

superior conj	15100 Jan 20 20:20	14°≈04'55	1°34'20			15100 Dec 22 17:49	0°☿	
minimum elong	15100 Jan 20 21:30	14°≈11'17	1°35'02	morning set		15100 Dec 29 12:31	13°☿50'55	
max. Earth dist.	15100 Jan 23 04:00	19°≈07'12	1.32429 AU					
evening rise	15100 Jan 28 08:03	29°≈57'06		superior conj		15101 Jan 05 06:28	28°☿44'24	1°37'57
	15100 Jan 28 08:38	0°☿		minimum elong		15101 Jan 05 06:34	28°☿44'58	1°38'51
desc. node	15100 Feb 03 23:15	12°☿45'07				15101 Jan 05 20:04	0°≈	
	15100 Feb 14 05:54	0°☿		max. Earth dist.		15101 Jan 06 08:52	1°≈11'03	1.31500 AU
evening max el	15100 Mar 03 00:22	21°☿15'07	27°33'03	evening rise		15101 Jan 12 07:27	14°≈02'45	
retrograde	15100 Mar 16 19:35	28°☿44'11				15101 Jan 20 10:21	0°☿	
evening set	15100 Mar 23 14:59	26°☿19'45		desc. node		15101 Jan 21 19:55	2°☿31'28	
min. Earth dist.	15100 Mar 27 09:52	23°☿03'44	0.63586 AU			15101 Feb 09 15:24	0°☿	
inferior conj	15100 Mar 30 03:54	20°☿15'11	-0°22'12	evening max el		15101 Feb 13 09:24	3°☿53'37	27°28'44
minimum elong	15100 Mar 30 04:37	20°☿13'23	0°22'09	retrograde		15101 Feb 27 08:30	11°☿15'49	
asc. node	15100 Mar 31 07:38	19°☿05'09		evening set		15101 Mar 06 04:31	9°☿05'40	
morning rise	15100 Apr 05 20:39	14°☿58'31		min. Earth dist.		15101 Mar 09 23:14	6°☿13'11	0.61448 AU
direct	15100 Apr 08 07:15	14°☿29'13		inferior conj		15101 Mar 13 01:42	3°☿25'16	-1°39'37
morning max el	15100 Apr 14 17:37	17°☿46'27	17°47'04	minimum elong		15101 Mar 13 05:16	3°☿17'13	1°38'09
	15100 Apr 23 16:21	0°☿				15101 Mar 17 06:15	30°☿☿	
morning set	15100 May 01 06:40	12°☿47'21		asc. node		15101 Mar 18 05:05	29°☿42'27	
desc. node	15100 May 03 01:21	15°☿49'30		morning rise		15101 Mar 20 09:08	28°☿26'37	
	15100 May 11 11:56	0°☿		direct		15101 Mar 22 13:04	28°☿06'24	
						15101 Mar 27 14:30	0°☿	
superior conj	15100 May 14 00:58	4°☿09'55	-1°19'54	morning max el		15101 Mar 29 10:28	1°☿34'32	17°50'33
minimum elong	15100 May 13 17:21	3°☿38'53	1°19'47	morning set		15101 Apr 14 03:02	25°☿56'19	
max. Earth dist.	15100 May 19 17:49	13°☿19'44	1.44909 AU			15101 Apr 16 09:23	0°☿	
evening rise	15100 May 29 10:41	28°☿26'24		desc. node		15101 Apr 19 22:00	6°☿16'13	
	15100 May 30 11:10	0°☿						
	15100 Jun 20 01:04	0°☿		superior conj		15101 Apr 25 03:57	15°☿23'02	-0°41'21
evening max el	15100 Jun 26 23:10	8°☿13'03	20°28'21	minimum elong		15101 Apr 25 00:08	15°☿06'45	0°41'23
asc. node	15100 Jun 27 05:36	8°☿28'57		max. Earth dist.		15101 May 02 09:30	27°☿26'12	1.43402 AU
retrograde	15100 Jul 04 23:28	12°☿48'19				15101 May 03 23:29	0°☿	
evening set	15100 Jul 09 02:01	11°☿12'24		evening rise		15101 May 09 03:56	8°☿13'32	
inferior conj	15100 Jul 14 08:08	5°☿07'12	3°09'18			15101 May 23 15:48	0°☿	
minimum elong	15100 Jul 14 08:29	5°☿06'00	3°08'27	evening max el		15101 Jun 09 19:34	22°☿05'12	21°40'46
min. Earth dist.	15100 Jul 15 01:12	4°☿08'38	0.68428 AU	asc. node		15101 Jun 14 02:33	25°☿42'03	
	15100 Jul 18 08:19	30°☿☿		retrograde		15101 Jun 18 21:57	27°☿23'48	
morning rise	15100 Jul 19 14:39	28°☿45'01		evening set		15101 Jun 23 11:27	25°☿31'00	
direct	15100 Jul 25 01:30	26°☿21'44		inferior conj		15101 Jun 28 17:15	19°☿15'10	3°07'38
desc. node	15100 Jul 30 00:28	27°☿56'17		minimum elong		15101 Jun 28 16:38	19°☿17'17	3°06'38
	15100 Aug 01 21:55	0°☿		min. Earth dist.		15101 Jun 28 20:54	19°☿02'23	0.68972 AU
morning max el	15100 Aug 05 04:02	3°☿00'04	24°02'40	morning rise		15101 Jul 03 21:38	12°☿58'45	
	15100 Aug 25 19:22	0°☿		direct		15101 Jul 08 20:05	10°☿51'52	
morning set	15100 Sep 09 11:16	23°☿30'08		desc. node		15101 Jul 16 21:48	14°☿59'19	
max. Earth dist.	15100 Sep 13 04:25	29°☿58'51	1.38429 AU	morning max el		15101 Jul 18 16:04	16°☿39'57	22°33'31
	15100 Sep 13 04:41	0°☿				15101 Jul 29 15:39	0°☿	
						15101 Aug 18 20:02	0°☿	
superior conj	15100 Sep 20 14:19	13°☿36'37	-0°24'15	morning set		15101 Aug 21 07:46	4°☿00'55	
minimum elong	15100 Sep 20 16:01	13°☿44'40	0°23'49	max. Earth dist.		15101 Aug 26 04:44	12°☿05'49	1.40801 AU
asc. node	15100 Sep 23 07:04	18°☿47'36						
evening rise	15100 Sep 29 10:47	0°☿53'07		superior conj		15101 Sep 03 01:10	25°☿47'06	-1°00'18
	15100 Sep 29 00:00	0°☿		minimum elong		15101 Sep 03 05:52	26°☿08'15	0°59'43
evening max el	15100 Oct 15 20:14	27°☿42'30	19°00'32			15101 Sep 05 08:56	0°☿	
	15100 Oct 18 12:33	0°☿		asc. node		15101 Sep 10 03:39	8°☿52'09	
retrograde	15100 Oct 24 16:19	2°☿09'17		evening rise		15101 Sep 13 02:44	14°☿26'49	
desc. node	15100 Oct 25 20:50	2°☿04'44				15101 Sep 21 16:42	0°☿	
evening set	15100 Oct 26 13:23	1°☿58'03		evening max el		15101 Sep 29 00:50	10°☿01'54	18°21'54
	15100 Oct 31 09:25	30°☿☿		retrograde		15101 Oct 06 15:01	13°☿53'24	
inferior conj	15100 Nov 03 22:02	27°☿42'05	-2°51'53	evening set		15101 Oct 08 15:48	13°☿37'30	
minimum elong	15100 Nov 03 14:53	27°☿54'29	2°48'24	desc. node		15101 Oct 12 18:14	11°☿40'42	
min. Earth dist.	15100 Nov 06 18:49	25°☿43'10	0.56319 AU	inferior conj		15101 Oct 16 07:12	9°☿00'31	-1°07'56
morning rise	15100 Nov 11 13:39	22°☿59'48		minimum elong		15101 Oct 16 04:36	9°☿05'47	1°06'20
direct	15100 Nov 17 06:52	21°☿43'09		min. Earth dist.		15101 Oct 19 13:22	6°☿22'36	0.58282 AU
morning max el	15100 Dec 01 09:59	28°☿57'07	26°02'40	morning rise		15101 Oct 23 13:56	3°☿40'56	
	15100 Dec 02 11:31	0°☿		direct		15101 Oct 29 20:58	1°☿57'26	
asc. node	15100 Dec 20 07:52	25°☿29'30		morning max el		15101 Nov 13 04:13	9°☿34'05	27°17'22

	15101 Nov 28 19:48	0°♊		morning max el	15102 Oct 26 06:11	20°♊58'12	27°54'58
asc. node	15101 Dec 07 04:54	14°♊44'37			15102 Nov 03 02:33	0°♊	
morning set	15101 Dec 13 21:04	28°♊16'38			15102 Nov 21 19:47	0°♊	
	15101 Dec 14 16:21	0°♋		asc. node	15102 Nov 24 01:48	4°♊21'28	
				morning set	15102 Nov 28 01:08	12°♊26'13	
superior conj	15101 Dec 20 17:57	13°♋24'25	1°35'33	max. Earth dist.	15102 Dec 03 23:43	25°♊17'22	1.31210 AU
minimum elong	15101 Dec 20 17:01	13°♋19'13	1°36'29				
max. Earth dist.	15101 Dec 20 16:42	13°♋17'27	1.31087 AU	superior conj	15102 Dec 05 04:55	27°♊59'41	1°27'14
evening rise	15101 Dec 27 12:37	28°♋21'16		minimum elong	15102 Dec 05 03:08	27°♊49'48	1°28'03
	15101 Dec 28 07:10	0°♌			15102 Dec 06 02:30	0°♋	
desc. node	15102 Jan 08 16:39	21°♌50'07		evening rise	15102 Dec 11 21:29	12°♋47'38	
	15102 Jan 13 19:04	0°♌			15102 Dec 20 10:09	0°♌	
evening max el	15102 Jan 26 12:12	15°♌43'54	26°49'45	desc. node	15102 Dec 26 13:30	10°♌30'50	
retrograde	15102 Feb 09 12:06	22°♌56'23		evening max el	15103 Jan 08 06:52	26°♌41'55	25°37'42
evening set	15102 Feb 16 01:51	21°♌07'43			15103 Jan 12 05:46	0°♌	
min. Earth dist.	15102 Feb 20 02:07	18°♌28'55	0.59221 AU	retrograde	15103 Jan 22 04:40	3°♌42'31	
inferior conj	15102 Feb 23 07:00	15°♌57'57	-3°06'12	evening set	15103 Jan 28 03:13	2°♌21'18	
minimum elong	15102 Feb 23 13:58	15°♌44'14	3°03'19		15103 Feb 01 08:34	30°♌	
morning rise	15102 Mar 03 05:28	11°♌20'06		min. Earth dist.	15103 Feb 01 19:38	29°♌41'51	0.57138 AU
direct	15102 Mar 05 05:27	11°♌05'29		inferior conj	15103 Feb 04 16:32	27°♌44'29	-4°32'18
asc. node	15102 Mar 05 02:32	11°♌05'32		minimum elong	15103 Feb 05 01:42	27°♌28'49	4°29'06
morning max el	15102 Mar 12 23:03	14°♌55'35	18°13'07	morning rise	15103 Feb 13 03:02	23°♌28'17	
	15102 Mar 23 07:43	0°♍		direct	15103 Feb 15 04:15	23°♌15'29	
morning set	15102 Mar 28 14:42	9°♍46'31		asc. node	15103 Feb 19 23:58	24°♌30'57	
desc. node	15102 Apr 06 18:33	26°♍48'05		morning max el	15103 Feb 24 03:21	27°♌38'20	18°56'37
					15103 Feb 26 07:28	0°♌	
superior conj	15102 Apr 07 05:35	27°♍37'51	-0°03'47	morning set	15103 Mar 12 13:02	24°♌04'42	
minimum elong	15102 Apr 07 05:15	27°♍36'24	0°04'05		15103 Mar 15 13:13	0°♍	
behind sun begin	15102 Apr 06 21:57	27°♍03'26					
behind sun end	15102 Apr 07 12:34	28°♍09'18		superior conj	15103 Mar 21 01:53	10°♍43'14	0°29'11
	15102 Apr 08 13:18	0°♎		minimum elong	15103 Mar 21 03:41	10°♍51'45	0°28'48
max. Earth dist.	15102 Apr 14 20:09	10°♎54'39	1.41417 AU	desc. node	15103 Mar 24 15:05	17°♍21'52	
evening rise	15102 Apr 19 14:54	18°♎49'52		max. Earth dist.	15103 Mar 28 02:50	23°♍40'20	1.39177 AU
	15102 Apr 26 16:32	0°♏		evening rise	15103 Mar 31 23:17	0°♎22'39	
	15102 May 18 03:01	0°♏			15103 Mar 31 17:59	0°♎	
evening max el	15102 May 23 11:30	5°♏57'17	23°00'34		15103 Apr 20 00:31	0°♏	
asc. node	15102 May 31 23:37	11°♏46'22		evening max el	15103 May 06 01:22	19°♏51'21	24°21'39
retrograde	15102 Jun 02 18:26	12°♏00'24		retrograde	15103 May 17 11:38	26°♏32'50	
evening set	15102 Jun 07 19:19	9°♏52'32		asc. node	15103 May 18 20:47	26°♏24'35	
min. Earth dist.	15102 Jun 12 17:45	4°♏00'32	0.69032 AU	evening set	15103 May 23 00:03	24°♏12'43	
inferior conj	15102 Jun 13 03:04	3°♏28'14	2°55'22	min. Earth dist.	15103 May 27 13:41	18°♏57'29	0.68618 AU
minimum elong	15102 Jun 13 01:38	3°♏33'12	2°54'10	inferior conj	15103 May 28 11:45	17°♏43'07	2°32'41
	15102 Jun 15 17:43	30°♏		minimum elong	15103 May 28 09:45	17°♏49'51	2°31'18
morning rise	15102 Jun 18 07:52	27°♏19'07		morning rise	15103 Jun 02 19:35	11°♏42'33	
direct	15102 Jun 22 17:51	25°♏31'24		direct	15103 Jun 06 17:35	10°♏14'53	
	15102 Jun 30 20:30	0°♐		morning max el	15103 Jun 14 07:01	14°♏28'24	19°56'57
morning max el	15102 Jul 01 08:15	0°♐28'47	21°09'37	desc. node	15103 Jun 20 16:05	21°♏58'51	
desc. node	15102 Jul 03 19:00	3°♐05'41			15103 Jun 26 10:47	0°♐	
	15102 Jul 23 08:43	0°♑		morning set	15103 Jul 11 08:44	22°♐20'37	
morning set	15102 Aug 01 04:18	13°♑30'19			15103 Jul 16 07:33	0°♑	
max. Earth dist.	15102 Aug 08 10:19	25°♑04'13	1.42943 AU	max. Earth dist.	15103 Jul 21 22:18	8°♑49'23	1.44618 AU
	15102 Aug 11 10:23	0°♒					
				superior conj	15103 Jul 27 05:36	17°♑19'28	-2°01'50
superior conj	15102 Aug 15 15:08	7°♒02'41	-1°34'52	minimum elong	15103 Jul 27 12:23	17°♑46'58	2°02'08
minimum elong	15102 Aug 15 22:24	7°♒33'38	1°34'29		15103 Aug 03 22:14	0°♒	
evening rise	15102 Aug 27 05:30	27°♒24'39		evening rise	15103 Aug 09 14:04	9°♒34'14	
asc. node	15102 Aug 28 00:12	28°♒48'27		asc. node	15103 Aug 14 20:48	18°♒32'30	
	15102 Aug 28 16:10	0°♓			15103 Aug 22 01:15	0°♓	
evening max el	15102 Sep 12 12:22	22°♓56'56	18°03'45	evening max el	15103 Aug 27 02:56	6°♓18'01	18°04'38
retrograde	15102 Sep 19 07:05	26°♓25'59		retrograde	15103 Sep 02 12:24	9°♓38'22	
evening set	15102 Sep 21 15:05	26°♓01'21		evening set	15103 Sep 05 04:49	9°♓01'26	
inferior conj	15102 Sep 28 13:01	21°♓04'11	0°20'41	inferior conj	15103 Sep 11 11:54	3°♓46'02	1°28'40
minimum elong	15102 Sep 28 13:40	21°♓02'37	0°20'40	minimum elong	15103 Sep 11 14:03	3°♓40'17	1°27'55
desc. node	15102 Sep 29 15:41	20°♓01'00		min. Earth dist.	15103 Sep 14 06:20	0°♓49'44	0.62814 AU
min. Earth dist.	15102 Oct 01 16:59	18°♓06'29	0.60541 AU		15103 Sep 15 02:12	30°♓	
morning rise	15102 Oct 05 09:08	15°♓14'01		desc. node	15103 Sep 16 13:10	28°♓39'23	
direct	15102 Oct 11 23:56	13°♓05'19		morning rise	15103 Sep 17 21:04	27°♓35'28	

direct	15103 Sep 24 13:18	25° $\cap$ 08'10		desc. node	15104 Sep 02 10:39	8° $\cap$ 58'12	
	15103 Oct 05 03:42	0° $\underline{\cap}$		direct	15104 Sep 06 11:06	7° $\cap$ 59'22	
morning max el	15103 Oct 08 13:44	3° $\underline{\cap}$ 07'52	27°53'30	morning max el	15104 Sep 20 00:23	15° $\cap$ 54'41	27°17'23
	15103 Oct 28 14:17	0° $\cap$			15104 Oct 01 15:28	0° $\underline{\cap}$	
asc. node	15103 Nov 10 22:37	24° $\cap$ 13'33			15104 Oct 20 08:53	0° $\cap$	
morning set	15103 Nov 11 22:32	26° $\cap$ 14'12		morning set	15104 Oct 25 10:38	9° $\cap$ 34'46	
	15103 Nov 13 18:28	0° $\times$		asc. node	15104 Oct 27 19:21	14° $\cap$ 15'49	
max. Earth dist.	15103 Nov 17 02:10	7° $\times$ 02'14	1.31894 AU	max. Earth dist.	15104 Oct 29 20:49	18° $\cap$ 27'37	1.33135 AU
superior conj	15103 Nov 19 13:27	12° $\times$ 24'34	1°12'59	superior conj	15104 Nov 02 17:28	26° $\cap$ 33'43	0°52'48
minimum elong	15103 Nov 19 11:11	12° $\times$ 12'08	1°13'34	minimum elong	15104 Nov 02 15:14	26° $\cap$ 21'50	0°53'10
evening rise	15103 Nov 26 08:12	27° $\times$ 17'00			15104 Nov 04 07:59	0° $\times$	
	15103 Nov 27 14:38	0° $\text{Z}$		evening rise	15104 Nov 09 18:58	11° $\times$ 45'04	
desc. node	15103 Dec 13 10:28	28° $\text{Z}$ 18'54			15104 Nov 19 00:13	0° $\text{Z}$	
	15103 Dec 14 16:25	0° $\approx$		desc. node	15104 Nov 29 07:33	14° $\text{Z}$ 55'40	
evening max el	15103 Dec 20 18:19	6° $\approx$ 55'49	24°01'46	evening max el	15104 Dec 01 04:48	16° $\text{Z}$ 53'32	22°18'45
retrograde	15104 Jan 03 07:51	13° $\approx$ 40'00		retrograde	15104 Dec 13 22:33	23° $\text{Z}$ 11'57	
evening set	15104 Jan 08 05:26	12° $\approx$ 47'49		evening set	15104 Dec 17 12:33	22° $\text{Z}$ 43'41	
min. Earth dist.	15104 Jan 14 05:49	9° $\approx$ 50'16	0.55492 AU	min. Earth dist.	15104 Dec 25 11:47	19° $\text{Z}$ 09'00	0.54566 AU
inferior conj	15104 Jan 16 05:06	8° $\approx$ 39'15	-5°38'50	inferior conj	15104 Dec 26 01:06	18° $\text{Z}$ 50'19	-6°00'02
minimum elong	15104 Jan 16 11:54	8° $\approx$ 29'00	5°37'01	minimum elong	15104 Dec 25 23:38	18° $\text{Z}$ 52'23	5°59'03
morning rise	15104 Jan 24 20:07	4° $\approx$ 41'53		morning rise	15105 Jan 03 11:46	15° $\text{Z}$ 03'06	
direct	15104 Jan 27 07:38	4° $\approx$ 26'11		direct	15105 Jan 06 19:35	14° $\text{Z}$ 38'19	
asc. node	15104 Feb 06 21:22	9° $\approx$ 35'26		morning max el	15105 Jan 18 19:57	20° $\text{Z}$ 25'10	21°32'11
morning max el	15104 Feb 06 19:06	9° $\approx$ 29'56	20°02'59	asc. node	15105 Jan 23 18:42	26° $\text{Z}$ 03'11	
	15104 Feb 20 10:04	0° $\text{X}$			15105 Jan 26 13:40	0° $\approx$	
morning set	15104 Feb 24 18:22	8° $\text{X}$ 39'15		morning set	15105 Feb 08 03:58	23° $\approx$ 22'20	
					15105 Feb 11 07:20	0° $\text{X}$	
superior conj	15104 Mar 03 12:21	24° $\text{X}$ 25'44	0°55'54	superior conj	15105 Feb 15 09:07	8° $\text{X}$ 34'56	1°15'58
minimum elong	15104 Mar 03 14:56	24° $\text{X}$ 38'38	0°55'42	minimum elong	15105 Feb 15 11:33	8° $\text{X}$ 47'38	1°16'06
	15104 Mar 06 08:07	0° $\text{Y}$		max. Earth dist.	15105 Feb 19 20:43	17° $\text{X}$ 44'26	1.34873 AU
max. Earth dist.	15104 Mar 09 09:31	5° $\text{Y}$ 51'11	1.36923 AU	evening rise	15105 Feb 23 23:48	25° $\text{X}$ 46'23	
desc. node	15104 Mar 10 11:38	7° $\text{Y}$ 53'13		desc. node	15105 Feb 25 08:13	28° $\text{X}$ 18'31	
evening rise	15104 Mar 13 03:22	12° $\text{Y}$ 44'34			15105 Feb 26 06:10	0° $\text{Y}$	
	15104 Mar 23 07:49	0° $\text{Z}$			15105 Mar 16 18:40	0° $\text{Z}$	
	15104 Apr 14 01:33	0° $\text{II}$		evening max el	15105 Mar 31 04:48	17° $\text{Z}$ 31'40	26°39'15
evening max el	15104 Apr 17 14:59	3° $\text{II}$ 44'58	25°37'02	retrograde	15105 Apr 13 07:41	24° $\text{Z}$ 56'32	
retrograde	15104 Apr 30 00:22	10° $\text{II}$ 53'54		evening set	15105 Apr 19 17:16	22° $\text{Z}$ 24'14	
asc. node	15104 May 04 18:03	9° $\text{II}$ 21'45		asc. node	15105 Apr 21 15:23	20° $\text{Z}$ 38'57	
evening set	15104 May 05 23:58	8° $\text{II}$ 25'17		min. Earth dist.	15105 Apr 23 17:55	18° $\text{Z}$ 20'08	0.66427 AU
min. Earth dist.	15104 May 10 06:27	3° $\text{II}$ 46'19	0.67742 AU	inferior conj	15105 Apr 25 17:35	15° $\text{Z}$ 58'15	1°14'14
inferior conj	15104 May 11 17:19	1° $\text{II}$ 54'43	1°59'14	minimum elong	15105 Apr 25 15:52	16° $\text{Z}$ 03'25	1°13'00
minimum elong	15104 May 11 15:09	2° $\text{II}$ 01'39	1°57'48	morning rise	15105 May 01 15:36	10° $\text{Z}$ 19'18	
	15104 May 13 05:51	30° $\text{RZ}$		direct	15105 May 04 16:07	9° $\text{Z}$ 28'32	
morning rise	15104 May 17 06:51	26° $\text{Z}$ 04'06		morning max el	15105 May 11 01:42	12° $\text{Z}$ 50'44	18°17'39
direct	15104 May 20 17:40	24° $\text{Z}$ 55'50			15105 May 23 14:12	0° $\text{II}$	
morning max el	15104 May 27 13:10	28° $\text{Z}$ 37'09	18°59'05	desc. node	15105 May 24 09:59	1° $\text{II}$ 17'45	
	15104 May 28 21:12	0° $\text{II}$		morning set	15105 May 30 20:28	11° $\text{II}$ 31'19	
desc. node	15104 Jun 06 13:05	11° $\text{II}$ 25'52			15105 Jun 11 12:54	0° $\text{Z}$	
greatest brilliancy	15104 Jun 09 18:43	16° $\text{II}$ 14'26	-0.7m	superior conj	15105 Jun 15 07:42	5° $\text{Z}$ 55'11	-2°05'58
	15104 Jun 18 18:14	0° $\text{Z}$		minimum elong	15105 Jun 15 01:16	5° $\text{Z}$ 30'04	2°06'37
morning set	15104 Jun 19 15:57	1° $\text{Z}$ 24'00		max. Earth dist.	15105 Jun 16 12:10	7° $\text{Z}$ 46'12	1.45943 AU
max. Earth dist.	15104 Jul 03 15:50	23° $\text{Z}$ 09'11	1.45648 AU		15105 Jun 30 18:31	0° $\Omega$	
superior conj	15104 Jul 05 23:12	26° $\text{Z}$ 46'14	-2°13'50	evening rise	15105 Jul 01 08:07	0° $\Omega$ 53'02	
minimum elong	15104 Jul 06 00:13	26° $\text{Z}$ 50'13	2°14'44	greatest brilliancy	15105 Jul 11 16:51	16° $\Omega$ 57'16	-0.8m
	15104 Jul 08 00:27	0° $\Omega$		asc. node	15105 Jul 18 14:13	27° $\Omega$ 01'01	
evening rise	15104 Jul 20 23:27	20° $\Omega$ 44'05			15105 Jul 20 20:54	0° $\cap$	
	15104 Jul 26 16:38	0° $\cap$		evening max el	15105 Jul 24 03:53	3° $\cap$ 43'13	18°59'41
asc. node	15104 Jul 31 17:29	7° $\cap$ 59'01		retrograde	15105 Jul 30 22:40	7° $\cap$ 26'49	
evening max el	15104 Aug 09 17:03	19° $\cap$ 56'07	18°23'33	evening set	15105 Aug 03 09:15	6° $\cap$ 18'19	
retrograde	15104 Aug 16 02:46	23° $\cap$ 21'26		inferior conj	15105 Aug 08 21:15	0° $\cap$ 32'27	2°48'13
evening set	15104 Aug 19 04:05	22° $\cap$ 29'32		minimum elong	15105 Aug 08 23:03	0° $\cap$ 26'40	2°47'21
inferior conj	15104 Aug 24 23:51	16° $\cap$ 58'01	2°16'56		15105 Aug 09 07:23	30° $\text{RZ}$	
minimum elong	15104 Aug 25 02:12	16° $\cap$ 51'03	2°16'01	min. Earth dist.	15105 Aug 10 12:17	28° $\Omega$ 27'58	0.66592 AU
min. Earth dist.	15104 Aug 27 05:07	14° $\cap$ 21'09	0.64876 AU	morning rise	15105 Aug 14 12:06	24° $\Omega$ 06'40	
morning rise	15104 Aug 30 22:59	10° $\cap$ 36'15					

desc. node	15105 Aug 20 08:08	21° $\Omega$ 29'33		minimum elong	15106 Jul 24 02:02	14° $\Omega$ 20'51	3°04'22
direct	15105 Aug 20 16:09	21° $\Omega$ 29'07		min. Earth dist.	15106 Jul 25 02:04	12° $\Omega$ 59'52	0.67888 AU
morning max el	15105 Sep 02 11:50	29° $\Omega$ 06'38	26°14'15	morning rise	15106 Jul 29 09:57	7° $\Omega$ 59'11	
	15105 Sep 03 08:35	0° $\cap$		direct	15106 Aug 04 03:26	5° $\Omega$ 28'50	
	15105 Sep 25 11:19	0° $\underline{\Omega}$		desc. node	15106 Aug 07 05:33	6° $\Omega$ 05'37	
morning set	15105 Oct 08 10:10	22° $\underline{\Omega}$ 19'48		morning max el	15106 Aug 15 22:47	12° $\Omega$ 33'21	24°53'20
max. Earth dist.	15105 Oct 12 05:45	29° $\underline{\Omega}$ 35'55	1.34894 AU		15106 Aug 30 00:33	0° $\cap$	
	15105 Oct 12 10:41	0° $\cap$			15106 Sep 18 05:25	0° $\underline{\Omega}$	
asc. node	15105 Oct 14 16:01	4° $\cap$ 23'24		morning set	15106 Sep 20 17:09	4° $\underline{\Omega}$ 20'23	
				max. Earth dist.	15106 Sep 24 06:25	10° $\underline{\Omega}$ 44'02	1.37065 AU
superior conj	15105 Oct 17 14:21	10° $\cap$ 19'50	0°26'49	superior conj	15106 Oct 01 01:04	23° $\underline{\Omega}$ 35'48	-0°04'25
minimum elong	15105 Oct 17 12:55	10° $\cap$ 12'24	0°27'05	minimum elong	15106 Oct 01 01:20	23° $\underline{\Omega}$ 37'05	0°04'05
evening rise	15105 Oct 25 03:45	26° $\cap$ 06'00		behind sun begin	15106 Sep 30 18:57	23° $\underline{\Omega}$ 05'49	
	15105 Oct 27 01:01	0° $\nearrow$		behind sun end	15106 Oct 01 07:43	24° $\underline{\Omega}$ 08'25	
evening max el	15105 Nov 12 23:52	27° $\nearrow$ 12'17	20°45'46	asc. node	15106 Oct 01 12:39	24° $\underline{\Omega}$ 32'38	
desc. node	15105 Nov 16 04:45	29° $\nearrow$ 56'45			15106 Oct 04 06:34	0° $\cap$	
	15105 Nov 16 06:34	0° $\Xi$		evening rise	15106 Oct 09 08:16	10° $\cap$ 14'08	
retrograde	15105 Nov 24 08:53	2° $\Xi$ 51'29			15106 Oct 20 00:00	0° $\nearrow$	
evening set	15105 Nov 26 19:32	2° $\Xi$ 36'59		evening max el	15106 Oct 26 09:14	8° $\nearrow$ 17'15	19°32'35
	15105 Dec 03 10:03	30° $\cap$ $\nearrow$		desc. node	15106 Nov 03 02:00	12° $\nearrow$ 57'04	
inferior conj	15105 Dec 05 16:17	28° $\nearrow$ 43'39	-5°20'35	retrograde	15106 Nov 05 02:56	13° $\nearrow$ 09'29	
minimum elong	15105 Dec 05 07:16	28° $\nearrow$ 56'35	5°17'48	evening set	15106 Nov 07 00:55	12° $\nearrow$ 59'01	
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morning rise	15105 Dec 13 19:01	24° $\nearrow$ 48'43		minimum elong	15106 Nov 15 07:55	9° $\nearrow$ 08'59	3°48'40
direct	15105 Dec 18 03:07	24° $\nearrow$ 08'22		min. Earth dist.	15106 Nov 18 02:09	7° $\nearrow$ 23'19	0.55438 AU
	15105 Dec 30 17:40	0° $\Xi$		morning rise	15106 Nov 23 12:57	4° $\nearrow$ 31'59	
morning max el	15105 Dec 31 08:44	0° $\Xi$ 34'56	23°18'17	direct	15106 Nov 28 19:23	3° $\nearrow$ 29'47	
asc. node	15106 Jan 10 15:57	13° $\Xi$ 35'54		morning max el	15106 Dec 12 17:48	10° $\nearrow$ 29'23	25°06'42
	15106 Jan 19 18:01	0° $\approx$			15106 Dec 27 09:36	0° $\Xi$	
morning set	15106 Jan 23 15:38	8° $\approx$ 07'09		asc. node	15106 Dec 28 13:08	1° $\Xi$ 58'02	
superior conj	15106 Jan 30 13:01	23° $\approx$ 01'43	1°29'28	morning set	15107 Jan 08 03:27	22° $\Xi$ 48'16	
minimum elong	15106 Jan 30 14:44	23° $\approx$ 10'59	1°29'58		15107 Jan 11 10:32	0° $\approx$	
max. Earth dist.	15106 Feb 02 14:58	29° $\approx$ 35'41	1.33186 AU	superior conj	15107 Jan 14 21:30	7° $\approx$ 38'36	1°36'37
	15106 Feb 02 19:36	0° $\text{X}$		minimum elong	15107 Jan 14 22:13	7° $\approx$ 42'35	1°37'25
evening rise	15106 Feb 07 09:04	9° $\text{X}$ 18'56		max. Earth dist.	15107 Jan 16 16:23	11° $\approx$ 34'09	1.31966 AU
desc. node	15106 Feb 12 04:50	18° $\text{X}$ 33'15		evening rise	15107 Jan 22 04:04	23° $\approx$ 14'33	
	15106 Feb 18 17:12	0° $\Upsilon$			15107 Jan 25 12:50	0° $\text{X}$	
	15106 Mar 12 17:12	0° $\text{B}$		desc. node	15107 Jan 30 01:28	8° $\text{X}$ 31'52	
evening max el	15106 Mar 13 18:07	1° $\text{B}$ 01'29	27°21'00		15107 Feb 12 10:27	0° $\Upsilon$	
retrograde	15106 Mar 27 08:54	8° $\text{B}$ 32'09		evening max el	15107 Feb 24 05:19	14° $\Upsilon$ 02'17	27°35'18
evening set	15106 Apr 03 01:53	6° $\text{B}$ 02'28		retrograde	15107 Mar 10 02:57	21° $\Upsilon$ 30'00	
min. Earth dist.	15106 Apr 06 22:08	2° $\text{B}$ 30'25	0.64715 AU	evening set	15107 Mar 16 23:14	19° $\Upsilon$ 10'29	
asc. node	15106 Apr 08 12:45	0° $\text{B}$ 46'06		min. Earth dist.	15107 Mar 20 17:25	16° $\Upsilon$ 05'28	0.62693 AU
inferior conj	15106 Apr 09 10:04	29° $\Upsilon$ 47'47	0°16'47	inferior conj	15107 Mar 23 15:40	13° $\Upsilon$ 14'58	-0°53'36
minimum elong	15106 Apr 09 09:35	29° $\Upsilon$ 49'04	0°16'13	minimum elong	15107 Mar 23 17:27	13° $\Upsilon$ 10'35	0°53'00
	15106 Apr 09 05:35	30° $\cap$ $\Upsilon$		asc. node	15107 Mar 26 10:11	10° $\Upsilon$ 41'28	
morning rise	15106 Apr 15 19:17	24° $\Upsilon$ 22'34		morning rise	15107 Mar 30 14:30	8° $\Upsilon$ 05'50	
direct	15106 Apr 18 10:32	23° $\Upsilon$ 46'29		direct	15107 Apr 01 21:53	7° $\Upsilon$ 40'59	
morning max el	15106 Apr 24 18:20	27° $\Upsilon$ 02'10	17°53'16	morning max el	15107 Apr 08 12:03	11° $\Upsilon$ 01'44	17°46'18
	15106 Apr 27 10:13	0° $\text{B}$			15107 Apr 21 08:24	0° $\text{B}$	
desc. node	15106 May 11 06:48	21° $\text{B}$ 27'42		morning set	15107 Apr 24 13:47	5° $\text{B}$ 36'38	
morning set	15106 May 12 04:50	22° $\text{B}$ 59'18		desc. node	15107 Apr 28 03:30	11° $\text{B}$ 49'37	
	15106 May 16 10:23	0° $\cap$		superior conj	15107 May 06 13:49	26° $\text{B}$ 08'29	-1°03'48
superior conj	15106 May 26 00:32	15° $\cap$ 32'50	-1°40'06	minimum elong	15107 May 06 07:43	25° $\text{B}$ 43'06	1°03'42
minimum elong	15106 May 25 15:44	14° $\cap$ 57'47	1°40'08		15107 May 08 22:00	0° $\cap$	
max. Earth dist.	15106 May 30 08:14	22° $\cap$ 23'01	1.45486 AU	max. Earth dist.	15107 May 13 01:36	6° $\cap$ 43'07	1.44334 AU
	15106 Jun 04 05:19	0° $\text{E}$		evening rise	15107 May 21 10:25	19° $\cap$ 51'02	
evening rise	15106 Jun 10 22:47	10° $\text{E}$ 22'07			15107 May 28 02:44	0° $\text{E}$	
	15106 Jun 23 23:23	0° $\Omega$			15107 Jun 18 23:57	0° $\Omega$	
greatest brilliancy	15106 Jun 25 13:41	2° $\Omega$ 19'47	-0.6m	evening max el	15107 Jun 20 09:05	1° $\Omega$ 26'28	20°57'54
asc. node	15106 Jul 05 11:03	15° $\Omega$ 30'18		asc. node	15107 Jun 22 07:57	3° $\Omega$ 15'08	
evening max el	15106 Jul 07 09:29	17° $\Omega$ 34'28	19°51'51	retrograde	15107 Jun 28 20:12	6° $\Omega$ 19'58	
retrograde	15106 Jul 14 21:13	21° $\Omega$ 48'24		evening set	15107 Jul 03 03:13	4° $\Omega$ 36'57	
evening set	15106 Jul 18 17:41	20° $\Omega$ 22'35			15107 Jul 07 05:51	30° $\cap$ $\text{E}$	
inferior conj	15106 Jul 24 01:07	14° $\Omega$ 23'57	3°05'12				


























































































































inferior conj	15107 Jul 08 08:55	28°☿27'00	3°09'55	inferior conj	15108 Jun 21 18:34	12°☿37'41	3°03'40
minimum elong	15107 Jul 08 08:51	28°☿27'14	3°09'01	minimum elong	15108 Jun 21 17:35	12°☿41'07	3°02'36
min. Earth dist.	15107 Jul 08 20:17	27°☿47'34	0.68719 AU	min. Earth dist.	15108 Jun 21 16:45	12°☿44'00	0.69065 AU
morning rise	15107 Jul 13 14:12	22°☿06'46		morning rise	15108 Jun 26 22:49	6°☿24'08	
direct	15107 Jul 18 19:49	19°☿49'48		direct	15108 Jul 01 16:01	4°☿24'56	
desc. node	15107 Jul 25 02:54	22°☿21'50		morning max el	15108 Jul 10 22:51	9°☿50'40	21°56'38
morning max el	15107 Jul 29 09:37	26°☿07'59	23°24'26	desc. node	15108 Jul 11 00:10	9°☿54'01	
	15107 Aug 01 22:49	0°♊			15108 Jul 26 17:58	0°♊	
	15107 Aug 23 13:10	0°♐		morning set	15108 Aug 12 13:10	25°♊29'10	
morning set	15107 Sep 02 03:13	15°♐25'55			15108 Aug 15 08:20	0°♐	
max. Earth dist.	15107 Sep 06 04:23	22°♐20'04	1.39445 AU	max. Earth dist.	15108 Aug 18 06:31	4°♐48'21	1.41763 AU
	15107 Sep 10 12:22	0°♑					
				superior conj	15108 Aug 26 00:18	18°♐01'10	-1°15'28
superior conj	15107 Sep 13 21:50	6°♑12'48	-0°39'27	minimum elong	15108 Aug 26 06:16	18°♐27'21	1°14'55
minimum elong	15107 Sep 14 00:45	6°♑26'22	0°38'55		15108 Sep 01 16:34	0°♑	
asc. node	15107 Sep 18 09:15	14°♑39'52		asc. node	15108 Sep 04 05:50	4°♑41'24	
evening rise	15107 Sep 23 05:45	24°♑02'25		evening rise	15108 Sep 05 16:37	7°♑21'55	
	15107 Sep 26 08:12	0°♒			15108 Sep 19 05:05	0°♒	
evening max el	15107 Oct 09 07:57	20°♒11'50	18°41'36	evening max el	15108 Sep 21 16:03	2°♒47'40	18°11'48
retrograde	15107 Oct 17 14:04	24°♒21'48		retrograde	15108 Sep 28 20:24	6°♒27'34	
evening set	15107 Oct 19 12:02	24°♒09'08		evening set	15108 Oct 01 00:11	6°♒08'17	
desc. node	15107 Oct 20 23:19	23°♒43'14		desc. node	15108 Oct 06 20:44	2°♒37'08	
inferior conj	15107 Oct 27 13:43	19°♒44'49	-2°06'39	inferior conj	15108 Oct 08 07:55	1°♒22'26	-0°27'53
minimum elong	15107 Oct 27 08:33	19°♒54'23	2°03'55	minimum elong	15108 Oct 08 06:56	1°♒24'34	0°27'04
min. Earth dist.	15107 Oct 30 16:24	17°♒27'02	0.57095 AU		15108 Oct 09 21:45	30°♒♑	
morning rise	15107 Nov 04 01:48	14°♒46'23		min. Earth dist.	15108 Oct 11 14:21	28°♑33'42	0.59227 AU
direct	15107 Nov 10 01:51	13°♒18'01		morning rise	15108 Oct 15 10:19	25°♑49'07	
morning max el	15107 Nov 24 07:15	20°♒42'53	26°38'30	direct	15108 Oct 21 21:38	23°♑54'23	
	15107 Dec 02 08:07	0°♓			15108 Nov 03 10:38	0°♒	
asc. node	15107 Dec 15 10:12	20°♓57'00		morning max el	15108 Nov 05 04:37	1°♒38'04	27°38'18
	15107 Dec 20 01:29	0°♑			15108 Nov 25 16:16	0°♓	
morning set	15107 Dec 23 13:43	7°♑21'13		asc. node	15108 Dec 01 07:11	10°♓22'10	
				morning set	15108 Dec 06 20:34	21°♓40'16	
superior conj	15107 Dec 30 08:27	22°♑19'37	1°37'40		15108 Dec 10 16:48	0°♑	
minimum elong	15107 Dec 30 08:06	22°♑17'40	1°38'36				
max. Earth dist.	15107 Dec 30 22:49	23°♑39'53	1.31255 AU	superior conj	15108 Dec 13 19:54	6°♑57'59	1°32'46
	15108 Jan 02 19:23	0°♒		minimum elong	15108 Dec 13 18:35	6°♑50'36	1°33'39
evening rise	15108 Jan 06 06:12	7°♒27'05		max. Earth dist.	15108 Dec 13 06:49	5°♑44'47	1.31072 AU
desc. node	15108 Jan 16 22:09	28°♒08'00		evening rise	15108 Dec 20 13:09	21°♑49'32	
	15108 Jan 18 00:01	0°♈			15108 Dec 24 10:56	0°♒	
evening max el	15108 Feb 06 12:10	26°♈22'35	27°16'36	desc. node	15109 Jan 02 18:56	17°♒11'58	
	15108 Feb 10 20:11	0°♉			15109 Jan 11 11:46	0°♈	
retrograde	15108 Feb 20 12:18	3°♉41'06		evening max el	15109 Jan 18 11:53	7°♈51'19	26°22'56
evening set	15108 Feb 27 06:22	1°♉39'32		retrograde	15109 Feb 01 11:08	14°♈58'07	
	15108 Feb 29 17:11	30°♈♉		evening set	15109 Feb 07 19:37	13°♈20'52	
min. Earth dist.	15108 Mar 02 02:38	28°♈53'58	0.60497 AU	min. Earth dist.	15109 Feb 12 01:19	10°♈43'44	0.58305 AU
inferior conj	15108 Mar 05 06:57	26°♈11'13	-2°15'33	inferior conj	15109 Feb 15 04:11	8°♈25'27	-3°43'37
minimum elong	15108 Mar 05 11:57	26°♈00'32	2°13'26	minimum elong	15109 Feb 15 12:24	8°♈10'14	3°40'24
asc. node	15108 Mar 12 07:36	21°♈31'08		morning rise	15109 Feb 23 08:21	3°♈56'31	
morning rise	15108 Mar 12 20:52	21°♈20'53		direct	15109 Feb 25 08:10	3°♈43'03	
direct	15108 Mar 14 22:33	21°♈03'33		asc. node	15109 Feb 27 05:03	3°♈55'27	
morning max el	15108 Mar 22 03:33	24°♈40'04	17°57'38	morning max el	15109 Mar 05 13:02	7°♈45'49	18°28'53
	15108 Mar 26 12:41	0°♉			15109 Mar 19 18:24	0°♉	
morning set	15108 Apr 06 17:21	19°♉05'36		morning set	15109 Mar 21 10:05	3°♉09'31	
	15108 Apr 12 17:03	0°♊					
desc. node	15108 Apr 14 00:08	2°♊19'17		superior conj	15109 Mar 30 12:55	20°♉26'45	0°10'55
				minimum elong	15109 Mar 30 13:41	20°♉30'14	0°10'33
superior conj	15108 Apr 17 02:49	7°♊49'01	-0°25'02	behind sun begin	15109 Mar 30 08:16	20°♉05'17	
minimum elong	15108 Apr 17 00:37	7°♊39'26	0°25'11	behind sun end	15109 Mar 30 19:05	20°♉55'08	
max. Earth dist.	15108 Apr 24 14:56	20°♊33'57	1.42612 AU	desc. node	15109 Mar 31 20:43	22°♉52'30	
evening rise	15108 Apr 30 10:24	29°♊57'53			15109 Apr 04 20:10	0°♊	
	15108 Apr 30 10:56	0°♋		max. Earth dist.	15109 Apr 07 00:07	3°♊46'09	1.40491 AU
	15108 May 20 16:01	0°☿		evening rise	15109 Apr 11 06:27	10°♊58'33	
evening max el	15108 Jun 02 03:29	15°☿19'03	22°14'08		15109 Apr 23 08:42	0°♋	
asc. node	15108 Jun 08 04:57	20°☿01'16		evening max el	15109 May 15 18:24	29°♋12'42	23°35'16
retrograde	15108 Jun 11 17:53	20°☿56'28			15109 May 16 13:49	0°☿	
evening set	15108 Jun 16 12:10	18°☿57'12		asc. node	15109 May 26 02:02	5°☿31'32	

retrograde	15109 May 26 13:01	5°☿32'27		evening set	15110 May 15 21:50	17°♄36'45	
evening set	15109 May 31 18:55	3°☿18'53		min. Earth dist.	15110 May 20 08:08	12°♄37'22	0.68302 AU
	15109 Jun 03 20:08	30°♄11		inferior conj	15110 May 21 11:45	11°♄06'08	2°19'51
min. Earth dist.	15109 Jun 05 13:23	27°♄42'47	0.68921 AU	minimum elong	15110 May 21 09:38	11°♄13'10	2°18'26
inferior conj	15109 Jun 06 04:09	26°♄52'07	2°47'00	morning rise	15110 May 26 21:42	5°♄09'54	
minimum elong	15109 Jun 06 02:26	26°♄58'00	2°45'44	direct	15110 May 30 14:48	3°♄50'49	
morning rise	15109 Jun 11 09:56	20°♄46'43		morning max el	15110 Jun 06 19:44	7°♄48'58	19°30'26
direct	15109 Jun 15 14:50	19°♄07'28		desc. node	15110 Jun 14 18:25	17°♄31'20	
morning max el	15109 Jun 23 17:39	23°♄44'24	20°37'05	greatest brilliancy	15110 Jun 19 10:57	24°♄13'54	-0.7m
desc. node	15109 Jun 27 21:21	28°♄22'17			15110 Jun 23 08:05	0°☿	
	15109 Jun 29 04:48	0°☿		morning set	15110 Jul 02 04:18	13°☿27'08	
	15109 Jul 20 00:59	0°♄			15110 Jul 12 20:20	0°♄	
morning set	15109 Jul 23 01:17	4°♄38'04		max. Earth dist.	15110 Jul 14 06:24	2°♄13'53	1.45140 AU
max. Earth dist.	15109 Jul 31 15:38	18°♄11'19	1.43730 AU				
				superior conj	15110 Jul 18 09:11	8°♄45'15	-2°09'10
superior conj	15109 Aug 07 04:28	28°♄52'25	-1°47'40	minimum elong	15110 Jul 18 14:08	9°♄05'03	2°09'47
minimum elong	15109 Aug 07 12:06	29°♄24'11	1°47'31		15110 Jul 31 09:49	0°♄	
	15109 Aug 07 20:41	0°♄		evening rise	15110 Aug 01 11:38	1°♄47'27	
evening rise	15109 Aug 19 12:22	20°♄01'40		asc. node	15110 Aug 08 23:03	14°♄11'10	
asc. node	15109 Aug 22 02:25	24°♄33'37		evening max el	15110 Aug 19 20:02	29°♄24'23	18°10'27
	15109 Aug 25 05:43	0°♄			15110 Aug 20 11:03	0°♄	
evening max el	15109 Sep 05 05:21	15°♄55'17	18°01'48	retrograde	15110 Aug 26 04:41	2°♄45'36	
retrograde	15109 Sep 11 18:52	19°♄19'05		evening set	15110 Aug 29 00:43	2°♄02'41	
evening set	15109 Sep 14 06:24	18°♄49'31			15110 Aug 31 21:26	30°♄11	
inferior conj	15109 Sep 20 21:34	13°♄43'56	0°52'03	inferior conj	15110 Sep 04 02:33	26°♄40'04	1°51'22
minimum elong	15109 Sep 20 23:03	13°♄40'13	0°51'39	minimum elong	15110 Sep 04 04:54	26°♄33'27	1°50'30
desc. node	15109 Sep 23 18:12	10°♄53'39		min. Earth dist.	15110 Sep 06 15:35	23°♄50'02	0.63724 AU
min. Earth dist.	15109 Sep 23 21:58	10°♄44'40	0.61521 AU	morning rise	15110 Sep 10 07:14	20°♄23'22	
morning rise	15109 Sep 27 13:00	7°♄43'50		desc. node	15110 Sep 10 15:42	20°♄07'27	
direct	15109 Oct 04 04:59	5°♄26'38		direct	15110 Sep 16 22:07	17°♄50'55	
morning max el	15109 Oct 18 09:26	13°♄23'04	27°59'04	morning max el	15110 Sep 30 18:54	25°♄50'57	27°41'57
	15109 Oct 31 17:21	0°♄			15110 Oct 04 15:07	0°♄	
asc. node	15109 Nov 18 04:05	0°♄06'27			15110 Oct 25 06:37	0°♄	
	15109 Nov 18 02:47	0°♄		morning set	15110 Nov 04 15:53	19°♄18'30	
morning set	15109 Nov 20 22:05	5°♄41'14		asc. node	15110 Nov 05 00:53	20°♄03'37	
max. Earth dist.	15109 Nov 26 12:33	17°♄40'07	1.31437 AU	max. Earth dist.	15110 Nov 09 12:04	29°♄17'01	1.32354 AU
					15110 Nov 09 20:11	0°♄	
superior conj	15109 Nov 28 06:04	21°♄29'08	1°21'55	superior conj	15110 Nov 12 12:56	5°♄47'50	1°05'09
minimum elong	15109 Nov 28 04:01	21°♄17'51	1°22'38	minimum elong	15110 Nov 12 10:37	5°♄35'12	1°05'37
	15109 Dec 02 02:06	0°♄		evening rise	15110 Nov 19 10:01	20°♄46'45	
evening rise	15109 Dec 04 23:03	6°♄17'38			15110 Nov 23 19:53	0°♄	
	15109 Dec 17 04:10	0°♄		desc. node	15110 Dec 07 12:51	22°♄52'32	
desc. node	15109 Dec 20 15:50	5°♄32'06		evening max el	15110 Dec 12 12:37	28°♄29'09	23°17'38
evening max el	15109 Dec 31 02:57	18°♄27'27	24°58'50		15110 Dec 14 04:33	0°♄	
retrograde	15110 Jan 13 21:50	25°♄21'43		retrograde	15110 Dec 25 19:43	5°♄04'51	
evening set	15110 Jan 19 11:14	24°♄12'41		evening set	15110 Dec 30 04:07	4°♄23'48	
min. Earth dist.	15110 Jan 24 14:58	21°♄28'09	0.56370 AU	min. Earth dist.	15111 Jan 05 22:56	1°♄12'34	0.54988 AU
inferior conj	15110 Jan 27 04:34	19°♄49'14	-5°04'24	inferior conj	15111 Jan 07 09:04	0°♄23'10	-5°54'49
minimum elong	15110 Jan 27 13:31	19°♄34'52	5°01'38	minimum elong	15111 Jan 07 12:53	0°♄17'38	5°53'39
morning rise	15110 Feb 04 18:12	15°♄41'59			15111 Jan 08 01:07	30°♄3	
direct	15110 Feb 06 22:38	15°♄28'34		morning rise	15111 Jan 15 23:11	26°♄31'57	
asc. node	15110 Feb 14 02:28	18°♄04'02		direct	15111 Jan 18 18:01	26°♄13'25	
morning max el	15110 Feb 16 12:24	20°♄07'30	19°22'04		15111 Jan 28 02:48	0°♄	
	15110 Feb 24 00:33	0°♄		morning max el	15111 Jan 29 22:01	1°♄35'43	20°38'29
morning set	15110 Mar 05 11:45	17°♄35'39		asc. node	15111 Jan 31 23:51	3°♄46'16	
	15110 Mar 11 16:54	0°♄			15111 Feb 16 16:57	0°♄	
superior conj	15110 Mar 13 15:45	3°♄49'25	0°41'19	morning set	15111 Feb 17 19:12	2°♄14'53	
minimum elong	15110 Mar 13 18:02	4°♄00'26	0°40'59				
desc. node	15110 Mar 18 17:15	13°♄25'45		superior conj	15111 Feb 25 07:04	17°♄45'05	1°05'13
max. Earth dist.	15110 Mar 20 06:29	16°♄16'25	1.38205 AU	minimum elong	15111 Feb 25 09:41	17°♄58'23	1°05'09
evening rise	15110 Mar 23 23:29	22°♄52'47		max. Earth dist.	15111 Mar 02 14:12	28°♄16'10	1.36004 AU
	15110 Mar 28 03:38	0°♄			15111 Mar 03 11:51	0°♄	
	15110 Apr 17 04:27	0°♄		desc. node	15111 Mar 05 13:50	3°♄55'29	
evening max el	15110 Apr 28 07:51	13°♄06'37	24°54'48	evening rise	15111 Mar 06 10:57	5°♄33'14	
retrograde	15110 May 10 04:26	20°♄01'21			15111 Mar 21 00:06	0°♄	
asc. node	15110 May 12 23:14	19°♄28'25		evening max el	15111 Apr 10 21:24	26°♄58'18	26°05'32

	15111 Apr 14 06:20	0°♂		evening max el	15112 Mar 23 11:13	10°♂39'29	27°00'04
retrograde	15111 Apr 23 15:14	4°♂16'22		retrograde	15112 Apr 05 20:10	18°♂08'18	
evening set	15111 Apr 29 19:13	1°♂45'20		evening set	15112 Apr 12 09:04	15°♂36'32	
asc. node	15111 Apr 29 20:31	1°♂42'39		asc. node	15112 Apr 15 17:52	12°♂24'30	
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min. Earth dist.	15111 May 03 22:58	27°♂21'28	0.67229 AU	inferior conj	15112 Apr 18 12:38	9°♂14'15	0°51'28
inferior conj	15111 May 05 15:22	25°♂15'41	1°41'39	minimum elong	15112 Apr 18 11:20	9°♂18'01	0°50'28
minimum elong	15111 May 05 13:19	25°♂22'07	1°40'15	morning rise	15112 Apr 24 15:04	3°♂40'35	
morning rise	15111 May 11 08:11	19°♂29'51		direct	15112 Apr 27 11:27	2°♂56'29	
direct	15111 May 14 14:23	18°♂29'30		morning max el	15112 May 03 19:22	6°♂14'45	18°05'08
morning max el	15111 May 21 04:52	22°♂01'28	18°39'24	desc. node	15112 May 18 12:16	27°♂10'55	
	15111 May 27 17:46	0°♂			15112 May 20 06:04	0°♂	
desc. node	15111 Jun 01 15:24	7°♂10'30		morning set	15112 May 22 11:12	3°♂35'16	
morning set	15111 Jun 11 18:54	22°♂53'32					
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max. Earth dist.	15111 Jun 27 00:55	16°♂41'31	1.45866 AU	minimum elong	15112 Jun 05 22:50	26°♂43'59	1°57'11
					15112 Jun 08 00:50	0°♂	
superior conj	15111 Jun 27 21:04	18°♂00'09	-2°13'00	max. Earth dist.	15112 Jun 08 21:11	1°♂19'35	1.45843 AU
minimum elong	15111 Jun 27 18:40	17°♂50'47	2°13'54	evening rise	15112 Jun 22 09:53	22°♂18'38	
	15111 Jul 05 12:48	0°♂			15112 Jun 27 09:44	0°♂	
evening rise	15111 Jul 13 10:21	12°♂30'46		greatest brilliancy	15112 Jul 04 20:23	11°♂17'44	-0.7m
greatest brilliancy	15111 Jul 20 11:36	23°♂43'41	-0.9m	asc. node	15112 Jul 12 16:30	22°♂18'05	
	15111 Jul 24 12:14	0°♂		evening max el	15112 Jul 16 17:55	26°♂57'26	19°20'03
asc. node	15111 Jul 26 19:45	3°♂28'27			15112 Jul 20 15:28	0°♂	
evening max el	15111 Aug 03 09:03	13°♂07'16	18°36'50	retrograde	15112 Jul 23 18:56	0°♂52'11	
retrograde	15111 Aug 09 21:45	16°♂38'54			15112 Jul 26 18:56	30°♂8	
evening set	15111 Aug 13 02:51	15°♂40'17		evening set	15112 Jul 27 09:40	29°♂36'24	
inferior conj	15111 Aug 18 18:56	10°♂02'39	2°32'04	inferior conj	15112 Aug 01 19:23	23°♂45'11	2°57'01
minimum elong	15111 Aug 18 21:07	9°♂55'58	2°31'10	minimum elong	15112 Aug 01 20:51	23°♂40'25	2°56'09
min. Earth dist.	15111 Aug 20 18:18	7°♂37'56	0.65659 AU	min. Earth dist.	15112 Aug 03 04:27	21°♂57'01	0.67206 AU
morning rise	15111 Aug 24 14:16	3°♂38'16		morning rise	15112 Aug 07 07:25	17°♂19'29	
desc. node	15111 Aug 28 13:11	1°♂21'43		direct	15112 Aug 13 07:21	14°♂43'55	
direct	15111 Aug 30 23:24	0°♂59'43		desc. node	15112 Aug 14 10:38	14°♂48'53	
morning max el	15111 Sep 13 06:06	8°♂49'56	26°53'06	morning max el	15112 Aug 25 17:10	22°♂08'48	25°41'17
	15111 Sep 29 20:11	0°♂			15112 Sep 01 14:22	0°♂	
	15111 Oct 17 16:30	0°♂			15112 Sep 22 02:21	0°♂	
morning set	15111 Oct 18 23:04	2°♂25'09		morning set	15112 Sep 30 16:05	14°♂52'55	
asc. node	15111 Oct 22 21:37	10°♂08'52		max. Earth dist.	15112 Oct 04 07:06	21°♂37'26	1.35779 AU
max. Earth dist.	15111 Oct 23 02:20	10°♂32'35	1.33822 AU	asc. node	15112 Oct 08 18:16	0°♂18'08	
					15112 Oct 08 14:37	0°♂	
superior conj	15111 Oct 27 14:15	19°♂48'07	0°42'27				
minimum elong	15111 Oct 27 12:15	19°♂37'37	0°42'45	superior conj	15112 Oct 10 07:17	3°♂23'18	0°14'09
	15111 Nov 01 09:26	0°♂		minimum elong	15112 Oct 10 06:26	3°♂19'02	0°14'26
evening rise	15111 Nov 03 20:09	5°♂12'12		behind sun begin	15112 Oct 10 03:39	3°♂05'03	
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desc. node	15111 Nov 24 09:58	8°♂51'53			15112 Oct 23 09:36	0°♂	
retrograde	15111 Dec 06 07:16	14°♂35'04		evening max el	15112 Nov 05 02:49	19°♂09'53	20°11'57
evening set	15111 Dec 09 07:58	14°♂14'17		desc. node	15112 Nov 10 07:10	23°♂05'13	
inferior conj	15111 Dec 18 01:16	10°♂22'54	-5°50'43	retrograde	15112 Nov 15 18:54	24°♂28'37	
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min. Earth dist.	15111 Dec 18 04:40	10°♂18'08	0.54432 AU	inferior conj	15112 Nov 26 18:59	20°♂19'56	-4°47'31
morning rise	15111 Dec 26 08:28	6°♂34'32		minimum elong	15112 Nov 26 08:56	20°♂34'53	4°43'54
direct	15111 Dec 30 02:34	6°♂03'49		min. Earth dist.	15112 Nov 28 11:10	19°♂20'15	0.54819 AU
morning max el	15112 Jan 11 17:00	12°♂09'13	22°15'58	morning rise	15112 Dec 04 18:39	16°♂15'43	
asc. node	15112 Jan 18 21:10	20°♂43'55		direct	15112 Dec 09 13:04	15°♂26'31	
	15112 Jan 24 15:19	0°♂		morning max el	15112 Dec 23 02:49	22°♂07'40	24°05'11
morning set	15112 Feb 02 05:54	16°♂59'06			15112 Dec 29 23:22	0°♂	
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					15113 Jan 15 22:31	0°♂	
superior conj	15112 Feb 09 07:11	2°♂02'37	1°22'28	morning set	15113 Jan 16 17:50	1°♂43'04	
minimum elong	15112 Feb 09 09:22	2°♂14'10	1°22'46				
max. Earth dist.	15112 Feb 13 03:58	10°♂05'46	1.34098 AU	superior conj	15113 Jan 23 13:17	16°♂34'24	1°33'14
evening rise	15112 Feb 17 13:15	18°♂49'20		minimum elong	15113 Jan 23 14:36	16°♂41'35	1°33'54
desc. node	15112 Feb 20 10:24	24°♂16'56		max. Earth dist.	15113 Jan 26 01:37	22°♂00'36	1.32612 AU
	15112 Feb 23 13:59	0°♂			15113 Jan 29 20:58	0°♂	
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

























































































































desc. node	15113 Feb 06 07:00	14° $\text{X}$ 25'39			15114 Jan 07 09:49	0° $\approx$	
	15113 Feb 15 10:32	0° $\text{Y}$					
evening max el	15113 Mar 06 00:04	23° $\text{Y}$ 59'00	27°30'53	superior conj	15114 Jan 07 23:02	1° $\approx$ 13'27	1°37'47
	15113 Mar 14 01:45	0° $\text{B}$		minimum elong	15114 Jan 07 23:18	1° $\approx$ 14'56	1°38'40
retrograde	15113 Mar 19 18:12	1° $\text{B}$ 28'26		max. Earth dist.	15114 Jan 09 05:43	4° $\approx$ 03'26	1.31603 AU
	15113 Mar 25 01:15	30° $\text{K}$ $\text{Y}$		evening rise	15114 Jan 15 01:19	16° $\approx$ 36'02	
evening set	15113 Mar 26 13:09	29° $\text{Y}$ 02'28			15114 Jan 21 19:47	0° $\text{X}$	
min. Earth dist.	15113 Mar 30 08:20	25° $\text{Y}$ 42'29	0.63888 AU	desc. node	15114 Jan 24 03:40	4° $\text{X}$ 15'40	
inferior conj	15113 Apr 02 00:51	22° $\text{Y}$ 55'07	-0°11'30		15114 Feb 10 05:26	0° $\text{Y}$	
minimum elong	15113 Apr 02 01:13	22° $\text{Y}$ 54'11	0°11'38	evening max el	15114 Feb 16 09:44	6° $\text{Y}$ 43'45	27°31'33
transit middle	15113 Apr 02 01:13	22° $\text{Y}$ 54'11	0°11'38	retrograde	15114 Mar 02 08:28	14° $\text{Y}$ 07'35	
transit begin	15113 Apr 01 23:04	22° $\text{Y}$ 59'47		evening set	15114 Mar 09 04:49	11° $\text{Y}$ 54'39	
transit end	15113 Apr 02 03:21	22° $\text{Y}$ 48'36		min. Earth dist.	15114 Mar 12 23:11	8° $\text{Y}$ 59'21	0.61772 AU
asc. node	15113 Apr 02 15:16	22° $\text{Y}$ 17'47		inferior conj	15114 Mar 16 00:48	6° $\text{Y}$ 10'09	-1°27'10
morning rise	15113 Apr 08 15:34	17° $\text{Y}$ 36'08		minimum elong	15114 Mar 16 03:51	6° $\text{Y}$ 03'05	1°25'56
direct	15113 Apr 11 03:22	17° $\text{Y}$ 05'07		asc. node	15114 Mar 20 12:41	2° $\text{Y}$ 29'02	
morning max el	15113 Apr 17 12:44	20° $\text{Y}$ 21'29	17°48'07	morning rise	15114 Mar 23 05:58	1° $\text{Y}$ 08'50	
	15113 Apr 24 21:03	0° $\text{B}$		direct	15114 Mar 25 10:43	0° $\text{Y}$ 47'31	
morning set	15113 May 04 06:39	15° $\text{B}$ 34'44		morning max el	15114 Apr 01 05:56	4° $\text{Y}$ 13'17	17°48'53
desc. node	15113 May 05 09:00	17° $\text{B}$ 26'28		morning set	15114 Apr 17 00:15	28° $\text{Y}$ 36'21	
	15113 May 12 20:55	0° $\text{II}$			15114 Apr 17 19:01	0° $\text{B}$	
				desc. node	15114 Apr 22 05:41	7° $\text{B}$ 52'24	
superior conj	15113 May 17 07:30	7° $\text{II}$ 15'31	-1°25'27				
minimum elong	15113 May 16 23:27	6° $\text{II}$ 42'56	1°25'21	superior conj	15114 Apr 28 06:57	18° $\text{B}$ 19'25	-0°47'16
max. Earth dist.	15113 May 22 16:43	15° $\text{II}$ 52'22	1.45079 AU	minimum elong	15114 Apr 28 02:32	18° $\text{B}$ 00'42	0°47'15
	15113 May 31 18:26	0° $\text{E}$			15114 May 05 08:07	0° $\text{II}$	
evening rise	15113 Jun 01 21:08	1° $\text{E}$ 42'18		max. Earth dist.	15114 May 05 08:57	0° $\text{II}$ 03'23	1.43657 AU
	15113 Jun 21 01:16	0° $\text{O}$		evening rise	15114 May 12 12:30	11° $\text{II}$ 23'56	
asc. node	15113 Jun 29 13:20	10° $\text{O}$ 30'08			15114 May 24 20:32	0° $\text{E}$	
evening max el	15113 Jun 29 21:01	10° $\text{O}$ 49'34	20°18'27	evening max el	15114 Jun 12 18:12	24° $\text{E}$ 41'50	21°29'20
retrograde	15113 Jul 07 17:49	15° $\text{O}$ 18'59		asc. node	15114 Jun 16 10:17	27° $\text{E}$ 52'25	
evening set	15113 Jul 11 18:48	13° $\text{O}$ 45'35		retrograde	15114 Jun 21 16:32	29° $\text{E}$ 54'00	
inferior conj	15113 Jul 17 01:10	7° $\text{O}$ 42'01	3°08'36	evening set	15114 Jun 26 04:20	28° $\text{E}$ 03'40	
minimum elong	15113 Jul 17 01:40	7° $\text{O}$ 40'18	3°07'45	inferior conj	15114 Jul 01 10:01	21° $\text{E}$ 49'12	3°08'34
min. Earth dist.	15113 Jul 17 20:14	6° $\text{O}$ 36'50	0.68303 AU	minimum elong	15114 Jul 01 09:32	21° $\text{E}$ 50'50	3°07'36
morning rise	15113 Jul 22 08:13	1° $\text{O}$ 19'08		min. Earth dist.	15114 Jul 01 15:38	21° $\text{E}$ 29'35	0.68921 AU
	15113 Jul 24 02:32	30° $\text{K}$ $\text{E}$		morning rise	15114 Jul 06 14:33	15° $\text{E}$ 31'42	
direct	15113 Jul 27 20:48	28° $\text{E}$ 53'57		direct	15114 Jul 11 14:49	13° $\text{E}$ 22'11	
	15113 Jul 31 23:42	0° $\text{O}$		desc. node	15114 Jul 19 05:19	17° $\text{E}$ 02'29	
desc. node	15113 Aug 01 08:02	0° $\text{O}$ 10'50		morning max el	15114 Jul 21 15:31	19° $\text{E}$ 18'21	22°46'37
morning max el	15113 Aug 08 03:49	5° $\text{O}$ 39'14	24°15'59		15114 Jul 30 16:04	0° $\text{O}$	
	15113 Aug 27 00:20	0° $\text{P}$			15114 Aug 20 03:41	0° $\text{P}$	
morning set	15113 Sep 12 14:40	26° $\text{P}$ 31'18		morning set	15114 Aug 24 14:47	7° $\text{P}$ 11'37	
	15113 Sep 14 14:33	0° $\text{E}$		max. Earth dist.	15114 Aug 29 05:47	14° $\text{P}$ 54'56	1.40458 AU
max. Earth dist.	15113 Sep 16 06:15	2° $\text{E}$ 56'11	1.38074 AU				
				superior conj	15114 Sep 06 02:06	28° $\text{P}$ 41'56	-0°54'49
superior conj	15113 Sep 23 12:34	16° $\text{E}$ 24'09	-0°18'56	minimum elong	15114 Sep 06 06:20	29° $\text{P}$ 01'08	0°54'15
minimum elong	15113 Sep 23 13:51	16° $\text{E}$ 30'20	0°18'31		15114 Sep 06 19:17	0° $\text{E}$	
asc. node	15113 Sep 25 14:51	20° $\text{E}$ 27'06		asc. node	15114 Sep 12 11:26	10° $\text{E}$ 32'39	
	15113 Sep 30 11:02	0° $\text{M}$		evening rise	15114 Sep 15 22:52	17° $\text{E}$ 08'08	
evening rise	15113 Oct 02 05:21	3° $\text{M}$ 30'09			15114 Sep 22 21:56	0° $\text{M}$	
	15113 Oct 18 04:09	0° $\text{X}$		evening max el	15114 Oct 01 21:21	12° $\text{M}$ 49'30	18°26'18
evening max el	15113 Oct 18 18:10	0° $\text{X}$ 36'12	19°08'05	retrograde	15114 Oct 09 15:24	16° $\text{M}$ 45'24	
retrograde	15113 Oct 27 19:39	5° $\text{X}$ 09'30		evening set	15114 Oct 11 15:15	16° $\text{M}$ 30'31	
desc. node	15113 Oct 28 04:28	5° $\text{X}$ 09'04		desc. node	15114 Oct 15 01:49	15° $\text{M}$ 02'18	
evening set	15113 Oct 29 16:38	4° $\text{X}$ 58'37		inferior conj	15114 Oct 19 09:22	11° $\text{M}$ 56'53	-1°22'53
inferior conj	15113 Nov 07 03:31	0° $\text{X}$ 45'32	-3°08'00	minimum elong	15114 Oct 19 06:09	12° $\text{M}$ 03'17	1°21'00
minimum elong	15113 Nov 06 19:42	0° $\text{X}$ 58'48	3°04'20	min. Earth dist.	15114 Oct 22 15:04	9° $\text{M}$ 23'29	0.57965 AU
	15113 Nov 08 06:11	30° $\text{K}$ $\text{M}$		morning rise	15114 Oct 26 17:32	6° $\text{M}$ 42'28	
min. Earth dist.	15113 Nov 09 21:37	28° $\text{M}$ 53'40	0.56071 AU	direct	15114 Nov 01 22:57	5° $\text{M}$ 02'47	
morning rise	15113 Nov 14 20:13	26° $\text{M}$ 08'40		morning max el	15114 Nov 16 05:59	12° $\text{M}$ 36'54	27°08'26
direct	15113 Nov 20 10:44	24° $\text{M}$ 55'59			15114 Nov 29 22:33	0° $\text{X}$	
	15113 Dec 02 04:10	0° $\text{X}$		asc. node	15114 Dec 09 12:34	16° $\text{X}$ 30'11	
morning max el	15113 Dec 04 12:59	2° $\text{X}$ 06'19	25°48'55		15114 Dec 16 05:02	0° $\text{E}$	
asc. node	15113 Dec 22 15:32	27° $\text{X}$ 19'01		morning set	15114 Dec 16 14:15	0° $\text{E}$ 49'09	
	15113 Dec 24 02:43	0° $\text{E}$					
morning set	15114 Jan 01 05:12	16° $\text{E}$ 21'19		superior conj	15114 Dec 23 10:27	15° $\text{E}$ 54'04	1°36'19



minimum elong	15114 Dec 23 09:40	15°  49'42	1°37'15	asc. node	15115 Nov 26 09:32	6°  04'43	
max. Earth dist.	15114 Dec 23 13:14	16°  09'39	1.31110 AU	morning set	15115 Nov 30 19:10	15°  01'56	
	15114 Dec 29 19:49	0° 		max. Earth dist.	15115 Dec 06 20:37	28°  11'29	1.31156 AU
evening rise	15114 Dec 30 05:46	0°  53'11					
desc. node	15115 Jan 11 00:24	23°  39'19		superior conj	15115 Dec 07 21:39	0°  30'59	1°28'55
	15115 Jan 14 21:09	0° 		minimum elong	15115 Dec 07 20:00	0°  21'42	1°29'43
evening max el	15115 Jan 29 13:34	18°  41'56	26°57'52		15115 Dec 07 16:06	0° 	
retrograde	15115 Feb 12 13:45	25°  56'27		evening rise	15115 Dec 14 14:16	15°  219'21	
evening set	15115 Feb 19 04:50	24°  04'12			15115 Dec 21 18:48	0° 	
min. Earth dist.	15115 Feb 23 03:44	21°  42'02	0.59543 AU	desc. node	15115 Dec 28 21:14	12°  26'47	
inferior conj	15115 Feb 26 08:48	18°  49'22	-2°52'50	evening max el	15116 Jan 11 09:39	29°  48'22	25°50'19
minimum elong	15115 Feb 26 15:16	18°  36'21	2°50'07		15116 Jan 11 14:35	0° 	
morning rise	15115 Mar 06 05:07	14°  08'21		retrograde	15116 Jan 25 08:06	6°  50'38	
asc. node	15115 Mar 07 10:09	13°  55'38		evening set	15116 Jan 31 09:25	5°  25'18	
direct	15115 Mar 08 05:20	13°  53'11		min. Earth dist.	15116 Feb 04 22:40	2°  46'54	0.57428 AU
morning max el	15115 Mar 15 19:27	17°  39'31	18°08'30	inferior conj	15116 Feb 07 21:28	0°  43'42	-4°19'58
	15115 Mar 24 14:46	0° 		minimum elong	15116 Feb 08 06:30	0°  47'56	4°16'42
morning set	15115 Mar 31 10:00	12°  21'40			15116 Feb 08 22:42	30° 	
desc. node	15115 Apr 09 02:18	28°  24'01		morning rise	15116 Feb 16 06:32	26°  24'08	
	15115 Apr 09 23:39	0° 		direct	15116 Feb 18 07:04	26° 	
				asc. node	15116 Feb 22 07:35	27°  05'04	
superior conj	15115 Apr 10 05:27	0°  25'58	-0°09'15		15116 Feb 26 13:08	0° 	
minimum elong	15115 Apr 10 04:41	0°  22'31	0°09'31	morning max el	15116 Feb 27 01:16	0°  48'50	18°48'41
behind sun begin	15115 Apr 09 22:29	29°  54'45		morning set	15116 Mar 14 07:02	26°  43'38	
behind sun end	15115 Apr 10 10:53	0°  50'14			15116 Mar 16 00:38	0° 	
max. Earth dist.	15115 Apr 17 20:05	13°  37'14	1.41733 AU				
evening rise	15115 Apr 22 20:29	21°  52'28		superior conj	15116 Mar 22 23:17	13°  24'33	0°24'34
	15115 Apr 27 23:42	0° 		minimum elong	15116 Mar 23 00:51	13°  31'55	0°24'09
	15115 May 18 23:50	0° 		desc. node	15116 Mar 25 22:54	18°  57'55	
evening max el	15115 May 26 10:41	8°  34'04	22°48'26	max. Earth dist.	15116 Mar 30 03:17	26°  29'25	1.39522 AU
asc. node	15115 Jun 03 07:19	14°  08'27			15116 Apr 01 03:35	0° 	
retrograde	15115 Jun 05 13:26	14°  30'52		evening rise	15116 Apr 03 01:44	3°  17'13	
evening set	15115 Jun 10 12:33	12°  25'12			15116 Apr 20 04:18	0° 	
inferior conj	15115 Jun 15 19:53	6°  02'01	2°57'52	evening max el	15116 May 08 00:49	22°  28'07	24°09'47
minimum elong	15115 Jun 15 18:33	6°  06'37	2°56'44	retrograde	15116 May 19 07:09	29°  04'05	
min. Earth dist.	15115 Jun 15 12:32	6°  27'35	0.69055 AU	asc. node	15116 May 20 04:27	29°  00'40	
	15115 Jun 20 20:29	30°  00'00		evening set	15116 May 24 17:52	26°  45'40	
morning rise	15115 Jun 21 00:27	29°  25'13		min. Earth dist.	15116 May 29 08:44	21°  24'58	0.68712 AU
direct	15115 Jun 25 12:16	28°  00'50		inferior conj	15116 May 30 04:53	20°  16'43	2°36'48
	15115 Jun 30 16:44	0° 		minimum elong	15116 May 30 02:56	20°  23'16	2°35'28
morning max el	15115 Jul 04 06:52	3°  05'36	21°21'28	morning rise	15116 Jun 04 12:05	14°  21'48	
desc. node	15115 Jul 06 02:34	5°  00'29		direct	15116 Jun 08 11:53	12°  24'04	
	15115 Jul 24 14:25	0° 		morning max el	15116 Jun 16 04:31	17°  03'13	20°06'51
morning set	15115 Aug 04 14:40	16°  04'39		desc. node	15116 Jun 21 23:43	23°  14'21	
max. Earth dist.	15115 Aug 11 10:11	27°  04'51	1.42650 AU		15116 Jun 26 13:40	0° 	
	15115 Aug 12 19:07	0° 		morning set	15116 Jul 13 20:31	25°  02'51	
					15116 Jul 16 15:07	0° 	
superior conj	15115 Aug 18 19:28	10°  06'37	-1°29'57	max. Earth dist.	15116 Jul 23 21:29	11°  02'43	1.44406 AU
minimum elong	15115 Aug 19 02:28	10°  06'39	1°29'31				
evening rise	15115 Aug 30 03:56	0°  12'17		superior conj	15116 Jul 29 13:27	20°  02'04	-1°58'33
asc. node	15115 Aug 30 08:02	0°  30'48		minimum elong	15116 Jul 29 20:38	21°  01'22	1°58'43
	15115 Aug 30 01:13	0° 			15116 Aug 04 06:56	0° 	
evening max el	15115 Sep 15 08:11	25°  40'30	18°05'14	evening rise	15116 Aug 11 15:32	12°  09'51	
retrograde	15115 Sep 22 05:04	29°  11'52		asc. node	15116 Aug 16 04:38	20°  09'05	
evening set	15115 Sep 24 11:55	28°  48'44			15116 Aug 22 02:31	0° 	
inferior conj	15115 Oct 01 12:20	23°  54'33	0°08'30	evening max el	15116 Aug 28 22:34	8°  58'34	18°03'22
minimum elong	15115 Oct 01 12:37	23°  53'53	0°08'42	retrograde	15116 Sep 04 08:43	12°  19'17	
transit middle	15115 Oct 01 12:37	23°  53'53	0°08'42	evening set	15116 Sep 06 23:54	11°  44'18	
transit begin	15115 Oct 01 09:49	24°  00'21		inferior conj	15116 Sep 13 08:59	6°  31'22	1°19'37
transit end	15115 Oct 01 15:26	23°  47'24		minimum elong	15116 Sep 13 11:00	6°  26'03	1°18'57
desc. node	15115 Oct 01 23:13	23°  29'22		min. Earth dist.	15116 Sep 16 05:04	3°  33'48	0.62483 AU
min. Earth dist.	15115 Oct 04 17:16	20°  58'27	0.60199 AU	desc. node	15116 Sep 17 20:43	1°  59'04	
morning rise	15115 Oct 08 10:07	18°  08'31		morning rise	15116 Sep 19 19:45	0°  23'20	
direct	15115 Oct 15 00:16	16°  03'07			15116 Sep 20 09:12	30°	
morning max el	15115 Oct 29 06:47	23°  53'56	27°51'52	direct	15116 Sep 26 12:08	27°  08'26	
	15115 Nov 03 19:22	0°			15116 Oct 03 03:20	0°	
	15115 Nov 23 05:18	0°		morning max el	15116 Oct 10 13:40	5°  57'20	27°56'07

	15116 Oct 28 19:23	0°♄			15117 Oct 02 14:30	0°♄		
asc. node	15116 Nov 12 06:23	25°♄55'06			15117 Oct 21 18:16	0°♄		
morning set	15116 Nov 13 17:42	28°♄53'30		morning set	15117 Oct 28 07:22	12°♄18'32		
	15116 Nov 14 06:41	0°♄		asc. node	15117 Oct 30 03:10	15°♄56'15		
max. Earth dist.	15116 Nov 19 00:05	9°♄59'41	1.31760 AU	max. Earth dist.	15117 Nov 01 20:10	21°♄28'26	1.32919 AU	
superior conj	15116 Nov 21 06:41	14°♄57'49	1°15'34	superior conj	15117 Nov 05 11:30	29°♄09'29	0°56'15	
minimum elong	15116 Nov 21 04:28	14°♄45'36	1°16'10	minimum elong	15117 Nov 05 09:13	28°♄57'17	0°56'39	
evening rise	15116 Nov 28 00:50	29°♄48'45			15117 Nov 05 20:55	0°♄		
	15116 Nov 28 02:55	0°♄		evening rise	15117 Nov 12 11:42	14°♄17'12		
	15116 Dec 14 11:30	0°♄			15117 Nov 20 06:49	0°♄		
desc. node	15116 Dec 14 18:11	0°♄23'50		desc. node	15117 Dec 01 15:12	17°♄12'34		
evening max el	15116 Dec 22 21:58	10°♄07'35	24°16'55	evening max el	15117 Dec 04 07:49	20°♄04'42	22°33'43	
retrograde	15117 Jan 05 13:04	16°♄54'18		retrograde	15117 Dec 17 05:23	26°♄28'05		
evening set	15117 Jan 10 15:05	15°♄57'52		evening set	15117 Dec 21 00:14	25°♄56'43		
min. Earth dist.	15117 Jan 16 09:38	13°♄04'20	0.55703 AU	min. Earth dist.	15117 Dec 28 15:51	22°♄28'39	0.54652 AU	
inferior conj	15117 Jan 18 13:01	11°♄45'57	-5°31'01	inferior conj	15117 Dec 29 10:51	22°♄01'53	-6°00'37	
minimum elong	15117 Jan 18 20:36	11°♄34'21	5°28'57	minimum elong	15117 Dec 29 10:49	22°♄01'55	5°59'41	
morning rise	15117 Jan 27 04:00	7°♄46'11		morning rise	15118 Jan 06 22:37	18°♄14'14		
direct	15117 Jan 29 13:24	7°♄31'13		direct	15118 Jan 10 02:51	17°♄51'19		
asc. node	15117 Feb 08 05:00	11°♄55'13		morning max el	15118 Jan 21 22:06	23°♄31'39	21°17'39	
morning max el	15117 Feb 08 19:04	12°♄28'20	19°51'37	asc. node	15118 Jan 26 02:21	28°♄11'24		
	15117 Feb 20 19:01	0°♄			15118 Jan 27 11:13	0°♄		
morning set	15117 Feb 26 11:31	11°♄09'21		morning set	15118 Feb 10 20:37	25°♄51'29		
					15118 Feb 12 19:59	0°♄		
superior conj	15117 Mar 06 07:54	27°♄02'12	0°52'16	superior conj	15118 Feb 18 03:19	11°♄08'01	1°13'20	
minimum elong	15117 Mar 06 10:26	27°♄14'46	0°52'01	minimum elong	15118 Feb 18 05:49	11°♄20'59	1°13'25	
	15117 Mar 07 19:58	0°♄		max. Earth dist.	15118 Feb 22 20:03	20°♄39'39	1.35155 AU	
max. Earth dist.	15117 Mar 12 09:53	8°♄45'25	1.37253 AU	evening rise	15118 Feb 26 21:14	28°♄28'32		
desc. node	15117 Mar 12 19:28	9°♄29'56		desc. node	15118 Feb 27 16:01	29°♄56'20		
evening rise	15117 Mar 16 03:04	15°♄32'15			15118 Feb 27 16:48	0°♄		
	15117 Mar 24 15:17	0°♄			15118 Mar 17 21:23	0°♄		
	15117 Apr 14 18:43	0°♄		evening max el	15118 Apr 03 04:06	20°♄10'11	26°31'06	
evening max el	15117 Apr 20 14:25	6°♄22'14	25°26'28	retrograde	15118 Apr 16 04:46	27°♄33'45		
retrograde	15117 May 02 20:32	13°♄27'36		evening set	15118 Apr 22 13:01	25°♄01'29		
asc. node	15117 May 07 01:41	12°♄13'56		asc. node	15118 Apr 23 23:00	23°♄45'27		
evening set	15117 May 08 18:37	10°♄59'50		min. Earth dist.	15118 Apr 26 14:23	20°♄52'28	0.66647 AU	
min. Earth dist.	15117 May 13 02:04	6°♄15'42	0.67902 AU	inferior conj	15118 Apr 28 12:14	18°♄34'21	1°21'54	
inferior conj	15117 May 14 11:03	4°♄29'14	2°05'03	minimum elong	15118 Apr 28 10:24	18°♄39'55	1°20'36	
minimum elong	15117 May 14 08:53	4°♄36'14	2°03'37	morning rise	15118 May 04 08:49	12°♄53'41		
	15117 May 18 07:07	30°♄		direct	15118 May 07 10:47	12°♄00'33		
morning rise	15117 May 19 23:34	28°♄37'09		morning max el	15118 May 13 21:22	15°♄24'48	18°22'46	
direct	15117 May 23 12:01	27°♄26'04			15118 May 24 19:30	0°♄		
	15117 May 29 02:24	0°♄		desc. node	15118 May 26 17:43	2°♄58'55		
morning max el	15117 May 30 09:39	1°♄11'11	19°06'42	morning set	15118 Jun 03 02:36	14°♄36'55		
desc. node	15117 Jun 08 20:47	13°♄10'09			15118 Jun 12 20:45	0°♄		
greatest brilliancy	15117 Jun 12 08:53	18°♄19'38	-0.7m	superior conj	15118 Jun 18 18:27	9°♄13'46	-2°08'26	
	15117 Jun 20 01:02	0°♄		minimum elong	15118 Jun 18 12:56	8°♄52'14	2°09'11	
morning set	15117 Jun 23 02:01	4°♄41'03		max. Earth dist.	15118 Jun 19 10:35	10°♄16'41	1.45946 AU	
max. Earth dist.	15117 Jul 06 14:37	25°♄41'32	1.45539 AU		15118 Jul 02 01:48	0°♄		
superior conj	15117 Jul 09 09:38	0°♄04'51	-2°13'15	evening rise	15118 Jul 04 16:49	4°♄06'51		
minimum elong	15117 Jul 09 11:49	0°♄13'25	2°14'06	greatest brilliancy	15118 Jul 14 06:59	19°♄04'34	-0.8m	
	15117 Jul 09 08:25	0°♄		asc. node	15118 Jul 20 21:58	28°♄52'49		
evening rise	15117 Jul 24 04:38	23°♄49'28			15118 Jul 21 17:30	0°♄		
	15117 Jul 27 23:22	0°♄		evening max el	15118 Jul 27 00:21	6°♄20'26	18°53'13	
asc. node	15117 Aug 03 01:16	9°♄46'42		retrograde	15118 Aug 02 17:21	10°♄00'40		
evening max el	15117 Aug 12 12:57	22°♄34'38	18°19'37	evening set	15118 Aug 06 02:28	8°♄54'48		
retrograde	15117 Aug 18 22:06	25°♄58'30		inferior conj	15118 Aug 11 15:25	3°♄10'57	2°44'27	
evening set	15117 Aug 21 22:02	25°♄08'57		minimum elong	15118 Aug 11 17:20	3°♄04'52	2°43'33	
inferior conj	15117 Aug 27 19:15	19°♄39'33	2°10'44	min. Earth dist.	15118 Aug 13 08:36	1°♄00'53	0.66362 AU	
minimum elong	15117 Aug 27 21:38	19°♄32'36	2°09'50		15118 Aug 14 04:34	30°♄		
min. Earth dist.	15117 Aug 30 02:31	16°♄58'58	0.64585 AU	morning rise	15118 Aug 17 07:21	26°♄45'13		
morning rise	15117 Sep 02 19:46	13°♄18'53		desc. node	15118 Aug 22 15:42	24°♄10'07		
desc. node	15117 Sep 04 18:12	11°♄59'23		direct	15118 Aug 23 12:44	24°♄07'12		
direct	15117 Sep 09 08:41	10°♄43'00			15118 Sep 03 14:41	0°♄		
morning max el	15117 Sep 23 00:08	18°♄39'46	27°24'43					

morning max el	15118 Sep 05 11:37	1° $\mathbb{M}$ 48'43	26°24'57	direct	15119 Aug 06 23:14	8° $\Omega$ 02'42	
	15118 Sep 26 17:21	0° $\underline{\Omega}$		desc. node	15119 Aug 09 13:08	8° $\Omega$ 28'22	
morning set	15118 Oct 11 08:58	25° $\underline{\Omega}$ 09'14		morning max el	15119 Aug 18 22:33	15° $\Omega$ 13'10	25°06'00
	15118 Oct 13 22:02	0° $\mathbb{M}$			15119 Aug 31 02:17	0° $\mathbb{M}$	
max. Earth dist.	15118 Oct 15 06:25	2° $\mathbb{M}$ 37'49	1.34599 AU		15119 Sep 19 14:21	0° $\underline{\Omega}$	
asc. node	15118 Oct 16 23:50	6° $\mathbb{M}$ 03'11		morning set	15119 Sep 23 18:39	7° $\underline{\Omega}$ 16'42	
				max. Earth dist.	15119 Sep 27 07:44	13° $\underline{\Omega}$ 42'45	1.36720 AU
superior conj	15118 Oct 20 09:35	12° $\mathbb{M}$ 59'09	0°31'06				
minimum elong	15118 Oct 20 07:58	12° $\mathbb{M}$ 50'46	0°31'23	superior conj	15119 Oct 03 22:01	26° $\underline{\Omega}$ 19'50	0°00'36
evening rise	15118 Oct 27 20:52	28° $\mathbb{M}$ 39'10		minimum elong	15119 Oct 03 21:57	26° $\underline{\Omega}$ 19'34	0°00'56
	15118 Oct 28 12:21	0° $\mathbb{M}$		behind sun begin	15119 Oct 03 15:30	25° $\underline{\Omega}$ 47'45	
	15118 Nov 15 17:48	0° $\mathbb{Z}$		behind sun end	15119 Oct 04 04:25	26° $\underline{\Omega}$ 51'27	
evening max el	15118 Nov 16 01:04	0° $\mathbb{Z}$ 18'12	20°58'32	asc. node	15119 Oct 03 20:27	26° $\underline{\Omega}$ 12'05	
desc. node	15118 Nov 18 12:20	2° $\mathbb{Z}$ 29'44			15119 Oct 05 18:18	0° $\mathbb{M}$	
retrograde	15118 Nov 27 15:49	6° $\mathbb{Z}$ 04'10		evening rise	15119 Oct 12 02:08	12° $\mathbb{M}$ 49'10	
evening set	15118 Nov 30 05:36	5° $\mathbb{Z}$ 48'24			15119 Oct 21 02:42	0° $\mathbb{M}$	
inferior conj	15118 Dec 09 01:49	1° $\mathbb{Z}$ 55'56	-5°30'20	evening max el	15119 Oct 29 08:17	11° $\mathbb{M}$ 15'41	19°42'08
minimum elong	15118 Dec 08 17:31	2° $\mathbb{Z}$ 07'45	5°27'53	desc. node	15119 Nov 05 09:34	15° $\mathbb{M}$ 49'35	
min. Earth dist.	15118 Dec 09 21:25	1° $\mathbb{Z}$ 28'01	0.54479 AU	retrograde	15119 Nov 08 07:45	16° $\mathbb{M}$ 14'37	
	15118 Dec 12 13:38	30° $\mathbb{M}$ 47		evening set	15119 Nov 10 06:41	16° $\mathbb{M}$ 04'01	
morning rise	15118 Dec 17 05:40	28° $\mathbb{M}$ 03'19		inferior conj	15119 Nov 19 00:30	12° $\mathbb{M}$ 01'39	-4°07'51
direct	15118 Dec 21 10:04	27° $\mathbb{M}$ 25'43		minimum elong	15119 Nov 18 14:47	12° $\mathbb{M}$ 16'51	4°03'52
	15118 Dec 29 16:31	0° $\mathbb{Z}$		min. Earth dist.	15119 Nov 21 05:34	10° $\mathbb{M}$ 38'42	0.55246 AU
morning max el	15119 Jan 03 12:19	3° $\mathbb{Z}$ 47'14	23°01'55	morning rise	15119 Nov 26 21:11	7° $\mathbb{M}$ 44'36	
asc. node	15119 Jan 12 23:38	15° $\mathbb{Z}$ 35'42		direct	15119 Dec 02 00:43	6° $\mathbb{M}$ 45'49	
	15119 Jan 21 04:14	0° $\approx$		morning max el	15119 Dec 15 21:13	13° $\mathbb{M}$ 41'10	24°51'12
morning set	15119 Jan 26 08:04	10° $\approx$ 36'35			15119 Dec 28 13:12	0° $\mathbb{Z}$	
				asc. node	15119 Dec 30 20:50	3° $\mathbb{Z}$ 51'21	
superior conj	15119 Feb 02 06:19	25° $\approx$ 33'02	1°27'48	morning set	15120 Jan 10 19:57	25° $\mathbb{Z}$ 18'29	
minimum elong	15119 Feb 02 08:10	25° $\approx$ 42'59	1°28'16		15120 Jan 12 23:47	0° $\approx$	
	15119 Feb 04 08:27	0° $\mathbb{M}$					
max. Earth dist.	15119 Feb 05 13:05	2° $\mathbb{M}$ 30'16	1.33407 AU	superior conj	15120 Jan 17 14:14	10° $\approx$ 08'46	1°35'54
evening rise	15119 Feb 10 04:48	11° $\mathbb{M}$ 57'23		minimum elong	15120 Jan 17 15:07	10° $\approx$ 13'37	1°36'41
desc. node	15119 Feb 14 12:34	20° $\mathbb{M}$ 13'02		max. Earth dist.	15120 Jan 19 13:31	14° $\approx$ 27'31	1.32115 AU
	15119 Feb 20 00:49	0° $\mathbb{Y}$		evening rise	15120 Jan 24 22:31	25° $\approx$ 50'07	
	15119 Mar 13 03:38	0° $\mathbb{Z}$			15120 Jan 27 00:03	0° $\mathbb{M}$	
evening max el	15119 Mar 16 17:31	3° $\mathbb{Z}$ 43'16	27°16'22	desc. node	15120 Feb 01 09:09	10° $\mathbb{M}$ 14'23	
retrograde	15119 Mar 30 07:03	11° $\mathbb{Z}$ 14'03			15120 Feb 13 11:04	0° $\mathbb{Y}$	
evening set	15119 Apr 05 23:03	8° $\mathbb{Z}$ 43'31		evening max el	15120 Feb 27 05:14	16° $\mathbb{Y}$ 49'26	27°35'11
min. Earth dist.	15119 Apr 09 19:50	5° $\mathbb{Z}$ 06'53	0.64991 AU	retrograde	15120 Mar 12 02:13	24° $\mathbb{Y}$ 17'52	
asc. node	15119 Apr 10 20:22	3° $\mathbb{Z}$ 59'59		evening set	15120 Mar 18 22:14	21° $\mathbb{Y}$ 56'33	
inferior conj	15119 Apr 12 06:01	2° $\mathbb{Z}$ 26'32	0°26'23	min. Earth dist.	15120 Mar 22 16:37	18° $\mathbb{Y}$ 47'44	0.63012 AU
minimum elong	15119 Apr 12 05:17	2° $\mathbb{Z}$ 28'32	0°25'39	inferior conj	15120 Mar 25 13:27	15° $\mathbb{Y}$ 57'34	-0°42'06
	15119 Apr 14 13:19	30° $\mathbb{M}$ 47		minimum elong	15120 Mar 25 14:50	15° $\mathbb{Y}$ 54'08	0°41'42
morning rise	15119 Apr 18 13:24	26° $\mathbb{Y}$ 59'05		asc. node	15120 Mar 27 17:47	13° $\mathbb{Y}$ 52'26	
direct	15119 Apr 21 05:54	26° $\mathbb{Y}$ 21'04		morning rise	15120 Apr 01 10:07	10° $\mathbb{Y}$ 45'43	
morning max el	15119 Apr 27 13:33	29° $\mathbb{Y}$ 37'10	17°55'47	direct	15120 Apr 03 18:34	10° $\mathbb{Y}$ 19'23	
	15119 Apr 27 22:45	0° $\mathbb{Z}$		morning max el	15120 Apr 10 07:15	13° $\mathbb{Y}$ 38'43	17°46'09
desc. node	15119 May 13 14:32	23° $\mathbb{Z}$ 06'34			15120 Apr 21 16:04	0° $\mathbb{Z}$	
morning set	15119 May 15 06:51	25° $\mathbb{Z}$ 53'00		morning set	15120 Apr 26 12:28	8° $\mathbb{Z}$ 20'59	
	15119 May 17 18:46	0° $\mathbb{M}$		desc. node	15120 Apr 29 11:14	13° $\mathbb{Z}$ 26'48	
superior conj	15119 May 29 09:03	18° $\mathbb{M}$ 44'46	-1°44'54	superior conj	15120 May 08 18:50	29° $\mathbb{Z}$ 10'21	-1°09'37
minimum elong	15119 May 29 00:13	18° $\mathbb{M}$ 09'40	1°45'00	minimum elong	15120 May 08 12:09	28° $\mathbb{Z}$ 42'48	1°09'29
max. Earth dist.	15119 Jun 02 06:36	24° $\mathbb{M}$ 53'34	1.45603 AU		15120 May 09 06:53	0° $\mathbb{M}$	
	15119 Jun 05 13:03	0° $\mathbb{Z}$		max. Earth dist.	15120 May 15 00:24	9° $\mathbb{M}$ 16'39	1.44550 AU
evening rise	15119 Jun 14 09:19	13° $\mathbb{Z}$ 39'18		evening rise	15120 May 23 20:17	23° $\mathbb{M}$ 05'22	
	15119 Jun 25 03:55	0° $\Omega$			15120 May 28 09:09	0° $\mathbb{Z}$	
greatest brilliancy	15119 Jun 28 13:25	5° $\Omega$ 00'50	-0.6m		15120 Jun 18 15:27	0° $\Omega$	
asc. node	15119 Jul 07 18:45	17° $\Omega$ 27'33		evening max el	15120 Jun 22 07:20	4° $\Omega$ 03'27	20°47'21
evening max el	15119 Jul 10 06:46	20° $\Omega$ 11'07	19°43'06	asc. node	15120 Jun 23 15:38	5° $\Omega$ 20'07	
retrograde	15119 Jul 17 15:35	24° $\Omega$ 19'47		retrograde	15120 Jun 30 14:34	8° $\Omega$ 50'23	
evening set	15119 Jul 21 10:29	22° $\Omega$ 56'40		evening set	15120 Jul 04 20:00	7° $\Omega$ 09'53	
inferior conj	15119 Jul 26 18:26	16° $\Omega$ 59'56	3°03'26	inferior conj	15120 Jul 10 01:48	1° $\Omega$ 01'39	3°09'54
minimum elong	15119 Jul 26 19:30	16° $\Omega$ 56'23	3°02'35	minimum elong	15120 Jul 10 01:53	1° $\Omega$ 01'22	3°09'01
min. Earth dist.	15119 Jul 27 21:31	15° $\Omega$ 29'20	0.67728 AU	min. Earth dist.	15120 Jul 10 15:11	0° $\Omega$ 15'23	0.68628 AU
morning rise	15119 Aug 01 04:01	10° $\Omega$ 34'43			15120 Jul 10 19:39	30° $\mathbb{M}$ 47	

morning rise	15120 Jul 15 07:28	24°  40'40		morning rise	15121 Jun 29 15:35	8°  56'48	
direct	15120 Jul 20 14:57	22°  21'21		direct	15121 Jul 04 10:38	6°  54'51	
desc. node	15120 Jul 26 10:31	24°  31'18		desc. node	15121 Jul 13 07:48	11°  53'23	
morning max el	15120 Jul 31 09:12	28°  46'41	23°37'48	morning max el	15121 Jul 13 21:57	12°  28'13	22°09'22
	15120 Aug 01 13:27	0°  Ω			15121 Jul 27 21:22	0°  Ω	
	15120 Aug 23 19:30	0°  ♍		morning set	15121 Aug 15 21:45	28°  Ω43'58	
morning set	15120 Sep 04 08:07	18°  ♍31'18			15121 Aug 16 16:36	0°  ♍	
max. Earth dist.	15120 Sep 08 05:50	25°  ♍13'48	1.39091 AU	max. Earth dist.	15121 Aug 21 07:26	7°  ♍35'13	1.41436 AU
	15120 Sep 10 22:29	0°  ♌					
superior conj	15120 Sep 15 21:11	9°  ♌03'47	-0°33'59	superior conj	15121 Aug 29 02:40	21°  ♍00'02	-1°10'06
minimum elong	15120 Sep 15 23:39	9°  ♌15'21	0°33'29	minimum elong	15121 Aug 29 08:13	21°  ♍24'33	1°09'33
asc. node	15120 Sep 19 17:02	16°  ♌20'01		asc. node	15121 Sep 03 02:37	0°  ♌	
evening rise	15120 Sep 25 00:55	26°  ♌41'16		evening rise	15121 Sep 06 13:37	6°  ♌22'38	
	15120 Sep 26 17:51	0°  ♍			15121 Sep 08 13:41	10°  ♌05'59	
evening max el	15120 Oct 11 05:16	23°  ♍03'22	18°47'47	evening max el	15121 Sep 20 00:45	0°  ♍	
retrograde	15120 Oct 19 16:00	27°  ♍18'53		retrograde	15121 Sep 24 12:14	5°  ♍33'32	18°14'53
evening set	15120 Oct 21 13:33	27°  ♍06'47		evening set	15121 Oct 01 19:46	9°  ♍17'13	
desc. node	15120 Oct 22 06:54	26°  ♍56'05		desc. node	15121 Oct 03 22:29	8°  ♍59'11	
inferior conj	15120 Oct 29 17:46	22°  ♍45'26	-2°22'37	inferior conj	15121 Oct 09 04:20	6°  ♍03'42	
minimum elong	15120 Oct 29 11:53	22°  ♍56'04	2°19'36	minimum elong	15121 Oct 11 08:52	4°  ♍16'17	-0°41'47
min. Earth dist.	15120 Nov 01 18:43	20°  ♍33'57	0.56813 AU	min. Earth dist.	15121 Oct 11 07:21	4°  ♍19'30	0°40'43
morning rise	15120 Nov 06 07:07	17°  ♍52'45			15121 Oct 14 15:22	1°  ♍31'00	0.58895 AU
direct	15120 Nov 12 04:59	16°  ♍28'27		morning rise	15121 Oct 16 15:21	30°  ♌♌	
morning max el	15120 Nov 26 09:36	23°  ♍49'28	26°26'37	direct	15121 Oct 18 12:48	28°  ♌♌47'37	
	15120 Dec 02 00:17	0°  ♎			15121 Oct 24 22:46	26°  ♌♌56'48	
asc. node	15120 Dec 16 17:56	22°  ♎45'15		morning max el	15121 Nov 02 15:21	0°  ♍	
	15120 Dec 20 12:26	0°  ♏			15121 Nov 08 05:54	4°  ♍37'57	27°31'48
morning set	15120 Dec 25 06:34	9°  ♏52'35			15121 Nov 26 22:42	0°  ♎	
				asc. node	15121 Dec 03 14:57	12°  ♎06'44	
superior conj	15121 Jan 01 00:57	24°  ♏49'05	1°37'54	morning set	15121 Dec 09 14:05	24°  ♎13'46	
minimum elong	15121 Jan 01 00:46	24°  ♏48'02	1°38'49		15121 Dec 12 06:13	0°  ♏	
max. Earth dist.	15121 Jan 01 19:29	26°  ♏32'26	1.31328 AU	max. Earth dist.	15121 Dec 16 03:33	8°  ♏37'52	1.31065 AU
	15121 Jan 03 08:53	0°  ♏					
evening rise	15121 Jan 07 23:44	10°  ♏00'08		superior conj	15121 Dec 16 12:28	9°  ♏27'47	1°33'54
desc. node	15121 Jan 18 05:51	29°  ♏54'07		minimum elong	15121 Dec 16 11:17	9°  ♏21'10	1°34'47
	15121 Jan 18 07:11	0°  ♐		evening rise	15121 Dec 23 06:08	24°  ♏21'03	
evening max el	15121 Feb 08 13:00	29°  ♐16'28	27°21'38		15121 Dec 25 22:27	0°  ♏	
	15121 Feb 09 07:42	0°  ♑		desc. node	15122 Jan 05 02:39	19°  ♏03'21	
retrograde	15121 Feb 22 12:50	6°  ♑36'08			15122 Jan 12 06:53	0°  ♐	
evening set	15121 Mar 01 07:41	4°  ♑31'31		evening max el	15122 Jan 21 13:52	10°  ♐52'38	26°33'02
min. Earth dist.	15121 Mar 05 03:19	1°  ♑43'43	0.60831 AU	retrograde	15122 Feb 04 13:18	18°  ♐01'23	
	15121 Mar 07 03:20	30°  ♑♑		evening set	15122 Feb 10 23:52	16°  ♐20'02	
inferior conj	15121 Mar 08 07:07	28°  ♑58'51	-2°02'35	min. Earth dist.	15122 Feb 15 03:26	13°  ♐42'41	0.58617 AU
minimum elong	15121 Mar 08 11:35	28°  ♑49'05	2°00'40	inferior conj	15122 Feb 18 07:15	11°  ♐19'40	-3°30'22
asc. node	15121 Mar 14 15:15	24°  ♑30'02		minimum elong	15122 Feb 18 15:03	11°  ♐04'54	3°27'15
morning rise	15121 Mar 15 18:45	24°  ♑05'26		morning rise	15122 Feb 26 09:30	6°  ♐47'38	
direct	15121 Mar 17 21:10	23°  ♑47'09		direct	15122 Feb 28 09:17	6°  ♐33'50	
morning max el	15121 Mar 24 23:17	27°  ♑20'30	17°54'42	asc. node	15122 Mar 01 12:42	6°  ♐38'33	
	15121 Mar 27 08:29	0°  ♑		morning max el	15122 Mar 08 09:59	10°  ♐31'52	18°22'59
morning set	15121 Apr 09 13:39	21°  ♑43'17			15122 Mar 21 04:11	0°  ♑	
	15121 Apr 14 03:16	0°  ♒		morning set	15122 Mar 24 04:47	5°  ♑43'03	
desc. node	15121 Apr 16 07:52	3°  ♒55'20					
superior conj	15121 Apr 20 04:21	10°  ♒41'16	-0°30'48	superior conj	15122 Apr 02 11:41	23°  ♑11'44	0°05'47
minimum elong	15121 Apr 20 01:36	10°  ♒29'21	0°30'55	minimum elong	15122 Apr 02 12:05	23°  ♑13'34	0°05'25
max. Earth dist.	15121 Apr 27 14:44	23°  ♒13'39	1.42900 AU	behind sun begin	15122 Apr 02 05:11	22°  ♑42'02	
	15121 May 01 19:07	0°  ♒		behind sun end	15122 Apr 02 18:58	23°  ♑45'02	
evening rise	15121 May 03 17:43	3°  ♒04'51		desc. node	15122 Apr 03 04:29	24°  ♑28'23	
	15121 May 21 18:42	0°  ♒			15122 Apr 06 06:24	0°  ♒	
evening max el	15121 Jun 05 02:27	17°  ♒55'56	22°02'21	max. Earth dist.	15122 Apr 10 00:38	6°  ♒32'40	1.40818 AU
asc. node	15121 Jun 10 12:37	22°  ♒16'14		evening rise	15122 Apr 14 10:40	13°  ♒57'28	
retrograde	15121 Jun 14 12:33	23°  ♒26'36			15122 Apr 24 14:47	0°  ♒	
evening set	15121 Jun 19 05:11	21°  ♒29'31		evening max el	15122 May 16 23:33	0°  ♒	
inferior conj	15121 Jun 24 11:19	15°  ♒11'19	3°05'16	asc. node	15122 May 18 17:42	1°  ♒49'17	23°23'04
minimum elong	15121 Jun 24 10:28	15°  ♒14'17	3°04'15	retrograde	15122 May 28 09:43	7°  ♒59'28	
min. Earth dist.	15121 Jun 24 11:25	15°  ♒10'58	0.69045 AU	evening set	15122 May 29 08:12	8°  ♒03'20	
					15122 Jun 03 12:24	5°  ♒51'36	
					15122 Jun 08 11:06	30°  ♒♒	

inferior conj	15122 Jun 08 21:04	29°II25'37	2°50'12	minimum elong	15123 May 24 03:01	13°II46'58	2°23'18
minimum elong	15122 Jun 08 19:27	29°II31'11	2°48'58	morning rise	15123 May 29 14:15	7°II42'13	
min. Earth dist.	15122 Jun 08 08:12	0°☿09'59	0.68974 AU	direct	15123 Jun 02 09:02	6°II20'12	
morning rise	15122 Jun 14 02:28	23°II18'56		morning max el	15123 Jun 09 16:50	10°II23'33	19°39'22
direct	15122 Jun 18 09:07	21°II36'46		desc. node	15123 Jun 17 02:07	19°II17'54	
morning max el	15122 Jun 26 15:53	26°II20'35	20°48'11	greatest brilliancy	15123 Jun 22 11:29	26°II56'34	-0.6m
desc. node	15122 Jun 30 05:01	0°☿14'18			15123 Jun 24 13:20	0°☿	
	15122 Jun 30 00:11	0°☿		morning set	15123 Jul 05 15:44	16°☿47'58	
	15122 Jul 21 07:43	0°♊			15123 Jul 14 04:15	0°♊	
morning set	15122 Jul 26 12:38	7°♊59'37		max. Earth dist.	15123 Jul 17 05:06	4°♊46'15	1.44973 AU
max. Earth dist.	15122 Aug 03 15:24	20°♊49'57	1.43469 AU				
	15122 Aug 09 05:38	0°♋		superior conj	15123 Jul 21 18:22	12°♊00'39	-2°06'55
				minimum elong	15123 Jul 22 00:06	12°♊23'39	2°07'25
superior conj	15122 Aug 10 10:20	1°♋59'47	-1°43'18		15123 Aug 01 18:10	0°♋	
minimum elong	15122 Aug 10 17:55	2°♋31'37	1°43'03	evening rise	15123 Aug 04 14:38	4°♋46'39	
evening rise	15122 Aug 22 12:02	22°♋52'25		asc. node	15123 Aug 11 06:49	15°♋56'19	
asc. node	15122 Aug 24 10:13	26°♋16'25			15123 Aug 20 18:34	0°♌	
	15122 Aug 26 13:05	0°♌		evening max el	15123 Aug 22 15:42	2°♌03'11	18°08'03
evening max el	15122 Sep 08 01:00	18°♌36'48	18°02'04	retrograde	15123 Aug 29 00:29	5°♌23'53	
retrograde	15122 Sep 14 16:11	22°♌02'14		evening set	15123 Aug 31 19:13	4°♌43'10	
evening set	15122 Sep 17 02:25	21°♌34'30			15123 Sep 06 09:21	30°♌♋	
inferior conj	15122 Sep 23 19:53	16°♌31'45	0°41'14	inferior conj	15123 Sep 06 22:50	29°♋23'05	1°43'36
minimum elong	15122 Sep 23 21:07	16°♌28'45	0°40'58	minimum elong	15123 Sep 07 01:08	29°♋16'44	1°42'46
desc. node	15122 Sep 26 01:47	14°♌19'42		min. Earth dist.	15123 Sep 09 13:50	26°♋30'25	0.63410 AU
min. Earth dist.	15122 Sep 26 21:38	13°♌32'38	0.61182 AU	desc. node	15123 Sep 12 23:16	23°♋19'29	
morning rise	15122 Sep 30 12:57	10°♌34'51		morning rise	15123 Sep 13 05:03	23°♋08'19	
direct	15122 Oct 07 04:36	8°♌20'29		direct	15123 Sep 19 20:29	20°♋37'25	
morning max el	15122 Oct 21 09:51	16°♌15'55	27°58'26	morning max el	15123 Oct 03 18:44	28°♋37'49	27°46'41
	15122 Nov 01 17:34	0°♍			15123 Oct 05 02:40	0°♌	
	15122 Nov 19 13:50	0°♎			15123 Oct 26 14:07	0°♍	
asc. node	15122 Nov 20 11:52	1°♎48'27		morning set	15123 Nov 07 11:41	21°♍59'18	
morning set	15122 Nov 23 16:33	8°♎17'50		asc. node	15123 Nov 07 08:41	21°♍44'11	
max. Earth dist.	15122 Nov 29 09:50	20°♎34'54	1.31345 AU		15123 Nov 11 08:59	0°♎	
				max. Earth dist.	15123 Nov 12 10:27	2°♎14'56	1.32179 AU
superior conj	15122 Nov 30 22:58	24°♎00'22	1°23'58				
minimum elong	15122 Nov 30 21:01	23°♎49'33	1°24'42	superior conj	15123 Nov 15 06:29	8°♎21'39	1°08'05
	15122 Dec 03 15:38	0°♏		minimum elong	15123 Nov 15 04:10	8°♎09'02	1°08'36
evening rise	15122 Dec 07 15:44	8°♏48'28		evening rise	15123 Nov 22 02:39	23°♎17'58	
	15122 Dec 18 09:26	0°♐			15123 Nov 25 06:46	0°♏	
desc. node	15122 Dec 22 23:31	7°♐30'55		desc. node	15123 Dec 09 20:30	25°♏01'46	
evening max el	15123 Jan 03 06:05	21°♐35'36	25°12'51		15123 Dec 14 00:22	0°♐	
retrograde	15123 Jan 17 02:08	28°♐32'24		evening max el	15123 Dec 15 16:14	1°♐41'13	23°33'09
evening set	15123 Jan 22 18:57	27°♐19'03		retrograde	15123 Dec 29 01:58	8°♐20'11	
min. Earth dist.	15123 Jan 27 18:20	24°♐36'41	0.56622 AU	evening set	15124 Jan 02 15:01	7°♐35'24	
inferior conj	15123 Jan 30 10:48	22°♐51'03	-4°53'31	min. Earth dist.	15124 Jan 09 03:07	4°♐29'17	0.55147 AU
minimum elong	15123 Jan 30 19:57	22°♐36'02	4°50'35	inferior conj	15124 Jan 10 18:03	3°♐32'15	-5°50'14
morning rise	15123 Feb 07 23:33	18°♐40'52		minimum elong	15124 Jan 10 23:03	3°♐24'54	5°48'52
direct	15123 Feb 10 02:38	18°♐27'48			15124 Jan 18 00:34	30°♏♐	
asc. node	15123 Feb 16 10:09	20°♐31'33		morning rise	15124 Jan 19 08:40	29°♏39'01	
morning max el	15123 Feb 19 11:11	23°♐00'58	19°12'47	direct	15124 Jan 22 00:40	29°♏21'39	
	15123 Feb 25 02:11	0°♑			15124 Jan 25 20:49	0°♐	
morning set	15123 Mar 08 05:22	20°♑06'21		morning max el	15124 Feb 01 23:00	4°♐37'36	20°25'35
	15123 Mar 13 04:48	0°♒		asc. node	15124 Feb 03 07:32	6°♐00'42	
					15124 Feb 18 04:16	0°♑	
superior conj	15123 Mar 16 12:20	6°♒28'28	0°37'05	morning set	15124 Feb 20 12:05	4°♑43'46	
minimum elong	15123 Mar 16 14:27	6°♒38'41	0°36'44				
desc. node	15123 Mar 21 01:03	15°♒01'45		superior conj	15124 Feb 28 01:59	20°♑19'26	1°02'00
max. Earth dist.	15123 Mar 23 06:55	19°♒07'28	1.38539 AU	minimum elong	15124 Feb 28 04:36	20°♑32'40	1°01'53
evening rise	15123 Mar 27 00:42	25°♒44'03			15124 Mar 03 23:27	0°♒	
	15123 Mar 29 12:36	0°♓		max. Earth dist.	15124 Mar 04 14:02	1°♒10'00	1.36320 AU
	15123 Apr 18 05:25	0°♔		desc. node	15124 Mar 06 21:36	5°♒31'58	
evening max el	15123 May 01 07:12	15°♔43'05	24°43'19	evening rise	15124 Mar 08 09:38	8°♒18'00	
retrograde	15123 May 13 00:20	22°♔33'37			15124 Mar 21 06:15	0°♓	
asc. node	15123 May 15 06:54	22°♔11'29		evening max el	15124 Apr 12 20:46	29°♓35'17	25°55'53
evening set	15123 May 18 16:00	20°♔10'26			15124 Apr 13 06:57	0°♔	
min. Earth dist.	15123 May 23 03:24	15°♔05'32	0.68423 AU	retrograde	15124 Apr 25 11:50	6°♔50'30	
inferior conj	15123 May 24 05:06	13°♔40'00	2°24'42	asc. node	15124 May 01 04:09	4°♔40'39	

evening set	15124 May 01 14:17	4° $\Pi$ 20'14		asc. node	15125 Apr 18 01:30	15° $\mathcal{B}$ 34'09	
	15124 May 05 16:04	30° $\mathcal{R}$ 8		min. Earth dist.	15125 Apr 19 04:42	14° $\mathcal{B}$ 19'00	0.65984 AU
min. Earth dist.	15124 May 05 18:57	29° $\mathcal{B}$ 51'03	0.67417 AU	inferior conj	15125 Apr 21 07:47	11° $\mathcal{B}$ 50'25	0°59'57
inferior conj	15124 May 07 09:25	27° $\mathcal{B}$ 50'05	1°48'15	minimum elong	15125 Apr 21 06:18	11° $\mathcal{B}$ 54'43	0°58'49
minimum elong	15124 May 07 07:19	27° $\mathcal{B}$ 56'44	1°46'49	morning rise	15125 Apr 27 08:35	6° $\mathcal{B}$ 14'48	
morning rise	15124 May 13 01:01	22° $\mathcal{B}$ 02'29		direct	15125 Apr 30 06:25	5° $\mathcal{B}$ 28'22	
direct	15124 May 16 08:49	20° $\mathcal{B}$ 59'23		morning max el	15125 May 06 14:43	8° $\mathcal{B}$ 47'44	18°09'11
morning max el	15124 May 23 00:54	24° $\mathcal{B}$ 34'26	18°45'55	desc. node	15125 May 20 19:59	28° $\mathcal{B}$ 50'16	
	15124 May 27 17:02	0° $\Pi$			15125 May 21 13:23	0° $\Pi$	
desc. node	15124 Jun 02 23:07	8° $\Pi$ 52'44		morning set	15125 May 25 15:31	6° $\Pi$ 34'49	
greatest brilliancy	15124 Jun 06 02:50	13° $\Pi$ 39'34	-0.8m		15125 Jun 09 08:59	0° $\mathcal{E}$	
morning set	15124 Jun 14 03:22	26° $\Pi$ 05'03					
	15124 Jun 16 15:43	0° $\mathcal{E}$		superior conj	15125 Jun 09 17:06	0° $\mathcal{E}$ 31'46	-2°00'26
max. Earth dist.	15124 Jun 28 23:13	19° $\mathcal{E}$ 11'00	1.45807 AU	minimum elong	15125 Jun 09 09:21	0° $\mathcal{E}$ 01'27	2°00'54
				max. Earth dist.	15125 Jun 11 19:39	3° $\mathcal{E}$ 49'29	1.45893 AU
superior conj	15124 Jun 30 07:57	21° $\mathcal{E}$ 18'50	-2°13'43	evening rise	15125 Jun 25 19:40	25° $\mathcal{E}$ 34'03	
minimum elong	15124 Jun 30 06:45	21° $\mathcal{E}$ 14'11	2°14'39		15125 Jun 28 16:25	0° $\mathcal{O}$	
	15124 Jul 05 20:47	0° $\mathcal{O}$		greatest brilliancy	15125 Jul 07 13:19	13° $\mathcal{O}$ 34'27	-0.7m
evening rise	15124 Jul 15 17:04	15° $\mathcal{O}$ 38'58		asc. node	15125 Jul 15 00:12	24° $\mathcal{O}$ 11'18	
	15124 Jul 24 16:58	0° $\mathcal{M}$		evening max el	15125 Jul 19 14:45	29° $\mathcal{O}$ 34'00	19°12'33
asc. node	15124 Jul 28 03:28	5° $\mathcal{M}$ 16'52			15125 Jul 20 01:28	0° $\mathcal{M}$	
evening max el	15124 Aug 05 05:09	15° $\mathcal{M}$ 44'28	18°31'51	retrograde	15125 Jul 26 13:22	3° $\mathcal{M}$ 24'28	
retrograde	15124 Aug 11 16:37	19° $\mathcal{M}$ 13'31		evening set	15125 Jul 30 02:40	2° $\mathcal{M}$ 11'12	
evening set	15124 Aug 14 20:22	18° $\mathcal{M}$ 17'18			15125 Aug 01 13:26	30° $\mathcal{R}$ 0	
inferior conj	15124 Aug 20 13:42	12° $\mathcal{M}$ 41'50	2°26'58	inferior conj	15125 Aug 04 13:07	26° $\mathcal{O}$ 21'50	2°54'06
minimum elong	15124 Aug 20 15:57	12° $\mathcal{M}$ 35'00	2°26'03	minimum elong	15125 Aug 04 14:43	26° $\mathcal{O}$ 16'40	2°53'15
min. Earth dist.	15124 Aug 22 15:09	10° $\mathcal{M}$ 12'36	0.65394 AU	min. Earth dist.	15125 Aug 06 00:16	24° $\mathcal{O}$ 27'51	0.67004 AU
morning rise	15124 Aug 26 10:19	6° $\mathcal{M}$ 18'16		morning rise	15125 Aug 10 02:07	19° $\mathcal{O}$ 56'03	
desc. node	15124 Aug 29 20:46	4° $\mathcal{M}$ 13'19		direct	15125 Aug 16 03:32	17° $\mathcal{O}$ 19'40	
direct	15124 Sep 01 20:38	3° $\mathcal{M}$ 40'04		desc. node	15125 Aug 16 18:13	17° $\mathcal{O}$ 21'06	
morning max el	15124 Sep 15 05:41	11° $\mathcal{M}$ 32'20	27°02'05	morning max el	15125 Aug 28 16:52	24° $\mathcal{O}$ 49'00	25°53'07
	15124 Sep 29 23:12	0° $\mathcal{L}$			15125 Sep 02 09:33	0° $\mathcal{M}$	
	15124 Oct 18 03:03	0° $\mathcal{M}$			15125 Sep 23 09:59	0° $\mathcal{L}$	
morning set	15124 Oct 20 20:36	5° $\mathcal{M}$ 10'34		morning set	15125 Oct 03 15:57	17° $\mathcal{L}$ 44'21	
asc. node	15124 Oct 24 05:22	11° $\mathcal{M}$ 48'13		max. Earth dist.	15125 Oct 07 08:21	24° $\mathcal{L}$ 38'51	1.35466 AU
max. Earth dist.	15124 Oct 25 02:09	13° $\mathcal{M}$ 33'06	1.33570 AU		15125 Oct 10 02:26	0° $\mathcal{M}$	
				asc. node	15125 Oct 11 02:01	1° $\mathcal{M}$ 56'50	
superior conj	15124 Oct 29 08:45	22° $\mathcal{M}$ 24'54	0°46'16	superior conj	15125 Oct 13 03:11	6° $\mathcal{M}$ 03'56	0°18'47
minimum elong	15124 Oct 29 06:39	22° $\mathcal{M}$ 13'49	0°46'37	minimum elong	15125 Oct 13 02:06	5° $\mathcal{M}$ 58'27	0°19'04
	15124 Nov 01 22:09	0° $\mathcal{J}$		evening rise	15125 Oct 20 20:50	22° $\mathcal{M}$ 02'21	
evening rise	15124 Nov 05 13:00	7° $\mathcal{J}$ 44'06			15125 Oct 24 19:02	0° $\mathcal{J}$	
	15124 Nov 17 04:41	0° $\mathcal{Z}$		evening max el	15125 Nov 08 03:05	22° $\mathcal{J}$ 11'45	20°23'18
desc. node	15124 Nov 25 17:35	11° $\mathcal{Z}$ 14'49		desc. node	15125 Nov 12 14:45	25° $\mathcal{J}$ 45'25	
evening max el	15124 Nov 26 04:14	11° $\mathcal{Z}$ 41'23	21°51'30	retrograde	15125 Nov 19 01:04	27° $\mathcal{J}$ 37'43	
retrograde	15124 Dec 08 14:16	17° $\mathcal{Z}$ 49'59		evening set	15125 Nov 21 06:51	27° $\mathcal{J}$ 25'02	
evening set	15124 Dec 11 19:30	17° $\mathcal{Z}$ 26'49		inferior conj	15125 Nov 30 03:44	23° $\mathcal{J}$ 29'41	-5°00'07
inferior conj	15124 Dec 20 11:17	13° $\mathcal{Z}$ 35'08	-5°55'22	minimum elong	15125 Nov 29 17:52	23° $\mathcal{J}$ 44'07	4°56'46
minimum elong	15124 Dec 20 07:13	13° $\mathcal{Z}$ 40'48	5°54'05	min. Earth dist.	15125 Dec 01 14:49	22° $\mathcal{J}$ 38'15	0.54705 AU
min. Earth dist.	15124 Dec 20 08:50	13° $\mathcal{Z}$ 38'33	0.54462 AU	morning rise	15125 Dec 08 04:27	19° $\mathcal{J}$ 29'10	
morning rise	15124 Dec 28 19:44	9° $\mathcal{Z}$ 47'32		direct	15125 Dec 12 19:23	18° $\mathcal{J}$ 43'12	
direct	15125 Jan 01 10:12	9° $\mathcal{Z}$ 18'59		morning max el	15125 Dec 26 06:28	25° $\mathcal{J}$ 19'15	23°48'49
morning max el	15125 Jan 13 19:53	15° $\mathcal{Z}$ 18'02	22°00'17		15125 Dec 30 14:34	0° $\mathcal{Z}$	
asc. node	15125 Jan 20 04:52	22° $\mathcal{Z}$ 47'53		asc. node	15126 Jan 07 02:06	10° $\mathcal{Z}$ 35'41	
	15125 Jan 24 20:51	0° $\approx$			15126 Jan 17 10:42	0° $\approx$	
morning set	15125 Feb 03 22:24	19° $\approx$ 27'26		morning set	15126 Jan 19 10:16	4° $\approx$ 11'39	
	15125 Feb 08 21:15	0° $\mathcal{H}$					
superior conj	15125 Feb 11 00:56	4° $\mathcal{H}$ 33'50	1°20'16	superior conj	15126 Jan 26 06:18	19° $\approx$ 03'47	1°32'01
minimum elong	15125 Feb 11 03:13	4° $\mathcal{H}$ 45'52	1°20'31	minimum elong	15126 Jan 26 07:46	19° $\approx$ 11'44	1°32'37
max. Earth dist.	15125 Feb 15 02:50	13° $\mathcal{H}$ 00'17	1.34363 AU	max. Earth dist.	15126 Jan 28 23:22	24° $\approx$ 53'55	1.32804 AU
evening rise	15125 Feb 19 09:55	21° $\mathcal{H}$ 29'03			15126 Jan 31 09:38	0° $\mathcal{H}$	
desc. node	15125 Feb 21 18:08	25° $\mathcal{H}$ 54'35		evening rise	15126 Feb 02 22:09	5° $\mathcal{H}$ 08'36	
	15125 Feb 23 23:46	0° $\mathcal{Y}$		desc. node	15126 Feb 08 14:42	16° $\mathcal{H}$ 05'14	
	15125 Mar 15 02:16	0° $\mathcal{B}$			15126 Feb 16 16:17	0° $\mathcal{Y}$	
evening max el	15125 Mar 26 10:38	13° $\mathcal{B}$ 18'35	26°53'17	evening max el	15126 Mar 08 23:41	26° $\mathcal{Y}$ 41'46	27°28'02
retrograde	15125 Apr 08 17:34	20° $\mathcal{B}$ 46'06			15126 Mar 12 18:50	0° $\mathcal{B}$	
evening set	15125 Apr 15 05:21	18° $\mathcal{B}$ 14'06		retrograde	15126 Mar 22 16:40	4° $\mathcal{B}$ 11'39	

evening set	15126 Mar 29 11:02	1°♄44'13		evening rise	15127 Jan 17 19:23	19°♁09'36	
	15126 Mar 31 13:30	30°♄			15127 Jan 23 05:56	0°♄	
min. Earth dist.	15126 Apr 02 06:33	28°♄20'11	0.64183 AU	desc. node	15127 Jan 26 11:21	5°♄58'34	
inferior conj	15126 Apr 04 21:31	25°♄34'13	-0°01'06		15127 Feb 10 23:39	0°♄	
minimum elong	15126 Apr 04 21:34	25°♄34'06	0°01'25	evening max el	15127 Feb 19 09:54	9°♄32'35	27°33'34
transit middle	15126 Apr 04 21:34	25°♄34'06	0°01'25	retrograde	15127 Mar 05 08:19	16°♄58'03	
transit begin	15126 Apr 04 18:28	25°♄42'19		evening set	15127 Mar 12 04:49	14°♄42'34	
transit end	15126 Apr 05 00:39	25°♄25'55		min. Earth dist.	15127 Mar 15 23:00	11°♄44'07	0.62098 AU
asc. node	15126 Apr 04 22:55	25°♄30'31		inferior conj	15127 Mar 18 23:34	8°♄54'02	-1°14'57
morning rise	15126 Apr 11 10:15	20°♄13'02		minimum elong	15127 Mar 19 02:09	8°♄47'56	1°13'56
direct	15126 Apr 13 23:17	19°♄40'16		asc. node	15127 Mar 22 20:22	5°♄35'03	
morning max el	15126 Apr 20 07:52	22°♄56'05	17°49'35	morning rise	15127 Mar 26 02:30	3°♄50'00	
	15126 Apr 25 23:42	0°♄		direct	15127 Mar 28 08:07	3°♄27'32	
morning set	15126 May 07 07:09	18°♄23'19		morning max el	15127 Apr 04 01:24	6°♄51'15	17°47'36
desc. node	15126 May 07 16:45	19°♄03'42			15127 Apr 19 04:29	0°♄	
	15126 May 14 05:53	0°♄		morning set	15127 Apr 19 21:52	1°♄16'52	
				desc. node	15127 Apr 24 13:26	9°♄28'16	
superior conj	15126 May 20 14:36	10°♄22'33	-1°30'51	superior conj	15127 May 01 10:31	21°♄16'42	-0°53'11
minimum elong	15126 May 20 06:13	9°♄48'45	1°30'46	minimum elong	15127 May 01 05:30	20°♄55'34	0°53'08
max. Earth dist.	15126 May 25 15:35	18°♄24'21	1.45234 AU		15127 May 06 17:02	0°♄	
	15126 Jun 02 02:01	0°♄		max. Earth dist.	15127 May 08 08:09	2°♄38'30	1.43906 AU
evening rise	15126 Jun 05 07:43	4°♄58'27		evening rise	15127 May 15 21:29	14°♄34'46	
	15126 Jun 22 03:14	0°♄			15127 May 26 02:04	0°♄	
asc. node	15126 Jul 01 21:02	12°♄29'44		evening max el	15127 Jun 15 16:44	27°♄17'38	21°18'08
evening max el	15126 Jul 02 18:45	13°♄25'45	20°08'50	asc. node	15127 Jun 18 17:59	0°♄00'18	
retrograde	15126 Jul 10 12:13	17°♄49'33			15127 Jun 18 17:49	0°♄	
evening set	15126 Jul 14 11:37	16°♄18'46		retrograde	15127 Jun 24 11:07	2°♄23'22	
inferior conj	15126 Jul 19 18:17	10°♄16'48	3°07'35	evening set	15127 Jun 28 21:13	0°♄35'34	
minimum elong	15126 Jul 19 18:56	10°♄14'35	3°06'45		15127 Jun 29 13:21	30°♄	
min. Earth dist.	15126 Jul 20 15:23	9°♄05'01	0.68168 AU	inferior conj	15127 Jul 04 02:51	24°♄22'36	3°09'15
morning rise	15126 Jul 25 01:55	3°♄53'12		minimum elong	15127 Jul 04 02:31	24°♄23'44	3°08'19
direct	15126 Jul 30 16:13	1°♄26'12		min. Earth dist.	15127 Jul 04 10:28	23°♄56'01	0.68860 AU
desc. node	15126 Aug 03 15:39	2°♄27'08		morning rise	15127 Jul 09 07:35	18°♄04'01	
morning max el	15126 Aug 11 03:40	8°♄18'26	24°29'11	direct	15127 Jul 14 09:41	15°♄51'51	
	15126 Aug 28 04:44	0°♄		desc. node	15127 Jul 21 13:00	19°♄06'32	
morning set	15126 Sep 15 17:35	29°♄30'47		morning max el	15127 Jul 24 15:04	21°♄55'58	22°59'46
	15126 Sep 16 00:18	0°♄			15127 Jul 31 15:01	0°♄	
max. Earth dist.	15126 Sep 19 08:01	5°♄53'44	1.37721 AU		15127 Aug 21 11:16	0°♄	
superior conj	15126 Sep 26 10:28	19°♄10'15	-0°13'40	morning set	15127 Aug 27 21:16	10°♄20'09	
minimum elong	15126 Sep 26 11:22	19°♄14'37	0°13'17	max. Earth dist.	15127 Sep 01 06:49	17°♄43'48	1.40107 AU
behind sun begin	15126 Sep 26 07:29	18°♄55'51			15127 Sep 08 05:48	0°♄	
behind sun end	15126 Sep 26 15:15	19°♄33'24		superior conj	15127 Sep 09 02:38	1°♄34'57	-0°49'19
asc. node	15126 Sep 27 22:37	22°♄05'54		minimum elong	15127 Sep 09 06:24	1°♄52'09	0°48'46
	15126 Oct 01 22:28	0°♄		asc. node	15127 Sep 14 19:12	12°♄12'01	
evening rise	15126 Oct 04 23:44	6°♄06'09		evening rise	15127 Sep 18 18:46	19°♄48'02	
	15126 Oct 18 15:26	0°♄			15127 Sep 24 05:04	0°♄	
evening max el	15126 Oct 21 16:21	3°♄30'29	19°16'09	evening max el	15127 Oct 04 18:06	15°♄37'34	18°31'12
retrograde	15126 Oct 30 23:26	8°♄10'21		retrograde	15127 Oct 12 16:11	19°♄38'09	
desc. node	15126 Oct 30 12:02	8°♄09'39		evening set	15127 Oct 14 15:15	19°♄24'09	
evening set	15126 Nov 01 20:30	7°♄59'45		desc. node	15127 Oct 17 09:25	18°♄21'20	
inferior conj	15126 Nov 10 09:27	3°♄49'34	-3°24'05	inferior conj	15127 Oct 22 12:04	14°♄53'51	-1°38'14
minimum elong	15126 Nov 10 01:02	4°♄03'33	3°20'15	minimum elong	15127 Oct 22 08:10	15°♄01'24	1°36'03
min. Earth dist.	15126 Nov 13 00:37	2°♄04'53	0.55833 AU	min. Earth dist.	15127 Oct 25 17:01	12°♄25'27	0.57652 AU
	15126 Nov 16 14:17	30°♄		morning rise	15127 Oct 29 21:36	9°♄44'52	
morning rise	15126 Nov 18 03:12	29°♄18'00		direct	15127 Nov 05 01:18	8°♄09'03	
direct	15126 Nov 23 14:57	28°♄09'06		morning max el	15127 Nov 19 07:54	15°♄40'15	26°58'43
	15126 Nov 30 14:18	0°♄			15127 Nov 30 23:25	0°♄	
morning max el	15126 Dec 07 16:10	5°♄15'54	25°34'41	asc. node	15127 Dec 11 20:19	18°♄15'58	
asc. node	15126 Dec 24 23:15	29°♄09'06			15127 Dec 17 17:28	0°♄	
	15126 Dec 25 10:38	0°♄		morning set	15127 Dec 19 07:24	3°♄21'01	
morning set	15127 Jan 03 21:52	18°♄51'24					
	15127 Jan 08 23:35	0°♄		superior conj	15127 Dec 26 02:59	18°♄23'23	1°36'56
superior conj	15127 Jan 10 15:41	3°♄42'34	1°37'30	minimum elong	15127 Dec 26 02:22	18°♄19'52	1°37'51
minimum elong	15127 Jan 10 16:07	3°♄44'57	1°38'21	max. Earth dist.	15127 Dec 26 09:47	19°♄01'26	1.31146 AU
max. Earth dist.	15127 Jan 12 02:39	6°♄55'45	1.31716 AU		15127 Dec 31 08:53	0°♄	

evening rise	15128 Jan 01 23:04	3°≈25'05		max. Earth dist.	15128 Dec 08 17:28	1°≈30'436	1.31118 AU
desc. node	15128 Jan 13 08:05	25°≈26'45					
	15128 Jan 16 01:10	0°≈		superior conj	15128 Dec 09 14:20	3°≈30'01'03	1°30'25
evening max el	15128 Feb 01 14:51	21°≈38'33	27°05'11	minimum elong	15128 Dec 09 12:48	2°≈35'2'26	1°31'16
retrograde	15128 Feb 15 15:13	28°≈54'45		evening rise	15128 Dec 16 07:05	17°≈35'0'13	
evening set	15128 Feb 22 07:25	26°≈59'09			15128 Dec 22 04:35	0°≈	
min. Earth dist.	15128 Feb 26 05:13	24°≈17'20	0.59874 AU	desc. node	15128 Dec 30 04:54	14°≈20'19	
inferior conj	15128 Feb 29 10:13	21°≈39'24	-2°39'27		15129 Jan 10 16:40	0°≈	
minimum elong	15128 Feb 29 16:10	21°≈27'10	2°36'56	evening max el	15129 Jan 13 12:16	2°≈52'45	26°02'19
morning rise	15128 Mar 08 04:20	16°≈55'07		retrograde	15129 Jan 27 11:06	9°≈56'30	
asc. node	15128 Mar 08 17:51	16°≈47'37		evening set	15129 Feb 02 15:04	8°≈27'02	
direct	15128 Mar 10 04:57	16°≈39'18		min. Earth dist.	15129 Feb 07 01:28	5°≈49'20	0.57727 AU
morning max el	15128 Mar 17 15:43	20°≈22'04	18°04'15	inferior conj	15129 Feb 10 01:53	3°≈40'40	-4°07'16
	15128 Mar 24 20:13	0°≈		minimum elong	15129 Feb 10 10:42	3°≈24'58	4°04'00
morning set	15128 Apr 02 05:35	14°≈56'46			15129 Feb 16 04:08	30°≈	
desc. node	15128 Apr 10 10:03	29°≈59'07		morning rise	15129 Feb 18 09:22	29°≈17'43	
	15128 Apr 10 10:15	0°≈		direct	15129 Feb 20 09:28	29°≈04'46	
				asc. node	15129 Feb 23 15:16	29°≈40'33	
superior conj	15128 Apr 12 05:47	3°≈14'20	-0°14'49		15129 Feb 24 09:57	0°≈	
minimum elong	15128 Apr 12 04:32	3°≈08'48	0°15'03	morning max el	15129 Feb 28 22:52	3°≈17'03	18°41'18
behind sun begin	15128 Apr 12 01:55	2°≈57'10		morning set	15129 Mar 17 01:11	29°≈08'00	
behind sun end	15128 Apr 12 07:09	3°≈20'25			15129 Mar 17 11:54	0°≈	
max. Earth dist.	15128 Apr 19 19:56	16°≈17'55	1.42049 AU				
evening rise	15128 Apr 25 02:32	24°≈55'28		superior conj	15129 Mar 25 20:59	16°≈05'44	0°19'47
	15128 Apr 28 07:25	0°≈		minimum elong	15129 Mar 25 22:17	16°≈11'50	0°19'24
	15128 May 18 23:09	0°≈		desc. node	15129 Mar 28 06:37	20°≈32'42	
evening max el	15128 May 28 09:51	11°≈10'01	22°36'24	max. Earth dist.	15129 Apr 02 03:49	29°≈17'14	1.39864 AU
asc. node	15128 Jun 04 15:03	16°≈27'30			15129 Apr 02 13:37	0°≈	
retrograde	15128 Jun 07 08:21	17°≈00'09		evening rise	15129 Apr 06 04:36	6°≈11'56	
evening set	15128 Jun 12 05:45	14°≈56'45			15129 Apr 21 09:05	0°≈	
inferior conj	15128 Jun 17 12:42	8°≈34'48	3°00'09	evening max el	15129 May 11 00:15	25°≈04'05	23°57'48
minimum elong	15128 Jun 17 11:30	8°≈38'59	2°59'03		15129 May 17 02:24	0°≈	
min. Earth dist.	15128 Jun 17 07:19	8°≈53'34	0.69067 AU	retrograde	15129 May 22 02:31	1°≈34'25	
morning rise	15128 Jun 22 17:06	2°≈23'12		asc. node	15129 May 22 12:11	1°≈33'42	
direct	15128 Jun 27 06:49	0°≈29'24			15129 May 26 14:11	30°≈	
morning max el	15128 Jul 06 05:36	5°≈41'30	21°33'33	evening set	15129 May 27 11:34	29°≈17'38	
desc. node	15128 Jul 07 10:15	6°≈55'38		min. Earth dist.	15129 Jun 01 03:41	23°≈51'35	0.68797 AU
	15128 Jul 24 19:53	0°≈		inferior conj	15129 Jun 01 21:56	22°≈49'28	2°40'42
morning set	15128 Aug 07 00:38	20°≈07'00		minimum elong	15129 Jun 01 20:04	22°≈55'48	2°39'22
	15128 Aug 13 03:58	0°≈		morning rise	15129 Jun 07 04:35	16°≈46'17	
max. Earth dist.	15128 Aug 13 10:20	0°≈26'10	1.42346 AU	direct	15129 Jun 11 06:11	15°≈12'31	
				morning max el	15129 Jun 19 02:11	19°≈37'35	20°17'06
superior conj	15128 Aug 20 23:19	13°≈08'26	-1°24'54	desc. node	15129 Jun 24 07:25	25°≈36'03	
minimum elong	15128 Aug 21 05:59	13°≈37'18	1°24'24		15129 Jun 27 15:27	0°≈	
	15128 Aug 30 10:50	0°≈		morning set	15129 Jul 17 08:17	29°≈04'26	
asc. node	15128 Aug 31 15:47	2°≈11'40			15129 Jul 17 22:42	0°≈	
evening rise	15128 Sep 01 01:59	2°≈58'05		max. Earth dist.	15129 Jul 26 20:56	14°≈00'20	1.44183 AU
evening max el	15128 Sep 17 04:08	28°≈24'06	18°07'10				
	15128 Sep 18 23:54	0°≈		superior conj	15129 Aug 01 20:49	23°≈42'37	-1°54'57
retrograde	15128 Sep 24 03:23	1°≈58'05		minimum elong	15129 Aug 02 04:16	24°≈13'14	1°54'59
evening set	15128 Sep 26 09:09	1°≈36'22			15129 Aug 05 15:54	0°≈	
	15128 Sep 29 12:41	30°≈		evening rise	15129 Aug 14 16:30	15°≈23'24	
desc. node	15128 Oct 03 06:52	26°≈56'53		asc. node	15129 Aug 18 12:23	22°≈00'04	
inferior conj	15128 Oct 03 12:06	26°≈45'06	-0°04'07		15129 Aug 23 06:30	0°≈	
minimum elong	15128 Oct 03 11:58	26°≈45'23	0°03'43	evening max el	15129 Aug 31 18:12	11°≈38'29	18°02'27
transit middle	15128 Oct 03 11:58	26°≈45'23	0°03'43	retrograde	15129 Sep 07 05:17	14°≈59'58	
transit begin	15128 Oct 03 08:42	26°≈52'45		evening set	15129 Sep 09 19:12	14°≈26'54	
transit end	15128 Oct 03 15:14	26°≈38'00		inferior conj	15129 Sep 16 06:20	9°≈16'27	1°10'11
min. Earth dist.	15128 Oct 06 17:45	23°≈51'09	0.59858 AU	minimum elong	15129 Sep 16 08:12	9°≈11'39	1°09'35
morning rise	15128 Oct 10 11:30	21°≈03'23		min. Earth dist.	15129 Sep 19 03:59	6°≈18'00	0.62150 AU
direct	15128 Oct 17 00:53	19°≈01'32		desc. node	15129 Sep 20 04:21	5°≈19'39	
morning max el	15128 Oct 31 07:32	26°≈49'54	27°47'53	morning rise	15129 Sep 22 18:44	3°≈11'04	
	15128 Nov 03 07:54	0°≈		direct	15129 Sep 29 11:06	0°≈48'46	
	15128 Nov 23 14:17	0°≈		morning max el	15129 Oct 13 13:41	8°≈46'46	27°57'56
asc. node	15128 Nov 27 17:16	7°≈47'20			15129 Oct 29 23:36	0°≈	
morning set	15128 Dec 02 13:02	17°≈36'11		asc. node	15129 Nov 14 14:06	27°≈35'36	
	15128 Dec 08 05:52	0°≈			15129 Nov 15 18:47	0°≈	






















































































































morning set	15129 Nov 16 12:39	1°♂31'08		asc. node	15130 Nov 01 10:52	17°♂35'23	
max. Earth dist.	15129 Nov 21 21:49	12°♂55'37	1.31638 AU	max. Earth dist.	15130 Nov 04 19:11	24°♂27'22	1.32708 AU
					15130 Nov 07 10:02	0°♂	
superior conj	15129 Nov 23 23:48	17°♂29'34	1°17'58	superior conj	15130 Nov 08 05:20	1°♂43'34	0°59'33
minimum elong	15129 Nov 23 21:38	17°♂17'38	1°18'37	minimum elong	15130 Nov 08 03:01	1°♂31'08	0°59'59
	15129 Nov 29 15:48	0°♂		evening rise	15130 Nov 15 04:21	16°♂48'00	
evening rise	15129 Nov 30 17:27	2°♂19'21			15130 Nov 21 15:07	0°♂	
	15129 Dec 15 10:43	0°♂		desc. node	15130 Dec 03 22:51	19°♂26'36	
desc. node	15129 Dec 17 01:50	2°♂26'00		evening max el	15130 Dec 07 10:59	23°♂15'21	22°48'59
evening max el	15129 Dec 26 01:27	13°♂17'32	24°31'49	retrograde	15130 Dec 20 12:11	29°♂43'29	
retrograde	15130 Jan 08 17:55	20°♂06'50		evening set	15130 Dec 24 11:49	29°♂08'53	
evening set	15130 Jan 14 00:11	19°♂06'01		min. Earth dist.	15130 Dec 31 19:54	25°♂47'05	0.54749 AU
min. Earth dist.	15130 Jan 19 13:15	16°♂16'04	0.55923 AU	inferior conj	15131 Jan 01 20:26	25°♂12'15	-5°59'51
inferior conj	15130 Jan 21 20:28	14°♂50'24	-5°22'21	minimum elong	15131 Jan 01 21:49	25°♂10'16	5°58'53
minimum elong	15130 Jan 22 04:40	14°♂37'39	5°20'01	morning rise	15131 Jan 10 09:10	21°♂23'46	
morning rise	15130 Jan 30 11:11	10°♂48'09		direct	15131 Jan 13 09:57	21°♂02'34	
direct	15130 Feb 01 18:41	10°♂33'50		morning max el	15131 Jan 24 23:59	26°♂36'35	21°03'32
asc. node	15130 Feb 10 12:39	14°♂16'05		asc. node	15131 Jan 28 10:01	0°♂20'39	
morning max el	15130 Feb 11 18:38	15°♂24'24	19°40'50		15131 Jan 28 03:12	0°♂	
	15130 Feb 22 02:47	0°♂		morning set	15131 Feb 13 13:16	28°♂20'05	
morning set	15130 Mar 01 04:45	13°♂38'52			15131 Feb 14 08:27	0°♂	
superior conj	15130 Mar 09 03:39	29°♂38'34	0°48'28	superior conj	15131 Feb 20 21:40	13°♂41'02	1°10'34
minimum elong	15130 Mar 09 06:07	29°♂50'41	0°48'11	minimum elong	15131 Feb 21 00:13	13°♂54'11	1°10'35
	15130 Mar 09 08:00	0°♂		max. Earth dist.	15131 Feb 25 19:31	23°♂34'13	1.35443 AU
desc. node	15130 Mar 15 03:10	11°♂05'23			15131 Mar 01 03:49	0°♂	
max. Earth dist.	15130 Mar 15 10:20	11°♂38'34	1.37581 AU	evening rise	15131 Mar 01 18:57	1°♂10'52	
evening rise	15130 Mar 19 03:05	18°♂20'07		desc. node	15131 Mar 01 23:41	1°♂32'57	
	15130 Mar 25 23:23	0°♂			15131 Mar 19 01:18	0°♂	
	15130 Apr 15 15:03	0°♂		evening max el	15131 Apr 06 03:20	22°♂47'47	26°22'32
evening max el	15130 Apr 23 13:47	8°♂58'38	25°15'34		15131 Apr 17 09:00	0°♂	
retrograde	15130 May 05 16:37	16°♂00'24		retrograde	15131 Apr 19 01:44	0°♂09'50	
asc. node	15130 May 09 09:22	15°♂03'09			15131 Apr 20 17:10	30°♂	
evening set	15130 May 11 13:06	13°♂33'37		evening set	15131 Apr 25 08:34	27°♂37'47	
min. Earth dist.	15130 May 15 21:30	8°♂44'15	0.68054 AU	asc. node	15131 Apr 26 06:40	26°♂49'26	
inferior conj	15130 May 17 04:38	7°♂02'57	2°10'38	min. Earth dist.	15131 Apr 29 10:41	23°♂23'43	0.66859 AU
minimum elong	15130 May 17 02:28	7°♂10'00	2°09'11	inferior conj	15131 May 01 06:41	21°♂09'37	1°29'15
morning rise	15130 May 22 16:12	1°♂09'28		minimum elong	15131 May 01 04:45	21°♂15'32	1°27'54
	15130 May 25 09:04	30°♂		morning rise	15131 May 07 01:53	15°♂27'12	
direct	15130 May 26 06:17	29°♂55'36		direct	15131 May 10 05:18	14°♂31'37	
	15130 May 27 03:48	0°♂		morning max el	15131 May 16 17:07	17°♂58'20	18°28'16
morning max el	15130 Jun 02 06:16	3°♂44'53	19°14'41		15131 May 25 23:50	0°♂	
desc. node	15130 Jun 11 04:28	14°♂54'22		desc. node	15131 May 29 01:23	4°♂39'47	
greatest brilliancy	15130 Jun 15 00:54	20°♂31'08	-0.7m	morning set	15131 Jun 06 09:22	17°♂43'46	
	15130 Jun 21 07:39	0°♂			15131 Jun 14 04:41	0°♂	
morning set	15130 Jun 26 12:32	7°♂58'45		superior conj	15131 Jun 22 05:20	12°♂32'20	-2°10'29
max. Earth dist.	15130 Jul 09 13:24	28°♂13'14	1.45418 AU	minimum elong	15131 Jun 22 00:51	12°♂14'50	2°11'18
	15130 Jul 10 16:35	0°♂		max. Earth dist.	15131 Jun 22 08:55	12°♂46'16	1.45935 AU
superior conj	15130 Jul 12 19:49	3°♂22'05	-2°12'11		15131 Jul 03 09:26	0°♂	
minimum elong	15130 Jul 12 23:04	3°♂34'59	2°12'59	evening rise	15131 Jul 08 01:03	7°♂18'56	
evening rise	15130 Jul 27 09:15	26°♂52'32		greatest brilliancy	15131 Jul 16 19:40	21°♂05'41	-0.8m
	15130 Jul 29 06:50	0°♂			15131 Jul 22 17:36	0°♂	
asc. node	15130 Aug 05 09:01	11°♂32'46		asc. node	15131 Jul 23 05:43	0°♂43'15	
evening max el	15130 Aug 15 08:41	25°♂12'01	18°16'00	evening max el	15131 Jul 29 20:40	8°♂56'59	18°47'06
retrograde	15130 Aug 21 17:30	28°♂34'44		retrograde	15131 Aug 05 12:02	12°♂34'01	
evening set	15130 Aug 24 16:02	27°♂47'34		evening set	15131 Aug 08 19:42	11°♂30'45	
inferior conj	15130 Aug 30 14:48	22°♂20'24	2°04'09	inferior conj	15131 Aug 14 09:42	5°♂49'03	2°40'16
minimum elong	15130 Aug 30 17:11	22°♂13'31	2°03'15	minimum elong	15131 Aug 14 11:43	5°♂42'43	2°39'23
min. Earth dist.	15130 Sep 02 00:05	19°♂36'14	0.64291 AU	min. Earth dist.	15131 Aug 16 05:03	3°♂33'36	0.66125 AU
morning rise	15130 Sep 05 16:44	16°♂00'55			15131 Aug 19 10:31	30°♂	
desc. node	15130 Sep 07 01:50	15°♂02'08		morning rise	15131 Aug 20 02:47	29°♂23'34	
direct	15130 Sep 12 06:23	13°♂26'08		desc. node	15131 Aug 24 23:18	26°♂52'52	
morning max el	15130 Sep 25 23:53	21°♂24'17	27°31'23	direct	15131 Aug 26 09:30	26°♂45'12	
	15130 Oct 03 11:45	0°♂			15131 Sep 03 08:54	0°♂	
	15130 Oct 23 03:24	0°♂		morning max el	15131 Sep 08 11:21	4°♂30'19	26°35'13
morning set	15130 Oct 31 03:47	15°♂00'26					

	15131 Sep 27 22:52	0°♄			15132 Aug 31 02:41	0°♍		
morning set	15131 Oct 14 07:26	27°♄57'05			15132 Sep 19 23:00	0°♄		
	15131 Oct 15 09:17	0°♍		morning set	15132 Sep 25 19:46	10°♄11'55		
max. Earth dist.	15131 Oct 18 06:48	5°♍38'37	1.34313 AU	max. Earth dist.	15132 Sep 29 09:06	16°♄42'29	1.36386 AU	
asc. node	15131 Oct 19 07:34	7°♍42'01		asc. node	15132 Oct 05 04:12	27°♄51'14		
superior conj	15131 Oct 23 04:37	15°♍37'15	0°35'17	superior conj	15132 Oct 05 18:44	29°♄03'16	0°05'34	
minimum elong	15131 Oct 23 02:50	15°♍28'01	0°35'34	minimum elong	15132 Oct 05 18:22	29°♄01'28	0°05'52	
	15131 Oct 30 00:19	0°♁		behind sun begin	15132 Oct 05 12:24	28°♄31'48		
evening rise	15131 Oct 30 13:53	1°♁11'23		behind sun end	15132 Oct 06 00:21	29°♄31'12		
	15131 Nov 16 00:47	0°♂			15132 Oct 06 06:08	0°♍		
evening max el	15131 Nov 19 02:39	3°♂24'50	21°11'47	evening rise	15132 Oct 13 19:56	15°♍23'55		
desc. node	15131 Nov 20 19:59	4°♂59'43			15132 Oct 21 08:05	0°♁		
retrograde	15131 Nov 30 22:55	9°♂17'10		evening max el	15132 Oct 31 07:42	14°♁15'10	19°52'07	
evening set	15131 Dec 03 16:10	8°♂59'54		desc. node	15132 Nov 06 17:14	18°♁38'59		
inferior conj	15131 Dec 12 11:34	5°♂08'06	-5°38'48	retrograde	15132 Nov 10 12:55	19°♁20'54		
minimum elong	15131 Dec 12 04:10	5°♂18'33	5°36'42	evening set	15132 Nov 12 13:11	19°♁09'58		
min. Earth dist.	15131 Dec 13 01:35	4°♂48'18	0.54439 AU	inferior conj	15132 Nov 21 08:13	15°♁09'52	-4°22'32	
morning rise	15131 Dec 20 16:34	1°♂17'20		minimum elong	15132 Nov 20 22:15	15°♁25'11	4°18'38	
direct	15131 Dec 24 17:18	0°♂42'18		min. Earth dist.	15132 Nov 23 09:07	13°♁54'53	0.55080 AU	
morning max el	15132 Jan 06 15:47	6°♂58'30	22°45'37	morning rise	15132 Nov 29 05:55	10°♁57'37		
asc. node	15132 Jan 15 07:18	17°♂36'08		direct	15132 Dec 04 06:24	10°♁02'13		
	15132 Jan 22 13:36	0°♁		morning max el	15132 Dec 18 00:44	16°♁52'51	24°35'19	
morning set	15132 Jan 29 00:30	13°♁05'18			15132 Dec 28 14:38	0°♂		
				asc. node	15133 Jan 01 04:31	5°♂44'51		
superior conj	15132 Feb 04 23:44	28°♁03'57	1°26'01	morning set	15133 Jan 12 12:29	27°♂47'56		
minimum elong	15132 Feb 05 01:43	28°♁14'31	1°26'25		15133 Jan 13 12:56	0°♁		
	15132 Feb 05 21:32	0°♁						
max. Earth dist.	15132 Feb 08 11:21	5°♁24'18	1.33641 AU	superior conj	15133 Jan 19 07:05	12°♁38'25	1°35'05	
evening rise	15132 Feb 13 00:45	14°♁35'47		minimum elong	15133 Jan 19 08:08	12°♁44'08	1°35'48	
desc. node	15132 Feb 16 20:16	21°♁51'40		max. Earth dist.	15133 Jan 21 10:50	17°♁20'28	1.32279 AU	
	15132 Feb 21 09:15	0°♂		evening rise	15133 Jan 26 17:11	28°♁25'30		
	15132 Mar 12 19:12	0°♂			15133 Jan 27 11:50	0°♁		
evening max el	15132 Mar 18 16:53	6°♂23'49	27°11'09	desc. node	15133 Feb 02 16:53	11°♁55'49		
retrograde	15132 Apr 01 05:01	13°♂54'19			15133 Feb 13 13:34	0°♂		
evening set	15132 Apr 07 19:59	11°♂23'11		evening max el	15133 Mar 01 05:09	19°♂35'19	27°34'20	
min. Earth dist.	15132 Apr 11 17:22	7°♂41'47	0.65260 AU	retrograde	15133 Mar 15 01:16	27°♂04'10		
asc. node	15132 Apr 12 04:02	7°♂12'29		evening set	15133 Mar 21 20:58	24°♂41'10		
inferior conj	15132 Apr 14 01:44	5°♂04'04	0°35'37	min. Earth dist.	15133 Mar 25 15:35	21°♂28'31	0.63323 AU	
minimum elong	15132 Apr 14 00:47	5°♂06'45	0°34'48	inferior conj	15133 Mar 28 10:57	18°♂39'02	-0°30'53	
	15132 Apr 19 12:33	30°♂♂		minimum elong	15133 Mar 28 11:57	18°♂36'31	0°30'42	
morning rise	15132 Apr 20 07:19	29°♂34'24		asc. node	15133 Mar 30 01:28	17°♂04'02		
direct	15132 Apr 23 01:08	28°♂54'21		morning rise	15133 Apr 04 05:29	13°♂24'32		
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morning max el	15132 Apr 29 08:45	2°♂11'02	17°58'40	morning max el	15133 Apr 13 02:25	16°♂14'45	17°46'26	
desc. node	15132 May 14 22:12	24°♂44'49			15133 Apr 22 22:55	0°♂		
morning set	15132 May 17 09:23	28°♂47'33		morning set	15133 Apr 29 11:39	11°♂06'17		
	15132 May 18 03:04	0°♁		desc. node	15133 May 01 18:57	15°♂03'40		
					15133 May 10 15:54	0°♁		
superior conj	15132 May 31 17:58	21°♁57'09	-1°49'25	superior conj	15133 May 12 00:23	2°♁13'26	-1°15'21	
minimum elong	15132 May 31 09:12	21°♁22'32	1°49'36	minimum elong	15133 May 11 17:10	1°♁43'52	1°15'14	
max. Earth dist.	15132 Jun 04 04:49	27°♁22'55	1.45701 AU	max. Earth dist.	15133 May 17 23:20	11°♁50'03	1.44748 AU	
	15132 Jun 05 21:00	0°♁		evening rise	15133 May 27 06:25	26°♁20'21		
evening rise	15132 Jun 16 19:40	16°♁55'43			15133 May 29 15:57	0°♁		
	15132 Jun 25 09:17	0°♁			15133 Jun 19 11:23	0°♁		
greatest brilliancy	15132 Jun 30 10:44	7°♁33'06	-0.7m		15133 Jun 25 05:31	6°♁40'31	20°37'01	
asc. node	15132 Jul 09 02:30	19°♁23'46		evening max el	15133 Jun 25 23:23	7°♁23'54		
evening max el	15132 Jul 12 03:59	22°♁47'44	19°34'45	asc. node	15133 Jun 25 23:23	7°♁23'54		
retrograde	15132 Jul 19 09:58	26°♁51'20		retrograde	15133 Jul 03 08:56	11°♁21'02		
evening set	15132 Jul 23 03:23	25°♁30'50		evening set	15133 Jul 07 12:50	9°♁43'00		
inferior conj	15132 Jul 28 11:53	19°♁36'04	3°01'20	inferior conj	15133 Jul 12 18:46	3°♁36'27	3°09'38	
minimum elong	15132 Jul 28 13:06	19°♁32'03	3°00'30	minimum elong	15133 Jul 12 19:00	3°♁35'39	3°08'46	
min. Earth dist.	15132 Jul 29 17:05	17°♁59'07	0.67556 AU	min. Earth dist.	15133 Jul 13 10:09	2°♁43'30	0.68525 AU	
morning rise	15132 Aug 02 22:17	13°♁10'35			15133 Jul 15 11:36	30°♂♂		
direct	15132 Aug 08 19:12	10°♁37'06		morning rise	15133 Jul 18 00:53	27°♂14'47		
desc. node	15132 Aug 10 20:45	10°♁53'33		direct	15133 Jul 23 10:11	24°♂53'18		
morning max el	15132 Aug 20 22:17	17°♁52'59	25°18'32	desc. node	15133 Jul 28 18:09	26°♂42'42		

	15133 Aug 01 21:40	0°♎	direct	15134 Jul 07 05:18	9°♊25'02	
morning max el	15133 Aug 03 08:54	1°♎25'39 23°51'12	desc. node	15134 Jul 15 15:27	13°♊54'17	
	15133 Aug 25 01:21	0°♐	morning max el	15134 Jul 16 21:15	15°♊06'16	22°22'16
morning set	15133 Sep 07 12:32	21°♐35'19		15134 Jul 28 23:49	0°♎	
max. Earth dist.	15133 Sep 11 07:35	28°♐09'29 1.38739 AU		15134 Aug 18 00:38	0°♐	
	15133 Sep 12 08:32	0°♑	morning set	15134 Aug 19 05:49	1°♐57'32	
			max. Earth dist.	15134 Aug 24 08:28	10°♐23'05	1.41101 AU
superior conj	15133 Sep 18 20:11	11°♑53'46 -0°28'33				
minimum elong	15133 Sep 18 22:13	12°♑03'21 0°28'05	superior conj	15134 Sep 01 04:33	23°♐57'36 -1°04'42	
asc. node	15133 Sep 22 00:49	17°♑59'55	minimum elong	15134 Sep 01 09:38	24°♐20'18 1°04'07	
evening rise	15133 Sep 27 19:55	29°♑19'40		15134 Sep 04 12:47	0°♑	
	15133 Sep 28 04:09	0°♒	asc. node	15134 Sep 08 21:24	8°♑03'44	
evening max el	15133 Oct 14 02:49	25°♒55'38 18°54'21	evening rise	15134 Sep 11 10:25	12°♑49'15	
	15133 Oct 20 12:54	0°♓		15134 Sep 21 01:25	0°♒	
retrograde	15133 Oct 22 18:25	0°♓17'02	evening max el	15134 Sep 27 08:32	8°♒20'08 18°18'27	
evening set	15133 Oct 24 15:41	0°♓05'26	retrograde	15134 Oct 04 19:33	12°♒07'55	
desc. node	15133 Oct 24 14:33	0°♓05'59	evening set	15134 Oct 06 21:11	11°♒51'05	
	15133 Oct 25 01:26	30°♒♒	desc. node	15134 Oct 11 11:58	9°♒29'05	
inferior conj	15133 Nov 01 22:20	25°♒46'59 -2°38'45	inferior conj	15134 Oct 14 10:15	7°♒11'17 -0°56'06	
minimum elong	15133 Nov 01 15:45	25°♒58'38 2°35'27	minimum elong	15134 Oct 14 08:10	7°♒15'38 0°54'45	
min. Earth dist.	15133 Nov 04 21:11	23°♒42'06 0.56547 AU	min. Earth dist.	15134 Oct 17 16:39	4°♒29'49 0.58565 AU	
morning rise	15133 Nov 09 12:53	20°♒59'56	morning rise	15134 Oct 21 15:41	1°♒47'27	
direct	15133 Nov 15 08:23	19°♒39'43	direct	15134 Oct 28 00:10	0°♒00'31	
morning max el	15133 Nov 29 12:12	26°♒56'54 26°14'03	morning max el	15134 Nov 11 07:25	7°♒39'17 27°24'29	
	15133 Dec 02 10:58	0°♓		15134 Nov 28 03:52	0°♓	
asc. node	15133 Dec 19 01:39	24°♓33'37	asc. node	15134 Dec 05 22:40	13°♓51'52	
	15133 Dec 21 22:45	0°♔	morning set	15134 Dec 12 07:31	26°♓47'26	
morning set	15133 Dec 27 23:24	12°♔23'25		15134 Dec 13 19:21	0°♔	
superior conj	15134 Jan 03 17:31	27°♔18'11 1°37'59	superior conj	15134 Dec 19 05:03	11°♔57'59 1°34'53	
minimum elong	15134 Jan 03 17:29	27°♔18'03 1°38'53	minimum elong	15134 Dec 19 04:00	11°♔52'08 1°35'48	
max. Earth dist.	15134 Jan 04 16:15	29°♔24'46 1.31414 AU	max. Earth dist.	15134 Dec 19 00:16	11°♔31'12 1.31068 AU	
	15134 Jan 04 22:36	0°♕	evening rise	15134 Dec 25 23:12	26°♔53'08	
evening rise	15134 Jan 10 17:27	12°♕33'07		15134 Dec 27 10:25	0°♕	
	15134 Jan 19 15:23	0°♖	desc. node	15135 Jan 07 10:21	20°♕54'12	
desc. node	15134 Jan 20 13:34	1°♖39'15		15135 Jan 13 05:07	0°♖	
	15134 Feb 09 10:15	0°♗	evening max el	15135 Jan 24 15:37	13°♖53'05 26°42'26	
evening max el	15134 Feb 11 13:40	2°♗08'51 27°25'51	retrograde	15135 Feb 07 15:18	21°♖03'59	
retrograde	15134 Feb 25 13:07	9°♗29'51	evening set	15135 Feb 14 03:41	19°♖18'39	
evening set	15134 Mar 04 08:39	7°♗22'15	min. Earth dist.	15135 Feb 18 05:22	16°♖40'43 0.58936 AU	
min. Earth dist.	15134 Mar 08 03:45	4°♗32'02 0.61160 AU	inferior conj	15135 Feb 21 09:53	14°♖13'13 -3°16'59	
inferior conj	15134 Mar 11 06:54	1°♗45'23 -1°49'44	minimum elong	15135 Feb 21 17:15	13°♖59'00 3°13'59	
minimum elong	15134 Mar 11 10:52	1°♗36'35 1°48'04	morning rise	15135 Mar 01 10:09	9°♖38'08	
	15134 Mar 13 07:43	30°♖♖	direct	15135 Mar 03 09:58	9°♖23'55	
asc. node	15134 Mar 16 22:55	27°♖31'03	asc. node	15135 Mar 03 20:22	9°♖24'37	
morning rise	15134 Mar 18 16:15	26°♖49'08	morning max el	15135 Mar 11 06:45	13°♖17'32 18°17'30	
direct	15134 Mar 20 19:29	26°♖29'50		15135 Mar 22 13:06	0°♗	
	15134 Mar 27 18:51	0°♗	morning set	15135 Mar 26 23:41	8°♗17'16	
morning max el	15134 Mar 27 18:57	0°♗00'15 17°52'18				
morning set	15134 Apr 12 10:20	24°♗21'55	superior conj	15135 Apr 05 10:48	25°♗57'56 0°00'29	
	15134 Apr 15 13:20	0°♘	minimum elong	15135 Apr 05 10:49	25°♗58'01 0°00'09	
desc. node	15134 Apr 18 15:36	5°♘31'24	behind sun begin	15135 Apr 05 03:27	25°♗24'32	
			behind sun end	15135 Apr 05 18:11	26°♗31'25	
superior conj	15134 Apr 23 06:26	13°♘35'07 -0°36'39	desc. node	15135 Apr 05 12:11	26°♗04'15	
minimum elong	15134 Apr 23 03:07	13°♘20'48 0°36'43		15135 Apr 07 16:40	0°♘	
max. Earth dist.	15134 Apr 30 14:33	25°♘53'01 1.43175 AU	max. Earth dist.	15135 Apr 13 00:53	9°♘17'42 1.41144 AU	
	15134 May 03 03:30	0°♙	evening rise	15135 Apr 17 15:19	16°♘57'41	
evening rise	15134 May 07 01:31	6°♙13'12		15135 Apr 25 21:18	0°♙	
	15134 May 22 22:16	0°♚		15135 May 17 15:04	0°♚	
evening max el	15134 Jun 08 01:18	20°♚32'51 21°50'40	evening max el	15135 May 21 16:54	4°♚25'49 23°10'52	
asc. node	15134 Jun 12 20:22	24°♚29'44	asc. node	15135 May 30 17:26	10°♚25'15	
retrograde	15134 Jun 17 07:12	25°♚56'57	retrograde	15135 Jun 01 03:20	10°♚34'01	
evening set	15134 Jun 21 22:10	24°♚02'06	evening set	15135 Jun 06 05:46	8°♚24'18	
inferior conj	15134 Jun 27 04:06	17°♚45'09 3°06'40	min. Earth dist.	15135 Jun 11 02:57	2°♚37'05 0.69015 AU	
minimum elong	15134 Jun 27 03:23	17°♚47'39 3°05'40	inferior conj	15135 Jun 11 13:55	1°♚59'09 2°53'11	
min. Earth dist.	15134 Jun 27 06:06	17°♚38'09 0.69013 AU	minimum elong	15135 Jun 11 12:24	2°♚04'24 2°51'59	
morning rise	15134 Jul 02 08:25	11°♚29'39		15135 Jun 13 00:52	30°♒♒	

morning rise	15135 Jun 16 18:59	25° $\Pi$ 51'08		morning rise	15136 May 31 06:43	10° $\Pi$ 14'30	
direct	15135 Jun 21 03:24	24° $\Pi$ 06'01		direct	15136 Jun 04 03:14	8° $\Pi$ 49'28	
morning max el	15135 Jun 29 14:14	28° $\Pi$ 57'00	20°59'31	morning max el	15136 Jun 11 14:00	12° $\Pi$ 58'14	19°48'38
	15135 Jun 30 14:47	0° $\mathfrak{C}$		desc. node	15136 Jun 18 09:45	21° $\Pi$ 05'17	
desc. node	15135 Jul 02 12:40	2° $\mathfrak{C}$ 07'25			15136 Jun 24 17:43	0° $\mathfrak{C}$	
	15135 Jul 22 14:05	0° $\Omega$		morning set	15136 Jul 08 03:18	20° $\mathfrak{C}$ 09'32	
morning set	15135 Jul 29 23:37	11° $\Omega$ 20'20			15136 Jul 14 11:57	0° $\Omega$	
max. Earth dist.	15135 Aug 06 15:03	23° $\Omega$ 28'50	1.43194 AU	max. Earth dist.	15136 Jul 19 03:52	7° $\Omega$ 19'32	1.44789 AU
	15135 Aug 10 14:30	0° $\Pi$					
superior conj	15135 Aug 13 15:34	5° $\Pi$ 05'46	-1°38'44	superior conj	15136 Jul 24 03:04	15° $\Omega$ 15'23	-2°04'16
minimum elong	15135 Aug 13 23:02	5° $\Pi$ 37'16	1°38'24	minimum elong	15136 Jul 24 09:26	15° $\Omega$ 41'05	2°04'39
evening rise	15135 Aug 25 11:10	25° $\Pi$ 41'54		evening rise	15136 Aug 02 02:35	0° $\Pi$	
asc. node	15135 Aug 26 17:58	27° $\Pi$ 59'02		asc. node	15136 Aug 06 17:03	7° $\Pi$ 44'48	
	15135 Aug 27 21:11	0° $\Omega$			15136 Aug 12 14:34	17° $\Pi$ 41'35	
evening max el	15135 Sep 10 20:39	21° $\Omega$ 19'03	18°02'49	evening max el	15136 Aug 20 12:26	0° $\Omega$	
retrograde	15135 Sep 17 13:40	24° $\Omega$ 46'24		retrograde	15136 Aug 24 11:19	4° $\Omega$ 42'55	18°06'03
evening set	15135 Sep 19 22:40	24° $\Omega$ 20'23		evening set	15136 Aug 30 20:23	8° $\Omega$ 03'18	
inferior conj	15135 Sep 26 18:31	19° $\Omega$ 20'36	0°29'59	inferior conj	15136 Sep 02 13:51	7° $\Omega$ 24'39	
minimum elong	15135 Sep 26 19:27	19° $\Omega$ 18'22	0°29'51	minimum elong	15136 Sep 08 19:19	2° $\Omega$ 07'07	1°35'25
desc. node	15135 Sep 28 09:25	17° $\Omega$ 46'51			15136 Sep 08 21:32	2° $\Omega$ 01'05	1°34'38
min. Earth dist.	15135 Sep 29 21:31	16° $\Omega$ 22'02	0.60835 AU	min. Earth dist.	15136 Sep 10 18:09	30° $\mathfrak{R}$ $\Pi$	
morning rise	15135 Oct 03 13:12	13° $\Omega$ 27'12		desc. node	15136 Sep 11 12:11	29° $\Pi$ 12'19	0.63090 AU
direct	15135 Oct 10 04:26	11° $\Omega$ 15'48		desc. node	15136 Sep 14 06:53	26° $\Pi$ 34'28	
morning max el	15135 Oct 24 10:19	19° $\Omega$ 10'03	27°56'59	morning rise	15136 Sep 15 03:06	25° $\Pi$ 54'32	
	15135 Nov 02 15:24	0° $\mathfrak{M}$		direct	15136 Sep 21 19:01	23° $\Pi$ 25'27	
	15135 Nov 21 00:13	0° $\mathfrak{J}$			15136 Oct 04 07:00	0° $\Omega$	
asc. node	15135 Nov 22 19:33	3° $\mathfrak{J}$ 31'07		morning max el	15136 Oct 05 18:30	1° $\Omega$ 25'41	27°50'41
morning set	15135 Nov 26 10:50	10° $\mathfrak{J}$ 54'36			15136 Oct 26 20:41	0° $\mathfrak{M}$	
max. Earth dist.	15135 Dec 02 06:58	23° $\mathfrak{J}$ 30'03	1.31264 AU	asc. node	15136 Nov 08 16:21	23° $\mathfrak{M}$ 25'02	
				morning set	15136 Nov 09 07:11	24° $\mathfrak{M}$ 39'43	
superior conj	15135 Dec 03 15:47	26° $\mathfrak{J}$ 32'06	1°25'51		15136 Nov 11 21:29	0° $\mathfrak{J}$	
minimum elong	15135 Dec 03 13:56	26° $\mathfrak{J}$ 21'47	1°26'38	max. Earth dist.	15136 Nov 14 08:33	5° $\mathfrak{J}$ 12'39	1.32019 AU
	15135 Dec 05 05:06	0° $\mathfrak{Z}$					
evening rise	15135 Dec 10 08:24	11° $\mathfrak{Z}$ 20'02		superior conj	15136 Nov 16 23:51	10° $\mathfrak{J}$ 55'29	1°10'54
	15135 Dec 19 16:05	0° $\approx$		minimum elong	15136 Nov 16 21:33	10° $\mathfrak{J}$ 42'56	1°11'27
desc. node	15135 Dec 25 07:13	9° $\approx$ 29'15		evening rise	15136 Nov 23 19:12	25° $\mathfrak{J}$ 49'32	
evening max el	15136 Jan 06 09:05	24° $\approx$ 43'50	25°26'28		15136 Nov 25 18:11	0° $\mathfrak{Z}$	
	15136 Jan 13 13:27	0° $\mathfrak{H}$		desc. node	15136 Dec 11 04:11	27° $\mathfrak{Z}$ 09'51	
retrograde	15136 Jan 20 06:12	1° $\mathfrak{H}$ 42'49			15136 Dec 13 08:47	0° $\approx$	
evening set	15136 Jan 26 02:09	0° $\mathfrak{H}$ 25'15		evening max el	15136 Dec 17 19:51	4° $\approx$ 53'35	23°48'36
	15136 Jan 27 00:10	30° $\mathfrak{R}$ $\approx$		retrograde	15136 Dec 31 07:45	11° $\approx$ 35'23	
min. Earth dist.	15136 Jan 30 21:36	27° $\approx$ 44'37	0.56893 AU	evening set	15137 Jan 05 01:26	10° $\approx$ 46'41	
inferior conj	15136 Feb 02 16:37	25° $\approx$ 52'31	-4°42'04	min. Earth dist.	15137 Jan 11 07:08	7° $\approx$ 45'18	0.55326 AU
minimum elong	15136 Feb 03 01:49	25° $\approx$ 37'04	4°38'58	inferior conj	15137 Jan 13 02:37	6° $\approx$ 40'45	-5°44'27
morning rise	15136 Feb 11 04:15	21° $\approx$ 39'10		minimum elong	15137 Jan 13 08:40	6° $\approx$ 31'45	5°42'51
direct	15136 Feb 13 06:11	21° $\approx$ 26'19		morning rise	15137 Jan 21 17:34	2° $\approx$ 45'19	
asc. node	15136 Feb 18 17:47	23° $\approx$ 01'55		direct	15137 Jan 24 07:00	2° $\approx$ 28'56	
morning max el	15136 Feb 22 09:38	25° $\approx$ 53'55	19°03'52	morning max el	15137 Feb 03 23:32	7° $\approx$ 38'22	20°13'12
	15136 Feb 25 23:05	0° $\mathfrak{H}$		asc. node	15137 Feb 04 15:09	8° $\approx$ 17'11	
morning set	15136 Mar 09 23:02	22° $\mathfrak{H}$ 37'36			15137 Feb 18 14:45	0° $\mathfrak{H}$	
	15136 Mar 13 16:29	0° $\mathfrak{Y}$		morning set	15137 Feb 22 05:00	7° $\mathfrak{H}$ 13'16	
superior conj	15136 Mar 18 09:08	9° $\mathfrak{Y}$ 08'27	0°32'43				
minimum elong	15136 Mar 18 11:05	9° $\mathfrak{Y}$ 17'46	0°32'20	superior conj	15137 Mar 01 21:03	22° $\mathfrak{H}$ 54'39	0°58'39
desc. node	15136 Mar 22 08:45	16° $\mathfrak{Y}$ 37'46		minimum elong	15137 Mar 01 23:39	23° $\mathfrak{H}$ 07'44	0°58'28
max. Earth dist.	15136 Mar 25 07:16	21° $\mathfrak{Y}$ 57'48	1.38883 AU		15137 Mar 05 11:07	0° $\mathfrak{Y}$	
evening rise	15136 Mar 29 02:17	28° $\mathfrak{Y}$ 36'40		max. Earth dist.	15137 Mar 07 14:00	4° $\mathfrak{Y}$ 04'08	1.36643 AU
	15136 Mar 29 21:47	0° $\mathfrak{B}$		desc. node	15137 Mar 09 05:18	7° $\mathfrak{Y}$ 08'31	
	15136 Apr 18 07:34	0° $\Pi$		evening rise	15137 Mar 11 08:37	11° $\mathfrak{Y}$ 04'02	
evening max el	15136 May 03 06:34	18° $\Pi$ 19'40	24°31'41		15137 Mar 22 12:52	0° $\mathfrak{B}$	
retrograde	15136 May 14 20:04	25° $\Pi$ 05'28		evening max el	15137 Apr 13 16:23	0° $\Pi$	
asc. node	15136 May 16 14:36	24° $\Pi$ 51'57		retrograde	15137 Apr 15 20:08	2° $\Pi$ 12'40	25°45'54
evening set	15136 May 20 09:59	22° $\Pi$ 43'53		asc. node	15137 Apr 28 08:13	9° $\Pi$ 24'40	
min. Earth dist.	15136 May 24 22:34	17° $\Pi$ 33'25	0.68535 AU	evening set	15137 May 03 11:51	7° $\Pi$ 36'42	
inferior conj	15136 May 25 22:19	16° $\Pi$ 13'49	2°29'17	min. Earth dist.	15137 May 04 09:09	6° $\Pi$ 55'16	
minimum elong	15136 May 25 20:16	16° $\Pi$ 20'41	2°27'54	inferior conj	15137 May 08 14:48	2° $\Pi$ 20'49	0.67595 AU
				minimum elong	15137 May 10 03:19	0° $\Pi$ 24'51	1°54'31
					15137 May 10 01:10	0° $\Pi$ 31'40	1°53'05

	15137 May 10 11:08	30° 		morning rise	15138 Apr 30 02:00	8°  49'54	
morning rise	15137 May 15 17:45	24°  35'34		direct	15138 May 03 01:18	8°  01'07	
direct	15137 May 19 03:11	23°  29'42		morning max el	15138 May 09 10:12	11°  21'52	18°13'37
morning max el	15137 May 25 21:02	27°  08'00	18°52'51		15138 May 22 19:56	0° 	
	15137 May 28 12:16	0° 		desc. node	15138 May 23 03:38	0°  30'30	
desc. node	15137 Jun 05 06:44	10°  35'53		morning set	15138 May 28 20:31	9°  37'14	
greatest brilliancy	15137 Jun 08 09:46	15°  17'09	-0.8m		15138 Jun 10 16:56	0° 	
morning set	15137 Jun 17 12:26	29°  19'07					
	15137 Jun 17 22:59	0° 		superior conj	15138 Jun 13 03:27	3°  49'03	-2°03'40
max. Earth dist.	15137 Jul 01 21:42	21°  41'56	1.45730 AU	minimum elong	15138 Jun 12 20:22	3°  21'24	2°04'14
				max. Earth dist.	15138 Jun 14 18:15	6°  20'38	1.45929 AU
superior conj	15137 Jul 03 18:44	24°  38'10	-2°13'59	evening rise	15138 Jun 29 05:08	28°  49'39	
minimum elong	15137 Jul 03 18:46	24°  38'18	2°14'54		15138 Jun 29 23:14	0° 	
	15137 Jul 07 04:39	0° 		greatest brilliancy	15138 Jul 10 05:10	15°  48'00	-0.7m
evening rise	15137 Jul 18 23:15	18°  46'46		asc. node	15138 Jul 17 08:00	26°  44'41	
	15137 Jul 25 22:31	0° 			15138 Jul 20 10:54	0° 	
asc. node	15137 Jul 30 11:14	7°  05'38		evening max el	15138 Jul 22 11:29	2°  11'17	19°05'24
evening max el	15137 Aug 08 01:09	18°  22'39	18°27'11	retrograde	15138 Jul 29 07:56	5°  07'51	
retrograde	15137 Aug 14 11:35	21°  09'30		evening set	15138 Aug 01 19:46	4°  07'08	
evening set	15137 Aug 17 14:01	20°  55'37			15138 Aug 06 12:08	30° 	
inferior conj	15137 Aug 23 08:38	15°  22'16	2°21'27	inferior conj	15138 Aug 07 07:02	28°  59'36	2°50'52
minimum elong	15137 Aug 23 10:57	15°  15'21	2°20'33	minimum elong	15138 Aug 07 08:45	28°  54'05	2°50'00
min. Earth dist.	15137 Aug 25 12:09	12°  48'50	0.65122 AU	min. Earth dist.	15138 Aug 08 20:16	26°  59'56	0.66792 AU
morning rise	15137 Aug 29 06:36	8°  59'38		morning rise	15138 Aug 12 21:02	22°  33'46	
desc. node	15137 Sep 01 04:22	7°  08'46		direct	15138 Aug 18 23:52	19°  56'45	
direct	15137 Sep 04 17:56	6°  22'04		desc. node	15138 Aug 19 01:49	19°  56'47	
morning max el	15137 Sep 18 05:16	14°  15'57	27°10'32	morning max el	15138 Aug 31 16:40	27°  30'27	26°04'33
	15137 Oct 01 00:47	0° 			15138 Sep 03 01:06	0° 	
	15137 Oct 19 13:06	0° 			15138 Sep 24 16:58	0° 	
morning set	15137 Oct 23 17:49	7°  55'43		morning set	15138 Oct 06 15:27	20°  35'30	
asc. node	15137 Oct 26 13:05	13°  28'03		max. Earth dist.	15138 Oct 10 09:29	27°  41'06	1.35158 AU
max. Earth dist.	15137 Oct 28 01:47	16°  34'08	1.33331 AU		15138 Oct 11 14:02	0° 	
				asc. node	15138 Oct 13 09:47	3° 	
superior conj	15137 Nov 01 03:03	25°  01'41	0°49'59	superior conj	15138 Oct 15 22:51	8°  44'30	0°23'19
minimum elong	15137 Nov 01 00:53	24°  50'07	0°50'19	minimum elong	15138 Oct 15 21:34	8°  37'54	0°23'35
	15137 Nov 03 10:54	0° 		evening rise	15138 Oct 23 14:09	24°  36'06	
evening rise	15137 Nov 08 05:46	10°  16'27			15138 Oct 26 05:16	0° 	
	15137 Nov 18 07:55	0° 		evening max el	15138 Nov 11 03:40	25°  15'29	20°35'10
desc. node	15137 Nov 28 01:15	13°  36'01		desc. node	15138 Nov 14 22:26	28°  12'33	
evening max el	15137 Nov 29 06:54	14°  51'48	22°06'03		15138 Nov 18 00:28	0° 	
retrograde	15137 Dec 11 21:09	21°  05'44		retrograde	15138 Nov 22 07:37	0°  48'38	
evening set	15137 Dec 15 07:07	20°  39'54		evening set	15138 Nov 24 15:54	0°  35'02	
inferior conj	15137 Dec 23 21:11	16°  34'32	-5°58'32		15138 Nov 26 20:06	30° 	
minimum elong	15137 Dec 23 18:31	16°  51'16	5°57'27	inferior conj	15138 Dec 03 12:48	26°  40'53	-5°11'50
min. Earth dist.	15137 Dec 23 12:55	16°  59'06	0.54508 AU	minimum elong	15138 Dec 03 03:19	26°  54'36	5°08'46
morning rise	15138 Jan 01 06:51	13°  00'18		min. Earth dist.	15138 Dec 04 18:37	25°  17'42	0.54604 AU
direct	15138 Jan 04 17:45	12°  33'51		morning rise	15138 Dec 11 14:35	22°  14'38	
morning max el	15138 Jan 16 22:29	18°  26'25	21°45'03	direct	15138 Dec 16 01:54	22°  10'44	
asc. node	15138 Jan 22 12:28	24°  53'33		morning max el	15138 Dec 29 10:10	28°  13'48	23°32'29
	15138 Jan 25 23:56	0° 			15138 Dec 30 21:40	0° 	
morning set	15138 Feb 06 14:57	21°  56'43		asc. node	15139 Jan 09 09:44	12°  33'07	
	15138 Feb 10 10:10	0° 			15139 Jan 18 22:08	0° 	
superior conj	15138 Feb 13 18:50	7°  06'20	1°17'55	morning set	15139 Jan 22 02:44	6°  41'21	
minimum elong	15138 Feb 13 21:13	7°  18'45	1°18'06	superior conj	15139 Jan 28 23:26	21°  34'36	1°30'38
max. Earth dist.	15138 Feb 18 01:56	15°  56'03	1.34631 AU	minimum elong	15139 Jan 29 01:03	21°  43'19	1°31'11
evening rise	15138 Feb 22 06:51	24°  10'14		max. Earth dist.	15139 Jan 31 21:20	27°  48'41	1.33001 AU
desc. node	15138 Feb 24 01:52	27°  32'46			15139 Feb 01 22:18	0° 	
	15138 Feb 25 09:48	0° 		evening rise	15139 Feb 05 17:31	7°  46'03	
	15138 Mar 16 02:46	0° 		desc. node	15139 Feb 10 22:27	17°  45'40	
evening max el	15138 Mar 29 10:03	15°  58'19	26°46'00		15139 Feb 17 22:40	0°	
retrograde	15138 Apr 11 14:51	23°  24'29		evening max el	15139 Mar 11 23:15	29°  07'25	27°24'33
evening set	15138 Apr 18 01:28	20°  52'17			15139 Mar 12 13:59	0°	
asc. node	15138 Apr 20 09:11	18°  43'26		retrograde	15139 Mar 25 15:04	6°  55'25	
min. Earth dist.	15138 Apr 22 01:30	16°  52'24	0.66225 AU	evening set	15139 Apr 01 08:45	4°  26'40	
inferior conj	15138 Apr 24 02:45	14°  27'19	1°08'04	min. Earth dist.	15139 Apr 05 04:37	0°  58'25	0.64472 AU
minimum elong	15138 Apr 24 01:08	14°  32'07	1°06'54				

	15139 Apr 06 02:45	30° $\Upsilon$			15140 Feb 11 20:42	0° $\Upsilon$	
asc. node	15139 Apr 07 06:36	28° $\Upsilon$ 44'52		evening max el	15140 Feb 22 09:59	12° $\Upsilon$ 21'08	27°34'48
inferior conj	15139 Apr 07 18:00	28° $\Upsilon$ 14'04	0°09'01	retrograde	15140 Mar 07 08:03	19° $\Upsilon$ 47'59	
minimum elong	15139 Apr 07 17:45	28° $\Upsilon$ 14'46	0°08'34	evening set	15140 Mar 14 04:28	17° $\Upsilon$ 30'15	
transit middle	15139 Apr 07 17:45	28° $\Upsilon$ 14'46	0°08'34	min. Earth dist.	15140 Mar 17 22:36	14° $\Upsilon$ 28'21	0.62422 AU
transit begin	15139 Apr 07 15:09	28° $\Upsilon$ 21'46		inferior conj	15140 Mar 20 21:59	11° $\Upsilon$ 37'47	-1°02'55
transit end	15139 Apr 07 20:21	28° $\Upsilon$ 07'46		minimum elong	15140 Mar 21 00:08	11° $\Upsilon$ 32'39	1°02'09
morning rise	15139 Apr 14 04:49	22° $\Upsilon$ 50'43		asc. node	15140 Mar 24 04:00	8° $\Upsilon$ 43'26	
direct	15139 Apr 16 19:02	22° $\Upsilon$ 16'12		morning rise	15140 Mar 27 22:43	6° $\Upsilon$ 31'02	
morning max el	15139 Apr 23 03:06	25° $\Upsilon$ 31'46	17°51'24	direct	15140 Mar 30 05:15	6° $\Upsilon$ 07'19	
	15139 Apr 26 22:51	0° $\text{B}$		morning max el	15140 Apr 05 20:46	9° $\Upsilon$ 29'17	17°46'42
morning set	15139 May 10 08:13	21° $\text{B}$ 14'22			15140 Apr 19 13:20	0° $\text{B}$	
desc. node	15139 May 10 00:25	20° $\text{B}$ 41'45		morning set	15140 Apr 21 19:51	3° $\text{B}$ 58'59	
	15139 May 15 14:32	0° $\text{II}$		desc. node	15140 Apr 25 21:09	11° $\text{B}$ 04'45	
superior conj	15139 May 23 22:16	13° $\text{II}$ 32'05	-1°36'03	superior conj	15140 May 03 14:35	24° $\text{B}$ 15'54	-0°59'05
minimum elong	15139 May 23 13:37	12° $\text{II}$ 57'26	1°36'02	minimum elong	15140 May 03 08:57	23° $\text{B}$ 52'23	0°59'00
max. Earth dist.	15139 May 28 14:17	20° $\text{II}$ 56'26	1.45378 AU		15140 May 07 01:53	0° $\text{II}$	
	15139 Jun 03 09:34	0° $\text{B}$		max. Earth dist.	15140 May 10 07:08	5° $\text{II}$ 12'59	1.44143 AU
evening rise	15139 Jun 08 18:23	8° $\text{B}$ 15'44		evening rise	15140 May 18 06:47	17° $\text{II}$ 47'10	
	15139 Jun 23 06:14	0° $\Omega$			15140 May 26 07:57	0° $\text{B}$	
greatest brilliancy	15139 Jun 23 14:52	0° $\Omega$ 31'15	-0.6m	evening max el	15140 Jun 17 15:11	29° $\text{B}$ 54'14	21°07'11
asc. node	15139 Jul 04 04:51	14° $\Omega$ 29'09			15140 Jun 17 17:30	0° $\Omega$	
evening max el	15139 Jul 05 16:21	16° $\Omega$ 02'36	19°59'31	asc. node	15140 Jun 20 01:46	2° $\Omega$ 07'33	
retrograde	15139 Jul 13 06:41	20° $\Omega$ 21'00		retrograde	15140 Jun 26 05:39	4° $\Omega$ 53'24	
evening set	15139 Jul 17 04:29	18° $\Omega$ 52'53		evening set	15140 Jun 30 14:05	3° $\Omega$ 08'10	
inferior conj	15139 Jul 22 11:32	12° $\Omega$ 52'40	3°06'18		15140 Jul 03 13:16	30° $\text{B}$	
minimum elong	15139 Jul 22 12:20	12° $\Omega$ 49'57	3°05'28	inferior conj	15140 Jul 05 19:43	26° $\text{B}$ 56'49	3°09'42
min. Earth dist.	15139 Jul 23 10:42	11° $\Omega$ 34'15	0.68024 AU	minimum elong	15140 Jul 05 19:32	26° $\text{B}$ 57'26	3°08'47
morning rise	15139 Jul 27 19:49	6° $\Omega$ 28'23		min. Earth dist.	15140 Jul 06 05:22	26° $\text{B}$ 23'15	0.68787 AU
direct	15139 Aug 02 11:48	3° $\Omega$ 59'34		morning rise	15140 Jul 11 00:43	20° $\text{B}$ 37'16	
desc. node	15139 Aug 05 23:14	4° $\Omega$ 46'12		direct	15140 Jul 16 04:42	18° $\text{B}$ 22'30	
morning max el	15139 Aug 14 03:35	10° $\Omega$ 58'35	24°42'12	desc. node	15140 Jul 22 20:35	21° $\text{B}$ 12'37	
	15139 Aug 29 08:08	0° $\text{B}$		morning max el	15140 Jul 26 14:38	24° $\text{B}$ 34'20	23°13'01
	15139 Sep 17 09:38	0° $\Omega$			15140 Jul 31 11:28	0° $\Omega$	
morning set	15139 Sep 18 20:04	2° $\Omega$ 29'57			15140 Aug 21 18:19	0° $\text{B}$	
max. Earth dist.	15139 Sep 22 09:40	8° $\Omega$ 52'23	1.37367 AU	morning set	15140 Aug 30 03:14	13° $\text{B}$ 28'08	
				max. Earth dist.	15140 Sep 03 07:59	20° $\text{B}$ 34'44	1.39751 AU
superior conj	15139 Sep 29 08:04	21° $\Omega$ 56'23	-0°08'30		15140 Sep 08 16:05	0° $\Omega$	
minimum elong	15139 Sep 29 08:37	21° $\Omega$ 59'01	0°08'07	superior conj	15140 Sep 11 02:47	4° $\Omega$ 27'50	-0°43'50
behind sun begin	15139 Sep 29 02:49	21° $\Omega$ 30'47		minimum elong	15140 Sep 11 06:04	4° $\Omega$ 43'02	0°43'17
behind sun end	15139 Sep 29 14:25	22° $\Omega$ 27'18		asc. node	15140 Sep 16 03:02	13° $\Omega$ 52'24	
asc. node	15139 Sep 30 06:26	23° $\Omega$ 45'37		evening rise	15140 Sep 20 14:25	22° $\Omega$ 28'06	
	15139 Oct 03 09:59	0° $\text{B}$			15140 Sep 24 13:19	0° $\text{B}$	
evening rise	15139 Oct 07 18:01	8° $\text{B}$ 42'41		evening max el	15140 Oct 06 15:04	18° $\text{B}$ 27'35	18°36'34
	15139 Oct 19 10:57	0° $\text{B}$		retrograde	15140 Oct 14 17:22	22° $\text{B}$ 33'05	
evening max el	15139 Oct 24 14:54	6° $\text{B}$ 27'10	19°24'46	evening set	15140 Oct 16 15:48	22° $\text{B}$ 19'50	
desc. node	15139 Nov 01 19:42	11° $\text{B}$ 08'17		desc. node	15140 Oct 18 17:03	21° $\text{B}$ 38'56	
retrograde	15139 Nov 03 03:42	11° $\text{B}$ 13'41		inferior conj	15140 Oct 24 15:16	17° $\text{B}$ 52'47	-1°53'51
evening set	15139 Nov 05 01:07	11° $\text{B}$ 03'13		minimum elong	15140 Oct 24 10:41	18° $\text{B}$ 01'29	1°51'22
inferior conj	15139 Nov 13 15:58	6° $\text{B}$ 55'53	-3°39'59	min. Earth dist.	15140 Oct 27 19:09	15° $\text{B}$ 29'54	0.57351 AU
minimum elong	15139 Nov 13 07:00	7° $\text{B}$ 10'28	3°36'02	morning rise	15140 Nov 01 02:10	12° $\text{B}$ 49'27	
min. Earth dist.	15139 Nov 16 03:54	5° $\text{B}$ 18'37	0.55612 AU	direct	15140 Nov 07 04:00	11° $\text{B}$ 17'33	
morning rise	15139 Nov 21 10:43	2° $\text{B}$ 29'31		morning max el	15140 Nov 21 10:00	18° $\text{B}$ 45'25	26°48'09
direct	15139 Nov 26 19:40	1° $\text{B}$ 24'13			15140 Nov 30 21:29	0° $\text{B}$	
morning max el	15139 Dec 10 19:31	8° $\text{B}$ 27'18	25°19'52	asc. node	15140 Dec 13 04:00	20° $\text{B}$ 02'47	
	15139 Dec 26 17:04	0° $\text{B}$			15140 Dec 18 05:19	0° $\text{B}$	
asc. node	15139 Dec 27 06:55	1° $\text{B}$ 00'31		morning set	15140 Dec 21 00:27	5° $\text{B}$ 53'09	
morning set	15140 Jan 06 14:31	21° $\text{B}$ 22'08					
	15140 Jan 10 13:07	0° $\approx$		superior conj	15140 Dec 27 19:32	20° $\text{B}$ 53'13	1°37'24
superior conj	15140 Jan 13 08:24	6° $\approx$ 12'41	1°37'03	minimum elong	15140 Dec 27 19:04	20° $\text{B}$ 50'35	1°38'20
minimum elong	15140 Jan 13 09:00	6° $\approx$ 15'58	1°37'52	max. Earth dist.	15140 Dec 28 06:23	21° $\text{B}$ 53'51	1.31199 AU
max. Earth dist.	15140 Jan 14 23:38	9° $\approx$ 48'47	1.31843 AU		15140 Dec 31 22:06	0° $\approx$	
evening rise	15140 Jan 20 13:36	21° $\approx$ 44'24		evening rise	15141 Jan 03 16:28	5° $\approx$ 57'53	
	15140 Jan 24 16:30	0° $\text{H}$		desc. node	15141 Jan 14 15:50	27° $\approx$ 14'15	
desc. node	15140 Jan 28 19:07	7° $\text{H}$ 42'05			15141 Jan 16 06:32	0° $\text{H}$	

evening max el	15141 Feb 03 15:58	24° $\text{H}$ 34'28	27°11'40	desc. node	15142 Jan 01 12:37	16° $\approx$ 13'22	
	15141 Feb 10 21:36	0° $\text{Y}$			15142 Jan 11 03:30	0° $\text{H}$	
retrograde	15141 Feb 17 16:18	1° $\text{Y}$ 51'58		evening max el	15142 Jan 16 14:38	5° $\text{H}$ 56'15	26°13'41
evening set	15141 Feb 24 09:30	29° $\text{H}$ 53'09		retrograde	15142 Jan 30 13:43	13° $\text{H}$ 01'33	
	15141 Feb 24 04:43	30° $\text{R}$ $\text{H}$		evening set	15142 Feb 05 20:10	11° $\text{H}$ 27'57	
min. Earth dist.	15141 Feb 28 06:25	27° $\text{H}$ 09'24	0.60206 AU	min. Earth dist.	15142 Feb 10 04:00	8° $\text{H}$ 50'38	0.58032 AU
inferior conj	15141 Mar 03 11:08	24° $\text{H}$ 28'41	-2°26'09	inferior conj	15142 Feb 13 05:48	6° $\text{H}$ 36'46	-3°54'21
minimum elong	15141 Mar 03 16:33	24° $\text{H}$ 17'18	2°23'51	minimum elong	15142 Feb 13 14:19	6° $\text{H}$ 21'16	3°51'05
morning rise	15141 Mar 11 03:00	19° $\text{H}$ 41'07		morning rise	15142 Feb 21 11:33	2° $\text{H}$ 10'34	
asc. node	15141 Mar 11 01:25	19° $\text{H}$ 42'11		direct	15142 Feb 23 11:26	1° $\text{H}$ 57'22	
direct	15141 Mar 13 04:08	19° $\text{H}$ 24'32		asc. node	15142 Feb 25 22:51	2° $\text{H}$ 18'43	
morning max el	15141 Mar 20 11:45	23° $\text{H}$ 03'54	18°00'30	morning max el	15142 Mar 03 20:09	6° $\text{H}$ 04'29	18°34'27
	15141 Mar 25 23:03	0° $\text{Y}$			15142 Mar 18 22:38	0° $\text{Y}$	
morning set	15141 Apr 05 01:23	17° $\text{Y}$ 32'59		morning set	15142 Mar 19 19:29	1° $\text{Y}$ 40'16	
	15141 Apr 11 20:40	0° $\text{B}$					
desc. node	15141 Apr 12 17:47	1° $\text{B}$ 34'50		superior conj	15142 Mar 28 18:59	18° $\text{Y}$ 48'19	0°14'54
				minimum elong	15142 Mar 28 20:00	18° $\text{Y}$ 53'00	0°14'30
superior conj	15141 Apr 15 06:30	6° $\text{B}$ 04'18	-0°20'28	behind sun begin	15142 Mar 28 17:04	18° $\text{Y}$ 39'21	
minimum elong	15141 Apr 15 04:44	5° $\text{B}$ 56'33	0°20'39	behind sun end	15142 Mar 28 22:56	19° $\text{Y}$ 06'37	
max. Earth dist.	15141 Apr 22 19:46	18° $\text{B}$ 58'39	1.42354 AU	desc. node	15142 Mar 30 14:21	22° $\text{Y}$ 08'07	
evening rise	15141 Apr 28 09:03	28° $\text{B}$ 00'15			15142 Apr 03 23:43	0° $\text{B}$	
	15141 Apr 29 15:15	0° $\text{II}$		max. Earth dist.	15142 Apr 05 04:21	2° $\text{B}$ 04'56	1.40200 AU
	15141 May 19 23:54	0° $\text{E}$		evening rise	15142 Apr 09 07:53	9° $\text{B}$ 08'13	
evening max el	15141 May 31 08:58	13° $\text{E}$ 46'47	22°24'25		15142 Apr 22 14:20	0° $\text{II}$	
asc. node	15141 Jun 06 22:44	18° $\text{E}$ 45'26		evening max el	15142 May 13 23:37	27° $\text{II}$ 40'30	23°45'41
retrograde	15141 Jun 10 03:07	19° $\text{E}$ 30'03			15142 May 16 11:49	0° $\text{E}$	
evening set	15141 Jun 14 22:50	17° $\text{E}$ 28'52		retrograde	15142 May 24 21:45	4° $\text{E}$ 05'08	
inferior conj	15141 Jun 20 05:28	11° $\text{E}$ 08'14	3°02'14	asc. node	15142 May 24 19:49	4° $\text{E}$ 05'07	
minimum elong	15141 Jun 20 04:23	11° $\text{E}$ 12'00	3°01'08	evening set	15142 May 30 05:09	1° $\text{E}$ 50'02	
min. Earth dist.	15141 Jun 20 02:01	11° $\text{E}$ 20'16	0.69070 AU		15142 Jun 01 00:59	30° $\text{R}$ $\text{II}$	
morning rise	15141 Jun 25 09:46	4° $\text{E}$ 55'33		min. Earth dist.	15142 Jun 03 22:31	26° $\text{II}$ 18'35	0.68871 AU
direct	15141 Jun 30 01:22	2° $\text{E}$ 58'48		inferior conj	15142 Jun 04 14:53	25° $\text{II}$ 22'38	2°44'20
morning max el	15141 Jul 09 04:26	8° $\text{E}$ 18'15	21°45'53	minimum elong	15142 Jun 04 13:06	25° $\text{II}$ 28'44	2°43'03
desc. node	15141 Jul 09 17:52	8° $\text{E}$ 52'23		morning rise	15142 Jun 09 21:03	19° $\text{II}$ 18'14	
	15141 Jul 26 00:33	0° $\text{O}$		direct	15142 Jun 14 00:25	17° $\text{II}$ 41'29	
morning set	15141 Aug 10 10:06	23° $\text{O}$ 23'41		morning max el	15142 Jun 22 00:01	22° $\text{II}$ 12'45	20°27'42
	15141 Aug 14 12:33	0° $\text{M}$		desc. node	15142 Jun 26 15:02	27° $\text{II}$ 25'53	
max. Earth dist.	15141 Aug 16 10:45	3° $\text{M}$ 09'34	1.42036 AU		15142 Jun 28 15:20	0° $\text{E}$	
					15142 Jul 19 05:55	0° $\text{O}$	
superior conj	15141 Aug 24 02:36	16° $\text{M}$ 09'23	-1°19'43	morning set	15142 Jul 20 19:57	2° $\text{O}$ 26'21	
minimum elong	15141 Aug 24 08:54	16° $\text{M}$ 36'51	1°19'10	max. Earth dist.	15142 Jul 29 20:30	16° $\text{O}$ 37'19	1.43949 AU
	15141 Aug 31 20:38	0° $\text{A}$					
asc. node	15141 Sep 02 23:36	3° $\text{A}$ 53'06		superior conj	15142 Aug 05 03:37	26° $\text{O}$ 52'05	-1°51'02
evening rise	15141 Sep 03 23:38	5° $\text{A}$ 43'17		minimum elong	15142 Aug 05 11:13	27° $\text{O}$ 23'33	1°50'59
	15141 Sep 18 22:16	0° $\text{M}$			15142 Aug 07 00:51	0° $\text{M}$	
evening max el	15141 Sep 20 00:08	1° $\text{M}$ 08'30	18°09'28	evening rise	15142 Aug 17 16:57	18° $\text{M}$ 15'52	
retrograde	15141 Sep 27 02:00	4° $\text{M}$ 45'30		asc. node	15142 Aug 20 20:10	23° $\text{M}$ 43'14	
evening set	15141 Sep 29 06:42	4° $\text{M}$ 25'07			15142 Aug 24 12:06	0° $\text{A}$	
desc. node	15141 Oct 05 14:27	0° $\text{M}$ 24'15		evening max el	15142 Sep 03 13:45	14° $\text{A}$ 18'42	18°01'56
	15141 Oct 06 01:38	30° $\text{R}$ $\text{A}$		retrograde	15142 Sep 10 02:04	17° $\text{A}$ 41'20	
inferior conj	15141 Oct 06 12:13	29° $\text{A}$ 36'44	-0°17'11	evening set	15142 Sep 12 14:41	17° $\text{A}$ 10'10	
minimum elong	15141 Oct 06 11:37	29° $\text{A}$ 38'02	0°16'33	inferior conj	15142 Sep 19 03:58	12° $\text{A}$ 02'15	1°00'14
min. Earth dist.	15141 Oct 09 18:21	26° $\text{A}$ 45'27	0.59521 AU	minimum elong	15142 Sep 19 05:38	11° $\text{A}$ 58'02	0°59'45
morning rise	15141 Oct 13 13:14	23° $\text{A}$ 59'30		min. Earth dist.	15142 Sep 22 03:07	9° $\text{A}$ 03'15	0.61813 AU
direct	15141 Oct 20 01:38	22° $\text{A}$ 01'25		desc. node	15142 Sep 22 11:55	8° $\text{A}$ 42'11	
morning max el	15141 Nov 03 08:24	29° $\text{A}$ 47'10	27°43'03	morning rise	15142 Sep 25 17:59	5° $\text{A}$ 59'40	
	15141 Nov 03 13:37	0° $\text{M}$		direct	15142 Oct 02 10:12	3° $\text{A}$ 40'03	
	15141 Nov 24 22:20	0° $\text{J}$		morning max el	15142 Oct 16 13:49	11° $\text{A}$ 37'10	27°58'56
asc. node	15141 Nov 30 00:59	9° $\text{J}$ 30'46			15142 Oct 31 02:32	0° $\text{M}$	
morning set	15141 Dec 05 06:44	20° $\text{J}$ 10'12		asc. node	15142 Nov 16 21:51	29° $\text{M}$ 16'48	
	15141 Dec 09 19:29	0° $\text{B}$			15142 Nov 17 06:30	0° $\text{J}$	
max. Earth dist.	15141 Dec 11 14:15	3° $\text{B}$ 57'48	1.31090 AU	morning set	15142 Nov 19 07:24	4° $\text{J}$ 08'22	
				max. Earth dist.	15142 Nov 24 19:24	15° $\text{J}$ 51'21	1.31521 AU
superior conj	15141 Dec 12 06:57	5° $\text{B}$ 31'07	1°31'47				
minimum elong	15141 Dec 12 05:32	5° $\text{B}$ 23'11	1°32'39	superior conj	15142 Nov 26 16:47	20° $\text{J}$ 01'02	1°20'15
evening rise	15141 Dec 18 23:55	20° $\text{B}$ 21'26		minimum elong	15142 Nov 26 14:42	19° $\text{J}$ 49'27	1°20'56
	15141 Dec 23 15:04	0° $\approx$			15142 Dec 01 04:56	0° $\text{B}$	

evening rise	15142 Dec 03 10:03	4° $\text{Z}$ 50'04		evening rise	15143 Nov 17 20:58	19° $\text{X}$ 18'40	
	15142 Dec 16 12:38	0° $\approx$			15143 Nov 23 00:36	0° $\text{Z}$	
desc. node	15142 Dec 19 09:31	4° $\approx$ 27'22		desc. node	15143 Dec 06 06:32	21° $\text{Z}$ 38'56	
evening max el	15142 Dec 29 04:52	16° $\approx$ 27'23	24°46'35	evening max el	15143 Dec 10 14:21	26° $\text{Z}$ 26'36	23°04'27
retrograde	15143 Jan 11 22:40	23° $\approx$ 19'25			15143 Dec 14 22:30	0° $\approx$	
evening set	15143 Jan 17 08:55	22° $\approx$ 14'10		retrograde	15143 Dec 23 18:54	2° $\approx$ 59'03	
min. Earth dist.	15143 Jan 22 16:45	19° $\approx$ 27'21	0.56156 AU	evening set	15143 Dec 27 23:17	2° $\approx$ 21'01	
inferior conj	15143 Jan 25 03:34	17° $\approx$ 54'27	-5°12'48		15144 Jan 02 08:44	30° $\text{R}$ $\text{Z}$	
minimum elong	15143 Jan 25 12:15	17° $\approx$ 40'43	5°10'13	min. Earth dist.	15144 Jan 04 00:03	29° $\text{Z}$ 05'07	0.54867 AU
morning rise	15143 Feb 02 17:49	13° $\approx$ 49'36		inferior conj	15144 Jan 05 05:53	28° $\text{Z}$ 22'22	-5°57'39
direct	15143 Feb 04 23:34	13° $\approx$ 35'49		minimum elong	15144 Jan 05 08:39	28° $\text{Z}$ 18'24	5°56'37
asc. node	15143 Feb 12 20:16	16° $\approx$ 39'38		morning rise	15144 Jan 13 19:27	24° $\text{Z}$ 32'34	
morning max el	15143 Feb 14 17:57	18° $\approx$ 20'02	19°30'30	direct	15144 Jan 16 16:53	24° $\text{Z}$ 12'54	
	15143 Feb 23 08:43	0° $\text{X}$		morning max el	15144 Jan 28 01:36	29° $\text{Z}$ 40'41	20°49'50
morning set	15143 Mar 03 22:04	16° $\text{X}$ 08'56			15144 Jan 28 09:33	0° $\approx$	
	15143 Mar 10 19:59	0° $\text{Y}$		asc. node	15144 Jan 30 17:40	2° $\approx$ 31'43	
					15144 Feb 15 20:35	0° $\text{X}$	
superior conj	15143 Mar 11 23:40	2° $\text{Y}$ 16'01	0°44'32	morning set	15144 Feb 16 06:02	0° $\text{X}$ 48'52	
minimum elong	15143 Mar 12 02:02	2° $\text{Y}$ 27'33	0°44'12				
desc. node	15143 Mar 17 10:54	12° $\text{Y}$ 41'11		superior conj	15144 Feb 23 16:15	16° $\text{X}$ 14'40	1°07'37
max. Earth dist.	15143 Mar 18 10:49	14° $\text{Y}$ 31'17	1.37916 AU	minimum elong	15144 Feb 23 18:51	16° $\text{X}$ 27'56	1°07'35
evening rise	15143 Mar 22 03:31	21° $\text{Y}$ 09'11		max. Earth dist.	15144 Feb 28 19:10	26° $\text{X}$ 28'41	1.35744 AU
	15143 Mar 27 07:51	0° $\text{X}$			15144 Mar 01 15:08	0° $\text{Y}$	
	15143 Apr 16 13:32	0° $\text{II}$		desc. node	15144 Mar 03 07:28	3° $\text{Y}$ 09'41	
evening max el	15143 Apr 26 13:07	11° $\text{II}$ 34'48	25°04'24	evening rise	15144 Mar 03 17:03	3° $\text{Y}$ 54'11	
retrograde	15143 May 08 12:35	18° $\text{II}$ 32'49			15144 Mar 19 06:15	0° $\text{X}$	
asc. node	15143 May 11 17:01	17° $\text{II}$ 50'01		evening max el	15144 Apr 08 02:37	25° $\text{X}$ 24'51	26°13'30
evening set	15143 May 14 07:27	16° $\text{II}$ 07'08			15144 Apr 13 13:40	0° $\text{II}$	
min. Earth dist.	15143 May 18 16:50	11° $\text{II}$ 12'25	0.68196 AU	retrograde	15144 Apr 20 22:38	2° $\text{II}$ 44'57	
inferior conj	15143 May 19 22:05	9° $\text{II}$ 36'25	2°15'54	evening set	15144 Apr 27 03:58	0° $\text{II}$ 13'21	
minimum elong	15143 May 19 19:56	9° $\text{II}$ 43'29	2°14'28		15144 Apr 27 10:18	30° $\text{R}$ $\text{X}$	
morning rise	15143 May 25 08:45	3° $\text{II}$ 41'29		asc. node	15144 Apr 27 14:19	29° $\text{X}$ 51'16	
direct	15143 May 29 00:28	2° $\text{II}$ 24'49		min. Earth dist.	15144 May 01 06:56	25° $\text{X}$ 54'01	0.67065 AU
morning max el	15143 Jun 05 03:01	6° $\text{II}$ 18'41	19°22'59	inferior conj	15144 May 03 01:00	23° $\text{X}$ 44'17	1°36'18
desc. node	15143 Jun 13 12:05	16° $\text{II}$ 39'04		minimum elong	15144 May 02 22:59	23° $\text{X}$ 50'31	1°34'56
greatest brilliancy	15143 Jun 17 18:46	22° $\text{II}$ 49'24	-0.7m	morning rise	15144 May 08 18:53	18° $\text{X}$ 00'01	
	15143 Jun 22 13:52	0° $\text{X}$		direct	15144 May 11 23:47	17° $\text{X}$ 01'54	
morning set	15143 Jun 29 23:21	11° $\text{X}$ 17'20		morning max el	15144 May 18 12:59	20° $\text{X}$ 31'21	18°34'04
	15143 Jul 12 00:42	0° $\text{Q}$			15144 May 26 02:48	0° $\text{II}$	
max. Earth dist.	15143 Jul 12 12:08	0° $\text{Q}$ 44'56	1.45281 AU	desc. node	15144 May 30 09:02	6° $\text{II}$ 20'43	
				morning set	15144 Jun 08 16:44	20° $\text{II}$ 51'49	
superior conj	15143 Jul 16 05:36	6° $\text{Q}$ 38'23	-2°10'42		15144 Jun 14 12:38	0° $\text{X}$	
minimum elong	15143 Jul 16 09:51	6° $\text{Q}$ 55'15	2°11'24				
evening rise	15143 Jul 30 13:15	29° $\text{Q}$ 53'54		superior conj	15144 Jun 24 16:17	15° $\text{X}$ 50'46	-2°12'04
	15143 Jul 30 14:43	0° $\text{R}$		minimum elong	15144 Jun 24 12:55	15° $\text{X}$ 37'38	2°12'56
asc. node	15143 Aug 07 16:47	13° $\text{R}$ 18'27		max. Earth dist.	15144 Jun 24 07:05	15° $\text{X}$ 14'55	1.45905 AU
evening max el	15143 Aug 18 04:21	27° $\text{R}$ 49'32	18°12'50		15144 Jul 03 17:20	0° $\text{Q}$	
	15143 Aug 20 20:26	0° $\text{Q}$		evening rise	15144 Jul 10 08:47	10° $\text{Q}$ 29'28	
retrograde	15143 Aug 24 13:00	1° $\text{Q}$ 11'20		greatest brilliancy	15144 Jul 18 06:32	22° $\text{Q}$ 59'21	-0.8m
evening set	15143 Aug 27 10:10	0° $\text{Q}$ 26'29			15144 Jul 22 19:59	0° $\text{R}$	
	15143 Aug 28 04:36	30° $\text{R}$ $\text{R}$		asc. node	15144 Jul 24 13:30	2° $\text{R}$ 33'00	
inferior conj	15143 Sep 02 10:34	25° $\text{R}$ 01'43	1°57'09	evening max el	15144 Jul 31 16:57	11° $\text{R}$ 33'40	18°41'25
minimum elong	15143 Sep 02 12:56	24° $\text{R}$ 54'58	1°56'17	retrograde	15144 Aug 07 06:49	15° $\text{R}$ 07'42	
min. Earth dist.	15143 Sep 04 21:53	22° $\text{R}$ 14'14	0.63989 AU	evening set	15144 Aug 10 13:04	14° $\text{R}$ 07'00	
morning rise	15143 Sep 08 13:57	18° $\text{R}$ 43'36		inferior conj	15144 Aug 16 04:10	8° $\text{R}$ 27'28	2°35'47
desc. node	15143 Sep 09 09:24	18° $\text{R}$ 07'53		minimum elong	15144 Aug 16 06:17	8° $\text{R}$ 20'55	2°34'53
direct	15143 Sep 15 04:17	16° $\text{R}$ 10'01		min. Earth dist.	15144 Aug 18 01:41	6° $\text{R}$ 06'54	0.65877 AU
morning max el	15143 Sep 28 23:40	24° $\text{R}$ 09'23	27°37'23	morning rise	15144 Aug 21 22:27	2° $\text{R}$ 02'29	
	15143 Oct 04 06:17	0° $\text{Q}$			15144 Aug 25 04:47	30° $\text{R}$ $\text{Q}$	
	15143 Oct 24 12:00	0° $\text{R}$		desc. node	15144 Aug 26 06:52	29° $\text{Q}$ 38'43	
morning set	15143 Nov 02 23:59	17° $\text{R}$ 41'40		direct	15144 Aug 28 06:30	29° $\text{Q}$ 23'54	
asc. node	15143 Nov 03 18:39	19° $\text{R}$ 14'58			15144 Aug 31 12:54	0° $\text{R}$	
max. Earth dist.	15143 Nov 07 17:57	27° $\text{R}$ 25'36	1.32508 AU	morning max el	15144 Sep 10 11:02	7° $\text{R}$ 12'01	26°45'03
	15143 Nov 08 23:07	0° $\text{X}$			15144 Sep 28 03:37	0° $\text{Q}$	
					15144 Oct 15 20:21	0° $\text{R}$	
superior conj	15143 Nov 10 23:03	4° $\text{X}$ 17'17	1°02'45	morning set	15144 Oct 16 05:35	0° $\text{R}$ 43'51	
minimum elong	15143 Nov 10 20:44	4° $\text{X}$ 04'42	1°03'12	max. Earth dist.	15144 Oct 20 06:58	8° $\text{R}$ 38'49	1.34043 AU



asc. node	15144 Oct 20 15:22	9°♍20'54		superior conj	15145 Oct 08 15:11	1°♍45'24	0°10'23
				minimum elong	15145 Oct 08 14:33	1°♍42'11	0°10'41
superior conj	15144 Oct 24 23:29	18°♍14'36	0°39'21	behind sun begin	15145 Oct 08 09:48	1°♍18'29	
minimum elong	15144 Oct 24 21:34	18°♍04'37	0°39'38	behind sun end	15145 Oct 08 19:17	2°♍05'57	
	15144 Oct 30 12:44	0°♊		evening rise	15145 Oct 16 13:36	17°♍57'45	
evening rise	15144 Nov 01 06:53	3°♊43'10			15145 Oct 22 15:31	0°♊	
	15144 Nov 15 17:12	0°♊		evening max el	15145 Nov 03 07:25	17°♊15'00	20°02'32
evening max el	15144 Nov 21 04:33	6°♊31'53	21°25'19	desc. node	15145 Nov 09 00:52	21°♊24'35	
desc. node	15144 Nov 22 03:39	7°♊26'37		retrograde	15145 Nov 13 18:25	22°♊27'37	
retrograde	15144 Dec 03 05:55	12°♊30'07		evening set	15145 Nov 15 20:21	22°♊16'12	
evening set	15144 Dec 06 03:04	12°♊11'03		inferior conj	15145 Nov 24 16:18	18°♊18'02	-4°36'33
inferior conj	15144 Dec 14 21:25	8°♊19'39	-5°45'58	minimum elong	15145 Nov 24 06:13	18°♊33'13	4°32'47
minimum elong	15144 Dec 14 15:04	8°♊28'34	5°44'11	min. Earth dist.	15145 Nov 26 12:41	17°♊11'09	0.54933 AU
min. Earth dist.	15144 Dec 15 05:47	8°♊07'53	0.54426 AU	morning rise	15145 Dec 02 15:01	14°♊10'14	
morning rise	15144 Dec 23 03:35	4°♊30'20		direct	15145 Dec 07 12:22	13°♊18'09	
direct	15144 Dec 27 00:43	3°♊57'41		morning max el	15145 Dec 21 04:19	20°♊03'49	24°19'16
morning max el	15145 Jan 08 19:03	10°♊08'15	22°29'34		15145 Dec 29 13:19	0°♊	
asc. node	15145 Jan 16 14:59	19°♊37'09		asc. node	15146 Jan 03 12:13	7°♊38'31	
	15145 Jan 22 21:56	0°♋		morning set	15146 Jan 15 04:59	0°♋16'29	
morning set	15145 Jan 30 17:01	15°♋33'22			15146 Jan 15 01:55	0°♋	
	15145 Feb 06 10:49	0°♌					
				superior conj	15146 Jan 21 24:00	15°♋07'21	1°34'06
superior conj	15145 Feb 06 17:18	0°♌34'31	1°24'04	minimum elong	15146 Jan 22 01:12	15°♋13'54	1°34'47
minimum elong	15145 Feb 06 19:24	0°♌45'40	1°24'25	max. Earth dist.	15146 Jan 24 08:19	20°♋13'02	1.32449 AU
max. Earth dist.	15145 Feb 10 09:48	8°♌17'47	1.33883 AU		15146 Jan 29 00:07	0°♌	
evening rise	15145 Feb 14 20:59	17°♌14'14		evening rise	15146 Jan 29 12:00	1°♌00'27	
desc. node	15145 Feb 18 04:03	23°♌29'45		desc. node	15146 Feb 05 00:40	13°♌36'27	
	15145 Feb 21 18:22	0°♍			15146 Feb 14 17:36	0°♍	
	15145 Mar 13 14:23	0°♍		evening max el	15146 Mar 04 05:01	22°♍20'03	27°32'52
evening max el	15145 Mar 21 16:20	9°♍03'41	27°05'25	retrograde	15146 Mar 18 00:08	29°♍49'17	
retrograde	15145 Apr 04 02:52	16°♍33'26		evening set	15146 Mar 24 19:27	27°♍24'39	
evening set	15145 Apr 10 16:44	14°♍01'57		min. Earth dist.	15146 Mar 28 14:21	24°♍08'08	0.63627 AU
asc. node	15145 Apr 14 11:42	10°♍24'15		inferior conj	15146 Mar 31 08:13	21°♍19'39	-0°19'54
min. Earth dist.	15145 Apr 14 14:46	10°♍15'45	0.65521 AU	minimum elong	15146 Mar 31 08:51	21°♍18'02	0°19'55
inferior conj	15145 Apr 16 21:19	7°♍40'58	0°44'37	asc. node	15146 Apr 01 09:06	20°♍16'31	
minimum elong	15145 Apr 16 20:09	7°♍44'17	0°43'41	morning rise	15146 Apr 07 00:39	16°♍02'40	
morning rise	15145 Apr 23 01:10	2°♍09'08		direct	15146 Apr 09 11:25	15°♍33'07	
direct	15145 Apr 25 20:21	1°♍26'55		morning max el	15146 Apr 15 21:37	18°♍50'11	17°47'10
morning max el	15145 May 02 04:03	4°♍44'21	18°01'56		15146 Apr 24 04:36	0°♍	
desc. node	15145 May 17 05:54	26°♍23'07		morning set	15146 May 02 11:19	13°♍52'43	
	15145 May 19 11:10	0°♎		desc. node	15146 May 04 02:40	16°♍40'29	
morning set	15145 May 20 12:36	1°♎43'38			15146 May 12 00:59	0°♎	
superior conj	15145 Jun 04 03:20	25°♎10'25	-1°53'38	superior conj	15146 May 15 06:33	5°♎17'51	-1°21'01
minimum elong	15145 Jun 03 18:48	24°♎36'48	1°53'55	minimum elong	15146 May 14 22:51	4°♎46'32	1°20'53
max. Earth dist.	15145 Jun 07 03:09	29°♎52'08	1.45783 AU	max. Earth dist.	15146 May 20 22:25	14°♎23'20	1.44935 AU
	15145 Jun 07 05:10	0°♏		evening rise	15146 May 30 16:50	29°♎35'50	
evening rise	15145 Jun 20 05:55	20°♏11'39			15146 May 30 23:09	0°♏	
	15145 Jun 26 15:21	0°♏			15146 Jun 20 10:24	0°♏	
greatest brilliancy	15145 Jul 03 06:17	9°♏58'47	-0.7m	evening max el	15146 Jun 28 03:34	9°♏16'51	20°26'52
asc. node	15145 Jul 11 10:16	21°♏18'38		asc. node	15146 Jun 28 07:08	9°♏25'43	
evening max el	15145 Jul 15 01:08	25°♏24'09	19°26'42	retrograde	15146 Jul 06 03:19	13°♏51'12	
retrograde	15145 Jul 22 04:22	29°♏22'50		evening set	15146 Jul 10 05:39	12°♏15'38	
evening set	15145 Jul 25 20:20	28°♏04'53		inferior conj	15146 Jul 15 11:48	6°♏10'41	3°09'06
inferior conj	15145 Jul 31 05:28	22°♏12'04	2°59'00	minimum elong	15146 Jul 15 12:11	6°♏09'21	3°08'15
minimum elong	15145 Jul 31 06:49	22°♏07'38	2°58'09	min. Earth dist.	15146 Jul 16 05:09	5°♏11'08	0.68415 AU
min. Earth dist.	15145 Aug 01 12:46	20°♏28'59	0.67372 AU	morning rise	15146 Jul 20 18:25	29°♏48'21	
morning rise	15145 Aug 05 16:44	15°♏46'25			15146 Jul 20 13:17	30°♏♌	
direct	15145 Aug 11 15:18	13°♏11'44		direct	15146 Jul 26 05:29	27°♏24'51	
desc. node	15145 Aug 13 04:20	13°♏20'55		desc. node	15146 Jul 31 01:43	28°♏55'12	
morning max el	15145 Aug 23 22:01	20°♏32'33	25°30'51		15146 Aug 01 17:26	0°♏	
	15145 Sep 01 01:35	0°♐		morning max el	15146 Aug 06 08:39	4°♏04'08	24°04'29
	15145 Sep 21 07:24	0°♐			15146 Aug 26 06:51	0°♐	
morning set	15145 Sep 28 20:27	13°♐05'27		morning set	15146 Sep 10 16:21	24°♐36'51	
max. Earth dist.	15145 Oct 02 10:32	19°♐42'46	1.36060 AU		15146 Sep 13 18:37	0°♐	
asc. node	15145 Oct 07 12:01	29°♐30'03		max. Earth dist.	15146 Sep 14 09:19	1°♐05'06	1.38385 AU
	15145 Oct 07 18:03	0°♑					




































































































































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minimum elong	15146 Sep 21 20:20	14° $\Omega$ 49'12	0°22'44	minimum elong	15147 Sep 04 10:31	27° $\Pi$ 13'43	0°58'39
asc. node	15146 Sep 24 08:37	19° $\Omega$ 38'59			15147 Sep 05 23:12	0° $\Omega$	
	15146 Sep 29 15:04	0° $\Pi$		asc. node	15147 Sep 11 05:12	9° $\Omega$ 43'55	
evening rise	15146 Sep 30 14:39	1° $\Pi$ 56'26		evening rise	15147 Sep 14 06:48	15° $\Omega$ 30'45	
evening max el	15146 Oct 17 00:32	28° $\Pi$ 47'53	19°01'29		15147 Sep 22 05:23	0° $\Pi$	
	15146 Oct 18 07:27	0° $\Sigma$		evening max el	15147 Sep 30 04:55	11° $\Pi$ 06'37	18°22'29
retrograde	15146 Oct 25 21:20	3° $\Sigma$ 15'32		retrograde	15147 Oct 07 19:40	14° $\Pi$ 58'46	
desc. node	15146 Oct 26 22:09	3° $\Sigma$ 12'05		evening set	15147 Oct 09 20:17	14° $\Pi$ 43'02	
evening set	15146 Oct 27 18:23	3° $\Sigma$ 04'20		desc. node	15147 Oct 13 19:30	12° $\Pi$ 52'05	
	15146 Nov 03 09:22	30° $\kappa$ $\Pi$		inferior conj	15147 Oct 17 12:04	10° $\Pi$ 06'31	-1°10'49
inferior conj	15146 Nov 05 03:21	28° $\Pi$ 48'45	-2°54'51	minimum elong	15147 Oct 17 09:21	10° $\Pi$ 12'00	1°09'10
minimum elong	15146 Nov 04 20:05	29° $\Pi$ 01'19	2°51'21	min. Earth dist.	15147 Oct 20 18:11	7° $\Pi$ 29'12	0.58237 AU
min. Earth dist.	15146 Nov 07 23:46	26° $\Pi$ 50'45	0.56287 AU	morning rise	15147 Oct 24 18:56	4° $\Pi$ 47'42	
morning rise	15146 Nov 12 19:03	24° $\Pi$ 07'14		direct	15147 Oct 31 01:49	3° $\Pi$ 04'38	
direct	15146 Nov 18 12:00	22° $\Pi$ 51'03		morning max el	15147 Nov 14 09:02	10° $\Pi$ 40'58	27°16'16
morning max el	15146 Dec 02 14:59	0° $\Sigma$ 04'31	26°00'53		15147 Nov 29 07:44	0° $\Sigma$	
	15146 Dec 02 13:06	0° $\Sigma$		asc. node	15147 Dec 08 06:22	15° $\Sigma$ 36'51	
asc. node	15146 Dec 21 09:20	26° $\Sigma$ 22'03		morning set	15147 Dec 15 00:47	29° $\Sigma$ 19'54	
	15146 Dec 23 08:21	0° $\Theta$			15147 Dec 15 08:17	0° $\Theta$	
morning set	15146 Dec 30 16:09	14° $\Theta$ 53'27					
				superior conj	15147 Dec 21 21:32	14° $\Theta$ 27'15	1°35'45
superior conj	15147 Jan 06 10:04	29° $\Theta$ 46'40	1°37'56	minimum elong	15147 Dec 21 20:38	14° $\Theta$ 22'13	1°36'40
minimum elong	15147 Jan 06 10:12	29° $\Theta$ 47'26	1°38'49	max. Earth dist.	15147 Dec 21 20:52	14° $\Theta$ 23'28	1.31083 AU
	15147 Jan 06 12:28	0° $\approx$		evening rise	15147 Dec 28 16:18	29° $\Theta$ 24'28	
max. Earth dist.	15147 Jan 07 13:04	2° $\approx$ 16'39	1.31507 AU		15147 Dec 28 22:57	0° $\approx$	
evening rise	15147 Jan 13 11:14	15° $\approx$ 05'42		desc. node	15148 Jan 09 18:04	22° $\approx$ 43'27	
	15147 Jan 21 00:30	0° $\text{H}$			15148 Jan 14 06:05	0° $\text{H}$	
desc. node	15147 Jan 22 21:20	3° $\text{H}$ 23'30		evening max el	15148 Jan 27 17:06	16° $\text{H}$ 51'15	26°51'03
	15147 Feb 09 21:01	0° $\Upsilon$		retrograde	15148 Feb 10 17:06	24° $\text{H}$ 04'11	
evening max el	15147 Feb 14 14:09	4° $\Upsilon$ 59'32	27°29'20	evening set	15148 Feb 17 06:59	22° $\text{H}$ 15'04	
retrograde	15147 Feb 28 13:13	12° $\Upsilon$ 22'08		min. Earth dist.	15148 Feb 21 07:03	19° $\text{H}$ 36'05	0.59261 AU
evening set	15147 Mar 07 09:16	10° $\Upsilon$ 11'38		inferior conj	15148 Feb 24 12:00	17° $\text{H}$ 04'31	-3°03'37
min. Earth dist.	15147 Mar 11 03:56	7° $\Upsilon$ 18'49	0.61487 AU	minimum elong	15148 Feb 24 18:52	16° $\text{H}$ 50'56	3°00'46
inferior conj	15147 Mar 14 06:19	4° $\Upsilon$ 30'37	-1°37'05	morning rise	15148 Mar 03 10:10	12° $\text{H}$ 26'16	
minimum elong	15147 Mar 14 09:47	4° $\Upsilon$ 22'46	1°35'40	direct	15148 Mar 05 10:09	12° $\text{H}$ 11'35	
asc. node	15147 Mar 19 06:32	0° $\Upsilon$ 33'50		asc. node	15148 Mar 05 03:57	12° $\text{H}$ 11'50	
	15147 Mar 20 08:10	30° $\kappa$ $\text{H}$		morning max el	15148 Mar 13 03:16	16° $\text{H}$ 01'09	18°12'28
morning rise	15147 Mar 21 13:25	29° $\text{H}$ 31'38			15148 Mar 22 21:10	0° $\Upsilon$	
direct	15147 Mar 23 17:28	29° $\text{H}$ 11'17		morning set	15148 Mar 28 18:44	10° $\Upsilon$ 50'47	
	15147 Mar 27 00:41	0° $\Upsilon$		desc. node	15148 Apr 06 19:59	27° $\Upsilon$ 39'28	
morning max el	15147 Mar 30 14:31	2° $\Upsilon$ 39'01	17°50'18				
morning set	15147 Apr 15 07:19	27° $\Upsilon$ 00'54		superior conj	15148 Apr 07 10:17	28° $\Upsilon$ 44'01	-0°04'54
	15147 Apr 16 23:17	0° $\text{B}$		minimum elong	15148 Apr 07 09:53	28° $\Upsilon$ 42'11	0°05'13
desc. node	15147 Apr 20 23:21	7° $\text{B}$ 07'14		behind sun begin	15148 Apr 07 02:43	28° $\Upsilon$ 09'52	
				behind sun end	15148 Apr 07 17:03	29° $\Upsilon$ 14'26	
superior conj	15147 Apr 26 09:03	16° $\text{B}$ 29'58	-0°42'33		15148 Apr 08 03:13	0° $\text{B}$	
minimum elong	15147 Apr 26 05:08	16° $\text{B}$ 13'14	0°42'34	max. Earth dist.	15148 Apr 15 00:53	12° $\text{B}$ 00'05	1.41465 AU
max. Earth dist.	15147 May 03 14:11	28° $\text{B}$ 30'45	1.43441 AU	evening rise	15148 Apr 19 20:24	19° $\text{B}$ 57'58	
	15147 May 04 12:12	0° $\text{II}$			15148 Apr 26 04:30	0° $\text{II}$	
evening rise	15147 May 10 09:48	9° $\text{II}$ 22'19			15148 May 17 10:34	0° $\text{E}$	
	15147 May 24 02:44	0° $\text{E}$		evening max el	15148 May 23 16:04	7° $\text{E}$ 01'26	22°58'45
evening max el	15147 Jun 11 00:03	23° $\text{E}$ 08'59	21°39'03	asc. node	15148 Jun 01 01:06	12° $\text{E}$ 47'53	
asc. node	15147 Jun 15 04:04	26° $\text{E}$ 40'47		retrograde	15148 Jun 02 22:23	13° $\text{E}$ 03'35	
retrograde	15147 Jun 20 01:50	28° $\text{E}$ 26'36		evening set	15148 Jun 07 23:02	10° $\text{E}$ 56'00	
evening set	15147 Jun 24 15:06	26° $\text{E}$ 34'07		inferior conj	15148 Jun 13 06:43	4° $\text{E}$ 31'50	2°55'53
inferior conj	15147 Jun 29 20:52	20° $\text{E}$ 18'29	3°07'47	minimum elong	15148 Jun 13 05:19	4° $\text{E}$ 36'44	2°54'44
minimum elong	15147 Jun 29 20:18	20° $\text{E}$ 20'30	3°06'49	min. Earth dist.	15148 Jun 12 21:42	5° $\text{E}$ 03'10	0.69043 AU
min. Earth dist.	15147 Jun 30 00:49	20° $\text{E}$ 04'42	0.68974 AU		15148 Jun 16 19:11	30° $\kappa$ $\text{II}$	
morning rise	15147 Jul 05 01:18	14° $\text{E}$ 01'52		morning rise	15148 Jun 18 11:30	28° $\text{II}$ 22'30	
direct	15147 Jul 09 23:59	11° $\text{E}$ 54'39		direct	15148 Jun 22 21:44	26° $\text{II}$ 34'22	
desc. node	15147 Jul 17 23:02	15° $\text{E}$ 55'45			15148 Jun 29 21:08	0° $\text{E}$	
morning max el	15147 Jul 19 20:38	17° $\text{E}$ 43'50	22°35'15	morning max el	15148 Jul 01 12:43	1° $\text{E}$ 32'44	21°11'11
	15147 Jul 30 01:20	0° $\Omega$		desc. node	15148 Jul 03 20:17	4° $\text{E}$ 00'39	
	15147 Aug 19 08:37	0° $\Pi$			15148 Jul 22 20:16	0° $\Omega$	
morning set	15147 Aug 22 13:19	5° $\Pi$ 08'48		morning set	15148 Aug 01 10:20	14° $\Omega$ 39'44	
max. Earth dist.	15147 Aug 27 09:25	13° $\Pi$ 10'31	1.40758 AU	max. Earth dist.	15148 Aug 08 14:51	26° $\Omega$ 08'05	1.42907 AU


































































































































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				minimum elong	15149 Jul 27 18:16	18°♏56'40	2°01'31
superior conj	15148 Aug 15 20:21	8°♎10'01	-1°33'57		15149 Aug 03 11:18	0°♎	
minimum elong	15148 Aug 16 03:36	8°♎40'50	1°33'33	evening rise	15149 Aug 09 18:59	10°♎41'12	
evening rise	15148 Aug 27 09:55	28°♎29'43		asc. node	15149 Aug 14 22:21	19°♎25'48	
asc. node	15148 Aug 28 01:46	29°♎40'47			15149 Aug 21 11:45	0°♏	
	15148 Aug 28 06:02	0°♏		evening max el	15149 Aug 27 06:58	7°♏22'34	18°04'24
evening max el	15148 Sep 12 16:23	24°♏01'18	18°03'56	retrograde	15149 Sep 02 16:32	10°♏42'57	
retrograde	15148 Sep 19 11:24	27°♏30'43		evening set	15149 Sep 05 08:44	10°♏06'20	
evening set	15148 Sep 21 19:12	27°♏06'18		inferior conj	15149 Sep 11 16:08	4°♏51'15	1°26'45
inferior conj	15148 Sep 28 17:30	22°♏09'33	0°18'12	minimum elong	15149 Sep 11 18:15	4°♏45'35	1°26'01
minimum elong	15148 Sep 28 18:05	22°♏08'11	0°18'15	min. Earth dist.	15149 Sep 14 10:46	1°♏54'49	0.62769 AU
desc. node	15148 Sep 29 16:57	21°♏14'13			15149 Sep 16 10:39	30°♎♎	
min. Earth dist.	15148 Oct 01 21:37	19°♏12'06	0.60492 AU	desc. node	15149 Sep 16 14:26	29°♎51'42	
morning rise	15148 Oct 05 13:50	16°♏20'01		morning rise	15149 Sep 18 01:31	28°♎41'04	
direct	15148 Oct 12 04:33	14°♏11'45		direct	15149 Sep 24 17:47	26°♎14'07	
morning max el	15148 Oct 26 10:51	22°♏04'21	27°54'37		15149 Oct 03 22:55	0°♏	
	15148 Nov 02 10:38	0°♎		morning max el	15149 Oct 08 18:21	4°♏13'39	27°53'53
	15148 Nov 21 10:13	0°♎			15149 Oct 28 02:35	0°♎	
asc. node	15148 Nov 24 03:18	5°♎13'31		asc. node	15149 Nov 11 00:09	25°♎05'41	
morning set	15148 Nov 28 04:56	13°♎29'55		morning set	15149 Nov 12 02:30	27°♎18'34	
max. Earth dist.	15148 Dec 04 03:55	26°♎23'39	1.31200 AU		15149 Nov 13 09:59	0°♎	
				max. Earth dist.	15149 Nov 17 06:30	8°♎09'04	1.31875 AU
superior conj	15148 Dec 05 08:31	29°♎02'41	1°27'38				
minimum elong	15148 Dec 05 06:46	28°♎52'56	1°28'25	superior conj	15149 Nov 19 17:08	13°♎28'03	1°13'34
	15148 Dec 05 18:48	0°♎		minimum elong	15149 Nov 19 14:53	13°♎15'40	1°14'08
evening rise	15148 Dec 12 01:05	13°♎50'42		evening rise	15149 Nov 26 11:47	28°♎20'14	
	15148 Dec 20 00:14	0°♎			15149 Nov 27 06:21	0°♎	
desc. node	15148 Dec 26 14:54	11°♎25'14		desc. node	15149 Dec 13 11:50	29°♎15'03	
evening max el	15149 Jan 08 11:54	27°♎49'59	25°39'31		15149 Dec 14 00:53	0°♎	
	15149 Jan 10 23:05	0°♎		evening max el	15149 Dec 20 23:28	8°♎04'42	24°03'55
retrograde	15149 Jan 22 09:49	4°♎50'48		retrograde	15150 Jan 03 13:11	14°♎49'09	
evening set	15149 Jan 28 08:42	3°♎29'03		evening set	15150 Jan 08 11:26	13°♎56'22	
min. Earth dist.	15149 Feb 02 00:43	0°♎49'43	0.57175 AU	min. Earth dist.	15150 Jan 14 11:02	10°♎59'21	0.55520 AU
	15149 Feb 03 06:08	30°♎		inferior conj	15150 Jan 16 10:50	9°♎47'23	-5°37'32
inferior conj	15149 Feb 04 21:52	28°♎51'33	-4°30'05	minimum elong	15150 Jan 16 17:47	9°♎36'53	5°35'41
minimum elong	15149 Feb 05 07:01	28°♎35'52	4°26'53	morning rise	15150 Jan 25 01:55	5°♎49'39	
morning rise	15149 Feb 13 08:13	24°♎34'52		direct	15150 Jan 27 13:04	5°♎34'05	
direct	15149 Feb 15 09:16	24°♎22'06		asc. node	15150 Feb 06 22:49	10°♎34'43	
asc. node	15149 Feb 20 01:23	25°♎33'09		morning max el	15150 Feb 06 23:45	10°♎36'58	20°01'23
morning max el	15149 Feb 24 07:43	28°♎44'16	18°55'31		15150 Feb 20 00:30	0°♎	
	15149 Feb 25 12:52	0°♎		morning set	15150 Feb 24 22:01	9°♎42'17	
morning set	15149 Mar 12 16:50	25°♎08'00					
	15149 Mar 15 04:13	0°♎		superior conj	15150 Mar 04 16:21	25°♎29'42	0°55'08
				minimum elong	15150 Mar 04 18:55	25°♎42'32	0°54'55
superior conj	15149 Mar 21 06:11	11°♎47'57	0°28'14		15150 Mar 06 23:03	0°♎	
minimum elong	15149 Mar 21 07:56	11°♎56'14	0°27'49	max. Earth dist.	15150 Mar 10 14:10	6°♎57'34	1.36967 AU
desc. node	15149 Mar 24 16:32	18°♎13'05		desc. node	15150 Mar 11 13:04	8°♎44'34	
max. Earth dist.	15149 Mar 28 07:33	24°♎46'08	1.39224 AU	evening rise	15150 Mar 14 07:56	13°♎50'08	
	15149 Mar 31 07:26	0°♎			15150 Mar 23 20:13	0°♎	
evening rise	15149 Apr 01 04:16	1°♎29'10			15150 Apr 14 07:25	0°♎	
	15149 Apr 19 11:01	0°♎		evening max el	15150 Apr 18 19:34	4°♎49'30	25°35'37
evening max el	15149 May 06 05:57	20°♎55'37	24°20'00	retrograde	15150 May 01 04:30	11°♎58'02	
retrograde	15149 May 17 15:41	27°♎36'21		asc. node	15150 May 05 19:30	10°♎30'08	
asc. node	15149 May 18 22:14	27°♎29'21		evening set	15150 May 07 03:55	9°♎29'30	
evening set	15149 May 23 03:52	25°♎16'26		min. Earth dist.	15150 May 11 10:31	4°♎49'52	0.67763 AU
min. Earth dist.	15149 May 27 17:40	20°♎00'26	0.68633 AU	inferior conj	15150 May 12 21:08	2°♎58'57	2°00'34
inferior conj	15149 May 28 15:28	18°♎46'56	2°33'37	minimum elong	15150 May 12 18:58	3°♎05'54	1°59'07
minimum elong	15149 May 28 13:29	18°♎53'38	2°32'16		15150 May 15 07:27	30°♎♎	
morning rise	15149 Jun 02 23:11	12°♎46'11		morning rise	15150 May 18 10:30	27°♎08'09	
direct	15149 Jun 06 21:28	11°♎18'03		direct	15150 May 21 21:34	25°♎59'27	
morning max el	15149 Jun 14 11:21	15°♎32'24	19°58'20	morning max el	15150 May 28 17:21	29°♎41'17	19°00'10
desc. node	15149 Jun 20 17:26	22°♎52'52			15150 May 29 00:55	0°♎	
	15149 Jun 25 21:24	0°♎		desc. node	15150 Jun 07 14:27	12°♎19'17	
morning set	15149 Jul 11 15:05	23°♎31'19		greatest brilliancy	15150 Jun 10 21:45	17°♎13'31	-0.7m
	15149 Jul 15 19:42	0°♎			15150 Jun 19 06:07	0°♎	
max. Earth dist.	15149 Jul 22 02:54	9°♎53'29	1.44591 AU	morning set	15150 Jun 20 22:06	2°♎34'26	

max. Earth dist.	15150 Jul 04 20:25	24°☿13'24	1.45637 AU	minimum elong	15151 Jun 16 07:41	6°☿41'38	2°07'09
superior conj	15150 Jul 07 05:23	27°☿56'46	-2°13'46	max. Earth dist.	15151 Jun 17 16:45	8°☿50'38	1.45948 AU
minimum elong	15150 Jul 07 06:38	28°☿01'39	2°14'40		15151 Jul 01 06:31	0°♌	
	15150 Jul 08 12:43	0°♌		evening rise	15151 Jul 02 14:09	2°♌03'27	
evening rise	15150 Jul 22 04:57	21°♌52'53		greatest brilliancy	15151 Jul 12 20:10	17°♌57'52	-0.8m
	15150 Jul 27 05:00	0°♍		asc. node	15151 Jul 19 15:45	27°♌56'21	
asc. node	15150 Aug 01 19:01	8°♍53'10			15151 Jul 21 04:49	0°♍	
evening max el	15150 Aug 10 21:08	21°♍00'34	18°22'54	evening max el	15151 Jul 25 08:04	4°♍47'50	18°58'39
retrograde	15150 Aug 17 06:46	24°♍25'38		retrograde	15151 Aug 01 02:35	8°♍30'51	
evening set	15150 Aug 20 07:51	23°♍34'05		evening set	15151 Aug 04 12:57	7°♍22'45	
inferior conj	15150 Aug 26 03:51	18°♍02'49	2°15'35	inferior conj	15151 Aug 10 01:05	1°♍37'08	2°47'21
minimum elong	15150 Aug 26 06:12	17°♍55'52	2°14'39	minimum elong	15151 Aug 10 02:55	1°♍31'17	2°46'28
min. Earth dist.	15150 Aug 28 09:23	15°♍25'27	0.64842 AU		15151 Aug 11 07:29	30°♍♌	
morning rise	15150 Sep 01 03:11	11°♍41'11		min. Earth dist.	15151 Aug 11 16:25	29°♌31'50	0.66567 AU
desc. node	15150 Sep 03 11:56	10°♍07'00		morning rise	15151 Aug 15 16:07	25°♌11'17	
direct	15150 Sep 07 15:24	9°♍04'29		desc. node	15151 Aug 21 09:25	22°♌34'31	
morning max el	15150 Sep 21 04:58	16°♍59'53	27°18'21	direct	15151 Aug 21 20:20	22°♌33'43	
	15150 Oct 02 01:04	0°♎			15151 Sep 03 11:48	0°♍	
	15150 Oct 20 22:54	0°♎		morning max el	15151 Sep 03 16:28	0°♍11'45	26°15'40
morning set	15150 Oct 26 14:48	10°♎39'34			15151 Sep 25 23:29	0°♎	
asc. node	15150 Oct 28 20:55	15°♎07'47		morning set	15151 Oct 09 14:38	23°♎25'33	
max. Earth dist.	15150 Oct 31 01:18	19°♎34'33	1.33104 AU		15151 Oct 13 01:33	0°♎	
				max. Earth dist.	15151 Oct 13 10:25	0°♎43'03	1.34854 AU
superior conj	15150 Nov 03 21:15	27°♎37'24	0°53'32	asc. node	15151 Oct 15 17:36	5°♎15'27	
minimum elong	15150 Nov 03 19:01	27°♎25'27	0°53'55				
	15150 Nov 04 23:54	0°♏		superior conj	15151 Oct 18 18:21	11°♎24'15	0°27'42
evening rise	15150 Nov 10 22:33	12°♏48'12		minimum elong	15151 Oct 18 16:51	11°♎16'36	0°27'59
	15150 Nov 19 13:33	0°♏		evening rise	15151 Oct 26 07:25	27°♎09'27	
desc. node	15150 Nov 30 08:53	15°♏54'10			15151 Oct 27 16:18	0°♏	
evening max el	15150 Dec 02 09:51	18°♏02'21	22°20'53	evening max el	15151 Nov 14 04:38	28°♏20'20	20°47'31
retrograde	15150 Dec 15 04:08	24°♏21'30			15151 Nov 16 00:11	0°♏	
evening set	15150 Dec 18 18:53	23°♏52'47		desc. node	15151 Nov 17 06:02	0°♏58'32	
min. Earth dist.	15150 Dec 26 17:00	20°♏19'04	0.54572 AU	retrograde	15151 Nov 25 14:28	4°♏00'29	
inferior conj	15150 Dec 27 07:06	19°♏59'18	-6°00'22	evening set	15151 Nov 28 01:34	3°♏45'48	
minimum elong	15150 Dec 27 05:52	20°♏01'01	5°59'23	inferior conj	15151 Dec 06 22:11	29°♏52'41	-5°22'30
morning rise	15151 Jan 04 17:57	16°♏12'06		minimum elong	15151 Dec 06 13:16	0°♏05'27	5°19'46
direct	15151 Jan 08 01:12	15°♏47'37			15151 Dec 06 17:04	30°♏♏	
morning max el	15151 Jan 20 00:55	21°♏33'42	21°30'10	min. Earth dist.	15151 Dec 07 22:35	29°♏17'41	0.54526 AU
asc. node	15151 Jan 24 20:11	27°♏00'34		morning rise	15151 Dec 15 01:03	25°♏58'09	
	15151 Jan 27 00:01	0°♐		direct	15151 Dec 19 08:39	25°♏18'11	
morning set	15151 Feb 09 07:35	24°♐25'46			15151 Dec 30 14:41	0°♏	
	15151 Feb 11 23:00	0°♑		morning max el	15152 Jan 01 13:53	1°♏44'14	23°16'04
				asc. node	15152 Jan 11 17:28	14°♏31'50	
superior conj	15151 Feb 16 12:56	9°♑38'56	1°15'23		15152 Jan 20 08:55	0°♐	
minimum elong	15151 Feb 16 15:23	9°♑51'41	1°15'32	morning set	15152 Jan 24 19:14	9°♐10'48	
max. Earth dist.	15151 Feb 21 01:18	18°♑51'46	1.34909 AU				
evening rise	15151 Feb 25 04:05	26°♑51'44		superior conj	15152 Jan 31 16:42	24°♐05'35	1°29'05
desc. node	15151 Feb 26 09:37	29°♑10'21		minimum elong	15152 Jan 31 18:27	24°♐15'00	1°29'36
	15151 Feb 26 20:19	0°♒			15152 Feb 03 11:11	0°♑	
	15151 Mar 17 04:52	0°♒		max. Earth dist.	15152 Feb 03 19:23	0°♑43'07	1.33213 AU
evening max el	15151 Apr 01 09:24	18°♒36'53	26°38'09	evening rise	15152 Feb 08 13:06	10°♑23'52	
retrograde	15151 Apr 14 12:00	26°♒01'40		desc. node	15152 Feb 13 06:11	19°♑25'20	
evening set	15151 Apr 20 21:23	23°♒29'20			15152 Feb 19 05:57	0°♒	
asc. node	15151 Apr 22 16:50	21°♒50'38			15152 Mar 11 20:23	0°♒	
min. Earth dist.	15151 Apr 24 22:07	19°♒24'36	0.66459 AU	evening max el	15152 Mar 13 22:40	2°♒06'55	27°20'23
inferior conj	15151 Apr 26 21:33	17°♒03'11	1°15'58	retrograde	15152 Mar 27 13:18	9°♒37'42	
minimum elong	15151 Apr 26 19:48	17°♒08'26	1°14'42	evening set	15152 Apr 03 06:09	7°♒07'54	
morning rise	15151 May 02 19:20	11°♒24'00		min. Earth dist.	15152 Apr 07 02:28	3°♒35'13	0.64757 AU
direct	15151 May 05 20:04	10°♒32'52		asc. node	15152 Apr 08 14:13	1°♒58'32	
morning max el	15151 May 12 05:47	13°♒55'20	18°18'22	inferior conj	15152 Apr 09 14:10	0°♒52'49	0°18'51
	15151 May 24 01:57	0°♓		minimum elong	15152 Apr 09 13:39	0°♒54'15	0°18'14
desc. node	15151 May 25 11:22	2°♓10'48			15152 Apr 10 09:42	30°♒♒	
morning set	15151 Jun 01 02:04	12°♓40'28		morning rise	15152 Apr 15 23:07	25°♒27'17	
	15151 Jun 12 01:01	0°♓		direct	15152 Apr 18 14:33	24°♒50'55	
				morning max el	15152 Apr 24 22:18	28°♒06'35	17°53'33
superior conj	15151 Jun 16 13:57	7°♓06'07	-2°06'28		15152 Apr 26 16:46	0°♒	
				desc. node	15152 May 11 08:10	22°♒19'59	

morning set	15152 May 12 09:43	24°♄06'09		morning set	15153 Apr 24 18:11	6°♄42'07	
	15152 May 15 23:09	0°♄		desc. node	15153 Apr 28 04:52	12°♄41'33	
superior conj	15152 May 26 06:21	16°♄42'14	-1°41'03	superior conj	15153 May 06 19:06	27°♄16'23	-1°04'56
minimum elong	15152 May 25 21:32	16°♄07'10	1°41'05	minimum elong	15153 May 06 12:53	26°♄50'36	1°04'49
max. Earth dist.	15152 May 30 12:38	23°♄26'37	1.45504 AU		15153 May 08 10:46	0°♄	
	15152 Jun 03 17:21	0°♄		max. Earth dist.	15153 May 13 06:00	7°♄46'59	1.44367 AU
evening rise	15152 Jun 11 04:55	11°♄32'19		evening rise	15153 May 21 16:21	21°♄00'33	
	15152 Jun 23 10:20	0°♄			15153 May 27 14:11	0°♄	
greatest brilliancy	15152 Jun 25 18:39	3°♄26'14	-0.6m		15153 Jun 18 05:07	0°♄	
asc. node	15152 Jul 05 12:32	16°♄26'52		evening max el	15153 Jun 20 13:29	2°♄31'01	20°56'27
evening max el	15152 Jul 07 13:46	18°♄39'00	19°50'36	asc. node	15153 Jun 22 09:25	4°♄13'22	
retrograde	15152 Jul 15 01:05	22°♄52'11		retrograde	15153 Jun 29 00:03	7°♄23'32	
evening set	15152 Jul 18 21:19	21°♄26'45		evening set	15153 Jul 03 06:51	5°♄40'52	
inferior conj	15152 Jul 24 04:49	15°♄28'24	3°04'46		15153 Jul 08 04:14	30°♄	
minimum elong	15152 Jul 24 05:46	15°♄25'12	3°03'56	inferior conj	15153 Jul 08 12:33	29°♄31'12	3°09'53
min. Earth dist.	15152 Jul 25 06:06	14°♄03'21	0.67865 AU	minimum elong	15153 Jul 08 12:31	29°♄31'19	3°09'00
morning rise	15152 Jul 29 13:47	9°♄03'33		min. Earth dist.	15153 Jul 09 00:13	28°♄50'44	0.68705 AU
direct	15152 Aug 04 07:28	6°♄32'58		morning rise	15153 Jul 13 17:53	23°♄10'50	
desc. node	15152 Aug 07 06:51	7°♄07'08		direct	15153 Jul 18 23:46	20°♄53'33	
morning max el	15152 Aug 16 03:25	13°♄38'25	24°55'08	desc. node	15153 Jul 25 04:13	23°♄20'35	
	15152 Aug 29 10:33	0°♄		morning max el	15153 Jul 29 14:11	27°♄12'48	23°26'20
	15152 Sep 17 18:41	0°♄			15153 Aug 01 04:41	0°♄	
morning set	15152 Sep 20 22:04	5°♄27'52			15153 Aug 23 00:56	0°♄	
max. Earth dist.	15152 Sep 24 11:14	11°♄51'33	1.37015 AU	morning set	15153 Sep 02 08:34	16°♄34'36	
				max. Earth dist.	15153 Sep 06 09:16	23°♄27'13	1.39396 AU
					15153 Sep 10 02:13	0°♄	
superior conj	15152 Oct 01 05:21	24°♄41'38	-0°03'23				
minimum elong	15152 Oct 01 05:33	24°♄42'35	0°03'02	superior conj	15153 Sep 14 02:26	7°♄19'36	-0°38'20
behind sun begin	15152 Sep 30 23:05	24°♄10'56		minimum elong	15153 Sep 14 05:16	7°♄32'46	0°37'50
behind sun end	15152 Oct 01 12:01	25°♄14'18		asc. node	15153 Sep 18 10:45	15°♄32'25	
asc. node	15152 Oct 01 14:13	25°♄25'07		evening rise	15153 Sep 23 09:44	25°♄07'25	
	15152 Oct 03 21:37	0°♄			15153 Sep 25 22:29	0°♄	
evening rise	15152 Oct 09 12:05	11°♄18'35					
	15152 Oct 19 11:28	0°♄		evening max el	15153 Oct 09 12:13	21°♄18'30	18°42'24
evening max el	15152 Oct 26 13:44	9°♄24'55	19°33'52	retrograde	15153 Oct 17 18:56	25°♄29'14	
desc. node	15152 Nov 03 03:18	14°♄03'34		evening set	15153 Oct 19 16:52	25°♄16'38	
retrograde	15152 Nov 05 08:15	14°♄18'05		desc. node	15153 Oct 21 00:38	24°♄54'00	
evening set	15152 Nov 07 06:22	14°♄07'35		inferior conj	15153 Oct 27 18:55	20°♄52'41	-2°09'42
inferior conj	15152 Nov 15 22:55	10°♄03'01	-3°55'30	minimum elong	15153 Oct 27 13:37	21°♄02'29	2°06'55
minimum elong	15152 Nov 15 13:29	10°♄18'01	3°51'32	min. Earth dist.	15153 Oct 30 21:21	18°♄35'48	0.57060 AU
min. Earth dist.	15152 Nov 18 07:18	8°♄33'19	0.55411 AU	morning rise	15153 Nov 04 07:07	15°♄55'06	
morning rise	15152 Nov 23 18:40	5°♄41'43		direct	15153 Nov 10 06:58	14°♄27'13	
direct	15152 Nov 29 00:46	4°♄39'55		morning max el	15153 Nov 24 12:12	21°♄51'26	26°36'50
morning max el	15152 Dec 12 22:56	11°♄38'58	25°04'34		15153 Dec 01 16:14	0°♄	
	15152 Dec 26 21:54	0°♄		asc. node	15153 Dec 15 11:43	21°♄50'34	
asc. node	15152 Dec 28 14:39	2°♄52'55			15153 Dec 19 16:36	0°♄	
morning set	15153 Jan 08 07:04	23°♄52'13		morning set	15153 Dec 23 17:21	8°♄24'52	
	15153 Jan 11 02:33	0°♄					
				superior conj	15153 Dec 30 12:02	23°♄22'54	1°37'45
superior conj	15153 Jan 15 01:08	8°♄42'29	1°36'28	minimum elong	15153 Dec 30 11:43	23°♄21'10	1°38'39
minimum elong	15153 Jan 15 01:53	8°♄46'40	1°37'15	max. Earth dist.	15153 Dec 31 02:58	24°♄46'20	1.31264 AU
max. Earth dist.	15153 Jan 16 20:38	12°♄41'21	1.31985 AU		15154 Jan 02 11:29	0°♄	
evening rise	15153 Jan 22 07:56	24°♄19'14		evening rise	15154 Jan 06 09:55	8°♄30'54	
	15153 Jan 25 03:35	0°♄		desc. node	15154 Jan 16 23:31	29°♄00'59	
desc. node	15153 Jan 30 02:49	9°♄24'29			15154 Jan 17 13:03	0°♄	
	15153 Feb 11 20:13	0°♄		evening max el	15154 Feb 06 16:57	27°♄29'34	27°17'25
evening max el	15153 Feb 24 09:57	15°♄08'34	27°35'19		15154 Feb 09 13:36	0°♄	
retrograde	15153 Mar 10 07:32	22°♄36'26		retrograde	15154 Feb 20 17:04	4°♄48'19	
evening set	15153 Mar 17 03:45	20°♄16'43		evening set	15154 Feb 27 11:11	2°♄46'24	
min. Earth dist.	15153 Mar 20 21:57	17°♄11'11	0.62740 AU		15154 Mar 03 07:39	30°♄	
inferior conj	15153 Mar 23 20:02	14°♄20'36	-0°51'14	min. Earth dist.	15154 Mar 03 07:23	0°♄00'32	0.60537 AU
minimum elong	15153 Mar 23 21:45	14°♄16'26	0°50'40	inferior conj	15154 Mar 06 11:39	27°♄17'28	-2°13'01
asc. node	15153 Mar 26 11:38	11°♄52'55		minimum elong	15154 Mar 06 16:33	27°♄06'58	2°10'56
morning rise	15153 Mar 30 18:33	9°♄11'06		asc. node	15154 Mar 13 09:04	22°♄39'35	
direct	15153 Apr 02 02:06	8°♄46'02		morning rise	15154 Mar 14 01:14	22°♄26'44	
morning max el	15153 Apr 08 16:01	12°♄06'31	17°46'12	direct	15154 Mar 16 03:01	22°♄09'17	
	15153 Apr 20 21:32	0°♄		morning max el	15154 Mar 23 07:36	25°♄45'21	17°57'14

	15154 Mar 26 22:00	0°♿			15155 Mar 20 08:42	0°♿	
morning set	15154 Apr 07 21:29	20°♿10'32		morning set	15155 Mar 22 14:00	4°♿13'55	
	15154 Apr 13 06:54	0°♿					
desc. node	15154 Apr 15 01:31	3°♿11'11		superior conj	15155 Mar 31 17:26	21°♿32'52	0°09'51
				minimum elong	15155 Mar 31 18:07	21°♿36'00	0°09'28
superior conj	15154 Apr 18 07:41	8°♿56'05	-0°26'11	behind sun begin	15155 Mar 31 12:18	21°♿09'13	
minimum elong	15154 Apr 18 05:23	8°♿46'03	0°26'21	behind sun end	15155 Mar 31 23:55	22°♿02'45	
max. Earth dist.	15154 Apr 25 19:38	21°♿39'35	1.42651 AU	desc. node	15155 Apr 01 22:06	23°♿44'16	
	15154 Apr 30 23:11	0°♿			15155 Apr 05 09:48	0°♿	
evening rise	15154 May 01 16:03	1°♿06'57		max. Earth dist.	15155 Apr 08 04:55	4°♿52'42	1.40536 AU
	15154 May 21 01:49	0°♿		evening rise	15155 Apr 12 11:43	12°♿06'35	
evening max el	15154 Jun 03 08:00	16°♿24'01	22°12'26		15155 Apr 23 20:00	0°♿	
asc. node	15154 Jun 09 06:24	21°♿02'03			15155 May 16 15:57	0°♿	
retrograde	15154 Jun 12 21:46	22°♿00'24		evening max el	15155 May 16 22:58	0°♿17'34	23°33'28
evening set	15154 Jun 17 15:51	20°♿01'24		asc. node	15155 May 27 03:31	6°♿35'06	
inferior conj	15154 Jun 22 22:11	13°♿42'05	3°03'59	retrograde	15155 May 27 16:58	6°♿36'29	
minimum elong	15154 Jun 22 21:14	13°♿45'25	3°02'57	evening set	15155 Jun 01 22:40	4°♿23'08	
min. Earth dist.	15154 Jun 22 20:40	13°♿47'25	0.69066 AU		15155 Jun 05 19:33	30°♿♿	
morning rise	15154 Jun 28 02:27	7°♿28'23		min. Earth dist.	15155 Jun 06 17:19	28°♿46'14	0.68936 AU
direct	15154 Jul 02 19:56	5°♿28'48		inferior conj	15155 Jun 07 07:49	27°♿56'28	2°47'42
morning max el	15154 Jul 12 03:23	10°♿55'37	21°58'24	minimum elong	15155 Jun 07 06:07	28°♿02'17	2°46'27
desc. node	15154 Jul 12 01:30	10°♿50'55		morning rise	15155 Jun 12 13:33	21°♿50'52	
	15154 Jul 27 04:24	0°♿		direct	15155 Jun 16 18:41	20°♿11'12	
morning set	15154 Aug 13 19:00	26°♿39'09		morning max el	15155 Jun 24 22:04	24°♿49'02	20°38'34
	15154 Aug 15 20:54	0°♿		desc. node	15155 Jun 28 22:42	29°♿17'33	
max. Earth dist.	15154 Aug 19 11:17	5°♿54'27	1.41720 AU		15155 Jun 29 12:34	0°♿	
					15155 Jul 20 12:43	0°♿	
superior conj	15154 Aug 27 05:18	19°♿08'59	-1°14'26	morning set	15155 Jul 24 07:29	5°♿48'38	
minimum elong	15154 Aug 27 11:12	19°♿34'54	1°13'52	max. Earth dist.	15155 Aug 01 20:11	19°♿15'40	1.43700 AU
	15154 Sep 02 06:32	0°♿					
asc. node	15154 Sep 05 07:19	5°♿34'14		superior conj	15155 Aug 08 09:55	0°♿00'55	-1°46'53
evening rise	15154 Sep 06 20:52	8°♿27'38		minimum elong	15155 Aug 08 17:33	0°♿32'45	1°46'42
	15154 Sep 19 13:07	0°♿			15155 Aug 08 09:41	0°♿	
evening max el	15154 Sep 22 20:09	3°♿53'33	18°12'13	evening rise	15155 Aug 20 16:58	21°♿07'52	
retrograde	15154 Sep 30 00:58	7°♿34'01		asc. node	15155 Aug 23 03:56	25°♿26'33	
evening set	15154 Oct 02 04:35	7°♿14'55			15155 Aug 25 18:47	0°♿	
desc. node	15154 Oct 07 22:03	3°♿51'02		evening max el	15155 Sep 06 09:20	17°♿00'00	18°01'49
inferior conj	15154 Oct 09 12:42	2°♿29'26	-0°30'40	retrograde	15155 Sep 12 23:07	20°♿24'06	
minimum elong	15154 Oct 09 11:37	2°♿31'47	0°29'48	evening set	15155 Sep 15 10:25	19°♿54'49	
	15154 Oct 12 10:03	30°♿♿		inferior conj	15155 Sep 22 01:56	14°♿49'37	0°49'51
min. Earth dist.	15154 Oct 12 19:06	29°♿41'14	0.59182 AU	minimum elong	15155 Sep 22 03:22	14°♿46'03	0°49'28
morning rise	15154 Oct 16 15:17	26°♿56'48		desc. node	15155 Sep 24 19:30	12°♿07'07	
direct	15154 Oct 23 02:28	25°♿02'34		min. Earth dist.	15155 Sep 25 02:31	11°♿50'22	0.61471 AU
	15154 Nov 03 07:41	0°♿		morning rise	15155 Sep 28 17:34	8°♿50'00	
morning max el	15154 Nov 06 09:26	2°♿45'47	27°37'26	direct	15155 Oct 05 09:30	6°♿33'10	
	15154 Nov 26 05:21	0°♿		morning max el	15155 Oct 19 14:07	14°♿29'31	27°59'08
asc. node	15154 Dec 02 08:42	11°♿15'11			15155 Nov 01 03:44	0°♿	
morning set	15154 Dec 08 00:20	22°♿44'23			15155 Nov 18 17:40	0°♿	
	15154 Dec 11 08:54	0°♿		asc. node	15155 Nov 19 05:36	0°♿59'04	
				morning set	15155 Nov 22 02:01	6°♿46'04	
superior conj	15154 Dec 14 23:31	8°♿01'32	1°33'02	max. Earth dist.	15155 Nov 27 16:53	18°♿47'36	1.31416 AU
minimum elong	15154 Dec 14 22:14	7°♿54'19	1°33'55				
max. Earth dist.	15154 Dec 14 11:01	6°♿51'35	1.31070 AU	superior conj	15155 Nov 29 09:45	22°♿33'09	1°22'24
evening rise	15154 Dec 21 16:50	22°♿53'22		minimum elong	15155 Nov 29 07:44	22°♿21'58	1°23'06
	15154 Dec 25 02:06	0°♿			15155 Dec 02 18:12	0°♿	
desc. node	15155 Jan 03 20:18	18°♿06'02		evening rise	15155 Dec 06 02:41	7°♿21'38	
	15155 Jan 11 19:47	0°♿			15155 Dec 17 16:35	0°♿	
evening max el	15155 Jan 19 16:51	8°♿59'27	26°24'26	desc. node	15155 Dec 21 17:11	6°♿27'58	
retrograde	15155 Feb 02 16:07	16°♿06'33		evening max el	15156 Jan 01 08:09	19°♿37'11	25°00'58
evening set	15155 Feb 09 00:52	14°♿28'48		retrograde	15156 Jan 15 03:13	26°♿31'50	
min. Earth dist.	15155 Feb 13 06:18	11°♿51'37	0.58343 AU	evening set	15156 Jan 20 17:07	25°♿22'11	
inferior conj	15155 Feb 16 09:18	9°♿32'41	-3°41'08	min. Earth dist.	15156 Jan 25 20:11	22°♿37'59	0.56402 AU
minimum elong	15155 Feb 16 17:27	9°♿17'32	3°37'57	inferior conj	15156 Jan 28 10:14	20°♿58'05	-5°02'26
morning rise	15155 Feb 24 13:13	5°♿03'20		minimum elong	15156 Jan 28 19:14	20°♿43'34	4°59'39
direct	15155 Feb 26 13:00	4°♿49'50		morning rise	15156 Feb 05 23:48	16°♿50'25	
asc. node	15155 Feb 28 06:32	5°♿00'28		direct	15156 Feb 08 03:58	16°♿37'05	
morning max el	15155 Mar 06 17:17	8°♿51'57	18°28'04	asc. node	15156 Feb 15 03:58	19°♿06'11	

morning max el	15156 Feb 17 17:00	21°  15'13	19°20'42	direct	15157 Jan 18 23:39	27°  22'36	
	15156 Feb 24 12:06	0° 			15157 Jan 26 18:54	0° 	
morning set	15156 Mar 05 15:33	18°  39'50		morning max el	15157 Jan 30 02:53	2°  44'05	20°36'35
	15156 Mar 11 07:50	0° 		asc. node	15157 Feb 01 01:22	4°  45'15	
					15157 Feb 16 08:09	0° 	
superior conj	15156 Mar 13 19:59	4°  54'51	0°40'25	morning set	15157 Feb 17 22:52	3°  18'18	
minimum elong	15156 Mar 13 22:13	5°  05'41	0°40'04				
desc. node	15156 Mar 18 18:40	14°  17'31		superior conj	15157 Feb 25 11:01	18°  49'16	1°04'31
max. Earth dist.	15156 Mar 20 11:17	17°  23'36	1.38255 AU	minimum elong	15157 Feb 25 13:38	19°  02'33	1°04'26
evening rise	15156 Mar 24 04:22	23°  05'52		max. Earth dist.	15157 Mar 02 18:51	29°  23'06	1.36051 AU
	15156 Mar 27 16:35	0° 			15157 Mar 03 02:31	0° 	
	15156 Apr 16 13:35	0° 		desc. node	15157 Mar 05 15:13	4°  46'50	
evening max el	15156 Apr 28 12:26	14°  11'21	24°53'06	evening rise	15157 Mar 06 15:26	6°  38'51	
retrograde	15156 May 10 08:32	21°  05'29			15157 Mar 20 11:49	0° 	
asc. node	15156 May 13 00:43	20°  35'03		evening max el	15157 Apr 11 01:58	28°  02'42	26°04'12
evening set	15156 May 16 01:42	18°  41'02			15157 Apr 13 04:24	0° 	
min. Earth dist.	15156 May 20 12:09	13°  40'52	0.68326 AU	retrograde	15157 Apr 23 19:26	5°  20'26	
inferior conj	15156 May 21 15:30	12°  10'26	2°20'57	evening set	15157 Apr 29 23:13	2°  49'29	
minimum elong	15156 May 21 13:22	12°  17'27	2°19'32	asc. node	15157 Apr 29 22:01	2°  51'59	
morning rise	15156 May 27 01:19	6°  13'58			15157 May 02 19:06	30°  R 	
direct	15156 May 30 18:40	4°  54'27		min. Earth dist.	15157 May 04 03:05	28°  24'52	0.67258 AU
morning max el	15156 Jun 06 23:59	8°  53'19	19°31'37	inferior conj	15157 May 05 19:13	26°  19'44	1°43'09
desc. node	15156 Jun 14 19:47	18°  25'20		minimum elong	15157 May 05 17:09	26°  26'13	1°41'44
greatest brilliancy	15156 Jun 19 15:26	25°  18'23	-0.6m	morning rise	15157 May 11 11:50	20°  33'39	
	15156 Jun 22 19:25	0° 		direct	15157 May 14 18:17	19°  32'54	
morning set	15156 Jul 02 10:33	14°  37'45		morning max el	15157 May 21 08:58	23°  05'16	18°40'16
	15156 Jul 12 08:33	0° 			15157 May 27 03:28	0° 	
max. Earth dist.	15156 Jul 14 10:53	3°  17'40	1.45123 AU	desc. node	15157 Jun 01 16:46	8°  23'20	
				morning set	15157 Jun 12 00:44	24°  02'44	
superior conj	15156 Jul 18 15:07	9°  54'58	-2°08'47		15157 Jun 15 20:13	0° 	
minimum elong	15156 Jul 18 20:15	10°  15'26	2°09'22	max. Earth dist.	15157 Jun 27 05:20	17°  34'50	1.45858 AU
	15156 Jul 30 22:44	0° 					
evening rise	15156 Aug 01 16:45	2°  54'58		superior conj	15157 Jun 28 03:15	19°  10'24	-2°13'11
asc. node	15156 Aug 09 00:34	15°  04'36		minimum elong	15157 Jun 28 01:04	19°  01'53	2°14'06
	15156 Aug 19 12:46	0° 			15157 Jul 05 01:04	0° 	
evening max el	15156 Aug 20 00:03	0°  28'37	18°10'04	evening rise	15157 Jul 13 16:02	13°  03'47	
retrograde	15156 Aug 26 08:42	3°  49'44		greatest brilliancy	15157 Jul 20 13:23	24°  03'52	-0.9m
evening set	15156 Aug 29 04:31	3°  49'10			15157 Jul 23 23:44	0° 	
	15156 Sep 02 04:21	30°  R 		asc. node	15157 Jul 26 21:15	4°  22'51	
inferior conj	15156 Sep 04 06:37	27°  44'53	1°49'44	evening max el	15157 Aug 03 13:10	14°  11'38	18°36'05
minimum elong	15156 Sep 04 08:58	27°  38'20	1°48'53	retrograde	15157 Aug 10 01:40	17°  42'52	
min. Earth dist.	15156 Sep 06 19:56	24°  45'27	0.63680 AU	evening set	15157 Aug 13 06:34	16°  44'37	
morning rise	15156 Sep 10 11:31	21°  42'26		inferior conj	15157 Aug 18 22:50	11°  42'17	2°30'55
desc. node	15156 Sep 10 17:00	21°  48'04		minimum elong	15157 Aug 19 01:02	11°  42'00	2°30'01
direct	15156 Sep 17 02:29	18°  56'12		min. Earth dist.	15157 Aug 20 22:29	8°  41'55	0.65623 AU
morning max el	15156 Sep 30 23:30	26°  56'21	27°42'42	morning rise	15157 Aug 24 18:22	4°  42'59	
	15156 Oct 03 20:42	0° 		desc. node	15157 Aug 28 14:29	2°  28'47	
	15156 Oct 24 19:46	0° 		direct	15157 Aug 31 03:39	2°  40'30	
morning set	15156 Nov 04 19:58	20°  18'25		morning max el	15157 Sep 13 10:40	9°  54'57	26°54'22
asc. node	15156 Nov 05 02:24	20°  18'55			15157 Sep 29 07:08	0° 	
	15156 Nov 09 11:55	0° 			15157 Oct 17 06:56	0° 	
max. Earth dist.	15156 Nov 09 16:29	0°  24'14	1.32323 AU	morning set	15157 Oct 19 03:23	3°  30'30	
				asc. node	15157 Oct 22 23:08	11°  00'38	
superior conj	15156 Nov 12 16:41	6°  51'44	1°05'47	max. Earth dist.	15157 Oct 23 06:55	11°  39'48	1.33787 AU
minimum elong	15156 Nov 12 14:21	6°  39'07	1°06'17				
evening rise	15156 Nov 19 13:36	21°  50'15		superior conj	15157 Oct 27 18:08	20°  15'21	0°43'16
	15156 Nov 23 10:55	0° 		minimum elong	15157 Oct 27 16:07	20°  14'37	0°43'35
desc. node	15156 Dec 07 14:11	23°  50'03			15157 Nov 01 01:14	0° 	
evening max el	15156 Dec 12 17:50	29°  38'49	23°19'56	evening rise	15157 Nov 03 23:47	6°  51'33	
	15156 Dec 13 02:44	0° 			15157 Nov 16 14:59	0° 	
retrograde	15156 Dec 26 01:20	6°  14'59		desc. node	15157 Nov 24 11:16	9°  51'40	
evening set	15156 Dec 30 10:25	5°  33'23		evening max el	15157 Nov 24 06:44	9°  40'36	21°39'13
min. Earth dist.	15157 Jan 06 04:15	2°  22'54	0.55007 AU	retrograde	15157 Dec 06 12:51	15°  34'25	
inferior conj	15157 Jan 07 15:04	1°  32'27	-5°54'10	evening set	15157 Dec 09 14:16	15°  23'16	
minimum elong	15157 Jan 07 19:06	1°  26'35	5°52'58	inferior conj	15157 Dec 18 07:17	11°  31'55	-5°51'43
	15157 Jan 10 08:43	30°  R 		minimum elong	15157 Dec 18 02:09	11°  39'07	5°50'15
morning rise	15157 Jan 16 05:19	27°  34'05		min. Earth dist.	15157 Dec 18 09:56	11°  28'13	0.54434 AU

morning rise	15157 Dec 26 14:41	7°  43'40		minimum elong	15158 Nov 27 14:42	21°  42'44	4°46'19
direct	15157 Dec 30 08:16	7°  13'15		min. Earth dist.	15158 Nov 29 16:16	20°  29'14	0.54800 AU
morning max el	15158 Jan 11 22:05	13°  17'52	22°13'47	morning rise	15158 Dec 06 00:30	17°  24'14	
asc. node	15158 Jan 18 22:40	21°  40'17		direct	15158 Dec 10 18:30	16°  35'25	
	15158 Jan 24 04:31	0°  ≈		morning max el	15158 Dec 24 07:55	23°  16'00	24°03'03
morning set	15158 Feb 02 09:30	18°  ≈02'07			15158 Dec 30 07:39	0°  	
	15158 Feb 07 23:56	0°  ✕		asc. node	15159 Jan 05 19:53	9°  34'17	
					15159 Jan 16 14:14	0°  ≈	
superior conj	15158 Feb 09 10:57	3°  ✕06'01	1°22'00	morning set	15159 Jan 17 21:26	2°  ≈46'02	
minimum elong	15158 Feb 09 13:09	3°  ✕17'41	1°22'17				
max. Earth dist.	15158 Feb 13 08:27	11°  ✕12'28	1.34133 AU	superior conj	15159 Jan 24 16:57	17°  ≈37'27	1°32'59
evening rise	15158 Feb 17 17:26	19°  ✕53'59		minimum elong	15159 Jan 24 18:18	17°  ≈44'48	1°33'37
desc. node	15158 Feb 20 11:46	25°  ✕08'12		max. Earth dist.	15159 Jan 27 05:59	23°  ≈07'14	1.32631 AU
	15158 Feb 23 03:47	0°  Υ			15159 Jan 30 12:28	0°  ✕	
	15158 Mar 14 11:55	0°  8		evening rise	15159 Feb 01 06:59	3°  ✕36'52	
evening max el	15158 Mar 24 15:49	11°  844'11	26°59'11	desc. node	15159 Feb 07 08:21	15°  ✕17'10	
retrograde	15158 Apr 07 00:30	19°  812'52			15159 Feb 15 22:31	0°  Υ	
evening set	15158 Apr 13 13:15	16°  841'03		evening max el	15159 Mar 07 04:44	25°  Υ04'31	27°30'36
asc. node	15158 Apr 16 19:22	13°  835'58			15159 Mar 13 07:38	0°  8	
min. Earth dist.	15158 Apr 17 11:58	12°  850'07	0.65773 AU	retrograde	15159 Mar 20 22:43	2°  834'09	
inferior conj	15158 Apr 19 16:40	10°  818'31	0°53'20	evening set	15159 Mar 27 17:34	0°  807'58	
minimum elong	15158 Apr 19 15:19	10°  822'25	0°52'18		15159 Mar 27 21:57	30°  RΥ	
morning rise	15158 Apr 25 18:50	4°  844'36		min. Earth dist.	15159 Mar 31 12:47	26°  Υ47'28	0.63929 AU
direct	15158 Apr 28 15:27	4°  800'08		inferior conj	15159 Apr 03 05:07	24°  Υ00'11	-0°09'16
morning max el	15158 May 04 23:23	7°  818'30	18°05'39	minimum elong	15159 Apr 03 05:25	23°  Υ59'26	0°09'26
desc. node	15158 May 19 13:38	28°  802'59		transit middle	15159 Apr 03 05:25	23°  Υ59'26	0°09'26
	15158 May 20 18:37	0°  Π		transit begin	15159 Apr 03 02:53	24°  Υ06'02	
morning set	15158 May 23 16:26	4°  Π42'37		transit end	15159 Apr 03 07:56	23°  Υ52'51	
				asc. node	15159 Apr 03 16:45	23°  Υ29'58	
superior conj	15158 Jun 07 13:07	28°  Π25'52	-1°57'32	morning rise	15159 Apr 09 19:32	18°  Υ40'54	
minimum elong	15158 Jun 07 04:57	27°  Π53'51	1°57'55	direct	15159 Apr 12 07:32	18°  Υ09'37	
	15158 Jun 08 13:07	0°  ☿		morning max el	15159 Apr 18 16:45	21°  Υ25'50	17°48'18
max. Earth dist.	15158 Jun 10 01:40	2°  ☿22'58	1.45852 AU		15159 Apr 25 08:25	0°  8	
evening rise	15158 Jun 23 15:57	23°  ☿28'18		morning set	15159 May 05 11:26	16°  840'58	
	15158 Jun 27 21:37	0°  Ω		desc. node	15159 May 06 10:24	18°  818'13	
greatest brilliancy	15158 Jul 06 00:10	12°  Ω19'28	-0.7m		15159 May 13 09:52	0°  Π	
asc. node	15158 Jul 13 18:00	23°  Ω13'16		superior conj	15159 May 18 13:13	8°  Π24'17	-1°26'31
evening max el	15158 Jul 17 22:08	28°  Ω01'25	19°18'55	minimum elong	15159 May 18 05:06	7°  Π51'29	1°26'26
	15158 Jul 20 04:07	0°  ൬		max. Earth dist.	15159 May 23 21:21	16°  Π56'25	1.45107 AU
retrograde	15158 Jul 24 22:47	1°  ൬55'28			15159 Jun 01 06:26	0°  ☿	
evening set	15158 Jul 28 13:19	0°  ൬40'02		evening rise	15159 Jun 03 03:21	2°  ☿52'16	
	15158 Jul 29 10:01	30°  RΩ			15159 Jun 21 11:16	0°  Ω	
inferior conj	15158 Aug 02 23:08	24°  Ω49'05	2°56'17	asc. node	15159 Jun 30 14:50	11°  Ω26'38	
minimum elong	15158 Aug 03 00:37	24°  Ω44'14	2°55'27	evening max el	15159 Jul 01 01:23	11°  Ω53'25	20°16'59
min. Earth dist.	15158 Aug 04 08:30	23°  Ω00'05	0.67182 AU	retrograde	15159 Jul 08 21:40	16°  Ω21'56	
morning rise	15158 Aug 08 11:19	18°  Ω23'20		evening set	15159 Jul 12 22:26	14°  Ω48'53	
direct	15158 Aug 14 11:27	15°  Ω47'42		inferior conj	15159 Jul 18 04:51	8°  Ω45'31	3°08'18
desc. node	15158 Aug 15 11:57	15°  Ω51'42		minimum elong	15159 Jul 18 05:23	8°  Ω43'41	3°07'28
morning max el	15158 Aug 26 21:44	23°  Ω13'08	25°42'53	min. Earth dist.	15159 Jul 19 00:12	7°  Ω39'23	0.68292 AU
	15158 Sep 01 22:10	0°  ൬		morning rise	15159 Jul 23 12:00	2°  Ω22'29	
	15158 Sep 22 15:12	0°  Ω			15159 Jul 28 05:19	30°  R☿	
morning set	15158 Oct 01 20:40	15°  Ω58'26		direct	15159 Jul 29 00:48	29°  ☿57'06	
max. Earth dist.	15158 Oct 05 11:50	22°  Ω44'09	1.35739 AU		15159 Jul 29 20:40	0°  Ω	
	15158 Oct 09 05:46	0°  ൬		desc. node	15159 Aug 02 09:22	1°  Ω10'17	
asc. node	15158 Oct 09 19:46	1°  ൬09'22		morning max el	15159 Aug 09 08:26	6°  Ω43'19	24°17'44
					15159 Aug 27 11:34	0°  ൬	
superior conj	15158 Oct 11 11:20	4°  ൬27'23	0°15'07	morning set	15159 Sep 13 19:40	27°  ൬37'44	
minimum elong	15158 Oct 11 10:26	4°  ൬22'53	0°15'24		15159 Sep 15 04:22	0°  Ω	
behind sun begin	15158 Oct 11 08:36	4°  ൬13'36		max. Earth dist.	15159 Sep 17 11:02	4°  Ω02'07	1.38028 AU
behind sun end	15158 Oct 11 12:16	4°  ൬32'09					
evening rise	15158 Oct 19 07:07	20°  ൬31'59		superior conj	15159 Sep 24 16:54	17°  Ω28'51	-0°17'52
	15158 Oct 24 00:09	0°  ✕		minimum elong	15159 Sep 24 18:07	17°  Ω34'40	0°17'27
evening max el	15158 Nov 06 07:26	20°  ✕16'43	20°13'28	asc. node	15159 Sep 26 16:21	21°  Ω18'14	
desc. node	15158 Nov 11 08:27	24°  ✕07'57			15159 Oct 01 02:11	0°  ൬	
retrograde	15158 Nov 17 00:18	25°  ✕36'26		evening rise	15159 Oct 03 09:11	4°  ൬33'22	
evening set	15158 Nov 19 04:11	25°  ✕24'24			15159 Oct 18 08:53	0°  ✕	
inferior conj	15158 Nov 28 00:44	21°  ✕27'52	-4°49'52				



































































































































evening max el	15159 Oct 19 22:29	1° $\text{♊}$ 41'53	19°09'09		15160 Sep 22 11:22	0° $\text{♌}$	
retrograde	15159 Oct 29 00:46	6° $\text{♊}$ 16'05		evening max el	15160 Oct 02 01:31	13° $\text{♌}$ 54'32	18°26'59
desc. node	15159 Oct 29 05:46	6° $\text{♊}$ 15'57		retrograde	15160 Oct 09 20:08	17° $\text{♌}$ 51'10	
evening set	15159 Oct 30 21:44	6° $\text{♊}$ 05'15		evening set	15160 Oct 11 19:52	17° $\text{♌}$ 36'25	
inferior conj	15159 Nov 08 08:53	1° $\text{♊}$ 52'34	-3°11'03	desc. node	15160 Oct 15 03:09	16° $\text{♌}$ 13'26	
minimum elong	15159 Nov 08 00:58	2° $\text{♊}$ 05'58	3°07'20	inferior conj	15160 Oct 19 14:23	13° $\text{♌}$ 03'15	-1°25'53
min. Earth dist.	15159 Nov 11 02:37	0° $\text{♊}$ 01'38	0.56036 AU	minimum elong	15160 Oct 19 11:01	13° $\text{♌}$ 09'54	1°23'56
	15159 Nov 11 03:37	30° $\text{♌}$		min. Earth dist.	15160 Oct 22 19:58	10° $\text{♌}$ 30'34	0.57919 AU
morning rise	15159 Nov 16 01:40	27° $\text{♌}$ 16'28		morning rise	15160 Oct 26 22:40	7° $\text{♌}$ 49'40	
direct	15159 Nov 21 15:52	26° $\text{♌}$ 04'14		direct	15160 Nov 02 03:54	6° $\text{♌}$ 10'27	
	15159 Dec 01 22:18	0° $\text{♊}$		morning max el	15160 Nov 16 10:52	13° $\text{♌}$ 44'09	27°07'09
morning max el	15159 Dec 05 18:00	3° $\text{♊}$ 14'07	25°47'05		15160 Nov 29 09:47	0° $\text{♊}$	
asc. node	15159 Dec 23 17:01	28° $\text{♊}$ 12'09		asc. node	15160 Dec 09 14:04	17° $\text{♊}$ 22'30	
	15159 Dec 24 16:46	0° $\text{♊}$			15160 Dec 15 20:50	0° $\text{♊}$	
morning set	15160 Jan 02 08:49	17° $\text{♊}$ 24'12		morning set	15160 Dec 16 17:58	1° $\text{♊}$ 52'16	
	15160 Jan 08 02:08	0° $\text{♊}$					
				superior conj	15160 Dec 23 14:02	16° $\text{♊}$ 56'44	1°36'28
superior conj	15160 Jan 09 02:38	2° $\text{♊}$ 16'09	1°37'45	minimum elong	15160 Dec 23 13:18	16° $\text{♊}$ 52'33	1°37'23
minimum elong	15160 Jan 09 02:56	2° $\text{♊}$ 17'49	1°38'36	max. Earth dist.	15160 Dec 23 17:25	17° $\text{♊}$ 15'39	1.31113 AU
max. Earth dist.	15160 Jan 10 09:56	5° $\text{♊}$ 09'30	1.31612 AU		15160 Dec 29 11:48	0° $\text{♊}$	
evening rise	15160 Jan 16 05:08	17° $\text{♊}$ 39'26		evening rise	15160 Dec 30 09:28	1° $\text{♊}$ 56'16	
	15160 Jan 22 10:09	0° $\text{♊}$		desc. node	15161 Jan 11 01:44	24° $\text{♊}$ 31'44	
desc. node	15160 Jan 25 04:59	5° $\text{♊}$ 07'24			15161 Jan 14 09:01	0° $\text{♊}$	
	15160 Feb 10 12:43	0° $\text{♊}$		evening max el	15161 Jan 29 18:25	19° $\text{♊}$ 48'32	26°58'58
evening max el	15160 Feb 17 14:25	7° $\text{♊}$ 49'34	27°31'57	retrograde	15161 Feb 12 18:40	27° $\text{♊}$ 03'19	
retrograde	15160 Mar 02 13:08	15° $\text{♊}$ 13'47		evening set	15161 Feb 19 09:51	25° $\text{♊}$ 10'39	
evening set	15160 Mar 09 09:29	13° $\text{♊}$ 00'32		min. Earth dist.	15161 Feb 23 08:37	22° $\text{♊}$ 30'14	0.59588 AU
min. Earth dist.	15160 Mar 13 03:49	10° $\text{♊}$ 04'48	0.61817 AU	inferior conj	15161 Feb 26 13:41	19° $\text{♊}$ 55'04	-2°50'13
inferior conj	15160 Mar 16 05:20	7° $\text{♊}$ 15'23	-1°24'40	minimum elong	15161 Feb 26 20:03	19° $\text{♊}$ 42'12	2°47'33
minimum elong	15160 Mar 16 08:18	7° $\text{♊}$ 08'30	1°23'29	morning rise	15161 Mar 06 09:42	15° $\text{♊}$ 13'35	
asc. node	15160 Mar 20 14:11	3° $\text{♊}$ 38'43		asc. node	15161 Mar 07 11:38	15° $\text{♊}$ 01'39	
morning rise	15160 Mar 23 10:10	2° $\text{♊}$ 13'42		direct	15161 Mar 08 09:57	14° $\text{♊}$ 58'20	
direct	15160 Mar 25 15:04	1° $\text{♊}$ 52'14		morning max el	15161 Mar 15 23:36	18° $\text{♊}$ 44'09	18°07'53
morning max el	15160 Apr 01 09:59	5° $\text{♊}$ 17'39	17°48'42		15161 Mar 24 03:43	0° $\text{♊}$	
morning set	15160 Apr 17 04:35	29° $\text{♊}$ 40'56		morning set	15161 Mar 31 14:01	13° $\text{♊}$ 25'06	
	15160 Apr 17 08:52	0° $\text{♊}$		desc. node	15161 Apr 09 03:40	29° $\text{♊}$ 14'29	
desc. node	15160 Apr 22 07:04	8° $\text{♊}$ 43'23			15161 Apr 09 13:46	0° $\text{♊}$	
				superior conj	15161 Apr 10 10:10	1° $\text{♊}$ 31'21	-0°10'23
superior conj	15160 Apr 28 12:08	19° $\text{♊}$ 26'22	-0°48'27	minimum elong	15161 Apr 10 09:18	1° $\text{♊}$ 27'30	0°10'39
minimum elong	15160 Apr 28 07:36	19° $\text{♊}$ 07'11	0°48'26	behind sun begin	15161 Apr 10 03:32	1° $\text{♊}$ 01'41	
	15160 May 04 20:58	0° $\text{♊}$		behind sun end	15161 Apr 10 15:05	1° $\text{♊}$ 53'15	
max. Earth dist.	15160 May 05 13:31	1° $\text{♊}$ 07'09	1.43696 AU	max. Earth dist.	15161 Apr 18 00:44	14° $\text{♊}$ 41'32	1.41779 AU
evening rise	15160 May 12 18:25	12° $\text{♊}$ 32'34		evening rise	15161 Apr 23 01:58	22° $\text{♊}$ 59'47	
	15160 May 24 07:47	0° $\text{♊}$			15161 Apr 27 11:59	0° $\text{♊}$	
evening max el	15160 Jun 12 22:39	25° $\text{♊}$ 45'20	21°27'42		15161 May 18 08:31	0° $\text{♊}$	
asc. node	15160 Jun 16 11:46	28° $\text{♊}$ 50'30		evening max el	15161 May 26 15:14	9° $\text{♊}$ 37'36	22°46'43
	15160 Jun 18 08:40	0° $\text{♊}$		asc. node	15161 Jun 03 08:50	15° $\text{♊}$ 08'57	
retrograde	15160 Jun 21 20:25	0° $\text{♊}$ 56'32		retrograde	15161 Jun 05 17:23	15° $\text{♊}$ 33'25	
	15160 Jun 25 01:58	30° $\text{♊}$		evening set	15161 Jun 10 16:17	13° $\text{♊}$ 28'02	
evening set	15160 Jun 26 08:00	29° $\text{♊}$ 06'32		inferior conj	15161 Jun 15 23:32	7° $\text{♊}$ 05'02	2°58'24
inferior conj	15160 Jul 01 13:39	22° $\text{♊}$ 52'17	3°08'41	minimum elong	15161 Jun 15 22:15	7° $\text{♊}$ 09'32	2°57'15
minimum elong	15160 Jul 01 13:13	22° $\text{♊}$ 53'48	3°07'45	min. Earth dist.	15161 Jun 15 16:28	7° $\text{♊}$ 29'37	0.69060 AU
min. Earth dist.	15160 Jul 01 19:35	22° $\text{♊}$ 31'37	0.68917 AU	morning rise	15161 Jun 21 04:05	0° $\text{♊}$ 54'26	
morning rise	15160 Jul 06 18:15	16° $\text{♊}$ 34'34			15161 Jun 22 10:32	30° $\text{♊}$	
direct	15160 Jul 11 18:44	14° $\text{♊}$ 24'43		direct	15161 Jun 25 16:11	29° $\text{♊}$ 03'14	
desc. node	15160 Jul 19 06:42	17° $\text{♊}$ 59'15			15161 Jun 29 03:59	0° $\text{♊}$	
morning max el	15160 Jul 21 20:07	20° $\text{♊}$ 21'59	22°48'24	morning max el	15161 Jul 04 11:21	4° $\text{♊}$ 09'02	21°23'07
	15160 Jul 30 01:13	0° $\text{♊}$		desc. node	15161 Jul 06 03:57	5° $\text{♊}$ 55'25	
	15160 Aug 19 16:11	0° $\text{♊}$			15161 Jul 24 01:56	0° $\text{♊}$	
morning set	15160 Aug 24 20:18	8° $\text{♊}$ 19'21		morning set	15161 Aug 04 20:41	17° $\text{♊}$ 58'37	
max. Earth dist.	15160 Aug 29 10:30	15° $\text{♊}$ 59'43	1.40409 AU	max. Earth dist.	15161 Aug 11 14:51	28° $\text{♊}$ 48'50	1.42612 AU
					15161 Aug 12 08:13	0° $\text{♊}$	
superior conj	15160 Sep 06 06:50	29° $\text{♊}$ 47'38	-0°53'45	superior conj	15161 Aug 19 00:40	11° $\text{♊}$ 13'26	-1°29'01
minimum elong	15160 Sep 06 06:59	0° $\text{♊}$ 06'28	0°53'10	minimum elong	15161 Aug 19 07:37	11° $\text{♊}$ 43'17	1°28'32
	15160 Sep 06 09:33	0° $\text{♊}$			15161 Aug 29 15:20	0° $\text{♊}$	
asc. node	15160 Sep 12 12:56	11° $\text{♊}$ 23'56					
evening rise	15160 Sep 16 02:56	18° $\text{♊}$ 11'59					

evening rise	15161 Aug 30 08:19	1°♎16'51			15162 Jul 17 03:20	0°♏	
asc. node	15161 Aug 30 09:31	1°♎22'15		max. Earth dist.	15162 Jul 25 02:09	12°♏28'26	1.44382 AU
evening max el	15161 Sep 15 12:15	26°♎44'36	18°05'28				
	15161 Sep 20 12:02	0°♎		superior conj	15162 Jul 30 19:14	21°♏40'45	-1°57'54
retrograde	15161 Sep 22 09:27	0°♎16'19		minimum elong	15162 Jul 31 02:29	22°♏10'22	1°58'02
	15161 Sep 24 07:29	30°♎			15162 Aug 04 20:10	0°♎	
evening set	15161 Sep 24 16:08	29°♎53'24		evening rise	15162 Aug 12 20:26	13°♎36'06	
inferior conj	15161 Oct 01 16:55	24°♎59'36	0°06'01	asc. node	15162 Aug 17 06:09	21°♎09'22	
minimum elong	15161 Oct 01 17:08	24°♎59'07	0°06'14		15162 Aug 22 14:20	0°♎	
transit middle	15161 Oct 01 17:08	24°♎59'07	0°06'14	evening max el	15162 Aug 30 02:37	10°♎02'19	18°03'07
transit begin	15161 Oct 01 14:03	25°♎06'11		retrograde	15162 Sep 05 12:52	13°♎23'05	
transit end	15161 Oct 01 20:12	24°♎52'03		evening set	15162 Sep 08 03:51	12°♎48'23	
desc. node	15161 Oct 02 00:37	24°♎41'53		inferior conj	15162 Sep 14 13:14	7°♎35'45	1°17'40
min. Earth dist.	15161 Oct 04 21:56	22°♎03'50	0.60154 AU	minimum elong	15162 Sep 14 15:13	7°♎30'33	1°17'00
morning rise	15161 Oct 08 14:54	19°♎14'12		min. Earth dist.	15162 Sep 17 09:32	4°♎38'05	0.62443 AU
direct	15161 Oct 15 05:00	17°♎09'14		desc. node	15162 Sep 18 22:05	3°♎10'36	
morning max el	15161 Oct 29 11:30	24°♎59'39	27°51'21	morning rise	15162 Sep 21 00:14	1°♎28'05	
	15161 Nov 03 02:10	0°♎			15162 Sep 23 11:58	30°♎	
	15161 Nov 22 19:36	0°♎		direct	15162 Sep 27 16:39	29°♎03'32	
asc. node	15161 Nov 26 11:01	6°♎55'56			15162 Oct 02 03:12	0°♎	
morning set	15161 Nov 30 22:56	16°♎04'44		morning max el	15162 Oct 11 18:17	7°♎02'09	27°56'22
max. Earth dist.	15161 Dec 07 00:47	29°♎16'48	1.31149 AU		15162 Oct 29 07:32	0°♎	
	15161 Dec 07 08:33	0°♎		asc. node	15162 Nov 13 07:53	26°♎45'52	
				morning set	15162 Nov 14 21:38	29°♎56'41	
superior conj	15161 Dec 08 01:15	1°♎33'07	1°29'15		15162 Nov 14 22:17	0°♎	
minimum elong	15161 Dec 07 23:37	1°♎23'59	1°30'04	max. Earth dist.	15162 Nov 20 04:22	11°♎05'10	1.31740 AU
evening rise	15161 Dec 14 17:52	16°♎21'36					
	15161 Dec 21 09:27	0°♎		superior conj	15162 Nov 22 10:22	16°♎00'08	1°16'05
desc. node	15161 Dec 28 22:35	13°♎19'58		minimum elong	15162 Nov 22 08:09	15°♎47'59	1°16'42
	15162 Jan 10 15:53	0°♎			15162 Nov 28 19:01	0°♎	
evening max el	15162 Jan 11 14:40	0°♎55'28	25°52'05	evening rise	15162 Nov 29 04:25	0°♎50'53	
retrograde	15162 Jan 25 13:10	7°♎57'57			15162 Dec 14 21:49	0°♎	
evening set	15162 Jan 31 14:50	6°♎32'06		desc. node	15162 Dec 15 19:32	1°♎18'40	
min. Earth dist.	15162 Feb 05 03:44	3°♎53'44	0.57464 AU	evening max el	15162 Dec 24 03:06	11°♎15'27	24°19'04
inferior conj	15162 Feb 08 02:44	1°♎49'51	-4°17'40	retrograde	15163 Jan 06 18:24	18°♎02'31	
minimum elong	15162 Feb 08 11:44	1°♎34'05	4°14'25	evening set	15163 Jan 11 21:02	17°♎05'29	
	15162 Feb 10 20:03	30°♎		min. Earth dist.	15163 Jan 17 14:48	14°♎12'29	0.55726 AU
morning rise	15162 Feb 16 11:37	27°♎29'48		inferior conj	15163 Jan 19 18:42	12°♎53'07	-5°29'38
direct	15162 Feb 18 12:02	27°♎17'00		minimum elong	15163 Jan 20 02:25	12°♎41'18	5°27'31
asc. node	15162 Feb 22 09:04	28°♎07'06		morning rise	15163 Jan 28 09:43	8°♎53'03	
	15162 Feb 25 11:01	0°♎		direct	15163 Jan 30 18:47	8°♎38'12	
morning max el	15162 Feb 27 05:35	1°♎33'51	18°47'41	asc. node	15163 Feb 09 06:30	12°♎54'17	
morning set	15162 Mar 15 10:51	27°♎39'20		morning max el	15163 Feb 09 23:40	13°♎34'30	19°50'07
	15162 Mar 16 15:39	0°♎			15163 Feb 21 09:06	0°♎	
				morning set	15163 Feb 27 15:12	12°♎11'50	
superior conj	15162 Mar 24 03:37	14°♎28'45	0°23'34				
minimum elong	15162 Mar 24 05:07	14°♎35'52	0°23'10	superior conj	15163 Mar 07 11:56	28°♎05'41	0°51'28
desc. node	15162 Mar 27 00:14	19°♎48'06		minimum elong	15163 Mar 07 14:27	28°♎18'09	0°51'12
max. Earth dist.	15162 Mar 31 08:02	27°♎34'41	1.39566 AU		15163 Mar 08 11:06	0°♎	
	15162 Apr 01 17:17	0°♎		max. Earth dist.	15163 Mar 13 14:38	9°♎51'29	1.37295 AU
evening rise	15162 Apr 04 06:46	4°♎23'21		desc. node	15163 Mar 13 20:46	10°♎20'04	
	15162 Apr 20 15:17	0°♎		evening rise	15163 Mar 17 07:41	16°♎37'22	
evening max el	15162 May 09 05:25	23°♎32'00	24°08'05		15163 Mar 25 04:03	0°♎	
	15162 May 19 03:24	0°♎			15163 Apr 15 02:08	0°♎	
retrograde	15162 May 20 11:11	0°♎07'13		evening max el	15163 Apr 21 19:00	7°♎26'04	25°24'57
asc. node	15162 May 21 05:59	0°♎04'34		retrograde	15163 May 04 00:40	14°♎30'57	
	15162 May 21 17:59	30°♎		asc. node	15163 May 08 03:13	13°♎20'57	
evening set	15162 May 25 21:41	27°♎49'00		evening set	15163 May 09 22:32	12°♎03'18	
min. Earth dist.	15162 May 30 12:43	22°♎27'33	0.68726 AU	min. Earth dist.	15163 May 14 06:05	7°♎18'28	0.67926 AU
inferior conj	15162 May 31 08:35	21°♎20'11	2°37'43	inferior conj	15163 May 15 14:49	5°♎32'40	2°06'19
minimum elong	15162 May 31 06:40	21°♎26'42	2°36'22	minimum elong	15163 May 15 12:39	5°♎39'42	2°04'53
morning rise	15162 Jun 05 15:42	15°♎18'04			15163 May 20 16:14	30°♎	
direct	15162 Jun 09 15:46	13°♎46'53		morning rise	15163 May 21 03:11	29°♎40'25	
morning max el	15162 Jun 17 08:53	18°♎06'52	20°08'19	direct	15163 May 24 15:53	28°♎28'55	
desc. node	15162 Jun 23 01:05	24°♎41'09			15163 May 28 21:23	0°♎	
	15162 Jun 26 23:56	0°♎		morning max el	15163 May 31 13:50	2°♎14'35	19°07'49
morning set	15162 Jul 15 02:55	26°♎53'13		desc. node	15163 Jun 09 22:06	14°♎02'41	

greatest brilliancy	15163 Jun 13 12:10	19° $\Pi$ 18'54	-0.7m		15164 Jun 12 09:10	0° $\mathfrak{G}$	
	15163 Jun 20 13:02	0° $\mathfrak{G}$					
morning set	15163 Jun 24 08:12	5° $\mathfrak{G}$ 50'41		superior conj	15164 Jun 19 00:36	10° $\mathfrak{G}$ 23'07	-2°08'52
max. Earth dist.	15163 Jul 07 19:11	26° $\mathfrak{G}$ 44'42	1.45528 AU	minimum elong	15164 Jun 18 19:16	10° $\mathfrak{G}$ 02'19	2°09'37
	15163 Jul 09 20:55	0° $\Omega$		max. Earth dist.	15164 Jun 19 15:00	11° $\mathfrak{G}$ 19'17	1.45948 AU
					15164 Jul 01 14:09	0° $\Omega$	
superior conj	15163 Jul 10 15:46	1° $\Omega$ 14'16	-2°13'06	evening rise	15164 Jul 04 22:40	5° $\Omega$ 15'31	
minimum elong	15163 Jul 10 18:09	1° $\Omega$ 23'41	2°13'56	greatest brilliancy	15164 Jul 14 10:07	20° $\Omega$ 03'22	-0.8m
evening rise	15163 Jul 25 10:02	24° $\Omega$ 56'59		asc. node	15164 Jul 20 23:30	29° $\Omega$ 46'57	
	15163 Jul 28 12:10	0° $\mathfrak{P}$			15164 Jul 21 03:15	0° $\mathfrak{P}$	
asc. node	15163 Aug 04 02:49	10° $\mathfrak{P}$ 39'44		evening max el	15164 Jul 27 04:29	7° $\mathfrak{P}$ 23'51	18°52'19
evening max el	15163 Aug 13 17:00	23° $\mathfrak{P}$ 37'59	18°19'01	retrograde	15164 Aug 02 21:14	11° $\mathfrak{P}$ 03'36	
retrograde	15163 Aug 20 02:04	27° $\mathfrak{P}$ 01'38		evening set	15164 Aug 06 06:08	9° $\mathfrak{P}$ 58'07	
evening set	15163 Aug 23 01:47	26° $\mathfrak{P}$ 12'28		inferior conj	15164 Aug 11 19:14	4° $\mathfrak{P}$ 14'34	2°43'27
inferior conj	15163 Aug 28 23:15	20° $\mathfrak{P}$ 43'21	2°09'17	minimum elong	15164 Aug 11 21:10	4° $\mathfrak{P}$ 08'26	2°42'36
minimum elong	15163 Aug 29 01:37	20° $\mathfrak{P}$ 36'24	2°08'23	min. Earth dist.	15164 Aug 13 12:44	2° $\mathfrak{P}$ 03'44	0.66329 AU
min. Earth dist.	15163 Aug 31 06:48	18° $\mathfrak{P}$ 02'14	0.64548 AU		15164 Aug 15 06:31	30° $\mathfrak{R}$ $\Omega$	
morning rise	15163 Sep 03 23:58	14° $\mathfrak{P}$ 22'48		morning rise	15164 Aug 17 11:21	27° $\Omega$ 48'50	
desc. node	15163 Sep 05 19:33	13° $\mathfrak{P}$ 07'32		desc. node	15164 Aug 22 17:01	25° $\Omega$ 14'34	
direct	15163 Sep 10 12:59	11° $\mathfrak{P}$ 47'06		direct	15164 Aug 23 16:54	25° $\Omega$ 10'48	
morning max el	15163 Sep 24 04:44	19° $\mathfrak{P}$ 44'03	27°25'40		15164 Sep 02 14:29	0° $\mathfrak{P}$	
	15163 Oct 02 23:38	0° $\mathfrak{L}$		morning max el	15164 Sep 05 16:13	2° $\mathfrak{P}$ 52'52	26°26'25
	15163 Oct 22 08:17	0° $\mathfrak{M}$			15164 Sep 26 05:26	0° $\mathfrak{L}$	
morning set	15163 Oct 29 11:32	13° $\mathfrak{M}$ 22'31		morning set	15164 Oct 11 13:25	26° $\mathfrak{L}$ 14'15	
asc. node	15163 Oct 31 04:39	16° $\mathfrak{M}$ 46'56			15164 Oct 13 12:56	0° $\mathfrak{M}$	
max. Earth dist.	15163 Nov 03 00:39	22° $\mathfrak{M}$ 34'34	1.32885 AU	max. Earth dist.	15164 Oct 15 11:06	3° $\mathfrak{M}$ 44'29	1.34559 AU
				asc. node	15164 Oct 17 01:19	6° $\mathfrak{M}$ 54'02	
superior conj	15163 Nov 06 15:18	0° $\mathfrak{X}$ 12'22	0°56'58				
minimum elong	15163 Nov 06 13:00	0° $\mathfrak{X}$ 00'06	0°57'22	superior conj	15164 Oct 20 13:34	14° $\mathfrak{M}$ 02'51	0°32'00
	15163 Nov 06 12:59	0° $\mathfrak{X}$		minimum elong	15164 Oct 20 11:54	13° $\mathfrak{M}$ 54'16	0°32'17
evening rise	15163 Nov 13 15:18	15° $\mathfrak{X}$ 19'35		evening rise	15164 Oct 28 00:32	29° $\mathfrak{M}$ 41'58	
	15163 Nov 20 20:58	0° $\mathfrak{Z}$			15164 Oct 28 03:59	0° $\mathfrak{X}$	
desc. node	15163 Dec 02 16:34	18° $\mathfrak{Z}$ 10'03			15164 Nov 14 21:05	0° $\mathfrak{Z}$	
evening max el	15163 Dec 05 12:57	21° $\mathfrak{Z}$ 13'01	22°35'56	evening max el	15164 Nov 16 05:55	1° $\mathfrak{Z}$ 25'49	21°00'21
retrograde	15163 Dec 18 11:04	27° $\mathfrak{Z}$ 37'06		desc. node	15164 Nov 18 13:43	3° $\mathfrak{Z}$ 30'28	
evening set	15163 Dec 22 06:37	27° $\mathfrak{Z}$ 05'17		retrograde	15164 Nov 27 21:26	7° $\mathfrak{Z}$ 12'38	
min. Earth dist.	15163 Dec 29 21:06	23° $\mathfrak{Z}$ 38'10	0.54658 AU	evening set	15164 Nov 30 11:44	6° $\mathfrak{Z}$ 56'38	
inferior conj	15163 Dec 30 16:52	23° $\mathfrak{Z}$ 10'17	-6°00'40	inferior conj	15164 Dec 09 07:48	3° $\mathfrak{Z}$ 04'19	-5°31'58
minimum elong	15163 Dec 30 17:06	23° $\mathfrak{Z}$ 09'58	5°59'45	minimum elong	15164 Dec 08 23:39	3° $\mathfrak{Z}$ 15'54	5°29'36
morning rise	15164 Jan 08 04:49	19° $\mathfrak{Z}$ 22'35		min. Earth dist.	15164 Dec 10 02:41	2° $\mathfrak{Z}$ 37'28	0.54472 AU
direct	15164 Jan 11 08:30	18° $\mathfrak{Z}$ 59'57			15164 Dec 15 05:50	30° $\mathfrak{R}$ $\mathfrak{X}$	
morning max el	15164 Jan 23 03:05	24° $\mathfrak{Z}$ 39'33	21°15'39	morning rise	15164 Dec 17 11:47	29° $\mathfrak{X}$ 11'57	
asc. node	15164 Jan 27 03:50	29° $\mathfrak{Z}$ 08'24		direct	15164 Dec 21 15:40	28° $\mathfrak{X}$ 34'43	
	15164 Jan 27 19:52	0° $\approx$			15164 Dec 27 18:58	0° $\mathfrak{Z}$	
morning set	15164 Feb 12 00:14	26° $\approx$ 54'14		morning max el	15165 Jan 03 17:29	4° $\mathfrak{Z}$ 55'35	22°59'38
	15164 Feb 13 11:43	0° $\mathfrak{X}$		asc. node	15165 Jan 13 01:05	16° $\mathfrak{Z}$ 30'34	
					15165 Jan 20 19:00	0° $\approx$	
superior conj	15164 Feb 19 07:11	12° $\mathfrak{X}$ 11'23	1°12'45	morning set	15165 Jan 26 11:39	11° $\approx$ 39'01	
minimum elong	15164 Feb 19 09:41	12° $\mathfrak{X}$ 24'23	1°12'48				
max. Earth dist.	15164 Feb 24 00:42	21° $\mathfrak{X}$ 46'23	1.35195 AU	superior conj	15165 Feb 02 10:02	26° $\approx$ 35'45	1°27'26
evening rise	15164 Feb 28 01:35	29° $\mathfrak{X}$ 33'13		minimum elong	15165 Feb 02 11:55	26° $\approx$ 45'50	1°27'52
	15164 Feb 28 07:17	0° $\mathfrak{Y}$			15165 Feb 04 00:21	0° $\mathfrak{X}$	
desc. node	15164 Feb 28 17:20	0° $\mathfrak{Y}$ 46'54		max. Earth dist.	15165 Feb 05 17:28	3° $\mathfrak{X}$ 36'12	1.33438 AU
	15164 Mar 17 08:18	0° $\mathfrak{Z}$		evening rise	15165 Feb 10 08:52	13° $\mathfrak{X}$ 01'10	
evening max el	15164 Apr 03 08:38	21° $\mathfrak{Z}$ 14'07	26°29'53	desc. node	15165 Feb 14 13:55	21° $\mathfrak{X}$ 03'47	
retrograde	15164 Apr 16 09:00	28° $\mathfrak{Z}$ 37'31			15165 Feb 19 14:10	0° $\mathfrak{Y}$	
evening set	15164 Apr 22 17:04	26° $\mathfrak{Z}$ 05'15			15165 Mar 12 09:25	0° $\mathfrak{Z}$	
asc. node	15164 Apr 24 00:31	24° $\mathfrak{Z}$ 55'16		evening max el	15165 Mar 16 22:03	4° $\mathfrak{Z}$ 47'22	27°15'41
min. Earth dist.	15164 Apr 26 18:32	21° $\mathfrak{Z}$ 55'33	0.66682 AU	retrograde	15165 Mar 30 11:27	12° $\mathfrak{Z}$ 18'13	
inferior conj	15164 Apr 28 16:08	19° $\mathfrak{Z}$ 37'56	1°23'31	evening set	15165 Apr 06 03:17	9° $\mathfrak{Z}$ 47'37	
minimum elong	15164 Apr 28 14:16	19° $\mathfrak{Z}$ 43'35	1°22'13	min. Earth dist.	15165 Apr 10 00:08	6° $\mathfrak{Z}$ 10'21	0.65030 AU
morning rise	15164 May 04 12:30	13° $\mathfrak{Z}$ 57'02		asc. node	15165 Apr 10 21:52	5° $\mathfrak{Z}$ 11'03	
direct	15164 May 07 14:40	13° $\mathfrak{Z}$ 03'32		inferior conj	15165 Apr 12 10:05	3° $\mathfrak{Z}$ 30'16	0°28'21
morning max el	15164 May 14 01:25	16° $\mathfrak{Z}$ 28'04	18°23'29	minimum elong	15165 Apr 12 09:19	3° $\mathfrak{Z}$ 32'25	0°27'37
	15164 May 24 07:11	0° $\Pi$			15165 Apr 15 20:31	30° $\mathfrak{R}$ $\mathfrak{Y}$	
desc. node	15164 May 26 19:00	3° $\Pi$ 50'33		morning rise	15165 Apr 18 17:12	28° $\mathfrak{Y}$ 02'32	
morning set	15164 Jun 03 08:10	15° $\Pi$ 44'41		direct	15165 Apr 21 09:54	27° $\mathfrak{Y}$ 24'13	

	15165 Apr 27 00:04	0°♄		direct	15166 Apr 04 22:44	11°♄23'16	
morning max el	15165 Apr 27 17:30	0°♄40'20	17°56'08	morning max el	15166 Apr 11 11:13	14°♄42'25	17°46'11
desc. node	15165 May 13 15:50	23°♄57'36			15166 Apr 22 05:07	0°♄	
morning set	15165 May 15 11:48	26°♄58'58		morning set	15166 Apr 27 17:00	9°♄25'58	
	15165 May 17 07:44	0°♄		desc. node	15166 Apr 30 12:34	14°♄17'43	
					15166 May 09 19:55	0°♄	
superior conj	15165 May 29 14:54	19°♄53'14	-1°45'47	superior conj	15166 May 10 00:15	0°♄17'51	-1°10'44
minimum elong	15165 May 29 06:04	19°♄18'13	1°45'54	minimum elong	15166 May 09 17:28	29°♄49'55	1°10'37
max. Earth dist.	15165 Jun 02 10:57	25°♄56'01	1.45615 AU	max. Earth dist.	15166 May 16 04:58	10°♄20'14	1.44578 AU
	15165 Jun 05 01:22	0°♄		evening rise	15166 May 25 02:20	24°♄14'29	
evening rise	15165 Jun 14 15:24	14°♄48'28			15166 May 28 20:57	0°♄	
	15165 Jun 24 15:23	0°♄			15166 Jun 18 22:55	0°♄	
greatest brilliancy	15165 Jun 28 18:01	6°♄05'09	-0.6m				
asc. node	15165 Jul 07 20:17	18°♄23'13		evening max el	15166 Jun 23 11:44	5°♄07'15	20°45'51
evening max el	15165 Jul 10 11:03	21°♄14'54	19°41'56	asc. node	15166 Jun 24 17:10	6°♄17'25	
retrograde	15165 Jul 17 19:26	25°♄22'51		retrograde	15166 Jul 01 18:24	9°♄53'11	
evening set	15165 Jul 21 14:09	24°♄00'06		evening set	15166 Jul 05 23:38	8°♄13'01	
inferior conj	15165 Jul 26 22:09	18°♄03'41	3°02'55	inferior conj	15166 Jul 11 05:27	2°♄05'02	3°09'49
minimum elong	15165 Jul 26 23:15	18°♄00'01	3°02'05	minimum elong	15166 Jul 11 05:34	2°♄04'38	3°08'57
min. Earth dist.	15165 Jul 28 01:33	16°♄32'07	0.67701 AU	min. Earth dist.	15166 Jul 11 19:07	1°♄17'48	0.68617 AU
morning rise	15165 Aug 01 07:52	11°♄38'24			15166 Jul 12 17:56	30°♄	
direct	15165 Aug 07 03:18	9°♄06'12		morning rise	15166 Jul 16 11:11	25°♄43'56	
desc. node	15165 Aug 09 14:26	9°♄29'40		direct	15166 Jul 21 18:55	23°♄24'20	
morning max el	15165 Aug 19 03:10	16°♄17'31	25°07'49	desc. node	15166 Jul 27 11:50	25°♄29'36	
	15165 Aug 30 11:59	0°♄		morning max el	15166 Aug 01 13:48	29°♄50'41	23°39'39
	15165 Sep 19 03:37	0°♄			15166 Aug 01 17:28	0°♄	
morning set	15165 Sep 23 23:30	8°♄23'20			15166 Aug 24 07:19	0°♄	
max. Earth dist.	15165 Sep 27 12:38	14°♄50'05	1.36674 AU	morning set	15166 Sep 05 13:21	19°♄38'35	
asc. node	15165 Oct 03 21:56	27°♄03'34		max. Earth dist.	15166 Sep 09 10:40	26°♄19'51	1.39044 AU
					15166 Sep 11 12:29	0°♄	
superior conj	15165 Oct 04 02:15	27°♄24'55	0°01'40	superior conj	15166 Sep 17 01:40	10°♄09'15	-0°32'54
minimum elong	15165 Oct 04 02:08	27°♄24'16	0°01'59	minimum elong	15166 Sep 17 04:04	10°♄20'26	0°32'24
behind sun begin	15165 Oct 03 19:43	26°♄52'36		asc. node	15166 Sep 20 18:32	17°♄11'33	
behind sun end	15165 Oct 04 08:33	27°♄56'00		evening rise	15166 Sep 26 04:50	27°♄45'03	
	15165 Oct 05 09:30	0°♄			15166 Sep 27 08:35	0°♄	
evening rise	15165 Oct 12 05:57	13°♄52'52		evening max el	15166 Oct 12 09:32	24°♄09'09	18°48'41
	15165 Oct 20 15:30	0°♄		retrograde	15166 Oct 20 20:57	28°♄25'29	
evening max el	15165 Oct 29 12:51	12°♄22'45	19°43'29	evening set	15166 Oct 22 18:28	28°♄13'28	
desc. node	15165 Nov 05 10:56	16°♄54'41		desc. node	15166 Oct 23 08:16	28°♄05'15	
retrograde	15165 Nov 08 13:04	17°♄22'34		inferior conj	15166 Oct 30 23:01	23°♄52'31	-2°25'42
evening set	15165 Nov 10 12:15	17°♄11'53		minimum elong	15166 Oct 30 17:00	24°♄03'21	2°22'38
inferior conj	15165 Nov 19 06:14	13°♄09'50	-4°10'39	min. Earth dist.	15166 Nov 02 23:40	21°♄41'59	0.56775 AU
minimum elong	15165 Nov 18 20:27	13°♄25'05	4°06'40	morning rise	15166 Nov 07 12:28	19°♄00'43	
min. Earth dist.	15165 Nov 21 10:44	11°♄47'58	0.55228 AU	direct	15166 Nov 13 10:06	17°♄36'54	
morning rise	15165 Nov 27 03:00	8°♄53'28		morning max el	15166 Nov 27 14:35	24°♄57'22	26°24'57
direct	15165 Dec 02 06:12	7°♄55'05			15166 Dec 02 06:51	0°♄	
morning max el	15165 Dec 16 02:23	14°♄49'43	24°48'56	asc. node	15166 Dec 17 19:24	23°♄38'03	
	15165 Dec 28 00:59	0°♄			15166 Dec 21 03:24	0°♄	
asc. node	15165 Dec 30 22:17	4°♄44'52		morning set	15166 Dec 26 10:15	10°♄55'47	
morning set	15166 Jan 10 23:34	26°♄21'03					
	15166 Jan 12 15:57	0°♄		superior conj	15167 Jan 02 04:34	25°♄52'00	1°37'55
superior conj	15166 Jan 17 17:53	11°♄11'20	1°35'45	minimum elong	15167 Jan 02 04:25	25°♄51'09	1°38'50
minimum elong	15166 Jan 17 18:48	11°♄16'22	1°36'29	max. Earth dist.	15167 Jan 02 23:43	27°♄38'41	1.31337 AU
max. Earth dist.	15166 Jan 19 17:47	15°♄33'14	1.32138 AU		15167 Jan 04 01:09	0°♄	
evening rise	15166 Jan 25 02:25	26°♄53'32		evening rise	15167 Jan 09 03:32	11°♄03'41	
	15166 Jan 26 15:17	0°♄			15167 Jan 18 20:44	0°♄	
desc. node	15166 Feb 01 10:33	11°♄05'42		desc. node	15167 Jan 19 07:15	0°♄46'35	
	15166 Feb 12 21:55	0°♄			15167 Feb 09 08:13	0°♄	
evening max el	15166 Feb 27 09:53	17°♄54'26	27°35'08	evening max el	15167 Feb 09 17:48	0°♄23'01	27°22'20
retrograde	15166 Mar 13 06:46	25°♄23'00		retrograde	15167 Feb 23 17:36	7°♄42'58	
evening set	15166 Mar 20 02:43	23°♄01'30		evening set	15167 Mar 02 12:31	5°♄38'00	
min. Earth dist.	15166 Mar 23 21:08	19°♄52'10	0.63052 AU	min. Earth dist.	15167 Mar 06 08:06	2°♄49'52	0.60873 AU
inferior conj	15166 Mar 26 17:47	17°♄02'01	-0°39'46	inferior conj	15167 Mar 09 11:49	0°♄04'42	-1°59'58
minimum elong	15166 Mar 26 19:05	16°♄58'47	0°39'26	minimum elong	15167 Mar 09 16:12	29°♄55'07	1°58'08
asc. node	15166 Mar 28 19:16	15°♄03'02			15167 Mar 09 13:58	30°♄	
morning rise	15166 Apr 02 14:07	11°♄49'49		asc. node	15167 Mar 15 16:43	25°♄38'47	

morning rise	15167 Mar 16 23:07	25° $\text{K}$ 10'55		direct	15168 Feb 29 14:08	7° $\text{K}$ 40'30	
direct	15167 Mar 19 01:40	24° $\text{K}$ 52'29		asc. node	15168 Mar 01 14:12	7° $\text{K}$ 44'08	
morning max el	15167 Mar 26 03:23	28° $\text{K}$ 25'23	17°54'23	morning max el	15168 Mar 08 14:15	11° $\text{K}$ 37'51	18°22'08
	15167 Mar 27 14:54	0° $\text{Y}$			15168 Mar 20 18:17	0° $\text{Y}$	
morning set	15167 Apr 10 17:54	22° $\text{Y}$ 48'03		morning set	15168 Mar 24 08:44	6° $\text{Y}$ 47'05	
	15167 Apr 14 17:13	0° $\text{B}$					
desc. node	15167 Apr 17 09:14	4° $\text{B}$ 46'32		superior conj	15168 Apr 02 16:14	24° $\text{Y}$ 17'31	0°04'41
				minimum elong	15168 Apr 02 16:33	24° $\text{Y}$ 18'58	0°04'20
superior conj	15167 Apr 21 09:22	11° $\text{B}$ 48'16	-0°32'00	behind sun begin	15168 Apr 02 09:30	23° $\text{Y}$ 46'41	
minimum elong	15167 Apr 21 06:31	11° $\text{B}$ 35'53	0°32'06	behind sun end	15168 Apr 02 23:37	24° $\text{Y}$ 51'10	
max. Earth dist.	15167 Apr 28 19:29	24° $\text{B}$ 18'47	1.42941 AU	desc. node	15168 Apr 03 05:49	25° $\text{Y}$ 19'26	
	15167 May 02 07:38	0° $\text{II}$			15168 Apr 05 20:14	0° $\text{B}$	
evening rise	15167 May 04 23:32	4° $\text{II}$ 13'49		max. Earth dist.	15168 Apr 10 05:21	7° $\text{B}$ 38'16	1.40868 AU
	15167 May 22 05:04	0° $\text{B}$		evening rise	15168 Apr 14 15:58	15° $\text{B}$ 05'02	
evening max el	15167 Jun 06 06:58	19° $\text{B}$ 00'14	22°00'35		15168 Apr 24 02:28	0° $\text{II}$	
asc. node	15167 Jun 11 14:09	23° $\text{B}$ 16'05			15168 May 16 04:42	0° $\text{B}$	
retrograde	15167 Jun 15 16:26	24° $\text{B}$ 29'52		evening max el	15168 May 18 22:15	2° $\text{B}$ 53'27	23°21'18
evening set	15167 Jun 20 08:52	22° $\text{B}$ 33'04		asc. node	15168 May 28 11:16	9° $\text{B}$ 01'54	
inferior conj	15167 Jun 25 14:58	16° $\text{B}$ 15'04	3°05'35	retrograde	15168 May 29 12:11	9° $\text{B}$ 06'38	
minimum elong	15167 Jun 25 14:09	16° $\text{B}$ 17'55	3°04'33	evening set	15168 Jun 03 16:08	6° $\text{B}$ 55'10	
min. Earth dist.	15167 Jun 25 15:21	16° $\text{B}$ 13'44	0.69048 AU	min. Earth dist.	15168 Jun 08 12:07	1° $\text{B}$ 12'45	0.68984 AU
morning rise	15167 Jun 30 19:15	10° $\text{B}$ 00'21		inferior conj	15168 Jun 09 00:43	0° $\text{B}$ 29'17	2°50'52
direct	15167 Jul 05 14:33	7° $\text{B}$ 58'03		minimum elong	15168 Jun 08 23:08	0° $\text{B}$ 34'47	2°49'39
desc. node	15167 Jul 14 09:08	12° $\text{B}$ 49'51			15168 Jun 09 09:13	30° $\text{R}$ $\text{II}$	
morning max el	15167 Jul 15 02:31	13° $\text{B}$ 32'28	22°11'06	morning rise	15168 Jun 14 06:05	24° $\text{II}$ 22'25	
	15167 Jul 28 07:42	0° $\text{Q}$		direct	15168 Jun 18 12:58	22° $\text{II}$ 39'50	
morning set	15167 Aug 17 03:28	29° $\text{Q}$ 52'42		morning max el	15168 Jun 26 20:19	27° $\text{II}$ 24'40	20°49'43
	15167 Aug 17 05:17	0° $\text{P}$			15168 Jun 29 06:29	0° $\text{B}$	
max. Earth dist.	15167 Aug 22 12:08	8° $\text{P}$ 40'06	1.41394 AU	desc. node	15168 Jun 30 06:19	1° $\text{B}$ 09'07	
					15168 Jul 20 19:26	0° $\text{Q}$	
superior conj	15167 Aug 30 07:34	22° $\text{P}$ 06'35	-1°09'05	morning set	15168 Jul 26 18:48	9° $\text{Q}$ 09'44	
minimum elong	15167 Aug 30 13:02	22° $\text{P}$ 30'47	1°08'29	max. Earth dist.	15168 Aug 03 19:58	21° $\text{Q}$ 54'11	1.43434 AU
	15167 Sep 03 16:49	0° $\text{A}$			15168 Aug 08 18:41	0° $\text{P}$	
asc. node	15167 Sep 07 15:08	7° $\text{A}$ 14'37		superior conj	15168 Aug 10 15:43	3° $\text{P}$ 07'52	-1°42'27
evening rise	15167 Sep 09 17:51	11° $\text{A}$ 10'29		minimum elong	15168 Aug 10 23:18	3° $\text{P}$ 39'42	1°42'12
	15167 Sep 20 11:21	0° $\text{M}$		evening rise	15168 Aug 22 16:35	23° $\text{P}$ 58'14	
evening max el	15167 Sep 25 16:19	6° $\text{M}$ 38'27	18°15'22	asc. node	15168 Aug 24 11:45	27° $\text{P}$ 09'09	
retrograde	15167 Oct 03 00:22	10° $\text{M}$ 22'48			15168 Aug 26 02:31	0° $\text{A}$	
evening set	15167 Oct 05 02:53	10° $\text{M}$ 04'57		evening max el	15168 Sep 08 05:00	19° $\text{A}$ 41'23	18°02'08
desc. node	15167 Oct 10 05:41	7° $\text{M}$ 16'09		retrograde	15168 Sep 14 20:26	23° $\text{A}$ 07'08	
inferior conj	15167 Oct 12 13:40	5° $\text{M}$ 22'29	-0°44'34	evening set	15168 Sep 17 06:28	22° $\text{A}$ 39'40	
minimum elong	15167 Oct 12 12:02	5° $\text{M}$ 25'55	0°43'27	inferior conj	15168 Sep 24 00:18	17° $\text{A}$ 37'21	0°38'57
min. Earth dist.	15167 Oct 15 20:09	2° $\text{M}$ 37'43	0.58845 AU	minimum elong	15168 Sep 24 01:28	17° $\text{A}$ 34'30	0°38'43
morning rise	15167 Oct 19 17:45	29° $\text{A}$ 54'33		desc. node	15168 Sep 26 03:08	15° $\text{A}$ 33'00	
	15167 Oct 19 13:56	30° $\text{R}$ $\text{A}$		min. Earth dist.	15168 Sep 27 02:13	14° $\text{A}$ 38'17	0.61130 AU
direct	15167 Oct 26 03:32	28° $\text{A}$ 04'14		morning rise	15168 Sep 30 17:33	11° $\text{A}$ 40'57	
	15167 Nov 01 23:34	0° $\text{M}$		direct	15168 Oct 07 09:10	9° $\text{A}$ 26'58	
morning max el	15167 Nov 09 10:43	5° $\text{M}$ 45'04	27°30'57	morning max el	15168 Oct 21 14:33	17° $\text{A}$ 22'20	27°58'22
	15167 Nov 27 11:26	0° $\text{J}$			15168 Nov 01 03:13	0° $\text{M}$	
asc. node	15167 Dec 04 16:25	12° $\text{J}$ 59'14			15168 Nov 19 04:32	0° $\text{J}$	
morning set	15167 Dec 10 17:51	25° $\text{J}$ 17'42		asc. node	15168 Nov 20 13:19	2° $\text{J}$ 40'41	
	15167 Dec 12 22:16	0° $\text{B}$		morning set	15168 Nov 23 20:26	9° $\text{J}$ 22'20	
				max. Earth dist.	15168 Nov 29 14:07	21° $\text{J}$ 42'04	1.31327 AU
superior conj	15167 Dec 17 16:05	10° $\text{B}$ 31'10	1°34'08	superior conj	15168 Dec 01 02:37	25° $\text{J}$ 04'05	1°24'24
minimum elong	15167 Dec 17 14:56	10° $\text{B}$ 24'42	1°35'02	minimum elong	15168 Dec 01 00:41	24° $\text{J}$ 53'22	1°25'08
max. Earth dist.	15167 Dec 17 07:48	9° $\text{B}$ 44'44	1.31059 AU		15168 Dec 03 07:48	0° $\text{B}$	
evening rise	15167 Dec 24 09:49	25° $\text{B}$ 24'46		evening rise	15168 Dec 07 19:20	9° $\text{B}$ 52'10	
	15167 Dec 26 13:52	0° $\text{A}$			15168 Dec 17 22:33	0° $\text{A}$	
desc. node	15168 Jan 06 04:02	19° $\text{A}$ 57'15		desc. node	15168 Dec 23 00:54	8° $\text{A}$ 26'27	
	15168 Jan 12 16:15	0° $\text{K}$		evening max el	15169 Jan 03 11:13	22° $\text{A}$ 44'54	25°14'54
evening max el	15168 Jan 22 18:50	12° $\text{K}$ 00'42	26°34'29	retrograde	15169 Jan 17 07:28	29° $\text{A}$ 42'01	
retrograde	15168 Feb 05 18:20	19° $\text{K}$ 09'49		evening set	15169 Jan 23 00:42	28° $\text{A}$ 28'05	
evening set	15168 Feb 12 05:08	17° $\text{K}$ 27'56		min. Earth dist.	15169 Jan 27 23:31	25° $\text{A}$ 45'59	0.56659 AU
min. Earth dist.	15168 Feb 16 08:25	14° $\text{K}$ 50'32	0.58662 AU	inferior conj	15169 Jan 30 16:22	23° $\text{A}$ 59'24	-4°51'29
inferior conj	15168 Feb 19 12:23	12° $\text{K}$ 26'48	-3°27'48	minimum elong	15169 Jan 31 01:33	23° $\text{A}$ 44'18	4°48'31
minimum elong	15168 Feb 19 20:07	12° $\text{K}$ 12'07	3°24'42				
morning rise	15168 Feb 27 14:23	7° $\text{K}$ 54'21					

morning rise	15169 Feb 08 05:01	19°  48'46		minimum elong	15170 Jan 11 05:04	4°  33'16	5°47'58
direct	15169 Feb 10 07:51	19°  35'45		morning rise	15170 Jan 19 14:35	0°  47'24	
asc. node	15169 Feb 16 11:36	21°  33'49		direct	15170 Jan 22 06:09	0°  30'13	
morning max el	15169 Feb 19 15:41	24°  08'09	19°11'26	morning max el	15170 Feb 02 03:44	5°  45'25	20°23'52
	15169 Feb 24 12:12	0°  ✠		asc. node	15170 Feb 03 08:57	6°  59'39	
morning set	15169 Mar 08 09:07	21°  ✠10'04			15170 Feb 17 19:10	0°  ✠	
	15169 Mar 12 19:46	0°  Υ		morning set	15170 Feb 20 15:44	5°  ✠47'20	
superior conj	15169 Mar 16 16:33	7°  Υ33'28	0°36'10	superior conj	15170 Feb 28 05:56	21°  ✠23'50	1°01'18
minimum elong	15169 Mar 16 18:38	7°  Υ43'29	0°35'48	minimum elong	15170 Feb 28 08:33	21°  ✠37'03	1°01'08
desc. node	15169 Mar 21 02:23	15°  Υ52'56			15170 Mar 04 14:10	0°  Υ	
max. Earth dist.	15169 Mar 23 11:38	20°  Υ13'53	1.38592 AU	max. Earth dist.	15170 Mar 05 18:41	2°  Υ17'08	1.36362 AU
evening rise	15169 Mar 27 05:34	26°  Υ50'44		desc. node	15170 Mar 07 22:57	6°  Υ23'29	
	15169 Mar 29 01:46	0°  ♄		evening rise	15170 Mar 09 14:08	9°  Υ23'58	
	15169 Apr 17 15:11	0°  ♅			15170 Mar 21 18:08	0°  ♄	
evening max el	15169 May 01 11:46	16°  ♅47'20	24°41'39		15170 Apr 13 09:08	0°  ♅	
retrograde	15169 May 13 04:24	23°  ♅37'13		evening max el	15170 Apr 14 01:21	0°  ♅40'18	25°54'31
asc. node	15169 May 15 08:27	23°  ♅17'05		retrograde	15170 Apr 26 16:02	7°  ♅55'07	
evening set	15169 May 18 19:50	21°  ♅14'14		asc. node	15170 May 02 05:40	5°  ♅50'10	
min. Earth dist.	15169 May 23 07:24	16°  ♅08'31	0.68443 AU	evening set	15170 May 02 18:16	5°  ♅24'58	
inferior conj	15169 May 24 08:49	14°  ♅43'50	2°25'43	min. Earth dist.	15170 May 06 23:04	0°  ♅55'04	0.67444 AU
minimum elong	15169 May 24 06:44	14°  ♅50'47	2°24'19		15170 May 07 16:38	30°  ♄	
morning rise	15169 May 29 17:51	8°  ♅45'49		inferior conj	15170 May 08 13:15	28°  ♄54'45	1°49'39
direct	15169 Jun 02 12:52	7°  ♅23'22		minimum elong	15170 May 08 11:08	29°  ♄01'27	1°48'14
morning max el	15169 Jun 09 21:04	11°  ♅27'29	19°40'36	morning rise	15170 May 14 04:40	23°  ♄06'55	
desc. node	15169 Jun 17 03:24	20°  ♅11'33		direct	15170 May 17 12:43	22°  ♄03'24	
greatest brilliancy	15169 Jun 22 16:41	28°  ♅03'22	-0.6m	morning max el	15170 May 24 05:02	25°  ♄38'52	18°46'52
	15169 Jun 24 00:28	0°  ♄			15170 May 28 01:12	0°  ♅	
morning set	15169 Jul 05 21:59	17°  ♄58'24		desc. node	15170 Jun 04 00:23	9°  ♅45'55	
	15169 Jul 13 16:26	0°  ♄		greatest brilliancy	15170 Jun 07 04:12	14°  ♅32'34	-0.8m
max. Earth dist.	15169 Jul 17 09:34	5°  ♄49'57	1.44950 AU	morning set	15170 Jun 15 09:20	27°  ♅15'12	
					15170 Jun 17 03:42	0°  ♄	
superior conj	15169 Jul 22 00:14	13°  ♄10'10	-2°06'27	max. Earth dist.	15170 Jun 30 03:43	20°  ♄15'04	1.45800 AU
minimum elong	15169 Jul 22 06:06	13°  ♄33'43	2°06'56				
	15169 Aug 01 07:07	0°  ♄		superior conj	15170 Jul 01 14:09	22°  ♄29'38	-2°13'50
evening rise	15169 Aug 04 19:41	5°  ♄54'03		minimum elong	15170 Jul 01 13:12	22°  ♄25'53	2°14'44
asc. node	15169 Aug 11 08:22	16°  ♄49'56			15170 Jul 06 08:58	0°  ♄	
	15169 Aug 20 01:37	0°  ♄		evening rise	15170 Jul 16 22:41	16°  ♄48'18	
evening max el	15169 Aug 22 19:43	3°  ♄07'38	18°07'42		15170 Jul 25 04:48	0°  ♄	
retrograde	15169 Aug 29 04:31	6°  ♄28'15		asc. node	15170 Jul 29 05:03	6°  ♄11'42	
evening set	15169 Aug 31 23:02	5°  ♄47'52		evening max el	15170 Aug 06 09:15	16°  ♄49'11	18°31'06
inferior conj	15169 Sep 07 02:56	0°  ♄28'07	1°41'51	retrograde	15170 Aug 12 20:32	20°  ♄17'51	
minimum elong	15169 Sep 07 05:13	0°  ♄21'49	1°41'02	evening set	15170 Aug 16 00:06	19°  ♄21'59	
	15169 Sep 07 13:08	30°  ♄		inferior conj	15170 Aug 21 17:37	13°  ♄46'48	2°25'42
min. Earth dist.	15169 Sep 09 18:11	27°  ♄35'11	0.63368 AU	minimum elong	15170 Aug 21 19:53	13°  ♄39'57	2°24'48
morning rise	15169 Sep 13 09:22	24°  ♄13'39		min. Earth dist.	15170 Aug 23 19:22	11°  ♄16'58	0.65361 AU
desc. node	15169 Sep 13 00:36	24°  ♄30'42		morning rise	15170 Aug 27 14:27	7°  ♄23'20	
direct	15169 Sep 20 00:53	21°  ♄42'59		desc. node	15170 Aug 30 22:03	5°  ♄21'17	
morning max el	15169 Oct 03 23:17	29°  ♄43'19	27°47'16	direct	15170 Sep 03 00:53	4°  ♄45'16	
	15169 Oct 04 05:55	0°  ♄		morning max el	15170 Sep 16 10:14	12°  ♄37'38	27°03'13
	15169 Oct 26 02:57	0°  ♄			15170 Sep 30 09:38	0°  ♄	
asc. node	15169 Nov 07 10:08	22°  ♄35'56			15170 Oct 18 17:17	0°  ♄	
morning set	15169 Nov 07 15:41	23°  ♄03'49		morning set	15170 Oct 22 00:50	6°  ♄15'50	
	15169 Nov 11 00:39	0°  ♄		asc. node	15170 Oct 25 06:52	12°  ♄40'05	
max. Earth dist.	15169 Nov 12 14:45	3°  ♄21'35	1.32154 AU	max. Earth dist.	15170 Oct 26 06:40	14°  ♄40'18	1.33538 AU
superior conj	15169 Nov 15 10:10	9°  ♄25'13	1°08'43	superior conj	15170 Oct 30 12:35	23°  ♄29'01	0°47'05
minimum elong	15169 Nov 15 07:51	9°  ♄12'37	1°09'13	minimum elong	15170 Oct 30 10:28	23°  ♄17'49	0°47'24
evening rise	15169 Nov 22 06:12	24°  ♄21'11			15170 Nov 02 13:58	0°  ♄	
	15169 Nov 24 22:07	0°  ♄		evening rise	15170 Nov 06 16:35	8°  ♄47'30	
desc. node	15169 Dec 09 21:53	25°  ♄58'48			15170 Nov 17 16:34	0°  ♄	
	15169 Dec 13 04:20	0°  ♄		desc. node	15170 Nov 26 18:57	12°  ♄14'22	
evening max el	15169 Dec 15 21:21	2°  ♄50'18	23°35'21	evening max el	15170 Nov 27 09:12	12°  ♄50'03	21°53'30
retrograde	15169 Dec 29 07:24	9°  ♄29'40		retrograde	15170 Dec 09 19:48	18°  ♄59'20	
evening set	15170 Jan 02 21:07	8°  ♄44'21		evening set	15170 Dec 13 01:44	18°  ♄35'47	
min. Earth dist.	15170 Jan 09 08:20	5°  ♄38'55	0.55165 AU	inferior conj	15170 Dec 21 17:12	14°  ♄44'06	-5°56'05
inferior conj	15170 Jan 10 23:51	4°  ♄40'55	-5°49'22	minimum elong	15170 Dec 21 13:23	14°  ♄49'27	5°54'52

min. Earth dist.	15170 Dec 21 14:01	14° $\text{♁}$ 48'33	0.54462 AU	min. Earth dist.	15171 Dec 02 20:00	23° $\text{♁}$ 48'40	0.54686 AU
morning rise	15170 Dec 30 01:50	10° $\text{♁}$ 56'37		morning rise	15171 Dec 09 10:26	20° $\text{♁}$ 39'00	
direct	15171 Jan 02 15:49	10° $\text{♁}$ 28'22		direct	15171 Dec 14 00:53	19° $\text{♁}$ 53'26	
morning max el	15171 Jan 15 00:52	16° $\text{♁}$ 26'41	21°58'15	morning max el	15171 Dec 27 11:38	26° $\text{♁}$ 28'53	23°46'37
asc. node	15171 Jan 21 06:16	23° $\text{♁}$ 44'35			15171 Dec 30 20:03	0° $\text{♁}$	
	15171 Jan 25 09:07	0° $\text{♁}$		asc. node	15172 Jan 08 03:31	11° $\text{♁}$ 31'04	
morning set	15171 Feb 05 02:00	20° $\text{♁}$ 31'01			15172 Jan 18 02:00	0° $\text{♁}$	
	15171 Feb 09 12:58	0° $\text{♁}$		morning set	15172 Jan 20 13:53	5° $\text{♁}$ 15'42	
superior conj	15171 Feb 12 04:43	5° $\text{♁}$ 37'54	1°19'46	superior conj	15172 Jan 27 10:00	20° $\text{♁}$ 07'56	1°31'43
minimum elong	15171 Feb 12 07:01	5° $\text{♁}$ 50'00	1°19'59	minimum elong	15172 Jan 27 11:29	20° $\text{♁}$ 16'04	1°32'18
max. Earth dist.	15171 Feb 16 07:23	14° $\text{♁}$ 07'51	1.34394 AU	max. Earth dist.	15172 Jan 30 03:47	26° $\text{♁}$ 01'42	1.32827 AU
evening rise	15171 Feb 20 14:07	22° $\text{♁}$ 34'24			15172 Feb 01 01:03	0° $\text{♁}$	
desc. node	15171 Feb 22 19:30	26° $\text{♁}$ 46'32		evening rise	15172 Feb 04 02:10	6° $\text{♁}$ 13'48	
	15171 Feb 24 13:37	0° $\text{♁}$		desc. node	15172 Feb 09 16:07	16° $\text{♁}$ 57'57	
	15171 Mar 15 11:28	0° $\text{♁}$			15172 Feb 17 04:26	0° $\text{♁}$	
evening max el	15171 Mar 27 15:14	14° $\text{♁}$ 24'08	26°52'20	evening max el	15172 Mar 09 04:18	27° $\text{♁}$ 47'57	27°27'35
retrograde	15171 Apr 09 21:52	21° $\text{♁}$ 51'32			15172 Mar 11 14:40	0° $\text{♁}$	
evening set	15171 Apr 16 09:30	19° $\text{♁}$ 19'29		retrograde	15172 Mar 22 21:09	5° $\text{♁}$ 18'02	
asc. node	15171 Apr 19 02:59	16° $\text{♁}$ 46'23		evening set	15172 Mar 29 15:25	2° $\text{♁}$ 50'25	
min. Earth dist.	15171 Apr 20 08:56	15° $\text{♁}$ 23'46	0.66021 AU		15172 Apr 01 21:25	30° $\text{♁}$	
inferior conj	15171 Apr 22 11:46	12° $\text{♁}$ 55'36	1°01'44	min. Earth dist.	15172 Apr 02 10:57	29° $\text{♁}$ 25'50	0.64227 AU
minimum elong	15171 Apr 22 10:16	13° $\text{♁}$ 00'01	1°00'37	inferior conj	15172 Apr 05 01:44	26° $\text{♁}$ 39'59	0°01'06
morning rise	15171 Apr 28 12:20	7° $\text{♁}$ 19'43		minimum elong	15172 Apr 05 01:43	26° $\text{♁}$ 40'02	0°00'45
direct	15171 May 01 10:24	6° $\text{♁}$ 32'56		transit middle	15172 Apr 05 01:43	26° $\text{♁}$ 40'02	0°00'45
morning max el	15171 May 07 18:46	9° $\text{♁}$ 52'27	18°09'46	transit begin	15172 Apr 04 22:37	26° $\text{♁}$ 48'17	
desc. node	15171 May 21 21:16	29° $\text{♁}$ 42'52		transit end	15172 Apr 05 04:49	26° $\text{♁}$ 31'49	
	15171 May 22 01:33	0° $\text{♁}$		asc. node	15172 Apr 05 00:21	26° $\text{♁}$ 43'40	
morning set	15171 May 26 20:53	7° $\text{♁}$ 43'21		morning rise	15172 Apr 11 14:11	21° $\text{♁}$ 18'30	
	15171 Jun 09 21:07	0° $\text{♁}$		direct	15172 Apr 14 03:24	20° $\text{♁}$ 45'29	
superior conj	15171 Jun 10 23:12	1° $\text{♁}$ 42'10	-2°01'04	morning max el	15172 Apr 20 11:53	24° $\text{♁}$ 01'10	17°49'48
minimum elong	15171 Jun 10 15:35	1° $\text{♁}$ 12'21	2°01'33		15172 Apr 25 09:42	0° $\text{♁}$	
max. Earth dist.	15171 Jun 13 00:11	4° $\text{♁}$ 53'43	1.45906 AU	morning set	15172 May 07 11:59	19° $\text{♁}$ 30'22	
evening rise	15171 Jun 27 01:41	26° $\text{♁}$ 44'14		desc. node	15172 May 07 18:04	19° $\text{♁}$ 56'01	
	15171 Jun 29 04:15	0° $\text{♁}$			15172 May 13 18:39	0° $\text{♁}$	
greatest brilliancy	15171 Jul 08 16:43	14° $\text{♁}$ 35'16	-0.7m	superior conj	15172 May 20 20:22	11° $\text{♁}$ 32'08	-1°31'52
asc. node	15171 Jul 16 01:46	25° $\text{♁}$ 07'02		minimum elong	15172 May 20 11:55	10° $\text{♁}$ 58'10	1°31'49
	15171 Jul 20 03:54	0° $\text{♁}$		max. Earth dist.	15172 May 25 20:05	19° $\text{♁}$ 28'40	1.45261 AU
evening max el	15171 Jul 20 18:57	0° $\text{♁}$ 38'25	19°11'29		15172 Jun 01 13:54	0° $\text{♁}$	
retrograde	15171 Jul 27 17:15	4° $\text{♁}$ 28'16		evening rise	15172 Jun 05 13:54	6° $\text{♁}$ 09'01	
evening set	15171 Jul 31 06:20	3° $\text{♁}$ 15'21			15172 Jun 21 13:32	0° $\text{♁}$	
	15171 Aug 03 15:53	30° $\text{♁}$		asc. node	15172 Jul 01 22:35	13° $\text{♁}$ 26'51	
inferior conj	15171 Aug 05 16:55	27° $\text{♁}$ 26'13	2°53'20	evening max el	15172 Jul 02 23:04	14° $\text{♁}$ 30'15	20°07'27
minimum elong	15171 Aug 05 18:31	27° $\text{♁}$ 20'59	2°52'29	retrograde	15172 Jul 10 16:05	18° $\text{♁}$ 53'13	
min. Earth dist.	15171 Aug 07 04:20	25° $\text{♁}$ 31'27	0.66978 AU	evening set	15172 Jul 14 15:16	17° $\text{♁}$ 22'48	
morning rise	15171 Aug 11 06:04	21° $\text{♁}$ 00'24		inferior conj	15172 Jul 19 21:59	11° $\text{♁}$ 21'05	3°07'16
direct	15171 Aug 17 07:40	18° $\text{♁}$ 24'00		minimum elong	15172 Jul 19 22:40	11° $\text{♁}$ 18'45	3°06'26
desc. node	15171 Aug 17 19:30	18° $\text{♁}$ 24'56		min. Earth dist.	15172 Jul 20 19:23	10° $\text{♁}$ 08'19	0.68152 AU
morning max el	15171 Aug 29 21:29	25° $\text{♁}$ 53'56	25°54'40	morning rise	15172 Jul 25 05:44	4° $\text{♁}$ 57'19	
	15171 Sep 02 16:00	0° $\text{♁}$		direct	15172 Jul 30 20:14	2° $\text{♁}$ 30'07	
	15171 Sep 23 22:29	0° $\text{♁}$		desc. node	15172 Aug 03 16:56	3° $\text{♁}$ 27'42	
morning set	15171 Oct 04 20:30	18° $\text{♁}$ 50'33		morning max el	15172 Aug 11 08:18	9° $\text{♁}$ 23'17	24°30'56
max. Earth dist.	15171 Oct 08 13:05	25° $\text{♁}$ 46'18	1.35421 AU		15172 Aug 27 15:26	0° $\text{♁}$	
	15171 Oct 10 17:22	0° $\text{♁}$		morning set	15172 Sep 15 22:33	0° $\text{♁}$ 38'05	
asc. node	15171 Oct 12 03:33	2° $\text{♁}$ 48'56			15172 Sep 15 13:47	0° $\text{♁}$	
superior conj	15171 Oct 14 07:13	7° $\text{♁}$ 08'47	0°19'44	max. Earth dist.	15172 Sep 19 12:49	7° $\text{♁}$ 00'45	1.37671 AU
minimum elong	15171 Oct 14 06:05	7° $\text{♁}$ 03'03	0°20'01	superior conj	15172 Sep 26 14:47	20° $\text{♁}$ 15'53	-0°12'38
evening rise	15171 Oct 22 00:31	23° $\text{♁}$ 06'11		minimum elong	15172 Sep 26 15:36	20° $\text{♁}$ 19'53	0°12'14
	15171 Oct 25 09:48	0° $\text{♁}$		behind sun begin	15172 Sep 26 11:09	19° $\text{♁}$ 58'22	
evening max el	15171 Nov 09 07:48	23° $\text{♁}$ 19'59	20°24'59	behind sun end	15172 Sep 26 20:04	20° $\text{♁}$ 41'27	
desc. node	15171 Nov 13 16:08	26° $\text{♁}$ 48'49		asc. node	15172 Sep 28 00:10	22° $\text{♁}$ 58'12	
retrograde	15171 Nov 20 06:38	28° $\text{♁}$ 46'57			15172 Oct 01 13:30	0° $\text{♁}$	
evening set	15171 Nov 22 12:47	28° $\text{♁}$ 34'08		evening rise	15172 Oct 05 03:35	7° $\text{♁}$ 10'25	
inferior conj	15171 Dec 01 09:37	24° $\text{♁}$ 38'58	-5°02'24		15172 Oct 17 23:45	0° $\text{♁}$	
minimum elong	15171 Nov 30 23:49	24° $\text{♁}$ 53'19	4°59'05	evening max el	15172 Oct 21 20:47	4° $\text{♁}$ 37'40	19°17'21

desc. node	15172 Oct 30 13:25	9°♊17'17		evening max el	15173 Oct 04 22:19	16°♎43'52	18°31'54
retrograde	15172 Oct 31 04:40	9°♊18'32		retrograde	15173 Oct 12 20:58	20°♎45'07	
evening set	15172 Nov 02 01:47	9°♊07'56		evening set	15173 Oct 14 19:57	20°♎31'14	
inferior conj	15172 Nov 10 15:00	4°♊58'09	-3°27'05	desc. node	15173 Oct 17 10:46	19°♎32'59	
minimum elong	15172 Nov 10 06:28	5°♊12'16	3°23'13	inferior conj	15173 Oct 22 17:09	16°♎01'23	-1°41'14
min. Earth dist.	15172 Nov 13 05:43	3°♊14'29	0.55801 AU	minimum elong	15173 Oct 22 13:07	16°♎09'10	1°39'00
morning rise	15172 Nov 18 08:49	0°♊27'21		min. Earth dist.	15173 Oct 25 21:57	13°♎33'46	0.57612 AU
	15172 Nov 19 14:55	30°♎18'53		morning rise	15173 Oct 30 02:50	10°♎53'14	
direct	15172 Nov 23 20:13	29°♎18'53		direct	15173 Nov 05 06:21	9°♎17'53	
	15172 Nov 28 01:23	0°♊		morning max el	15173 Nov 19 12:50	16°♎48'34	26°57'18
morning max el	15172 Dec 07 21:16	6°♊25'11	25°32'40		15173 Nov 30 09:32	0°♊	
	15172 Dec 24 23:59	0°♊		asc. node	15173 Dec 11 21:48	19°♊09'12	
asc. node	15172 Dec 25 00:42	0°♊03'10			15173 Dec 17 08:56	0°♊	
morning set	15173 Jan 04 01:30	19°♊55'11		morning set	15173 Dec 19 11:05	4°♊24'51	
	15173 Jan 08 15:44	0°♎					
superior conj	15173 Jan 10 19:18	4°♎46'12	1°37'24	superior conj	15173 Dec 26 06:35	19°♊26'48	1°37'03
minimum elong	15173 Jan 10 19:46	4°♎48'47	1°38'15	minimum elong	15173 Dec 26 06:00	19°♊23'29	1°37'58
max. Earth dist.	15173 Jan 12 06:53	8°♎02'41	1.31732 AU	max. Earth dist.	15173 Dec 26 13:58	20°♊08'03	1.31151 AU
evening rise	15173 Jan 17 23:13	20°♎13'56			15173 Dec 31 00:51	0°♎	
	15173 Jan 22 20:24	0°♋		evening rise	15174 Jan 02 02:47	4°♎28'57	
desc. node	15173 Jan 26 12:47	6°♋51'29		desc. node	15174 Jan 13 09:30	26°♎20'10	
	15173 Feb 10 08:01	0°♌			15174 Jan 15 13:27	0°♋	
evening max el	15173 Feb 19 14:34	10°♌38'54	27°33'48	evening max el	15174 Feb 01 19:39	22°♋45'41	27°06'11
retrograde	15173 Mar 05 12:59	18°♌04'39			15174 Feb 14 22:13	0°♌	
evening set	15173 Mar 12 09:25	15°♌48'54		retrograde	15174 Feb 15 20:02	0°♌02'07	
min. Earth dist.	15173 Mar 16 03:35	12°♌49'58	0.62141 AU		15174 Feb 16 17:45	30°♋♋	
inferior conj	15173 Mar 19 04:01	9°♌59'45	-1°12'27	evening set	15174 Feb 22 12:21	28°♋06'08	
minimum elong	15173 Mar 19 06:31	9°♌53'50	1°11'31	min. Earth dist.	15174 Feb 26 10:03	25°♋24'01	0.59915 AU
asc. node	15173 Mar 22 21:47	6°♌45'49		inferior conj	15174 Mar 01 15:01	22°♋45'40	-2°36'53
morning rise	15173 Mar 26 06:38	4°♌55'21		minimum elong	15174 Mar 01 20:52	22°♋33'35	2°34'25
direct	15173 Mar 28 12:23	4°♌32'43		morning rise	15174 Mar 09 08:49	18°♋00'56	
morning max el	15173 Apr 04 05:24	7°♌56'10	17°47'29	asc. node	15174 Mar 09 19:16	17°♋54'54	
	15173 Apr 18 18:00	0°♍		direct	15174 Mar 11 09:28	17°♋45'01	
morning set	15173 Apr 20 02:14	2°♍22'21		morning max el	15174 Mar 18 19:48	21°♋27'18	18°03'44
desc. node	15173 Apr 24 14:48	10°♍20'08			15174 Mar 25 08:03	0°♌	
superior conj	15173 May 01 15:46	22°♍24'42	-0°54'22	morning set	15174 Apr 03 09:38	16°♌01'13	
minimum elong	15173 May 01 10:37	22°♍03'06	0°54'18	desc. node	15174 Apr 11 11:25	0°♍50'42	
	15173 May 06 05:42	0°♎			15174 Apr 11 00:09	0°♍	
max. Earth dist.	15173 May 08 12:43	3°♎43'08	1.43939 AU	superior conj	15174 Apr 13 10:31	4°♍20'51	-0°15'57
evening rise	15173 May 16 03:26	15°♎44'33		minimum elong	15174 Apr 13 09:11	4°♍14'52	0°16'11
	15173 May 25 13:14	0°♏		max. Earth dist.	15174 Apr 21 00:35	17°♍23'17	1.42089 AU
evening max el	15173 Jun 15 21:11	28°♏22'28	21°16'32	evening rise	15174 Apr 26 08:05	26°♍04'01	
	15173 Jun 17 14:41	0°♐			15174 Apr 28 19:33	0°♎	
asc. node	15173 Jun 18 19:30	0°♐59'23		evening max el	15174 May 19 08:09	0°♏	
retrograde	15173 Jun 24 15:00	3°♐27'12			15174 May 29 14:24	12°♏14'52	22°34'40
evening set	15173 Jun 29 00:53	1°♐39'45		asc. node	15174 Jun 05 16:32	17°♏28'56	
	15173 Jun 30 18:03	30°♋♏		retrograde	15174 Jun 08 12:16	18°♏04'01	
inferior conj	15173 Jul 04 06:30	25°♏27'02	3°09'20	evening set	15174 Jun 13 09:27	16°♏00'53	
minimum elong	15173 Jul 04 06:12	25°♏28'03	3°08'25	inferior conj	15174 Jun 18 16:20	9°♏39'09	3°00'37
min. Earth dist.	15173 Jul 04 14:25	24°♏59'25	0.68852 AU	minimum elong	15174 Jun 18 15:10	9°♏43'15	2°59'31
morning rise	15173 Jul 09 11:18	19°♏08'16		min. Earth dist.	15174 Jun 18 11:14	9°♏56'56	0.69071 AU
direct	15173 Jul 14 13:39	16°♏55'46		morning rise	15174 Jun 23 20:44	3°♏27'22	
desc. node	15173 Jul 21 14:17	20°♏04'45		direct	15174 Jun 28 10:42	1°♏33'09	
morning max el	15173 Jul 24 19:41	23°♏01'00	23°01'37	morning max el	15174 Jul 07 10:06	6°♏46'17	21°35'16
	15173 Jul 30 22:56	0°♑		desc. node	15174 Jul 08 11:33	7°♏51'52	
	15173 Aug 20 23:18	0°♒			15174 Jul 25 06:50	0°♑	
morning set	15173 Aug 28 02:46	11°♒29'08		morning set	15174 Aug 08 06:36	21°♑17'03	
max. Earth dist.	15173 Sep 01 11:38	18°♒50'21	1.40060 AU		15174 Aug 13 16:43	0°♒	
	15173 Sep 07 19:46	0°♓		max. Earth dist.	15174 Aug 14 15:02	1°♒31'29	1.42311 AU
superior conj	15173 Sep 09 07:21	2°♓41'52	-0°48'14	superior conj	15174 Aug 22 04:26	14°♒16'15	-1°23'54
minimum elong	15173 Sep 09 11:02	2°♓58'42	0°47'40	minimum elong	15174 Aug 22 11:03	14°♒44'53	1°23'24
asc. node	15173 Sep 14 20:47	13°♓04'48			15174 Aug 31 00:48	0°♓	
evening rise	15173 Sep 18 22:50	20°♓53'04		asc. node	15174 Sep 01 17:21	3°♓04'30	
	15173 Sep 23 18:48	0°♔		evening rise	15174 Sep 02 06:19	4°♓03'35	
				evening max el	15174 Sep 18 08:10	29°♓29'06	18°07'24



	15174 Sep 18 21:03	0°♌			15175 Aug 06 04:55	0°♏		
retrograde	15174 Sep 25 07:46	3°♌03'28		evening rise	15175 Aug 15 21:16	16°♏30'07		
evening set	15174 Sep 27 13:22	2°♌41'57		asc. node	15175 Aug 19 13:56	22°♏53'19		
	15174 Oct 02 04:36	30°♌04'36			15175 Aug 23 18:49	0°♏		
desc. node	15174 Oct 04 08:10	28°♌10'08		evening max el	15175 Sep 01 22:11	12°♌42'57	18°02'17	
inferior conj	15174 Oct 04 16:42	27°♌51'02	-0°06'42	retrograde	15175 Sep 08 09:25	16°♌04'34		
minimum elong	15174 Oct 04 16:29	27°♌51'31	0°06'15	evening set	15175 Sep 10 23:08	15°♌31'47		
transit middle	15174 Oct 04 16:29	27°♌51'31	0°06'15	inferior conj	15175 Sep 17 10:35	10°♌21'39	1°08'05	
transit begin	15174 Oct 04 13:22	27°♌58'30		minimum elong	15175 Sep 17 12:25	10°♌16'57	1°07'32	
transit end	15174 Oct 04 19:35	27°♌44'32		min. Earth dist.	15175 Sep 20 08:27	7°♌23'07	0.62107 AU	
min. Earth dist.	15174 Oct 07 22:25	24°♌57'28	0.59815 AU	desc. node	15175 Sep 21 05:37	6°♌32'20		
morning rise	15174 Oct 11 16:18	22°♌10'00		morning rise	15175 Sep 23 23:12	4°♌16'38		
direct	15174 Oct 18 05:36	20°♌08'35		direct	15175 Sep 30 15:34	1°♌54'41		
morning max el	15174 Nov 01 12:14	27°♌56'31	27°47'19	morning max el	15175 Oct 14 18:18	9°♌52'29	27°58'06	
	15174 Nov 03 12:18	0°♌			15175 Oct 30 11:03	0°♌		
	15174 Nov 24 04:04	0°♌		asc. node	15175 Nov 15 15:38	28°♌27'37		
asc. node	15174 Nov 28 18:47	8°♌39'49			15175 Nov 16 10:03	0°♌		
morning set	15174 Dec 03 16:49	18°♌40'01		morning set	15175 Nov 17 16:33	2°♌35'12		
	15174 Dec 08 22:05	0°♌		max. Earth dist.	15175 Nov 23 02:06	14°♌02'07	1.31616 AU	
max. Earth dist.	15174 Dec 09 21:38	2°♌10'57	1.31106 AU					
				superior conj	15175 Nov 25 03:27	18°♌32'47	1°18'29	
superior conj	15174 Dec 10 17:57	4°♌04'17	1°30'44	minimum elong	15175 Nov 25 01:18	18°♌20'55	1°19'07	
minimum elong	15174 Dec 10 16:25	3°♌55'48	1°31'34		15175 Nov 30 07:50	0°♌		
evening rise	15174 Dec 17 10:42	18°♌53'37		evening rise	15175 Dec 01 21:02	3°♌22'29		
	15174 Dec 22 19:19	0°♌			15175 Dec 15 21:54	0°♌		
desc. node	15174 Dec 31 06:18	15°♌14'44		desc. node	15175 Dec 18 03:12	3°♌21'46		
	15175 Jan 10 21:13	0°♌		evening max el	15175 Dec 27 06:38	14°♌26'39	24°34'02	
evening max el	15175 Jan 14 17:18	4°♌01'15	26°04'06	retrograde	15176 Jan 09 23:19	21°♌16'23		
retrograde	15175 Jan 28 16:13	11°♌05'18		evening set	15176 Jan 15 06:09	20°♌14'56		
evening set	15175 Feb 03 20:30	9°♌35'19		min. Earth dist.	15176 Jan 20 18:25	17°♌25'30	0.55949 AU	
min. Earth dist.	15175 Feb 08 06:32	6°♌57'42	0.57762 AU	inferior conj	15176 Jan 23 02:10	15°♌58'49	-5°20'44	
inferior conj	15175 Feb 11 07:10	4°♌48'16	-4°04'54	minimum elong	15176 Jan 23 10:29	15°♌45'52	5°18'22	
minimum elong	15175 Feb 11 15:57	4°♌32'35	4°01'38	morning rise	15176 Jan 31 16:54	11°♌56'14		
morning rise	15175 Feb 19 14:26	0°♌24'52		direct	15176 Feb 03 00:03	11°♌42'01		
direct	15175 Feb 21 14:28	0°♌11'55		asc. node	15176 Feb 11 14:07	15°♌16'47		
asc. node	15175 Feb 24 16:43	0°♌44'35		morning max el	15176 Feb 12 23:15	16°♌31'45	19°39'21	
morning max el	15175 Mar 02 03:11	4°♌23'29	18°40'19		15176 Feb 22 16:00	0°♌		
morning set	15175 Mar 18 05:03	0°♌12'13		morning set	15176 Mar 01 08:27	14°♌42'27		
	15175 Mar 18 02:31	0°♌			15176 Mar 08 22:59	0°♌		
				superior conj	15176 Mar 09 07:45	0°♌43'12	0°47'38	
superior conj	15175 Mar 27 01:22	17°♌11'27	0°18'46	minimum elong	15176 Mar 09 10:11	0°♌55'11	0°47'20	
minimum elong	15175 Mar 27 02:37	17°♌17'15	0°18'22	desc. node	15176 Mar 15 04:33	11°♌56'42		
desc. node	15175 Mar 29 08:00	21°♌24'20		max. Earth dist.	15176 Mar 15 15:08	12°♌45'39	1.37629 AU	
	15175 Apr 03 03:08	0°♌		evening rise	15176 Mar 19 07:48	19°♌26'18		
max. Earth dist.	15175 Apr 03 08:37	0°♌23'55	1.39910 AU		15176 Mar 25 12:08	0°♌		
evening rise	15175 Apr 07 09:43	7°♌19'33			15176 Apr 14 23:12	0°♌		
	15175 Apr 21 20:01	0°♌		evening max el	15176 Apr 23 18:20	10°♌02'55	25°13'59	
evening max el	15175 May 12 04:52	26°♌09'02	23°56'02	retrograde	15176 May 05 20:42	17°♌04'09		
	15175 May 16 15:22	0°♌		asc. node	15176 May 09 10:51	16°♌10'10		
retrograde	15175 May 23 06:31	2°♌38'31		evening set	15176 May 11 16:59	14°♌37'27		
asc. node	15175 May 23 13:39	2°♌38'08		min. Earth dist.	15176 May 16 01:30	9°♌47'20	0.68079 AU	
evening set	15175 May 28 15:21	0°♌21'56		inferior conj	15176 May 17 08:22	8°♌06'46	2°11'48	
	15175 May 29 01:08	30°♌01'08		minimum elong	15176 May 17 06:12	8°♌13'50	2°10'22	
min. Earth dist.	15175 Jun 02 07:38	24°♌55'07	0.68813 AU	morning rise	15176 May 22 19:48	2°♌13'04		
inferior conj	15175 Jun 03 01:36	23°♌53'53	2°41'30	direct	15176 May 26 10:07	0°♌58'48		
minimum elong	15175 Jun 02 23:46	24°♌00'10	2°40'12	morning max el	15176 Jun 02 10:27	4°♌48'42	19°15'48	
morning rise	15175 Jun 08 08:11	17°♌50'31		desc. node	15176 Jun 11 05:44	15°♌47'28		
direct	15175 Jun 12 10:03	16°♌16'18		greatest brilliancy	15176 Jun 15 04:24	21°♌31'42	-0.7m	
morning max el	15175 Jun 20 06:33	20°♌42'12	20°18'33		15176 Jun 20 19:22	0°♌		
desc. node	15175 Jun 25 08:42	26°♌30'46		morning set	15176 Jun 26 18:40	9°♌08'48		
	15175 Jun 28 00:48	0°♌		max. Earth dist.	15176 Jul 09 17:53	29°♌16'48	1.45400 AU	
	15175 Jul 18 10:35	0°♌			15176 Jul 10 04:53	0°♌		
morning set	15175 Jul 18 14:36	0°♌15'26						
max. Earth dist.	15175 Jul 28 01:33	15°♌04'59	1.44158 AU	superior conj	15176 Jul 13 01:49	4°♌31'49	-2°11'58	
				minimum elong	15176 Jul 13 05:17	4°♌45'30	2°12'43	
superior conj	15175 Aug 03 02:27	24°♌51'45	-1°54'14	evening rise	15176 Jul 27 14:31	28°♌00'24		
minimum elong	15175 Aug 03 09:57	25°♌22'36	1°54'15					

	15176 Jul 28 19:34	0°♍			15177 Jul 02 21:46	0°♎		
asc. node	15176 Aug 05 10:33	12°♍26'32		evening rise	15177 Jul 08 06:49	8°♎27'40		
evening max el	15176 Aug 15 12:43	26°♍16'16	18°15'31	greatest brilliancy	15177 Jul 16 22:43	22°♎04'32	-0.8m	
retrograde	15176 Aug 21 21:30	29°♍38'52			15177 Jul 22 04:12	0°♍		
evening set	15176 Aug 24 19:49	28°♍52'04		asc. node	15177 Jul 23 07:14	1°♍37'37		
inferior conj	15176 Aug 30 18:49	23°♍25'12	2°02'37	evening max el	15177 Jul 30 00:48	10°♍00'53	18°46'18	
minimum elong	15176 Aug 30 21:12	23°♍18'21	2°01'44	retrograde	15177 Aug 05 15:57	13°♍37'29		
min. Earth dist.	15176 Sep 02 04:23	20°♍40'37	0.64248 AU	evening set	15177 Aug 08 23:24	12°♍34'36		
morning rise	15176 Sep 05 20:58	17°♍05'54		inferior conj	15177 Aug 14 13:33	6°♍53'13	2°39'17	
desc. node	15176 Sep 07 03:05	16°♍11'58		minimum elong	15177 Aug 14 15:35	6°♍46'50	2°38'23	
direct	15176 Sep 12 10:43	14°♍31'19		min. Earth dist.	15177 Aug 16 09:13	4°♍37'01	0.66089 AU	
morning max el	15176 Sep 26 04:29	22°♍29'39	27°32'16	morning rise	15177 Aug 20 06:49	0°♍27'46		
	15176 Oct 02 19:37	0°♌			15177 Aug 20 20:28	30°♌♎		
	15176 Oct 22 16:57	0°♌		desc. node	15177 Aug 25 00:35	27°♌58'27		
morning set	15176 Oct 31 07:55	16°♌05'19		direct	15177 Aug 26 13:42	27°♌49'24		
asc. node	15176 Nov 01 12:24	18°♌27'16			15177 Sep 01 23:38	0°♍		
max. Earth dist.	15176 Nov 04 23:40	25°♌34'32	1.32680 AU	morning max el	15177 Sep 08 15:56	5°♍34'57	26°36'37	
	15176 Nov 07 01:54	0°♌			15177 Sep 27 10:31	0°♌		
				morning set	15177 Oct 14 11:49	29°♌02'24		
superior conj	15176 Nov 08 09:07	2°♌47'22	1°00'16		15177 Oct 14 23:58	0°♌		
minimum elong	15176 Nov 08 06:48	2°♌34'54	1°00'42	max. Earth dist.	15177 Oct 18 11:29	6°♌45'49	1.34278 AU	
evening rise	15176 Nov 15 07:58	17°♌51'20		asc. node	15177 Oct 19 09:05	8°♌33'32		
	15176 Nov 21 05:35	0°♌						
desc. node	15176 Dec 04 00:12	20°♌24'27		superior conj	15177 Oct 23 08:33	16°♌41'15	0°36'09	
evening max el	15176 Dec 07 16:07	24°♌24'24	22°51'10	minimum elong	15177 Oct 23 06:44	16°♌31'50	0°36'27	
	15176 Dec 15 22:38	0°♌			15177 Oct 29 16:01	0°♌		
retrograde	15176 Dec 20 17:47	0°♌53'06		evening rise	15177 Oct 30 17:32	2°♌14'30		
evening set	15176 Dec 24 18:08	0°♌17'59			15177 Nov 15 08:05	0°♌		
	15176 Dec 25 17:06	30°♌♌		evening max el	15177 Nov 19 07:31	4°♌32'40	21°13'36	
min. Earth dist.	15177 Jan 01 01:11	26°♌57'00	0.54764 AU	desc. node	15177 Nov 20 21:20	6°♌00'01		
inferior conj	15177 Jan 02 02:24	26°♌21'08	-5°59'36	retrograde	15177 Dec 01 04:27	10°♌25'42		
minimum elong	15177 Jan 02 04:03	26°♌18'48	5°58'39	evening set	15177 Dec 03 22:18	10°♌08'09		
morning rise	15177 Jan 10 15:19	22°♌32'27		inferior conj	15177 Dec 12 17:31	6°♌16'27	-5°40'13	
direct	15177 Jan 13 15:33	22°♌11'30		minimum elong	15177 Dec 12 10:18	6°♌26'39	5°38'11	
morning max el	15177 Jan 25 04:54	27°♌44'45	21°01'36	min. Earth dist.	15177 Dec 13 06:49	5°♌57'40	0.54439 AU	
	15177 Jan 27 08:43	0°♌		morning rise	15177 Dec 20 22:40	2°♌25'52		
asc. node	15177 Jan 28 11:28	1°♌18'23		direct	15177 Dec 24 22:57	1°♌51'08		
morning set	15177 Feb 13 16:55	29°♌23'14		morning max el	15178 Jan 06 20:53	8°♌06'40	22°43'25	
	15177 Feb 13 23:59	0°♌		asc. node	15178 Jan 15 08:45	18°♌31'15		
					15178 Jan 22 03:55	0°♌		
superior conj	15177 Feb 21 01:34	14°♌44'51	1°09'55	morning set	15178 Jan 29 04:07	14°♌07'48		
minimum elong	15177 Feb 21 04:08	14°♌58'02	1°09'56					
max. Earth dist.	15177 Feb 26 00:08	24°♌40'59	1.35485 AU	superior conj	15178 Feb 05 03:29	29°♌06'49	1°25'36	
	15177 Feb 28 18:23	0°♌		minimum elong	15178 Feb 05 05:29	29°♌17'30	1°25'59	
evening rise	15177 Mar 01 23:21	2°♌16'03			15178 Feb 05 13:28	0°♌		
desc. node	15177 Mar 02 01:06	2°♌24'13		max. Earth dist.	15178 Feb 08 15:44	6°♌30'12	1.33670 AU	
	15177 Mar 18 12:33	0°♌		evening rise	15178 Feb 13 04:53	15°♌39'48		
evening max el	15177 Apr 06 07:53	23°♌51'55	26°21'16	desc. node	15178 Feb 16 21:42	22°♌42'52		
	15177 Apr 14 10:32	0°♌			15178 Feb 20 22:49	0°♌		
retrograde	15177 Apr 19 05:58	1°♌13'45			15178 Mar 13 02:21	0°♌		
	15177 Apr 23 15:41	30°♌♌		evening max el	15178 Mar 19 21:30	7°♌28'27	27°10'28	
evening set	15177 Apr 25 12:36	28°♌41'44		retrograde	15178 Apr 02 09:27	14°♌58'59		
asc. node	15177 Apr 26 08:07	27°♌59'16		evening set	15178 Apr 09 00:14	12°♌27'49		
min. Earth dist.	15177 Apr 29 14:49	24°♌26'56	0.66891 AU	min. Earth dist.	15178 Apr 12 21:41	8°♌45'48	0.65293 AU	
inferior conj	15177 May 01 10:33	22°♌13'23	1°30'49	asc. node	15178 Apr 13 05:29	8°♌24'24		
minimum elong	15177 May 01 08:36	22°♌19'22	1°29'28	inferior conj	15178 Apr 15 05:50	6°♌08'24	0°37'38	
morning rise	15177 May 07 05:34	16°♌30'42		minimum elong	15178 Apr 15 04:50	6°♌11'13	0°36'45	
direct	15177 May 10 09:12	15°♌34'45		morning rise	15178 Apr 21 11:09	0°♌38'26		
morning max el	15177 May 16 21:11	19°♌01'47	18°29'01		15178 Apr 23 14:46	30°♌♌		
	15177 May 25 10:56	0°♌		direct	15178 Apr 24 05:10	29°♌58'04		
desc. node	15177 May 29 02:43	5°♌31'55			15178 Apr 24 19:37	0°♌		
morning set	15177 Jun 06 15:00	18°♌51'58		morning max el	15178 Apr 30 12:47	3°♌14'51	17°59'08	
	15177 Jun 13 17:00	0°♌		desc. node	15178 May 15 23:34	25°♌36'37		
				morning set	15178 May 18 14:34	29°♌54'40		
superior conj	15177 Jun 22 11:28	13°♌41'55	-2°10'49		15178 May 18 15:52	0°♌		
minimum elong	15177 Jun 22 07:11	13°♌25'13	2°11'39					
max. Earth dist.	15177 Jun 22 13:15	13°♌48'52	1.45931 AU	superior conj	15178 Jun 02 00:00	23°♌06'37	-1°50'15	

minimum elong	15178 Jun 01 15:17	22° $\Pi$ 32'10	1°50'28	superior conj	15179 May 13 05:57	3° $\Pi$ 21'26	-1°16'29
max. Earth dist.	15178 Jun 05 09:21	28° $\Pi$ 26'22	1.45714 AU	minimum elong	15179 May 12 22:39	2° $\Pi$ 51'33	1°16'21
	15178 Jun 06 09:17	0° $\mathfrak{S}$		max. Earth dist.	15179 May 19 03:58	12° $\Pi$ 53'53	1.44778 AU
evening rise	15178 Jun 18 01:51	18° $\mathfrak{S}$ 05'35		evening rise	15179 May 28 12:35	27° $\Pi$ 29'52	
	15178 Jun 25 20:55	0° $\Omega$			15179 May 30 03:52	0° $\mathfrak{S}$	
greatest brilliancy	15178 Jul 01 14:47	8° $\Omega$ 35'36	-0.7m		15179 Jun 19 20:11	0° $\Omega$	
asc. node	15178 Jul 10 04:01	20° $\Omega$ 19'16		evening max el	15179 Jun 26 09:56	7° $\Omega$ 44'09	20°35'29
evening max el	15178 Jul 13 08:17	23° $\Omega$ 51'42	19°33'33	asc. node	15179 Jun 27 00:54	8° $\Omega$ 20'41	
retrograde	15178 Jul 20 13:50	27° $\Omega$ 54'29		retrograde	15179 Jul 04 12:47	12° $\Omega$ 23'41	
evening set	15178 Jul 24 07:03	26° $\Omega$ 34'22		evening set	15179 Jul 08 16:29	10° $\Omega$ 45'58	
inferior conj	15178 Jul 29 15:39	20° $\Omega$ 39'53	3°00'47	inferior conj	15179 Jul 13 22:27	4° $\Omega$ 39'39	3°09'28
minimum elong	15178 Jul 29 16:53	20° $\Omega$ 35'46	2°59'57	minimum elong	15179 Jul 13 22:43	4° $\Omega$ 38'43	3°08'37
min. Earth dist.	15178 Jul 30 21:09	19° $\Omega$ 02'01	0.67533 AU	min. Earth dist.	15179 Jul 14 14:07	3° $\Omega$ 45'43	0.68517 AU
morning rise	15178 Aug 04 02:11	14° $\Omega$ 14'19			15179 Jul 17 12:31	30° $\mathfrak{R}$ $\mathfrak{S}$	
direct	15178 Aug 09 23:20	11° $\Omega$ 40'42		morning rise	15179 Jul 19 04:39	28° $\mathfrak{S}$ 17'50	
desc. node	15178 Aug 11 22:02	11° $\Omega$ 55'20		direct	15179 Jul 24 14:11	25° $\mathfrak{S}$ 56'06	
morning max el	15178 Aug 22 02:55	18° $\Omega$ 57'16	25°20'14	desc. node	15179 Jul 29 19:26	27° $\mathfrak{S}$ 41'03	
	15178 Aug 31 11:50	0° $\mathfrak{M}$			15179 Aug 01 21:52	0° $\Omega$	
	15178 Sep 20 12:10	0° $\mathfrak{L}$		morning max el	15179 Aug 04 13:30	2° $\Omega$ 29'21	23°52'58
morning set	15178 Sep 27 00:29	11° $\mathfrak{L}$ 17'52			15179 Aug 25 13:04	0° $\mathfrak{M}$	
max. Earth dist.	15178 Sep 30 13:55	17° $\mathfrak{L}$ 49'15	1.36341 AU	morning set	15179 Sep 08 17:40	22° $\mathfrak{M}$ 41'52	
asc. node	15178 Oct 06 05:45	28° $\mathfrak{L}$ 42'39		max. Earth dist.	15179 Sep 12 12:19	29° $\mathfrak{M}$ 14'47	1.38690 AU
					15179 Sep 12 22:33	0° $\mathfrak{L}$	
superior conj	15178 Oct 06 22:53	0° $\mathfrak{M}$ 07'41	0°06'33	superior conj	15179 Sep 20 00:36	12° $\mathfrak{L}$ 58'32	-0°27'29
minimum elong	15178 Oct 06 22:28	0° $\mathfrak{M}$ 05'35	0°06'52	minimum elong	15179 Sep 20 02:33	13° $\mathfrak{L}$ 07'45	0°27'00
behind sun begin	15178 Oct 06 16:40	29° $\mathfrak{L}$ 36'48		asc. node	15179 Sep 23 02:22	18° $\mathfrak{L}$ 51'12	
behind sun end	15178 Oct 07 04:16	0° $\mathfrak{M}$ 34'27		evening rise	15179 Sep 28 23:48	0° $\mathfrak{M}$ 22'50	
	15178 Oct 06 21:21	0° $\mathfrak{M}$			15179 Sep 28 19:08	0° $\mathfrak{M}$	
evening rise	15178 Oct 14 23:40	16° $\mathfrak{M}$ 27'03		evening max el	15179 Oct 15 07:06	27° $\mathfrak{M}$ 01'11	18°55'23
	15178 Oct 21 21:46	0° $\mathfrak{J}$			15179 Oct 19 01:37	0° $\mathfrak{J}$	
evening max el	15178 Nov 01 12:17	15° $\mathfrak{J}$ 22'00	19°53'34	retrograde	15179 Oct 23 23:28	1° $\mathfrak{J}$ 23'32	
desc. node	15178 Nov 07 18:34	19° $\mathfrak{J}$ 43'04		evening set	15179 Oct 25 20:41	1° $\mathfrak{J}$ 11'59	
retrograde	15178 Nov 11 18:18	20° $\mathfrak{J}$ 28'38		desc. node	15179 Oct 25 15:51	1° $\mathfrak{J}$ 14'18	
evening set	15178 Nov 13 18:50	20° $\mathfrak{J}$ 17'38			15179 Oct 29 05:13	30° $\mathfrak{R}$ $\mathfrak{M}$	
inferior conj	15178 Nov 22 13:58	16° $\mathfrak{J}$ 17'48	-4°25'10	inferior conj	15179 Nov 03 03:39	26° $\mathfrak{M}$ 53'57	-2°41'49
minimum elong	15178 Nov 22 03:58	16° $\mathfrak{J}$ 33'06	4°21'18	minimum elong	15179 Nov 02 20:56	27° $\mathfrak{M}$ 05'47	2°38'29
min. Earth dist.	15178 Nov 24 14:15	15° $\mathfrak{J}$ 03'56	0.55060 AU	min. Earth dist.	15179 Nov 06 02:10	24° $\mathfrak{M}$ 50'03	0.56504 AU
morning rise	15178 Nov 30 11:45	12° $\mathfrak{J}$ 06'13		morning rise	15179 Nov 10 18:18	22° $\mathfrak{M}$ 07'47	
direct	15178 Dec 05 11:54	11° $\mathfrak{J}$ 11'12		direct	15179 Nov 16 13:30	20° $\mathfrak{M}$ 48'06	
morning max el	15178 Dec 19 05:52	18° $\mathfrak{J}$ 01'09	24°33'06	morning max el	15179 Nov 30 17:13	28° $\mathfrak{M}$ 04'47	26°12'19
	15178 Dec 29 01:24	0° $\mathfrak{Z}$			15179 Dec 02 14:55	0° $\mathfrak{J}$	
asc. node	15179 Jan 02 06:00	6° $\mathfrak{Z}$ 38'38		asc. node	15179 Dec 20 03:08	25° $\mathfrak{J}$ 26'39	
morning set	15179 Jan 13 16:04	28° $\mathfrak{Z}$ 50'28			15179 Dec 22 13:24	0° $\mathfrak{Z}$	
	15179 Jan 14 04:59	0° $\approx$		morning set	15179 Dec 29 03:04	13° $\mathfrak{Z}$ 26'33	
superior conj	15179 Jan 20 10:44	13° $\approx$ 40'58	1°34'52	superior conj	15180 Jan 04 21:07	28° $\mathfrak{Z}$ 21'02	1°37'59
minimum elong	15179 Jan 20 11:48	13° $\approx$ 46'52	1°35'35	minimum elong	15180 Jan 04 21:08	28° $\mathfrak{Z}$ 21'06	1°38'52
max. Earth dist.	15179 Jan 22 15:08	18° $\approx$ 26'24	1.32300 AU		15180 Jan 05 14:54	0° $\approx$	
evening rise	15179 Jan 27 21:06	29° $\approx$ 28'59		max. Earth dist.	15180 Jan 05 20:31	0° $\approx$ 31'14	1.31423 AU
	15179 Jan 28 03:12	0° $\mathfrak{H}$		evening rise	15180 Jan 11 21:14	13° $\approx$ 36'38	
desc. node	15179 Feb 03 18:19	12° $\mathfrak{H}$ 47'20			15180 Jan 20 05:18	0° $\mathfrak{H}$	
	15179 Feb 14 00:58	0° $\mathfrak{Y}$		desc. node	15180 Jan 21 14:59	2° $\mathfrak{H}$ 31'39	
evening max el	15179 Mar 02 09:49	20° $\mathfrak{Y}$ 40'27	27°34'14		15180 Feb 09 14:22	0° $\mathfrak{Y}$	
retrograde	15179 Mar 16 05:50	28° $\mathfrak{Y}$ 09'28		evening max el	15180 Feb 12 18:27	3° $\mathfrak{Y}$ 15'04	27°26'24
evening set	15179 Mar 23 01:27	25° $\mathfrak{Y}$ 46'17		retrograde	15180 Feb 26 17:52	10° $\mathfrak{Y}$ 36'20	
min. Earth dist.	15179 Mar 26 20:07	22° $\mathfrak{Y}$ 33'06	0.63363 AU	evening set	15180 Mar 04 13:26	8° $\mathfrak{Y}$ 28'21	
inferior conj	15179 Mar 29 15:17	19° $\mathfrak{Y}$ 43'42	-0°28'34	min. Earth dist.	15180 Mar 08 08:29	5° $\mathfrak{Y}$ 37'46	0.61209 AU
minimum elong	15179 Mar 29 16:12	19° $\mathfrak{Y}$ 41'23	0°28'25	inferior conj	15180 Mar 11 11:34	2° $\mathfrak{Y}$ 50'48	-1°47'10
asc. node	15179 Mar 31 02:56	18° $\mathfrak{Y}$ 15'20		minimum elong	15180 Mar 11 15:25	2° $\mathfrak{Y}$ 42'11	1°45'33
morning rise	15179 Apr 05 09:30	14° $\mathfrak{Y}$ 28'52			15180 Mar 14 21:49	30° $\mathfrak{R}$ $\mathfrak{H}$	
direct	15179 Apr 07 19:16	14° $\mathfrak{Y}$ 00'44		asc. node	15180 Mar 17 00:22	28° $\mathfrak{H}$ 40'02	
morning max el	15179 Apr 14 06:26	17° $\mathfrak{Y}$ 18'38	17°46'33	morning rise	15180 Mar 18 20:35	27° $\mathfrak{H}$ 54'09	
	15179 Apr 23 11:30	0° $\mathfrak{B}$		direct	15180 Mar 20 23:56	27° $\mathfrak{H}$ 34'42	
morning set	15179 Apr 30 16:18	12° $\mathfrak{B}$ 11'45			15180 Mar 26 18:22	0° $\mathfrak{Y}$	
desc. node	15179 May 02 20:20	15° $\mathfrak{B}$ 54'53		morning max el	15180 Mar 27 23:01	1° $\mathfrak{Y}$ 04'39	17°51'57
	15179 May 11 04:57	0° $\Pi$		morning set	15180 Apr 12 14:34	25° $\mathfrak{Y}$ 26'06	

	15180 Apr 15 03:21	0°♄		minimum elong	15181 Apr 05 15:17	27°♄02'20	0°00'57
desc. node	15180 Apr 18 17:00	6°♄22'19		behind sun begin	15181 Apr 05 07:53	26°♄28'44	
				behind sun end	15181 Apr 05 22:41	27°♄35'51	
superior conj	15180 Apr 23 11:30	14°♄41'34 -0°37'50		desc. node	15181 Apr 05 13:36	26°♄54'42	
minimum elong	15180 Apr 23 08:03	14°♄26'47 0°37'54			15181 Apr 07 06:46	0°♄	
max. Earth dist.	15180 Apr 30 19:12	26°♄57'02 1.43217 AU		max. Earth dist.	15181 Apr 13 05:31	10°♄21'54	1.41191 AU
	15180 May 02 16:17	0°♄		evening rise	15181 Apr 17 20:37	18°♄04'14	
evening rise	15180 May 07 07:22	7°♄21'32			15181 Apr 25 09:24	0°♄	
	15180 May 22 09:08	0°♄			15181 May 16 22:09	0°♄	
evening max el	15180 Jun 08 05:49	21°♄36'24 21°48'56		evening max el	15181 May 21 21:26	5°♄29'06	23°09'10
asc. node	15180 Jun 12 21:52	25°♄28'27		asc. node	15181 May 30 18:54	11°♄26'23	
retrograde	15180 Jun 17 11:06	26°♄59'30		retrograde	15181 Jun 01 07:18	11°♄36'30	
evening set	15180 Jun 22 01:51	25°♄04'58		evening set	15181 Jun 06 09:30	9°♄27'02	
inferior conj	15180 Jun 27 07:44	18°♄48'12 3°06'52		inferior conj	15181 Jun 11 17:34	3°♄02'03	2°53'46
minimum elong	15180 Jun 27 07:03	18°♄50'35 3°05'53		minimum elong	15181 Jun 11 16:04	3°♄07'12	2°52'35
min. Earth dist.	15180 Jun 27 10:02	18°♄40'12 0.69013 AU		min. Earth dist.	15181 Jun 11 06:53	3°♄39'01	0.69020 AU
morning rise	15180 Jul 02 12:05	12°♄32'30			15181 Jun 13 23:56	30°♄	
direct	15180 Jul 07 09:12	10°♄27'33		morning rise	15181 Jun 16 22:35	26°♄53'49	
desc. node	15180 Jul 15 16:45	14°♄50'19		direct	15181 Jun 21 07:15	25°♄08'17	
morning max el	15180 Jul 17 01:48	16°♄09'53 22°24'02			15181 Jun 29 18:32	0°♄	
	15180 Jul 28 09:55	0°♄		morning max el	15181 Jun 29 18:41	0°♄00'23	21°01'10
	15180 Aug 17 13:21	0°♄		desc. node	15181 Jul 02 13:58	3°♄01'44	
morning set	15180 Aug 19 11:29	3°♄05'32			15181 Jul 22 01:50	0°♄	
max. Earth dist.	15180 Aug 24 13:12	11°♄27'38 1.41056 AU		morning set	15181 Jul 30 05:49	12°♄30'00	
				max. Earth dist.	15181 Aug 06 19:43	24°♄32'52	1.43156 AU
superior conj	15180 Sep 01 09:24	25°♄03'28 -1°03'38			15181 Aug 10 03:39	0°♄	
minimum elong	15180 Sep 01 14:24	25°♄25'50 1°03'03		superior conj	15181 Aug 13 20:58	6°♄13'20	-1°37'50
	15180 Sep 04 03:07	0°♄		minimum elong	15181 Aug 14 04:23	6°♄44'45	1°37'29
asc. node	15180 Sep 08 22:57	8°♄55'12		evening rise	15181 Aug 25 15:43	26°♄47'11	
evening rise	15180 Sep 11 14:34	13°♄53'08		asc. node	15181 Aug 26 19:31	28°♄51'08	
	15180 Sep 20 13:34	0°♄			15181 Aug 27 10:59	0°♄	
evening max el	15180 Sep 27 12:37	9°♄24'32 18°18'57		evening max el	15181 Sep 11 00:41	22°♄23'10	18°02'53
retrograde	15180 Oct 05 00:09	13°♄12'58		retrograde	15181 Sep 17 17:59	25°♄50'47	
evening set	15180 Oct 07 01:37	12°♄56'17		evening set	15181 Sep 20 02:46	25°♄25'01	
desc. node	15180 Oct 11 13:14	10°♄40'37		inferior conj	15181 Sep 26 22:59	20°♄25'39	0°27'33
inferior conj	15180 Oct 14 15:05	8°♄16'57 -0°58'58		minimum elong	15181 Sep 26 23:51	20°♄23'35	0°27'29
minimum elong	15180 Oct 14 12:53	8°♄21'32 0°57'33		desc. node	15181 Sep 28 10:40	18°♄59'53	
min. Earth dist.	15180 Oct 17 21:27	5°♄36'02 0.58517 AU		min. Earth dist.	15181 Sep 30 02:08	17°♄27'15	0.60790 AU
morning rise	15180 Oct 21 20:40	2°♄53'51		morning rise	15181 Oct 03 17:53	14°♄32'48	
direct	15180 Oct 28 04:57	1°♄07'25		direct	15181 Oct 10 09:05	12°♄21'46	
morning max el	15180 Nov 11 12:14	8°♄45'52 27°23'28		morning max el	15181 Oct 24 15:00	20°♄15'43	27°56'42
	15180 Nov 27 16:14	0°♄			15181 Nov 02 00:22	0°♄	
asc. node	15180 Dec 06 00:10	14°♄43'54			15181 Nov 20 14:55	0°♄	
morning set	15180 Dec 12 11:14	27°♄50'24		asc. node	15181 Nov 22 21:05	4°♄22'39	
	15180 Dec 13 11:24	0°♄		morning set	15181 Nov 26 14:40	11°♄57'43	
superior conj	15180 Dec 19 08:37	13°♄00'23 1°35'06		max. Earth dist.	15181 Dec 02 11:09	24°♄35'30	1.31252 AU
minimum elong	15180 Dec 19 07:36	12°♄54'43 1°36'00		superior conj	15181 Dec 03 19:24	27°♄34'28	1°26'16
max. Earth dist.	15180 Dec 19 04:27	12°♄37'05 1.31065 AU		minimum elong	15181 Dec 03 17:34	27°♄24'16	1°27'02
evening rise	15180 Dec 26 02:51	27°♄55'52			15181 Dec 04 21:31	0°♄	
	15180 Dec 27 02:11	0°♄		evening rise	15181 Dec 10 11:59	12°♄22'22	
desc. node	15181 Jan 07 11:43	21°♄46'59			15181 Dec 19 06:02	0°♄	
	15181 Jan 12 15:46	0°♄		desc. node	15181 Dec 25 08:33	10°♄22'56	
evening max el	15181 Jan 24 20:28	14°♄59'43 26°43'43		evening max el	15182 Jan 06 14:07	25°♄51'15	25°28'22
retrograde	15181 Feb 07 20:13	22°♄10'56			15182 Jan 11 19:02	0°♄	
evening set	15181 Feb 14 08:47	20°♄25'06		retrograde	15182 Jan 20 11:22	2°♄50'32	
min. Earth dist.	15181 Feb 18 10:15	17°♄47'00 0.58981 AU		evening set	15182 Jan 26 07:42	1°♄32'26	
inferior conj	15181 Feb 21 14:52	15°♄18'53 -3°14'26			15182 Jan 29 07:10	30°♄	
minimum elong	15181 Feb 21 22:08	15°♄04'47 3°11'28		min. Earth dist.	15182 Jan 31 02:42	28°♄51'58	0.56926 AU
morning rise	15181 Mar 01 14:51	10°♄43'21		inferior conj	15182 Feb 02 22:00	26°♄59'02	-4°39'55
direct	15181 Mar 03 14:40	10°♄29'06		minimum elong	15182 Feb 03 07:13	26°♄43'32	4°36'49
asc. node	15181 Mar 03 21:48	10°♄29'25		morning rise	15182 Feb 11 09:31	22°♄45'15	
morning max el	15181 Mar 11 10:55	14°♄22'06 18°16'44		direct	15182 Feb 13 11:15	22°♄32'26	
	15181 Mar 22 03:02	0°♄		asc. node	15182 Feb 18 19:14	24°♄03'08	
morning set	15181 Mar 27 03:35	9°♄20'08		morning max el	15182 Feb 22 14:01	26°♄59'21	19°02'41
superior conj	15181 Apr 05 15:22	27°♄02'42 -0°00'37			15182 Feb 25 07:02	0°♄	

morning set	15182 Mar 11 02:47	23° $\text{H}$ 40'06		morning set	15183 Feb 23 08:41	8° $\text{H}$ 16'08	
	15182 Mar 14 07:38	0° $\text{Y}$					
superior conj	15182 Mar 19 13:20	10° $\text{Y}$ 12'17	0°31'47	superior conj	15183 Mar 03 01:04	23° $\text{H}$ 58'25	0°57'53
minimum elong	15182 Mar 19 15:14	10° $\text{Y}$ 21'23	0°31'23	minimum elong	15183 Mar 03 03:39	24° $\text{H}$ 11'27	0°57'42
desc. node	15182 Mar 23 10:09	17° $\text{Y}$ 28'12			15183 Mar 06 02:05	0° $\text{Y}$	
max. Earth dist.	15182 Mar 26 11:55	23° $\text{Y}$ 02'52	1.38929 AU	max. Earth dist.	15183 Mar 08 18:46	5° $\text{Y}$ 10'49	1.36685 AU
evening rise	15182 Mar 30 07:10	29° $\text{Y}$ 42'15		desc. node	15183 Mar 10 06:41	7° $\text{Y}$ 59'23	
	15182 Mar 30 11:18	0° $\text{B}$		evening rise	15183 Mar 12 13:12	12° $\text{Y}$ 09'24	
	15182 Apr 18 18:01	0° $\text{II}$			15183 Mar 23 01:14	0° $\text{B}$	
evening max el	15182 May 04 11:06	19° $\text{II}$ 23'08	24°30'03	evening max el	15183 Apr 13 21:22	0° $\text{II}$	
retrograde	15182 May 16 00:07	26° $\text{II}$ 08'15		retrograde	15183 Apr 17 00:45	3° $\text{II}$ 16'52	25°44'25
asc. node	15182 May 17 16:03	25° $\text{II}$ 56'20		asc. node	15183 Apr 29 12:23	10° $\text{II}$ 28'21	
evening set	15182 May 21 13:48	23° $\text{II}$ 46'52		evening set	15183 May 04 13:17	8° $\text{II}$ 44'59	
min. Earth dist.	15182 May 26 02:32	18° $\text{II}$ 35'38	0.68551 AU	min. Earth dist.	15183 May 05 13:07	7° $\text{II}$ 59'03	
inferior conj	15182 May 27 02:00	17° $\text{II}$ 16'54	2°30'16	inferior conj	15183 May 09 18:52	3° $\text{II}$ 23'54	0.67625 AU
minimum elong	15182 May 26 23:59	17° $\text{II}$ 23'42	2°28'53	minimum elong	15183 May 11 07:08	1° $\text{II}$ 28'35	1°55'55
morning rise	15182 Jun 01 10:19	11° $\text{II}$ 17'22			15183 May 11 04:59	1° $\text{II}$ 35'27	1°54'28
direct	15182 Jun 05 07:05	9° $\text{II}$ 51'52			15183 May 12 11:20	30° $\text{R}$ 8	
morning max el	15182 Jun 12 18:17	14° $\text{II}$ 01'24	19°49'58	morning rise	15183 May 16 21:25	25° $\text{B}$ 39'05	
desc. node	15182 Jun 19 11:05	21° $\text{II}$ 58'28		direct	15183 May 20 07:05	24° $\text{B}$ 32'47	
	15182 Jun 25 04:46	0° $\text{E}$		morning max el	15183 May 27 01:11	28° $\text{B}$ 11'32	18°53'48
morning set	15182 Jul 09 09:35	21° $\text{E}$ 19'18			15183 May 28 18:28	0° $\text{II}$	
	15182 Jul 15 00:18	0° $\text{Q}$		desc. node	15183 Jun 06 08:07	11° $\text{II}$ 28'31	
max. Earth dist.	15182 Jul 20 08:22	8° $\text{Q}$ 22'36	1.44766 AU	greatest brilliancy	15183 Jun 09 12:44	16° $\text{II}$ 15'16	-0.8m
					15183 Jun 18 11:09	0° $\text{E}$	
superior conj	15182 Jul 25 08:53	16° $\text{Q}$ 23'56	-2°03'45	morning set	15183 Jun 18 18:26	0° $\text{E}$ 28'15	
minimum elong	15182 Jul 25 15:22	16° $\text{Q}$ 50'06	2°04'05	max. Earth dist.	15183 Jul 03 02:12	22° $\text{E}$ 44'57	1.45726 AU
	15182 Aug 02 15:47	0° $\text{P}$					
evening rise	15182 Aug 07 22:01	8° $\text{P}$ 51'05		superior conj	15183 Jul 05 00:51	25° $\text{E}$ 47'33	-2°13'59
asc. node	15182 Aug 13 16:06	18° $\text{P}$ 34'01		minimum elong	15183 Jul 05 01:07	25° $\text{E}$ 48'35	2°14'54
	15182 Aug 20 22:14	0° $\text{Q}$			15183 Jul 07 17:08	0° $\text{Q}$	
evening max el	15182 Aug 25 15:20	5° $\text{Q}$ 46'31	18°05'46	evening rise	15183 Jul 20 04:45	19° $\text{Q}$ 54'29	
retrograde	15182 Sep 01 00:28	9° $\text{Q}$ 06'53			15183 Jul 26 10:58	0° $\text{P}$	
evening set	15182 Sep 03 17:44	8° $\text{Q}$ 28'33		asc. node	15183 Jul 31 12:44	7° $\text{P}$ 58'45	
inferior conj	15182 Sep 09 23:29	3° $\text{Q}$ 11'19	1°33'34	evening max el	15183 Aug 09 05:14	19° $\text{P}$ 26'01	18°26'32
minimum elong	15182 Sep 10 01:42	3° $\text{Q}$ 05'21	1°32'48	retrograde	15183 Aug 15 15:32	22° $\text{P}$ 52'33	
min. Earth dist.	15182 Sep 12 16:37	0° $\text{Q}$ 16'19	0.63049 AU	evening set	15183 Aug 18 17:46	21° $\text{P}$ 59'02	
	15182 Sep 12 22:56	30° $\text{R}$ 11		inferior conj	15183 Aug 24 12:36	16° $\text{P}$ 25'57	2°20'10
desc. node	15182 Sep 15 08:09	27° $\text{P}$ 45'27		minimum elong	15183 Aug 24 14:55	16° $\text{P}$ 19'01	2°19'15
morning rise	15182 Sep 16 07:30	26° $\text{P}$ 59'04		min. Earth dist.	15183 Aug 26 16:23	13° $\text{P}$ 51'58	0.65086 AU
direct	15182 Sep 22 23:29	24° $\text{P}$ 30'16		morning rise	15183 Aug 30 10:46	10° $\text{P}$ 03'25	
	15182 Oct 04 06:51	0° $\text{Q}$		desc. node	15183 Sep 02 05:40	8° $\text{P}$ 15'59	
morning max el	15182 Oct 06 23:05	2° $\text{Q}$ 30'18	27°51'08	direct	15183 Sep 05 22:12	7° $\text{P}$ 26'01	
	15182 Oct 27 09:27	0° $\text{M}$		morning max el	15183 Sep 19 09:50	15° $\text{P}$ 20'05	27°11'35
asc. node	15182 Nov 09 17:55	24° $\text{M}$ 16'12			15183 Oct 01 11:01	0° $\text{Q}$	
morning set	15182 Nov 10 11:11	25° $\text{M}$ 43'08			15183 Oct 20 03:24	0° $\text{M}$	
	15182 Nov 12 13:16	0° $\text{X}$		morning set	15183 Oct 24 22:02	8° $\text{M}$ 59'50	
max. Earth dist.	15182 Nov 15 12:51	6° $\text{X}$ 18'14	1.31995 AU	asc. node	15183 Oct 27 14:38	14° $\text{M}$ 19'06	
				max. Earth dist.	15183 Oct 29 06:18	17° $\text{M}$ 40'19	1.33297 AU
superior conj	15182 Nov 18 03:33	11° $\text{X}$ 58'00	1°11'29				
minimum elong	15182 Nov 18 01:15	11° $\text{X}$ 45'29	1°12'02	superior conj	15183 Nov 02 06:54	26° $\text{M}$ 04'46	0°50'44
evening rise	15182 Nov 24 22:47	26° $\text{X}$ 51'46		minimum elong	15183 Nov 02 04:42	25° $\text{M}$ 53'06	0°51'06
	15182 Nov 26 09:59	0° $\text{Z}$			15183 Nov 04 02:57	0° $\text{X}$	
desc. node	15182 Dec 12 05:30	28° $\text{Z}$ 05'19		evening rise	15183 Nov 09 09:23	11° $\text{X}$ 18'55	
	15182 Dec 13 16:10	0° $\text{A}$			15183 Nov 18 20:59	0° $\text{Z}$	
evening max el	15182 Dec 19 01:02	6° $\text{A}$ 01'50	23°50'51	desc. node	15183 Nov 29 02:34	14° $\text{Z}$ 34'08	
retrograde	15183 Jan 01 13:14	12° $\text{A}$ 44'01		evening max el	15183 Nov 30 11:59	15° $\text{Z}$ 59'58	22°08'10
evening set	15183 Jan 06 07:33	11° $\text{A}$ 54'46		retrograde	15183 Dec 13 02:47	22° $\text{Z}$ 14'36	
min. Earth dist.	15183 Jan 12 12:22	8° $\text{A}$ 54'03	0.55344 AU	evening set	15183 Dec 16 13:28	21° $\text{Z}$ 48'20	
inferior conj	15183 Jan 14 08:26	7° $\text{A}$ 48'31	-5°43'22	inferior conj	15183 Dec 25 03:12	17° $\text{Z}$ 55'54	-5°59'05
minimum elong	15183 Jan 14 14:40	7° $\text{A}$ 39'14	5°41'45	minimum elong	15183 Dec 25 00:47	17° $\text{Z}$ 59'17	5°58'02
morning rise	15183 Jan 22 23:27	3° $\text{A}$ 52'48		min. Earth dist.	15183 Dec 24 18:10	18° $\text{Z}$ 08'33	0.54511 AU
direct	15183 Jan 25 12:30	3° $\text{A}$ 36'34		morning rise	15184 Jan 02 13:03	14° $\text{Z}$ 08'43	
morning max el	15183 Feb 05 04:16	8° $\text{A}$ 45'16	20°11'35	direct	15184 Jan 05 23:24	13° $\text{Z}$ 42'33	
asc. node	15183 Feb 05 16:38	9° $\text{A}$ 15'50		morning max el	15184 Jan 18 03:30	19° $\text{Z}$ 34'20	21°43'01
	15183 Feb 19 05:30	0° $\text{H}$		asc. node	15184 Jan 23 13:59	25° $\text{Z}$ 50'04	
					15184 Jan 26 11:19	0° $\text{A}$	

morning set	15184 Feb 07 18:36	22° $\approx$ 59'31			15184 Dec 29 23:25	0° $\approx$	
	15184 Feb 11 02:02	0° $\approx$		asc. node	15185 Jan 09 11:16	13° $\approx$ 28'11	
					15185 Jan 18 13:23	0° $\approx$	
superior conj	15184 Feb 14 22:41	8° $\approx$ 09'36	1°17'22	morning set	15185 Jan 22 06:22	7° $\approx$ 44'19	
minimum elong	15184 Feb 15 01:04	8° $\approx$ 22'06	1°17'32				
max. Earth dist.	15184 Feb 19 06:34	17° $\approx$ 02'52	1.34668 AU	superior conj	15185 Jan 29 03:10	22° $\approx$ 37'44	1°30'18
evening rise	15184 Feb 23 11:08	25° $\approx$ 14'51		minimum elong	15185 Jan 29 04:48	22° $\approx$ 46'36	1°30'50
desc. node	15184 Feb 25 03:15	28° $\approx$ 23'42		max. Earth dist.	15185 Feb 01 01:44	28° $\approx$ 55'08	1.33030 AU
	15184 Feb 26 00:04	0° $\approx$			15185 Feb 01 14:03	0° $\approx$	
	15184 Mar 15 12:56	0° $\approx$		evening rise	15185 Feb 05 21:34	8° $\approx$ 50'11	
evening max el	15184 Mar 29 14:37	17° $\approx$ 02'31	26°44'53	desc. node	15185 Feb 10 23:50	18° $\approx$ 36'56	
retrograde	15184 Apr 11 19:07	24° $\approx$ 28'32			15185 Feb 17 11:29	0° $\approx$	
evening set	15184 Apr 18 05:34	21° $\approx$ 56'18			15185 Mar 11 15:39	0° $\approx$	
asc. node	15184 Apr 20 10:38	19° $\approx$ 54'07		evening max el	15185 Mar 12 03:50	0° $\approx$ 29'42	27°24'00
min. Earth dist.	15184 Apr 22 05:41	17° $\approx$ 55'46	0.66262 AU	retrograde	15185 Mar 25 19:30	8° $\approx$ 00'14	
inferior conj	15184 Apr 24 06:42	15° $\approx$ 31'08	1°09'51	evening set	15185 Apr 01 13:03	5° $\approx$ 31'21	
minimum elong	15184 Apr 24 05:03	15° $\approx$ 36'02	1°08'38	min. Earth dist.	15185 Apr 05 08:58	2° $\approx$ 02'31	0.64513 AU
morning rise	15184 Apr 30 05:44	9° $\approx$ 53'28		asc. node	15185 Apr 07 08:04	29° $\approx$ 56'27	
direct	15184 May 03 05:15	9° $\approx$ 04'20			15185 Apr 07 06:45	30° $\approx$ 00'00	
morning max el	15184 May 09 14:14	12° $\approx$ 25'15	18°14'14	inferior conj	15185 Apr 07 22:09	29° $\approx$ 18'21	0°11'08
	15184 May 22 08:10	0° $\approx$		minimum elong	15185 Apr 07 21:50	29° $\approx$ 19'11	0°10'38
desc. node	15184 May 23 05:01	1° $\approx$ 22'25		transit middle	15185 Apr 07 21:50	29° $\approx$ 19'11	0°10'38
morning set	15184 May 29 01:55	10° $\approx$ 44'38		transit begin	15185 Apr 07 19:32	29° $\approx$ 25'24	
	15184 Jun 10 05:22	0° $\approx$		transit end	15185 Apr 08 00:08	29° $\approx$ 13'00	
				morning rise	15185 Apr 14 08:40	23° $\approx$ 54'43	
superior conj	15184 Jun 13 09:32	4° $\approx$ 58'14	-2°04'13	direct	15185 Apr 16 23:05	23° $\approx$ 19'55	
minimum elong	15184 Jun 13 02:36	4° $\approx$ 31'08	2°04'48	morning max el	15185 Apr 23 07:05	26° $\approx$ 35'27	17°51'41
max. Earth dist.	15184 Jun 14 22:41	7° $\approx$ 23'17	1.45937 AU		15185 Apr 26 07:22	0° $\approx$	
evening rise	15184 Jun 29 11:04	29° $\approx$ 58'29		desc. node	15185 May 10 01:49	21° $\approx$ 33'21	
	15184 Jun 29 11:27	0° $\approx$		morning set	15185 May 10 13:04	22° $\approx$ 20'23	
greatest brilliancy	15184 Jul 10 08:30	16° $\approx$ 04'35	-0.8m		15185 May 15 03:32	0° $\approx$	
asc. node	15184 Jul 17 09:29	26° $\approx$ 05'52					
	15184 Jul 19 17:48	0° $\approx$		superior conj	15185 May 24 04:03	14° $\approx$ 40'39	-1°37'02
evening max el	15184 Jul 22 15:39	3° $\approx$ 00'14	19°04'25	minimum elong	15185 May 23 19:22	14° $\approx$ 05'56	1°37'01
retrograde	15184 Jul 29 11:49	7° $\approx$ 00'40		max. Earth dist.	15185 May 28 18:44	21° $\approx$ 59'31	1.45397 AU
evening set	15184 Aug 01 23:26	5° $\approx$ 50'20			15185 Jun 02 21:46	0° $\approx$	
inferior conj	15184 Aug 07 10:49	0° $\approx$ 03'04	2°50'04	evening rise	15185 Jun 09 00:31	9° $\approx$ 25'14	
minimum elong	15184 Aug 07 12:34	29° $\approx$ 05'29	2°49'13		15185 Jun 22 17:11	0° $\approx$	
	15184 Aug 07 11:47	30° $\approx$ 00'00		greatest brilliancy	15185 Jun 23 20:27	1° $\approx$ 39'03	-0.6m
min. Earth dist.	15184 Aug 09 00:21	28° $\approx$ 02'35	0.66761 AU	asc. node	15185 Jul 04 06:18	15° $\approx$ 02'50	
morning rise	15184 Aug 13 00:59	23° $\approx$ 03'12		evening max el	15185 Jul 05 20:38	17° $\approx$ 06'17	19°58'12
direct	15184 Aug 19 03:59	21° $\approx$ 00'09		retrograde	15185 Jul 13 10:31	21° $\approx$ 02'53	
desc. node	15184 Aug 19 03:09	21° $\approx$ 00'10		evening set	15185 Jul 17 08:06	19° $\approx$ 05'10	
morning max el	15184 Aug 31 21:16	28° $\approx$ 03'30	26°06'08	inferior conj	15185 Jul 22 15:13	13° $\approx$ 05'13	3°05'55
	15184 Sep 02 06:08	0° $\approx$		minimum elong	15185 Jul 22 16:03	13° $\approx$ 05'23	3°05'06
	15184 Sep 24 05:26	0° $\approx$		min. Earth dist.	15185 Jul 23 14:41	12° $\approx$ 03'49	0.68004 AU
morning set	15184 Oct 06 20:00	21° $\approx$ 40'59		morning rise	15185 Jul 27 23:36	7° $\approx$ 03'14	
max. Earth dist.	15184 Oct 10 14:15	28° $\approx$ 04'06	1.35112 AU	direct	15185 Aug 02 15:49	5° $\approx$ 02'47	
	15184 Oct 11 05:04	0° $\approx$		desc. node	15185 Aug 06 00:35	5° $\approx$ 04'32	
asc. node	15184 Oct 13 11:19	4° $\approx$ 02'28		morning max el	15185 Aug 14 08:12	12° $\approx$ 02'43	24°43'59
					15185 Aug 28 18:38	0° $\approx$	
superior conj	15184 Oct 16 02:54	9° $\approx$ 04'38	0°24'14		15185 Sep 16 23:09	0° $\approx$	
minimum elong	15184 Oct 16 01:34	9° $\approx$ 04'47	0°24'31	morning set	15185 Sep 19 00:57	3° $\approx$ 03'20	
evening rise	15184 Oct 23 17:52	25° $\approx$ 03'18		max. Earth dist.	15185 Sep 22 14:30	9° $\approx$ 05'56	1.37321 AU
	15184 Oct 25 20:30	0° $\approx$					
evening max el	15184 Nov 11 08:28	26° $\approx$ 03'15	20°36'55	superior conj	15185 Sep 29 12:20	23° $\approx$ 01'06	-0°07'27
desc. node	15184 Nov 14 23:45	29° $\approx$ 05'34		minimum elong	15185 Sep 29 12:48	23° $\approx$ 03'23	0°07'05
	15184 Nov 15 21:28	0° $\approx$		behind sun begin	15185 Sep 29 06:47	22° $\approx$ 03'40	
retrograde	15184 Nov 22 13:14	1° $\approx$ 57'25		behind sun end	15185 Sep 29 18:49	23° $\approx$ 03'44	
evening set	15184 Nov 24 21:58	1° $\approx$ 43'39		asc. node	15185 Sep 30 07:55	24° $\approx$ 03'52	
	15184 Nov 29 19:23	30° $\approx$ 00'00			15185 Oct 03 01:11	0° $\approx$	
inferior conj	15184 Dec 03 18:46	27° $\approx$ 04'40	-5°13'54	evening rise	15185 Oct 07 21:48	9° $\approx$ 04'55	
minimum elong	15184 Dec 03 09:23	28° $\approx$ 03'14	5°10'54		15185 Oct 18 21:45	0° $\approx$	
min. Earth dist.	15184 Dec 04 23:51	27° $\approx$ 07'35	0.54592 AU	evening max el	15185 Oct 24 19:20	7° $\approx$ 33'29	19°25'59
morning rise	15184 Dec 11 20:40	23° $\approx$ 05'24		desc. node	15185 Nov 01 21:02	12° $\approx$ 01'40	
direct	15184 Dec 16 07:29	23° $\approx$ 01'02		retrograde	15185 Nov 03 08:54	12° $\approx$ 02'54	
morning max el	15184 Dec 29 15:23	29° $\approx$ 04'44	23°30'10	evening set	15185 Nov 05 06:26	12° $\approx$ 01'25	

inferior conj	15185 Nov 13 21:31	8° $\text{♊}$ 03'30	-3°42'51	minimum elong	15186 Oct 25 15:37	19° $\text{♍}$ 08'22	1°54'19
minimum elong	15185 Nov 13 12:28	8° $\text{♊}$ 18'11	3°38'55	min. Earth dist.	15186 Oct 29 00:02	16° $\text{♍}$ 37'24	0.57313 AU
min. Earth dist.	15185 Nov 16 08:59	6° $\text{♊}$ 27'15	0.55585 AU	morning rise	15186 Nov 02 07:22	13° $\text{♍}$ 57'00	
morning rise	15185 Nov 21 16:21	3° $\text{♊}$ 37'52		direct	15186 Nov 08 09:00	12° $\text{♍}$ 25'33	
direct	15185 Nov 27 00:59	2° $\text{♊}$ 33'00		morning max el	15186 Nov 22 14:52	19° $\text{♍}$ 52'52	26°46'41
morning max el	15185 Dec 11 00:37	9° $\text{♊}$ 35'34	25°17'48		15186 Dec 01 06:42	0° $\text{♊}$	
	15185 Dec 26 06:03	0° $\text{♊}$		asc. node	15186 Dec 14 05:30	20° $\text{♊}$ 55'39	
asc. node	15185 Dec 27 08:27	1° $\text{♊}$ 54'06			15186 Dec 18 20:40	0° $\text{♊}$	
morning set	15186 Jan 06 18:07	22° $\text{♊}$ 24'51		morning set	15186 Dec 22 04:05	6° $\text{♊}$ 56'17	
	15186 Jan 10 05:23	0° $\text{♊}$					
				superior conj	15186 Dec 28 23:06	21° $\text{♊}$ 56'02	1°37'30
superior conj	15186 Jan 13 12:00	7° $\text{♊}$ 15'18	1°36'57	minimum elong	15186 Dec 28 22:39	21° $\text{♊}$ 53'36	1°38'24
minimum elong	15186 Jan 13 12:38	7° $\text{♊}$ 18'47	1°37'44	max. Earth dist.	15186 Dec 29 10:30	22° $\text{♊}$ 59'48	1.31202 AU
max. Earth dist.	15186 Jan 15 03:50	10° $\text{♊}$ 54'36	1.31858 AU		15187 Jan 01 14:13	0° $\text{♊}$	
evening rise	15186 Jan 20 17:26	22° $\text{♊}$ 47'47		evening rise	15187 Jan 04 20:09	7° $\text{♊}$ 01'13	
	15186 Jan 24 07:23	0° $\text{♊}$		desc. node	15187 Jan 15 17:10	28° $\text{♊}$ 06'54	
desc. node	15186 Jan 28 20:29	8° $\text{♊}$ 33'43			15187 Jan 16 19:23	0° $\text{♊}$	
	15186 Feb 11 06:16	0° $\text{♊}$		evening max el	15187 Feb 04 20:47	25° $\text{♊}$ 41'23	27°12'39
evening max el	15186 Feb 22 14:38	13° $\text{♊}$ 26'41	27°35'02		15187 Feb 10 05:02	0° $\text{♊}$	
retrograde	15186 Mar 08 12:42	20° $\text{♊}$ 53'52		retrograde	15187 Feb 18 21:08	2° $\text{♊}$ 59'12	
evening set	15186 Mar 15 09:03	18° $\text{♊}$ 35'53		evening set	15187 Feb 25 14:26	1° $\text{♊}$ 00'02	
min. Earth dist.	15186 Mar 19 03:11	15° $\text{♊}$ 33'30	0.62460 AU		15187 Feb 27 04:07	30° $\text{♊}$	
inferior conj	15186 Mar 22 02:25	12° $\text{♊}$ 42'52	-1°00'32	min. Earth dist.	15187 Mar 01 11:15	28° $\text{♊}$ 16'00	0.60247 AU
minimum elong	15186 Mar 22 04:28	12° $\text{♊}$ 37'55	0°59'48	inferior conj	15187 Mar 04 15:56	25° $\text{♊}$ 34'52	-2°23'35
asc. node	15186 Mar 25 05:30	9° $\text{♊}$ 53'53		minimum elong	15187 Mar 04 21:15	25° $\text{♊}$ 23'39	2°21'20
morning rise	15186 Mar 29 02:48	7° $\text{♊}$ 35'45		morning rise	15187 Mar 12 07:28	20° $\text{♊}$ 46'53	
direct	15186 Mar 31 09:29	7° $\text{♊}$ 11'51		asc. node	15187 Mar 12 02:57	20° $\text{♊}$ 50'02	
morning max el	15186 Apr 07 00:46	10° $\text{♊}$ 33'36	17°46'38	direct	15187 Mar 14 08:40	20° $\text{♊}$ 30'11	
	15186 Apr 20 02:45	0° $\text{♊}$		morning max el	15187 Mar 21 15:50	24° $\text{♊}$ 09'04	18°00'01
morning set	15186 Apr 23 00:17	5° $\text{♊}$ 04'13			15187 Mar 26 09:35	0° $\text{♊}$	
desc. node	15186 Apr 26 22:31	11° $\text{♊}$ 56'13		morning set	15187 Apr 06 05:29	18° $\text{♊}$ 37'31	
					15187 Apr 12 10:37	0° $\text{♊}$	
superior conj	15186 May 04 19:54	25° $\text{♊}$ 23'43	-1°00'15	desc. node	15187 Apr 13 19:07	2° $\text{♊}$ 26'10	
minimum elong	15186 May 04 14:10	24° $\text{♊}$ 59'46	1°00'10				
	15186 May 07 14:42	0° $\text{♊}$		superior conj	15187 Apr 16 11:19	7° $\text{♊}$ 10'54	-0°21'37
max. Earth dist.	15186 May 11 11:43	6° $\text{♊}$ 17'22	1.44172 AU	minimum elong	15187 Apr 16 09:27	7° $\text{♊}$ 02'42	0°21'49
evening rise	15186 May 19 12:49	18° $\text{♊}$ 56'51		max. Earth dist.	15187 Apr 24 00:27	20° $\text{♊}$ 03'56	1.42395 AU
	15186 May 26 19:22	0° $\text{♊}$		evening rise	15187 Apr 29 14:40	29° $\text{♊}$ 08'55	
	15186 Jun 17 20:49	0° $\text{♊}$			15187 Apr 30 03:32	0° $\text{♊}$	
evening max el	15186 Jun 18 19:38	0° $\text{♊}$ 58'44	21°05'34		15187 May 20 09:32	0° $\text{♊}$	
asc. node	15186 Jun 21 03:14	3° $\text{♊}$ 05'54		evening max el	15187 Jun 01 13:31	14° $\text{♊}$ 51'23	22°22'39
retrograde	15186 Jun 27 09:31	5° $\text{♊}$ 56'54		asc. node	15187 Jun 08 00:15	19° $\text{♊}$ 46'13	
evening set	15186 Jul 01 17:43	4° $\text{♊}$ 12'01		retrograde	15187 Jun 11 07:01	20° $\text{♊}$ 33'37	
	15186 Jul 05 12:36	30° $\text{♊}$		evening set	15187 Jun 16 02:31	18° $\text{♊}$ 32'43	
inferior conj	15186 Jul 06 23:21	28° $\text{♊}$ 00'56	3°09'41	inferior conj	15187 Jun 21 09:06	12° $\text{♊}$ 12'17	3°02'34
minimum elong	15186 Jul 06 23:12	28° $\text{♊}$ 01'26	3°08'48	minimum elong	15187 Jun 21 08:03	12° $\text{♊}$ 15'57	3°01'31
min. Earth dist.	15186 Jul 07 09:18	27° $\text{♊}$ 26'20	0.68781 AU	min. Earth dist.	15187 Jun 21 05:56	12° $\text{♊}$ 23'20	0.69075 AU
morning rise	15186 Jul 12 04:26	21° $\text{♊}$ 41'13		morning rise	15187 Jun 26 13:23	5° $\text{♊}$ 59'26	
direct	15186 Jul 17 08:40	19° $\text{♊}$ 26'06		direct	15187 Jul 01 05:15	4° $\text{♊}$ 02'17	
desc. node	15186 Jul 23 21:55	22° $\text{♊}$ 10'56		morning max el	15187 Jul 10 08:56	9° $\text{♊}$ 22'44	21°47'36
morning max el	15186 Jul 27 19:14	25° $\text{♊}$ 38'59	23°14'51	desc. node	15187 Jul 10 19:10	9° $\text{♊}$ 48'41	
	15186 Jul 31 18:21	0° $\text{♊}$			15187 Jul 26 11:18	0° $\text{♊}$	
	15186 Aug 22 06:19	0° $\text{♊}$		morning set	15187 Aug 11 15:58	24° $\text{♊}$ 33'15	
morning set	15186 Aug 31 08:35	14° $\text{♊}$ 36'10			15187 Aug 15 01:16	0° $\text{♊}$	
max. Earth dist.	15186 Sep 04 12:44	21° $\text{♊}$ 40'39	1.39709 AU	max. Earth dist.	15187 Aug 17 15:25	4° $\text{♊}$ 14'42	1.41997 AU
	15186 Sep 09 06:06	0° $\text{♊}$					
				superior conj	15187 Aug 25 07:39	17° $\text{♊}$ 16'48	-1°18'43
superior conj	15186 Sep 12 07:22	5° $\text{♊}$ 33'50	-0°42'44	minimum elong	15187 Aug 25 13:53	17° $\text{♊}$ 44'00	1°18'09
minimum elong	15186 Sep 12 10:35	5° $\text{♊}$ 48'38	0°42'12		15187 Sep 01 10:40	0° $\text{♊}$	
asc. node	15186 Sep 17 04:31	14° $\text{♊}$ 44'08		asc. node	15187 Sep 04 01:06	4° $\text{♊}$ 45'27	
evening rise	15186 Sep 21 18:23	23° $\text{♊}$ 32'14		evening rise	15187 Sep 05 03:54	6° $\text{♊}$ 48'29	
	15186 Sep 25 03:34	0° $\text{♊}$			15187 Sep 19 04:08	0° $\text{♊}$	
evening max el	15186 Oct 07 19:15	19° $\text{♊}$ 33'04	18°37'18	evening max el	15187 Sep 21 04:09	2° $\text{♊}$ 13'32	18°09'46
retrograde	15186 Oct 15 22:09	23° $\text{♊}$ 39'15		retrograde	15187 Sep 28 06:26	5° $\text{♊}$ 51'02	
evening set	15186 Oct 17 20:30	23° $\text{♊}$ 26'07		evening set	15187 Sep 30 10:57	5° $\text{♊}$ 30'51	
desc. node	15186 Oct 19 18:22	22° $\text{♊}$ 49'00		desc. node	15187 Oct 06 15:44	1° $\text{♊}$ 37'23	
inferior conj	15186 Oct 25 20:20	18° $\text{♊}$ 59'28	-1°56'52	inferior conj	15187 Oct 07 16:51	0° $\text{♊}$ 42'50	-0°19'51

minimum elong	15187 Oct 07 16:10	0° $\mathbb{M}$ 44'21	0°19'10	evening set	15188 Sep 12 18:41	18° $\mathbb{A}$ 15'40	
	15187 Oct 08 12:12	30° $\mathbb{R}$ $\mathbb{A}$		inferior conj	15188 Sep 19 08:18	13° $\mathbb{A}$ 08'06	0°58'05
min. Earth dist.	15187 Oct 10 23:02	27° $\mathbb{A}$ 51'59	0.59474 AU	minimum elong	15188 Sep 19 09:55	13° $\mathbb{A}$ 04'01	0°57'37
morning rise	15187 Oct 14 18:03	25° $\mathbb{A}$ 06'18		min. Earth dist.	15188 Sep 22 07:37	10° $\mathbb{A}$ 09'06	0.61765 AU
direct	15187 Oct 21 06:19	23° $\mathbb{A}$ 08'42		desc. node	15188 Sep 22 13:13	9° $\mathbb{A}$ 55'41	
	15187 Nov 03 14:31	0° $\mathbb{M}$		morning rise	15188 Sep 25 22:31	7° $\mathbb{A}$ 05'56	
morning max el	15187 Nov 04 13:08	0° $\mathbb{M}$ 54'04	27°42'23	direct	15188 Oct 02 14:42	4° $\mathbb{A}$ 46'43	
	15187 Nov 25 11:43	0° $\mathbb{A}$		morning max el	15188 Oct 16 18:29	12° $\mathbb{A}$ 43'42	27°59'01
asc. node	15187 Dec 01 02:28	10° $\mathbb{A}$ 23'21			15188 Oct 30 13:16	0° $\mathbb{M}$	
morning set	15187 Dec 06 10:30	21° $\mathbb{A}$ 14'14		asc. node	15188 Nov 16 23:20	0° $\mathbb{A}$ 09'08	
	15187 Dec 10 11:37	0° $\mathbb{B}$			15188 Nov 16 21:29	0° $\mathbb{A}$	
				morning set	15188 Nov 19 11:18	5° $\mathbb{A}$ 12'58	
superior conj	15187 Dec 13 10:33	6° $\mathbb{B}$ 34'34	1°32'05	max. Earth dist.	15188 Nov 24 23:42	16° $\mathbb{A}$ 58'31	1.31506 AU
minimum elong	15187 Dec 13 09:09	6° $\mathbb{B}$ 26'47	1°32'56				
max. Earth dist.	15187 Dec 12 18:27	5° $\mathbb{B}$ 04'36	1.31081 AU	superior conj	15188 Nov 26 20:26	21° $\mathbb{A}$ 04'47	1°20'44
evening rise	15187 Dec 20 03:34	21° $\mathbb{B}$ 25'09		minimum elong	15188 Nov 26 18:22	20° $\mathbb{A}$ 53'17	1°21'25
	15187 Dec 24 06:03	0° $\mathbb{A}$			15188 Nov 30 21:00	0° $\mathbb{B}$	
desc. node	15188 Jan 02 13:58	17° $\mathbb{A}$ 07'36		evening rise	15188 Dec 03 13:39	5° $\mathbb{B}$ 53'43	
	15188 Jan 11 10:23	0° $\mathbb{H}$			15188 Dec 16 00:39	0° $\mathbb{A}$	
evening max el	15188 Jan 17 19:40	7° $\mathbb{H}$ 04'52	26°15'20	desc. node	15188 Dec 19 10:51	5° $\mathbb{A}$ 22'59	
retrograde	15188 Jan 31 18:48	14° $\mathbb{H}$ 10'28		evening max el	15188 Dec 29 09:58	17° $\mathbb{A}$ 36'23	24°48'36
evening set	15188 Feb 07 01:33	12° $\mathbb{H}$ 36'19		retrograde	15189 Jan 12 03:56	24° $\mathbb{A}$ 28'46	
min. Earth dist.	15188 Feb 11 09:01	9° $\mathbb{H}$ 59'04	0.58072 AU	evening set	15189 Jan 17 14:41	23° $\mathbb{A}$ 22'55	
inferior conj	15188 Feb 14 11:02	7° $\mathbb{H}$ 44'26	-3°51'49	min. Earth dist.	15189 Jan 22 21:53	20° $\mathbb{A}$ 36'27	0.56188 AU
minimum elong	15188 Feb 14 19:30	7° $\mathbb{H}$ 29'00	3°48'36	inferior conj	15189 Jan 25 09:08	19° $\mathbb{A}$ 02'38	-5°10'59
morning rise	15188 Feb 22 16:34	3° $\mathbb{H}$ 17'47		minimum elong	15189 Jan 25 17:54	18° $\mathbb{A}$ 48'44	5°08'23
direct	15188 Feb 24 16:23	3° $\mathbb{H}$ 04'35		morning rise	15189 Feb 02 23:22	14° $\mathbb{A}$ 57'24	
asc. node	15188 Feb 27 00:21	3° $\mathbb{H}$ 23'34		direct	15189 Feb 05 04:48	14° $\mathbb{A}$ 43'43	
morning max el	15188 Mar 04 00:28	7° $\mathbb{H}$ 10'59	18°33'30	asc. node	15189 Feb 12 21:45	17° $\mathbb{A}$ 40'48	
	15188 Mar 18 13:05	0° $\mathbb{Y}$		morning max el	15189 Feb 14 22:29	19° $\mathbb{A}$ 27'08	19°29'08
morning set	15188 Mar 19 23:22	2° $\mathbb{Y}$ 44'35			15189 Feb 22 21:03	0° $\mathbb{H}$	
				morning set	15189 Mar 04 01:48	17° $\mathbb{H}$ 12'35	
superior conj	15188 Mar 28 23:27	19° $\mathbb{Y}$ 54'12	0°13'50		15189 Mar 10 10:58	0° $\mathbb{Y}$	
minimum elong	15188 Mar 29 00:24	19° $\mathbb{Y}$ 58'34	0°13'27				
behind sun begin	15188 Mar 28 20:35	19° $\mathbb{Y}$ 40'51		superior conj	15189 Mar 12 03:48	3° $\mathbb{Y}$ 20'50	0°43'40
behind sun end	15188 Mar 29 04:13	20° $\mathbb{Y}$ 16'15		minimum elong	15189 Mar 12 06:08	3° $\mathbb{Y}$ 32'13	0°43'19
desc. node	15188 Mar 30 15:43	22° $\mathbb{Y}$ 59'37		desc. node	15189 Mar 17 12:17	13° $\mathbb{Y}$ 32'35	
	15188 Apr 03 13:21	0° $\mathbb{B}$		max. Earth dist.	15189 Mar 18 15:32	15° $\mathbb{Y}$ 37'58	1.37963 AU
max. Earth dist.	15188 Apr 05 09:09	3° $\mathbb{B}$ 11'25	1.40251 AU	evening rise	15189 Mar 22 08:16	22° $\mathbb{Y}$ 15'36	
evening rise	15188 Apr 09 13:05	10° $\mathbb{B}$ 15'56			15189 Mar 26 20:46	0° $\mathbb{B}$	
	15188 Apr 22 01:35	0° $\mathbb{II}$			15189 Apr 15 22:21	0° $\mathbb{II}$	
evening max el	15188 May 14 04:12	28° $\mathbb{II}$ 45'08	23°43'55	evening max el	15189 Apr 26 17:39	12° $\mathbb{II}$ 39'20	25°02'51
	15188 May 15 11:23	0° $\mathbb{E}$		retrograde	15189 May 08 16:41	19° $\mathbb{II}$ 36'55	
asc. node	15188 May 24 21:20	5° $\mathbb{E}$ 08'46		asc. node	15189 May 11 18:31	18° $\mathbb{II}$ 56'56	
retrograde	15188 May 25 01:44	5° $\mathbb{E}$ 08'54		evening set	15189 May 14 11:20	17° $\mathbb{II}$ 11'20	
evening set	15188 May 30 08:55	2° $\mathbb{E}$ 53'59		min. Earth dist.	15189 May 18 20:51	12° $\mathbb{II}$ 15'53	0.68215 AU
	15188 Jun 02 02:18	30° $\mathbb{R}$ $\mathbb{II}$		inferior conj	15189 May 20 01:50	10° $\mathbb{II}$ 40'39	2°17'04
min. Earth dist.	15188 Jun 04 02:27	27° $\mathbb{II}$ 21'47	0.68885 AU	minimum elong	15189 May 19 23:42	10° $\mathbb{II}$ 47'42	2°15'38
inferior conj	15188 Jun 04 18:33	26° $\mathbb{II}$ 26'42	2°45'05	morning rise	15189 May 25 12:23	4° $\mathbb{II}$ 45'30	
minimum elong	15188 Jun 04 16:47	26° $\mathbb{II}$ 32'44	2°43'48	direct	15189 May 29 04:20	3° $\mathbb{II}$ 28'26	
morning rise	15188 Jun 10 00:39	20° $\mathbb{II}$ 22'08		morning max el	15189 Jun 05 07:16	7° $\mathbb{II}$ 23'00	19°24'11
direct	15188 Jun 14 04:17	18° $\mathbb{II}$ 44'58		desc. node	15189 Jun 13 13:27	17° $\mathbb{II}$ 33'00	
morning max el	15188 Jun 22 04:24	23° $\mathbb{II}$ 17'09	20°29'11	greatest brilliancy	15189 Jun 17 22:50	23° $\mathbb{II}$ 52'25	-0.7m
desc. node	15188 Jun 26 16:21	28° $\mathbb{II}$ 20'46			15189 Jun 22 01:19	0° $\mathbb{E}$	
	15188 Jun 27 23:53	0° $\mathbb{E}$		morning set	15189 Jun 30 05:36	12° $\mathbb{E}$ 28'13	
	15188 Jul 18 17:43	0° $\mathbb{Q}$			15189 Jul 11 12:51	0° $\mathbb{Q}$	
morning set	15188 Jul 21 02:13	3° $\mathbb{Q}$ 37'10		max. Earth dist.	15189 Jul 12 16:38	1° $\mathbb{Q}$ 49'06	1.45257 AU
max. Earth dist.	15188 Jul 30 01:08	17° $\mathbb{Q}$ 42'03	1.43916 AU				
				superior conj	15189 Jul 16 11:38	7° $\mathbb{Q}$ 48'43	-2°10'23
superior conj	15188 Aug 05 09:10	28° $\mathbb{Q}$ 01'04	-1°50'17	minimum elong	15189 Jul 16 16:03	8° $\mathbb{Q}$ 06'20	2°11'03
minimum elong	15188 Aug 05 16:48	28° $\mathbb{Q}$ 32'40	1°50'11		15189 Jul 30 03:26	0° $\mathbb{H}$	
	15188 Aug 06 13:50	0° $\mathbb{H}$		evening rise	15189 Jul 30 18:28	1° $\mathbb{H}$ 02'19	
evening rise	15188 Aug 17 21:39	19° $\mathbb{H}$ 22'35		asc. node	15189 Aug 07 18:18	14° $\mathbb{H}$ 12'39	
asc. node	15188 Aug 20 21:41	24° $\mathbb{H}$ 36'24		evening max el	15189 Aug 18 08:26	28° $\mathbb{H}$ 54'41	18°12'26
	15188 Aug 24 00:52	0° $\mathbb{A}$			15189 Aug 19 13:01	0° $\mathbb{A}$	
evening max el	15188 Sep 03 17:46	15° $\mathbb{A}$ 23'40	18°01'52	retrograde	15189 Aug 24 17:05	2° $\mathbb{A}$ 16'26	
retrograde	15188 Sep 10 06:17	18° $\mathbb{A}$ 46'31		evening set	15189 Aug 27 14:02	1° $\mathbb{A}$ 31'57	



	15189 Aug 29 19:47	30° $\mathring{\text{R}}\mathring{\text{M}}$		asc. node	15190 Jul 25 15:00	3° $\mathring{\text{M}}27'51$	
inferior conj	15189 Sep 02 14:41	26° $\mathring{\text{M}}07'31$	1°55'32	evening max el	15190 Aug 01 21:05	12° $\mathring{\text{M}}38'20$	18°40'37
minimum elong	15189 Sep 02 17:03	26° $\mathring{\text{M}}00'48$	1°54'40	retrograde	15190 Aug 08 10:45	16° $\mathring{\text{M}}11'55$	
min. Earth dist.	15189 Sep 05 02:16	23° $\mathring{\text{M}}19'39$	0.63944 AU	evening set	15190 Aug 11 16:48	15° $\mathring{\text{M}}11'35$	
morning rise	15189 Sep 08 18:18	19° $\mathring{\text{M}}49'38$		inferior conj	15190 Aug 17 08:04	9° $\mathring{\text{M}}32'22$	2°34'40
desc. node	15189 Sep 09 10:43	19° $\mathring{\text{M}}19'14$		minimum elong	15190 Aug 17 10:12	9° $\mathring{\text{M}}25'47$	2°33'48
direct	15189 Sep 15 08:42	17° $\mathring{\text{M}}16'16$		min. Earth dist.	15190 Aug 19 05:53	7° $\mathring{\text{M}}11'07$	0.65844 AU
morning max el	15189 Sep 29 04:18	25° $\mathring{\text{M}}15'43$	27°38'10	morning rise	15190 Aug 23 02:32	3° $\mathring{\text{M}}07'26$	
	15189 Oct 03 12:36	0° $\mathring{\text{L}}$		desc. node	15190 Aug 27 08:14	0° $\mathring{\text{M}}45'34$	
	15189 Oct 24 01:08	0° $\mathring{\text{M}}$		direct	15190 Aug 29 10:45	0° $\mathring{\text{M}}28'55$	
morning set	15189 Nov 03 04:06	18° $\mathring{\text{M}}47'14$		morning max el	15190 Sep 11 15:38	8° $\mathring{\text{M}}17'21$	26°46'20
asc. node	15189 Nov 03 20:08	20° $\mathring{\text{M}}07'24$			15190 Sep 28 14:44	0° $\mathring{\text{L}}$	
max. Earth dist.	15189 Nov 07 22:26	28° $\mathring{\text{M}}33'32$	1.32483 AU		15190 Oct 16 10:45	0° $\mathring{\text{M}}$	
	15189 Nov 08 14:47	0° $\mathring{\text{J}}$		morning set	15190 Oct 17 09:55	1° $\mathring{\text{M}}49'41$	
				max. Earth dist.	15190 Oct 21 11:33	9° $\mathring{\text{M}}46'28$	1.34004 AU
superior conj	15189 Nov 11 02:50	5° $\mathring{\text{J}}21'44$	1°03'25	asc. node	15190 Oct 21 16:52	10° $\mathring{\text{M}}13'00$	
minimum elong	15189 Nov 11 00:30	5° $\mathring{\text{J}}09'08$	1°03'53				
evening rise	15189 Nov 18 00:36	20° $\mathring{\text{J}}22'39$		superior conj	15190 Oct 26 03:23	19° $\mathring{\text{M}}19'14$	0°40'11
	15189 Nov 22 15:22	0° $\mathring{\text{Z}}$		minimum elong	15190 Oct 26 01:26	19° $\mathring{\text{M}}09'05$	0°40'29
desc. node	15189 Dec 06 07:52	22° $\mathring{\text{Z}}36'49$			15190 Oct 31 04:23	0° $\mathring{\text{J}}$	
evening max el	15189 Dec 10 19:29	27° $\mathring{\text{Z}}36'06$	23°06'35	evening rise	15190 Nov 02 10:30	4° $\mathring{\text{J}}46'58$	
	15189 Dec 13 13:17	0° $\mathring{\approx}$			15190 Nov 16 02:37	0° $\mathring{\text{Z}}$	
retrograde	15189 Dec 24 00:25	4° $\mathring{\approx}08'58$		evening max el	15190 Nov 22 09:31	7° $\mathring{\text{Z}}41'06$	21°27'20
evening set	15189 Dec 28 05:30	3° $\mathring{\approx}30'25$		desc. node	15190 Nov 23 04:59	8° $\mathring{\text{Z}}27'29$	
min. Earth dist.	15190 Jan 04 05:19	0° $\mathring{\approx}15'14$	0.54887 AU	retrograde	15190 Dec 04 11:35	13° $\mathring{\text{Z}}40'06$	
	15190 Jan 04 15:57	30° $\mathring{\text{R}}\mathring{\text{Z}}$		evening set	15190 Dec 07 09:22	13° $\mathring{\text{Z}}20'43$	
inferior conj	15190 Jan 05 11:47	29° $\mathring{\text{Z}}31'29$	-5°57'12	inferior conj	15190 Dec 16 03:27	9° $\mathring{\text{Z}}29'24$	-5°47'10
minimum elong	15190 Jan 05 14:47	29° $\mathring{\text{Z}}27'10$	5°56'08	minimum elong	15190 Dec 15 21:19	9° $\mathring{\text{Z}}38'01$	5°45'27
morning rise	15190 Jan 14 01:31	25° $\mathring{\text{Z}}41'24$		min. Earth dist.	15190 Dec 16 11:03	9° $\mathring{\text{Z}}18'44$	0.54423 AU
direct	15190 Jan 16 22:28	25° $\mathring{\text{Z}}21'58$		morning rise	15190 Dec 24 09:48	5° $\mathring{\text{Z}}40'16$	
	15190 Jan 27 09:16	0° $\mathring{\approx}$		direct	15190 Dec 28 06:26	5° $\mathring{\text{Z}}07'55$	
morning max el	15190 Jan 28 06:28	0° $\mathring{\approx}48'57$	20°47'58	morning max el	15191 Jan 10 00:10	11° $\mathring{\text{Z}}17'47$	22°27'21
asc. node	15190 Jan 30 19:08	3° $\mathring{\approx}30'13$		asc. node	15191 Jan 17 16:27	20° $\mathring{\text{Z}}33'58$	
	15190 Feb 15 11:53	0° $\mathring{\text{H}}$			15191 Jan 23 11:22	0° $\mathring{\approx}$	
morning set	15190 Feb 16 09:40	1° $\mathring{\text{H}}52'18$		morning set	15191 Jan 31 20:37	16° $\mathring{\approx}37'14$	
					15191 Feb 07 02:31	0° $\mathring{\text{H}}$	
superior conj	15190 Feb 23 20:09	17° $\mathring{\text{H}}18'52$	1°06'58				
minimum elong	15190 Feb 23 22:45	17° $\mathring{\text{H}}32'08$	1°06'54	superior conj	15191 Feb 07 21:04	1° $\mathring{\text{H}}38'47$	1°23'38
max. Earth dist.	15190 Feb 28 23:43	27° $\mathring{\text{H}}35'30$	1.35785 AU	minimum elong	15191 Feb 07 23:11	1° $\mathring{\text{H}}50'02$	1°23'57
	15190 Mar 02 05:43	0° $\mathring{\text{Y}}$		max. Earth dist.	15191 Feb 11 14:18	9° $\mathring{\text{H}}25'30$	1.33916 AU
desc. node	15190 Mar 04 08:50	4° $\mathring{\text{Y}}01'15$		evening rise	15191 Feb 16 01:10	18° $\mathring{\text{H}}19'46$	
evening rise	15190 Mar 04 21:27	4° $\mathring{\text{Y}}59'48$		desc. node	15191 Feb 19 05:24	24° $\mathring{\text{H}}21'50$	
	15190 Mar 19 17:42	0° $\mathring{\text{Z}}$			15191 Feb 22 07:52	0° $\mathring{\text{Y}}$	
evening max el	15190 Apr 09 07:12	26° $\mathring{\text{Z}}29'51$	26°12'16		15191 Mar 13 22:17	0° $\mathring{\text{Z}}$	
	15190 Apr 13 06:32	0° $\mathring{\text{II}}$		evening max el	15191 Mar 22 20:58	10° $\mathring{\text{Z}}09'28$	27°04'35
retrograde	15190 Apr 22 02:53	3° $\mathring{\text{II}}49'43$		retrograde	15191 Apr 05 07:15	17° $\mathring{\text{Z}}39'09$	
evening set	15190 Apr 28 08:00	1° $\mathring{\text{II}}18'11$		evening set	15191 Apr 11 20:57	15° $\mathring{\text{Z}}07'38$	
asc. node	15190 Apr 28 15:49	1° $\mathring{\text{II}}01'37$		asc. node	15191 Apr 15 13:11	11° $\mathring{\text{Z}}37'03$	
	15190 Apr 29 18:13	30° $\mathring{\text{R}}\mathring{\text{Z}}$		min. Earth dist.	15191 Apr 15 19:05	11° $\mathring{\text{Z}}20'47$	0.65558 AU
min. Earth dist.	15190 May 02 11:04	26° $\mathring{\text{Z}}58'11$	0.67092 AU	inferior conj	15191 Apr 18 01:22	8° $\mathring{\text{Z}}46'24$	0°46'33
inferior conj	15190 May 04 04:53	24° $\mathring{\text{Z}}49'00$	1°37'52	minimum elong	15191 Apr 18 00:10	8° $\mathring{\text{Z}}49'50$	0°45'35
minimum elong	15190 May 04 02:52	24° $\mathring{\text{Z}}55'17$	1°36'28	morning rise	15191 Apr 24 04:57	3° $\mathring{\text{Z}}14'15$	
morning rise	15190 May 09 22:34	19° $\mathring{\text{Z}}04'30$		direct	15191 Apr 27 00:22	2° $\mathring{\text{Z}}31'42$	
direct	15190 May 13 03:42	18° $\mathring{\text{Z}}05'59$		morning max el	15191 May 03 08:05	5° $\mathring{\text{Z}}49'13$	18°02'27
morning max el	15190 May 19 17:06	21° $\mathring{\text{Z}}35'50$	18°34'55	desc. node	15191 May 18 07:17	27° $\mathring{\text{Z}}16'06$	
	15190 May 26 12:55	0° $\mathring{\text{II}}$			15191 May 19 23:36	0° $\mathring{\text{II}}$	
desc. node	15190 May 31 10:26	7° $\mathring{\text{II}}14'04$		morning set	15191 May 21 17:52	2° $\mathring{\text{II}}52'01$	
morning set	15190 Jun 09 22:32	22° $\mathring{\text{II}}01'27$					
	15190 Jun 15 00:42	0° $\mathring{\text{S}}$		superior conj	15191 Jun 05 09:26	26° $\mathring{\text{II}}21'03$	-1°54'25
				minimum elong	15191 Jun 05 00:59	25° $\mathring{\text{II}}47'44$	1°54'43
superior conj	15190 Jun 25 22:29	17° $\mathring{\text{S}}01'29$	-2°12'19		15191 Jun 07 17:14	0° $\mathring{\text{S}}$	
minimum elong	15190 Jun 25 19:19	16° $\mathring{\text{S}}49'12$	2°13'12	max. Earth dist.	15191 Jun 08 07:42	0° $\mathring{\text{S}}56'35$	1.45800 AU
max. Earth dist.	15190 Jun 25 11:33	16° $\mathring{\text{S}}18'52$	1.45902 AU	evening rise	15191 Jun 21 12:06	21° $\mathring{\text{S}}22'28$	
	15190 Jul 04 05:28	0° $\mathring{\text{Q}}$			15191 Jul 07 02:56	0° $\mathring{\text{Q}}$	
evening rise	15190 Jul 11 14:31	11° $\mathring{\text{Q}}39'01$		greatest brilliancy	15191 Jul 04 10:00	11° $\mathring{\text{Q}}00'54$	-0.7m
greatest brilliancy	15190 Jul 19 09:03	23° $\mathring{\text{Q}}56'50$	-0.8m	asc. node	15191 Jul 12 11:47	22° $\mathring{\text{Q}}14'41$	
	15190 Jul 23 07:04	0° $\mathring{\text{M}}$		evening max el	15191 Jul 16 05:23	26° $\mathring{\text{Q}}28'47$	19°25'29

	15191 Jul 21 02:43	0°♍		evening rise	15192 May 30 22:56	0°♌45'56	
retrograde	15191 Jul 23 08:13	0°♍26'42			15192 Jun 19 19:48	0°♌	
	15191 Jul 25 11:50	30°♌♌		asc. node	15192 Jun 28 08:39	10°♌23'07	
evening set	15191 Jul 26 23:59	29°♌09'07		evening max el	15192 Jun 28 07:55	10°♌21'17	20°25'26
inferior conj	15191 Aug 01 09:13	23°♌16'32	2°58'19	retrograde	15192 Jul 06 07:09	14°♌54'45	
minimum elong	15191 Aug 01 10:36	23°♌12'00	2°57'30	evening set	15192 Jul 10 09:17	13°♌19'31	
min. Earth dist.	15191 Aug 02 16:48	21°♌32'35	0.67353 AU	inferior conj	15192 Jul 15 15:27	7°♌14'49	3°08'53
morning rise	15191 Aug 06 20:38	16°♌50'49		minimum elong	15192 Jul 15 15:52	7°♌13'22	3°08'03
direct	15191 Aug 12 19:24	14°♌16'02		min. Earth dist.	15192 Jul 16 09:06	6°♌14'17	0.68400 AU
desc. node	15191 Aug 14 05:41	14°♌23'54		morning rise	15192 Jul 20 22:09	0°♌52'20	
morning max el	15191 Aug 25 02:37	21°♌37'26	25°32'28		15192 Jul 22 00:14	30°♌♌	
	15191 Sep 01 09:47	0°♍		direct	15192 Jul 26 09:27	28°♌♌28'38	
	15191 Sep 21 20:14	0°♌		desc. node	15192 Jul 31 03:04	29°♌♌55'05	
morning set	15191 Sep 30 01:06	14°♌11'52			15192 Jul 31 06:30	0°♌	
max. Earth dist.	15191 Oct 03 15:14	20°♌49'50	1.36013 AU	morning max el	15192 Aug 06 13:15	5°♌08'53	24°06'20
	15191 Oct 08 09:04	0°♍			15192 Aug 25 18:00	0°♍	
asc. node	15191 Oct 08 13:31	0°♍22'00		morning set	15192 Sep 10 21:28	25°♍44'36	
					15192 Sep 13 08:17	0°♌	
superior conj	15191 Oct 09 19:17	2°♍50'24	0°11'22	max. Earth dist.	15192 Sep 14 14:10	2°♌12'05	1.38335 AU
minimum elong	15191 Oct 09 18:36	2°♍46'55	0°11'40				
behind sun begin	15191 Oct 09 14:14	2°♍25'04		superior conj	15192 Sep 21 23:09	15°♌47'30	-0°22'06
behind sun end	15191 Oct 09 22:58	3°♍08'48		minimum elong	15192 Sep 22 00:41	15°♌54'48	0°21'39
evening rise	15191 Oct 17 17:19	19°♍01'36		asc. node	15192 Sep 24 10:07	20°♌31'05	
	15191 Oct 23 05:36	0°♌			15192 Sep 29 05:57	0°♍	
evening max el	15191 Nov 04 12:03	18°♌22'58	20°04'06	evening rise	15192 Sep 30 18:32	3°♍00'52	
desc. node	15191 Nov 10 02:12	22°♌29'04		evening max el	15192 Oct 17 04:52	29°♍54'42	19°02'32
retrograde	15191 Nov 14 23:52	23°♌36'37			15192 Oct 17 06:59	0°♌	
evening set	15191 Nov 17 02:07	23°♌25'06		retrograde	15192 Oct 26 02:26	4°♌23'20	
inferior conj	15191 Nov 25 22:06	19°♌27'13	-4°39'07	desc. node	15192 Oct 26 23:30	4°♌20'52	
minimum elong	15191 Nov 25 12:01	19°♌42'23	4°35'23	evening set	15192 Oct 27 23:28	4°♌12'12	
min. Earth dist.	15191 Nov 27 17:50	18°♌21'29	0.54908 AU	inferior conj	15192 Nov 05 08:44	29°♍57'02	-2°57'58
morning rise	15191 Dec 03 20:55	15°♌20'07		minimum elong	15192 Nov 05 01:21	0°♌09'47	2°54'24
direct	15191 Dec 08 17:49	14°♌28'28			15192 Nov 05 07:01	30°♌♍	
morning max el	15191 Dec 22 09:27	21°♌13'29	24°17'03	min. Earth dist.	15192 Nov 08 04:49	28°♍00'00	0.56248 AU
	15191 Dec 29 22:20	0°♌		morning rise	15192 Nov 13 00:31	25°♍16'21	
asc. node	15192 Jan 04 13:41	8°♌33'55		direct	15192 Nov 18 17:09	24°♍00'41	
	15192 Jan 15 17:32	0°♌			15192 Dec 01 12:02	0°♌	
morning set	15192 Jan 16 08:35	1°♌20'30		morning max el	15192 Dec 02 20:03	1°♌13'41	25°59'03
				asc. node	15192 Dec 21 10:49	27°♌16'12	
superior conj	15192 Jan 23 03:39	16°♌11'24	1°33'52		15192 Dec 22 22:25	0°♌	
minimum elong	15192 Jan 23 04:53	16°♌18'07	1°34'31	morning set	15192 Dec 30 19:48	15°♌57'32	
max. Earth dist.	15192 Jan 25 12:41	21°♌20'47	1.32472 AU		15193 Jan 06 04:36	0°♌	
	15192 Jan 29 15:21	0°♌					
evening rise	15192 Jan 30 15:57	2°♌05'29		superior conj	15193 Jan 06 13:40	0°♌50'27	1°37'54
desc. node	15192 Feb 06 01:59	14°♌28'47		minimum elong	15193 Jan 06 13:50	0°♌51'26	1°38'46
	15192 Feb 15 05:09	0°♌		max. Earth dist.	15193 Jan 07 17:20	3°♌24'03	1.31518 AU
evening max el	15192 Mar 04 09:38	23°♌26'07	27°32'33	evening rise	15193 Jan 13 15:01	16°♌10'09	
	15192 Mar 13 17:18	0°♌			15193 Jan 20 14:31	0°♌	
retrograde	15192 Mar 18 04:36	0°♌55'24		desc. node	15193 Jan 22 22:39	4°♌16'17	
	15192 Mar 22 10:01	30°♌♌			15193 Feb 09 03:03	0°♌	
evening set	15192 Mar 24 23:50	28°♌30'35		evening max el	15193 Feb 14 18:51	6°♌06'18	27°29'45
min. Earth dist.	15192 Mar 28 18:47	25°♌13'31	0.63674 AU	retrograde	15193 Feb 28 17:53	13°♌29'09	
inferior conj	15192 Mar 31 12:28	22°♌25'06	-0°17'41	evening set	15193 Mar 07 13:57	11°♌18'16	
minimum elong	15192 Mar 31 13:01	22°♌23'40	0°17'43	min. Earth dist.	15193 Mar 11 08:34	8°♌25'03	0.61536 AU
asc. node	15192 Apr 01 10:36	21°♌28'43		inferior conj	15193 Mar 14 10:53	5°♌36'35	-1°34'34
morning rise	15192 Apr 07 04:36	17°♌07'48		minimum elong	15193 Mar 14 14:14	5°♌28'56	1°33'11
direct	15192 Apr 09 15:34	16°♌37'59		asc. node	15193 Mar 19 08:02	1°♌43'47	
morning max el	15192 Apr 16 01:34	19°♌54'49	17°47'16	morning rise	15193 Mar 21 17:39	0°♌37'13	
	15192 Apr 23 16:21	0°♌		direct	15193 Mar 23 21:49	0°♌16'42	
morning set	15192 May 02 15:57	14°♌58'55		morning max el	15193 Mar 30 18:32	3°♌44'01	17°50'00
desc. node	15192 May 04 04:00	17°♌32'29		morning set	15193 Apr 15 11:31	28°♌05'44	
	15192 May 11 13:51	0°♌			15193 Apr 16 13:02	0°♌	
superior conj	15192 May 15 12:06	6°♌26'35	-1°22'05	desc. node	15193 Apr 21 00:39	7°♌58'38	
minimum elong	15192 May 15 04:20	5°♌54'59	1°21'58	superior conj	15193 Apr 26 14:05	17°♌37'06	-0°43'43
max. Earth dist.	15192 May 21 02:54	15°♌27'21	1.44963 AU	minimum elong	15193 Apr 26 10:03	17°♌19'54	0°43'44
	15192 May 30 10:57	0°♌		max. Earth dist.	15193 May 03 18:44	29°♌35'10	1.43480 AU

	15193 May 04 00:51	0°♊		evening rise	15194 Apr 21 01:49	21°♎06'06	
evening rise	15193 May 10 15:35	10°♊31'13			15194 Apr 26 16:27	0°♊	
	15193 May 23 13:38	0°♎			15194 May 17 18:22	0°♎	
evening max el	15193 Jun 11 04:29	24°♎13'14	21°37'26	evening max el	15194 May 24 20:36	8°♎06'01	22°57'00
asc. node	15193 Jun 15 05:35	27°♎39'59		asc. node	15194 Jun 02 02:37	13°♎49'52	
retrograde	15193 Jun 20 05:42	29°♎29'55		retrograde	15194 Jun 04 02:20	14°♎07'15	
evening set	15193 Jun 24 18:45	27°♎37'46		evening set	15194 Jun 09 02:46	11°♎59'56	
inferior conj	15193 Jun 30 00:29	21°♎22'20	3°07'58	inferior conj	15194 Jun 14 10:22	5°♎35'58	2°56'27
minimum elong	15193 Jun 29 23:56	21°♎24'13	3°07'00	minimum elong	15194 Jun 14 08:59	5°♎40'46	2°55'18
min. Earth dist.	15193 Jun 30 04:43	21°♎07'33	0.68967 AU	min. Earth dist.	15194 Jun 14 01:38	6°♎06'17	0.69050 AU
morning rise	15193 Jul 05 04:57	15°♎05'32			15194 Jun 18 23:51	30°♊	
direct	15193 Jul 10 03:52	12°♎57'58		morning rise	15194 Jun 19 15:07	29°♊26'24	
desc. node	15193 Jul 18 00:22	16°♎53'07		direct	15194 Jun 24 01:36	27°♊37'50	
morning max el	15193 Jul 20 01:12	18°♎48'22	22°37'04		15194 Jun 29 18:07	0°♎	
	15193 Jul 29 10:35	0°♏		morning max el	15194 Jul 02 17:11	2°♎37'15	21°12'49
	15193 Aug 18 20:56	0°♐		desc. node	15194 Jul 04 21:35	4°♎56'16	
morning set	15193 Aug 22 18:54	6°♐17'41			15194 Jul 23 07:36	0°♏	
max. Earth dist.	15193 Aug 27 14:13	14°♐16'34	1.40713 AU	morning set	15194 Aug 02 16:25	15°♏49'56	
				max. Earth dist.	15194 Aug 09 19:29	27°♏12'52	1.42872 AU
superior conj	15193 Sep 04 10:41	27°♐59'41	-0°58'10		15194 Aug 11 12:19	0°♐	
minimum elong	15193 Sep 04 15:13	28°♐20'07	0°57'35				
	15193 Sep 05 13:17	0°♑		superior conj	15194 Aug 17 01:37	9°♐18'02	-1°33'02
asc. node	15193 Sep 11 06:41	10°♑36'01		minimum elong	15194 Aug 17 08:49	9°♐48'43	1°32'36
evening rise	15193 Sep 14 10:55	16°♑35'36		evening rise	15194 Aug 28 14:23	29°♐35'27	
	15193 Sep 21 18:12	0°♒			15194 Aug 28 19:51	0°♑	
evening max el	15193 Sep 30 09:03	12°♒12'08	18°23'02	asc. node	15194 Aug 29 03:16	0°♑33'20	
retrograde	15193 Oct 08 00:19	16°♒04'52		evening max el	15194 Sep 13 20:25	25°♑06'10	18°04'05
evening set	15193 Oct 10 00:47	15°♒49'18		retrograde	15194 Sep 20 15:44	28°♑35'53	
desc. node	15193 Oct 13 20:53	14°♒03'56		evening set	15194 Sep 22 23:22	28°♑11'42	
inferior conj	15193 Oct 17 16:58	11°♒13'13	-1°13'42	inferior conj	15194 Sep 29 22:02	23°♑15'18	0°15'46
minimum elong	15193 Oct 17 14:08	11°♒18'56	1°12'00	minimum elong	15194 Sep 29 22:33	23°♑14'06	0°15'51
min. Earth dist.	15193 Oct 20 23:00	8°♒36'33	0.58196 AU	transit middle	15194 Sep 29 22:33	23°♑14'06	0°15'51
morning rise	15193 Oct 24 24:00	5°♒55'09		transit begin	15194 Sep 29 21:52	23°♑15'41	
direct	15193 Oct 31 06:43	4°♒12'31		transit end	15194 Sep 29 23:13	23°♑12'31	
morning max el	15193 Nov 14 13:53	11°♒48'28	27°15'05	desc. node	15194 Sep 30 18:19	22°♑27'35	
	15193 Nov 28 19:20	0°♓		min. Earth dist.	15194 Oct 03 02:16	20°♑18'06	0.60450 AU
asc. node	15193 Dec 08 07:50	16°♓29'25		morning rise	15194 Oct 06 18:34	17°♑26'22	
morning set	15193 Dec 15 04:29	0°♐23'24		direct	15194 Oct 13 09:15	15°♑18'28	
	15193 Dec 15 00:05	0°♐		morning max el	15194 Oct 27 15:32	23°♑10'38	27°54'11
					15194 Nov 02 18:11	0°♒	
superior conj	15193 Dec 22 01:07	15°♐30'14	1°35'55		15194 Nov 22 00:33	0°♓	
minimum elong	15193 Dec 22 00:15	15°♐25'24	1°36'50	asc. node	15194 Nov 25 04:45	6°♓05'15	
max. Earth dist.	15193 Dec 22 00:59	15°♐29'34	1.31082 AU	morning set	15194 Nov 29 08:45	14°♓33'31	
evening rise	15193 Dec 28 19:57	0°♐27'48		max. Earth dist.	15194 Dec 05 08:05	27°♓29'33	1.31189 AU
	15193 Dec 28 14:45	0°♐			15194 Dec 06 11:08	0°♐	
desc. node	15194 Jan 09 19:25	23°♐36'39					
	15194 Jan 13 17:22	0°♑		superior conj	15194 Dec 06 12:08	0°♐05'38	1°28'00
evening max el	15194 Jan 27 21:56	17°♑58'34	26°52'20	minimum elong	15194 Dec 06 10:25	29°♓56'01	1°28'48
retrograde	15194 Feb 10 22:01	25°♑11'55		evening rise	15194 Dec 13 04:43	14°♐53'44	
evening set	15194 Feb 17 12:03	23°♑22'22			15194 Dec 20 14:30	0°♐	
min. Earth dist.	15194 Feb 21 11:57	20°♑43'12	0.59299 AU	desc. node	15194 Dec 27 16:16	12°♐19'30	
inferior conj	15194 Feb 24 16:56	18°♑11'04	-3°01'01	evening max el	15195 Jan 09 16:59	28°♐58'12	25°41'25
minimum elong	15194 Feb 24 23:43	17°♑57'37	2°58'13		15195 Jan 10 19:55	0°♑	
morning rise	15194 Mar 04 14:49	13°♑32'25		retrograde	15195 Jan 23 15:02	5°♑59'19	
asc. node	15194 Mar 06 05:27	13°♑18'15		evening set	15195 Jan 29 14:15	4°♑37'04	
direct	15194 Mar 06 14:48	13°♑17'40		min. Earth dist.	15195 Feb 03 05:50	1°♑57'53	0.57206 AU
morning max el	15194 Mar 14 07:25	17°♑06'43	18°11'49	inferior conj	15195 Feb 06 03:14	29°♐58'56	-4°27'52
	15194 Mar 23 10:19	0°♒		minimum elong	15195 Feb 06 12:23	29°♐43'13	4°24'40
morning set	15194 Mar 29 22:43	11°♒55'02			15195 Feb 06 02:37	30°♒	
desc. node	15194 Apr 07 21:16	28°♒30'38		morning rise	15195 Feb 14 13:25	25°♐41'48	
				direct	15195 Feb 16 14:19	25°♐29'04	
superior conj	15194 Apr 08 14:56	29°♒50'15	-0°06'02	asc. node	15195 Feb 21 02:52	26°♐35'54	
minimum elong	15194 Apr 08 14:26	29°♒47'58	0°06'20	morning max el	15195 Feb 25 12:07	29°♐50'36	18°54'27
behind sun begin	15194 Apr 08 07:26	29°♒16'30			15195 Feb 25 15:56	0°♑	
behind sun end	15194 Apr 08 21:25	0°♓19'22		morning set	15195 Mar 13 20:40	26°♑11'49	
	15194 Apr 08 17:06	0°♓			15195 Mar 15 19:07	0°♒	
max. Earth dist.	15194 Apr 16 05:34	13°♓05'36	1.41508 AU				

superior conj	15195 Mar 22 10:31	12° $\Upsilon$ 53'11	0°27'14	minimum elong	15196 Mar 04 22:59	26° $\text{H}$ 46'52	0°54'07
minimum elong	15195 Mar 22 12:12	13° $\Upsilon$ 01'13	0°26'50		15196 Mar 06 14:02	0° $\Upsilon$	
desc. node	15195 Mar 25 17:51	19° $\Upsilon$ 04'03		max. Earth dist.	15196 Mar 10 19:00	8° $\Upsilon$ 04'46	1.37013 AU
max. Earth dist.	15195 Mar 29 12:22	25° $\Upsilon$ 52'44	1.39270 AU	desc. node	15196 Mar 11 14:26	9° $\Upsilon$ 35'34	
	15195 Mar 31 20:53	0° $\text{B}$		evening rise	15196 Mar 14 12:37	14° $\Upsilon$ 56'09	
evening rise	15195 Apr 02 09:18	2° $\text{B}$ 36'15			15196 Mar 23 08:43	0° $\text{B}$	
	15195 Apr 19 21:35	0° $\Pi$			15196 Apr 13 13:56	0° $\Pi$	
evening max el	15195 May 07 10:33	22° $\Pi$ 00'09	24°18'15	evening max el	15196 Apr 19 00:10	5° $\Pi$ 53'52	25°34'04
retrograde	15195 May 18 19:43	28° $\Pi$ 40'01		retrograde	15196 May 01 08:38	13° $\Pi$ 01'50	
asc. node	15195 May 19 23:46	28° $\Pi$ 34'07		asc. node	15196 May 05 21:01	11° $\Pi$ 37'56	
evening set	15195 May 24 07:41	26° $\Pi$ 20'18		evening set	15196 May 07 07:51	10° $\Pi$ 33'23	
min. Earth dist.	15195 May 28 21:38	21° $\Pi$ 03'33	0.68654 AU	min. Earth dist.	15196 May 11 14:34	5° $\Pi$ 53'02	0.67793 AU
inferior conj	15195 May 29 19:10	19° $\Pi$ 50'53	2°34'33	inferior conj	15196 May 13 00:55	4° $\Pi$ 02'49	2°01'52
minimum elong	15195 May 29 17:12	19° $\Pi$ 57'33	2°33'11	minimum elong	15196 May 12 22:45	4° $\Pi$ 09'47	2°00'25
morning rise	15195 Jun 04 02:49	13° $\Pi$ 49'55			15196 May 16 10:54	30° $\text{R}$ $\text{B}$	
direct	15195 Jun 08 01:21	12° $\Pi$ 21'20		morning rise	15196 May 18 14:08	28° $\text{B}$ 11'47	
morning max el	15195 Jun 15 15:40	16° $\Pi$ 36'25	19°59'39	direct	15196 May 22 01:27	27° $\text{B}$ 02'40	
desc. node	15195 Jun 21 18:44	23° $\Pi$ 46'48			15196 May 28 02:18	0° $\Pi$	
	15195 Jun 26 07:51	0° $\text{E}$		morning max el	15196 May 28 21:31	0° $\Pi$ 44'58	19°01'11
morning set	15195 Jul 12 21:20	24° $\text{E}$ 41'30		desc. node	15196 Jun 07 15:46	13° $\Pi$ 11'59	
	15195 Jul 16 07:52	0° $\Omega$		greatest brilliancy	15196 Jun 11 01:09	18° $\Pi$ 13'28	-0.7m
max. Earth dist.	15195 Jul 23 07:23	10° $\Omega$ 57'02	1.44569 AU		15196 Jun 18 18:09	0° $\text{E}$	
				morning set	15196 Jun 21 04:09	3° $\text{E}$ 43'51	
superior conj	15195 Jul 28 17:06	19° $\Omega$ 37'28	-2°00'40	max. Earth dist.	15196 Jul 05 00:52	25° $\text{E}$ 16'23	1.45628 AU
minimum elong	15195 Jul 29 00:04	20° $\Omega$ 05'45	2°00'53				
	15195 Aug 04 00:25	0° $\text{M}$		superior conj	15196 Jul 07 11:28	29° $\text{E}$ 06'09	-2°13'42
evening rise	15195 Aug 10 23:51	11° $\text{M}$ 47'34		minimum elong	15196 Jul 07 12:55	29° $\text{E}$ 11'52	2°14'34
asc. node	15195 Aug 15 23:53	20° $\text{M}$ 18'37			15196 Jul 08 01:09	0° $\Omega$	
	15195 Aug 21 22:51	0° $\text{E}$		evening rise	15196 Jul 22 10:20	23° $\Omega$ 00'29	
evening max el	15195 Aug 28 10:58	8° $\text{E}$ 26'36	18°04'12		15196 Jul 26 17:36	0° $\text{M}$	
retrograde	15195 Sep 03 20:37	11° $\text{E}$ 47'01		asc. node	15196 Aug 01 20:33	9° $\text{M}$ 46'32	
evening set	15195 Sep 06 12:38	11° $\text{E}$ 10'41		evening max el	15196 Aug 11 01:11	22° $\text{M}$ 04'05	18°22'19
inferior conj	15195 Sep 12 20:20	5° $\text{E}$ 55'56	1°24'50	retrograde	15196 Aug 17 10:43	25° $\text{M}$ 28'55	
minimum elong	15195 Sep 12 22:25	5° $\text{E}$ 50'22	1°24'08	evening set	15196 Aug 20 11:36	24° $\text{M}$ 37'44	
min. Earth dist.	15195 Sep 15 15:11	2° $\text{E}$ 59'21	0.62723 AU	inferior conj	15196 Aug 26 07:49	19° $\text{M}$ 06'44	2°14'11
desc. node	15195 Sep 17 15:47	1° $\text{E}$ 03'17		minimum elong	15196 Aug 26 10:10	18° $\text{M}$ 59'47	2°13'18
	15195 Sep 18 22:31	30° $\text{R}$ $\text{M}$		min. Earth dist.	15196 Aug 28 13:37	16° $\text{M}$ 28'52	0.64800 AU
morning rise	15195 Sep 19 05:57	29° $\text{M}$ 46'07		morning rise	15196 Sep 01 07:21	12° $\text{M}$ 45'15	
direct	15195 Sep 25 22:14	27° $\text{M}$ 19'31		desc. node	15196 Sep 03 13:17	11° $\text{M}$ 14'52	
	15195 Oct 03 14:08	0° $\text{E}$		direct	15196 Sep 07 19:40	10° $\text{M}$ 08'42	
morning max el	15195 Oct 09 22:57	5° $\text{E}$ 18'54	27°54'18	morning max el	15196 Sep 21 09:32	18° $\text{M}$ 04'18	27°19'25
	15195 Oct 28 14:49	0° $\text{M}$			15196 Oct 01 10:33	0° $\text{E}$	
asc. node	15195 Nov 12 01:37	25° $\text{M}$ 57'05			15196 Oct 20 12:54	0° $\text{M}$	
morning set	15195 Nov 13 06:30	28° $\text{M}$ 22'45		morning set	15196 Oct 26 18:59	11° $\text{M}$ 44'02	
	15195 Nov 14 01:31	0° $\text{A}$		asc. node	15196 Oct 28 22:23	15° $\text{M}$ 58'50	
max. Earth dist.	15195 Nov 18 10:51	9° $\text{A}$ 15'39	1.31851 AU	max. Earth dist.	15196 Oct 31 05:51	20° $\text{M}$ 41'22	1.33071 AU
superior conj	15195 Nov 20 20:51	14° $\text{A}$ 31'24	1°14'08	superior conj	15196 Nov 04 01:03	28° $\text{M}$ 40'47	0°54'18
minimum elong	15195 Nov 20 18:36	14° $\text{A}$ 19'03	1°14'43	minimum elong	15196 Nov 03 22:48	28° $\text{M}$ 28'45	0°54'40
evening rise	15195 Nov 27 15:25	29° $\text{A}$ 23'22			15196 Nov 04 15:52	0° $\text{A}$	
	15195 Nov 27 22:13	0° $\text{B}$		evening rise	15196 Nov 11 02:10	13° $\text{A}$ 51'03	
	15195 Dec 14 10:02	0° $\approx$			15196 Nov 19 03:15	0° $\text{B}$	
desc. node	15195 Dec 14 13:14	0° $\approx$ 11'13		desc. node	15196 Nov 30 10:17	16° $\text{B}$ 52'26	
evening max el	15195 Dec 22 04:43	9° $\approx$ 13'49	24°06'08	evening max el	15196 Dec 02 14:56	19° $\text{B}$ 10'50	22°23'01
retrograde	15196 Jan 04 18:38	15° $\approx$ 58'36		retrograde	15196 Dec 15 09:44	25° $\text{B}$ 30'38	
evening set	15196 Jan 09 17:31	15° $\approx$ 05'12		evening set	15196 Dec 19 01:14	25° $\text{B}$ 01'26	
min. Earth dist.	15196 Jan 15 16:17	12° $\approx$ 08'48	0.55543 AU	min. Earth dist.	15196 Dec 26 22:15	21° $\text{B}$ 28'39	0.54583 AU
inferior conj	15196 Jan 17 16:39	10° $\approx$ 55'50	-5°36'15	inferior conj	15196 Dec 27 13:06	21° $\text{B}$ 07'48	-6°00'33
minimum elong	15196 Jan 17 23:46	10° $\approx$ 45'05	5°34'22	minimum elong	15196 Dec 27 12:08	21° $\text{B}$ 09'09	5°59'37
morning rise	15196 Jan 26 07:47	6° $\approx$ 57'47		morning rise	15197 Jan 05 00:09	17° $\text{B}$ 20'30	
direct	15196 Jan 28 18:34	6° $\approx$ 42'21		direct	15197 Jan 08 06:53	16° $\text{B}$ 56'19	
morning max el	15196 Feb 08 04:28	11° $\approx$ 44'23	19°59'48	morning max el	15197 Jan 20 05:55	22° $\text{B}$ 41'33	21°28'06
asc. node	15196 Feb 08 00:16	11° $\approx$ 34'19		asc. node	15197 Jan 24 21:38	27° $\text{B}$ 57'07	
	15196 Feb 20 14:44	0° $\text{H}$			15197 Jan 26 09:56	0° $\approx$	
morning set	15196 Feb 26 01:46	10° $\text{H}$ 45'46		morning set	15197 Feb 09 11:12	25° $\approx$ 28'18	
					15197 Feb 11 14:50	0° $\text{H}$	
superior conj	15196 Mar 04 20:26	26° $\text{H}$ 34'08	0°54'22				

superior conj	15197 Feb 16 16:46	10° $\text{H}$ 42'00	1°14'51	morning set	15198 Jan 24 22:47	10° $\approx$ 13'00	
minimum elong	15197 Feb 16 19:14	10° $\text{H}$ 54'49	1°14'56				
max. Earth dist.	15197 Feb 21 05:50	19° $\text{H}$ 57'51	1.34947 AU	superior conj	15198 Jan 31 20:23	25° $\approx$ 08'02	1°28'45
evening rise	15197 Feb 25 08:23	27° $\text{H}$ 56'05		minimum elong	15198 Jan 31 22:10	25° $\approx$ 17'35	1°29'13
desc. node	15197 Feb 26 11:00	0° $\text{Y}$ 01'01			15198 Feb 03 03:05	0° $\text{H}$	
	15197 Feb 26 10:47	0° $\text{Y}$		max. Earth dist.	15198 Feb 03 23:44	1° $\text{H}$ 48'47	1.33243 AU
	15197 Mar 16 15:35	0° $\text{B}$		evening rise	15198 Feb 08 17:08	11° $\text{H}$ 27'21	
evening max el	15197 Apr 01 13:57	19° $\text{B}$ 40'50	26°37'04	desc. node	15198 Feb 13 07:35	20° $\text{H}$ 16'09	
retrograde	15197 Apr 14 16:16	27° $\text{B}$ 05'32			15198 Feb 18 19:11	0° $\text{Y}$	
evening set	15197 Apr 21 01:28	24° $\text{B}$ 33'12			15198 Mar 12 01:02	0° $\text{B}$	
asc. node	15197 Apr 22 18:20	23° $\text{B}$ 00'48		evening max el	15198 Mar 15 03:14	3° $\text{B}$ 11'05	27°19'50
min. Earth dist.	15197 Apr 25 02:16	20° $\text{B}$ 27'49	0.66489 AU	retrograde	15198 Mar 28 17:44	10° $\text{B}$ 42'01	
inferior conj	15197 Apr 27 01:28	18° $\text{B}$ 06'51	1°17'38	evening set	15198 Apr 04 10:25	8° $\text{B}$ 12'05	
minimum elong	15197 Apr 26 23:41	18° $\text{B}$ 12'11	1°16'22	min. Earth dist.	15198 Apr 08 06:48	4° $\text{B}$ 38'48	0.64792 AU
morning rise	15197 May 02 23:02	12° $\text{B}$ 27'28		asc. node	15198 Apr 09 15:42	3° $\text{B}$ 09'43	
direct	15197 May 05 24:00	11° $\text{B}$ 35'58		inferior conj	15198 Apr 10 18:17	1° $\text{B}$ 56'38	0°20'53
morning max el	15197 May 12 09:49	14° $\text{B}$ 58'42	18°19'05	minimum elong	15198 Apr 10 17:42	1° $\text{B}$ 58'14	0°20'15
	15197 May 23 13:51	0° $\text{II}$			15198 Apr 12 14:13	30° $\text{R}$ $\text{Y}$	
desc. node	15197 May 25 12:41	3° $\text{II}$ 02'33		morning rise	15198 Apr 17 02:56	26° $\text{Y}$ 30'49	
morning set	15197 Jun 01 07:36	13° $\text{II}$ 48'24		direct	15198 Apr 19 18:34	25° $\text{Y}$ 54'10	
	15197 Jun 11 13:24	0° $\text{E}$		morning max el	15198 Apr 26 02:17	29° $\text{Y}$ 09'54	17°53'55
					15198 Apr 26 21:59	0° $\text{B}$	
superior conj	15197 Jun 16 20:08	8° $\text{E}$ 15'48	-2°06'58	desc. node	15198 May 12 09:29	23° $\text{B}$ 11'02	
minimum elong	15197 Jun 16 14:02	7° $\text{E}$ 52'00	2°07'39	morning set	15198 May 13 14:40	25° $\text{B}$ 12'13	
max. Earth dist.	15197 Jun 17 21:13	9° $\text{E}$ 53'40	1.45949 AU		15198 May 16 12:10	0° $\text{II}$	
	15197 Jun 30 18:45	0° $\text{Q}$					
evening rise	15197 Jul 02 20:05	3° $\text{Q}$ 12'37		superior conj	15198 May 27 12:13	17° $\text{II}$ 50'55	-1°41'58
greatest brilliancy	15197 Jul 12 23:27	18° $\text{Q}$ 57'29	-0.8m	minimum elong	15198 May 27 03:24	17° $\text{II}$ 15'51	1°42'02
asc. node	15197 Jul 19 17:17	28° $\text{Q}$ 50'55		max. Earth dist.	15198 May 31 17:09	24° $\text{II}$ 29'47	1.45520 AU
	15197 Jul 20 13:40	0° $\text{np}$			15198 Jun 04 05:38	0° $\text{E}$	
evening max el	15197 Jul 25 12:14	5° $\text{np}$ 51'33	18°57'41	evening rise	15198 Jun 12 11:06	12° $\text{E}$ 41'51	
retrograde	15197 Aug 01 06:28	9° $\text{np}$ 34'03			15198 Jun 23 21:39	0° $\text{Q}$	
evening set	15197 Aug 04 16:37	8° $\text{np}$ 26'21		greatest brilliancy	15198 Jun 26 23:25	4° $\text{Q}$ 30'58	-0.6m
inferior conj	15197 Aug 10 04:53	2° $\text{np}$ 41'01	2°46'26	asc. node	15198 Jul 06 14:06	17° $\text{Q}$ 22'36	
minimum elong	15197 Aug 10 06:44	2° $\text{np}$ 35'07	2°45'34	evening max el	15198 Jul 08 18:03	19° $\text{Q}$ 42'33	19°49'16
min. Earth dist.	15197 Aug 11 20:32	0° $\text{np}$ 34'54	0.66535 AU	retrograde	15198 Jul 16 04:55	23° $\text{Q}$ 54'53	
	15197 Aug 12 07:48	30° $\text{R}$ $\text{Q}$		evening set	15198 Jul 20 00:56	22° $\text{Q}$ 29'51	
morning rise	15197 Aug 15 20:06	26° $\text{Q}$ 15'07		inferior conj	15198 Jul 25 08:30	16° $\text{Q}$ 31'47	3°04'18
desc. node	15197 Aug 21 10:43	23° $\text{Q}$ 38'48		minimum elong	15198 Jul 25 09:29	16° $\text{Q}$ 28'28	3°03'28
direct	15197 Aug 22 00:28	23° $\text{Q}$ 37'33		min. Earth dist.	15198 Jul 26 10:05	15° $\text{Q}$ 05'46	0.67848 AU
	15197 Sep 02 14:03	0° $\text{np}$		morning rise	15198 Jul 30 17:36	10° $\text{Q}$ 06'47	
morning max el	15197 Sep 03 21:04	1° $\text{np}$ 16'07	26°17'10	direct	15198 Aug 05 11:32	7° $\text{Q}$ 36'01	
	15197 Sep 25 11:40	0° $\text{L}$		desc. node	15198 Aug 08 08:08	8° $\text{Q}$ 07'37	
morning set	15197 Oct 09 19:05	24° $\text{L}$ 30'45		morning max el	15198 Aug 17 08:00	14° $\text{Q}$ 42'15	24°56'50
	15197 Oct 12 16:28	0° $\text{ml}$			15198 Aug 29 20:43	0° $\text{np}$	
max. Earth dist.	15197 Oct 13 15:08	1° $\text{ml}$ 50'02	1.34814 AU		15198 Sep 18 08:10	0° $\text{L}$	
asc. node	15197 Oct 15 19:05	6° $\text{ml}$ 06'31		morning set	15198 Sep 22 02:50	6° $\text{L}$ 33'25	
				max. Earth dist.	15198 Sep 25 15:56	12° $\text{L}$ 57'09	1.36972 AU
superior conj	15197 Oct 18 22:18	12° $\text{ml}$ 28'02	0°28'37				
minimum elong	15197 Oct 18 20:46	12° $\text{ml}$ 20'11	0°28'54	superior conj	15198 Oct 02 09:31	25° $\text{L}$ 45'30	-0°02'22
evening rise	15197 Oct 26 11:03	28° $\text{ml}$ 12'18		minimum elong	15198 Oct 02 09:39	25° $\text{L}$ 46'09	0°02'01
	15197 Oct 27 07:46	0° $\text{X}$		behind sun begin	15198 Oct 02 03:09	25° $\text{L}$ 14'17	
evening max el	15197 Nov 14 09:26	29° $\text{X}$ 27'46	20°49'18	behind sun end	15198 Oct 02 16:09	26° $\text{L}$ 18'06	
	15197 Nov 14 22:44	0° $\text{Z}$		asc. node	15198 Oct 02 15:43	26° $\text{L}$ 16'00	
desc. node	15197 Nov 17 07:25	1° $\text{Z}$ 59'43			15198 Oct 04 12:56	0° $\text{ml}$	
retrograde	15197 Nov 25 20:03	5° $\text{Z}$ 08'49		evening rise	15198 Oct 10 15:49	12° $\text{ml}$ 21'07	
evening set	15197 Nov 28 07:38	4° $\text{Z}$ 53'56			15198 Oct 19 23:49	0° $\text{X}$	
inferior conj	15197 Dec 07 04:08	1° $\text{Z}$ 00'56	-5°24'20	evening max el	15198 Oct 27 18:10	10° $\text{X}$ 30'41	19°35'10
minimum elong	15197 Dec 06 19:21	1° $\text{Z}$ 13'31	5°21'40	desc. node	15198 Nov 04 04:38	15° $\text{X}$ 08'03	
min. Earth dist.	15197 Dec 08 03:48	0° $\text{Z}$ 27'03	0.54519 AU	retrograde	15198 Nov 06 13:28	15° $\text{X}$ 24'44	
	15197 Dec 08 22:53	30° $\text{R}$ $\text{X}$		evening set	15198 Nov 08 11:44	15° $\text{X}$ 14'13	
morning rise	15197 Dec 15 07:08	27° $\text{X}$ 06'42		inferior conj	15198 Nov 17 04:27	11° $\text{X}$ 10'02	-3°58'22
direct	15197 Dec 19 14:15	26° $\text{X}$ 27'07		minimum elong	15198 Nov 16 18:57	11° $\text{X}$ 25'06	3°54'22
	15197 Dec 29 08:17	0° $\text{Z}$		min. Earth dist.	15198 Nov 19 12:22	9° $\text{X}$ 41'22	0.55382 AU
morning max el	15198 Jan 01 19:02	2° $\text{Z}$ 52'30	23°13'45	morning rise	15198 Nov 25 00:17	6° $\text{X}$ 49'30	
asc. node	15198 Jan 11 18:54	15° $\text{Z}$ 26'17		direct	15198 Nov 30 06:04	5° $\text{X}$ 48'06	
	15198 Jan 19 23:55	0° $\approx$		morning max el	15198 Dec 14 03:59	12° $\text{X}$ 46'39	25°02'32

	15198 Dec 27 10:16	0°♁		asc. node	15199 Dec 16 13:10	22°♁42'47	
asc. node	15198 Dec 29 16:04	3°♁45'57			15199 Dec 20 07:49	0°♁	
morning set	15199 Jan 09 10:40	24°♁54'40		morning set	15199 Dec 24 21:01	9°♁27'35	
	15199 Jan 11 18:47	0°♁					
superior conj	15199 Jan 16 04:44	9°♁44'54	1°36'19	superior conj	15199 Dec 31 15:37	24°♁25'19	1°37'47
minimum elong	15199 Jan 16 05:32	9°♁49'17	1°37'05	minimum elong	15199 Dec 31 15:20	24°♁23'46	1°38'42
max. Earth dist.	15199 Jan 18 00:53	13°♁47'09	1.32000 AU	max. Earth dist.	15200 Jan 01 07:10	25°♁52'09	1.31267 AU
evening rise	15199 Jan 23 11:48	25°♁22'30		evening rise	15200 Jan 03 03:46	0°♁	
	15199 Jan 25 18:42	0°♁		evening rise	15200 Jan 07 13:39	9°♁33'53	
desc. node	15199 Jan 31 04:12	10°♁15'58		desc. node	15200 Jan 18 00:53	29°♁53'10	
	15199 Feb 12 06:39	0°♁		evening max el	15200 Jan 18 02:27	0°♁	
evening max el	15199 Feb 25 14:37	16°♁13'51	27°35'26	evening max el	15200 Feb 07 21:45	28°♁35'49	27°18'14
retrograde	15199 Mar 11 12:09	23°♁41'57		retrograde	15200 Feb 09 10:41	0°♁	
evening set	15199 Mar 18 08:18	21°♁22'02		retrograde	15200 Feb 21 21:51	5°♁54'47	
min. Earth dist.	15199 Mar 22 02:32	18°♁15'59	0.62782 AU	evening set	15200 Feb 28 16:03	3°♁52'29	
inferior conj	15199 Mar 25 00:27	15°♁25'22	-0°48'49	min. Earth dist.	15200 Mar 03 12:10	1°♁06'19	0.60584 AU
minimum elong	15199 Mar 25 02:04	15°♁21'22	0°48'19	inferior conj	15200 Mar 04 19:35	30°♁	
asc. node	15199 Mar 27 13:06	13°♁03'37		minimum elong	15200 Mar 06 16:24	28°♁22'52	-2°10'24
morning rise	15199 Mar 31 22:38	10°♁15'29		asc. node	15200 Mar 06 21:12	28°♁12'33	2°08'23
direct	15199 Apr 03 06:20	9°♁50'12		morning rise	15200 Mar 13 10:32	23°♁47'20	
morning max el	15199 Apr 09 20:02	13°♁10'26	17°46'11	morning rise	15200 Mar 14 05:39	23°♁31'41	
	15199 Apr 21 10:48	0°♁		direct	15200 Mar 16 07:32	23°♁14'06	
morning set	15199 Apr 25 22:42	7°♁47'06		morning max el	15200 Mar 23 11:41	26°♁49'40	17°56'46
desc. node	15199 Apr 29 06:12	13°♁32'23		morning set	15200 Mar 26 06:39	0°♁	
				morning set	15200 Apr 08 01:37	21°♁14'12	
superior conj	15199 May 08 00:32	28°♁23'54	-1°06'06	desc. node	15200 Apr 12 21:04	0°♁	
minimum elong	15199 May 07 18:12	27°♁57'42	1°05'59	desc. node	15200 Apr 15 02:51	4°♁01'28	
	15199 May 08 23:48	0°♁		superior conj	15200 Apr 18 12:34	10°♁01'48	-0°27'22
max. Earth dist.	15199 May 14 10:34	8°♁50'31	1.44399 AU	minimum elong	15200 Apr 18 10:09	9°♁51'18	0°27'30
evening rise	15199 May 22 22:28	22°♁09'48		max. Earth dist.	15200 Apr 26 00:16	22°♁43'28	1.42696 AU
	15199 May 28 01:56	0°♁			15200 Apr 30 11:52	0°♁	
evening max el	15199 Jun 18 11:34	0°♁		evening rise	15200 May 01 21:42	2°♁14'32	
asc. node	15199 Jun 21 17:56	3°♁34'44	20°54'50		15200 May 20 12:13	0°♁	
retrograde	15199 Jun 23 10:58	5°♁10'47		evening max el	15200 Jun 03 12:32	17°♁27'25	22°10'46
evening set	15199 Jun 30 03:54	8°♁26'13		asc. node	15200 Jun 09 07:57	22°♁01'20	
inferior conj	15199 Jul 04 10:30	6°♁43'54		retrograde	15200 Jun 13 01:41	23°♁02'48	
minimum elong	15199 Jul 09 16:12	0°♁34'29	3°09'50	evening set	15200 Jun 17 19:33	21°♁04'04	
min. Earth dist.	15199 Jul 09 16:12	0°♁34'29	3°08'57	inferior conj	15200 Jun 23 01:50	14°♁44'59	3°04'21
morning rise	15199 Jul 10 04:10	29°♁52'59	0.68699 AU	minimum elong	15200 Jun 23 00:55	14°♁48'12	3°03'19
direct	15199 Jul 10 02:09	30°♁		min. Earth dist.	15200 Jun 23 00:35	14°♁49'20	0.69065 AU
desc. node	15199 Jul 14 21:37	24°♁13'57		morning rise	15200 Jun 28 06:07	8°♁31'08	
morning max el	15199 Jul 20 03:44	21°♁56'23		direct	15200 Jun 28 06:07	8°♁31'08	
	15199 Jul 26 05:30	24°♁18'19		desc. node	15200 Jul 02 23:50	6°♁31'10	
morning set	15199 Jul 30 18:47	28°♁16'34	23°28'09	morning max el	15200 Jul 12 02:47	11°♁46'19	
	15199 Aug 01 10:13	0°♁		morning max el	15200 Jul 12 07:55	11°♁59'07	22°00'10
morning set	15199 Aug 23 12:58	0°♁		morning set	15200 Jul 26 15:08	0°♁	
max. Earth dist.	15199 Sep 03 13:52	17°♁41'39		morning set	15200 Aug 14 00:52	27°♁47'54	
	15199 Sep 07 14:01	24°♁32'21	1.39352 AU	max. Earth dist.	15200 Aug 15 09:44	0°♁	
	15199 Sep 10 16:21	0°♁		max. Earth dist.	15200 Aug 19 16:06	6°♁59'20	1.41674 AU
superior conj	15199 Sep 15 06:59	8°♁24'43	-0°37'16	superior conj	15200 Aug 27 10:20	20°♁15'38	-1°13'24
minimum elong	15199 Sep 15 09:44	8°♁37'30	0°36'44	minimum elong	15200 Aug 27 16:09	20°♁41'15	1°12'49
asc. node	15199 Sep 19 12:18	16°♁23'39			15200 Sep 01 20:47	0°♁	
evening rise	15199 Sep 24 13:42	26°♁10'42		asc. node	15200 Sep 05 08:53	6°♁26'05	
	15199 Sep 26 13:10	0°♁		evening rise	15200 Sep 07 01:09	9°♁32'11	
evening max el	15199 Oct 10 16:25	22°♁23'24	18°43'12		15200 Sep 18 22:34	0°♁	
retrograde	15199 Oct 18 23:46	26°♁34'54		evening max el	15200 Sep 23 00:16	4°♁58'17	18°12'37
evening set	15199 Oct 20 21:38	26°♁22'23		retrograde	15200 Sep 30 05:32	8°♁39'19	
desc. node	15199 Oct 22 01:58	26°♁02'49		evening set	15200 Oct 02 08:58	8°♁20'24	
inferior conj	15199 Oct 29 00:02	21°♁58'51	-2°12'43	desc. node	15200 Oct 07 23:22	5°♁03'39	
minimum elong	15199 Oct 28 18:36	22°♁08'51	2°09'53	inferior conj	15200 Oct 09 17:29	3°♁35'19	-0°33'26
min. Earth dist.	15199 Nov 01 02:16	19°♁42'48	0.57019 AU	minimum elong	15200 Oct 09 16:17	3°♁37'53	0°32'31
morning rise	15199 Nov 05 12:21	17°♁02'08		min. Earth dist.	15200 Oct 12 23:53	0°♁47'39	0.59135 AU
direct	15199 Nov 11 11:58	15°♁34'44			15200 Oct 13 23:48	30°♁	
morning max el	15199 Nov 25 17:06	22°♁58'24	26°35'20	morning rise	15200 Oct 16 20:14	28°♁03'23	
	15199 Dec 02 00:11	0°♁		direct	15200 Oct 23 07:17	26°♁09'40	
					15200 Nov 02 02:06	0°♁	

morning max el	15200 Nov 06 14:15	3°♄52'29	27°36'35	direct	15201 Oct 05 14:07	7°♄39'05	
	15200 Nov 25 18:29	0°♄		morning max el	15201 Oct 19 18:49	15°♄35'14	27°59'02
asc. node	15200 Dec 02 10:10	12°♄06'57			15201 Oct 31 14:06	0°♄	
morning set	15200 Dec 08 04:06	23°♄47'35			15201 Nov 18 08:41	0°♄	
	15200 Dec 11 01:07	0°♄		asc. node	15201 Nov 19 07:05	1°♄50'19	
max. Earth dist.	15200 Dec 14 15:14	7°♄57'34	1.31067 AU	morning set	15201 Nov 22 05:53	7°♄49'26	
				max. Earth dist.	15201 Nov 27 21:08	19°♄53'24	1.31404 AU
superior conj	15200 Dec 15 03:07	9°♄04'06	1°33'17				
minimum elong	15200 Dec 15 01:52	8°♄57'04	1°34'10	superior conj	15201 Nov 29 13:23	23°♄35'41	1°22'51
evening rise	15200 Dec 21 20:30	23°♄56'13		minimum elong	15201 Nov 29 11:23	23°♄24'36	1°23'33
	15200 Dec 24 17:32	0°♄			15201 Dec 02 10:34	0°♄	
desc. node	15201 Jan 03 21:42	18°♄59'14		evening rise	15201 Dec 06 06:18	8°♄24'07	
	15201 Jan 11 04:39	0°♄			15201 Dec 17 05:38	0°♄	
evening max el	15201 Jan 19 21:48	10°♄06'33	26°25'54	desc. node	15201 Dec 21 18:36	7°♄22'25	
retrograde	15201 Feb 02 21:05	17°♄13'57		evening max el	15202 Jan 01 13:13	20°♄44'49	25°02'56
evening set	15201 Feb 09 06:07	15°♄35'39		retrograde	15202 Jan 15 08:28	27°♄39'50	
min. Earth dist.	15201 Feb 13 11:17	12°♄58'25	0.58386 AU	evening set	15202 Jan 20 22:48	26°♄29'37	
inferior conj	15201 Feb 16 14:26	10°♄38'49	-3°38'38	min. Earth dist.	15202 Jan 26 01:18	23°♄45'41	0.56433 AU
minimum elong	15201 Feb 16 22:31	10°♄23'45	3°35'28	inferior conj	15202 Jan 28 15:44	22°♄04'54	-5°00'33
morning rise	15201 Feb 24 18:07	6°♄09'02		minimum elong	15202 Jan 29 00:47	21°♄50'16	4°57'44
direct	15201 Feb 26 17:51	5°♄55'31		morning rise	15202 Feb 06 05:13	17°♄56'51	
asc. node	15201 Feb 28 07:58	6°♄04'30		direct	15202 Feb 08 09:08	17°♄43'36	
morning max el	15201 Mar 06 21:32	9°♄56'56	18°27'13	asc. node	15202 Feb 15 05:23	20°♄06'34	
	15201 Mar 19 23:11	0°♄		morning max el	15202 Feb 17 21:29	22°♄21'02	19°19'26
morning set	15201 Mar 22 17:54	5°♄16'56			15202 Feb 23 23:27	0°♄	
				morning set	15202 Mar 06 19:18	19°♄42'35	
superior conj	15201 Mar 31 21:54	22°♄37'31	0°08'47		15202 Mar 11 23:01	0°♄	
minimum elong	15201 Mar 31 22:31	22°♄40'19	0°08'25				
behind sun begin	15201 Mar 31 16:22	22°♄11'59		superior conj	15202 Mar 15 00:10	5°♄58'52	0°39'32
behind sun end	15201 Apr 01 04:40	23°♄08'36		minimum elong	15202 Mar 15 02:22	6°♄09'32	0°39'09
desc. node	15201 Apr 01 23:28	24°♄34'33		desc. node	15202 Mar 19 20:03	15°♄08'04	
	15201 Apr 04 23:48	0°♄		max. Earth dist.	15202 Mar 21 16:00	18°♄29'18	1.38297 AU
max. Earth dist.	15201 Apr 08 09:39	5°♄57'33	1.40584 AU	evening rise	15202 Mar 25 09:11	25°♄05'36	
evening rise	15201 Apr 12 16:56	13°♄13'02			15202 Mar 28 05:51	0°♄	
	15201 Apr 23 07:47	0°♄			15202 Apr 16 23:13	0°♄	
	15201 May 15 19:59	0°♄		evening max el	15202 Apr 29 17:01	15°♄15'19	24°51'29
evening max el	15201 May 17 03:31	1°♄20'53	23°31'45	retrograde	15202 May 11 12:39	22°♄08'55	
asc. node	15201 May 27 05:02	7°♄37'03		asc. node	15202 May 14 02:13	21°♄40'54	
retrograde	15201 May 27 20:57	7°♄38'59		evening set	15202 May 17 05:35	19°♄44'38	
evening set	15201 Jun 02 02:26	5°♄25'50		min. Earth dist.	15202 May 21 16:09	14°♄43'43	0.68345 AU
	15201 Jun 06 17:49	30°♄11'20		inferior conj	15202 May 22 19:14	13°♄14'03	2°22'02
inferior conj	15201 Jun 07 11:29	28°♄59'19	2°48'25	minimum elong	15202 May 22 17:08	13°♄21'03	2°20'38
minimum elong	15201 Jun 07 09:49	29°♄05'03	2°47'11	morning rise	15202 May 28 04:57	7°♄17'21	
min. Earth dist.	15201 Jun 06 21:16	29°♄48'10	0.68945 AU	direct	15202 May 31 22:33	5°♄57'25	
morning rise	15201 Jun 12 17:10	22°♄53'30		morning max el	15202 Jun 08 04:16	9°♄57'01	19°32'53
direct	15201 Jun 16 22:33	21°♄13'26		desc. node	15202 Jun 15 21:06	19°♄18'27	
morning max el	15201 Jun 25 02:29	25°♄52'16	20°40'06	greatest brilliancy	15202 Jun 20 20:08	26°♄22'53	-0.6m
desc. node	15201 Jun 28 24:00	0°♄11'20			15202 Jun 23 06:52	0°♄	
	15201 Jun 28 20:14	0°♄		morning set	15202 Jul 03 16:51	15°♄47'55	
	15201 Jul 20 00:42	0°♄			15202 Jul 12 20:54	0°♄	
morning set	15201 Jul 24 13:42	6°♄58'12		max. Earth dist.	15202 Jul 15 15:24	4°♄20'57	1.45104 AU
max. Earth dist.	15201 Aug 02 00:48	20°♄19'22	1.43663 AU				
	15201 Aug 07 22:54	0°♄		superior conj	15202 Jul 19 21:06	11°♄04'13	-2°08'24
superior conj	15201 Aug 08 15:23	1°♄08'35	-1°46'03	minimum elong	15202 Jul 20 02:22	11°♄25'17	2°08'57
minimum elong	15201 Aug 08 23:02	1°♄40'30	1°45'52		15202 Jul 31 11:48	0°♄	
evening rise	15201 Aug 20 21:36	22°♄13'22		evening rise	15202 Aug 02 21:54	4°♄02'01	
asc. node	15201 Aug 23 05:29	26°♄18'48		asc. node	15202 Aug 10 02:08	15°♄57'39	
	15201 Aug 25 08:10	0°♄			15202 Aug 19 17:29	0°♄	
evening max el	15201 Sep 06 13:23	18°♄04'08	18°01'51	evening max el	15202 Aug 21 04:06	1°♄32'26	18°09'41
retrograde	15201 Sep 13 03:25	21°♄28'30		retrograde	15202 Aug 27 12:45	4°♄53'27	
evening set	15201 Sep 15 14:31	20°♄59'31		evening set	15202 Aug 30 08:23	4°♄11'13	
inferior conj	15201 Sep 22 06:22	15°♄54'41	0°47'35		15202 Sep 04 09:01	30°♄	
minimum elong	15201 Sep 22 07:45	15°♄51'15	0°47'14	inferior conj	15202 Sep 05 10:45	28°♄49'18	1°48'01
desc. node	15201 Sep 24 20:51	13°♄20'00		minimum elong	15202 Sep 05 13:05	28°♄42'48	1°47'11
min. Earth dist.	15201 Sep 25 07:06	12°♄55'31	0.61424 AU	min. Earth dist.	15202 Sep 08 00:21	25°♄58'30	0.63639 AU
morning rise	15201 Sep 28 22:13	9°♄55'32		morning rise	15202 Sep 11 15:52	22°♄33'06	
				desc. node	15202 Sep 11 18:19	22°♄28'26	

direct	15202 Sep 18 06:54	20° $\cap$ 01'06		min. Earth dist.	15203 Aug 22 02:39	9° $\cap$ 44'58	0.65589 AU
morning max el	15202 Oct 02 04:07	28° $\cap$ 01'16	27°43'21	morning rise	15203 Aug 25 22:26	5° $\cap$ 46'46	
	15202 Oct 04 01:42	0° $\underline{\cap}$		desc. node	15203 Aug 29 15:46	3° $\cap$ 35'02	
	15202 Oct 25 08:57	0° $\cap$		direct	15203 Sep 01 07:53	3° $\cap$ 08'22	
morning set	15202 Nov 06 00:02	21° $\cap$ 27'29		morning max el	15203 Sep 14 15:14	10° $\cap$ 59'07	26°55'38
asc. node	15202 Nov 06 03:55	21° $\cap$ 46'54			15203 Sep 29 18:07	0° $\underline{\cap}$	
	15202 Nov 10 03:45	0° $\times$			15203 Oct 17 21:24	0° $\cap$	
max. Earth dist.	15202 Nov 10 20:53	1° $\times$ 30'33	1.32296 AU	morning set	15203 Oct 20 07:41	4° $\cap$ 35'20	
				asc. node	15203 Oct 24 00:39	11° $\cap$ 52'00	
superior conj	15202 Nov 13 20:26	7° $\times$ 54'49	1°06'27	max. Earth dist.	15203 Oct 24 11:28	12° $\cap$ 46'22	1.33745 AU
minimum elong	15202 Nov 13 18:06	7° $\times$ 42'10	1°06'55				
evening rise	15202 Nov 20 17:12	22° $\times$ 52'55		superior conj	15203 Oct 28 22:01	21° $\cap$ 55'57	0°44'06
	15202 Nov 24 02:15	0° $\underline{\times}$		minimum elong	15203 Oct 28 19:58	21° $\cap$ 45'11	0°44'25
desc. node	15202 Dec 08 15:35	24° $\underline{\times}$ 46'42			15203 Nov 01 17:07	0° $\times$	
	15202 Dec 13 03:52	0° $\approx$		evening rise	15203 Nov 05 03:24	7° $\times$ 18'31	
evening max el	15202 Dec 13 23:00	0° $\approx$ 47'22	23°22'09		15203 Nov 17 02:12	0° $\underline{\times}$	
retrograde	15202 Dec 27 06:52	7° $\approx$ 23'56		evening max el	15203 Nov 25 11:47	10° $\underline{\times}$ 49'24	21°41'21
evening set	15202 Dec 31 16:38	6° $\approx$ 41'48		desc. node	15203 Nov 25 12:39	10° $\underline{\times}$ 51'32	
min. Earth dist.	15203 Jan 07 09:30	3° $\approx$ 32'03	0.55025 AU	retrograde	15203 Dec 07 18:33	16° $\underline{\times}$ 54'01	
inferior conj	15203 Jan 08 20:57	2° $\approx$ 40'36	-5°53'26	evening set	15203 Dec 10 20:40	16° $\underline{\times}$ 32'30	
minimum elong	15203 Jan 09 01:13	2° $\approx$ 34'24	5°52'14	inferior conj	15203 Dec 19 13:24	12° $\underline{\times}$ 41'14	-5°52'43
	15203 Jan 13 22:03	30° $\cap$ $\underline{\times}$		minimum elong	15203 Dec 19 08:30	12° $\underline{\times}$ 48'06	5°51'18
morning rise	15203 Jan 17 11:19	28° $\underline{\times}$ 48'46		min. Earth dist.	15203 Dec 19 15:14	12° $\underline{\times}$ 38'40	0.54432 AU
direct	15203 Jan 20 05:11	28° $\underline{\times}$ 30'39		morning rise	15203 Dec 27 20:59	8° $\underline{\times}$ 53'09	
	15203 Jan 26 02:23	0° $\approx$		direct	15203 Dec 31 14:01	8° $\underline{\times}$ 23'05	
morning max el	15203 Jan 31 07:41	3° $\approx$ 51'24	20°34'47	morning max el	15204 Jan 13 03:12	14° $\underline{\times}$ 26'55	22°11'32
asc. node	15203 Feb 02 02:47	5° $\approx$ 43'10		asc. node	15204 Jan 20 00:06	22° $\underline{\times}$ 36'43	
	15203 Feb 16 23:22	0° $\times$			15204 Jan 24 17:22	0° $\approx$	
morning set	15203 Feb 19 02:30	4° $\times$ 21'02		morning set	15204 Feb 03 13:07	19° $\approx$ 05'28	
					15204 Feb 08 15:45	0° $\times$	
superior conj	15203 Feb 26 14:57	19° $\times$ 52'50	1°03'50				
minimum elong	15203 Feb 26 17:33	20° $\times$ 06'06	1°03'43	superior conj	15204 Feb 10 14:44	4° $\times$ 09'46	1°21'30
	15203 Mar 03 17:22	0° $\cap$		minimum elong	15204 Feb 10 16:57	4° $\times$ 21'31	1°21'46
max. Earth dist.	15203 Mar 03 23:30	0° $\cap$ 29'33	1.36092 AU	max. Earth dist.	15204 Feb 14 13:01	12° $\times$ 19'48	1.34171 AU
desc. node	15203 Mar 06 16:36	5° $\cap$ 37'42		evening rise	15204 Feb 18 21:39	20° $\times$ 59'01	
evening rise	15203 Mar 07 19:54	7° $\cap$ 43'57		desc. node	15204 Feb 21 13:10	25° $\times$ 59'49	
	15203 Mar 20 23:46	0° $\times$			15204 Feb 23 17:38	0° $\cap$	
evening max el	15203 Apr 12 06:32	29° $\times$ 06'54	26°02'50		15204 Mar 13 20:55	0° $\times$	
	15203 Apr 13 04:42	0° $\cap$		evening max el	15204 Mar 24 20:24	12° $\times$ 48'57	26°58'11
retrograde	15203 Apr 24 23:37	6° $\cap$ 24'17		retrograde	15204 Apr 07 04:48	20° $\times$ 17'25	
asc. node	15203 Apr 30 23:29	4° $\cap$ 01'04		evening set	15204 Apr 13 17:23	17° $\times$ 45'36	
evening set	15203 May 01 03:12	3° $\cap$ 53'25		asc. node	15204 Apr 16 20:48	14° $\times$ 47'31	
	15203 May 04 20:42	30° $\cap$ $\times$		min. Earth dist.	15204 Apr 17 16:12	13° $\times$ 53'59	0.65814 AU
min. Earth dist.	15203 May 05 07:11	29° $\times$ 28'05	0.67287 AU	inferior conj	15204 Apr 19 20:39	11° $\times$ 22'49	0°55'11
inferior conj	15203 May 06 23:03	27° $\times$ 23'36	1°44'34	minimum elong	15204 Apr 19 19:16	11° $\times$ 26'49	0°54'07
minimum elong	15203 May 06 20:58	27° $\times$ 30'07	1°43'11	morning rise	15204 Apr 25 22:34	5° $\times$ 48'36	
morning rise	15203 May 12 15:29	21° $\times$ 37'15		direct	15204 Apr 28 19:25	5° $\times$ 03'47	
direct	15203 May 15 22:10	20° $\times$ 36'05		morning max el	15204 May 05 03:22	8° $\times$ 22'13	18°06'09
morning max el	15203 May 22 13:05	24° $\times$ 08'52	18°41'10	desc. node	15204 May 19 14:55	28° $\times$ 54'46	
	15203 May 27 12:45	0° $\cap$			15204 May 20 07:06	0° $\cap$	
desc. node	15203 Jun 02 18:03	8° $\cap$ 55'38		morning set	15204 May 23 21:41	5° $\cap$ 49'56	
morning set	15203 Jun 13 06:37	25° $\cap$ 11'44					
	15203 Jun 16 08:28	0° $\underline{\cap}$		superior conj	15204 Jun 07 19:08	29° $\cap$ 35'17	-1°58'14
max. Earth dist.	15203 Jun 28 09:47	18° $\underline{\cap}$ 47'50	1.45858 AU	minimum elong	15204 Jun 07 11:05	29° $\cap$ 03'39	1°58'38
					15204 Jun 08 01:26	0° $\underline{\cap}$	
superior conj	15203 Jun 29 09:26	20° $\underline{\cap}$ 20'10	-2°13'21	max. Earth dist.	15204 Jun 10 06:04	3° $\underline{\cap}$ 25'58	1.45865 AU
minimum elong	15203 Jun 29 07:29	20° $\underline{\cap}$ 12'33	2°14'15	evening rise	15204 Jun 23 21:59	24° $\underline{\cap}$ 37'47	
	15203 Jul 05 13:28	0° $\cap$			15204 Jun 27 09:33	0° $\cap$	
evening rise	15203 Jul 14 21:40	14° $\cap$ 48'06		greatest brilliancy	15204 Jul 06 03:47	13° $\cap$ 20'25	-0.7m
greatest brilliancy	15203 Jul 21 14:34	25° $\cap$ 29'01	-0.9m	asc. node	15204 Jul 13 19:32	24° $\cap$ 08'25	
	15203 Jul 24 11:35	0° $\cap$		evening max el	15204 Jul 18 02:19	29° $\cap$ 05'08	19°17'49
asc. node	15203 Jul 27 22:48	5° $\cap$ 16'40			15204 Jul 19 01:31	0° $\cap$	
evening max el	15203 Aug 04 17:15	15° $\cap$ 15'06	18°35'19	retrograde	15204 Jul 25 02:36	2° $\cap$ 58'32	
retrograde	15203 Aug 11 05:34	18° $\cap$ 45'54		evening set	15204 Jul 28 16:57	1° $\cap$ 43'27	
evening set	15203 Aug 14 10:15	17° $\cap$ 48'01			15204 Jul 30 16:41	30° $\cap$ $\cap$	
inferior conj	15203 Aug 20 02:42	12° $\cap$ 10'59	2°29'45	inferior conj	15204 Aug 03 02:52	25° $\cap$ 52'46	2°55'36
minimum elong	15203 Aug 20 04:55	12° $\cap$ 04'13	2°28'52	minimum elong	15204 Aug 03 04:23	25° $\cap$ 47'49	2°54'46



min. Earth dist.	15204 Aug 04 12:32	24°02'55	0.67156 AU	evening set	15205 Jul 13 02:04	15°02'40	
morning rise	15204 Aug 08 15:13	19°02'57		inferior conj	15205 Jul 18 08:30	9°02'49'32	3°08'02
direct	15204 Aug 14 15:31	16°02'51'16		minimum elong	15205 Jul 18 09:05	9°02'47'35	3°07'12
desc. node	15204 Aug 15 13:12	16°02'54'24		min. Earth dist.	15205 Jul 19 04:10	8°02'42'26	0.68272 AU
morning max el	15204 Aug 27 02:18	24°02'17'17	25°44'31	morning rise	15205 Jul 23 15:46	3°02'26'22	
	15204 Sep 01 05:34	0°02'		direct	15205 Jul 29 04:47	1°02'00'47	
	15204 Sep 22 03:57	0°02'		desc. node	15205 Aug 02 10:36	2°02'10'16	
morning set	15204 Oct 02 01:16	17°02'04'12		morning max el	15205 Aug 09 13:04	7°02'48'02	24°19'36
max. Earth dist.	15204 Oct 05 16:35	23°02'51'06	1.35693 AU		15205 Aug 26 22:28	0°02'	
	15204 Oct 08 20:50	0°02'		morning set	15205 Sep 14 00:43	28°02'45'10	
asc. node	15204 Oct 09 21:18	2°02'00'57			15205 Sep 14 17:57	0°02'	
				max. Earth dist.	15205 Sep 17 15:57	5°02'09'25	1.37982 AU
superior conj	15204 Oct 11 15:24	5°02'31'46	0°16'04				
minimum elong	15204 Oct 11 14:27	5°02'26'59	0°16'22	superior conj	15205 Sep 24 21:16	18°02'34'31	-0°16'48
evening rise	15204 Oct 19 10:48	21°02'35'17		minimum elong	15205 Sep 24 22:24	18°02'39'57	0°16'22
	15204 Oct 23 14:47	0°02'		asc. node	15205 Sep 26 17:55	22°02'10'27	
evening max el	15204 Nov 06 12:06	21°02'24'14	20°15'05		15205 Sep 30 17:12	0°02'	
desc. node	15204 Nov 11 09:50	25°02'11'16		evening rise	15205 Oct 03 13:03	5°02'37'31	
retrograde	15204 Nov 17 05:48	26°02'45'00			15205 Oct 17 15:12	0°02'	
evening set	15204 Nov 19 10:03	26°02'32'51		evening max el	15205 Oct 20 02:52	2°02'48'29	19°10'14
inferior conj	15204 Nov 28 06:36	22°02'36'33	-4°52'17	retrograde	15205 Oct 29 05:54	7°02'23'35	
minimum elong	15204 Nov 27 20:36	22°02'51'21	4°48'45	desc. node	15205 Oct 29 07:05	7°02'23'35	
min. Earth dist.	15204 Nov 29 21:26	21°02'39'04	0.54781 AU	evening set	15205 Oct 31 02:54	7°02'12'47	
morning rise	15204 Dec 06 06:28	18°02'33'30		inferior conj	15205 Nov 08 14:20	3°02'00'29	-3°14'02
direct	15204 Dec 11 00:01	17°02'45'09		minimum elong	15205 Nov 08 06:18	3°02'14'02	3°10'18
morning max el	15204 Dec 24 13:06	24°02'25'04	24°00'46	min. Earth dist.	15205 Nov 11 07:39	1°02'10'33	0.56006 AU
	15204 Dec 29 15:01	0°02'			15205 Nov 13 04:46	30°02'38'38	
asc. node	15205 Jan 05 21:20	10°02'28'59		morning rise	15205 Nov 16 07:12	28°02'25'09	
	15205 Jan 16 05:49	0°02'		direct	15205 Nov 21 21:06	27°02'13'22	
morning set	15205 Jan 18 01:02	3°02'49'12			15205 Nov 30 10:59	0°02'	
				morning max el	15205 Dec 05 23:05	4°02'22'45	25°45'09
superior conj	15205 Jan 24 20:37	18°02'40'41	1°32'42	asc. node	15205 Dec 23 18:30	29°02'05'43	
minimum elong	15205 Jan 24 22:00	18°02'48'13	1°33'19		15205 Dec 24 06:33	0°02'	
max. Earth dist.	15205 Jan 27 10:21	24°02'14'02	1.32657 AU	morning set	15206 Jan 02 12:28	18°02'27'34	
	15205 Jan 30 03:59	0°02'			15206 Jan 07 18:24	0°02'	
evening rise	15205 Feb 01 10:57	4°02'41'04					
desc. node	15205 Feb 07 09:46	16°02'40'08		superior conj	15206 Jan 09 06:15	3°02'19'18	1°37'41
	15205 Feb 15 10:41	0°02'		minimum elong	15206 Jan 09 06:36	3°02'21'11	1°38'32
evening max el	15205 Mar 07 09:20	26°02'09'42	27°30'13	max. Earth dist.	15206 Jan 10 14:09	6°02'15'56	1.31625 AU
	15205 Mar 11 21:45	0°02'		evening rise	15206 Jan 16 08:57	18°02'43'17	
retrograde	15205 Mar 21 03:10	3°02'39'26			15206 Jan 22 00:36	0°02'	
evening set	15205 Mar 27 21:56	1°02'13'04		desc. node	15206 Jan 25 06:25	5°02'59'59	
	15205 Mar 29 10:49	30°02'38'38			15206 Feb 09 20:27	0°02'	
min. Earth dist.	15205 Mar 31 17:11	27°02'52'01	0.63973 AU	evening max el	15206 Feb 17 19:06	8°02'55'44	27°32'19
inferior conj	15205 Apr 03 09:20	25°02'04'52	-0°07'02	retrograde	15206 Mar 03 17:49	16°02'20'20	
minimum elong	15205 Apr 03 09:33	25°02'04'17	0°07'17	evening set	15206 Mar 10 14:09	14°02'06'46	
transit middle	15205 Apr 03 09:33	25°02'04'17	0°07'17	min. Earth dist.	15206 Mar 14 08:28	11°02'10'37	0.61858 AU
transit begin	15205 Apr 03 06:47	25°02'11'34		inferior conj	15206 Mar 17 09:51	8°02'20'59	-1°22'10
transit end	15205 Apr 03 12:20	24°02'57'00		minimum elong	15206 Mar 17 12:44	8°02'14'19	1°21'02
asc. node	15205 Apr 03 18:11	24°02'41'47		asc. node	15206 Mar 21 15:37	4°02'49'00	
morning rise	15205 Apr 09 23:27	19°02'45'17		morning rise	15206 Mar 24 14:22	3°02'18'58	
direct	15205 Apr 12 11:37	19°02'13'45		direct	15206 Mar 26 19:23	2°02'57'21	
morning max el	15205 Apr 18 20:42	22°02'29'49	17°48'27	morning max el	15206 Apr 02 14:01	6°02'22'26	17°48'31
	15205 Apr 24 19:24	0°02'			15206 Apr 17 22:33	0°02'	
morning set	15205 May 05 16:06	17°02'46'46		morning set	15206 Apr 18 08:54	0°02'46'01	
desc. node	15205 May 06 11:43	19°02'09'43		desc. node	15206 Apr 23 08:26	9°02'35'00	
	15205 May 12 22:50	0°02'					
superior conj	15205 May 18 18:49	9°02'32'41	-1°27'34	superior conj	15206 Apr 29 17:18	20°02'33'55	-0°49'38
minimum elong	15205 May 18 10:39	8°02'59'40	1°27'28	minimum elong	15206 Apr 29 12:40	20°02'34'16	0°49'36
max. Earth dist.	15205 May 24 01:50	18°02'00'04	1.45129 AU		15206 May 05 09:40	0°02'	
	15205 May 31 18:25	0°02'		max. Earth dist.	15206 May 06 18:07	2°02'11'45	1.43731 AU
evening rise	15205 Jun 03 09:27	4°02'01'59		evening rise	15206 May 14 00:19	13°02'41'55	
	15205 Jun 20 21:23	0°02'			15206 May 24 18:52	0°02'	
asc. node	15205 Jun 30 16:22	12°02'23'37		evening max el	15206 Jun 14 03:06	26°02'49'45	21°26'04
evening max el	15205 Jul 01 05:43	12°02'57'39	20°15'37	asc. node	15206 Jun 17 13:17	29°02'49'29	
retrograde	15205 Jul 09 01:32	17°02'25'20		retrograde	15206 Jun 17 19:09	0°02'	
					15206 Jun 23 00:18	2°02'00'01	

evening set	15206 Jun 27 11:39	0°♎10'21		retrograde	15207 Jun 06 21:20	16°♊37'20	
	15206 Jun 27 16:33	30°♊♊		evening set	15207 Jun 11 20:00	14°♊32'15	
inferior conj	15206 Jul 02 17:18	23°♊56'20	3°08'47	inferior conj	15207 Jun 17 03:12	8°♊09'26	2°58'52
minimum elong	15206 Jul 02 16:53	23°♊57'44	3°07'52	minimum elong	15207 Jun 17 01:56	8°♊13'50	2°57'45
min. Earth dist.	15206 Jul 02 23:31	23°♊34'38	0.68913 AU	min. Earth dist.	15207 Jun 16 20:25	8°♊33'00	0.69071 AU
morning rise	15206 Jul 07 21:55	17°♊38'25		morning rise	15207 Jun 22 07:44	1°♊58'36	
direct	15206 Jul 12 22:39	15°♊28'13		direct	15207 Jun 26 20:06	0°♊06'59	
desc. node	15206 Jul 20 07:58	18°♊56'50		morning max el	15207 Jul 05 15:51	5°♊13'46	21°24'43
morning max el	15206 Jul 23 00:42	21°♊26'37	22°50'11	desc. node	15207 Jul 07 05:15	6°♊51'25	
	15206 Jul 30 09:45	0°♎			15207 Jul 24 13:02	0°♎	
	15206 Aug 20 04:23	0°♐		morning set	15207 Aug 06 02:39	19°♎08'31	
morning set	15206 Aug 26 01:48	9°♐27'53			15207 Aug 12 21:00	0°♐	
max. Earth dist.	15206 Aug 30 15:14	17°♐05'26	1.40366 AU	max. Earth dist.	15207 Aug 12 19:27	29°♎53'36	1.42576 AU
	15206 Sep 06 23:36	0°♏					
superior conj	15206 Sep 07 11:32	0°♏54'05	-0°52'40	superior conj	15207 Aug 20 05:49	12°♐21'11	-1°28'03
minimum elong	15206 Sep 07 15:36	1°♏12'32	0°52'05	minimum elong	15207 Aug 20 12:43	12°♐50'51	1°27'34
asc. node	15206 Sep 13 14:30	12°♏16'21			15207 Aug 30 05:13	0°♏	
evening rise	15206 Sep 17 07:00	19°♏16'34		asc. node	15207 Aug 31 11:04	2°♏15'04	
	15206 Sep 23 00:51	0°♐		evening rise	15207 Aug 31 12:41	2°♏22'20	
evening max el	15206 Oct 03 05:39	15°♐00'04	18°27'37	evening max el	15207 Sep 16 16:17	27°♏49'38	18°05'43
retrograde	15206 Oct 11 00:50	18°♐57'20			15207 Sep 19 07:56	0°♐	
evening set	15206 Oct 13 00:27	18°♐42'44		retrograde	15207 Sep 23 13:48	1°♐21'43	
desc. node	15206 Oct 16 04:26	17°♐24'49		evening set	15207 Sep 25 20:19	0°♐59'01	
inferior conj	15206 Oct 20 19:20	14°♐10'00	-1°28'50		15207 Sep 27 23:11	30°♐♊	
minimum elong	15206 Oct 20 15:51	14°♐16'52	1°26'49	inferior conj	15207 Oct 02 21:29	26°♏05'36	0°03'27
min. Earth dist.	15206 Oct 24 00:50	11°♐37'59	0.57878 AU	minimum elong	15207 Oct 02 21:36	26°♏05'19	0°03'44
morning rise	15206 Oct 28 03:46	8°♐57'13		transit middle	15207 Oct 02 21:36	26°♏05'19	0°03'44
direct	15206 Nov 03 08:50	7°♐18'26		transit begin	15207 Oct 02 18:21	26°♏12'45	
morning max el	15206 Nov 17 15:44	14°♐51'43	27°05'56	transit end	15207 Oct 03 00:51	25°♏57'52	
	15206 Nov 29 20:36	0°♑		desc. node	15207 Oct 03 01:53	25°♏55'30	
asc. node	15206 Dec 10 15:34	18°♑15'27		min. Earth dist.	15207 Oct 06 02:36	23°♏10'09	0.60106 AU
	15206 Dec 16 12:28	0°♑		morning rise	15207 Oct 09 19:39	20°♏20'51	
morning set	15206 Dec 17 21:41	2°♑56'02		direct	15207 Oct 16 09:41	18°♏16'20	
				morning max el	15207 Oct 30 16:11	26°♏06'23	27°50'54
superior conj	15206 Dec 24 17:40	18°♑00'07	1°36'37		15207 Nov 03 07:54	0°♐	
minimum elong	15206 Dec 24 16:57	17°♑56'08	1°37'32		15207 Nov 23 09:31	0°♑	
max. Earth dist.	15206 Dec 24 21:35	18°♑22'03	1.31110 AU	asc. node	15207 Nov 27 12:32	7°♑48'38	
	15206 Dec 30 03:43	0°♑		morning set	15207 Dec 02 02:44	17°♑08'57	
evening rise	15206 Dec 31 13:12	3°♑00'03		max. Earth dist.	15207 Dec 08 04:59	0°♑23'39	1.31137 AU
desc. node	15207 Jan 12 03:09	25°♑25'21			15207 Dec 08 00:44	0°♑	
	15207 Jan 14 20:54	0°♒		superior conj	15207 Dec 09 04:52	2°♑36'43	1°29'36
evening max el	15207 Jan 30 23:19	20°♒56'22	27°00'10	minimum elong	15207 Dec 09 03:15	2°♑27'43	1°30'25
retrograde	15207 Feb 13 23:40	28°♒11'34		evening rise	15207 Dec 15 21:30	17°♑25'22	
evening set	15207 Feb 20 14:56	26°♒18'31			15207 Dec 21 23:56	0°♑	
min. Earth dist.	15207 Feb 24 13:32	23°♒37'54	0.59627 AU	desc. node	15207 Dec 29 23:59	14°♑14'47	
inferior conj	15207 Feb 27 18:38	21°♒02'11	-2°47'37		15208 Jan 10 18:09	0°♒	
minimum elong	15207 Feb 28 00:55	20°♒49'28	2°44'59	evening max el	15208 Jan 12 19:45	2°♒04'25	25°53'55
morning rise	15207 Mar 07 14:20	16°♒20'17		retrograde	15208 Jan 26 18:20	9°♒07'09	
asc. node	15207 Mar 08 13:04	16°♒09'19		evening set	15208 Feb 01 20:20	7°♒40'45	
direct	15207 Mar 09 14:37	16°♒04'58		min. Earth dist.	15208 Feb 06 08:50	5°♒02'31	0.57500 AU
morning max el	15207 Mar 17 03:48	19°♒50'19	18°07'18	inferior conj	15208 Feb 09 08:05	2°♒57'51	-4°15'21
	15207 Mar 24 16:03	0°♓		minimum elong	15208 Feb 09 17:04	2°♒42'05	4°12'05
morning set	15207 Apr 01 18:08	14°♓30'13			15208 Feb 14 00:14	30°♒♊	
desc. node	15207 Apr 10 05:05	0°♓06'33		morning rise	15208 Feb 17 16:46	28°♒37'20	
	15207 Apr 10 03:38	0°♓		direct	15208 Feb 19 17:05	28°♒24'32	
				asc. node	15208 Feb 23 10:32	29°♒11'00	
superior conj	15207 Apr 11 14:58	2°♓38'28	-0°11'32		15208 Feb 25 00:51	0°♒	
minimum elong	15207 Apr 11 14:00	2°♓34'10	0°11'48	morning max el	15208 Feb 28 09:57	2°♒40'41	18°46'38
behind sun begin	15207 Apr 11 08:46	2°♓10'50		morning set	15208 Mar 15 14:43	28°♒43'43	
behind sun end	15207 Apr 11 19:14	2°♓57'28			15208 Mar 16 06:22	0°♓	
max. Earth dist.	15207 Apr 19 05:30	15°♓47'42	1.41825 AU				
evening rise	15207 Apr 24 07:33	24°♓08'52		superior conj	15208 Mar 24 08:00	15°♓34'34	0°22'34
	15207 Apr 27 23:59	0°♐		minimum elong	15208 Mar 24 09:27	15°♓41'24	0°22'09
	15207 May 18 17:04	0°♊		desc. node	15208 Mar 27 01:40	20°♓39'58	
evening max el	15207 May 27 19:49	10°♊42'35	22°44'53	max. Earth dist.	15208 Mar 31 12:51	28°♓41'36	1.39616 AU
asc. node	15207 Jun 04 10:18	16°♊10'42			15208 Apr 01 06:45	0°♓	

evening rise	15208 Apr 04 11:52	5°♄31'00			15209 Mar 24 16:38	0°♄	
	15208 Apr 20 02:04	0°♄			15209 Apr 14 09:36	0°♄	
evening max el	15208 May 09 10:01	24°♄36'51	24°06'20	evening max el	15209 Apr 21 23:34	8°♄30'52	25°23'24
	15208 May 16 07:22	0°♄		retrograde	15209 May 04 04:46	15°♄35'17	
retrograde	15208 May 20 15:11	1°♄11'12		asc. node	15209 May 08 04:40	14°♄28'58	
asc. node	15208 May 21 07:26	1°♄09'13		evening set	15209 May 10 02:26	13°♄07'43	
	15208 May 24 13:30	30°♄		min. Earth dist.	15209 May 14 10:06	8°♄22'11	0.67950 AU
evening set	15208 May 26 01:28	28°♄53'10		inferior conj	15209 May 15 18:35	6°♄37'05	2°07'33
min. Earth dist.	15208 May 30 16:41	23°♄30'58	0.68745 AU	minimum elong	15209 May 15 16:25	6°♄44'07	2°06'07
inferior conj	15208 May 31 12:16	22°♄24'29	2°38'33	morning rise	15209 May 21 06:48	0°♄44'38	
minimum elong	15208 May 31 10:22	22°♄30'57	2°37'14		15209 May 22 15:20	30°♄	
morning rise	15208 Jun 05 19:19	16°♄22'11		direct	15209 May 24 19:45	29°♄32'44	
direct	15208 Jun 09 19:39	14°♄50'33			15209 May 27 01:59	0°♄	
morning max el	15208 Jun 17 13:13	19°♄11'21	20°09'41	morning max el	15209 May 31 18:01	3°♄18'57	19°08'54
desc. node	15208 Jun 23 02:24	25°♄35'47		desc. node	15209 Jun 09 23:27	14°♄56'27	
	15208 Jun 26 09:43	0°♄		greatest brilliancy	15209 Jun 13 15:29	20°♄19'21	-0.7m
morning set	15208 Jul 15 09:10	28°♄03'58			15209 Jun 20 00:43	0°♄	
	15208 Jul 16 15:17	0°♄		morning set	15209 Jun 24 14:20	7°♄01'16	
max. Earth dist.	15208 Jul 25 06:40	13°♄32'45	1.44355 AU	max. Earth dist.	15209 Jul 07 23:41	27°♄48'51	1.45514 AU
					15209 Jul 09 09:06	0°♄	
superior conj	15208 Jul 31 00:52	22°♄49'54	-1°57'15	superior conj	15209 Jul 10 21:51	2°♄24'40	-2°12'56
minimum elong	15208 Jul 31 08:11	23°♄19'49	1°57'21	minimum elong	15209 Jul 11 00:27	2°♄34'55	2°13'44
	15208 Aug 04 09:07	0°♄		evening rise	15209 Jul 25 15:23	26°♄05'33	
evening rise	15208 Aug 13 01:12	14°♄42'57			15209 Jul 28 00:41	0°♄	
asc. node	15208 Aug 17 07:40	22°♄02'44		asc. node	15209 Aug 04 04:18	11°♄33'50	
	15208 Aug 22 02:09	0°♄		evening max el	15209 Aug 13 21:01	24°♄42'30	18°18'26
evening max el	15208 Aug 30 06:36	11°♄07'07	18°02'59	retrograde	15209 Aug 20 06:02	28°♄06'00	
retrograde	15208 Sep 05 17:00	14°♄28'01		evening set	15209 Aug 23 05:32	27°♄17'11	
evening set	15208 Sep 08 07:46	13°♄53'38		inferior conj	15209 Aug 29 03:13	21°♄48'21	2°07'51
inferior conj	15208 Sep 14 17:28	8°♄41'19	1°15'39	minimum elong	15209 Aug 29 05:36	21°♄41'25	2°06'57
minimum elong	15208 Sep 14 19:25	8°♄36'13	1°15'02	min. Earth dist.	15209 Aug 31 11:03	19°♄06'45	0.64510 AU
min. Earth dist.	15208 Sep 17 13:58	5°♄43'34	0.62394 AU	morning rise	15209 Sep 04 04:09	15°♄27'56	
desc. node	15208 Sep 18 23:21	4°♄23'31		desc. node	15209 Sep 05 20:50	14°♄17'03	
morning rise	15208 Sep 21 04:42	2°♄34'03		direct	15209 Sep 10 17:15	12°♄52'25	
direct	15208 Sep 27 21:06	0°♄09'52		morning max el	15209 Sep 24 09:17	20°♄49'30	27°26'34
morning max el	15208 Oct 11 22:53	8°♄08'21	27°56'41		15209 Oct 02 08:02	0°♄	
	15208 Oct 28 19:06	0°♄			15209 Oct 21 21:53	0°♄	
asc. node	15208 Nov 13 09:24	27°♄38'29		morning set	15209 Oct 29 15:37	14°♄27'26	
	15208 Nov 14 13:30	0°♄		asc. node	15209 Oct 31 06:09	17°♄39'03	
morning set	15208 Nov 15 01:34	1°♄01'32		max. Earth dist.	15209 Nov 03 05:05	23°♄41'46	1.32856 AU
max. Earth dist.	15208 Nov 20 08:41	12°♄12'37	1.31720 AU		15209 Nov 06 04:47	0°♄	
superior conj	15208 Nov 22 14:01	17°♄04'09	1°16'38	superior conj	15209 Nov 06 19:01	1°♄16'11	0°57'41
minimum elong	15208 Nov 22 11:49	16°♄52'03	1°17'14	minimum elong	15209 Nov 06 16:43	1°♄03'52	0°58'05
	15208 Nov 28 10:52	0°♄		evening rise	15209 Nov 13 18:51	16°♄22'54	
evening rise	15208 Nov 29 08:01	1°♄54'44			15209 Nov 20 11:05	0°♄	
	15208 Dec 14 08:11	0°♄		desc. node	15209 Dec 02 17:53	19°♄08'15	
desc. node	15208 Dec 15 20:53	2°♄15'08		evening max el	15209 Dec 05 17:58	22°♄21'54	22°38'04
evening max el	15208 Dec 24 08:17	12°♄25'04	24°21'15	retrograde	15209 Dec 18 16:35	28°♄46'38	
retrograde	15209 Jan 06 23:43	19°♄12'27		evening set	15209 Dec 22 12:51	28°♄14'20	
evening set	15209 Jan 12 03:00	18°♄14'47		min. Earth dist.	15209 Dec 30 02:16	24°♄48'04	0.54668 AU
min. Earth dist.	15209 Jan 17 20:00	15°♄22'16	0.55756 AU	inferior conj	15209 Dec 30 22:46	24°♄19'08	-6°00'40
inferior conj	15209 Jan 20 00:26	14°♄01'55	-5°28'06	minimum elong	15209 Dec 30 23:15	24°♄18'27	5°59'46
minimum elong	15209 Jan 20 08:16	13°♄49'53	5°25'58	morning rise	15210 Jan 08 10:54	20°♄31'19	
morning rise	15209 Jan 28 15:28	10°♄01'28		direct	15210 Jan 11 14:03	20°♄08'58	
direct	15209 Jan 31 00:13	9°♄46'45		morning max el	15210 Jan 23 07:58	25°♄47'49	21°13'44
asc. node	15209 Feb 09 07:57	13°♄54'49		asc. node	15210 Jan 27 05:17	0°♄06'05	
morning max el	15209 Feb 10 04:17	14°♄42'09	19°48'34		15210 Jan 27 03:20	0°♄	
	15209 Feb 20 22:40	0°♄		morning set	15210 Feb 12 03:50	27°♄57'36	
morning set	15209 Feb 27 18:54	13°♄15'38			15210 Feb 13 03:15	0°♄	
superior conj	15209 Mar 07 16:00	29°♄10'29	0°50'39	superior conj	15210 Feb 19 11:00	13°♄15'24	1°12'08
minimum elong	15209 Mar 07 18:30	29°♄22'51	0°50'23	minimum elong	15210 Feb 19 13:32	13°♄28'27	1°12'11
	15209 Mar 08 02:01	0°♄		max. Earth dist.	15210 Feb 24 05:15	22°♄53'27	1.35230 AU
desc. node	15209 Mar 13 22:12	11°♄11'52			15210 Feb 27 21:40	0°♄	
max. Earth dist.	15209 Mar 13 19:20	10°♄58'35	1.37342 AU	evening rise	15210 Feb 28 05:53	0°♄38'36	
evening rise	15209 Mar 17 12:21	17°♄43'46					

desc. node	15210 Feb 28 18:44	1° $\Upsilon$ 38'43		max. Earth dist.	15211 Feb 06 21:51	4° $\text{X}$ 43'14	1.33464 AU
	15210 Mar 17 19:08	0° $\text{B}$		evening rise	15211 Feb 11 12:55	14° $\text{X}$ 05'56	
evening max el	15210 Apr 04 13:12	22° $\text{B}$ 19'20	26°28'46	desc. node	15211 Feb 15 15:17	21° $\text{X}$ 55'45	
retrograde	15210 Apr 17 13:17	29° $\text{B}$ 42'40			15211 Feb 20 03:21	0° $\Upsilon$	
evening set	15210 Apr 23 21:09	27° $\text{B}$ 10'23			15211 Mar 12 15:24	0° $\text{B}$	
asc. node	15210 Apr 25 01:57	26° $\text{B}$ 06'37		evening max el	15211 Mar 18 02:36	5° $\text{B}$ 52'50	27°15'04
min. Earth dist.	15210 Apr 27 22:41	23° $\text{B}$ 00'02	0.66709 AU	retrograde	15211 Mar 31 15:51	13° $\text{B}$ 23'48	
inferior conj	15210 Apr 29 20:03	20° $\text{B}$ 42'55	1°25'10	evening set	15211 Apr 07 07:32	10° $\text{B}$ 53'07	
minimum elong	15210 Apr 29 18:09	20° $\text{B}$ 48'38	1°23'51	min. Earth dist.	15211 Apr 11 04:27	7° $\text{B}$ 15'12	0.65065 AU
morning rise	15210 May 05 16:11	15° $\text{B}$ 01'47		asc. node	15211 Apr 11 23:19	6° $\text{B}$ 23'41	
direct	15210 May 08 18:35	14° $\text{B}$ 07'54		inferior conj	15211 Apr 13 14:11	4° $\text{B}$ 35'24	0°30'22
morning max el	15210 May 15 05:31	17° $\text{B}$ 32'49	18°24'18	minimum elong	15211 Apr 13 13:21	4° $\text{B}$ 37'42	0°29'36
	15210 May 24 18:19	0° $\text{II}$			15211 Apr 18 09:15	30° $\text{R}\Upsilon$	
desc. node	15210 May 27 20:22	4° $\text{II}$ 43'52		morning rise	15211 Apr 19 21:00	29° $\Upsilon$ 07'21	
morning set	15210 Jun 04 13:53	16° $\text{II}$ 54'26		direct	15211 Apr 22 13:55	28° $\Upsilon$ 28'45	
	15210 Jun 12 21:13	0° $\text{E}$			15211 Apr 26 19:23	0° $\text{B}$	
				morning max el	15211 Apr 28 21:30	1° $\text{B}$ 44'55	17°56'33
superior conj	15210 Jun 20 06:54	11° $\text{E}$ 34'29	-2°09'17	desc. node	15211 May 14 17:11	24° $\text{B}$ 50'04	
minimum elong	15210 Jun 20 01:45	11° $\text{E}$ 14'26	2°10'03	morning set	15211 May 16 16:51	28° $\text{B}$ 06'30	
max. Earth dist.	15210 Jun 20 19:35	12° $\text{E}$ 23'57	1.45949 AU		15211 May 17 20:25	0° $\text{II}$	
	15210 Jul 02 02:09	0° $\Omega$					
evening rise	15210 Jul 06 04:39	6° $\Omega$ 26'05		superior conj	15211 May 30 20:51	21° $\text{II}$ 03'15	-1°46'41
greatest brilliancy	15210 Jul 15 13:11	21° $\Omega$ 03'19	-0.8m	minimum elong	15211 May 30 12:02	20° $\text{II}$ 28'19	1°46'48
	15210 Jul 21 13:01	0° $\text{mp}$		max. Earth dist.	15211 Jun 03 15:25	27° $\text{II}$ 00'04	1.45632 AU
asc. node	15210 Jul 22 01:01	0° $\text{mp}$ 42'20			15211 Jun 05 13:26	0° $\text{E}$	
evening max el	15210 Jul 28 08:38	8° $\text{mp}$ 28'43	18°51'19	evening rise	15211 Jun 15 21:35	15° $\text{E}$ 59'05	
retrograde	15210 Aug 04 01:08	12° $\text{mp}$ 07'55			15211 Jun 25 02:40	0° $\Omega$	
evening set	15210 Aug 07 09:49	11° $\text{mp}$ 02'51		greatest brilliancy	15211 Jun 29 22:21	7° $\Omega$ 09'25	-0.6m
inferior conj	15210 Aug 12 23:04	5° $\text{mp}$ 19'35	2°42'30	asc. node	15211 Jul 08 21:48	19° $\Omega$ 19'39	
minimum elong	15210 Aug 13 01:02	5° $\text{mp}$ 13'23	2°41'37	evening max el	15211 Jul 11 15:21	22° $\Omega$ 19'34	19°40'41
min. Earth dist.	15210 Aug 14 16:52	3° $\text{mp}$ 07'58	0.66303 AU	retrograde	15211 Jul 18 23:18	26° $\Omega$ 26'43	
	15210 Aug 17 10:59	30° $\text{R}\Omega$		evening set	15211 Jul 22 17:48	25° $\Omega$ 04'20	
morning rise	15210 Aug 18 15:23	28° $\Omega$ 53'49		inferior conj	15211 Jul 28 01:54	19° $\Omega$ 08'13	3°02'23
desc. node	15210 Aug 23 18:18	26° $\Omega$ 20'31		minimum elong	15211 Jul 28 03:01	19° $\Omega$ 04'27	3°01'34
direct	15210 Aug 24 21:07	26° $\Omega$ 15'46		min. Earth dist.	15211 Jul 29 05:36	17° $\Omega$ 35'43	0.67682 AU
	15210 Sep 02 11:12	0° $\text{mp}$		morning rise	15211 Aug 02 11:45	12° $\Omega$ 42'50	
morning max el	15210 Sep 06 20:50	3° $\text{mp}$ 58'16	26°27'45	direct	15211 Aug 08 07:24	10° $\Omega$ 10'28	
	15210 Sep 26 17:08	0° $\text{E}$		desc. node	15211 Aug 10 15:43	10° $\Omega$ 31'47	
morning set	15210 Oct 12 17:48	27° $\text{E}$ 19'54		morning max el	15211 Aug 20 07:47	17° $\Omega$ 22'30	25°09'31
	15210 Oct 14 03:35	0° $\text{ml}$			15211 Aug 30 21:18	0° $\text{mp}$	
max. Earth dist.	15210 Oct 16 15:41	4° $\text{ml}$ 51'37	1.34523 AU		15211 Sep 19 16:42	0° $\text{E}$	
asc. node	15210 Oct 18 02:51	7° $\text{ml}$ 46'05		morning set	15211 Sep 25 04:17	9° $\text{E}$ 30'10	
				max. Earth dist.	15211 Sep 28 17:23	15° $\text{E}$ 57'09	1.36629 AU
superior conj	15210 Oct 21 17:28	15° $\text{ml}$ 07'09	0°32'52	asc. node	15211 Oct 04 23:30	27° $\text{E}$ 55'46	
minimum elong	15210 Oct 21 15:47	14° $\text{ml}$ 58'23	0°33'09				
	15210 Oct 28 19:30	0° $\text{X}$		superior conj	15211 Oct 05 06:27	28° $\text{E}$ 30'09	0°02'40
evening rise	15210 Oct 29 04:09	0° $\text{X}$ 45'20		minimum elong	15211 Oct 05 06:16	28° $\text{E}$ 29'13	0°03'00
	15210 Nov 15 01:57	0° $\text{B}$		behind sun begin	15211 Oct 04 23:55	27° $\text{E}$ 57'51	
evening max el	15210 Nov 17 10:42	2° $\text{B}$ 33'54	21°02'09	behind sun end	15211 Oct 05 12:37	29° $\text{E}$ 00'39	
desc. node	15210 Nov 19 15:00	4° $\text{B}$ 31'31			15211 Oct 06 00:34	0° $\text{ml}$	
retrograde	15210 Nov 29 03:00	8° $\text{B}$ 21'32		evening rise	15211 Oct 13 09:43	14° $\text{ml}$ 56'48	
evening set	15210 Dec 01 17:48	8° $\text{B}$ 05'19			15211 Oct 21 04:32	0° $\text{X}$	
inferior conj	15210 Dec 10 13:41	4° $\text{B}$ 13'10	-5°33'36	evening max el	15211 Oct 30 17:23	13° $\text{X}$ 30'09	19°44'51
minimum elong	15210 Dec 10 05:41	4° $\text{B}$ 24'32	5°31'17	desc. node	15211 Nov 06 12:14	18° $\text{X}$ 00'00	
min. Earth dist.	15210 Dec 11 07:52	3° $\text{B}$ 47'21	0.54463 AU	retrograde	15211 Nov 09 18:24	18° $\text{X}$ 30'55	
morning rise	15210 Dec 18 17:49	0° $\text{B}$ 21'05		evening set	15211 Nov 11 17:47	18° $\text{X}$ 20'11	
	15210 Dec 20 04:41	30° $\text{R}\text{X}$		inferior conj	15211 Nov 20 11:55	14° $\text{X}$ 18'29	-4°13'21
direct	15210 Dec 22 21:12	29° $\text{X}$ 44'11		minimum elong	15211 Nov 20 02:05	14° $\text{X}$ 33'46	4°09'24
	15210 Dec 25 12:42	0° $\text{B}$		min. Earth dist.	15211 Nov 22 15:53	12° $\text{X}$ 57'40	0.55202 AU
morning max el	15211 Jan 04 22:33	6° $\text{B}$ 04'29	22°57'27	morning rise	15211 Nov 28 08:46	10° $\text{X}$ 02'51	
asc. node	15211 Jan 14 02:35	17° $\text{B}$ 26'30		direct	15211 Dec 03 11:36	9° $\text{X}$ 04'54	
	15211 Jan 21 09:23	0° $\approx$		morning max el	15211 Dec 17 07:30	15° $\text{X}$ 58'57	24°46'48
morning set	15211 Jan 27 15:13	12° $\approx$ 42'22			15211 Dec 28 12:09	0° $\text{B}$	
				asc. node	15211 Dec 31 23:47	5° $\text{B}$ 39'38	
superior conj	15211 Feb 03 13:43	27° $\approx$ 39'24	1°27'02	morning set	15212 Jan 12 03:11	27° $\text{B}$ 24'47	
minimum elong	15211 Feb 03 15:37	27° $\approx$ 49'36	1°27'28		15212 Jan 13 07:52	0° $\approx$	
	15211 Feb 04 16:03	0° $\text{X}$					

superior conj	15212 Jan 18 21:32	12° $\approx$ 15'03	1°35'34	minimum elong	15213 Jan 02 08:03	26° $\approx$ 54'26	1°38'51
minimum elong	15212 Jan 18 22:29	12° $\approx$ 20'17	1°36'17	max. Earth dist.	15213 Jan 03 03:55	28° $\approx$ 45'07	1.31349 AU
max. Earth dist.	15212 Jan 20 22:04	16° $\approx$ 40'26	1.32156 AU		15213 Jan 03 17:23	0° $\approx$	
evening rise	15212 Jan 26 06:20	27° $\approx$ 58'08		evening rise	15213 Jan 09 07:18	12° $\approx$ 07'21	
	15212 Jan 27 06:20	0° $\approx$			15213 Jan 18 10:24	0° $\approx$	
desc. node	15212 Feb 02 11:56	11° $\approx$ 58'15		desc. node	15213 Jan 19 08:38	1° $\approx$ 39'10	
	15212 Feb 13 08:41	0° $\approx$			15213 Feb 08 10:20	0° $\approx$	
evening max el	15212 Feb 28 14:33	19° $\approx$ 00'42	27°35'05	evening max el	15213 Feb 09 22:33	1° $\approx$ 29'20	27°22'57
retrograde	15212 Mar 13 11:21	26° $\approx$ 09'22		retrograde	15213 Feb 23 22:17	8° $\approx$ 49'30	
evening set	15212 Mar 20 07:13	24° $\approx$ 07'40		evening set	15213 Mar 02 17:16	6° $\approx$ 44'11	
min. Earth dist.	15212 Mar 24 01:40	20° $\approx$ 57'48	0.63098 AU	min. Earth dist.	15213 Mar 06 12:48	3° $\approx$ 55'41	0.60917 AU
inferior conj	15212 Mar 26 22:08	18° $\approx$ 07'39	-0°37'25	inferior conj	15213 Mar 09 16:27	1° $\approx$ 10'15	-1°57'27
minimum elong	15212 Mar 26 23:22	18° $\approx$ 04'36	0°37'07	minimum elong	15213 Mar 09 20:43	1° $\approx$ 00'52	1°55'39
asc. node	15212 Mar 28 20:44	16° $\approx$ 15'02			15213 Mar 11 00:58	30° $\approx$ 11'	
morning rise	15212 Apr 02 18:10	12° $\approx$ 55'03		asc. node	15213 Mar 15 18:10	26° $\approx$ 47'19	
direct	15212 Apr 05 02:57	12° $\approx$ 28'16		morning rise	15213 Mar 17 03:25	26° $\approx$ 16'05	
morning max el	15212 Apr 11 15:13	15° $\approx$ 47'10	17°46'10	direct	15213 Mar 19 06:04	25° $\approx$ 57'31	
	15212 Apr 21 17:48	0° $\approx$		morning max el	15213 Mar 26 07:24	29° $\approx$ 29'58	17°54'02
morning set	15212 Apr 27 21:32	10° $\approx$ 31'48			15213 Mar 26 19:19	0° $\approx$	
desc. node	15212 Apr 30 13:57	15° $\approx$ 09'40		morning set	15213 Apr 10 22:03	23° $\approx$ 52'23	
	15212 May 09 08:47	0° $\approx$			15213 Apr 14 07:12	0° $\approx$	
				desc. node	15213 Apr 17 10:39	5° $\approx$ 37'56	
superior conj	15212 May 10 05:41	1° $\approx$ 26'08	-1°11'53	superior conj	15213 Apr 21 14:18	12° $\approx$ 54'47	-0°33'09
minimum elong	15212 May 09 22:48	0° $\approx$ 57'51	1°11'45	minimum elong	15213 Apr 21 11:19	12° $\approx$ 41'56	0°33'16
max. Earth dist.	15212 May 16 09:28	11° $\approx$ 24'19	1.44610 AU	max. Earth dist.	15213 Apr 29 00:06	25° $\approx$ 23'21	1.42978 AU
evening rise	15212 May 25 08:24	25° $\approx$ 24'20			15213 May 01 20:14	0° $\approx$	
	15212 May 28 08:37	0° $\approx$		evening rise	15213 May 05 05:13	5° $\approx$ 22'13	
	15212 Jun 18 06:45	0° $\approx$			15213 May 21 15:34	0° $\approx$	
evening max el	15212 Jun 23 16:11	6° $\approx$ 11'49	20°44'23	evening max el	15213 Jun 06 11:29	20° $\approx$ 04'30	21°58'58
asc. node	15212 Jun 24 18:40	7° $\approx$ 15'16		asc. node	15213 Jun 11 15:38	24° $\approx$ 15'48	
retrograde	15212 Jul 01 22:17	10° $\approx$ 56'46		retrograde	15213 Jun 15 20:20	25° $\approx$ 33'12	
evening set	15212 Jul 06 03:19	9° $\approx$ 16'55		evening set	15213 Jun 20 12:33	23° $\approx$ 36'39	
inferior conj	15212 Jul 11 09:08	3° $\approx$ 09'12	3°09'41	inferior conj	15213 Jun 25 18:36	17° $\approx$ 18'51	3°05'50
minimum elong	15212 Jul 11 09:17	3° $\approx$ 08'40	3°08'50	minimum elong	15213 Jun 25 17:49	17° $\approx$ 21'36	3°04'51
min. Earth dist.	15212 Jul 11 23:06	2° $\approx$ 20'57	0.68603 AU	min. Earth dist.	15213 Jun 25 19:16	17° $\approx$ 16'32	0.69042 AU
	15212 Jul 13 17:11	30° $\approx$ 11'		morning rise	15213 Jun 30 22:54	11° $\approx$ 03'59	
morning rise	15212 Jul 16 14:57	26° $\approx$ 47'57		direct	15213 Jul 05 18:27	9° $\approx$ 01'19	
direct	15212 Jul 21 22:55	24° $\approx$ 28'05		desc. node	15213 Jul 14 10:28	13° $\approx$ 46'32	
desc. node	15212 Jul 27 13:08	26° $\approx$ 28'38		morning max el	15213 Jul 15 07:05	14° $\approx$ 36'55	22°12'57
	15212 Jul 31 19:56	0° $\approx$			15213 Jul 27 17:48	0° $\approx$	
morning max el	15212 Aug 01 18:25	0° $\approx$ 55'25	23°41'31		15213 Aug 16 17:48	0° $\approx$	
	15212 Aug 23 18:52	0° $\approx$		morning set	15213 Aug 17 09:18	1° $\approx$ 02'16	
morning set	15212 Sep 05 18:38	20° $\approx$ 46'47		max. Earth dist.	15213 Aug 22 17:00	9° $\approx$ 46'11	1.41346 AU
max. Earth dist.	15212 Sep 09 15:35	27° $\approx$ 26'54	1.38995 AU				
	15212 Sep 11 02:18	0° $\approx$		superior conj	15213 Aug 30 12:33	23° $\approx$ 14'03	-1°08'00
superior conj	15212 Sep 17 06:14	11° $\approx$ 15'39	-0°31'48	minimum elong	15213 Aug 30 17:56	23° $\approx$ 37'55	1°07'25
minimum elong	15212 Sep 17 08:32	11° $\approx$ 26'26	0°31'18		15213 Sep 03 06:53	0° $\approx$	
asc. node	15212 Sep 20 20:05	18° $\approx$ 03'53		asc. node	15213 Sep 07 16:41	8° $\approx$ 07'12	
evening rise	15212 Sep 26 08:50	28° $\approx$ 49'44		evening rise	15213 Sep 09 22:06	12° $\approx$ 15'55	
	15212 Sep 26 23:14	0° $\approx$			15213 Sep 19 22:26	0° $\approx$	
evening max el	15212 Oct 12 13:51	25° $\approx$ 15'42	18°49'33	evening max el	15213 Sep 25 20:28	7° $\approx$ 44'15	18°15'50
retrograde	15212 Oct 21 01:55	29° $\approx$ 32'52		retrograde	15213 Oct 03 05:01	11° $\approx$ 29'11	
evening set	15212 Oct 22 23:24	29° $\approx$ 20'54		evening set	15213 Oct 05 07:22	11° $\approx$ 11'31	
desc. node	15212 Oct 23 09:34	29° $\approx$ 15'04		desc. node	15213 Oct 10 06:58	8° $\approx$ 29'36	
inferior conj	15212 Oct 31 04:18	25° $\approx$ 00'19	-2°28'47	inferior conj	15213 Oct 12 18:32	6° $\approx$ 29'27	-0°47'29
minimum elong	15212 Oct 30 22:10	25° $\approx$ 11'22	2°25'40	minimum elong	15213 Oct 12 16:48	6° $\approx$ 33'07	0°46'16
min. Earth dist.	15212 Nov 03 04:39	22° $\approx$ 50'44	0.56741 AU	min. Earth dist.	15213 Oct 16 00:59	3° $\approx$ 45'18	0.58802 AU
morning rise	15212 Nov 07 17:52	20° $\approx$ 09'21		morning rise	15213 Oct 19 22:48	1° $\approx$ 02'15	
direct	15212 Nov 13 15:15	18° $\approx$ 46'03			15213 Oct 22 03:34	30° $\approx$ 11'	
morning max el	15212 Nov 27 19:35	26° $\approx$ 05'53	26°23'12	direct	15213 Oct 26 08:26	29° $\approx$ 12'24	
	15212 Dec 01 12:24	0° $\approx$			15213 Oct 30 16:10	0° $\approx$	
asc. node	15212 Dec 17 20:54	24° $\approx$ 31'30		morning max el	15213 Nov 09 15:35	6° $\approx$ 52'46	27°29'54
	15212 Dec 20 18:09	0° $\approx$			15213 Nov 26 23:56	0° $\approx$	
morning set	15212 Dec 26 13:54	11° $\approx$ 59'11		asc. node	15213 Dec 04 17:56	13° $\approx$ 51'58	
				morning set	15213 Dec 10 21:36	26° $\approx$ 21'21	
superior conj	15213 Jan 02 08:10	26° $\approx$ 55'04	1°37'58		15213 Dec 12 14:18	0° $\approx$	

superior conj	15213 Dec 17 19:42	11° $\text{☿}$ 34'13	1°34'22	max. Earth dist.	15214 Nov 30 18:23	22° $\text{♄}$ 48'36	1.31311 AU
minimum elong	15213 Dec 17 18:35	11° $\text{☿}$ 27'56	1°35'15				
max. Earth dist.	15213 Dec 17 11:59	10° $\text{☿}$ 51'02	1.31062 AU	superior conj	15214 Dec 02 06:15	26° $\text{♄}$ 07'16	1°24'50
evening rise	15213 Dec 24 13:30	26° $\text{☿}$ 28'05		minimum elong	15214 Dec 02 04:21	25° $\text{♄}$ 56'40	1°25'34
	15213 Dec 26 05:26	0° $\approx$			15214 Dec 04 00:05	0° $\text{☿}$	
desc. node	15214 Jan 06 05:23	20° $\approx$ 50'28		evening rise	15214 Dec 08 22:57	10° $\text{☿}$ 55'20	
	15214 Jan 12 02:13	0° $\text{☿}$			15214 Dec 18 12:02	0° $\approx$	
evening max el	15214 Jan 22 23:42	13° $\text{☿}$ 07'41	26°35'47	desc. node	15214 Dec 24 02:14	9° $\approx$ 21'06	
retrograde	15214 Feb 05 23:14	20° $\text{☿}$ 17'07		evening max el	15215 Jan 04 16:21	23° $\approx$ 53'32	25°16'56
evening set	15214 Feb 12 10:14	18° $\text{☿}$ 34'45			15215 Jan 13 20:01	0° $\text{☿}$	
min. Earth dist.	15214 Feb 16 13:18	15° $\text{☿}$ 57'12	0.58702 AU	retrograde	15215 Jan 18 12:46	0° $\text{☿}$ 50'59	
inferior conj	15214 Feb 19 17:22	13° $\text{☿}$ 32'52	-3°25'17		15215 Jan 23 06:05	30° $\text{♁}$ $\approx$	
minimum elong	15214 Feb 20 01:02	13° $\text{☿}$ 18'17	3°22'14	evening set	15215 Jan 24 06:26	29° $\approx$ 36'29	
morning rise	15214 Feb 27 19:07	9° $\text{☿}$ 00'01		min. Earth dist.	15215 Jan 29 04:40	26° $\approx$ 54'37	0.56693 AU
direct	15214 Mar 01 18:51	8° $\text{☿}$ 46'07		inferior conj	15215 Jan 31 21:54	25° $\approx$ 07'08	-4°49'23
asc. node	15214 Mar 02 15:38	8° $\text{☿}$ 48'51		minimum elong	15215 Feb 01 07:06	24° $\approx$ 51'56	4°46'24
morning max el	15214 Mar 09 18:25	12° $\text{☿}$ 42'53	18°21'24	morning rise	15215 Feb 09 10:27	20° $\approx$ 56'02	
	15214 Mar 21 08:20	0° $\text{☿}$		direct	15215 Feb 11 13:02	20° $\approx$ 43'06	
morning set	15214 Mar 25 12:38	7° $\text{☿}$ 50'33		asc. node	15215 Feb 17 13:05	22° $\approx$ 35'40	
				morning max el	15215 Feb 20 20:11	25° $\approx$ 14'46	19°10'08
superior conj	15214 Apr 03 20:45	25° $\text{☿}$ 22'44	0°03'37		15215 Feb 24 21:31	0° $\text{☿}$	
minimum elong	15214 Apr 03 20:59	25° $\text{☿}$ 23'51	0°03'15	morning set	15215 Mar 09 12:52	22° $\text{☿}$ 13'26	
behind sun begin	15214 Apr 03 13:48	24° $\text{☿}$ 51'02			15215 Mar 13 10:48	0° $\text{☿}$	
behind sun end	15214 Apr 04 04:10	25° $\text{☿}$ 56'36					
desc. node	15214 Apr 04 07:14	26° $\text{☿}$ 10'33		superior conj	15215 Mar 17 20:46	8° $\text{☿}$ 38'09	0°35'14
	15214 Apr 06 10:10	0° $\text{♄}$		minimum elong	15215 Mar 17 22:48	8° $\text{☿}$ 47'59	0°34'51
max. Earth dist.	15214 Apr 11 10:02	8° $\text{♄}$ 43'23	1.40910 AU	desc. node	15215 Mar 22 03:46	16° $\text{☿}$ 44'01	
evening rise	15214 Apr 15 21:13	16° $\text{♄}$ 12'09		max. Earth dist.	15215 Mar 24 16:23	21° $\text{☿}$ 20'09	1.38640 AU
	15214 Apr 24 14:15	0° $\text{♄}$		evening rise	15215 Mar 28 10:28	27° $\text{☿}$ 57'10	
	15214 May 16 10:37	0° $\text{♄}$			15215 Mar 29 15:05	0° $\text{♄}$	
evening max el	15214 May 20 02:47	3° $\text{♄}$ 57'30	23°19'34		15215 Apr 18 01:13	0° $\text{♄}$	
asc. node	15214 May 29 12:42	10° $\text{♄}$ 04'09		evening max el	15215 May 02 16:20	17° $\text{♄}$ 51'29	24°39'57
retrograde	15214 May 30 16:08	10° $\text{♄}$ 09'52		retrograde	15215 May 14 08:27	24° $\text{♄}$ 40'42	
evening set	15214 Jun 04 19:52	7° $\text{♄}$ 58'38		asc. node	15215 May 16 09:53	24° $\text{♄}$ 22'32	
min. Earth dist.	15214 Jun 09 16:02	2° $\text{♄}$ 15'25	0.68992 AU	evening set	15215 May 19 23:39	22° $\text{♄}$ 17'53	
inferior conj	15214 Jun 10 04:21	1° $\text{♄}$ 32'53	2°51'31	min. Earth dist.	15215 May 24 11:22	17° $\text{♄}$ 11'24	0.68465 AU
minimum elong	15214 Jun 10 02:47	1° $\text{♄}$ 38'18	2°50'19	inferior conj	15215 May 25 12:30	15° $\text{♄}$ 47'33	2°26'46
	15214 Jun 11 07:32	30° $\text{♁}$ $\text{♄}$		minimum elong	15215 May 25 10:26	15° $\text{♄}$ 54'28	2°25'22
morning rise	15214 Jun 15 09:40	25° $\text{♄}$ 25'47		morning rise	15215 May 30 21:26	9° $\text{♄}$ 49'17	
direct	15214 Jun 19 16:49	23° $\text{♄}$ 42'48		direct	15215 Jun 03 16:43	8° $\text{♄}$ 26'23	
morning max el	15214 Jun 28 00:44	28° $\text{♄}$ 28'39	20°51'18	morning max el	15215 Jun 11 01:20	12° $\text{♄}$ 31'15	19°41'52
	15214 Jun 29 11:52	0° $\text{♄}$		desc. node	15215 Jun 18 04:46	21° $\text{♄}$ 05'13	
desc. node	15214 Jul 01 07:41	2° $\text{♄}$ 04'01		greatest brilliancy	15215 Jun 23 22:42	29° $\text{♄}$ 12'53	-0.6m
	15214 Jul 21 07:08	0° $\text{♄}$			15215 Jun 24 11:35	0° $\text{♄}$	
morning set	15214 Jul 28 00:59	10° $\text{♄}$ 19'44		morning set	15215 Jul 07 04:14	19° $\text{♄}$ 08'28	
max. Earth dist.	15214 Aug 05 00:33	22° $\text{♄}$ 58'16	1.43399 AU		15215 Jul 14 04:43	0° $\text{♄}$	
	15214 Aug 09 07:44	0° $\text{♄}$		max. Earth dist.	15215 Jul 18 14:02	6° $\text{♄}$ 53'09	1.44932 AU
superior conj	15214 Aug 11 21:05	4° $\text{♄}$ 15'44	-1°41'37	superior conj	15215 Jul 23 06:04	14° $\text{♄}$ 19'04	-2°06'00
minimum elong	15214 Aug 12 04:39	4° $\text{♄}$ 47'32	1°41'18	minimum elong	15215 Jul 23 12:05	14° $\text{♄}$ 43'10	2°06'26
evening rise	15214 Aug 23 21:07	25° $\text{♄}$ 03'48			15215 Aug 01 20:14	0° $\text{♄}$	
asc. node	15214 Aug 25 13:14	28° $\text{♄}$ 01'28		evening rise	15215 Aug 06 00:41	7° $\text{♄}$ 00'35	
	15214 Aug 26 16:05	0° $\text{♄}$		asc. node	15215 Aug 12 09:50	17° $\text{♄}$ 42'28	
evening max el	15214 Sep 09 09:00	20° $\text{♄}$ 45'46	18°02'14		15215 Aug 20 10:05	0° $\text{♄}$	
retrograde	15214 Sep 16 00:43	24° $\text{♄}$ 11'49		evening max el	15215 Aug 23 23:42	4° $\text{♄}$ 11'12	18°07'23
evening set	15214 Sep 18 10:33	23° $\text{♄}$ 44'38		retrograde	15215 Aug 30 08:32	7° $\text{♄}$ 31'45	
inferior conj	15214 Sep 25 04:44	18° $\text{♄}$ 42'42	0°36'38	evening set	15215 Sep 02 02:52	6° $\text{♄}$ 51'40	
minimum elong	15214 Sep 25 05:50	18° $\text{♄}$ 40'00	0°36'25	inferior conj	15215 Sep 08 07:02	1° $\text{♄}$ 32'16	1°40'08
desc. node	15214 Sep 27 04:25	16° $\text{♄}$ 46'17		minimum elong	15215 Sep 08 09:18	1° $\text{♄}$ 26'02	1°39'19
min. Earth dist.	15214 Sep 28 06:49	15° $\text{♄}$ 43'43	0.61081 AU		15215 Sep 09 16:32	30° $\text{♁}$ $\text{♄}$	
morning rise	15214 Oct 01 22:12	12° $\text{♄}$ 46'49		min. Earth dist.	15215 Sep 10 22:33	28° $\text{♄}$ 39'01	0.63324 AU
direct	15214 Oct 08 13:46	10° $\text{♄}$ 33'13		desc. node	15215 Sep 14 01:53	25° $\text{♄}$ 41'09	
morning max el	15214 Oct 22 19:14	18° $\text{♄}$ 28'24	27°58'14	morning rise	15215 Sep 14 13:41	25° $\text{♄}$ 18'05	
	15214 Nov 01 12:40	0° $\text{♄}$		direct	15215 Sep 21 05:18	22° $\text{♄}$ 47'39	
	15214 Nov 19 19:14	0° $\text{♄}$			15215 Oct 04 08:18	0° $\text{♄}$	
asc. node	15214 Nov 21 14:51	3° $\text{♄}$ 32'46		morning max el	15215 Oct 05 03:51	0° $\text{♄}$ 47'59	27°47'53
morning set	15214 Nov 25 00:19	10° $\text{♄}$ 26'17			15215 Oct 26 15:50	0° $\text{♄}$	

asc. node	15215 Nov 08 11:39	23°♄27'19			15216 Oct 18 07:36	0°♄	
morning set	15215 Nov 08 19:43	24°♄07'50		morning set	15216 Oct 22 05:07	7°♄20'28	
	15215 Nov 11 16:22	0°♄		asc. node	15216 Oct 25 08:22	13°♄31'12	
max. Earth dist.	15215 Nov 13 19:06	4°♄27'50	1.32124 AU	max. Earth dist.	15216 Oct 26 11:14	15°♄46'58	1.33500 AU
superior conj	15215 Nov 16 13:53	10°♄28'19	1°09'19	superior conj	15216 Oct 30 16:27	24°♄32'31	0°47'52
minimum elong	15215 Nov 16 11:34	10°♄15'43	1°09'51	minimum elong	15216 Oct 30 14:18	24°♄21'12	0°48'13
evening rise	15215 Nov 23 09:47	25°♄23'56			15216 Nov 02 05:55	0°♄	
	15215 Nov 25 13:40	0°♄		evening rise	15216 Nov 06 20:13	9°♄50'20	
desc. node	15215 Dec 10 23:11	26°♄55'12			15216 Nov 17 05:00	0°♄	
	15215 Dec 13 09:42	0°♄		desc. node	15216 Nov 26 20:15	13°♄13'14	
evening max el	15215 Dec 17 02:36	3°♄59'26	23°37'42	evening max el	15216 Nov 27 14:16	13°♄58'36	21°55'38
retrograde	15215 Dec 30 12:58	10°♄39'13		retrograde	15216 Dec 10 01:26	20°♄08'37	
evening set	15216 Jan 04 03:23	9°♄53'19		evening set	15216 Dec 13 08:08	19°♄44'38	
min. Earth dist.	15216 Jan 10 13:38	6°♄48'37	0.55186 AU	inferior conj	15216 Dec 21 23:18	15°♄52'57	-5°56'50
inferior conj	15216 Jan 12 05:49	5°♄49'35	-5°48'27	minimum elong	15216 Dec 21 19:43	15°♄57'57	5°55'38
minimum elong	15216 Jan 12 11:13	5°♄41'37	5°47'01	min. Earth dist.	15216 Dec 21 19:19	15°♄58'31	0.54465 AU
morning rise	15216 Jan 20 20:39	1°♄55'45		morning rise	15216 Dec 30 08:07	12°♄05'31	
direct	15216 Jan 23 11:45	1°♄38'44		direct	15217 Jan 02 21:34	11°♄37'35	
morning max el	15216 Feb 03 08:33	6°♄53'05	20°22'03	morning max el	15217 Jan 15 05:57	17°♄35'05	21°56'04
asc. node	15216 Feb 04 10:28	7°♄58'37		asc. node	15217 Jan 21 07:47	24°♄41'02	
	15216 Feb 18 10:05	0°♄			15217 Jan 24 21:11	0°♄	
morning set	15216 Feb 21 19:24	6°♄50'18		morning set	15217 Feb 05 05:38	21°♄33'49	
					15217 Feb 09 04:53	0°♄	
superior conj	15216 Feb 29 09:54	22°♄27'36	1°00'33	superior conj	15217 Feb 12 08:32	6°♄41'08	1°19'14
minimum elong	15216 Feb 29 12:31	22°♄40'46	1°00'24	minimum elong	15217 Feb 12 10:51	6°♄53'19	1°19'27
	15216 Mar 04 05:06	0°♄		max. Earth dist.	15217 Feb 16 11:58	15°♄14'30	1.34434 AU
max. Earth dist.	15216 Mar 05 23:23	3°♄23'43	1.36411 AU	evening rise	15217 Feb 20 18:23	23°♄38'54	
desc. node	15216 Mar 08 00:18	7°♄14'11		desc. node	15217 Feb 22 20:51	27°♄37'13	
evening rise	15216 Mar 09 18:40	10°♄29'16			15217 Feb 24 03:49	0°♄	
	15216 Mar 21 06:23	0°♄			15217 Mar 14 21:22	0°♄	
	15216 Apr 12 12:56	0°♄		evening max el	15217 Mar 27 19:49	15°♄28'09	26°51'15
evening max el	15216 Apr 14 05:54	1°♄43'59	25°53'02	retrograde	15217 Apr 10 02:09	22°♄55'18	
retrograde	15216 Apr 26 20:09	8°♄58'19		evening set	15217 Apr 16 13:38	20°♄23'13	
asc. node	15216 May 02 07:09	6°♄58'08		asc. node	15217 Apr 19 04:29	17°♄56'47	
evening set	15216 May 02 22:12	6°♄28'17		min. Earth dist.	15217 Apr 20 13:08	16°♄26'51	0.66060 AU
min. Earth dist.	15216 May 07 03:08	1°♄57'37	0.67476 AU	inferior conj	15217 Apr 22 15:45	13°♄59'06	1°03'31
inferior conj	15216 May 08 17:03	29°♄58'00	1°51'03	minimum elong	15217 Apr 22 14:12	14°♄03'37	1°02'22
minimum elong	15216 May 08 14:55	0°♄04'44	1°49'37	morning rise	15217 Apr 28 16:04	8°♄22'59	
	15216 May 08 16:25	30°♄		direct	15217 May 01 14:22	7°♄35'50	
morning rise	15216 May 14 08:17	24°♄09'55		morning max el	15217 May 07 22:46	10°♄55'27	18°10'18
direct	15216 May 17 16:34	23°♄06'00		desc. node	15217 May 21 22:38	0°♄34'20	
morning max el	15216 May 24 09:07	26°♄41'52	18°47'45		15217 May 21 14:02	0°♄	
	15216 May 27 08:59	0°♄		morning set	15217 May 27 02:11	8°♄50'07	
desc. node	15216 Jun 04 01:45	10°♄38'11			15217 Jun 09 09:37	0°♄	
greatest brilliancy	15216 Jun 07 06:03	15°♄26'12	-0.8m				
morning set	15216 Jun 15 15:12	28°♄23'43		superior conj	15217 Jun 11 05:14	2°♄50'55	-2°01'42
	15216 Jun 16 15:58	0°♄		minimum elong	15217 Jun 10 21:44	2°♄21'34	2°02'12
max. Earth dist.	15216 Jun 30 08:05	21°♄17'28	1.45793 AU	max. Earth dist.	15217 Jun 13 04:37	5°♄56'10	1.45913 AU
				evening rise	15217 Jun 27 07:39	27°♄52'57	
superior conj	15216 Jul 01 20:15	23°♄38'49	-2°13'54		15217 Jun 28 16:27	0°♄	
minimum elong	15216 Jul 01 19:31	23°♄35'58	2°14'49	greatest brilliancy	15217 Jul 08 20:20	15°♄35'42	-0.7m
	15216 Jul 05 21:27	0°♄		asc. node	15217 Jul 16 03:15	26°♄01'14	
evening rise	15216 Jul 17 04:13	17°♄56'04			15217 Jul 19 08:51	0°♄	
	15216 Jul 24 17:02	0°♄		evening max el	15217 Jul 20 23:08	1°♄41'40	19°10'27
asc. node	15216 Jul 29 06:31	7°♄04'56		retrograde	15217 Jul 27 21:06	5°♄30'55	
evening max el	15216 Aug 06 13:19	17°♄52'34	18°30'26	evening set	15217 Jul 31 09:59	4°♄18'23	
retrograde	15216 Aug 13 00:26	21°♄20'55			15217 Aug 04 16:21	30°♄	
evening set	15216 Aug 16 03:48	20°♄25'23		inferior conj	15217 Aug 05 20:40	28°♄29'31	2°52'34
inferior conj	15216 Aug 21 21:30	14°♄50'29	2°24'29	minimum elong	15217 Aug 05 22:18	28°♄24'12	2°51'44
minimum elong	15216 Aug 21 23:47	14°♄43'37	2°23'35	min. Earth dist.	15217 Aug 07 08:24	26°♄33'55	0.66949 AU
min. Earth dist.	15216 Aug 23 23:32	12°♄20'04	0.65322 AU	morning rise	15217 Aug 11 09:58	22°♄03'38	
morning rise	15216 Aug 27 18:32	8°♄27'08		direct	15217 Aug 17 11:45	19°♄27'13	
desc. node	15216 Aug 30 23:22	6°♄28'02		desc. node	15217 Aug 17 20:51	19°♄27'46	
direct	15216 Sep 03 05:06	5°♄49'10		morning max el	15217 Aug 30 02:03	26°♄57'45	25°56'15
morning max el	15216 Sep 16 14:46	13°♄41'45	27°04'27		15217 Sep 01 22:11	0°♄	
	15216 Sep 29 20:08	0°♄					

	15217 Sep 23 11:09	0°♄		direct	15218 Aug 01 00:16	3°♄33'04	
morning set	15217 Oct 05 01:03	19°♄55'32		desc. node	15218 Aug 04 18:16	4°♄27'25	
max. Earth dist.	15217 Oct 08 17:51	26°♄52'49	1.35381 AU	morning max el	15218 Aug 12 12:56	10°♄27'10	24°32'41
	15217 Oct 10 08:30	0°♄			15218 Aug 28 02:17	0°♄	
asc. node	15217 Oct 12 05:02	3°♄39'35			15218 Sep 16 03:29	0°♄	
				morning set	15218 Sep 17 03:29	1°♄44'06	
superior conj	15217 Oct 14 11:15	8°♄12'21	0°20'41	max. Earth dist.	15218 Sep 20 17:37	8°♄06'35	1.37627 AU
minimum elong	15217 Oct 14 10:04	8°♄06'23	0°20'57				
evening rise	15217 Oct 22 04:12	24°♄08'43		superior conj	15218 Sep 27 19:04	21°♄20'10	-0°11'34
	15217 Oct 25 00:57	0°♄		minimum elong	15218 Sep 27 19:50	21°♄23'49	0°11'11
evening max el	15217 Nov 09 12:28	24°♄26'33	20°26'34	behind sun begin	15218 Sep 27 14:55	21°♄00'05	
desc. node	15217 Nov 13 17:26	27°♄50'23		behind sun end	15218 Sep 28 00:44	21°♄47'36	
retrograde	15217 Nov 20 12:06	29°♄54'28		asc. node	15218 Sep 29 01:39	23°♄48'56	
evening set	15217 Nov 22 18:39	29°♄41'30			15218 Oct 02 04:47	0°♄	
inferior conj	15217 Dec 01 15:25	25°♄46'31	-5°04'32	evening rise	15218 Oct 06 07:24	8°♄13'17	
minimum elong	15217 Dec 01 05:41	26°♄00'45	5°01'18		15218 Oct 18 09:30	0°♄	
min. Earth dist.	15217 Dec 03 01:07	24°♄57'17	0.54671 AU	evening max el	15218 Oct 23 01:09	5°♄43'10	19°18'29
morning rise	15217 Dec 09 16:21	21°♄47'01		desc. node	15218 Oct 31 14:44	10°♄22'56	
direct	15217 Dec 14 06:22	21°♄01'50		retrograde	15218 Nov 01 09:49	10°♄24'54	
morning max el	15217 Dec 27 16:46	27°♄36'42	23°44'28	evening set	15218 Nov 03 07:00	10°♄14'19	
	15217 Dec 30 00:58	0°♄		inferior conj	15218 Nov 11 20:27	6°♄04'55	-3°30'01
asc. node	15218 Jan 08 05:02	12°♄25'09		minimum elong	15218 Nov 11 11:50	6°♄19'09	3°26'09
	15218 Jan 17 17:33	0°♄		min. Earth dist.	15218 Nov 14 10:46	4°♄22'12	0.55771 AU
morning set	15218 Jan 20 17:30	6°♄18'02		morning rise	15218 Nov 19 14:20	1°♄34'51	
				direct	15218 Nov 25 01:27	0°♄26'47	
superior conj	15218 Jan 27 13:42	21°♄10'23	1°31'26	morning max el	15218 Dec 09 02:18	7°♄32'36	25°30'44
minimum elong	15218 Jan 27 15:13	21°♄18'41	1°31'59		15218 Dec 25 13:28	0°♄	
max. Earth dist.	15218 Jan 30 08:11	27°♄07'36	1.32848 AU	asc. node	15218 Dec 26 02:11	0°♄55'56	
	15218 Jan 31 16:51	0°♄		morning set	15219 Jan 05 05:07	20°♄57'31	
evening rise	15218 Feb 04 06:11	7°♄17'16			15219 Jan 09 08:07	0°♄	
desc. node	15218 Feb 09 17:28	17°♄48'42					
	15218 Feb 16 17:09	0°♄		superior conj	15219 Jan 11 22:55	5°♄48'24	1°37'20
evening max el	15218 Mar 10 08:56	28°♄52'37	27°27'13	minimum elong	15219 Jan 11 23:25	5°♄51'11	1°38'08
	15218 Mar 11 13:45	0°♄		max. Earth dist.	15219 Jan 13 11:05	9°♄08'03	1.31741 AU
retrograde	15218 Mar 24 01:39	6°♄22'55		evening rise	15219 Jan 19 03:03	21°♄16'52	
evening set	15218 Mar 30 19:48	3°♄55'08			15219 Jan 23 11:16	0°♄	
min. Earth dist.	15218 Apr 03 15:23	0°♄30'01	0.64264 AU	desc. node	15219 Jan 27 14:08	7°♄42'45	
	15218 Apr 04 02:58	30°♄			15219 Feb 10 17:06	0°♄	
inferior conj	15218 Apr 06 05:59	27°♄44'17	0°03'15	evening max el	15219 Feb 20 19:16	11°♄44'21	27°34'09
minimum elong	15218 Apr 06 05:53	27°♄44'31	0°02'52	retrograde	15219 Mar 06 17:42	19°♄10'32	
transit middle	15218 Apr 06 05:53	27°♄44'31	0°02'52	evening set	15219 Mar 13 14:05	16°♄54'30	
transit begin	15218 Apr 06 02:50	27°♄52'38		min. Earth dist.	15219 Mar 17 08:13	13°♄55'09	0.62181 AU
transit end	15218 Apr 06 08:56	27°♄36'25		inferior conj	15219 Mar 20 08:33	11°♄04'43	-1°10'01
asc. node	15218 Apr 06 01:52	27°♄55'13		minimum elong	15219 Mar 20 10:57	10°♄59'01	1°09'06
morning rise	15218 Apr 12 18:07	22°♄22'32		asc. node	15219 Mar 23 23:19	7°♄55'53	
direct	15218 Apr 15 07:31	21°♄49'15		morning rise	15219 Mar 27 10:49	6°♄00'00	
morning max el	15218 Apr 21 15:55	25°♄04'51	17°50'03	direct	15219 Mar 29 16:42	5°♄37'11	
	15218 Apr 25 19:29	0°♄		morning max el	15219 Apr 05 09:28	9°♄00'22	17°47'21
morning set	15218 May 08 16:50	20°♄36'13			15219 Apr 19 07:41	0°♄	
desc. node	15218 May 08 19:27	20°♄47'13		morning set	15219 Apr 21 06:40	3°♄27'04	
	15218 May 14 07:44	0°♄		desc. node	15219 Apr 25 16:09	11°♄10'55	
superior conj	15218 May 22 02:08	12°♄40'33	-1°32'54	superior conj	15219 May 02 21:03	23°♄31'51	-0°55'33
minimum elong	15218 May 21 17:39	12°♄06'27	1°32'50	minimum elong	15219 May 02 15:48	23°♄09'48	0°55'29
max. Earth dist.	15218 May 27 00:40	20°♄32'02	1.45284 AU		15219 May 06 18:41	0°♄	
	15218 Jun 02 02:07	0°♄		max. Earth dist.	15219 May 09 17:19	4°♄46'55	1.43976 AU
evening rise	15218 Jun 06 20:07	7°♄18'30		evening rise	15219 May 17 09:27	16°♄53'24	
greatest brilliancy	15218 Jun 21 12:21	29°♄16'49	-0.6m		15219 May 26 00:46	0°♄	
	15218 Jun 22 00:19	0°♄		evening max el	15219 Jun 17 01:39	29°♄25'53	21°14'54
asc. node	15218 Jul 03 00:06	14°♄22'43			15219 Jun 17 15:33	0°♄	
evening max el	15218 Jul 04 03:25	15°♄33'45	20°06'04	asc. node	15219 Jun 19 21:02	1°♄57'01	
retrograde	15218 Jul 11 19:58	19°♄55'54		retrograde	15219 Jun 25 18:53	4°♄29'35	
evening set	15218 Jul 15 18:55	18°♄25'52		evening set	15219 Jun 30 04:32	2°♄42'29	
inferior conj	15218 Jul 21 01:41	12°♄24'24	3°06'53		15219 Jul 02 19:13	30°♄	
minimum elong	15218 Jul 21 02:24	12°♄21'56	3°06'05	inferior conj	15219 Jul 05 10:09	26°♄30'01	3°09'21
min. Earth dist.	15218 Jul 21 23:23	11°♄10'39	0.68137 AU	minimum elong	15219 Jul 05 09:54	26°♄30'54	3°08'27
morning rise	15218 Jul 26 09:33	6°♄00'29		min. Earth dist.	15219 Jul 05 18:23	26°♄01'21	0.68850 AU



morning rise	15219 Jul 10 15:00	20°☿11'03		morning rise	15220 Jun 24 00:22	4°☿30'13	
direct	15219 Jul 15 17:37	17°☿58'13		direct	15220 Jun 28 14:37	2°☿35'35	
desc. node	15219 Jul 22 15:37	21°☿01'40		morning max el	15220 Jul 07 14:35	7°☿49'43	21°36'54
morning max el	15219 Jul 26 00:16	24°☿04'29	23°03'21	desc. node	15220 Jul 08 12:53	8°☿46'59	
	15219 Jul 31 06:54	0°♊			15220 Jul 24 18:01	0°♊	
	15219 Aug 21 11:39	0°♊		morning set	15220 Aug 08 12:30	22°♊25'37	
morning set	15219 Aug 29 08:09	12°♊36'13			15220 Aug 13 05:42	0°♊	
max. Earth dist.	15219 Sep 02 16:19	19°♊54'51	1.40014 AU	max. Earth dist.	15220 Aug 14 19:39	2°♊35'20	1.42271 AU
	15219 Sep 08 10:00	0°♋					
superior conj	15219 Sep 10 11:58	3°♋47'01	-0°47'10	superior conj	15220 Aug 22 09:31	15°♊22'43	-1°22'56
minimum elong	15219 Sep 10 15:34	4°♋03'27	0°46'36	minimum elong	15220 Aug 22 16:04	15°♊51'08	1°22'24
asc. node	15219 Sep 15 22:16	13°♋55'45			15220 Aug 30 15:00	0°♋	
evening rise	15219 Sep 20 02:49	21°♋56'24		asc. node	15220 Sep 01 18:50	3°♋55'55	
	15219 Sep 24 08:59	0°♌		evening rise	15220 Sep 02 10:37	5°♋07'52	
evening max el	15219 Oct 06 02:29	17°♌48'39	18°32'39		15220 Sep 17 23:16	0°♌	
retrograde	15219 Oct 14 01:44	21°♌50'39		evening max el	15220 Sep 18 12:13	0°♌33'14	18°07'42
evening set	15219 Oct 16 00:37	21°♌36'52		retrograde	15220 Sep 25 12:11	4°♌08'03	
desc. node	15219 Oct 18 12:05	20°♌43'00		evening set	15220 Sep 27 17:36	3°♌46'44	
inferior conj	15219 Oct 23 22:11	17°♌07'29	-1°44'16		15220 Oct 03 16:23	30°♌	
minimum elong	15219 Oct 23 18:02	17°♌15'30	1°41'57	desc. node	15220 Oct 04 09:30	29°♋22'32	
min. Earth dist.	15219 Oct 27 02:51	14°♌40'38	0.57568 AU	inferior conj	15220 Oct 04 21:18	28°♋56'13	-0°09'17
morning rise	15219 Oct 31 07:59	12°♌00'13		minimum elong	15220 Oct 04 20:59	28°♋56'55	0°08'48
direct	15219 Nov 06 11:18	10°♌25'19		transit middle	15220 Oct 04 20:59	28°♋56'55	0°08'48
morning max el	15219 Nov 20 17:43	17°♌55'34	26°55'56	transit begin	15220 Oct 04 18:10	29°♋03'15	
	15219 Nov 30 19:35	0°♍		transit end	15220 Oct 04 23:49	28°♋50'34	
asc. node	15219 Dec 12 23:15	20°♍01'19		min. Earth dist.	15220 Oct 08 03:04	26°♋03'04	0.59767 AU
	15219 Dec 18 00:30	0°♎		morning rise	15220 Oct 11 21:06	23°♋15'52	
morning set	15219 Dec 20 14:46	5°♎27'46		direct	15220 Oct 18 10:18	21°♋14'57	
				morning max el	15220 Nov 01 16:56	29°♋02'29	27°46'43
superior conj	15219 Dec 27 10:11	20°♎29'21	1°37'10		15220 Nov 02 15:51	0°♌	
minimum elong	15219 Dec 27 09:37	20°♎26'13	1°38'04		15220 Nov 23 17:50	0°♍	
max. Earth dist.	15219 Dec 27 18:09	21°♎13'54	1.31153 AU	asc. node	15220 Nov 28 20:13	9°♍31'17	
	15219 Dec 31 17:00	0°♏		morning set	15220 Dec 03 20:33	19°♍43'02	
evening rise	15220 Jan 03 06:30	5°♏32'00			15220 Dec 08 14:25	0°♎	
desc. node	15220 Jan 14 10:51	27°♏12'31		max. Earth dist.	15220 Dec 10 01:48	3°♎16'42	1.31101 AU
	15220 Jan 16 02:07	0°♏					
evening max el	15220 Feb 03 00:31	23°♏52'22	27°07'13	superior conj	15220 Dec 10 21:31	5°♎06'42	1°31'03
	15220 Feb 11 17:55	0°♐		minimum elong	15220 Dec 10 20:01	4°♎58'23	1°31'53
retrograde	15220 Feb 17 00:56	1°♐09'04		evening rise	15220 Dec 17 14:18	19°♎56'14	
	15220 Feb 22 04:07	30°♐			15220 Dec 22 10:21	0°♏	
evening set	15220 Feb 23 17:20	29°♐12'41		desc. node	15220 Dec 31 07:39	16°♏07'59	
min. Earth dist.	15220 Feb 27 14:55	26°♐30'17	0.59959 AU		15221 Jan 10 03:10	0°♏	
inferior conj	15220 Mar 01 19:52	23°♐51'29	-2°34'14	evening max el	15221 Jan 14 22:15	5°♏08'23	26°05'43
minimum elong	15220 Mar 02 01:37	23°♐39'35	2°31'50	retrograde	15221 Jan 28 21:12	12°♏12'37	
morning rise	15220 Mar 09 13:21	19°♏06'17		evening set	15221 Feb 04 01:48	10°♏42'06	
asc. node	15220 Mar 09 20:44	19°♏01'51		min. Earth dist.	15221 Feb 08 11:31	8°♏04'29	0.57803 AU
direct	15220 Mar 11 14:03	18°♏50'17		inferior conj	15221 Feb 11 12:20	5°♏54'23	-4°02'29
morning max el	15220 Mar 18 23:56	22°♏32'04	18°03'12	minimum elong	15221 Feb 11 21:04	5°♏38'44	3°59'14
	15220 Mar 24 19:37	0°♐		morning rise	15221 Feb 19 19:24	1°♏30'32	
morning set	15220 Apr 03 13:44	17°♐05'06		direct	15221 Feb 21 19:22	1°♏17'33	
	15220 Apr 10 14:18	0°♑		asc. node	15221 Feb 24 18:10	1°♏47'21	
desc. node	15220 Apr 11 12:47	1°♑41'22		morning max el	15221 Mar 02 07:26	5°♏28'25	18°39'22
					15221 Mar 17 17:21	0°♐	
superior conj	15220 Apr 13 15:21	5°♑26'45	-0°17'07	morning set	15221 Mar 18 08:52	1°♐15'03	
minimum elong	15220 Apr 13 13:54	5°♑20'20	0°17'21				
max. Earth dist.	15220 Apr 21 05:18	18°♑27'57	1.42136 AU	superior conj	15221 Mar 27 05:44	18°♐15'50	0°17'45
evening rise	15220 Apr 26 13:42	27°♑11'53		minimum elong	15221 Mar 27 06:55	18°♐21'21	0°17'21
	15220 Apr 28 07:59	0°♒		desc. node	15221 Mar 29 09:21	22°♐14'40	
	15220 May 18 17:44	0°☊			15221 Apr 02 17:00	0°♑	
evening max el	15220 May 29 18:57	13°☊18'31	22°32'53	max. Earth dist.	15221 Apr 03 13:18	1°♑28'56	1.39955 AU
asc. node	15220 Jun 05 18:03	18°☊29'00		evening rise	15221 Apr 07 14:48	8°♑25'49	
retrograde	15220 Jun 08 16:11	19°☊06'34			15221 Apr 21 07:22	0°♒	
evening set	15220 Jun 13 13:08	17°☊03'43		evening max el	15221 May 12 09:26	27°♒12'49	23°54'20
inferior conj	15220 Jun 18 19:59	10°☊42'11	3°01'02		15221 May 15 10:51	0°☊	
minimum elong	15220 Jun 18 18:50	10°☊46'11	2°59'57	retrograde	15221 May 23 10:30	3°☊41'32	
min. Earth dist.	15220 Jun 18 15:10	10°☊58'58	0.69079 AU	asc. node	15221 May 23 15:09	3°☊41'22	
				evening set	15221 May 28 19:08	1°☊25'09	

	15221 May 30 06:01	30° $\mathbb{R}$ II		inferior conj	15222 May 18 12:07	9° $\mathbb{II}$ 10'27	2°13'00
min. Earth dist.	15221 Jun 02 11:35	25° $\mathbb{II}$ 57'35	0.68824 AU	minimum elong	15222 May 18 09:57	9° $\mathbb{II}$ 17'30	2°11'34
inferior conj	15221 Jun 03 05:17	24° $\mathbb{II}$ 57'14	2°42'21	morning rise	15222 May 23 23:24	3° $\mathbb{II}$ 16'35	
minimum elong	15221 Jun 03 03:27	25° $\mathbb{II}$ 03'28	2°41'02	direct	15222 May 27 13:58	2° $\mathbb{II}$ 01'52	
morning rise	15221 Jun 08 11:47	18° $\mathbb{II}$ 53'42		morning max el	15222 Jun 03 14:40	5° $\mathbb{II}$ 52'27	19°17'00
direct	15221 Jun 12 13:54	17° $\mathbb{II}$ 19'03		desc. node	15222 Jun 12 07:05	16° $\mathbb{II}$ 40'37	
morning max el	15221 Jun 20 10:55	21° $\mathbb{II}$ 45'51	20°20'05	greatest brilliancy	15222 Jun 16 07:59	22° $\mathbb{II}$ 32'28	-0.7m
desc. node	15221 Jun 25 10:03	27° $\mathbb{II}$ 24'49			15222 Jun 21 07:05	0° $\mathbb{S}$	
	15221 Jun 27 10:08	0° $\mathbb{S}$		morning set	15222 Jun 28 00:55	10° $\mathbb{S}$ 19'05	
	15221 Jul 17 22:38	0° $\mathbb{Q}$			15222 Jul 10 17:13	0° $\mathbb{Q}$	
morning set	15221 Jul 18 20:57	1° $\mathbb{Q}$ 25'49		max. Earth dist.	15222 Jul 10 22:29	0° $\mathbb{Q}$ 20'39	1.45385 AU
max. Earth dist.	15221 Jul 28 06:12	16° $\mathbb{Q}$ 09'01	1.44128 AU				
				superior conj	15222 Jul 14 07:54	5° $\mathbb{Q}$ 41'37	-2°11'43
superior conj	15221 Aug 03 08:07	26° $\mathbb{Q}$ 00'19	-1°53'31	minimum elong	15222 Jul 14 11:34	5° $\mathbb{Q}$ 56'05	2°12'27
minimum elong	15221 Aug 03 15:40	26° $\mathbb{Q}$ 31'22	1°53'29	evening rise	15222 Jul 28 19:49	29° $\mathbb{Q}$ 08'12	
	15221 Aug 05 18:03	0° $\mathbb{P}$			15222 Jul 29 08:24	0° $\mathbb{P}$	
evening rise	15221 Aug 16 02:03	17° $\mathbb{P}$ 36'18		asc. node	15222 Aug 06 12:04	13° $\mathbb{P}$ 19'52	
asc. node	15221 Aug 19 15:26	23° $\mathbb{P}$ 45'46		evening max el	15222 Aug 16 16:46	27° $\mathbb{P}$ 20'10	18°14'59
	15221 Aug 23 07:28	0° $\mathbb{A}$			15222 Aug 20 05:38	0° $\mathbb{A}$	
evening max el	15221 Sep 02 02:12	13° $\mathbb{A}$ 47'03	18°02'08	retrograde	15222 Aug 23 01:30	0° $\mathbb{A}$ 42'35	
retrograde	15221 Sep 08 13:37	17° $\mathbb{A}$ 08'50		evening set	15222 Aug 25 23:36	29° $\mathbb{P}$ 56'09	
evening set	15221 Sep 11 03:06	16° $\mathbb{A}$ 36'22			15222 Aug 25 20:36	30° $\mathbb{R}$ $\mathbb{P}$	
inferior conj	15221 Sep 17 14:53	11° $\mathbb{A}$ 26'33	1°06'01	inferior conj	15222 Aug 31 22:52	24° $\mathbb{P}$ 29'36	2°01'04
minimum elong	15221 Sep 17 16:40	11° $\mathbb{A}$ 21'58	1°05'29	minimum elong	15222 Sep 01 01:15	24° $\mathbb{P}$ 22'47	2°00'12
min. Earth dist.	15221 Sep 20 12:56	8° $\mathbb{A}$ 27'59	0.62063 AU	min. Earth dist.	15222 Sep 03 08:42	21° $\mathbb{P}$ 44'32	0.64211 AU
desc. node	15221 Sep 21 06:57	7° $\mathbb{A}$ 44'43		morning rise	15222 Sep 07 01:14	18° $\mathbb{P}$ 10'27	
morning rise	15221 Sep 24 03:44	5° $\mathbb{A}$ 21'57		desc. node	15222 Sep 08 04:26	17° $\mathbb{P}$ 21'19	
direct	15221 Sep 30 20:04	3° $\mathbb{A}$ 00'22		direct	15222 Sep 13 15:04	15° $\mathbb{P}$ 36'03	
morning max el	15221 Oct 14 22:56	10° $\mathbb{A}$ 57'57	27°58'15	morning max el	15222 Sep 27 09:06	23° $\mathbb{P}$ 34'31	27°33'04
	15221 Oct 29 22:23	0° $\mathbb{M}$			15222 Oct 07 03:12	0° $\mathbb{A}$	
asc. node	15221 Nov 15 17:06	29° $\mathbb{M}$ 18'56			15222 Oct 23 06:32	0° $\mathbb{M}$	
	15221 Nov 16 01:19	0° $\mathbb{X}$		morning set	15222 Nov 01 12:01	17° $\mathbb{M}$ 09'27	
morning set	15221 Nov 17 20:27	3° $\mathbb{X}$ 38'48		asc. node	15222 Nov 02 13:53	19° $\mathbb{M}$ 18'25	
max. Earth dist.	15221 Nov 23 06:23	15° $\mathbb{X}$ 08'16	1.31599 AU	max. Earth dist.	15222 Nov 06 04:04	26° $\mathbb{M}$ 40'47	1.32649 AU
					15222 Nov 07 17:49	0° $\mathbb{X}$	
superior conj	15221 Nov 25 07:04	19° $\mathbb{X}$ 35'30	1°18'58	superior conj	15222 Nov 09 12:51	3° $\mathbb{X}$ 50'27	1°00'57
minimum elong	15221 Nov 25 04:56	19° $\mathbb{X}$ 23'42	1°19'38	minimum elong	15222 Nov 09 10:32	3° $\mathbb{X}$ 37'56	1°01'23
	15221 Nov 30 00:00	0° $\mathbb{Z}$		evening rise	15222 Nov 16 11:32	18° $\mathbb{X}$ 53'56	
evening rise	15221 Dec 02 00:35	4° $\mathbb{Z}$ 25'05			15222 Nov 21 20:19	0° $\mathbb{Z}$	
	15221 Dec 15 09:38	0° $\mathbb{A}$		desc. node	15222 Dec 05 01:33	21° $\mathbb{Z}$ 21'46	
desc. node	15221 Dec 18 04:32	4° $\mathbb{A}$ 16'41		evening max el	15222 Dec 08 21:15	25° $\mathbb{Z}$ 33'03	22°53'24
evening max el	15221 Dec 27 11:43	15° $\mathbb{A}$ 34'42	24°36'06		15222 Dec 14 16:29	0° $\mathbb{A}$	
retrograde	15222 Jan 10 04:34	22° $\mathbb{A}$ 24'46		retrograde	15222 Dec 21 23:26	2° $\mathbb{A}$ 02'23	
evening set	15222 Jan 15 11:58	21° $\mathbb{A}$ 22'43		evening set	15222 Dec 26 00:27	1° $\mathbb{A}$ 26'48	
min. Earth dist.	15222 Jan 20 23:31	18° $\mathbb{A}$ 33'41	0.55979 AU		15222 Dec 29 17:25	30° $\mathbb{R}$ $\mathbb{Z}$	
inferior conj	15222 Jan 23 07:46	17° $\mathbb{A}$ 06'03	-5°19'06	min. Earth dist.	15223 Jan 02 06:26	28° $\mathbb{Z}$ 06'42	0.54773 AU
minimum elong	15222 Jan 23 16:11	16° $\mathbb{A}$ 52'54	5°16'41	inferior conj	15223 Jan 03 08:23	27° $\mathbb{Z}$ 29'46	-5°59'23
morning rise	15222 Jan 31 22:29	13° $\mathbb{A}$ 03'06		minimum elong	15223 Jan 03 10:16	27° $\mathbb{Z}$ 27'04	5°58'25
direct	15222 Feb 03 05:20	12° $\mathbb{A}$ 49'00		morning rise	15223 Jan 11 21:28	23° $\mathbb{Z}$ 40'56	
asc. node	15222 Feb 11 15:34	16° $\mathbb{A}$ 16'31		direct	15223 Jan 14 21:08	23° $\mathbb{Z}$ 20'16	
morning max el	15222 Feb 13 03:47	17° $\mathbb{A}$ 37'55	19°37'54	morning max el	15223 Jan 26 09:49	28° $\mathbb{Z}$ 52'48	20°59'41
	15222 Feb 22 05:05	0° $\mathbb{H}$			15223 Jan 27 12:36	0° $\mathbb{A}$	
morning set	15222 Mar 02 12:07	15° $\mathbb{H}$ 45'00		asc. node	15223 Jan 29 12:56	2° $\mathbb{A}$ 16'12	
	15222 Mar 09 14:08	0° $\mathbb{Y}$		morning set	15223 Feb 14 20:33	0° $\mathbb{H}$ 26'23	
					15223 Feb 14 15:28	0° $\mathbb{H}$	
superior conj	15222 Mar 10 11:47	1° $\mathbb{Y}$ 46'51	0°46'48	superior conj	15223 Feb 22 05:27	15° $\mathbb{H}$ 48'45	1°09'18
minimum elong	15222 Mar 10 14:12	1° $\mathbb{Y}$ 58'43	0°46'29	minimum elong	15223 Feb 22 08:01	16° $\mathbb{H}$ 01'56	1°09'16
desc. node	15222 Mar 16 05:53	12° $\mathbb{Y}$ 47'07		max. Earth dist.	15223 Feb 27 04:47	25° $\mathbb{H}$ 48'04	1.35525 AU
max. Earth dist.	15222 Mar 16 19:47	13° $\mathbb{Y}$ 51'25	1.37672 AU		15223 Mar 01 08:59	0° $\mathbb{Y}$	
evening rise	15222 Mar 20 12:26	20° $\mathbb{Y}$ 31'35			15223 Mar 03 03:44	3° $\mathbb{Y}$ 21'21	
	15222 Mar 26 01:09	0° $\mathbb{B}$		evening rise	15223 Mar 03 02:26	3° $\mathbb{Y}$ 15'19	
	15222 Apr 15 07:48	0° $\mathbb{II}$		desc. node	15223 Mar 18 23:54	0° $\mathbb{B}$	
evening max el	15222 Apr 24 22:54	11° $\mathbb{II}$ 06'54	25°12'29	evening max el	15223 Apr 07 12:27	24° $\mathbb{B}$ 56'33	26°20'00
retrograde	15222 May 07 00:48	18° $\mathbb{II}$ 07'43			15223 Apr 13 16:48	0° $\mathbb{II}$	
asc. node	15222 May 10 12:21	17° $\mathbb{II}$ 16'54		retrograde	15223 Apr 20 10:13	2° $\mathbb{II}$ 18'13	
evening set	15222 May 12 20:52	15° $\mathbb{II}$ 41'07					
min. Earth dist.	15222 May 17 05:30	10° $\mathbb{II}$ 50'19	0.68097 AU				

	15223 Apr 26 09:47	30° $\kappa$ 8		evening max el	15224 Mar 20 02:04	8° $\delta$ 33'24	27°09'38
evening set	15223 Apr 26 16:39	29° $\delta$ 46'14		retrograde	15224 Apr 02 13:50	16° $\delta$ 03'50	
asc. node	15223 Apr 27 09:38	29° $\delta$ 09'31		evening set	15224 Apr 09 04:26	13° $\delta$ 32'39	
min. Earth dist.	15223 Apr 30 18:59	25° $\delta$ 30'43	0.66923 AU	min. Earth dist.	15224 Apr 13 01:59	9° $\delta$ 49'58	0.65335 AU
inferior conj	15223 May 02 14:27	23° $\delta$ 17'44	1°32'23	asc. node	15224 Apr 13 07:00	9° $\delta$ 36'11	
minimum elong	15223 May 02 12:29	23° $\delta$ 23'47	1°31'02	inferior conj	15224 Apr 15 09:53	7° $\delta$ 12'54	0°39'32
morning rise	15223 May 08 09:15	17° $\delta$ 34'47		minimum elong	15224 Apr 15 08:50	7° $\delta$ 15'51	0°38'39
direct	15223 May 11 13:06	16° $\delta$ 38'28		morning rise	15224 Apr 21 14:56	1° $\delta$ 42'38	
morning max el	15223 May 18 01:17	20° $\delta$ 05'51	18°29'49	direct	15224 Apr 24 09:11	1° $\delta$ 01'55	
	15223 May 25 21:39	0° $\Pi$		morning max el	15224 Apr 30 16:46	4° $\delta$ 18'44	17°59'31
desc. node	15223 May 30 04:02	6° $\Pi$ 24'30		desc. node	15224 May 16 00:53	26° $\delta$ 28'25	
morning set	15223 Jun 07 20:45	20° $\Pi$ 01'00			15224 May 18 04:36	0° $\Pi$	
	15223 Jun 14 05:13	0° $\delta$		morning set	15224 May 18 19:38	1° $\Pi$ 01'33	
superior conj	15223 Jun 23 17:42	14° $\delta$ 52'19	-2°11'09	superior conj	15224 Jun 02 05:55	24° $\Pi$ 15'51	-1°51'04
minimum elong	15223 Jun 23 13:38	14° $\delta$ 36'25	2°11'58	minimum elong	15224 Jun 01 21:14	23° $\Pi$ 41'36	1°51'17
max. Earth dist.	15223 Jun 23 17:43	14° $\delta$ 52'20	1.45932 AU	max. Earth dist.	15224 Jun 05 13:42	29° $\Pi$ 29'22	1.45728 AU
	15223 Jul 03 10:00	0° $\delta$			15224 Jun 05 21:32	0° $\delta$	
evening rise	15223 Jul 09 12:39	9° $\delta$ 37'04		evening rise	15224 Jun 18 07:55	19° $\delta$ 15'17	
greatest brilliancy	15223 Jul 18 01:33	23° $\delta$ 02'47	-0.8m		15224 Jun 25 08:32	0° $\delta$	
	15223 Jul 22 15:01	0° $\eta$		greatest brilliancy	15224 Jul 01 18:59	9° $\delta$ 38'59	-0.7m
asc. node	15223 Jul 24 08:47	2° $\eta$ 32'13		asc. node	15224 Jul 10 05:33	21° $\delta$ 15'09	
evening max el	15223 Jul 31 04:57	11° $\eta$ 05'01	18°45'26	evening max el	15224 Jul 13 12:33	24° $\delta$ 55'58	19°32'25
retrograde	15223 Aug 06 19:52	14° $\eta$ 41'10		retrograde	15224 Jul 20 17:42	28° $\delta$ 58'01	
evening set	15223 Aug 10 03:07	13° $\eta$ 38'40		evening set	15224 Jul 24 10:42	27° $\delta$ 38'16	
inferior conj	15223 Aug 15 17:26	7° $\eta$ 57'34	2°38'11	inferior conj	15224 Jul 29 19:23	21° $\delta$ 44'05	3°00'11
minimum elong	15223 Aug 15 19:29	7° $\eta$ 51'08	2°37'20	minimum elong	15224 Jul 29 20:39	21° $\delta$ 39'53	2°59'22
min. Earth dist.	15223 Aug 17 13:24	5° $\eta$ 40'39	0.66058 AU	min. Earth dist.	15224 Jul 31 01:12	20° $\delta$ 05'19	0.67505 AU
morning rise	15223 Aug 21 10:53	1° $\eta$ 32'09		morning rise	15224 Aug 04 06:04	15° $\delta$ 18'29	
	15223 Aug 23 15:21	30° $\kappa$ 8		direct	15224 Aug 10 03:25	12° $\delta$ 44'45	
desc. node	15223 Aug 26 01:55	29° $\delta$ 04'17		desc. node	15224 Aug 11 23:22	12° $\delta$ 57'43	
direct	15223 Aug 27 17:56	28° $\delta$ 53'46		morning max el	15224 Aug 22 07:31	20° $\delta$ 02'03	25°22'01
	15223 Sep 01 05:09	0° $\eta$			15224 Aug 30 20:32	0° $\eta$	
morning max el	15223 Sep 09 20:32	6° $\eta$ 39'42	26°37'57		15224 Sep 20 01:05	0° $\delta$	
	15223 Sep 27 22:01	0° $\delta$		morning set	15224 Sep 27 05:18	12° $\delta$ 24'53	
morning set	15223 Oct 15 16:13	0° $\Pi$ 07'41		max. Earth dist.	15224 Sep 30 18:49	18° $\delta$ 57'09	1.36294 AU
	15223 Oct 15 14:35	0° $\Pi$		asc. node	15224 Oct 06 07:15	29° $\delta$ 34'40	
max. Earth dist.	15223 Oct 19 16:04	7° $\Pi$ 52'33	1.34239 AU		15224 Oct 06 12:22	0° $\Pi$	
asc. node	15223 Oct 20 10:36	9° $\Pi$ 24'56		superior conj	15224 Oct 07 03:07	1° $\Pi$ 13'13	0°07'35
superior conj	15223 Oct 24 12:29	17° $\Pi$ 45'16	0°37'01	minimum elong	15224 Oct 07 02:38	1° $\Pi$ 10'48	0°07'53
minimum elong	15223 Oct 24 10:39	17° $\Pi$ 35'41	0°37'19	behind sun begin	15224 Oct 06 21:03	0° $\Pi$ 43'03	
	15223 Oct 30 07:45	0° $\delta$		behind sun end	15224 Oct 07 08:12	1° $\Pi$ 38'37	
evening rise	15223 Oct 31 21:12	3° $\delta$ 17'41		evening rise	15224 Oct 15 03:29	17° $\Pi$ 31'18	
	15223 Nov 15 16:21	0° $\delta$			15224 Oct 21 11:30	0° $\delta$	
evening max el	15223 Nov 20 12:26	5° $\delta$ 40'59	21°15'31	evening max el	15224 Nov 01 16:56	16° $\delta$ 29'56	19°54'59
desc. node	15223 Nov 21 22:41	7° $\delta$ 00'36		desc. node	15224 Nov 07 19:56	20° $\delta$ 48'06	
retrograde	15223 Dec 02 10:05	11° $\delta$ 34'50		retrograde	15224 Nov 11 23:42	21° $\delta$ 37'30	
evening set	15223 Dec 05 04:32	11° $\delta$ 17'01		evening set	15224 Nov 14 00:32	21° $\delta$ 26'24	
inferior conj	15223 Dec 13 23:32	7° $\delta$ 25'29	-5°41'37	inferior conj	15224 Nov 22 19:46	17° $\delta$ 26'52	-4°27'51
minimum elong	15223 Dec 13 16:29	7° $\delta$ 35'25	5°39'39	minimum elong	15224 Nov 22 09:44	17° $\delta$ 42'10	4°23'59
min. Earth dist.	15223 Dec 14 12:06	7° $\delta$ 07'45	0.54432 AU	min. Earth dist.	15224 Nov 24 19:26	16° $\delta$ 14'07	0.55040 AU
morning rise	15223 Dec 22 04:50	3° $\delta$ 35'08		morning rise	15224 Nov 30 17:39	13° $\delta$ 15'57	
direct	15223 Dec 26 04:35	3° $\delta$ 00'45		direct	15224 Dec 05 17:25	12° $\delta$ 21'21	
morning max el	15224 Jan 08 02:01	9° $\delta$ 15'40	22°41'11	morning max el	15224 Dec 19 11:03	19° $\delta$ 10'36	24°30'51
asc. node	15224 Jan 16 10:14	19° $\delta$ 27'18			15224 Dec 28 11:27	0° $\delta$	
	15224 Jan 22 17:51	0° $\approx$		asc. node	15225 Jan 02 07:28	7° $\delta$ 33'21	
morning set	15224 Jan 30 07:44	15° $\approx$ 11'08		morning set	15225 Jan 13 19:42	29° $\delta$ 54'01	
					15225 Jan 13 20:49	0° $\approx$	
superior conj	15224 Feb 06 07:14	0° $\delta$ 10'30	1°25'11	superior conj	15225 Jan 20 14:24	14° $\approx$ 44'31	1°34'40
minimum elong	15224 Feb 06 09:16	0° $\delta$ 21'19	1°25'32	minimum elong	15225 Jan 20 15:31	14° $\approx$ 50'36	1°35'21
	15224 Feb 06 05:16	0° $\delta$		max. Earth dist.	15225 Jan 22 19:28	19° $\approx$ 33'22	1.32324 AU
max. Earth dist.	15224 Feb 09 20:13	7° $\delta$ 37'18	1.33703 AU		15225 Jan 27 18:30	0° $\delta$	
evening rise	15224 Feb 14 09:01	16° $\delta$ 44'40		evening rise	15225 Jan 28 01:03	0° $\delta$ 33'26	
desc. node	15224 Feb 17 23:02	23° $\delta$ 34'17		desc. node	15225 Feb 03 19:39	13° $\delta$ 39'18	
	15224 Feb 21 12:19	0° $\gamma$			15225 Feb 13 12:22	0° $\gamma$	
	15224 Mar 12 09:49	0° $\delta$					

evening max el	15225 Mar 02 14:27	21° $\Upsilon$ 46'11	27°34'02	desc. node	15226 Jan 21 16:21	3° $\text{X}$ 24'21	
retrograde	15225 Mar 16 10:19	29° $\Upsilon$ 15'15			15226 Feb 08 19:15	0° $\Upsilon$	
evening set	15225 Mar 23 05:52	26° $\Upsilon$ 51'53		evening max el	15226 Feb 12 23:11	4° $\Upsilon$ 21'40	27°26'59
min. Earth dist.	15225 Mar 27 00:35	23° $\Upsilon$ 38'10	0.63408 AU	retrograde	15226 Feb 26 22:34	11° $\Upsilon$ 43'17	
inferior conj	15225 Mar 29 19:34	20° $\Upsilon$ 48'50	-0°26'17	evening set	15226 Mar 05 18:10	9° $\Upsilon$ 34'58	
minimum elong	15225 Mar 29 20:25	20° $\Upsilon$ 46'42	0°26'11	min. Earth dist.	15226 Mar 09 13:09	6° $\Upsilon$ 44'03	0.61249 AU
asc. node	15225 Mar 31 04:24	19° $\Upsilon$ 27'02		inferior conj	15226 Mar 12 16:10	3° $\Upsilon$ 56'48	-1°44'37
morning rise	15225 Apr 05 13:28	15° $\Upsilon$ 33'40		minimum elong	15226 Mar 12 19:55	3° $\Upsilon$ 48'23	1°43'04
direct	15225 Apr 07 23:25	15° $\Upsilon$ 05'17			15226 Mar 17 18:24	30° $\text{X}$	
morning max el	15225 Apr 14 10:23	18° $\Upsilon$ 22'58	17°46'36	asc. node	15226 Mar 18 01:50	29° $\text{X}$ 49'39	
	15225 Apr 22 23:43	0° $\text{X}$		morning rise	15226 Mar 20 00:51	28° $\text{X}$ 59'50	
morning set	15225 Apr 30 20:52	13° $\text{X}$ 17'27		direct	15226 Mar 22 04:19	28° $\text{X}$ 40'13	
desc. node	15225 May 02 21:39	16° $\text{X}$ 46'28			15226 Mar 26 10:26	0° $\Upsilon$	
	15225 May 10 17:53	0° $\text{II}$		morning max el	15226 Mar 29 03:03	2° $\Upsilon$ 09'48	17°51'42
				morning set	15226 Apr 13 18:48	26° $\Upsilon$ 31'21	
superior conj	15225 May 13 11:25	4° $\text{II}$ 29'36	-1°17'34		15226 Apr 15 17:08	0° $\text{X}$	
minimum elong	15225 May 13 04:02	3° $\text{II}$ 59'23	1°17'27	desc. node	15226 Apr 19 18:19	7° $\text{X}$ 13'58	
max. Earth dist.	15225 May 19 08:28	13° $\text{II}$ 57'46	1.44806 AU				
evening rise	15225 May 28 18:38	28° $\text{II}$ 39'29		superior conj	15226 Apr 24 16:32	15° $\text{X}$ 49'10	-0°39'02
	15225 May 29 15:40	0° $\text{X}$		minimum elong	15226 Apr 24 12:59	15° $\text{X}$ 33'55	0°39'04
	15225 Jun 19 05:08	0° $\Omega$		max. Earth dist.	15226 May 01 23:52	28° $\text{X}$ 02'27	1.43253 AU
evening max el	15225 Jun 26 14:17	8° $\Omega$ 48'26	20°34'04		15226 May 03 04:48	0° $\text{II}$	
asc. node	15225 Jun 27 02:25	9° $\Omega$ 18'09		evening rise	15226 May 08 13:11	8° $\text{II}$ 31'05	
retrograde	15225 Jul 04 16:37	13° $\Omega$ 27'03			15226 May 22 19:44	0° $\text{X}$	
evening set	15225 Jul 08 20:06	11° $\Omega$ 49'39		evening max el	15226 Jun 09 10:18	22° $\text{X}$ 41'15	21°47'13
inferior conj	15225 Jul 14 02:05	5° $\Omega$ 43'35	3°09'19	asc. node	15226 Jun 13 23:23	26° $\text{X}$ 28'28	
minimum elong	15225 Jul 14 02:23	5° $\Omega$ 42'32	3°08'28	retrograde	15226 Jun 18 14:58	28° $\text{X}$ 03'22	
min. Earth dist.	15225 Jul 14 18:02	4° $\Omega$ 48'42	0.68500 AU	evening set	15226 Jun 23 05:30	26° $\text{X}$ 09'08	
	15225 Jul 18 16:08	30° $\text{X}$		inferior conj	15226 Jun 28 11:21	19° $\text{X}$ 52'35	3°07'06
morning rise	15225 Jul 19 08:22	29° $\text{X}$ 21'40		minimum elong	15226 Jun 28 10:42	19° $\text{X}$ 54'51	3°06'08
direct	15225 Jul 24 18:08	26° $\text{X}$ 59'42		min. Earth dist.	15226 Jun 28 13:56	19° $\text{X}$ 43'34	0.69012 AU
desc. node	15225 Jul 29 20:46	28° $\text{X}$ 40'27		morning rise	15226 Jul 03 15:44	13° $\text{X}$ 36'39	
	15225 Jul 31 18:48	0° $\Omega$		direct	15226 Jul 08 13:05	11° $\text{X}$ 31'22	
morning max el	15225 Aug 04 18:06	3° $\Omega$ 33'58	23°54'52	desc. node	15226 Jul 16 18:03	15° $\text{X}$ 47'47	
	15225 Aug 25 00:22	0° $\text{X}$		morning max el	15226 Jul 18 06:22	17° $\text{X}$ 14'48	22°25'48
morning set	15225 Sep 08 22:50	23° $\text{X}$ 49'46			15226 Jul 28 19:25	0° $\Omega$	
max. Earth dist.	15225 Sep 12 17:13	0° $\text{X}$ 21'56	1.38641 AU		15226 Aug 18 01:40	0° $\text{X}$	
	15225 Sep 12 12:15	0° $\text{X}$		morning set	15226 Aug 20 17:07	4° $\text{X}$ 14'44	
				max. Earth dist.	15226 Aug 25 17:54	12° $\text{X}$ 33'26	1.41013 AU
superior conj	15225 Sep 20 05:04	14° $\text{X}$ 04'39	-0°26'23				
minimum elong	15225 Sep 20 06:56	14° $\text{X}$ 13'29	0°25'55	superior conj	15226 Sep 02 14:12	26° $\text{X}$ 10'28	-1°02'35
asc. node	15225 Sep 23 03:51	19° $\text{X}$ 43'17		minimum elong	15226 Sep 02 19:07	26° $\text{X}$ 32'29	1°01'59
	15225 Sep 28 09:55	0° $\text{X}$			15226 Sep 04 17:07	0° $\text{X}$	
evening rise	15225 Sep 29 03:42	1° $\text{X}$ 27'21		asc. node	15226 Sep 10 00:26	9° $\text{X}$ 47'39	
evening max el	15225 Oct 15 11:25	28° $\text{X}$ 07'52	18°56'22	evening rise	15226 Sep 12 18:40	14° $\text{X}$ 58'10	
	15225 Oct 17 14:03	0° $\text{X}$			15226 Sep 21 01:47	0° $\text{X}$	
retrograde	15225 Oct 24 04:30	2° $\text{X}$ 31'05		evening max el	15226 Sep 28 16:42	10° $\text{X}$ 30'11	18°19'31
desc. node	15225 Oct 25 17:15	2° $\text{X}$ 23'27		retrograde	15226 Oct 06 04:47	14° $\text{X}$ 19'17	
evening set	15225 Oct 26 01:42	2° $\text{X}$ 19'36		evening set	15226 Oct 08 06:05	14° $\text{X}$ 02'47	
	15225 Oct 31 10:38	30° $\text{X}$		desc. node	15226 Oct 12 14:36	11° $\text{X}$ 53'10	
inferior conj	15225 Nov 03 08:59	28° $\text{X}$ 01'55	-2°44'53	inferior conj	15226 Oct 15 19:57	9° $\text{X}$ 23'53	-1°01'49
minimum elong	15225 Nov 03 02:09	28° $\text{X}$ 13'56	2°41'31	minimum elong	15226 Oct 15 17:37	9° $\text{X}$ 28'41	1°00'21
min. Earth dist.	15225 Nov 06 07:09	25° $\text{X}$ 59'01	0.56471 AU	min. Earth dist.	15226 Oct 19 02:16	6° $\text{X}$ 43'33	0.58471 AU
morning rise	15225 Nov 10 23:44	23° $\text{X}$ 16'35		morning rise	15226 Oct 23 01:41	4° $\text{X}$ 01'32	
direct	15225 Nov 16 18:40	21° $\text{X}$ 57'22		direct	15226 Oct 29 09:47	2° $\text{X}$ 15'33	
morning max el	15225 Nov 30 22:14	29° $\text{X}$ 13'27	26°10'30	morning max el	15226 Nov 12 17:03	9° $\text{X}$ 53'38	27°22'24
	15225 Dec 01 17:15	0° $\text{X}$			15226 Nov 28 04:06	0° $\text{X}$	
asc. node	15225 Dec 20 04:35	26° $\text{X}$ 20'06		asc. node	15226 Dec 07 01:35	15° $\text{X}$ 36'45	
	15225 Dec 22 03:47	0° $\text{X}$		morning set	15226 Dec 13 14:56	28° $\text{X}$ 54'27	
morning set	15225 Dec 29 06:42	14° $\text{X}$ 30'06			15226 Dec 14 03:12	0° $\text{X}$	
superior conj	15226 Jan 05 00:43	29° $\text{X}$ 24'17	1°37'59	superior conj	15226 Dec 20 12:11	14° $\text{X}$ 03'55	1°35'17
minimum elong	15226 Jan 05 00:46	29° $\text{X}$ 24'33	1°38'52	minimum elong	15226 Dec 20 11:13	13° $\text{X}$ 58'26	1°36'12
	15226 Jan 05 07:08	0° $\text{X}$		max. Earth dist.	15226 Dec 20 08:37	13° $\text{X}$ 43'55	1.31063 AU
max. Earth dist.	15226 Jan 06 00:43	1° $\text{X}$ 37'45	1.31434 AU	evening rise	15226 Dec 27 06:31	28° $\text{X}$ 59'46	
evening rise	15226 Jan 12 01:01	14° $\text{X}$ 40'30			15226 Dec 27 17:48	0° $\text{X}$	
	15226 Jan 19 19:14	0° $\text{X}$		desc. node	15227 Jan 08 13:06	22° $\text{X}$ 40'59	

	15227 Jan 13 02:27	0°♄				15227 Dec 19 19:48	0°♁		
evening max el	15227 Jan 26 01:22	16°♄07'45	26°45'04	desc. node		15227 Dec 26 09:57	11°♁18'39		
retrograde	15227 Feb 09 01:13	23°♄19'21		evening max el		15228 Jan 07 19:15	27°♁00'53	25°30'23	
evening set	15227 Feb 15 13:56	21°♄33'02				15228 Jan 11 07:45	0°♄		
min. Earth dist.	15227 Feb 19 15:10	18°♄54'48	0.59022 AU	retrograde		15228 Jan 21 16:38	4°♄00'28		
inferior conj	15227 Feb 22 19:53	16°♄26'04	-3°11'52	evening set		15228 Jan 27 13:23	2°♄41'47		
minimum elong	15227 Feb 23 03:04	16°♄12'04	3°08'56			15228 Feb 01 08:48	30°♁		
morning rise	15227 Mar 02 19:35	11°♄50'06		min. Earth dist.		15228 Feb 01 07:53	0°♄01'31	0.56963 AU	
direct	15227 Mar 04 19:23	11°♄35'48		inferior conj		15228 Feb 04 03:30	28°♁07'43	-4°37'44	
asc. node	15227 Mar 04 23:16	11°♄35'54		minimum elong		15228 Feb 04 12:43	27°♁52'09	4°34'36	
morning max el	15227 Mar 12 15:06	15°♄28'15	18°16'01	morning rise		15228 Feb 12 14:52	23°♁53'25		
	15227 Mar 22 16:26	0°♄		direct		15228 Feb 14 16:25	23°♁40'40		
morning set	15227 Mar 28 07:33	10°♄24'45		asc. node		15228 Feb 19 20:40	25°♁06'26		
				morning max el		15228 Feb 23 18:29	28°♁06'48	19°01'27	
superior conj	15227 Apr 06 19:58	28°♄09'09	-0°01'45			15228 Feb 25 12:58	0°♄		
minimum elong	15227 Apr 06 19:49	28°♄08'26	0°02'04	morning set		15228 Mar 11 06:35	24°♄44'27		
behind sun begin	15227 Apr 06 12:25	27°♄34'56				15228 Mar 13 22:28	0°♄		
behind sun end	15227 Apr 07 03:12	28°♄41'52							
desc. node	15227 Apr 06 14:54	27°♄46'13		superior conj		15228 Mar 19 17:37	11°♄18'00	0°30'50	
	15227 Apr 07 20:34	0°♄		minimum elong		15228 Mar 19 19:29	11°♄26'52	0°30'25	
max. Earth dist.	15227 Apr 14 10:15	11°♄28'03	1.41237 AU	desc. node		15228 Mar 23 11:29	18°♄19'52		
evening rise	15227 Apr 19 02:00	19°♄12'39		max. Earth dist.		15228 Mar 26 16:40	24°♄09'51	1.38982 AU	
	15227 Apr 25 21:10	0°♄				15228 Mar 30 00:35	0°♄		
	15227 May 17 05:14	0°♄		evening rise		15228 Mar 30 12:09	0°♄49'43		
evening max el	15227 May 23 01:58	6°♄33'56	23°07'22			15228 Apr 18 04:17	0°♄		
asc. node	15227 May 31 20:27	12°♄28'56		evening max el		15228 May 04 15:41	20°♄27'53	24°28'19	
retrograde	15227 Jun 02 11:14	12°♄40'25		retrograde		15228 May 16 04:08	27°♄12'14		
evening set	15227 Jun 07 13:12	10°♄31'13		asc. node		15228 May 17 17:35	27°♄01'46		
inferior conj	15227 Jun 12 21:11	4°♄06'22	2°54'22	evening set		15228 May 21 17:36	24°♄51'03		
minimum elong	15227 Jun 12 19:43	4°♄11'27	2°53'11	min. Earth dist.		15228 May 26 06:31	19°♄39'00	0.68572 AU	
min. Earth dist.	15227 Jun 12 10:47	4°♄42'23	0.69032 AU	inferior conj		15228 May 27 05:42	18°♄21'09	2°31'12	
	15227 Jun 16 00:52	30°♁		minimum elong		15228 May 27 03:41	18°♄27'56	2°29'51	
morning rise	15227 Jun 18 02:10	27°♄57'56		morning rise		15228 Jun 01 13:54	12°♄21'24		
direct	15227 Jun 22 11:06	26°♄11'58		direct		15228 Jun 05 10:55	10°♄55'27		
	15227 Jun 29 19:50	0°♄		morning max el		15228 Jun 12 22:33	15°♄05'44	19°51'15	
morning max el	15227 Jun 30 23:07	1°♄05'05	21°02'43	desc. node		15228 Jun 19 12:22	22°♄52'38		
desc. node	15227 Jul 03 15:15	3°♄57'21				15228 Jun 24 15:21	0°♄		
	15227 Jul 22 13:13	0°♄		morning set		15228 Jul 09 15:51	22°♄30'04		
morning set	15227 Jul 31 11:53	13°♄40'17				15228 Jul 14 12:21	0°♄		
max. Earth dist.	15227 Aug 08 00:16	25°♄37'28	1.43122 AU	max. Earth dist.		15228 Jul 20 12:49	9°♄26'32	1.44743 AU	
	15227 Aug 10 16:29	0°♄							
superior conj	15227 Aug 15 02:14	7°♄21'29	-1°36'57	superior conj		15228 Jul 25 14:40	17°♄33'30	-2°03'13	
minimum elong	15227 Aug 15 09:38	7°♄52'50	1°36'34	minimum elong		15228 Jul 25 21:16	18°♄00'07	2°03'32	
evening rise	15227 Aug 26 20:09	27°♄53'02				15228 Aug 02 04:43	0°♄		
asc. node	15227 Aug 27 21:02	29°♄44'04		evening rise		15228 Aug 08 02:57	9°♄58'21		
	15227 Aug 28 00:37	0°♄		asc. node		15228 Aug 13 17:39	19°♄27'41		
evening max el	15227 Sep 12 04:39	23°♄28'03	18°03'01			15228 Aug 20 08:21	0°♄		
retrograde	15227 Sep 18 22:14	26°♄55'59		evening max el		15228 Aug 25 19:20	6°♄51'08	18°05'29	
evening set	15227 Sep 21 06:50	26°♄30'28		retrograde		15228 Sep 01 04:31	10°♄11'30		
inferior conj	15227 Sep 28 03:25	21°♄31'32	0°25'13	evening set		15228 Sep 03 21:35	9°♄33'29		
minimum elong	15227 Sep 28 04:12	21°♄29'38	0°25'10	inferior conj		15228 Sep 10 03:37	4°♄16'34	1°31'43	
desc. node	15227 Sep 29 12:00	20°♄13'24		minimum elong		15228 Sep 10 05:48	4°♄10'41	1°30'59	
min. Earth dist.	15227 Oct 01 06:43	18°♄33'16	0.60741 AU	min. Earth dist.		15228 Sep 12 20:59	1°♄21'21	0.63005 AU	
morning rise	15227 Oct 04 22:31	15°♄39'15				15228 Sep 14 05:41	30°♁		
direct	15227 Oct 11 13:41	13°♄28'37		desc. node		15228 Sep 15 09:28	28°♄57'21		
morning max el	15227 Oct 25 19:40	21°♄22'25	27°56'31	morning rise		15228 Sep 16 11:51	28°♄04'40		
	15227 Nov 02 08:33	0°♄		direct		15228 Sep 23 03:54	25°♄36'09		
	15227 Nov 21 05:12	0°♄				15228 Oct 03 03:50	0°♄		
asc. node	15227 Nov 23 22:31	5°♄15'06		morning max el		15228 Oct 07 03:38	3°♄36'03	27°51'39	
morning set	15227 Nov 27 18:31	13°♄02'25				15228 Oct 26 21:44	0°♄		
max. Earth dist.	15227 Dec 03 15:23	25°♄42'48	1.31235 AU	asc. node		15228 Nov 09 19:21	25°♄08'13		
				morning set		15228 Nov 10 15:10	26°♄47'57		
superior conj	15227 Dec 04 23:01	28°♄38'28	1°26'40			15228 Nov 12 04:43	0°♄		
minimum elong	15227 Dec 04 21:13	28°♄28'24	1°27'26	max. Earth dist.		15228 Nov 15 17:10	7°♄25'21	1.31971 AU	
	15227 Dec 05 13:40	0°♄							
evening rise	15227 Dec 11 15:36	13°♄26'25		superior conj		15228 Nov 18 07:14	13°♄01'55	1°12'05	
				minimum elong		15228 Nov 18 04:57	12°♄49'26	1°12'37	

































































































































evening rise	15228 Nov 25 02:22	27° $\text{♄}$ 55'24			15229 Nov 03 18:45	0° $\text{♄}$	
	15228 Nov 26 01:35	0° $\text{♄}$		evening rise	15229 Nov 09 13:00	12° $\text{♄}$ 22'36	
desc. node	15228 Dec 12 06:54	29° $\text{♄}$ 02'23			15229 Nov 18 10:06	0° $\text{♄}$	
	15228 Dec 12 23:57	0° $\text{♄}$		desc. node	15229 Nov 29 03:58	15° $\text{♄}$ 33'19	
evening max el	15228 Dec 19 06:12	7° $\text{♄}$ 11'21	23°53'03	evening max el	15229 Nov 30 17:01	17° $\text{♄}$ 08'58	22°10'12
retrograde	15229 Jan 01 18:38	13° $\text{♄}$ 53'52		retrograde	15229 Dec 13 08:21	23° $\text{♄}$ 24'14	
evening set	15229 Jan 06 13:37	13° $\text{♄}$ 04'03		evening set	15229 Dec 16 19:46	22° $\text{♄}$ 57'32	
min. Earth dist.	15229 Jan 12 17:35	10° $\text{♄}$ 03'57	0.55368 AU	inferior conj	15229 Dec 25 09:10	19° $\text{♄}$ 04'59	-5°59'29
inferior conj	15229 Jan 14 14:14	8° $\text{♄}$ 57'26	-5°42'13	minimum elong	15229 Dec 25 07:01	19° $\text{♄}$ 08'01	5°58'29
minimum elong	15229 Jan 14 20:39	8° $\text{♄}$ 47'53	5°40'34	min. Earth dist.	15229 Dec 24 23:22	19° $\text{♄}$ 18'43	0.54519 AU
morning rise	15229 Jan 23 05:21	5° $\text{♄}$ 01'23		morning rise	15230 Jan 02 19:14	15° $\text{♄}$ 17'49	
direct	15229 Jan 25 18:01	4° $\text{♄}$ 45'18		direct	15230 Jan 06 05:03	14° $\text{♄}$ 51'57	
morning max el	15229 Feb 05 08:59	9° $\text{♄}$ 53'10	20°09'55	morning max el	15230 Jan 18 08:29	20° $\text{♄}$ 42'56	21°40'58
asc. node	15229 Feb 05 18:03	10° $\text{♄}$ 15'28		asc. node	15230 Jan 23 15:24	26° $\text{♄}$ 47'02	
	15229 Feb 18 19:55	0° $\text{♄}$			15230 Jan 25 22:01	0° $\text{♄}$	
morning set	15229 Feb 23 12:22	9° $\text{♄}$ 19'47		morning set	15230 Feb 07 22:12	24° $\text{♄}$ 02'53	
					15230 Feb 10 17:45	0° $\text{♄}$	
superior conj	15229 Mar 03 05:04	25° $\text{♄}$ 02'57	0°57'09	superior conj	15230 Feb 15 02:29	9° $\text{♄}$ 13'29	1°16'50
minimum elong	15229 Mar 03 07:39	25° $\text{♄}$ 15'55	0°56'55	minimum elong	15230 Feb 15 04:54	9° $\text{♄}$ 26'03	1°16'58
	15229 Mar 05 16:57	0° $\text{♄}$		max. Earth dist.	15230 Feb 19 11:07	18° $\text{♄}$ 10'03	1.34703 AU
max. Earth dist.	15229 Mar 08 23:26	6° $\text{♄}$ 17'51	1.36730 AU	evening rise	15230 Feb 23 15:23	26° $\text{♄}$ 20'00	
desc. node	15229 Mar 10 08:04	8° $\text{♄}$ 50'55		desc. node	15230 Feb 25 04:39	29° $\text{♄}$ 15'23	
evening rise	15229 Mar 12 17:45	13° $\text{♄}$ 15'28			15230 Feb 25 14:15	0° $\text{♄}$	
	15229 Mar 22 13:31	0° $\text{♄}$			15230 Mar 15 23:06	0° $\text{♄}$	
	15229 Apr 13 02:49	0° $\text{♄}$		evening max el	15230 Mar 30 19:12	18° $\text{♄}$ 07'36	26°43'52
evening max el	15229 Apr 17 05:20	4° $\text{♄}$ 21'41	25°43'00	retrograde	15230 Apr 12 23:24	25° $\text{♄}$ 33'31	
retrograde	15229 Apr 29 16:33	11° $\text{♄}$ 32'42		evening set	15230 Apr 19 09:42	23° $\text{♄}$ 01'13	
asc. node	15229 May 04 14:49	9° $\text{♄}$ 53'41		asc. node	15230 Apr 21 12:08	21° $\text{♄}$ 05'39	
evening set	15229 May 05 17:04	9° $\text{♄}$ 03'29		min. Earth dist.	15230 Apr 23 09:54	19° $\text{♄}$ 00'05	0.66295 AU
min. Earth dist.	15229 May 09 22:57	4° $\text{♄}$ 27'38	0.67650 AU	inferior conj	15230 Apr 25 10:41	16° $\text{♄}$ 35'53	1°11'34
inferior conj	15229 May 11 10:57	2° $\text{♄}$ 33'00	1°57'14	minimum elong	15230 Apr 25 09:00	16° $\text{♄}$ 40'53	1°10'21
minimum elong	15229 May 11 08:48	2° $\text{♄}$ 39'53	1°55'48	morning rise	15230 May 01 09:29	10° $\text{♄}$ 57'59	
	15229 May 13 12:36	30° $\text{♄}$		direct	15230 May 04 09:14	10° $\text{♄}$ 08'29	
morning rise	15229 May 17 01:04	26° $\text{♄}$ 43'18		morning max el	15230 May 10 18:18	13° $\text{♄}$ 29'36	18°14'52
direct	15229 May 20 10:59	25° $\text{♄}$ 36'34			15230 May 22 20:05	0° $\text{♄}$	
morning max el	15229 May 27 05:21	29° $\text{♄}$ 15'46	18°54'49	desc. node	15230 May 24 06:19	2° $\text{♄}$ 14'54	
	15229 May 27 22:53	0° $\text{♄}$		morning set	15230 May 30 07:23	11° $\text{♄}$ 53'07	
desc. node	15229 Jun 06 09:24	12° $\text{♄}$ 21'43			15230 Jun 10 17:34	0° $\text{♄}$	
greatest brilliancy	15229 Jun 09 15:23	17° $\text{♄}$ 13'06	-0.8m	superior conj	15230 Jun 14 15:39	6° $\text{♄}$ 08'29	-2°04'47
	15229 Jun 17 23:02	0° $\text{♄}$		minimum elong	15230 Jun 14 08:53	5° $\text{♄}$ 42'00	2°05'22
morning set	15229 Jun 19 00:28	1° $\text{♄}$ 38'29		max. Earth dist.	15230 Jun 16 03:14	8° $\text{♄}$ 27'22	1.45943 AU
max. Earth dist.	15229 Jul 03 06:43	23° $\text{♄}$ 49'05	1.45713 AU		15230 Jun 29 23:27	0° $\text{♄}$	
superior conj	15229 Jul 05 07:01	26° $\text{♄}$ 58'12	-2°14'00	evening rise	15230 Jun 30 17:02	1° $\text{♄}$ 08'25	
minimum elong	15229 Jul 05 07:30	27° $\text{♄}$ 00'07	2°14'52	greatest brilliancy	15230 Jul 11 11:53	17° $\text{♄}$ 48'12	-0.8m
	15229 Jul 07 05:19	0° $\text{♄}$		asc. node	15230 Jul 18 11:04	27° $\text{♄}$ 54'19	
evening rise	15229 Jul 20 10:17	21° $\text{♄}$ 03'36			15230 Jul 20 01:22	0° $\text{♄}$	
	15229 Jul 25 23:09	0° $\text{♄}$		evening max el	15230 Jul 23 19:50	4° $\text{♄}$ 18'58	19°03'24
asc. node	15229 Jul 31 14:20	8° $\text{♄}$ 53'33		retrograde	15230 Jul 30 15:43	8° $\text{♄}$ 04'27	
evening max el	15229 Aug 09 09:21	20° $\text{♄}$ 30'55	18°25'53	evening set	15230 Aug 03 03:07	6° $\text{♄}$ 54'30	
retrograde	15229 Aug 15 19:30	23° $\text{♄}$ 57'11		inferior conj	15230 Aug 08 14:38	1° $\text{♄}$ 07'29	2°49'12
evening set	15229 Aug 18 21:32	23° $\text{♄}$ 04'00		minimum elong	15230 Aug 08 16:24	1° $\text{♄}$ 01'49	2°48'22
inferior conj	15229 Aug 24 16:34	17° $\text{♄}$ 31'12	2°18'48		15230 Aug 09 11:35	30° $\text{♄}$	
minimum elong	15229 Aug 24 18:54	17° $\text{♄}$ 24'16	2°17'55	min. Earth dist.	15230 Aug 10 04:27	29° $\text{♄}$ 06'12	0.66734 AU
min. Earth dist.	15229 Aug 26 20:38	14° $\text{♄}$ 56'42	0.65048 AU	morning rise	15230 Aug 14 04:57	24° $\text{♄}$ 41'33	
morning rise	15229 Aug 30 14:57	11° $\text{♄}$ 08'48		direct	15230 Aug 20 08:08	22° $\text{♄}$ 04'29	
desc. node	15229 Sep 02 06:57	9° $\text{♄}$ 24'55		desc. node	15230 Aug 20 04:25	22° $\text{♄}$ 04'35	
direct	15229 Sep 06 02:29	8° $\text{♄}$ 31'34		morning max el	15230 Sep 02 01:52	29° $\text{♄}$ 39'23	26°07'36
morning max el	15229 Sep 19 14:26	16° $\text{♄}$ 25'46	27°12'41		15230 Sep 02 09:58	0° $\text{♄}$	
	15229 Sep 30 20:35	0° $\text{♄}$			15230 Sep 24 17:37	0° $\text{♄}$	
	15229 Oct 19 17:18	0° $\text{♄}$		morning set	15230 Oct 08 00:29	22° $\text{♄}$ 46'40	
morning set	15229 Oct 25 02:16	10° $\text{♄}$ 05'19			15230 Oct 11 19:54	0° $\text{♄}$	
asc. node	15229 Oct 27 16:08	15° $\text{♄}$ 11'11		max. Earth dist.	15230 Oct 11 18:55	29° $\text{♄}$ 55'12	1.35072 AU
max. Earth dist.	15229 Oct 29 10:53	18° $\text{♄}$ 48'04	1.33268 AU	asc. node	15230 Oct 14 12:51	5° $\text{♄}$ 19'18	
superior conj	15229 Nov 02 10:43	27° $\text{♄}$ 09'05	0°51'31	superior conj	15230 Oct 17 06:53	10° $\text{♄}$ 52'59	0°25'09
minimum elong	15229 Nov 02 08:31	26° $\text{♄}$ 57'19	0°51'52				

minimum elong	15230 Oct 17 05:30	10° $\mathbb{M}$ 45'54	0°25'26	morning set	15231 Sep 20 05:49	4° $\mathbb{A}$ 42'55	
evening rise	15230 Oct 24 21:31	26° $\mathbb{M}$ 42'41		max. Earth dist.	15231 Sep 23 19:14	11° $\mathbb{A}$ 05'19	1.37272 AU
	15230 Oct 26 11:43	0° $\mathbb{A}$					
evening max el	15230 Nov 12 13:12	27° $\mathbb{A}$ 31'04	20°38'37	superior conj	15231 Sep 30 16:34	24° $\mathbb{A}$ 06'02	-0°06'26
	15230 Nov 15 09:39	0° $\mathbb{B}$		minimum elong	15231 Sep 30 16:58	24° $\mathbb{A}$ 07'58	0°06'03
desc. node	15230 Nov 16 01:06	0° $\mathbb{B}$ 27'41		behind sun begin	15231 Sep 30 10:46	23° $\mathbb{A}$ 37'48	
retrograde	15230 Nov 23 18:47	3° $\mathbb{B}$ 06'10		behind sun end	15231 Sep 30 23:09	24° $\mathbb{A}$ 38'12	
evening set	15230 Nov 26 03:56	2° $\mathbb{B}$ 52'14		asc. node	15231 Oct 01 09:29	25° $\mathbb{A}$ 28'44	
	15230 Dec 03 05:27	30° $\mathbb{R}$ $\mathbb{A}$			15231 Oct 03 16:20	0° $\mathbb{M}$	
inferior conj	15230 Dec 05 00:38	28° $\mathbb{A}$ 58'26	-5°15'56	evening rise	15231 Oct 09 01:35	10° $\mathbb{M}$ 49'34	
minimum elong	15230 Dec 04 15:21	29° $\mathbb{A}$ 11'51	5°12'59		15231 Oct 19 09:03	0° $\mathbb{A}$	
min. Earth dist.	15230 Dec 06 05:02	28° $\mathbb{A}$ 17'26	0.54577 AU	evening max el	15231 Oct 25 23:46	8° $\mathbb{A}$ 40'12	19°27'16
morning rise	15230 Dec 13 02:39	25° $\mathbb{A}$ 01'59		desc. node	15231 Nov 02 22:21	13° $\mathbb{A}$ 20'15	
direct	15230 Dec 17 12:58	24° $\mathbb{A}$ 19'54		retrograde	15231 Nov 04 14:07	13° $\mathbb{A}$ 28'34	
	15230 Dec 29 22:51	0° $\mathbb{B}$		evening set	15231 Nov 06 11:46	13° $\mathbb{A}$ 18'05	
morning max el	15230 Dec 30 20:30	0° $\mathbb{B}$ 49'45	23°28'00	inferior conj	15231 Nov 15 03:03	9° $\mathbb{A}$ 11'35	-3°45'48
asc. node	15231 Jan 10 12:41	14° $\mathbb{B}$ 23'21		minimum elong	15231 Nov 14 17:55	9° $\mathbb{A}$ 26'21	3°41'49
	15231 Jan 19 04:23	0° $\approx$		min. Earth dist.	15231 Nov 17 14:04	7° $\mathbb{A}$ 36'19	0.55553 AU
morning set	15231 Jan 23 09:58	8° $\approx$ 47'50		morning rise	15231 Nov 22 21:58	4° $\mathbb{A}$ 46'43	
				direct	15231 Nov 28 06:16	3° $\mathbb{A}$ 42'15	
superior conj	15231 Jan 30 06:52	23° $\approx$ 41'28	1°29'58	morning max el	15231 Dec 12 05:41	10° $\mathbb{A}$ 44'21	25°15'46
minimum elong	15231 Jan 30 08:32	23° $\approx$ 50'29	1°30'29		15231 Dec 26 18:38	0° $\mathbb{B}$	
	15231 Feb 02 05:41	0° $\mathbb{H}$		asc. node	15231 Dec 28 09:52	2° $\mathbb{B}$ 48'00	
max. Earth dist.	15231 Feb 02 06:08	0° $\mathbb{H}$ 02'20	1.33054 AU	morning set	15232 Jan 07 21:43	23° $\mathbb{B}$ 28'16	
evening rise	15231 Feb 07 01:37	9° $\mathbb{H}$ 54'59			15232 Jan 10 21:30	0° $\approx$	
desc. node	15231 Feb 12 01:15	19° $\mathbb{H}$ 29'08					
	15231 Feb 18 00:14	0° $\mathbb{Y}$		superior conj	15232 Jan 14 15:37	8° $\approx$ 18'39	1°36'48
	15231 Mar 11 18:12	0° $\mathbb{B}$		minimum elong	15232 Jan 14 16:17	8° $\approx$ 22'20	1°37'36
evening max el	15231 Mar 13 08:26	1° $\mathbb{B}$ 35'25	27°23'29	max. Earth dist.	15232 Jan 16 08:05	12° $\approx$ 01'19	1.31874 AU
retrograde	15231 Mar 26 23:59	9° $\mathbb{B}$ 06'11		evening rise	15232 Jan 21 21:17	23° $\approx$ 51'54	
evening set	15231 Apr 02 17:24	6° $\mathbb{B}$ 37'09			15232 Jan 24 22:13	0° $\mathbb{H}$	
min. Earth dist.	15231 Apr 06 13:21	3° $\mathbb{B}$ 07'44	0.64553 AU	desc. node	15232 Jan 29 21:52	9° $\mathbb{H}$ 26'06	
asc. node	15231 Apr 08 09:29	1° $\mathbb{B}$ 09'24			15232 Feb 11 16:01	0° $\mathbb{Y}$	
inferior conj	15231 Apr 09 02:20	0° $\mathbb{B}$ 23'43	0°13'17	evening max el	15232 Feb 23 19:17	14° $\mathbb{Y}$ 32'40	27°35'09
minimum elong	15231 Apr 09 01:57	0° $\mathbb{B}$ 24'44	0°12'44	retrograde	15232 Mar 08 17:19	22° $\mathbb{Y}$ 00'03	
transit middle	15231 Apr 09 01:57	0° $\mathbb{B}$ 24'44	0°12'44	evening set	15232 Mar 15 13:36	19° $\mathbb{Y}$ 41'51	
transit begin	15231 Apr 09 00:06	0° $\mathbb{B}$ 29'46		min. Earth dist.	15232 Mar 19 07:44	16° $\mathbb{Y}$ 38'57	0.62506 AU
transit end	15231 Apr 09 03:49	0° $\mathbb{B}$ 19'42		inferior conj	15232 Mar 22 06:49	13° $\mathbb{Y}$ 48'13	-0°58'05
	15231 Apr 09 11:08	30° $\mathbb{R}$ $\mathbb{Y}$		minimum elong	15232 Mar 22 08:47	13° $\mathbb{Y}$ 43'29	0°57'25
morning rise	15231 Apr 15 12:34	24° $\mathbb{Y}$ 59'48		asc. node	15232 Mar 25 06:54	11° $\mathbb{Y}$ 04'52	
direct	15231 Apr 18 03:10	24° $\mathbb{Y}$ 24'43		morning rise	15232 Mar 29 06:53	8° $\mathbb{Y}$ 40'43	
morning max el	15231 Apr 24 11:06	27° $\mathbb{Y}$ 40'12	17°51'58	direct	15232 Mar 31 13:42	8° $\mathbb{Y}$ 16'37	
	15231 Apr 26 14:28	0° $\mathbb{B}$		morning max el	15232 Apr 07 04:45	11° $\mathbb{Y}$ 38'07	17°46'33
desc. node	15231 May 11 03:09	22° $\mathbb{B}$ 25'30			15232 Apr 19 16:04	0° $\mathbb{B}$	
morning set	15231 May 11 18:00	23° $\mathbb{B}$ 27'28		morning set	15232 Apr 23 04:42	6° $\mathbb{B}$ 09'27	
	15231 May 15 16:21	0° $\mathbb{H}$		desc. node	15232 Apr 26 23:52	12° $\mathbb{B}$ 47'39	
superior conj	15231 May 25 09:54	15° $\mathbb{H}$ 50'16	-1°38'00	superior conj	15232 May 05 01:13	26° $\mathbb{B}$ 31'25	-1°01'25
minimum elong	15231 May 25 01:12	15° $\mathbb{H}$ 15'28	1°38'01	minimum elong	15232 May 04 19:22	26° $\mathbb{B}$ 07'02	1°01'19
max. Earth dist.	15231 May 29 23:14	23° $\mathbb{H}$ 03'30	1.45421 AU		15232 May 07 03:36	0° $\mathbb{H}$	
	15231 Jun 03 09:49	0° $\mathbb{B}$		max. Earth dist.	15232 May 11 16:13	7° $\mathbb{H}$ 21'13	1.44208 AU
evening rise	15231 Jun 10 06:44	10° $\mathbb{B}$ 35'38		evening rise	15232 May 19 18:49	20° $\mathbb{H}$ 06'10	
	15231 Jun 23 04:06	0° $\mathbb{B}$			15232 May 26 06:55	0° $\mathbb{B}$	
greatest brilliancy	15231 Jun 25 01:45	2° $\mathbb{B}$ 46'22	-0.6m		15232 Jun 17 01:40	0° $\mathbb{B}$	
asc. node	15231 Jul 05 07:52	16° $\mathbb{B}$ 21'31		evening max el	15232 Jun 19 00:03	2° $\mathbb{B}$ 02'45	21°04'00
evening max el	15231 Jul 07 00:56	18° $\mathbb{B}$ 10'28	19°56'51	asc. node	15232 Jun 21 04:44	4° $\mathbb{B}$ 03'49	
retrograde	15231 Jul 14 14:22	22° $\mathbb{B}$ 27'14		retrograde	15232 Jun 27 13:22	6° $\mathbb{B}$ 59'52	
evening set	15231 Jul 18 11:44	20° $\mathbb{B}$ 59'53		evening set	15232 Jul 01 21:21	5° $\mathbb{B}$ 15'21	
inferior conj	15231 Jul 23 18:55	15° $\mathbb{B}$ 00'11	3°05'31		15232 Jul 06 10:57	30° $\mathbb{R}$ $\mathbb{B}$	
minimum elong	15231 Jul 23 19:47	14° $\mathbb{B}$ 57'15	3°04'42	inferior conj	15232 Jul 07 02:59	29° $\mathbb{B}$ 04'31	3°09'43
min. Earth dist.	15231 Jul 24 18:42	13° $\mathbb{B}$ 39'48	0.67988 AU	minimum elong	15232 Jul 07 02:52	29° $\mathbb{B}$ 04'53	3°08'49
morning rise	15231 Jul 29 03:26	8° $\mathbb{B}$ 35'36		min. Earth dist.	15232 Jul 07 13:14	28° $\mathbb{B}$ 28'53	0.68772 AU
direct	15231 Aug 03 19:51	6° $\mathbb{B}$ 06'23		morning rise	15232 Jul 12 08:07	22° $\mathbb{B}$ 44'38	
desc. node	15231 Aug 07 01:51	6° $\mathbb{B}$ 47'15		direct	15232 Jul 17 12:37	20° $\mathbb{B}$ 29'12	
morning max el	15231 Aug 15 12:48	13° $\mathbb{B}$ 07'09	24°45'41	desc. node	15232 Jul 23 23:13	23° $\mathbb{B}$ 08'46	
	15231 Aug 29 04:54	0° $\mathbb{H}$		morning max el	15232 Jul 27 23:49	26° $\mathbb{B}$ 43'08	23°16'41
	15231 Sep 17 12:32	0° $\mathbb{A}$			15232 Jul 31 00:48	0° $\mathbb{B}$	

	15232 Aug 21 18:18	0° $\mathbb{M}$		morning set	15233 Aug 11 21:50	25° $\mathcal{Q}$ 42'14	
morning set	15232 Aug 31 13:57	15° $\mathbb{M}$ 44'02			15233 Aug 14 14:03	0° $\mathbb{M}$	
max. Earth dist.	15232 Sep 04 17:31	22° $\mathbb{M}$ 46'26	1.39660 AU	max. Earth dist.	15233 Aug 17 20:07	5° $\mathbb{M}$ 19'28	1.41957 AU
	15232 Sep 08 20:06	0° $\mathcal{L}$					
superior conj	15232 Sep 12 11:59	6° $\mathcal{L}$ 39'47	-0°41'40	superior conj	15233 Aug 25 12:40	18° $\mathbb{M}$ 23'36	-1°17'41
minimum elong	15232 Sep 12 15:06	6° $\mathcal{L}$ 54'12	0°41'06	minimum elong	15233 Aug 25 18:50	18° $\mathbb{M}$ 50'33	1°17'08
asc. node	15232 Sep 17 06:04	15° $\mathcal{L}$ 36'09		asc. node	15233 Sep 01 00:49	0° $\mathcal{L}$	
evening rise	15232 Sep 21 22:22	24° $\mathcal{L}$ 36'22		evening rise	15233 Sep 04 02:38	5° $\mathcal{L}$ 37'26	
	15232 Sep 24 17:55	0° $\mathbb{M}$			15233 Sep 05 08:10	7° $\mathcal{L}$ 53'06	
evening max el	15232 Oct 07 23:28	20° $\mathbb{M}$ 38'55	18°38'07	evening max el	15233 Sep 18 11:49	0° $\mathbb{M}$	
retrograde	15232 Oct 16 02:59	24° $\mathbb{M}$ 45'51		retrograde	15233 Sep 21 08:12	3° $\mathbb{M}$ 18'03	18°10'07
evening set	15232 Oct 18 01:16	24° $\mathbb{M}$ 32'48		evening set	15233 Sep 28 10:53	6° $\mathbb{M}$ 56'02	
desc. node	15232 Oct 19 19:41	23° $\mathbb{M}$ 59'25		desc. node	15233 Sep 30 15:14	6° $\mathbb{M}$ 36'03	
inferior conj	15232 Oct 26 01:28	20° $\mathbb{M}$ 06'36	-1°59'54	inferior conj	15233 Oct 06 17:05	2° $\mathbb{M}$ 49'51	
minimum elong	15232 Oct 25 20:37	20° $\mathbb{M}$ 15'44	1°57'18	minimum elong	15233 Oct 07 21:31	1° $\mathbb{M}$ 48'23	-0°22'30
min. Earth dist.	15232 Oct 29 04:57	17° $\mathbb{M}$ 45'24	0.57270 AU		15233 Oct 07 20:45	1° $\mathbb{M}$ 50'06	0°21'47
morning rise	15232 Nov 02 12:37	15° $\mathbb{M}$ 05'01		min. Earth dist.	15233 Oct 09 22:43	30° $\mathcal{R}$ $\mathcal{L}$	
direct	15232 Nov 08 14:04	13° $\mathbb{M}$ 34'04		morning rise	15233 Oct 11 03:43	28° $\mathcal{L}$ 58'00	0.59430 AU
morning max el	15232 Nov 22 19:47	21° $\mathbb{M}$ 00'50	26°45'10	direct	15233 Oct 14 22:55	26° $\mathcal{L}$ 12'32	
	15232 Nov 30 15:19	0° $\mathcal{X}$			15233 Oct 21 11:03	24° $\mathcal{L}$ 15'24	
asc. node	15232 Dec 14 06:58	21° $\mathcal{X}$ 48'36		morning max el	15233 Nov 02 13:50	0° $\mathbb{M}$	
	15232 Dec 18 11:53	0° $\mathcal{Z}$			15233 Nov 04 17:51	2° $\mathbb{M}$ 00'17	27°41'38
morning set	15232 Dec 22 07:45	7° $\mathcal{Z}$ 59'40		asc. node	15233 Nov 25 01:06	0° $\mathcal{X}$	
				morning set	15233 Dec 01 03:57	11° $\mathcal{X}$ 15'08	
superior conj	15232 Dec 29 02:40	22° $\mathcal{Z}$ 59'03	1°37'34		15233 Dec 06 14:14	22° $\mathcal{X}$ 17'13	
minimum elong	15232 Dec 29 02:16	22° $\mathcal{Z}$ 56'48	1°38'29	max. Earth dist.	15233 Dec 10 03:53	0° $\mathcal{Z}$	
max. Earth dist.	15232 Dec 29 14:41	24° $\mathcal{Z}$ 06'12	1.31210 AU		15233 Dec 12 22:36	6° $\mathcal{Z}$ 10'13	1.31075 AU
	15233 Jan 01 06:22	0° $\approx$		superior conj	15233 Dec 13 14:07	7° $\mathcal{Z}$ 36'58	1°32'22
evening rise	15233 Jan 04 23:52	8° $\approx$ 04'44		minimum elong	15233 Dec 13 12:45	7° $\mathcal{Z}$ 29'20	1°33'13
desc. node	15233 Jan 15 18:34	28° $\approx$ 59'42		evening rise	15233 Dec 20 07:10	22° $\mathcal{Z}$ 27'47	
	15233 Jan 16 08:26	0° $\mathcal{H}$			15233 Dec 23 21:20	0° $\approx$	
evening max el	15233 Feb 05 01:33	26° $\mathcal{H}$ 47'55	27°13'29	desc. node	15234 Jan 02 15:22	18° $\approx$ 01'02	
	15233 Feb 08 19:48	0° $\mathcal{Y}$			15234 Jan 10 18:17	0° $\mathcal{H}$	
retrograde	15233 Feb 19 01:53	4° $\mathcal{Y}$ 05'54		evening max el	15234 Jan 18 00:38	8° $\mathcal{H}$ 12'08	26°16'58
evening set	15233 Feb 25 19:16	2° $\mathcal{Y}$ 06'22		retrograde	15234 Jan 31 23:49	15° $\mathcal{H}$ 18'03	
	15233 Feb 28 20:53	30° $\mathcal{R}$ $\mathcal{H}$		evening set	15234 Feb 07 06:50	13° $\mathcal{H}$ 43'22	
min. Earth dist.	15233 Mar 01 16:02	29° $\mathcal{H}$ 21'59	0.60293 AU	min. Earth dist.	15234 Feb 11 13:59	11° $\mathcal{H}$ 06'08	0.58109 AU
inferior conj	15233 Mar 04 20:39	26° $\mathcal{H}$ 40'31	-2°21'00	inferior conj	15234 Feb 14 16:11	8° $\mathcal{H}$ 50'47	-3°49'25
minimum elong	15233 Mar 05 01:53	26° $\mathcal{H}$ 29'28	2°18'48	minimum elong	15234 Feb 15 00:36	8° $\mathcal{H}$ 35'24	3°46'11
morning rise	15233 Mar 12 11:52	21° $\mathcal{H}$ 52'05		morning rise	15234 Feb 22 21:29	4° $\mathcal{H}$ 23'44	
asc. node	15233 Mar 12 04:21	21° $\mathcal{H}$ 57'30		direct	15234 Feb 24 21:15	4° $\mathcal{H}$ 10'29	
direct	15233 Mar 14 13:10	21° $\mathcal{H}$ 35'16		asc. node	15234 Feb 27 01:47	4° $\mathcal{H}$ 27'16	
morning max el	15233 Mar 21 19:53	25° $\mathcal{H}$ 13'38	17°59'33	morning max el	15234 Mar 05 04:43	8° $\mathcal{H}$ 16'13	18°32'37
	15233 Mar 25 19:31	0° $\mathcal{Y}$			15234 Mar 19 03:38	0° $\mathcal{Y}$	
morning set	15233 Apr 06 09:33	19° $\mathcal{Y}$ 41'25		morning set	15234 Mar 21 03:14	3° $\mathcal{Y}$ 47'55	
	15233 Apr 12 00:42	0° $\mathcal{B}$					
desc. node	15233 Apr 13 20:29	3° $\mathcal{B}$ 17'07		superior conj	15234 Mar 30 03:53	20° $\mathcal{Y}$ 59'11	0°12'48
				minimum elong	15234 Mar 30 04:45	21° $\mathcal{Y}$ 03'13	0°12'24
superior conj	15233 Apr 16 16:07	8° $\mathcal{B}$ 16'52	-0°22'47	behind sun begin	15234 Mar 30 00:16	20° $\mathcal{Y}$ 42'26	
minimum elong	15233 Apr 16 14:08	8° $\mathcal{B}$ 08'13	0°22'57	behind sun end	15234 Mar 30 09:14	21° $\mathcal{Y}$ 23'58	
max. Earth dist.	15233 Apr 24 05:03	21° $\mathcal{B}$ 08'18	1.42438 AU	desc. node	15234 Mar 31 17:05	23° $\mathcal{Y}$ 50'25	
evening rise	15233 Apr 29 20:15	0° $\mathbb{I}$ 16'51			15234 Apr 04 03:13	0° $\mathcal{B}$	
	15233 Apr 29 16:01	0° $\mathbb{I}$		max. Earth dist.	15234 Apr 06 13:55	4° $\mathcal{B}$ 17'03	1.40294 AU
	15233 May 19 19:30	0° $\mathcal{E}$		evening rise	15234 Apr 10 18:15	11° $\mathcal{B}$ 22'49	
evening max el	15233 Jun 01 18:01	15° $\mathcal{E}$ 55'19	22°20'57		15234 Apr 22 13:04	0° $\mathbb{I}$	
asc. node	15233 Jun 08 01:43	20° $\mathcal{E}$ 46'15		evening max el	15234 May 15 08:48	29° $\mathbb{I}$ 49'23	23°42'10
retrograde	15233 Jun 11 10:53	21° $\mathcal{E}$ 36'32			15234 May 15 13:05	0° $\mathcal{E}$	
evening set	15233 Jun 16 06:11	19° $\mathcal{E}$ 35'53		asc. node	15234 May 25 22:49	6° $\mathcal{E}$ 11'58	
inferior conj	15233 Jun 21 12:42	13° $\mathcal{E}$ 15'42	3°02'58	retrograde	15234 May 26 05:44	6° $\mathcal{E}$ 12'20	
minimum elong	15233 Jun 21 11:41	13° $\mathcal{E}$ 19'16	3°01'55	evening set	15234 May 31 12:41	3° $\mathcal{E}$ 57'37	
min. Earth dist.	15233 Jun 21 09:49	13° $\mathcal{E}$ 25'45	0.69076 AU		15234 Jun 04 01:59	30° $\mathcal{R}$ $\mathbb{I}$	
morning rise	15233 Jun 26 17:00	7° $\mathcal{E}$ 02'40		inferior conj	15234 Jun 05 22:13	27° $\mathbb{I}$ 30'28	2°45'49
direct	15233 Jul 01 09:08	5° $\mathcal{E}$ 05'08		minimum elong	15234 Jun 05 20:29	27° $\mathbb{I}$ 36'25	2°44'34
morning max el	15233 Jul 10 13:25	10° $\mathcal{E}$ 26'37	21°49'21	min. Earth dist.	15234 Jun 05 06:24	28° $\mathbb{I}$ 24'39	0.68897 AU
desc. node	15233 Jul 10 20:28	10° $\mathcal{E}$ 44'24		morning rise	15234 Jun 11 04:16	21° $\mathbb{I}$ 25'43	
	15233 Jul 25 22:04	0° $\mathcal{Q}$		direct	15234 Jun 15 08:09	19° $\mathbb{I}$ 48'07	



morning max el	15234 Jun 23 08:48	24° $\Pi$ 21'14	20°30'43	greatest brilliancy	15235 Jun 19 02:54	24° $\Pi$ 54'34	-0.7m
desc. node	15234 Jun 27 17:38	29° $\Pi$ 15'08			15235 Jun 22 12:57	0° $\mathfrak{C}$	
	15234 Jun 28 08:06	0° $\mathfrak{C}$		morning set	15235 Jul 01 11:50	13° $\mathfrak{C}$ 38'01	
	15234 Jul 19 05:37	0° $\Omega$			15235 Jul 12 01:15	0° $\Omega$	
morning set	15234 Jul 22 08:32	4° $\Omega$ 47'38		max. Earth dist.	15235 Jul 13 21:08	2° $\Omega$ 52'10	1.45240 AU
max. Earth dist.	15234 Jul 31 05:49	18° $\Omega$ 46'25	1.43888 AU				
				superior conj	15235 Jul 17 17:38	8° $\Omega$ 57'52	-2°10'05
superior conj	15234 Aug 06 14:45	29° $\Omega$ 09'30	-1°49'30	minimum elong	15235 Jul 17 22:14	9° $\Omega$ 16'10	2°10'41
minimum elong	15234 Aug 06 22:24	29° $\Omega$ 41'12	1°49'22		15235 Jul 30 16:27	0° $\mathfrak{M}$	
	15234 Aug 07 02:56	0° $\mathfrak{M}$		evening rise	15235 Jul 31 23:41	2° $\mathfrak{M}$ 09'22	
evening rise	15234 Aug 19 02:22	20° $\mathfrak{M}$ 28'36		asc. node	15235 Aug 08 19:53	15° $\mathfrak{M}$ 05'40	
asc. node	15234 Aug 21 23:14	25° $\mathfrak{M}$ 28'56		evening max el	15235 Aug 19 12:28	29° $\mathfrak{M}$ 58'15	18°11'59
	15234 Aug 24 13:59	0° $\mathfrak{L}$			15235 Aug 19 13:10	0° $\mathfrak{L}$	
evening max el	15234 Sep 04 21:47	16° $\mathfrak{L}$ 27'40	18°01'45	retrograde	15235 Aug 25 21:07	3° $\mathfrak{L}$ 19'53	
retrograde	15234 Sep 11 10:29	19° $\mathfrak{L}$ 50'41		evening set	15235 Aug 28 17:51	2° $\mathfrak{L}$ 35'45	
evening set	15234 Sep 13 22:41	19° $\mathfrak{L}$ 20'07			15235 Sep 01 03:47	30° $\mathfrak{R}$ $\mathfrak{M}$	
inferior conj	15234 Sep 20 12:38	14° $\mathfrak{L}$ 12'53	0°55'54	inferior conj	15235 Sep 03 18:45	27° $\mathfrak{M}$ 11'39	1°53'53
minimum elong	15234 Sep 20 14:12	14° $\mathfrak{L}$ 08'55	0°55'29	minimum elong	15235 Sep 03 21:07	27° $\mathfrak{M}$ 04'59	1°53'03
min. Earth dist.	15234 Sep 23 12:09	11° $\mathfrak{L}$ 13'51	0.61724 AU	min. Earth dist.	15235 Sep 06 06:37	24° $\mathfrak{M}$ 23'23	0.63903 AU
desc. node	15234 Sep 23 14:31	11° $\mathfrak{L}$ 08'09		morning rise	15235 Sep 09 22:35	20° $\mathfrak{M}$ 53'59	
morning rise	15234 Sep 27 03:05	8° $\mathfrak{L}$ 11'06		desc. node	15235 Sep 10 11:59	20° $\mathfrak{M}$ 28'58	
direct	15234 Oct 03 19:15	5° $\mathfrak{L}$ 52'14		direct	15235 Sep 16 13:05	18° $\mathfrak{M}$ 20'48	
morning max el	15234 Oct 17 23:09	13° $\mathfrak{L}$ 49'01	27°59'02	morning max el	15235 Sep 30 08:55	26° $\mathfrak{M}$ 20'22	27°38'56
	15234 Oct 31 00:07	0° $\mathfrak{M}$			15235 Oct 03 18:50	0° $\mathfrak{L}$	
	15234 Nov 17 12:39	0° $\mathfrak{J}$			15235 Oct 24 14:31	0° $\mathfrak{M}$	
asc. node	15234 Nov 18 00:51	1° $\mathfrak{J}$ 00'23		morning set	15235 Nov 04 08:13	19° $\mathfrak{M}$ 51'18	
morning set	15234 Nov 20 15:11	6° $\mathfrak{J}$ 16'12		asc. node	15235 Nov 04 21:40	20° $\mathfrak{M}$ 58'34	
max. Earth dist.	15234 Nov 26 03:57	18° $\mathfrak{J}$ 04'08	1.31487 AU	max. Earth dist.	15235 Nov 09 02:51	29° $\mathfrak{M}$ 39'40	1.32453 AU
					15235 Nov 09 06:42	0° $\mathfrak{J}$	
superior conj	15234 Nov 28 00:05	22° $\mathfrak{J}$ 07'11	1°21'13	superior conj	15235 Nov 12 06:37	6° $\mathfrak{J}$ 24'47	1°04'06
minimum elong	15234 Nov 27 22:01	21° $\mathfrak{J}$ 55'46	1°21'53	minimum elong	15235 Nov 12 04:17	6° $\mathfrak{J}$ 12'10	1°04'33
	15234 Dec 01 13:20	0° $\mathfrak{Z}$		evening rise	15235 Nov 19 04:13	21° $\mathfrak{J}$ 25'15	
evening rise	15234 Dec 04 17:14	6° $\mathfrak{Z}$ 56'04			15235 Nov 23 06:33	0° $\mathfrak{Z}$	
	15234 Dec 16 13:16	0° $\approx$		desc. node	15235 Dec 07 09:15	23° $\mathfrak{Z}$ 33'42	
desc. node	15234 Dec 20 12:15	6° $\approx$ 17'41		evening max el	15235 Dec 12 00:40	28° $\mathfrak{Z}$ 44'41	23°08'50
evening max el	15234 Dec 30 15:06	18° $\approx$ 44'27	24°50'45		15235 Dec 13 09:22	0° $\approx$	
retrograde	15235 Jan 13 09:17	25° $\approx$ 37'15		retrograde	15235 Dec 25 06:02	5° $\approx$ 18'05	
evening set	15235 Jan 18 20:32	24° $\approx$ 30'48		evening set	15235 Dec 29 11:49	4° $\approx$ 39'02	
min. Earth dist.	15235 Jan 24 03:02	21° $\approx$ 44'44	0.56213 AU	min. Earth dist.	15236 Jan 05 10:39	1° $\approx$ 24'38	0.54900 AU
inferior conj	15235 Jan 26 14:45	20° $\approx$ 09'58	-5°09'13	inferior conj	15236 Jan 06 17:46	0° $\approx$ 39'53	-5°56'40
minimum elong	15235 Jan 26 23:34	19° $\approx$ 55'55	5°06'35	minimum elong	15236 Jan 06 21:00	0° $\approx$ 35'13	5°55'36
morning rise	15235 Feb 04 04:56	16° $\approx$ 04'22			15236 Jan 07 21:40	30° $\mathfrak{R}$ $\mathfrak{Z}$	
direct	15235 Feb 06 10:04	15° $\approx$ 50'48		morning rise	15236 Jan 15 07:39	26° $\mathfrak{Z}$ 49'34	
asc. node	15235 Feb 13 23:12	18° $\approx$ 41'12		direct	15236 Jan 18 04:04	26° $\mathfrak{Z}$ 30'22	
morning max el	15235 Feb 16 03:02	20° $\approx$ 33'27	19°27'46		15236 Jan 27 05:38	0° $\approx$	
	15235 Feb 23 09:08	0° $\mathfrak{H}$		morning max el	15236 Jan 29 11:22	1° $\approx$ 56'37	20°46'06
morning set	15235 Mar 05 05:32	18° $\mathfrak{H}$ 15'30		asc. node	15236 Jan 31 20:35	4° $\approx$ 28'00	
	15235 Mar 11 02:07	0° $\mathfrak{Y}$			15236 Feb 16 03:16	0° $\mathfrak{H}$	
superior conj	15235 Mar 13 07:57	4° $\mathfrak{Y}$ 24'56	0°42'47	morning set	15236 Feb 17 13:21	2° $\mathfrak{H}$ 55'12	
minimum elong	15235 Mar 13 10:15	4° $\mathfrak{Y}$ 36'10	0°42'26				
desc. node	15235 Mar 18 13:40	14° $\mathfrak{Y}$ 23'14		superior conj	15236 Feb 25 00:07	18° $\mathfrak{H}$ 22'30	1°06'17
max. Earth dist.	15235 Mar 19 20:19	16° $\mathfrak{Y}$ 44'17	1.38008 AU	minimum elong	15236 Feb 25 02:43	18° $\mathfrak{H}$ 35'46	1°06'12
evening rise	15235 Mar 23 13:02	23° $\mathfrak{Y}$ 21'20		max. Earth dist.	15236 Mar 01 04:24	28° $\mathfrak{H}$ 42'05	1.35827 AU
	15235 Mar 27 09:56	0° $\mathfrak{B}$			15236 Mar 01 20:32	0° $\mathfrak{Y}$	
	15235 Apr 16 07:39	0° $\Pi$		desc. node	15236 Mar 04 10:15	4° $\mathfrak{Y}$ 52'08	
evening max el	15235 Apr 27 22:14	13° $\Pi$ 43'11	25°01'14	evening rise	15236 Mar 05 01:55	6° $\mathfrak{Y}$ 04'52	
retrograde	15235 May 09 20:47	20° $\Pi$ 40'14			15236 Mar 19 05:32	0° $\mathfrak{B}$	
asc. node	15235 May 12 20:01	20° $\Pi$ 03'00		evening max el	15236 Apr 09 11:45	27° $\mathfrak{B}$ 33'41	26°10'54
evening set	15235 May 15 15:12	18° $\Pi$ 14'47			15236 Apr 12 03:40	0° $\Pi$	
min. Earth dist.	15235 May 20 00:52	13° $\Pi$ 18'34	0.68239 AU	retrograde	15236 Apr 22 07:06	4° $\Pi$ 53'14	
inferior conj	15235 May 21 05:35	11° $\Pi$ 44'06	2°18'09	evening set	15236 Apr 28 12:00	2° $\Pi$ 21'46	
minimum elong	15235 May 21 03:27	11° $\Pi$ 51'09	2°16'45	asc. node	15236 Apr 28 17:17	2° $\Pi$ 10'41	
morning rise	15235 May 26 16:00	5° $\Pi$ 48'43			15236 Apr 30 22:21	30° $\mathfrak{R}$ $\mathfrak{B}$	
direct	15235 May 30 08:11	4° $\Pi$ 31'14		min. Earth dist.	15236 May 02 15:11	28° $\mathfrak{B}$ 01'01	0.67125 AU
morning max el	15235 Jun 06 11:31	8° $\Pi$ 26'30	19°25'21	inferior conj	15236 May 04 08:45	25° $\mathfrak{B}$ 52'26	1°39'21
desc. node	15235 Jun 14 14:44	18° $\Pi$ 25'47		minimum elong	15236 May 04 06:42	25° $\mathfrak{B}$ 58'47	1°37'58

morning rise	15236 May 10 02:15	20°  07'40		direct	15237 Apr 27 04:21	3°  34'41	
direct	15236 May 13 07:37	19°  08'46		morning max el	15237 May 03 12:04	6°  52'18	18°02'57
morning max el	15236 May 19 21:11	22°  38'56	18°35'43	desc. node	15237 May 18 08:37	28°  07'21	
	15236 May 25 23:02	0°  II			15237 May 19 12:22	0°  II	
desc. node	15236 May 31 11:43	8°  II05'49		morning set	15237 May 21 23:02	3°  II58'34	
morning set	15236 Jun 10 04:16	23°  II09'34					
	15236 Jun 14 13:06	0°  ☿		superior conj	15237 Jun 05 15:26	27°  II29'50	-1°55'10
max. Earth dist.	15236 Jun 25 15:53	17°  ☿21'01	1.45898 AU	minimum elong	15237 Jun 05 07:02	26°  II56'48	1°55'29
					15237 Jun 07 05:41	0°  ☿	
superior conj	15236 Jun 26 04:37	18°  ☿10'41	-2°12'34	max. Earth dist.	15237 Jun 08 12:09	1°  ☿59'17	1.45810 AU
minimum elong	15236 Jun 26 01:41	17°  ☿59'16	2°13'26	evening rise	15237 Jun 21 18:09	22°  ☿31'33	
	15236 Jul 03 17:56	0°  ♊			15237 Jun 26 14:53	0°  ♊	
evening rise	15236 Jul 11 20:12	12°  ♊47'04		greatest brilliancy	15237 Jul 04 13:50	12°  ♊02'15	-0.7m
greatest brilliancy	15236 Jul 19 11:35	24°  ♊53'07	-0.9m	asc. node	15237 Jul 12 13:17	23°  ♊09'34	
	15236 Jul 22 18:40	0°  ♊		evening max el	15237 Jul 16 09:37	27°  ♊32'20	19°24'23
asc. node	15236 Jul 25 16:33	4°  ♊21'34			15237 Jul 19 07:41	0°  ♊	
evening max el	15236 Aug 02 01:11	13°  ♊41'44	18°39'52	retrograde	15237 Jul 23 12:04	1°  ♊29'32	
retrograde	15236 Aug 08 14:39	17°  ♊14'54		evening set	15237 Jul 27 03:38	0°  ♊12'19	
evening set	15236 Aug 11 20:30	16°  ♊14'56			15237 Jul 27 10:22	30°  ♊♊	
inferior conj	15236 Aug 17 11:56	10°  ♊36'03	2°33'35	inferior conj	15237 Aug 01 12:57	24°  ♊20'02	2°57'41
minimum elong	15236 Aug 17 14:05	10°  ♊29'24	2°32'42	minimum elong	15237 Aug 01 14:22	24°  ♊15'24	2°56'52
min. Earth dist.	15236 Aug 19 10:04	8°  ♊14'05	0.65806 AU	min. Earth dist.	15237 Aug 02 20:51	22°  ♊35'13	0.67324 AU
morning rise	15236 Aug 23 06:36	4°  ♊11'11		morning rise	15237 Aug 07 00:31	17°  ♊54'16	
desc. node	15236 Aug 27 09:29	1°  ♊51'23		direct	15237 Aug 12 23:30	15°  ♊19'25	
direct	15236 Aug 29 14:58	1°  ♊32'42		desc. node	15237 Aug 14 06:55	15°  ♊26'02	
morning max el	15236 Sep 11 20:12	9°  ♊21'29	26°47'41	morning max el	15237 Aug 25 07:13	22°  ♊41'30	25°34'11
	15236 Sep 28 01:58	0°  ♊			15237 Aug 31 17:52	0°  ♊	
	15236 Oct 16 01:19	0°  ♊			15237 Sep 21 09:08	0°  ♊	
morning set	15236 Oct 17 14:16	2°  ♊54'30		morning set	15237 Sep 30 05:46	15°  ♊17'38	
max. Earth dist.	15236 Oct 21 16:13	10°  ♊53'15	1.33968 AU	max. Earth dist.	15237 Oct 03 20:05	21°  ♊56'54	1.35969 AU
asc. node	15236 Oct 21 18:23	11°  ♊04'09			15237 Oct 08 00:12	0°  ♊	
				asc. node	15237 Oct 08 15:03	1°  ♊13'21	
superior conj	15236 Oct 26 07:18	20°  ♊22'48	0°41'02				
minimum elong	15236 Oct 26 05:20	20°  ♊12'31	0°41'20	superior conj	15237 Oct 09 23:24	3°  ♊54'43	0°12'21
	15236 Oct 30 20:17	0°  ♊		minimum elong	15237 Oct 09 22:39	3°  ♊50'57	0°12'40
evening rise	15236 Nov 02 14:09	5°  ♊49'43		behind sun begin	15237 Oct 09 18:45	3°  ♊31'23	
	15236 Nov 15 13:05	0°  ♊		behind sun end	15237 Oct 10 02:33	4°  ♊10'32	
evening max el	15236 Nov 22 14:29	8°  ♊48'56	21°29'15	evening rise	15237 Oct 17 21:02	20°  ♊04'43	
desc. node	15236 Nov 23 06:21	9°  ♊26'59			15237 Oct 22 20:03	0°  ♊	
retrograde	15236 Dec 04 17:09	14°  ♊48'36		evening max el	15237 Nov 04 16:42	19°  ♊29'58	20°05'37
evening set	15236 Dec 07 15:37	14°  ♊28'54		desc. node	15237 Nov 10 03:31	23°  ♊32'22	
inferior conj	15236 Dec 16 09:28	10°  ♊37'38	-5°48'18	retrograde	15237 Nov 15 05:19	24°  ♊44'33	
minimum elong	15236 Dec 16 03:32	10°  ♊45'57	5°46'39	evening set	15237 Nov 17 07:54	24°  ♊32'55	
min. Earth dist.	15236 Dec 16 16:19	10°  ♊28'01	0.54425 AU	inferior conj	15237 Nov 26 03:55	20°  ♊35'14	-4°41'36
morning rise	15236 Dec 24 16:00	6°  ♊48'38		minimum elong	15237 Nov 25 17:50	20°  ♊50'21	4°37'55
direct	15236 Dec 28 12:10	6°  ♊16'35		min. Earth dist.	15237 Nov 27 22:59	19°  ♊30'39	0.54894 AU
morning max el	15237 Jan 10 05:16	12°  ♊25'42	22°25'07	morning rise	15237 Dec 04 02:51	16°  ♊28'44	
asc. node	15237 Jan 17 17:54	21°  ♊29'09		direct	15237 Dec 08 23:22	15°  ♊37'29	
	15237 Jan 23 00:55	0°  ♊		morning max el	15237 Dec 22 14:36	22°  ♊21'43	24°14'45
morning set	15237 Feb 01 00:13	17°  ♊39'22			15237 Dec 29 07:11	0°  ♊	
	15237 Feb 06 18:33	0°  ♊		asc. node	15238 Jan 04 15:08	9°  ♊27'39	
					15238 Jan 15 09:24	0°  ♊	
superior conj	15237 Feb 08 00:49	2°  ♊41'18	1°23'10	morning set	15238 Jan 16 12:09	2°  ♊22'42	
minimum elong	15237 Feb 08 02:58	2°  ♊52'40	1°23'28				
max. Earth dist.	15237 Feb 11 18:44	10°  ♊31'11	1.33950 AU	superior conj	15238 Jan 23 07:18	17°  ♊13'37	1°33'37
evening rise	15237 Feb 16 05:19	19°  ♊23'28		minimum elong	15238 Jan 23 08:34	17°  ♊20'32	1°34'16
desc. node	15237 Feb 19 06:50	25°  ♊12'37		max. Earth dist.	15238 Jan 25 16:59	22°  ♊26'20	1.32498 AU
	15237 Feb 21 21:51	0°  ♊			15238 Jan 29 07:00	0°  ♊	
	15237 Mar 13 07:04	0°  ♊		evening rise	15238 Jan 30 19:54	3°  ♊08'41	
evening max el	15237 Mar 23 01:32	11°  ♊13'27	27°03'46	desc. node	15238 Feb 06 03:25	15°  ♊19'56	
retrograde	15237 Apr 05 11:36	18°  ♊43'03			15238 Feb 14 17:18	0°  ♊	
evening set	15237 Apr 12 01:08	16°  ♊11'29		evening max el	15238 Mar 05 14:15	24°  ♊30'36	27°32'19
asc. node	15237 Apr 15 14:37	12°  ♊48'04			15238 Mar 12 16:15	0°  ♊	
min. Earth dist.	15237 Apr 15 23:20	12°  ♊24'01	0.65593 AU	retrograde	15238 Mar 19 09:05	2°  ♊00'04	
inferior conj	15237 Apr 18 05:23	9°  ♊50'00	0°48'28		15238 Mar 25 13:35	30°  ♊♊	
minimum elong	15237 Apr 18 04:09	9°  ♊53'34	0°47'27	evening set	15238 Mar 26 04:14	29°  ♊35'05	
morning rise	15237 Apr 24 08:43	4°  ♊17'34		min. Earth dist.	15238 Mar 29 23:13	26°  ♊17'28	0.63712 AU

inferior conj	15238 Apr 01 16:42	23° $\Upsilon$ 29'10	-0°15'24			15239 Feb 09 10:03	0° $\Upsilon$	
minimum elong	15238 Apr 01 17:12	23° $\Upsilon$ 27'55	0°15'30	evening max el	15239 Feb 15 23:36	7° $\Upsilon$ 12'15	27°30'12	
transit middle	15238 Apr 01 17:12	23° $\Upsilon$ 27'55	0°15'30	retrograde	15239 Mar 01 22:36	14° $\Upsilon$ 35'26		
transit begin	15238 Apr 01 16:26	23° $\Upsilon$ 29'52		evening set	15239 Mar 08 18:41	12° $\Upsilon$ 24'13		
transit end	15238 Apr 01 17:57	23° $\Upsilon$ 25'58		min. Earth dist.	15239 Mar 12 13:15	9° $\Upsilon$ 30'36	0.61581 AU	
asc. node	15238 Apr 02 12:01	22° $\Upsilon$ 39'47		inferior conj	15239 Mar 15 15:28	6° $\Upsilon$ 41'52	-1°32'01	
morning rise	15238 Apr 08 08:32	18° $\Upsilon$ 11'35		minimum elong	15239 Mar 15 18:44	6° $\Upsilon$ 34'25	1°30'42	
direct	15238 Apr 10 19:41	17° $\Upsilon$ 41'30		asc. node	15239 Mar 20 09:26	2° $\Upsilon$ 53'22		
morning max el	15238 Apr 17 05:32	20° $\Upsilon$ 58'12	17°47'27	morning rise	15239 Mar 22 21:54	1° $\Upsilon$ 42'09		
	15238 Apr 24 04:05	0° $\text{B}$		direct	15239 Mar 25 02:11	1° $\Upsilon$ 21'28		
morning set	15238 May 03 20:39	16° $\text{B}$ 04'14		morning max el	15239 Mar 31 22:35	4° $\Upsilon$ 48'25	17°49'46	
desc. node	15238 May 05 05:23	18° $\text{B}$ 23'34		morning set	15239 Apr 16 15:50	29° $\Upsilon$ 10'19		
	15238 May 12 02:58	0° $\text{II}$			15239 Apr 17 02:56	0° $\text{B}$		
				desc. node	15239 Apr 22 02:04	8° $\text{B}$ 49'50		
superior conj	15238 May 16 17:43	7° $\text{II}$ 34'30	-1°23'11	superior conj	15239 Apr 27 19:15	18° $\text{B}$ 44'06	-0°44'55	
minimum elong	15238 May 16 09:53	7° $\text{II}$ 02'37	1°23'03	minimum elong	15239 Apr 27 15:06	18° $\text{B}$ 26'25	0°44'55	
max. Earth dist.	15238 May 22 07:29	16° $\text{II}$ 30'51	1.44987 AU		15239 May 04 13:42	0° $\text{II}$		
	15238 May 30 23:02	0° $\text{B}$		max. Earth dist.	15239 May 04 23:24	0° $\text{II}$ 39'25	1.43519 AU	
evening rise	15238 Jun 01 05:06	1° $\text{B}$ 55'16		evening rise	15239 May 11 21:31	11° $\text{II}$ 40'05		
	15238 Jun 20 05:45	0° $\Omega$			15239 May 24 00:47	0° $\text{B}$		
asc. node	15238 Jun 29 10:07	11° $\Omega$ 19'25		evening max el	15239 Jun 12 08:58	25° $\text{B}$ 17'02	21°35'42	
evening max el	15238 Jun 29 12:15	11° $\Omega$ 24'45	20°23'56	asc. node	15239 Jun 16 07:03	28° $\text{B}$ 38'28		
retrograde	15238 Jul 07 10:58	15° $\Omega$ 57'18			15239 Jun 18 18:25	0° $\Omega$		
evening set	15238 Jul 11 12:53	14° $\Omega$ 22'25		retrograde	15239 Jun 21 09:35	0° $\Omega$ 32'41		
inferior conj	15238 Jul 16 19:06	8° $\Omega$ 17'56	3°08'39		15239 Jun 23 21:05	30° $\text{R}$ $\text{B}$		
minimum elong	15238 Jul 16 19:33	8° $\Omega$ 16'22	3°07'49	evening set	15239 Jun 25 22:24	28° $\text{B}$ 40'52		
min. Earth dist.	15238 Jul 17 13:02	7° $\Omega$ 16'26	0.68388 AU	inferior conj	15239 Jul 01 04:07	22° $\text{B}$ 25'38	3°08'06	
morning rise	15238 Jul 22 01:54	1° $\Omega$ 55'18		minimum elong	15239 Jul 01 03:36	22° $\text{B}$ 27'25	3°07'10	
	15238 Jul 25 01:37	30° $\text{R}$ $\text{B}$		min. Earth dist.	15239 Jul 01 08:38	22° $\text{B}$ 09'50	0.68967 AU	
direct	15238 Jul 27 13:25	29° $\text{B}$ 31'22		morning rise	15239 Jul 06 08:37	16° $\text{B}$ 08'37		
	15238 Jul 30 04:59	0° $\Omega$		direct	15239 Jul 11 07:47	14° $\text{B}$ 00'43		
desc. node	15238 Aug 01 04:20	0° $\Omega$ 53'52		desc. node	15239 Jul 19 01:40	17° $\text{B}$ 49'44		
morning max el	15238 Aug 07 17:50	6° $\Omega$ 12'33	24°08'07	morning max el	15239 Jul 21 05:46	19° $\text{B}$ 52'12	22°38'50	
	15238 Aug 26 05:21	0° $\text{R}$			15239 Jul 29 19:50	0° $\Omega$		
morning set	15238 Sep 12 02:30	26° $\text{R}$ 50'52			15239 Aug 19 09:25	0° $\text{R}$		
	15238 Sep 13 22:08	0° $\text{B}$		morning set	15239 Aug 24 00:28	7° $\text{R}$ 25'29		
max. Earth dist.	15238 Sep 15 18:55	3° $\text{B}$ 17'36	1.38288 AU	max. Earth dist.	15239 Aug 28 18:55	15° $\text{R}$ 21'11	1.40670 AU	
superior conj	15238 Sep 23 03:29	16° $\text{B}$ 51'59	-0°21'03	superior conj	15239 Sep 05 15:26	29° $\text{R}$ 05'20	-0°57'06	
minimum elong	15238 Sep 23 04:56	16° $\text{B}$ 58'55	0°20'35	minimum elong	15239 Sep 05 19:53	29° $\text{R}$ 25'25	0°56'31	
asc. node	15238 Sep 25 11:39	21° $\text{B}$ 22'16			15239 Sep 06 03:32	0° $\text{B}$		
	15238 Sep 29 21:04	0° $\text{R}$		asc. node	15239 Sep 12 08:13	11° $\text{B}$ 27'29		
evening rise	15238 Oct 01 22:21	4° $\text{R}$ 03'50		evening rise	15239 Sep 15 14:59	17° $\text{B}$ 39'17		
	15238 Oct 17 10:19	0° $\text{R}$			15239 Sep 22 07:30	0° $\text{R}$		
evening max el	15238 Oct 18 09:09	1° $\text{R}$ 00'10	19°03'37	evening max el	15239 Oct 01 13:08	13° $\text{R}$ 16'41	18°23'38	
retrograde	15238 Oct 27 07:31	5° $\text{R}$ 29'48		retrograde	15239 Oct 09 04:57	17° $\text{R}$ 10'05		
desc. node	15238 Oct 28 00:46	5° $\text{R}$ 28'09		evening set	15239 Oct 11 05:17	16° $\text{R}$ 54'39		
evening set	15238 Oct 29 04:33	5° $\text{R}$ 18'43		desc. node	15239 Oct 14 22:08	15° $\text{R}$ 14'56		
inferior conj	15238 Nov 06 14:06	1° $\text{R}$ 03'58	-3°01'00	inferior conj	15239 Oct 18 21:51	12° $\text{R}$ 19'04	-1°16'38	
minimum elong	15238 Nov 06 06:36	1° $\text{R}$ 16'52	2°57'25	minimum elong	15239 Oct 18 18:54	12° $\text{R}$ 25'01	1°14'52	
	15238 Nov 08 03:06	30° $\text{R}$ $\text{R}$		min. Earth dist.	15239 Oct 22 03:50	9° $\text{R}$ 43'00	0.58148 AU	
min. Earth dist.	15238 Nov 09 09:49	29° $\text{R}$ 07'55	0.56210 AU	morning rise	15239 Oct 26 05:01	7° $\text{R}$ 01'47		
morning rise	15238 Nov 14 05:58	26° $\text{R}$ 24'07		direct	15239 Nov 01 11:35	5° $\text{R}$ 19'38		
direct	15238 Nov 19 22:15	25° $\text{R}$ 08'56		morning max el	15239 Nov 15 18:44	12° $\text{R}$ 55'19	27°13'59	
	15238 Dec 01 08:55	0° $\text{R}$			15239 Nov 29 06:45	0° $\text{R}$		
morning max el	15238 Dec 04 01:04	2° $\text{R}$ 21'29	25°57'13	asc. node	15239 Dec 09 09:20	17° $\text{R}$ 21'51		
asc. node	15238 Dec 22 12:17	28° $\text{R}$ 09'11			15239 Dec 15 15:53	0° $\text{B}$		
	15238 Dec 23 12:33	0° $\text{B}$		morning set	15239 Dec 16 08:11	1° $\text{B}$ 26'40		
morning set	15238 Dec 31 23:25	17° $\text{B}$ 00'25						
	15239 Jan 06 20:56	0° $\approx$		superior conj	15239 Dec 23 04:42	16° $\text{B}$ 33'02	1°36'06	
superior conj	15239 Jan 07 17:16	1° $\approx$ 53'07	1°37'52	minimum elong	15239 Dec 23 03:52	16° $\text{B}$ 28'23	1°37'00	
minimum elong	15239 Jan 07 17:29	1° $\approx$ 54'18	1°38'44	max. Earth dist.	15239 Dec 23 05:11	16° $\text{B}$ 35'49	1.31079 AU	
max. Earth dist.	15239 Jan 08 21:34	4° $\approx$ 30'10	1.31529 AU		15239 Dec 29 06:41	0° $\approx$		
evening rise	15239 Jan 14 18:49	17° $\approx$ 13'31		evening rise	15239 Dec 29 23:38	1° $\approx$ 30'59		
	15239 Jan 21 04:53	0° $\text{H}$		desc. node	15240 Jan 10 20:46	24° $\approx$ 29'37		
desc. node	15239 Jan 24 00:03	5° $\text{H}$ 08'25			15240 Jan 14 05:00	0° $\text{H}$		

evening max el	15240 Jan 29 02:49	19° $\text{H}$ 05'41	26°53'33	minimum elong	15240 Dec 06 14:04	0° $\text{Z}$ 59'11	1°29'09
retrograde	15240 Feb 12 02:59	26° $\text{H}$ 19'23		evening rise	15240 Dec 13 08:20	15° $\text{Z}$ 56'50	
evening set	15240 Feb 18 17:09	24° $\text{H}$ 29'22			15240 Dec 20 04:54	0° $\approx$	
min. Earth dist.	15240 Feb 22 16:52	21° $\text{H}$ 49'59	0.59346 AU	desc. node	15240 Dec 27 17:37	13° $\approx$ 13'38	
inferior conj	15240 Feb 25 21:54	19° $\text{H}$ 17'17	-2°58'26		15241 Jan 09 19:21	0° $\text{H}$	
minimum elong	15240 Feb 26 04:36	19° $\text{H}$ 03'58	2°55'39	evening max el	15241 Jan 09 22:03	0° $\text{H}$ 06'25	25°43'17
morning rise	15240 Mar 04 19:30	14° $\text{H}$ 38'09		retrograde	15241 Jan 23 20:12	7° $\text{H}$ 07'48	
asc. node	15240 Mar 06 06:54	14° $\text{H}$ 24'24		evening set	15241 Jan 29 19:48	5° $\text{H}$ 45'01	
direct	15240 Mar 06 19:29	14° $\text{H}$ 23'22		min. Earth dist.	15241 Feb 03 10:57	3° $\text{H}$ 05'58	0.57245 AU
morning max el	15240 Mar 14 11:36	18° $\text{H}$ 11'50	18°11'07	inferior conj	15241 Feb 06 08:38	1° $\text{H}$ 06'12	-4°25'34
	15240 Mar 22 23:22	0° $\text{Y}$		minimum elong	15241 Feb 06 17:46	0° $\text{H}$ 50'28	4°22'22
morning set	15240 Mar 30 02:43	12° $\text{Y}$ 58'36			15241 Feb 07 23:41	30° $\text{R}$ $\approx$	
desc. node	15240 Apr 07 22:41	29° $\text{Y}$ 21'30		morning rise	15241 Feb 14 18:39	26° $\approx$ 48'35	
	15240 Apr 08 07:13	0° $\text{B}$		direct	15241 Feb 16 19:24	26° $\approx$ 35'52	
				asc. node	15241 Feb 21 04:21	27° $\approx$ 38'31	
superior conj	15240 Apr 08 19:36	0° $\text{B}$ 55'40	-0°07'09		15241 Feb 24 15:57	0° $\text{H}$	
minimum elong	15240 Apr 08 19:00	0° $\text{B}$ 53'01	0°07'27	morning max el	15241 Feb 25 16:30	0° $\text{H}$ 56'40	18°53'17
behind sun begin	15240 Apr 08 12:15	0° $\text{B}$ 22'39		morning set	15241 Mar 14 00:28	27° $\text{H}$ 15'01	
behind sun end	15240 Apr 09 01:45	1° $\text{B}$ 23'19			15241 Mar 15 10:05	0° $\text{Y}$	
max. Earth dist.	15240 Apr 16 10:12	14° $\text{B}$ 10'05	1.41557 AU				
evening rise	15240 Apr 21 07:15	22° $\text{B}$ 13'25		superior conj	15241 Mar 22 14:48	13° $\text{Y}$ 57'46	0°26'16
	15240 Apr 26 04:41	0° $\text{II}$		minimum elong	15241 Mar 22 16:27	14° $\text{Y}$ 05'32	0°25'51
	15240 May 17 02:50	0° $\text{E}$		desc. node	15241 Mar 25 19:16	19° $\text{Y}$ 54'58	
evening max el	15240 May 25 01:09	9° $\text{E}$ 09'37	22°55'17	max. Earth dist.	15241 Mar 29 17:03	26° $\text{Y}$ 58'15	1.39322 AU
asc. node	15240 Jun 02 04:06	14° $\text{E}$ 50'44			15241 Mar 31 10:30	0° $\text{B}$	
retrograde	15240 Jun 04 06:17	15° $\text{E}$ 09'58		evening rise	15241 Apr 02 14:17	3° $\text{B}$ 42'37	
evening set	15240 Jun 09 06:29	13° $\text{E}$ 02'55			15241 Apr 19 08:28	0° $\text{II}$	
min. Earth dist.	15240 Jun 14 05:35	7° $\text{E}$ 08'28	0.69056 AU	evening max el	15241 May 07 15:08	23° $\text{II}$ 04'00	24°16'35
inferior conj	15240 Jun 14 14:01	6° $\text{E}$ 39'09	2°56'58	retrograde	15241 May 18 23:45	29° $\text{II}$ 43'05	
minimum elong	15240 Jun 14 12:40	6° $\text{E}$ 43'51	2°55'50	asc. node	15241 May 20 01:15	29° $\text{II}$ 38'13	
morning rise	15240 Jun 19 18:44	0° $\text{E}$ 29'22		evening set	15241 May 24 11:30	27° $\text{II}$ 23'35	
	15240 Jun 20 10:03	30° $\text{R}$ $\text{II}$		min. Earth dist.	15241 May 29 01:38	22° $\text{II}$ 06'03	0.68670 AU
direct	15240 Jun 24 05:29	28° $\text{II}$ 40'22		inferior conj	15241 May 29 22:53	20° $\text{II}$ 54'17	2°35'26
	15240 Jun 28 09:21	0° $\text{E}$		minimum elong	15241 May 29 20:55	21° $\text{II}$ 00'54	2°34'06
morning max el	15240 Jul 02 21:39	3° $\text{E}$ 40'53	21°14'27	morning rise	15241 Jun 04 06:26	14° $\text{II}$ 53'07	
desc. node	15240 Jul 04 22:55	5° $\text{E}$ 51'09		direct	15241 Jun 08 05:14	13° $\text{II}$ 24'05	
	15240 Jul 22 19:05	0° $\text{O}$		morning max el	15241 Jun 15 19:58	17° $\text{II}$ 39'56	20°00'59
morning set	15240 Aug 02 22:30	16° $\text{O}$ 59'28		desc. node	15241 Jun 21 20:05	24° $\text{II}$ 40'33	
max. Earth dist.	15240 Aug 10 00:06	28° $\text{O}$ 16'59	1.42832 AU		15241 Jun 25 18:13	0° $\text{E}$	
	15240 Aug 11 01:18	0° $\text{P}$		morning set	15241 Jul 13 03:37	25° $\text{E}$ 51'38	
					15241 Jul 15 20:02	0° $\text{O}$	
superior conj	15240 Aug 17 06:54	10° $\text{P}$ 25'28	-1°32'06	max. Earth dist.	15241 Jul 23 11:57	12° $\text{O}$ 00'44	1.44542 AU
minimum elong	15240 Aug 17 14:03	10° $\text{P}$ 56'01	1°31'39				
	15240 Aug 28 09:48	0° $\text{A}$		superior conj	15241 Jul 28 22:51	20° $\text{O}$ 46'16	-2°00'04
evening rise	15240 Aug 28 18:50	0° $\text{A}$ 40'38		minimum elong	15241 Jul 29 05:54	21° $\text{O}$ 14'55	2°00'15
asc. node	15240 Aug 29 04:48	1° $\text{A}$ 25'30			15241 Aug 03 13:31	0° $\text{P}$	
evening max el	15240 Sep 14 00:28	26° $\text{A}$ 10'38	18°04'16	evening rise	15241 Aug 11 04:45	12° $\text{P}$ 54'07	
retrograde	15240 Sep 20 20:05	29° $\text{A}$ 40'42		asc. node	15241 Aug 16 01:25	21° $\text{P}$ 11'22	
evening set	15240 Sep 23 03:32	29° $\text{A}$ 16'45			15241 Aug 21 10:20	0° $\text{A}$	
inferior conj	15240 Sep 30 02:34	24° $\text{A}$ 20'46	0°13'16	evening max el	15241 Aug 28 15:00	9° $\text{A}$ 30'47	18°03'58
minimum elong	15240 Sep 30 03:00	24° $\text{A}$ 19'45	0°13'24	retrograde	15241 Sep 04 00:44	12° $\text{A}$ 51'16	
transit middle	15240 Sep 30 03:00	24° $\text{A}$ 19'45	0°13'24	evening set	15241 Sep 06 16:34	12° $\text{A}$ 15'13	
transit begin	15240 Sep 30 01:09	24° $\text{A}$ 24'05		inferior conj	15241 Sep 13 00:33	7° $\text{A}$ 00'47	1°22'55
transit end	15240 Sep 30 04:52	24° $\text{A}$ 15'25		minimum elong	15241 Sep 13 02:37	6° $\text{A}$ 55'18	1°22'14
desc. node	15240 Sep 30 19:35	23° $\text{A}$ 40'51		min. Earth dist.	15241 Sep 15 19:37	4° $\text{A}$ 04'03	0.62682 AU
min. Earth dist.	15240 Oct 03 06:55	21° $\text{A}$ 23'49	0.60402 AU	desc. node	15241 Sep 17 17:04	2° $\text{A}$ 15'14	
morning rise	15240 Oct 06 23:18	18° $\text{A}$ 32'27		morning rise	15241 Sep 19 10:23	0° $\text{A}$ 51'19	
direct	15240 Oct 13 13:56	16° $\text{A}$ 24'58			15241 Sep 20 17:21	30° $\text{R}$ $\text{P}$	
morning max el	15240 Oct 27 20:14	24° $\text{A}$ 16'50	27°53'50	direct	15241 Sep 26 02:42	28° $\text{P}$ 25'02	
	15240 Nov 02 01:13	0° $\text{M}$			15241 Oct 01 21:56	0° $\text{A}$	
	15240 Nov 21 14:46	0° $\text{J}$		morning max el	15241 Oct 10 03:32	6° $\text{A}$ 24'10	27°54'37
asc. node	15240 Nov 25 06:18	6° $\text{J}$ 57'23			15241 Oct 28 02:54	0° $\text{M}$	
morning set	15240 Nov 29 12:35	15° $\text{J}$ 37'14		asc. node	15241 Nov 12 03:09	26° $\text{M}$ 48'39	
max. Earth dist.	15240 Dec 05 12:17	28° $\text{J}$ 35'49	1.31177 AU	morning set	15241 Nov 13 10:26	29° $\text{M}$ 26'30	
	15240 Dec 06 03:26	0° $\text{Z}$			15241 Nov 13 17:00	0° $\text{J}$	
				max. Earth dist.	15241 Nov 18 15:08	10° $\text{J}$ 21'43	1.31832 AU
superior conj	15240 Dec 06 15:46	1° $\text{Z}$ 08'40	1°28'22				

superior conj	15241 Nov 21 00:31	15° $\text{♄}$ 34'17	1°14'41	superior conj	15242 Nov 05 04:51	29° $\text{♄}$ 44'16	0°55'01
minimum elong	15241 Nov 20 22:17	15° $\text{♄}$ 21'59	1°15'16	minimum elong	15242 Nov 05 02:35	29° $\text{♄}$ 32'09	0°55'24
evening rise	15241 Nov 27 18:59	0° $\text{♄}$ 26'02			15242 Nov 05 07:47	0° $\text{♄}$	
	15241 Nov 27 14:10	0° $\text{♄}$		evening rise	15242 Nov 12 05:45	14° $\text{♄}$ 53'58	
	15241 Dec 13 19:52	0° $\text{♄}$			15242 Nov 19 17:10	0° $\text{♄}$	
desc. node	15241 Dec 14 14:33	1° $\text{♄}$ 06'42		desc. node	15242 Dec 01 11:35	17° $\text{♄}$ 50'21	
evening max el	15241 Dec 22 09:51	10° $\text{♄}$ 22'15	24°08'18	evening max el	15242 Dec 03 19:57	20° $\text{♄}$ 19'14	22°25'06
retrograde	15242 Jan 05 00:01	17° $\text{♄}$ 07'23		retrograde	15242 Dec 16 15:17	26° $\text{♄}$ 39'41	
evening set	15242 Jan 09 23:30	16° $\text{♄}$ 13'26		evening set	15242 Dec 20 07:29	26° $\text{♄}$ 10'03	
min. Earth dist.	15242 Jan 15 21:27	13° $\text{♄}$ 17'35	0.55565 AU	min. Earth dist.	15242 Dec 28 03:26	22° $\text{♄}$ 38'09	0.54588 AU
inferior conj	15242 Jan 17 22:21	12° $\text{♄}$ 03'41	-5°34'56	inferior conj	15242 Dec 28 19:01	22° $\text{♄}$ 16'17	-6°00'48
minimum elong	15242 Jan 18 05:37	11° $\text{♄}$ 52'41	5°33'01	minimum elong	15242 Dec 28 18:18	22° $\text{♄}$ 17'17	5°59'52
morning rise	15242 Jan 26 13:32	8° $\text{♄}$ 05'20		morning rise	15243 Jan 06 06:14	18° $\text{♄}$ 28'57	
direct	15242 Jan 28 23:57	7° $\text{♄}$ 50'03		direct	15243 Jan 09 12:25	18° $\text{♄}$ 05'04	
asc. node	15242 Feb 08 01:45	12° $\text{♄}$ 33'46		morning max el	15243 Jan 21 10:49	23° $\text{♄}$ 49'34	21°26'11
morning max el	15242 Feb 08 09:06	12° $\text{♄}$ 51'19	19°58'17	asc. node	15243 Jan 25 23:06	28° $\text{♄}$ 54'19	
	15242 Feb 20 04:48	0° $\text{♄}$			15243 Jan 26 18:59	0° $\text{♄}$	
morning set	15242 Feb 26 05:27	11° $\text{♄}$ 48'59		morning set	15243 Feb 10 14:49	26° $\text{♄}$ 31'33	
					15243 Feb 12 06:29	0° $\text{♄}$	
superior conj	15242 Mar 06 00:28	27° $\text{♄}$ 38'20	0°53'34	superior conj	15243 Feb 17 20:36	11° $\text{♄}$ 45'51	1°14'15
minimum elong	15242 Mar 06 03:01	27° $\text{♄}$ 51'00	0°53'19	minimum elong	15243 Feb 17 23:05	11° $\text{♄}$ 58'42	1°14'20
	15242 Mar 07 05:03	0° $\text{♄}$		max. Earth dist.	15243 Feb 22 10:26	21° $\text{♄}$ 05'05	1.34981 AU
max. Earth dist.	15242 Mar 11 23:45	9° $\text{♄}$ 11'44	1.37054 AU	evening rise	15243 Feb 26 12:40	29° $\text{♄}$ 01'17	
desc. node	15242 Mar 12 15:50	10° $\text{♄}$ 26'45			15243 Feb 27 01:09	0° $\text{♄}$	
evening rise	15242 Mar 15 17:14	16° $\text{♄}$ 01'59		desc. node	15243 Feb 27 12:22	0° $\text{♄}$ 52'27	
	15242 Mar 23 21:18	0° $\text{♄}$			15243 Mar 17 02:14	0° $\text{♄}$	
	15242 Apr 13 20:52	0° $\text{♄}$		evening max el	15243 Apr 02 18:29	20° $\text{♄}$ 45'42	26°35'55
evening max el	15242 Apr 20 04:47	6° $\text{♄}$ 58'32	25°32'34	retrograde	15243 Apr 15 20:31	28° $\text{♄}$ 10'20	
retrograde	15242 May 02 12:47	14° $\text{♄}$ 06'03		evening set	15243 Apr 22 05:32	25° $\text{♄}$ 37'59	
asc. node	15242 May 06 22:28	12° $\text{♄}$ 46'10		asc. node	15243 Apr 23 19:47	24° $\text{♄}$ 11'56	
evening set	15242 May 08 11:48	11° $\text{♄}$ 37'40		min. Earth dist.	15243 Apr 26 06:25	21° $\text{♄}$ 31'57	0.66524 AU
min. Earth dist.	15242 May 12 18:38	6° $\text{♄}$ 56'38	0.67819 AU	inferior conj	15243 Apr 28 05:23	19° $\text{♄}$ 11'26	1°19'19
inferior conj	15242 May 14 04:44	5° $\text{♄}$ 07'06	2°03'10	minimum elong	15243 Apr 28 03:35	19° $\text{♄}$ 16'51	1°18'02
minimum elong	15242 May 14 02:34	5° $\text{♄}$ 14'05	2°01'44	morning rise	15243 May 04 02:44	13° $\text{♄}$ 31'50	
	15242 May 18 18:19	30° $\text{♄}$		direct	15243 May 07 03:55	12° $\text{♄}$ 39'59	
morning rise	15242 May 19 17:48	29° $\text{♄}$ 15'52		morning max el	15243 May 13 13:53	16° $\text{♄}$ 02'56	18°19'46
direct	15242 May 23 05:21	28° $\text{♄}$ 06'20			15243 May 24 01:25	0° $\text{♄}$	
	15242 May 27 23:19	0° $\text{♄}$		desc. node	15243 May 26 14:02	3° $\text{♄}$ 55'15	
morning max el	15242 May 30 01:43	1° $\text{♄}$ 49'09	19°02'14	morning set	15243 Jun 02 13:08	14° $\text{♄}$ 56'57	
desc. node	15242 Jun 08 17:07	14° $\text{♄}$ 05'20			15243 Jun 12 01:37	0° $\text{♄}$	
greatest brilliancy	15242 Jun 12 04:23	19° $\text{♄}$ 13'17	-0.7m	superior conj	15243 Jun 18 02:16	9° $\text{♄}$ 25'55	-2°07'27
	15242 Jun 19 06:01	0° $\text{♄}$		minimum elong	15243 Jun 17 20:20	9° $\text{♄}$ 02'47	2°08'08
morning set	15242 Jun 22 10:16	4° $\text{♄}$ 54'03		max. Earth dist.	15243 Jun 19 01:38	10° $\text{♄}$ 57'05	1.45956 AU
max. Earth dist.	15242 Jul 06 05:28	26° $\text{♄}$ 20'25	1.45619 AU		15243 Jul 01 06:52	0° $\text{♄}$	
superior conj	15242 Jul 08 17:36	0° $\text{♄}$ 16'22	-2°13'36	evening rise	15243 Jul 04 01:58	4° $\text{♄}$ 22'04	
minimum elong	15242 Jul 08 19:17	0° $\text{♄}$ 22'58	2°14'27	greatest brilliancy	15243 Jul 14 02:34	19° $\text{♄}$ 56'57	-0.8m
	15242 Jul 08 13:27	0° $\text{♄}$		asc. node	15243 Jul 20 18:46	29° $\text{♄}$ 45'35	
evening rise	15242 Jul 23 15:48	24° $\text{♄}$ 08'56			15243 Jul 20 22:58	0° $\text{♄}$	
	15242 Jul 27 06:07	0° $\text{♄}$		evening max el	15243 Jul 26 16:21	6° $\text{♄}$ 55'29	18°56'45
asc. node	15242 Aug 02 22:04	10° $\text{♄}$ 40'17		retrograde	15243 Aug 02 10:20	10° $\text{♄}$ 37'29	
evening max el	15242 Aug 12 05:15	23° $\text{♄}$ 08'16	18°21'41	evening set	15243 Aug 05 20:16	9° $\text{♄}$ 30'10	
retrograde	15242 Aug 18 14:42	26° $\text{♄}$ 32'52		inferior conj	15243 Aug 11 08:41	3° $\text{♄}$ 45'07	2°45'32
evening set	15242 Aug 21 15:22	25° $\text{♄}$ 42'03		minimum elong	15243 Aug 11 10:34	3° $\text{♄}$ 39'09	2°44'41
inferior conj	15242 Aug 27 11:48	20° $\text{♄}$ 11'19	2°12'48	min. Earth dist.	15243 Aug 13 00:39	1° $\text{♄}$ 38'12	0.66505 AU
minimum elong	15242 Aug 27 14:10	20° $\text{♄}$ 04'22	2°11'54		15243 Aug 14 09:07	30° $\text{♄}$	
min. Earth dist.	15242 Aug 29 17:53	17° $\text{♄}$ 32'57	0.64765 AU	morning rise	15243 Aug 17 00:04	27° $\text{♄}$ 19'12	
morning rise	15242 Sep 02 11:33	13° $\text{♄}$ 49'56		desc. node	15243 Aug 22 12:02	24° $\text{♄}$ 43'25	
desc. node	15242 Sep 04 14:34	12° $\text{♄}$ 23'37		direct	15243 Aug 23 04:36	24° $\text{♄}$ 41'36	
direct	15242 Sep 08 23:58	11° $\text{♄}$ 13'35			15243 Sep 02 14:35	0° $\text{♄}$	
morning max el	15242 Sep 22 14:08	19° $\text{♄}$ 09'19	27°20'22	morning max el	15243 Sep 05 01:39	2° $\text{♄}$ 20'45	26°18'38
	15242 Oct 01 19:37	0° $\text{♄}$			15243 Sep 25 23:37	0° $\text{♄}$	
	15242 Oct 21 02:46	0° $\text{♄}$		morning set	15243 Oct 10 23:33	25° $\text{♄}$ 36'28	
morning set	15242 Oct 27 23:09	12° $\text{♄}$ 48'35			15243 Oct 13 07:12	0° $\text{♄}$	
asc. node	15242 Oct 29 23:55	16° $\text{♄}$ 50'24		max. Earth dist.	15243 Oct 14 19:48	2° $\text{♄}$ 57'15	1.34769 AU
max. Earth dist.	15242 Nov 01 10:19	21° $\text{♄}$ 47'59	1.33041 AU	asc. node	15243 Oct 16 20:36	6° $\text{♄}$ 58'17	

superior conj	15243 Oct 20 02:16	13° $\mathbb{M}$ 32'26	0°29'31	superior conj	15244 Oct 02 13:44	26° $\mathbb{A}$ 50'49	-0°01'20
minimum elong	15243 Oct 20 00:42	13° $\mathbb{M}$ 24'22	0°29'48	minimum elong	15244 Oct 02 13:47	26° $\mathbb{A}$ 51'05	0°00'59
evening rise	15243 Oct 27 14:42	29° $\mathbb{M}$ 15'48		behind sun begin	15244 Oct 02 07:16	26° $\mathbb{A}$ 19'07	
	15243 Oct 27 23:11	0° $\mathbb{A}$		behind sun end	15244 Oct 02 20:18	27° $\mathbb{A}$ 23'08	
	15243 Nov 15 00:01	0° $\mathbb{B}$		asc. node	15244 Oct 02 17:13	27° $\mathbb{A}$ 07'58	
evening max el	15243 Nov 15 14:14	0° $\mathbb{B}$ 36'07	20°51'08		15244 Oct 04 03:59	0° $\mathbb{M}$	
desc. node	15243 Nov 18 08:43	3° $\mathbb{B}$ 01'31		evening rise	15244 Oct 10 19:34	13° $\mathbb{M}$ 25'04	
retrograde	15243 Nov 27 01:39	6° $\mathbb{B}$ 18'08			15244 Oct 19 12:16	0° $\mathbb{A}$	
evening set	15243 Nov 29 13:45	6° $\mathbb{B}$ 03'02		evening max el	15244 Oct 27 22:40	11° $\mathbb{A}$ 38'03	19°36'31
inferior conj	15243 Dec 08 10:06	2° $\mathbb{B}$ 10'14	-5°26'09	desc. node	15244 Nov 04 05:58	16° $\mathbb{A}$ 14'00	
minimum elong	15243 Dec 08 01:26	2° $\mathbb{B}$ 22'37	5°23'34	retrograde	15244 Nov 06 18:45	16° $\mathbb{A}$ 33'02	
min. Earth dist.	15243 Dec 09 09:02	1° $\mathbb{B}$ 37'25	0.54506 AU	evening set	15244 Nov 08 17:12	16° $\mathbb{A}$ 22'28	
	15243 Dec 12 08:29	30° $\mathbb{R}$ $\mathbb{A}$		inferior conj	15244 Nov 17 10:06	12° $\mathbb{A}$ 18'40	-4°01'08
morning rise	15243 Dec 16 13:14	28° $\mathbb{A}$ 16'19		minimum elong	15244 Nov 17 00:32	12° $\mathbb{A}$ 33'48	3°57'10
direct	15243 Dec 20 19:49	27° $\mathbb{A}$ 37'07		min. Earth dist.	15244 Nov 19 17:29	10° $\mathbb{A}$ 51'05	0.55357 AU
	15243 Dec 28 19:04	0° $\mathbb{B}$		morning rise	15244 Nov 25 06:02	7° $\mathbb{A}$ 58'52	
morning max el	15244 Jan 03 00:11	4° $\mathbb{B}$ 01'55	23°11'29	direct	15244 Nov 30 11:29	6° $\mathbb{A}$ 57'53	
asc. node	15244 Jan 12 20:23	16° $\mathbb{B}$ 22'11		morning max el	15244 Dec 14 09:06	13° $\mathbb{A}$ 55'49	25°00'20
	15244 Jan 20 14:32	0° $\mathbb{A}$			15244 Dec 26 22:02	0° $\mathbb{B}$	
morning set	15244 Jan 26 02:23	11° $\mathbb{A}$ 16'36		asc. node	15244 Dec 29 17:34	4° $\mathbb{B}$ 40'25	
				morning set	15245 Jan 09 14:14	25° $\mathbb{B}$ 58'00	
superior conj	15244 Feb 02 00:06	26° $\mathbb{A}$ 11'53	1°28'23		15245 Jan 11 10:49	0° $\mathbb{A}$	
minimum elong	15244 Feb 02 01:54	26° $\mathbb{A}$ 21'35	1°28'50	superior conj	15245 Jan 16 08:20	10° $\mathbb{A}$ 48'10	1°36'11
	15244 Feb 03 18:46	0° $\mathbb{H}$		minimum elong	15245 Jan 16 09:10	10° $\mathbb{A}$ 52'44	1°36'55
max. Earth dist.	15244 Feb 05 04:08	2° $\mathbb{H}$ 56'00	1.33271 AU	max. Earth dist.	15245 Jan 18 05:06	14° $\mathbb{A}$ 53'42	1.32021 AU
evening rise	15244 Feb 09 21:12	12° $\mathbb{H}$ 32'16		evening rise	15245 Jan 23 15:39	26° $\mathbb{A}$ 26'35	
desc. node	15244 Feb 14 08:56	21° $\mathbb{H}$ 08'09			15245 Jan 25 09:44	0° $\mathbb{H}$	
	15244 Feb 19 08:14	0° $\mathbb{Y}$		desc. node	15245 Jan 31 05:34	11° $\mathbb{H}$ 08'09	
	15244 Mar 11 06:00	0° $\mathbb{B}$			15245 Feb 11 17:09	0° $\mathbb{Y}$	
evening max el	15244 Mar 15 07:48	4° $\mathbb{B}$ 16'32	27°19'11	evening max el	15245 Feb 25 19:14	17° $\mathbb{Y}$ 19'36	27°35'28
retrograde	15244 Mar 28 22:09	11° $\mathbb{B}$ 47'34		retrograde	15245 Mar 11 16:43	24° $\mathbb{Y}$ 47'54	
evening set	15244 Apr 04 14:41	9° $\mathbb{B}$ 17'32		evening set	15245 Mar 18 12:47	22° $\mathbb{Y}$ 27'47	
min. Earth dist.	15244 Apr 08 11:06	5° $\mathbb{B}$ 43'39	0.64833 AU	min. Earth dist.	15245 Mar 22 07:03	19° $\mathbb{Y}$ 21'11	0.62822 AU
asc. node	15244 Apr 09 17:09	4° $\mathbb{B}$ 22'15		inferior conj	15245 Mar 25 04:46	16° $\mathbb{Y}$ 30'35	-0°46'29
inferior conj	15244 Apr 10 22:23	3° $\mathbb{B}$ 01'42	0°22'57	minimum elong	15245 Mar 25 06:19	16° $\mathbb{Y}$ 26'47	0°46'01
minimum elong	15244 Apr 10 21:45	3° $\mathbb{B}$ 03'27	0°22'16	asc. node	15245 Mar 27 14:33	14° $\mathbb{Y}$ 14'44	
	15244 Apr 13 21:01	30° $\mathbb{R}$ $\mathbb{Y}$		morning rise	15245 Apr 01 02:38	11° $\mathbb{Y}$ 20'21	
morning rise	15244 Apr 17 06:45	27° $\mathbb{Y}$ 35'35		direct	15245 Apr 03 10:29	10° $\mathbb{Y}$ 54'51	
direct	15244 Apr 19 22:34	26° $\mathbb{Y}$ 58'39		morning max el	15245 Apr 09 23:58	14° $\mathbb{Y}$ 14'53	17°46'11
	15244 Apr 26 00:13	0° $\mathbb{B}$			15245 Apr 20 23:44	0° $\mathbb{B}$	
morning max el	15244 Apr 26 06:15	0° $\mathbb{B}$ 14'23	17°54'15	morning set	15245 Apr 26 03:09	8° $\mathbb{B}$ 52'44	
desc. node	15244 May 12 10:50	24° $\mathbb{B}$ 03'24		desc. node	15245 Apr 29 07:35	14° $\mathbb{B}$ 24'21	
morning set	15244 May 13 19:37	26° $\mathbb{B}$ 19'17					
	15244 May 16 00:56	0° $\mathbb{H}$		superior conj	15245 May 08 05:53	29° $\mathbb{B}$ 32'07	-1°07'14
superior conj	15244 May 27 18:04	19° $\mathbb{H}$ 00'28	-1°42'54	minimum elong	15245 May 07 23:28	29° $\mathbb{B}$ 05'31	1°07'07
minimum elong	15244 May 27 09:15	18° $\mathbb{H}$ 25'25	1°42'57		15245 May 08 12:38	0° $\mathbb{H}$	
max. Earth dist.	15244 May 31 21:34	25° $\mathbb{H}$ 33'30	1.45541 AU	max. Earth dist.	15245 May 14 15:05	9° $\mathbb{H}$ 54'55	1.44427 AU
	15244 Jun 03 17:43	0° $\mathbb{B}$		evening rise	15245 May 23 04:30	23° $\mathbb{H}$ 19'47	
evening rise	15244 Jun 12 17:13	13° $\mathbb{B}$ 52'03			15245 May 27 13:27	0° $\mathbb{B}$	
	15244 Jun 23 08:48	0° $\mathbb{Q}$			15245 Jun 17 18:22	0° $\mathbb{Q}$	
greatest brilliancy	15244 Jun 27 03:54	5° $\mathbb{Q}$ 35'36	-0.6m	evening max el	15245 Jun 21 22:21	4° $\mathbb{Q}$ 39'35	20°53'18
asc. node	15244 Jul 06 15:33	18° $\mathbb{Q}$ 18'48		asc. node	15245 Jun 23 12:26	6° $\mathbb{Q}$ 09'10	
evening max el	15244 Jul 08 22:18	20° $\mathbb{Q}$ 46'49	19°48'00	retrograde	15245 Jun 30 07:45	9° $\mathbb{Q}$ 30'06	
retrograde	15244 Jul 16 08:45	24° $\mathbb{Q}$ 58'21		evening set	15245 Jul 04 14:08	7° $\mathbb{Q}$ 48'06	
evening set	15244 Jul 20 04:33	23° $\mathbb{Q}$ 33'42		inferior conj	15245 Jul 09 19:50	1° $\mathbb{Q}$ 38'58	3°09'44
inferior conj	15244 Jul 25 12:11	17° $\mathbb{Q}$ 35'56	3°03'49	minimum elong	15245 Jul 09 19:52	1° $\mathbb{Q}$ 38'50	3°08'53
minimum elong	15244 Jul 25 13:12	17° $\mathbb{Q}$ 32'30	3°03'01	min. Earth dist.	15245 Jul 10 08:06	0° $\mathbb{Q}$ 56'28	0.68688 AU
min. Earth dist.	15244 Jul 26 14:05	16° $\mathbb{Q}$ 08'57	0.67827 AU		15245 Jul 11 00:32	30° $\mathbb{R}$ $\mathbb{B}$	
morning rise	15244 Jul 30 21:25	11° $\mathbb{Q}$ 10'49		morning rise	15245 Jul 15 01:20	25° $\mathbb{B}$ 18'19	
direct	15244 Aug 05 15:34	8° $\mathbb{Q}$ 39'52		direct	15245 Jul 20 07:42	23° $\mathbb{B}$ 00'25	
desc. node	15244 Aug 08 09:28	9° $\mathbb{Q}$ 09'03		desc. node	15245 Jul 26 06:49	25° $\mathbb{B}$ 17'29	
morning max el	15244 Aug 17 12:36	15° $\mathbb{Q}$ 46'56	24°58'34	morning max el	15245 Jul 30 23:22	29° $\mathbb{B}$ 21'38	23°30'01
	15244 Aug 29 06:25	0° $\mathbb{H}$			15245 Aug 31 14:21	0° $\mathbb{Q}$	
	15244 Sep 17 21:19	0° $\mathbb{A}$			15245 Aug 23 00:32	0° $\mathbb{H}$	
morning set	15244 Sep 22 07:39	7° $\mathbb{A}$ 40'15		morning set	15245 Sep 03 19:09	18° $\mathbb{H}$ 50'06	
max. Earth dist.	15244 Sep 25 20:43	14° $\mathbb{A}$ 04'19	1.36925 AU	max. Earth dist.	15245 Sep 07 18:51	25° $\mathbb{H}$ 39'13	1.39307 AU

	15245 Sep 10 06:07	0°♄		superior conj	15246 Aug 28 15:19	21°♄23'17	-1°12'22
				minimum elong	15246 Aug 28 21:04	21°♄48'35	1°11'46
superior conj	15245 Sep 15 11:33	9°♄31'15	-0°36'10		15246 Sep 02 10:46	0°♄	
minimum elong	15245 Sep 15 14:12	9°♄43'39	0°35'39	asc. node	15246 Sep 06 10:24	7°♄18'45	
asc. node	15245 Sep 19 13:48	17°♄16'02		evening rise	15246 Sep 08 05:23	10°♄37'40	
evening rise	15245 Sep 24 17:40	27°♄15'28			15246 Sep 19 08:37	0°♄	
	15245 Sep 26 03:39	0°♄		evening max el	15246 Sep 24 04:19	6°♄03'42	18°12'58
evening max el	15245 Oct 10 20:40	23°♄29'50	18°44'01	retrograde	15246 Oct 01 10:02	9°♄45'18	
retrograde	15245 Oct 19 04:39	27°♄42'06		evening set	15246 Oct 03 13:18	9°♄26'35	
evening set	15245 Oct 21 02:28	27°♄29'40		desc. node	15246 Oct 09 00:40	6°♄16'48	
desc. node	15245 Oct 22 03:17	27°♄13'03		inferior conj	15246 Oct 10 22:12	4°♄41'53	-0°36'12
inferior conj	15245 Oct 29 05:14	23°♄06'30	-2°15'47	minimum elong	15246 Oct 10 20:55	4°♄44'40	0°35'12
minimum elong	15245 Oct 28 23:40	23°♄16'42	2°12'53	min. Earth dist.	15246 Oct 14 04:37	1°♄54'40	0.59091 AU
min. Earth dist.	15245 Nov 01 07:12	20°♄51'21	0.56984 AU		15246 Oct 16 17:37	30°♄	
morning rise	15245 Nov 05 17:40	18°♄10'39		morning rise	15246 Oct 18 01:08	29°♄10'38	
direct	15245 Nov 11 17:03	16°♄43'44		direct	15246 Oct 24 12:01	27°♄17'24	
morning max el	15245 Nov 25 22:02	24°♄06'45	26°33'42		15246 Nov 01 15:22	0°♄	
	15245 Dec 01 07:05	0°♄		morning max el	15246 Nov 07 19:02	4°♄59'51	27°35'46
asc. node	15245 Dec 16 14:40	23°♄36'20			15246 Nov 26 07:13	0°♄	
	15245 Dec 19 22:42	0°♄		asc. node	15246 Dec 03 11:42	12°♄59'56	
morning set	15245 Dec 25 00:40	10°♄31'11		morning set	15246 Dec 09 07:52	24°♄51'47	
					15246 Dec 11 17:08	0°♄	
superior conj	15245 Dec 31 19:12	25°♄28'36	1°37'51	superior conj	15246 Dec 16 06:44	10°♄07'44	1°33'33
minimum elong	15245 Dec 31 18:57	25°♄27'16	1°38'44	minimum elong	15246 Dec 16 05:31	10°♄00'51	1°34'25
max. Earth dist.	15246 Jan 01 11:19	26°♄58'38	1.31277 AU	max. Earth dist.	15246 Dec 15 19:27	9°♄04'31	1.31059 AU
	15246 Jan 02 19:56	0°♄		evening rise	15246 Dec 23 00:10	25°♄00'08	
evening rise	15246 Jan 07 17:23	10°♄37'45			15246 Dec 25 08:52	0°♄	
	15246 Jan 17 15:50	0°♄		desc. node	15247 Jan 04 23:02	19°♄53'23	
desc. node	15246 Jan 18 02:15	0°♄46'03			15247 Jan 11 13:38	0°♄	
evening max el	15246 Feb 08 02:31	29°♄42'38	27°19'00	evening max el	15247 Jan 21 02:48	11°♄15'08	26°27'28
	15246 Feb 08 09:53	0°♄		retrograde	15247 Feb 04 02:09	18°♄22'55	
retrograde	15246 Feb 22 02:36	7°♄01'49		evening set	15247 Feb 10 11:25	16°♄44'05	
evening set	15246 Feb 28 20:52	4°♄59'11		min. Earth dist.	15247 Feb 14 16:16	14°♄06'51	0.58425 AU
min. Earth dist.	15246 Mar 04 16:54	2°♄12'42	0.60625 AU	inferior conj	15247 Feb 17 19:36	11°♄46'31	-3°36'05
	15246 Mar 07 06:46	30°♄		minimum elong	15247 Feb 18 03:37	11°♄31'32	3°32'57
inferior conj	15246 Mar 07 21:05	29°♄28'54	-2°07'52	morning rise	15247 Feb 25 23:02	7°♄16'20	
minimum elong	15246 Mar 08 01:47	29°♄18'46	2°05'54	direct	15247 Feb 27 22:43	7°♄02'47	
asc. node	15246 Mar 14 12:01	24°♄55'49		asc. node	15247 Mar 01 09:28	7°♄10'16	
morning rise	15246 Mar 15 10:00	24°♄37'19		morning max el	15247 Mar 08 01:49	11°♄03'31	18°26'21
direct	15246 Mar 17 11:59	24°♄19'36			15247 Mar 20 13:14	0°♄	
morning max el	15246 Mar 24 15:44	27°♄54'43	17°56'24	morning set	15247 Mar 23 21:50	6°♄21'36	
	15246 Mar 26 13:43	0°♄					
morning set	15246 Apr 09 05:44	22°♄18'59		superior conj	15247 Apr 02 02:26	23°♄43'54	0°07'43
	15246 Apr 13 10:58	0°♄		minimum elong	15247 Apr 02 02:58	23°♄46'20	0°07'20
desc. node	15246 Apr 16 04:14	4°♄53'14		behind sun begin	15247 Apr 01 20:31	23°♄16'42	
				behind sun end	15247 Apr 02 09:25	24°♄15'55	
superior conj	15246 Apr 19 17:26	11°♄08'44	-0°28'31	desc. node	15247 Apr 03 00:50	25°♄26'25	
minimum elong	15246 Apr 19 14:55	10°♄57'47	0°28'40		15247 Apr 05 13:31	0°♄	
max. Earth dist.	15246 Apr 27 04:56	23°♄48'48	1.42732 AU	max. Earth dist.	15247 Apr 09 14:28	7°♄04'18	1.40631 AU
	15246 May 01 00:16	0°♄		evening rise	15247 Apr 13 22:12	14°♄21'14	
evening rise	15246 May 03 03:22	3°♄23'32			15247 Apr 23 19:15	0°♄	
	15246 May 20 22:20	0°♄			15247 May 16 00:26	0°♄	
evening max el	15246 Jun 04 17:04	18°♄32'25	22°09'03	evening max el	15247 May 18 08:06	2°♄25'54	23°29'59
asc. node	15246 Jun 10 09:26	23°♄02'04		asc. node	15247 May 28 06:32	8°♄40'35	
retrograde	15246 Jun 14 05:35	24°♄06'49		retrograde	15247 May 29 00:57	8°♄43'10	
evening set	15246 Jun 18 23:14	22°♄08'21		evening set	15247 Jun 03 06:12	6°♄30'13	
inferior conj	15246 Jun 24 05:28	15°♄49'28	3°04'38	min. Earth dist.	15247 Jun 08 01:12	0°♄51'46	0.68957 AU
minimum elong	15246 Jun 24 04:35	15°♄52'35	3°03'38	inferior conj	15247 Jun 08 15:09	0°♄03'48	2°49'07
min. Earth dist.	15246 Jun 24 04:30	15°♄52'51	0.69065 AU	minimum elong	15247 Jun 08 13:30	0°♄09'28	2°47'53
morning rise	15246 Jun 29 09:45	9°♄35'26			15247 Jun 08 16:15	30°♄	
direct	15246 Jul 04 03:43	7°♄35'07		morning rise	15247 Jun 13 20:47	23°♄57'48	
desc. node	15246 Jul 13 04:07	12°♄43'27		direct	15247 Jun 18 02:25	22°♄17'19	
morning max el	15246 Jul 13 12:28	13°♄04'07	22°01'57	morning max el	15247 Jun 26 06:54	26°♄57'09	20°41'37
	15246 Jul 27 01:18	0°♄			15247 Jun 29 02:39	0°♄	
morning set	15246 Aug 15 06:42	28°♄57'46		desc. node	15247 Jun 30 01:20	1°♄06'52	
	15246 Aug 15 22:12	0°♄			15247 Jul 20 12:16	0°♄	
max. Earth dist.	15246 Aug 20 20:53	8°♄05'21	1.41635 AU				

morning set	15247 Jul 25 19:57	8°♎09'15		max. Earth dist.	15248 Jul 15 19:47	5°♎24'36	1.45078 AU
max. Earth dist.	15247 Aug 03 05:27	21°♎24'26	1.43631 AU				
	15247 Aug 08 11:46	0°♎		superior conj	15248 Jul 20 02:59	12°♎14'00	-2°07'59
				minimum elong	15248 Jul 20 08:25	12°♎35'42	2°08'31
superior conj	15247 Aug 09 20:52	2°♎17'35	-1°45'15		15248 Jul 31 00:37	0°♎	
minimum elong	15247 Aug 10 04:31	2°♎49'32	1°45'00	evening rise	15248 Aug 03 02:58	5°♎09'46	
evening rise	15247 Aug 22 02:14	23°♎20'02		asc. node	15248 Aug 10 03:36	16°♎51'24	
asc. node	15247 Aug 24 06:59	27°♎11'59			15248 Aug 18 23:40	0°♎	
	15247 Aug 25 21:22	0°♎		evening max el	15248 Aug 21 08:07	2°♎37'21	18°09'22
evening max el	15247 Sep 07 17:23	19°♎09'12	18°01'50	retrograde	15248 Aug 27 16:49	5°♎58'21	
retrograde	15247 Sep 14 07:39	22°♎33'47		evening set	15248 Aug 30 12:14	5°♎16'27	
evening set	15247 Sep 16 18:32	22°♎05'05		inferior conj	15248 Sep 05 14:52	29°♎54'53	1°46'19
inferior conj	15247 Sep 23 10:44	17°♎00'38	0°45'20	minimum elong	15248 Sep 05 17:11	29°♎48'26	1°45'30
minimum elong	15247 Sep 23 12:04	16°♎57'21	0°45'02		15248 Sep 05 13:01	30°♎	
desc. node	15247 Sep 25 22:08	14°♎33'46		min. Earth dist.	15248 Sep 08 04:44	27°♎03'45	0.63591 AU
min. Earth dist.	15247 Sep 26 11:39	14°♎01'31	0.61378 AU	morning rise	15248 Sep 11 20:12	23°♎38'59	
morning rise	15247 Sep 30 02:48	11°♎01'57		desc. node	15248 Sep 11 19:37	23°♎40'06	
direct	15247 Oct 06 18:42	8°♎45'51		direct	15248 Sep 18 11:18	21°♎07'12	
morning max el	15247 Oct 20 23:30	16°♎41'51	27°59'00	morning max el	15248 Oct 02 08:42	29°♎07'23	27°44'03
	15247 Oct 31 23:53	0°♎			15248 Oct 03 05:21	0°♎	
	15247 Nov 18 23:23	0°♎			15248 Oct 24 21:42	0°♎	
asc. node	15247 Nov 20 08:35	2°♎42'50		morning set	15248 Nov 06 04:06	22°♎32'53	
morning set	15247 Nov 23 09:46	8°♎54'00		asc. node	15248 Nov 06 05:23	22°♎39'16	
max. Earth dist.	15247 Nov 29 01:23	21°♎00'25	1.31387 AU		15248 Nov 09 19:18	0°♎	
				max. Earth dist.	15248 Nov 11 01:19	2°♎38'22	1.32272 AU
superior conj	15247 Nov 30 17:02	24°♎39'28	1°23'18				
minimum elong	15247 Nov 30 15:03	24°♎28'29	1°24'01	superior conj	15248 Nov 14 00:10	8°♎59'11	1°07'05
	15247 Dec 03 02:42	0°♎		minimum elong	15248 Nov 13 21:50	8°♎46'32	1°07'35
evening rise	15247 Dec 07 09:54	9°♎27'49		evening rise	15248 Nov 20 20:49	23°♎56'54	
	15247 Dec 17 18:37	0°♎			15248 Nov 23 17:27	0°♎	
desc. node	15247 Dec 22 19:55	8°♎17'52		desc. node	15248 Dec 08 16:53	25°♎44'10	
evening max el	15248 Jan 02 18:21	21°♎54'04	25°05'00		15248 Dec 12 06:29	0°♎	
retrograde	15248 Jan 16 13:47	28°♎49'30		evening max el	15248 Dec 14 04:10	1°♎57'03	23°24'19
evening set	15248 Jan 22 04:35	27°♎38'43		retrograde	15248 Dec 27 12:23	8°♎33'57	
min. Earth dist.	15248 Jan 27 06:29	24°♎55'05	0.56464 AU	evening set	15248 Dec 31 22:50	7°♎51'17	
inferior conj	15248 Jan 29 21:18	23°♎13'22	-4°58'34	min. Earth dist.	15249 Jan 07 14:47	4°♎42'13	0.55048 AU
minimum elong	15248 Jan 30 06:24	22°♎58'37	4°55'44	inferior conj	15249 Jan 09 02:51	3°♎49'45	-5°52'42
morning rise	15248 Feb 07 10:44	19°♎04'56		minimum elong	15249 Jan 09 07:20	3°♎43'14	5°51'27
direct	15248 Feb 09 14:22	18°♎51'46		morning rise	15249 Jan 17 17:21	29°♎57'37	
asc. node	15248 Feb 16 06:54	21°♎08'45			15249 Jan 17 13:02	30°♎	
morning max el	15248 Feb 19 02:01	23°♎28'26	19°18'05	direct	15249 Jan 20 10:47	29°♎39'40	
	15248 Feb 24 09:50	0°♎			15249 Jan 23 06:30	0°♎	
morning set	15248 Mar 06 23:03	20°♎46'32		morning max el	15249 Jan 31 12:30	4°♎59'37	20°32'58
	15248 Mar 11 13:58	0°♎		asc. node	15249 Feb 02 04:16	6°♎42'14	
					15249 Feb 16 14:21	0°♎	
superior conj	15248 Mar 15 04:21	7°♎04'01	0°38'37	morning set	15249 Feb 19 06:09	5°♎24'30	
minimum elong	15248 Mar 15 06:31	7°♎14'31	0°38'15				
desc. node	15248 Mar 19 21:24	15°♎59'32		superior conj	15249 Feb 26 18:54	20°♎57'07	1°03'08
max. Earth dist.	15248 Mar 21 20:43	19°♎36'07	1.38348 AU	minimum elong	15249 Feb 26 21:30	21°♎10'22	1°03'00
evening rise	15248 Mar 25 14:00	26°♎12'22			15249 Mar 03 08:08	0°♎	
	15248 Mar 27 18:58	0°♎		max. Earth dist.	15249 Mar 04 04:06	1°♎36'24	1.36137 AU
	15248 Apr 16 08:49	0°♎		desc. node	15249 Mar 06 17:57	6°♎29'03	
evening max el	15248 Apr 29 21:33	16°♎19'45	24°49'51	evening rise	15249 Mar 08 00:23	8°♎49'42	
retrograde	15248 May 11 16:42	23°♎12'46			15249 Mar 20 11:42	0°♎	
asc. node	15248 May 14 03:43	22°♎47'03			15249 Apr 12 06:25	0°♎	
evening set	15248 May 17 09:25	20°♎48'40		evening max el	15249 Apr 12 11:05	0°♎11'29	26°01'29
min. Earth dist.	15248 May 21 20:09	15°♎46'57	0.68365 AU	retrograde	15249 Apr 25 03:48	7°♎28'28	
inferior conj	15248 May 22 22:57	14°♎18'05	2°23'07	evening set	15249 May 01 07:10	4°♎57'41	
minimum elong	15248 May 22 20:51	14°♎25'04	2°21'42	asc. node	15249 May 01 00:58	5°♎10'19	
morning rise	15248 May 28 08:33	8°♎21'10		min. Earth dist.	15249 May 05 11:16	0°♎31'37	0.67317 AU
direct	15248 Jun 01 02:23	7°♎00'48			15249 May 05 21:28	30°♎	
morning max el	15248 Jun 08 08:30	11°♎01'07	19°34'04	inferior conj	15249 May 07 02:52	28°♎27'46	1°46'03
desc. node	15248 Jun 15 22:26	20°♎12'24		minimum elong	15249 May 07 00:46	28°♎34'20	1°44'38
greatest brilliancy	15248 Jun 21 00:37	27°♎27'21	-0.6m	morning rise	15249 May 12 19:07	22°♎41'10	
	15248 Jun 22 18:02	0°♎		direct	15249 May 16 02:03	21°♎39'35	
morning set	15248 Jul 03 23:03	16°♎58'26		morning max el	15249 May 22 17:10	25°♎12'46	18°42'02
	15248 Jul 12 09:01	0°♎			15249 May 26 21:22	0°♎	



































































































































desc. node	15249 Jun 02 19:25	9° $\Pi$ 48'39		morning set	15250 May 25 03:02	6° $\Pi$ 58'09	
morning set	15249 Jun 13 12:25	26° $\Pi$ 20'56			15250 Jun 08 13:39	0° $\mathfrak{C}$	
	15249 Jun 15 20:34	0° $\mathfrak{C}$					
max. Earth dist.	15249 Jun 28 14:11	19° $\mathfrak{C}$ 51'11	1.45850 AU	superior conj	15250 Jun 09 01:16	0° $\mathfrak{C}$ 45'35	-1°58'57
				minimum elong	15250 Jun 08 17:19	0° $\mathfrak{C}$ 14'22	1°59'21
superior conj	15249 Jun 29 15:33	21° $\mathfrak{C}$ 30'14	-2°13'30	max. Earth dist.	15250 Jun 11 10:37	4° $\mathfrak{C}$ 30'01	1.45876 AU
minimum elong	15249 Jun 29 13:49	21° $\mathfrak{C}$ 23'28	2°14'24	evening rise	15250 Jun 25 04:07	25° $\mathfrak{C}$ 48'04	
	15249 Jul 05 01:43	0° $\mathcal{O}$			15250 Jun 27 21:24	0° $\mathcal{O}$	
evening rise	15249 Jul 15 03:15	15° $\mathcal{O}$ 56'51		greatest brilliancy	15250 Jul 07 07:18	14° $\mathcal{O}$ 21'25	-0.7m
greatest brilliancy	15249 Jul 21 15:48	26° $\mathcal{O}$ 21'04	-0.9m	asc. node	15250 Jul 14 21:02	25° $\mathcal{O}$ 03'47	
	15249 Jul 23 23:21	0° $\mathfrak{P}$			15250 Jul 19 02:47	0° $\mathfrak{P}$	
asc. node	15249 Jul 28 00:16	6° $\mathfrak{P}$ 10'55		evening max el	15250 Jul 19 06:32	0° $\mathfrak{P}$ 09'22	19°16'40
evening max el	15249 Aug 04 21:20	16° $\mathfrak{P}$ 19'26	18°34'37	retrograde	15250 Jul 26 06:27	4° $\mathfrak{P}$ 02'04	
retrograde	15249 Aug 11 09:27	19° $\mathfrak{P}$ 49'51		evening set	15250 Jul 29 20:35	2° $\mathfrak{P}$ 47'21	
evening set	15249 Aug 14 13:57	18° $\mathfrak{P}$ 52'19			15250 Aug 01 19:53	30° $\mathfrak{R}$ $\mathcal{O}$	
inferior conj	15249 Aug 20 06:35	13° $\mathfrak{P}$ 15'35	2°28'35	inferior conj	15250 Aug 04 06:37	26° $\mathcal{O}$ 56'54	2°54'52
minimum elong	15249 Aug 20 08:49	13° $\mathfrak{P}$ 08'48	2°27'42	minimum elong	15250 Aug 04 08:09	26° $\mathcal{O}$ 51'52	2°54'03
min. Earth dist.	15249 Aug 22 06:50	10° $\mathfrak{P}$ 48'57	0.65551 AU	min. Earth dist.	15250 Aug 05 16:35	25° $\mathcal{O}$ 06'13	0.67133 AU
morning rise	15249 Aug 26 02:31	6° $\mathfrak{P}$ 51'28		morning rise	15250 Aug 09 19:07	20° $\mathcal{O}$ 31'02	
desc. node	15249 Aug 29 17:07	4° $\mathfrak{P}$ 42'15		direct	15250 Aug 15 19:37	17° $\mathcal{O}$ 55'16	
direct	15249 Sep 01 12:06	4° $\mathfrak{P}$ 13'10		desc. node	15250 Aug 16 14:34	17° $\mathcal{O}$ 57'40	
morning max el	15249 Sep 14 19:46	12° $\mathfrak{P}$ 04'10	26°56'54	morning max el	15250 Aug 28 06:53	25° $\mathcal{O}$ 21'51	25°46'07
	15249 Sep 29 04:39	0° $\mathfrak{L}$			15250 Sep 01 12:24	0° $\mathfrak{P}$	
	15249 Oct 17 11:36	0° $\mathfrak{M}$			15250 Sep 22 16:33	0° $\mathfrak{L}$	
morning set	15249 Oct 20 11:57	5° $\mathfrak{M}$ 40'45		morning set	15250 Oct 03 05:51	18° $\mathfrak{L}$ 10'00	
asc. node	15249 Oct 24 02:06	12° $\mathfrak{M}$ 43'42		max. Earth dist.	15250 Oct 06 21:18	24° $\mathfrak{L}$ 58'00	1.35649 AU
max. Earth dist.	15249 Oct 24 16:03	13° $\mathfrak{M}$ 53'55	1.33710 AU		15250 Oct 09 11:49	0° $\mathfrak{M}$	
				asc. node	15250 Oct 10 22:45	2° $\mathfrak{M}$ 52'19	
superior conj	15249 Oct 29 01:51	23° $\mathfrak{M}$ 00'12	0°44'54				
minimum elong	15249 Oct 28 23:47	22° $\mathfrak{M}$ 49'18	0°45'14	superior conj	15250 Oct 12 19:26	6° $\mathfrak{M}$ 36'09	0°17'03
	15249 Nov 01 08:53	0° $\mathfrak{N}$		minimum elong	15250 Oct 12 18:26	6° $\mathfrak{M}$ 31'07	0°17'19
evening rise	15249 Nov 05 06:59	8° $\mathfrak{N}$ 22'00		evening rise	15250 Oct 20 14:28	22° $\mathfrak{M}$ 38'34	
	15249 Nov 16 13:49	0° $\mathfrak{Z}$			15250 Oct 24 05:33	0° $\mathfrak{N}$	
evening max el	15249 Nov 25 16:45	11° $\mathfrak{Z}$ 58'09	21°43'19	evening max el	15250 Nov 07 16:45	22° $\mathfrak{N}$ 31'44	20°16'43
desc. node	15249 Nov 25 13:58	11° $\mathfrak{Z}$ 51'19		desc. node	15250 Nov 12 11:09	26° $\mathfrak{N}$ 14'24	
retrograde	15249 Dec 08 00:07	18° $\mathfrak{Z}$ 03'25		retrograde	15250 Nov 18 11:17	27° $\mathfrak{N}$ 53'32	
evening set	15249 Dec 11 02:55	17° $\mathfrak{Z}$ 41'32		evening set	15250 Nov 20 15:54	27° $\mathfrak{N}$ 41'14	
inferior conj	15249 Dec 19 19:22	13° $\mathfrak{Z}$ 50'15	-5°53'35	inferior conj	15250 Nov 29 12:25	23° $\mathfrak{N}$ 45'09	-4°54'37
minimum elong	15249 Dec 19 14:41	13° $\mathfrak{Z}$ 56'48	5°52'14	minimum elong	15250 Nov 29 02:27	23° $\mathfrak{N}$ 59'53	4°51'09
min. Earth dist.	15249 Dec 19 20:26	13° $\mathfrak{Z}$ 48'45	0.54436 AU	min. Earth dist.	15250 Dec 01 02:35	22° $\mathfrak{N}$ 48'47	0.54761 AU
morning rise	15249 Dec 28 03:08	10° $\mathfrak{Z}$ 02'15		morning rise	15250 Dec 07 12:23	19° $\mathfrak{N}$ 42'40	
direct	15249 Dec 31 19:40	9° $\mathfrak{Z}$ 32'28		direct	15250 Dec 12 05:28	18° $\mathfrak{N}$ 54'44	
morning max el	15250 Jan 13 08:13	15° $\mathfrak{Z}$ 35'30	22°09'23	morning max el	15250 Dec 25 18:13	25° $\mathfrak{N}$ 34'01	23°58'33
asc. node	15250 Jan 20 01:33	23° $\mathfrak{Z}$ 33'12			15250 Dec 29 21:29	0° $\mathfrak{Z}$	
	15250 Jan 24 05:53	0° $\approx$		asc. node	15251 Jan 06 22:48	11° $\mathfrak{Z}$ 23'50	
morning set	15250 Feb 03 16:42	20° $\approx$ 08'35			15251 Jan 16 21:17	0° $\approx$	
	15250 Feb 08 07:34	0° $\mathfrak{H}$		morning set	15251 Jan 19 04:37	4° $\approx$ 52'27	
superior conj	15250 Feb 10 18:30	5° $\mathfrak{H}$ 13'19	1°21'02	superior conj	15251 Jan 26 00:16	19° $\approx$ 44'00	1°32'27
minimum elong	15250 Feb 10 20:44	5° $\mathfrak{H}$ 25'10	1°21'16	minimum elong	15251 Jan 26 01:41	19° $\approx$ 51'42	1°33'02
max. Earth dist.	15250 Feb 14 17:30	13° $\mathfrak{H}$ 26'39	1.34205 AU	max. Earth dist.	15251 Jan 28 14:42	25° $\approx$ 20'56	1.32681 AU
evening rise	15250 Feb 19 01:50	22° $\mathfrak{H}$ 03'51			15251 Jan 30 19:33	0° $\mathfrak{H}$	
desc. node	15250 Feb 21 14:30	26° $\mathfrak{H}$ 51'09		evening rise	15251 Feb 02 14:55	5° $\mathfrak{H}$ 45'23	
	15250 Feb 23 07:35	0° $\mathfrak{Y}$		desc. node	15251 Feb 08 11:05	17° $\mathfrak{H}$ 00'44	
	15250 Mar 14 06:10	0° $\mathfrak{B}$			15251 Feb 15 22:59	0° $\mathfrak{Y}$	
evening max el	15250 Mar 26 00:59	13° $\mathfrak{B}$ 54'00	26°57'17	evening max el	15251 Mar 08 13:56	27° $\mathfrak{Y}$ 15'07	27°29'50
retrograde	15250 Apr 08 09:07	21° $\mathfrak{B}$ 22'24			15251 Mar 11 16:16	0° $\mathfrak{B}$	
evening set	15250 Apr 14 21:33	18° $\mathfrak{B}$ 50'33		retrograde	15251 Mar 22 07:39	4° $\mathfrak{B}$ 45'00	
asc. node	15250 Apr 17 22:18	15° $\mathfrak{B}$ 59'22		evening set	15251 Mar 29 02:18	2° $\mathfrak{B}$ 18'27	
min. Earth dist.	15250 Apr 18 20:27	14° $\mathfrak{B}$ 58'17	0.65847 AU		15251 Mar 31 19:54	30° $\mathfrak{R}$ $\mathfrak{Y}$	
inferior conj	15250 Apr 21 00:39	12° $\mathfrak{B}$ 27'33	0°57'01	min. Earth dist.	15251 Apr 01 21:35	28° $\mathfrak{Y}$ 56'52	0.64015 AU
minimum elong	15250 Apr 20 23:14	12° $\mathfrak{B}$ 31'40	0°55'56	inferior conj	15251 Apr 04 13:33	26° $\mathfrak{Y}$ 09'48	-0°04'53
morning rise	15250 Apr 27 02:19	6° $\mathfrak{B}$ 53'05		minimum elong	15251 Apr 04 13:43	26° $\mathfrak{Y}$ 09'24	0°05'08
direct	15250 Apr 29 23:23	6° $\mathfrak{B}$ 07'54		transit middle	15251 Apr 04 13:43	26° $\mathfrak{Y}$ 09'24	0°05'08
morning max el	15250 May 06 07:24	9° $\mathfrak{B}$ 26'28	18°06'46	transit begin	15251 Apr 04 10:45	26° $\mathfrak{Y}$ 17'09	
desc. node	15250 May 20 16:17	29° $\mathfrak{B}$ 47'19		transit end	15251 Apr 04 16:40	26° $\mathfrak{Y}$ 01'39	
	15250 May 20 19:27	0° $\mathfrak{I}$		asc. node	15251 Apr 04 19:42	25° $\mathfrak{Y}$ 53'44	

morning rise	15251 Apr 11 03:22	20° $\Upsilon$ 49'56		minimum elong	15252 Mar 17 17:11	9° $\Upsilon$ 20'04	1°18'35
direct	15251 Apr 13 15:45	20° $\Upsilon$ 18'08		asc. node	15252 Mar 21 17:07	5° $\Upsilon$ 59'12	
morning max el	15251 Apr 20 00:42	23° $\Upsilon$ 34'04	17°48'39	morning rise	15252 Mar 24 18:35	4° $\Upsilon$ 24'07	
	15251 Apr 25 05:54	0° $\mathcal{B}$		direct	15252 Mar 26 23:43	4° $\Upsilon$ 02'20	
morning set	15251 May 06 20:52	18° $\mathcal{B}$ 52'57		morning max el	15252 Apr 02 18:03	7° $\Upsilon$ 27'03	17°48'15
desc. node	15251 May 07 13:03	20° $\mathcal{B}$ 01'19			15252 Apr 17 12:16	0° $\mathcal{B}$	
	15251 May 13 11:48	0° $\Pi$		morning set	15252 Apr 18 13:13	1° $\mathcal{B}$ 50'40	
				desc. node	15252 Apr 23 09:45	10° $\mathcal{B}$ 25'58	
superior conj	15251 May 20 00:31	10° $\Pi$ 41'26	-1°28'37				
minimum elong	15251 May 19 16:17	10° $\Pi$ 08'12	1°28'32	superior conj	15252 Apr 29 22:28	21° $\mathcal{B}$ 40'57	-0°50'48
max. Earth dist.	15251 May 25 06:23	19° $\Pi$ 03'51	1.45156 AU	minimum elong	15252 Apr 29 17:43	21° $\mathcal{B}$ 20'51	0°50'46
	15251 Jun 01 06:28	0° $\mathcal{E}$			15252 May 04 22:34	0° $\Pi$	
evening rise	15251 Jun 04 15:38	5° $\mathcal{E}$ 11'54		max. Earth dist.	15252 May 06 22:40	3° $\Pi$ 15'35	1.43772 AU
	15251 Jun 21 07:45	0° $\Omega$		evening rise	15252 May 14 06:13	14° $\Pi$ 50'41	
asc. node	15251 Jul 01 17:53	13° $\Omega$ 20'11			15252 May 24 06:14	0° $\mathcal{E}$	
evening max el	15251 Jul 02 10:04	14° $\Omega$ 01'33	20°14'11	evening max el	15252 Jun 14 07:33	27° $\mathcal{E}$ 53'27	21°24'27
retrograde	15251 Jul 10 05:22	18° $\Omega$ 28'22			15252 Jun 16 14:35	0° $\Omega$	
evening set	15251 Jul 14 05:42	16° $\Omega$ 56'03		asc. node	15252 Jun 17 14:50	0° $\Omega$ 47'42	
inferior conj	15251 Jul 19 12:11	10° $\Omega$ 53'09	3°07'43	retrograde	15252 Jun 23 04:12	3° $\Omega$ 02'44	
minimum elong	15251 Jul 19 12:47	10° $\Omega$ 51'05	3°06'55	evening set	15252 Jun 27 15:19	1° $\Omega$ 13'24	
min. Earth dist.	15251 Jul 20 08:08	9° $\Omega$ 45'04	0.68258 AU		15252 Jun 28 22:33	30° $\mathcal{R}$ $\mathcal{E}$	
morning rise	15251 Jul 24 19:33	4° $\Omega$ 29'48		inferior conj	15252 Jul 02 20:56	24° $\mathcal{E}$ 59'37	3°08'53
direct	15251 Jul 30 08:47	2° $\Omega$ 04'01		minimum elong	15252 Jul 02 20:34	25° $\mathcal{E}$ 00'54	3°07'58
desc. node	15251 Aug 03 11:57	3° $\Omega$ 10'01		min. Earth dist.	15252 Jul 03 03:27	24° $\mathcal{E}$ 36'54	0.68907 AU
morning max el	15251 Aug 10 17:41	8° $\Omega$ 52'12	24°21'22	morning rise	15252 Jul 08 01:37	18° $\mathcal{E}$ 41'31	
	15251 Aug 27 09:24	0° $\mathcal{M}$		direct	15252 Jul 13 02:36	16° $\mathcal{E}$ 30'58	
morning set	15251 Sep 15 05:43	29° $\mathcal{M}$ 51'50		desc. node	15252 Jul 20 09:18	19° $\mathcal{E}$ 53'53	
	15251 Sep 15 07:36	0° $\mathcal{L}$		morning max el	15252 Jul 23 05:17	22° $\mathcal{E}$ 30'31	22°51'59
max. Earth dist.	15251 Sep 18 20:45	6° $\mathcal{L}$ 15'33	1.37931 AU		15252 Jul 29 18:12	0° $\Omega$	
					15252 Aug 19 16:41	0° $\mathcal{M}$	
superior conj	15251 Sep 26 01:37	19° $\mathcal{L}$ 39'28	-0°15'44	morning set	15252 Aug 26 07:18	10° $\mathcal{M}$ 35'48	
minimum elong	15251 Sep 26 02:40	19° $\mathcal{L}$ 44'32	0°15'19	max. Earth dist.	15252 Aug 30 19:59	18° $\mathcal{M}$ 10'36	1.40319 AU
behind sun begin	15251 Sep 26 00:29	19° $\mathcal{L}$ 34'04			15252 Sep 06 13:46	0° $\mathcal{L}$	
behind sun end	15251 Sep 26 04:51	19° $\mathcal{L}$ 55'01					
asc. node	15251 Sep 27 19:24	23° $\mathcal{L}$ 01'43		superior conj	15252 Sep 07 16:16	1° $\mathcal{L}$ 59'58	-0°51'36
	15251 Oct 01 08:19	0° $\mathcal{M}$		minimum elong	15252 Sep 07 20:14	2° $\mathcal{L}$ 18'03	0°51'00
evening rise	15251 Oct 04 16:53	6° $\mathcal{M}$ 41'00		asc. node	15252 Sep 13 16:00	13° $\mathcal{L}$ 07'46	
	15251 Oct 17 23:03	0° $\mathcal{J}$		evening rise	15252 Sep 17 11:04	20° $\mathcal{L}$ 20'35	
evening max el	15251 Oct 21 07:14	3° $\mathcal{J}$ 54'45	19°11'24		15252 Sep 22 14:41	0° $\mathcal{M}$	
retrograde	15251 Oct 30 11:04	8° $\mathcal{J}$ 30'53		evening max el	15252 Oct 03 09:49	16° $\mathcal{M}$ 05'09	18°28'16
desc. node	15251 Oct 30 08:27	8° $\mathcal{J}$ 30'50		retrograde	15252 Oct 11 05:34	20° $\mathcal{M}$ 03'04	
evening set	15251 Nov 01 08:06	8° $\mathcal{J}$ 20'06		evening set	15252 Oct 13 05:03	19° $\mathcal{M}$ 48'35	
inferior conj	15251 Nov 09 19:48	4° $\mathcal{J}$ 08'15	-3°17'06	desc. node	15252 Oct 16 05:49	18° $\mathcal{M}$ 35'34	
minimum elong	15251 Nov 09 11:40	4° $\mathcal{J}$ 21'57	3°13'20	inferior conj	15252 Oct 21 00:19	15° $\mathcal{M}$ 16'19	-1°31'47
min. Earth dist.	15251 Nov 12 12:44	2° $\mathcal{J}$ 19'18	0.55966 AU	minimum elong	15252 Oct 20 20:43	15° $\mathcal{M}$ 23'25	1°29'43
	15251 Nov 16 13:14	30° $\mathcal{R}$ $\mathcal{M}$		min. Earth dist.	15252 Oct 24 05:42	12° $\mathcal{M}$ 45'00	0.57834 AU
morning rise	15251 Nov 17 12:44	29° $\mathcal{M}$ 33'44		morning rise	15252 Oct 28 08:53	10° $\mathcal{M}$ 04'21	
direct	15251 Nov 23 02:18	28° $\mathcal{M}$ 22'26		direct	15252 Nov 03 13:48	8° $\mathcal{M}$ 26'00	
	15251 Nov 29 14:46	0° $\mathcal{J}$		morning max el	15252 Nov 17 20:36	15° $\mathcal{M}$ 58'51	27°04'39
morning max el	15251 Dec 07 04:10	5° $\mathcal{J}$ 31'26	25°43'15		15252 Nov 29 07:12	0° $\mathcal{J}$	
asc. node	15251 Dec 24 19:57	29° $\mathcal{J}$ 59'21		asc. node	15252 Dec 10 17:01	19° $\mathcal{J}$ 07'36	
	15251 Dec 24 20:06	0° $\mathcal{Z}$			15252 Dec 16 04:07	0° $\mathcal{Z}$	
morning set	15252 Jan 03 16:07	19° $\mathcal{Z}$ 31'09		morning set	15252 Dec 18 01:22	3° $\mathcal{Z}$ 59'05	
	15252 Jan 08 10:37	0° $\approx$					
superior conj	15252 Jan 10 09:53	4° $\approx$ 22'40	1°37'37	superior conj	15252 Dec 24 21:15	19° $\mathcal{Z}$ 02'43	1°36'45
minimum elong	15252 Jan 10 10:15	4° $\approx$ 24'45	1°38'27	minimum elong	15252 Dec 24 20:34	18° $\mathcal{Z}$ 58'56	1°37'39
max. Earth dist.	15252 Jan 11 18:27	7° $\approx$ 22'57	1.31637 AU	max. Earth dist.	15252 Dec 25 01:44	19° $\mathcal{Z}$ 27'52	1.31112 AU
evening rise	15252 Jan 17 12:47	19° $\approx$ 47'21			15252 Dec 29 19:47	0° $\approx$	
	15252 Jan 22 15:06	0° $\mathcal{H}$		evening rise	15252 Dec 31 16:53	4° $\approx$ 03'04	
desc. node	15252 Jan 26 07:46	6° $\mathcal{H}$ 52'18		desc. node	15253 Jan 12 04:31	26° $\approx$ 17'55	
	15252 Feb 10 04:39	0° $\Upsilon$			15253 Jan 14 09:14	0° $\mathcal{H}$	
evening max el	15252 Feb 18 23:49	10° $\Upsilon$ 02'01	27°32'38	evening max el	15253 Jan 31 04:08	22° $\mathcal{H}$ 02'54	27°01'15
retrograde	15252 Mar 03 22:30	17° $\Upsilon$ 26'53		retrograde	15253 Feb 14 04:32	29° $\mathcal{H}$ 18'24	
evening set	15252 Mar 10 18:50	15° $\Upsilon$ 12'59		evening set	15253 Feb 20 19:55	27° $\mathcal{H}$ 24'57	
min. Earth dist.	15252 Mar 14 13:07	12° $\Upsilon$ 16'23	0.61908 AU	min. Earth dist.	15253 Feb 24 18:23	24° $\mathcal{H}$ 44'04	0.59670 AU
inferior conj	15252 Mar 17 14:24	9° $\Upsilon$ 26'32	-1°19'39	inferior conj	15253 Feb 27 23:30	22° $\mathcal{H}$ 07'52	-2°44'59
				minimum elong	15253 Feb 28 05:41	21° $\mathcal{H}$ 55'19	2°42'26


































































































































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asc. node	15253 Mar 08 14:32	17° $\text{K}$ 15'37		evening set	15254 Feb 02 01:44	8° $\text{K}$ 47'46	
direct	15253 Mar 09 19:13	17° $\text{K}$ 10'07		min. Earth dist.	15254 Feb 06 13:52	6° $\text{K}$ 09'37	0.57535 AU
morning max el	15253 Mar 17 07:55	20° $\text{K}$ 54'57	18°06'42	inferior conj	15254 Feb 09 13:20	4° $\text{K}$ 04'12	-4°13'00
	15253 Mar 24 04:18	0° $\text{Y}$		minimum elong	15254 Feb 09 22:17	3° $\text{K}$ 48'27	4°09'46
morning set	15253 Apr 01 22:08	15° $\text{Y}$ 33'43			15254 Feb 16 20:06	30° $\text{R}$ $\approx$	
	15253 Apr 09 17:47	0° $\text{B}$		morning rise	15254 Feb 17 21:49	29° $\approx$ 43'13	
desc. node	15253 Apr 10 06:24	0° $\text{B}$ 57'00		direct	15254 Feb 19 22:02	29° $\approx$ 30'26	
					15254 Feb 22 21:24	0° $\text{K}$	
superior conj	15253 Apr 11 19:39	3° $\text{B}$ 43'54	-0°12'40	asc. node	15254 Feb 23 11:59	0° $\text{K}$ 13'28	
minimum elong	15253 Apr 11 18:36	3° $\text{B}$ 39'11	0°12'56	morning max el	15254 Feb 28 14:15	3° $\text{K}$ 45'55	18°45'38
behind sun begin	15253 Apr 11 14:02	3° $\text{B}$ 18'50		morning set	15254 Mar 16 18:32	29° $\text{K}$ 46'39	
behind sun end	15253 Apr 11 23:10	3° $\text{B}$ 59'31			15254 Mar 16 21:16	0° $\text{Y}$	
max. Earth dist.	15253 Apr 19 10:06	16° $\text{B}$ 51'58	1.41869 AU				
evening rise	15253 Apr 24 13:01	25° $\text{B}$ 16'15		superior conj	15254 Mar 25 12:19	16° $\text{Y}$ 38'59	0°21'34
	15253 Apr 27 12:21	0° $\text{II}$		minimum elong	15254 Mar 25 13:43	16° $\text{Y}$ 45'32	0°21'09
	15253 May 18 02:15	0° $\text{E}$		desc. node	15254 Mar 28 02:59	21° $\text{Y}$ 30'15	
evening max el	15253 May 28 00:21	11° $\text{E}$ 46'20	22°43'11	max. Earth dist.	15254 Apr 01 17:36	29° $\text{Y}$ 47'05	1.39661 AU
asc. node	15253 Jun 04 11:51	17° $\text{E}$ 11'20			15254 Apr 01 20:33	0° $\text{B}$	
retrograde	15253 Jun 07 01:16	17° $\text{E}$ 40'07		evening rise	15254 Apr 05 16:54	6° $\text{B}$ 37'15	
evening set	15253 Jun 11 23:42	15° $\text{E}$ 35'19			15254 Apr 20 13:15	0° $\text{II}$	
inferior conj	15253 Jun 17 06:50	9° $\text{E}$ 12'43	2°59'21	evening max el	15254 May 10 14:36	25° $\text{II}$ 40'37	24°04'37
minimum elong	15253 Jun 17 05:36	9° $\text{E}$ 17'02	2°58'15		15254 May 15 17:14	0° $\text{E}$	
min. Earth dist.	15253 Jun 17 00:22	9° $\text{E}$ 35'16	0.69074 AU	retrograde	15254 May 21 19:10	2° $\text{E}$ 14'09	
morning rise	15253 Jun 22 11:22	3° $\text{E}$ 01'42		asc. node	15254 May 22 08:57	2° $\text{E}$ 12'43	
direct	15253 Jun 26 23:59	1° $\text{E}$ 09'39		evening set	15254 May 27 05:15	29° $\text{II}$ 56'17	
morning max el	15253 Jul 05 20:20	6° $\text{E}$ 17'29	21°26'25		15254 May 27 03:31	30° $\text{R}$ $\text{II}$	
desc. node	15253 Jul 07 06:33	7° $\text{E}$ 46'33		min. Earth dist.	15254 May 31 20:37	24° $\text{II}$ 33'21	0.68761 AU
	15253 Jul 24 00:17	0° $\text{O}$		inferior conj	15254 Jun 01 15:57	23° $\text{II}$ 27'44	2°39'25
morning set	15253 Aug 06 08:43	20° $\text{O}$ 18'00		minimum elong	15254 Jun 01 14:04	23° $\text{II}$ 34'08	2°38'06
	15253 Aug 12 09:56	0° $\text{M}$		morning rise	15254 Jun 06 22:55	17° $\text{II}$ 25'14	
max. Earth dist.	15253 Aug 13 00:08	0° $\text{M}$ 58'03	1.42537 AU	direct	15254 Jun 10 23:30	15° $\text{II}$ 53'09	
				morning max el	15254 Jun 18 17:33	20° $\text{II}$ 14'46	20°11'05
superior conj	15253 Aug 20 11:03	13° $\text{M}$ 28'34	-1°27'05	desc. node	15254 Jun 24 03:42	26° $\text{II}$ 29'21	
minimum elong	15253 Aug 20 17:54	13° $\text{M}$ 58'02	1°26'34		15254 Jun 26 19:33	0° $\text{E}$	
	15253 Aug 29 19:17	0° $\text{A}$		morning set	15254 Jul 16 15:25	29° $\text{E}$ 13'42	
evening rise	15253 Aug 31 17:06	3° $\text{A}$ 27'27			15254 Jul 17 03:27	0° $\text{O}$	
asc. node	15253 Aug 31 12:37	3° $\text{A}$ 07'05		max. Earth dist.	15254 Jul 26 11:16	14° $\text{O}$ 36'14	1.44331 AU
evening max el	15253 Sep 16 20:21	28° $\text{A}$ 54'08	18°05'54				
	15253 Sep 18 01:05	0° $\text{M}$		superior conj	15254 Aug 01 06:31	23° $\text{O}$ 57'58	-1°56'34
retrograde	15253 Sep 23 18:12	2° $\text{M}$ 26'35		minimum elong	15254 Aug 01 13:54	24° $\text{O}$ 28'09	1°56'39
evening set	15253 Sep 26 00:32	2° $\text{M}$ 04'06			15254 Aug 04 22:19	0° $\text{M}$	
	15253 Sep 29 18:24	30° $\text{R}$ $\text{A}$		evening rise	15254 Aug 14 05:59	15° $\text{M}$ 48'39	
inferior conj	15253 Oct 03 02:04	27° $\text{A}$ 11'02	0°00'54	asc. node	15254 Aug 18 09:12	22° $\text{M}$ 54'57	
minimum elong	15253 Oct 03 02:07	27° $\text{A}$ 10'57	0°01'14		15254 Aug 22 14:33	0° $\text{A}$	
transit middle	15253 Oct 03 02:07	27° $\text{A}$ 10'57	0°01'14	evening max el	15254 Aug 31 10:36	12° $\text{A}$ 10'38	18°02'49
transit begin	15253 Oct 02 22:47	27° $\text{A}$ 18'33		retrograde	15254 Sep 06 21:08	15° $\text{A}$ 31'38	
transit end	15253 Oct 03 05:27	27° $\text{A}$ 03'20		evening set	15254 Sep 09 11:42	14° $\text{A}$ 57'32	
desc. node	15253 Oct 03 03:14	27° $\text{A}$ 08'24		inferior conj	15254 Sep 15 21:43	9° $\text{A}$ 45'33	1°13'39
min. Earth dist.	15253 Oct 06 07:16	24° $\text{A}$ 15'55	0.60064 AU	minimum elong	15254 Sep 15 23:38	9° $\text{A}$ 40'33	1°13'03
morning rise	15253 Oct 10 00:27	21° $\text{A}$ 26'56		min. Earth dist.	15254 Sep 18 18:24	6° $\text{A}$ 47'42	0.62351 AU
direct	15253 Oct 16 14:25	19° $\text{A}$ 22'50		desc. node	15254 Sep 20 00:41	5° $\text{A}$ 34'59	
morning max el	15253 Oct 30 20:54	27° $\text{A}$ 12'23	27°50'21	morning rise	15254 Sep 22 09:09	3° $\text{A}$ 38'39	
	15253 Nov 02 13:07	0° $\text{M}$		direct	15254 Sep 29 01:34	1° $\text{A}$ 14'50	
	15253 Nov 22 23:32	0° $\text{X}$		morning max el	15254 Oct 13 03:29	9° $\text{A}$ 13'09	27°56'57
asc. node	15253 Nov 27 14:00	8° $\text{X}$ 39'58			15254 Oct 29 06:52	0° $\text{M}$	
morning set	15253 Dec 02 06:32	18° $\text{X}$ 11'59		asc. node	15254 Nov 14 10:52	28° $\text{M}$ 29'20	
	15253 Dec 07 17:07	0° $\text{B}$			15254 Nov 15 04:56	0° $\text{X}$	
max. Earth dist.	15253 Dec 08 09:09	1° $\text{B}$ 29'08	1.31130 AU	morning set	15254 Nov 16 05:31	2° $\text{X}$ 04'50	
				max. Earth dist.	15254 Nov 21 12:58	13° $\text{X}$ 18'16	1.31698 AU
superior conj	15253 Dec 09 08:28	3° $\text{B}$ 39'07	1°29'55				
minimum elong	15253 Dec 09 06:53	3° $\text{B}$ 30'15	1°30'45	superior conj	15254 Nov 23 17:41	18° $\text{X}$ 06'37	1°17'09
evening rise	15253 Dec 16 01:07	18° $\text{B}$ 27'51		minimum elong	15254 Nov 23 15:30	17° $\text{X}$ 54'34	1°17'47
	15253 Dec 21 14:50	0° $\text{A}$			15254 Nov 29 03:02	0° $\text{B}$	
desc. node	15253 Dec 30 01:20	15° $\text{A}$ $\approx$ 08'08		evening rise	15254 Nov 30 11:35	2° $\text{B}$ 57'02	
	15254 Jan 09 22:20	0° $\text{K}$			15254 Dec 14 19:22	0° $\text{A}$	
evening max el	15254 Jan 13 00:45	3° $\text{K}$ 11'44	25°55'39	desc. node	15254 Dec 16 22:15	3° $\text{A}$ $\approx$ 10'09	

evening max el	15254 Dec 25 13:27	13° $\approx$ 33'19	24°23'27	evening set	15255 Dec 23 19:12	29° $\approx$ 22'45	
retrograde	15255 Jan 08 05:06	20° $\approx$ 21'07		min. Earth dist.	15255 Dec 31 07:32	25° $\approx$ 57'23	0.54678 AU
evening set	15255 Jan 13 08:58	19° $\approx$ 22'49		inferior conj	15256 Jan 01 04:46	25° $\approx$ 27'22	-6°00'37
min. Earth dist.	15255 Jan 19 01:11	16° $\approx$ 30'51	0.55778 AU	minimum elong	15256 Jan 01 05:30	25° $\approx$ 26'20	5°59'43
inferior conj	15255 Jan 21 06:09	15° $\approx$ 09'32	-5°26'38	morning rise	15256 Jan 09 17:05	21° $\approx$ 39'26	
minimum elong	15255 Jan 21 14:07	14° $\approx$ 57'17	5°24'26	direct	15256 Jan 12 19:41	21° $\approx$ 17'21	
morning rise	15255 Jan 29 21:12	11° $\approx$ 08'46		morning max el	15256 Jan 24 12:55	26° $\approx$ 55'26	21°11'45
direct	15255 Feb 01 05:35	10° $\approx$ 54'11			15256 Jan 27 09:57	0° $\approx$	
asc. node	15255 Feb 10 09:22	14° $\approx$ 54'21		asc. node	15256 Jan 28 06:43	1° $\approx$ 02'57	
morning max el	15255 Feb 11 08:55	15° $\approx$ 48'45	19°47'06	morning set	15256 Feb 13 07:27	29° $\approx$ 00'06	
	15255 Feb 21 12:11	0° $\approx$			15256 Feb 13 18:56	0° $\approx$	
morning set	15255 Feb 28 22:37	14° $\approx$ 18'37					
				superior conj	15256 Feb 20 14:52	14° $\approx$ 18'33	1°11'33
superior conj	15255 Mar 08 20:05	0° $\approx$ 14'31	0°49'50	minimum elong	15256 Feb 20 17:24	14° $\approx$ 31'38	1°11'33
minimum elong	15255 Mar 08 22:33	0° $\approx$ 26'46	0°49'32	max. Earth dist.	15256 Feb 25 09:51	23° $\approx$ 59'39	1.35270 AU
	15255 Mar 08 17:09	0° $\approx$			15256 Feb 28 12:22	0° $\approx$	
desc. node	15255 Mar 14 23:32	12° $\approx$ 02'26		evening rise	15256 Feb 29 10:14	1° $\approx$ 43'05	
max. Earth dist.	15255 Mar 15 00:10	12° $\approx$ 05'21	1.37386 AU	desc. node	15256 Feb 29 20:05	2° $\approx$ 29'10	
evening rise	15255 Mar 18 17:03	18° $\approx$ 49'27			15256 Mar 17 06:29	0° $\approx$	
	15255 Mar 25 05:31	0° $\approx$		evening max el	15256 Apr 04 17:45	23° $\approx$ 23'02	26°27'32
	15255 Apr 14 17:44	0° $\approx$			15256 Apr 13 22:49	0° $\approx$	
evening max el	15255 Apr 23 04:08	9° $\approx$ 13'45	25°21'48	retrograde	15256 Apr 17 17:31	0° $\approx$ 46'11	
retrograde	15255 May 05 08:52	16° $\approx$ 13'46			15256 Apr 21 06:07	30° $\approx$ 18'55	
asc. node	15255 May 09 06:09	15° $\approx$ 13'57		evening set	15256 Apr 24 01:11	28° $\approx$ 13'55	
evening set	15255 May 11 06:20	14° $\approx$ 11'17		asc. node	15256 Apr 25 03:26	27° $\approx$ 16'06	
min. Earth dist.	15255 May 15 14:07	9° $\approx$ 12'50	0.67979 AU	min. Earth dist.	15256 Apr 28 02:48	24° $\approx$ 02'52	0.66743 AU
inferior conj	15255 May 16 22:21	7° $\approx$ 40'38	2°08'48	inferior conj	15256 Apr 29 23:55	21° $\approx$ 46'16	1°26'45
minimum elong	15255 May 16 20:10	7° $\approx$ 47'40	2°07'22	minimum elong	15256 Apr 29 22:00	21° $\approx$ 52'03	1°25'26
morning rise	15255 May 22 10:25	1° $\approx$ 47'58		morning rise	15256 May 05 19:51	16° $\approx$ 04'53	
direct	15255 May 25 23:37	0° $\approx$ 35'38		direct	15256 May 08 22:28	15° $\approx$ 10'39	
morning max el	15255 Jun 01 22:12	4° $\approx$ 22'24	19°09'58	morning max el	15256 May 15 09:33	18° $\approx$ 35'51	18°25'02
desc. node	15255 Jun 11 00:44	15° $\approx$ 14'01			15256 May 24 05:41	0° $\approx$	
greatest brilliancy	15255 Jun 14 19:10	21° $\approx$ 12'05	-0.7m	desc. node	15256 May 27 21:40	5° $\approx$ 13'25	
	15255 Jun 20 12:38	0° $\approx$		morning set	15256 Jun 04 19:29	18° $\approx$ 12'07	
morning set	15255 Jun 25 20:26	8° $\approx$ 10'35			15256 Jun 12 09:40	0° $\approx$	
max. Earth dist.	15255 Jul 09 04:09	28° $\approx$ 51'36	1.45505 AU				
	15255 Jul 09 21:35	0° $\approx$		superior conj	15256 Jun 20 13:02	12° $\approx$ 43'39	-2°09'41
				minimum elong	15256 Jun 20 08:05	12° $\approx$ 24'22	2°10'27
superior conj	15255 Jul 12 03:52	3° $\approx$ 13'37	-2°12'45	max. Earth dist.	15256 Jun 20 23:58	13° $\approx$ 26'15	1.45949 AU
minimum elong	15255 Jul 12 06:40	3° $\approx$ 44'40	2°13'32		15256 Jul 01 14:34	0° $\approx$	
evening rise	15255 Jul 26 20:40	27° $\approx$ 12'33		evening rise	15256 Jul 06 10:27	7° $\approx$ 13'42	
	15255 Jul 28 13:34	0° $\approx$		greatest brilliancy	15256 Jul 15 16:15	22° $\approx$ 01'41	-0.8m
asc. node	15255 Aug 05 05:49	12° $\approx$ 26'37			15256 Jul 20 23:35	0° $\approx$	
evening max el	15255 Aug 15 01:01	25° $\approx$ 45'34	18°17'54	asc. node	15256 Jul 22 02:32	1° $\approx$ 36'10	
retrograde	15255 Aug 21 10:00	29° $\approx$ 08'54		evening max el	15256 Jul 28 12:44	9° $\approx$ 31'52	18°50'27
evening set	15255 Aug 24 09:17	28° $\approx$ 20'27		retrograde	15256 Aug 04 05:00	13° $\approx$ 10'36	
inferior conj	15255 Aug 30 07:12	22° $\approx$ 51'53	2°06'21	evening set	15256 Aug 07 13:28	12° $\approx$ 05'55	
minimum elong	15255 Aug 30 09:35	22° $\approx$ 44'59	2°05'30	inferior conj	15256 Aug 13 02:53	6° $\approx$ 22'58	2°41'30
min. Earth dist.	15255 Sep 01 15:18	20° $\approx$ 09'50	0.64471 AU	minimum elong	15256 Aug 13 04:52	6° $\approx$ 16'43	2°40'39
morning rise	15255 Sep 05 08:21	16° $\approx$ 31'39		min. Earth dist.	15256 Aug 14 21:00	4° $\approx$ 10'34	0.66269 AU
desc. node	15255 Sep 06 22:09	15° $\approx$ 25'11		morning rise	15256 Aug 18 19:22	29° $\approx$ 12'57	
direct	15255 Sep 11 21:33	13° $\approx$ 56'18			15256 Aug 18 18:03	30° $\approx$ 18'01	
morning max el	15255 Sep 25 13:50	21° $\approx$ 53'33	27°27'29	desc. node	15256 Aug 23 19:37	27° $\approx$ 12'45	
	15255 Oct 02 16:28	0° $\approx$		direct	15256 Aug 25 01:15	27° $\approx$ 19'09	
	15255 Oct 22 11:41	0° $\approx$			15256 Sep 01 04:57	0° $\approx$	
morning set	15255 Oct 30 19:45	15° $\approx$ 31'15		morning max el	15256 Sep 07 01:24	5° $\approx$ 02'10	26°29'11
asc. node	15255 Nov 01 07:37	18° $\approx$ 12'42			15256 Sep 26 04:58	0° $\approx$	
max. Earth dist.	15255 Nov 04 09:32	24° $\approx$ 14'49	1.32823 AU	morning set	15256 Oct 12 22:13	28° $\approx$ 12'46	
	15255 Nov 06 20:48	0° $\approx$			15256 Oct 13 18:21	0° $\approx$	
				max. Earth dist.	15256 Oct 16 20:22	5° $\approx$ 15'17	1.34481 AU
superior conj	15255 Nov 07 22:47	2° $\approx$ 18'57	0°58'24	asc. node	15256 Oct 18 04:19	8° $\approx$ 13'54	
minimum elong	15255 Nov 07 20:28	2° $\approx$ 06'35	0°58'48				
evening rise	15255 Nov 14 22:26	17° $\approx$ 25'13		superior conj	15256 Oct 21 21:25	16° $\approx$ 10'42	0°33'46
	15255 Nov 21 01:38	0° $\approx$		minimum elong	15256 Oct 21 19:41	16° $\approx$ 01'45	0°34'02
desc. node	15255 Dec 03 19:16	20° $\approx$ 05'38			15256 Oct 28 11:13	0° $\approx$	
evening max el	15255 Dec 06 23:05	23° $\approx$ 30'09	22°40'17	evening rise	15256 Oct 29 07:47	1° $\approx$ 48'01	
retrograde	15255 Dec 19 22:12	29° $\approx$ 55'33			15256 Nov 14 08:30	0° $\approx$	

evening max el	15256 Nov 17 15:36	3°  41'38"	21°04'03"	evening rise	15257 Oct 13 13:26	15°  59'25"	
desc. node	15256 Nov 19 16:24	5°  32'07"			15257 Oct 20 18:09	0° 	
retrograde	15256 Nov 29 08:38	9°  30'07"		evening max el	15257 Oct 30 21:53	14°  36'11"	19°46'12"
evening set	15256 Dec 02 00:00	9°  13'39"		desc. node	15257 Nov 06 13:37	19°  03'51"	
inferior conj	15256 Dec 10 19:42	5°  32'138"	-5°35'11"	retrograde	15257 Nov 09 23:41	19°  37'50"	
minimum elong	15256 Dec 10 11:52	5°  32'45"	5°32'57"	evening set	15257 Nov 11 23:17	19°  27'03"	
min. Earth dist.	15256 Dec 11 13:07	4°  56'55"	0.54458 AU	inferior conj	15257 Nov 20 17:32	15°  25'40"	-4°16'04"
morning rise	15256 Dec 18 24:00	1°  32'48"		minimum elong	15257 Nov 20 07:40	15°  40'59"	4°12'07"
direct	15256 Dec 23 02:54	0°  53'14"		min. Earth dist.	15257 Nov 22 20:59	14°  05'55"	0.55179 AU
morning max el	15257 Jan 05 03:43	7°  12'52"	22°55'08"	morning rise	15257 Nov 28 14:29	11°  10'46"	
asc. node	15257 Jan 14 04:01	18°  21'23"		direct	15257 Dec 03 16:58	10°  13'12"	
	15257 Jan 20 23:49	0° 		morning max el	15257 Dec 17 12:34	17°  06'38"	24°44'41"
morning set	15257 Jan 27 18:49	13°  44'44"			15257 Dec 27 23:17	0° 	
				asc. node	15258 Jan 01 01:14	6°  32'51"	
superior conj	15257 Feb 03 17:27	28°  42'04"	1°26'39"	morning set	15258 Jan 12 06:47	28°  27'04"	
minimum elong	15257 Feb 03 19:23	28°  52'25"	1°27'02"		15258 Jan 13 00:00	0° 	
	15257 Feb 04 08:02	0° 					
max. Earth dist.	15257 Feb 07 02:16	5°  49'08"	1.33498 AU	superior conj	15258 Jan 19 01:10	13°  17'19"	1°35'23"
evening rise	15257 Feb 11 17:01	15°  09'43"		minimum elong	15258 Jan 19 02:09	13°  22'45"	1°36'05"
desc. node	15257 Feb 15 16:40	22°  46'28"		max. Earth dist.	15258 Jan 21 02:20	17°  45'59"	1.32174 AU
	15257 Feb 19 16:59	0° 		evening rise	15258 Jan 26 10:13	29°  01'18"	
	15257 Mar 11 22:27	0° 			15258 Jan 26 21:45	0° 	
evening max el	15257 Mar 18 07:11	6°  56'53"	27°14'21"	desc. node	15258 Feb 02 13:19	12°  49'28"	
retrograde	15257 Mar 31 20:14	14°  27'52"			15258 Feb 12 20:02	0° 	
evening set	15257 Apr 07 11:46	11°  57'07"		evening max el	15258 Feb 28 19:13	20°  05'45"	27°35'06"
min. Earth dist.	15257 Apr 11 08:46	8°  18'33"	0.65103 AU	retrograde	15258 Mar 14 15:57	27°  34'37"	
asc. node	15257 Apr 12 00:48	7°  34'43"		evening set	15258 Mar 21 11:44	25°  12'44"	
inferior conj	15257 Apr 13 18:15	5°  39'03"	0°32'20"	min. Earth dist.	15258 Mar 25 06:12	22°  02'23"	0.63136 AU
minimum elong	15257 Apr 13 17:22	5°  41'30"	0°31'32"	inferior conj	15258 Mar 28 02:30	19°  09'12'15"	-0°35'04"
morning rise	15257 Apr 20 00:48	0°  10'43"		minimum elong	15258 Mar 28 03:39	19°  09'23"	0°34'50"
	15257 Apr 20 10:33	30°  08'00"		asc. node	15258 Mar 29 22:13	17°  09'25'59"	
direct	15257 Apr 22 17:54	29°  09'31'48"		morning rise	15258 Apr 03 22:12	13°  09'59'19"	
	15257 Apr 25 01:35	0° 		direct	15258 Apr 06 07:10	13°  32'17"	
morning max el	15257 Apr 29 01:28	2°  48'02"	17°56'57"	morning max el	15258 Apr 12 19:13	16°  50'59"	17°46'14"
desc. node	15257 May 14 18:31	25°  41'06"			15258 Apr 22 06:31	0° 	
morning set	15257 May 16 21:53	29°  12'38"		morning set	15258 Apr 29 02:08	11°  37'06"	
	15257 May 17 09:24	0° 		desc. node	15258 May 01 15:16	16°  00'35"	
					15258 May 09 21:51	0° 	
superior conj	15257 May 31 02:46	22°  11'53"	-1°47'32"	superior conj	15258 May 11 11:11	2°  13'40'02"	-1°13'01"
minimum elong	15257 May 30 17:59	21°  37'04"	1°47'41"	minimum elong	15258 May 11 04:13	2°  05'21"	1°12'53"
max. Earth dist.	15257 Jun 03 19:52	28°  02'47"	1.45646 AU	max. Earth dist.	15258 May 17 14:04	12°  28'10"	1.44637 AU
	15257 Jun 05 01:50	0° 		evening rise	15258 May 26 14:33	26°  13'33'56"	
evening rise	15257 Jun 16 03:43	17°  08'20"			15258 May 28 20:28	0° 	
	15257 Jun 24 14:20	0° 			15258 Jun 18 15:13	0° 	
greatest brilliancy	15257 Jun 30 02:37	8°  12'16"	-0.6m	evening max el	15258 Jun 24 20:37	7°  15'53"	20°42'49"
asc. node	15257 Jul 08 23:19	20°  14'57"		asc. node	15258 Jun 25 20:13	8°  12'41"	
evening max el	15257 Jul 11 19:36	23°  23'00"	19°39'26"	retrograde	15258 Jul 03 02:08	11°  12'59'49"	
retrograde	15257 Jul 19 03:09	27°  29'21"		evening set	15258 Jul 07 06:58	10°  20'19"	
evening set	15257 Jul 22 21:25	26°  07'21"		inferior conj	15258 Jul 12 12:47	4°  12'52"	3°09'34"
inferior conj	15257 Jul 28 05:36	20°  11'31"	3°01'51"	minimum elong	15258 Jul 12 12:59	4°  12'13"	3°08'43"
minimum elong	15257 Jul 28 06:45	20°  07'38"	3°01'03"	min. Earth dist.	15258 Jul 13 03:03	3°  23'37"	0.68594 AU
min. Earth dist.	15257 Jul 29 09:36	18°  38'06"	0.67661 AU		15258 Jul 15 17:31	30°  08'00"	
morning rise	15257 Aug 02 15:35	13°  46'04"		morning rise	15258 Jul 17 18:42	27°  05'51'28"	
direct	15257 Aug 08 11:28	11°  13'32"		direct	15258 Jul 23 02:55	25°  03'12'20"	
desc. node	15257 Aug 10 17:03	11°  13'25'50"		desc. node	15258 Jul 28 14:25	27°  03'27'14"	
morning max el	15257 Aug 20 12:22	18°  26'17"	25°11'13"		15258 Jul 31 20:54	0° 	
	15257 Aug 30 06:41	0° 		morning max el	15258 Aug 02 23:01	1°  25'59'34"	23°43'20"
	15257 Sep 19 05:57	0° 			15258 Aug 24 06:30	0° 	
morning set	15257 Sep 25 09:01	10°  23'35'39"		morning set	15258 Sep 06 23:50	21°  08'53'51"	
max. Earth dist.	15257 Sep 28 22:07	17°  03'07"	1.36587 AU	max. Earth dist.	15258 Sep 10 20:24	28°  08'32'42"	1.38953 AU
					15258 Sep 11 16:14	0° 	
superior conj	15257 Oct 05 10:36	29°  23'43'03"	0°03'41"	superior conj	15258 Sep 18 10:44	12°  20'48"	-0°30'43"
minimum elong	15257 Oct 05 10:21	29°  32'50"	0°04'00"	minimum elong	15258 Sep 18 12:57	12°  21'31'12"	0°30'13"
behind sun begin	15257 Oct 05 04:06	29°  01'54"		asc. node	15258 Sep 21 21:36	18°  25'55'10"	
behind sun end	15257 Oct 05 16:36	0° 		evening rise	15258 Sep 27 12:44	29°  25'53'08"	
asc. node	15257 Oct 05 00:58	28°  46'30"					
	15257 Oct 05 15:50	0° 					

	15258 Sep 27 14:09	0°♌		asc. node	15259 Sep 08 18:13	8°♊59'13	
evening max el	15258 Oct 13 18:04	26°♌20'49	18°50'24	evening rise	15259 Sep 11 02:17	13°♊20'28	
	15258 Oct 18 22:59	0°♏			15259 Sep 20 10:11	0°♌	
retrograde	15258 Oct 22 06:49	0°♏38'48		evening max el	15259 Sep 27 00:33	8°♌49'08	18°16'18
evening set	15258 Oct 24 04:16	0°♏26'54		retrograde	15259 Oct 04 09:35	12°♌34'41	
desc. node	15258 Oct 24 10:56	0°♏23'13		evening set	15259 Oct 06 11:46	12°♌17'12	
	15258 Oct 25 18:01	30°♋♌		desc. node	15259 Oct 11 08:18	9°♌41'47	
inferior conj	15258 Nov 01 09:29	26°♌06'42	-2°31'47	inferior conj	15259 Oct 13 23:20	7°♌35'33	-0°50'16
minimum elong	15258 Nov 01 03:13	26°♌17'57	2°28'37	minimum elong	15259 Oct 13 21:29	7°♌39'26	0°49'02
min. Earth dist.	15258 Nov 04 09:34	23°♌57'59	0.56705 AU	min. Earth dist.	15259 Oct 17 05:44	4°♌51'56	0.58756 AU
morning rise	15258 Nov 08 23:10	21°♌16'34		morning rise	15259 Oct 21 03:45	2°♌09'03	
direct	15258 Nov 14 20:17	19°♌53'45		direct	15259 Oct 27 13:13	0°♌19'42	
morning max el	15258 Nov 29 00:31	27°♌13'03	26°21'34	morning max el	15259 Nov 10 20:24	7°♌59'45	27°28'57
	15258 Dec 01 17:22	0°♏			15259 Nov 27 12:18	0°♏	
asc. node	15258 Dec 18 22:21	25°♏23'52		asc. node	15259 Dec 05 19:22	14°♏44'02	
	15258 Dec 21 08:56	0°♐		morning set	15259 Dec 12 01:19	27°♏24'48	
morning set	15258 Dec 27 17:32	13°♐01'50			15259 Dec 13 06:17	0°♐	
superior conj	15259 Jan 03 11:45	27°♐57'25	1°37'58	superior conj	15259 Dec 18 23:17	12°♐37'07	1°34'35
minimum elong	15259 Jan 03 11:40	27°♐56'59	1°38'51	minimum elong	15259 Dec 18 22:11	12°♐31'01	1°35'28
	15259 Jan 04 09:45	0°♑		max. Earth dist.	15259 Dec 18 16:10	11°♐57'17	1.31058 AU
max. Earth dist.	15259 Jan 04 08:06	29°♐50'50	1.31354 AU	evening rise	15259 Dec 25 17:10	27°♐31'19	
evening rise	15259 Jan 10 11:02	13°♑10'20			15259 Dec 26 21:05	0°♑	
	15259 Jan 19 00:19	0°♒		desc. node	15260 Jan 07 06:47	21°♑44'02	
desc. node	15259 Jan 20 10:01	2°♒31'21			15260 Jan 12 12:31	0°♒	
	15259 Feb 08 13:49	0°♑		evening max el	15260 Jan 24 04:37	14°♒15'11	26°37'12
evening max el	15259 Feb 11 03:20	2°♑35'37	27°23'42	retrograde	15260 Feb 07 04:12	21°♒25'01	
retrograde	15259 Feb 25 03:04	9°♑56'05		evening set	15260 Feb 13 15:26	19°♒42'08	
evening set	15259 Mar 03 22:06	7°♑50'23		min. Earth dist.	15260 Feb 17 18:15	17°♒04'30	0.58745 AU
min. Earth dist.	15259 Mar 07 17:32	5°♑01'37	0.60960 AU	inferior conj	15260 Feb 20 22:26	14°♒39'30	-3°22'43
inferior conj	15259 Mar 10 21:09	2°♑15'49	-1°54'51	minimum elong	15260 Feb 21 06:01	14°♒25'02	3°19'41
minimum elong	15259 Mar 11 01:20	2°♑06'37	1°53'07	morning rise	15260 Feb 28 23:55	10°♒06'15	
	15259 Mar 13 13:54	30°♋♒		direct	15260 Mar 01 23:37	9°♒52'19	
asc. node	15259 Mar 16 19:40	27°♒56'02		asc. node	15260 Mar 02 17:04	9°♒54'15	
morning rise	15259 Mar 18 07:48	27°♒21'16		morning max el	15260 Mar 09 22:38	13°♒48'26	18°20'36
direct	15259 Mar 20 10:33	27°♒02'34			15260 Mar 20 22:12	0°♑	
	15259 Mar 26 20:47	0°♑		morning set	15260 Mar 25 16:34	8°♑54'18	
morning max el	15259 Mar 27 11:29	0°♑34'34	17°53'40				
morning set	15259 Apr 12 02:15	24°♑56'40		superior conj	15260 Apr 04 01:19	26°♑28'19	0°02'31
	15259 Apr 14 21:14	0°♒		minimum elong	15260 Apr 04 01:28	26°♑29'01	0°02'09
desc. node	15259 Apr 18 11:56	6°♒28'37		behind sun begin	15260 Apr 03 18:11	25°♑55'49	
				behind sun end	15260 Apr 04 08:44	27°♑02'08	
superior conj	15259 Apr 22 19:16	14°♒01'16	-0°34'21	desc. node	15260 Apr 04 08:35	27°♑01'28	
minimum elong	15259 Apr 22 16:11	13°♒47'57	0°34'26		15260 Apr 06 00:08	0°♒	
max. Earth dist.	15259 Apr 30 04:48	26°♒27'58	1.43019 AU	max. Earth dist.	15260 Apr 11 14:44	9°♒48'42	1.40960 AU
	15259 May 02 08:56	0°♓		evening rise	15260 Apr 16 02:32	17°♒19'29	
evening rise	15259 May 06 10:58	6°♓30'37			15260 Apr 24 02:10	0°♓	
	15259 May 22 02:17	0°♈			15260 Apr 25 17:14	0°♈	
evening max el	15259 Jun 07 16:00	21°♈08'26	21°57'15	evening max el	15260 May 20 07:18	5°♈01'17	23°17'49
asc. node	15259 Jun 12 17:12	25°♈15'13		asc. node	15260 May 29 14:15	11°♈06'03	
retrograde	15259 Jun 17 00:15	26°♈36'08		retrograde	15260 May 30 20:05	11°♈12'50	
evening set	15259 Jun 21 16:14	24°♈39'53		evening set	15260 Jun 04 23:36	9°♈01'49	
inferior conj	15259 Jun 26 22:15	18°♈22'15	3°06'05	inferior conj	15260 Jun 10 08:00	2°♈36'12	2°52'08
minimum elong	15259 Jun 26 21:29	18°♈24'54	3°05'06	minimum elong	15260 Jun 10 06:27	2°♈41'33	2°50'57
min. Earth dist.	15259 Jun 26 23:11	18°♈18'59	0.69043 AU	min. Earth dist.	15260 Jun 09 19:57	3°♈17'48	0.69002 AU
morning rise	15259 Jul 02 02:34	12°♈07'14			15260 Jun 12 06:24	30°♋♓	
direct	15259 Jul 06 22:21	10°♈04'13		morning rise	15260 Jun 15 13:16	26°♓28'54	
desc. node	15259 Jul 15 11:43	14°♈42'43		direct	15260 Jun 19 20:39	24°♓45'30	
morning max el	15259 Jul 16 11:39	15°♈40'57	22°14'43	morning max el	15260 Jun 28 05:09	29°♓32'23	20°52'50
	15259 Jul 28 03:51	0°♎			15260 Jun 28 16:06	0°♈	
	15259 Aug 17 06:23	0°♏		desc. node	15260 Jul 01 08:56	2°♈58'29	
morning set	15259 Aug 18 15:02	2°♏10'58			15260 Jul 20 18:48	0°♎	
max. Earth dist.	15259 Aug 23 21:46	10°♏51'24	1.41302 AU	morning set	15260 Jul 28 07:07	11°♎29'33	
				max. Earth dist.	15260 Aug 05 05:05	24°♎02'11	1.43360 AU
superior conj	15259 Aug 31 17:28	24°♏20'38	-1°06'58		15260 Aug 08 20:44	0°♏	
minimum elong	15259 Aug 31 22:46	24°♏44'10	1°06'21				
	15259 Sep 03 21:02	0°♏		superior conj	15260 Aug 12 02:27	5°♏23'36	-1°40'45

minimum elong	15260 Aug 12 10:01	5° $\mathbb{M}$ 55'24	1°40'26	minimum elong	15261 Jul 23 18:05	15° $\Omega$ 53'19	2°05'55
evening rise	15260 Aug 24 01:39	26° $\mathbb{M}$ 09'30			15261 Aug 01 09:10	0° $\mathbb{M}$	
asc. node	15260 Aug 25 14:48	28° $\mathbb{M}$ 54'10		evening rise	15261 Aug 06 05:42	8° $\mathbb{M}$ 08'00	
	15260 Aug 26 05:40	0° $\underline{\mathbf{A}}$		asc. node	15261 Aug 12 11:24	18° $\mathbb{M}$ 36'10	
evening max el	15260 Sep 09 13:01	21° $\underline{\mathbf{A}}$ 50'24	18°02'19		15261 Aug 19 19:10	0° $\underline{\mathbf{A}}$	
retrograde	15260 Sep 16 05:01	25° $\underline{\mathbf{A}}$ 16'46		evening max el	15261 Aug 24 03:44	5° $\underline{\mathbf{A}}$ 15'56	18°07'06
evening set	15260 Sep 18 14:38	24° $\underline{\mathbf{A}}$ 49'50		retrograde	15261 Aug 30 12:37	8° $\underline{\mathbf{A}}$ 36'27	
inferior conj	15260 Sep 25 09:10	19° $\underline{\mathbf{A}}$ 48'19	0°34'17	evening set	15261 Sep 02 06:45	7° $\underline{\mathbf{A}}$ 56'41	
minimum elong	15260 Sep 25 10:12	19° $\underline{\mathbf{A}}$ 45'47	0°34'07	inferior conj	15261 Sep 08 11:12	2° $\underline{\mathbf{A}}$ 37'39	1°38'17
desc. node	15260 Sep 27 05:44	17° $\underline{\mathbf{A}}$ 59'45		minimum elong	15261 Sep 08 13:27	2° $\underline{\mathbf{A}}$ 31'29	1°37'32
min. Earth dist.	15260 Sep 28 11:24	16° $\underline{\mathbf{A}}$ 49'29	0.61033 AU		15261 Sep 10 20:58	30° $\mathbb{R}$ $\mathbb{M}$	
morning rise	15260 Oct 02 02:50	13° $\underline{\mathbf{A}}$ 52'58		min. Earth dist.	15261 Sep 11 02:58	29° $\mathbb{M}$ 44'08	0.63278 AU
direct	15260 Oct 08 18:22	11° $\underline{\mathbf{A}}$ 39'44		desc. node	15261 Sep 14 03:11	26° $\mathbb{M}$ 53'06	
morning max el	15260 Oct 22 23:53	19° $\underline{\mathbf{A}}$ 34'41	27°58'03	morning rise	15261 Sep 14 18:05	26° $\mathbb{M}$ 23'48	
	15260 Oct 31 21:38	0° $\mathbb{M}$		direct	15261 Sep 21 09:45	23° $\mathbb{M}$ 53'39	
	15260 Nov 19 09:47	0° $\mathbb{X}$			15261 Oct 03 08:43	0° $\underline{\mathbf{A}}$	
asc. node	15260 Nov 21 16:17	4° $\mathbb{X}$ 24'35		morning max el	15261 Oct 05 08:28	1° $\underline{\mathbf{A}}$ 53'53	27°48'27
morning set	15260 Nov 25 04:08	11° $\mathbb{X}$ 30'11			15261 Oct 26 04:21	0° $\mathbb{M}$	
max. Earth dist.	15260 Nov 30 22:35	23° $\mathbb{X}$ 54'58	1.31301 AU	morning set	15261 Nov 08 23:44	25° $\mathbb{M}$ 12'39	
				asc. node	15261 Nov 08 13:07	24° $\mathbb{M}$ 19'22	
superior conj	15260 Dec 02 09:52	27° $\mathbb{X}$ 10'23	1°25'15		15261 Nov 11 07:53	0° $\mathbb{X}$	
minimum elong	15260 Dec 02 07:58	26° $\mathbb{X}$ 59'54	1°25'59	max. Earth dist.	15261 Nov 13 23:29	5° $\mathbb{X}$ 35'05	1.32102 AU
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evening rise	15260 Dec 09 02:33	11° $\mathbb{Z}$ 58'26		superior conj	15261 Nov 16 17:35	11° $\mathbb{X}$ 32'10	1°09'57
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desc. node	15260 Dec 24 03:38	10° $\approx$ 15'52		evening rise	15261 Nov 23 13:22	26° $\mathbb{X}$ 27'24	
evening max el	15261 Jan 04 21:21	25° $\approx$ 01'29	25°18'48		15261 Nov 25 05:11	0° $\mathbb{Z}$	
	15261 Jan 11 12:22	0° $\mathbb{X}$		desc. node	15261 Dec 11 00:35	27° $\mathbb{Z}$ 52'07	
retrograde	15261 Jan 18 17:55	1° $\mathbb{X}$ 59'13			15261 Dec 12 16:05	0° $\approx$	
evening set	15261 Jan 24 11:58	0° $\mathbb{X}$ 44'12		evening max el	15261 Dec 17 07:45	5° $\approx$ 08'35	23°39'52
	15261 Jan 26 01:41	30° $\mathbb{R}$ $\approx$		retrograde	15261 Dec 30 18:23	11° $\approx$ 48'36	
min. Earth dist.	15261 Jan 29 09:44	28° $\approx$ 02'30	0.56728 AU	evening set	15262 Jan 04 09:28	11° $\approx$ 02'09	
inferior conj	15261 Feb 01 03:17	26° $\approx$ 14'11	-4°47'21	min. Earth dist.	15262 Jan 10 18:51	7° $\approx$ 58'04	0.55211 AU
minimum elong	15261 Feb 01 12:30	25° $\approx$ 58'55	4°44'20	inferior conj	15262 Jan 12 11:36	6° $\approx$ 58'03	-5°47'26
morning rise	15261 Feb 09 15:43	22° $\approx$ 02'40		minimum elong	15262 Jan 12 17:12	6° $\approx$ 49'47	5°45'59
direct	15261 Feb 11 18:06	21° $\approx$ 49'47		morning rise	15262 Jan 21 02:33	3° $\approx$ 03'51	
asc. node	15261 Feb 17 14:27	23° $\approx$ 37'00		direct	15262 Jan 23 17:14	2° $\approx$ 47'00	
morning max el	15261 Feb 21 00:34	26° $\approx$ 20'46	19°08'57	morning max el	15262 Feb 03 13:15	8° $\approx$ 00'32	20°20'19
	15261 Feb 24 05:55	0° $\mathbb{X}$		asc. node	15262 Feb 04 11:51	8° $\approx$ 57'21	
morning set	15261 Mar 09 16:37	23° $\mathbb{X}$ 16'31			15262 Feb 18 00:48	0° $\mathbb{X}$	
	15261 Mar 13 01:53	0° $\mathbb{Y}$		morning set	15262 Feb 21 23:01	7° $\mathbb{X}$ 53'21	
superior conj	15261 Mar 18 00:57	9° $\mathbb{Y}$ 42'34	0°34'20	superior conj	15262 Mar 01 13:50	23° $\mathbb{X}$ 31'32	0°59'51
minimum elong	15261 Mar 18 02:57	9° $\mathbb{Y}$ 52'12	0°33'55	minimum elong	15262 Mar 01 16:26	23° $\mathbb{X}$ 44'40	0°59'39
desc. node	15261 Mar 22 05:09	17° $\mathbb{Y}$ 35'01			15262 Mar 04 20:00	0° $\mathbb{Y}$	
max. Earth dist.	15261 Mar 24 21:01	22° $\mathbb{Y}$ 25'51	1.38685 AU	max. Earth dist.	15262 Mar 07 03:59	4° $\mathbb{Y}$ 30'15	1.36454 AU
evening rise	15261 Mar 28 15:18	29° $\mathbb{Y}$ 03'19		desc. node	15262 Mar 09 01:42	8° $\mathbb{Y}$ 05'33	
	15261 Mar 29 04:29	0° $\mathbb{B}$		evening rise	15262 Mar 10 23:09	11° $\mathbb{Y}$ 34'45	
	15261 Apr 17 11:24	0° $\mathbb{I}$			15262 Mar 21 18:37	0° $\mathbb{B}$	
evening max el	15261 May 02 20:53	18° $\mathbb{I}$ 55'41	24°38'21		15262 Apr 12 17:20	0° $\mathbb{I}$	
retrograde	15261 May 14 12:31	25° $\mathbb{I}$ 44'15		evening max el	15262 Apr 15 10:27	2° $\mathbb{I}$ 48'37	25°51'41
asc. node	15261 May 16 11:21	25° $\mathbb{I}$ 27'56		retrograde	15262 Apr 28 00:18	10° $\mathbb{I}$ 02'35	
evening set	15261 May 20 03:28	23° $\mathbb{I}$ 21'39		asc. node	15262 May 03 08:36	8° $\mathbb{I}$ 07'10	
min. Earth dist.	15261 May 24 15:20	18° $\mathbb{I}$ 14'24	0.68480 AU	evening set	15262 May 04 02:08	7° $\mathbb{I}$ 32'38	
inferior conj	15261 May 25 16:12	16° $\mathbb{I}$ 51'23	2°27'46	min. Earth dist.	15262 May 08 07:12	3° $\mathbb{I}$ 01'17	0.67501 AU
minimum elong	15261 May 25 14:09	16° $\mathbb{I}$ 58'16	2°26'23	inferior conj	15262 May 09 20:51	1° $\mathbb{I}$ 02'20	1°52'26
morning rise	15261 May 31 01:01	10° $\mathbb{I}$ 52'54		minimum elong	15262 May 09 18:43	1° $\mathbb{I}$ 09'07	1°51'01
direct	15261 Jun 03 20:34	9° $\mathbb{I}$ 29'33			15262 May 10 16:43	30° $\mathbb{R}$ $\mathbb{B}$	
morning max el	15261 Jun 11 05:36	13° $\mathbb{I}$ 35'12	19°43'11	morning rise	15262 May 15 11:55	25° $\mathbb{B}$ 14'02	
desc. node	15261 Jun 18 06:03	21° $\mathbb{I}$ 58'53		direct	15262 May 18 20:27	24° $\mathbb{B}$ 09'41	
	15261 Jun 23 22:31	0° $\mathbb{E}$		morning max el	15262 May 25 13:14	27° $\mathbb{B}$ 46'01	18°48'45
greatest brilliancy	15261 Jun 24 05:01	0° $\mathbb{E}$ 23'43	-0.6m		15262 May 27 15:27	0° $\mathbb{I}$	
morning set	15261 Jul 07 10:33	20° $\mathbb{E}$ 19'07		desc. node	15262 Jun 05 03:03	11° $\mathbb{I}$ 31'16	
	15261 Jul 13 16:52	0° $\Omega$		greatest brilliancy	15262 Jun 08 08:28	16° $\mathbb{I}$ 23'00	-0.8m
max. Earth dist.	15261 Jul 18 18:31	7° $\Omega$ 56'58	1.44906 AU	morning set	15262 Jun 16 21:11	29° $\mathbb{I}$ 33'40	
					15262 Jun 17 03:58	0° $\mathbb{E}$	
superior conj	15261 Jul 23 11:57	15° $\Omega$ 28'41	-2°05'31	max. Earth dist.	15262 Jul 01 12:36	22° $\mathbb{E}$ 21'25	1.45788 AU

































































































































superior conj	15262 Jul 03 02:25	24°  49'14	-2°13'59	evening rise	15263 Jun 28 13:42	29°  03'13	
minimum elong	15262 Jul 03 01:55	24°  47'16	2°14'52		15263 Jun 29 04:21	0° 	
	15262 Jul 06 09:41	0° 		greatest brilliancy	15263 Jul 09 23:46	16°  036'39	-0.7m
evening rise	15262 Jul 18 09:46	19°  04'52		asc. node	15263 Jul 17 04:48	26°  056'48	
	15262 Jul 25 05:08	0° 			15263 Jul 19 14:51	0° 	
asc. node	15262 Jul 30 08:04	7°  09'17		evening max el	15263 Jul 22 03:20	2°  046'03	19°09'22
evening max el	15262 Aug 07 17:23	18°  056'48	18°29'44	retrograde	15263 Jul 29 00:58	6°  034'42	
retrograde	15262 Aug 14 04:22	22°  024'47		evening set	15263 Aug 01 13:38	5°  022'32	
evening set	15262 Aug 17 07:31	21°  029'37			15263 Aug 06 16:22	30°  000'00	
inferior conj	15262 Aug 23 01:26	15°  054'59	2°23'13	inferior conj	15263 Aug 07 00:27	29°  033'55	2°51'47
minimum elong	15262 Aug 23 03:43	15°  048'05	2°22'20	minimum elong	15263 Aug 07 02:07	29°  028'31	2°50'57
min. Earth dist.	15262 Aug 25 03:45	13°  023'59	0.65288 AU	min. Earth dist.	15263 Aug 08 12:29	27°  037'29	0.66924 AU
morning rise	15262 Aug 28 22:40	9°  031'44		morning rise	15263 Aug 12 13:55	23°  007'58	
desc. node	15262 Sep 01 00:39	7°  035'46		direct	15263 Aug 18 15:51	20°  031'30	
direct	15262 Sep 04 09:22	6°  053'55		desc. node	15263 Aug 18 22:07	20°  031'46	
morning max el	15262 Sep 17 19:20	14°  046'41	27°05'36	morning max el	15263 Aug 31 06:38	28°  002'35	25°57'47
	15262 Sep 30 06:13	0° 			15263 Sep 02 03:21	0° 	
	15262 Oct 18 21:41	0° 			15263 Sep 23 23:27	0° 	
morning set	15262 Oct 23 09:21	8°  000'00		morning set	15263 Oct 06 05:36	21°  001'36	
asc. node	15262 Oct 26 09:54	14°  000'00		max. Earth dist.	15263 Oct 09 22:34	28°  000'00	1.35335 AU
max. Earth dist.	15262 Oct 27 15:45	16°  000'00	1.33462 AU		15263 Oct 10 23:22	0° 	
				asc. node	15263 Oct 13 06:35	4°  000'00	
superior conj	15262 Oct 31 20:16	25°  000'00	0°48'39				
minimum elong	15262 Oct 31 18:07	25°  000'00	0°49'00	superior conj	15263 Oct 15 15:17	9°  000'00	0°21'36
	15262 Nov 02 21:44	0° 		minimum elong	15263 Oct 15 14:04	9°  000'00	0°21'54
evening rise	15262 Nov 07 23:48	10°  000'00		evening rise	15263 Oct 23 07:53	25°  000'00	
	15262 Nov 17 17:37	0° 			15263 Oct 25 15:58	0° 	
desc. node	15262 Nov 27 21:38	14°  000'00		evening max el	15263 Nov 10 17:12	25°  000'00	20°28'18
evening max el	15262 Nov 28 19:20	15°  000'00	21°57'47	desc. node	15263 Nov 14 18:48	28°  000'00	
retrograde	15262 Dec 11 07:06	21°  000'00			15263 Nov 16 20:26	0° 	
evening set	15262 Dec 14 14:32	20°  000'00		retrograde	15263 Nov 21 17:41	1°  000'00	
inferior conj	15262 Dec 23 05:22	17°  000'00	-5°57'30	evening set	15263 Nov 24 00:38	0° 	
minimum elong	15262 Dec 23 02:03	17°  000'00	5°56'22		15263 Nov 26 22:09	30°  000'00	
min. Earth dist.	15262 Dec 23 00:35	17°  000'00	0.54466 AU	inferior conj	15263 Dec 02 21:21	26°  000'00	-5°06'48
morning rise	15262 Dec 31 14:23	13°  000'00		minimum elong	15263 Dec 02 11:40	27°  000'00	5°03'36
direct	15263 Jan 04 03:16	12°  000'00		min. Earth dist.	15263 Dec 04 06:20	26°  000'00	0.54651 AU
morning max el	15263 Jan 16 11:01	18°  000'00	21°53'55	morning rise	15263 Dec 10 22:23	22°  000'00	
asc. node	15263 Jan 22 09:12	25°  000'00		direct	15263 Dec 15 11:54	22°  000'00	
	15263 Jan 25 08:33	0° 		morning max el	15263 Dec 28 21:58	28°  000'00	23°42'12
morning set	15263 Feb 06 09:15	22°  000'00			15263 Dec 30 03:44	0° 	
	15263 Feb 09 20:34	0° 		asc. node	15264 Jan 09 06:29	13°  000'00	
					15264 Jan 18 08:38	0° 	
superior conj	15263 Feb 13 12:20	7°  000'00	1°18'43	morning set	15264 Jan 21 21:07	7°  000'00	
minimum elong	15263 Feb 13 14:41	7°  000'00	1°18'54				
max. Earth dist.	15263 Feb 17 16:33	16°  000'00	1.34471 AU	superior conj	15264 Jan 28 17:23	22°  000'00	1°31'06
evening rise	15263 Feb 21 22:38	24°  000'00		minimum elong	15264 Jan 28 18:57	22°  000'00	1°31'39
desc. node	15263 Feb 23 22:16	28°  000'00		max. Earth dist.	15264 Jan 31 12:37	28°  000'00	1.32875 AU
	15263 Feb 24 17:50	0° 			15264 Feb 01 08:24	0° 	
	15263 Mar 15 07:08	0° 		evening rise	15264 Feb 05 10:12	8°  000'00	
evening max el	15263 Mar 29 00:25	16°  000'00	26°50'12	desc. node	15264 Feb 10 18:53	18°  000'00	
retrograde	15263 Apr 11 06:27	24°  000'00			15264 Feb 17 05:40	0° 	
evening set	15263 Apr 17 17:46	21°  000'00		evening max el	15264 Mar 10 13:32	29°  000'00	27°26'41
asc. node	15263 Apr 20 05:55	19°  000'00			15264 Mar 10 14:12	0° 	
min. Earth dist.	15263 Apr 21 17:21	17°  000'00	0.66098 AU	retrograde	15264 Mar 24 06:05	7°  000'00	
inferior conj	15263 Apr 23 19:43	15°  000'00	1°05'18	evening set	15264 Mar 31 00:08	5°  000'00	
minimum elong	15263 Apr 23 18:09	15°  000'00	1°04'08	min. Earth dist.	15264 Apr 03 19:45	1°  000'00	0.64311 AU
morning rise	15263 Apr 29 19:49	9°  000'00			15264 Apr 05 07:50	30°  000'00	
direct	15263 May 02 18:20	8°  000'00		inferior conj	15264 Apr 06 10:09	28°  000'00	0°05'25
morning max el	15263 May 09 02:48	11°  000'00	18°10'54	minimum elong	15264 Apr 06 10:00	28°  000'00	0°04'59
	15263 May 22 02:05	0° 		transit middle	15264 Apr 06 10:00	28°  000'00	0°04'59
desc. node	15263 May 22 23:58	1°  000'00		transit begin	15264 Apr 06 07:04	28°  000'00	
morning set	15263 May 28 07:35	9°  000'00		transit end	15264 Apr 06 12:57	28°  000'00	
	15263 Jun 09 21:48	0° 		asc. node	15264 Apr 06 03:18	29°  000'00	
				morning rise	15264 Apr 12 22:01	23°  000'00	
superior conj	15263 Jun 12 11:22	4°  000'00	-2°02'19	direct	15264 Apr 15 11:35	22°  000'00	
minimum elong	15263 Jun 12 04:00	3°  000'00	2°02'50	morning max el	15264 Apr 21 19:53	26°  000'00	17°50'14
max. Earth dist.	15263 Jun 14 09:08	7°  000'00	1.45923 AU		15264 Apr 25 04:10	0° 	



morning set	15264 May 08 21:36	21°♄42'43		morning set	15265 Apr 18 21:04	0°♄
desc. node	15264 May 08 20:47	21°♄39'18		desc. node	15265 Apr 21 10:59	4°♄32'22
	15264 May 13 20:36	0°♄			15265 Apr 25 17:30	12°♄02'46
superior conj	15264 May 22 07:50	13°♄49'36	-1°33'53	superior conj	15265 May 03 02:14	24°♄39'34 -0°56'43
minimum elong	15264 May 21 23:18	13°♄15'22	1°33'51	minimum elong	15265 May 02 20:52	24°♄17'05 0°56'38
max. Earth dist.	15264 May 27 05:06	21°♄35'50	1.45306 AU		15265 May 06 07:27	0°♄
	15264 Jun 01 14:07	0°♄		max. Earth dist.	15265 May 09 21:46	5°♄51'04 1.44010 AU
evening rise	15264 Jun 07 02:14	8°♄28'37		evening rise	15265 May 17 15:20	18°♄02'49
	15264 Jun 21 10:57	0°♄			15265 May 25 12:05	0°♄
greatest brilliancy	15264 Jun 21 21:20	0°♄37'33	-0.6m		15265 Jun 16 18:06	0°♄
asc. node	15264 Jul 03 01:37	15°♄19'39		evening max el	15265 Jun 17 06:03	0°♄30'22 21°13'21
evening max el	15264 Jul 04 07:43	16°♄38'14	20°04'44	asc. node	15265 Jun 19 22:31	2°♄55'40
retrograde	15264 Jul 11 23:49	20°♄59'35		retrograde	15265 Jun 25 22:44	5°♄33'07
evening set	15264 Jul 15 22:33	19°♄29'56		evening set	15265 Jun 30 08:10	3°♄46'21
inferior conj	15264 Jul 21 05:22	13°♄28'43	3°06'34		15265 Jul 03 19:00	30°♄
minimum elong	15264 Jul 21 06:07	13°♄26'09	3°05'45	inferior conj	15265 Jul 05 13:46	27°♄34'09 3°09'24
min. Earth dist.	15264 Jul 22 03:22	12°♄14'00	0.68116 AU	minimum elong	15265 Jul 05 13:32	27°♄34'55 3°08'31
morning rise	15264 Jul 26 13:20	7°♄04'40		min. Earth dist.	15265 Jul 05 22:18	27°♄04'26 0.68841 AU
direct	15264 Aug 01 04:16	4°♄37'03		morning rise	15265 Jul 10 18:40	21°♄15'00
desc. node	15264 Aug 04 19:33	5°♄28'14		direct	15265 Jul 15 21:31	19°♄01'49
morning max el	15264 Aug 12 17:34	11°♄32'12	24°34'31	desc. node	15265 Jul 22 16:54	21°♄59'50
	15264 Aug 27 12:37	0°♄		morning max el	15265 Jul 26 04:49	25°♄09'12 23°05'11
	15264 Sep 15 16:48	0°♄			15265 Jul 30 13:58	0°♄
morning set	15264 Sep 17 08:29	2°♄51'45			15265 Aug 20 23:33	0°♄
max. Earth dist.	15264 Sep 20 22:30	9°♄14'05	1.37578 AU	morning set	15265 Aug 29 13:33	13°♄44'48
				max. Earth dist.	15265 Sep 02 21:04	21°♄01'07 1.39969 AU
					15265 Sep 07 23:53	0°♄
superior conj	15264 Sep 27 23:25	22°♄26'06	-0°10'31	superior conj	15265 Sep 10 16:37	4°♄53'37 -0°46'05
minimum elong	15264 Sep 28 00:06	22°♄29'24	0°10'07	minimum elong	15265 Sep 10 20:07	5°♄09'40 0°45'30
behind sun begin	15264 Sep 27 18:49	22°♄03'48		asc. node	15265 Sep 15 23:48	14°♄48'17
behind sun end	15264 Sep 28 05:23	22°♄55'03		evening rise	15265 Sep 20 06:50	23°♄01'09
asc. node	15264 Sep 29 03:14	24°♄41'29			15265 Sep 23 23:01	0°♄
	15264 Oct 01 19:47	0°♄		evening max el	15265 Oct 06 06:39	18°♄54'37 18°33'20
evening rise	15264 Oct 06 11:15	9°♄17'47		retrograde	15265 Oct 14 06:28	22°♄57'17
	15264 Oct 17 19:37	0°♄		evening set	15265 Oct 16 05:16	22°♄43'36
evening max el	15264 Oct 23 05:35	6°♄50'30	19°19'39	desc. node	15265 Oct 18 13:24	21°♄53'57
desc. node	15264 Oct 31 16:03	11°♄30'18		inferior conj	15265 Oct 24 03:12	18°♄14'37 -1°47'13
retrograde	15264 Nov 01 15:03	11°♄33'08		minimum elong	15265 Oct 23 22:55	18°♄22'51 1°44'51
evening set	15264 Nov 03 12:17	11°♄22'34		min. Earth dist.	15265 Oct 27 07:43	15°♄48'31 0.57531 AU
inferior conj	15264 Nov 12 01:59	7°♄13'36	-3°33'00	morning rise	15265 Oct 31 13:09	13°♄08'10
minimum elong	15264 Nov 11 17:16	7°♄27'57	3°29'06	direct	15265 Nov 06 16:17	11°♄33'43
min. Earth dist.	15264 Nov 14 15:52	5°♄31'54	0.55740 AU	morning max el	15265 Nov 20 22:34	19°♄03'24 26°54'32
morning rise	15264 Nov 19 19:57	2°♄44'19			15265 Nov 30 04:58	0°♄
direct	15264 Nov 25 06:45	1°♄36'41		asc. node	15265 Dec 13 00:45	20°♄54'30
morning max el	15264 Dec 09 07:25	8°♄42'02	25°28'43		15265 Dec 17 15:49	0°♄
	15264 Dec 25 02:21	0°♄		morning set	15265 Dec 20 18:26	6°♄31'24
asc. node	15264 Dec 26 03:41	1°♄50'23				
morning set	15265 Jan 05 08:46	22°♄01'32		superior conj	15265 Dec 27 13:45	21°♄32'38 1°37'16
	15265 Jan 09 00:12	0°♄		minimum elong	15265 Dec 27 13:14	21°♄29'42 1°38'10
superior conj	15265 Jan 12 02:33	6°♄52'15	1°37'13	max. Earth dist.	15265 Dec 27 22:15	22°♄20'11 1.31155 AU
minimum elong	15265 Jan 12 03:06	6°♄55'14	1°38'01		15265 Dec 31 09:03	0°♄
max. Earth dist.	15265 Jan 13 15:20	10°♄15'15	1.31757 AU	evening rise	15266 Jan 03 10:11	6°♄35'44
evening rise	15265 Jan 19 06:54	22°♄21'26		desc. node	15266 Jan 14 12:14	28°♄05'53
	15265 Jan 23 01:55	0°♄			15266 Jan 15 14:47	0°♄
desc. node	15265 Jan 27 15:31	8°♄35'39		evening max el	15266 Feb 03 05:20	24°♄59'51 27°08'17
	15265 Feb 10 02:13	0°♄			15266 Feb 09 16:47	0°♄
evening max el	15265 Feb 20 23:55	12°♄50'46	27°34'21	retrograde	15266 Feb 17 05:49	2°♄16'53
retrograde	15265 Mar 06 22:19	20°♄17'14		evening set	15266 Feb 23 22:17	0°♄20'09
evening set	15265 Mar 13 18:40	18°♄00'56			15266 Feb 24 11:54	30°♄
min. Earth dist.	15265 Mar 17 12:48	15°♄01'05	0.62227 AU	min. Earth dist.	15266 Feb 27 19:45	27°♄37'30 0.59998 AU
inferior conj	15265 Mar 20 12:59	12°♄10'31	-1°07'33	inferior conj	15266 Mar 03 00:42	24°♄58'16 -2°31'40
minimum elong	15265 Mar 20 15:19	12°♄05'00	1°06'42	minimum elong	15266 Mar 03 06:21	24°♄46'31 2°29'17
asc. node	15265 Mar 24 00:44	9°♄06'54		morning rise	15266 Mar 10 17:51	20°♄12'38
morning rise	15265 Mar 27 14:57	7°♄05'25		asc. node	15266 Mar 10 22:10	20°♄09'56
direct	15265 Mar 29 20:58	6°♄42'26		direct	15266 Mar 12 18:37	19°♄56'31
morning max el	15265 Apr 05 13:27	10°♄05'17	17°47'11			

morning max el	15266 Mar 20 04:03	23° $\text{H}$ 37'52	18°02'42	morning rise	15267 Feb 21 00:24	2° $\text{H}$ 37'41	
	15266 Mar 25 06:19	0° $\text{Y}$		direct	15267 Feb 23 00:17	2° $\text{H}$ 24'42	
morning set	15266 Apr 04 17:48	18° $\text{Y}$ 10'08		asc. node	15267 Feb 25 19:36	2° $\text{H}$ 51'43	
	15266 Apr 11 04:11	0° $\text{B}$		morning max el	15267 Mar 03 11:44	6° $\text{H}$ 34'54	18°38'27
desc. node	15266 Apr 12 14:09	2° $\text{B}$ 33'18			15267 Mar 18 07:50	0° $\text{Y}$	
				morning set	15267 Mar 19 12:44	2° $\text{Y}$ 19'27	
superior conj	15266 Apr 14 20:08	6° $\text{B}$ 33'49	-0°18'17				
minimum elong	15266 Apr 14 18:35	6° $\text{B}$ 26'57	0°18'30	superior conj	15267 Mar 28 10:09	19° $\text{Y}$ 21'48	0°16'43
max. Earth dist.	15266 Apr 22 10:01	19° $\text{B}$ 33'54	1.42178 AU	minimum elong	15267 Mar 28 11:16	19° $\text{Y}$ 27'00	0°16'18
evening rise	15266 Apr 27 19:16	28° $\text{B}$ 20'58		desc. node	15267 Mar 30 10:44	23° $\text{Y}$ 06'26	
	15266 Apr 28 20:09	0° $\text{II}$			15267 Apr 03 06:37	0° $\text{B}$	
	15266 May 19 03:06	0° $\text{E}$		max. Earth dist.	15267 Apr 04 18:10	2° $\text{B}$ 35'57	1.40003 AU
evening max el	15266 May 30 23:30	14° $\text{E}$ 23'34	22°31'07	evening rise	15267 Apr 08 19:58	9° $\text{B}$ 33'40	
asc. node	15266 Jun 06 19:30	19° $\text{E}$ 30'22			15267 Apr 21 18:31	0° $\text{II}$	
retrograde	15266 Jun 09 20:05	20° $\text{E}$ 10'32		evening max el	15267 May 13 14:00	28° $\text{II}$ 17'38	23°52'31
evening set	15266 Jun 14 16:49	18° $\text{E}$ 07'58			15267 May 15 09:15	0° $\text{E}$	
inferior conj	15266 Jun 19 23:36	11° $\text{E}$ 46'39	3°01'26	retrograde	15267 May 24 14:27	4° $\text{E}$ 45'27	
minimum elong	15266 Jun 19 22:29	11° $\text{E}$ 50'32	3°00'23	asc. node	15267 May 24 16:36	4° $\text{E}$ 45'24	
min. Earth dist.	15266 Jun 19 19:04	12° $\text{E}$ 02'26	0.69085 AU	evening set	15267 May 29 22:53	2° $\text{E}$ 29'14	
morning rise	15266 Jun 25 03:59	5° $\text{E}$ 34'29			15267 Jun 01 08:12	30° $\text{R}$ $\text{II}$	
direct	15266 Jun 29 18:30	3° $\text{E}$ 39'26		min. Earth dist.	15267 Jun 03 15:30	27° $\text{II}$ 00'54	0.68843 AU
morning max el	15266 Jul 08 19:04	8° $\text{E}$ 54'33	21°38'34	inferior conj	15267 Jun 04 08:56	26° $\text{II}$ 01'26	2°43'05
desc. node	15266 Jul 09 14:09	9° $\text{E}$ 43'24		minimum elong	15267 Jun 04 07:07	26° $\text{II}$ 07'37	2°41'49
	15266 Jul 25 04:43	0° $\text{Q}$		morning rise	15267 Jun 09 15:22	19° $\text{II}$ 57'42	
morning set	15266 Aug 09 18:22	23° $\text{Q}$ 35'29		direct	15267 Jun 13 17:45	18° $\text{II}$ 22'38	
	15266 Aug 13 18:18	0° $\text{P}$		morning max el	15267 Jun 21 15:15	22° $\text{II}$ 50'15	20°21'29
max. Earth dist.	15266 Aug 16 00:19	3° $\text{P}$ 40'42	1.42235 AU	desc. node	15267 Jun 26 11:20	28° $\text{II}$ 19'30	
					15267 Jun 27 18:52	0° $\text{E}$	
superior conj	15266 Aug 23 14:34	16° $\text{P}$ 30'26	-1°21'56		15267 Jul 18 10:28	0° $\text{Q}$	
minimum elong	15266 Aug 23 21:04	16° $\text{P}$ 58'36	1°21'23	morning set	15267 Jul 20 03:08	2° $\text{Q}$ 36'14	
	15266 Aug 31 04:55	0° $\text{A}$		max. Earth dist.	15267 Jul 29 10:42	17° $\text{Q}$ 13'08	1.44101 AU
asc. node	15266 Sep 02 20:22	4° $\text{A}$ 48'43					
evening rise	15266 Sep 03 14:54	6° $\text{A}$ 13'20		superior conj	15267 Aug 04 13:38	27° $\text{Q}$ 08'54	-1°52'48
	15266 Sep 18 03:55	0° $\text{M}$		minimum elong	15267 Aug 04 21:12	27° $\text{Q}$ 40'07	1°52'44
evening max el	15266 Sep 19 16:14	1° $\text{M}$ 38'25	18°07'59		15267 Aug 06 07:01	0° $\text{P}$	
retrograde	15266 Sep 26 16:34	5° $\text{M}$ 13'40		evening rise	15267 Aug 17 06:43	18° $\text{P}$ 42'34	
evening set	15266 Sep 28 21:49	4° $\text{M}$ 52'33		asc. node	15267 Aug 20 16:57	24° $\text{P}$ 38'49	
desc. node	15266 Oct 05 10:47	0° $\text{M}$ 35'58			15267 Aug 23 20:10	0° $\text{A}$	
inferior conj	15266 Oct 06 01:54	0° $\text{M}$ 02'24	-0°11'55	evening max el	15267 Sep 03 06:09	14° $\text{A}$ 51'30	18°02'04
minimum elong	15266 Oct 06 01:30	0° $\text{M}$ 03'17	0°11'22	retrograde	15267 Sep 09 17:46	18° $\text{A}$ 13'29	
transit middle	15266 Oct 06 01:30	0° $\text{M}$ 03'17	0°11'22	evening set	15267 Sep 12 07:03	17° $\text{A}$ 41'19	
transit begin	15266 Oct 05 23:06	0° $\text{M}$ 08'39		inferior conj	15267 Sep 18 19:09	12° $\text{A}$ 31'49	1°03'55
transit end	15266 Oct 06 03:54	29° $\text{A}$ 57'55		minimum elong	15267 Sep 18 20:53	12° $\text{A}$ 27'22	1°03'25
	15266 Oct 06 02:58	30° $\text{R}$ $\text{A}$		min. Earth dist.	15267 Sep 21 17:23	9° $\text{A}$ 33'13	0.62014 AU
min. Earth dist.	15266 Oct 09 07:43	27° $\text{A}$ 09'39	0.59724 AU	desc. node	15267 Sep 22 08:13	8° $\text{A}$ 57'33	
morning rise	15266 Oct 13 01:53	24° $\text{A}$ 22'41		morning rise	15267 Sep 25 08:12	6° $\text{A}$ 27'38	
direct	15266 Oct 19 15:00	22° $\text{A}$ 22'15		direct	15267 Oct 02 00:31	4° $\text{A}$ 06'26	
	15266 Nov 02 17:49	0° $\text{M}$		morning max el	15267 Oct 16 03:32	12° $\text{A}$ 03'54	27°58'28
morning max el	15266 Nov 02 21:38	0° $\text{M}$ 09'19	27°46'04		15267 Oct 30 09:19	0° $\text{M}$	
	15266 Nov 24 07:17	0° $\text{J}$		asc. node	15267 Nov 16 18:36	0° $\text{J}$ 11'14	
asc. node	15266 Nov 29 21:43	10° $\text{J}$ 23'51			15267 Nov 16 16:20	0° $\text{J}$	
morning set	15266 Dec 05 00:18	20° $\text{J}$ 46'52		morning set	15267 Nov 19 00:22	4° $\text{J}$ 43'18	
	15266 Dec 09 06:34	0° $\text{Z}$		max. Earth dist.	15267 Nov 24 10:41	16° $\text{J}$ 15'21	1.31579 AU
max. Earth dist.	15266 Dec 11 05:57	4° $\text{Z}$ 23'07	1.31093 AU				
				superior conj	15267 Nov 26 10:44	20° $\text{J}$ 39'12	1°19'30
superior conj	15266 Dec 12 01:05	6° $\text{Z}$ 09'57	1°31'22	minimum elong	15267 Nov 26 08:36	20° $\text{J}$ 27'29	1°20'08
minimum elong	15266 Dec 11 23:38	6° $\text{Z}$ 01'46	1°32'11		15267 Nov 30 16:03	0° $\text{Z}$	
evening rise	15266 Dec 18 17:55	20° $\text{Z}$ 59'43		evening rise	15267 Dec 03 04:11	5° $\text{Z}$ 28'42	
	15266 Dec 23 01:20	0° $\text{A}$			15267 Dec 15 21:28	0° $\text{A}$	
desc. node	15267 Jan 01 09:02	17° $\text{A}$ 02'21		desc. node	15267 Dec 19 05:55	5° $\text{A}$ 12'44	
	15267 Jan 10 09:35	0° $\text{H}$		evening max el	15267 Dec 28 16:53	16° $\text{A}$ 44'04	24°38'16
evening max el	15267 Jan 16 03:17	6° $\text{H}$ 16'52	26°07'27	retrograde	15268 Jan 11 09:55	23° $\text{A}$ 34'32	
retrograde	15267 Jan 30 02:16	13° $\text{H}$ 21'24		evening set	15268 Jan 16 17:53	22° $\text{A}$ 31'52	
evening set	15267 Feb 05 07:11	11° $\text{H}$ 50'21		min. Earth dist.	15268 Jan 22 04:43	19° $\text{A}$ 43'15	0.56008 AU
min. Earth dist.	15267 Feb 09 16:33	9° $\text{H}$ 12'49	0.57837 AU	inferior conj	15268 Jan 24 13:26	18° $\text{A}$ 14'38	-5°17'22
inferior conj	15267 Feb 12 17:35	7° $\text{H}$ 01'58	-4°00'07	minimum elong	15268 Jan 24 21:57	18° $\text{A}$ 01'19	5°14'56
minimum elong	15267 Feb 13 02:15	6° $\text{H}$ 46'22	3°56'51	morning rise	15268 Feb 02 04:09	14° $\text{A}$ 11'20	

direct	15268 Feb 04 10:42	13° $\approx$ 57'21		minimum elong	15269 Jan 03 16:26	28° $\approx$ 35'22	5°58'05
asc. node	15268 Feb 12 17:00	17° $\approx$ 17'33		morning rise	15269 Jan 12 03:33	24° $\approx$ 49'21	
morning max el	15268 Feb 14 08:23	18° $\approx$ 45'25	19°36'28	direct	15269 Jan 15 02:43	24° $\approx$ 28'55	
	15268 Feb 22 17:35	0° $\approx$		morning max el	15269 Jan 26 14:42	0° $\approx$ 00'41	20°57'47
morning set	15268 Mar 02 15:52	16° $\approx$ 48'55			15269 Jan 26 14:25	0° $\approx$	
	15268 Mar 09 05:08	0° $\approx$		asc. node	15269 Jan 29 14:23	3° $\approx$ 13'56	
					15269 Feb 14 06:54	0° $\approx$	
superior conj	15268 Mar 10 15:56	2° $\approx$ 51'53	0°45'57	morning set	15269 Feb 15 00:10	1° $\approx$ 29'19	
minimum elong	15268 Mar 10 18:19	3° $\approx$ 03'37	0°45'37				
desc. node	15268 Mar 16 07:19	13° $\approx$ 38'51		superior conj	15269 Feb 22 09:20	16° $\approx$ 52'24	1°08'39
max. Earth dist.	15268 Mar 17 00:34	14° $\approx$ 58'34	1.37720 AU	minimum elong	15269 Feb 22 11:55	17° $\approx$ 05'36	1°08'37
evening rise	15268 Mar 20 17:13	21° $\approx$ 38'14		max. Earth dist.	15269 Feb 27 09:21	26° $\approx$ 54'29	1.35564 AU
	15268 Mar 25 14:03	0° $\approx$			15269 Feb 28 23:41	0° $\approx$	
	15268 Apr 14 16:29	0° $\approx$		evening rise	15269 Mar 03 08:06	4° $\approx$ 26'22	
evening max el	15268 Apr 25 03:28	12° $\approx$ 11'31	25°10'50	desc. node	15269 Mar 03 03:53	4° $\approx$ 06'40	
retrograde	15268 May 07 04:53	19° $\approx$ 11'48			15269 Mar 18 11:27	0° $\approx$	
asc. node	15268 May 10 13:48	18° $\approx$ 12'40		evening max el	15269 Apr 07 17:01	26° $\approx$ 01'02	26°18'49
evening set	15268 May 13 00:45	16° $\approx$ 14'51			15269 Apr 12 07:40	0° $\approx$	
min. Earth dist.	15268 May 17 09:30	11° $\approx$ 53'46	0.68123 AU	retrograde	15269 Apr 20 14:29	3° $\approx$ 22'33	
inferior conj	15268 May 18 15:51	10° $\approx$ 14'37	2°14'10	evening set	15269 Apr 26 20:42	0° $\approx$ 15'35	
minimum elong	15268 May 18 13:42	10° $\approx$ 21'41	2°12'44	asc. node	15269 Apr 27 11:05	0° $\approx$ 19'42	
morning rise	15268 May 24 03:01	4° $\approx$ 20'32			15269 Apr 27 19:40	30° $\approx$	
direct	15268 May 27 17:50	3° $\approx$ 05'26		min. Earth dist.	15269 Apr 30 23:07	26° $\approx$ 34'23	0.66949 AU
morning max el	15268 Jun 03 18:52	6° $\approx$ 56'37	19°18'07	inferior conj	15269 May 02 18:21	24° $\approx$ 21'58	1°33'58
desc. node	15268 Jun 12 08:25	17° $\approx$ 13'41		minimum elong	15269 May 02 16:21	24° $\approx$ 28'05	1°32'36
greatest brilliancy	15268 Jun 16 11:49	23° $\approx$ 13'48	-0.7m	morning rise	15269 May 08 12:55	18° $\approx$ 38'46	
	15268 Jun 20 18:39	0° $\approx$		direct	15269 May 11 17:00	17° $\approx$ 42'04	
morning set	15268 Jun 28 07:05	11° $\approx$ 29'22		morning max el	15269 May 18 05:23	21° $\approx$ 09'52	18°30'40
	15268 Jul 10 05:28	0° $\approx$			15269 May 25 08:05	0° $\approx$	
max. Earth dist.	15268 Jul 11 02:55	1° $\approx$ 24'09	1.45370 AU	desc. node	15269 May 30 05:23	7° $\approx$ 17'17	
				morning set	15269 Jun 08 02:32	21° $\approx$ 10'14	
					15269 Jun 13 17:24	0° $\approx$	
superior conj	15268 Jul 14 13:54	6° $\approx$ 51'20	-2°11'28				
minimum elong	15268 Jul 14 17:44	7° $\approx$ 06'33	2°12'09	superior conj	15269 Jun 23 23:58	16° $\approx$ 02'57	-2°11'28
	15268 Jul 28 21:11	0° $\approx$		minimum elong	15269 Jun 23 20:06	15° $\approx$ 47'53	2°12'18
evening rise	15268 Jul 29 01:02	0° $\approx$ 15'54		max. Earth dist.	15269 Jun 23 22:14	15° $\approx$ 56'09	1.45928 AU
asc. node	15268 Aug 06 13:35	14° $\approx$ 13'27			15269 Jul 02 22:12	0° $\approx$	
evening max el	15268 Aug 16 20:46	28° $\approx$ 24'14	18°14'31	evening rise	15269 Jul 09 18:30	10° $\approx$ 46'42	
	15268 Aug 18 16:38	0° $\approx$		greatest brilliancy	15269 Jul 18 04:21	24° $\approx$ 01'09	-0.8m
retrograde	15268 Aug 23 05:29	1° $\approx$ 46'33			15269 Jul 22 02:01	0° $\approx$	
evening set	15268 Aug 26 03:22	1° $\approx$ 00'27		asc. node	15269 Jul 24 10:18	3° $\approx$ 26'56	
	15268 Aug 27 16:45	30° $\approx$		evening max el	15269 Jul 31 09:06	12° $\approx$ 09'25	18°44'33
inferior conj	15268 Sep 01 02:52	25° $\approx$ 34'14	1°59'32	retrograde	15269 Aug 06 23:47	15° $\approx$ 45'03	
minimum elong	15268 Sep 01 05:15	25° $\approx$ 27'26	1°58'41	evening set	15269 Aug 10 06:49	14° $\approx$ 42'57	
min. Earth dist.	15268 Sep 03 13:00	22° $\approx$ 48'42	0.64169 AU	inferior conj	15269 Aug 15 21:18	9° $\approx$ 02'09	2°37'09
morning rise	15268 Sep 07 05:27	19° $\approx$ 15'16		minimum elong	15269 Aug 15 23:22	8° $\approx$ 55'40	2°36'16
desc. node	15268 Sep 08 05:43	18° $\approx$ 31'05		min. Earth dist.	15269 Aug 17 17:34	6° $\approx$ 44'30	0.66027 AU
direct	15268 Sep 13 19:21	16° $\approx$ 41'02		morning rise	15269 Aug 21 14:57	2° $\approx$ 36'45	
morning max el	15268 Sep 27 13:39	24° $\approx$ 39'40	27°33'55	desc. node	15269 Aug 26 03:11	0° $\approx$ 10'32	
	15268 Oct 02 10:08	0° $\approx$			15269 Aug 27 06:21	30° $\approx$	
	15268 Oct 22 19:52	0° $\approx$		direct	15269 Aug 27 22:11	29° $\approx$ 58'23	
morning set	15268 Nov 01 16:07	18° $\approx$ 14'10			15269 Aug 28 14:14	0° $\approx$	
asc. node	15268 Nov 02 15:23	20° $\approx$ 10'15		morning max el	15269 Sep 10 01:08	7° $\approx$ 44'41	26°39'16
max. Earth dist.	15268 Nov 06 08:31	27° $\approx$ 14'53	1.32619 AU		15269 Sep 27 09:19	0° $\approx$	
	15268 Nov 07 09:35	0° $\approx$			15269 Oct 15 05:06	0° $\approx$	
superior conj	15268 Nov 09 16:35	4° $\approx$ 54'05	1°01'38	morning set	15269 Oct 15 20:34	1° $\approx$ 12'56	
minimum elong	15268 Nov 09 14:16	4° $\approx$ 41'32	1°02'04	max. Earth dist.	15269 Oct 19 20:40	8° $\approx$ 59'28	1.34203 AU
evening rise	15268 Nov 16 15:06	19° $\approx$ 57'07		asc. node	15269 Oct 20 12:08	10° $\approx$ 16'37	
	15268 Nov 21 11:07	0° $\approx$					
desc. node	15268 Dec 05 02:55	22° $\approx$ 19'28		superior conj	15269 Oct 24 16:23	18° $\approx$ 49'12	0°37'52
evening max el	15268 Dec 09 02:20	26° $\approx$ 41'57	22°55'35	minimum elong	15269 Oct 24 14:31	18° $\approx$ 39'28	0°38'10
	15268 Dec 13 01:31	0° $\approx$			15269 Oct 29 23:29	0° $\approx$	
retrograde	15268 Dec 22 04:58	3° $\approx$ 11'48		evening rise	15269 Nov 01 00:49	4° $\approx$ 20'44	
evening set	15268 Dec 26 06:42	2° $\approx$ 35'43			15269 Nov 15 01:30	0° $\approx$	
	15269 Jan 01 04:29	30° $\approx$		evening max el	15269 Nov 20 17:19	6° $\approx$ 49'01	21°17'24
min. Earth dist.	15269 Jan 02 11:39	29° $\approx$ 16'23	0.54789 AU	desc. node	15269 Nov 22 00:01	8° $\approx$ 00'48	
inferior conj	15269 Jan 03 14:18	28° $\approx$ 38'25	-5°59'02	retrograde	15269 Dec 02 15:40	12° $\approx$ 43'36	

evening set	15269 Dec 05 10:43	12°  25'31		desc. node	15270 Nov 08 21:12	21°  51'43	
inferior conj	15269 Dec 14 05:29	8°  34'04	-5°42'59	retrograde	15270 Nov 13 05:02	22°  45'05	
minimum elong	15269 Dec 13 22:38	8°  43'44	5°41'04	evening set	15270 Nov 15 06:08	22°  33'54	
min. Earth dist.	15269 Dec 14 17:19	8°  17'23	0.54429 AU	inferior conj	15270 Nov 24 01:27	18°  34'40	-4°30'25
morning rise	15269 Dec 22 10:58	4°  43'54		minimum elong	15270 Nov 23 15:24	18°  49'58	4°26'35
direct	15269 Dec 26 10:13	4°  09'50		min. Earth dist.	15270 Nov 26 00:33	17°  22'58	0.55016 AU
morning max el	15270 Jan 08 07:06	10°  24'03	22°38'58	morning rise	15270 Dec 01 23:25	14°  24'27	
asc. node	15270 Jan 16 11:43	20°  22'54		direct	15270 Dec 06 22:48	13°  30'17	
	15270 Jan 22 07:39	0° 		morning max el	15270 Dec 20 16:09	20°  18'55	24°28'43
morning set	15270 Jan 30 11:18	16°  13'47			15270 Dec 28 21:10	0° 	
	15270 Feb 05 21:11	0° 		asc. node	15271 Jan 03 08:57	8°  27'32	
				morning set	15271 Jan 14 23:18	0° 	
					15271 Jan 14 12:40	0° 	
superior conj	15270 Feb 06 10:57	1°  13'29	1°24'45				
minimum elong	15270 Feb 06 13:00	1°  24'25	1°25'05	superior conj	15271 Jan 21 18:02	15° 	1°34'27
max. Earth dist.	15270 Feb 10 00:37	8°  43'32	1.33734 AU	minimum elong	15271 Jan 21 19:11	15° 	1°35'07
evening rise	15270 Feb 14 13:07	17°  48'50		max. Earth dist.	15271 Jan 23 23:47	20° 	1.32342 AU
desc. node	15270 Feb 18 00:27	24°  42'54			15271 Jan 28 09:55	0° 	
	15270 Feb 21 02:03	0° 		evening rise	15271 Jan 29 04:58	1° 	37'22
	15270 Mar 12 17:50	0° 		desc. node	15271 Feb 04 21:03	14° 	31'10
evening max el	15270 Mar 21 06:39	9°  38'06	27°08'57		15271 Feb 14 00:03	0° 	
retrograde	15270 Apr 03 18:14	17°  08'34		evening max el	15271 Mar 03 19:07	22° 	51'47 27°33'54
evening set	15270 Apr 10 08:41	14°  37'20			15271 Mar 14 21:32	0° 	
asc. node	15270 Apr 14 08:28	10°  48'04		retrograde	15271 Mar 17 14:52	0° 	20'58
min. Earth dist.	15270 Apr 14 06:18	10°  54'01	0.65368 AU		15271 Mar 20 06:00	30° 	
inferior conj	15270 Apr 16 13:58	8°  17'18	0°41'30	evening set	15271 Mar 24 10:21	27° 	57'23
minimum elong	15270 Apr 16 12:52	8°  20'23	0°40'35	min. Earth dist.	15271 Mar 28 05:05	24° 	43'10 0.63451 AU
morning rise	15270 Apr 22 18:44	2°  46'44		inferior conj	15271 Mar 30 23:54	21° 	53'52 -0°23'58
direct	15270 Apr 25 13:11	2°  05'43		minimum elong	15271 Mar 31 00:40	21° 	51'55 0°23'55
morning max el	15270 May 01 20:46	5°  22'36	18°00'00	asc. node	15271 Apr 01 05:51	20° 	38'54
desc. node	15270 May 17 02:15	27°  02'26		morning rise	15271 Apr 06 17:29	16° 	38'20
	15270 May 18 17:18	0° 		direct	15271 Apr 09 03:37	16° 	09'42
morning set	15270 May 20 00:47	2°  08'49		morning max el	15271 Apr 15 14:23	19° 	27'11 17°46'40
					15271 Apr 23 11:47	0° 	
superior conj	15270 Jun 03 11:56	25°  02'53	-1°51'54	morning set	15271 May 02 01:30	14° 	23'07
minimum elong	15270 Jun 03 03:19	24°  01'29	1°52'07	desc. node	15271 May 03 23:02	17° 	38'02
	15270 Jun 06 09:47	0° 			15271 May 11 06:55	0° 	
max. Earth dist.	15270 Jun 06 18:13	0° 	1.45741 AU	superior conj	15271 May 14 16:59	5° 	37'48 -1°18'41
evening rise	15270 Jun 19 14:07	20°  25'28		minimum elong	15271 May 14 09:30	5° 	07'17 1°18'33
	15270 Jun 25 20:13	0° 		max. Earth dist.	15271 May 20 13:03	15° 	01'39 1.44836 AU
greatest brilliancy	15270 Jul 02 23:05	10°  41'53	-0.7m	evening rise	15271 May 30 00:47	29° 	49'11
asc. node	15270 Jul 11 07:05	22°  10'50			15271 May 30 03:37	0° 	
evening max el	15270 Jul 14 16:50	26°  00'08	19°31'11	evening max el	15271 Jun 19 14:33	0° 	
	15270 Jul 21 09:28	0° 		asc. node	15271 Jun 27 18:42	9° 	52'26 20°32'34
retrograde	15270 Jul 21 21:33	0° 		retrograde	15271 Jun 28 03:55	10° 	15'06
	15270 Jul 22 09:32	30° 		evening set	15271 Jul 05 20:29	14° 	30'04
evening set	15270 Jul 25 14:21	28°  42'00		inferior conj	15271 Jul 09 23:45	12° 	53'01
inferior conj	15270 Jul 30 23:08	22°  48'06	2°59'34	minimum elong	15271 Jul 15 05:45	6° 	47'11 3°09'06
minimum elong	15270 Jul 31 00:26	22°  43'48	2°58'45	min. Earth dist.	15271 Jul 15 06:06	6° 	46'01 3°08'17
min. Earth dist.	15270 Aug 01 05:15	21°  08'27	0.67486 AU	morning rise	15271 Jul 15 22:00	5° 	51'19 0.68489 AU
morning rise	15270 Aug 05 09:58	16°  02'25		morning set	15271 Jul 20 12:08	0° 	
direct	15270 Aug 11 07:31	13°  48'33			15271 Jul 20 23:57	30° 	
desc. node	15270 Aug 13 00:38	13°  59'54		direct	15271 Jul 25 22:08	28° 	02'55
morning max el	15270 Aug 23 12:07	21°  06'25	25°23'38	desc. node	15271 Jul 30 22:02	29° 	39'22
	15270 Aug 31 05:03	0° 		morning max el	15271 Jul 31 11:18	0° 	
	15270 Sep 20 14:04	0° 			15271 Aug 05 22:43	4° 	38'09 23°56'41
morning set	15270 Sep 28 09:58	13°  30'38		morning set	15271 Aug 25 11:45	0° 	
max. Earth dist.	15270 Oct 01 23:31	20°  03'28	1.36252 AU		15271 Sep 10 03:59	24° 	56'49
asc. node	15270 Oct 07 08:48	0° 			15271 Sep 13 02:04	0° 	
	15270 Oct 07 03:31	0° 		max. Earth dist.	15271 Sep 13 22:05	1° 	28'09 1.38594 AU
superior conj	15270 Oct 08 07:13	2°  17'27	0°08'33	superior conj	15271 Sep 21 09:31	15° 	09'55 -0°25'18
minimum elong	15270 Oct 08 06:41	2°  14'46	0°08'53	minimum elong	15271 Sep 21 11:18	15° 	18'22 0°24'50
behind sun begin	15270 Oct 08 01:21	1°  48'13		asc. node	15271 Sep 24 05:24	20° 	34'50
behind sun end	15270 Oct 08 12:01	2°  14'21			15271 Sep 29 00:55	0° 	
evening rise	15270 Oct 16 07:11	18°  34'17		evening rise	15271 Sep 30 07:36	2° 	30'58
	15270 Oct 22 01:39	0° 					
evening max el	15270 Nov 02 21:28	17°  36'33	19°56'25				

evening max el	15271 Oct 16 15:42	29° $\mathbb{M}$ 13'29	18°57'18	evening rise	15272 Sep 12 22:50	16° $\mathbb{A}$ 02'42	
	15271 Oct 17 11:06	0° $\mathbb{A}$			15272 Sep 20 14:32	0° $\mathbb{M}$	
retrograde	15271 Oct 25 09:30	3° $\mathbb{A}$ 37'36		evening max el	15272 Sep 28 20:51	11° $\mathbb{M}$ 35'26	18°20'04
desc. node	15271 Oct 26 18:30	3° $\mathbb{A}$ 31'27		retrograde	15272 Oct 06 09:29	15° $\mathbb{M}$ 25'10	
evening set	15271 Oct 27 06:40	3° $\mathbb{A}$ 26'10		evening set	15272 Oct 08 10:37	15° $\mathbb{M}$ 08'51	
	15271 Nov 03 08:47	30° $\mathbb{R}\mathbb{M}$		desc. node	15272 Oct 12 15:52	13° $\mathbb{M}$ 05'28	
inferior conj	15271 Nov 04 14:16	29° $\mathbb{M}$ 08'53	-2°47'56	inferior conj	15272 Oct 16 00:52	10° $\mathbb{M}$ 30'23	-1°04'47
minimum elong	15271 Nov 04 07:18	29° $\mathbb{M}$ 21'05	2°44'31	minimum elong	15272 Oct 15 22:26	10° $\mathbb{M}$ 35'25	1°03'14
min. Earth dist.	15271 Nov 07 12:06	27° $\mathbb{M}$ 06'54	0.56434 AU	min. Earth dist.	15272 Oct 19 07:07	7° $\mathbb{M}$ 50'42	0.58426 AU
morning rise	15271 Nov 12 05:06	24° $\mathbb{M}$ 24'21		morning rise	15272 Oct 23 06:46	5° $\mathbb{M}$ 08'48	
direct	15271 Nov 17 23:45	23° $\mathbb{M}$ 05'39		direct	15272 Oct 29 14:43	3° $\mathbb{M}$ 23'17	
	15271 Dec 01 18:16	0° $\mathbb{A}$		morning max el	15272 Nov 12 21:56	11° $\mathbb{M}$ 00'57	27°21'14
morning max el	15271 Dec 02 03:13	0° $\mathbb{A}$ 21'13	26°08'45		15272 Nov 27 15:54	0° $\mathbb{A}$	
asc. node	15271 Dec 21 06:04	27° $\mathbb{A}$ 13'08		asc. node	15272 Dec 07 03:06	16° $\mathbb{A}$ 29'08	
	15271 Dec 22 18:09	0° $\mathbb{B}$		morning set	15272 Dec 13 18:39	29° $\mathbb{A}$ 57'36	
morning set	15271 Dec 30 10:20	15° $\mathbb{B}$ 32'59			15272 Dec 13 19:06	0° $\mathbb{B}$	
	15272 Jan 05 23:28	0° $\mathbb{A}$					
				superior conj	15272 Dec 20 15:47	15° $\mathbb{B}$ 06'31	1°35'29
superior conj	15272 Jan 06 04:17	0° $\mathbb{A}$ 26'51	1°37'59	minimum elong	15272 Dec 20 14:50	15° $\mathbb{B}$ 01'14	1°36'23
minimum elong	15272 Jan 06 04:23	0° $\mathbb{A}$ 27'20	1°38'50	max. Earth dist.	15272 Dec 20 12:47	14° $\mathbb{B}$ 49'46	1.31066 AU
max. Earth dist.	15272 Jan 07 04:55	2° $\mathbb{A}$ 43'49	1.31444 AU	evening rise	15272 Dec 27 10:12	0° $\mathbb{A}$ 02'39	
evening rise	15272 Jan 13 04:46	15° $\mathbb{A}$ 43'45			15272 Dec 27 09:42	0° $\mathbb{A}$	
	15272 Jan 20 09:26	0° $\mathbb{H}$		desc. node	15273 Jan 08 14:25	23° $\mathbb{A}$ 33'30	
desc. node	15272 Jan 22 17:41	4° $\mathbb{H}$ 16'18			15273 Jan 12 13:45	0° $\mathbb{H}$	
	15272 Feb 09 01:11	0° $\mathbb{Y}$		evening max el	15273 Jan 26 06:12	17° $\mathbb{H}$ 14'10	26°46'16
evening max el	15272 Feb 14 03:52	5° $\mathbb{Y}$ 27'30	27°27'31	retrograde	15273 Feb 09 06:06	24° $\mathbb{H}$ 26'06	
retrograde	15272 Feb 28 03:12	12° $\mathbb{Y}$ 49'24		evening set	15273 Feb 15 18:59	22° $\mathbb{H}$ 39'20	
evening set	15272 Mar 05 22:52	10° $\mathbb{Y}$ 40'43		min. Earth dist.	15273 Feb 19 20:01	20° $\mathbb{H}$ 00'54	0.59065 AU
min. Earth dist.	15272 Mar 09 17:49	7° $\mathbb{Y}$ 49'25	0.61295 AU	inferior conj	15273 Feb 23 00:48	17° $\mathbb{H}$ 31'35	-3°09'19
inferior conj	15272 Mar 12 20:44	5° $\mathbb{Y}$ 01'54	-1°42'05	minimum elong	15273 Feb 23 07:54	17° $\mathbb{H}$ 17'43	3°06'25
minimum elong	15272 Mar 13 00:24	4° $\mathbb{Y}$ 53'40	1°40'35	morning rise	15273 Mar 03 00:13	12° $\mathbb{H}$ 55'12	
asc. node	15272 Mar 18 03:16	0° $\mathbb{Y}$ 58'28		direct	15273 Mar 05 00:02	12° $\mathbb{H}$ 40'50	
morning rise	15272 Mar 20 05:07	0° $\mathbb{Y}$ 04'33		asc. node	15273 Mar 05 00:43	12° $\mathbb{H}$ 40'50	
	15272 Mar 20 11:31	30° $\mathbb{R}\mathbb{H}$		morning max el	15273 Mar 12 19:15	16° $\mathbb{H}$ 32'43	18°15'20
direct	15272 Mar 22 08:41	29° $\mathbb{H}$ 44'48			15273 Mar 22 05:58	0° $\mathbb{Y}$	
	15272 Mar 24 05:13	0° $\mathbb{Y}$		morning set	15273 Mar 28 11:28	11° $\mathbb{Y}$ 27'44	
morning max el	15272 Mar 29 07:04	3° $\mathbb{Y}$ 13'54	17°51'24	desc. node	15273 Apr 06 16:17	28° $\mathbb{Y}$ 36'40	
morning set	15272 Apr 13 23:00	27° $\mathbb{Y}$ 35'18					
	15272 Apr 15 07:09	0° $\mathbb{B}$		superior conj	15273 Apr 07 00:32	29° $\mathbb{Y}$ 14'01	-0°02'50
desc. node	15272 Apr 19 19:42	8° $\mathbb{B}$ 04'50		minimum elong	15273 Apr 07 00:17	29° $\mathbb{Y}$ 12'53	0°03'10
				behind sun begin	15273 Apr 06 16:57	28° $\mathbb{Y}$ 39'39	
superior conj	15272 Apr 24 21:32	16° $\mathbb{B}$ 55'21	-0°40'11	behind sun end	15273 Apr 07 07:37	29° $\mathbb{Y}$ 46'02	
minimum elong	15272 Apr 24 17:52	16° $\mathbb{B}$ 39'38	0°40'15		15273 Apr 07 10:43	0° $\mathbb{B}$	
max. Earth dist.	15272 May 02 04:26	29° $\mathbb{B}$ 06'08	1.43293 AU	max. Earth dist.	15273 Apr 14 14:50	12° $\mathbb{B}$ 32'11	1.41281 AU
	15272 May 02 17:40	0° $\mathbb{I}$		evening rise	15273 Apr 19 07:19	20° $\mathbb{B}$ 19'20	
evening rise	15272 May 08 18:55	9° $\mathbb{I}$ 39'02			15273 Apr 25 09:23	0° $\mathbb{I}$	
	15272 May 22 06:48	0° $\mathbb{B}$			15273 May 16 13:11	0° $\mathbb{B}$	
evening max el	15272 Jun 09 14:45	23° $\mathbb{B}$ 44'40	21°45'36	evening max el	15273 May 23 06:29	7° $\mathbb{B}$ 37'15	23°05'40
asc. node	15272 Jun 14 00:50	27° $\mathbb{B}$ 26'56		asc. node	15273 May 31 21:52	13° $\mathbb{B}$ 29'52	
retrograde	15272 Jun 18 18:51	29° $\mathbb{B}$ 05'53		retrograde	15273 Jun 02 15:10	13° $\mathbb{B}$ 42'52	
evening set	15272 Jun 23 09:09	27° $\mathbb{B}$ 11'56		evening set	15273 Jun 07 16:54	11° $\mathbb{B}$ 33'56	
inferior conj	15272 Jun 28 14:58	20° $\mathbb{B}$ 55'36	3°07'17	min. Earth dist.	15273 Jun 12 14:41	5° $\mathbb{B}$ 44'18	0.69036 AU
minimum elong	15272 Jun 28 14:21	20° $\mathbb{B}$ 57'45	3°06'21	inferior conj	15273 Jun 13 00:48	5° $\mathbb{B}$ 09'15	2°54'56
min. Earth dist.	15272 Jun 28 17:51	20° $\mathbb{B}$ 45'35	0.69006 AU	minimum elong	15273 Jun 12 23:22	5° $\mathbb{B}$ 14'14	2°53'47
morning rise	15272 Jul 03 19:23	14° $\mathbb{B}$ 39'29			15273 Jun 17 03:44	30° $\mathbb{R}\mathbb{I}$	
direct	15272 Jul 08 16:58	12° $\mathbb{B}$ 33'52		morning rise	15273 Jun 18 05:46	29° $\mathbb{I}$ 00'35	
desc. node	15272 Jul 16 19:23	16° $\mathbb{B}$ 44'05		direct	15273 Jun 22 14:56	27° $\mathbb{I}$ 14'12	
morning max el	15272 Jul 18 10:56	18° $\mathbb{B}$ 18'31	22°27'39		15273 Jun 28 18:56	0° $\mathbb{B}$	
	15272 Jul 28 05:03	0° $\mathbb{Q}$		morning max el	15273 Jul 01 03:33	2° $\mathbb{B}$ 08'22	21°04'21
	15272 Aug 17 14:10	0° $\mathbb{P}$		desc. node	15273 Jul 03 16:37	4° $\mathbb{B}$ 51'53	
morning set	15272 Aug 20 22:50	5° $\mathbb{P}$ 23'18			15273 Jul 22 00:52	0° $\mathbb{Q}$	
max. Earth dist.	15272 Aug 25 22:42	13° $\mathbb{P}$ 38'42	1.40963 AU	morning set	15273 Jul 31 17:59	14° $\mathbb{Q}$ 49'32	
				max. Earth dist.	15273 Aug 08 04:51	26° $\mathbb{Q}$ 41'12	1.43083 AU
					15273 Aug 10 05:33	0° $\mathbb{P}$	
superior conj	15272 Sep 02 19:05	27° $\mathbb{P}$ 16'57	-1°01'30				
minimum elong	15272 Sep 02 23:55	27° $\mathbb{P}$ 38'37	1°00'54				
	15272 Sep 04 07:17	0° $\mathbb{A}$		superior conj	15273 Aug 15 07:31	8° $\mathbb{P}$ 28'38	-1°36'03
asc. node	15272 Sep 10 01:57	10° $\mathbb{A}$ 39'27		minimum elong	15273 Aug 15 14:53	8° $\mathbb{P}$ 59'53	1°35'38

































































































































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asc. node	15273 Aug 27 22:31	0° $\mathbb{A}$ 35'43		asc. node	15274 Aug 14 19:08	20° $\mathbb{M}$ 19'52	
	15273 Aug 27 14:31	0° $\mathbb{A}$			15274 Aug 20 19:19	0° $\mathbb{A}$	
evening max el	15273 Sep 12 08:42	24° $\mathbb{A}$ 32'11	18°03'11	evening max el	15274 Aug 26 23:21	7° $\mathbb{A}$ 54'41	18°05'12
retrograde	15273 Sep 19 02:34	28° $\mathbb{A}$ 00'27		retrograde	15274 Sep 02 08:36	11° $\mathbb{A}$ 15'00	
evening set	15273 Sep 21 10:59	27° $\mathbb{A}$ 35'11		evening set	15274 Sep 05 01:28	10° $\mathbb{A}$ 37'17	
inferior conj	15273 Sep 28 07:56	22° $\mathbb{A}$ 36'38	0°22'47	inferior conj	15274 Sep 11 07:49	5° $\mathbb{A}$ 20'42	1°29'53
minimum elong	15273 Sep 28 08:39	22° $\mathbb{A}$ 34'55	0°22'46	minimum elong	15274 Sep 11 09:58	5° $\mathbb{A}$ 14'53	1°29'09
desc. node	15273 Sep 29 13:19	21° $\mathbb{A}$ 26'24		min. Earth dist.	15274 Sep 14 01:24	2° $\mathbb{A}$ 25'17	0.62963 AU
min. Earth dist.	15273 Oct 01 11:23	19° $\mathbb{A}$ 38'36	0.60694 AU	desc. node	15274 Sep 16 10:48	0° $\mathbb{A}$ 08'16	
morning rise	15273 Oct 05 03:14	16° $\mathbb{A}$ 44'57			15274 Sep 16 14:40	30° $\mathbb{R}$ $\mathbb{M}$	
direct	15273 Oct 11 18:21	14° $\mathbb{A}$ 34'43		morning rise	15274 Sep 17 16:16	29° $\mathbb{M}$ 09'08	
morning max el	15273 Oct 26 00:22	22° $\mathbb{A}$ 28'12	27°56'10	direct	15274 Sep 24 08:23	26° $\mathbb{M}$ 40'55	
	15273 Nov 01 16:36	0° $\mathbb{M}$			15274 Oct 02 22:10	0° $\mathbb{A}$	
	15273 Nov 20 19:40	0° $\mathbb{A}$		morning max el	15274 Oct 08 08:14	4° $\mathbb{A}$ 40'40	27°52'05
asc. node	15273 Nov 24 00:02	6° $\mathbb{A}$ 06'37			15274 Oct 27 10:12	0° $\mathbb{M}$	
morning set	15273 Nov 27 22:20	14° $\mathbb{A}$ 05'33		asc. node	15274 Nov 10 20:53	25° $\mathbb{M}$ 59'12	
max. Earth dist.	15273 Dec 03 19:35	26° $\mathbb{A}$ 48'26	1.31225 AU	morning set	15274 Nov 11 19:10	27° $\mathbb{M}$ 51'25	
					15274 Nov 12 20:22	0° $\mathbb{A}$	
superior conj	15273 Dec 05 02:38	29° $\mathbb{A}$ 40'52	1°27'03	max. Earth dist.	15274 Nov 16 21:30	8° $\mathbb{A}$ 31'04	1.31947 AU
minimum elong	15273 Dec 05 00:51	29° $\mathbb{A}$ 30'56	1°27'49				
	15273 Dec 05 06:04	0° $\mathbb{B}$		superior conj	15274 Nov 19 10:56	14° $\mathbb{A}$ 04'32	1°12'39
evening rise	15273 Dec 11 19:12	14° $\mathbb{B}$ 28'52		minimum elong	15274 Nov 19 08:40	13° $\mathbb{A}$ 52'04	1°13'13
	15273 Dec 19 10:07	0° $\mathbb{A}$		evening rise	15274 Nov 26 05:57	28° $\mathbb{A}$ 57'44	
desc. node	15273 Dec 26 11:17	12° $\mathbb{A}$ 12'15			15274 Nov 26 17:32	0° $\mathbb{B}$	
evening max el	15274 Jan 08 00:19	28° $\mathbb{A}$ 08'24	25°32'16	desc. node	15274 Dec 13 08:14	29° $\mathbb{B}$ 57'49	
	15274 Jan 10 02:28	0° $\mathbb{A}$			15274 Dec 13 08:52	0° $\mathbb{A}$	
retrograde	15274 Jan 21 21:50	5° $\mathbb{A}$ 08'15		evening max el	15274 Dec 20 11:24	8° $\mathbb{A}$ 19'46	23°55'19
evening set	15274 Jan 27 18:56	3° $\mathbb{A}$ 49'02		retrograde	15275 Jan 03 00:05	15° $\mathbb{A}$ 02'39	
min. Earth dist.	15274 Feb 01 12:59	1° $\mathbb{A}$ 08'55	0.56998 AU	evening set	15275 Jan 07 19:45	14° $\mathbb{A}$ 12'14	
	15274 Feb 03 06:02	30° $\mathbb{R}$ $\mathbb{A}$		min. Earth dist.	15275 Jan 13 22:51	11° $\mathbb{A}$ 12'47	0.55390 AU
inferior conj	15274 Feb 04 08:53	29° $\mathbb{A}$ 14'18	-4°35'32	inferior conj	15275 Jan 15 20:05	10° $\mathbb{A}$ 05'17	-5°41'04
minimum elong	15274 Feb 04 18:06	28° $\mathbb{A}$ 58'42	4°32'25	minimum elong	15275 Jan 16 02:40	9° $\mathbb{A}$ 55'27	5°39'22
morning rise	15274 Feb 12 20:07	24° $\mathbb{A}$ 59'32		morning rise	15275 Jan 24 11:16	6° $\mathbb{A}$ 08'55	
direct	15274 Feb 14 21:28	24° $\mathbb{A}$ 46'49		direct	15275 Jan 26 23:31	5° $\mathbb{A}$ 52'59	
asc. node	15274 Feb 19 22:09	26° $\mathbb{A}$ 07'58		morning max el	15275 Feb 06 13:42	11° $\mathbb{A}$ 00'01	20°08'14
morning max el	15274 Feb 23 22:52	29° $\mathbb{A}$ 12'17	19°00'18	asc. node	15275 Feb 06 19:34	11° $\mathbb{A}$ 14'21	
	15274 Feb 24 17:39	0° $\mathbb{A}$			15275 Feb 19 10:22	0° $\mathbb{A}$	
morning set	15274 Mar 12 10:21	25° $\mathbb{A}$ 47'10		morning set	15275 Feb 24 16:03	10° $\mathbb{A}$ 22'27	
	15274 Mar 14 13:35	0° $\mathbb{Y}$					
superior conj	15274 Mar 20 21:53	12° $\mathbb{Y}$ 22'07	0°29'52	superior conj	15275 Mar 04 09:04	26° $\mathbb{A}$ 06'30	0°56'22
minimum elong	15274 Mar 20 23:41	12° $\mathbb{Y}$ 30'46	0°29'28	minimum elong	15275 Mar 04 11:39	26° $\mathbb{A}$ 19'24	0°56'09
desc. node	15274 Mar 24 12:52	19° $\mathbb{Y}$ 10'20			15275 Mar 06 08:05	0° $\mathbb{Y}$	
max. Earth dist.	15274 Mar 27 21:24	25° $\mathbb{Y}$ 15'20	1.39027 AU	max. Earth dist.	15275 Mar 10 04:10	7° $\mathbb{Y}$ 24'10	1.36776 AU
	15274 Mar 30 14:13	0° $\mathbb{B}$		desc. node	15275 Mar 11 09:25	9° $\mathbb{Y}$ 41'20	
evening rise	15274 Mar 31 17:05	1° $\mathbb{B}$ 55'41		evening rise	15275 Mar 13 22:20	14° $\mathbb{Y}$ 20'36	
	15274 Apr 18 14:59	0° $\mathbb{I}$			15275 Mar 23 02:09	0° $\mathbb{B}$	
evening max el	15274 May 05 20:17	21° $\mathbb{I}$ 31'46	24°26'39	evening max el	15275 Apr 13 09:17	0° $\mathbb{I}$	
retrograde	15274 May 17 08:12	28° $\mathbb{I}$ 15'24			15275 Apr 18 09:54	5° $\mathbb{I}$ 25'23	25°41'30
asc. node	15274 May 18 19:02	28° $\mathbb{I}$ 06'20		retrograde	15275 Apr 30 20:40	12° $\mathbb{I}$ 35'53	
evening set	15274 May 22 21:25	25° $\mathbb{I}$ 54'25		asc. node	15275 May 05 16:18	11° $\mathbb{I}$ 01'08	
min. Earth dist.	15274 May 27 10:30	20° $\mathbb{I}$ 41'36	0.68589 AU	evening set	15275 May 06 21:00	10° $\mathbb{I}$ 06'47	
inferior conj	15274 May 28 09:24	19° $\mathbb{I}$ 24'37	2°32'11	min. Earth dist.	15275 May 11 03:00	5° $\mathbb{I}$ 30'12	0.67680 AU
minimum elong	15274 May 28 07:24	19° $\mathbb{I}$ 31'21	2°30'50	inferior conj	15275 May 12 14:44	3° $\mathbb{I}$ 36'16	1°58'34
morning rise	15274 Jun 02 17:30	13° $\mathbb{I}$ 24'38		minimum elong	15275 May 12 12:34	3° $\mathbb{I}$ 43'10	1°57'08
direct	15274 Jun 06 14:48	11° $\mathbb{I}$ 58'13			15275 May 15 15:02	30° $\mathbb{R}$ $\mathbb{B}$	
morning max el	15274 Jun 14 02:51	16° $\mathbb{I}$ 09'18	19°52'36	morning rise	15275 May 18 04:41	27° $\mathbb{B}$ 46'20	
desc. node	15274 Jun 20 13:44	23° $\mathbb{I}$ 46'15		direct	15275 May 21 14:51	26° $\mathbb{B}$ 39'11	
	15274 Jun 25 02:03	0° $\mathbb{B}$			15275 May 28 01:37	0° $\mathbb{I}$	
morning set	15274 Jul 10 22:11	23° $\mathbb{B}$ 40'09		morning max el	15275 May 28 09:28	0° $\mathbb{I}$ 18'49	18°55'48
	15274 Jul 15 00:37	0° $\mathbb{Q}$		desc. node	15275 Jun 07 10:45	13° $\mathbb{I}$ 14'04	
max. Earth dist.	15274 Jul 21 17:24	10° $\mathbb{Q}$ 29'55	1.44722 AU	greatest brilliancy	15275 Jun 10 18:20	18° $\mathbb{I}$ 10'53	-0.7m
					15275 Jun 18 11:13	0° $\mathbb{B}$	
superior conj	15274 Jul 26 20:30	18° $\mathbb{Q}$ 42'10	-2°02'39	morning set	15275 Jun 20 06:29	2° $\mathbb{B}$ 47'22	
minimum elong	15274 Jul 27 03:12	19° $\mathbb{Q}$ 09'14	2°02'56	max. Earth dist.	15275 Jul 04 11:10	24° $\mathbb{B}$ 51'38	1.45705 AU
	15274 Aug 02 17:54	0° $\mathbb{M}$					
				superior conj	15275 Jul 06 13:08	28° $\mathbb{B}$ 07'19	-2°13'58









































































































































































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	15275 Jul 07 17:50	0°♄		greatest brilliancy	15276 Jul 11 15:19	18°♄48'00	-0.8m
evening rise	15275 Jul 21 15:45	22°♄11'04		asc. node	15276 Jul 18 12:33	28°♄48'21	
	15275 Jul 26 11:46	0°♄			15276 Jul 19 10:00	0°♄	
asc. node	15275 Aug 01 15:49	9°♄46'26		evening max el	15276 Jul 23 23:59	5°♄22'12	19°02'27
evening max el	15275 Aug 10 13:23	21°♄34'03	18°25'15	retrograde	15276 Jul 30 19:34	9°♄07'09	
retrograde	15275 Aug 16 23:26	25°♄00'04		evening set	15276 Aug 03 06:46	7°♄57'35	
evening set	15275 Aug 20 01:15	24°♄07'14		inferior conj	15276 Aug 08 18:24	2°♄10'50	2°48'21
inferior conj	15275 Aug 25 20:30	18°♄34'41	2°17'30	minimum elong	15276 Aug 08 20:11	2°♄05'06	2°47'31
minimum elong	15275 Aug 25 22:50	18°♄27'45	2°16'37		15276 Aug 10 11:18	30°♄♄	
min. Earth dist.	15275 Aug 28 00:51	15°♄59'38	0.65010 AU	min. Earth dist.	15276 Aug 10 08:31	0°♄08'45	0.66702 AU
morning rise	15275 Aug 31 19:05	12°♄12'25		morning rise	15276 Aug 14 08:53	25°♄44'51	
desc. node	15275 Sep 03 08:16	10°♄32'05		desc. node	15276 Aug 20 05:45	23°♄08'04	
direct	15275 Sep 07 06:44	9°♄35'20		direct	15276 Aug 20 12:14	23°♄07'47	
morning max el	15275 Sep 20 19:00	17°♄29'43	27°13'48		15276 Sep 01 13:01	0°♄	
	15275 Oct 01 06:20	0°♄		morning max el	15276 Sep 02 06:27	0°♄43'19	26°09'10
	15275 Oct 20 07:26	0°♄			15276 Sep 24 05:54	0°♄	
morning set	15275 Oct 26 06:31	11°♄09'36		morning set	15276 Oct 08 04:59	23°♄51'47	
asc. node	15275 Oct 28 17:39	16°♄02'02			15276 Oct 11 10:51	0°♄	
max. Earth dist.	15275 Oct 30 15:26	19°♄54'26	1.33230 AU	max. Earth dist.	15276 Oct 11 23:40	1°♄01'58	1.35030 AU
				asc. node	15276 Oct 14 14:19	6°♄10'06	
superior conj	15275 Nov 03 14:34	28°♄12'16	0°52'16	superior conj	15276 Oct 17 10:53	11°♄56'42	0°26'05
minimum elong	15275 Nov 03 12:20	28°♄00'25	0°52'39	minimum elong	15276 Oct 17 09:28	11°♄49'25	0°26'22
	15275 Nov 04 10:46	0°♄		evening rise	15276 Oct 25 01:11	27°♄45'27	
evening rise	15275 Nov 10 16:38	13°♄25'13			15276 Oct 26 03:10	0°♄	
	15275 Nov 18 23:42	0°♄		evening max el	15276 Nov 12 17:57	28°♄38'16	20°40'19
desc. node	15275 Nov 30 05:17	16°♄31'32			15276 Nov 14 05:05	0°♄	
evening max el	15275 Dec 01 22:07	18°♄17'26	22°12'23	desc. node	15276 Nov 16 02:27	1°♄28'59	
retrograde	15275 Dec 14 14:02	24°♄33'29		retrograde	15276 Nov 24 00:21	4°♄14'18	
evening set	15275 Dec 18 02:11	24°♄06'22		evening set	15276 Nov 26 09:56	4°♄00'11	
min. Earth dist.	15275 Dec 26 04:39	20°♄28'36	0.54522 AU	inferior conj	15276 Dec 05 06:32	0°♄06'34	-5°17'51
inferior conj	15275 Dec 26 15:16	20°♄13'45	-5°59'56	minimum elong	15276 Dec 04 21:21	0°♄19'49	5°15'00
minimum elong	15275 Dec 26 13:21	20°♄16'25	5°58'57		15276 Dec 05 11:05	30°♄♄	
morning rise	15276 Jan 04 01:31	16°♄26'37		min. Earth dist.	15276 Dec 06 10:13	29°♄26'39	0.54566 AU
direct	15276 Jan 07 10:46	16°♄01'04		morning rise	15276 Dec 13 08:41	26°♄10'30	
morning max el	15276 Jan 19 13:34	21°♄51'16	21°38'51	direct	15276 Dec 17 18:31	25°♄28'47	
asc. node	15276 Jan 24 16:55	27°♄43'51			15276 Dec 28 19:43	0°♄	
	15276 Jan 26 08:16	0°♄		morning max el	15276 Dec 31 01:40	1°♄58'03	23°25'44
morning set	15276 Feb 09 01:51	25°♄05'47		asc. node	15277 Jan 10 14:10	15°♄17'57	
	15276 Feb 11 09:35	0°♄			15277 Jan 18 19:27	0°♄	
superior conj	15276 Feb 16 06:20	10°♄16'52	1°16'16	morning set	15277 Jan 23 13:33	9°♄50'14	
minimum elong	15276 Feb 16 08:45	10°♄29'30	1°16'23	superior conj	15277 Jan 30 10:33	24°♄44'03	1°29'39
max. Earth dist.	15276 Feb 20 15:45	19°♄16'52	1.34743 AU	minimum elong	15277 Jan 30 12:15	24°♄53'13	1°30'07
evening rise	15276 Feb 24 19:42	27°♄24'40			15277 Feb 01 21:35	0°♄	
desc. node	15276 Feb 26 06:00	0°♄06'07		max. Earth dist.	15277 Feb 02 10:30	1°♄08'15	1.33081 AU
	15276 Feb 26 04:41	0°♄		evening rise	15277 Feb 07 05:37	10°♄58'34	
	15276 Mar 15 09:43	0°♄		desc. node	15277 Feb 12 02:36	20°♄19'56	
evening max el	15276 Mar 30 23:46	19°♄11'35	26°42'42		15277 Feb 17 13:24	0°♄	
retrograde	15276 Apr 13 03:39	26°♄37'17			15277 Mar 10 22:20	0°♄	
evening set	15276 Apr 19 13:47	24°♄04'57		evening max el	15277 Mar 13 12:58	2°♄39'42	27°22'58
asc. node	15276 Apr 21 13:37	22°♄15'47		retrograde	15277 Mar 27 04:24	10°♄10'39	
min. Earth dist.	15276 Apr 23 14:03	20°♄03'08	0.66334 AU	evening set	15277 Apr 02 21:41	7°♄41'29	
inferior conj	15276 Apr 25 14:37	17°♄39'23	1°13'17	min. Earth dist.	15277 Apr 06 17:41	4°♄11'30	0.64592 AU
minimum elong	15276 Apr 25 12:54	17°♄44'29	1°12'03	asc. node	15277 Apr 08 10:59	2°♄20'38	
morning rise	15276 May 01 13:11	12°♄01'15		inferior conj	15277 Apr 09 06:28	1°♄27'40	0°15'21
direct	15276 May 04 13:09	11°♄11'24		minimum elong	15277 Apr 09 06:02	1°♄28'50	0°14'46
morning max el	15276 May 10 22:19	14°♄32'42	18°15'28	transit middle	15277 Apr 09 06:02	1°♄28'50	0°14'46
	15276 May 22 08:10	0°♄		transit begin	15277 Apr 09 04:51	1°♄32'01	
desc. node	15276 May 24 07:40	3°♄06'27		transit end	15277 Apr 09 07:12	1°♄25'39	
morning set	15276 May 30 12:46	13°♄00'13			15277 Apr 10 15:30	30°♄♄	
	15276 Jun 10 06:03	0°♄		morning rise	15277 Apr 15 16:25	26°♄03'28	
superior conj	15276 Jun 14 21:43	7°♄17'23	-2°05'19	direct	15277 Apr 18 07:12	25°♄28'08	
minimum elong	15276 Jun 14 15:05	6°♄51'28	2°05'55	morning max el	15277 Apr 24 15:04	28°♄43'35	17°52'15
max. Earth dist.	15276 Jun 16 07:39	9°♄29'47	1.45948 AU		15277 Apr 25 20:27	0°♄	
	15276 Jun 29 11:44	0°♄		desc. node	15277 May 11 04:29	23°♄16'40	

morning set	15277 May 11 22:50	24°♄33'11		morning set	15278 Apr 24 09:08	7°♄14'23	
	15277 May 15 05:24	0°♄		desc. node	15278 Apr 28 01:12	13°♄38'45	
superior conj	15277 May 25 15:39	16°♄58'32	-1°38'59	superior conj	15278 May 06 06:31	27°♄38'50	-1°02'34
minimum elong	15277 May 25 06:55	16°♄23'42	1°38'59	minimum elong	15278 May 06 00:34	27°♄14'02	1°02'29
max. Earth dist.	15277 May 30 03:39	24°♄06'21	1.45439 AU		15278 May 07 16:35	0°♄	
	15277 Jun 02 22:05	0°♄		max. Earth dist.	15278 May 12 20:46	8°♄25'02	1.44241 AU
evening rise	15277 Jun 10 12:50	11°♄44'52		evening rise	15278 May 21 00:49	21°♄15'20	
	15277 Jun 22 15:17	0°♄			15278 May 26 18:33	0°♄	
greatest brilliancy	15277 Jun 25 07:06	3°♄53'18	-0.6m		15278 Jun 17 07:37	0°♄	
asc. node	15277 Jul 05 09:21	17°♄17'17		evening max el	15278 Jun 20 04:28	3°♄06'35	21°02'25
evening max el	15277 Jul 07 05:13	19°♄14'03	19°55'34	asc. node	15278 Jun 22 06:14	5°♄01'29	
retrograde	15277 Jul 14 18:13	23°♄30'04		retrograde	15278 Jun 28 17:11	8°♄02'40	
evening set	15277 Jul 18 15:21	22°♄03'06		evening set	15278 Jul 03 00:58	6°♄18'30	
inferior conj	15277 Jul 23 22:35	16°♄03'42	3°05'03	inferior conj	15278 Jul 08 06:36	0°♄07'55	3°09'39
minimum elong	15277 Jul 23 23:29	16°♄00'39	3°04'16	minimum elong	15278 Jul 08 06:31	0°♄08'10	3°08'47
min. Earth dist.	15277 Jul 24 22:41	14°♄42'20	0.67967 AU		15278 Jul 08 08:52	30°♄	
morning rise	15277 Jul 29 07:13	9°♄38'59		min. Earth dist.	15278 Jul 08 17:09	29°♄31'16	0.68767 AU
direct	15277 Aug 03 23:51	7°♄09'34		morning rise	15278 Jul 13 11:48	23°♄47'52	
desc. node	15277 Aug 07 03:09	7°♄47'41		direct	15278 Jul 18 16:33	21°♄32'07	
morning max el	15277 Aug 15 17:23	14°♄11'15	24°47'29	desc. node	15278 Jul 25 00:31	24°♄06'33	
	15277 Aug 28 15:03	0°♄		morning max el	15278 Jul 29 04:22	27°♄47'02	23°18'27
	15277 Sep 17 01:54	0°♄			15278 Jul 31 06:36	0°♄	
morning set	15277 Sep 20 10:41	5°♄49'15			15278 Aug 22 06:15	0°♄	
max. Earth dist.	15277 Sep 24 00:01	12°♄11'46	1.37227 AU	morning set	15278 Sep 01 19:14	16°♄51'21	
				max. Earth dist.	15278 Sep 05 22:12	23°♄51'43	1.39614 AU
					15278 Sep 09 10:06	0°♄	
superior conj	15277 Sep 30 20:48	25°♄10'40	-0°05'23	superior conj	15278 Sep 13 16:31	7°♄45'12	-0°40'35
minimum elong	15277 Sep 30 21:08	25°♄12'17	0°05'01	minimum elong	15278 Sep 13 19:33	7°♄59'14	0°40'02
behind sun begin	15277 Sep 30 14:48	24°♄41'25		asc. node	15278 Sep 18 07:32	16°♄27'32	
behind sun end	15277 Oct 01 03:28	25°♄43'13		evening rise	15278 Sep 23 02:18	25°♄40'00	
asc. node	15277 Oct 01 10:57	26°♄19'53			15278 Sep 25 08:25	0°♄	
	15277 Oct 03 07:31	0°♄		evening max el	15278 Oct 09 03:39	21°♄44'13	18°38'55
evening rise	15277 Oct 09 05:21	11°♄52'51		retrograde	15278 Oct 17 07:46	25°♄51'55	
	15277 Oct 18 21:01	0°♄		evening set	15278 Oct 19 05:59	25°♄38'57	
evening max el	15277 Oct 26 04:11	9°♄46'25	19°28'29	desc. node	15278 Oct 20 20:59	25°♄09'06	
desc. node	15277 Nov 02 23:40	14°♄25'39		inferior conj	15278 Oct 27 06:33	21°♄13'11	-2°02'58
retrograde	15277 Nov 04 19:20	14°♄35'39		minimum elong	15278 Oct 27 01:34	21°♄22'31	2°00'17
evening set	15277 Nov 06 17:06	14°♄25'09		min. Earth dist.	15278 Oct 30 09:50	18°♄52'48	0.57229 AU
inferior conj	15277 Nov 15 08:36	10°♄19'00	-3°48'39	morning rise	15278 Nov 03 17:49	16°♄12'28	
minimum elong	15277 Nov 14 23:23	10°♄33'51	3°44'41	direct	15278 Nov 09 19:03	14°♄41'59	
min. Earth dist.	15277 Nov 17 19:09	8°♄44'45	0.55528 AU	morning max el	15278 Nov 24 00:40	22°♄08'16	26°43'42
morning rise	15277 Nov 23 03:35	5°♄54'51			15278 Nov 30 23:31	0°♄	
direct	15277 Nov 28 11:34	4°♄50'47		asc. node	15278 Dec 15 08:25	22°♄41'16	
morning max el	15277 Dec 12 10:44	11°♄52'18	25°13'42		15278 Dec 19 03:02	0°♄	
	15277 Dec 26 07:08	0°♄		morning set	15278 Dec 23 11:25	9°♄02'56	
asc. node	15277 Dec 28 11:20	3°♄41'14					
morning set	15278 Jan 08 01:19	24°♄30'46		superior conj	15278 Dec 30 06:16	24°♄02'00	1°37'39
	15278 Jan 10 13:45	0°♄		minimum elong	15278 Dec 30 05:54	23°♄59'57	1°38'33
superior conj	15278 Jan 14 19:13	9°♄21'05	1°36'42	max. Earth dist.	15278 Dec 30 18:52	25°♄12'27	1.31213 AU
minimum elong	15278 Jan 14 19:55	9°♄24'58	1°37'27		15279 Jan 01 22:34	0°♄	
max. Earth dist.	15278 Jan 16 12:16	13°♄06'50	1.31890 AU	evening rise	15279 Jan 06 03:36	9°♄08'16	
evening rise	15278 Jan 22 01:07	24°♄55'07		desc. node	15279 Jan 16 19:55	29°♄52'22	
	15278 Jan 24 13:20	0°♄			15279 Jan 16 21:39	0°♄	
desc. node	15278 Jan 29 23:13	10°♄17'31		evening max el	15279 Feb 06 06:24	27°♄55'01	27°14'25
	15278 Feb 11 02:18	0°♄			15279 Feb 08 14:35	0°♄	
evening max el	15278 Feb 23 23:56	15°♄37'59	27°35'20	retrograde	15279 Feb 20 06:44	5°♄13'16	
retrograde	15278 Mar 09 21:57	23°♄05'39		evening set	15279 Feb 27 00:12	3°♄13'22	
evening set	15278 Mar 16 18:09	20°♄47'14		min. Earth dist.	15279 Mar 02 20:51	0°♄28'42	0.60335 AU
min. Earth dist.	15278 Mar 20 12:17	17°♄43'53	0.62545 AU		15279 Mar 03 10:49	30°♄	
inferior conj	15278 Mar 23 11:14	14°♄53'03	-0°55'42	inferior conj	15279 Mar 06 01:27	27°♄46'51	-2°18'22
minimum elong	15278 Mar 23 13:06	14°♄48'30	0°55'04	minimum elong	15279 Mar 06 06:34	27°♄35'59	2°16'13
asc. node	15278 Mar 26 08:24	12°♄15'17		asc. node	15279 Mar 13 05:49	23°♄05'47	
morning rise	15278 Mar 30 10:57	9°♄45'12		morning rise	15279 Mar 13 16:20	22°♄57'58	
direct	15278 Apr 01 17:56	9°♄20'54		direct	15279 Mar 15 17:42	22°♄41'02	
morning max el	15278 Apr 08 08:45	12°♄42'11	17°46'30	morning max el	15279 Mar 22 24:00	26°♄18'56	17°59'07
	15278 Apr 20 05:22	0°♄					



































































































































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morning set	15279 Apr 07 13:43	20°♿46'12		morning set	15280 Mar 21 07:08	4°♿51'47	
	15279 Apr 12 14:43	0°♿					
desc. node	15279 Apr 14 21:52	4°♿08'32		superior conj	15280 Mar 30 08:21	22°♿04'38	0°11'45
				minimum elong	15280 Mar 30 09:09	22°♿08'22	0°11'21
superior conj	15279 Apr 17 21:02	9°♿23'46	-0°23'57	behind sun begin	15280 Mar 30 04:07	21°♿45'06	
minimum elong	15279 Apr 17 18:57	9°♿14'39	0°24'08	behind sun end	15280 Mar 30 14:10	22°♿31'35	
max. Earth dist.	15279 Apr 25 09:49	22°♿13'47	1.42484 AU	desc. node	15280 Mar 31 18:27	24°♿41'32	
	15279 Apr 30 04:28	0°♿			15280 Apr 03 17:04	0°♿	
evening rise	15279 May 01 01:58	1°♿25'44		max. Earth dist.	15280 Apr 06 18:40	5°♿22'50	1.40343 AU
	15279 May 20 05:32	0°♿		evening rise	15280 Apr 10 23:27	12°♿30'07	
evening max el	15279 Jun 02 22:34	16°♿59'39	22°19'09		15280 Apr 22 00:36	0°♿	
asc. node	15279 Jun 09 03:13	21°♿46'33			15280 May 14 16:13	0°♿	
retrograde	15279 Jun 12 14:47	22°♿39'46		evening max el	15280 May 15 13:21	0°♿53'39	23°40'25
evening set	15279 Jun 17 09:52	20°♿39'24		retrograde	15280 May 26 09:43	7°♿15'49	
inferior conj	15279 Jun 22 16:20	14°♿19'25	3°03'20	asc. node	15280 May 26 00:19	7°♿15'09	
minimum elong	15279 Jun 22 15:21	14°♿22'52	3°02'17	evening set	15280 May 31 16:27	5°♿01'18	
min. Earth dist.	15279 Jun 22 13:44	14°♿28'29	0.69084 AU		15280 Jun 05 00:48	30°♿♿	
morning rise	15279 Jun 27 20:39	8°♿06'12		min. Earth dist.	15280 Jun 05 10:20	29°♿27'34	0.68909 AU
direct	15279 Jul 02 13:02	6°♿08'17		inferior conj	15280 Jun 06 01:53	28°♿34'17	2°46'36
morning max el	15279 Jul 11 17:56	11°♿30'46	21°51'00	minimum elong	15280 Jun 06 00:10	28°♿40'10	2°45'20
desc. node	15279 Jul 11 21:49	11°♿40'31		morning rise	15280 Jun 11 07:52	22°♿29'20	
	15279 Jul 26 08:41	0°♿		direct	15280 Jun 15 12:00	20°♿51'21	
morning set	15279 Aug 13 03:38	26°♿51'07		morning max el	15280 Jun 23 13:12	25°♿25'24	20°32'13
	15279 Aug 15 02:45	0°♿		desc. node	15280 Jun 27 19:01	0°♿09'57	
max. Earth dist.	15279 Aug 19 00:46	6°♿24'06	1.41918 AU		15280 Jun 27 15:45	0°♿	
					15280 Jul 18 17:24	0°♿	
superior conj	15279 Aug 26 17:38	19°♿30'22	-1°16'42	morning set	15280 Jul 22 14:47	5°♿58'07	
minimum elong	15279 Aug 26 23:44	19°♿57'01	1°16'06	max. Earth dist.	15280 Jul 31 10:24	19°♿50'42	1.43855 AU
	15279 Sep 01 14:55	0°♿					
asc. node	15279 Sep 05 04:07	6°♿29'21		superior conj	15280 Aug 06 20:16	0°♿18'03	-1°48'44
evening rise	15279 Sep 06 12:23	8°♿57'43		minimum elong	15280 Aug 07 03:57	0°♿49'53	1°48'33
	15279 Sep 18 20:39	0°♿			15280 Aug 06 15:55	0°♿	
evening max el	15279 Sep 22 12:15	4°♿22'46	18°10'30	evening rise	15280 Aug 19 07:02	21°♿34'53	
retrograde	15279 Sep 29 15:21	8°♿01'17		asc. node	15280 Aug 22 00:43	26°♿21'43	
evening set	15279 Oct 01 19:32	7°♿41'29			15280 Aug 24 03:05	0°♿	
desc. node	15279 Oct 07 18:24	4°♿02'31		evening max el	15280 Sep 05 01:47	17°♿32'19	18°01'44
inferior conj	15279 Oct 09 02:11	2°♿54'13	-0°25'11	retrograde	15280 Sep 11 14:43	20°♿55'37	
minimum elong	15279 Oct 09 01:18	2°♿56'08	0°24'24	evening set	15280 Sep 14 02:42	20°♿25'21	
	15279 Oct 12 10:28	30°♿♿		inferior conj	15280 Sep 20 16:59	15°♿18'29	0°53'45
min. Earth dist.	15279 Oct 12 08:24	0°♿04'18	0.59381 AU	minimum elong	15280 Sep 20 18:30	15°♿14'39	0°53'20
morning rise	15279 Oct 16 03:45	27°♿19'04		min. Earth dist.	15280 Sep 23 16:41	12°♿19'27	0.61674 AU
direct	15279 Oct 22 15:46	25°♿22'26		desc. node	15280 Sep 23 15:52	12°♿21'25	
	15279 Nov 02 10:29	0°♿		morning rise	15280 Sep 27 07:39	9°♿17'10	
morning max el	15279 Nov 05 22:35	3°♿06'58	27°40'58	direct	15280 Oct 03 23:46	6°♿58'40	
	15279 Nov 25 14:11	0°♿		morning max el	15280 Oct 18 03:48	14°♿55'20	27°59'06
asc. node	15279 Dec 02 05:24	12°♿07'28			15280 Oct 30 10:24	0°♿	
morning set	15279 Dec 07 17:59	23°♿20'58			15280 Nov 17 03:29	0°♿	
	15279 Dec 10 19:59	0°♿		asc. node	15280 Nov 18 02:19	1°♿52'35	
max. Earth dist.	15279 Dec 14 02:47	7°♿16'47	1.31068 AU	morning set	15280 Nov 20 19:05	7°♿20'40	
				max. Earth dist.	15280 Nov 26 08:15	19°♿11'17	1.31470 AU
superior conj	15279 Dec 14 17:42	8°♿40'08	1°32'38				
minimum elong	15279 Dec 14 16:22	8°♿32'40	1°33'30	superior conj	15280 Nov 28 03:43	23°♿10'48	1°21'40
evening rise	15279 Dec 21 10:48	23°♿31'13		minimum elong	15280 Nov 28 01:40	22°♿59'28	1°22'22
	15279 Dec 24 12:36	0°♿			15280 Dec 01 05:28	0°♿	
desc. node	15280 Jan 03 16:42	18°♿54'51		evening rise	15280 Dec 04 20:49	7°♿59'37	
	15280 Jan 11 02:34	0°♿			15280 Dec 16 01:54	0°♿	
evening max el	15280 Jan 19 05:35	9°♿20'07	26°18'32	desc. node	15280 Dec 20 13:36	7°♿13'12	
retrograde	15280 Feb 02 04:48	16°♿26'20		evening max el	15280 Dec 30 20:14	19°♿53'28	24°52'49
evening set	15280 Feb 08 12:08	14°♿51'07		retrograde	15281 Jan 13 14:35	26°♿46'37	
min. Earth dist.	15280 Feb 12 18:59	12°♿13'52	0.58151 AU	evening set	15281 Jan 19 02:20	25°♿39'33	
inferior conj	15280 Feb 15 21:21	9°♿57'48	-3°46'54	min. Earth dist.	15281 Jan 24 08:10	22°♿53'49	0.56247 AU
minimum elong	15280 Feb 16 05:42	9°♿42'30	3°43'43	inferior conj	15281 Jan 26 20:20	21°♿18'04	-5°07'22
morning rise	15280 Feb 24 02:25	5°♿30'19		minimum elong	15281 Jan 27 05:14	21°♿03'53	5°04'42
direct	15280 Feb 26 02:09	5°♿17'03		morning rise	15281 Feb 04 10:29	17°♿12'04	
asc. node	15280 Feb 28 03:16	5°♿31'46		direct	15281 Feb 06 15:20	16°♿58'35	
morning max el	15280 Mar 05 08:58	9°♿22'05	18°31'44	asc. node	15281 Feb 14 00:41	19°♿42'27	
















































































































morning max el	15281 Feb 16 07:34	21°  40'26	19°26'22	direct	15282 Jan 18 09:34	27°  39'07	
	15281 Feb 22 20:33	0° 			15282 Jan 25 19:52	0° 	
morning set	15281 Mar 05 09:15	19°  18'55		morning max el	15282 Jan 29 16:11	3°  04'40	20°44'17
	15281 Mar 10 17:11	0° 		asc. node	15282 Jan 31 22:03	5°  26'33	
					15282 Feb 15 18:24	0° 	
superior conj	15281 Mar 13 12:04	5°  29'32	0°41'55	morning set	15282 Feb 17 16:58	3°  58'38	
minimum elong	15281 Mar 13 14:21	5°  40'37	0°41'33				
desc. node	15281 Mar 18 15:01	15°  14'22		superior conj	15282 Feb 25 04:00	19°  26'43	1°05'37
max. Earth dist.	15281 Mar 20 01:00	17°  50'38	1.38055 AU	minimum elong	15282 Feb 25 06:36	19°  39'59	1°05'31
evening rise	15281 Mar 23 17:47	24°  27'34			15282 Mar 02 11:14	0° 	
	15281 Mar 26 23:04	0° 		max. Earth dist.	15282 Mar 02 09:00	29°  49'13	1.35866 AU
	15281 Apr 15 17:00	0° 		desc. node	15282 Mar 05 11:34	5°  43'33	
evening max el	15281 Apr 28 02:48	14°  47'40	24°59'40	evening rise	15282 Mar 06 06:20	7°  10'34	
retrograde	15281 May 10 00:54	21°  44'13			15282 Mar 19 17:14	0° 	
asc. node	15281 May 12 21:32	21°  09'38		evening max el	15282 Apr 10 16:19	28°  38'47	26°09'39
evening set	15281 May 15 19:05	19°  18'55			15282 Apr 12 02:40	0° 	
min. Earth dist.	15281 May 20 04:52	14°  21'58	0.68257 AU	retrograde	15282 Apr 23 11:20	5°  15'07	
inferior conj	15281 May 21 09:20	12°  48'14	2°19'18	evening set	15282 Apr 29 16:02	3°  26'43	
minimum elong	15281 May 21 07:12	12°  55'16	2°17'53	asc. node	15282 Apr 29 18:48	3°  20'56	
morning rise	15281 May 26 19:36	6°  52'40			15282 May 03 01:04	30°  08'08	
direct	15281 May 30 12:02	5°  34'45		min. Earth dist.	15282 May 03 19:20	29°  05'14	0.67152 AU
morning max el	15281 Jun 06 15:45	9°  30'45	19°26'34	inferior conj	15282 May 05 12:37	26°  05'17	1°40'51
desc. node	15281 Jun 14 16:05	19°  19'43		minimum elong	15282 May 05 10:33	27°  03'41	1°39'28
greatest brilliancy	15281 Jun 19 06:50	25°  15'06	-0.7m	morning rise	15282 May 11 05:54	21°  08'15	
	15281 Jun 22 00:16	0° 		direct	15282 May 14 11:30	20°  08'12'57	
morning set	15281 Jul 01 18:06	14°  48'48		morning max el	15282 May 21 01:18	23°  43'33	18°36'37
	15281 Jul 11 13:24	0° 			15282 May 26 08:18	0° 	
max. Earth dist.	15281 Jul 14 01:41	3°  56'25	1.45221 AU	desc. node	15282 Jun 01 13:03	8°  15'59'11	
				morning set	15282 Jun 11 10:09	24°  19'38	
					15282 Jun 15 01:06	0° 	
superior conj	15281 Jul 17 23:38	10°  08'00	-2°09'43				
minimum elong	15281 Jul 18 04:24	10°  26'59	2°10'19				
	15281 Jul 30 05:15	0° 		superior conj	15282 Jun 27 10:54	19°  21'54	-2°12'48
evening rise	15281 Aug 01 04:53	3°  17'25		minimum elong	15282 Jun 27 08:11	19°  11'20	2°13'39
asc. node	15281 Aug 08 21:22	15°  09'21		max. Earth dist.	15282 Jun 26 20:23	18°  25'18	1.45896 AU
	15281 Aug 18 16:26	0° 			15282 Jul 04 06:02	0° 	
evening max el	15281 Aug 19 16:30	1°  02'46	18°11'31	evening rise	15282 Jul 13 02:00	13°  05'57'04	
retrograde	15281 Aug 26 01:07	4°  24'15		greatest brilliancy	15282 Jul 20 13:51	25°  09'47	-0.9m
evening set	15281 Aug 28 21:39	3°  40'29			15282 Jul 23 06:04	0° 	
	15281 Sep 02 09:16	30°  08'00		asc. node	15282 Jul 26 18:05	5°  16'34	
inferior conj	15281 Sep 03 22:49	28°  16'44	1°52'16	evening max el	15282 Aug 03 05:19	14°  08'46'31	18°39'00
minimum elong	15281 Sep 04 01:10	28°  10'06	1°51'26	retrograde	15282 Aug 09 18:34	18°  08'19'14	
min. Earth dist.	15281 Sep 06 10:57	25°  08'04	0.63865 AU	evening set	15282 Aug 13 00:12	17°  08'19'38	
morning rise	15281 Sep 10 02:52	21°  09'59'16		inferior conj	15282 Aug 18 15:50	11°  08'41'01	2°32'24
desc. node	15281 Sep 10 13:21	21°  09'39'34		minimum elong	15282 Aug 18 17:59	11°  08'34'21	2°31'33
direct	15281 Sep 16 17:27	19°  26'18		min. Earth dist.	15282 Aug 20 14:15	9°  08'18'24	0.65778 AU
morning max el	15281 Sep 30 13:30	27°  25'55	27°39'36	morning rise	15282 Aug 24 10:41	5°  08'16'14	
	15281 Oct 03 00:02	0° 		desc. node	15282 Aug 28 10:49	2°  08'58'33	
	15281 Oct 24 03:34	0° 		direct	15282 Aug 30 19:13	2°  08'37'47	
morning set	15281 Nov 04 12:15	20°  08'55'51		morning max el	15282 Sep 13 00:46	10°  08'26'46	26°48'54
asc. node	15281 Nov 04 23:08	21°  08'50'15			15282 Sep 28 12:46	0° 	
	15281 Nov 08 22:24	0° 			15282 Oct 16 15:37	0° 	
max. Earth dist.	15281 Nov 09 07:12	0°  08'46'21	1.32427 AU	morning set	15282 Oct 18 18:34	3°  08'59'56	
				asc. node	15282 Oct 22 19:52	11°  08'55'53	
superior conj	15281 Nov 12 10:18	7°  08'28'19	1°04'44	max. Earth dist.	15282 Oct 22 20:43	12°  08'00'11	1.33934 AU
minimum elong	15281 Nov 12 07:58	7°  08'15'41	1°05'12				
evening rise	15281 Nov 19 07:46	22°  08'28'21		superior conj	15282 Oct 27 11:10	21°  08'27'00	0°41'52
	15281 Nov 22 21:40	0° 		minimum elong	15282 Oct 27 09:10	21°  08'16'34	0°42'10
desc. node	15281 Dec 07 10:35	24°  08'31'01			15282 Oct 31 12:02	0° 	
evening max el	15281 Dec 12 05:46	29°  08'53'41	23°11'03	evening rise	15282 Nov 03 17:46	6°  08'53'06	
	15281 Dec 12 08:24	0° 			15282 Nov 15 23:54	0° 	
retrograde	15281 Dec 25 11:34	6°  08'27'35		evening max el	15282 Nov 23 19:22	9°  08'57'26	21°31'10
evening set	15281 Dec 29 18:01	5°  08'48'02		desc. node	15282 Nov 24 07:41	10°  08'27'07	
min. Earth dist.	15282 Jan 05 15:52	2°  08'34'24	0.54914 AU	retrograde	15282 Dec 05 22:41	15°  08'57'51	
inferior conj	15282 Jan 06 23:38	1°  08'48'39	-5°56'10	evening set	15282 Dec 08 21:48	15°  08'37'50	
minimum elong	15282 Jan 07 03:06	1°  08'43'39	5°55'04	inferior conj	15282 Dec 17 15:23	11°  08'46'42	-5°49'24
	15282 Jan 10 06:09	30°  08'08'00		minimum elong	15282 Dec 17 09:40	11°  08'54'43	5°47'50
morning rise	15282 Jan 15 13:39	27°  08'58'06		min. Earth dist.	15282 Dec 17 21:31	11°  08'38'06	0.54420 AU

morning rise	15282 Dec 25 22:05	7°  57'53		minimum elong	15283 Nov 26 23:39	21°  59'35	4°40'26
direct	15282 Dec 29 17:44	7°  26'10		min. Earth dist.	15283 Nov 29 04:07	20°  41'03	0.54873 AU
morning max el	15283 Jan 11 10:18	13°  34'38	22°23'00	morning rise	15283 Dec 05 08:45	17°  38'39	
asc. node	15283 Jan 18 19:21	22°  25'45		direct	15283 Dec 10 04:51	16°  47'50	
	15283 Jan 23 13:51	0°  ≈		morning max el	15283 Dec 23 19:46	23°  31'26	24°12'31
morning set	15283 Feb 02 03:48	18°  ≈42'59			15283 Dec 29 14:53	0°  	
	15283 Feb 07 10:17	0°  ✕		asc. node	15284 Jan 05 16:34	10°  22'53	
					15284 Jan 16 00:53	0°  ≈	
superior conj	15283 Feb 09 04:33	3°  ✕45'18	1°22'43	morning set	15284 Jan 17 15:45	3°  ≈26'39	
minimum elong	15283 Feb 09 06:43	3°  ✕56'46	1°22'59				
max. Earth dist.	15283 Feb 12 23:13	11°  ✕38'41	1.33980 AU	superior conj	15284 Jan 24 10:57	18°  ≈17'35	1°33'23
evening rise	15283 Feb 17 09:27	20°  ✕28'43		minimum elong	15284 Jan 24 12:15	18°  ≈24'41	1°33'59
desc. node	15283 Feb 20 08:07	26°  ✕04'23		max. Earth dist.	15284 Jan 26 21:20	23°  ≈33'57	1.32522 AU
	15283 Feb 22 11:34	0°  			15284 Jan 29 22:22	0°  ✕	
	15283 Mar 13 15:43	0°  8		evening rise	15284 Jan 31 23:51	4°  ✕13'37	
evening max el	15283 Mar 24 06:06	12°  818'56	27°02'54	desc. node	15284 Feb 07 04:45	16°  ✕12'19	
retrograde	15283 Apr 06 15:56	19°  848'24			15284 Feb 15 05:13	0°  	
evening set	15283 Apr 13 05:17	17°  816'48		evening max el	15284 Mar 05 18:52	25°   36'41	27°32'00
asc. node	15283 Apr 16 16:07	14°  800'14			15284 Mar 11 02:16	0°  8	
min. Earth dist.	15283 Apr 17 03:35	13°  828'41	0.65632 AU	retrograde	15284 Mar 19 13:32	3°  806'14	
inferior conj	15283 Apr 19 09:24	10°  855'02	0°50'18	evening set	15284 Mar 26 08:37	0°  841'03	
minimum elong	15283 Apr 19 08:07	10°  858'44	0°49'18		15284 Mar 27 06:21	30°  R 	
morning rise	15283 Apr 25 12:28	5°  822'20		min. Earth dist.	15284 Mar 30 03:38	27°   22'55	0.63758 AU
direct	15283 Apr 28 08:20	4°  839'05		inferior conj	15284 Apr 01 20:57	24°   34'42	-0°13'11
morning max el	15283 May 04 16:03	7°  856'45	18°03'26	minimum elong	15284 Apr 01 21:21	24°   33'37	0°13'19
desc. node	15283 May 19 09:54	28°  859'46		transit middle	15284 Apr 01 21:21	24°   33'37	0°13'19
	15283 May 20 00:46	0°  II		transit begin	15284 Apr 01 19:37	24°   38'07	
morning set	15283 May 23 04:13	5°  II06'27		transit end	15284 Apr 01 23:06	24°   29'07	
				asc. node	15284 Apr 02 13:29	23°   52'11	
superior conj	15283 Jun 06 21:25	28°  II39'53	-1°55'56	morning rise	15284 Apr 08 12:28	19°   16'46	
minimum elong	15283 Jun 06 13:06	28°  II07'11	1°56'14	direct	15284 Apr 10 23:48	18°   46'27	
	15283 Jun 07 17:49	0°  		morning max el	15284 Apr 17 09:29	22°   02'56	17°47'33
max. Earth dist.	15283 Jun 09 16:34	3°   03'05	1.45823 AU		15284 Apr 23 15:07	0°  8	
evening rise	15283 Jun 23 00:12	23°   041'48		morning set	15284 May 04 01:16	17°  810'29	
	15283 Jun 27 02:34	0°  8		desc. node	15284 May 05 06:40	19°  815'28	
greatest brilliancy	15283 Jul 05 17:40	13°  804'46	-0.7m		15284 May 11 15:50	0°  II	
asc. node	15283 Jul 13 14:50	24°  805'37		superior conj	15284 May 16 23:15	8°  II43'11	-1°24'14
evening max el	15283 Jul 17 13:51	28°  836'57	19°23'16	minimum elong	15284 May 16 15:20	8°  II11'04	1°24'07
	15283 Jul 19 01:57	0°  		max. Earth dist.	15284 May 22 11:57	17°  II34'55	1.45015 AU
retrograde	15283 Jul 24 15:55	2°   33'27			15284 May 30 10:53	0°  	
evening set	15283 Jul 28 07:17	1°   16'35		evening rise	15284 Jun 01 11:09	3°   05'13	
	15283 Jul 29 19:51	30°  R  8			15284 Jun 19 15:37	0°  8	
inferior conj	15283 Aug 02 16:42	25°  824'35	2°57'00	asc. node	15284 Jun 29 11:39	12°  816'47	
minimum elong	15283 Aug 02 18:08	25°  819'51	2°56'12	evening max el	15284 Jun 29 16:35	12°  829'11	20°22'35
min. Earth dist.	15283 Aug 04 00:53	23°  838'54	0.67298 AU	retrograde	15284 Jul 07 14:48	17°  800'53	
morning rise	15283 Aug 08 04:25	18°  858'46		evening set	15284 Jul 11 16:31	15°  826'19	
direct	15283 Aug 14 03:35	16°  823'51		inferior conj	15284 Jul 16 22:44	9°  822'04	3°08'24
desc. node	15283 Aug 15 08:15	16°  829'21		minimum elong	15284 Jul 16 23:14	9°  820'23	3°07'36
morning max el	15283 Aug 26 11:48	23°  846'34	25°35'53	min. Earth dist.	15284 Jul 17 16:59	8°  819'37	0.68369 AU
	15283 Sep 01 01:13	0°  		morning rise	15284 Jul 22 05:39	2°  859'19	
	15283 Sep 21 21:42	0°  		direct	15284 Jul 27 17:23	0°  835'10	
morning set	15283 Oct 01 10:27	16°  824'28		desc. node	15284 Aug 01 05:39	1°  853'53	
max. Earth dist.	15283 Oct 05 00:53	23°  804'49	1.35923 AU	morning max el	15284 Aug 07 22:27	7°  817'24	24°10'00
	15283 Oct 08 15:05	0°  			15284 Aug 25 16:13	0°  	
asc. node	15283 Oct 09 16:31	2°   105'27		morning set	15284 Sep 12 07:35	27°   158'48	
					15284 Sep 13 11:36	0°  	
superior conj	15283 Oct 11 03:32	5°   100'07	0°13'21	max. Earth dist.	15284 Sep 15 23:49	4°  825'10	1.38237 AU
minimum elong	15283 Oct 11 02:43	4°   156'04	0°13'39				
behind sun begin	15283 Oct 10 23:22	4°   139'15		superior conj	15284 Sep 23 07:54	17°  858'12	-0°19'58
behind sun end	15283 Oct 11 06:05	5°   112'54		minimum elong	15284 Sep 23 09:16	18°  804'45	0°19'31
evening rise	15283 Oct 19 00:46	21°   108'56		asc. node	15284 Sep 25 13:07	22°  814'32	
	15283 Oct 23 10:26	0°  			15284 Sep 29 11:55	0°  	
evening max el	15283 Nov 05 21:20	20°  838'06	20°07'08	evening rise	15284 Oct 02 02:14	5°   108'34	
desc. node	15283 Nov 11 04:53	24°  836'46			15284 Oct 16 15:21	0°  	
retrograde	15283 Nov 16 10:45	25°  853'41		evening max el	15284 Oct 18 13:32	2°  807'22	19°04'42
evening set	15283 Nov 18 13:40	25°  841'57		retrograde	15284 Oct 27 12:40	6°  837'55	
inferior conj	15283 Nov 27 09:43	21°  844'31	-4°44'05				

desc. node	15284 Oct 28 02:10	6°♊36'54		retrograde	15285 Oct 09 09:42	18°♌16'59	
evening set	15284 Oct 29 09:41	6°♊26'52		evening set	15285 Oct 11 09:54	18°♌01'42	
inferior conj	15284 Nov 06 19:33	2°♊12'29	-3°04'04	desc. node	15285 Oct 14 23:31	16°♌27'26	
minimum elong	15284 Nov 06 11:55	2°♊25'34	3°00'27	inferior conj	15285 Oct 19 02:51	13°♌26'34	-1°19'35
min. Earth dist.	15284 Nov 09 14:51	0°♊17'28	0.56178 AU	minimum elong	15285 Oct 18 23:47	13°♌32'44	1°17'46
	15284 Nov 10 01:28	30°♌		min. Earth dist.	15285 Oct 22 08:45	10°♌51'11	0.58105 AU
morning rise	15284 Nov 14 11:30	27°♌33'26		morning rise	15285 Oct 26 10:10	8°♌10'04	
direct	15284 Nov 20 03:28	26°♌18'44		direct	15285 Nov 01 16:32	6°♌28'22	
	15284 Nov 30 01:30	0°♊		morning max el	15285 Nov 15 23:38	14°♌03'35	27°12'42
morning max el	15284 Dec 04 06:08	3°♊30'41	25°55'15		15285 Nov 28 17:37	0°♊	
asc. node	15284 Dec 22 13:42	29°♊02'57		asc. node	15285 Dec 09 10:46	18°♊14'47	
	15284 Dec 23 02:18	0°♊			15285 Dec 15 07:28	0°♊	
morning set	15285 Jan 01 03:02	18°♊04'06		morning set	15285 Dec 16 11:54	2°♊30'40	
	15285 Jan 06 13:08	0°♊					
superior conj	15285 Jan 07 20:51	2°♊56'33	1°37'50	superior conj	15285 Dec 23 08:18	17°♊36'35	1°36'15
minimum elong	15285 Jan 07 21:06	2°♊57'56	1°38'40	minimum elong	15285 Dec 23 07:30	17°♊32'07	1°37'09
max. Earth dist.	15285 Jan 09 01:45	5°♊36'50	1.31545 AU	max. Earth dist.	15285 Dec 23 09:22	17°♊42'35	1.31083 AU
evening rise	15285 Jan 14 22:37	18°♊17'35			15285 Dec 28 22:33	0°♊	
	15285 Jan 20 19:14	0°♊		evening rise	15285 Dec 30 03:20	2°♊34'55	
desc. node	15285 Jan 24 01:26	6°♊01'07		desc. node	15286 Jan 10 22:11	25°♊23'14	
	15285 Feb 08 17:26	0°♊			15286 Jan 13 16:48	0°♊	
evening max el	15285 Feb 16 04:15	8°♊18'31	27°30'36	evening max el	15286 Jan 29 07:40	20°♊13'07	26°54'41
retrograde	15285 Mar 02 03:15	15°♊42'03		retrograde	15286 Feb 12 07:54	27°♊27'06	
evening set	15285 Mar 08 23:19	13°♊30'32		evening set	15286 Feb 18 22:10	25°♊36'40	
min. Earth dist.	15285 Mar 12 17:51	10°♊36'30	0.61623 AU	min. Earth dist.	15286 Feb 22 21:44	22°♊57'03	0.59388 AU
inferior conj	15285 Mar 15 19:58	7°♊47'33	-1°29'31	inferior conj	15286 Feb 26 02:48	20°♊23'49	-2°55'50
minimum elong	15285 Mar 15 23:08	7°♊40'18	1°28'16	minimum elong	15286 Feb 26 09:25	20°♊10'39	2°53'07
asc. node	15285 Mar 20 10:54	4°♊03'18		morning rise	15286 Mar 06 00:06	15°♊44'15	
morning rise	15285 Mar 23 02:04	2°♊47'30		asc. node	15286 Mar 07 08:21	15°♊31'01	
direct	15285 Mar 25 06:29	2°♊26'40		direct	15286 Mar 08 00:06	15°♊29'23	
morning max el	15285 Apr 01 02:34	5°♊53'17	17°49'34	morning max el	15286 Mar 15 15:45	19°♊17'22	18°10'30
morning set	15285 Apr 16 20:06	0°♊15'28			15286 Mar 23 11:58	0°♊	
	15285 Apr 16 16:38	0°♊		morning set	15286 Mar 31 06:42	14°♊02'57	
desc. node	15285 Apr 22 03:23	9°♊41'24			15286 Apr 08 21:10	0°♊	
				desc. node	15286 Apr 09 00:01	0°♊12'51	
superior conj	15285 Apr 28 00:21	19°♊51'40	-0°46'05	superior conj	15286 Apr 10 00:15	2°♊01'59	-0°08'17
minimum elong	15285 Apr 27 20:05	19°♊33'31	0°46'05	minimum elong	15286 Apr 09 23:34	1°♊58'55	0°08'34
	15285 May 04 02:22	0°♊		behind sun begin	15286 Apr 09 17:06	1°♊29'54	
max. Earth dist.	15285 May 05 03:58	1°♊44'12	1.43553 AU	behind sun end	15286 Apr 10 06:02	2°♊27'53	
evening rise	15285 May 12 03:21	12°♊49'29		max. Earth dist.	15286 Apr 17 14:53	15°♊15'41	1.41599 AU
	15285 May 23 11:45	0°♊		evening rise	15286 Apr 22 12:41	23°♊21'43	
evening max el	15285 Jun 12 13:25	26°♊21'44	21°34'05		15286 Apr 26 16:45	0°♊	
asc. node	15285 Jun 16 08:35	29°♊37'58			15286 May 17 11:17	0°♊	
	15285 Jun 16 21:44	0°♊		evening max el	15286 May 26 05:42	10°♊14'23	22°53'31
retrograde	15285 Jun 21 13:27	1°♊36'28		asc. node	15286 Jun 03 05:38	15°♊52'39	
	15285 Jun 25 18:34	30°♌		retrograde	15286 Jun 05 10:14	16°♊13'45	
evening set	15285 Jun 26 02:03	29°♊44'58		evening set	15286 Jun 10 10:11	14°♊07'00	
inferior conj	15285 Jul 01 07:44	23°♊29'56	3°08'16	inferior conj	15286 Jun 15 17:39	7°♊43'23	2°57'30
minimum elong	15285 Jul 01 07:16	23°♊31'37	3°07'20	minimum elong	15286 Jun 15 16:19	7°♊48'00	2°56'23
min. Earth dist.	15285 Jul 01 12:34	23°♊13'06	0.68960 AU	min. Earth dist.	15286 Jun 15 09:29	8°♊11'44	0.69064 AU
morning rise	15285 Jul 06 12:16	17°♊12'43		morning rise	15286 Jun 20 22:21	1°♊33'24	
direct	15285 Jul 11 11:41	15°♊04'28			15286 Jun 23 15:45	30°♌	
desc. node	15285 Jul 19 02:58	18°♊47'30		direct	15286 Jun 25 09:22	29°♊43'58	
morning max el	15285 Jul 21 10:21	20°♊57'07	22°40'41		15286 Jun 27 04:43	0°♊	
	15285 Jul 29 04:27	0°♊		morning max el	15286 Jul 04 02:07	4°♊45'31	21°16'05
	15285 Aug 18 21:31	0°♊		desc. node	15286 Jul 06 00:13	6°♊46'58	
morning set	15285 Aug 24 06:04	8°♊34'47			15286 Jul 23 06:15	0°♊	
max. Earth dist.	15285 Aug 28 23:41	16°♊27'28	1.40622 AU	morning set	15286 Aug 04 04:33	18°♊09'31	
				max. Earth dist.	15286 Aug 11 04:42	29°♊21'41	1.42798 AU
superior conj	15285 Sep 05 20:13	0°♊12'30	-0°56'02		15286 Aug 11 14:05	0°♊	
minimum elong	15285 Sep 06 00:35	0°♊32'12	0°55'25				
	15285 Sep 05 17:27	0°♊		superior conj	15286 Aug 18 12:07	11°♊33'19	-1°31'10
asc. node	15285 Sep 12 09:44	12°♊20'06		minimum elong	15286 Aug 18 19:13	12°♊03'43	1°30'41
evening rise	15285 Sep 15 19:06	18°♊44'33			15286 Aug 28 23:38	0°♊	
	15285 Sep 21 20:44	0°♊		evening rise	15286 Aug 29 23:14	1°♊46'08	
evening max el	15285 Oct 01 17:18	14°♊22'54	18°24'17	asc. node	15286 Aug 30 06:20	2°♊18'09	

evening max el	15286 Sep 15 04:29	27° $\Omega$ 15'29	18°04'28	superior conj	15287 Jul 30 04:34	21° $\Omega$ 55'19	-1°59'26
	15286 Sep 18 20:42	0° $\mathbb{M}$		minimum elong	15287 Jul 30 11:42	22° $\Omega$ 24'19	1°59'36
retrograde	15286 Sep 22 00:24	0° $\mathbb{M}$ 45'51			15287 Aug 04 02:31	0° $\mathbb{M}$	
evening set	15286 Sep 24 07:40	0° $\mathbb{M}$ 22'08		evening rise	15287 Aug 12 09:35	14° $\mathbb{M}$ 00'46	
	15286 Sep 25 05:48	30° $\mathbb{R}$ $\Omega$		asc. node	15287 Aug 17 02:57	22° $\mathbb{M}$ 04'28	
inferior conj	15286 Oct 01 07:05	25° $\Omega$ 26'34	0°10'49		15287 Aug 21 22:05	0° $\Omega$	
minimum elong	15286 Oct 01 07:26	25° $\Omega$ 25'44	0°10'59	evening max el	15287 Aug 29 18:59	10° $\Omega$ 34'57	18°03'44
transit middle	15286 Oct 01 07:26	25° $\Omega$ 25'44	0°10'59	retrograde	15287 Sep 05 04:48	13° $\Omega$ 55'29	
transit begin	15286 Oct 01 05:00	25° $\Omega$ 31'23		evening set	15287 Sep 07 20:26	13° $\Omega$ 19'44	
transit end	15286 Oct 01 09:52	25° $\Omega$ 20'03		inferior conj	15287 Sep 14 04:43	8° $\Omega$ 05'35	1°20'58
desc. node	15286 Oct 01 20:56	24° $\Omega$ 54'11		minimum elong	15287 Sep 14 06:45	8° $\Omega$ 00'13	1°20'19
min. Earth dist.	15286 Oct 04 11:33	22° $\Omega$ 29'51	0.60353 AU	min. Earth dist.	15287 Sep 17 00:01	5° $\Omega$ 08'43	0.62637 AU
morning rise	15286 Oct 08 04:01	19° $\Omega$ 38'52		desc. node	15287 Sep 18 18:23	3° $\Omega$ 27'03	
direct	15286 Oct 14 18:37	17° $\Omega$ 31'49		morning rise	15287 Sep 20 14:47	1° $\Omega$ 56'30	
morning max el	15286 Oct 29 00:56	25° $\Omega$ 23'24	27°53'30		15287 Sep 24 06:24	30° $\mathbb{R}$ $\mathbb{M}$	
	15286 Nov 02 07:28	0° $\mathbb{M}$		direct	15287 Sep 27 07:07	29° $\mathbb{M}$ 30'31	
	15286 Nov 22 04:45	0° $\mathbb{A}$			15287 Sep 30 11:00	0° $\Omega$	
asc. node	15286 Nov 26 07:45	7° $\mathbb{A}$ 49'40		morning max el	15287 Oct 11 08:05	7° $\Omega$ 29'29	27°55'03
morning set	15286 Nov 30 16:26	16° $\mathbb{A}$ 41'34			15287 Oct 28 14:43	0° $\mathbb{M}$	
max. Earth dist.	15286 Dec 06 16:31	29° $\mathbb{A}$ 42'43	1.31162 AU	asc. node	15287 Nov 13 04:37	27° $\mathbb{M}$ 40'22	
	15286 Dec 06 19:38	0° $\mathbb{B}$			15287 Nov 14 08:20	0° $\mathbb{A}$	
				morning set	15287 Nov 14 14:25	0° $\mathbb{A}$ 30'52	
superior conj	15286 Dec 07 19:24	2° $\mathbb{B}$ 12'21	1°28'44	max. Earth dist.	15287 Nov 19 19:27	11° $\mathbb{A}$ 28'29	1.31805 AU
minimum elong	15286 Dec 07 17:44	2° $\mathbb{B}$ 03'00	1°29'31				
evening rise	15286 Dec 14 11:58	17° $\mathbb{B}$ 00'36		superior conj	15287 Nov 22 04:12	16° $\mathbb{A}$ 37'47	1°15'14
	15286 Dec 20 19:21	0° $\approx$		minimum elong	15287 Nov 22 01:58	16° $\mathbb{A}$ 25'32	1°15'49
desc. node	15286 Dec 28 19:01	14° $\approx$ 08'41			15287 Nov 28 06:04	0° $\mathbb{B}$	
	15287 Jan 09 20:25	0° $\mathbb{H}$		evening rise	15287 Nov 28 22:34	1° $\mathbb{B}$ 29'20	
evening max el	15287 Jan 11 03:11	1° $\mathbb{H}$ 15'37	25°45'13		15287 Dec 14 06:01	0° $\approx$	
retrograde	15287 Jan 25 01:26	8° $\mathbb{H}$ 17'17		desc. node	15287 Dec 15 15:57	2° $\approx$ 03'08	
evening set	15287 Jan 31 01:24	6° $\mathbb{H}$ 53'57		evening max el	15287 Dec 23 15:04	11° $\approx$ 31'43	24°10'35
min. Earth dist.	15287 Feb 04 16:07	4° $\mathbb{H}$ 15'02	0.57281 AU	retrograde	15288 Jan 06 05:27	18° $\approx$ 17'16	
inferior conj	15287 Feb 07 14:05	2° $\mathbb{H}$ 14'27	-4°23'15	evening set	15288 Jan 11 05:35	17° $\approx$ 22'41	
minimum elong	15287 Feb 07 23:12	1° $\mathbb{H}$ 58'41	4°20'02	min. Earth dist.	15288 Jan 17 02:41	14° $\approx$ 27'29	0.55590 AU
	15287 Feb 11 00:33	30° $\mathbb{R}$ $\approx$		inferior conj	15288 Jan 19 04:11	13° $\approx$ 12'30	-5°33'33
morning rise	15287 Feb 15 23:55	27° $\approx$ 56'21		minimum elong	15288 Jan 19 11:36	13° $\approx$ 01'16	5°31'35
direct	15287 Feb 18 00:32	27° $\approx$ 43'39		morning rise	15288 Jan 27 19:25	9° $\approx$ 13'50	
asc. node	15287 Feb 22 05:47	28° $\approx$ 42'11		direct	15288 Jan 30 05:29	8° $\approx$ 58'41	
	15287 Feb 24 10:30	0° $\mathbb{H}$		asc. node	15288 Feb 09 03:12	13° $\approx$ 33'53	
morning max el	15287 Feb 26 20:56	2° $\mathbb{H}$ 03'42	18°52'08	morning max el	15288 Feb 09 13:49	13° $\approx$ 59'04	19°56'38
morning set	15287 Mar 15 04:18	28° $\mathbb{H}$ 19'16			15288 Feb 20 18:33	0° $\mathbb{H}$	
	15287 Mar 16 00:52	0° $\mathbb{Y}$		morning set	15288 Feb 27 09:09	12° $\mathbb{H}$ 52'31	
superior conj	15287 Mar 23 19:09	15° $\mathbb{Y}$ 03'25	0°25'17	superior conj	15288 Mar 06 04:31	28° $\mathbb{H}$ 42'46	0°52'47
minimum elong	15287 Mar 23 20:44	15° $\mathbb{Y}$ 10'56	0°24'51	minimum elong	15288 Mar 06 07:02	28° $\mathbb{H}$ 55'20	0°52'29
desc. node	15287 Mar 26 20:37	20° $\mathbb{Y}$ 46'26			15288 Mar 06 20:04	0° $\mathbb{Y}$	
max. Earth dist.	15287 Mar 30 21:52	28° $\mathbb{Y}$ 05'05	1.39373 AU	max. Earth dist.	15288 Mar 12 04:30	10° $\mathbb{Y}$ 18'44	1.37104 AU
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evening rise	15287 Apr 03 19:21	4° $\mathbb{B}$ 50'06		evening rise	15288 Mar 15 21:52	17° $\mathbb{Y}$ 07'57	
	15287 Apr 19 19:14	0° $\mathbb{II}$			15288 Mar 23 09:59	0° $\mathbb{B}$	
evening max el	15287 May 08 19:44	24° $\mathbb{II}$ 08'41	24°14'48		15288 Apr 13 04:21	0° $\mathbb{II}$	
	15287 May 16 16:02	0° $\mathbb{B}$		evening max el	15288 Apr 20 09:21	8° $\mathbb{II}$ 02'44	25°31'01
retrograde	15287 May 20 03:45	0° $\mathbb{B}$ 46'56		retrograde	15288 May 02 16:53	15° $\mathbb{II}$ 09'41	
asc. node	15287 May 21 02:46	0° $\mathbb{B}$ 42'58		asc. node	15288 May 06 23:58	13° $\mathbb{II}$ 53'38	
	15287 May 23 09:09	30° $\mathbb{R}$ $\mathbb{II}$		evening set	15288 May 08 15:42	12° $\mathbb{II}$ 41'24	
evening set	15287 May 25 15:17	28° $\mathbb{II}$ 27'37		min. Earth dist.	15288 May 12 22:39	7° $\mathbb{II}$ 59'39	0.67847 AU
min. Earth dist.	15287 May 30 05:36	23° $\mathbb{II}$ 09'18	0.68690 AU	inferior conj	15288 May 14 08:30	6° $\mathbb{II}$ 10'48	2°04'25
inferior conj	15287 May 31 02:33	21° $\mathbb{II}$ 58'27	2°36'20	minimum elong	15288 May 14 06:20	6° $\mathbb{II}$ 17'48	2°02'59
minimum elong	15287 May 31 00:37	22° $\mathbb{II}$ 05'01	2°35'00	morning rise	15288 May 19 21:24	0° $\mathbb{II}$ 19'23	
morning rise	15287 Jun 05 10:01	15° $\mathbb{II}$ 57'03			15288 May 20 09:57	30° $\mathbb{R}$ $\mathbb{B}$	
direct	15287 Jun 09 09:05	14° $\mathbb{II}$ 27'35		direct	15288 May 23 09:13	29° $\mathbb{B}$ 09'26	
morning max el	15287 Jun 17 00:17	18° $\mathbb{II}$ 44'11	20°02'20		15288 May 26 11:40	0° $\mathbb{II}$	
desc. node	15287 Jun 22 21:21	25° $\mathbb{II}$ 34'46		morning max el	15288 May 30 05:51	2° $\mathbb{II}$ 52'44	19°03'14
	15287 Jun 26 04:12	0° $\mathbb{B}$		desc. node	15288 Jun 08 18:23	14° $\mathbb{II}$ 58'03	
morning set	15287 Jul 14 09:54	27° $\mathbb{B}$ 02'13		greatest brilliancy	15288 Jun 12 07:23	20° $\mathbb{II}$ 11'53	-0.7m
	15287 Jul 16 08:03	0° $\Omega$			15288 Jun 18 17:55	0° $\mathbb{B}$	
max. Earth dist.	15287 Jul 24 16:27	13° $\Omega$ 04'36	1.44519 AU	morning set	15288 Jun 22 16:17	6° $\mathbb{B}$ 03'34	

































































































































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	15288 Jul 08 01:47	0° 		max. Earth dist.	15289 Jun 19 06:04	12°  00'02	1.45959 AU
					15289 Jun 30 19:07	0° 	
superior conj	15288 Jul 08 23:39	1°  25'57	-2°13'30	evening rise	15289 Jul 04 07:50	5°  21'01	
minimum elong	15288 Jul 09 01:32	1°  33'24	2°14'19	greatest brilliancy	15289 Jul 14 05:50	20°  25'33	-0.8m
evening rise	15288 Jul 23 21:10	25°  16'53			15289 Jul 20 08:49	0° 	
	15288 Jul 26 18:43	0° 		asc. node	15289 Jul 20 20:18	0°  40'04	
asc. node	15288 Aug 02 23:37	11°  11'34'05		evening max el	15289 Jul 26 20:28	7°  11'59'04	18°55'48
evening max el	15288 Aug 12 09:17	24°  12'18	18°21'07	retrograde	15289 Aug 02 14:12	11°  11'40'35	
retrograde	15288 Aug 18 18:39	27°  11'36'42		evening set	15289 Aug 05 23:54	10°  11'33'40	
evening set	15288 Aug 21 19:06	26°  11'46'14		inferior conj	15289 Aug 11 12:28	4°  11'48'54	2°44'36
inferior conj	15288 Aug 27 15:45	21°  11'15'48	2°11'21	minimum elong	15289 Aug 11 14:22	4°  11'42'51	2°43'46
minimum elong	15288 Aug 27 18:07	21°  11'08'51	2°10'29	min. Earth dist.	15289 Aug 13 04:44	2°  11'41'13	0.66475 AU
min. Earth dist.	15288 Aug 29 22:07	18°  11'36'54	0.64723 AU		15289 Aug 15 11:53	30° 	
morning rise	15288 Sep 02 15:42	14°  11'54'33		morning rise	15289 Aug 17 04:01	28°  11'22'57	
desc. node	15288 Sep 04 15:50	13°  11'32'19		desc. node	15289 Aug 22 13:18	25°  11'47'50	
direct	15288 Sep 09 04:13	12°  11'18'22		direct	15289 Aug 23 08:44	25°  11'45'20	
morning max el	15288 Sep 22 18:41	20°  11'14'18	27°21'24		15289 Sep 01 13:09	0° 	
	15288 Oct 01 04:20	0° 		morning max el	15289 Sep 05 06:13	3°  11'25'01	26°20'03
	15288 Oct 20 16:29	0° 			15289 Sep 25 11:32	0° 	
morning set	15288 Oct 28 03:19	13°  11'53'25		morning set	15289 Oct 11 03:56	26°  11'41'21	
asc. node	15288 Oct 30 01:23	17°  11'41'56			15289 Oct 12 22:00	0° 	
max. Earth dist.	15288 Nov 01 14:50	22°  11'55'10	1.33009 AU	max. Earth dist.	15289 Oct 15 00:25	4°  11'03'41	1.34732 AU
	15288 Nov 04 23:39	0° 		asc. node	15289 Oct 16 22:05	7°  11'49'21	
superior conj	15288 Nov 05 08:38	0°  11'47'58	0°55'46	superior conj	15289 Oct 20 06:11	14°  11'35'58	0°30'25
minimum elong	15288 Nov 05 06:21	0°  11'35'47	0°56'09	minimum elong	15289 Oct 20 04:35	14°  11'27'42	0°30'42
evening rise	15288 Nov 12 09:21	15°  11'57'07		evening rise	15289 Oct 27 18:20	0°  11'57'18'25	
	15288 Nov 19 07:15	0° 			15289 Oct 27 14:48	0° 	
desc. node	15288 Dec 01 12:57	18°  11'38'41			15289 Nov 14 03:57	0° 	
evening max el	15288 Dec 04 01:03	21°  11'38'04	22°27'15	evening max el	15289 Nov 15 18:58	1°  11'43'12	20°52'51
retrograde	15288 Dec 16 20:54	27°  11'39'10		desc. node	15289 Nov 18 10:04	4°  11'30'07	
evening set	15288 Dec 20 13:49	27°  11'31'03		retrograde	15289 Nov 27 07:09	7°  11'36'03	
min. Earth dist.	15288 Dec 28 08:39	23°  11'38'05	0.54597 AU	evening set	15289 Nov 29 19:44	7°  11'31'45	
inferior conj	15288 Dec 29 01:00	23°  11'35'07	-6°00'54	inferior conj	15289 Dec 08 15:56	3°  11'18'06	-5°27'55
minimum elong	15288 Dec 29 00:33	23°  11'35'45	6°00'01	minimum elong	15289 Dec 08 07:24	3°  11'30'17	5°25'23
morning rise	15289 Jan 06 12:26	19°  11'37'43		min. Earth dist.	15289 Dec 09 14:12	2°  11'46'17	0.54497 AU
direct	15289 Jan 09 18:04	19°  11'31'40'06			15289 Dec 15 02:14	30° 	
morning max el	15289 Jan 21 15:48	24°  11'35'748	21°24'10	morning rise	15289 Dec 16 19:12	29°  11'57'24'29	
asc. node	15289 Jan 26 00:31	29°  11'35'1'21		direct	15289 Dec 21 01:17	28°  11'57'45'37	
	15289 Jan 26 03:13	0° 			15289 Dec 26 19:01	0° 	
morning set	15289 Feb 10 18:26	27°  11'33'34		morning max el	15290 Jan 03 05:16	5°  11'30'9'53	23°09'21
	15289 Feb 11 22:10	0° 		asc. node	15290 Jan 12 21:47	17°  11'31'6'43	
					15290 Jan 20 05:12	0° 	
superior conj	15289 Feb 18 00:27	12°  11'38'49'25	1°13'41	morning set	15290 Jan 26 05:58	12°  11'33'19'09	
minimum elong	15289 Feb 18 02:56	13°  11'38'02'19	1°13'44				
max. Earth dist.	15289 Feb 22 15:02	22°  11'38'11'53	1.35020 AU	superior conj	15290 Feb 02 03:48	27°  11'33'14'44	1°28'01
evening rise	15289 Feb 26 16:59	0°  11'30'06'09		minimum elong	15290 Feb 02 05:38	27°  11'33'24'35	1°28'27
	15289 Feb 26 15:40	0° 			15290 Feb 03 10:41	0° 	
desc. node	15289 Feb 27 13:45	1°  11'34'43'33		max. Earth dist.	15290 Feb 05 08:30	4°  11'38'02'04	1.33295 AU
	15289 Mar 16 13:13	0° 		evening rise	15290 Feb 10 01:14	13°  11'38'36'13	
evening max el	15289 Apr 02 23:02	21°  11'34'49'56	26°34'46	desc. node	15290 Feb 14 10:20	21°  11'38'59'22	
retrograde	15289 Apr 16 00:45	29°  11'34'14'24			15290 Feb 18 21:36	0° 	
evening set	15289 Apr 22 09:36	26°  11'34'42'01			15290 Mar 11 11:57	0° 	
asc. node	15289 Apr 23 21:15	25°  11'34'22'12		evening max el	15290 Mar 16 12:22	5°  11'34'21'21	27°18'38
min. Earth dist.	15289 Apr 26 10:34	22°  11'34'35'19	0.66558 AU	retrograde	15290 Mar 30 02:37	12°  11'34'52'34	
inferior conj	15289 Apr 28 09:18	20°  11'34'15'16	1°20'57	evening set	15290 Apr 05 18:59	10°  11'34'22'27	
minimum elong	15289 Apr 28 07:28	20°  11'34'20'47	1°19'40	min. Earth dist.	15290 Apr 09 15:27	6°  11'34'47'57	0.64868 AU
morning rise	15289 May 04 06:25	14°  11'34'35'25		asc. node	15290 Apr 10 18:35	5°  11'34'34'22	
direct	15289 May 07 07:49	13°  11'34'43'14		inferior conj	15290 Apr 12 02:31	4°  11'34'06'14	0°25'01
morning max el	15289 May 13 17:55	17°  11'34'06'26	18°20'27	minimum elong	15290 Apr 12 01:49	4°  11'34'08'08	0°24'18
	15289 May 23 13:00	0° 			15290 Apr 16 07:15	30° 	
desc. node	15289 May 26 15:19	4°  11'34'47'06		morning rise	15290 Apr 18 10:36	28°  11'34'39'50	
morning set	15289 Jun 02 18:37	16°  11'34'04'46		direct	15290 Apr 21 02:38	28°  11'34'02'35	
	15289 Jun 11 13:59	0° 			15290 Apr 25 22:31	0° 	
				morning max el	15290 Apr 27 10:16	1°  11'34'18'21	17°54'38
superior conj	15289 Jun 18 08:22	10°  11'34'35'24	-2°07'54	desc. node	15290 May 13 12:10	24°  11'34'54'55	

morning set	15290 May 15 00:39	27°  26'01		morning set	15291 Apr 27 07:42	9°  57'54	
	15290 May 16 13:52	0° 		desc. node	15291 Apr 30 08:55	15°  15'16	
superior conj	15290 May 28 24:00	20°  09'41	-1°43'49	superior conj	15291 May 09 11:20	0°  39'45	-1°08'24
minimum elong	15290 May 28 15:11	19°  34'41	1°43'54	minimum elong	15291 May 09 04:48	0°  12'45	1°08'16
max. Earth dist.	15290 Jun 02 02:04	26°  36'52	1.45561 AU		15291 May 09 01:43	0° 	
	15290 Jun 04 05:59	0° 		max. Earth dist.	15291 May 15 19:41	10°  58'39	1.44461 AU
evening rise	15290 Jun 13 23:26	15°  01'56		evening rise	15291 May 24 10:35	24°  28'58	
	15290 Jun 23 20:14	0° 			15291 May 28 01:18	0° 	
greatest brilliancy	15290 Jun 28 08:27	6°  39'43	-0.6m		15291 Jun 18 02:12	0° 	
asc. node	15290 Jul 07 17:05	19°  14'31		evening max el	15291 Jun 23 02:47	5°  43'08	20°51'45
evening max el	15290 Jul 10 02:35	21°  50'31	19°46'41	asc. node	15291 Jun 24 13:58	7°  06'16	
retrograde	15290 Jul 17 12:35	26°  01'12		retrograde	15291 Jul 01 11:36	10°  32'35	
evening set	15290 Jul 21 08:10	24°  36'56		evening set	15291 Jul 05 17:47	8°  50'56	
inferior conj	15290 Jul 26 15:54	18°  39'26	3°03'20	inferior conj	15291 Jul 10 23:30	2°  42'03	3°09'41
minimum elong	15290 Jul 26 16:57	18°  35'54	3°02'32	minimum elong	15291 Jul 10 23:34	2°  41'47	3°08'50
min. Earth dist.	15290 Jul 27 18:07	17°  11'29	0.67811 AU	min. Earth dist.	15291 Jul 11 12:03	1°  58'33	0.68681 AU
morning rise	15290 Aug 01 01:15	12°  14'12			15291 Jul 12 23:05	30° 	
direct	15290 Aug 06 19:38	9°  43'05		morning rise	15291 Jul 16 05:04	26°  21'13	
desc. node	15290 Aug 09 10:44	10°  09'53		direct	15291 Jul 21 11:42	24°  03'04	
morning max el	15290 Aug 18 17:11	16°  50'52	25°00'14	desc. node	15291 Jul 27 08:06	26°  05'12	
	15290 Aug 29 16:08	0° 			15291 Jul 31 17:52	0° 	
	15290 Sep 18 10:37	0° 		morning max el	15291 Aug 01 03:58	0°  25'13	23°31'48
morning set	15290 Sep 23 12:25	8°  45'55			15291 Aug 23 12:25	0° 	
max. Earth dist.	15290 Sep 27 01:26	15°  10'13	1.36881 AU	morning set	15291 Sep 05 00:24	19°  56'54	
				max. Earth dist.	15291 Sep 08 23:37	26°  44'22	1.39260 AU
					15291 Sep 10 20:08	0° 	
superior conj	15290 Oct 03 17:54	27°  54'52	-0°00'19				
minimum elong	15290 Oct 03 17:53	27°  54'50	0°00'03	superior conj	15291 Sep 16 16:04	10°  36'14	-0°35'06
behind sun begin	15290 Oct 03 11:38	27°  24'06		minimum elong	15291 Sep 16 18:38	10°  48'15	0°34'33
behind sun end	15290 Oct 04 00:09	28°  25'39		asc. node	15291 Sep 20 15:21	18°  07'16	
asc. node	15290 Oct 03 18:43	27°  58'57		evening rise	15291 Sep 25 21:35	28°  18'44	
	15290 Oct 04 19:14	0° 			15291 Sep 26 18:28	0° 	
evening rise	15290 Oct 11 23:18	14°  27'47		evening max el	15291 Oct 12 00:54	24°  35'04	18°44'55
	15290 Oct 20 01:21	0° 		retrograde	15291 Oct 20 09:34	28°  48'09	
evening max el	15290 Oct 29 03:07	12°  44'01	19°37'48	evening set	15291 Oct 22 07:19	28°  35'48	
desc. node	15290 Nov 05 07:18	17°  18'25		desc. node	15291 Oct 23 04:38	28°  22'00	
retrograde	15290 Nov 07 23:57	17°  39'53		inferior conj	15291 Oct 30 10:26	24°  13'03	-2°18'49
evening set	15290 Nov 09 22:36	17°  29'17		minimum elong	15291 Oct 30 04:44	24°  23'28	2°15'53
inferior conj	15290 Nov 18 15:40	13°  25'51	-4°03'56	min. Earth dist.	15291 Nov 02 12:07	21°  58'50	0.56943 AU
minimum elong	15290 Nov 18 06:02	13°  41'02	3°59'57	morning rise	15291 Nov 06 22:59	19°  18'06	
min. Earth dist.	15290 Nov 20 22:33	11°  59'16	0.55331 AU	direct	15291 Nov 12 22:08	17°  51'41	
morning rise	15290 Nov 26 11:40	9°  06'45		morning max el	15291 Nov 27 02:59	25°  14'11	26°32'06
direct	15290 Dec 01 16:47	8°  06'10			15291 Dec 01 13:33	0° 	
morning max el	15290 Dec 15 14:09	15°  03'33	24°58'18	asc. node	15291 Dec 17 16:07	24°  28'43	
	15290 Dec 27 09:45	0° 			15291 Dec 20 13:38	0° 	
asc. node	15290 Dec 30 18:59	5°  33'34		morning set	15291 Dec 26 04:19	11°  33'59	
morning set	15291 Jan 10 17:50	27°  00'27					
	15291 Jan 12 02:58	0° 		superior conj	15292 Jan 01 22:47	26°  31'05	1°37'53
				minimum elong	15292 Jan 01 22:34	26°  29'56	1°38'46
superior conj	15291 Jan 17 11:57	11°  50'36	1°36'00	max. Earth dist.	15292 Jan 02 15:32	28°  04'35	1.31285 AU
minimum elong	15291 Jan 17 12:49	11°  55'22	1°36'45		15292 Jan 03 12:16	0° 	
max. Earth dist.	15291 Jan 19 09:20	15°  59'27	1.32035 AU	evening rise	15292 Jan 08 21:08	11°  40'50	
evening rise	15291 Jan 24 19:30	27°  29'54			15292 Jan 18 05:34	0° 	
	15291 Jan 26 01:01	0° 		desc. node	15292 Jan 19 03:40	1°  38'22	
desc. node	15291 Feb 01 06:57	11°  39'42			15292 Feb 08 11:13	0° 	
	15291 Feb 12 04:05	0° 		evening max el	15292 Feb 09 07:18	0°  48'43	27°19'44
evening max el	15291 Feb 26 23:54	18°  09'24'59	27°35'34	retrograde	15292 Feb 23 07:21	8°  08'08	
retrograde	15291 Mar 12 21:19	25°  09'53'30		evening set	15292 Mar 01 01:41	6°  05'07	
evening set	15291 Mar 19 17:19	23°  09'33'10		min. Earth dist.	15292 Mar 04 21:40	3°  18'17	0.60671 AU
min. Earth dist.	15291 Mar 23 11:36	20°  09'26'05	0.62863 AU	inferior conj	15292 Mar 08 01:47	0°  34'10	-2°05'16
inferior conj	15291 Mar 26 09:10	17°  09'35'26	-0°44'04	minimum elong	15292 Mar 08 06:23	0°  24'13	2°03'21
minimum elong	15291 Mar 26 10:37	17°  09'31'51	0°43'40		15292 Mar 08 17:39	30°	
asc. node	15291 Mar 28 16:00	15°  09'25'43		asc. node	15292 Mar 14 13:26	26°  03'43	
morning rise	15291 Apr 02 06:42	12°  09'24'49		morning rise	15292 Mar 15 14:23	25°  38'10	
direct	15291 Apr 04 14:43	11°  09'59'06		direct	15292 Mar 17 16:29	25°  38'24'18	
morning max el	15291 Apr 11 03:59	15°  09'18'55	17°46'12	morning max el	15292 Mar 24 19:47	28°  38'58'55	17°56'00
	15291 Apr 21 12:43	0°					

	15292 Mar 25 19:21	0°♿			15293 Mar 20 03:32	0°♿	
morning set	15292 Apr 09 09:54	23°♿22'48		morning set	15293 Mar 24 01:42	7°♿24'16	
	15292 Apr 13 01:09	0°♿					
desc. node	15292 Apr 16 05:36	5°♿43'48		superior conj	15293 Apr 02 06:54	24°♿48'18	0°06'40
				minimum elong	15293 Apr 02 07:21	24°♿50'24	0°06'16
superior conj	15292 Apr 19 22:22	12°♿14'41	-0°29'42	behind sun begin	15293 Apr 02 00:40	24°♿19'40	
minimum elong	15292 Apr 19 19:44	12°♿03'16	0°29'50	behind sun end	15293 Apr 02 14:02	25°♿21'03	
max. Earth dist.	15292 Apr 27 09:35	24°♿52'52	1.42775 AU	desc. node	15293 Apr 03 02:13	26°♿16'42	
	15292 Apr 30 13:02	0°♿			15293 Apr 05 03:38	0°♿	
evening rise	15292 May 03 09:05	4°♿31'24		max. Earth dist.	15293 Apr 09 19:09	8°♿08'50	1.40673 AU
	15292 May 20 08:58	0°♿		evening rise	15293 Apr 14 03:24	15°♿27'32	
evening max el	15292 Jun 04 21:35	19°♿35'52	22°07'20		15293 Apr 23 07:12	0°♿	
asc. node	15292 Jun 10 10:58	24°♿01'12			15293 May 15 06:12	0°♿	
retrograde	15292 Jun 14 09:28	25°♿09'14		evening max el	15293 May 18 12:40	3°♿29'31	23°28'17
evening set	15292 Jun 19 02:55	23°♿11'02		asc. node	15293 May 28 08:01	9°♿42'40	
inferior conj	15292 Jun 24 09:06	16°♿52'22	3°04'57	retrograde	15293 May 29 04:56	9°♿46'00	
minimum elong	15292 Jun 24 08:15	16°♿55'22	3°03'57	evening set	15293 Jun 03 09:57	7°♿33'17	
min. Earth dist.	15292 Jun 24 08:25	16°♿54'46	0.69067 AU	min. Earth dist.	15293 Jun 08 05:08	1°♿54'03	0.68962 AU
morning rise	15292 Jun 29 13:24	10°♿38'09		inferior conj	15293 Jun 08 18:48	1°♿06'59	2°49'47
direct	15292 Jul 04 07:38	8°♿37'28		minimum elong	15293 Jun 08 17:11	1°♿12'35	2°48'35
desc. node	15292 Jul 13 05:25	13°♿38'56			15293 Jun 09 14:23	30°♿♿	
morning max el	15292 Jul 13 16:59	14°♿07'31	22°03'41	morning rise	15293 Jun 14 00:22	25°♿00'49	
	15292 Jul 26 11:47	0°♿		direct	15293 Jun 18 06:16	23°♿19'54	
	15292 Aug 15 10:59	0°♿		morning max el	15293 Jun 26 11:20	28°♿00'47	20°43'15
morning set	15292 Aug 15 12:28	0°♿05'55			15293 Jun 28 08:38	0°♿	
max. Earth dist.	15292 Aug 21 01:36	9°♿09'39	1.41593 AU	desc. node	15293 Jun 30 02:37	2°♿01'01	
					15293 Jul 20 00:06	0°♿	
superior conj	15292 Aug 28 20:16	22°♿29'19	-1°11'19	morning set	15293 Jul 26 02:15	9°♿19'23	
minimum elong	15292 Aug 29 01:56	22°♿54'19	1°10'43	max. Earth dist.	15293 Aug 03 10:10	22°♿28'39	1.43597 AU
	15292 Sep 02 01:02	0°♿			15293 Aug 08 00:52	0°♿	
asc. node	15292 Sep 06 11:57	8°♿10'14					
evening rise	15292 Sep 08 09:36	11°♿41'39		superior conj	15293 Aug 10 02:24	3°♿25'38	-1°44'24
	15292 Sep 18 19:42	0°♿		minimum elong	15293 Aug 10 10:03	3°♿57'37	1°44'08
evening max el	15292 Sep 24 08:24	7°♿07'53	18°13'23	evening rise	15293 Aug 22 06:54	24°♿25'43	
retrograde	15292 Oct 01 14:34	10°♿50'04		asc. node	15293 Aug 24 08:34	28°♿04'20	
evening set	15292 Oct 03 17:40	10°♿31'32			15293 Aug 25 10:55	0°♿	
desc. node	15292 Oct 09 02:01	7°♿28'35		evening max el	15293 Sep 07 21:25	20°♿13'11	18°01'47
inferior conj	15292 Oct 11 02:57	5°♿47'13	-0°38'55	retrograde	15293 Sep 14 11:54	23°♿38'00	
minimum elong	15292 Oct 11 01:33	5°♿50'13	0°37'54	evening set	15293 Sep 16 22:35	23°♿09'35	
min. Earth dist.	15292 Oct 14 09:21	3°♿00'32	0.59046 AU	inferior conj	15293 Sep 23 15:08	18°♿05'30	0°43'02
morning rise	15292 Oct 18 06:03	0°♿16'41		minimum elong	15293 Sep 23 16:24	18°♿02'22	0°42'47
	15292 Oct 18 18:06	30°♿♿		desc. node	15293 Sep 25 23:26	15°♿46'31	
direct	15292 Oct 24 16:46	28°♿23'55		min. Earth dist.	15293 Sep 26 16:14	15°♿06'25	0.61335 AU
	15292 Oct 30 21:12	0°♿		morning rise	15293 Sep 30 07:25	12°♿07'16	
morning max el	15292 Nov 07 23:48	6°♿05'58	27°34'53	direct	15293 Oct 06 23:17	9°♿51'32	
	15292 Nov 25 20:03	0°♿		morning max el	15293 Oct 21 04:11	17°♿47'20	27°58'52
asc. node	15292 Dec 03 13:08	13°♿51'23			15293 Oct 31 09:41	0°♿	
morning set	15292 Dec 09 11:34	25°♿54'24			15293 Nov 18 14:15	0°♿	
	15292 Dec 11 09:18	0°♿		asc. node	15293 Nov 20 10:05	3°♿34'01	
				morning set	15293 Nov 23 13:38	9°♿57'04	
superior conj	15292 Dec 16 10:18	11°♿09'45	1°33'48	max. Earth dist.	15293 Nov 29 05:36	22°♿05'54	1.31373 AU
minimum elong	15292 Dec 16 09:06	11°♿03'02	1°34'39				
max. Earth dist.	15292 Dec 15 23:36	10°♿09'54	1.31058 AU	superior conj	15293 Nov 30 20:39	25°♿41'43	1°23'45
evening rise	15292 Dec 23 03:47	26°♿02'27		minimum elong	15293 Nov 30 18:41	25°♿30'50	1°24'27
	15292 Dec 25 00:33	0°♿			15293 Dec 02 19:07	0°♿	
desc. node	15293 Jan 05 00:27	20°♿46'15		evening rise	15293 Dec 07 13:29	10°♿30'00	
	15293 Jan 10 23:34	0°♿			15293 Dec 17 08:11	0°♿	
evening max el	15293 Jan 21 07:40	12°♿21'30	26°28'53	desc. node	15293 Dec 22 21:18	9°♿12'01	
retrograde	15293 Feb 04 07:04	19°♿29'36		evening max el	15294 Jan 02 23:24	23°♿01'32	25°07'00
evening set	15293 Feb 10 16:35	17°♿50'15		retrograde	15294 Jan 16 19:01	29°♿57'18	
min. Earth dist.	15293 Feb 14 21:10	15°♿12'57	0.58465 AU	evening set	15294 Jan 22 10:14	28°♿45'57	
inferior conj	15293 Feb 18 00:38	12°♿51'57	-3°33'37	min. Earth dist.	15294 Jan 27 11:34	26°♿02'35	0.56495 AU
minimum elong	15293 Feb 18 08:34	12°♿37'04	3°30'30	inferior conj	15294 Jan 30 02:46	24°♿19'59	-4°56'37
morning rise	15293 Feb 26 03:49	8°♿21'22		minimum elong	15294 Jan 30 11:54	24°♿05'07	4°53'46
direct	15293 Feb 28 03:28	8°♿07'47		morning rise	15294 Feb 07 16:07	20°♿11'07	
asc. node	15293 Mar 01 10:52	8°♿13'55		direct	15294 Feb 09 19:29	19°♿58'02	
morning max el	15293 Mar 08 06:00	12°♿07'53	18°25'34	asc. node	15294 Feb 16 08:18	22°♿09'09	



morning max el	15294 Feb 19 06:27	24° $\approx$ 33'59	19°16'48	morning max el	15295 Feb 01 17:19	6° $\approx$ 06'57	20°31'10
	15294 Feb 23 19:51	0° $\text{H}$		asc. node	15295 Feb 03 05:41	7° $\approx$ 40'22	
morning set	15294 Mar 08 02:44	21° $\text{H}$ 48'52			15295 Feb 17 05:22	0° $\text{H}$	
	15294 Mar 12 05:12	0° $\text{Y}$		morning set	15295 Feb 20 09:48	6° $\text{H}$ 27'19	
superior conj	15294 Mar 16 08:28	8° $\text{Y}$ 07'38	0°37'44	superior conj	15295 Feb 27 22:50	22° $\text{H}$ 00'44	1°02'26
minimum elong	15294 Mar 16 10:36	8° $\text{Y}$ 17'56	0°37'20	minimum elong	15295 Feb 28 01:26	22° $\text{H}$ 13'57	1°02'16
desc. node	15294 Mar 20 22:46	16° $\text{Y}$ 49'54			15295 Mar 03 23:05	0° $\text{Y}$	
max. Earth dist.	15294 Mar 23 01:23	20° $\text{Y}$ 41'26	1.38391 AU	max. Earth dist.	15295 Mar 05 08:46	2° $\text{Y}$ 42'58	1.36180 AU
evening rise	15294 Mar 26 18:46	27° $\text{Y}$ 17'40		desc. node	15295 Mar 07 19:20	7° $\text{Y}$ 20'01	
	15294 Mar 28 08:27	0° $\text{B}$		evening rise	15295 Mar 09 04:51	9° $\text{Y}$ 54'51	
	15294 Apr 16 18:55	0° $\text{II}$			15295 Mar 20 23:54	0° $\text{B}$	
evening max el	15294 May 01 02:05	17° $\text{II}$ 23'19	24°48'16		15295 Apr 12 09:37	0° $\text{II}$	
retrograde	15294 May 12 20:46	24° $\text{II}$ 15'49		evening max el	15295 Apr 13 15:39	1° $\text{II}$ 15'29	26°00'05
asc. node	15294 May 15 05:10	23° $\text{II}$ 52'18		retrograde	15295 Apr 26 07:59	8° $\text{II}$ 32'03	
evening set	15294 May 18 13:15	21° $\text{II}$ 51'52		evening set	15295 May 02 11:08	6° $\text{II}$ 01'23	
min. Earth dist.	15294 May 23 00:08	16° $\text{II}$ 49'24	0.68382 AU	asc. node	15295 May 02 02:23	6° $\text{II}$ 19'03	
inferior conj	15294 May 24 02:39	15° $\text{II}$ 21'21	2°24'08	min. Earth dist.	15295 May 06 15:21	1° $\text{II}$ 34'35	0.67348 AU
minimum elong	15294 May 24 00:34	15° $\text{II}$ 28'18	2°22'46		15295 May 07 21:35	30° $\text{R}$ $\text{B}$	
morning rise	15294 May 29 12:07	9° $\text{II}$ 24'11		inferior conj	15295 May 08 06:41	29° $\text{B}$ 31'22	1°47'28
direct	15294 Jun 02 06:12	8° $\text{II}$ 03'23		minimum elong	15295 May 08 04:35	29° $\text{B}$ 37'59	1°46'04
morning max el	15294 Jun 09 12:44	12° $\text{II}$ 04'29	19°35'21	morning rise	15295 May 13 22:45	23° $\text{B}$ 44'32	
desc. node	15294 Jun 16 23:42	21° $\text{II}$ 05'20		direct	15295 May 17 05:56	22° $\text{B}$ 42'31	
greatest brilliancy	15294 Jun 22 05:17	28° $\text{II}$ 31'38	-0.6m	morning max el	15295 May 23 21:15	26° $\text{B}$ 16'05	18°42'54
	15294 Jun 23 05:20	0° $\text{E}$			15295 May 27 05:27	0° $\text{II}$	
morning set	15294 Jul 05 05:21	18° $\text{E}$ 08'27		desc. node	15295 Jun 03 20:42	10° $\text{II}$ 40'48	
	15294 Jul 12 21:22	0° $\text{O}$		morning set	15295 Jun 14 18:16	27° $\text{II}$ 29'38	
max. Earth dist.	15294 Jul 17 00:18	6° $\text{O}$ 27'49	1.45060 AU		15295 Jun 16 08:50	0° $\text{E}$	
				max. Earth dist.	15295 Jun 29 18:34	20° $\text{E}$ 53'48	1.45846 AU
superior conj	15294 Jul 21 08:56	13° $\text{O}$ 23'04	-2°07'35				
minimum elong	15294 Jul 21 14:30	13° $\text{O}$ 45'22	2°08'03	superior conj	15295 Jun 30 21:41	22° $\text{E}$ 39'43	-2°13'38
	15294 Jul 31 13:42	0° $\text{np}$		minimum elong	15295 Jun 30 20:11	22° $\text{E}$ 33'51	2°14'32
evening rise	15294 Aug 04 08:05	6° $\text{np}$ 16'36			15295 Jul 05 14:08	0° $\text{O}$	
asc. node	15294 Aug 11 05:10	17° $\text{np}$ 44'16		evening rise	15295 Jul 16 08:51	17° $\text{O}$ 04'58	
	15294 Aug 19 07:37	0° $\text{u}$		greatest brilliancy	15295 Jul 22 16:11	27° $\text{O}$ 08'59	-0.9m
evening max el	15294 Aug 22 12:08	3° $\text{u}$ 40'52	18°08'58		15295 Jul 24 11:26	0° $\text{np}$	
retrograde	15294 Aug 28 20:51	7° $\text{u}$ 01'46		asc. node	15295 Jul 29 01:48	7° $\text{np}$ 04'37	
evening set	15294 Aug 31 16:03	6° $\text{u}$ 20'13		evening max el	15295 Aug 06 01:25	17° $\text{np}$ 23'01	18°33'55
inferior conj	15294 Sep 06 18:58	0° $\text{u}$ 58'58	1°44'34	retrograde	15295 Aug 12 13:22	20° $\text{np}$ 53'03	
minimum elong	15294 Sep 06 21:16	0° $\text{u}$ 52'34	1°43'47	evening set	15295 Aug 15 17:40	19° $\text{np}$ 55'52	
	15294 Sep 07 16:07	30° $\text{R}$ $\text{np}$		inferior conj	15295 Aug 21 10:29	14° $\text{np}$ 19'26	2°27'22
min. Earth dist.	15294 Sep 09 09:05	28° $\text{np}$ 07'31	0.63552 AU	minimum elong	15295 Aug 21 12:43	14° $\text{np}$ 12'37	2°26'30
desc. node	15294 Sep 12 20:53	24° $\text{np}$ 50'23		min. Earth dist.	15295 Aug 23 11:01	11° $\text{np}$ 52'10	0.65514 AU
morning rise	15294 Sep 13 00:31	24° $\text{np}$ 43'20		morning rise	15295 Aug 27 06:37	7° $\text{np}$ 55'25	
direct	15294 Sep 19 15:43	22° $\text{np}$ 11'46		desc. node	15295 Aug 30 18:21	5° $\text{np}$ 48'57	
	15294 Oct 03 08:30	0° $\text{u}$		direct	15295 Sep 02 16:20	5° $\text{np}$ 17'13	
morning max el	15294 Oct 03 13:17	0° $\text{u}$ 11'55	27°44'40	morning max el	15295 Sep 16 00:19	13° $\text{np}$ 08'26	26°58'08
	15294 Oct 25 10:42	0° $\text{ml}$			15295 Sep 29 15:12	0° $\text{u}$	
morning set	15294 Nov 07 08:09	23° $\text{ml}$ 36'31			15295 Oct 18 01:55	0° $\text{ml}$	
asc. node	15294 Nov 07 06:55	23° $\text{ml}$ 30'22		morning set	15295 Oct 21 16:15	6° $\text{ml}$ 45'28	
	15294 Nov 10 11:06	0° $\text{x}$		asc. node	15295 Oct 25 03:38	13° $\text{ml}$ 35'02	
max. Earth dist.	15294 Nov 12 05:38	3° $\text{x}$ 43'59	1.32244 AU	max. Earth dist.	15295 Oct 25 20:38	15° $\text{ml}$ 00'37	1.33674 AU
superior conj	15294 Nov 15 03:53	10° $\text{x}$ 01'51	1°07'43	superior conj	15295 Oct 30 05:44	24° $\text{ml}$ 03'46	0°45'43
minimum elong	15294 Nov 15 01:33	9° $\text{x}$ 49'12	1°08'13	minimum elong	15295 Oct 30 03:38	23° $\text{ml}$ 52'44	0°46'03
evening rise	15294 Nov 22 00:23	24° $\text{x}$ 59'09			15295 Nov 02 00:49	0° $\text{x}$	
	15294 Nov 24 09:02	0° $\text{Z}$		evening rise	15295 Nov 06 10:37	9° $\text{x}$ 24'51	
desc. node	15294 Dec 09 18:15	26° $\text{Z}$ 40'24			15295 Nov 17 02:02	0° $\text{Z}$	
	15294 Dec 12 11:08	0° $\approx$		desc. node	15295 Nov 26 15:19	12° $\text{Z}$ 50'28	
evening max el	15294 Dec 15 09:20	3° $\approx$ 05'24	23°26'36	evening max el	15295 Nov 26 21:46	13° $\text{Z}$ 06'27	21°45'22
retrograde	15294 Dec 28 17:55	9° $\approx$ 42'48		retrograde	15295 Dec 09 05:43	19° $\text{Z}$ 12'27	
evening set	15295 Jan 02 05:02	8° $\approx$ 59'37		evening set	15295 Dec 12 09:15	18° $\text{Z}$ 50'11	
min. Earth dist.	15295 Jan 08 20:03	5° $\approx$ 51'19	0.55062 AU	inferior conj	15295 Dec 21 01:24	14° $\text{Z}$ 58'55	-5°54'29
inferior conj	15295 Jan 10 08:44	4° $\approx$ 57'52	-5°51'54	minimum elong	15295 Dec 20 20:58	15° $\text{Z}$ 05'08	5°53'10
minimum elong	15295 Jan 10 13:26	4° $\approx$ 51'01	5°50'39	min. Earth dist.	15295 Dec 21 01:42	14° $\text{Z}$ 58'31	0.54438 AU
morning rise	15295 Jan 18 23:22	1° $\approx$ 05'28		morning rise	15295 Dec 29 09:22	11° $\text{Z}$ 11'02	
direct	15295 Jan 21 16:19	0° $\approx$ 47'44		direct	15296 Jan 02 01:24	10° $\text{Z}$ 41'35	

morning max el	15296 Jan 14 13:18	16°  43'50	22°07'12	morning max el	15296 Dec 25 23:25	26°  43'02	23°56'12
asc. node	15296 Jan 21 03:00	24°  29'14			15296 Dec 29 02:57	0°  3	
	15296 Jan 24 18:10	0°  3		asc. node	15297 Jan 07 00:16	12°  318'28	
morning set	15296 Feb 04 20:18	21°  11'21			15297 Jan 16 12:44	0°  3	
	15296 Feb 08 23:30	0°  1		morning set	15297 Jan 19 08:13	5°  55'22	
superior conj	15296 Feb 11 22:17	6°  16'29	1°20'32	superior conj	15297 Jan 26 03:57	20°  46'59	1°32'09
minimum elong	15296 Feb 12 00:32	6°  28'26	1°20'45	minimum elong	15297 Jan 26 05:24	20°  54'52	1°32'44
max. Earth dist.	15296 Feb 15 22:02	14°  33'18	1.34242 AU	max. Earth dist.	15297 Jan 28 19:04	26°  27'16	1.32710 AU
evening rise	15296 Feb 20 06:02	23°  08'16			15297 Jan 30 11:16	0°  1	
desc. node	15296 Feb 22 15:55	27°  42'18		evening rise	15297 Feb 02 18:56	6°  149'21	
	15296 Feb 23 21:45	0°  1		desc. node	15297 Feb 08 12:31	17°  152'16	
	15296 Mar 13 15:54	0°  8			15297 Feb 15 11:35	0°  1	
evening max el	15296 Mar 26 05:33	14°  58'13	26°56'17	evening max el	15297 Mar 08 18:32	28°  19'52	27°29'26
retrograde	15296 Apr 08 13:23	22°  26'25			15297 Mar 10 14:05	0°  8	
evening set	15296 Apr 15 01:40	19°  54'31		retrograde	15297 Mar 22 12:05	5°  849'54	
asc. node	15296 Apr 17 23:42	17°  10'19		evening set	15297 Mar 29 06:39	3°  823'11	
min. Earth dist.	15296 Apr 19 00:40	16°  01'38	0.65887 AU	min. Earth dist.	15297 Apr 02 01:58	0°  801'03	0.64056 AU
inferior conj	15296 Apr 21 04:37	13°  31'19	0°58'52		15297 Apr 02 02:23	30°  81	
minimum elong	15296 Apr 21 03:10	13°  35'33	0°57'44	inferior conj	15297 Apr 04 17:45	27°  14'07	-0°02'40
morning rise	15296 Apr 27 06:03	7°  56'35		minimum elong	15297 Apr 04 17:50	27°  13'53	0°02'59
direct	15296 Apr 30 03:20	7°  11'03		transit middle	15297 Apr 04 17:50	27°  13'53	0°02'59
morning max el	15296 May 06 11:23	10°  29'43	18°07'16	transit begin	15297 Apr 04 14:46	27°  21'57	
	15296 May 20 07:55	0°  11		transit end	15297 Apr 04 20:54	27°  05'50	
desc. node	15296 May 20 17:37	0°  1138'54		asc. node	15297 Apr 04 21:06	27°  05'17	
morning set	15296 May 25 08:16	8°  1105'00		morning rise	15297 Apr 11 07:16	21°  153'59	
	15296 Jun 08 02:06	0°  1		direct	15297 Apr 13 19:50	21°  15'55	
superior conj	15296 Jun 09 07:16	1°  54'28	-1°59'36	morning max el	15297 Apr 20 04:39	24°  137'44	17°48'52
minimum elong	15296 Jun 08 23:24	1°  23'40	2°00'02		15297 Apr 24 15:56	0°  8	
max. Earth dist.	15296 Jun 11 15:02	5°  32'42	1.45884 AU	morning set	15297 May 07 01:36	19°  858'39	
evening rise	15296 Jun 25 10:05	26°  57'03		desc. node	15297 May 07 14:26	20°  852'50	
	15296 Jun 27 09:27	0°  1			15297 May 13 00:52	0°  11	
greatest brilliancy	15296 Jul 07 10:56	15°  122'16	-0.7m	superior conj	15297 May 20 06:10	11°  1149'42	-1°29'39
asc. node	15296 Jul 14 22:31	25°  158'34		minimum elong	15297 May 19 21:53	11°  116'17	1°29'34
	15296 Jul 18 06:44	0°  1		max. Earth dist.	15297 May 25 10:52	20°  1107'11	1.45178 AU
evening max el	15296 Jul 19 10:44	1°  113'02	19°15'40		15297 May 31 18:36	0°  1	
retrograde	15296 Jul 26 10:19	5°  105'08		evening rise	15297 Jun 04 21:45	6°  521'22	
evening set	15296 Jul 30 00:14	3°  150'47			15297 Jun 20 18:18	0°  1	
	15296 Aug 02 20:57	30°  181		asc. node	15297 Jul 01 19:21	14°  116'27	
inferior conj	15296 Aug 04 10:22	28°  100'36	2°54'10	evening max el	15297 Jul 02 14:22	15°  105'17	20°12'48
minimum elong	15296 Aug 04 11:56	27°  155'29	2°53'21	retrograde	15297 Jul 10 09:13	19°  131'17	
min. Earth dist.	15296 Aug 05 20:38	26°  109'06	0.67100 AU	evening set	15297 Jul 14 09:19	17°  159'20	
morning rise	15296 Aug 09 23:02	21°  134'43		inferior conj	15297 Jul 19 15:50	11°  156'41	3°07'26
direct	15296 Aug 15 23:42	18°  158'55		minimum elong	15297 Jul 19 16:29	11°  154'30	3°06'38
desc. node	15296 Aug 16 15:48	19°  100'39		min. Earth dist.	15297 Jul 20 12:06	10°  147'37	0.68241 AU
morning max el	15296 Aug 28 11:29	26°  126'12	25°47'50	morning rise	15297 Jul 24 23:18	5°  133'11	
	15296 Aug 31 18:44	0°  1		direct	15297 Jul 30 12:45	3°  107'11	
	15296 Sep 22 05:03	0°  1		desc. node	15297 Aug 03 13:15	4°  109'46	
morning set	15296 Oct 03 10:29	19°  116'09		morning max el	15297 Aug 10 22:17	9°  156'22	24°23'12
max. Earth dist.	15296 Oct 07 02:10	26°  105'40	1.35603 AU		15297 Aug 26 20:10	0°  1	
	15296 Oct 09 02:46	0°  1			15297 Sep 14 21:09	0°  1	
asc. node	15296 Oct 11 00:18	3°  1144'07		morning set	15297 Sep 15 10:42	0°  158'38	
				max. Earth dist.	15297 Sep 19 01:34	7°  122'02	1.37883 AU
superior conj	15296 Oct 12 23:32	7°  1140'54	0°18'00	superior conj	15297 Sep 26 05:56	20°  144'30	-0°14'41
minimum elong	15296 Oct 12 22:29	7°  1135'36	0°18'19	minimum elong	15297 Sep 26 06:54	20°  149'13	0°14'16
evening rise	15296 Oct 20 18:13	23°  1142'15		behind sun begin	15297 Sep 26 03:41	20°  133'41	
	15296 Oct 23 20:27	0°  1		behind sun end	15297 Sep 26 10:08	21°  104'47	
evening max el	15296 Nov 07 21:29	23°  139'37	20°18'20	asc. node	15297 Sep 27 20:55	23°  153'23	
desc. node	15296 Nov 12 12:29	27°  117'36			15297 Sep 30 23:24	0°  1	
retrograde	15296 Nov 18 16:51	29°  102'22		evening rise	15297 Oct 04 20:42	7°  1144'37	
evening set	15296 Nov 20 21:50	28°  149'56			15297 Oct 17 08:00	0°  1	
inferior conj	15296 Nov 29 18:20	24°  154'00	-4°56'58	evening max el	15297 Oct 21 11:36	5°  101'03	19°12'33
minimum elong	15296 Nov 29 08:25	25°  108'38	4°53'32	desc. node	15297 Oct 30 09:45	9°  137'55	
min. Earth dist.	15296 Dec 01 07:46	23°  158'49	0.54749 AU	retrograde	15297 Oct 30 16:14	9°  138'09	
morning rise	15296 Dec 07 18:26	20°  152'02		evening set	15297 Nov 01 13:18	9°  127'24	
direct	15296 Dec 12 11:04	20°  104'31					

inferior conj	15297 Nov 10 01:16	5°♊15'57	-3°20'05	desc. node	15298 Oct 17 07:06	19°♍46'28	
minimum elong	15297 Nov 09 17:01	5°♊29'47	3°16'18	inferior conj	15298 Oct 22 05:17	16°♍22'54	-1°34'44
min. Earth dist.	15297 Nov 12 17:48	3°♊27'59	0.55933 AU	minimum elong	15298 Oct 22 01:33	16°♍30'12	1°32'37
morning rise	15297 Nov 17 18:17	0°♊42'13		min. Earth dist.	15298 Oct 25 10:34	13°♍52'16	0.57790 AU
	15297 Nov 19 19:26	30°♍		morning rise	15298 Oct 29 13:59	11°♍11'45	
direct	15297 Nov 23 07:30	29°♍31'22		direct	15298 Nov 04 18:43	9°♍33'51	
	15297 Nov 26 19:38	0°♊		morning max el	15298 Nov 19 01:27	17°♍06'21	27°03'24
morning max el	15297 Dec 07 09:15	6°♊39'53	25°41'18		15298 Nov 29 17:20	0°♊	
	15297 Dec 24 09:30	0°♊		asc. node	15298 Dec 11 18:31	20°♊00'35	
asc. node	15297 Dec 24 21:27	0°♊52'56			15298 Dec 16 19:34	0°♊	
morning set	15298 Jan 03 19:45	20°♊34'20		morning set	15298 Dec 19 05:04	5°♊02'43	
	15298 Jan 08 02:53	0°♋					
				superior conj	15298 Dec 26 00:49	20°♊05'57	1°36'54
superior conj	15298 Jan 10 13:30	5°♋25'42	1°37'33	minimum elong	15298 Dec 26 00:11	20°♊02'21	1°37'47
minimum elong	15298 Jan 10 13:55	5°♋27'59	1°38'22	max. Earth dist.	15298 Dec 26 05:54	20°♊34'23	1.31110 AU
max. Earth dist.	15298 Jan 11 22:40	8°♋29'14	1.31649 AU		15298 Dec 30 11:48	0°♋	
evening rise	15298 Jan 17 16:37	20°♋51'05		evening rise	15299 Jan 01 20:34	5°♋06'44	
	15298 Jan 22 05:48	0°♋		desc. node	15299 Jan 13 05:53	27°♋11'16	
desc. node	15298 Jan 26 09:10	7°♋44'35			15299 Jan 14 21:37	0°♋	
	15298 Feb 09 13:21	0°♋		evening max el	15299 Feb 01 09:00	23°♋10'31	27°02'25
evening max el	15298 Feb 19 04:31	11°♋08'07	27°32'59		15299 Feb 12 03:35	0°♋	
retrograde	15298 Mar 05 03:13	18°♋33'21		retrograde	15299 Feb 15 09:27	0°♋26'21	
evening set	15298 Mar 11 23:31	16°♋19'08			15299 Feb 18 13:54	30°♋	
min. Earth dist.	15298 Mar 15 17:46	13°♋22'08	0.61949 AU	evening set	15299 Feb 22 00:58	28°♋32'29	
inferior conj	15298 Mar 18 18:56	10°♋32'04	-1°17'10	min. Earth dist.	15299 Feb 25 23:18	25°♋51'22	0.59714 AU
minimum elong	15298 Mar 18 21:37	10°♋25'48	1°16'09	inferior conj	15299 Mar 01 04:25	23°♋14'39	-2°42'24
asc. node	15298 Mar 22 18:33	7°♋09'38		minimum elong	15299 Mar 01 10:30	23°♋02'14	2°39'52
morning rise	15298 Mar 25 22:47	5°♋29'19		morning rise	15299 Mar 08 23:30	18°♋31'50	
direct	15298 Mar 28 04:02	5°♋07'21		asc. node	15299 Mar 09 16:01	18°♋23'08	
morning max el	15298 Apr 03 22:05	8°♋31'48	17°48'07	direct	15299 Mar 10 23:51	18°♋16'22	
	15298 Apr 18 01:53	0°♋		morning max el	15299 Mar 18 12:04	22°♋00'39	18°06'04
morning set	15298 Apr 19 17:35	2°♋55'56			15299 Mar 24 15:53	0°♋	
desc. node	15298 Apr 24 11:09	11°♋17'39		morning set	15299 Apr 03 02:10	16°♋38'12	
					15299 Apr 10 07:47	0°♋	
superior conj	15298 May 01 03:43	22°♋48'43	-0°52'00	desc. node	15299 Apr 11 07:47	1°♋48'32	
minimum elong	15298 Apr 30 22:50	22°♋28'09	0°51'57				
	15298 May 05 11:22	0°♌		superior conj	15299 Apr 13 00:23	4°♋50'21	-0°13'49
max. Earth dist.	15298 May 08 03:19	4°♌20'21	1.43806 AU	minimum elong	15299 Apr 12 23:14	4°♋45'12	0°14'04
evening rise	15298 May 15 12:12	16°♌00'19		behind sun begin	15299 Apr 12 19:33	4°♋28'49	
	15298 May 24 17:29	0°♌		behind sun end	15299 Apr 13 02:55	5°♋01'35	
evening max el	15298 Jun 15 12:02	28°♌57'56	21°22'45	max. Earth dist.	15299 Apr 20 14:47	17°♋57'23	1.41917 AU
	15298 Jun 16 13:46	0°♌		evening rise	15299 Apr 25 18:33	26°♋24'39	
asc. node	15298 Jun 18 16:17	1°♌46'26			15299 Apr 28 00:35	0°♌	
retrograde	15298 Jun 24 08:04	4°♌06'11			15299 May 18 11:27	0°♌	
evening set	15298 Jun 28 18:57	2°♌17'13		evening max el	15299 May 29 04:53	12°♌50'43	22°41'24
	15298 Jul 01 01:03	30°♌		asc. node	15299 Jun 05 13:20	18°♌12'25	
inferior conj	15298 Jul 04 00:34	26°♌03'40	3°08'57	retrograde	15299 Jun 08 05:10	18°♌43'29	
minimum elong	15298 Jul 04 00:14	26°♌04'49	3°08'04	evening set	15299 Jun 13 03:24	16°♌38'59	
min. Earth dist.	15298 Jul 04 07:23	25°♌39'55	0.68905 AU	inferior conj	15299 Jun 18 10:28	10°♌16'35	2°59'46
morning rise	15298 Jul 09 05:18	19°♌45'20		minimum elong	15299 Jun 18 09:15	10°♌20'47	2°58'42
direct	15298 Jul 14 06:32	17°♌34'27		min. Earth dist.	15299 Jun 18 04:16	10°♌38'08	0.69082 AU
desc. node	15298 Jul 21 10:36	20°♌51'37		morning rise	15299 Jun 23 14:58	4°♌05'22	
morning max el	15298 Jul 24 09:52	23°♌35'05	22°53'45	direct	15299 Jun 28 03:51	2°♌12'54	
	15298 Jul 30 02:03	0°♌		morning max el	15299 Jul 07 00:47	7°♌21'45	21°28'02
	15298 Aug 20 04:48	0°♍		desc. node	15299 Jul 08 07:51	8°♌42'18	
morning set	15298 Aug 27 12:46	11°♍44'00			15299 Jul 24 11:16	0°♌	
max. Earth dist.	15298 Sep 01 00:41	19°♍16'03	1.40277 AU	morning set	15299 Aug 07 14:39	21°♌27'37	
	15298 Sep 07 03:47	0°♍			15299 Aug 12 22:40	0°♍	
				max. Earth dist.	15299 Aug 14 04:42	2°♍02'35	1.42500 AU
superior conj	15298 Sep 08 20:56	3°♍06'04	-0°50'31				
minimum elong	15298 Sep 09 00:49	3°♍23'47	0°49'56	superior conj	15299 Aug 21 16:10	14°♍36'05	-1°26'07
asc. node	15298 Sep 14 17:31	13°♍59'42		minimum elong	15299 Aug 21 22:58	15°♍05'21	1°25'35
evening rise	15298 Sep 18 15:05	21°♍24'46			15299 Aug 30 09:13	0°♍	
	15298 Sep 23 04:34	0°♍		evening rise	15299 Sep 01 21:26	4°♍32'43	
evening max el	15298 Oct 04 13:57	17°♍10'27	18°28'56	asc. node	15299 Sep 01 14:07	3°♍59'33	
retrograde	15298 Oct 12 10:15	21°♍09'02		evening max el	15299 Sep 18 00:21	29°♍58'59	18°06'09
evening set	15298 Oct 14 09:38	20°♍54'41			15299 Sep 18 00:45	0°♍	

retrograde	15299 Sep 24 22:32	3°♍31'51		evening rise	15300 Aug 15 10:46	16°♏55'24	
evening set	15299 Sep 27 04:42	3°♍09'34		asc. node	15300 Aug 19 10:42	23°♏48'08	
	15299 Oct 02 07:51	30°♋♂			15300 Aug 23 02:53	0°♂	
inferior conj	15299 Oct 04 06:36	28°♂16'54	-0°01'40	evening max el	15300 Sep 01 14:35	13°♂15'16	18°02'39
minimum elong	15299 Oct 04 06:34	28°♂17'00	0°01'17	retrograde	15300 Sep 08 01:14	16°♂36'25	
transit middle	15299 Oct 04 06:34	28°♂17'00	0°01'17	evening set	15300 Sep 10 15:36	16°♂02'37	
transit begin	15299 Oct 04 03:13	28°♂24'35		inferior conj	15300 Sep 17 01:55	10°♂50'56	1°11'38
transit end	15299 Oct 04 09:54	28°♂09'24		minimum elong	15300 Sep 17 03:48	10°♂46'03	1°11'03
desc. node	15299 Oct 04 04:30	28°♂21'42		min. Earth dist.	15300 Sep 19 22:49	7°♂53'01	0.62306 AU
min. Earth dist.	15299 Oct 07 11:53	25°♂22'07	0.60015 AU	desc. node	15300 Sep 21 01:57	6°♂47'44	
morning rise	15299 Oct 11 05:10	22°♂33'29		morning rise	15300 Sep 23 13:35	4°♂44'25	
direct	15299 Oct 17 19:04	20°♂29'50		direct	15300 Sep 30 05:58	2°♂20'58	
morning max el	15299 Nov 01 01:33	28°♂19'02	27°49'55	morning max el	15300 Oct 14 08:03	10°♂19'06	27°57'12
	15299 Nov 02 17:07	0°♍			15300 Oct 29 18:05	0°♍	
	15299 Nov 23 13:09	0°♌		asc. node	15300 Nov 15 12:21	29°♍21'31	
asc. node	15299 Nov 28 15:29	9°♌32'36			15300 Nov 15 20:03	0°♌	
morning set	15299 Dec 03 10:19	19°♌16'14		morning set	15300 Nov 17 09:25	3°♌09'13	
	15299 Dec 08 09:15	0°♎		max. Earth dist.	15300 Nov 22 17:15	14°♌25'12	1.31680 AU
max. Earth dist.	15299 Dec 09 13:21	2°♎36'03	1.31117 AU				
				superior conj	15300 Nov 24 21:19	19°♌10'08	1°17'41
superior conj	15299 Dec 10 12:04	4°♎42'44	1°30'16	minimum elong	15300 Nov 24 19:08	18°♌58'09	1°18'18
minimum elong	15299 Dec 10 10:31	4°♎34'02	1°31'04		15300 Nov 29 19:01	0°♎	
evening rise	15299 Dec 17 04:44	19°♎31'40		evening rise	15300 Dec 01 15:09	4°♎00'25	
	15299 Dec 22 05:34	0°♏			15300 Dec 15 06:40	0°♏	
desc. node	15299 Dec 31 02:41	16°♏02'53		desc. node	15300 Dec 17 23:34	4°♏06'02	
	15300 Jan 10 03:04	0°♏		evening max el	15300 Dec 26 18:33	14°♏42'15	24°25'33
evening max el	15300 Jan 14 05:49	4°♏20'43	25°57'29	retrograde	15301 Jan 09 10:23	21°♏30'24	
retrograde	15300 Jan 28 04:34	11°♏23'56		evening set	15301 Jan 14 14:50	20°♏31'31	
evening set	15300 Feb 03 07:13	9°♏56'29		min. Earth dist.	15301 Jan 20 06:17	17°♏40'01	0.55805 AU
min. Earth dist.	15300 Feb 07 18:57	7°♏18'27	0.57575 AU	inferior conj	15301 Jan 22 11:45	16°♏17'45	-5°25'03
inferior conj	15300 Feb 10 18:40	5°♏12'13	-4°10'36	minimum elong	15301 Jan 22 19:50	16°♏05'17	5°22'51
minimum elong	15300 Feb 11 03:35	4°♏56'29	4°07'21	morning rise	15301 Jan 31 02:50	12°♏16'39	
morning rise	15300 Feb 19 02:58	0°♏50'46		direct	15301 Feb 02 10:53	12°♏02'11	
direct	15300 Feb 21 03:05	0°♏37'58		asc. node	15301 Feb 11 10:49	15°♏54'43	
asc. node	15300 Feb 24 13:26	1°♏17'36		morning max el	15301 Feb 12 13:28	16°♏55'57	19°45'39
morning max el	15300 Mar 01 18:36	4°♏52'42	18°44'33		15301 Feb 22 01:13	0°♏	
	15300 Mar 17 11:54	0°♏		morning set	15301 Mar 02 02:18	15°♏22'13	
morning set	15300 Mar 17 22:22	0°♏50'51			15301 Mar 09 08:09	0°♏	
				superior conj	15301 Mar 10 00:08	1°♏19'09	0°49'01
superior conj	15300 Mar 26 16:41	17°♏44'37	0°20'33	minimum elong	15301 Mar 10 02:35	1°♏31'17	0°48'42
minimum elong	15300 Mar 26 18:01	17°♏50'53	0°20'08	max. Earth dist.	15301 Mar 16 04:53	13°♏12'22	1.37430 AU
desc. node	15300 Mar 29 04:22	22°♏21'54		desc. node	15301 Mar 16 00:56	12°♏54'03	
	15300 Apr 02 10:10	0°♏		evening rise	15301 Mar 19 21:41	19°♏55'39	
max. Earth dist.	15300 Apr 02 22:21	0°♏53'33	1.39714 AU		15301 Mar 25 18:19	0°♏	
evening rise	15300 Apr 06 21:59	7°♏44'42			15301 Apr 15 01:56	0°♏	
	15300 Apr 21 00:19	0°♏		evening max el	15301 Apr 24 08:42	10°♏39'40	25°20'18
evening max el	15300 May 11 19:10	26°♏45'08	24°02'52	retrograde	15301 Apr 24 12:58	17°♏43'07	
	15300 May 15 10:25	0°♏		asc. node	15301 May 10 07:36	16°♏43'47	
retrograde	15300 May 22 23:09	3°♏17'46		evening set	15301 May 12 10:14	15°♏15'43	
asc. node	15300 May 23 10:26	3°♏16'49		min. Earth dist.	15301 May 16 18:08	10°♏28'46	0.68000 AU
evening set	15300 May 28 09:01	1°♏00'07		inferior conj	15301 May 18 02:06	8°♏45'05	2°10'01
	15300 May 29 10:26	30°♋♏		minimum elong	15301 May 17 23:56	8°♏52'07	2°08'35
min. Earth dist.	15300 Jun 02 00:33	25°♏36'24	0.68779 AU	morning rise	15301 May 23 14:02	2°♏52'13	
inferior conj	15300 Jun 02 19:37	24°♏31'40	2°40'13	direct	15301 May 27 03:29	1°♏39'29	
minimum elong	15300 Jun 02 17:45	24°♏38'01	2°38'55	morning max el	15301 Jun 03 02:24	5°♏26'52	19°11'06
morning rise	15300 Jun 08 02:30	18°♏28'59		desc. node	15301 Jun 12 02:05	16°♏42'49	
direct	15300 Jun 12 03:21	16°♏56'29		greatest brilliancy	15301 Jun 15 22:39	22°♏21'12	-0.7m
morning max el	15300 Jun 19 21:51	21°♏18'52	20°12'27		15301 Jun 21 00:13	0°♏	
desc. node	15300 Jun 25 05:00	27°♏23'48		morning set	15301 Jun 27 02:37	9°♏21'21	
	15300 Jun 27 04:52	0°♏			15301 Jul 10 09:43	0°♏	
morning set	15300 Jul 17 21:39	0°♏24'14		max. Earth dist.	15301 Jul 10 08:42	29°♏56'03	1.45489 AU
	15300 Jul 17 15:21	0°♏					
max. Earth dist.	15300 Jul 27 15:48	15°♏40'25	1.44302 AU	superior conj	15301 Jul 13 09:57	4°♏44'09	-2°12'33
				minimum elong	15301 Jul 13 12:57	4°♏56'02	2°13'19
superior conj	15300 Aug 02 12:08	25°♏06'57	-1°55'55	evening rise	15301 Jul 28 02:01	28°♏21'16	
minimum elong	15300 Aug 02 19:34	25°♏37'24	1°55'56		15301 Jul 29 02:07	0°♏	
	15300 Aug 05 11:16	0°♏					

asc. node	15301 Aug 06 07:20	13° $\cap$ 20'53		max. Earth dist.	15302 Jun 23 04:24	14° $\ominus$ 30'14	1.45952 AU
evening max el	15301 Aug 16 05:04	26° $\cap$ 50'25	18°17'22		15302 Jul 03 02:38	0° $\Omega$	
	15301 Aug 21 00:05	0° $\underline{\Omega}$		evening rise	15302 Jul 08 16:17	8° $\Omega$ 44'17	
retrograde	15301 Aug 22 14:00	0° $\underline{\Omega}$ 13'34		greatest brilliancy	15302 Jul 17 19:11	23° $\Omega$ 00'54	-0.8m
	15301 Aug 24 03:38	30° $\mathbb{R}$ $\cap$			15302 Jul 22 10:05	0° $\cap$	
evening set	15301 Aug 25 13:04	29° $\cap$ 25'29		asc. node	15302 Jul 24 04:02	2° $\cap$ 31'11	
inferior conj	15301 Aug 31 11:13	23° $\cap$ 57'14	2°04'52	evening max el	15302 Jul 30 16:52	10° $\cap$ 36'21	18°49'34
minimum elong	15301 Aug 31 13:36	23° $\cap$ 50'21	2°04'00	retrograde	15302 Aug 06 08:54	14° $\cap$ 14'37	
min. Earth dist.	15301 Sep 02 19:36	21° $\cap$ 14'43	0.64432 AU	evening set	15302 Aug 09 17:09	13° $\cap$ 10'19	
morning rise	15301 Sep 06 12:35	17° $\cap$ 37'08		inferior conj	15302 Aug 15 06:44	7° $\cap$ 27'39	2°40'30
desc. node	15301 Sep 07 23:25	16° $\cap$ 35'21		minimum elong	15302 Aug 15 08:44	7° $\cap$ 21'21	2°39'40
direct	15301 Sep 13 01:52	15° $\cap$ 01'59		min. Earth dist.	15302 Aug 17 01:10	5° $\cap$ 14'29	0.66240 AU
morning max el	15301 Sep 26 18:26	22° $\cap$ 59'22	27°28'21	morning rise	15302 Aug 20 23:24	1° $\cap$ 01'53	
	15301 Oct 02 23:59	0° $\underline{\Omega}$			15302 Aug 22 07:49	30° $\mathbb{R}$ $\Omega$	
	15301 Oct 23 01:03	0° $\mathbb{M}$		desc. node	15302 Aug 25 20:54	28° $\Omega$ 30'49	
morning set	15301 Oct 31 23:51	16° $\mathbb{M}$ 36'22		direct	15302 Aug 27 05:27	28° $\Omega$ 23'49	
asc. node	15301 Nov 02 09:08	19° $\mathbb{M}$ 21'54			15302 Sep 01 15:35	0° $\cap$	
max. Earth dist.	15301 Nov 05 13:59	25° $\mathbb{M}$ 55'06	1.32796 AU	morning max el	15302 Sep 09 05:59	6° $\cap$ 07'16	26°30'32
	15301 Nov 07 12:32	0° $\mathbb{X}$			15302 Sep 27 16:23	0° $\underline{\Omega}$	
				morning set	15302 Oct 15 02:36	29° $\underline{\Omega}$ 30'31	
superior conj	15301 Nov 09 02:32	3° $\mathbb{X}$ 22'57	0°59'05		15302 Oct 15 08:51	0° $\mathbb{M}$	
minimum elong	15301 Nov 09 00:13	3° $\mathbb{X}$ 10'32	0°59'31	max. Earth dist.	15302 Oct 19 00:59	7° $\mathbb{M}$ 05'34	1.34441 AU
evening rise	15301 Nov 16 02:01	18° $\mathbb{X}$ 28'42		asc. node	15302 Oct 20 05:51	9° $\mathbb{M}$ 29'01	
	15301 Nov 21 16:07	0° $\mathbb{Z}$					
desc. node	15301 Dec 04 20:35	21° $\mathbb{Z}$ 03'38		superior conj	15302 Oct 24 01:20	17° $\mathbb{M}$ 15'10	0°34'37
evening max el	15301 Dec 08 04:07	24° $\mathbb{Z}$ 39'04	22°42'23	minimum elong	15302 Oct 23 23:34	17° $\mathbb{M}$ 06'02	0°34'55
	15301 Dec 15 20:32	0° $\approx$			15302 Oct 30 02:48	0° $\mathbb{X}$	
retrograde	15301 Dec 21 03:43	1° $\approx$ 05'03		evening rise	15302 Oct 31 11:25	2° $\mathbb{X}$ 51'37	
evening set	15301 Dec 25 01:24	0° $\approx$ 31'46			15302 Nov 15 15:55	0° $\mathbb{Z}$	
	15301 Dec 26 16:23	30° $\mathbb{R}$ $\mathbb{Z}$		evening max el	15302 Nov 19 20:27	4° $\mathbb{Z}$ 50'16	21°05'56
min. Earth dist.	15302 Jan 01 12:44	27° $\mathbb{Z}$ 07'12	0.54689 AU	desc. node	15302 Nov 21 17:41	6° $\mathbb{Z}$ 33'22	
inferior conj	15302 Jan 02 10:39	26° $\mathbb{Z}$ 36'12	-6°00'31	retrograde	15302 Dec 01 14:14	10° $\mathbb{Z}$ 39'36	
minimum elong	15302 Jan 02 11:38	26° $\mathbb{Z}$ 34'48	5°59'37	evening set	15302 Dec 04 06:10	10° $\mathbb{Z}$ 22'54	
morning rise	15302 Jan 10 23:08	22° $\mathbb{Z}$ 48'06		inferior conj	15302 Dec 13 01:40	6° $\mathbb{Z}$ 31'03	-5°36'46
direct	15302 Jan 14 01:11	22° $\mathbb{Z}$ 26'18		minimum elong	15302 Dec 12 17:59	6° $\mathbb{Z}$ 41'56	5°34'35
morning max el	15302 Jan 25 17:47	28° $\mathbb{Z}$ 03'39	21°09'52	min. Earth dist.	15302 Dec 13 18:22	6° $\mathbb{Z}$ 07'23	0.54449 AU
	15302 Jan 27 14:53	0° $\approx$		morning rise	15302 Dec 21 06:06	2° $\mathbb{Z}$ 39'29	
asc. node	15302 Jan 29 08:11	2° $\approx$ 00'48		direct	15302 Dec 25 08:31	2° $\mathbb{Z}$ 03'16	
morning set	15302 Feb 14 11:04	0° $\mathbb{X}$ 03'33		morning max el	15303 Jan 07 08:51	8° $\mathbb{Z}$ 22'20	22°52'56
	15302 Feb 14 10:23	0° $\mathbb{X}$		asc. node	15303 Jan 16 05:29	19° $\mathbb{Z}$ 17'43	
					15303 Jan 22 13:45	0° $\approx$	
superior conj	15302 Feb 21 18:43	15° $\mathbb{X}$ 22'41	1°10'55	morning set	15303 Jan 29 22:25	14° $\approx$ 48'34	
minimum elong	15302 Feb 21 21:15	15° $\mathbb{X}$ 35'47	1°10'55				
max. Earth dist.	15302 Feb 26 14:24	25° $\mathbb{X}$ 06'48	1.35305 AU	superior conj	15303 Feb 05 21:11	29° $\approx$ 46'15	1°26'15
	15302 Mar 01 02:53	0° $\mathbb{Y}$		minimum elong	15303 Feb 05 23:09	29° $\approx$ 56'44	1°26'37
evening rise	15302 Mar 02 14:33	2° $\mathbb{Y}$ 48'34			15303 Feb 05 23:46	0° $\mathbb{X}$	
desc. node	15302 Mar 02 21:28	3° $\mathbb{Y}$ 20'57		max. Earth dist.	15303 Feb 09 06:43	6° $\mathbb{X}$ 56'42	1.33526 AU
	15302 Mar 18 17:38	0° $\mathbb{B}$		evening rise	15303 Feb 13 21:08	16° $\mathbb{X}$ 15'04	
evening max el	15302 Apr 06 22:17	24° $\mathbb{B}$ 28'10	26°26'23	desc. node	15303 Feb 17 18:04	23° $\mathbb{X}$ 38'48	
	15302 Apr 13 21:31	0° $\mathbb{I}$			15303 Feb 21 06:21	0° $\mathbb{Y}$	
retrograde	15302 Apr 19 21:46	1° $\mathbb{I}$ 51'15			15303 Mar 13 05:27	0° $\mathbb{B}$	
	15302 Apr 25 07:37	30° $\mathbb{R}$ $\mathbb{B}$		evening max el	15303 Mar 20 11:48	8° $\mathbb{B}$ 02'48	27°13'38
evening set	15302 Apr 26 05:14	29° $\mathbb{B}$ 19'00		retrograde	15303 Apr 03 00:41	15° $\mathbb{B}$ 33'49	
asc. node	15302 Apr 27 04:53	28° $\mathbb{B}$ 27'14		evening set	15303 Apr 09 16:02	13° $\mathbb{B}$ 03'00	
min. Earth dist.	15302 Apr 30 06:57	25° $\mathbb{B}$ 07'18	0.66771 AU	min. Earth dist.	15303 Apr 13 13:06	9° $\mathbb{B}$ 23'48	0.65142 AU
inferior conj	15302 May 02 03:49	22° $\mathbb{B}$ 51'10	1°28'24	asc. node	15303 Apr 14 02:15	8° $\mathbb{B}$ 47'52	
minimum elong	15302 May 02 01:53	22° $\mathbb{B}$ 57'02	1°27'03	inferior conj	15303 Apr 15 22:21	6° $\mathbb{B}$ 44'36	0°34'22
morning rise	15302 May 07 23:33	17° $\mathbb{B}$ 09'34		minimum elong	15303 Apr 15 21:26	6° $\mathbb{B}$ 47'11	0°33'32
direct	15302 May 11 02:24	16° $\mathbb{B}$ 14'58		morning rise	15303 Apr 22 04:37	1° $\mathbb{B}$ 15'56	
morning max el	15302 May 17 13:38	19° $\mathbb{B}$ 40'29	18°25'48	direct	15303 Apr 24 21:56	0° $\mathbb{B}$ 36'41	
	15302 May 25 16:25	0° $\mathbb{I}$		morning max el	15303 May 01 05:30	3° $\mathbb{B}$ 52'59	17°57'21
desc. node	15302 May 29 23:02	6° $\mathbb{I}$ 28'39		desc. node	15303 May 16 19:55	26° $\mathbb{B}$ 34'00	
morning set	15302 Jun 07 01:09	19° $\mathbb{I}$ 11'30			15303 May 18 22:00	0° $\mathbb{I}$	
	15302 Jun 13 21:46	0° $\ominus$		morning set	15303 May 19 02:59	0° $\mathbb{I}$ 20'32	
superior conj	15302 Jun 22 19:13	13° $\ominus$ 54'24	-2°10'04	superior conj	15303 Jun 02 08:45	23° $\mathbb{I}$ 22'08	-1°48'25
minimum elong	15302 Jun 22 14:28	13° $\ominus$ 35'53	2°10'50	minimum elong	15303 Jun 01 23:59	22° $\mathbb{I}$ 47'28	1°48'33

max. Earth dist.	15303 Jun 06 00:21	29° $\Pi$ 06'59	1.45666 AU	minimum elong	15304 May 12 09:35	3° $\Pi$ 13'27	1°14'00
	15303 Jun 06 13:54	0° $\mathfrak{E}$		max. Earth dist.	15304 May 18 18:35	13° $\Pi$ 32'24	1.44666 AU
evening rise	15303 Jun 18 09:54	18° $\mathfrak{E}$ 19'01		evening rise	15304 May 27 20:38	27° $\Pi$ 43'59	
	15303 Jun 26 01:45	0° $\Omega$			15304 May 29 08:11	0° $\mathfrak{E}$	
greatest brilliancy	15303 Jul 02 06:43	9° $\Omega$ 15'42	-0.6m		15304 Jun 18 23:52	0° $\Omega$	
asc. node	15303 Jul 11 00:49	21° $\Omega$ 11'10		evening max el	15304 Jun 26 01:01	8° $\Omega$ 20'29	20°41'19
evening max el	15303 Jul 13 23:53	24° $\Omega$ 27'35	19°38'12	asc. node	15304 Jun 26 21:41	9° $\Omega$ 10'26	
retrograde	15303 Jul 21 07:00	28° $\Omega$ 33'06		retrograde	15304 Jul 04 05:59	13° $\Omega$ 03'28	
evening set	15303 Jul 25 01:04	27° $\Omega$ 11'29		evening set	15304 Jul 08 10:36	11° $\Omega$ 24'17	
inferior conj	15303 Jul 30 09:20	21° $\Omega$ 15'55	3°01'17	inferior conj	15304 Jul 13 16:26	5° $\Omega$ 17'05	3°09'25
minimum elong	15303 Jul 30 10:31	21° $\Omega$ 11'56	3°00'30	minimum elong	15304 Jul 13 16:40	5° $\Omega$ 16'19	3°08'36
min. Earth dist.	15303 Jul 31 13:39	19° $\Omega$ 41'35	0.67642 AU	min. Earth dist.	15304 Jul 14 07:00	4° $\Omega$ 26'51	0.68581 AU
morning rise	15303 Aug 04 19:28	14° $\Omega$ 50'22			15304 Jul 17 20:02	30° $\mathfrak{R}$ $\mathfrak{E}$	
direct	15303 Aug 10 15:34	12° $\Omega$ 17'41		morning rise	15304 Jul 18 22:26	28° $\mathfrak{E}$ 55'33	
desc. node	15303 Aug 12 18:22	12° $\Omega$ 35'03		direct	15304 Jul 24 06:53	26° $\mathfrak{E}$ 35'10	
morning max el	15303 Aug 22 16:58	19° $\Omega$ 31'07	25°12'53	desc. node	15304 Jul 29 15:46	28° $\mathfrak{E}$ 26'38	
	15303 Aug 31 15:30	0° $\mathfrak{M}$			15304 Jul 31 19:07	0° $\Omega$	
	15303 Sep 20 18:52	0° $\mathfrak{L}$		morning max el	15304 Aug 04 03:38	3° $\Omega$ 04'22	23°45'13
morning set	15303 Sep 27 13:46	11° $\mathfrak{L}$ 42'18			15304 Aug 24 17:50	0° $\mathfrak{M}$	
max. Earth dist.	15303 Oct 01 02:52	18° $\mathfrak{L}$ 10'13	1.36540 AU	morning set	15304 Sep 08 05:04	23° $\mathfrak{M}$ 01'58	
asc. node	15303 Oct 07 02:30	29° $\mathfrak{L}$ 38'36		max. Earth dist.	15304 Sep 12 01:15	29° $\mathfrak{M}$ 39'32	1.38905 AU
	15303 Oct 07 06:50	0° $\mathfrak{M}$			15304 Sep 12 05:54	0° $\mathfrak{L}$	
superior conj	15303 Oct 07 14:46	0° $\mathfrak{M}$ 39'16	0°04'41	superior conj	15304 Sep 19 15:15	13° $\mathfrak{L}$ 27'05	-0°29'37
minimum elong	15303 Oct 07 14:27	0° $\mathfrak{M}$ 37'42	0°05'01	minimum elong	15304 Sep 19 17:22	13° $\mathfrak{L}$ 37'06	0°29'07
behind sun begin	15303 Oct 07 08:20	0° $\mathfrak{M}$ 07'21		asc. node	15304 Sep 22 23:07	19° $\mathfrak{L}$ 47'27	
behind sun end	15303 Oct 07 20:35	1° $\mathfrak{M}$ 08'07			15304 Sep 28 04:52	0° $\mathfrak{M}$	
evening rise	15303 Oct 15 17:11	17° $\mathfrak{M}$ 03'19		evening rise	15304 Sep 28 16:41	0° $\mathfrak{M}$ 57'44	
	15303 Oct 22 07:45	0° $\mathfrak{J}$		evening max el	15304 Oct 14 22:21	27° $\mathfrak{M}$ 27'25	18°51'19
evening max el	15303 Nov 02 02:27	15° $\mathfrak{J}$ 43'51	19°47'38		15304 Oct 18 00:02	0° $\mathfrak{J}$	
desc. node	15303 Nov 08 14:55	20° $\mathfrak{J}$ 09'06		retrograde	15304 Oct 23 11:48	1° $\mathfrak{J}$ 46'17	
retrograde	15303 Nov 12 05:03	20° $\mathfrak{J}$ 46'27		evening set	15304 Oct 25 09:13	1° $\mathfrak{J}$ 34'26	
evening set	15303 Nov 14 04:53	20° $\mathfrak{J}$ 35'36		desc. node	15304 Oct 25 12:14	1° $\mathfrak{J}$ 32'50	
inferior conj	15303 Nov 22 23:15	16° $\mathfrak{J}$ 34'33	-4°18'45		15304 Oct 29 09:41	30° $\mathfrak{R}$ $\mathfrak{M}$	
minimum elong	15303 Nov 22 13:20	16° $\mathfrak{J}$ 49'53	4°14'51	inferior conj	15304 Nov 02 14:46	27° $\mathfrak{M}$ 14'37	-2°34'53
min. Earth dist.	15303 Nov 25 02:06	15° $\mathfrak{J}$ 15'55	0.55153 AU	minimum elong	15304 Nov 02 08:22	27° $\mathfrak{M}$ 26'03	2°31'39
morning rise	15303 Nov 30 20:17	12° $\mathfrak{J}$ 20'23		min. Earth dist.	15304 Nov 05 14:33	25° $\mathfrak{M}$ 06'51	0.56668 AU
direct	15303 Dec 05 22:25	11° $\mathfrak{J}$ 23'14		morning rise	15304 Nov 10 04:33	22° $\mathfrak{M}$ 25'20	
morning max el	15303 Dec 19 17:41	18° $\mathfrak{J}$ 16'02	24°42'30	direct	15304 Nov 16 01:23	21° $\mathfrak{M}$ 03'02	
	15303 Dec 29 09:34	0° $\mathfrak{Z}$		morning max el	15304 Nov 30 05:30	28° $\mathfrak{M}$ 21'43	26°19'50
asc. node	15304 Jan 03 02:43	7° $\mathfrak{Z}$ 27'49			15304 Dec 01 20:43	0° $\mathfrak{J}$	
morning set	15304 Jan 14 10:23	29° $\mathfrak{Z}$ 30'45		asc. node	15304 Dec 19 23:52	26° $\mathfrak{J}$ 17'43	
	15304 Jan 14 15:49	0° $\approx$			15304 Dec 21 23:21	0° $\mathfrak{Z}$	
				morning set	15304 Dec 28 21:11	14° $\mathfrak{Z}$ 05'32	
superior conj	15304 Jan 21 04:47	14° $\approx$ 21'00	1°35'12	superior conj	15305 Jan 04 15:19	29° $\mathfrak{Z}$ 00'47	1°37'59
minimum elong	15304 Jan 21 05:49	14° $\approx$ 26'37	1°35'52	minimum elong	15305 Jan 04 15:17	29° $\mathfrak{Z}$ 00'33	1°38'51
max. Earth dist.	15304 Jan 23 06:38	18° $\approx$ 53'10	1.32197 AU		15305 Jan 05 01:57	0° $\approx$	
evening rise	15304 Jan 28 14:07	0° $\mathfrak{H}$ 05'54		max. Earth dist.	15305 Jan 05 12:17	0° $\approx$ 57'36	1.31365 AU
	15304 Jan 28 12:58	0° $\mathfrak{H}$		evening rise	15305 Jan 11 14:47	14° $\approx$ 14'18	
desc. node	15304 Feb 04 14:41	13° $\mathfrak{H}$ 41'50			15305 Jan 19 14:12	0° $\mathfrak{H}$	
	15304 Feb 14 07:18	0° $\mathfrak{Y}$		desc. node	15305 Jan 21 11:20	3° $\mathfrak{H}$ 24'01	
evening max el	15304 Mar 01 23:50	21° $\mathfrak{Y}$ 11'43	27°34'58		15305 Feb 08 18:10	0° $\mathfrak{Y}$	
retrograde	15304 Mar 15 20:27	28° $\mathfrak{Y}$ 40'42		evening max el	15305 Feb 12 08:02	3° $\mathfrak{Y}$ 42'06	27°24'17
evening set	15304 Mar 22 16:11	26° $\mathfrak{Y}$ 18'37		retrograde	15305 Feb 26 07:44	11° $\mathfrak{Y}$ 02'48	
min. Earth dist.	15304 Mar 26 10:42	23° $\mathfrak{Y}$ 07'42	0.63181 AU	evening set	15305 Mar 05 02:49	8° $\mathfrak{Y}$ 56'44	
inferior conj	15304 Mar 29 06:48	20° $\mathfrak{Y}$ 17'38	-0°32'46	min. Earth dist.	15305 Mar 08 22:11	6° $\mathfrak{Y}$ 07'36	0.61005 AU
minimum elong	15304 Mar 29 07:52	20° $\mathfrak{Y}$ 14'58	0°32'34	inferior conj	15305 Mar 12 01:45	3° $\mathfrak{Y}$ 21'29	-1°52'20
asc. node	15304 Mar 30 23:40	18° $\mathfrak{Y}$ 37'47		minimum elong	15305 Mar 12 05:49	3° $\mathfrak{Y}$ 12'29	1°50'39
morning rise	15304 Apr 05 02:11	15° $\mathfrak{Y}$ 04'20			15305 Mar 16 06:52	30° $\mathfrak{R}$ $\mathfrak{H}$	
direct	15304 Apr 07 11:19	14° $\mathfrak{Y}$ 37'05		asc. node	15305 Mar 17 21:07	29° $\mathfrak{H}$ 04'54	
morning max el	15304 Apr 13 23:10	17° $\mathfrak{Y}$ 55'33	17°46'17	morning rise	15305 Mar 19 12:04	28° $\mathfrak{H}$ 26'34	
	15304 Apr 22 18:49	0° $\mathfrak{B}$		direct	15305 Mar 21 14:56	28° $\mathfrak{H}$ 07'42	
morning set	15304 Apr 30 06:40	12° $\mathfrak{B}$ 43'01			15305 Mar 26 17:04	0° $\mathfrak{Y}$	
desc. node	15304 May 02 16:40	16° $\mathfrak{B}$ 52'43		morning max el	15305 Mar 28 15:29	1° $\mathfrak{Y}$ 39'15	17°53'19
	15304 May 10 10:46	0° $\Pi$		morning set	15305 Apr 13 06:23	26° $\mathfrak{Y}$ 01'11	
superior conj	15304 May 12 16:39	3° $\Pi$ 42'28	-1°14'08		15305 Apr 15 11:09	0° $\mathfrak{B}$	

desc. node	15305 Apr 19 13:19	7°♄20'10		behind sun begin	15306 Apr 05 22:35	27°♄01'05	
				behind sun end	15306 Apr 06 13:14	28°♄07'48	
superior conj	15305 Apr 24 00:11	15°♄08'00	-0°35'30	desc. node	15306 Apr 06 09:54	27°♄52'42	
minimum elong	15305 Apr 23 20:59	14°♄54'13	0°35'35		15306 Apr 07 14:03	0°♄	
max. Earth dist.	15305 May 01 09:23	27°♄32'36	1.43056 AU	max. Earth dist.	15306 Apr 13 19:28	10°♄54'34	1.41003 AU
	15305 May 02 21:34	0°♄		evening rise	15306 Apr 18 07:49	18°♄27'14	
evening rise	15305 May 07 16:39	7°♄39'17			15306 Apr 25 14:00	0°♄	
	15305 May 22 12:55	0°♄			15306 May 17 00:09	0°♄	
evening max el	15305 Jun 08 20:28	22°♄12'55	21°55'35	evening max el	15306 May 22 11:51	6°♄05'55	23°16'04
asc. node	15305 Jun 13 18:39	26°♄15'00		asc. node	15306 May 31 15:42	12°♄08'41	
retrograde	15305 Jun 18 04:07	27°♄39'40		retrograde	15306 Jun 02 00:03	12°♄16'38	
evening set	15305 Jun 22 19:53	25°♄43'42		evening set	15306 Jun 07 03:19	10°♄05'52	
inferior conj	15305 Jun 28 01:51	19°♄26'17	3°06'20	inferior conj	15306 Jun 12 11:38	3°♄40'24	2°52'46
minimum elong	15305 Jun 28 01:07	19°♄28'49	3°05'23	minimum elong	15306 Jun 12 10:07	3°♄45'39	2°51'35
min. Earth dist.	15305 Jun 28 03:04	19°♄22'02	0.69039 AU	min. Earth dist.	15306 Jun 11 23:52	4°♄21'02	0.69011 AU
morning rise	15305 Jul 03 06:11	13°♄11'05			15306 Jun 15 06:42	30°♄	
direct	15305 Jul 08 02:13	11°♄07'44		morning rise	15306 Jun 17 16:51	27°♄32'52	
desc. node	15305 Jul 16 13:04	15°♄39'52		direct	15306 Jun 22 00:29	25°♄49'02	
morning max el	15305 Jul 17 16:11	16°♄45'34	22°16'32		15306 Jun 29 18:20	0°♄	
	15305 Jul 28 13:32	0°♄		morning max el	15306 Jun 30 09:35	0°♄37'00	20°54'26
	15305 Aug 17 18:45	0°♄		desc. node	15306 Jul 03 10:15	3°♄53'59	
morning set	15305 Aug 19 20:45	3°♄20'15			15306 Jul 22 06:15	0°♄	
max. Earth dist.	15305 Aug 25 02:34	11°♄57'18	1.41260 AU	morning set	15306 Jul 30 13:18	12°♄40'10	
				max. Earth dist.	15306 Aug 07 09:45	25°♄07'05	1.43328 AU
					15306 Aug 10 09:35	0°♄	
superior conj	15305 Sep 01 22:21	25°♄27'41	-1°05'54				
minimum elong	15305 Sep 02 03:34	25°♄50'53	1°05'17				
	15305 Sep 04 11:03	0°♄		superior conj	15306 Aug 14 07:51	6°♄32'01	-1°39'53
asc. node	15305 Sep 09 19:41	9°♄51'22		minimum elong	15306 Aug 14 15:23	7°♄03'46	1°39'31
evening rise	15305 Sep 12 06:27	14°♄25'27		evening rise	15306 Aug 26 06:11	27°♄15'33	
	15305 Sep 20 22:16	0°♄		asc. node	15306 Aug 27 16:15	29°♄46'42	
evening max el	15305 Sep 28 04:37	9°♄54'18	18°16'43		15306 Aug 27 19:15	0°♄	
retrograde	15305 Oct 05 14:08	13°♄40'25		evening max el	15306 Sep 11 17:01	22°♄55'01	18°02'21
evening set	15305 Oct 07 16:09	13°♄23'06		retrograde	15306 Sep 18 09:15	26°♄21'36	
desc. node	15305 Oct 12 09:37	10°♄54'05		evening set	15306 Sep 20 18:41	25°♄54'56	
inferior conj	15305 Oct 15 04:06	8°♄41'51	-0°53'05	inferior conj	15306 Sep 27 13:35	20°♄53'47	0°31'57
minimum elong	15305 Oct 15 02:09	8°♄45'58	0°51'47	minimum elong	15306 Sep 27 14:33	20°♄51'25	0°31'49
min. Earth dist.	15305 Oct 18 10:30	5°♄58'46	0.58714 AU	desc. node	15306 Sep 29 07:02	19°♄13'01	
morning rise	15305 Oct 22 08:42	3°♄16'02		min. Earth dist.	15306 Sep 30 15:58	17°♄55'04	0.60991 AU
direct	15305 Oct 28 18:01	1°♄27'09		morning rise	15306 Oct 04 07:28	14°♄58'57	
morning max el	15305 Nov 12 01:12	9°♄06'49	27°27'58	direct	15306 Oct 10 22:59	12°♄46'03	
	15305 Nov 28 00:26	0°♄		morning max el	15306 Oct 25 04:33	20°♄40'43	27°57'48
asc. node	15305 Dec 06 20:52	15°♄36'36			15306 Nov 02 06:18	0°♄	
morning set	15305 Dec 13 05:02	28°♄28'14			15306 Nov 21 00:17	0°♄	
	15305 Dec 13 22:12	0°♄		asc. node	15306 Nov 23 17:46	5°♄16'24	
				morning set	15306 Nov 27 07:58	12°♄33'46	
superior conj	15305 Dec 20 02:50	13°♄39'58	1°34'48	max. Earth dist.	15306 Dec 03 02:44	25°♄00'47	1.31286 AU
minimum elong	15305 Dec 20 01:47	13°♄34'03	1°35'40				
max. Earth dist.	15305 Dec 19 20:18	13°♄03'24	1.31053 AU	superior conj	15306 Dec 04 13:28	28°♄13'14	1°25'39
evening rise	15305 Dec 26 20:47	28°♄34'29		minimum elong	15306 Dec 04 11:36	28°♄02'52	1°26'24
	15305 Dec 27 12:48	0°♄			15306 Dec 05 08:39	0°♄	
desc. node	15306 Jan 08 08:06	22°♄37'18		evening rise	15306 Dec 11 06:07	13°♄01'15	
	15306 Jan 12 23:08	0°♄			15306 Dec 19 15:39	0°♄	
evening max el	15306 Jan 25 09:30	15°♄22'42	26°38'39	desc. node	15306 Dec 26 04:57	11°♄10'16	
retrograde	15306 Feb 08 09:10	22°♄32'57		evening max el	15307 Jan 07 02:25	26°♄09'49	25°20'50
evening set	15306 Feb 14 20:36	20°♄49'33			15307 Jan 11 19:59	0°♄	
min. Earth dist.	15306 Feb 18 23:09	18°♄11'51	0.58782 AU	retrograde	15307 Jan 20 23:10	3°♄07'58	
inferior conj	15306 Feb 22 03:28	15°♄46'11	-3°20'10	evening set	15307 Jan 26 17:38	1°♄52'23	
minimum elong	15306 Feb 22 10:58	15°♄31'50	3°17'11		15307 Jan 30 07:36	30°♄	
morning rise	15306 Mar 02 04:40	11°♄12'31		min. Earth dist.	15307 Jan 31 14:52	29°♄10'56	0.56757 AU
direct	15306 Mar 04 04:20	10°♄58'34		inferior conj	15307 Feb 03 08:45	27°♄21'45	-4°45'15
asc. node	15306 Mar 04 18:34	10°♄59'51		minimum elong	15307 Feb 03 17:59	27°♄06'24	4°42'14
morning max el	15306 Mar 12 02:49	14°♄54'05	18°19'51	morning rise	15307 Feb 11 21:04	23°♄09'49	
	15306 Mar 22 11:50	0°♄		direct	15307 Feb 13 23:14	22°♄57'00	
morning set	15306 Mar 27 20:28	9°♄58'19		asc. node	15307 Feb 19 15:58	24°♄39'05	
				morning max el	15307 Feb 23 05:01	27°♄27'17	19°07'44
					15307 Feb 25 12:59	0°♄	
superior conj	15306 Apr 06 05:50	27°♄34'08	0°01'25	morning set	15307 Mar 11 20:22	24°♄19'59	
minimum elong	15306 Apr 06 05:54	27°♄34'29	0°01'03				

	15307 Mar 14 16:55	0° $\Upsilon$		morning set	15308 Feb 24 02:42	8° $\text{H}$ 56'28	
superior conj	15307 Mar 20 05:10	10° $\Upsilon$ 47'19	0°33'23	superior conj	15308 Mar 02 17:51	24° $\text{H}$ 35'31	0°59'06
minimum elong	15307 Mar 20 07:07	10° $\Upsilon$ 56'44	0°32'59	minimum elong	15308 Mar 02 20:26	24° $\text{H}$ 48'35	0°58'54
desc. node	15307 Mar 24 06:28	18° $\Upsilon$ 25'53			15308 Mar 05 11:01	0° $\Upsilon$	
max. Earth dist.	15307 Mar 27 01:45	23° $\Upsilon$ 32'08	1.38734 AU	max. Earth dist.	15308 Mar 08 08:42	5° $\Upsilon$ 36'55	1.36500 AU
evening rise	15307 Mar 30 20:11	0° $\text{S}$ 09'47		desc. node	15308 Mar 10 03:03	8° $\Upsilon$ 56'19	
	15307 Mar 30 17:55	0° $\text{S}$		evening rise	15308 Mar 12 03:43	12° $\Upsilon$ 40'14	
	15307 Apr 18 21:45	0° $\text{II}$			15308 Mar 22 07:03	0° $\text{S}$	
evening max el	15307 May 05 01:25	19° $\text{II}$ 59'43	24°36'40		15308 Apr 12 22:43	0° $\text{II}$	
retrograde	15307 May 16 16:32	26° $\text{II}$ 47'35		evening max el	15308 Apr 16 15:02	3° $\text{II}$ 52'40	25°50'14
asc. node	15307 May 18 12:51	26° $\text{II}$ 32'59		retrograde	15308 Apr 29 04:26	11° $\text{II}$ 06'05	
evening set	15307 May 22 07:17	24° $\text{II}$ 25'10		asc. node	15308 May 04 10:06	9° $\text{II}$ 15'13	
min. Earth dist.	15307 May 26 19:18	19° $\text{II}$ 17'08	0.68501 AU	evening set	15308 May 05 06:05	8° $\text{II}$ 36'13	
inferior conj	15307 May 27 19:54	17° $\text{II}$ 54'57	2°28'46	min. Earth dist.	15308 May 09 11:15	4° $\text{II}$ 04'09	0.67531 AU
minimum elong	15307 May 27 17:51	18° $\text{II}$ 01'48	2°27'23	inferior conj	15308 May 11 00:39	2° $\text{II}$ 05'52	1°53'49
morning rise	15307 Jun 02 04:36	11° $\text{II}$ 56'14		minimum elong	15308 May 10 22:30	2° $\text{II}$ 12'40	1°52'23
direct	15307 Jun 06 00:23	10° $\text{II}$ 32'27			15308 May 12 17:23	30° $\text{R}$ 8	
morning max el	15307 Jun 13 09:50	14° $\text{II}$ 38'49	19°44'25	morning rise	15308 May 16 15:33	26° $\text{S}$ 17'19	
desc. node	15307 Jun 20 07:22	22° $\text{II}$ 52'28		direct	15308 May 20 00:20	25° $\text{S}$ 12'32	
	15307 Jun 25 09:23	0° $\text{S}$		morning max el	15308 May 26 17:21	28° $\text{S}$ 49'16	18°49'40
greatest brilliancy	15307 Jun 26 11:58	1° $\text{S}$ 36'38	-0.6m		15308 May 27 20:54	0° $\text{II}$	
morning set	15307 Jul 09 16:45	21° $\text{S}$ 29'07		desc. node	15308 Jun 06 04:24	12° $\text{II}$ 23'41	
	15307 Jul 15 05:03	0° $\Omega$		greatest brilliancy	15308 Jun 09 10:58	17° $\text{II}$ 19'20	-0.8m
max. Earth dist.	15307 Jul 20 22:55	9° $\Omega$ 00'05	1.44882 AU		15308 Jun 17 16:09	0° $\text{S}$	
				morning set	15308 Jun 18 03:04	0° $\text{S}$ 42'24	
superior conj	15307 Jul 25 17:46	16° $\Omega$ 37'40	-2°05'02	max. Earth dist.	15308 Jul 02 17:00	23° $\text{S}$ 24'03	1.45778 AU
minimum elong	15307 Jul 26 00:01	17° $\Omega$ 02'49	2°05'23				
	15307 Aug 02 22:11	0° $\text{II}$		superior conj	15308 Jul 04 08:30	25° $\text{S}$ 58'28	-2°14'01
evening rise	15307 Aug 08 10:41	9° $\text{II}$ 14'47		minimum elong	15308 Jul 04 08:13	25° $\text{S}$ 57'23	2°14'54
asc. node	15307 Aug 14 12:53	19° $\text{II}$ 29'02			15308 Jul 06 22:06	0° $\Omega$	
	15307 Aug 21 05:05	0° $\Omega$		evening rise	15308 Jul 19 15:15	20° $\Omega$ 12'40	
evening max el	15307 Aug 26 07:44	6° $\Omega$ 20'04	18°06'49		15308 Jul 25 17:29	0° $\text{II}$	
retrograde	15307 Sep 01 16:40	9° $\Omega$ 40'34		asc. node	15308 Jul 31 09:33	8° $\text{II}$ 52'42	
evening set	15307 Sep 04 10:36	9° $\Omega$ 01'08		evening max el	15308 Aug 08 21:28	20° $\text{II}$ 00'31	18°29'07
inferior conj	15307 Sep 10 15:20	3° $\Omega$ 42'25	1°36'31	retrograde	15308 Aug 15 08:18	23° $\text{II}$ 28'12	
minimum elong	15307 Sep 10 17:34	3° $\Omega$ 36'19	1°35'45	evening set	15308 Aug 18 11:15	22° $\text{II}$ 33'23	
min. Earth dist.	15307 Sep 13 07:21	0° $\Omega$ 48'39	0.63233 AU	inferior conj	15308 Aug 24 05:21	16° $\text{II}$ 59'03	2°21'57
	15307 Sep 14 02:18	30° $\text{R}$ 11		minimum elong	15308 Aug 24 07:39	16° $\text{II}$ 52'08	2°21'05
desc. node	15307 Sep 16 04:29	28° $\text{II}$ 04'23		min. Earth dist.	15308 Aug 26 07:57	14° $\text{II}$ 27'30	0.65245 AU
morning rise	15307 Sep 16 22:26	27° $\text{II}$ 28'55		morning rise	15308 Aug 30 02:47	10° $\text{II}$ 35'56	
direct	15307 Sep 23 14:09	24° $\text{II}$ 59'01		desc. node	15308 Sep 02 02:00	8° $\text{II}$ 43'08	
	15307 Oct 04 07:23	0° $\Omega$		direct	15308 Sep 05 13:36	7° $\text{II}$ 58'16	
morning max el	15307 Oct 07 13:02	2° $\Omega$ 59'10	27°49'01	morning max el	15308 Sep 18 23:54	15° $\text{II}$ 51'18	27°06'49
	15307 Oct 27 16:49	0° $\text{II}$			15308 Sep 30 16:09	0° $\Omega$	
asc. node	15307 Nov 10 14:35	25° $\text{II}$ 10'54			15308 Oct 19 11:46	0° $\text{II}$	
morning set	15307 Nov 11 03:46	26° $\text{II}$ 17'05		morning set	15308 Oct 24 13:36	9° $\text{II}$ 30'32	
	15307 Nov 12 23:26	0° $\text{S}$		asc. node	15308 Oct 27 11:20	15° $\text{II}$ 14'16	
max. Earth dist.	15307 Nov 16 03:52	6° $\text{S}$ 41'51	1.32079 AU	max. Earth dist.	15308 Oct 28 20:22	18° $\text{II}$ 01'21	1.33429 AU
superior conj	15307 Nov 18 21:19	12° $\text{S}$ 35'40	1°10'33	superior conj	15308 Nov 02 00:07	26° $\text{II}$ 40'21	0°49'27
minimum elong	15307 Nov 18 19:01	12° $\text{S}$ 23'06	1°11'05	minimum elong	15308 Nov 01 21:57	26° $\text{II}$ 28'49	0°49'48
evening rise	15307 Nov 25 16:58	27° $\text{S}$ 30'36			15308 Nov 03 13:38	0° $\text{S}$	
	15307 Nov 26 20:52	0° $\text{S}$		evening rise	15308 Nov 09 03:26	11° $\text{S}$ 56'51	
desc. node	15307 Dec 13 01:55	28° $\text{S}$ 48'31			15308 Nov 18 06:43	0° $\text{S}$	
	15307 Dec 13 23:30	0° $\approx$		desc. node	15308 Nov 28 22:59	15° $\text{S}$ 11'43	
evening max el	15307 Dec 19 12:57	6° $\approx$ 17'36	23°42'04	evening max el	15308 Nov 30 00:22	16° $\text{S}$ 16'16	21°59'48
retrograde	15308 Jan 01 23:53	12° $\approx$ 57'56		retrograde	15308 Dec 12 12:40	22° $\text{S}$ 27'39	
evening set	15308 Jan 06 15:37	12° $\approx$ 10'56		evening set	15308 Dec 15 20:50	22° $\text{S}$ 02'50	
min. Earth dist.	15308 Jan 13 00:06	9° $\approx$ 07'30	0.55233 AU	inferior conj	15308 Dec 24 11:22	18° $\text{S}$ 11'01	-5°58'04
inferior conj	15308 Jan 14 17:28	8° $\approx$ 06'29	-5°46'27	minimum elong	15308 Dec 24 08:17	18° $\text{S}$ 15'19	5°56'58
minimum elong	15308 Jan 14 23:15	7° $\approx$ 57'56	5°44'57	min. Earth dist.	15308 Dec 24 05:48	18° $\text{S}$ 18'47	0.54477 AU
morning rise	15308 Jan 23 08:30	4° $\approx$ 11'58		morning rise	15309 Jan 01 20:36	14° $\text{S}$ 23'40	
direct	15308 Jan 25 22:48	3° $\approx$ 55'16		direct	15309 Jan 05 08:58	13° $\text{S}$ 56'22	
morning max el	15308 Feb 05 18:02	9° $\approx$ 08'01	20°18'37	morning max el	15309 Jan 17 16:02	19° $\text{S}$ 52'09	21°51'48
asc. node	15308 Feb 06 13:20	9° $\approx$ 56'19		asc. node	15309 Jan 23 10:40	26° $\text{S}$ 34'18	
	15308 Feb 19 15:26	0° $\text{H}$			15309 Jan 25 19:48	0° $\approx$	



morning set	15309 Feb 07 12:51	23° $\approx$ 39'59			15309 Dec 30 05:16	0° $\approx$	
	15309 Feb 10 12:31	0° $\approx$		asc. node	15310 Jan 10 07:56	14° $\approx$ 15'10	
					15310 Jan 18 23:53	0° $\approx$	
superior conj	15309 Feb 14 16:08	8° $\approx$ 48'12	1°18'13	morning set	15310 Jan 23 00:41	8° $\approx$ 24'23	
minimum elong	15309 Feb 14 18:30	9° $\approx$ 00'33	1°18'21				
max. Earth dist.	15309 Feb 18 21:03	17° $\approx$ 28'13	1.34508 AU	superior conj	15310 Jan 29 21:03	23° $\approx$ 17'01	1°30'48
evening rise	15309 Feb 23 02:52	25° $\approx$ 48'33		minimum elong	15310 Jan 29 22:39	23° $\approx$ 25'38	1°31'19
desc. node	15309 Feb 24 23:38	29° $\approx$ 19'54		max. Earth dist.	15310 Feb 01 16:56	29° $\approx$ 21'13	1.32903 AU
	15309 Feb 25 08:16	0° $\approx$			15310 Feb 02 00:16	0° $\approx$	
	15309 Mar 15 17:31	0° $\approx$		evening rise	15310 Feb 06 14:12	9° $\approx$ 25'53	
evening max el	15309 Mar 30 04:58	17° $\approx$ 37'31	26°49'14	desc. node	15310 Feb 11 20:14	19° $\approx$ 32'02	
retrograde	15309 Apr 12 10:44	25° $\approx$ 04'28			15310 Feb 17 18:41	0° $\approx$	
evening set	15309 Apr 18 21:53	22° $\approx$ 32'19			15310 Mar 11 16:40	0° $\approx$	
asc. node	15309 Apr 21 07:25	20° $\approx$ 19'22		evening max el	15310 Mar 12 18:07	1° $\approx$ 02'46	27°26'14
min. Earth dist.	15309 Apr 22 21:33	18° $\approx$ 34'40	0.66128 AU	retrograde	15310 Mar 26 10:32	8° $\approx$ 33'20	
inferior conj	15309 Apr 24 23:41	16° $\approx$ 07'48	1°07'04	evening set	15310 Apr 02 04:28	6° $\approx$ 05'12	
minimum elong	15309 Apr 24 22:05	16° $\approx$ 12'32	1°05'53	min. Earth dist.	15310 Apr 06 00:07	2° $\approx$ 38'57	0.64348 AU
morning rise	15309 Apr 30 23:32	10° $\approx$ 31'12		asc. node	15310 Apr 08 04:49	0° $\approx$ 18'59	
direct	15309 May 03 22:17	9° $\approx$ 43'21			15310 Apr 08 11:54	30° $\approx$ 18'59	
morning max el	15309 May 10 06:50	13° $\approx$ 03'16	18°11'34	inferior conj	15310 Apr 08 14:20	29° $\approx$ 53'30	0°07'31
	15309 May 22 14:19	0° $\approx$		minimum elong	15310 Apr 08 14:07	29° $\approx$ 54'04	0°07'04
desc. node	15309 May 24 01:19	2° $\approx$ 18'47		transit middle	15310 Apr 08 14:07	29° $\approx$ 54'04	0°07'04
morning set	15309 May 29 13:00	11° $\approx$ 06'08		transit begin	15310 Apr 08 11:20	0° $\approx$ 01'29	
	15309 Jun 10 10:13	0° $\approx$		transit end	15310 Apr 08 16:53	29° $\approx$ 46'40	
				morning rise	15310 Apr 15 01:53	24° $\approx$ 31'11	
superior conj	15309 Jun 13 17:29	5° $\approx$ 10'49	-2°02'56	direct	15310 Apr 17 15:39	23° $\approx$ 57'22	
minimum elong	15309 Jun 13 10:15	4° $\approx$ 42'30	2°03'27	morning max el	15310 Apr 23 23:52	27° $\approx$ 12'49	17°50'31
max. Earth dist.	15309 Jun 15 13:39	8° $\approx$ 03'20	1.45928 AU		15310 Apr 26 12:11	0° $\approx$	
evening rise	15309 Jun 29 19:43	0° $\approx$ 12'28		desc. node	15310 May 10 22:07	22° $\approx$ 30'22	
	15309 Jun 29 16:30	0° $\approx$		morning set	15310 May 11 02:26	22° $\approx$ 48'27	
greatest brilliancy	15309 Jul 11 03:11	17° $\approx$ 36'39	-0.7m		15310 May 15 09:42	0° $\approx$	
asc. node	15309 Jul 18 06:18	27° $\approx$ 51'21					
	15309 Jul 19 22:12	0° $\approx$		superior conj	15310 May 24 13:36	14° $\approx$ 57'58	-1°34'54
evening max el	15309 Jul 23 07:31	3° $\approx$ 49'39	19°08'20	minimum elong	15310 May 24 05:02	14° $\approx$ 23'36	1°34'51
retrograde	15309 Jul 30 04:50	7° $\approx$ 37'44		max. Earth dist.	15310 May 29 09:39	22° $\approx$ 39'06	1.45326 AU
evening set	15309 Aug 02 17:18	6° $\approx$ 25'56			15310 Jun 03 02:24	0° $\approx$	
inferior conj	15309 Aug 08 04:13	0° $\approx$ 37'34	2°50'57	evening rise	15310 Jun 09 08:25	9° $\approx$ 38'03	
minimum elong	15309 Aug 08 05:55	0° $\approx$ 32'05	2°50'09		15310 Jun 22 21:59	0° $\approx$	
	15309 Aug 08 15:49	30° $\approx$ 18'00		greatest brilliancy	15310 Jun 24 04:33	1° $\approx$ 50'58	-0.6m
min. Earth dist.	15309 Aug 09 16:33	28° $\approx$ 40'19	0.66895 AU	asc. node	15310 Jul 05 03:09	16° $\approx$ 15'27	
morning rise	15309 Aug 13 17:52	24° $\approx$ 11'34		evening max el	15310 Jul 06 12:02	17° $\approx$ 41'38	20°03'20
direct	15309 Aug 19 19:59	21° $\approx$ 35'04		retrograde	15310 Jul 14 03:39	22° $\approx$ 02'07	
desc. node	15309 Aug 19 23:27	21° $\approx$ 35'09		evening set	15310 Jul 18 02:09	20° $\approx$ 32'50	
morning max el	15309 Sep 01 11:15	29° $\approx$ 06'44	25°59'23	inferior conj	15310 Jul 23 09:02	14° $\approx$ 31'53	3°06'09
	15309 Sep 02 07:56	0° $\approx$		minimum elong	15310 Jul 23 09:49	14° $\approx$ 29'12	3°05'22
	15309 Sep 24 11:49	0° $\approx$		min. Earth dist.	15310 Jul 24 07:21	13° $\approx$ 16'11	0.68102 AU
morning set	15309 Oct 07 10:09	22° $\approx$ 06'58		morning rise	15310 Jul 28 17:07	8° $\approx$ 07'39	
max. Earth dist.	15309 Oct 11 03:19	29° $\approx$ 06'59	1.35292 AU	direct	15310 Aug 03 08:16	5° $\approx$ 39'50	
	15309 Oct 11 14:19	0° $\approx$		desc. node	15310 Aug 06 20:52	6° $\approx$ 27'58	
asc. node	15309 Oct 14 08:03	5° $\approx$ 22'35		morning max el	15310 Aug 14 22:10	12° $\approx$ 35'50	24°36'15
					15310 Aug 28 23:11	0° $\approx$	
superior conj	15309 Oct 16 19:18	10° $\approx$ 21'00	0°22'33		15310 Sep 17 06:22	0° $\approx$	
minimum elong	15309 Oct 16 18:02	10° $\approx$ 14'33	0°22'50	morning set	15310 Sep 19 13:22	3° $\approx$ 57'34	
evening rise	15309 Oct 24 11:33	26° $\approx$ 15'22		max. Earth dist.	15310 Sep 23 03:13	10° $\approx$ 19'35	1.37529 AU
	15309 Oct 26 07:14	0° $\approx$					
evening max el	15309 Nov 11 21:55	26° $\approx$ 42'04	20°29'59	superior conj	15310 Sep 30 03:40	23° $\approx$ 30'14	-0°09'28
desc. node	15309 Nov 15 20:09	29° $\approx$ 55'30		minimum elong	15310 Sep 30 04:16	23° $\approx$ 33'11	0°09'05
	15309 Nov 15 22:58	0° $\approx$		behind sun begin	15310 Sep 29 22:40	23° $\approx$ 06'04	
retrograde	15309 Nov 22 23:14	2° $\approx$ 12'04		behind sun end	15310 Sep 30 09:52	24° $\approx$ 00'21	
evening set	15309 Nov 25 06:36	1° $\approx$ 58'47		asc. node	15310 Oct 01 04:42	25° $\approx$ 32'11	
	15309 Nov 30 16:05	30° $\approx$ 18'00			15310 Oct 03 11:01	0° $\approx$	
inferior conj	15309 Dec 04 03:15	28° $\approx$ 04'13	-5°08'53	evening rise	15310 Oct 08 15:01	10° $\approx$ 20'30	
minimum elong	15309 Dec 03 17:39	28° $\approx$ 18'11	5°05'46		15310 Oct 19 06:47	0° $\approx$	
min. Earth dist.	15309 Dec 05 11:32	27° $\approx$ 17'13	0.54639 AU	evening max el	15310 Oct 25 09:58	7° $\approx$ 56'18	19°20'55
morning rise	15309 Dec 12 04:25	24° $\approx$ 05'39		desc. node	15310 Nov 02 17:23	12° $\approx$ 36'04	
direct	15309 Dec 16 17:26	23° $\approx$ 21'19		retrograde	15310 Nov 03 20:15	12° $\approx$ 39'55	
morning max el	15309 Dec 30 03:08	29° $\approx$ 54'56	23°39'53	evening set	15310 Nov 05 17:33	12° $\approx$ 29'22	

inferior conj	15310 Nov 14 07:29	8° $\text{♁}$ 20'52	-3°35'59	minimum elong	15311 Oct 26 03:48	19° $\text{♁}$ 29'02	1°47'48
minimum elong	15310 Nov 13 22:41	8° $\text{♁}$ 35'20	3°32'04	min. Earth dist.	15311 Oct 29 12:35	16° $\text{♁}$ 55'15	0.57485 AU
min. Earth dist.	15310 Nov 16 20:57	6° $\text{♁}$ 40'10	0.55703 AU	morning rise	15311 Nov 02 18:16	14° $\text{♁}$ 15'01	
morning rise	15310 Nov 22 01:32	3° $\text{♁}$ 52'23		direct	15311 Nov 08 21:14	12° $\text{♁}$ 41'01	
direct	15310 Nov 27 12:00	2° $\text{♁}$ 45'12		morning max el	15311 Nov 23 03:25	20° $\text{♁}$ 10'17	26°53'11
morning max el	15310 Dec 11 12:30	9° $\text{♁}$ 50'11	25°26'45		15311 Dec 01 14:09	0° $\text{♁}$	
	15310 Dec 26 15:13	0° $\text{♁}$		asc. node	15311 Dec 15 02:11	21° $\text{♁}$ 46'36	
asc. node	15310 Dec 28 05:07	2° $\text{♁}$ 43'34			15311 Dec 19 07:10	0° $\text{♁}$	
morning set	15311 Jan 07 12:23	23° $\text{♁}$ 04'27		morning set	15311 Dec 22 22:06	7° $\text{♁}$ 34'17	
	15311 Jan 10 16:27	0° $\text{♁}$					
				superior conj	15311 Dec 29 17:19	22° $\text{♁}$ 35'08	1°37'22
superior conj	15311 Jan 14 06:10	7° $\text{♁}$ 55'04	1°37'07	minimum elong	15311 Dec 29 16:50	22° $\text{♁}$ 32'24	1°38'16
minimum elong	15311 Jan 14 06:44	7° $\text{♁}$ 58'16	1°37'54	max. Earth dist.	15311 Dec 30 02:25	23° $\text{♁}$ 26'02	1.31157 AU
max. Earth dist.	15311 Jan 15 19:37	11° $\text{♁}$ 21'39	1.31770 AU		15312 Jan 02 01:16	0° $\text{♁}$	
evening rise	15311 Jan 21 10:44	23° $\text{♁}$ 25'02		evening rise	15312 Jan 05 13:53	7° $\text{♁}$ 38'44	
	15311 Jan 24 16:52	0° $\text{♁}$		desc. node	15312 Jan 16 13:34	28° $\text{♁}$ 58'09	
desc. node	15311 Jan 29 16:52	9° $\text{♁}$ 27'22			15312 Jan 17 03:51	0° $\text{♁}$	
	15311 Feb 11 11:56	0° $\text{♁}$		evening max el	15312 Feb 05 10:08	26° $\text{♁}$ 06'13	27°09'14
evening max el	15311 Feb 23 04:37	13° $\text{♁}$ 56'30	27°34'34		15312 Feb 10 03:41	0° $\text{♁}$	
retrograde	15311 Mar 09 03:00	21° $\text{♁}$ 23'13		retrograde	15312 Feb 19 10:37	3° $\text{♁}$ 23'29	
evening set	15311 Mar 15 23:18	19° $\text{♁}$ 06'38		evening set	15312 Feb 26 03:12	1° $\text{♁}$ 26'22	
min. Earth dist.	15311 Mar 19 17:26	16° $\text{♁}$ 06'17	0.62275 AU		15312 Feb 28 08:22	30° $\text{♁}$	
inferior conj	15311 Mar 22 17:29	13° $\text{♁}$ 15'34	-1°05'04	min. Earth dist.	15312 Mar 01 00:34	28° $\text{♁}$ 43'26	0.60046 AU
minimum elong	15311 Mar 22 19:42	13° $\text{♁}$ 10'16	1°04'17	inferior conj	15312 Mar 04 05:30	26° $\text{♁}$ 03'44	-2°29'00
asc. node	15311 Mar 26 02:13	10° $\text{♁}$ 17'15		minimum elong	15312 Mar 04 11:03	25° $\text{♁}$ 52'09	2°26'42
morning rise	15311 Mar 29 19:06	8° $\text{♁}$ 10'04		morning rise	15312 Mar 11 22:20	21° $\text{♁}$ 17'38	
direct	15311 Apr 01 01:15	7° $\text{♁}$ 46'54		asc. node	15312 Mar 11 23:37	21° $\text{♁}$ 16'48	
morning max el	15311 Apr 07 17:28	11° $\text{♁}$ 09'28	17°47'01	direct	15312 Mar 13 23:11	21° $\text{♁}$ 01'25	
	15311 Apr 20 10:36	0° $\text{♁}$		morning max el	15312 Mar 21 08:08	24° $\text{♁}$ 42'13	18°02'07
morning set	15311 Apr 23 15:23	5° $\text{♁}$ 36'58			15312 Mar 25 16:43	0° $\text{♁}$	
desc. node	15311 Apr 27 18:50	12° $\text{♁}$ 53'32		morning set	15312 Apr 05 21:50	19° $\text{♁}$ 13'28	
					15312 Apr 11 18:25	0° $\text{♁}$	
superior conj	15311 May 05 07:31	25° $\text{♁}$ 46'38	-0°57'52	desc. node	15312 Apr 13 15:28	3° $\text{♁}$ 23'32	
minimum elong	15311 May 05 02:02	25° $\text{♁}$ 23'42	0°57'48				
	15311 May 07 20:30	0° $\text{♁}$		superior conj	15312 Apr 16 00:53	7° $\text{♁}$ 39'06	-0°19'25
max. Earth dist.	15311 May 12 02:19	6° $\text{♁}$ 54'33	1.44049 AU	minimum elong	15312 Apr 15 23:13	7° $\text{♁}$ 31'48	0°19'38
evening rise	15311 May 19 21:20	19° $\text{♁}$ 11'37		max. Earth dist.	15312 Apr 23 14:34	20° $\text{♁}$ 37'36	1.42225 AU
	15311 May 26 23:45	0° $\text{♁}$		evening rise	15312 Apr 29 00:48	29° $\text{♁}$ 28'09	
	15311 Jun 17 22:36	0° $\text{♁}$			15312 Apr 29 08:47	0° $\text{♁}$	
evening max el	15311 Jun 19 10:29	1° $\text{♁}$ 33'47	21°11'42		15312 May 19 13:09	0° $\text{♁}$	
asc. node	15311 Jun 22 00:03	3° $\text{♁}$ 53'11		evening max el	15312 Jun 01 04:00	15° $\text{♁}$ 26'48	22°29'25
retrograde	15311 Jun 28 02:35	6° $\text{♁}$ 35'31		asc. node	15312 Jun 07 21:01	20° $\text{♁}$ 29'59	
evening set	15311 Jul 02 11:48	4° $\text{♁}$ 49'06		retrograde	15312 Jun 10 23:58	21° $\text{♁}$ 12'45	
	15311 Jul 06 17:24	30° $\text{♁}$		evening set	15312 Jun 15 20:29	19° $\text{♁}$ 10'29	
inferior conj	15311 Jul 07 17:23	28° $\text{♁}$ 37'07	3°09'25	inferior conj	15312 Jun 21 03:13	12° $\text{♁}$ 49'22	3°01'52
minimum elong	15311 Jul 07 17:12	28° $\text{♁}$ 37'46	3°08'33	minimum elong	15312 Jun 21 02:08	12° $\text{♁}$ 53'10	3°00'49
min. Earth dist.	15311 Jul 08 02:13	28° $\text{♁}$ 06'23	0.68837 AU	min. Earth dist.	15312 Jun 20 22:58	13° $\text{♁}$ 04'10	0.69087 AU
morning rise	15311 Jul 12 22:21	22° $\text{♁}$ 17'48		morning rise	15312 Jun 26 07:36	6° $\text{♁}$ 37'02	
direct	15311 Jul 18 01:28	20° $\text{♁}$ 04'16		direct	15312 Jun 30 22:22	4° $\text{♁}$ 41'37	
desc. node	15311 Jul 24 18:13	22° $\text{♁}$ 56'54		morning max el	15312 Jul 09 23:32	9° $\text{♁}$ 57'46	21°40'18
morning max el	15311 Jul 28 09:23	26° $\text{♁}$ 12'43	23°06'58	desc. node	15312 Jul 10 15:29	10° $\text{♁}$ 38'24	
	15311 Jul 31 20:55	0° $\text{♁}$			15312 Jul 25 15:42	0° $\text{♁}$	
	15311 Aug 22 11:44	0° $\text{♁}$		morning set	15312 Aug 11 00:19	24° $\text{♁}$ 44'18	
morning set	15311 Aug 31 18:57	14° $\text{♁}$ 51'57			15312 Aug 14 07:11	0° $\text{♁}$	
max. Earth dist.	15311 Sep 05 01:45	22° $\text{♁}$ 05'41	1.39922 AU	max. Earth dist.	15312 Aug 17 05:00	4° $\text{♁}$ 44'56	1.42191 AU
	15311 Sep 09 14:01	0° $\text{♁}$					
				superior conj	15312 Aug 24 19:41	17° $\text{♁}$ 37'11	-1°20'57
superior conj	15311 Sep 12 21:14	5° $\text{♁}$ 58'46	-0°45'01	minimum elong	15312 Aug 25 02:07	18° $\text{♁}$ 05'06	1°20'22
minimum elong	15311 Sep 13 00:39	6° $\text{♁}$ 14'27	0°44'25		15312 Aug 31 19:05	0° $\text{♁}$	
asc. node	15311 Sep 18 01:18	15° $\text{♁}$ 39'14		asc. node	15312 Sep 03 21:52	5° $\text{♁}$ 40'21	
evening rise	15311 Sep 22 10:49	24° $\text{♁}$ 04'27		evening rise	15312 Sep 04 19:13	7° $\text{♁}$ 17'54	
	15311 Sep 25 13:26	0° $\text{♁}$			15312 Sep 18 10:50	0° $\text{♁}$	
evening max el	15311 Oct 08 10:48	19° $\text{♁}$ 59'19	18°34'04	evening max el	15312 Sep 20 20:18	2° $\text{♁}$ 42'49	18°08'17
retrograde	15311 Oct 16 11:12	24° $\text{♁}$ 02'40		retrograde	15312 Sep 27 21:00	6° $\text{♁}$ 18'32	
evening set	15311 Oct 18 09:54	23° $\text{♁}$ 49'06		evening set	15312 Sep 30 02:05	5° $\text{♁}$ 57'37	
desc. node	15311 Oct 20 14:43	23° $\text{♁}$ 03'32		desc. node	15312 Oct 06 12:07	1° $\text{♁}$ 48'33	
inferior conj	15311 Oct 26 08:13	19° $\text{♁}$ 20'35	-1°50'14	inferior conj	15312 Oct 07 06:33	1° $\text{♁}$ 07'50	-0°14'33

minimum elong	15312 Oct 07 06:03	1° $\mathbb{M}$ 08'55	0°13'58		15313 Aug 24 09:13	0° $\underline{\mathfrak{A}}$	
transit middle	15312 Oct 07 06:03	1° $\mathbb{M}$ 08'55	0°13'58	evening max el	15313 Sep 04 10:10	15° $\underline{\mathfrak{A}}$ 55'14	18°01'59
transit begin	15312 Oct 07 04:21	1° $\mathbb{M}$ 12'44		retrograde	15313 Sep 10 21:57	19° $\underline{\mathfrak{A}}$ 17'24	
transit end	15312 Oct 07 07:46	1° $\mathbb{M}$ 05'07		evening set	15313 Sep 13 11:02	18° $\underline{\mathfrak{A}}$ 45'31	
	15312 Oct 08 12:47	30° $\mathfrak{K}$ $\underline{\mathfrak{A}}$		inferior conj	15313 Sep 19 23:27	13° $\underline{\mathfrak{A}}$ 36'21	1°01'50
min. Earth dist.	15312 Oct 10 12:25	28° $\underline{\mathfrak{A}}$ 15'30	0.59676 AU	minimum elong	15313 Sep 20 01:09	13° $\underline{\mathfrak{A}}$ 32'01	1°01'21
morning rise	15312 Oct 14 06:43	25° $\underline{\mathfrak{A}}$ 28'49		min. Earth dist.	15313 Sep 22 21:52	10° $\underline{\mathfrak{A}}$ 37'45	0.61970 AU
direct	15312 Oct 20 19:43	23° $\underline{\mathfrak{A}}$ 28'50		desc. node	15313 Sep 23 09:35	10° $\underline{\mathfrak{A}}$ 09'33	
	15312 Nov 02 18:31	0° $\mathbb{M}$		morning rise	15313 Sep 26 12:43	7° $\underline{\mathfrak{A}}$ 32'33	
morning max el	15312 Nov 04 02:21	1° $\mathbb{M}$ 15'28	27°45'26	direct	15313 Oct 03 05:02	5° $\underline{\mathfrak{A}}$ 11'43	
	15312 Nov 24 20:45	0° $\mathfrak{A}$		morning max el	15313 Oct 17 08:11	13° $\underline{\mathfrak{A}}$ 09'01	27°58'33
asc. node	15312 Nov 30 23:10	11° $\mathfrak{A}$ 15'22			15313 Oct 30 20:18	0° $\mathbb{M}$	
morning set	15312 Dec 06 04:04	21° $\mathfrak{A}$ 50'00			15313 Nov 17 07:31	0° $\mathfrak{A}$	
	15312 Dec 09 22:50	0° $\mathfrak{B}$		asc. node	15313 Nov 17 20:03	1° $\mathfrak{A}$ 02'06	
max. Earth dist.	15312 Dec 12 10:09	5° $\mathfrak{B}$ 28'58	1.31087 AU	morning set	15313 Nov 20 04:15	5° $\mathfrak{A}$ 46'28	
				max. Earth dist.	15313 Nov 25 14:55	17° $\mathfrak{A}$ 20'54	1.31561 AU
superior conj	15312 Dec 13 04:41	7° $\mathfrak{B}$ 12'27	1°31'39				
minimum elong	15312 Dec 13 03:15	7° $\mathfrak{B}$ 04'26	1°32'29	superior conj	15313 Nov 27 14:22	21° $\mathfrak{A}$ 41'32	1°19'58
evening rise	15312 Dec 19 21:33	22° $\mathfrak{B}$ 02'24		minimum elong	15313 Nov 27 12:15	21° $\mathfrak{A}$ 29'53	1°20'38
	15312 Dec 23 16:35	0° $\approx$			15313 Dec 01 08:22	0° $\mathfrak{B}$	
desc. node	15313 Jan 02 10:22	17° $\approx$ 55'33		evening rise	15313 Dec 04 07:46	6° $\mathfrak{B}$ 30'56	
	15313 Jan 10 17:04	0° $\mathfrak{H}$			15313 Dec 16 09:56	0° $\approx$	
evening max el	15313 Jan 17 08:16	7° $\mathfrak{H}$ 24'11	26°09'05	desc. node	15313 Dec 20 07:17	6° $\approx$ 07'21	
retrograde	15313 Jan 31 07:18	14° $\mathfrak{H}$ 28'56		evening max el	15313 Dec 29 22:00	17° $\approx$ 52'00	24°40'24
evening set	15313 Feb 06 12:31	12° $\mathfrak{H}$ 57'21		retrograde	15314 Jan 12 15:14	24° $\approx$ 42'54	
min. Earth dist.	15313 Feb 10 21:32	10° $\mathfrak{H}$ 19'52	0.57878 AU	evening set	15314 Jan 17 23:44	23° $\approx$ 39'38	
inferior conj	15313 Feb 13 22:46	8° $\mathfrak{H}$ 08'17	-3°57'39	min. Earth dist.	15314 Jan 23 09:51	20° $\approx$ 51'27	0.56032 AU
minimum elong	15313 Feb 14 07:24	7° $\mathfrak{H}$ 52'43	3°54'25	inferior conj	15314 Jan 25 19:03	19° $\approx$ 21'53	-5°15'43
morning rise	15313 Feb 22 05:23	3° $\mathfrak{H}$ 43'33		minimum elong	15314 Jan 26 03:39	19° $\approx$ 08'24	5°13'14
direct	15313 Feb 24 05:12	3° $\mathfrak{H}$ 30'33		morning rise	15314 Feb 03 09:44	15° $\approx$ 18'15	
asc. node	15313 Feb 26 21:03	3° $\mathfrak{H}$ 54'55		direct	15314 Feb 05 15:57	15° $\approx$ 04'23	
morning max el	15313 Mar 04 15:59	7° $\mathfrak{H}$ 40'01	18°37'28	asc. node	15314 Feb 13 18:27	18° $\approx$ 17'33	
	15313 Mar 18 22:31	0° $\mathfrak{Y}$		morning max el	15314 Feb 15 12:56	19° $\approx$ 51'42	19°35'06
morning set	15313 Mar 20 16:34	3° $\mathfrak{Y}$ 22'19			15314 Feb 23 05:54	0° $\mathfrak{H}$	
				morning set	15314 Mar 04 19:36	17° $\mathfrak{H}$ 51'53	
superior conj	15313 Mar 29 14:31	20° $\mathfrak{Y}$ 26'12	0°15'41		15314 Mar 10 20:19	0° $\mathfrak{Y}$	
minimum elong	15313 Mar 29 15:34	20° $\mathfrak{Y}$ 31'05	0°15'17				
behind sun begin	15313 Mar 29 13:35	20° $\mathfrak{Y}$ 21'50		superior conj	15314 Mar 12 20:04	3° $\mathfrak{Y}$ 56'01	0°45'06
behind sun end	15313 Mar 29 17:33	20° $\mathfrak{Y}$ 40'20		minimum elong	15314 Mar 12 22:25	4° $\mathfrak{Y}$ 07'36	0°44'45
desc. node	15313 Mar 31 12:03	23° $\mathfrak{Y}$ 56'37		desc. node	15314 Mar 18 08:38	14° $\mathfrak{Y}$ 29'22	
	15313 Apr 03 20:36	0° $\mathfrak{B}$		max. Earth dist.	15314 Mar 19 05:21	16° $\mathfrak{Y}$ 05'03	1.37763 AU
max. Earth dist.	15313 Apr 05 22:53	3° $\mathfrak{B}$ 41'02	1.40052 AU	evening rise	15314 Mar 22 21:57	22° $\mathfrak{Y}$ 44'02	
evening rise	15313 Apr 10 01:03	10° $\mathfrak{B}$ 39'51			15314 Mar 27 03:12	0° $\mathfrak{B}$	
	15313 Apr 22 06:07	0° $\mathbb{I}$			15314 Apr 16 01:36	0° $\mathbb{I}$	
evening max el	15313 May 14 18:33	29° $\mathbb{I}$ 21'04	23°50'49	evening max el	15314 Apr 27 08:02	13° $\mathbb{I}$ 15'36	25°09'13
	15313 May 15 10:29	0° $\mathfrak{E}$		retrograde	15314 May 09 09:00	20° $\mathbb{I}$ 15'26	
retrograde	15313 May 25 18:25	5° $\mathfrak{E}$ 48'04		asc. node	15314 May 12 15:18	19° $\mathbb{I}$ 30'45	
asc. node	15313 May 25 18:06	5° $\mathfrak{E}$ 48'04		evening set	15314 May 15 04:39	17° $\mathbb{I}$ 49'05	
evening set	15313 May 31 02:38	3° $\mathfrak{E}$ 32'02		min. Earth dist.	15314 May 19 13:32	12° $\mathbb{I}$ 56'47	0.68147 AU
	15313 Jun 03 08:10	30° $\mathfrak{K}$ $\mathbb{I}$		inferior conj	15314 May 20 19:37	11° $\mathbb{I}$ 18'22	2°15'20
min. Earth dist.	15313 Jun 04 19:25	28° $\mathbb{I}$ 02'58	0.68855 AU	minimum elong	15314 May 20 17:28	11° $\mathbb{I}$ 25'25	2°13'55
inferior conj	15313 Jun 05 12:35	27° $\mathbb{I}$ 04'23	2°43'54	morning rise	15314 May 26 06:39	5° $\mathbb{I}$ 24'04	
minimum elong	15313 Jun 05 10:48	27° $\mathbb{I}$ 10'28	2°42'38	direct	15314 May 29 21:42	4° $\mathbb{I}$ 08'33	
morning rise	15313 Jun 10 18:58	21° $\mathbb{I}$ 00'28		morning max el	15314 Jun 05 23:07	8° $\mathbb{I}$ 00'22	19°19'16
direct	15313 Jun 14 21:35	19° $\mathbb{I}$ 24'58		desc. node	15314 Jun 14 09:43	18° $\mathbb{I}$ 27'14	
morning max el	15313 Jun 22 19:36	23° $\mathbb{I}$ 53'29	20°22'56	greatest brilliancy	15314 Jun 18 15:51	24° $\mathbb{I}$ 36'43	-0.7m
desc. node	15313 Jun 27 12:39	29° $\mathbb{I}$ 13'10			15314 Jun 22 06:18	0° $\mathfrak{E}$	
	15313 Jun 28 03:33	0° $\mathfrak{E}$		morning set	15314 Jun 30 13:18	12° $\mathfrak{E}$ 39'15	
	15313 Jul 18 22:31	0° $\mathfrak{Q}$			15314 Jul 11 17:50	0° $\mathfrak{Q}$	
morning set	15313 Jul 21 09:22	3° $\mathfrak{Q}$ 45'49		max. Earth dist.	15314 Jul 13 07:25	2° $\mathfrak{Q}$ 27'20	1.45358 AU
max. Earth dist.	15313 Jul 30 15:20	18° $\mathfrak{Q}$ 16'48	1.44071 AU				
				superior conj	15314 Jul 16 19:55	8° $\mathfrak{Q}$ 00'36	-2°11'10
superior conj	15313 Aug 05 19:11	28° $\mathfrak{Q}$ 16'43	-1°52'03	minimum elong	15314 Jul 16 23:56	8° $\mathfrak{Q}$ 16'33	2°11'51
minimum elong	15313 Aug 06 02:48	28° $\mathfrak{Q}$ 48'08	1°51'58		15314 Jul 30 10:07	0° $\mathbb{N}$	
	15313 Aug 06 20:11	0° $\mathbb{N}$		evening rise	15314 Jul 31 06:17	1° $\mathbb{N}$ 23'08	
evening rise	15313 Aug 18 11:25	19° $\mathbb{N}$ 48'08		asc. node	15314 Aug 08 15:07	15° $\mathbb{N}$ 06'24	
asc. node	15313 Aug 21 18:28	25° $\mathbb{N}$ 30'53		evening max el	15314 Aug 19 00:48	29° $\mathbb{N}$ 27'44	18°14'02

	15314 Aug 19 14:20	0°♄		evening rise	15315 Jul 12 00:14	11°♄55'11	
retrograde	15314 Aug 25 09:30	2°♄49'55		greatest brilliancy	15315 Jul 20 07:02	24°♄58'20	-0.8m
evening set	15314 Aug 28 07:10	2°♄04'11			15315 Jul 23 13:24	0°♄	
	15314 Aug 31 02:45	30°♄		asc. node	15315 Jul 26 11:49	4°♄20'53	
inferior conj	15314 Sep 03 06:56	26°♄38'16	1°57'57	evening max el	15315 Aug 02 13:11	13°♄12'50	18°43'43
minimum elong	15314 Sep 03 09:18	26°♄31'30	1°57'07	retrograde	15315 Aug 09 03:39	16°♄48'00	
min. Earth dist.	15314 Sep 05 17:20	23°♄52'18	0.64131 AU	evening set	15315 Aug 12 10:29	15°♄46'17	
morning rise	15314 Sep 09 09:43	20°♄19'28		inferior conj	15315 Aug 18 01:08	10°♄05'49	2°36'04
desc. node	15314 Sep 10 07:04	19°♄40'17		minimum elong	15315 Aug 18 03:14	9°♄59'17	2°35'13
direct	15314 Sep 15 23:43	17°♄45'26		min. Earth dist.	15315 Aug 19 21:44	7°♄47'25	0.65994 AU
morning max el	15314 Sep 29 18:14	25°♄44'09	27°34'41	morning rise	15315 Aug 23 18:58	3°♄40'27	
	15314 Oct 03 16:45	0°♄		desc. node	15315 Aug 28 04:32	1°♄15'55	
	15314 Oct 24 09:16	0°♄		direct	15315 Aug 30 02:22	1°♄02'07	
morning set	15314 Nov 03 20:12	19°♄18'03		morning max el	15315 Sep 12 05:42	8°♄48'50	26°40'37
asc. node	15314 Nov 04 16:52	21°♄01'05			15315 Sep 28 20:36	0°♄	
max. Earth dist.	15314 Nov 08 12:55	28°♄53'50	1.32589 AU		15315 Oct 16 19:38	0°♄	
	15314 Nov 09 01:30	0°♄		morning set	15315 Oct 18 00:56	2°♄17'58	
				max. Earth dist.	15315 Oct 22 01:16	10°♄06'12	1.34161 AU
superior conj	15314 Nov 11 20:21	5°♄56'56	1°02'19	asc. node	15315 Oct 22 13:36	11°♄07'44	
minimum elong	15314 Nov 11 18:01	5°♄44'21	1°02'45				
evening rise	15314 Nov 18 18:41	20°♄59'32		superior conj	15315 Oct 26 20:18	19°♄53'02	0°38'44
	15314 Nov 23 02:13	0°♄		minimum elong	15315 Oct 26 18:24	19°♄43'08	0°39'01
desc. node	15314 Dec 07 04:18	23°♄16'26			15315 Oct 31 15:17	0°♄	
evening max el	15314 Dec 11 07:27	27°♄50'14	22°57'48	evening rise	15315 Nov 03 04:27	5°♄23'44	
	15314 Dec 13 18:05	0°♄			15315 Nov 16 11:24	0°♄	
retrograde	15314 Dec 24 10:33	4°♄20'42		evening max el	15315 Nov 22 22:16	7°♄57'25	21°19'23
evening set	15314 Dec 28 12:58	3°♄44'06		desc. node	15315 Nov 24 01:25	9°♄01'16	
min. Earth dist.	15315 Jan 04 16:55	0°♄25'36	0.54798 AU	retrograde	15315 Dec 04 21:20	13°♄52'47	
	15315 Jan 05 10:52	30°♄		evening set	15315 Dec 07 17:00	13°♄34'25	
inferior conj	15315 Jan 05 20:13	29°♄46'37	-5°58'43	inferior conj	15315 Dec 16 11:32	9°♄43'05	-5°44'17
minimum elong	15315 Jan 05 22:36	29°♄43'13	5°57'45	minimum elong	15315 Dec 16 04:52	9°♄52'28	5°42'28
morning rise	15315 Jan 14 09:37	25°♄57'23		min. Earth dist.	15315 Dec 16 22:36	9°♄27'31	0.54424 AU
direct	15315 Jan 17 08:16	25°♄37'11		morning rise	15315 Dec 24 17:11	5°♄53'09	
	15315 Jan 27 13:33	0°♄		direct	15315 Dec 28 15:56	5°♄19'24	
morning max el	15315 Jan 28 19:35	1°♄08'17	20°55'57	morning max el	15316 Jan 10 12:15	11°♄32'56	22°36'43
asc. node	15315 Jan 31 15:50	4°♄11'28		asc. node	15316 Jan 18 13:09	21°♄18'44	
	15315 Feb 15 22:19	0°♄			15316 Jan 23 21:09	0°♄	
morning set	15315 Feb 17 03:49	2°♄32'14		morning set	15316 Feb 01 14:54	17°♄16'53	
					15316 Feb 07 13:04	0°♄	
superior conj	15315 Feb 24 13:15	17°♄56'05	1°08'01				
minimum elong	15315 Feb 24 15:49	18°♄09'18	1°07'57	superior conj	15316 Feb 08 14:42	2°♄16'56	1°24'19
max. Earth dist.	15315 Mar 01 13:59	28°♄01'12	1.35602 AU	minimum elong	15316 Feb 08 16:46	2°♄27'59	1°24'38
	15315 Mar 02 14:29	0°♄		max. Earth dist.	15316 Feb 12 05:06	9°♄50'25	1.33767 AU
desc. node	15315 Mar 05 05:12	4°♄57'26		evening rise	15316 Feb 16 17:16	18°♄53'28	
evening rise	15315 Mar 05 12:31	5°♄31'29		desc. node	15316 Feb 20 01:48	25°♄16'58	
	15315 Mar 19 23:10	0°♄			15316 Feb 22 15:50	0°♄	
evening max el	15315 Apr 09 21:34	27°♄05'21	26°17'31		15316 Mar 13 02:13	0°♄	
	15315 Apr 13 03:07	0°♄		evening max el	15316 Mar 22 11:13	10°♄42'51	27°08'07
retrograde	15315 Apr 22 18:43	4°♄26'36		retrograde	15316 Apr 04 22:34	18°♄13'15	
evening set	15315 Apr 29 00:43	1°♄54'42		evening set	15316 Apr 11 12:52	15°♄41'58	
asc. node	15315 Apr 29 12:35	1°♄29'22		asc. node	15316 Apr 15 09:56	11°♄59'43	
	15315 May 01 01:20	30°♄		min. Earth dist.	15316 Apr 15 10:34	11°♄57'59	0.65408 AU
min. Earth dist.	15315 May 03 03:14	27°♄37'48	0.66983 AU	inferior conj	15316 Apr 17 17:59	9°♄21'38	0°43'24
inferior conj	15315 May 04 22:12	25°♄25'56	1°35'29	minimum elong	15316 Apr 17 16:51	9°♄24'51	0°42'28
minimum elong	15315 May 04 20:12	25°♄32'07	1°34'08	morning rise	15316 Apr 23 22:30	3°♄50'46	
morning rise	15315 May 10 16:36	19°♄42'29		direct	15316 Apr 26 17:10	3°♄09'24	
direct	15315 May 13 20:55	18°♄45'22		morning max el	15316 May 03 00:44	6°♄26'21	18°00'26
morning max el	15315 May 20 09:28	22°♄13'32	18°31'27	desc. node	15316 May 18 03:32	28°♄12'06	
	15315 May 26 18:17	0°♄			15316 May 19 05:59	0°♄	
desc. node	15315 Jun 01 06:41	8°♄09'27		morning set	15316 May 21 05:54	3°♄15'48	
morning set	15315 Jun 10 08:14	22°♄18'43					
	15315 Jun 15 05:44	0°♄		superior conj	15316 Jun 04 17:54	26°♄34'48	-1°52'41
				minimum elong	15316 Jun 04 09:19	26°♄00'59	1°52'56
superior conj	15315 Jun 26 06:08	17°♄12'35	-2°11'46		15316 Jun 06 22:05	0°♄	
minimum elong	15315 Jun 26 02:29	16°♄58'20	2°12'35	max. Earth dist.	15316 Jun 07 22:38	1°♄36'09	1.45757 AU
max. Earth dist.	15315 Jun 26 02:37	16°♄58'52	1.45931 AU	evening rise	15316 Jun 20 20:12	21°♄35'05	
	15315 Jul 04 10:34	0°♄			15316 Jun 26 07:59	0°♄	

greatest brilliancy	15316 Jul 04 02:56	11°♎43'43	-0.7m	minimum elong	15317 May 15 14:57	6°♐15'24	1°19'39
asc. node	15316 Jul 12 08:36	23°♎06'16		max. Earth dist.	15317 May 21 17:36	16°♐05'49	1.44859 AU
evening max el	15316 Jul 15 21:02	27°♎03'54	19°30'00		15317 May 30 15:27	0°♐	
	15316 Jul 19 12:45	0°♐		evening rise	15317 May 31 06:55	0°♐59'16	
retrograde	15316 Jul 23 01:22	1°♐04'26			15317 Jun 20 00:01	0°♎	
	15316 Jul 26 09:22	30°♐♎		evening max el	15317 Jun 28 23:05	10°♎57'01	20°31'04
evening set	15316 Jul 26 17:57	29°♎45'24		asc. node	15317 Jun 29 05:27	11°♎12'45	
inferior conj	15316 Aug 01 02:49	23°♎51'46	2°58'57	retrograde	15317 Jul 07 00:19	15°♎33'44	
minimum elong	15316 Aug 01 04:09	23°♎47'21	2°58'10	evening set	15317 Jul 11 03:22	13°♎57'02	
min. Earth dist.	15316 Aug 02 09:14	22°♎11'14	0.67463 AU	inferior conj	15317 Jul 16 09:24	7°♎51'26	3°08'54
morning rise	15316 Aug 06 13:48	17°♎26'02		minimum elong	15317 Jul 16 09:46	7°♎50'09	3°08'05
direct	15316 Aug 12 11:35	14°♎52'04		min. Earth dist.	15317 Jul 17 01:56	6°♎54'36	0.68475 AU
desc. node	15316 Aug 14 01:57	15°♎01'58		morning rise	15317 Jul 21 15:52	1°♎29'13	
morning max el	15316 Aug 24 16:40	22°♎10'36	25°25'19		15317 Jul 23 17:34	30°♐♐	
	15316 Aug 31 13:14	0°♐		direct	15317 Jul 27 02:05	29°♐06'48	
	15316 Sep 21 02:55	0°♐			15317 Jul 30 17:32	0°♎	
morning set	15316 Sep 29 14:38	14°♐36'32		desc. node	15317 Jul 31 23:18	0°♎39'05	
max. Earth dist.	15316 Oct 03 04:15	21°♐10'10	1.36208 AU	morning max el	15317 Aug 07 03:19	5°♎42'59	23°58'32
	15316 Oct 07 18:34	0°♐			15317 Aug 25 22:49	0°♐	
asc. node	15316 Oct 08 10:15	1°♐17'23		morning set	15317 Sep 11 09:06	26°♐04'27	
					15317 Sep 13 15:40	0°♐	
superior conj	15316 Oct 09 11:19	3°♐21'54	0°09'34	max. Earth dist.	15317 Sep 15 02:57	2°♐35'06	1.38551 AU
minimum elong	15316 Oct 09 10:44	3°♐18'55	0°09'52				
behind sun begin	15316 Oct 09 05:41	2°♐53'47		superior conj	15317 Sep 22 13:56	16°♐15'40	-0°24'14
behind sun end	15316 Oct 09 15:46	3°♐44'06		minimum elong	15317 Sep 22 15:38	16°♐23'44	0°23'45
evening rise	15316 Oct 17 10:53	19°♐37'32		asc. node	15317 Sep 25 06:53	21°♐26'48	
	15316 Oct 22 15:56	0°♐			15317 Sep 29 15:48	0°♐	
evening max el	15316 Nov 04 02:02	18°♐43'36	19°57'53	evening rise	15317 Oct 01 11:28	3°♐35'04	
desc. node	15316 Nov 09 22:37	22°♐55'43			15317 Oct 17 12:17	0°♐	
retrograde	15316 Nov 14 10:24	23°♐53'05		evening max el	15317 Oct 17 19:57	0°♐19'34	18°58'14
evening set	15316 Nov 16 11:47	23°♐41'49		retrograde	15317 Oct 26 14:28	4°♐44'34	
inferior conj	15316 Nov 25 07:10	19°♐42'51	-4°32'59	desc. node	15317 Oct 27 19:52	4°♐39'42	
minimum elong	15316 Nov 24 21:06	19°♐58'08	4°29'11	evening set	15317 Oct 28 11:38	4°♐33'11	
min. Earth dist.	15316 Nov 27 05:40	18°♐32'16	0.54996 AU	inferior conj	15317 Nov 05 19:33	0°♐16'17	-2°50'56
morning rise	15316 Dec 03 05:15	15°♐33'17		minimum elong	15317 Nov 05 12:28	0°♐28'39	2°47'29
direct	15316 Dec 08 04:14	14°♐39'33			15317 Nov 06 04:49	30°♐♐	
morning max el	15316 Dec 21 21:15	21°♐27'29	24°26'30	min. Earth dist.	15317 Nov 08 17:04	28°♐15'13	0.56402 AU
	15316 Dec 29 06:18	0°♐		morning rise	15317 Nov 13 10:29	25°♐32'32	
asc. node	15317 Jan 04 10:22	9°♐21'35		direct	15317 Nov 19 04:50	24°♐14'19	
	15317 Jan 15 04:27	0°♐			15317 Dec 01 17:04	0°♐	
morning set	15317 Jan 16 02:52	1°♐59'46		morning max el	15317 Dec 03 08:12	1°♐29'22	26°06'58
				asc. node	15317 Dec 22 07:29	28°♐06'12	
superior conj	15317 Jan 22 21:39	16°♐50'18	1°34'14		15317 Dec 23 08:16	0°♐	
minimum elong	15317 Jan 22 22:50	16°♐56'45	1°34'52	morning set	15317 Dec 31 13:56	16°♐36'08	
max. Earth dist.	15317 Jan 25 04:02	21°♐46'03	1.32364 AU		15318 Jan 06 15:45	0°♐	
	15317 Jan 29 01:25	0°♐					
evening rise	15317 Jan 30 08:51	2°♐41'06		superior conj	15318 Jan 07 07:51	1°♐29'45	1°37'57
desc. node	15317 Feb 05 22:26	15°♐22'52		minimum elong	15318 Jan 07 07:59	1°♐30'25	1°38'48
	15317 Feb 14 11:58	0°♐		max. Earth dist.	15318 Jan 08 09:05	3°♐50'03	1.31453 AU
evening max el	15317 Mar 04 23:43	23°♐57'01	27°33'46	evening rise	15318 Jan 14 08:31	16°♐47'18	
	15317 Mar 13 03:41	0°♐			15318 Jan 20 23:41	0°♐	
retrograde	15317 Mar 18 19:22	1°♐26'23		desc. node	15318 Jan 23 19:06	5°♐08'56	
	15317 Mar 24 02:12	30°♐♐			15318 Feb 09 07:41	0°♐	
evening set	15317 Mar 25 14:46	29°♐02'37		evening max el	15318 Feb 15 08:35	6°♐33'53	27°28'06
min. Earth dist.	15317 Mar 29 09:31	25°♐47'53	0.63490 AU	retrograde	15318 Mar 01 07:55	13°♐56'08	
inferior conj	15317 Apr 01 04:10	22°♐58'39	-0°21'42	evening set	15318 Mar 08 03:36	11°♐47'05	
minimum elong	15317 Apr 01 04:51	22°♐56'53	0°21'42	min. Earth dist.	15318 Mar 11 22:28	8°♐55'27	0.61336 AU
asc. node	15317 Apr 02 07:19	21°♐50'22		inferior conj	15318 Mar 15 01:20	6°♐07'38	-1°39'32
morning rise	15317 Apr 07 21:25	17°♐42'49		minimum elong	15318 Mar 15 04:54	5°♐59'36	1°38'06
direct	15317 Apr 10 07:44	17°♐13'56		asc. node	15318 Mar 20 04:43	2°♐08'03	
morning max el	15317 Apr 16 18:19	20°♐31'14	17°46'48	morning rise	15318 Mar 22 09:22	1°♐09'56	
	15317 Apr 23 23:30	0°♐		direct	15318 Mar 24 13:03	0°♐50'02	
morning set	15317 May 03 06:05	15°♐28'56		morning max el	15318 Mar 31 11:05	4°♐18'46	17°51'08
desc. node	15317 May 05 00:18	18°♐29'28		morning set	15318 Apr 16 03:13	28°♐40'14	
	15317 May 11 19:53	0°♐			15318 Apr 16 20:57	0°♐	
				desc. node	15318 Apr 21 21:00	8°♐56'11	
superior conj	15317 May 15 22:30	6°♐46'14	-1°19'47				

superior conj	15318 Apr 27 02:34	18° $\text{8}$ 02'38	-0°41'23	minimum elong	15319 Apr 09 04:51	0° $\text{8}$ 19'09	0°04'18
minimum elong	15318 Apr 26 22:47	17° $\text{8}$ 46'26	0°41'24	behind sun begin	15319 Apr 08 21:37	29° $\text{9}$ 46'24	
	15318 May 04 06:21	0° $\text{II}$		behind sun end	15319 Apr 09 12:06	0° $\text{8}$ 51'49	
max. Earth dist.	15318 May 04 09:06	0° $\text{II}$ 11'15	1.43328 AU		15319 Apr 09 00:37	0° $\text{8}$	
evening rise	15318 May 11 00:43	10° $\text{II}$ 48'15		max. Earth dist.	15319 Apr 16 19:33	13° $\text{8}$ 38'15	1.41328 AU
	15318 May 23 17:39	0° $\text{8}$		evening rise	15319 Apr 21 12:44	21° $\text{8}$ 27'51	
evening max el	15318 Jun 11 19:14	24° $\text{8}$ 49'22	21°43'55		15319 Apr 26 21:20	0° $\text{II}$	
asc. node	15318 Jun 16 02:23	28° $\text{8}$ 26'41			15319 May 17 21:07	0° $\text{8}$	
	15318 Jun 19 12:55	0° $\text{9}$		evening max el	15319 May 25 11:02	8° $\text{8}$ 42'01	23°03'53
retrograde	15318 Jun 20 22:44	0° $\text{9}$ 09'37		asc. node	15319 Jun 02 23:24	14° $\text{8}$ 32'10	
	15318 Jun 22 07:28	30° $\text{8}$ 8		retrograde	15319 Jun 04 19:07	14° $\text{8}$ 46'44	
evening set	15318 Jun 25 12:49	28° $\text{8}$ 15'59		evening set	15319 Jun 09 20:38	12° $\text{8}$ 38'03	
inferior conj	15318 Jun 30 18:36	21° $\text{8}$ 59'50	3°07'29	inferior conj	15319 Jun 15 04:28	6° $\text{8}$ 13'32	2°55'30
minimum elong	15318 Jun 30 18:01	22° $\text{8}$ 01'53	3°06'33	minimum elong	15319 Jun 15 03:03	6° $\text{8}$ 18'27	2°54'22
min. Earth dist.	15318 Jun 30 21:45	21° $\text{8}$ 48'50	0.69004 AU	min. Earth dist.	15319 Jun 14 18:38	6° $\text{8}$ 47'35	0.69046 AU
morning rise	15318 Jul 05 23:01	15° $\text{8}$ 43'33		morning rise	15319 Jun 20 09:23	0° $\text{8}$ 04'38	
direct	15318 Jul 10 20:52	13° $\text{8}$ 37'34			15319 Jun 20 11:40	30° $\text{8}$ II	
desc. node	15318 Jul 18 20:36	17° $\text{8}$ 41'26		direct	15319 Jun 24 18:48	28° $\text{II}$ 17'50	
morning max el	15318 Jul 20 15:30	19° $\text{8}$ 23'23	22°29'26		15319 Jun 29 12:31	0° $\text{8}$	
	15318 Jul 29 14:07	0° $\text{9}$		morning max el	15319 Jul 03 08:00	3° $\text{8}$ 13'03	21°05'56
	15318 Aug 19 02:23	0° $\text{9}$		desc. node	15319 Jul 05 17:52	5° $\text{8}$ 47'27	
morning set	15318 Aug 23 04:27	6° $\text{9}$ 32'25			15319 Jul 23 12:07	0° $\text{9}$	
max. Earth dist.	15318 Aug 28 03:28	14° $\text{9}$ 44'39	1.40921 AU	morning set	15319 Aug 03 00:05	16° $\text{9}$ 00'02	
				max. Earth dist.	15319 Aug 10 09:25	27° $\text{9}$ 45'56	1.43046 AU
					15319 Aug 11 18:18	0° $\text{9}$	
superior conj	15318 Sep 04 23:54	28° $\text{9}$ 23'54	-1°00'27				
minimum elong	15318 Sep 05 04:38	28° $\text{9}$ 45'12	0°59'49				
	15318 Sep 05 21:15	0° $\text{9}$		superior conj	15319 Aug 17 12:49	9° $\text{9}$ 37'03	-1°35'08
asc. node	15318 Sep 12 03:29	11° $\text{9}$ 32'00		minimum elong	15319 Aug 17 20:10	10° $\text{9}$ 08'12	1°34'42
evening rise	15318 Sep 15 02:57	17° $\text{9}$ 07'40		evening rise	15319 Aug 29 05:06	0° $\text{9}$ 04'06	
	15318 Sep 22 03:26	0° $\text{9}$			15319 Aug 29 04:11	0° $\text{9}$	
evening max el	15318 Oct 01 00:56	12° $\text{9}$ 40'52	18°20'34	asc. node	15319 Aug 30 00:04	1° $\text{9}$ 28'58	
retrograde	15318 Oct 08 14:04	16° $\text{9}$ 31'12		evening max el	15319 Sep 14 12:43	25° $\text{9}$ 37'29	18°03'20
evening set	15318 Oct 10 15:03	16° $\text{9}$ 15'03		retrograde	15319 Sep 21 06:53	29° $\text{9}$ 06'04	
desc. node	15318 Oct 14 17:11	14° $\text{9}$ 17'34		evening set	15319 Sep 23 15:07	28° $\text{9}$ 41'02	
inferior conj	15318 Oct 18 05:42	11° $\text{9}$ 37'03	-1°07'38	inferior conj	15319 Sep 30 12:25	23° $\text{9}$ 42'54	0°20'20
minimum elong	15318 Oct 18 03:08	11° $\text{9}$ 42'18	1°06'02	minimum elong	15319 Sep 30 13:04	23° $\text{9}$ 41'22	0°20'22
min. Earth dist.	15318 Oct 21 11:54	8° $\text{9}$ 57'57	0.58383 AU	desc. node	15319 Oct 01 14:37	22° $\text{9}$ 40'29	
morning rise	15318 Oct 25 11:45	6° $\text{9}$ 16'12		min. Earth dist.	15319 Oct 03 16:00	20° $\text{9}$ 45'04	0.60646 AU
direct	15318 Oct 31 19:33	4° $\text{9}$ 31'08		morning rise	15319 Oct 07 07:56	17° $\text{9}$ 51'49	
morning max el	15318 Nov 15 02:45	12° $\text{9}$ 08'30	27°20'10	direct	15319 Oct 13 23:00	15° $\text{9}$ 41'58	
	15318 Nov 29 03:18	0° $\text{9}$		morning max el	15319 Oct 28 05:03	23° $\text{9}$ 35'09	27°55'52
asc. node	15318 Dec 09 04:32	17° $\text{9}$ 21'48			15319 Nov 02 23:42	0° $\text{9}$	
	15318 Dec 15 10:47	0° $\text{9}$			15319 Nov 22 09:44	0° $\text{9}$	
morning set	15318 Dec 15 22:22	1° $\text{9}$ 01'32		asc. node	15319 Nov 26 01:29	6° $\text{9}$ 59'10	
				morning set	15319 Nov 30 02:10	15° $\text{9}$ 10'06	
superior conj	15318 Dec 22 19:22	16° $\text{9}$ 09'58	1°35'40	max. Earth dist.	15319 Dec 05 23:48	27° $\text{9}$ 55'30	1.31214 AU
minimum elong	15318 Dec 22 18:27	16° $\text{9}$ 04'52	1°36'34		15319 Dec 06 22:13	0° $\text{9}$	
max. Earth dist.	15318 Dec 22 16:57	15° $\text{9}$ 56'25	1.31062 AU				
	15318 Dec 29 01:29	0° $\text{9}$		superior conj	15319 Dec 07 06:15	0° $\text{9}$ 44'43	1°27'27
evening rise	15318 Dec 29 13:52	1° $\text{9}$ 06'28		minimum elong	15319 Dec 07 04:30	0° $\text{9}$ 34'54	1°28'12
desc. node	15319 Jan 10 15:50	24° $\text{9}$ 27'31		evening rise	15319 Dec 13 22:50	15° $\text{9}$ 32'44	
	15319 Jan 14 01:04	0° $\text{9}$			15319 Dec 21 00:18	0° $\text{9}$	
evening max el	15319 Jan 28 11:06	18° $\text{9}$ 22'14	26°47'37	desc. node	15319 Dec 28 12:41	13° $\text{9}$ 07'30	
retrograde	15319 Feb 11 11:06	25° $\text{9}$ 34'38		evening max el	15320 Jan 10 05:22	29° $\text{9}$ 17'20	25°34'08
evening set	15319 Feb 18 00:08	23° $\text{9}$ 47'24			15320 Jan 10 23:46	0° $\text{9}$	
min. Earth dist.	15319 Feb 22 00:58	21° $\text{9}$ 08'49	0.59105 AU	retrograde	15320 Jan 24 03:02	6° $\text{9}$ 17'26	
inferior conj	15319 Feb 25 05:49	18° $\text{9}$ 38'53	-3°06'41	evening set	15320 Jan 30 00:29	4° $\text{9}$ 57'43	
minimum elong	15319 Feb 25 12:50	18° $\text{9}$ 25'09	3°03'50	min. Earth dist.	15320 Feb 03 18:05	2° $\text{9}$ 17'44	0.57035 AU
morning rise	15319 Mar 05 04:58	14° $\text{9}$ 02'05		inferior conj	15320 Feb 06 14:17	0° $\text{9}$ 22'18	-4°33'20
direct	15319 Mar 07 04:45	13° $\text{9}$ 47'41		minimum elong	15320 Feb 06 23:30	0° $\text{9}$ 06'39	4°30'11
asc. node	15319 Mar 07 02:08	13° $\text{9}$ 47'44			15320 Feb 07 03:27	30° $\text{9}$ 8	
morning max el	15319 Mar 14 23:28	17° $\text{9}$ 39'00	18°14'37	morning rise	15320 Feb 15 01:22	26° $\text{9}$ 07'04	
	15319 Mar 23 18:56	0° $\text{9}$		direct	15320 Feb 17 02:34	25° $\text{9}$ 54'23	
morning set	15319 Mar 30 15:29	12° $\text{9}$ 32'31		asc. node	15320 Feb 21 23:34	27° $\text{9}$ 10'55	
desc. node	15319 Apr 08 17:39	29° $\text{9}$ 28'27			15320 Feb 25 19:18	0° $\text{9}$	
				morning max el	15320 Feb 26 03:17	0° $\text{9}$ 19'10	18°59'09
superior conj	15319 Apr 09 05:11	0° $\text{8}$ 20'40	-0°03'58	morning set	15320 Mar 13 14:10	26° $\text{9}$ 51'12	

	15320 Mar 15 04:28	0°♿		superior conj	15321 Mar 05 13:04	27°♿11'00	0°55'38
				minimum elong	15321 Mar 05 15:38	27°♿23'49	0°55'22
superior conj	15320 Mar 22 02:10	13°♿27'30	0°28'55		15321 Mar 06 23:02	0°♿	
minimum elong	15320 Mar 22 03:55	13°♿35'54	0°28'29	max. Earth dist.	15321 Mar 11 08:50	8°♿31'10	1.36823 AU
desc. node	15320 Mar 25 14:16	20°♿01'56		desc. node	15321 Mar 12 10:50	10°♿33'00	
max. Earth dist.	15320 Mar 29 02:07	26°♿21'48	1.39076 AU	evening rise	15321 Mar 15 02:55	15°♿26'40	
	15320 Mar 31 03:41	0°♿			15321 Mar 23 14:39	0°♿	
evening rise	15320 Apr 01 22:03	3°♿02'48			15321 Apr 13 15:53	0°♿	
	15320 Apr 19 01:35	0°♿		evening max el	15321 Apr 19 14:29	6°♿30'14	25°40'04
evening max el	15320 May 07 00:51	22°♿36'27	24°24'59	retrograde	15321 May 02 00:48	13°♿40'18	
retrograde	15320 May 18 12:14	29°♿19'19		asc. node	15321 May 06 17:46	12°♿09'46	
asc. node	15320 May 19 20:32	29°♿11'32		evening set	15321 May 08 00:56	11°♿11'16	
evening set	15320 May 24 01:15	26°♿58'31		min. Earth dist.	15321 May 12 07:03	6°♿34'00	0.67704 AU
min. Earth dist.	15320 May 28 14:28	21°♿44'57	0.68606 AU	inferior conj	15321 May 13 18:32	4°♿40'45	1°59'53
inferior conj	15320 May 29 13:06	20°♿28'49	2°33'07	minimum elong	15321 May 13 16:22	4°♿47'41	1°58'27
minimum elong	15320 May 29 11:07	20°♿35'31	2°31'47		15321 May 17 20:53	30°♿♿	
morning rise	15320 Jun 03 21:07	14°♿28'37		morning rise	15321 May 19 08:19	28°♿50'37	
direct	15320 Jun 07 18:40	13°♿01'46		direct	15321 May 22 18:44	27°♿43'03	
morning max el	15320 Jun 15 07:09	17°♿13'37	19°53'56		15321 May 28 00:26	0°♿	
desc. node	15320 Jun 21 15:01	24°♿40'29		morning max el	15321 May 29 13:37	1°♿23'10	18°56'49
	15320 Jun 25 12:19	0°♿		desc. node	15321 Jun 08 12:04	14°♿07'31	
morning set	15320 Jul 12 04:28	24°♿51'03		greatest brilliancy	15321 Jun 11 21:19	19°♿10'05	-0.7m
	15320 Jul 15 12:35	0°♿			15321 Jun 18 23:02	0°♿	
max. Earth dist.	15320 Jul 22 21:53	11°♿34'09	1.44693 AU	morning set	15321 Jun 21 12:31	3°♿57'40	
				max. Earth dist.	15321 Jul 05 15:41	25°♿55'49	1.45695 AU
superior conj	15320 Jul 28 02:17	19°♿51'52	-2°02'06				
minimum elong	15320 Jul 28 09:04	20°♿19'21	2°02'20	superior conj	15321 Jul 07 19:15	29°♿17'50	-2°13'56
	15320 Aug 03 06:45	0°♿		minimum elong	15321 Jul 07 20:12	29°♿21'30	2°14'47
evening rise	15320 Aug 10 12:50	12°♿12'05			15321 Jul 08 06:00	0°♿	
asc. node	15320 Aug 15 20:41	21°♿13'48		evening rise	15321 Jul 22 21:13	23°♿19'55	
	15320 Aug 21 06:18	0°♿			15321 Jul 27 00:05	0°♿	
evening max el	15320 Aug 28 03:24	8°♿59'56	18°05'01	asc. node	15321 Aug 02 17:21	10°♿40'52	
retrograde	15320 Sep 03 12:44	12°♿20'18		evening max el	15321 Aug 11 17:27	22°♿38'39	18°24'37
evening set	15320 Sep 06 05:24	11°♿42'54		retrograde	15321 Aug 18 03:23	26°♿04'24	
inferior conj	15320 Sep 12 12:02	6°♿26'39	1°27'57	evening set	15321 Aug 21 05:00	25°♿11'55	
minimum elong	15320 Sep 12 14:09	6°♿20'56	1°27'16	inferior conj	15321 Aug 27 00:27	19°♿39'39	2°16'09
min. Earth dist.	15320 Sep 15 05:51	3°♿31'04	0.62913 AU	minimum elong	15321 Aug 27 02:47	19°♿32'41	2°15'16
desc. node	15320 Sep 17 12:05	1°♿21'15		min. Earth dist.	15321 Aug 29 05:04	17°♿04'04	0.64972 AU
morning rise	15320 Sep 18 20:42	0°♿15'28		morning rise	15321 Sep 01 23:14	13°♿17'29	
	15320 Sep 19 05:17	30°♿♿		desc. node	15321 Sep 04 09:34	11°♿40'53	
direct	15320 Sep 25 12:51	27°♿47'35		direct	15321 Sep 08 11:00	10°♿40'34	
	15320 Oct 02 10:13	0°♿		morning max el	15321 Sep 21 23:33	18°♿35'07	27°14'52
morning max el	15320 Oct 09 12:52	5°♿47'12	27°52'34		15321 Oct 01 15:23	0°♿	
	15320 Oct 27 22:02	0°♿			15321 Oct 20 21:09	0°♿	
asc. node	15320 Nov 11 22:22	26°♿51'52		morning set	15321 Oct 27 10:41	12°♿14'53	
morning set	15320 Nov 12 23:10	28°♿56'47		asc. node	15321 Oct 29 19:09	16°♿54'10	
	15320 Nov 13 11:35	0°♿		max. Earth dist.	15321 Oct 31 19:55	21°♿01'53	1.33197 AU
max. Earth dist.	15320 Nov 18 01:54	9°♿39'04	1.31927 AU				
superior conj	15320 Nov 20 14:39	15°♿08'59	1°13'14	superior conj	15321 Nov 04 18:21	29°♿16'27	0°53'02
minimum elong	15320 Nov 20 12:23	14°♿56'33	1°13'48	minimum elong	15321 Nov 04 16:06	29°♿04'30	0°53'24
evening rise	15320 Nov 27 09:34	0°♿01'54			15321 Nov 05 02:31	0°♿	
	15320 Nov 27 09:13	0°♿		evening rise	15321 Nov 11 20:12	14°♿28'49	
	15320 Dec 13 17:58	0°♿			15321 Nov 19 13:19	0°♿	
desc. node	15320 Dec 14 09:37	0°♿54'55		desc. node	15321 Dec 01 06:39	17°♿30'44	
evening max el	15320 Dec 21 16:36	9°♿29'35	23°57'27	evening max el	15321 Dec 03 03:09	19°♿26'42	22°14'31
retrograde	15321 Jan 04 05:28	16°♿12'41		retrograde	15321 Dec 15 19:37	25°♿43'27	
evening set	15321 Jan 09 01:48	15°♿21'39		evening set	15321 Dec 19 08:31	25°♿15'52	
min. Earth dist.	15321 Jan 15 04:04	12°♿22'46	0.55420 AU	inferior conj	15321 Dec 27 21:15	21°♿23'09	-6°00'17
inferior conj	15321 Jan 17 01:52	11°♿14'17	-5°39'48	minimum elong	15321 Dec 27 19:36	21°♿25'27	5°59'20
minimum elong	15321 Jan 17 08:37	11°♿04'11	5°38'04	min. Earth dist.	15321 Dec 27 09:52	21°♿39'06	0.54528 AU
morning rise	15321 Jan 25 17:08	7°♿17'32		morning rise	15322 Jan 05 07:42	17°♿36'00	
direct	15321 Jan 28 05:01	7°♿01'45		direct	15322 Jan 08 16:24	17°♿10'47	
asc. node	15321 Feb 07 20:58	12°♿14'08		morning max el	15322 Jan 20 18:32	23°♿00'10	21°36'47
morning max el	15321 Feb 07 18:23	12°♿07'52	20°06'33	asc. node	15322 Jan 25 18:19	28°♿41'17	
	15321 Feb 20 00:25	0°♿			15322 Jan 26 17:36	0°♿	
morning set	15321 Feb 25 19:42	11°♿26'02		morning set	15322 Feb 10 05:26	26°♿09'27	
					15322 Feb 12 01:11	0°♿	

superior conj	15322 Feb 17 10:09	11° $\text{H}$ 21'05	1°15'43	morning set	15323 Jan 25 17:08	10° $\approx$ 53'59	
minimum elong	15322 Feb 17 12:34	11° $\text{H}$ 33'46	1°15'48				
max. Earth dist.	15322 Feb 21 20:18	20° $\text{H}$ 24'21	1.34780 AU	superior conj	15323 Feb 01 14:13	25° $\approx$ 48'00	1°29'17
evening rise	15322 Feb 25 23:57	28° $\text{H}$ 30'12		minimum elong	15323 Feb 01 15:57	25° $\approx$ 57'19	1°29'45
	15322 Feb 26 18:59	0° $\text{Y}$			15323 Feb 03 13:14	0° $\text{H}$	
desc. node	15322 Feb 27 07:24	0° $\text{Y}$ 58'07		max. Earth dist.	15323 Feb 04 14:54	2° $\text{H}$ 15'49	1.33107 AU
	15322 Mar 16 20:13	0° $\text{B}$		evening rise	15323 Feb 09 09:38	12° $\text{H}$ 03'34	
evening max el	15322 Apr 02 04:20	20° $\text{B}$ 16'53	26°41'37	desc. node	15323 Feb 14 03:57	21° $\text{H}$ 12'13	
retrograde	15322 Apr 15 07:56	27° $\text{B}$ 42'31			15323 Feb 19 02:23	0° $\text{Y}$	
evening set	15322 Apr 21 17:53	25° $\text{B}$ 10'10			15323 Mar 12 02:52	0° $\text{B}$	
asc. node	15322 Apr 23 15:03	23° $\text{B}$ 27'33		evening max el	15323 Mar 15 17:32	3° $\text{B}$ 45'20	27°22'23
min. Earth dist.	15322 Apr 25 18:14	21° $\text{B}$ 07'42	0.66367 AU	retrograde	15323 Mar 29 08:48	11° $\text{B}$ 16'23	
inferior conj	15322 Apr 27 18:33	18° $\text{B}$ 44'23	1°14'59	evening set	15323 Apr 05 01:58	8° $\text{B}$ 47'04	
minimum elong	15322 Apr 27 16:48	18° $\text{B}$ 49'35	1°13'45	min. Earth dist.	15323 Apr 08 22:01	5° $\text{B}$ 16'28	0.64635 AU
morning rise	15322 May 03 16:54	13° $\text{B}$ 06'03		asc. node	15323 Apr 10 12:25	3° $\text{B}$ 33'17	
direct	15322 May 06 17:05	12° $\text{B}$ 15'51		inferior conj	15323 Apr 11 10:35	2° $\text{B}$ 32'50	0°17'26
morning max el	15322 May 13 02:22	15° $\text{B}$ 37'21	18°16'10	minimum elong	15323 Apr 11 10:06	2° $\text{B}$ 34'10	0°16'49
	15322 May 23 19:44	0° $\text{II}$			15323 Apr 13 21:41	30° $\text{R}$ $\text{Y}$	
desc. node	15322 May 26 08:59	3° $\text{II}$ 59'26		morning rise	15323 Apr 17 20:15	27° $\text{Y}$ 08'20	
morning set	15322 Jun 01 18:18	14° $\text{II}$ 09'20		direct	15323 Apr 20 11:13	26° $\text{Y}$ 32'43	
	15322 Jun 11 18:10	0° $\text{E}$			15323 Apr 26 23:52	0° $\text{B}$	
				morning max el	15323 Apr 26 19:02	29° $\text{Y}$ 48'09	17°52'31
superior conj	15322 Jun 17 03:56	8° $\text{E}$ 28'19	-2°05'51	desc. node	15323 May 13 05:48	24° $\text{B}$ 08'46	
minimum elong	15322 Jun 16 21:28	8° $\text{E}$ 03'03	2°06'28	morning set	15323 May 14 03:42	25° $\text{B}$ 40'01	
max. Earth dist.	15322 Jun 18 12:11	10° $\text{E}$ 34'09	1.45955 AU		15323 May 16 18:14	0° $\text{II}$	
	15322 Jun 30 23:41	0° $\text{Q}$					
evening rise	15322 Jul 03 04:58	3° $\text{Q}$ 27'28		superior conj	15323 May 27 21:26	18° $\text{II}$ 07'54	-1°39'55
greatest brilliancy	15322 Jul 13 18:37	19° $\text{Q}$ 48'39	-0.8m	minimum elong	15323 May 27 12:42	17° $\text{II}$ 33'00	1°39'56
asc. node	15322 Jul 20 14:05	29° $\text{Q}$ 43'48		max. Earth dist.	15323 Jun 01 08:05	25° $\text{II}$ 10'04	1.45461 AU
	15322 Jul 20 18:51	0° $\text{np}$			15323 Jun 04 10:10	0° $\text{E}$	
evening max el	15322 Jul 26 04:08	6° $\text{np}$ 26'43	19°01'23	evening rise	15323 Jun 12 18:58	12° $\text{E}$ 55'02	
retrograde	15322 Aug 01 23:26	10° $\text{np}$ 11'06			15323 Jun 24 02:22	0° $\text{Q}$	
evening set	15322 Aug 05 10:24	9° $\text{np}$ 01'55		greatest brilliancy	15323 Jun 27 12:09	4° $\text{Q}$ 59'53	-0.6m
inferior conj	15322 Aug 10 22:11	3° $\text{np}$ 15'25	2°47'29	asc. node	15323 Jul 07 10:52	18° $\text{Q}$ 13'46	
minimum elong	15322 Aug 10 24:00	3° $\text{np}$ 09'37	2°46'39	evening max el	15323 Jul 09 09:29	20° $\text{Q}$ 18'20	19°54'16
min. Earth dist.	15322 Aug 12 12:37	1° $\text{np}$ 12'30	0.66677 AU	retrograde	15323 Jul 16 22:03	24° $\text{Q}$ 33'32	
	15322 Aug 13 12:08	30° $\text{R}$ $\text{Q}$		evening set	15323 Jul 20 18:58	23° $\text{Q}$ 06'57	
morning rise	15322 Aug 16 12:50	26° $\text{Q}$ 49'22		inferior conj	15323 Jul 26 02:16	17° $\text{Q}$ 07'49	3°04'39
desc. node	15322 Aug 22 07:01	24° $\text{Q}$ 12'50		minimum elong	15323 Jul 26 03:12	17° $\text{Q}$ 04'40	3°03'52
direct	15322 Aug 22 16:21	24° $\text{Q}$ 12'16		min. Earth dist.	15323 Jul 27 02:40	15° $\text{Q}$ 45'29	0.67948 AU
	15322 Sep 02 14:15	0° $\text{np}$		morning rise	15323 Jul 31 11:01	10° $\text{Q}$ 42'59	
morning max el	15322 Sep 04 11:01	1° $\text{np}$ 48'19	26°10'37	direct	15323 Aug 06 03:53	8° $\text{Q}$ 13'22	
	15322 Sep 25 17:49	0° $\text{Q}$		desc. node	15323 Aug 09 04:25	8° $\text{Q}$ 48'48	
morning set	15322 Oct 10 09:27	24° $\text{Q}$ 57'34		morning max el	15323 Aug 17 21:59	15° $\text{Q}$ 15'58	24°49'14
	15322 Oct 13 01:33	0° $\text{ml}$			15323 Aug 30 00:51	0° $\text{np}$	
max. Earth dist.	15322 Oct 14 04:19	2° $\text{ml}$ 09'07	1.34987 AU		15323 Sep 18 15:04	0° $\text{Q}$	
asc. node	15322 Oct 16 15:51	7° $\text{ml}$ 02'04		morning set	15323 Sep 22 15:33	6° $\text{Q}$ 56'13	
				max. Earth dist.	15323 Sep 26 04:47	13° $\text{Q}$ 18'37	1.37178 AU
superior conj	15322 Oct 19 14:50	13° $\text{ml}$ 01'07	0°26'59				
minimum elong	15322 Oct 19 13:23	12° $\text{ml}$ 53'37	0°27'16	superior conj	15323 Oct 03 01:03	26° $\text{Q}$ 16'01	-0°04'21
evening rise	15322 Oct 27 04:49	28° $\text{ml}$ 48'54		minimum elong	15323 Oct 03 01:18	26° $\text{Q}$ 17'16	0°03'58
	15322 Oct 27 18:30	0° $\text{X}$		behind sun begin	15323 Oct 02 18:53	25° $\text{Q}$ 45'52	
evening max el	15322 Nov 14 22:40	29° $\text{X}$ 46'20	20°42'05	behind sun end	15323 Oct 03 07:44	26° $\text{Q}$ 48'44	
	15322 Nov 15 04:14	0° $\text{Z}$		asc. node	15323 Oct 03 12:29	27° $\text{Q}$ 11'59	
desc. node	15322 Nov 18 03:47	2° $\text{Z}$ 31'07			15323 Oct 04 22:33	0° $\text{ml}$	
retrograde	15322 Nov 26 05:54	5° $\text{Z}$ 23'22		evening rise	15323 Oct 11 09:08	12° $\text{ml}$ 56'47	
evening set	15322 Nov 28 15:56	5° $\text{Z}$ 09'05			15323 Oct 20 09:14	0° $\text{X}$	
inferior conj	15322 Dec 07 12:25	1° $\text{Z}$ 15'41	-5°19'51	evening max el	15323 Oct 28 08:38	10° $\text{X}$ 53'35	19°29'46
minimum elong	15322 Dec 07 03:20	1° $\text{Z}$ 28'46	5°17'03	desc. node	15323 Nov 05 01:00	15° $\text{X}$ 31'54	
min. Earth dist.	15322 Dec 08 15:23	0° $\text{Z}$ 36'51	0.54549 AU	retrograde	15323 Nov 07 00:36	15° $\text{X}$ 43'45	
	15322 Dec 09 17:23	30° $\text{R}$ $\text{X}$		evening set	15323 Nov 08 22:28	15° $\text{X}$ 33'14	
morning rise	15322 Dec 15 14:41	27° $\text{X}$ 20'02		inferior conj	15323 Nov 17 14:10	11° $\text{X}$ 27'30	-3°51'32
direct	15322 Dec 20 00:01	26° $\text{X}$ 38'43		minimum elong	15323 Nov 17 04:52	11° $\text{X}$ 42'27	3°47'34
	15322 Dec 29 11:48	0° $\text{Z}$		min. Earth dist.	15323 Nov 20 00:15	9° $\text{X}$ 54'18	0.55496 AU
morning max el	15323 Jan 02 06:48	3° $\text{Z}$ 07'27	23°23'31	morning rise	15323 Nov 25 09:14	7° $\text{X}$ 04'09	
asc. node	15323 Jan 12 15:36	16° $\text{Z}$ 13'39		direct	15323 Nov 30 16:54	6° $\text{X}$ 00'29	
	15323 Jan 20 10:05	0° $\approx$		morning max el	15323 Dec 14 15:50	13° $\text{X}$ 01'31	25°11'38



	15323 Dec 27 19:03	0°♄		asc. node	15324 Dec 16 09:53	23°♄34'08	
asc. node	15323 Dec 30 12:47	4°♄35'37			15324 Dec 19 18:03	0°♄	
morning set	15324 Jan 10 04:55	25°♄34'35		morning set	15324 Dec 24 15:03	10°♄06'06	
	15324 Jan 12 05:44	0°♄					
superior conj	15324 Jan 16 22:50	10°♄24'47	1°36'33	superior conj	15324 Dec 31 09:50	25°♄04'49	1°37'43
minimum elong	15324 Jan 16 23:34	10°♄28'52	1°37'18	minimum elong	15324 Dec 31 09:30	25°♄02'59	1°38'36
max. Earth dist.	15324 Jan 18 16:31	14°♄14'00	1.31906 AU	max. Earth dist.	15324 Dec 31 23:00	26°♄18'27	1.31219 AU
evening rise	15324 Jan 24 04:58	25°♄59'37		evening rise	15325 Jan 02 14:48	0°♄	
	15324 Jan 26 04:17	0°♄			15325 Jan 07 07:19	10°♄11'37	
desc. node	15324 Feb 01 00:36	11°♄10'13		desc. node	15325 Jan 17 11:04	0°♄	
	15324 Feb 12 12:34	0°♄		evening max el	15325 Jan 17 21:19	0°♄45'11	
evening max el	15324 Feb 26 04:34	16°♄44'13	27°35'25		15325 Feb 07 11:10	29°♄01'37	27°15'18
retrograde	15324 Mar 11 02:32	24°♄12'05		retrograde	15325 Feb 08 12:28	0°♄	
evening set	15324 Mar 17 22:41	21°♄53'26		evening set	15325 Feb 21 11:30	6°♄20'06	
min. Earth dist.	15324 Mar 21 16:51	18°♄49'33	0.62593 AU	min. Earth dist.	15325 Feb 28 05:02	4°♄19'50	
inferior conj	15324 Mar 24 15:38	15°♄58'38	-0°53'16		15325 Mar 04 01:36	1°♄34'53	0.60376 AU
minimum elong	15324 Mar 24 17:25	15°♄54'17	0°52'42	inferior conj	15325 Mar 05 22:46	30°♄	
asc. node	15324 Mar 27 09:48	13°♄26'40		minimum elong	15325 Mar 07 06:10	28°♄52'39	-2°15'48
morning rise	15324 Mar 31 15:02	10°♄50'23		asc. node	15325 Mar 07 11:12	28°♄41'58	2°13'42
direct	15324 Apr 02 22:10	10°♄25'53		morning rise	15325 Mar 14 07:13	24°♄13'41	
morning max el	15324 Apr 09 12:43	13°♄46'52	17°46'22	direct	15325 Mar 14 20:43	24°♄03'20	
	15324 Apr 20 18:26	0°♄		morning max el	15325 Mar 16 22:11	23°♄46'17	
morning set	15324 Apr 25 13:31	8°♄19'38			15325 Mar 24 04:03	27°♄23'44	17°58'41
desc. node	15324 Apr 29 02:32	14°♄30'19		morning set	15325 Mar 26 12:13	0°♄	
					15325 Apr 08 17:48	21°♄50'30	
superior conj	15324 May 07 11:47	28°♄46'28	-1°03'43	desc. node	15325 Apr 13 04:46	0°♄	
minimum elong	15324 May 07 05:43	28°♄21'16	1°03'36		15325 Apr 15 23:14	4°♄59'48	
	15324 May 08 05:30	0°♄		superior conj	15325 Apr 19 01:51	10°♄30'08	-0°25'07
max. Earth dist.	15324 May 14 01:10	9°♄28'42	1.44277 AU	minimum elong	15325 Apr 18 23:40	10°♄20'34	0°25'18
evening rise	15324 May 22 06:45	22°♄24'35		max. Earth dist.	15325 Apr 26 14:28	23°♄18'42	1.42523 AU
	15324 May 27 06:10	0°♄			15325 Apr 30 16:59	0°♄	
evening max el	15324 Jun 17 14:16	0°♄		evening rise	15325 May 02 07:35	2°♄34'05	
asc. node	15324 Jun 21 08:51	4°♄10'37	21°00'54		15325 May 20 15:43	0°♄	
retrograde	15324 Jun 23 07:44	5°♄59'22		evening max el	15325 Jun 04 03:06	18°♄04'02	22°17'27
evening set	15324 Jun 29 21:01	9°♄05'43		asc. node	15325 Jun 10 04:42	22°♄46'51	
inferior conj	15324 Jul 04 04:35	7°♄21'53		retrograde	15325 Jun 13 18:41	23°♄43'07	
minimum elong	15324 Jul 09 10:13	1°♄11'34	3°09'38	evening set	15325 Jun 18 13:33	21°♄43'01	
min. Earth dist.	15324 Jul 09 10:10	1°♄11'43	3°08'47	inferior conj	15325 Jun 23 19:58	15°♄23'14	3°03'39
	15324 Jul 10 06:52	30°♄		minimum elong	15325 Jun 23 19:00	15°♄26'35	3°02'39
morning rise	15324 Jul 14 15:29	24°♄51'23		min. Earth dist.	15325 Jun 23 17:39	15°♄31'20	0.69085 AU
direct	15324 Jul 19 20:29	22°♄35'19		morning rise	15325 Jun 29 00:17	9°♄09'52	
desc. node	15324 Jul 26 01:47	25°♄04'38		direct	15325 Jun 29 00:17	9°♄09'52	
morning max el	15324 Jul 30 08:54	28°♄51'14	23°20'16	desc. node	15325 Jul 03 16:56	7°♄11'34	
	15324 Jul 31 11:27	0°♄		morning max el	15325 Jul 12 23:04	12°♄36'40	
morning set	15324 Aug 22 18:00	0°♄			15325 Jul 12 22:27	12°♄35'07	21°52'46
	15324 Aug 22 18:00	0°♄		morning set	15325 Jul 26 19:07	0°♄	
max. Earth dist.	15324 Sep 03 00:33	17°♄59'16			15325 Aug 14 09:30	28°♄00'34	
	15324 Sep 07 02:59	24°♄57'44	1.39567 AU	max. Earth dist.	15325 Aug 15 15:20	0°♄	
	15324 Sep 09 23:57	0°♄			15325 Aug 20 05:34	7°♄29'39	1.41878 AU
superior conj	15324 Sep 14 21:05	8°♄51'15	-0°39'30	superior conj	15325 Aug 27 22:41	20°♄37'41	-1°15'39
minimum elong	15324 Sep 15 00:02	9°♄04'53	0°38'56	minimum elong	15325 Aug 28 04:42	21°♄04'04	1°15'03
asc. node	15324 Sep 19 09:04	17°♄19'37			15325 Sep 02 04:57	0°♄	
evening rise	15324 Sep 24 06:16	26°♄44'17		asc. node	15325 Sep 06 05:40	7°♄21'50	
	15324 Sep 25 22:55	0°♄		evening rise	15325 Sep 07 16:40	10°♄02'54	
evening max el	15324 Oct 10 07:52	22°♄50'03	18°39'42		15325 Sep 19 06:22	0°♄	
retrograde	15324 Oct 18 12:35	26°♄58'29		evening max el	15325 Sep 23 16:20	5°♄27'52	18°10'50
evening set	15324 Oct 20 10:45	26°♄45'36		retrograde	15325 Sep 30 19:51	9°♄06'53	
desc. node	15324 Oct 21 22:19	26°♄19'08		evening set	15325 Oct 02 23:52	8°♄47'17	
inferior conj	15324 Oct 28 11:40	22°♄20'13	-2°05'56	desc. node	15325 Oct 08 19:42	5°♄15'37	
minimum elong	15324 Oct 28 06:33	22°♄29'46	2°03'13	inferior conj	15325 Oct 10 06:55	4°♄00'22	-0°27'56
min. Earth dist.	15324 Oct 31 14:45	20°♄00'40	0.57192 AU	minimum elong	15325 Oct 10 05:56	4°♄02'30	0°27'05
morning rise	15324 Nov 04 23:03	17°♄20'20		min. Earth dist.	15325 Oct 13 13:07	1°♄10'56	0.59339 AU
direct	15324 Nov 11 00:05	15°♄50'20			15325 Oct 15 00:51	30°♄	
morning max el	15324 Nov 25 05:33	23°♄15'59	26°42'10	morning rise	15325 Oct 17 08:39	28°♄25'52	
	15324 Dec 01 07:03	0°♄		direct	15325 Oct 23 20:33	26°♄29'43	
					15325 Nov 02 03:38	0°♄	

morning max el	15325 Nov 07 03:22	4° $\mathbb{M}$ 13'47	27°40'09	direct	15326 Oct 06 04:18	8° $\mathbb{A}$ 04'16	
	15325 Nov 26 03:10	0° $\mathbb{A}$		morning max el	15326 Oct 20 08:27	16° $\mathbb{A}$ 00'49	27°59'09
asc. node	15325 Dec 03 06:55	12° $\mathbb{A}$ 59'36			15326 Oct 31 20:37	0° $\mathbb{M}$	
morning set	15325 Dec 08 21:45	24° $\mathbb{A}$ 24'18			15326 Nov 18 18:23	0° $\mathbb{A}$	
	15325 Dec 11 12:08	0° $\mathbb{B}$		asc. node	15326 Nov 20 03:51	2° $\mathbb{A}$ 44'17	
				morning set	15326 Nov 22 22:59	8° $\mathbb{A}$ 24'23	
superior conj	15325 Dec 15 21:18	9° $\mathbb{B}$ 42'52	1°32'55	max. Earth dist.	15326 Nov 28 12:31	20° $\mathbb{A}$ 17'24	1.31451 AU
minimum elong	15325 Dec 15 20:00	9° $\mathbb{B}$ 35'34	1°33'45				
max. Earth dist.	15325 Dec 15 06:58	8° $\mathbb{B}$ 22'43	1.31065 AU	superior conj	15326 Nov 30 07:23	24° $\mathbb{A}$ 13'43	1°22'09
evening rise	15325 Dec 22 14:28	24° $\mathbb{B}$ 34'13		minimum elong	15326 Nov 30 05:21	24° $\mathbb{A}$ 02'28	1°22'50
	15325 Dec 25 04:04	0° $\mathbb{A}$			15326 Dec 02 21:46	0° $\mathbb{B}$	
desc. node	15326 Jan 04 18:06	19° $\mathbb{A}$ 48'23		evening rise	15326 Dec 07 00:26	9° $\mathbb{B}$ 02'27	
	15326 Jan 11 11:34	0° $\mathbb{H}$			15326 Dec 17 14:58	0° $\mathbb{A}$	
evening max el	15326 Jan 20 10:33	10° $\mathbb{H}$ 27'33	26°20'05	desc. node	15326 Dec 22 14:58	8° $\mathbb{A}$ 08'10	
retrograde	15326 Feb 03 09:47	17° $\mathbb{H}$ 34'04		evening max el	15327 Jan 02 01:22	21° $\mathbb{A}$ 01'58	24°54'56
evening set	15326 Feb 09 17:24	15° $\mathbb{H}$ 58'20		retrograde	15327 Jan 15 19:56	27° $\mathbb{A}$ 55'34	
min. Earth dist.	15326 Feb 13 23:57	13° $\mathbb{H}$ 21'05	0.58186 AU	evening set	15327 Jan 21 08:10	26° $\mathbb{A}$ 47'55	
inferior conj	15326 Feb 17 02:29	11° $\mathbb{H}$ 04'20	-3°44'28	min. Earth dist.	15327 Jan 26 13:21	24° $\mathbb{A}$ 02'32	0.56274 AU
minimum elong	15326 Feb 17 10:45	10° $\mathbb{H}$ 49'06	3°41'17	inferior conj	15327 Jan 29 01:57	22° $\mathbb{A}$ 25'50	-5°05'28
morning rise	15326 Feb 25 07:18	6° $\mathbb{H}$ 36'27		minimum elong	15327 Jan 29 10:54	22° $\mathbb{A}$ 11'31	5°02'47
direct	15326 Feb 27 06:59	6° $\mathbb{H}$ 23'10		morning rise	15327 Feb 06 16:02	18° $\mathbb{A}$ 19'28	
asc. node	15326 Mar 01 04:41	6° $\mathbb{H}$ 35'56		direct	15327 Feb 08 20:37	18° $\mathbb{A}$ 06'05	
morning max el	15326 Mar 07 13:13	10° $\mathbb{H}$ 27'31	18°30'55	asc. node	15327 Feb 16 02:07	20° $\mathbb{A}$ 43'26	
	15326 Mar 20 08:20	0° $\mathbb{Y}$		morning max el	15327 Feb 18 12:07	22° $\mathbb{A}$ 47'11	19°25'02
morning set	15326 Mar 23 11:02	5° $\mathbb{Y}$ 55'28			15327 Feb 24 07:27	0° $\mathbb{H}$	
				morning set	15327 Mar 07 13:01	20° $\mathbb{H}$ 22'20	
superior conj	15326 Apr 01 12:49	23° $\mathbb{Y}$ 10'00	0°10'42		15327 Mar 12 08:19	0° $\mathbb{Y}$	
minimum elong	15326 Apr 01 13:33	23° $\mathbb{Y}$ 13'23	0°10'17				
behind sun begin	15326 Apr 01 08:04	22° $\mathbb{Y}$ 48'02		superior conj	15327 Mar 15 16:16	6° $\mathbb{Y}$ 34'11	0°41'02
behind sun end	15326 Apr 01 19:01	23° $\mathbb{Y}$ 38'41		minimum elong	15327 Mar 15 18:30	6° $\mathbb{Y}$ 45'05	0°40'39
desc. node	15326 Apr 02 19:51	25° $\mathbb{Y}$ 32'40		desc. node	15327 Mar 20 16:26	16° $\mathbb{Y}$ 05'36	
	15326 Apr 05 06:59	0° $\mathbb{B}$		max. Earth dist.	15327 Mar 22 05:47	18° $\mathbb{Y}$ 57'13	1.38100 AU
max. Earth dist.	15326 Apr 08 23:29	6° $\mathbb{B}$ 28'54	1.40386 AU	evening rise	15327 Mar 25 22:37	25° $\mathbb{Y}$ 33'52	
evening rise	15326 Apr 13 04:39	13° $\mathbb{B}$ 37'22			15327 Mar 28 12:19	0° $\mathbb{B}$	
	15326 Apr 23 12:13	0° $\mathbb{II}$			15327 Apr 17 02:39	0° $\mathbb{II}$	
	15326 May 15 20:29	0° $\mathbb{E}$		evening max el	15327 Apr 30 07:22	15° $\mathbb{II}$ 51'49	24°57'59
evening max el	15326 May 17 17:55	1° $\mathbb{E}$ 57'54	23°38'39	retrograde	15327 May 12 04:58	22° $\mathbb{II}$ 47'48	
asc. node	15326 May 28 01:47	8° $\mathbb{E}$ 18'09		asc. node	15327 May 14 22:57	22° $\mathbb{II}$ 15'50	
retrograde	15326 May 28 13:41	8° $\mathbb{E}$ 19'13		evening set	15327 May 17 22:57	20° $\mathbb{II}$ 22'38	
evening set	15326 Jun 02 20:13	6° $\mathbb{E}$ 04'54		min. Earth dist.	15327 May 22 08:51	15° $\mathbb{II}$ 24'55	0.68281 AU
min. Earth dist.	15326 Jun 07 14:16	0° $\mathbb{E}$ 30'24	0.68923 AU	inferior conj	15327 May 23 13:03	13° $\mathbb{II}$ 51'58	2°20'24
	15326 Jun 07 23:08	30° $\mathbb{R}$ $\mathbb{II}$		minimum elong	15327 May 23 10:56	13° $\mathbb{II}$ 58'58	2°18'59
inferior conj	15326 Jun 08 05:33	29° $\mathbb{II}$ 37'59	2°47'17	morning rise	15327 May 28 23:13	7° $\mathbb{II}$ 56'08	
minimum elong	15326 Jun 08 03:51	29° $\mathbb{II}$ 43'49	2°46'04	direct	15327 Jun 01 15:53	6° $\mathbb{II}$ 37'48	
morning rise	15326 Jun 13 11:29	23° $\mathbb{II}$ 32'51		morning max el	15327 Jun 08 20:00	10° $\mathbb{II}$ 34'28	19°27'44
direct	15326 Jun 17 15:52	21° $\mathbb{II}$ 54'27		desc. node	15327 Jun 16 17:24	20° $\mathbb{II}$ 12'56	
morning max el	15326 Jun 25 17:36	26° $\mathbb{II}$ 29'25	20°33'42	greatest brilliancy	15327 Jun 21 11:12	27° $\mathbb{II}$ 00'32	-0.7m
	15326 Jun 28 22:48	0° $\mathbb{E}$			15327 Jun 23 11:41	0° $\mathbb{E}$	
desc. node	15326 Jun 29 20:18	1° $\mathbb{E}$ 04'22		morning set	15327 Jul 04 00:18	15° $\mathbb{E}$ 58'38	
	15326 Jul 20 05:13	0° $\mathbb{Q}$			15327 Jul 13 01:43	0° $\mathbb{Q}$	
morning set	15326 Jul 24 20:59	7° $\mathbb{Q}$ 08'05		max. Earth dist.	15327 Jul 16 06:06	4° $\mathbb{Q}$ 59'18	1.45206 AU
max. Earth dist.	15326 Aug 02 14:58	20° $\mathbb{Q}$ 54'33	1.43827 AU				
	15326 Aug 08 04:58	0° $\mathbb{P}$		superior conj	15327 Jul 20 05:33	11° $\mathbb{Q}$ 16'58	-2°09'22
superior conj	15326 Aug 09 01:45	1° $\mathbb{P}$ 26'00	-1°47'57	minimum elong	15327 Jul 20 10:29	11° $\mathbb{Q}$ 36'37	2°09'56
minimum elong	15326 Aug 09 09:26	1° $\mathbb{P}$ 57'54	1°47'44		15327 Jul 31 18:16	0° $\mathbb{P}$	
evening rise	15326 Aug 21 11:39	22° $\mathbb{P}$ 40'30		evening rise	15327 Aug 03 10:00	4° $\mathbb{P}$ 24'12	
asc. node	15326 Aug 24 02:16	27° $\mathbb{P}$ 14'12		asc. node	15327 Aug 10 22:53	16° $\mathbb{P}$ 52'10	
	15326 Aug 25 16:24	0° $\mathbb{A}$			15327 Aug 19 22:16	0° $\mathbb{A}$	
evening max el	15326 Sep 07 05:46	18° $\mathbb{A}$ 36'15	18°01'42	evening max el	15327 Aug 21 20:28	2° $\mathbb{A}$ 06'11	18°11'07
retrograde	15326 Sep 13 18:56	21° $\mathbb{A}$ 59'47		retrograde	15327 Aug 28 05:06	5° $\mathbb{A}$ 27'34	
evening set	15326 Sep 16 06:42	21° $\mathbb{A}$ 29'48		evening set	15327 Aug 31 01:26	4° $\mathbb{A}$ 44'08	
inferior conj	15326 Sep 22 21:19	16° $\mathbb{A}$ 23'17	0°51'32		15327 Sep 05 12:48	30° $\mathbb{R}$ $\mathbb{P}$	
minimum elong	15326 Sep 22 22:47	16° $\mathbb{A}$ 19'36	0°51'10	inferior conj	15327 Sep 06 02:52	29° $\mathbb{P}$ 20'43	1°50'38
desc. node	15326 Sep 25 17:08	13° $\mathbb{A}$ 34'02		minimum elong	15327 Sep 06 05:12	29° $\mathbb{P}$ 14'08	1°49'49
min. Earth dist.	15326 Sep 25 21:12	13° $\mathbb{A}$ 24'17	0.61628 AU	min. Earth dist.	15327 Sep 08 15:17	26° $\mathbb{P}$ 31'37	0.63822 AU
morning rise	15326 Sep 29 12:11	10° $\mathbb{A}$ 22'25		morning rise	15327 Sep 12 07:08	23° $\mathbb{P}$ 03'29	
				desc. node	15327 Sep 12 14:37	22° $\mathbb{P}$ 49'19	

direct	15327 Sep 18 21:47	20° $\cap$ 30'42		min. Earth dist.	15328 Aug 21 18:24	10° $\cap$ 21'30	0.65742 AU
morning max el	15327 Oct 02 18:04	28° $\cap$ 30'25	27°40'21	morning rise	15328 Aug 25 14:44	6° $\cap$ 20'05	
	15327 Oct 04 04:46	0° $\underline{\cap}$		desc. node	15328 Aug 29 12:04	4° $\cap$ 04'42	
	15327 Oct 25 16:40	0° $\cap$		direct	15328 Aug 31 23:26	3° $\cap$ 41'42	
morning set	15327 Nov 06 16:19	21° $\cap$ 59'54		morning max el	15328 Sep 14 05:18	11° $\cap$ 30'59	26°50'12
asc. node	15327 Nov 07 00:39	22° $\cap$ 41'36			15328 Sep 28 23:37	0° $\underline{\cap}$	
	15327 Nov 10 14:10	0° $\times$			15328 Oct 17 06:01	0° $\cap$	
max. Earth dist.	15327 Nov 11 11:36	1° $\times$ 52'45	1.32396 AU	morning set	15328 Oct 19 22:52	5° $\cap$ 04'36	
				asc. node	15328 Oct 23 21:22	12° $\cap$ 47'07	
superior conj	15327 Nov 14 14:01	8° $\times$ 31'21	1°05'24	max. Earth dist.	15328 Oct 24 01:17	13° $\cap$ 06'45	1.33897 AU
minimum elong	15327 Nov 14 11:41	8° $\times$ 18'42	1°05'52				
evening rise	15327 Nov 21 11:20	23° $\times$ 30'59		superior conj	15328 Oct 28 15:01	22° $\cap$ 30'27	0°42'41
	15327 Nov 24 13:02	0° $\underline{\times}$		minimum elong	15328 Oct 28 13:00	22° $\cap$ 19'53	0°43'00
desc. node	15327 Dec 09 11:57	25° $\underline{\times}$ 27'50			15328 Nov 01 03:55	0° $\times$	
	15327 Dec 13 09:58	0° $\approx$		evening rise	15328 Nov 04 21:21	7° $\times$ 55'46	
evening max el	15327 Dec 14 10:56	1° $\approx$ 02'24	23°13'19		15328 Nov 16 11:25	0° $\underline{\times}$	
retrograde	15327 Dec 27 17:10	7° $\approx$ 36'46		evening max el	15328 Nov 25 00:20	11° $\underline{\times}$ 05'28	21°33'10
evening set	15328 Jan 01 00:17	6° $\approx$ 56'41		desc. node	15328 Nov 25 08:59	11° $\underline{\times}$ 26'27	
min. Earth dist.	15328 Jan 07 21:08	3° $\approx$ 43'50	0.54932 AU	retrograde	15328 Dec 07 04:17	17° $\underline{\times}$ 06'34	
inferior conj	15328 Jan 09 05:35	2° $\approx$ 57'01	-5°55'32	evening set	15328 Dec 10 04:05	16° $\underline{\times}$ 46'13	
minimum elong	15328 Jan 09 09:17	2° $\approx$ 51'40	5°54'26	inferior conj	15328 Dec 18 21:25	12° $\underline{\times}$ 55'07	-5°50'30
	15328 Jan 14 23:10	30° $\mathbb{R}$ $\underline{\times}$		minimum elong	15328 Dec 18 15:54	13° $\underline{\times}$ 02'50	5°48'58
morning rise	15328 Jan 17 19:45	29° $\underline{\times}$ 06'11		min. Earth dist.	15328 Dec 19 02:46	12° $\underline{\times}$ 47'37	0.54423 AU
direct	15328 Jan 20 15:10	28° $\underline{\times}$ 47'25		morning rise	15328 Dec 27 04:18	9° $\underline{\times}$ 06'25	
	15328 Jan 25 23:19	0° $\approx$		direct	15328 Dec 30 23:26	8° $\underline{\times}$ 35'02	
morning max el	15328 Jan 31 21:02	4° $\approx$ 12'11	20°42'23	morning max el	15329 Jan 12 15:22	14° $\underline{\times}$ 42'40	22°20'44
asc. node	15328 Feb 02 23:30	6° $\approx$ 24'27		asc. node	15329 Jan 19 20:49	23° $\underline{\times}$ 21'20	
	15328 Feb 17 09:37	0° $\mathbb{H}$			15329 Jan 24 02:45	0° $\approx$	
morning set	15328 Feb 19 20:35	5° $\mathbb{H}$ 01'12		morning set	15329 Feb 03 07:21	19° $\approx$ 45'12	
					15329 Feb 08 02:18	0° $\mathbb{H}$	
superior conj	15328 Feb 27 07:55	20° $\mathbb{H}$ 30'04	1°04'56				
minimum elong	15328 Feb 27 10:30	20° $\mathbb{H}$ 43'18	1°04'49	superior conj	15329 Feb 10 08:17	4° $\mathbb{H}$ 47'53	1°22'15
	15328 Mar 03 02:11	0° $\mathbb{Y}$		minimum elong	15329 Feb 10 10:28	4° $\mathbb{H}$ 59'27	1°22'30
max. Earth dist.	15328 Mar 03 13:36	0° $\mathbb{Y}$ 55'20	1.35910 AU	max. Earth dist.	15329 Feb 14 03:39	12° $\mathbb{H}$ 44'30	1.34017 AU
desc. node	15328 Mar 06 12:59	6° $\mathbb{Y}$ 34'23		evening rise	15329 Feb 18 13:35	21° $\mathbb{H}$ 32'31	
evening rise	15328 Mar 07 10:45	8° $\mathbb{Y}$ 15'20		desc. node	15329 Feb 21 09:32	26° $\mathbb{H}$ 55'09	
	15328 Mar 20 05:22	0° $\mathbb{B}$			15329 Feb 23 01:44	0° $\mathbb{Y}$	
evening max el	15328 Apr 11 20:52	29° $\mathbb{B}$ 42'33	26°08'20		15329 Mar 14 01:10	0° $\mathbb{B}$	
	15328 Apr 12 04:03	0° $\mathbb{I}$		evening max el	15329 Mar 25 10:40	13° $\mathbb{B}$ 22'47	27°02'03
retrograde	15328 Apr 24 15:32	7° $\mathbb{I}$ 01'34		retrograde	15329 Apr 07 20:14	20° $\mathbb{B}$ 52'10	
evening set	15328 Apr 30 20:01	4° $\mathbb{I}$ 30'14		evening set	15329 Apr 14 09:27	18° $\mathbb{B}$ 20'32	
asc. node	15328 Apr 30 20:13	4° $\mathbb{I}$ 29'48		asc. node	15329 Apr 17 17:33	15° $\mathbb{B}$ 11'01	
min. Earth dist.	15328 May 04 23:25	0° $\mathbb{I}$ 08'01	0.67181 AU	min. Earth dist.	15329 Apr 18 07:49	14° $\mathbb{B}$ 31'46	0.65666 AU
	15328 May 05 02:02	30° $\mathbb{R}$ $\mathbb{B}$		inferior conj	15329 Apr 20 13:23	11° $\mathbb{B}$ 58'31	0°52'11
inferior conj	15328 May 06 16:26	28° $\mathbb{B}$ 00'42	1°42'21	minimum elong	15329 Apr 20 12:04	12° $\mathbb{B}$ 02'20	0°51'08
minimum elong	15328 May 06 14:22	28° $\mathbb{B}$ 07'09	1°40'57	morning rise	15329 Apr 26 16:12	6° $\mathbb{B}$ 25'32	
morning rise	15328 May 12 09:32	22° $\mathbb{B}$ 15'24		direct	15329 Apr 29 12:17	5° $\mathbb{B}$ 41'57	
direct	15328 May 15 15:22	21° $\mathbb{B}$ 15'42		morning max el	15329 May 05 20:01	8° $\mathbb{B}$ 59'43	18°03'57
morning max el	15328 May 22 05:22	24° $\mathbb{B}$ 46'43	18°37'28	desc. node	15329 May 20 11:16	29° $\mathbb{B}$ 51'14	
	15328 May 26 17:25	0° $\mathbb{I}$			15329 May 20 13:26	0° $\mathbb{I}$	
desc. node	15328 Jun 02 14:23	9° $\mathbb{I}$ 51'21		morning set	15329 May 24 09:25	6° $\mathbb{I}$ 13'08	
morning set	15328 Jun 12 15:56	25° $\mathbb{I}$ 28'07					
	15328 Jun 15 13:26	0° $\underline{\mathbb{E}}$		superior conj	15329 Jun 08 03:27	29° $\mathbb{I}$ 48'52	-1°56'40
max. Earth dist.	15328 Jun 28 00:48	19° $\underline{\mathbb{E}}$ 28'01	1.45890 AU	minimum elong	15329 Jun 07 19:12	29° $\mathbb{I}$ 16'29	1°57'00
					15329 Jun 08 06:17	0° $\underline{\mathbb{E}}$	
superior conj	15328 Jun 28 17:04	20° $\underline{\mathbb{E}}$ 31'27	-2°13'00	max. Earth dist.	15329 Jun 10 21:02	4° $\underline{\mathbb{E}}$ 05'54	1.45831 AU
minimum elong	15328 Jun 28 14:35	20° $\underline{\mathbb{E}}$ 21'46	2°13'52	evening rise	15329 Jun 24 06:18	24° $\underline{\mathbb{E}}$ 51'07	
	15328 Jul 04 18:26	0° $\Omega$			15329 Jun 27 14:34	0° $\Omega$	
evening rise	15328 Jul 14 07:41	15° $\Omega$ 05'24		greatest brilliancy	15329 Jul 06 21:30	14° $\Omega$ 06'13	-0.7m
greatest brilliancy	15328 Jul 21 16:01	26° $\Omega$ 44'50	-0.9m	asc. node	15329 Jul 14 16:18	25° $\Omega$ 00'19	
	15328 Jul 23 17:55	0° $\cap$		evening max el	15329 Jul 18 18:04	29° $\Omega$ 40'27	19°22'06
asc. node	15328 Jul 27 19:33	6° $\cap$ 10'13			15329 Jul 19 02:04	0° $\cap$	
evening max el	15328 Aug 04 09:24	15° $\cap$ 50'03	18°38'14	retrograde	15329 Jul 25 19:44	3° $\cap$ 36'15	
retrograde	15328 Aug 10 22:26	19° $\cap$ 22'19		evening set	15329 Jul 29 10:53	2° $\cap$ 19'44	
evening set	15328 Aug 14 03:52	18° $\cap$ 23'06			15329 Jul 31 23:52	30° $\mathbb{R}$ $\Omega$	
inferior conj	15328 Aug 19 19:40	12° $\cap$ 44'47	2°31'18	inferior conj	15329 Aug 03 20:25	26° $\Omega$ 27'59	2°56'20
minimum elong	15328 Aug 19 21:51	12° $\cap$ 38'05	2°30'26	minimum elong	15329 Aug 03 21:53	26° $\Omega$ 23'10	2°55'32

min. Earth dist.	15329 Aug 05 04:54	24° $\Omega$ 41'28	0.67275 AU	evening max el	15330 Jul 01 20:58	13° $\Omega$ 32'57	20°21'06
morning rise	15329 Aug 09 08:17	20° $\Omega$ 02'07		retrograde	15330 Jul 09 18:41	18° $\Omega$ 03'44	
direct	15329 Aug 15 07:38	17° $\Omega$ 27'07		evening set	15330 Jul 13 20:09	16° $\Omega$ 29'33	
desc. node	15329 Aug 16 09:31	17° $\Omega$ 31'36		inferior conj	15330 Jul 19 02:25	10° $\Omega$ 25'31	3°08'07
morning max el	15329 Aug 27 16:21	24° $\Omega$ 50'22	25°37'30	minimum elong	15330 Jul 19 02:57	10° $\Omega$ 23'43	3°07'20
	15329 Sep 01 08:30	0° $\Pi$		min. Earth dist.	15330 Jul 19 20:57	9° $\Omega$ 22'06	0.68356 AU
	15329 Sep 22 10:29	0° $\Omega$		morning rise	15330 Jul 24 09:25	4° $\Omega$ 02'36	
morning set	15329 Oct 02 15:02	17° $\Omega$ 29'32		direct	15330 Jul 29 21:23	1° $\Omega$ 38'14	
max. Earth dist.	15329 Oct 06 05:36	24° $\Omega$ 10'54	1.35884 AU	desc. node	15330 Aug 03 06:56	2° $\Omega$ 53'09	
	15329 Oct 09 06:12	0° $\Pi$		morning max el	15330 Aug 10 03:05	8° $\Omega$ 21'26	24°11'48
asc. node	15329 Oct 10 18:02	2° $\Pi$ 56'17			15330 Aug 27 03:16	0° $\Pi$	
				morning set	15330 Sep 14 12:39	29° $\Pi$ 05'17	
superior conj	15329 Oct 12 07:34	6° $\Pi$ 03'42	0°14'18		15330 Sep 15 01:19	0° $\Omega$	
minimum elong	15329 Oct 12 06:43	5° $\Pi$ 59'23	0°14'37	max. Earth dist.	15330 Sep 18 04:41	5° $\Omega$ 31'11	1.38192 AU
behind sun begin	15329 Oct 12 04:04	5° $\Pi$ 46'04					
behind sun end	15329 Oct 12 09:22	6° $\Pi$ 12'42		superior conj	15330 Sep 25 12:16	19° $\Omega$ 02'52	-0°18'53
evening rise	15329 Oct 20 04:26	22° $\Pi$ 11'20		minimum elong	15330 Sep 25 13:34	19° $\Omega$ 09'03	0°18'26
	15329 Oct 24 01:18	0° $\Omega$		asc. node	15330 Sep 27 14:39	23° $\Omega$ 05'36	
evening max el	15329 Nov 07 01:53	21° $\Omega$ 44'16	20°08'36		15330 Oct 01 03:05	0° $\Pi$	
desc. node	15329 Nov 12 06:09	25° $\Omega$ 39'01		evening rise	15330 Oct 04 06:05	6° $\Pi$ 11'39	
retrograde	15329 Nov 17 16:07	27° $\Omega$ 00'48			15330 Oct 17 22:38	0° $\Omega$	
evening set	15329 Nov 19 19:20	26° $\Omega$ 48'57		evening max el	15330 Oct 20 17:50	3° $\Omega$ 12'38	19°05'42
inferior conj	15329 Nov 28 15:26	22° $\Omega$ 51'47	-4°46'29	retrograde	15330 Oct 29 17:42	7° $\Omega$ 44'04	
minimum elong	15329 Nov 28 05:22	23° $\Omega$ 06'48	4°42'52	desc. node	15330 Oct 30 03:26	7° $\Omega$ 43'32	
min. Earth dist.	15329 Nov 30 09:13	21° $\Omega$ 49'23	0.54854 AU	evening set	15330 Oct 31 14:44	7° $\Omega$ 33'03	
morning rise	15329 Dec 06 14:33	18° $\Omega$ 46'30		inferior conj	15330 Nov 09 00:52	3° $\Omega$ 19'04	-3°07'03
direct	15329 Dec 11 10:14	17° $\Omega$ 56'08		minimum elong	15330 Nov 08 17:08	3° $\Omega$ 32'18	3°03'24
morning max el	15329 Dec 25 00:51	24° $\Omega$ 39'07	24°10'22	min. Earth dist.	15330 Nov 11 19:49	1° $\Omega$ 24'58	0.56145 AU
	15329 Dec 29 22:21	0° $\Omega$			15330 Nov 14 02:17	30° $\Omega$	
asc. node	15330 Jan 06 18:03	11° $\Omega$ 16'41		morning rise	15330 Nov 16 16:55	28° $\Pi$ 40'47	
	15330 Jan 16 16:34	0° $\approx$		direct	15330 Nov 22 08:36	27° $\Pi$ 26'32	
morning set	15330 Jan 18 19:20	4° $\approx$ 28'55			15330 Nov 30 13:34	0° $\Omega$	
				morning max el	15330 Dec 06 11:08	4° $\Omega$ 38'03	25°53'27
superior conj	15330 Jan 25 14:35	19° $\approx$ 19'55	1°33'07	asc. node	15330 Dec 24 15:12	29° $\Omega$ 55'43	
minimum elong	15330 Jan 25 15:55	19° $\approx$ 27'11	1°33'43		15330 Dec 24 16:09	0° $\Omega$	
max. Earth dist.	15330 Jan 28 01:39	24° $\approx$ 39'46	1.32541 AU	morning set	15331 Jan 03 06:40	19° $\Omega$ 06'35	
	15330 Jan 30 14:07	0° $\Omega$			15331 Jan 08 05:32	0° $\approx$	
evening rise	15330 Feb 02 03:47	5° $\Omega$ 16'55					
desc. node	15330 Feb 08 06:08	17° $\Omega$ 03'24		superior conj	15331 Jan 10 00:26	3° $\approx$ 58'48	1°37'47
	15330 Feb 15 17:39	0° $\Omega$		minimum elong	15331 Jan 10 00:44	4° $\approx$ 00'23	1°38'36
evening max el	15330 Mar 07 23:30	26° $\Omega$ 41'32	27°31'46	max. Earth dist.	15331 Jan 11 05:57	6° $\approx$ 42'29	1.31552 AU
	15330 Mar 11 19:00	0° $\Omega$		evening rise	15331 Jan 17 02:23	19° $\approx$ 20'31	
retrograde	15330 Mar 21 18:03	4° $\Omega$ 11'15			15331 Jan 22 09:54	0° $\Omega$	
evening set	15330 Mar 28 13:02	1° $\Omega$ 45'51		desc. node	15331 Jan 26 02:47	6° $\Omega$ 52'41	
	15330 Mar 30 17:10	30° $\Omega$			15331 Feb 10 01:35	0° $\Omega$	
min. Earth dist.	15330 Apr 01 08:05	28° $\Omega$ 27'12	0.63798 AU	evening max el	15331 Feb 18 08:57	9° $\Omega$ 24'08	27°31'04
inferior conj	15330 Apr 04 01:12	25° $\Omega$ 39'04	-0°10'56	retrograde	15331 Mar 04 07:56	16° $\Omega$ 48'05	
minimum elong	15330 Apr 04 01:33	25° $\Omega$ 38'10	0°11'06	evening set	15331 Mar 11 04:02	14° $\Omega$ 36'13	
transit middle	15330 Apr 04 01:33	25° $\Omega$ 38'10	0°11'06	min. Earth dist.	15331 Mar 14 22:31	11° $\Omega$ 41'49	0.61667 AU
transit begin	15330 Apr 03 23:18	25° $\Omega$ 44'02		inferior conj	15331 Mar 18 00:33	8° $\Omega$ 52'36	-1°27'01
transit end	15330 Apr 04 03:49	25° $\Omega$ 32'19		minimum elong	15331 Mar 18 03:37	8° $\Omega$ 45'32	1°25'48
asc. node	15330 Apr 04 14:56	25° $\Omega$ 03'40		asc. node	15331 Mar 22 12:22	5° $\Omega$ 12'45	
morning rise	15330 Apr 10 16:25	20° $\Omega$ 20'51		morning rise	15331 Mar 25 06:19	3° $\Omega$ 52'12	
direct	15330 Apr 13 03:57	19° $\Omega$ 50'16		direct	15331 Mar 27 10:51	3° $\Omega$ 31'13	
morning max el	15330 Apr 19 13:29	23° $\Omega$ 06'36	17°47'44	morning max el	15331 Apr 03 06:38	6° $\Omega$ 57'27	17°49'20
	15330 Apr 25 02:01	0° $\Omega$			15331 Apr 18 06:32	0° $\Omega$	
morning set	15330 May 06 06:00	18° $\Omega$ 16'03		morning set	15331 Apr 19 00:23	1° $\Omega$ 19'39	
desc. node	15330 May 07 08:03	20° $\Omega$ 06'44		desc. node	15331 Apr 24 04:46	10° $\Omega$ 32'10	
	15330 May 13 04:59	0° $\Pi$					
superior conj	15330 May 19 04:55	9° $\Pi$ 51'23	-1°25'19	superior conj	15331 Apr 30 05:28	20° $\Omega$ 58'11	-0°47'16
minimum elong	15330 May 18 20:56	9° $\Pi$ 19'01	1°25'12	minimum elong	15331 Apr 30 01:05	20° $\Omega$ 39'34	0°47'16
max. Earth dist.	15330 May 24 16:35	18° $\Pi$ 38'33	1.45040 AU		15331 May 05 15:23	0° $\Pi$	
	15330 May 31 23:02	0° $\Omega$		max. Earth dist.	15331 May 07 08:33	2° $\Pi$ 47'50	1.43593 AU
evening rise	15330 Jun 03 17:22	4° $\Omega$ 14'49		evening rise	15331 May 14 09:12	13° $\Pi$ 57'43	
	15330 Jun 21 01:57	0° $\Omega$			15331 May 24 23:09	0° $\Omega$	
asc. node	15330 Jul 01 13:08	13° $\Omega$ 13'09		evening max el	15331 Jun 14 17:53	27° $\Omega$ 25'04	21°32'28
					15331 Jun 17 14:50	0° $\Omega$	

asc. node	15331 Jun 18 10:04	0°03'57"		evening max el	15332 May 27 10:14	11°06'17"	22°51'46"
retrograde	15331 Jun 23 17:21	2°03'38"		asc. node	15332 Jun 04 07:06	16°05'53"	
evening set	15331 Jun 28 05:44	0°03'47"		retrograde	15332 Jun 06 14:10	17°05'16"	
	15331 Jun 29 02:44	30°06'00"		evening set	15332 Jun 11 13:54	15°05'09"	
inferior conj	15331 Jul 03 11:23	24°03'25"	3°08'22"	inferior conj	15332 Jun 16 21:18	8°05'46"	2°57'59"
minimum elong	15331 Jul 03 10:57	24°03'34"	3°07'29"	minimum elong	15332 Jun 16 20:00	8°05'50"	2°56'54"
min. Earth dist.	15331 Jul 03 16:30	24°03'15"	0.68955 AU	min. Earth dist.	15332 Jun 16 13:25	9°05'13"	0.69070 AU
morning rise	15331 Jul 08 15:58	18°05'15"		morning rise	15332 Jun 22 01:58	2°05'36"	
direct	15331 Jul 13 15:36	16°05'06"		direct	15332 Jun 26 13:15	0°05'46"	
desc. node	15331 Jul 21 04:17	19°05'44"		morning max el	15332 Jul 05 06:34	5°05'48"	21°17'42"
morning max el	15331 Jul 23 14:56	22°05'00"	22°42'29"	desc. node	15332 Jul 07 01:33	7°05'41"	
	15331 Jul 30 13:10	0°03'00"			15332 Jul 23 17:38	0°03'00"	
	15331 Aug 20 09:53	0°03'00"		morning set	15332 Aug 05 10:34	19°03'18"	
morning set	15331 Aug 26 11:39	9°03'42"			15332 Aug 12 03:03	0°03'00"	
max. Earth dist.	15331 Aug 31 04:26	17°03'32"	1.40572 AU	max. Earth dist.	15332 Aug 12 09:17	0°03'25"	1.42756 AU
	15331 Sep 07 07:36	0°03'00"					
superior conj	15331 Sep 08 01:00	1°03'18"	-0°54'56"	superior conj	15332 Aug 19 17:20	12°03'40"	-1°30'13"
minimum elong	15331 Sep 08 05:17	1°03'37"	0°54'20"	minimum elong	15332 Aug 20 00:24	13°03'10"	1°29'43"
asc. node	15331 Sep 14 11:15	13°03'11"			15332 Aug 29 13:40	0°03'00"	
evening rise	15331 Sep 17 23:12	19°03'48"		evening rise	15332 Aug 31 03:38	2°05'51"	
	15331 Sep 23 10:26	0°03'00"		asc. node	15332 Aug 31 07:50	3°05'09"	
evening max el	15331 Oct 03 21:28	15°03'27"	18°24'55"	evening max el	15332 Sep 16 08:32	28°03'19"	18°04'42"
retrograde	15331 Oct 11 14:25	19°03'22"			15332 Sep 18 06:39	0°03'00"	
evening set	15331 Oct 13 14:29	19°03'07"		retrograde	15332 Sep 23 04:47	1°03'50"	
desc. node	15331 Oct 17 00:48	17°03'38"		evening set	15332 Sep 25 11:52	1°03'27"	
inferior conj	15331 Oct 21 07:50	14°03'32"	-1°22'35"		15332 Sep 28 07:35	30°06'00"	
minimum elong	15331 Oct 21 04:38	14°03'39"	1°20'41"	inferior conj	15332 Oct 02 11:39	26°03'32"	0°08'17"
min. Earth dist.	15331 Oct 24 13:38	11°03'58"	0.58059 AU	minimum elong	15332 Oct 02 11:56	26°03'31"	0°08'30"
morning rise	15331 Oct 28 15:17	9°03'17"		transit middle	15332 Oct 02 11:56	26°03'31"	0°08'30"
direct	15331 Nov 03 21:29	7°03'35"		transit begin	15332 Oct 02 09:06	26°03'37"	
morning max el	15331 Nov 18 04:31	15°03'10"	27°11'28"	transit end	15332 Oct 02 14:45	26°03'24"	
	15331 Nov 30 04:26	0°03'00"		desc. node	15332 Oct 02 22:14	26°03'07"	
asc. node	15331 Dec 11 12:16	19°03'07"		min. Earth dist.	15332 Oct 05 16:13	23°03'35"	0.60305 AU
	15331 Dec 16 23:08	0°03'00"		morning rise	15332 Oct 09 08:47	20°03'44"	
morning set	15331 Dec 18 15:36	3°03'33"		direct	15332 Oct 15 23:19	18°03'38"	
				morning max el	15332 Oct 30 05:38	26°03'29"	27°53'03"
superior conj	15331 Dec 25 11:54	18°03'39"	1°36'25"		15332 Nov 02 13:09	0°03'00"	
minimum elong	15331 Dec 25 11:08	18°03'34"	1°37'18"		15332 Nov 22 18:43	0°03'00"	
max. Earth dist.	15331 Dec 25 13:33	18°03'48"	1.31085 AU	asc. node	15332 Nov 27 09:14	8°03'41"	
	15331 Dec 30 14:38	0°03'00"		morning set	15332 Dec 01 20:13	17°03'44"	
evening rise	15332 Jan 01 07:03	3°03'37"			15332 Dec 07 11:57	0°03'00"	
desc. node	15332 Jan 12 23:32	26°03'15"		max. Earth dist.	15332 Dec 07 20:43	0°03'48"	1.31156 AU
	15332 Jan 15 05:02	0°03'00"					
evening max el	15332 Jan 31 12:31	21°03'19"	26°55'50"	superior conj	15332 Dec 08 23:00	3°03'14"	1°29'05"
retrograde	15332 Feb 14 12:49	28°03'34"		minimum elong	15332 Dec 08 21:21	3°03'05"	1°29'52"
evening set	15332 Feb 21 03:13	26°03'43"		evening rise	15332 Dec 15 15:35	18°03'03"	
min. Earth dist.	15332 Feb 25 02:37	24°03'03"	0.59432 AU		15332 Dec 21 10:08	0°03'00"	
inferior conj	15332 Feb 28 07:44	21°03'29"	-2°53'14"	desc. node	15332 Dec 29 20:21	15°03'02"	
minimum elong	15332 Feb 28 14:14	21°03'16"	2°50'33"		15333 Jan 09 23:39	0°03'00"	
morning rise	15332 Mar 07 04:43	16°03'49"		evening max el	15333 Jan 12 08:11	2°03'23"	25°46'57"
asc. node	15332 Mar 08 09:48	16°03'37"		retrograde	15333 Jan 26 06:30	9°03'24"	
direct	15332 Mar 09 04:45	16°03'34"		evening set	15333 Feb 01 06:48	8°03'00"	
morning max el	15332 Mar 16 19:54	20°03'22"	18°09'50"	min. Earth dist.	15333 Feb 05 21:10	5°03'22"	0.57320 AU
	15332 Mar 24 00:25	0°03'00"		inferior conj	15333 Feb 08 19:20	3°03'20"	-4°20'56"
morning set	15332 Apr 01 10:42	15°03'06"		minimum elong	15333 Feb 09 04:26	3°03'05"	4°17'45"
	15332 Apr 09 11:23	0°03'00"			15333 Feb 14 08:06	30°06'00"	
desc. node	15332 Apr 10 01:25	1°03'03"		morning rise	15333 Feb 17 05:01	29°03'02"	
				direct	15333 Feb 19 05:29	28°03'49"	
superior conj	15332 Apr 11 04:56	3°03'07"	-0°09'24"	asc. node	15333 Feb 23 07:14	29°03'44"	
minimum elong	15332 Apr 11 04:09	3°03'03"	0°09'42"		15333 Feb 23 20:16	0°03'00"	
behind sun begin	15332 Apr 10 22:03	2°03'36"		morning max el	15333 Feb 28 01:14	3°03'08"	18°51'05"
behind sun end	15332 Apr 11 10:15	3°03'31"		morning set	15333 Mar 16 08:05	29°03'22"	
max. Earth dist.	15332 Apr 18 19:31	16°03'20"	1.41647 AU		15333 Mar 16 15:51	0°03'00"	
evening rise	15332 Apr 23 18:09	24°03'28"		superior conj	15333 Mar 24 23:26	16°03'07"	0°24'18"
	15332 Apr 27 05:09	0°03'00"		minimum elong	15333 Mar 25 00:58	16°03'14"	0°23'52"
	15332 May 17 20:23	0°03'00"		desc. node	15333 Mar 27 22:00	21°03'37"	

max. Earth dist.	15333 Apr 01 02:34	29° $\Upsilon$ 10'24	1.39418 AU	desc. node	15334 Mar 14 18:32	12° $\Upsilon$ 08'39	
	15333 Apr 01 13:50	0° $\mathcal{B}$		evening rise	15334 Mar 18 02:27	18° $\Upsilon$ 13'19	
evening rise	15333 Apr 05 00:20	5° $\mathcal{B}$ 56'13			15334 Mar 24 22:50	0° $\mathcal{B}$	
	15333 Apr 20 06:22	0° $\Pi$			15334 Apr 14 12:15	0° $\Pi$	
evening max el	15333 May 10 00:19	25° $\Pi$ 12'38	24°13'08	evening max el	15334 Apr 22 13:53	9° $\Pi$ 06'50	25°29'31
	15333 May 15 20:02	0° $\mathcal{G}$		retrograde	15334 May 04 20:58	16° $\Pi$ 13'22	
retrograde	15333 May 21 07:46	1° $\mathcal{G}$ 50'07		asc. node	15334 May 09 01:26	15° $\Pi$ 01'05	
asc. node	15333 May 22 04:13	1° $\mathcal{G}$ 46'59		evening set	15334 May 10 19:35	13° $\Pi$ 45'10	
	15333 May 26 04:54	30° $\mathcal{K}$ $\Pi$		min. Earth dist.	15334 May 15 02:39	9° $\Pi$ 02'43	0.67871 AU
evening set	15333 May 26 19:05	29° $\Pi$ 31'00		inferior conj	15334 May 16 12:14	7° $\Pi$ 14'34	2°05'41
min. Earth dist.	15333 May 31 09:33	24° $\Pi$ 11'57	0.68704 AU	minimum elong	15334 May 16 10:04	7° $\Pi$ 21'34	2°04'15
inferior conj	15333 Jun 01 06:14	23° $\Pi$ 01'58	2°37'13	morning rise	15334 May 22 01:00	1° $\Pi$ 22'58	
minimum elong	15333 Jun 01 04:19	23° $\Pi$ 08'29	2°35'55	direct	15334 May 25 13:03	0° $\Pi$ 12'35	
morning rise	15333 Jun 06 13:37	17° $\Pi$ 00'23		morning max el	15334 Jun 01 10:00	3° $\Pi$ 56'27	19°04'20
direct	15333 Jun 10 12:57	15° $\Pi$ 30'28		desc. node	15334 Jun 10 19:44	15° $\Pi$ 51'07	
morning max el	15333 Jun 18 04:36	19° $\Pi$ 47'54	20°03'46	greatest brilliancy	15334 Jun 14 10:40	21° $\Pi$ 11'34	-0.7m
desc. node	15333 Jun 23 22:42	26° $\Pi$ 28'42			15334 Jun 20 05:46	0° $\mathcal{G}$	
	15333 Jun 26 14:06	0° $\mathcal{G}$		morning set	15334 Jun 24 22:24	7° $\mathcal{G}$ 13'28	
morning set	15333 Jul 15 16:15	28° $\mathcal{G}$ 12'38		max. Earth dist.	15334 Jul 08 14:26	28° $\mathcal{G}$ 27'12	1.45595 AU
	15333 Jul 16 20:09	0° $\mathcal{Q}$			15334 Jul 09 14:07	0° $\mathcal{Q}$	
max. Earth dist.	15333 Jul 25 21:04	14° $\mathcal{Q}$ 08'30	1.44494 AU				
				superior conj	15334 Jul 11 05:45	2° $\mathcal{Q}$ 35'45	-2°13'22
superior conj	15333 Jul 31 10:20	23° $\mathcal{Q}$ 04'10	-1°58'49	minimum elong	15334 Jul 11 07:52	2° $\mathcal{Q}$ 44'03	2°14'10
minimum elong	15333 Jul 31 17:32	23° $\mathcal{Q}$ 33'31	1°58'55	evening rise	15334 Jul 26 02:33	26° $\mathcal{Q}$ 24'49	
	15333 Aug 04 15:35	0° $\mathcal{M}$			15334 Jul 28 07:22	0° $\mathcal{M}$	
evening rise	15333 Aug 13 14:29	15° $\mathcal{M}$ 07'15		asc. node	15334 Aug 05 01:05	12° $\mathcal{M}$ 27'23	
asc. node	15333 Aug 18 04:27	22° $\mathcal{M}$ 57'01		evening max el	15334 Aug 14 13:18	25° $\mathcal{M}$ 15'57	18°20'30
	15333 Aug 22 10:12	0° $\mathcal{A}$		retrograde	15334 Aug 20 22:36	28° $\mathcal{M}$ 40'10	
evening max el	15333 Aug 30 23:00	11° $\mathcal{A}$ 39'03	18°03'31	evening set	15334 Aug 23 22:50	27° $\mathcal{M}$ 50'03	
retrograde	15333 Sep 06 08:56	14° $\mathcal{A}$ 59'38		inferior conj	15334 Aug 29 19:43	22° $\mathcal{M}$ 19'53	2°09'57
evening set	15333 Sep 09 00:22	14° $\mathcal{A}$ 24'12		minimum elong	15334 Aug 29 22:05	22° $\mathcal{M}$ 12'57	2°09'05
inferior conj	15333 Sep 15 08:57	9° $\mathcal{A}$ 10'22	1°19'01	min. Earth dist.	15334 Sep 01 02:21	19° $\mathcal{M}$ 40'28	0.64687 AU
minimum elong	15333 Sep 15 10:57	9° $\mathcal{A}$ 05'05	1°18'23	morning rise	15334 Sep 04 19:52	15° $\mathcal{M}$ 58'46	
min. Earth dist.	15333 Sep 18 04:27	6° $\mathcal{A}$ 13'23	0.62593 AU	desc. node	15334 Sep 06 17:09	14° $\mathcal{M}$ 40'43	
desc. node	15333 Sep 19 19:41	4° $\mathcal{A}$ 39'03		direct	15334 Sep 11 08:28	13° $\mathcal{M}$ 22'45	
morning rise	15333 Sep 21 19:14	3° $\mathcal{A}$ 01'39		morning max el	15334 Sep 24 23:15	21° $\mathcal{M}$ 18'52	27°22'24
direct	15333 Sep 28 11:36	0° $\mathcal{A}$ 36'02			15334 Oct 02 12:49	0° $\mathcal{A}$	
morning max el	15333 Oct 12 12:42	8° $\mathcal{A}$ 34'49	27°55'24		15334 Oct 22 06:11	0° $\mathcal{M}$	
	15333 Oct 29 02:25	0° $\mathcal{M}$		morning set	15334 Oct 30 07:29	14° $\mathcal{M}$ 57'55	
asc. node	15333 Nov 14 06:06	28° $\mathcal{M}$ 31'49		asc. node	15334 Nov 01 02:53	18° $\mathcal{M}$ 33'16	
	15333 Nov 14 23:41	0° $\mathcal{J}$		max. Earth dist.	15334 Nov 03 19:18	24° $\mathcal{M}$ 01'47	1.32972 AU
morning set	15333 Nov 15 18:21	1° $\mathcal{J}$ 34'44			15334 Nov 06 15:32	0° $\mathcal{J}$	
max. Earth dist.	15333 Nov 20 23:45	12° $\mathcal{J}$ 34'46	1.31785 AU				
				superior conj	15334 Nov 07 12:24	1° $\mathcal{J}$ 51'22	0°56'29
superior conj	15333 Nov 23 07:52	17° $\mathcal{J}$ 40'47	1°15'47	minimum elong	15334 Nov 07 10:07	1° $\mathcal{J}$ 39'07	0°56'53
minimum elong	15333 Nov 23 05:38	17° $\mathcal{J}$ 28'34	1°16'22	evening rise	15334 Nov 14 12:55	17° $\mathcal{J}$ 00'01	
	15333 Nov 28 22:07	0° $\mathcal{Z}$			15334 Nov 20 21:33	0° $\mathcal{Z}$	
evening rise	15333 Nov 30 02:08	2° $\mathcal{Z}$ 32'06		desc. node	15334 Dec 03 14:16	19° $\mathcal{Z}$ 46'49	
	15333 Dec 14 16:50	0° $\approx$		evening max el	15334 Dec 06 06:09	22° $\mathcal{Z}$ 37'02	22°29'30
desc. node	15333 Dec 16 17:16	2° $\approx$ 58'32		retrograde	15334 Dec 19 02:35	28° $\mathcal{Z}$ 58'55	
evening max el	15333 Dec 24 20:12	12° $\approx$ 40'12	24°12'45	evening set	15334 Dec 22 20:13	28° $\mathcal{Z}$ 28'21	
retrograde	15334 Jan 07 10:45	19° $\approx$ 26'04		min. Earth dist.	15334 Dec 30 13:55	24° $\mathcal{Z}$ 58'23	0.54602 AU
evening set	15334 Jan 12 11:33	18° $\approx$ 30'52		inferior conj	15334 Dec 31 07:03	24° $\mathcal{Z}$ 34'16	-6°01'04
min. Earth dist.	15334 Jan 18 07:51	15° $\approx$ 36'11	0.55616 AU	minimum elong	15334 Dec 31 06:52	24° $\mathcal{Z}$ 34'32	6°00'10
inferior conj	15334 Jan 20 09:53	14° $\approx$ 20'15	-5°32'08	morning rise	15335 Jan 08 18:40	20° $\mathcal{Z}$ 46'51	
minimum elong	15334 Jan 20 17:26	14° $\approx$ 08'46	5°30'08	direct	15335 Jan 11 23:43	20° $\mathcal{Z}$ 23'33	
morning rise	15334 Jan 29 01:10	10° $\approx$ 21'15		morning max el	15335 Jan 23 20:48	26° $\mathcal{Z}$ 06'31	21°22'07
direct	15334 Jan 31 10:53	10° $\approx$ 06'14			15335 Jan 27 10:18	0° $\approx$	
asc. node	15334 Feb 10 04:39	14° $\approx$ 33'17		asc. node	15335 Jan 28 01:59	0° $\approx$ 49'02	
morning max el	15334 Feb 10 18:25	15° $\approx$ 05'44	19°55'04	morning set	15335 Feb 12 22:03	28° $\approx$ 38'01	
	15334 Feb 21 08:10	0° $\mathcal{H}$			15335 Feb 13 13:43	0° $\mathcal{H}$	
morning set	15334 Feb 28 12:48	13° $\mathcal{H}$ 55'18					
				superior conj	15335 Feb 20 04:17	13° $\mathcal{H}$ 53'29	1°13'05
superior conj	15334 Mar 08 08:30	29° $\mathcal{H}$ 46'32	0°51'58	minimum elong	15335 Feb 20 06:47	14° $\mathcal{H}$ 06'26	1°13'06
minimum elong	15334 Mar 08 11:01	29° $\mathcal{H}$ 59'00	0°51'41	max. Earth dist.	15335 Feb 24 19:40	23° $\mathcal{H}$ 19'22	1.35060 AU
	15334 Mar 08 11:13	0° $\mathcal{Y}$			15335 Feb 28 06:10	0° $\mathcal{Y}$	
max. Earth dist.	15334 Mar 14 09:10	11° $\mathcal{Y}$ 25'01	1.37148 AU	evening rise	15335 Feb 28 21:18	1° $\mathcal{Y}$ 11'33	

desc. node	15335 Mar 01 15:05	2°Υ34'59		minimum elong	15336 Feb 04 09:22	28°≈28'22	1°28'02
	15335 Mar 18 00:15	0°Ϸ			15336 Feb 05 02:29	0°Ϸ	
evening max el	15335 Apr 05 03:35	22°Ϸ54'39	26°33'32	max. Earth dist.	15336 Feb 07 12:55	5°Ϸ09'10	1.33326 AU
	15335 Apr 15 19:30	0°Π		evening rise	15336 Feb 12 05:19	14°Ϸ40'57	
retrograde	15335 Apr 18 04:59	0°Π18'56		desc. node	15336 Feb 16 11:40	22°Ϸ50'58	
	15335 Apr 20 11:59	30°Ϸ8			15336 Feb 20 10:59	0°Υ	
evening set	15335 Apr 24 13:39	27°Ϸ46'32			15336 Mar 11 18:23	0°Ϸ	
asc. node	15335 Apr 25 22:43	26°Ϸ32'55		evening max el	15336 Mar 17 16:55	6°Ϸ26'21	27°17'57
min. Earth dist.	15335 Apr 28 14:42	23°Ϸ39'09	0.66595 AU	retrograde	15336 Mar 31 07:00	13°Ϸ57'38	
inferior conj	15335 Apr 30 13:12	21°Ϸ19'35	1°22'38	evening set	15336 Apr 06 23:13	11°Ϸ27'25	
minimum elong	15335 Apr 30 11:20	21°Ϸ25'10	1°21'19	min. Earth dist.	15336 Apr 10 19:46	7°Ϸ52'16	0.64910 AU
morning rise	15335 May 06 10:06	15°Ϸ39'30		asc. node	15336 Apr 11 20:04	6°Ϸ46'20	
direct	15335 May 09 11:44	14°Ϸ46'56		inferior conj	15336 Apr 13 06:36	5°Ϸ10'49	0°27'02
morning max el	15335 May 15 21:57	18°Ϸ10'24	18°21'07	minimum elong	15336 Apr 13 05:52	5°Ϸ12'52	0°26'17
	15335 May 25 00:16	0°Π			15336 Apr 19 01:48	30°ϷΥ	
desc. node	15335 May 28 16:40	5°Π39'36		morning rise	15336 Apr 19 14:25	29°Υ44'06	
morning set	15335 Jun 05 00:09	17°Π13'05		direct	15336 Apr 22 06:38	29°Υ06'35	
	15335 Jun 13 02:15	0°Ϸ			15336 Apr 25 11:52	0°Ϸ	
				morning max el	15336 Apr 28 14:14	2°Ϸ22'21	17°54'56
superior conj	15335 Jun 20 14:30	11°Ϸ45'20	-2°08'21	desc. node	15336 May 14 13:31	25°Ϸ46'52	
minimum elong	15335 Jun 20 08:55	11°Ϸ23'36	2°09'03	morning set	15336 May 16 05:34	28°Ϸ32'34	
max. Earth dist.	15335 Jun 21 10:29	13°Ϸ03'17	1.45963 AU		15336 May 17 02:42	0°Π	
	15335 Jul 02 07:18	0°Ω					
evening rise	15335 Jul 06 13:42	6°Ω40'18		superior conj	15336 May 30 05:48	21°Π18'43	-1°44'43
greatest brilliancy	15335 Jul 16 09:00	21°Ω56'03	-0.8m	minimum elong	15336 May 29 21:00	20°Π43'46	1°44'48
	15335 Jul 21 18:57	0°Ϸ		max. Earth dist.	15336 Jun 03 06:25	27°Π39'58	1.45577 AU
asc. node	15335 Jul 22 21:47	1°Ϸ34'34			15336 Jun 04 18:10	0°Ϸ	
evening max el	15335 Jul 29 00:36	9°Ϸ02'57	18°54'52	evening rise	15336 Jun 15 05:31	16°Ϸ11'42	
retrograde	15335 Aug 04 18:04	12°Ϸ43'57			15336 Jun 24 07:37	0°Ω	
evening set	15335 Aug 08 03:34	11°Ϸ37'26		greatest brilliancy	15336 Jun 29 13:06	7°Ω44'45	-0.6m
inferior conj	15335 Aug 13 16:16	5°Ϸ52'57	2°43'39	asc. node	15336 Jul 08 18:34	20°Ω10'34	
minimum elong	15335 Aug 13 18:12	5°Ϸ46'51	2°42'50	evening max el	15336 Jul 11 06:51	22°Ω54'43	19°45'29
min. Earth dist.	15335 Aug 15 08:50	3°Ϸ44'29	0.66445 AU	retrograde	15336 Jul 18 16:26	27°Ω04'40	
	15335 Aug 18 17:19	30°ϷΩ		evening set	15336 Jul 22 11:48	25°Ω40'46	
morning rise	15335 Aug 19 08:00	29°Ω26'58		inferior conj	15336 Jul 27 19:36	19°Ω43'34	3°02'49
desc. node	15335 Aug 24 14:36	26°Ω52'38		minimum elong	15336 Jul 27 20:40	19°Ω39'56	3°02'03
direct	15335 Aug 25 12:52	26°Ω49'20		min. Earth dist.	15336 Jul 28 22:07	18°Ω14'40	0.67787 AU
	15335 Sep 02 08:36	0°Ϸ		morning rise	15336 Aug 02 05:04	13°Ω18'16	
morning max el	15335 Sep 07 10:48	4°Ϸ29'36	26°21'30	direct	15336 Aug 07 23:40	10°Ω46'57	
	15335 Sep 26 23:16	0°Ω		desc. node	15336 Aug 10 12:03	11°Ω11'31	
morning set	15335 Oct 13 08:23	27°Ω46'51		morning max el	15336 Aug 19 21:46	17°Ω55'35	25°02'02
	15335 Oct 14 12:38	0°ℳ			15336 Aug 30 01:20	0°Ϸ	
max. Earth dist.	15335 Oct 17 05:05	5°ℳ10'41	1.34690 AU		15336 Sep 18 23:37	0°Ω	
asc. node	15335 Oct 18 23:34	8°ℳ40'49		morning set	15336 Sep 24 17:15	9°Ω52'58	
				max. Earth dist.	15336 Sep 28 06:15	16°Ω17'36	1.36835 AU
superior conj	15335 Oct 22 10:09	15°ℳ40'09	0°31'18				
minimum elong	15335 Oct 22 08:31	15°ℳ31'41	0°31'35	superior conj	15336 Oct 04 22:08	29°Ω00'17	0°00'44
	15335 Oct 29 06:22	0°Ϸ		minimum elong	15336 Oct 04 22:04	28°Ω59'58	0°01'05
evening rise	15335 Oct 29 21:59	1°Ϸ21'42		behind sun begin	15336 Oct 04 15:35	28°Ω28'05	
	15335 Nov 15 09:18	0°Ϸ		behind sun end	15336 Oct 05 04:33	29°Ω31'56	
evening max el	15335 Nov 17 23:49	2°Ϸ51'27	20°54'43	asc. node	15336 Oct 04 20:12	28°Ω50'49	
desc. node	15335 Nov 20 11:24	5°Ϸ03'34			15336 Oct 05 10:14	0°ℳ	
retrograde	15335 Nov 29 12:48	8°Ϸ35'13		evening rise	15336 Oct 13 03:06	15°ℳ31'55	
evening set	15335 Dec 02 01:52	8°Ϸ19'43			15336 Oct 20 14:31	0°Ϸ	
inferior conj	15335 Dec 10 21:55	4°Ϸ27'15	-5°29'38	evening max el	15336 Oct 30 07:39	13°Ϸ51'27	19°39'07
minimum elong	15335 Dec 10 13:31	4°Ϸ39'14	5°27'11	desc. node	15336 Nov 06 08:37	18°Ϸ24'04	
min. Earth dist.	15335 Dec 11 19:26	3°Ϸ56'33	0.54485 AU	retrograde	15336 Nov 09 05:16	18°Ϸ48'13	
morning rise	15335 Dec 19 01:19	0°Ϸ33'58		evening set	15336 Nov 11 04:06	18°Ϸ37'34	
	15335 Dec 21 20:35	30°ϷϷ		inferior conj	15336 Nov 19 21:19	14°Ϸ34'28	-4°06'43
direct	15335 Dec 23 06:54	29°Ϸ55'29		minimum elong	15336 Nov 19 11:39	14°Ϸ49'42	4°02'45
	15335 Dec 24 16:56	0°Ϸ		min. Earth dist.	15336 Nov 22 03:42	13°Ϸ08'56	0.55308 AU
morning max el	15336 Jan 05 10:26	6°Ϸ19'10	23°07'04	morning rise	15336 Nov 27 17:25	10°Ϸ16'05	
asc. node	15336 Jan 14 23:16	18°Ϸ12'33		direct	15336 Dec 02 22:12	9°Ϸ15'54	
	15336 Jan 21 19:30	0°≈		morning max el	15336 Dec 16 19:16	16°Ϸ12'39	24°56'08
morning set	15336 Jan 28 09:34	13°≈22'33			15336 Dec 27 20:49	0°Ϸ	
				asc. node	15336 Dec 31 20:29	6°Ϸ28'01	
superior conj	15336 Feb 04 07:31	28°≈18'23	1°27'38	morning set	15337 Jan 11 21:27	28°Ϸ03'54	



































































































































	15337 Jan 12 18:56	0°♊		superior conj	15338 Jan 03 02:23	27°♊34'20	1°37'56
				minimum elong	15338 Jan 03 02:12	27°♊33'24	1°38'48
superior conj	15337 Jan 18 15:36	12°♊54'02	1°35'51	max. Earth dist.	15338 Jan 03 19:43	29°♊11'06	1.31290 AU
minimum elong	15337 Jan 18 16:30	12°♊58'59	1°36'33		15338 Jan 04 04:30	0°♊	
max. Earth dist.	15337 Jan 20 13:36	17°♊06'04	1.32056 AU	evening rise	15338 Jan 10 00:53	12°♊44'42	
evening rise	15337 Jan 25 23:24	28°♊34'10			15338 Jan 18 19:16	0°♋	
	15337 Jan 26 16:14	0°♋		desc. node	15338 Jan 20 05:00	2°♋31'09	
desc. node	15337 Feb 02 08:18	12°♋51'45			15338 Feb 08 13:36	0°♌	
	15337 Feb 12 15:06	0°♌		evening max el	15338 Feb 10 12:06	1°♌55'57	27°20'33
evening max el	15337 Feb 28 04:33	19°♌30'52	27°35'33	retrograde	15338 Feb 24 12:08	9°♌15'40	
retrograde	15337 Mar 14 01:54	26°♌59'31		evening set	15338 Mar 03 06:33	7°♌12'18	
evening set	15337 Mar 20 21:49	24°♌39'00		min. Earth dist.	15338 Mar 07 02:26	4°♌25'11	0.60711 AU
min. Earth dist.	15337 Mar 24 16:08	21°♌31'24	0.62906 AU	inferior conj	15338 Mar 10 06:31	1°♌40'43	-2°02'41
inferior conj	15337 Mar 27 13:31	18°♌40'44	-0°41'44	minimum elong	15338 Mar 10 11:00	1°♌30'58	2°00'49
minimum elong	15337 Mar 27 14:54	18°♌37'20	0°41'23		15338 Mar 12 06:18	30°♌♋	
asc. node	15337 Mar 29 17:29	16°♌37'06		asc. node	15338 Mar 16 14:56	27°♋13'01	
morning rise	15337 Apr 03 10:43	13°♌29'45		morning rise	15338 Mar 17 18:46	26°♋48'20	
direct	15337 Apr 05 18:55	13°♌03'48		direct	15338 Mar 19 20:58	26°♋30'21	
morning max el	15337 Apr 12 07:57	16°♌23'24	17°46'11		15338 Mar 26 22:01	0°♍	
	15337 Apr 22 01:24	0°♍		morning max el	15338 Mar 26 23:52	0°♍04'31	17°55'39
morning set	15337 Apr 28 12:11	11°♍03'28		morning set	15338 Apr 11 14:06	24°♍28'11	
desc. node	15337 May 01 10:16	16°♍07'02			15338 Apr 14 15:00	0°♎	
	15337 May 09 14:40	0°♎		desc. node	15338 Apr 18 06:57	6°♎35'43	
superior conj	15337 May 10 16:42	1°♎47'46	-1°09'31	superior conj	15338 Apr 22 03:20	13°♎22'16	-0°30'53
minimum elong	15337 May 10 10:04	1°♎20'24	1°09'24	minimum elong	15338 Apr 22 00:36	13°♎10'23	0°31'01
max. Earth dist.	15337 May 17 00:12	12°♎02'46	1.44491 AU	max. Earth dist.	15338 Apr 29 14:22	25°♎58'53	1.42815 AU
evening rise	15337 May 25 16:36	25°♎38'39			15338 May 02 01:30	0°♏	
	15337 May 28 12:59	0°♏		evening rise	15338 May 05 14:50	5°♏40'57	
	15337 Jun 18 10:14	0°♐			15338 May 21 19:18	0°♏	
evening max el	15337 Jun 24 07:11	6°♐47'35	20°50'15	evening max el	15338 Jun 07 02:06	20°♏40'52	22°05'34
asc. node	15337 Jun 25 15:27	8°♐04'10		asc. node	15338 Jun 12 12:26	25°♏01'44	
retrograde	15337 Jul 02 15:26	11°♐36'02		retrograde	15338 Jun 16 13:21	26°♏13'12	
evening set	15337 Jul 06 21:24	9°♐54'43		evening set	15338 Jun 21 06:35	24°♏15'16	
inferior conj	15337 Jul 12 03:08	3°♐46'06	3°09'34	inferior conj	15338 Jun 26 12:44	17°♏56'48	3°05'14
minimum elong	15337 Jul 12 03:14	3°♐45'43	3°08'45	minimum elong	15338 Jun 26 11:54	17°♏59'40	3°04'15
min. Earth dist.	15337 Jul 12 15:59	3°♐01'36	0.68670 AU	min. Earth dist.	15338 Jun 26 12:20	17°♏58'13	0.69071 AU
	15337 Jul 14 22:52	30°♐♏		morning rise	15338 Jul 01 17:03	11°♏42'24	
morning rise	15337 Jul 17 08:47	27°♏25'08		direct	15338 Jul 06 11:32	9°♏41'21	
direct	15337 Jul 22 15:39	25°♏06'42		desc. node	15338 Jul 15 06:45	14°♏36'07	
desc. node	15337 Jul 28 09:27	27°♏14'09		morning max el	15338 Jul 15 21:32	15°♏12'27	22°05'24
	15337 Jul 31 19:27	0°♑			15338 Jul 27 21:40	0°♑	
morning max el	15337 Aug 02 08:32	1°♑29'50	23°33'37		15338 Aug 16 23:22	0°♒	
	15337 Aug 23 23:53	0°♒		morning set	15338 Aug 17 18:11	1°♒15'17	
morning set	15337 Sep 06 05:38	21°♒04'51		max. Earth dist.	15338 Aug 23 06:18	10°♒15'16	1.41554 AU
max. Earth dist.	15337 Sep 10 04:26	27°♒50'59	1.39215 AU				
	15337 Sep 11 09:51	0°♓		superior conj	15338 Aug 31 01:10	23°♒36'31	-1°10'18
superior conj	15337 Sep 17 20:34	11°♓42'20	-0°34'00	minimum elong	15338 Aug 31 06:45	24°♒01'12	1°09'40
minimum elong	15337 Sep 17 23:04	11°♓53'57	0°33'28		15338 Sep 03 14:59	0°♓	
asc. node	15337 Sep 21 16:49	18°♓59'16		asc. node	15338 Sep 08 13:24	9°♓02'35	
evening rise	15337 Sep 27 01:31	29°♓23'05		evening rise	15338 Sep 10 13:46	12°♓46'45	
	15337 Sep 27 09:07	0°♔			15338 Sep 20 07:01	0°♔	
evening max el	15337 Oct 13 05:08	25°♔41'09	18°45'45	evening max el	15338 Sep 26 12:26	8°♔13'11	18°13'49
retrograde	15337 Oct 21 14:26	29°♔55'01		retrograde	15338 Oct 03 19:05	11°♔55'56	
evening set	15337 Oct 23 12:09	29°♔42'44		evening set	15338 Oct 05 22:00	11°♔37'35	
desc. node	15337 Oct 24 05:57	29°♔31'35		desc. node	15338 Oct 11 03:21	8°♔41'24	
inferior conj	15337 Oct 31 15:35	25°♔20'22	-2°21'52	inferior conj	15338 Oct 13 07:41	6°♔53'40	-0°41'41
minimum elong	15337 Oct 31 09:46	25°♔30'59	2°18'52	minimum elong	15338 Oct 13 06:10	6°♔56'53	0°40'36
min. Earth dist.	15337 Nov 03 17:02	23°♔07'01	0.56907 AU	min. Earth dist.	15338 Oct 16 14:03	4°♔07'30	0.59000 AU
morning rise	15337 Nov 08 04:15	20°♔26'14		morning rise	15338 Oct 20 10:56	1°♔23'49	
direct	15337 Nov 14 03:11	19°♔00'19			15338 Oct 23 15:49	30°♔♑	
morning max el	15337 Nov 28 07:54	26°♔22'15	26°30'31	direct	15338 Oct 26 21:31	29°♑31'32	
	15337 Dec 01 18:56	0°♑			15338 Oct 30 05:03	0°♒	
asc. node	15337 Dec 18 17:36	25°♑22'05		morning max el	15338 Nov 10 04:33	7°♒13'12	27°34'02
	15337 Dec 21 04:19	0°♓			15338 Nov 27 08:24	0°♑	
morning set	15337 Dec 27 07:59	12°♓37'34		asc. node	15338 Dec 05 14:36	14°♑44'08	
				morning set	15338 Dec 11 15:17	26°♑58'19	



	15338 Dec 13 01:12	0°♄		asc. node	15339 Nov 22 11:30	4°♄26'25	
max. Earth dist.	15338 Dec 18 03:45	11°♄16'31	1.31052 AU	morning set	15339 Nov 25 17:28	11°♄01'42	
				max. Earth dist.	15339 Dec 01 09:51	23°♄13'11	1.31356 AU
superior conj	15338 Dec 18 13:52	12°♄13'07	1°34'01				
minimum elong	15338 Dec 18 12:42	12°♄06'34	1°34'53	superior conj	15339 Dec 03 00:15	26°♄45'33	1°24'10
evening rise	15338 Dec 25 07:25	27°♄06'07		minimum elong	15339 Dec 02 22:19	26°♄34'46	1°24'53
	15338 Dec 26 16:04	0°♄			15339 Dec 04 11:14	0°♄	
desc. node	15339 Jan 07 01:47	21°♄40'09		evening rise	15339 Dec 09 17:03	11°♄33'50	
	15339 Jan 12 09:29	0°♄			15339 Dec 18 21:35	0°♄	
evening max el	15339 Jan 23 12:36	13°♄29'41	26°30'24	desc. node	15339 Dec 24 22:38	10°♄07'38	
retrograde	15339 Feb 06 12:04	20°♄38'12		evening max el	15340 Jan 05 04:29	24°♄10'50	25°09'02
evening set	15339 Feb 12 21:49	18°♄58'21			15340 Jan 13 14:44	0°♄	
min. Earth dist.	15339 Feb 17 02:07	16°♄21'00	0.58504 AU	retrograde	15340 Jan 19 00:18	1°♄06'56	
inferior conj	15339 Feb 20 05:44	13°♄59'19	-3°31'04		15340 Jan 24 11:00	30°♄	
minimum elong	15339 Feb 20 13:36	13°♄44'31	3°27'59	evening set	15340 Jan 24 15:57	29°♄55'00	
morning rise	15339 Feb 28 08:39	9°♄28'20		min. Earth dist.	15340 Jan 29 16:42	27°♄11'54	0.56530 AU
direct	15339 Mar 02 08:17	9°♄14'43		inferior conj	15340 Feb 01 08:17	25°♄28'22	-4°54'36
asc. node	15339 Mar 03 12:23	9°♄19'38		minimum elong	15340 Feb 01 17:28	25°♄13'23	4°51'43
morning max el	15339 Mar 10 10:14	13°♄14'11	18°24'45	morning rise	15340 Feb 09 21:33	21°♄19'03	
	15339 Mar 21 17:20	0°♄		direct	15340 Feb 12 00:41	21°♄06'02	
morning set	15339 Mar 26 05:37	8°♄28'48		asc. node	15340 Feb 18 09:46	23°♄11'24	
				morning max el	15340 Feb 21 10:55	25°♄41'13	19°15'29
superior conj	15339 Apr 04 11:25	25°♄54'33	0°05'34		15340 Feb 25 04:33	0°♄	
minimum elong	15339 Apr 04 11:48	25°♄56'18	0°05'12	morning set	15340 Mar 09 06:28	22°♄52'46	
behind sun begin	15339 Apr 04 04:55	25°♄24'41			15340 Mar 12 20:10	0°♄	
behind sun end	15339 Apr 04 18:41	26°♄27'50					
desc. node	15339 Apr 05 03:32	27°♄08'15		superior conj	15340 Mar 17 12:39	9°♄12'49	0°36'49
	15339 Apr 06 17:28	0°♄		minimum elong	15340 Mar 17 14:45	9°♄22'56	0°36'25
max. Earth dist.	15339 Apr 11 23:54	9°♄15'14	1.40721 AU	desc. node	15340 Mar 22 00:06	17°♄41'21	
evening rise	15339 Apr 16 08:40	16°♄35'38		max. Earth dist.	15340 Mar 24 06:05	21°♄48'10	1.38440 AU
	15339 Apr 24 18:52	0°♄		evening rise	15340 Mar 27 23:36	28°♄24'32	
	15339 May 16 12:14	0°♄			15340 Mar 28 21:42	0°♄	
evening max el	15339 May 20 17:11	4°♄34'11	23°26'28		15340 Apr 17 04:53	0°♄	
asc. node	15339 May 30 09:31	10°♄45'40		evening max el	15340 May 02 06:38	18°♄27'59	24°46'37
retrograde	15339 May 31 08:53	10°♄49'48		retrograde	15340 May 14 00:50	25°♄19'50	
evening set	15339 Jun 05 13:40	8°♄37'19		asc. node	15340 May 16 06:41	24°♄58'23	
inferior conj	15339 Jun 10 22:26	2°♄11'09	2°50'28	evening set	15340 May 19 17:04	22°♄56'03	
minimum elong	15339 Jun 10 20:50	2°♄16'40	2°49'16	min. Earth dist.	15340 May 24 04:05	17°♄52'49	0.68403 AU
min. Earth dist.	15339 Jun 10 09:02	2°♄57'17	0.68977 AU	inferior conj	15340 May 25 06:21	16°♄25'34	2°25'12
	15339 Jun 12 13:14	30°♄		minimum elong	15340 May 25 04:16	16°♄32'30	2°23'49
morning rise	15339 Jun 16 03:58	26°♄04'45		morning rise	15340 May 30 15:42	10°♄28'11	
direct	15339 Jun 20 10:06	24°♄23'27		direct	15340 Jun 03 10:01	9°♄06'56	
morning max el	15339 Jun 28 15:43	29°♄05'17	20°44'43	morning max el	15340 Jun 10 16:58	13°♄08'47	19°36'35
	15339 Jun 29 13:09	0°♄		desc. node	15340 Jun 18 01:02	21°♄59'30	
desc. node	15339 Jul 02 03:56	2°♄56'23		greatest brilliancy	15340 Jun 23 10:03	29°♄37'20	-0.6m
	15339 Jul 21 11:37	0°♄			15340 Jun 23 16:15	0°♄	
morning set	15339 Jul 28 08:22	10°♄29'42		morning set	15340 Jul 06 11:35	19°♄19'10	
max. Earth dist.	15339 Aug 05 14:39	23°♄32'56	1.43564 AU		15340 Jul 13 09:25	0°♄	
	15339 Aug 09 13:42	0°♄		max. Earth dist.	15340 Jul 18 04:45	7°♄31'45	1.45038 AU
superior conj	15339 Aug 12 07:45	4°♄33'56	-1°43'35	superior conj	15340 Jul 22 14:48	14°♄32'54	-2°07'08
minimum elong	15339 Aug 12 15:24	5°♄05'56	1°43'17	minimum elong	15340 Jul 22 20:32	14°♄55'48	2°07'36
evening rise	15339 Aug 24 11:25	25°♄31'45			15340 Aug 01 02:32	0°♄	
asc. node	15339 Aug 26 10:01	28°♄57'07		evening rise	15340 Aug 05 13:08	7°♄24'14	
	15339 Aug 27 00:19	0°♄		asc. node	15340 Aug 12 06:38	18°♄37'50	
evening max el	15339 Sep 10 01:22	21°♄17'56	18°01'51		15340 Aug 19 16:14	0°♄	
retrograde	15339 Sep 16 16:07	24°♄43'03		evening max el	15340 Aug 23 16:07	4°♄45'27	18°08'36
evening set	15339 Sep 19 02:35	24°♄14'55		retrograde	15340 Aug 30 00:50	8°♄06'15	
inferior conj	15339 Sep 25 19:29	19°♄11'14	0°40'49	evening set	15340 Sep 01 19:50	7°♄25'02	
minimum elong	15339 Sep 25 20:42	19°♄08'15	0°40'34	inferior conj	15340 Sep 07 23:01	2°♄04'08	1°42'53
desc. node	15339 Sep 28 00:46	16°♄59'55		minimum elong	15340 Sep 08 01:19	1°♄57'48	1°42'06
min. Earth dist.	15339 Sep 28 20:46	16°♄12'12	0.61285 AU		15340 Sep 09 19:47	30°♄	
morning rise	15339 Oct 02 11:57	13°♄13'30		min. Earth dist.	15340 Sep 10 13:24	29°♄12'22	0.63509 AU
direct	15339 Oct 09 03:47	10°♄58'08		desc. node	15340 Sep 13 22:13	26°♄01'34	
morning max el	15339 Oct 23 08:48	18°♄53'48	27°58'50	morning rise	15340 Sep 14 04:48	25°♄48'48	
	15339 Nov 01 18:46	0°♄		direct	15340 Sep 20 20:05	23°♄17'27	
	15339 Nov 20 04:41	0°♄			15340 Oct 03 09:51	0°♄	

morning max el	15340 Oct 04 17:50	1° $\Omega$ 17'35	27°45'18	direct	15341 Sep 03 20:36	6° $\cap$ 22'29	
	15340 Oct 25 23:14	0° $\cap$		morning max el	15341 Sep 17 04:52	14° $\cap$ 13'48	26°59'17
asc. node	15340 Nov 08 08:19	24° $\cap$ 22'11			15341 Sep 30 01:17	0° $\Omega$	
morning set	15340 Nov 08 12:08	24° $\cap$ 41'17			15341 Oct 18 15:58	0° $\cap$	
	15340 Nov 11 02:34	0° $\nearrow$		morning set	15341 Oct 22 20:29	7° $\cap$ 50'46	
max. Earth dist.	15340 Nov 13 09:57	4° $\nearrow$ 51'01	1.32220 AU	asc. node	15341 Oct 26 05:05	14° $\cap$ 26'42	
				max. Earth dist.	15341 Oct 27 01:09	16° $\cap$ 07'47	1.33642 AU
superior conj	15340 Nov 16 07:33	11° $\nearrow$ 05'38	1°08'20				
minimum elong	15340 Nov 16 05:13	10° $\nearrow$ 53'00	1°08'50	superior conj	15341 Oct 31 09:33	25° $\cap$ 07'51	0°46'31
evening rise	15340 Nov 23 03:55	26° $\nearrow$ 02'33		minimum elong	15341 Oct 31 07:27	24° $\cap$ 56'43	0°46'51
	15340 Nov 25 00:29	0° $\searrow$			15341 Nov 02 16:36	0° $\nearrow$	
desc. node	15340 Dec 10 19:36	27° $\searrow$ 37'35		evening rise	15341 Nov 07 14:12	10° $\nearrow$ 28'11	
	15340 Dec 12 16:41	0° $\approx$			15341 Nov 17 14:30	0° $\searrow$	
evening max el	15340 Dec 16 14:26	4° $\approx$ 14'36	23°28'47	desc. node	15341 Nov 27 16:40	13° $\searrow$ 50'00	
retrograde	15340 Dec 29 23:20	10° $\approx$ 52'20		evening max el	15341 Nov 28 02:42	14° $\searrow$ 14'59	21°47'20
evening set	15341 Jan 03 11:08	10° $\approx$ 08'36		retrograde	15341 Dec 10 11:13	20° $\searrow$ 21'39	
min. Earth dist.	15341 Jan 10 01:14	7° $\approx$ 00'58	0.55083 AU	evening set	15341 Dec 13 15:28	19° $\searrow$ 59'01	
inferior conj	15341 Jan 11 14:32	6° $\approx$ 06'33	-5°51'06	inferior conj	15341 Dec 22 07:20	16° $\searrow$ 07'47	-5°55'15
minimum elong	15341 Jan 11 19:27	5° $\approx$ 59'23	5°49'48	minimum elong	15341 Dec 22 03:07	16° $\searrow$ 13'40	5°54'00
morning rise	15341 Jan 20 05:17	2° $\approx$ 13'49		min. Earth dist.	15341 Dec 22 06:53	16° $\searrow$ 08'24	0.54439 AU
direct	15341 Jan 22 21:47	1° $\approx$ 56'16		morning rise	15341 Dec 30 15:30	12° $\searrow$ 20'00	
morning max el	15341 Feb 02 22:02	7° $\approx$ 14'41	20°29'25	direct	15342 Jan 03 07:00	11° $\searrow$ 50'51	
asc. node	15341 Feb 04 07:07	8° $\approx$ 39'14		morning max el	15342 Jan 15 18:17	17° $\searrow$ 52'21	22°05'06
	15341 Feb 17 20:07	0° $\Upsilon$		asc. node	15342 Jan 22 04:26	25° $\searrow$ 25'48	
morning set	15341 Feb 21 13:24	7° $\Upsilon$ 30'34			15342 Jan 25 05:55	0° $\approx$	
				morning set	15342 Feb 05 23:52	22° $\approx$ 14'32	
superior conj	15341 Mar 01 02:44	23° $\Upsilon$ 04'49	1°01'44		15342 Feb 09 15:17	0° $\Upsilon$	
minimum elong	15341 Mar 01 05:20	23° $\Upsilon$ 17'59	1°01'33				
	15341 Mar 04 13:58	0° $\Upsilon$		superior conj	15342 Feb 13 02:01	7° $\Upsilon$ 20'06	1°20'03
max. Earth dist.	15341 Mar 06 13:20	3° $\Upsilon$ 49'39	1.36222 AU	minimum elong	15342 Feb 13 04:18	7° $\Upsilon$ 32'08	1°20'13
desc. node	15341 Mar 08 20:40	8° $\Upsilon$ 11'17		max. Earth dist.	15342 Feb 17 02:30	15° $\Upsilon$ 40'15	1.34274 AU
evening rise	15341 Mar 10 09:17	11° $\Upsilon$ 00'25		evening rise	15342 Feb 21 10:11	24° $\Upsilon$ 13'08	
	15341 Mar 21 12:04	0° $\searrow$		desc. node	15342 Feb 23 17:14	28° $\Upsilon$ 33'46	
	15341 Apr 12 13:31	0° $\cap$			15342 Feb 24 11:51	0° $\Upsilon$	
evening max el	15341 Apr 14 20:12	2° $\cap$ 20'18	25°58'47		15342 Mar 15 01:39	0° $\searrow$	
retrograde	15341 Apr 27 12:09	9° $\cap$ 36'33		evening max el	15342 Mar 28 10:07	16° $\searrow$ 03'20	26°55'24
asc. node	15341 May 03 03:55	7° $\cap$ 28'26		retrograde	15342 Apr 10 17:42	23° $\searrow$ 31'27	
evening set	15341 May 03 15:06	7° $\cap$ 05'58		evening set	15342 Apr 17 05:49	20° $\searrow$ 59'30	
min. Earth dist.	15341 May 07 19:26	2° $\cap$ 38'27	0.67371 AU	asc. node	15342 Apr 20 01:14	18° $\searrow$ 22'01	
inferior conj	15341 May 09 10:31	0° $\cap$ 35'55	1°48'54	min. Earth dist.	15342 Apr 21 04:53	17° $\searrow$ 06'00	0.65920 AU
minimum elong	15341 May 09 08:24	0° $\cap$ 42'34	1°47'29	inferior conj	15342 Apr 23 08:37	14° $\searrow$ 36'04	1°00'38
	15341 May 09 21:59	30° $\searrow$		minimum elong	15342 Apr 23 07:07	14° $\searrow$ 40'25	0°59'31
morning rise	15341 May 15 02:23	24° $\searrow$ 48'50		morning rise	15342 Apr 29 09:48	9° $\searrow$ 01'06	
direct	15341 May 18 09:48	23° $\searrow$ 46'25		direct	15342 May 02 07:19	8° $\searrow$ 15'12	
morning max el	15341 May 25 01:21	27° $\searrow$ 20'25	18°43'53	morning max el	15342 May 08 15:24	11° $\searrow$ 34'00	18°07'51
	15341 May 27 12:18	0° $\cap$			15342 May 21 20:06	0° $\cap$	
desc. node	15341 Jun 04 22:01	11° $\cap$ 34'08		desc. node	15342 May 22 18:55	1° $\cap$ 31'16	
greatest brilliancy	15341 Jun 08 10:20	16° $\cap$ 54'23	-0.8m	morning set	15342 May 27 13:35	9° $\cap$ 13'11	
morning set	15341 Jun 16 00:14	28° $\cap$ 39'52			15342 Jun 09 14:18	0° $\searrow$	
	15341 Jun 16 20:47	0° $\searrow$					
max. Earth dist.	15341 Jun 30 23:04	21° $\searrow$ 58'04	1.45838 AU	superior conj	15342 Jun 11 13:21	3° $\searrow$ 04'43	-2°00'17
				minimum elong	15342 Jun 11 05:36	2° $\searrow$ 34'22	2°00'42
superior conj	15341 Jul 02 03:57	23° $\searrow$ 50'48	-2°13'46	max. Earth dist.	15342 Jun 13 19:34	6° $\searrow$ 36'51	1.45893 AU
minimum elong	15341 Jul 02 02:40	23° $\searrow$ 45'50	2°14'38	evening rise	15342 Jun 27 16:09	28° $\searrow$ 07'20	
	15341 Jul 06 02:14	0° $\Omega$			15342 Jun 28 21:18	0° $\Omega$	
evening rise	15341 Jul 17 14:33	18° $\Omega$ 14'40		greatest brilliancy	15342 Jul 09 14:33	16° $\Omega$ 23'53	-0.7m
greatest brilliancy	15341 Jul 23 14:55	27° $\Omega$ 51'28	-0.9m	asc. node	15342 Jul 17 00:05	26° $\Omega$ 54'18	
	15341 Jul 24 23:19	0° $\cap$			15342 Jul 19 12:05	0° $\cap$	
asc. node	15341 Jul 30 03:20	7° $\cap$ 59'26		evening max el	15342 Jul 21 14:58	2° $\cap$ 17'35	19°14'34
evening max el	15341 Aug 07 05:31	18° $\cap$ 27'52	18°33'07	retrograde	15342 Jul 28 14:12	6° $\cap$ 09'02	
retrograde	15341 Aug 13 17:17	21° $\cap$ 57'29		evening set	15342 Aug 01 03:55	4° $\cap$ 55'03	
evening set	15341 Aug 16 21:22	21° $\cap$ 00'40			15342 Aug 05 21:12	30° $\searrow$	
inferior conj	15341 Aug 22 14:23	15° $\cap$ 24'30	2°26'07	inferior conj	15342 Aug 06 14:10	29° $\Omega$ 05'07	2°53'22
minimum elong	15341 Aug 22 16:38	15° $\cap$ 17'40	2°25'16	minimum elong	15342 Aug 06 15:45	28° $\Omega$ 59'55	2°52'35
min. Earth dist.	15341 Aug 24 15:13	12° $\cap$ 56'38	0.65482 AU	min. Earth dist.	15342 Aug 08 00:43	27° $\Omega$ 12'47	0.67075 AU
morning rise	15341 Aug 28 10:43	9° $\cap$ 00'35		morning rise	15342 Aug 12 02:58	22° $\Omega$ 39'09	
desc. node	15341 Aug 31 19:41	6° $\cap$ 56'54		direct	15342 Aug 18 03:49	20° $\Omega$ 03'19	



































































































































desc. node	15342 Aug 18 17:08	20° $\Omega$ 04'30		inferior conj	15343 Jul 21 19:32	13° $\Omega$ 00'42	3°07'06
morning max el	15342 Aug 30 16:06	27° $\Omega$ 31'11	25°49'24	minimum elong	15343 Jul 21 20:13	12° $\Omega$ 58'24	3°06'19
	15342 Sep 02 00:14	0° $\mathbb{M}$		min. Earth dist.	15343 Jul 22 16:06	11° $\Omega$ 50'39	0.68223 AU
	15342 Sep 23 17:23	0° $\underline{\mathbf{A}}$		morning rise	15343 Jul 27 03:07	6° $\Omega$ 37'03	
morning set	15342 Oct 05 15:05	20° $\underline{\mathbf{A}}$ 22'20		direct	15343 Aug 01 16:46	4° $\Omega$ 10'50	
max. Earth dist.	15342 Oct 09 06:56	27° $\underline{\mathbf{A}}$ 13'07	1.35560 AU	desc. node	15343 Aug 05 14:33	5° $\Omega$ 10'02	
	15342 Oct 10 17:37	0° $\mathbb{M}$		morning max el	15343 Aug 13 02:55	11° $\Omega$ 01'01	24°25'00
asc. node	15342 Oct 13 01:47	4° $\mathbb{M}$ 35'48			15343 Aug 28 06:42	0° $\mathbb{M}$	
					15343 Sep 16 10:32	0° $\underline{\mathbf{A}}$	
superior conj	15342 Oct 15 03:36	8° $\mathbb{M}$ 45'40	0°18'58	morning set	15343 Sep 17 15:44	2° $\underline{\mathbf{A}}$ 05'57	
minimum elong	15342 Oct 15 02:30	8° $\mathbb{M}$ 40'07	0°19'16	max. Earth dist.	15343 Sep 21 06:25	8° $\underline{\mathbf{A}}$ 28'58	1.37833 AU
evening rise	15342 Oct 22 21:55	24° $\mathbb{M}$ 45'55					
	15342 Oct 25 11:25	0° $\mathbb{A}$		superior conj	15343 Sep 28 10:18	21° $\underline{\mathbf{A}}$ 50'06	-0°13'37
evening max el	15342 Nov 10 02:10	24° $\mathbb{A}$ 47'23	20°19'56	minimum elong	15343 Sep 28 11:12	21° $\underline{\mathbf{A}}$ 54'28	0°13'11
desc. node	15342 Nov 14 13:50	28° $\mathbb{A}$ 20'45		behind sun begin	15343 Sep 28 07:14	21° $\underline{\mathbf{A}}$ 35'23	
	15342 Nov 18 21:17	0° $\mathbb{B}$		behind sun end	15343 Sep 28 15:10	22° $\underline{\mathbf{A}}$ 13'35	
retrograde	15342 Nov 20 22:20	0° $\mathbb{B}$ 11'09		asc. node	15343 Sep 29 22:26	24° $\underline{\mathbf{A}}$ 45'15	
evening set	15342 Nov 23 03:42	29° $\mathbb{A}$ 58'35			15343 Oct 02 14:26	0° $\mathbb{M}$	
	15342 Nov 23 00:34	30° $\mathbb{R}$ $\mathbb{A}$		evening rise	15343 Oct 07 00:34	8° $\mathbb{M}$ 48'47	
inferior conj	15342 Dec 02 00:11	26° $\mathbb{A}$ 02'54	-4°59'15		15343 Oct 18 17:46	0° $\mathbb{A}$	
minimum elong	15342 Dec 01 14:18	26° $\mathbb{A}$ 17'26	4°55'53	evening max el	15343 Oct 23 16:00	6° $\mathbb{A}$ 07'56	19°13'42
min. Earth dist.	15342 Dec 03 12:56	25° $\mathbb{A}$ 08'48	0.54729 AU	desc. node	15343 Nov 01 11:07	10° $\mathbb{A}$ 45'22	
morning rise	15342 Dec 10 00:22	22° $\mathbb{A}$ 01'28		retrograde	15343 Nov 01 21:26	10° $\mathbb{A}$ 45'56	
direct	15342 Dec 14 16:33	21° $\mathbb{A}$ 14'22		evening set	15343 Nov 03 18:32	10° $\mathbb{A}$ 35'13	
morning max el	15342 Dec 28 04:35	27° $\mathbb{A}$ 52'19	23°54'00	inferior conj	15343 Nov 12 06:46	6° $\mathbb{A}$ 24'11	-3°23'08
	15342 Dec 30 07:02	0° $\mathbb{B}$		minimum elong	15343 Nov 11 22:25	6° $\mathbb{A}$ 38'09	3°19'18
asc. node	15343 Jan 09 01:42	13° $\mathbb{B}$ 13'32		min. Earth dist.	15343 Nov 14 22:52	4° $\mathbb{A}$ 37'14	0.55901 AU
	15343 Jan 18 03:56	0° $\approx$		morning rise	15343 Nov 19 23:51	1° $\mathbb{A}$ 51'14	
morning set	15343 Jan 21 11:50	6° $\approx$ 59'02		direct	15343 Nov 25 12:46	0° $\mathbb{A}$ 40'48	
				morning max el	15343 Dec 09 14:20	7° $\mathbb{A}$ 48'49	25°39'18
superior conj	15343 Jan 28 07:38	21° $\approx$ 50'45	1°31'53		15343 Dec 25 22:36	0° $\mathbb{B}$	
minimum elong	15343 Jan 28 09:07	21° $\approx$ 58'47	1°32'25	asc. node	15343 Dec 26 22:52	1° $\mathbb{B}$ 46'33	
max. Earth dist.	15343 Jan 30 23:28	27° $\approx$ 34'44	1.32732 AU	morning set	15344 Jan 05 23:22	21° $\mathbb{B}$ 37'45	
	15343 Feb 01 02:52	0° $\mathbb{H}$			15344 Jan 09 19:04	0° $\approx$	
evening rise	15343 Feb 04 22:56	7° $\mathbb{H}$ 54'07		superior conj	15344 Jan 12 17:07	6° $\approx$ 28'56	1°37'28
desc. node	15343 Feb 10 13:52	18° $\mathbb{H}$ 44'24		minimum elong	15344 Jan 12 17:34	6° $\approx$ 31'25	1°38'16
	15343 Feb 17 00:06	0° $\mathbb{Y}$		max. Earth dist.	15344 Jan 14 02:53	9° $\approx$ 35'45	1.31666 AU
evening max el	15343 Mar 10 23:09	29° $\mathbb{Y}$ 25'45	27°29'02	evening rise	15344 Jan 19 20:26	21° $\approx$ 54'59	
	15343 Mar 11 13:36	0° $\mathbb{B}$			15344 Jan 23 20:33	0° $\mathbb{H}$	
retrograde	15343 Mar 24 16:34	6° $\mathbb{B}$ 55'56		desc. node	15344 Jan 28 10:32	8° $\mathbb{H}$ 36'47	
evening set	15343 Mar 31 11:02	4° $\mathbb{B}$ 29'00			15344 Feb 10 22:27	0° $\mathbb{Y}$	
min. Earth dist.	15343 Apr 04 06:23	1° $\mathbb{B}$ 06'20	0.64100 AU	evening max el	15344 Feb 21 09:10	12° $\mathbb{Y}$ 13'57	27°33'14
	15343 Apr 05 08:00	30° $\mathbb{R}$ $\mathbb{Y}$		retrograde	15344 Mar 06 07:51	19° $\mathbb{Y}$ 39'28	
inferior conj	15343 Apr 06 21:59	28° $\mathbb{Y}$ 19'30	-0°00'29	evening set	15344 Mar 13 04:06	17° $\mathbb{Y}$ 24'59	
minimum elong	15343 Apr 06 22:00	28° $\mathbb{Y}$ 19'26	0°00'49	min. Earth dist.	15344 Mar 16 22:20	14° $\mathbb{Y}$ 27'30	0.61994 AU
transit middle	15343 Apr 06 22:00	28° $\mathbb{Y}$ 19'26	0°00'49	inferior conj	15344 Mar 19 23:23	11° $\mathbb{Y}$ 37'17	-1°14'41
transit begin	15343 Apr 06 18:54	28° $\mathbb{Y}$ 27'39		minimum elong	15344 Mar 20 01:59	11° $\mathbb{Y}$ 31'12	1°13'44
transit end	15343 Apr 07 01:07	28° $\mathbb{Y}$ 11'15		asc. node	15344 Mar 23 20:00	8° $\mathbb{Y}$ 19'42	
asc. node	15343 Apr 06 22:35	28° $\mathbb{Y}$ 17'54		morning rise	15344 Mar 27 02:55	6° $\mathbb{Y}$ 34'10	
morning rise	15343 Apr 13 11:12	22° $\mathbb{Y}$ 59'03		direct	15344 Mar 29 08:18	6° $\mathbb{Y}$ 12'02	
direct	15343 Apr 15 23:57	22° $\mathbb{Y}$ 26'44		morning max el	15344 Apr 05 02:04	9° $\mathbb{Y}$ 36'10	17°47'56
morning max el	15343 Apr 22 08:39	25° $\mathbb{Y}$ 42'23	17°49'02		15344 Apr 18 15:30	0° $\mathbb{B}$	
	15343 Apr 26 01:01	0° $\mathbb{B}$		morning set	15344 Apr 20 21:54	4° $\mathbb{B}$ 00'38	
morning set	15343 May 09 06:22	21° $\mathbb{B}$ 05'06		desc. node	15344 Apr 25 12:28	12° $\mathbb{B}$ 08'45	
desc. node	15343 May 09 15:45	21° $\mathbb{B}$ 44'39					
	15343 May 14 13:48	0° $\mathbb{I}$		superior conj	15344 May 02 08:52	23° $\mathbb{B}$ 55'49	-0°53'10
superior conj	15343 May 22 11:52	12° $\mathbb{I}$ 58'39	-1°30'41	minimum elong	15344 May 02 03:53	23° $\mathbb{B}$ 34'48	0°53'07
minimum elong	15343 May 22 03:32	12° $\mathbb{I}$ 25'04	1°30'36		15344 May 06 00:18	0° $\mathbb{I}$	
max. Earth dist.	15343 May 27 15:23	21° $\mathbb{I}$ 11'08	1.45205 AU	max. Earth dist.	15344 May 09 07:47	5° $\mathbb{I}$ 24'03	1.43841 AU
	15343 Jun 02 06:38	0° $\mathbb{E}$		evening rise	15344 May 16 18:05	17° $\mathbb{I}$ 09'07	
evening rise	15343 Jun 07 03:55	7° $\mathbb{E}$ 31'26			15344 May 25 04:55	0° $\mathbb{E}$	
	15343 Jun 22 04:54	0° $\Omega$		evening max el	15344 Jun 16 16:27	0° $\Omega$ 01'51	21°21'11
asc. node	15343 Jul 03 20:55	15° $\Omega$ 13'19			15344 Jun 16 15:43	0° $\Omega$	
evening max el	15343 Jul 04 18:43	16° $\Omega$ 09'32	20°11'26	asc. node	15344 Jun 19 17:48	2° $\Omega$ 44'45	
retrograde	15343 Jul 12 13:05	20° $\Omega$ 34'42		retrograde	15344 Jun 25 11:56	5° $\Omega$ 09'09	
evening set	15343 Jul 16 12:58	19° $\Omega$ 03'06		evening set	15344 Jun 29 22:36	3° $\Omega$ 20'31	

	15344 Jul 03 01:12	30° 	asc. node	15345 Jun 06 14:48	19° 	12'58"	
inferior conj	15344 Jul 05 04:11	27°  07'12"	3°09'03"	retrograde	15345 Jun 09 09:04	19°  46'23"	
minimum elong	15344 Jul 05 03:53	27°  08'15"	3°08'10"	evening set	15345 Jun 14 07:03	17°  42'09"	
min. Earth dist.	15344 Jul 05 11:18	26°  42'23"	0.68896 AU	inferior conj	15345 Jun 19 14:04	11°  19'58"	3°00'16"
morning rise	15344 Jul 10 08:58	20°  48'41"		minimum elong	15345 Jun 19 12:53	11°  24'04"	2°59'11"
direct	15344 Jul 15 10:27	18°  37'27"		min. Earth dist.	15345 Jun 19 08:09	11°  40'32"	0.69086 AU
desc. node	15344 Jul 22 11:55	21°  49'02"		morning rise	15345 Jun 24 18:33	5°  08'33"	
morning max el	15344 Jul 25 14:27	24°  39'15"	22°55'37"	direct	15345 Jun 29 07:43	3°  15'40"	
	15344 Jul 30 09:34	0° 		morning max el	15345 Jul 08 05:14	8°  25'33"	21°29'44"
	15344 Aug 20 16:51	0° 		desc. node	15345 Jul 09 09:09	9°  37'41"	
morning set	15344 Aug 28 18:18	12°  52'34"			15345 Jul 24 22:18	0° 	
max. Earth dist.	15344 Sep 02 05:28	20°  21'54"	1.40225 AU	morning set	15345 Aug 08 20:36	22°  36'49"	
	15344 Sep 07 17:44	0° 			15345 Aug 13 11:28	0° 	
				max. Earth dist.	15345 Aug 15 09:21	3°  06'59"	1.42461 AU
superior conj	15344 Sep 10 01:40	4°  12'37"	-0°49'26"	superior conj	15345 Aug 22 21:17	15°  43'07"	-1°25'09"
minimum elong	15344 Sep 10 05:28	4°  29'56"	0°48'49"	minimum elong	15345 Aug 23 04:01	16°  12'11"	1°24'35"
asc. node	15344 Sep 15 19:02	14°  51'49"			15345 Aug 30 23:15	0° 	
evening rise	15344 Sep 19 19:10	22°  29'26"		asc. node	15345 Sep 02 15:37	4°  51'27"	
	15344 Sep 23 18:33	0° 		evening rise	15345 Sep 03 01:45	5°  37'29"	
evening max el	15344 Oct 05 18:09	18°  16'28"	18°29'39"		15345 Sep 18 04:19	0° 	
retrograde	15344 Oct 13 15:02	22°  15'46"		evening max el	15345 Sep 19 04:22	1°  03'24"	18°06'25"
evening set	15344 Oct 15 14:19	22°  10'31"		retrograde	15345 Sep 26 02:54	4°  16'39"	
desc. node	15344 Oct 18 08:27	20°  15'8'03"		evening set	15345 Sep 28 08:54	4°  14'35"	
inferior conj	15344 Oct 23 10:22	17°  30'12"	-1°37'46"		15345 Oct 04 18:27	30°  R 	
minimum elong	15344 Oct 23 06:30	17°  37'44"	1°35'36"	inferior conj	15345 Oct 05 11:11	29°  22'18"	-0°04'12"
min. Earth dist.	15344 Oct 26 15:31	15°  00'21"	0.57747 AU	minimum elong	15345 Oct 05 11:03	29°  22'35"	0°03'47"
morning rise	15344 Oct 30 19:12	12°  19'54"		transit middle	15345 Oct 05 11:03	29°  22'35"	0°03'47"
direct	15344 Nov 05 23:45	10°  14'22'29"		transit begin	15345 Oct 05 07:48	29°  29'59"	
morning max el	15344 Nov 20 06:23	18°  14'27"	27°01'58"	transit end	15345 Oct 05 14:19	29°  25'11"	
	15344 Nov 30 02:59	0° 		desc. node	15345 Oct 05 05:51	29°  34'23"	
asc. node	15344 Dec 12 19:58	20°  53'19"		min. Earth dist.	15345 Oct 08 16:32	26°  27'52"	0.59968 AU
	15344 Dec 17 10:56	0° 		morning rise	15345 Oct 12 09:57	23°  39'31"	
morning set	15344 Dec 20 08:45	6°  30'6'17"		direct	15345 Oct 18 23:47	21°  36'20"	
				morning max el	15345 Nov 02 06:16	29°  25'09"	27°49'23"
superior conj	15344 Dec 27 04:25	21°  30'9'04"	1°37'00"		15345 Nov 02 20:15	0° 	
minimum elong	15344 Dec 27 03:48	21°  30'5'39"	1°37'54"		15345 Nov 24 02:47	0° 	
max. Earth dist.	15344 Dec 27 10:05	21°  34'0'47"	1.31118 AU	asc. node	15345 Nov 29 16:56	10°  24'17"	
	15344 Dec 31 03:54	0° 		morning set	15345 Dec 04 14:06	20°  21'9'35"	
evening rise	15345 Jan 03 00:17	6°  10'16"			15345 Dec 09 01:30	0° 	
desc. node	15345 Jan 14 07:15	28°  04'03"		max. Earth dist.	15345 Dec 10 17:31	3°  34'2'01"	1.31107 AU
	15345 Jan 15 10:20	0° 					
evening max el	15345 Feb 02 13:48	24°  17'08"	27°03'23"	superior conj	15345 Dec 11 15:39	5°  34'5'29"	1°30'35"
	15345 Feb 10 09:44	0° 		minimum elong	15345 Dec 11 14:07	5°  36'5'55"	1°31'24"
retrograde	15345 Feb 16 14:16	1°  09'33'09"		evening rise	15345 Dec 18 08:20	20°  34'3'34"	
	15345 Feb 22 14:08	30°  R 			15345 Dec 22 20:37	0° 	
evening set	15345 Feb 23 05:53	29°  38'5'53"		desc. node	15346 Jan 01 04:03	16°  35'5'6'43"	
min. Earth dist.	15345 Feb 27 04:07	26°  35'7'27"	0.59759 AU		15346 Jan 10 09:07	0° 	
inferior conj	15345 Mar 02 09:13	24°  30'20'19"	-2°39'47"	evening max el	15346 Jan 15 10:51	5°  28'3'9"	25°59'17"
minimum elong	15345 Mar 02 15:12	24°  30'8'04"	2°37'19"	retrograde	15346 Jan 29 09:39	12°  32'0'8"	
morning rise	15345 Mar 10 03:59	19°  37'0'1"		evening set	15346 Feb 04 12:40	11°  30'4'09"	
asc. node	15345 Mar 10 17:26	19°  37'2'9'38"		min. Earth dist.	15346 Feb 09 00:01	8°  26'1'2"	0.57613 AU
direct	15345 Mar 12 04:23	19°  37'2'1'28"		inferior conj	15346 Feb 11 23:58	6°  19'1'2"	-4°08'13"
morning max el	15345 Mar 19 16:08	23°  37'0'5'15"	18°05'30"	minimum elong	15346 Feb 12 08:51	6°  03'2'9"	4°04'58"
	15345 Mar 25 03:09	0° 		morning rise	15346 Feb 20 08:04	1°  37'5'7'17"	
morning set	15345 Apr 04 06:09	17°  09'41'48"		direct	15346 Feb 22 08:05	1°  37'4'4'29"	
	15345 Apr 10 21:57	0° 		asc. node	15346 Feb 25 14:52	2°  37'2'0'52"	
desc. node	15345 Apr 12 09:06	2°  39'3'9'11"		morning max el	15346 Mar 02 22:55	5°  37'5'8'28"	18°43'30"
					15346 Mar 18 02:37	0° 	
superior conj	15345 Apr 14 05:04	5°  35'5'55"	-0°14'57"	morning set	15346 Mar 19 02:10	1°  37'5'4'12"	
minimum elong	15345 Apr 14 03:49	5°  35'0'21"	0°15'12"				
behind sun begin	15345 Apr 14 01:26	5°  33'9'45"		superior conj	15346 Mar 27 21:01	18°  37'4'9'28"	0°19'32"
behind sun end	15345 Apr 14 06:12	6°  30'0'57"		minimum elong	15346 Mar 27 22:18	18°  37'5'5'27"	0°19'07"
max. Earth dist.	15345 Apr 21 19:23	19°  30'1'49"	1.41959 AU	desc. node	15346 Mar 30 05:41	23°  37'1'2'33"	
evening rise	15345 Apr 26 24:00	27°  32'1'1"			15346 Apr 02 24:00	0° 	
	15345 Apr 28 13:02	0° 		max. Earth dist.	15346 Apr 04 03:06	1°  37'5'9'22"	1.39762 AU
	15345 May 18 21:01	0° 		evening rise	15346 Apr 08 03:03	8°  37'5'1'26"	
evening max el	15345 May 30 09:23	13°  35'4'37"	22°39'42"				

	15346 Apr 21 11:39	0°♊			15347 Apr 15 10:45	0°♊	
evening max el	15346 May 12 23:44	27°♊49'12	24°01'06	evening max el	15347 Apr 25 13:15	11°♊43'21	25°18'39
	15346 May 15 07:55	0°♋		retrograde	15347 May 07 17:03	18°♊46'14	
retrograde	15346 May 24 03:07	4°♋21'00		asc. node	15347 May 11 09:06	17°♊50'09	
asc. node	15346 May 24 11:55	4°♋20'25		evening set	15347 May 13 14:06	16°♊18'55	
evening set	15346 May 29 12:46	2°♋03'32		min. Earth dist.	15347 May 17 22:08	11°♊31'13	0.68029 AU
	15346 May 31 13:26	30°♋♊		inferior conj	15347 May 19 05:50	9°♊48'14	2°11'11
min. Earth dist.	15346 Jun 03 04:29	26°♊39'04	0.68795 AU	minimum elong	15347 May 19 03:40	9°♊55'17	2°09'46
inferior conj	15346 Jun 03 23:16	25°♊35'13	2°41'03	morning rise	15347 May 24 17:38	3°♊55'11	
minimum elong	15346 Jun 03 21:25	25°♊41'31	2°39'46	direct	15347 May 28 07:19	2°♊42'02	
morning rise	15346 Jun 09 06:04	19°♊32'20		morning max el	15347 Jun 04 06:34	6°♊29'59	19°12'09
direct	15346 Jun 13 07:11	17°♊59'23		desc. node	15347 Jun 13 03:20	17°♊35'08	
morning max el	15346 Jun 21 02:10	22°♊22'36	20°13'54	greatest brilliancy	15347 Jun 17 02:08	23°♊21'01	-0.7m
desc. node	15346 Jun 26 06:17	28°♊17'43			15347 Jun 21 12:05	0°♋	
	15346 Jun 27 14:00	0°♋		morning set	15347 Jun 28 08:41	10°♋30'26	
	15346 Jul 18 03:22	0°♌			15347 Jul 10 22:11	0°♌	
morning set	15346 Jul 19 03:55	1°♌34'19		max. Earth dist.	15347 Jul 11 13:09	0°♌58'40	1.45475 AU
max. Earth dist.	15346 Jul 28 20:21	16°♌44'03	1.44278 AU				
				superior conj	15347 Jul 14 15:56	5°♌52'58	-2°12'21
superior conj	15346 Aug 03 17:46	26°♌15'14	-1°55'12	minimum elong	15347 Jul 14 19:08	6°♌05'37	2°13'05
minimum elong	15346 Aug 04 01:15	26°♌45'56	1°55'13	evening rise	15347 Jul 29 07:17	29°♌28'15	
	15346 Aug 06 00:21	0°♍			15347 Jul 29 15:02	0°♍	
evening rise	15346 Aug 16 15:31	18°♍01'15		asc. node	15347 Aug 07 08:52	14°♍13'48	
asc. node	15346 Aug 20 12:13	24°♍40'25		evening max el	15347 Aug 17 09:04	27°♍53'39	18°16'51
	15346 Aug 23 15:38	0°♎			15347 Aug 19 22:22	0°♎	
evening max el	15346 Sep 02 18:33	14°♎18'52	18°02'28	retrograde	15347 Aug 23 17:58	1°♎16'39	
retrograde	15346 Sep 09 05:21	17°♎40'08		evening set	15347 Aug 26 16:48	0°♎28'56	
evening set	15346 Sep 11 19:31	17°♎06'37			15347 Aug 27 12:06	30°♎♍	
inferior conj	15346 Sep 18 06:09	11°♎55'13	1°09'36	inferior conj	15347 Sep 01 15:12	25°♎00'59	2°03'21
minimum elong	15346 Sep 18 07:59	11°♎50'27	1°09'03	minimum elong	15347 Sep 01 17:34	24°♎54'07	2°02'31
min. Earth dist.	15346 Sep 21 03:15	8°♎57'13	0.62262 AU	min. Earth dist.	15347 Sep 03 23:51	22°♎17'58	0.64389 AU
desc. node	15346 Sep 22 03:17	7°♎59'18		morning rise	15347 Sep 07 16:46	18°♎41'02	
morning rise	15346 Sep 24 18:01	5°♎49'05		desc. node	15347 Sep 09 00:43	17°♎43'52	
direct	15346 Oct 01 10:25	3°♎25'58		direct	15347 Sep 14 06:08	16°♎06'03	
morning max el	15346 Oct 15 12:38	11°♎23'54	27°57'28	morning max el	15347 Sep 27 23:01	24°♎03'41	27°29'18
	15346 Oct 30 05:25	0°♏			15347 Oct 03 07:28	0°♏	
	15346 Nov 16 11:17	0°♐			15347 Oct 23 14:36	0°♏	
asc. node	15346 Nov 16 13:48	0°♐12'29		morning set	15347 Nov 02 04:01	17°♏40'31	
morning set	15346 Nov 18 13:20	4°♐12'40		asc. node	15347 Nov 03 10:36	20°♏12'43	
max. Earth dist.	15346 Nov 23 21:32	15°♐31'03	1.31656 AU	max. Earth dist.	15347 Nov 06 18:28	27°♏01'31	1.32763 AU
					15347 Nov 08 04:26	0°♑	
superior conj	15346 Nov 26 00:58	20°♑12'44	1°18'12				
minimum elong	15346 Nov 25 22:48	20°♑00'49	1°18'49	superior conj	15347 Nov 10 06:19	4°♑26'03	0°59'49
	15346 Nov 30 11:14	0°♒		minimum elong	15347 Nov 10 04:00	4°♑13'34	1°00'13
evening rise	15346 Dec 02 18:43	5°♒02'55		evening rise	15347 Nov 17 05:37	19°♑31'19	
	15346 Dec 15 18:32	0°♓			15347 Nov 22 06:58	0°♒	
desc. node	15346 Dec 19 00:58	5°♓01'22		desc. node	15347 Dec 05 21:59	22°♒01'11	
evening max el	15346 Dec 27 23:44	15°♓50'53	24°27'49	evening max el	15347 Dec 09 09:17	25°♒47'42	22°44'38
retrograde	15347 Jan 10 15:48	22°♓39'29			15347 Dec 14 18:30	0°♓	
evening set	15347 Jan 15 20:50	21°♓39'59		retrograde	15347 Dec 22 09:24	2°♓14'19	
min. Earth dist.	15347 Jan 21 11:29	18°♓49'03	0.55829 AU	evening set	15347 Dec 26 07:47	1°♓40'33	
inferior conj	15347 Jan 23 17:31	17°♓25'43	-5°23'30		15347 Dec 30 13:17	30°♓♑	
minimum elong	15347 Jan 24 01:43	17°♓13'03	5°21'14	min. Earth dist.	15348 Jan 02 18:00	28°♑16'54	0.54699 AU
morning rise	15347 Feb 01 08:36	13°♓24'19		inferior conj	15348 Jan 03 16:40	27°♑44'48	-6°00'21
direct	15347 Feb 03 16:19	13°♓09'58		minimum elong	15348 Jan 03 17:55	27°♑43'02	5°59'28
asc. node	15347 Feb 12 12:15	16°♓54'47		morning rise	15348 Jan 12 05:20	23°♑56'33	
morning max el	15347 Feb 13 18:07	18°♓02'54	19°44'06	direct	15348 Jan 15 06:50	23°♑35'01	
	15347 Feb 22 14:04	0°♒		morning max el	15348 Jan 26 22:46	29°♑11'37	21°07'54
morning set	15347 Mar 03 06:00	16°♒25'17			15348 Jan 27 18:18	0°♓	
	15347 Mar 09 23:20	0°♑		asc. node	15348 Jan 30 09:36	2°♓58'02	
					15348 Feb 15 01:56	0°♒	
superior conj	15347 Mar 11 04:13	2°♑23'15	0°48'11	morning set	15348 Feb 15 14:44	1°♒06'25	
minimum elong	15347 Mar 11 06:39	2°♑35'16	0°47'51				
desc. node	15347 Mar 17 02:15	13°♑44'35		superior conj	15348 Feb 22 22:38	16°♒26'12	1°10'18
max. Earth dist.	15347 Mar 17 09:40	14°♑18'58	1.37479 AU	minimum elong	15348 Feb 23 01:11	16°♒39'20	1°10'16
evening rise	15347 Mar 21 02:23	21°♑01'20		max. Earth dist.	15348 Feb 27 19:04	26°♒13'30	1.35348 AU
	15347 Mar 26 07:24	0°♑			15348 Feb 29 17:41	0°♑	

evening rise	15348 Mar 02 18:57	3° $\Upsilon$ 53'27		minimum elong	15349 Feb 06 02:55	0° $\Upsilon$ 59'21	1°26'11
desc. node	15348 Mar 02 22:51	4° $\Upsilon$ 11'39		max. Earth dist.	15349 Feb 09 11:06	8° $\Upsilon$ 02'20	1.33554 AU
	15348 Mar 18 05:16	0° $\Upsilon$		evening rise	15349 Feb 14 01:14	17° $\Upsilon$ 18'42	
evening max el	15348 Apr 07 02:50	25° $\Upsilon$ 31'57	26°25'06	desc. node	15349 Feb 17 19:28	24° $\Upsilon$ 29'32	
	15348 Apr 12 09:52	0° $\Pi$			15349 Feb 20 20:12	0° $\Upsilon$	
retrograde	15348 Apr 20 02:00	2° $\Pi$ 54'48			15349 Mar 12 13:26	0° $\Upsilon$	
evening set	15348 Apr 26 09:17	0° $\Pi$ 22'34		evening max el	15349 Mar 20 16:23	9° $\Upsilon$ 07'03	27°12'59
	15348 Apr 26 19:58	30° $\Upsilon$ 8		retrograde	15349 Apr 03 05:07	16° $\Upsilon$ 38'08	
asc. node	15348 Apr 27 06:23	29° $\Upsilon$ 36'38		evening set	15349 Apr 09 20:18	14° $\Upsilon$ 07'16	
min. Earth dist.	15348 Apr 30 11:05	26° $\Upsilon$ 10'08	0.66808 AU	min. Earth dist.	15349 Apr 13 17:25	10° $\Upsilon$ 27'27	0.65177 AU
inferior conj	15348 May 02 07:42	23° $\Upsilon$ 54'33	1°29'57	asc. node	15349 Apr 14 03:43	9° $\Upsilon$ 59'18	
minimum elong	15348 May 02 05:45	24° $\Upsilon$ 00'29	1°28'37	inferior conj	15349 Apr 16 02:27	7° $\Upsilon$ 48'32	0°36'21
morning rise	15348 May 08 03:14	18° $\Upsilon$ 12'40		minimum elong	15349 Apr 16 01:29	7° $\Upsilon$ 51'15	0°35'29
direct	15348 May 11 06:17	17° $\Upsilon$ 17'42		morning rise	15349 Apr 22 08:27	2° $\Upsilon$ 19'36	
morning max el	15348 May 17 17:42	20° $\Upsilon$ 43'32	18°26'30	direct	15349 Apr 25 01:58	1° $\Upsilon$ 40'02	
	15348 May 25 03:18	0° $\Pi$		morning max el	15349 May 01 09:30	4° $\Upsilon$ 56'22	17°57'46
desc. node	15348 May 30 00:19	7° $\Pi$ 20'05		desc. node	15349 May 16 21:12	27° $\Upsilon$ 25'05	
morning set	15348 Jun 07 06:43	20° $\Pi$ 18'59			15349 May 18 10:54	0° $\Pi$	
	15348 Jun 13 10:15	0° $\Upsilon$		morning set	15349 May 19 08:04	1° $\Pi$ 26'59	
superior conj	15348 Jun 23 01:19	15° $\Upsilon$ 03'19	-2°10'26	superior conj	15349 Jun 02 14:42	24° $\Pi$ 31'00	-1°49'15
minimum elong	15348 Jun 22 20:46	14° $\Upsilon$ 45'34	2°11'11	minimum elong	15349 Jun 02 05:58	23° $\Pi$ 56'28	1°49'25
max. Earth dist.	15348 Jun 23 08:45	15° $\Upsilon$ 32'18	1.45953 AU	max. Earth dist.	15349 Jun 06 04:49	0° $\Upsilon$ 09'51	1.45682 AU
	15348 Jul 02 15:05	0° $\Omega$			15349 Jun 06 02:18	0° $\Upsilon$	
evening rise	15348 Jul 08 22:03	9° $\Omega$ 52'22		evening rise	15349 Jun 18 16:03	19° $\Upsilon$ 28'26	
greatest brilliancy	15348 Jul 17 22:17	23° $\Omega$ 59'16	-0.8m		15349 Jun 25 13:31	0° $\Omega$	
	15348 Jul 21 21:12	0° $\Pi$		greatest brilliancy	15349 Jul 02 10:56	10° $\Omega$ 18'27	-0.6m
asc. node	15348 Jul 24 05:35	3° $\Pi$ 24'58		asc. node	15349 Jul 11 02:22	22° $\Omega$ 06'28	
evening max el	15348 Jul 30 20:59	11° $\Pi$ 39'25	18°48'43	evening max el	15349 Jul 14 04:09	25° $\Omega$ 31'06	19°36'58
retrograde	15348 Aug 06 12:47	15° $\Pi$ 17'14		retrograde	15349 Jul 21 10:50	29° $\Omega$ 35'48	
evening set	15348 Aug 09 20:49	14° $\Pi$ 13'19		evening set	15349 Jul 25 04:42	28° $\Omega$ 14'34	
inferior conj	15348 Aug 15 10:33	8° $\Pi$ 30'58	2°39'30	inferior conj	15349 Jul 30 13:03	22° $\Omega$ 19'18	3°00'43
minimum elong	15348 Aug 15 12:34	8° $\Pi$ 24'36	2°38'40	minimum elong	15349 Jul 30 14:16	22° $\Omega$ 15'13	2°59'56
min. Earth dist.	15348 Aug 17 05:17	6° $\Pi$ 17'03	0.66206 AU	min. Earth dist.	15349 Jul 31 17:41	20° $\Omega$ 44'02	0.67621 AU
morning rise	15348 Aug 21 03:23	2° $\Pi$ 05'13		morning rise	15349 Aug 04 23:20	15° $\Omega$ 53'40	
	15348 Aug 24 11:55	30° $\Upsilon$ 8		direct	15349 Aug 10 19:39	13° $\Omega$ 20'51	
desc. node	15348 Aug 25 22:12	29° $\Omega$ 35'26		desc. node	15349 Aug 12 19:38	13° $\Omega$ 36'21	
direct	15348 Aug 27 09:37	29° $\Omega$ 27'09		morning max el	15349 Aug 22 21:33	20° $\Omega$ 34'57	25°14'34
	15348 Aug 30 11:39	0° $\Pi$			15349 Aug 31 00:19	0° $\Pi$	
morning max el	15348 Sep 09 10:32	7° $\Pi$ 11'04	26°31'57		15349 Sep 20 07:56	0° $\Omega$	
	15348 Sep 27 03:58	0° $\Omega$		morning set	15349 Sep 27 18:29	12° $\Omega$ 47'50	
	15348 Oct 14 23:31	0° $\Pi$		max. Earth dist.	15349 Oct 01 07:38	19° $\Omega$ 16'27	1.36497 AU
morning set	15348 Oct 15 06:59	0° $\Pi$ 35'06			15349 Oct 06 22:01	0° $\Pi$	
max. Earth dist.	15348 Oct 19 05:36	8° $\Pi$ 11'47	1.34403 AU	asc. node	15349 Oct 07 04:00	0° $\Pi$ 29'31	
asc. node	15348 Oct 20 07:20	10° $\Pi$ 19'39					
superior conj	15348 Oct 24 05:15	18° $\Pi$ 18'27	0°35'30	superior conj	15349 Oct 07 18:55	1° $\Pi$ 43'14	0°05'41
minimum elong	15348 Oct 24 03:28	18° $\Pi$ 09'08	0°35'47	minimum elong	15349 Oct 07 18:32	1° $\Pi$ 41'22	0°06'01
	15348 Oct 29 18:39	0° $\Upsilon$		behind sun begin	15349 Oct 07 12:34	1° $\Pi$ 11'46	
evening rise	15348 Oct 31 15:03	3° $\Upsilon$ 54'01		behind sun end	15349 Oct 08 00:31	2° $\Pi$ 11'03	
	15348 Nov 15 00:44	0° $\Upsilon$		evening rise	15349 Oct 15 20:54	18° $\Pi$ 06'01	
evening max el	15348 Nov 20 01:17	5° $\Upsilon$ 57'28	21°07'46		15349 Oct 21 21:51	0° $\Upsilon$	
desc. node	15348 Nov 21 19:06	7° $\Upsilon$ 33'20		evening max el	15349 Nov 02 06:58	16° $\Upsilon$ 49'58	19°49'00
retrograde	15348 Dec 01 19:47	11° $\Upsilon$ 47'33		desc. node	15349 Nov 08 16:17	21° $\Upsilon$ 12'45	
evening set	15348 Dec 04 12:17	11° $\Upsilon$ 30'36		retrograde	15349 Nov 12 10:18	21° $\Upsilon$ 53'28	
inferior conj	15348 Dec 13 07:36	7° $\Upsilon$ 38'53	-5°38'14	evening set	15349 Nov 14 10:25	21° $\Upsilon$ 42'31	
minimum elong	15348 Dec 13 00:05	7° $\Upsilon$ 49'31	5°36'08	inferior conj	15349 Nov 23 04:54	17° $\Upsilon$ 41'47	-4°21'25
min. Earth dist.	15348 Dec 13 23:36	7° $\Upsilon$ 16'13	0.54444 AU	minimum elong	15349 Nov 22 18:57	17° $\Upsilon$ 57'08	4°17'31
morning rise	15348 Dec 21 12:11	3° $\Upsilon$ 47'31		min. Earth dist.	15349 Nov 25 07:12	16° $\Upsilon$ 24'11	0.55133 AU
direct	15348 Dec 25 14:06	3° $\Upsilon$ 11'38		morning rise	15349 Dec 01 02:01	13° $\Upsilon$ 28'16	
morning max el	15349 Jan 07 13:57	9° $\Upsilon$ 30'04	22°50'45	direct	15349 Dec 06 03:48	12° $\Upsilon$ 31'31	
asc. node	15349 Jan 16 06:54	20° $\Upsilon$ 12'15		morning max el	15349 Dec 19 22:46	19° $\Upsilon$ 23'41	24°40'22
	15349 Jan 22 03:49	0° $\approx$			15349 Dec 28 19:50	0° $\Upsilon$	
morning set	15349 Jan 30 02:02	15° $\approx$ 50'45		asc. node	15350 Jan 03 04:08	8° $\Upsilon$ 20'52	
	15349 Feb 05 15:49	0° $\Upsilon$			15350 Jan 14 07:50	0° $\approx$	
				morning set	15350 Jan 14 13:58	0° $\approx$ 32'53	
superior conj	15349 Feb 06 00:56	0° $\Upsilon$ 48'45	1°25'50	superior conj	15350 Jan 21 08:25	15° $\approx$ 23'09	1°34'59

minimum elong	15350 Jan 21 09:28	15° $\approx$ 28'57	1°35'40	superior conj	15351 Jan 05 18:54	0° $\approx$ 03'17	1°38'00
max. Earth dist.	15350 Jan 23 10:53	19° $\approx$ 58'37	1.32214 AU	minimum elong	15351 Jan 05 18:53	0° $\approx$ 03'15	1°38'51
	15350 Jan 28 04:33	0° $\text{H}$			15351 Jan 05 18:18	0° $\approx$	
evening rise	15350 Jan 28 18:01	1° $\text{H}$ 08'58		max. Earth dist.	15351 Jan 06 16:29	2° $\approx$ 03'33	1.31372 AU
desc. node	15350 Feb 04 16:06	14° $\text{H}$ 33'07		evening rise	15351 Jan 12 18:32	15° $\approx$ 17'28	
	15350 Feb 13 19:05	0° $\text{Y}$			15351 Jan 20 04:22	0° $\text{H}$	
evening max el	15350 Mar 03 04:31	22° $\text{Y}$ 16'47	27°34'58	desc. node	15351 Jan 22 12:46	4° $\text{H}$ 16'23	
retrograde	15350 Mar 17 01:01	29° $\text{Y}$ 45'57			15351 Feb 08 23:36	0° $\text{Y}$	
evening set	15350 Mar 23 20:41	27° $\text{Y}$ 23'41		evening max el	15351 Feb 13 12:48	4° $\text{Y}$ 48'19	27°24'57
min. Earth dist.	15350 Mar 27 15:13	24° $\text{Y}$ 12'17	0.63219 AU	retrograde	15351 Feb 27 12:28	12° $\text{Y}$ 09'22	
inferior conj	15350 Mar 30 11:09	21° $\text{Y}$ 22'14	-0°30'25	evening set	15351 Mar 06 07:37	10° $\text{Y}$ 02'56	
minimum elong	15350 Mar 30 12:08	21° $\text{Y}$ 19'46	0°30'16	min. Earth dist.	15351 Mar 10 02:55	7° $\text{Y}$ 13'28	0.61049 AU
asc. node	15350 Apr 01 01:07	19° $\text{Y}$ 48'59		inferior conj	15351 Mar 13 06:24	4° $\text{Y}$ 27'02	-1°49'43
morning rise	15350 Apr 06 06:12	16° $\text{Y}$ 08'36		minimum elong	15351 Mar 13 10:23	4° $\text{Y}$ 18'14	1°48'06
direct	15350 Apr 08 15:31	15° $\text{Y}$ 41'06		asc. node	15351 Mar 18 22:31	0° $\text{Y}$ 13'56	
morning max el	15350 Apr 15 03:10	18° $\text{Y}$ 59'22	17°46'22		15351 Mar 19 10:08	30° $\text{R}$ $\text{H}$	
	15350 Apr 23 07:07	0° $\text{B}$		morning rise	15351 Mar 20 16:23	29° $\text{H}$ 31'44	
morning set	15350 May 01 11:16	13° $\text{B}$ 48'18		direct	15351 Mar 22 19:23	29° $\text{H}$ 12'44	
desc. node	15350 May 03 17:58	17° $\text{B}$ 43'35			15351 Mar 26 02:22	0° $\text{Y}$	
	15350 May 10 23:54	0° $\text{II}$		morning max el	15351 Mar 29 19:32	2° $\text{Y}$ 43'50	17°53'01
superior conj	15350 May 13 22:09	4° $\text{II}$ 50'17	-1°15'16	morning set	15351 Apr 14 10:37	27° $\text{Y}$ 05'41	
minimum elong	15350 May 13 15:00	4° $\text{II}$ 20'55	1°15'08		15351 Apr 16 01:10	0° $\text{B}$	
max. Earth dist.	15350 May 19 23:14	14° $\text{II}$ 36'17	1.44697 AU	desc. node	15351 Apr 20 14:40	8° $\text{B}$ 11'10	
evening rise	15350 May 29 02:46	28° $\text{II}$ 53'22		superior conj	15351 Apr 25 05:14	16° $\text{B}$ 14'47	-0°36'42
	15350 May 29 20:10	0° $\text{E}$		minimum elong	15351 Apr 25 01:56	16° $\text{B}$ 00'32	0°36'47
	15350 Jun 19 09:10	0° $\text{O}$		max. Earth dist.	15351 May 02 14:06	28° $\text{B}$ 37'14	1.43098 AU
evening max el	15350 Jun 27 05:25	9° $\text{O}$ 24'02	20°39'46		15351 May 03 10:23	0° $\text{II}$	
asc. node	15350 Jun 27 23:13	10° $\text{O}$ 07'17		evening rise	15351 May 08 22:30	8° $\text{II}$ 48'00	
retrograde	15350 Jul 05 09:48	14° $\text{O}$ 06'00			15351 May 22 23:51	0° $\text{E}$	
evening set	15350 Jul 09 14:13	12° $\text{O}$ 27'09		evening max el	15351 Jun 10 00:58	23° $\text{E}$ 16'42	21°53'48
inferior conj	15350 Jul 14 20:05	6° $\text{O}$ 20'10	3°09'15	asc. node	15351 Jun 14 20:09	27° $\text{E}$ 14'01	
minimum elong	15350 Jul 14 20:20	6° $\text{O}$ 19'17	3°08'26	retrograde	15351 Jun 19 07:59	28° $\text{E}$ 42'26	
min. Earth dist.	15350 Jul 15 10:55	5° $\text{O}$ 28'59	0.68575 AU	evening set	15351 Jun 23 23:32	26° $\text{E}$ 46'45	
morning rise	15350 Jul 20 02:10	29° $\text{E}$ 58'30		inferior conj	15351 Jun 29 05:28	20° $\text{E}$ 29'31	3°06'34
	15350 Jul 20 01:30	30° $\text{R}$ $\text{E}$		minimum elong	15351 Jun 29 04:46	20° $\text{E}$ 31'56	3°05'37
direct	15350 Jul 25 10:51	27° $\text{E}$ 37'52		min. Earth dist.	15351 Jun 29 06:58	20° $\text{E}$ 24'16	0.69042 AU
desc. node	15350 Jul 30 17:00	29° $\text{E}$ 24'49		morning rise	15351 Jul 04 09:50	14° $\text{E}$ 14'07	
	15350 Jul 31 14:09	0° $\text{O}$		direct	15351 Jul 09 06:07	12° $\text{E}$ 10'25	
morning max el	15350 Aug 05 08:12	4° $\text{O}$ 07'59	23°46'57	desc. node	15351 Jul 17 14:19	16° $\text{E}$ 35'58	
	15350 Aug 25 05:22	0° $\text{M}$		morning max el	15351 Jul 18 20:43	17° $\text{E}$ 49'20	22°18'15
morning set	15350 Sep 09 10:11	24° $\text{M}$ 08'20			15351 Jul 28 23:17	0° $\text{O}$	
	15350 Sep 12 19:47	0° $\text{E}$			15351 Aug 18 07:17	0° $\text{M}$	
max. Earth dist.	15350 Sep 13 05:59	0° $\text{E}$ 44'43	1.38859 AU	morning set	15351 Aug 21 02:24	4° $\text{M}$ 28'17	
superior conj	15350 Sep 20 19:39	14° $\text{E}$ 31'42	-0°28'34	max. Earth dist.	15351 Aug 26 07:13	13° $\text{M}$ 01'38	1.41218 AU
minimum elong	15350 Sep 20 21:42	14° $\text{E}$ 41'19	0°28'03	superior conj	15351 Sep 03 03:10	26° $\text{M}$ 33'34	-1°04'51
asc. node	15350 Sep 24 00:39	20° $\text{E}$ 38'36		minimum elong	15351 Sep 03 08:18	26° $\text{M}$ 56'26	1°04'13
	15350 Sep 28 19:53	0° $\text{M}$			15351 Sep 05 01:14	0° $\text{E}$	
evening rise	15350 Sep 29 20:32	2° $\text{M}$ 00'43		asc. node	15351 Sep 10 21:14	10° $\text{E}$ 43'00	
evening max el	15350 Oct 16 02:35	28° $\text{M}$ 32'32	18°52'16	evening rise	15351 Sep 13 10:34	15° $\text{E}$ 29'20	
	15350 Oct 17 16:53	0° $\text{A}$			15351 Sep 21 10:55	0° $\text{M}$	
retrograde	15350 Oct 24 16:45	2° $\text{A}$ 52'17		evening max el	15351 Sep 29 08:39	10° $\text{M}$ 58'39	18°17'13
evening set	15350 Oct 26 14:07	2° $\text{A}$ 40'31		retrograde	15351 Oct 06 18:42	14° $\text{M}$ 45'26	
desc. node	15350 Oct 26 13:33	2° $\text{A}$ 40'48		evening set	15351 Oct 08 20:32	14° $\text{M}$ 28'18	
	15350 Nov 01 10:35	30° $\text{R}$ $\text{M}$		desc. node	15351 Oct 13 10:54	12° $\text{M}$ 05'38	
inferior conj	15350 Nov 03 19:59	28° $\text{M}$ 21'06	-2°37'54	inferior conj	15351 Oct 16 08:53	9° $\text{M}$ 47'30	-0°55'54
minimum elong	15350 Nov 03 13:28	28° $\text{M}$ 32'43	2°34'39	minimum elong	15351 Oct 16 06:48	9° $\text{M}$ 51'50	0°54'32
min. Earth dist.	15350 Nov 06 19:27	26° $\text{M}$ 14'16	0.56628 AU	min. Earth dist.	15351 Oct 19 15:15	7° $\text{M}$ 04'57	0.58666 AU
morning rise	15350 Nov 11 09:52	23° $\text{M}$ 32'41		morning rise	15351 Oct 23 13:37	4° $\text{M}$ 22'26	
direct	15350 Nov 17 06:26	22° $\text{M}$ 10'52		direct	15351 Oct 29 22:45	2° $\text{M}$ 34'01	
morning max el	15350 Dec 01 10:26	29° $\text{M}$ 29'03	26°18'11	morning max el	15351 Nov 13 05:58	10° $\text{M}$ 13'23	27°27'00
	15350 Dec 01 23:09	0° $\text{A}$			15351 Nov 28 12:24	0° $\text{A}$	
asc. node	15350 Dec 21 01:16	27° $\text{A}$ 10'08		asc. node	15351 Dec 07 22:18	16° $\text{A}$ 28'34	
	15350 Dec 22 13:48	0° $\text{B}$		morning set	15351 Dec 14 08:43	29° $\text{A}$ 31'19	
morning set	15350 Dec 30 00:48	15° $\text{B}$ 08'18			15351 Dec 14 14:05	0° $\text{B}$	

superior conj	15351 Dec 21 06:23	14°  42'30	1°35'01	max. Earth dist.	15352 Dec 03 06:57	26°  06'59	1.31274 AU
minimum elong	15351 Dec 21 05:21	14°  36'46	1°35'52				
max. Earth dist.	15351 Dec 21 00:28	14°  09'21	1.31050 AU	superior conj	15352 Dec 04 17:04	29°  16'08	1°26'04
evening rise	15351 Dec 28 00:24	29°  37'20		minimum elong	15352 Dec 04 15:13	29°  05'52	1°26'48
	15351 Dec 28 04:38	0°  ≈			15352 Dec 05 00:57	0°  	
desc. node	15352 Jan 09 09:30	23°  ≈30'28		evening rise	15352 Dec 11 09:42	14°  30'47	
	15352 Jan 13 10:13	0°  ✕			15352 Dec 19 05:45	0°  ≈	
evening max el	15352 Jan 26 14:21	16°  ✕29'34	26°39'58	desc. node	15352 Dec 26 06:19	12°  ≈04'46	
retrograde	15352 Feb 09 14:05	23°  ✕40'09		evening max el	15353 Jan 07 07:28	27°  ≈17'50	25°22'45
evening set	15352 Feb 16 01:42	21°  ✕56'15			15353 Jan 10 10:59	0°  ✕	
min. Earth dist.	15352 Feb 20 04:01	19°  ✕18'25	0.58825 AU	retrograde	15353 Jan 21 04:21	4°  ✕16'15	
inferior conj	15352 Feb 23 08:26	16°  ✕52'06	-3°17'38	evening set	15353 Jan 26 23:12	3°  ✕00'07	
minimum elong	15352 Feb 23 15:51	16°  ✕37'51	3°14'40	min. Earth dist.	15353 Jan 31 19:58	0°  ✕18'51	0.56793 AU
morning rise	15352 Mar 02 09:22	12°  ✕18'00			15353 Feb 01 07:32	30°  R≈	
direct	15352 Mar 04 09:02	12°  ✕04'00		inferior conj	15353 Feb 03 14:09	28°  ≈28'48	-4°43'09
asc. node	15352 Mar 04 19:56	12°  ✕04'46		minimum elong	15353 Feb 03 23:25	28°  ≈13'23	4°40'06
morning max el	15352 Mar 12 06:59	15°  ✕58'56	18°19'07	morning rise	15353 Feb 12 02:22	24°  ≈16'24	
	15352 Mar 22 01:25	0°  Υ		direct	15353 Feb 14 04:19	24°  ≈03'38	
morning set	15352 Mar 28 00:23	11°  Υ01'34		asc. node	15353 Feb 19 17:22	25°  ≈40'35	
				morning max el	15353 Feb 23 09:24	28°  ≈33'11	19°06'30
superior conj	15352 Apr 06 10:21	28°  Υ39'11	0°00'19		15353 Feb 24 18:38	0°  ✕	
minimum elong	15352 Apr 06 10:22	28°  Υ39'12	0°00'03	morning set	15353 Mar 12 00:05	25°  ✕22'48	
behind sun begin	15352 Apr 06 03:15	28°  Υ06'47			15353 Mar 14 08:01	0°  Υ	
behind sun end	15352 Apr 06 17:29	29°  Υ11'32					
desc. node	15352 Apr 06 11:17	28°  Υ43'24		superior conj	15353 Mar 20 09:20	11°  Υ51'28	0°32'29
	15352 Apr 07 04:11	0°  ✕		minimum elong	15353 Mar 20 11:15	12°  Υ00'40	0°32'03
max. Earth dist.	15352 Apr 14 00:06	11°  ✕59'15	1.41047 AU	desc. node	15353 Mar 24 07:52	19°  Υ16'44	
evening rise	15352 Apr 18 13:06	19°  ✕34'12		max. Earth dist.	15353 Mar 27 06:22	24°  Υ37'35	1.38779 AU
	15352 Apr 25 02:08	0°  Π			15353 Mar 30 07:30	0°  ✕	
	15352 May 16 07:47	0°  ☿		evening rise	15353 Mar 31 01:01	1°  ✕15'40	
evening max el	15352 May 22 16:23	7°  ☿09'44	23°14'21		15353 Apr 18 08:20	0°  Π	
asc. node	15352 May 31 17:10	13°  ☿10'24		evening max el	15353 May 05 05:59	21°  Π03'46	24°35'05
retrograde	15352 Jun 02 04:01	13°  ☿19'38		retrograde	15353 May 16 20:36	27°  Π51'03	
evening set	15352 Jun 07 07:03	11°  ☿09'07		asc. node	15353 May 18 14:19	27°  Π38'06	
min. Earth dist.	15352 Jun 12 03:47	5°  ☿23'31	0.69016 AU	evening set	15353 May 22 11:07	25°  Π28'48	
inferior conj	15352 Jun 12 15:16	4°  ☿43'48	2°53'23	min. Earth dist.	15353 May 26 23:18	20°  Π20'00	0.68515 AU
minimum elong	15352 Jun 12 13:47	4°  ☿48'59	2°52'13	inferior conj	15353 May 27 23:36	18°  Π58'41	2°29'44
	15352 Jun 16 08:44	30°  RΠ		minimum elong	15353 May 27 21:34	19°  Π05'30	2°28'23
morning rise	15352 Jun 17 20:27	28°  Π36'04		morning rise	15353 Jun 02 08:12	12°  Π59'45	
direct	15352 Jun 22 04:20	26°  Π51'50		direct	15353 Jun 06 04:14	11°  Π35'30	
	15352 Jun 28 18:28	0°  ☿		morning max el	15353 Jun 13 14:07	15°  Π42'42	19°45'47
morning max el	15352 Jun 30 14:02	1°  ☿40'52	20°56'04	desc. node	15353 Jun 20 08:40	23°  Π46'12	
desc. node	15352 Jul 03 11:33	4°  ☿48'42			15353 Jun 24 20:03	0°  ☿	
	15352 Jul 21 17:48	0°  Ω		greatest brilliancy	15353 Jun 26 20:41	2°  ☿56'08	-0.6m
morning set	15352 Jul 30 19:30	13°  Ω50'16		morning set	15353 Jul 09 23:06	22°  ☿39'51	
max. Earth dist.	15352 Aug 07 14:24	26°  Ω11'26	1.43291 AU		15353 Jul 14 17:11	0°  Ω	
	15352 Aug 09 22:32	0°  Π		max. Earth dist.	15353 Jul 21 03:30	10°  Ω04'09	1.44860 AU
superior conj	15352 Aug 14 13:15	7°  Π40'02	-1°38'59	superior conj	15353 Jul 25 23:40	17°  Ω47'16	-2°04'31
minimum elong	15352 Aug 14 20:46	8°  Π11'43	1°38'36	minimum elong	15353 Jul 26 06:03	18°  Ω12'54	2°04'50
evening rise	15352 Aug 26 10:44	28°  Π21'12			15353 Aug 02 11:09	0°  Π	
	15352 Aug 27 08:59	0°  Ω		evening rise	15353 Aug 08 15:44	10°  Π22'05	
asc. node	15352 Aug 27 17:49	0°  Ω39'15		asc. node	15353 Aug 14 14:26	20°  Π22'19	
evening max el	15352 Sep 11 21:02	23°  Ω59'28	18°02'24		15353 Aug 20 15:33	0°  Ω	
retrograde	15352 Sep 18 13:31	27°  Ω26'19		evening max el	15353 Aug 26 11:46	7°  Ω24'22	18°06'28
evening set	15352 Sep 20 22:45	26°  Ω59'55		retrograde	15353 Sep 01 20:45	10°  Ω44'49	
inferior conj	15352 Sep 27 18:01	21°  Ω59'12	0°29'33	evening set	15353 Sep 04 14:28	10°  Ω05'42	
minimum elong	15352 Sep 27 18:56	21°  Ω57'00	0°29'29	inferior conj	15353 Sep 10 19:29	4°  Ω47'17	1°34'40
desc. node	15352 Sep 29 08:19	20°  Ω26'22		minimum elong	15353 Sep 10 21:42	4°  Ω41'16	1°33'56
min. Earth dist.	15352 Sep 30 20:35	19°  Ω00'37	0.60945 AU	min. Earth dist.	15353 Sep 13 11:45	1°  Ω53'19	0.63196 AU
morning rise	15352 Oct 04 12:07	16°  Ω04'54			15353 Sep 15 09:43	30°  RΠ	
direct	15352 Oct 11 03:37	13°  Ω52'25		desc. node	15353 Sep 16 05:47	29°  Π15'58	
morning max el	15352 Oct 25 09:15	21°  Ω46'52	27°57'34	morning rise	15353 Sep 17 02:49	28°  Π34'06	
	15352 Nov 01 14:30	0°  Π		direct	15353 Sep 23 18:37	26°  Π04'29	
	15352 Nov 20 14:40	0°  ✕			15353 Oct 03 03:24	0°  Ω	
asc. node	15352 Nov 23 19:15	6°  ✕08'16		morning max el	15353 Oct 07 17:37	4°  Ω04'25	27°49'27
morning set	15352 Nov 27 11:47	13°  ✕37'25			15353 Oct 27 05:11	0°  Π	



asc. node	15353 Nov 10 16:07	26°♄02'27			15354 Oct 20 01:42	0°♄	
morning set	15353 Nov 11 07:44	27°♄20'59		morning set	15354 Oct 25 17:51	10°♄35'31	
	15353 Nov 12 14:59	0°♄		asc. node	15354 Oct 28 12:53	16°♄06'04	
max. Earth dist.	15353 Nov 16 08:08	7°♄47'48	1.32056 AU	max. Earth dist.	15354 Oct 30 00:55	19°♄08'21	1.33398 AU
superior conj	15353 Nov 19 01:00	13°♄38'39	1°11'09	superior conj	15354 Nov 03 03:58	27°♄44'13	0°50'13
minimum elong	15353 Nov 18 22:42	13°♄26'06	1°11'40	minimum elong	15354 Nov 03 01:47	27°♄32'35	0°50'34
evening rise	15353 Nov 25 20:32	28°♄33'15			15354 Nov 04 05:30	0°♄	
	15353 Nov 26 12:41	0°♄		evening rise	15354 Nov 10 07:04	13°♄00'03	
desc. node	15353 Dec 13 03:16	29°♄44'42			15354 Nov 18 20:04	0°♄	
	15353 Dec 13 07:48	0°♄		desc. node	15354 Nov 30 00:20	16°♄10'34	
evening max el	15353 Dec 19 18:05	7°♄26'12	23°44'17	evening max el	15354 Dec 01 05:23	17°♄24'50	22°01'49
retrograde	15354 Jan 02 05:19	14°♄06'58		retrograde	15354 Dec 13 18:15	23°♄36'56	
evening set	15354 Jan 06 21:42	13°♄19'25		evening set	15354 Dec 17 03:07	23°♄11'43	
min. Earth dist.	15354 Jan 13 05:19	10°♄16'41	0.55251 AU	inferior conj	15354 Dec 25 17:20	19°♄19'53	-5°58'40
inferior conj	15354 Jan 14 23:16	9°♄14'42	-5°45'24	minimum elong	15354 Dec 25 14:30	19°♄23'50	5°57'36
minimum elong	15354 Jan 15 05:15	9°♄05'51	5°43'53	min. Earth dist.	15354 Dec 25 11:01	19°♄28'43	0.54478 AU
morning rise	15354 Jan 23 14:24	5°♄19'55		morning rise	15355 Jan 03 02:45	15°♄32'38	
direct	15354 Jan 26 04:16	5°♄03'24		direct	15355 Jan 06 14:36	15°♄05'38	
morning max el	15354 Feb 05 22:45	10°♄15'23	20°16'57	morning max el	15355 Jan 18 21:02	21°♄00'42	21°49'45
asc. node	15354 Feb 06 14:46	10°♄55'14		asc. node	15355 Jan 24 12:07	27°♄31'12	
	15354 Feb 19 05:52	0°♄			15355 Jan 26 06:16	0°♄	
morning set	15354 Feb 24 06:21	9°♄59'41		morning set	15355 Feb 08 16:28	24°♄43'24	
					15355 Feb 11 04:15	0°♄	
superior conj	15354 Mar 03 21:48	25°♄39'36	0°58'22	superior conj	15355 Feb 15 19:56	9°♄52'05	1°17'40
minimum elong	15354 Mar 04 00:23	25°♄52'37	0°58'08	minimum elong	15355 Feb 15 22:18	10°♄04'31	1°17'48
	15354 Mar 06 02:01	0°♄		max. Earth dist.	15355 Feb 20 01:38	18°♄35'41	1.34542 AU
max. Earth dist.	15354 Mar 09 13:23	6°♄43'50	1.36541 AU	evening rise	15355 Feb 24 07:06	26°♄53'44	
desc. node	15354 Mar 11 04:27	9°♄47'42			15355 Feb 25 22:32	0°♄	
evening rise	15354 Mar 13 08:14	13°♄45'54		desc. node	15355 Feb 26 01:01	0°♄11'36	
	15354 Mar 22 19:29	0°♄			15355 Mar 16 03:49	0°♄	
	15354 Apr 13 04:34	0°♄		evening max el	15355 Mar 31 09:31	18°♄42'28	26°48'10
evening max el	15354 Apr 17 19:38	4°♄57'23	25°48'49	retrograde	15355 Apr 13 14:59	26°♄09'15	
retrograde	15354 Apr 30 08:37	12°♄10'22		evening set	15355 Apr 20 01:59	23°♄37'02	
asc. node	15354 May 05 11:32	10°♄24'10		asc. node	15355 Apr 22 08:51	21°♄30'48	
evening set	15354 May 06 10:03	9°♄40'36		min. Earth dist.	15355 Apr 24 01:44	19°♄38'46	0.66167 AU
min. Earth dist.	15354 May 10 15:21	5°♄07'49	0.67558 AU	inferior conj	15355 Apr 26 03:38	17°♄12'19	1°08'49
inferior conj	15354 May 12 04:29	3°♄10'13	1°55'11	minimum elong	15355 Apr 26 01:59	17°♄17'09	1°07'37
minimum elong	15354 May 12 02:19	3°♄17'02	1°53'46	morning rise	15355 May 02 03:15	11°♄35'29	
	15354 May 14 19:38	30°♄		direct	15355 May 05 02:13	10°♄47'16	
morning rise	15354 May 17 19:12	27°♄21'26		morning max el	15355 May 11 10:50	14°♄07'20	18°12'08
direct	15354 May 21 04:14	26°♄16'14			15355 May 23 02:16	0°♄	
morning max el	15354 May 27 21:29	29°♄53'24	18°50'39	desc. node	15355 May 25 02:38	3°♄11'07	
	15354 May 28 00:11	0°♄		morning set	15355 May 30 18:21	12°♄14'03	
desc. node	15354 Jun 07 05:42	13°♄16'48			15355 Jun 10 22:30	0°♄	
greatest brilliancy	15354 Jun 10 13:11	18°♄15'19	-0.8m				
	15354 Jun 18 04:07	0°♄		superior conj	15355 Jun 14 23:32	6°♄20'35	-2°03'31
morning set	15354 Jun 19 09:06	1°♄52'26		minimum elong	15355 Jun 14 16:26	5°♄52'49	2°04'03
max. Earth dist.	15354 Jul 03 21:32	24°♄28'01	1.45771 AU	max. Earth dist.	15355 Jun 16 18:04	9°♄06'45	1.45935 AU
					15355 Jun 30 04:31	0°♄	
superior conj	15354 Jul 05 14:42	27°♄09'01	-2°14'03	evening rise	15355 Jul 01 01:39	1°♄22'04	
minimum elong	15354 Jul 05 14:40	27°♄08'51	2°14'55	greatest brilliancy	15355 Jul 12 06:39	18°♄37'32	-0.7m
	15354 Jul 07 10:20	0°♄		asc. node	15355 Jul 19 07:49	28°♄46'34	
evening rise	15354 Jul 20 20:51	21°♄21'40			15355 Jul 20 06:09	0°♄	
	15354 Jul 26 05:44	0°♄		evening max el	15355 Jul 24 11:42	4°♄53'56	19°07'22
asc. node	15354 Aug 01 11:06	9°♄47'01		retrograde	15355 Jul 31 08:44	8°♄41'28	
evening max el	15354 Aug 10 01:35	21°♄04'58	18°28'24	evening set	15355 Aug 03 20:58	7°♄30'04	
retrograde	15354 Aug 16 12:15	24°♄32'19		inferior conj	15355 Aug 09 08:00	1°♄41'57	2°50'11
evening set	15354 Aug 19 15:01	23°♄37'51		minimum elong	15355 Aug 09 09:44	1°♄36'23	2°49'22
inferior conj	15354 Aug 25 09:19	18°♄03'48	2°20'39		15355 Aug 10 15:35	30°♄	
minimum elong	15354 Aug 25 11:37	17°♄56'52	2°19'47	min. Earth dist.	15355 Aug 10 20:38	29°♄43'54	0.66861 AU
min. Earth dist.	15354 Aug 27 12:11	15°♄31'41	0.65212 AU	morning rise	15355 Aug 14 21:48	25°♄15'56	
morning rise	15354 Aug 31 06:57	11°♄40'46		direct	15355 Aug 21 00:05	22°♄39'24	
desc. node	15354 Sep 03 03:15	9°♄51'22		desc. node	15355 Aug 21 00:43	22°♄39'24	
direct	15354 Sep 06 17:53	9°♄03'15			15355 Sep 02 11:11	0°♄	
morning max el	15354 Sep 20 04:29	16°♄56'24	27°07'53	morning max el	15355 Sep 02 15:52	0°♄11'48	26°01'01
	15354 Oct 01 01:44	0°♄					

	15355 Sep 24 23:51	0°♄		min. Earth dist.	15356 Jul 24 11:18	14°♄19'09	0.68080 AU
morning set	15355 Oct 08 14:45	23°♄13'34		morning rise	15356 Jul 28 20:52	9°♄11'29	
	15355 Oct 12 05:00	0°♄		direct	15356 Aug 03 12:14	6°♄43'27	
max. Earth dist.	15355 Oct 12 08:09	0°♄15'09	1.35246 AU	desc. node	15356 Aug 06 22:09	7°♄28'39	
asc. node	15355 Oct 15 09:35	6°♄14'53		morning max el	15356 Aug 15 02:44	13°♄40'27	24°38'05
					15356 Aug 28 09:14	0°♄	
superior conj	15355 Oct 17 23:23	11°♄26'12	0°23'30		15356 Sep 16 19:32	0°♄	
minimum elong	15355 Oct 17 22:04	11°♄19'31	0°23'48	morning set	15356 Sep 19 18:17	5°♄04'54	
evening rise	15355 Oct 25 15:17	27°♄19'34		max. Earth dist.	15356 Sep 23 08:02	11°♄26'55	1.37478 AU
	15355 Oct 26 22:23	0°♄					
evening max el	15355 Nov 13 02:42	27°♄50'39	20°31'40	superior conj	15356 Sep 30 07:55	24°♄35'52	-0°08'26
	15355 Nov 15 12:57	0°♄		minimum elong	15356 Sep 30 08:28	24°♄38'29	0°08'02
desc. node	15355 Nov 16 21:29	0°♄58'32		behind sun begin	15356 Sep 30 02:36	24°♄10'04	
retrograde	15355 Nov 24 04:50	3°♄21'37		behind sun end	15356 Sep 30 14:19	25°♄06'57	
evening set	15355 Nov 26 12:37	3°♄08'10		asc. node	15356 Oct 01 06:11	26°♄24'23	
	15355 Dec 04 01:09	30°♄♂			15356 Oct 03 01:59	0°♄	
inferior conj	15355 Dec 05 09:12	29°♄13'46	-5°11'01	evening rise	15356 Oct 08 18:48	11°♄24'46	
minimum elong	15355 Dec 04 23:41	29°♄27'37	5°07'57		15356 Oct 18 18:11	0°♄	
min. Earth dist.	15355 Dec 06 16:45	28°♄27'54	0.54627 AU	evening max el	15356 Oct 25 14:24	9°♄03'37	19°22'10
morning rise	15355 Dec 13 10:29	25°♄15'39		desc. node	15356 Nov 02 18:43	13°♄43'10	
direct	15355 Dec 17 23:01	24°♄31'44		retrograde	15356 Nov 04 01:28	13°♄48'12	
	15355 Dec 30 03:55	0°♄		evening set	15356 Nov 05 22:53	13°♄37'38	
morning max el	15355 Dec 31 08:20	1°♄04'40	23°37'32	inferior conj	15356 Nov 14 13:03	9°♄29'31	-3°38'53
asc. node	15356 Jan 11 09:24	15°♄10'47		minimum elong	15356 Nov 14 04:09	9°♄44'06	3°34'59
	15356 Jan 19 14:46	0°♄		min. Earth dist.	15356 Nov 17 02:03	7°♄49'52	0.55675 AU
morning set	15356 Jan 24 04:17	9°♄28'03		morning rise	15356 Nov 22 07:10	5°♄01'47	
				direct	15356 Nov 27 17:19	3°♄55'03	
superior conj	15356 Jan 31 00:45	24°♄20'49	1°30'28	morning max el	15356 Dec 11 17:36	10°♄59'27	25°24'37
minimum elong	15356 Jan 31 02:22	24°♄29'35	1°30'58		15356 Dec 26 03:37	0°♄	
	15356 Feb 02 15:57	0°♄		asc. node	15356 Dec 28 06:35	3°♄37'48	
max. Earth dist.	15356 Feb 02 21:18	0°♄28'22	1.32932 AU	morning set	15357 Jan 07 15:58	24°♄07'56	
evening rise	15356 Feb 07 18:13	10°♄30'40			15357 Jan 10 08:31	0°♄	
desc. node	15356 Feb 12 21:37	20°♄24'09					
	15356 Feb 18 07:34	0°♄		superior conj	15357 Jan 14 09:45	8°♄58'26	1°37'01
	15356 Mar 10 19:53	0°♄		minimum elong	15357 Jan 14 10:22	9°♄01'49	1°37'46
evening max el	15356 Mar 12 22:39	2°♄08'05	27°25'42	max. Earth dist.	15357 Jan 15 23:47	12°♄28'10	1.31789 AU
retrograde	15356 Mar 26 14:56	9°♄38'49		evening rise	15357 Jan 21 14:33	24°♄29'07	
evening set	15356 Apr 02 08:45	7°♄10'33			15357 Jan 24 07:47	0°♄	
min. Earth dist.	15356 Apr 06 04:26	3°♄43'42	0.64391 AU	desc. node	15357 Jan 29 18:16	10°♄19'54	
asc. node	15356 Apr 08 06:13	1°♄31'16			15357 Feb 10 21:51	0°♄	
inferior conj	15356 Apr 08 18:27	0°♄58'25	0°09'39	evening max el	15357 Feb 23 09:14	15°♄02'30	27°34'46
minimum elong	15356 Apr 08 18:11	0°♄59'09	0°09'09	retrograde	15357 Mar 09 07:37	22°♄29'29	
transit middle	15356 Apr 08 18:11	0°♄59'09	0°09'09	evening set	15357 Mar 16 03:50	20°♄12'40	
transit begin	15356 Apr 08 15:39	1°♄05'56		min. Earth dist.	15357 Mar 19 21:59	17°♄11'50	0.62315 AU
transit end	15356 Apr 08 20:43	0°♄52'22		inferior conj	15357 Mar 22 21:52	14°♄21'02	-1°02'39
	15356 Apr 09 16:31	30°♄♂		minimum elong	15357 Mar 23 00:01	14°♄15'55	1°01'55
morning rise	15356 Apr 15 05:44	25°♄35'50		asc. node	15357 Mar 26 03:38	11°♄28'05	
direct	15356 Apr 17 19:41	25°♄01'45		morning rise	15357 Mar 29 23:10	9°♄15'10	
morning max el	15356 Apr 24 03:48	28°♄17'07	17°50'45	direct	15357 Apr 01 05:27	8°♄51'49	
	15356 Apr 25 18:34	0°♄		morning max el	15357 Apr 07 21:25	12°♄14'10	17°46'56
desc. node	15356 May 10 23:27	23°♄22'23			15357 Apr 19 23:50	0°♄	
morning set	15356 May 11 07:12	23°♄54'51		morning set	15357 Apr 23 19:44	6°♄42'27	
	15356 May 14 22:36	0°♄		desc. node	15357 Apr 27 20:11	13°♄45'27	
superior conj	15356 May 24 19:16	16°♄06'51	-1°35'53	superior conj	15357 May 05 12:45	26°♄54'39	-0°59'03
minimum elong	15356 May 24 10:41	15°♄32'23	1°35'50	minimum elong	15357 May 05 07:10	26°♄31'18	0°58'57
max. Earth dist.	15356 May 29 14:01	23°♄42'32	1.45348 AU		15357 May 07 09:19	0°♄	
	15356 Jun 02 14:29	0°♄		max. Earth dist.	15357 May 12 06:51	7°♄59'12	1.44079 AU
evening rise	15356 Jun 09 14:29	10°♄47'52		evening rise	15357 May 20 03:17	20°♄21'29	
	15356 Jun 22 08:53	0°♄			15357 May 26 11:07	0°♄	
greatest brilliancy	15356 Jun 24 11:02	3°♄02'34	-0.6m		15357 Jun 17 03:44	0°♄	
asc. node	15356 Jul 05 04:36	17°♄11'53		evening max el	15357 Jun 19 14:54	2°♄38'37	21°10'07
evening max el	15356 Jul 06 16:17	18°♄45'44	20°02'03	asc. node	15357 Jun 22 01:30	4°♄51'57	
retrograde	15356 Jul 14 07:28	23°♄05'27		retrograde	15357 Jun 28 06:25	7°♄39'20	
evening set	15356 Jul 18 05:45	21°♄36'32		evening set	15357 Jul 02 15:24	5°♄53'16	
inferior conj	15356 Jul 23 12:41	15°♄35'52	3°05'48	inferior conj	15357 Jul 07 20:59	29°♄41'33	3°09'25
minimum elong	15356 Jul 23 13:30	15°♄33'04	3°05'01	minimum elong	15357 Jul 07 20:50	29°♄42'05	3°08'34

	15357 Jul 07 15:41	30° $\text{R}\text{E}$		minimum elong	15358 Jun 22 05:46	13° $\text{E}57'25$	3°01'12
min. Earth dist.	15357 Jul 08 06:07	29° $\text{E}09'47$	0.68829 AU	min. Earth dist.	15358 Jun 22 02:52	14° $\text{E}07'32$	0.69094 AU
morning rise	15357 Jul 13 02:01	23° $\text{E}22'03$		morning rise	15358 Jun 27 11:12	7° $\text{E}41'13$	
direct	15357 Jul 18 05:23	21° $\text{E}08'11$		direct	15358 Jul 02 02:14	5° $\text{E}45'23$	
desc. node	15357 Jul 24 19:29	23° $\text{E}55'26$		morning max el	15358 Jul 11 04:00	11° $\text{E}02'33$	21°41'59
morning max el	15357 Jul 28 13:57	27° $\text{E}17'41$	23°08'49	desc. node	15358 Jul 11 16:45	11° $\text{E}34'55$	
	15357 Jul 31 02:43	0° $\text{Q}$			15358 Jul 26 02:11	0° $\text{Q}$	
	15357 Aug 21 23:26	0° $\text{M}$		morning set	15358 Aug 12 06:11	25° $\text{Q}54'05$	
morning set	15357 Sep 01 00:20	16° $\text{M}00'36$			15358 Aug 14 19:42	0° $\text{M}$	
max. Earth dist.	15357 Sep 05 06:29	23° $\text{M}12'06$	1.39876 AU	max. Earth dist.	15358 Aug 18 09:37	5° $\text{M}50'04$	1.42154 AU
	15357 Sep 09 03:46	0° $\text{E}$					
				superior conj	15358 Aug 26 00:43	18° $\text{M}44'48$	-1°19'56
superior conj	15357 Sep 13 01:50	7° $\text{E}05'25$	-0°43'55	minimum elong	15358 Aug 26 07:05	19° $\text{M}12'28$	1°19'21
minimum elong	15357 Sep 13 05:10	7° $\text{E}20'42$	0°43'20		15358 Sep 01 08:59	0° $\text{E}$	
asc. node	15357 Sep 18 02:47	16° $\text{E}31'44$		asc. node	15358 Sep 04 23:23	6° $\text{E}33'04$	
evening rise	15357 Sep 22 14:47	25° $\text{E}09'13$		evening rise	15358 Sep 05 23:29	8° $\text{E}23'16$	
	15357 Sep 25 03:39	0° $\text{M}$			15358 Sep 18 18:52	0° $\text{M}$	
evening max el	15357 Oct 08 14:58	21° $\text{M}05'36$	18°34'51	evening max el	15358 Sep 22 00:18	3° $\text{M}47'58$	18°08'35
retrograde	15357 Oct 16 15:59	25° $\text{M}09'39$		retrograde	15358 Sep 29 01:24	7° $\text{M}24'10$	
evening set	15357 Oct 18 14:36	24° $\text{M}56'12$		evening set	15358 Oct 01 06:18	7° $\text{M}03'27$	
desc. node	15357 Oct 20 16:01	24° $\text{M}14'39$		desc. node	15358 Oct 07 13:22	3° $\text{M}01'52$	
inferior conj	15357 Oct 26 13:17	20° $\text{M}28'07$	-1°53'14	inferior conj	15358 Oct 08 11:08	2° $\text{M}14'02$	-0°17'12
minimum elong	15357 Oct 26 08:45	20° $\text{M}36'47$	1°50'45	minimum elong	15358 Oct 08 10:33	2° $\text{M}15'19$	0°16'33
min. Earth dist.	15357 Oct 29 17:29	18° $\text{M}03'35$	0.57444 AU		15358 Oct 10 23:23	30° $\text{R}\text{E}$	
morning rise	15357 Nov 02 23:29	15° $\text{M}23'24$		min. Earth dist.	15358 Oct 11 17:03	29° $\text{E}22'05$	0.59628 AU
direct	15357 Nov 09 02:15	13° $\text{M}49'53$		morning rise	15358 Oct 15 11:30	26° $\text{E}35'42$	
morning max el	15357 Nov 23 08:19	21° $\text{M}18'37$	26°51'44	direct	15358 Oct 22 00:23	24° $\text{E}36'11$	
	15357 Nov 30 22:28	0° $\text{A}$			15358 Nov 02 16:48	0° $\text{M}$	
asc. node	15357 Dec 15 03:40	22° $\text{A}40'06$		morning max el	15358 Nov 05 07:03	2° $\text{M}22'27$	27°44'53
	15357 Dec 18 22:12	0° $\text{E}$			15358 Nov 25 09:47	0° $\text{A}$	
morning set	15357 Dec 23 01:45	8° $\text{E}38'14$		asc. node	15358 Dec 02 00:40	12° $\text{A}08'19$	
				morning set	15358 Dec 07 07:51	22° $\text{A}54'27$	
superior conj	15357 Dec 29 20:54	23° $\text{E}38'43$	1°37'29		15358 Dec 10 14:50	0° $\text{E}$	
minimum elong	15357 Dec 29 20:26	23° $\text{E}36'11$	1°38'21		15358 Dec 13 14:21	6° $\text{E}36'08$	1.31074 AU
max. Earth dist.	15357 Dec 30 06:35	24° $\text{E}32'55$	1.31162 AU	max. Earth dist.			
	15358 Jan 01 17:20	0° $\text{E}$		superior conj	15358 Dec 14 08:17	8° $\text{E}16'19$	1°31'58
evening rise	15358 Jan 05 17:35	8° $\text{E}42'50$		minimum elong	15358 Dec 14 06:53	8° $\text{E}08'27$	1°32'47
desc. node	15358 Jan 16 14:57	29° $\text{E}51'40$		evening rise	15358 Dec 21 01:11	23° $\text{E}06'31$	
	15358 Jan 16 16:52	0° $\text{H}$			15358 Dec 24 07:41	0° $\text{E}$	
evening max el	15358 Feb 05 14:57	27° $\text{H}13'44$	27°10'13	desc. node	15359 Jan 03 11:44	18° $\text{E}50'23$	
	15358 Feb 08 19:43	0° $\text{Y}$			15359 Jan 11 00:43	0° $\text{H}$	
retrograde	15358 Feb 19 15:27	4° $\text{Y}31'15$		evening max el	15359 Jan 18 13:19	8° $\text{H}33'22$	26°10'50
evening set	15358 Feb 26 08:08	2° $\text{Y}33'45$		retrograde	15359 Feb 01 12:25	15° $\text{H}38'26$	
min. Earth dist.	15358 Mar 02 05:24	29° $\text{H}50'31$	0.60089 AU	evening set	15359 Feb 07 17:57	14° $\text{H}06'19$	
	15358 Mar 02 00:38	30° $\text{R}\text{H}$		min. Earth dist.	15359 Feb 12 02:36	11° $\text{H}28'54$	0.57918 AU
inferior conj	15358 Mar 05 10:18	27° $\text{H}10'25$	-2°26'26	inferior conj	15359 Feb 15 04:04	9° $\text{H}16'31$	-3°55'08
minimum elong	15358 Mar 05 15:45	26° $\text{H}59'00$	2°24'10	minimum elong	15359 Feb 15 12:39	9° $\text{H}01'01$	3°51'56
morning rise	15358 Mar 13 02:48	22° $\text{H}23'52$		morning rise	15359 Feb 23 10:28	4° $\text{H}51'21$	
asc. node	15358 Mar 13 01:04	22° $\text{H}25'02$		direct	15359 Feb 25 10:13	4° $\text{H}38'19$	
direct	15358 Mar 15 03:43	22° $\text{H}07'33$		asc. node	15359 Feb 27 22:29	5° $\text{H}00'07$	
morning max el	15358 Mar 22 12:13	25° $\text{H}47'50$	18°01'36	morning max el	15359 Mar 05 20:20	8° $\text{H}47'04$	18°36'29
	15358 Mar 26 01:56	0° $\text{Y}$			15359 Mar 19 12:48	0° $\text{Y}$	
morning set	15358 Apr 07 01:54	20° $\text{Y}18'19$		morning set	15359 Mar 21 20:28	4° $\text{Y}27'04$	
	15358 Apr 12 08:22	0° $\text{E}$					
desc. node	15358 Apr 14 16:50	4° $\text{E}15'25$		superior conj	15359 Mar 30 18:59	21° $\text{Y}32'29$	0°14'39
				minimum elong	15359 Mar 30 19:58	21° $\text{Y}37'03$	0°14'13
superior conj	15358 Apr 17 05:40	8° $\text{E}46'01$	-0°20'35	behind sun begin	15359 Mar 30 16:47	21° $\text{Y}22'14$	
minimum elong	15358 Apr 17 03:54	8° $\text{E}38'16$	0°20'47	behind sun end	15359 Mar 30 23:09	21° $\text{Y}51'52$	
max. Earth dist.	15358 Apr 24 19:14	21° $\text{E}43'15$	1.42268 AU	desc. node	15359 Apr 01 13:28	24° $\text{Y}48'42$	
	15358 Apr 29 21:06	0° $\text{E}$			15359 Apr 04 10:18	0° $\text{E}$	
evening rise	15358 Apr 30 06:23	0° $\text{E}37'07$		max. Earth dist.	15359 Apr 07 03:42	4° $\text{E}48'00$	1.40104 AU
	15358 May 19 22:55	0° $\text{E}$		evening rise	15359 Apr 11 06:15	11° $\text{E}47'58$	
evening max el	15358 Jun 02 08:32	16° $\text{E}31'42$	22°27'38		15359 Apr 22 17:27	0° $\text{E}$	
asc. node	15358 Jun 08 22:29	21° $\text{E}31'06$			15359 May 15 12:47	0° $\text{E}$	
retrograde	15358 Jun 12 03:50	22° $\text{E}16'37$		evening max el	15359 May 15 23:08	0° $\text{E}25'58$	23°49'00
evening set	15358 Jun 17 00:09	20° $\text{E}14'37$		retrograde	15359 May 26 22:24	6° $\text{E}52'03$	
inferior conj	15358 Jun 22 06:49	13° $\text{E}53'44$	3°02'13	asc. node	15359 May 26 19:34	6° $\text{E}51'59$	

evening set	15359 Jun 01 06:24	4°☿36'13		min. Earth dist.	15360 May 19 17:33	14°♊00'15	0.68170 AU
	15359 Jun 05 07:28	30°♊♊		inferior conj	15360 May 20 23:23	12°♊22'35	2°16'29
min. Earth dist.	15359 Jun 05 23:21	29°♊06'22	0.68873 AU	minimum elong	15360 May 20 21:14	12°♊29'38	2°15'04
inferior conj	15359 Jun 06 16:15	28°♊08'40	2°44'38	morning rise	15360 May 26 10:16	6°♊28'04	
minimum elong	15359 Jun 06 14:29	28°♊14'42	2°43'23	direct	15360 May 30 01:33	5°♊12'09	
morning rise	15359 Jun 11 22:34	22°♊04'34		morning max el	15360 Jun 06 03:20	9°♊04'38	19°20'23
direct	15359 Jun 16 01:27	20°♊28'40		desc. node	15360 Jun 14 11:04	19°♊21'02	
morning max el	15359 Jun 23 23:58	24°♊58'02	20°24'22	greatest brilliancy	15360 Jun 18 19:40	25°♊38'48	-0.7m
	15359 Jun 28 11:19	0°☿			15360 Jun 21 17:42	0°☿	
desc. node	15359 Jun 28 13:57	0°☿08'09		morning set	15360 Jun 30 19:28	13°☿49'45	
	15359 Jul 19 10:14	0°♊			15360 Jul 11 05:58	0°♊	
morning set	15359 Jul 22 15:36	4°♊56'35		max. Earth dist.	15360 Jul 13 11:54	3°♊31'17	1.45338 AU
max. Earth dist.	15359 Jul 31 19:54	19°♊21'18	1.44042 AU				
				superior conj	15360 Jul 17 01:54	9°♊10'41	-2°10'53
superior conj	15359 Aug 07 00:44	29°♊25'40	-1°51'20	minimum elong	15360 Jul 17 06:07	9°♊27'23	2°11'31
minimum elong	15359 Aug 07 08:23	29°♊57'14	1°51'11		15360 Jul 29 22:50	0°♊	
	15359 Aug 07 09:03	0°♊		evening rise	15360 Jul 31 11:31	2°♊31'18	
evening rise	15359 Aug 19 16:07	20°♊54'46		asc. node	15360 Aug 08 16:37	16°♊00'22	
asc. node	15359 Aug 22 19:59	26°♊24'07			15360 Aug 18 16:04	0°♊	
	15359 Aug 24 22:09	0°♊		evening max el	15360 Aug 19 04:50	0°♊32'28	18°13'35
evening max el	15359 Sep 05 14:09	16°♊59'58	18°01'53	retrograde	15360 Aug 25 13:32	3°♊54'32	
retrograde	15359 Sep 12 02:06	20°♊22'19		evening set	15360 Aug 28 10:59	3°♊09'10	
evening set	15359 Sep 14 14:59	19°♊50'44			15360 Sep 01 09:16	30°♊♊	
inferior conj	15359 Sep 21 03:44	14°♊41'54	0°59'42	inferior conj	15360 Sep 03 10:59	27°♊43'36	1°56'22
minimum elong	15359 Sep 21 05:22	14°♊37'42	0°59'15	minimum elong	15360 Sep 03 13:21	27°♊36'52	1°55'32
min. Earth dist.	15359 Sep 24 02:20	11°♊43'14	0.61922 AU	min. Earth dist.	15360 Sep 05 21:39	24°♊57'13	0.64088 AU
desc. node	15359 Sep 24 10:50	11°♊22'45		morning rise	15360 Sep 09 13:59	21°♊25'00	
morning rise	15359 Sep 27 17:12	8°♊38'31		desc. node	15360 Sep 10 08:19	20°♊51'05	
direct	15359 Oct 04 09:30	6°♊18'02		direct	15360 Sep 16 04:04	18°♊51'09	
morning max el	15359 Oct 18 12:48	14°♊15'13	27°58'45	morning max el	15360 Sep 29 22:51	26°♊50'01	27°35'30
	15359 Oct 31 06:41	0°♊			15360 Oct 02 22:16	0°♊	
	15359 Nov 17 22:20	0°♊			15360 Oct 23 22:16	0°♊	
asc. node	15359 Nov 18 21:34	1°♊54'37		morning set	15360 Nov 04 00:18	20°♊23'13	
morning set	15359 Nov 21 08:10	6°♊51'10		asc. node	15360 Nov 04 18:23	21°♊53'24	
max. Earth dist.	15359 Nov 26 19:14	18°♊28'11	1.31540 AU	max. Earth dist.	15360 Nov 08 17:21	0°♊01'16	1.32562 AU
					15360 Nov 08 17:07	0°♊	
superior conj	15359 Nov 28 18:01	22°♊45'22	1°20'28				
minimum elong	15359 Nov 28 15:55	22°♊33'48	1°21'07	superior conj	15360 Nov 12 00:06	7°♊01'01	1°02'59
	15359 Dec 02 00:27	0°♊		minimum elong	15360 Nov 11 21:46	6°♊48'25	1°03'26
evening rise	15359 Dec 05 11:21	7°♊34'40		evening rise	15360 Nov 18 22:17	22°♊03'08	
	15359 Dec 16 22:21	0°♊			15360 Nov 22 17:14	0°♊	
desc. node	15359 Dec 21 08:37	7°♊03'19		desc. node	15360 Dec 07 05:36	24°♊14'08	
evening max el	15359 Dec 31 03:10	19°♊01'30	24°42'33	evening max el	15360 Dec 11 12:34	28°♊59'31	22°59'58
retrograde	15360 Jan 13 20:36	25°♊52'48			15360 Dec 12 14:33	0°♊	
evening set	15360 Jan 19 05:37	24°♊48'55		retrograde	15360 Dec 24 16:05	5°♊30'28	
min. Earth dist.	15360 Jan 24 15:01	22°♊01'10	0.56061 AU	evening set	15360 Dec 28 19:13	4°♊53'22	
inferior conj	15360 Jan 27 00:43	20°♊30'36	-5°13'54	min. Earth dist.	15361 Jan 04 22:10	1°♊35'37	0.54814 AU
minimum elong	15360 Jan 27 09:24	20°♊16'57	5°11'25	inferior conj	15361 Jan 06 02:09	0°♊55'38	-5°58'20
morning rise	15360 Feb 04 15:23	16°♊26'36		minimum elong	15361 Jan 06 04:46	0°♊51'52	5°57'21
direct	15360 Feb 06 21:17	16°♊12'51			15361 Jan 07 17:30	30°♊♊	
asc. node	15360 Feb 14 19:55	19°♊18'58		morning rise	15361 Jan 14 15:43	27°♊06'09	
morning max el	15360 Feb 16 17:32	20°♊59'20	19°33'39	direct	15361 Jan 17 13:50	26°♊46'12	
	15360 Feb 23 17:29	0°♊			15361 Jan 26 08:16	0°♊	
morning set	15360 Mar 04 23:20	18°♊55'48		morning max el	15361 Jan 29 00:27	2°♊16'31	20°54'03
	15360 Mar 10 11:21	0°♊		asc. node	15361 Jan 31 17:18	5°♊09'48	
					15361 Feb 15 13:32	0°♊	
superior conj	15360 Mar 13 00:12	5°♊01'03	0°44'14	morning set	15361 Feb 17 07:27	3°♊35'36	
minimum elong	15360 Mar 13 02:32	5°♊12'28	0°43'52				
desc. node	15360 Mar 18 10:03	15°♊21'07		superior conj	15361 Feb 24 17:08	19°♊00'10	1°07'21
max. Earth dist.	15360 Mar 19 10:06	17°♊12'10	1.37812 AU	minimum elong	15361 Feb 24 19:43	19°♊13'23	1°07'16
evening rise	15360 Mar 23 02:42	23°♊50'36		max. Earth dist.	15361 Mar 01 18:33	29°♊08'03	1.35643 AU
	15360 Mar 26 16:16	0°♊			15361 Mar 02 05:14	0°♊	
	15360 Apr 15 10:48	0°♊		desc. node	15361 Mar 05 06:37	5°♊49'02	
evening max el	15360 Apr 27 12:36	14°♊20'14	25°07'39	evening rise	15361 Mar 05 16:54	6°♊36'57	
retrograde	15360 May 09 13:06	21°♊19'32			15361 Mar 19 10:55	0°♊	
asc. node	15360 May 12 16:45	20°♊37'48		evening max el	15361 Apr 10 02:07	28°♊10'02	26°16'17
evening set	15360 May 15 08:32	18°♊53'17			15361 Apr 12 01:17	0°♊	

retrograde	15361 Apr 22 22:58	5° $\Pi$ 31'06		retrograde	15362 Apr 06 02:58	19° $\mathcal{B}$ 18'38	
evening set	15361 Apr 29 04:45	2° $\Pi$ 59'15		evening set	15362 Apr 12 17:05	16° $\mathcal{B}$ 47'17	
asc. node	15361 Apr 29 14:02	2° $\Pi$ 39'34		asc. node	15362 Apr 16 11:22	13° $\mathcal{B}$ 12'17	
	15361 May 02 04:46	30° $\mathcal{R}$ $\mathcal{B}$		min. Earth dist.	15362 Apr 16 14:52	13° $\mathcal{B}$ 02'41	0.65444 AU
min. Earth dist.	15361 May 03 07:22	28° $\mathcal{B}$ 41'38	0.67011 AU	inferior conj	15362 Apr 18 22:03	10° $\mathcal{B}$ 26'40	0°45'22
inferior conj	15361 May 05 02:05	26° $\mathcal{B}$ 30'19	1°37'03	minimum elong	15362 Apr 18 20:52	10° $\mathcal{B}$ 30'02	0°44'24
minimum elong	15361 May 05 00:04	26° $\mathcal{B}$ 36'34	1°35'40	morning rise	15362 Apr 25 02:17	4° $\mathcal{B}$ 55'30	
morning rise	15361 May 10 20:16	20° $\mathcal{B}$ 46'38		direct	15362 Apr 27 21:11	4° $\mathcal{B}$ 13'48	
direct	15361 May 14 00:49	19° $\mathcal{B}$ 49'08		morning max el	15362 May 04 04:46	7° $\mathcal{B}$ 30'50	18°00'56
morning max el	15361 May 20 13:33	23° $\mathcal{B}$ 17'39	18°32'15	desc. node	15362 May 19 04:56	29° $\mathcal{B}$ 04'43	
	15361 May 26 03:55	0° $\Pi$			15362 May 19 18:30	0° $\Pi$	
desc. node	15361 Jun 01 08:04	9° $\Pi$ 02'27		morning set	15362 May 22 11:07	4° $\Pi$ 23'40	
morning set	15361 Jun 10 13:57	23° $\Pi$ 27'48					
	15361 Jun 14 17:53	0° $\mathcal{E}$		superior conj	15362 Jun 05 23:57	27° $\Pi$ 44'56	-1°53'30
				minimum elong	15362 Jun 05 15:27	27° $\Pi$ 11'22	1°53'44
superior conj	15361 Jun 26 12:17	18° $\mathcal{E}$ 22'53	-2°12'02		15362 Jun 07 10:18	0° $\mathcal{E}$	
minimum elong	15361 Jun 26 08:51	18° $\mathcal{E}$ 09'28	2°12'52	max. Earth dist.	15362 Jun 09 03:11	2° $\mathcal{E}$ 40'12	1.45774 AU
max. Earth dist.	15361 Jun 26 07:01	18° $\mathcal{E}$ 02'21	1.45929 AU	evening rise	15362 Jun 22 02:23	22° $\mathcal{E}$ 45'28	
	15361 Jul 03 22:45	0° $\mathcal{Q}$			15362 Jun 26 19:42	0° $\mathcal{Q}$	
evening rise	15361 Jul 12 05:59	13° $\mathcal{Q}$ 04'26		greatest brilliancy	15362 Jul 05 06:44	12° $\mathcal{Q}$ 45'45	-0.7m
greatest brilliancy	15361 Jul 20 09:47	25° $\mathcal{Q}$ 56'26	-0.8m	asc. node	15362 Jul 13 10:03	24° $\mathcal{Q}$ 01'47	
	15361 Jul 23 00:47	0° $\mathcal{P}$		evening max el	15362 Jul 17 01:17	28° $\mathcal{Q}$ 08'05	19°28'46
asc. node	15361 Jul 26 13:18	5° $\mathcal{P}$ 15'22			15362 Jul 19 03:30	0° $\mathcal{P}$	
evening max el	15361 Aug 02 17:18	14° $\mathcal{P}$ 17'04	18°42'53	retrograde	15362 Jul 24 05:11	2° $\mathcal{P}$ 07'48	
retrograde	15361 Aug 09 07:33	17° $\mathcal{P}$ 51'46		evening set	15362 Jul 27 21:35	0° $\mathcal{P}$ 49'08	
evening set	15361 Aug 12 14:10	16° $\mathcal{P}$ 50'25			15362 Jul 28 22:02	30° $\mathcal{R}$ $\mathcal{Q}$	
inferior conj	15361 Aug 18 04:59	11° $\mathcal{P}$ 10'15	2°34'59	inferior conj	15362 Aug 02 06:33	24° $\mathcal{Q}$ 55'45	2°58'19
minimum elong	15361 Aug 18 07:06	11° $\mathcal{P}$ 03'41	2°34'08	minimum elong	15362 Aug 02 07:55	24° $\mathcal{Q}$ 51'16	2°57'32
min. Earth dist.	15361 Aug 20 01:53	8° $\mathcal{P}$ 51'09	0.65964 AU	min. Earth dist.	15362 Aug 03 13:16	23° $\mathcal{Q}$ 14'21	0.67444 AU
morning rise	15361 Aug 23 23:01	4° $\mathcal{P}$ 44'57		morning rise	15362 Aug 07 17:41	18° $\mathcal{Q}$ 29'56	
desc. node	15361 Aug 28 05:48	2° $\mathcal{P}$ 22'15		direct	15362 Aug 13 15:40	15° $\mathcal{Q}$ 55'53	
direct	15361 Aug 30 06:34	2° $\mathcal{P}$ 06'38		desc. node	15362 Aug 15 03:15	16° $\mathcal{Q}$ 04'24	
morning max el	15361 Sep 12 10:14	9° $\mathcal{P}$ 53'38	26°41'53	morning max el	15362 Aug 25 21:14	23° $\mathcal{Q}$ 14'59	25°26'55
	15361 Sep 28 07:32	0° $\mathcal{L}$			15362 Aug 31 21:00	0° $\mathcal{P}$	
	15361 Oct 16 09:58	0° $\mathcal{M}$			15362 Sep 21 15:40	0° $\mathcal{L}$	
morning set	15361 Oct 18 05:14	3° $\mathcal{M}$ 23'08		morning set	15362 Sep 30 19:16	15° $\mathcal{L}$ 42'20	
max. Earth dist.	15361 Oct 22 05:49	11° $\mathcal{M}$ 13'03	1.34126 AU	max. Earth dist.	15362 Oct 04 08:57	22° $\mathcal{L}$ 16'43	1.36164 AU
asc. node	15361 Oct 22 15:06	11° $\mathcal{M}$ 59'26			15362 Oct 08 09:34	0° $\mathcal{M}$	
				asc. node	15362 Oct 09 11:45	2° $\mathcal{M}$ 08'50	
superior conj	15361 Oct 27 00:10	20° $\mathcal{M}$ 56'56	0°39'33				
minimum elong	15361 Oct 26 22:14	20° $\mathcal{M}$ 46'53	0°39'52	superior conj	15362 Oct 10 15:24	4° $\mathcal{M}$ 26'16	0°10'32
	15361 Oct 31 07:03	0° $\mathcal{J}$		minimum elong	15362 Oct 10 14:45	4° $\mathcal{M}$ 23'00	0°10'51
evening rise	15361 Nov 03 08:03	6° $\mathcal{J}$ 26'49		behind sun begin	15362 Oct 10 10:03	3° $\mathcal{M}$ 59'30	
	15361 Nov 15 21:55	0° $\mathcal{Z}$		behind sun end	15362 Oct 10 19:27	4° $\mathcal{M}$ 46'31	
evening max el	15361 Nov 23 03:08	9° $\mathcal{Z}$ 05'31	21°21'17	evening rise	15362 Oct 18 14:34	20° $\mathcal{M}$ 40'40	
desc. node	15361 Nov 24 02:41	10° $\mathcal{Z}$ 01'16			15362 Oct 23 06:24	0° $\mathcal{J}$	
retrograde	15361 Dec 05 02:51	15° $\mathcal{Z}$ 01'38		evening max el	15362 Nov 05 06:35	19° $\mathcal{J}$ 50'32	19°59'21
evening set	15361 Dec 07 23:08	14° $\mathcal{Z}$ 42'58		desc. node	15362 Nov 10 23:52	23° $\mathcal{J}$ 59'20	
inferior conj	15361 Dec 16 17:27	10° $\mathcal{Z}$ 51'46	-5°45'35	retrograde	15362 Nov 15 15:45	25° $\mathcal{J}$ 00'59	
minimum elong	15361 Dec 16 10:58	11° $\mathcal{Z}$ 00'53	5°43'48	evening set	15362 Nov 17 17:25	24° $\mathcal{J}$ 49'36	
min. Earth dist.	15361 Dec 17 03:47	10° $\mathcal{Z}$ 37'13	0.54419 AU	inferior conj	15362 Nov 26 12:51	20° $\mathcal{J}$ 50'55	-4°35'30
morning rise	15361 Dec 24 23:15	7° $\mathcal{Z}$ 02'01		minimum elong	15362 Nov 26 02:47	21° $\mathcal{J}$ 06'10	4°31'45
direct	15361 Dec 28 21:32	6° $\mathcal{Z}$ 28'36		min. Earth dist.	15362 Nov 28 10:44	19° $\mathcal{J}$ 41'26	0.54973 AU
morning max el	15362 Jan 10 17:18	12° $\mathcal{Z}$ 41'30	22°34'35	morning rise	15362 Dec 04 11:01	16° $\mathcal{J}$ 42'02	
asc. node	15362 Jan 18 14:36	22° $\mathcal{Z}$ 14'46		direct	15362 Dec 09 09:38	15° $\mathcal{J}$ 48'42	
	15362 Jan 23 10:21	0° $\approx$		morning max el	15362 Dec 23 02:19	22° $\mathcal{J}$ 36'00	24°24'21
morning set	15362 Feb 01 18:29	18° $\approx$ 20'04			15362 Dec 29 14:46	0° $\mathcal{Z}$	
	15362 Feb 07 04:56	0° $\mathcal{H}$		asc. node	15363 Jan 05 11:50	10° $\mathcal{Z}$ 16'05	
					15363 Jan 15 20:07	0° $\approx$	
superior conj	15362 Feb 08 18:26	3° $\mathcal{H}$ 20'31	1°23'53	morning set	15363 Jan 17 06:26	3° $\approx$ 02'49	
minimum elong	15362 Feb 08 20:32	3° $\mathcal{H}$ 31'41	1°24'10				
max. Earth dist.	15362 Feb 12 09:32	10° $\mathcal{H}$ 57'22	1.33795 AU	superior conj	15363 Jan 24 01:16	17° $\approx$ 53'22	1°34'00
evening rise	15362 Feb 16 21:23	19° $\mathcal{H}$ 58'17		minimum elong	15363 Jan 24 02:28	18° $\approx$ 00'00	1°34'37
desc. node	15362 Feb 20 03:10	26° $\mathcal{H}$ 08'40		max. Earth dist.	15363 Jan 26 08:20	22° $\approx$ 52'42	1.32384 AU
	15362 Feb 22 05:39	0° $\mathcal{Y}$			15363 Jan 29 16:57	0° $\mathcal{H}$	
	15362 Mar 13 10:48	0° $\mathcal{B}$		evening rise	15363 Jan 31 12:45	3° $\mathcal{H}$ 45'08	
evening max el	15362 Mar 23 15:50	11° $\mathcal{B}$ 48'17	27°07'22	desc. node	15363 Feb 06 23:45	16° $\mathcal{H}$ 14'33	

	15363 Feb 14 24:00	0°♿				15364 Jan 21 14:05	0°♿	
evening max el	15363 Mar 06 04:20	25°♿02'32	27°33'34	desc. node		15364 Jan 24 20:25	6°♿01'01	
	15363 Mar 12 08:57	0°♿				15364 Feb 09 14:53	0°♿	
retrograde	15363 Mar 19 23:50	2°♿32'02		evening max el		15364 Feb 16 13:17	7°♿39'51	27°28'34
evening set	15363 Mar 26 19:10	0°♿08'04		retrograde		15364 Mar 01 12:34	15°♿02'23	
	15363 Mar 26 23:42	30°♿♿		evening set		15364 Mar 08 08:17	12°♿52'58	
min. Earth dist.	15363 Mar 30 13:58	26°♿52'49	0.63533 AU	min. Earth dist.		15364 Mar 12 03:06	10°♿00'57	0.61382 AU
inferior conj	15363 Apr 02 08:25	24°♿03'38	-0°19'26	inferior conj		15364 Mar 15 05:53	7°♿12'51	-1°37'02
minimum elong	15363 Apr 02 09:02	24°♿02'04	0°19'28	minimum elong		15364 Mar 15 09:21	7°♿05'00	1°35'39
asc. node	15363 Apr 03 08:45	23°♿02'09		asc. node		15364 Mar 20 06:11	3°♿17'10	
morning rise	15363 Apr 09 01:22	18°♿47'29		morning rise		15364 Mar 22 13:35	2°♿14'46	
direct	15363 Apr 11 11:53	18°♿18'20		direct		15364 Mar 24 17:24	1°♿54'43	
morning max el	15363 Apr 17 22:17	21°♿35'25	17°46'55	morning max el		15364 Mar 31 15:05	5°♿23'02	17°50'51
	15363 Apr 24 10:53	0°♿		morning set		15364 Apr 16 07:25	29°♿44'27	
morning set	15363 May 04 10:44	16°♿34'44				15364 Apr 16 10:53	0°♿	
desc. node	15363 May 06 01:41	19°♿21'09		desc. node		15364 Apr 21 22:21	9°♿47'12	
	15363 May 12 08:56	0°♿						
				superior conj		15364 Apr 27 07:35	19°♿09'10	-0°42'33
superior conj	15363 May 17 04:04	7°♿54'32	-1°20'53	minimum elong		15364 Apr 27 03:42	18°♿52'30	0°42'35
minimum elong	15363 May 16 20:26	7°♿23'25	1°20'45			15364 May 03 19:15	0°♿	
max. Earth dist.	15363 May 22 22:08	17°♿09'35	1.44889 AU	max. Earth dist.		15364 May 04 13:40	1°♿15'12	1.43366 AU
	15363 May 31 03:26	0°♿		evening rise		15364 May 11 06:30	11°♿56'38	
evening rise	15363 Jun 01 13:02	2°♿08'57				15364 May 23 04:49	0°♿	
	15363 Jun 20 09:55	0°♿		evening max el		15364 Jun 11 23:42	25°♿53'07	21°42'16
evening max el	15363 Jun 30 03:26	12°♿00'51	20°29'36	asc. node		15364 Jun 16 03:50	29°♿25'18	
asc. node	15363 Jun 30 06:54	12°♿09'28				15364 Jun 17 02:20	0°♿	
retrograde	15363 Jul 08 04:08	16°♿36'39		retrograde		15364 Jun 21 02:37	1°♿12'24	
evening set	15363 Jul 12 06:59	15°♿00'16				15364 Jun 24 18:44	30°♿♿	
inferior conj	15363 Jul 17 13:02	8°♿54'55	3°08'40	evening set		15364 Jun 25 16:28	29°♿19'04	
minimum elong	15363 Jul 17 13:27	8°♿53'30	3°07'53	inferior conj		15364 Jun 30 22:13	23°♿03'08	3°07'39
min. Earth dist.	15363 Jul 18 05:52	7°♿57'06	0.68463 AU	minimum elong		15364 Jun 30 21:39	23°♿05'03	3°06'44
morning rise	15363 Jul 22 19:36	2°♿32'33		min. Earth dist.		15364 Jul 01 01:39	22°♿51'08	0.68998 AU
direct	15363 Jul 28 06:03	0°♿09'54		morning rise		15364 Jul 06 02:40	16°♿46'38	
desc. node	15363 Aug 02 00:39	1°♿38'12		direct		15364 Jul 11 00:45	14°♿40'20	
morning max el	15363 Aug 08 07:54	6°♿47'02	24°00'21	desc. node		15364 Jul 18 21:58	18°♿38'10	
	15363 Aug 26 09:58	0°♿		morning max el		15364 Jul 20 20:04	20°♿27'17	22°31'15
morning set	15363 Sep 12 14:12	27°♿11'24				15364 Jul 28 23:12	0°♿	
	15363 Sep 14 05:20	0°♿				15364 Aug 18 14:44	0°♿	
max. Earth dist.	15363 Sep 16 07:45	3°♿41'07	1.38501 AU	morning set		15364 Aug 23 10:05	7°♿40'43	
				max. Earth dist.		15364 Aug 28 08:15	15°♿49'53	1.40876 AU
superior conj	15363 Sep 23 18:20	17°♿20'51	-0°23'09	superior conj		15364 Sep 05 04:42	29°♿30'03	-0°59'22
minimum elong	15363 Sep 23 19:58	17°♿28'33	0°22'41	minimum elong		15364 Sep 05 09:22	29°♿50'59	0°58'44
asc. node	15363 Sep 26 08:22	22°♿18'11				15364 Sep 05 11:22	0°♿	
	15363 Sep 30 06:47	0°♿		asc. node		15364 Sep 12 04:57	12°♿23'22	
evening rise	15363 Oct 02 15:20	4°♿38'42		evening rise		15364 Sep 15 07:05	18°♿11'50	
	15363 Oct 17 16:23	0°♿				15364 Sep 21 16:46	0°♿	
evening max el	15363 Oct 19 00:15	1°♿25'34	18°59'16	evening max el		15364 Oct 01 05:02	13°♿45'40	18°21'06
retrograde	15363 Oct 27 19:32	5°♿51'32		retrograde		15364 Oct 08 18:42	17°♿36'38	
desc. node	15363 Oct 28 21:09	5°♿47'50		evening set		15364 Oct 10 19:32	17°♿20'37	
evening set	15363 Oct 29 16:40	5°♿40'12		desc. node		15364 Oct 14 18:32	15°♿28'54	
inferior conj	15363 Nov 07 00:53	1°♿23'42	-2°54'00	inferior conj		15364 Oct 18 10:35	12°♿43'04	-1°10'31
minimum elong	15363 Nov 06 17:41	1°♿36'15	2°50'31	minimum elong		15364 Oct 18 07:54	12°♿48'32	1°08'52
	15363 Nov 09 00:45	30°♿♿		min. Earth dist.		15364 Oct 21 16:44	10°♿04'34	0.58341 AU
min. Earth dist.	15363 Nov 09 22:03	29°♿23'37	0.56363 AU	morning rise		15364 Oct 25 16:47	7°♿22'57	
morning rise	15363 Nov 14 15:55	26°♿40'48		direct		15364 Nov 01 00:25	5°♿38'21	
direct	15363 Nov 20 09:56	25°♿23'05		morning max el		15364 Nov 15 07:36	13°♿15'20	27°19'01
	15363 Dec 01 13:06	0°♿				15364 Nov 28 14:39	0°♿	
morning max el	15363 Dec 04 13:12	2°♿37'37	26°05'08	asc. node		15364 Dec 09 06:01	18°♿13'49	
asc. node	15363 Dec 23 08:58	28°♿59'38				15364 Dec 15 02:35	0°♿	
	15363 Dec 23 22:13	0°♿		morning set		15364 Dec 16 02:02	2°♿04'20	
morning set	15364 Jan 01 17:33	17°♿39'21						
	15364 Jan 07 08:02	0°♿						
				superior conj		15364 Dec 22 22:55	17°♿12'14	1°35'52
superior conj	15364 Jan 08 11:26	2°♿32'40	1°37'56	minimum elong		15364 Dec 22 22:02	17°♿07'19	1°36'43
minimum elong	15364 Jan 08 11:35	2°♿33'33	1°38'46	max. Earth dist.		15364 Dec 22 21:05	17°♿01'57	1.31062 AU
max. Earth dist.	15364 Jan 09 13:18	4°♿56'27	1.31465 AU			15364 Dec 28 17:32	0°♿	
evening rise	15364 Jan 15 12:16	17°♿50'51		evening rise		15364 Dec 29 17:30	2°♿09'04	

desc. node	15365 Jan 10 17:10	25° $\approx$ 19'58	superior conj	15365 Dec 07 09:52	1° $\mathfrak{Z}$ 47'01	1°27'49
	15365 Jan 13 12:58	0° $\mathfrak{H}$	minimum elong	15365 Dec 07 08:08	1° $\mathfrak{Z}$ 37'20	1°28'35
evening max el	15365 Jan 28 15:55	19° $\mathfrak{H}$ 28'41 26°48'52	evening rise	15365 Dec 14 02:26	16° $\mathfrak{Z}$ 35'03	
retrograde	15365 Feb 11 16:00	26° $\mathfrak{H}$ 41'26		15365 Dec 20 14:58	0° $\approx$	
evening set	15365 Feb 18 05:11	24° $\mathfrak{H}$ 53'45	desc. node	15365 Dec 28 14:01	14° $\approx$ 00'58	
min. Earth dist.	15365 Feb 22 05:50	22° $\mathfrak{H}$ 14'59 0.59145 AU		15366 Jan 10 00:06	0° $\mathfrak{H}$	
inferior conj	15365 Feb 25 10:45	19° $\mathfrak{H}$ 44'28 -3°04'07	evening max el	15366 Jan 10 10:24	0° $\mathfrak{H}$ 24'47	25°36'02
minimum elong	15365 Feb 25 17:40	19° $\mathfrak{H}$ 30'52 3°01'19	retrograde	15366 Jan 24 08:12	7° $\mathfrak{H}$ 25'11	
morning rise	15365 Mar 05 09:36	15° $\mathfrak{H}$ 07'15	evening set	15366 Jan 30 06:01	6° $\mathfrak{H}$ 04'57	
direct	15365 Mar 07 09:23	14° $\mathfrak{H}$ 52'48	min. Earth dist.	15366 Feb 03 23:11	3° $\mathfrak{H}$ 25'08	0.57066 AU
asc. node	15365 Mar 07 03:37	14° $\mathfrak{H}$ 53'01	inferior conj	15366 Feb 06 19:39	1° $\mathfrak{H}$ 28'54	-4°31'06
morning max el	15365 Mar 15 03:36	18° $\mathfrak{H}$ 43'34 18°13'57	minimum elong	15366 Feb 07 04:52	1° $\mathfrak{H}$ 13'13	4°27'58
	15365 Mar 23 07:54	0° $\mathfrak{Y}$		15366 Feb 09 01:23	30° $\mathfrak{R}$ $\approx$	
morning set	15365 Mar 30 19:25	13° $\mathfrak{Y}$ 35'43	morning rise	15366 Feb 15 06:35	27° $\approx$ 13'14	
desc. node	15365 Apr 08 19:00	0° $\mathfrak{B}$ 19'00	direct	15366 Feb 17 07:37	27° $\approx$ 00'35	
	15365 Apr 08 14:49	0° $\mathfrak{B}$	asc. node	15366 Feb 22 01:03	28° $\approx$ 12'46	
				15366 Feb 24 17:46	0° $\mathfrak{H}$	
superior conj	15365 Apr 09 09:46	1° $\mathfrak{B}$ 25'46 -0°05'04	morning max el	15366 Feb 26 07:40	1° $\mathfrak{H}$ 24'41	18°58'01
minimum elong	15365 Apr 09 09:21	1° $\mathfrak{B}$ 23'52 0°05'24	morning set	15366 Mar 14 17:56	27° $\mathfrak{H}$ 54'02	
behind sun begin	15365 Apr 09 02:15	0° $\mathfrak{B}$ 51'47		15366 Mar 15 19:32	0° $\mathfrak{Y}$	
behind sun end	15365 Apr 09 16:27	1° $\mathfrak{B}$ 55'53				
max. Earth dist.	15365 Apr 17 00:12	14° $\mathfrak{B}$ 42'52 1.41369 AU	superior conj	15366 Mar 23 06:25	14° $\mathfrak{Y}$ 31'41	0°27'57
evening rise	15365 Apr 21 18:05	22° $\mathfrak{B}$ 34'56	minimum elong	15366 Mar 23 08:07	14° $\mathfrak{Y}$ 39'50	0°27'31
	15365 Apr 26 09:37	0° $\mathfrak{II}$	desc. node	15366 Mar 26 15:35	20° $\mathfrak{Y}$ 52'15	
	15365 May 17 05:39	0° $\mathfrak{E}$	max. Earth dist.	15366 Mar 30 06:49	27° $\mathfrak{Y}$ 27'17	1.39122 AU
evening max el	15365 May 25 15:35	9° $\mathfrak{E}$ 45'59 23°02'11		15366 Mar 31 17:27	0° $\mathfrak{B}$	
asc. node	15365 Jun 03 00:53	15° $\mathfrak{E}$ 33'36	evening rise	15366 Apr 03 02:59	4° $\mathfrak{B}$ 08'48	
retrograde	15365 Jun 04 23:06	15° $\mathfrak{E}$ 49'51		15366 Apr 19 12:34	0° $\mathfrak{II}$	
evening set	15365 Jun 10 00:22	13° $\mathfrak{E}$ 41'27	evening max el	15366 May 08 05:26	23° $\mathfrak{II}$ 40'13	24°23'18
inferior conj	15365 Jun 15 08:07	7° $\mathfrak{E}$ 17'06 2°56'04		15366 May 17 07:07	0° $\mathfrak{E}$	
minimum elong	15365 Jun 15 06:43	7° $\mathfrak{E}$ 21'55 2°54'57	retrograde	15366 May 19 16:16	0° $\mathfrak{E}$ 22'19	
min. Earth dist.	15365 Jun 14 22:35	7° $\mathfrak{E}$ 50'10 0.69049 AU	asc. node	15366 May 20 22:02	0° $\mathfrak{E}$ 15'42	
morning rise	15365 Jun 20 13:00	1° $\mathfrak{E}$ 08'00		15366 May 21 22:23	30° $\mathfrak{R}$ $\mathfrak{II}$	
	15365 Jun 22 06:14	30° $\mathfrak{R}$ $\mathfrak{II}$	evening set	15366 May 25 05:03	28° $\mathfrak{II}$ 01'44	
direct	15365 Jun 24 22:41	29° $\mathfrak{II}$ 20'45	min. Earth dist.	15366 May 29 18:27	22° $\mathfrak{II}$ 47'23	0.68623 AU
	15365 Jun 27 19:16	0° $\mathfrak{E}$	inferior conj	15366 May 30 16:48	21° $\mathfrak{II}$ 32'07	2°34'03
morning max el	15365 Jul 03 12:29	4° $\mathfrak{E}$ 17'04 21°07'37	minimum elong	15366 May 30 14:50	21° $\mathfrak{II}$ 38'47	2°32'43
desc. node	15365 Jul 05 19:12	6° $\mathfrak{E}$ 42'36	morning rise	15366 Jun 05 00:43	15° $\mathfrak{II}$ 31'43	
	15365 Jul 22 23:29	0° $\mathfrak{Q}$	direct	15366 Jun 08 22:31	14° $\mathfrak{II}$ 04'24	
morning set	15365 Aug 03 06:17	17° $\mathfrak{Q}$ 10'07	morning max el	15366 Jun 16 11:27	18° $\mathfrak{II}$ 17'01	19°55'16
max. Earth dist.	15365 Aug 10 14:08	28° $\mathfrak{Q}$ 50'32 1.43011 AU	desc. node	15366 Jun 22 16:21	25° $\mathfrak{II}$ 33'57	
	15365 Aug 11 07:11	0° $\mathfrak{np}$		15366 Jun 25 22:40	0° $\mathfrak{E}$	
			morning set	15366 Jul 13 10:46	26° $\mathfrak{E}$ 01'02	
superior conj	15365 Aug 17 18:11	10° $\mathfrak{np}$ 44'56 -1°34'13		15366 Jul 16 00:48	0° $\mathfrak{Q}$	
minimum elong	15365 Aug 18 01:29	11° $\mathfrak{np}$ 15'57 1°33'44	max. Earth dist.	15366 Jul 24 02:24	12° $\mathfrak{Q}$ 37'24	1.44669 AU
	15365 Aug 28 18:05	0° $\mathfrak{Q}$				
evening rise	15365 Aug 29 09:38	1° $\mathfrak{Q}$ 09'36	superior conj	15366 Jul 29 08:05	21° $\mathfrak{Q}$ 00'31	-2°01'31
asc. node	15365 Aug 30 01:34	2° $\mathfrak{Q}$ 20'57	minimum elong	15366 Jul 29 14:58	21° $\mathfrak{Q}$ 28'25	2°01'43
evening max el	15365 Sep 14 16:46	26° $\mathfrak{Q}$ 41'50 18°03'25		15366 Aug 03 19:52	0° $\mathfrak{np}$	
	15365 Sep 19 22:57	0° $\mathfrak{ml}$	evening rise	15366 Aug 11 17:46	13° $\mathfrak{np}$ 18'24	
retrograde	15365 Sep 21 11:12	0° $\mathfrak{ml}$ 10'40	asc. node	15366 Aug 16 22:11	22° $\mathfrak{np}$ 06'10	
	15365 Sep 22 23:48	30° $\mathfrak{R}$ $\mathfrak{Q}$		15366 Aug 21 18:00	0° $\mathfrak{Q}$	
evening set	15365 Sep 23 19:15	29° $\mathfrak{Q}$ 45'53	evening max el	15366 Aug 29 07:25	10° $\mathfrak{Q}$ 03'40	18°04'46
inferior conj	15365 Sep 30 16:56	24° $\mathfrak{Q}$ 48'07 0°17'54	retrograde	15366 Sep 04 16:49	13° $\mathfrak{Q}$ 24'04	
minimum elong	15365 Sep 30 17:31	24° $\mathfrak{Q}$ 46'46 0°17'58	evening set	15366 Sep 07 09:18	12° $\mathfrak{Q}$ 46'57	
desc. node	15365 Oct 01 15:57	23° $\mathfrak{Q}$ 53'27	inferior conj	15366 Sep 13 16:13	7° $\mathfrak{Q}$ 31'01	1°26'04
min. Earth dist.	15365 Oct 03 20:38	21° $\mathfrak{Q}$ 50'31 0.60605 AU	minimum elong	15366 Sep 13 18:19	7° $\mathfrak{Q}$ 25'23	1°25'23
morning rise	15365 Oct 07 12:39	18° $\mathfrak{Q}$ 57'37	min. Earth dist.	15366 Sep 16 10:16	4° $\mathfrak{Q}$ 35'15	0.62870 AU
direct	15365 Oct 14 03:43	16° $\mathfrak{Q}$ 48'08	desc. node	15366 Sep 18 13:24	2° $\mathfrak{Q}$ 32'35	
morning max el	15365 Oct 28 09:45	24° $\mathfrak{Q}$ 40'54 27°55'28	morning rise	15366 Sep 20 01:07	1° $\mathfrak{Q}$ 20'12	
	15365 Nov 02 06:39	0° $\mathfrak{ml}$		15366 Sep 22 04:39	30° $\mathfrak{R}$ $\mathfrak{np}$	
	15365 Nov 21 23:59	0° $\mathfrak{J}$	direct	15366 Sep 26 17:18	28° $\mathfrak{np}$ 52'37	
asc. node	15365 Nov 26 02:58	7° $\mathfrak{J}$ 50'26		15366 Oct 01 13:11	0° $\mathfrak{Q}$	
morning set	15365 Nov 30 05:59	16° $\mathfrak{J}$ 13'06	morning max el	15366 Oct 10 17:27	6° $\mathfrak{Q}$ 52'03	27°53'01
max. Earth dist.	15365 Dec 06 03:57	29° $\mathfrak{J}$ 00'44 1.31204 AU		15366 Oct 28 10:06	0° $\mathfrak{ml}$	
	15365 Dec 06 14:38	0° $\mathfrak{Z}$	asc. node	15366 Nov 12 23:51	27° $\mathfrak{ml}$ 42'52	
			morning set	15366 Nov 14 03:11	0° $\mathfrak{J}$ 00'31	

	15366 Nov 14 03:05	0°♊		asc. node	15367 Oct 30 20:36	17°♍45'05	
max. Earth dist.	15366 Nov 19 06:15	10°♊45'05	1.31903 AU	max. Earth dist.	15367 Nov 02 00:30	22°♍08'46	1.33163 AU
superior conj	15366 Nov 21 18:22	16°♊11'48	1°13'48	superior conj	15367 Nov 05 22:10	0°♊19'50	0°53'47
minimum elong	15366 Nov 21 16:06	15°♊59'25	1°14'23	minimum elong	15367 Nov 05 19:55	0°♊07'49	0°54'10
	15366 Nov 28 01:15	0°♋			15367 Nov 05 18:27	0°♊	
evening rise	15366 Nov 28 13:10	1°♋04'28		evening rise	15367 Nov 12 23:49	15°♊31'37	
	15366 Dec 14 04:03	0°♌			15367 Nov 20 03:23	0°♋	
desc. node	15366 Dec 15 10:57	1°♌50'23		desc. node	15367 Dec 02 07:59	18°♋28'47	
evening max el	15366 Dec 22 21:48	10°♌38'05	23°59'41	evening max el	15367 Dec 04 08:15	20°♋35'08	22°16'38
retrograde	15367 Jan 05 10:56	17°♌21'33		retrograde	15367 Dec 17 01:15	26°♋52'31	
evening set	15367 Jan 10 07:54	16°♌29'58		evening set	15367 Dec 20 14:52	26°♋24'28	
min. Earth dist.	15367 Jan 16 09:18	13°♌31'43	0.55441 AU	min. Earth dist.	15367 Dec 28 15:06	22°♋48'39	0.54539 AU
inferior conj	15367 Jan 18 07:41	12°♌22'14	-5°38'34	inferior conj	15367 Dec 29 03:17	22°♋31'36	-6°00'34
minimum elong	15367 Jan 18 14:36	12°♌11'52	5°36'47	minimum elong	15367 Dec 29 01:54	22°♋33'32	5°59'39
morning rise	15367 Jan 26 23:01	8°♌25'12		morning rise	15368 Jan 06 13:57	18°♋44'24	
direct	15367 Jan 29 10:31	8°♌09'33		direct	15368 Jan 09 22:05	18°♋19'28	
asc. node	15367 Feb 08 22:26	13°♌13'15		morning max el	15368 Jan 21 23:32	24°♋07'58	21°34'40
morning max el	15367 Feb 08 23:07	13°♌14'53	20°04'56	asc. node	15368 Jan 26 19:47	29°♋37'45	
	15367 Feb 20 14:26	0°♌			15368 Jan 27 02:32	0°♌	
morning set	15367 Feb 26 23:24	12°♌28'58		morning set	15368 Feb 11 09:02	27°♌11'48	
					15368 Feb 12 17:01	0°♌	
superior conj	15367 Mar 06 17:06	28°♌14'51	0°54'50	superior conj	15368 Feb 18 13:58	12°♌23'56	1°15'10
minimum elong	15367 Mar 06 19:39	28°♌27'36	0°54'34	minimum elong	15368 Feb 18 16:24	12°♌36'41	1°15'13
	15367 Mar 07 14:12	0°♍		max. Earth dist.	15368 Feb 23 00:50	21°♌30'23	1.34820 AU
max. Earth dist.	15367 Mar 12 13:37	9°♍37'54	1.36868 AU	evening rise	15368 Feb 27 04:13	29°♌34'20	
desc. node	15367 Mar 13 12:10	11°♍23'33			15368 Feb 27 09:39	0°♍	
evening rise	15367 Mar 16 07:31	16°♍32'05		desc. node	15368 Feb 28 08:44	1°♍48'29	
	15367 Mar 24 03:27	0°♎			15368 Mar 16 07:19	0°♎	
	15367 Apr 13 23:17	0°♏		evening max el	15368 Apr 02 08:51	21°♎20'31	26°40'30
evening max el	15367 Apr 20 19:03	7°♏34'06	25°38'32	retrograde	15368 Apr 15 12:10	28°♎46'03	
retrograde	15367 May 03 04:54	14°♏43'36		evening set	15368 Apr 21 21:56	26°♎13'41	
asc. node	15367 May 07 19:14	13°♏17'09		asc. node	15368 Apr 23 16:32	24°♎37'24	
evening set	15367 May 09 04:51	12°♏14'38		min. Earth dist.	15368 Apr 25 22:22	22°♎10'35	0.66401 AU
min. Earth dist.	15367 May 13 11:06	7°♏36'40	0.67735 AU	inferior conj	15368 Apr 27 22:27	19°♎47'43	1°16'41
inferior conj	15367 May 14 22:19	5°♏44'06	2°01'13	minimum elong	15368 Apr 27 20:41	19°♎53'00	1°15'25
minimum elong	15367 May 14 20:08	5°♏51'03	1°59'46	morning rise	15368 May 03 20:34	14°♎09'10	
morning rise	15367 May 20 11:57	29°♎53'45		direct	15368 May 06 20:59	13°♎18'37	
	15367 May 20 08:13	30°♎		morning max el	15368 May 13 06:22	16°♎40'20	18°16'50
direct	15367 May 23 22:37	28°♎45'45			15368 May 23 07:33	0°♏	
	15367 May 27 17:27	0°♏		desc. node	15368 May 26 10:19	4°♏50'58	
morning max el	15367 May 30 17:45	2°♏26'20	18°57'47	morning set	15368 Jun 01 23:44	15°♏16'34	
desc. node	15367 Jun 09 13:23	14°♏59'51			15368 Jun 11 06:39	0°♐	
greatest brilliancy	15367 Jun 13 00:29	20°♏08'47	-0.7m				
	15367 Jun 19 11:08	0°♑		superior conj	15368 Jun 17 10:01	9°♑37'20	-2°06'22
morning set	15367 Jun 22 18:29	5°♑06'30		minimum elong	15368 Jun 17 03:42	9°♑12'41	2°06'59
max. Earth dist.	15367 Jul 06 20:07	26°♑58'25	1.45685 AU	max. Earth dist.	15368 Jun 18 16:34	11°♑36'32	1.45958 AU
	15367 Jul 08 18:29	0°♒			15368 Jun 30 11:59	0°♒	
superior conj	15367 Jul 09 01:19	0°♒26'49	-2°13'52	evening rise	15368 Jul 03 10:51	4°♒36'04	
minimum elong	15367 Jul 09 02:28	0°♒31'22	2°14'43	greatest brilliancy	15368 Jul 13 21:54	20°♒48'03	-0.8m
evening rise	15367 Jul 24 02:37	24°♒27'16			15368 Jul 20 04:32	0°♓	
	15367 Jul 27 12:45	0°♓		asc. node	15368 Jul 20 15:32	0°♓37'50	
asc. node	15367 Aug 03 18:50	11°♓33'50		evening max el	15368 Jul 26 08:16	7°♓30'01	19°00'27
evening max el	15367 Aug 12 21:30	23°♓42'01	18°24'02	retrograde	15368 Aug 02 03:18	11°♓13'55	
retrograde	15367 Aug 19 07:20	27°♓07'32		evening set	15368 Aug 05 14:03	10°♓05'08	
evening set	15367 Aug 22 08:44	26°♓15'25		inferior conj	15368 Aug 11 01:57	4°♓18'55	2°46'35
inferior conj	15367 Aug 28 04:24	20°♓43'25	2°14'46	minimum elong	15368 Aug 11 03:47	4°♓13'02	2°45'47
minimum elong	15367 Aug 28 06:44	20°♓36'28	2°13'55	min. Earth dist.	15368 Aug 12 16:42	2°♓15'11	0.66642 AU
min. Earth dist.	15367 Aug 30 09:17	18°♓07'19	0.64929 AU		15368 Aug 14 13:51	30°♓	
morning rise	15367 Sep 03 03:23	14°♓21'24		morning rise	15368 Aug 16 16:47	27°♓52'50	
desc. node	15367 Sep 05 10:52	12°♓48'37		desc. node	15368 Aug 22 08:20	25°♓16'41	
direct	15367 Sep 09 15:15	11°♓44'39		direct	15368 Aug 22 20:27	25°♓15'42	
morning max el	15367 Sep 23 04:08	19°♓39'27	27°16'00		15368 Sep 01 14:03	0°♓	
	15367 Oct 02 00:27	0°♔		morning max el	15368 Sep 04 15:36	2°♓52'24	26°12'12
	15367 Oct 21 11:00	0°♕			15368 Sep 25 05:48	0°♔	
morning set	15367 Oct 28 14:53	13°♕19'22		morning set	15368 Oct 10 13:56	26°♔02'58	



	15368 Oct 12 16:17	0°♌			15369 Aug 29 10:42	0°♏		
max. Earth dist.	15368 Oct 14 09:04	3°♌16'16	1.34942 AU		15369 Sep 18 04:22	0°♏		
asc. node	15368 Oct 16 17:17	7°♌53'03		morning set	15369 Sep 22 20:22	8°♏02'00		
				max. Earth dist.	15369 Sep 26 09:30	14°♏24'28	1.37132 AU	
superior conj	15368 Oct 19 18:49	14°♌05'07	0°27'55					
minimum elong	15368 Oct 19 17:19	13°♌57'23	0°28'12	superior conj	15369 Oct 03 05:14	27°♏20'08	-0°03'19	
evening rise	15368 Oct 27 08:28	29°♌51'58		minimum elong	15369 Oct 03 05:25	27°♏21'04	0°02'57	
	15368 Oct 27 10:01	0°♏		behind sun begin	15369 Oct 02 22:56	26°♏49'18		
	15368 Nov 14 06:28	0°♏		behind sun end	15369 Oct 03 11:55	27°♏52'54		
evening max el	15368 Nov 15 03:29	0°♏54'04	20°43'54	asc. node	15369 Oct 03 13:56	28°♏02'43		
desc. node	15368 Nov 18 05:06	3°♏32'36			15369 Oct 04 13:44	0°♌		
retrograde	15368 Nov 26 11:30	6°♏32'03		evening rise	15369 Oct 11 12:52	13°♌59'31		
evening set	15368 Nov 28 22:03	6°♏17'34			15369 Oct 19 22:05	0°♏		
inferior conj	15368 Dec 07 18:25	2°♏24'18	-5°21'44	evening max el	15369 Oct 28 13:04	11°♏59'37	19°31'05	
minimum elong	15368 Dec 07 09:26	2°♏37'12	5°19'00	desc. node	15369 Nov 05 02:19	16°♏36'53		
min. Earth dist.	15368 Dec 08 20:38	1°♏46'35	0.54541 AU	retrograde	15369 Nov 07 05:48	16°♏50'42		
	15368 Dec 12 03:16	30°♏♏		evening set	15369 Nov 09 03:50	16°♏40'10		
morning rise	15368 Dec 15 20:49	28°♏28'57		inferior conj	15369 Nov 17 19:44	12°♏34'53	-3°54'25	
direct	15368 Dec 20 05:38	27°♏48'03		minimum elong	15369 Nov 17 10:21	12°♏49'54	3°50'26	
	15368 Dec 27 21:35	0°♏		min. Earth dist.	15369 Nov 20 05:20	11°♏02'42	0.55466 AU	
morning max el	15369 Jan 02 11:59	4°♏16'05	23°21'08	morning rise	15369 Nov 25 14:52	8°♏12'17		
asc. node	15369 Jan 12 17:03	17°♏08'19		direct	15369 Nov 30 22:13	7°♏09'03		
	15369 Jan 20 00:50	0°♏		morning max el	15369 Dec 14 20:55	14°♏09'37	25°09'35	
morning set	15369 Jan 25 20:42	11°♏56'20			15369 Dec 27 06:54	0°♏		
				asc. node	15369 Dec 30 14:14	5°♏28'58		
superior conj	15369 Feb 01 17:55	26°♏50'35	1°28'57	morning set	15370 Jan 10 08:32	26°♏37'20		
minimum elong	15369 Feb 01 19:40	27°♏00'03	1°29'22		15370 Jan 11 21:53	0°♏		
	15369 Feb 03 05:13	0°♏						
max. Earth dist.	15369 Feb 04 19:14	3°♏21'31	1.33140 AU	superior conj	15370 Jan 17 02:27	11°♏27'30	1°36'25	
evening rise	15369 Feb 09 13:41	13°♏07'09		minimum elong	15370 Jan 17 03:14	11°♏31'46	1°37'08	
desc. node	15369 Feb 14 05:19	22°♏02'53		max. Earth dist.	15370 Jan 18 20:47	15°♏20'07	1.31922 AU	
	15369 Feb 18 15:51	0°♏		evening rise	15370 Jan 24 08:50	27°♏03'10		
	15369 Mar 11 08:43	0°♏			15370 Jan 25 19:32	0°♏		
evening max el	15369 Mar 15 22:05	4°♏49'23	27°21'48	desc. node	15370 Feb 01 01:56	12°♏01'42		
retrograde	15369 Mar 29 13:13	12°♏20'34			15370 Feb 11 23:21	0°♏		
evening set	15369 Apr 05 06:13	9°♏51'08		evening max el	15370 Feb 26 09:15	17°♏49'47	27°35'33	
min. Earth dist.	15369 Apr 09 02:20	6°♏19'56	0.64673 AU	retrograde	15370 Mar 12 07:10	25°♏17'53		
asc. node	15369 Apr 10 13:53	4°♏44'15		evening set	15370 Mar 19 03:16	22°♏59'00		
inferior conj	15369 Apr 11 14:41	3°♏36'31	0°19'28	min. Earth dist.	15370 Mar 22 21:27	19°♏54'36	0.62636 AU	
minimum elong	15369 Apr 11 14:08	3°♏38'00	0°18'50	inferior conj	15370 Mar 25 20:03	17°♏03'38	-0°50'52	
	15369 Apr 15 05:54	30°♏♏		minimum elong	15370 Mar 25 21:46	16°♏59'29	0°50'20	
morning rise	15369 Apr 18 00:03	28°♏11'44		asc. node	15370 Mar 28 11:18	14°♏37'28		
direct	15369 Apr 20 15:13	27°♏35'50		morning rise	15370 Apr 01 19:08	11°♏55'00		
	15369 Apr 26 00:29	0°♏		direct	15370 Apr 04 02:24	11°♏30'18		
morning max el	15369 Apr 26 22:59	0°♏51'18	17°52'51	morning max el	15370 Apr 10 16:43	14°♏51'03	17°46'19	
desc. node	15369 May 13 07:08	24°♏59'52			15370 Apr 21 07:30	0°♏		
morning set	15369 May 14 08:36	26°♏45'48		morning set	15370 Apr 26 18:01	9°♏24'47		
	15369 May 16 07:19	0°♏		desc. node	15370 Apr 30 03:52	15°♏21'24		
superior conj	15369 May 28 03:15	19°♏16'18	-1°40'52	superior conj	15370 May 08 17:11	29°♏54'09	-1°04'52	
minimum elong	15369 May 27 18:30	18°♏41'24	1°40'53	minimum elong	15370 May 08 11:01	29°♏28'31	1°04'46	
max. Earth dist.	15369 Jun 01 12:33	26°♏13'00	1.45478 AU		15370 May 08 18:35	0°♏		
	15369 Jun 03 22:31	0°♏		max. Earth dist.	15370 May 15 05:46	10°♏32'38	1.44310 AU	
evening rise	15369 Jun 13 01:07	14°♏04'21		evening rise	15370 May 23 12:51	23°♏34'01		
	15369 Jun 23 13:47	0°♏			15370 May 27 17:56	0°♏		
greatest brilliancy	15369 Jun 27 17:08	6°♏05'18	-0.6m		15370 Jun 17 21:41	0°♏		
asc. node	15369 Jul 07 12:20	19°♏09'14		evening max el	15370 Jun 22 13:17	5°♏14'35	20°59'17	
evening max el	15369 Jul 09 13:45	21°♏21'44	19°52'56	asc. node	15370 Jun 24 09:14	6°♏56'58		
retrograde	15369 Jul 17 01:51	25°♏36'05		retrograde	15370 Jul 01 00:52	10°♏08'38		
evening set	15369 Jul 20 22:33	24°♏09'54		evening set	15370 Jul 05 08:13	8°♏25'08		
inferior conj	15369 Jul 26 05:55	18°♏11'03	3°04'11	inferior conj	15370 Jul 10 13:51	2°♏15'05	3°09'34	
minimum elong	15369 Jul 26 06:53	18°♏07'48	3°03'25	minimum elong	15370 Jul 10 13:51	2°♏15'06	3°08'44	
min. Earth dist.	15369 Jul 27 06:38	16°♏47'45	0.67930 AU	min. Earth dist.	15370 Jul 11 01:00	1°♏36'23	0.68752 AU	
morning rise	15369 Jul 31 14:48	11°♏46'05			15370 Jul 12 05:13	30°♏♏		
direct	15369 Aug 06 07:53	9°♏16'16		morning rise	15370 Jul 15 19:12	25°♏54'44		
desc. node	15369 Aug 09 05:45	9°♏49'10		direct	15370 Jul 21 00:27	23°♏38'21		
morning max el	15369 Aug 18 02:34	16°♏19'43	24°50'58	desc. node	15370 Jul 27 03:07	26°♏02'40		

morning max el	15370 Jul 31 13:30	29°☿55'15	23°22'04	desc. node	15371 Jul 14 00:24	13°☿32'26	
	15370 Jul 31 15:22	0°♊			15371 Jul 27 05:33	0°♊	
	15370 Aug 23 05:49	0°♊		morning set	15371 Aug 15 15:19	29°♊09'21	
morning set	15370 Sep 04 05:51	19°♊06'30			15371 Aug 16 03:59	0°♊	
max. Earth dist.	15370 Sep 08 07:42	26°♊02'54	1.39524 AU	max. Earth dist.	15371 Aug 21 10:16	8°♊34'18	1.41834 AU
	15370 Sep 10 13:53	0°♋					
superior conj	15370 Sep 16 01:39	9°♋56'33	-0°38'25	superior conj	15371 Aug 29 03:41	21°♊44'24	-1°14'38
minimum elong	15370 Sep 16 04:30	10°♋09'48	0°37'51	minimum elong	15371 Aug 29 09:38	22°♊10'30	1°14'01
asc. node	15370 Sep 20 10:32	18°♋10'44			15371 Sep 02 19:03	0°♋	
evening rise	15370 Sep 25 10:13	27°♋47'45		asc. node	15371 Sep 07 07:09	8°♋13'35	
	15370 Sep 26 13:38	0°♌		evening rise	15371 Sep 08 20:55	11°♋07'31	
evening max el	15370 Oct 11 12:02	23°♌55'05	18°40'29		15371 Sep 19 16:56	0°♌	
retrograde	15370 Oct 19 17:23	28°♌04'16		evening max el	15371 Sep 24 20:23	6°♌32'34	18°11'12
evening set	15370 Oct 21 15:28	27°♌51'29		retrograde	15371 Oct 02 00:20	10°♌12'09	
desc. node	15370 Oct 22 23:39	27°♌28'13		evening set	15371 Oct 04 04:11	9°♌52'44	
inferior conj	15370 Oct 29 16:45	23°♌26'30	-2°08'58	desc. node	15371 Oct 09 21:03	6°♌28'08	
minimum elong	15370 Oct 29 11:30	23°♌36'16	2°06'11	inferior conj	15371 Oct 11 11:36	5°♌06'14	-0°30'37
min. Earth dist.	15370 Nov 01 19:38	21°♌07'47	0.57150 AU	minimum elong	15371 Oct 11 10:31	5°♌08'35	0°29'44
morning rise	15370 Nov 06 04:15	18°♌27'31		min. Earth dist.	15371 Oct 14 17:50	2°♌17'15	0.59290 AU
direct	15370 Nov 12 05:04	16°♌57'59			15371 Oct 17 19:35	30°♌	
morning max el	15370 Nov 26 10:26	24°♌23'08	26°40'43	morning rise	15371 Oct 18 13:31	29°♋32'26	
	15370 Dec 01 14:04	0°♍		direct	15371 Oct 25 01:15	27°♋36'46	
asc. node	15370 Dec 17 11:20	24°♍26'38			15371 Nov 01 15:27	0°♍	
	15370 Dec 20 09:01	0°♎		morning max el	15371 Nov 08 08:07	5°♌20'29	27°39'25
morning set	15370 Dec 25 18:43	11°♎09'10			15371 Nov 26 15:55	0°♍	
				asc. node	15371 Dec 04 08:20	13°♍51'40	
superior conj	15371 Jan 01 13:24	26°♎07'34	1°37'47	morning set	15371 Dec 10 01:30	25°♍27'58	
minimum elong	15371 Jan 01 13:07	26°♎05'56	1°38'39		15371 Dec 12 04:11	0°♎	
max. Earth dist.	15371 Jan 02 03:11	27°♎24'35	1.31221 AU	max. Earth dist.	15371 Dec 16 11:11	9°♎29'15	1.31057 AU
	15371 Jan 03 07:05	0°♏					
evening rise	15371 Jan 08 11:02	11°♏14'57		superior conj	15371 Dec 17 00:53	10°♎45'55	1°33'10
	15371 Jan 18 00:39	0°♐		minimum elong	15371 Dec 16 23:37	10°♎38'48	1°34'01
desc. node	15371 Jan 18 22:39	1°♐37'36		evening rise	15371 Dec 23 18:06	25°♎37'34	
evening max el	15371 Feb 08 15:59	0°♑08'24	27°16'11		15371 Dec 25 19:34	0°♏	
	15371 Feb 08 12:28	0°♑		desc. node	15372 Jan 05 19:27	20°♏42'06	
retrograde	15371 Feb 22 16:20	7°♑27'09			15372 Jan 11 20:55	0°♐	
evening set	15371 Mar 01 09:57	5°♑26'30		evening max el	15372 Jan 21 15:32	11°♐35'29	26°21'39
min. Earth dist.	15371 Mar 05 06:25	2°♑41'17	0.60422 AU	retrograde	15372 Feb 04 14:49	18°♐42'19	
inferior conj	15371 Mar 08 10:58	29°♐58'38	-2°13'09	evening set	15372 Feb 10 22:42	17°♐06'02	
minimum elong	15371 Mar 08 15:53	29°♐48'07	2°11'07	min. Earth dist.	15372 Feb 15 04:56	14°♐28'47	0.58229 AU
	15371 Mar 08 10:19	30°♑		inferior conj	15372 Feb 18 07:39	12°♐11'18	-3°41'55
asc. node	15371 Mar 15 08:44	25°♐21'52		minimum elong	15372 Feb 18 15:52	11°♐56'09	3°38'45
morning rise	15371 Mar 16 01:11	25°♐08'53		morning rise	15372 Feb 26 12:14	7°♐42'59	
direct	15371 Mar 18 02:45	24°♐51'42		direct	15372 Feb 28 11:52	7°♐29'41	
morning max el	15371 Mar 25 08:09	28°♐28'38	17°58'11	asc. node	15372 Mar 01 06:09	7°♐40'38	
	15371 Mar 26 18:33	0°♑		morning max el	15372 Mar 07 17:29	11°♐33'19	18°30'00
morning set	15371 Apr 09 21:56	22°♑54'38			15372 Mar 19 22:32	0°♑	
	15371 Apr 13 18:54	0°♒		morning set	15372 Mar 23 14:54	6°♑59'07	
desc. node	15371 Apr 17 00:32	5°♒50'29					
superior conj	15371 Apr 20 06:43	11°♒36'18	-0°26'18	superior conj	15372 Apr 01 17:16	24°♑15'16	0°09'37
minimum elong	15371 Apr 20 04:26	11°♒26'16	0°26'27	minimum elong	15372 Apr 01 17:56	24°♑18'19	0°09'14
max. Earth dist.	15371 Apr 27 19:07	24°♒23'09	1.42570 AU	behind sun begin	15372 Apr 01 12:04	23°♑51'14	
	15371 May 01 05:40	0°♓		behind sun end	15372 Apr 01 23:47	24°♑45'21	
evening rise	15371 May 03 13:13	3°♓42'07		desc. node	15372 Apr 02 21:10	26°♑23'25	
	15371 May 21 02:12	0°♈			15372 Apr 04 20:58	0°♒	
evening max el	15371 Jun 05 07:37	19°♈07'45	22°15'44	max. Earth dist.	15372 Apr 09 04:14	7°♒34'32	1.40437 AU
asc. node	15371 Jun 11 06:14	23°♈46'30		evening rise	15372 Apr 13 09:51	14°♒44'24	
retrograde	15371 Jun 14 22:34	24°♈45'49			15372 Apr 23 00:00	0°♓	
evening set	15371 Jun 19 17:14	22°♈45'59			15372 May 15 01:46	0°♈	
inferior conj	15371 Jun 24 23:36	16°♈26'25	3°04'00	evening max el	15372 May 17 22:28	3°♈01'47	23°36'55
minimum elong	15371 Jun 24 22:40	16°♈29'39	3°03'00	asc. node	15372 May 28 03:19	9°♈20'42	
min. Earth dist.	15371 Jun 24 21:33	16°♈33'32	0.69088 AU	retrograde	15372 May 28 17:39	9°♈22'15	
morning rise	15371 Jun 30 03:56	10°♈12'52		evening set	15372 Jun 02 23:58	7°♈08'08	
direct	15371 Jul 04 20:49	8°♈14'13		inferior conj	15372 Jun 08 09:12	0°♈41'19	2°48'00
morning max el	15371 Jul 14 02:57	13°♈38'48	21°54'28	minimum elong	15372 Jun 08 07:32	0°♈47'05	2°46'47
				min. Earth dist.	15372 Jun 07 18:11	1°♈32'51	0.68935 AU
					15372 Jun 08 21:17	30°♒	

morning rise	15372 Jun 13 15:05	24° $\Pi$ 36'00		morning max el	15373 Jun 09 00:14	11° $\Pi$ 38'40	19°28'58
direct	15372 Jun 17 19:42	22° $\Pi$ 57'12		desc. node	15373 Jun 16 18:42	21° $\Pi$ 06'37	
morning max el	15372 Jun 25 21:58	27° $\Pi$ 33'07	20°35'10	greatest brilliancy	15373 Jun 21 15:36	28° $\Pi$ 04'37	-0.7m
	15372 Jun 28 05:08	0° $\mathfrak{C}$			15373 Jun 22 22:52	0° $\mathfrak{C}$	
desc. node	15372 Jun 29 21:36	1° $\mathfrak{C}$ 58'43		morning set	15373 Jul 04 06:34	17° $\mathfrak{C}$ 09'17	
	15372 Jul 19 17:00	0° $\Omega$			15373 Jul 12 13:51	0° $\Omega$	
morning set	15372 Jul 25 03:10	8° $\Omega$ 18'01		max. Earth dist.	15373 Jul 16 10:35	6° $\Omega$ 03'07	1.45188 AU
max. Earth dist.	15372 Aug 02 19:34	21° $\Omega$ 58'38	1.43792 AU				
	15372 Aug 07 17:57	0° $\Pi$		superior conj	15373 Jul 20 11:31	12° $\Omega$ 26'51	-2°08'59
				minimum elong	15373 Jul 20 16:37	12° $\Omega$ 47'09	2°09'31
superior conj	15372 Aug 09 07:13	2° $\Pi$ 34'08	-1°47'09		15373 Jul 31 07:06	0° $\Pi$	
minimum elong	15372 Aug 09 14:55	3° $\Pi$ 06'08	1°46'55	evening rise	15373 Aug 03 15:10	5° $\Pi$ 31'58	
evening rise	15372 Aug 21 16:18	23° $\Pi$ 46'27		asc. node	15373 Aug 11 00:25	17° $\Pi$ 45'49	
asc. node	15372 Aug 24 03:46	28° $\Pi$ 06'43			15373 Aug 19 05:20	0° $\Omega$	
	15372 Aug 25 05:45	0° $\Omega$		evening max el	15373 Aug 22 00:30	3° $\Omega$ 10'33	18°10'41
evening max el	15372 Sep 07 09:46	19° $\Omega$ 40'40	18°01'41	retrograde	15373 Aug 28 09:08	6° $\Omega$ 31'51	
retrograde	15372 Sep 13 23:09	23° $\Omega$ 04'25		evening set	15373 Aug 31 05:15	5° $\Omega$ 48'46	
evening set	15372 Sep 16 10:42	22° $\Omega$ 34'44		inferior conj	15373 Sep 06 06:56	0° $\Omega$ 25'41	1°48'56
inferior conj	15372 Sep 23 01:39	17° $\Omega$ 28'36	0°49'21	minimum elong	15373 Sep 06 09:16	0° $\Omega$ 19'09	1°48'09
minimum elong	15372 Sep 23 03:05	17° $\Omega$ 25'03	0°49'00		15373 Sep 06 16:04	30° $\mathfrak{R}$ $\Pi$	
desc. node	15372 Sep 25 18:30	14° $\Omega$ 46'56		min. Earth dist.	15373 Sep 08 19:38	27° $\Pi$ 36'13	0.63782 AU
min. Earth dist.	15372 Sep 26 01:42	14° $\Omega$ 29'38	0.61582 AU	morning rise	15373 Sep 12 11:25	24° $\Pi$ 08'42	
morning rise	15372 Sep 29 16:44	11° $\Omega$ 28'10		desc. node	15373 Sep 12 15:56	24° $\Pi$ 00'05	
direct	15372 Oct 06 08:49	9° $\Omega$ 10'23		direct	15373 Sep 19 02:10	21° $\Pi$ 36'07	
morning max el	15372 Oct 20 13:06	17° $\Omega$ 06'47	27°59'08	morning max el	15373 Oct 02 22:38	29° $\Pi$ 35'49	27°41'01
	15372 Oct 31 06:24	0° $\mathfrak{M}$			15373 Oct 03 08:12	0° $\Omega$	
	15372 Nov 18 09:06	0° $\mathfrak{J}$			15373 Oct 25 05:29	0° $\mathfrak{M}$	
asc. node	15372 Nov 20 05:15	3° $\mathfrak{J}$ 35'49		morning set	15373 Nov 06 20:21	23° $\mathfrak{M}$ 04'23	
morning set	15372 Nov 23 02:50	9° $\mathfrak{J}$ 28'13		asc. node	15373 Nov 07 02:05	23° $\mathfrak{M}$ 33'07	
max. Earth dist.	15372 Nov 28 16:44	21° $\mathfrak{J}$ 23'40	1.31437 AU		15373 Nov 10 05:47	0° $\mathfrak{J}$	
				max. Earth dist.	15373 Nov 11 15:57	2° $\mathfrak{J}$ 59'22	1.32371 AU
superior conj	15372 Nov 30 10:59	25° $\mathfrak{J}$ 16'43	1°22'36				
minimum elong	15372 Nov 30 08:58	25° $\mathfrak{J}$ 05'34	1°23'17	superior conj	15373 Nov 14 17:44	9° $\mathfrak{J}$ 34'49	1°06'02
	15372 Dec 02 14:01	0° $\mathfrak{Z}$		minimum elong	15373 Nov 14 15:23	9° $\mathfrak{J}$ 22'09	1°06'31
evening rise	15372 Dec 07 04:00	10° $\mathfrak{Z}$ 05'23		evening rise	15373 Nov 21 14:53	24° $\mathfrak{J}$ 34'01	
	15372 Dec 17 04:14	0° $\approx$			15373 Nov 24 04:25	0° $\mathfrak{Z}$	
desc. node	15372 Dec 22 16:20	9° $\approx$ 03'08		desc. node	15373 Dec 09 13:18	26° $\mathfrak{Z}$ 24'54	
evening max el	15373 Jan 02 06:24	22° $\approx$ 10'12	24°56'56		15373 Dec 12 13:17	0° $\approx$	
retrograde	15373 Jan 16 01:10	29° $\approx$ 04'12		evening max el	15373 Dec 14 16:01	2° $\approx$ 11'06	23°15'28
evening set	15373 Jan 21 13:51	27° $\approx$ 55'59		retrograde	15373 Dec 27 22:37	8° $\approx$ 45'54	
min. Earth dist.	15373 Jan 26 18:27	25° $\approx$ 10'54	0.56303 AU	evening set	15374 Jan 01 06:24	8° $\approx$ 05'19	
inferior conj	15373 Jan 29 07:26	23° $\approx$ 33'19	-5°03'38	min. Earth dist.	15374 Jan 08 02:19	4° $\approx$ 53'11	0.54946 AU
minimum elong	15373 Jan 29 16:27	23° $\approx$ 18'51	5°00'54	inferior conj	15374 Jan 09 11:23	4° $\approx$ 05'25	-5°54'56
morning rise	15373 Feb 06 21:28	19° $\approx$ 26'35		minimum elong	15374 Jan 09 15:19	3° $\approx$ 59'44	5°53'48
direct	15373 Feb 09 01:45	19° $\approx$ 13'17		morning rise	15374 Jan 18 01:42	0° $\approx$ 14'20	
asc. node	15373 Feb 16 03:32	21° $\approx$ 44'24			15374 Jan 19 13:00	30° $\mathfrak{R}$ $\mathfrak{Z}$	
morning max el	15373 Feb 18 16:35	23° $\approx$ 53'40	19°23'44	direct	15374 Jan 20 20:39	29° $\mathfrak{Z}$ 55'46	
	15373 Feb 23 17:41	0° $\mathfrak{H}$			15374 Jan 22 03:53	0° $\approx$	
morning set	15373 Mar 07 16:43	21° $\mathfrak{H}$ 25'38		morning max el	15374 Feb 01 01:48	5° $\approx$ 19'51	20°40'38
	15373 Mar 11 23:25	0° $\mathfrak{Y}$		asc. node	15374 Feb 03 00:54	7° $\approx$ 22'44	
					15374 Feb 17 00:35	0° $\mathfrak{H}$	
superior conj	15373 Mar 15 20:24	7° $\mathfrak{Y}$ 38'43	0°40'09	morning set	15374 Feb 20 00:12	6° $\mathfrak{H}$ 04'26	
minimum elong	15373 Mar 15 22:36	7° $\mathfrak{Y}$ 49'27	0°39'45				
desc. node	15373 Mar 20 17:45	16° $\mathfrak{Y}$ 56'31		superior conj	15374 Feb 27 11:48	21° $\mathfrak{H}$ 34'08	1°04'16
max. Earth dist.	15373 Mar 22 10:29	20° $\mathfrak{Y}$ 03'36	1.38144 AU	minimum elong	15374 Feb 27 14:24	21° $\mathfrak{H}$ 47'22	1°04'07
evening rise	15373 Mar 26 03:22	26° $\mathfrak{Y}$ 40'04			15374 Mar 03 17:01	0° $\mathfrak{Y}$	
	15373 Mar 28 01:37	0° $\mathfrak{B}$		max. Earth dist.	15374 Mar 04 18:11	2° $\mathfrak{Y}$ 02'15	1.35948 AU
	15373 Apr 16 12:25	0° $\Pi$		desc. node	15374 Mar 07 14:18	7° $\mathfrak{Y}$ 25'40	
evening max el	15373 Apr 30 11:54	16° $\Pi$ 56'15	24°56'24	evening rise	15374 Mar 08 15:10	9° $\mathfrak{Y}$ 20'54	
retrograde	15373 May 12 09:03	23° $\Pi$ 51'45			15374 Mar 20 17:22	0° $\mathfrak{B}$	
asc. node	15373 May 15 00:28	23° $\Pi$ 22'13			15374 Apr 12 06:21	0° $\Pi$	
evening set	15373 May 18 02:48	21° $\Pi$ 26'44		evening max el	15374 Apr 13 01:25	0° $\Pi$ 47'27	26°07'01
min. Earth dist.	15373 May 22 12:51	16° $\Pi$ 28'15	0.68300 AU	retrograde	15374 Apr 25 19:44	8° $\Pi$ 06'10	
inferior conj	15373 May 23 16:47	14° $\Pi$ 56'05	2°21'30	evening set	15374 May 01 23:59	5° $\Pi$ 34'55	
minimum elong	15373 May 23 14:40	15° $\Pi$ 03'05	2°20'06	asc. node	15374 May 01 21:42	5° $\Pi$ 39'37	
morning rise	15373 May 29 02:49	9° $\Pi$ 00'02		min. Earth dist.	15374 May 06 03:30	1° $\Pi$ 12'00	0.67210 AU
direct	15373 Jun 01 19:44	7° $\Pi$ 41'17			15374 May 07 02:45	30° $\mathfrak{R}$ $\mathfrak{B}$	

inferior conj	15374 May 07 20:16	29°♄05'17	1°43'49	minimum elong	15375 Apr 21 16:02	13°♄07'39	0°52'59
minimum elong	15374 May 07 18:11	29°♄11'47	1°42'25	morning rise	15375 Apr 27 19:57	7°♄30'27	
morning rise	15374 May 13 13:10	23°♄19'45		direct	15375 Apr 30 16:15	6°♄46'30	
direct	15374 May 16 19:15	22°♄19'37		morning max el	15375 May 07 00:01	10°♄04'21	18°04'28
morning max el	15374 May 23 09:27	25°♄51'02	18°38'21		15375 May 21 01:41	0°♄	
	15374 May 27 01:33	0°♄		desc. node	15375 May 21 12:33	0°♄43'48	
desc. node	15374 Jun 03 15:40	10°♄44'20		morning set	15375 May 25 14:40	7°♄21'19	
morning set	15374 Jun 13 21:45	26°♄37'41			15375 Jun 08 18:26	0°♄	
	15374 Jun 16 01:30	0°♄					
max. Earth dist.	15374 Jun 29 05:14	20°♄31'42	1.45891 AU	superior conj	15375 Jun 09 09:29	0°♄59'09	-1°57'23
				minimum elong	15375 Jun 09 01:20	0°♄27'08	1°57'44
superior conj	15374 Jun 29 23:14	21°♄41'52	-2°13'12	max. Earth dist.	15375 Jun 12 01:30	5°♄09'55	1.45847 AU
minimum elong	15374 Jun 29 20:58	21°♄33'03	2°14'02	evening rise	15375 Jun 25 12:23	26°♄01'29	
	15374 Jul 05 06:37	0°♄			15375 Jun 28 02:19	0°♄	
evening rise	15374 Jul 15 13:19	16°♄14'25		greatest brilliancy	15375 Jul 08 01:01	15°♄07'31	-0.7m
greatest brilliancy	15374 Jul 22 17:49	27°♄39'14	-0.9m	asc. node	15375 Jul 15 17:49	25°♄56'09	
	15374 Jul 24 05:41	0°♄			15375 Jul 19 04:45	0°♄	
asc. node	15374 Jul 28 21:05	7°♄04'43		evening max el	15375 Jul 19 22:16	0°♄44'51	19°20'58
evening max el	15374 Aug 05 13:29	16°♄54'12	18°37'27	retrograde	15375 Jul 26 23:33	4°♄39'56	
retrograde	15374 Aug 12 02:19	20°♄26'01		evening set	15375 Jul 30 14:31	3°♄23'47	
evening set	15374 Aug 15 07:33	19°♄27'10			15375 Aug 03 01:42	30°♄	
inferior conj	15374 Aug 20 23:32	13°♄49'10	2°30'06	inferior conj	15375 Aug 05 00:09	27°♄32'18	2°55'37
minimum elong	15374 Aug 21 01:44	13°♄42'25	2°29'16	minimum elong	15375 Aug 05 01:38	27°♄27'23	2°54'50
min. Earth dist.	15374 Aug 22 22:34	11°♄25'12	0.65710 AU	min. Earth dist.	15375 Aug 06 08:56	25°♄44'55	0.67251 AU
morning rise	15374 Aug 26 18:48	7°♄24'31		morning rise	15375 Aug 10 12:11	21°♄06'22	
desc. node	15374 Aug 30 13:23	5°♄11'30		direct	15375 Aug 16 11:43	18°♄31'17	
direct	15374 Sep 02 03:39	4°♄46'13		desc. node	15375 Aug 17 10:49	18°♄34'52	
morning max el	15374 Sep 15 09:51	12°♄35'47	26°51'27	morning max el	15375 Aug 28 20:55	25°♄55'08	25°39'07
	15374 Sep 29 10:05	0°♄			15375 Sep 01 14:58	0°♄	
	15374 Oct 17 20:10	0°♄			15375 Sep 22 22:54	0°♄	
morning set	15374 Oct 21 03:09	6°♄09'57		morning set	15375 Oct 03 19:39	18°♄35'51	
asc. node	15374 Oct 24 22:50	13°♄38'49		max. Earth dist.	15375 Oct 07 10:19	25°♄18'13	1.35837 AU
max. Earth dist.	15374 Oct 25 05:50	14°♄13'56	1.33857 AU		15375 Oct 09 21:02	0°♄	
				asc. node	15375 Oct 11 19:31	3°♄48'12	
superior conj	15374 Oct 29 18:53	23°♄34'40	0°43'31				
minimum elong	15374 Oct 29 16:50	23°♄23'57	0°43'50	superior conj	15375 Oct 13 11:39	7°♄08'38	0°15'17
	15374 Nov 01 19:40	0°♄		minimum elong	15375 Oct 13 10:44	7°♄04'03	0°15'35
evening rise	15374 Nov 06 00:57	8°♄59'13		behind sun begin	15375 Oct 13 09:08	6°♄55'59	
	15374 Nov 16 23:10	0°♄		behind sun end	15375 Oct 13 12:20	7°♄12'08	
evening max el	15374 Nov 26 05:19	12°♄14'31	21°35'14	evening rise	15375 Oct 21 08:07	23°♄15'12	
desc. node	15374 Nov 26 10:22	12°♄26'51			15375 Oct 24 16:01	0°♄	
retrograde	15374 Dec 08 09:55	18°♄16'24		evening max el	15375 Nov 08 06:33	22°♄52'20	20°10'13
evening set	15374 Dec 11 10:23	17°♄55'42		desc. node	15375 Nov 13 07:33	26°♄43'07	
inferior conj	15374 Dec 20 03:26	14°♄04'41	-5°51'31	retrograde	15375 Nov 18 21:37	28°♄09'55	
minimum elong	15374 Dec 19 22:10	14°♄12'05	5°50'03	evening set	15375 Nov 21 01:10	27°♄57'57	
min. Earth dist.	15374 Dec 20 08:01	13°♄58'17	0.54419 AU	inferior conj	15375 Nov 29 21:16	24°♄01'01	-4°48'55
morning rise	15374 Dec 28 10:31	10°♄16'10		minimum elong	15375 Nov 29 11:14	24°♄15'58	4°45'22
direct	15375 Jan 01 05:07	9°♄45'06		min. Earth dist.	15375 Dec 01 14:22	22°♄59'46	0.54834 AU
morning max el	15375 Jan 13 20:27	15°♄52'02	22°18'33	morning rise	15375 Dec 07 20:30	19°♄56'21	
asc. node	15375 Jan 20 22:13	24°♄18'03		direct	15375 Dec 12 15:43	19°♄06'24	
	15375 Jan 24 14:59	0°♄		morning max el	15375 Dec 26 06:00	25°♄48'42	24°08'05
morning set	15375 Feb 04 10:57	20°♄49'01			15375 Dec 30 04:22	0°♄	
	15375 Feb 08 18:03	0°♄		asc. node	15376 Jan 07 19:28	12°♄11'47	
					15376 Jan 17 07:54	0°♄	
superior conj	15375 Feb 11 12:02	5°♄52'06	1°21'47	morning set	15376 Jan 19 22:55	5°♄32'35	
minimum elong	15375 Feb 11 14:15	6°♄03'46	1°22'00				
max. Earth dist.	15375 Feb 15 08:10	13°♄52'19	1.34051 AU	superior conj	15376 Jan 26 18:13	20°♄23'38	1°32'51
evening rise	15375 Feb 19 17:46	22°♄38'01		minimum elong	15376 Jan 26 19:35	20°♄31'04	1°33'26
desc. node	15375 Feb 22 10:53	27°♄47'13		max. Earth dist.	15376 Jan 29 05:59	25°♄47'01	1.32568 AU
	15375 Feb 23 15:38	0°♄			15376 Jan 31 05:39	0°♄	
	15375 Mar 14 10:25	0°♄		evening rise	15376 Feb 03 07:44	6°♄21'36	
evening max el	15375 Mar 26 15:15	14°♄28'24	27°01'08	desc. node	15376 Feb 09 07:31	17°♄55'44	
retrograde	15375 Apr 09 00:32	21°♄57'39			15376 Feb 16 05:59	0°♄	
evening set	15375 Apr 15 13:36	19°♄25'58		evening max el	15376 Mar 08 04:05	27°♄47'11	27°31'26
asc. node	15375 Apr 18 19:00	16°♄23'28			15376 Mar 10 14:56	0°♄	
min. Earth dist.	15375 Apr 19 12:04	15°♄36'33	0.65706 AU	retrograde	15376 Mar 21 22:30	5°♄17'02	
inferior conj	15375 Apr 21 17:24	13°♄03'43	0°54'02	evening set	15376 Mar 28 17:23	2°♄51'27	

	15376 Apr 01 01:15	30° $\Upsilon$			15377 Feb 09 09:55	0° $\Upsilon$	
min. Earth dist.	15376 Apr 01 12:28	29° $\Upsilon$ 32'16	0.63840 AU	evening max el	15377 Feb 18 13:37	10° $\Upsilon$ 30'37	27°31'27
inferior conj	15376 Apr 04 05:25	26° $\Upsilon$ 44'14	-0°08'43	retrograde	15377 Mar 04 12:36	17° $\Upsilon$ 54'51	
minimum elong	15376 Apr 04 05:41	26° $\Upsilon$ 43'31	0°08'57	evening set	15377 Mar 11 08:41	15° $\Upsilon$ 42'39	
transit middle	15376 Apr 04 05:41	26° $\Upsilon$ 43'31	0°08'57	min. Earth dist.	15377 Mar 15 03:08	12° $\Upsilon$ 47'50	0.61710 AU
transit begin	15376 Apr 04 03:05	26° $\Upsilon$ 50'16		inferior conj	15377 Mar 18 05:03	9° $\Upsilon$ 58'23	-1°24'30
transit end	15376 Apr 04 08:17	26° $\Upsilon$ 36'46		minimum elong	15377 Mar 18 08:02	9° $\Upsilon$ 51'31	1°23'21
asc. node	15376 Apr 04 16:23	26° $\Upsilon$ 15'50		asc. node	15377 Mar 22 13:49	6° $\Upsilon$ 23'02	
morning rise	15376 Apr 10 20:19	21° $\Upsilon$ 25'44		morning rise	15377 Mar 25 10:30	4° $\Upsilon$ 57'37	
direct	15376 Apr 13 08:02	20° $\Upsilon$ 54'53		direct	15377 Mar 27 15:09	4° $\Upsilon$ 36'29	
morning max el	15376 Apr 19 17:25	24° $\Upsilon$ 11'04	17°47'53	morning max el	15377 Apr 03 10:37	8° $\Upsilon$ 02'23	17°49'07
	15376 Apr 24 12:07	0° $\Upsilon$			15377 Apr 17 20:09	0° $\Upsilon$	
morning set	15376 May 06 10:40	19° $\Upsilon$ 22'25		morning set	15377 Apr 19 04:39	2° $\Upsilon$ 24'48	
desc. node	15376 May 07 09:21	20° $\Upsilon$ 58'42		desc. node	15377 Apr 24 06:05	11° $\Upsilon$ 23'50	
	15376 May 12 17:53	0° $\Upsilon$					
				superior conj	15377 Apr 30 10:34	22° $\Upsilon$ 05'45	-0°48'27
superior conj	15376 May 19 10:31	11° $\Upsilon$ 00'22	-1°26'22	minimum elong	15377 Apr 30 06:04	21° $\Upsilon$ 46'41	0°48'25
minimum elong	15376 May 19 02:28	10° $\Upsilon$ 27'45	1°26'16		15377 May 05 04:08	0° $\Upsilon$	
max. Earth dist.	15376 May 24 21:04	19° $\Upsilon$ 42'48	1.45062 AU	max. Earth dist.	15377 May 07 13:07	3° $\Upsilon$ 52'39	1.43625 AU
	15376 May 31 10:56	0° $\Upsilon$		evening rise	15377 May 14 15:03	15° $\Upsilon$ 07'11	
evening rise	15376 Jun 03 23:30	5° $\Upsilon$ 25'13			15377 May 24 10:15	0° $\Upsilon$	
	15376 Jun 20 12:08	0° $\Upsilon$		evening max el	15377 Jun 14 22:21	28° $\Upsilon$ 29'58	21°30'50
asc. node	15376 Jul 01 14:40	14° $\Upsilon$ 10'43			15377 Jun 16 12:22	0° $\Upsilon$	
evening max el	15376 Jul 02 01:19	14° $\Upsilon$ 37'44	20°19'40	asc. node	15377 Jun 18 11:35	1° $\Upsilon$ 35'28	
retrograde	15376 Jul 09 22:31	19° $\Upsilon$ 07'41		retrograde	15377 Jun 23 21:15	3° $\Upsilon$ 42'50	
evening set	15376 Jul 13 23:47	17° $\Upsilon$ 33'51		evening set	15377 Jun 28 09:23	1° $\Upsilon$ 51'59	
inferior conj	15376 Jul 19 06:05	11° $\Upsilon$ 30'03	3°07'52		15377 Jun 30 06:36	30° $\Upsilon$	
minimum elong	15376 Jul 19 06:38	11° $\Upsilon$ 28'09	3°07'05	inferior conj	15377 Jul 03 15:01	25° $\Upsilon$ 37'25	3°08'31
min. Earth dist.	15376 Jul 20 00:54	10° $\Upsilon$ 25'39	0.68338 AU	minimum elong	15377 Jul 03 14:36	25° $\Upsilon$ 38'51	3°07'37
morning rise	15376 Jul 24 13:10	5° $\Upsilon$ 07'00		min. Earth dist.	15377 Jul 03 20:25	25° $\Upsilon$ 18'33	0.68948 AU
direct	15376 Jul 30 01:21	2° $\Upsilon$ 42'26		morning rise	15377 Jul 08 19:37	19° $\Upsilon$ 19'49	
desc. node	15376 Aug 03 08:13	3° $\Upsilon$ 53'39		direct	15377 Jul 13 19:31	17° $\Upsilon$ 10'52	
morning max el	15376 Aug 10 07:42	9° $\Upsilon$ 26'38	24°13'40	desc. node	15377 Jul 21 05:33	20° $\Upsilon$ 42'05	
	15376 Aug 26 13:50	0° $\Upsilon$		morning max el	15377 Jul 23 19:32	23° $\Upsilon$ 05'54	22°44'19
morning set	15376 Sep 14 17:44	0° $\Upsilon$ 13'17			15377 Jul 29 21:02	0° $\Upsilon$	
	15376 Sep 14 14:39	0° $\Upsilon$			15377 Aug 19 21:50	0° $\Upsilon$	
max. Earth dist.	15376 Sep 18 09:35	6° $\Upsilon$ 38'47	1.38145 AU	morning set	15377 Aug 26 17:13	10° $\Upsilon$ 52'01	
				max. Earth dist.	15377 Aug 31 09:14	18° $\Upsilon$ 38'50	1.40530 AU
superior conj	15376 Sep 25 16:41	20° $\Upsilon$ 09'04	-0°17'49		15377 Sep 06 21:27	0° $\Upsilon$	
minimum elong	15376 Sep 25 17:53	20° $\Upsilon$ 14'52	0°17'21				
asc. node	15376 Sep 27 16:10	23° $\Upsilon$ 58'03		superior conj	15377 Sep 08 05:46	2° $\Upsilon$ 25'31	-0°53'52
	15376 Sep 30 17:58	0° $\Upsilon$		minimum elong	15377 Sep 08 09:57	2° $\Upsilon$ 44'28	0°53'14
evening rise	15376 Oct 04 09:58	7° $\Upsilon$ 16'19		asc. node	15377 Sep 14 12:46	14° $\Upsilon$ 04'10	
	15376 Oct 17 06:44	0° $\Upsilon$		evening rise	15377 Sep 18 03:17	20° $\Upsilon$ 53'42	
evening max el	15376 Oct 20 22:11	4° $\Upsilon$ 19'40	19°06'45		15377 Sep 23 00:05	0° $\Upsilon$	
retrograde	15376 Oct 29 22:49	8° $\Upsilon$ 52'01		evening max el	15377 Oct 04 01:35	16° $\Upsilon$ 33'45	18°25'28
desc. node	15376 Oct 30 04:48	8° $\Upsilon$ 51'49		retrograde	15377 Oct 11 19:04	20° $\Upsilon$ 29'06	
evening set	15376 Oct 31 19:52	8° $\Upsilon$ 41'03		evening set	15377 Oct 13 19:00	20° $\Upsilon$ 14'07	
inferior conj	15376 Nov 09 06:18	4° $\Upsilon$ 27'28	-3°10'05	desc. node	15377 Oct 17 02:09	18° $\Upsilon$ 50'25	
minimum elong	15376 Nov 08 22:27	4° $\Upsilon$ 40'52	3°06'24	inferior conj	15377 Oct 21 12:45	15° $\Upsilon$ 39'53	-1°25'28
min. Earth dist.	15376 Nov 12 00:52	2° $\Upsilon$ 34'20	0.56112 AU	minimum elong	15377 Oct 21 09:25	15° $\Upsilon$ 46'30	1°23'32
morning rise	15376 Nov 16 22:26	29° $\Upsilon$ 49'57		min. Earth dist.	15377 Oct 24 18:28	13° $\Upsilon$ 05'49	0.58020 AU
	15376 Nov 16 13:14	30° $\Upsilon$		morning rise	15377 Oct 28 20:21	10° $\Upsilon$ 24'58	
direct	15376 Nov 22 13:48	28° $\Upsilon$ 36'12		direct	15377 Nov 04 02:25	8° $\Upsilon$ 44'08	
	15376 Nov 28 14:19	0° $\Upsilon$		morning max el	15377 Nov 18 09:22	16° $\Upsilon$ 18'33	27°10'16
morning max el	15376 Dec 06 16:13	5° $\Upsilon$ 47'13	25°51'32		15377 Nov 29 14:43	0° $\Upsilon$	
	15376 Dec 24 05:30	0° $\Upsilon$		asc. node	15377 Dec 11 13:43	20° $\Upsilon$ 00'01	
asc. node	15376 Dec 24 16:39	0° $\Upsilon$ 49'38			15377 Dec 16 14:35	0° $\Upsilon$	
morning set	15377 Jan 03 10:18	20° $\Upsilon$ 10'25		morning set	15377 Dec 18 19:19	4° $\Upsilon$ 37'41	
	15377 Jan 07 21:41	0° $\Upsilon$					
				superior conj	15377 Dec 25 15:29	19° $\Upsilon$ 42'41	1°36'33
superior conj	15377 Jan 10 04:03	5° $\Upsilon$ 02'24	1°37'43	minimum elong	15377 Dec 25 14:46	19° $\Upsilon$ 38'37	1°37'26
minimum elong	15377 Jan 10 04:22	5° $\Upsilon$ 04'11	1°38'32	max. Earth dist.	15377 Dec 25 17:41	19° $\Upsilon$ 54'57	1.31082 AU
max. Earth dist.	15377 Jan 11 10:11	7° $\Upsilon$ 49'28	1.31566 AU		15377 Dec 30 06:37	0° $\Upsilon$	
evening rise	15377 Jan 17 06:11	20° $\Upsilon$ 24'47		evening rise	15378 Jan 01 10:43	4° $\Upsilon$ 41'45	
	15377 Jan 22 00:27	0° $\Upsilon$		desc. node	15378 Jan 13 00:55	27° $\Upsilon$ 09'31	
desc. node	15377 Jan 26 04:11	7° $\Upsilon$ 45'36			15378 Jan 14 17:16	0° $\Upsilon$	

evening max el	15378 Jan 31 17:23	22° $\text{H}$ 27'41	26°57'06	minimum elong	15378 Dec 10 00:58	4° $\text{Z}$ 09'25	1°30'13
retrograde	15378 Feb 14 17:47	29° $\text{H}$ 42'26		evening rise	15378 Dec 16 19:11	19° $\text{Z}$ 06'58	
evening set	15378 Feb 21 08:18	27° $\text{H}$ 51'11			15378 Dec 22 00:52	0° $\approx$	
min. Earth dist.	15378 Feb 25 07:32	25° $\text{H}$ 11'08	0.59470 AU	desc. node	15378 Dec 30 21:45	15° $\approx$ 57'03	
inferior conj	15378 Feb 28 12:41	22° $\text{H}$ 36'48	-2°50'36		15379 Jan 10 03:41	0° $\text{H}$	
minimum elong	15378 Feb 28 19:06	22° $\text{H}$ 23'55	2°47'58	evening max el	15379 Jan 13 13:15	3° $\text{H}$ 31'53	25°48'49
morning rise	15378 Mar 08 09:22	17° $\text{H}$ 56'22		retrograde	15379 Jan 27 11:41	10° $\text{H}$ 33'58	
asc. node	15378 Mar 09 11:15	17° $\text{H}$ 44'37		evening set	15379 Feb 02 12:19	9° $\text{H}$ 09'36	
direct	15378 Mar 10 09:25	17° $\text{H}$ 41'22		min. Earth dist.	15379 Feb 07 02:15	6° $\text{H}$ 30'55	0.57354 AU
morning max el	15378 Mar 18 00:04	21° $\text{H}$ 28'19	18°09'12	inferior conj	15379 Feb 10 00:42	4° $\text{H}$ 28'47	-4°18'39
	15378 Mar 24 12:09	0° $\text{Y}$		minimum elong	15379 Feb 10 09:46	4° $\text{H}$ 13'01	4°15'26
morning set	15378 Apr 02 14:44	16° $\text{Y}$ 11'19		morning rise	15379 Feb 18 10:11	0° $\text{H}$ 09'44	
	15378 Apr 10 01:19	0° $\text{B}$			15379 Feb 19 11:28	30° $\text{R}\approx$	
desc. node	15378 Apr 11 02:44	1° $\text{B}$ 55'16		direct	15379 Feb 20 10:32	29° $\approx$ 57'04	
					15379 Feb 21 09:21	0° $\text{H}$	
superior conj	15378 Apr 12 09:37	4° $\text{B}$ 14'11	-0°10'33	asc. node	15379 Feb 24 08:40	0° $\text{H}$ 47'58	
minimum elong	15378 Apr 12 08:45	4° $\text{B}$ 10'17	0°10'50	morning max el	15379 Mar 01 05:37	4° $\text{H}$ 15'45	18°50'00
behind sun begin	15378 Apr 12 03:06	3° $\text{B}$ 44'56		morning set	15379 Mar 17 11:55	0° $\text{Y}$ 26'17	
behind sun end	15378 Apr 12 14:24	4° $\text{B}$ 35'34			15379 Mar 17 06:32	0° $\text{Y}$	
max. Earth dist.	15378 Apr 20 00:12	17° $\text{B}$ 26'02	1.41691 AU				
evening rise	15378 Apr 24 23:37	25° $\text{B}$ 37'44		superior conj	15379 Mar 26 03:46	17° $\text{Y}$ 13'18	0°23'18
	15378 Apr 27 17:16	0° $\text{II}$		minimum elong	15379 Mar 26 05:14	17° $\text{Y}$ 20'17	0°22'52
	15378 May 18 05:16	0° $\text{E}$		desc. node	15379 Mar 28 23:20	22° $\text{Y}$ 28'30	
evening max el	15378 May 28 14:47	12° $\text{E}$ 22'50	22°50'00		15379 Apr 02 03:27	0° $\text{B}$	
asc. node	15378 Jun 05 08:36	17° $\text{E}$ 55'05		max. Earth dist.	15379 Apr 02 07:21	0° $\text{B}$ 17'16	1.39468 AU
retrograde	15378 Jun 07 18:06	18° $\text{E}$ 20'14		evening rise	15379 Apr 06 05:22	7° $\text{B}$ 03'39	
evening set	15378 Jun 12 17:37	16° $\text{E}$ 14'03			15379 Apr 20 17:22	0° $\text{II}$	
min. Earth dist.	15378 Jun 17 17:21	10° $\text{E}$ 17'10	0.69078 AU	evening max el	15379 May 11 04:53	26° $\text{II}$ 17'15	24°11'22
inferior conj	15378 Jun 18 00:56	9° $\text{E}$ 50'50	2°58'29		15379 May 15 10:42	0° $\text{E}$	
minimum elong	15378 Jun 17 23:39	9° $\text{E}$ 55'15	2°57'24	retrograde	15379 May 22 11:45	2° $\text{E}$ 53'50	
morning rise	15378 Jun 23 05:35	3° $\text{E}$ 40'25		asc. node	15379 May 23 05:42	2° $\text{E}$ 51'25	
direct	15378 Jun 27 17:07	1° $\text{E}$ 50'08		evening set	15379 May 27 22:51	0° $\text{E}$ 34'54	
morning max el	15378 Jul 06 11:02	6° $\text{E}$ 53'43	21°19'20		15379 May 28 14:07	30° $\text{R}\text{II}$	
desc. node	15378 Jul 08 02:48	8° $\text{E}$ 37'48		min. Earth dist.	15379 Jun 01 13:29	25° $\text{II}$ 15'05	0.68724 AU
	15378 Jul 24 04:32	0° $\text{O}$		inferior conj	15379 Jun 02 09:54	24° $\text{II}$ 05'58	2°38'04
morning set	15378 Aug 06 16:36	20° $\text{O}$ 29'01		minimum elong	15379 Jun 02 08:00	24° $\text{II}$ 12'26	2°36'46
	15378 Aug 12 15:38	0° $\text{P}$		morning rise	15379 Jun 07 17:12	18° $\text{II}$ 04'10	
max. Earth dist.	15378 Aug 13 13:53	1° $\text{P}$ 30'36	1.42720 AU	direct	15379 Jun 11 16:47	16° $\text{II}$ 33'49	
				morning max el	15379 Jun 19 08:53	20° $\text{II}$ 52'01	20°05'06
superior conj	15378 Aug 20 22:33	13° $\text{P}$ 48'41	-1°29'15	desc. node	15379 Jun 24 23:57	27° $\text{II}$ 22'53	
minimum elong	15378 Aug 21 05:34	14° $\text{P}$ 18'44	1°28'44		15379 Jun 26 23:35	0° $\text{E}$	
	15378 Aug 30 03:26	0° $\text{A}$		morning set	15379 Jul 16 22:27	29° $\text{E}$ 23'04	
evening rise	15378 Sep 01 08:02	3° $\text{A}$ 56'59			15379 Jul 17 08:03	0° $\text{O}$	
asc. node	15378 Sep 01 09:22	4° $\text{A}$ 02'57		max. Earth dist.	15379 Jul 27 01:32	15° $\text{O}$ 12'28	1.44465 AU
evening max el	15378 Sep 17 12:33	29° $\text{A}$ 25'10	18°04'52				
	15378 Sep 18 03:09	0° $\text{M}$		superior conj	15379 Aug 01 15:58	24° $\text{O}$ 13'12	-1°58'10
retrograde	15378 Sep 24 09:06	2° $\text{M}$ 56'17		minimum elong	15379 Aug 01 23:15	24° $\text{O}$ 42'51	1°58'15
evening set	15378 Sep 26 16:02	2° $\text{M}$ 33'00			15379 Aug 05 04:28	0° $\text{P}$	
	15378 Sep 30 23:28	30° $\text{R}\text{A}$		evening rise	15379 Aug 14 19:15	16° $\text{P}$ 14'03	
inferior conj	15378 Oct 03 16:10	27° $\text{A}$ 38'12	0°05'46	asc. node	15379 Aug 19 05:58	23° $\text{P}$ 50'25	
minimum elong	15378 Oct 03 16:22	27° $\text{A}$ 37'44	0°06'02		15379 Aug 22 22:21	0° $\text{A}$	
transit middle	15378 Oct 03 16:22	27° $\text{A}$ 37'44	0°06'02	evening max el	15379 Sep 01 02:59	12° $\text{A}$ 43'51	18°03'23
transit begin	15378 Oct 03 13:17	27° $\text{A}$ 44'51		retrograde	15379 Sep 07 13:03	16° $\text{A}$ 04'34	
transit end	15378 Oct 03 19:27	27° $\text{A}$ 30'36		evening set	15379 Sep 10 04:17	15° $\text{A}$ 29'25	
desc. node	15378 Oct 03 23:33	27° $\text{A}$ 21'06		inferior conj	15379 Sep 16 13:10	10° $\text{A}$ 15'56	1°17'01
min. Earth dist.	15378 Oct 06 20:51	24° $\text{A}$ 42'05	0.60261 AU	minimum elong	15379 Sep 16 15:08	10° $\text{A}$ 10'45	1°16'25
morning rise	15378 Oct 10 13:31	21° $\text{A}$ 51'47		min. Earth dist.	15379 Sep 19 08:53	7° $\text{A}$ 18'50	0.62542 AU
direct	15378 Oct 17 03:59	19° $\text{A}$ 45'34		desc. node	15379 Sep 20 20:58	5° $\text{A}$ 51'53	
morning max el	15378 Oct 31 10:18	27° $\text{A}$ 36'20	27°52'35	morning rise	15379 Sep 22 23:39	4° $\text{A}$ 07'36	
	15378 Nov 02 17:44	0° $\text{M}$		direct	15379 Sep 29 16:02	1° $\text{A}$ 42'21	
	15378 Nov 23 08:24	0° $\text{J}$		morning max el	15379 Oct 13 17:18	9° $\text{A}$ 41'01	27°55'47
asc. node	15378 Nov 28 10:41	9° $\text{J}$ 33'45			15379 Oct 29 13:40	0° $\text{M}$	
morning set	15378 Dec 03 00:01	18° $\text{J}$ 49'02		asc. node	15379 Nov 15 07:33	29° $\text{M}$ 24'07	
	15378 Dec 08 04:06	0° $\text{Z}$			15379 Nov 15 14:44	0° $\text{J}$	
max. Earth dist.	15378 Dec 09 00:53	1° $\text{Z}$ 55'16	1.31145 AU	morning set	15379 Nov 16 22:18	2° $\text{J}$ 39'40	
				max. Earth dist.	15379 Nov 22 04:07	13° $\text{J}$ 42'22	1.31765 AU
superior conj	15378 Dec 10 02:36	4° $\text{Z}$ 18'29	1°29'26				

superior conj	15379 Nov 24 11:32	18° $\text{♊}$ 44'50	1°16'20	minimum elong	15380 Nov 07 13:51	2° $\text{♊}$ 42'53	0°57'36
minimum elong	15379 Nov 24 09:19	18° $\text{♊}$ 32'41	1°16'55	evening rise	15380 Nov 14 16:29	18° $\text{♊}$ 03'21	
	15379 Nov 29 14:02	0° $\text{♊}$			15380 Nov 20 11:58	0° $\text{♊}$	
evening rise	15379 Dec 01 05:44	3° $\text{♋}$ 36'00		desc. node	15380 Dec 03 15:39	20° $\text{♋}$ 45'10	
	15379 Dec 15 03:49	0° $\text{♋}$		evening max el	15380 Dec 06 11:11	23° $\text{♋}$ 45'53	22°31'38
desc. node	15379 Dec 17 18:39	3° $\text{♌}$ 55'06			15380 Dec 17 10:19	0° $\text{♌}$	
evening max el	15379 Dec 26 01:23	13° $\text{♌}$ 49'48	24°14'54	retrograde	15380 Dec 19 08:07	0° $\text{♌}$ 08'24	
retrograde	15380 Jan 08 16:07	20° $\text{♌}$ 35'56			15380 Dec 21 06:35	30° $\text{♌}$	
evening set	15380 Jan 13 17:32	19° $\text{♌}$ 40'07		evening set	15380 Dec 23 02:30	29° $\text{♋}$ 37'20	
min. Earth dist.	15380 Jan 19 13:03	16° $\text{♌}$ 45'56	0.55646 AU	min. Earth dist.	15380 Dec 30 19:08	26° $\text{♋}$ 08'14	0.54615 AU
inferior conj	15380 Jan 21 15:38	15° $\text{♌}$ 29'01	-5°30'40	inferior conj	15380 Dec 31 13:00	25° $\text{♋}$ 43'04	-6°01'04
minimum elong	15380 Jan 21 23:19	15° $\text{♌}$ 17'18	5°28'38	minimum elong	15380 Dec 31 13:04	25° $\text{♋}$ 42'58	6°00'12
morning rise	15380 Jan 30 06:57	11° $\text{♌}$ 29'38		morning rise	15381 Jan 09 00:49	21° $\text{♋}$ 55'31	
direct	15380 Feb 01 16:19	11° $\text{♌}$ 14'44		direct	15381 Jan 12 05:19	21° $\text{♋}$ 32'30	
asc. node	15380 Feb 11 06:02	15° $\text{♌}$ 33'29		morning max el	15381 Jan 24 01:43	27° $\text{♋}$ 14'38	21°20'07
morning max el	15380 Feb 11 23:03	16° $\text{♌}$ 13'20	19°53'29		15381 Jan 26 16:17	0° $\text{♌}$	
	15380 Feb 21 21:22	0° $\text{♌}$		asc. node	15381 Jan 28 03:23	1° $\text{♌}$ 46'10	
morning set	15380 Feb 29 16:29	14° $\text{♌}$ 58'56		morning set	15381 Feb 13 01:39	29° $\text{♌}$ 40'59	
	15380 Mar 08 02:17	0° $\text{♌}$			15381 Feb 13 05:17	0° $\text{♌}$	
superior conj	15380 Mar 08 12:34	0° $\text{♍}$ 51'08	0°51'11	superior conj	15381 Feb 20 08:07	14° $\text{♌}$ 57'04	1°12'30
minimum elong	15380 Mar 08 15:03	1° $\text{♍}$ 03'30	0°50'52	minimum elong	15381 Feb 20 10:37	15° $\text{♌}$ 10'03	1°12'30
max. Earth dist.	15380 Mar 14 13:54	12° $\text{♍}$ 32'03	1.37196 AU	max. Earth dist.	15381 Feb 25 00:10	24° $\text{♌}$ 25'50	1.35098 AU
desc. node	15380 Mar 14 19:55	13° $\text{♍}$ 00'03			15381 Feb 27 20:50	0° $\text{♍}$	
evening rise	15380 Mar 18 07:06	19° $\text{♍}$ 19'30		evening rise	15381 Mar 01 01:36	2° $\text{♍}$ 16'26	
	15380 Mar 24 11:40	0° $\text{♍}$		desc. node	15381 Mar 01 16:30	3° $\text{♍}$ 26'17	
	15380 Apr 13 20:23	0° $\text{♍}$			15381 Mar 17 11:32	0° $\text{♍}$	
evening max el	15380 Apr 22 18:26	10° $\text{♍}$ 11'17	25°27'58	evening max el	15381 Apr 05 08:08	23° $\text{♍}$ 59'11	26°32'25
retrograde	15380 May 05 01:03	17° $\text{♍}$ 17'18			15381 Apr 13 04:59	0° $\text{♍}$	
asc. node	15380 May 09 02:53	16° $\text{♍}$ 08'40		retrograde	15381 Apr 18 09:15	1° $\text{♍}$ 23'24	
evening set	15380 May 10 23:28	14° $\text{♍}$ 49'11			15381 Apr 23 02:42	30° $\text{♍}$	
min. Earth dist.	15380 May 15 06:40	10° $\text{♍}$ 06'00	0.67898 AU	evening set	15381 Apr 24 17:43	28° $\text{♍}$ 51'00	
inferior conj	15380 May 16 15:59	8° $\text{♍}$ 18'33	2°06'54	asc. node	15381 Apr 26 00:09	27° $\text{♍}$ 43'35	
minimum elong	15380 May 16 13:49	8° $\text{♍}$ 25'35	2°05'30	min. Earth dist.	15381 Apr 28 18:51	24° $\text{♍}$ 42'58	0.66623 AU
morning rise	15380 May 22 04:36	2° $\text{♍}$ 26'44		inferior conj	15381 Apr 30 17:06	22° $\text{♍}$ 23'52	1°24'15
direct	15380 May 25 16:54	1° $\text{♍}$ 15'57		minimum elong	15381 Apr 30 15:13	22° $\text{♍}$ 29'32	1°22'57
morning max el	15380 Jun 01 14:09	5° $\text{♍}$ 00'19	19°05'22	morning rise	15381 May 06 13:47	16° $\text{♍}$ 43'34	
desc. node	15380 Jun 10 21:01	16° $\text{♍}$ 44'11		direct	15381 May 09 15:38	15° $\text{♍}$ 50'38	
greatest brilliancy	15380 Jun 14 14:06	22° $\text{♍}$ 12'01	-0.7m	morning max el	15381 May 16 02:01	19° $\text{♍}$ 14'26	18°21'55
	15380 Jun 19 17:32	0° $\text{♍}$			15381 May 24 11:18	0° $\text{♍}$	
morning set	15380 Jun 25 04:27	8° $\text{♍}$ 23'15		desc. node	15381 May 28 17:58	6° $\text{♍}$ 32'02	
max. Earth dist.	15380 Jul 08 18:51	29° $\text{♍}$ 30'33	1.45582 AU	morning set	15381 Jun 05 05:48	18° $\text{♍}$ 21'58	
	15380 Jul 09 02:22	0° $\text{♍}$			15381 Jun 12 14:29	0° $\text{♍}$	
superior conj	15380 Jul 11 11:46	3° $\text{♎}$ 45'26	-2°13'14	superior conj	15381 Jun 20 20:44	12° $\text{♍}$ 55'52	-2°08'48
minimum elong	15380 Jul 11 14:05	3° $\text{♎}$ 54'34	2°14'00	minimum elong	15381 Jun 20 15:21	12° $\text{♍}$ 34'52	2°09'30
evening rise	15380 Jul 26 07:52	27° $\text{♎}$ 32'45		max. Earth dist.	15381 Jun 21 15:00	14° $\text{♍}$ 07'06	1.45964 AU
	15380 Jul 27 19:59	0° $\text{♎}$			15381 Jul 01 19:26	0° $\text{♎}$	
asc. node	15380 Aug 05 02:36	13° $\text{♎}$ 21'11		evening rise	15381 Jul 06 19:39	7° $\text{♎}$ 50'06	
evening max el	15380 Aug 14 17:19	26° $\text{♎}$ 20'02	18°19'58	greatest brilliancy	15381 Jul 16 12:08	22° $\text{♎}$ 55'41	-0.8m
retrograde	15380 Aug 21 02:33	29° $\text{♎}$ 44'05			15381 Jul 21 05:21	0° $\text{♎}$	
evening set	15380 Aug 24 02:34	28° $\text{♎}$ 54'20		asc. node	15381 Jul 22 23:19	2° $\text{♎}$ 29'28	
inferior conj	15380 Aug 29 23:40	23° $\text{♎}$ 24'28	2°08'31	evening max el	15381 Jul 29 04:44	10° $\text{♎}$ 07'07	18°53'54
minimum elong	15380 Aug 30 02:02	23° $\text{♎}$ 17'32	2°07'40	retrograde	15381 Aug 04 21:57	13° $\text{♎}$ 47'35	
min. Earth dist.	15380 Sep 01 06:35	20° $\text{♎}$ 44'33	0.64644 AU	evening set	15381 Aug 08 07:13	12° $\text{♎}$ 41'27	
morning rise	15380 Sep 05 00:02	17° $\text{♎}$ 03'29		inferior conj	15381 Aug 13 20:05	6° $\text{♎}$ 57'15	2°42'42
desc. node	15380 Sep 06 18:26	15° $\text{♎}$ 49'43		minimum elong	15381 Aug 13 22:02	6° $\text{♎}$ 51'05	2°41'52
direct	15380 Sep 11 12:43	14° $\text{♎}$ 27'39		min. Earth dist.	15381 Aug 15 12:58	4° $\text{♎}$ 47'58	0.66416 AU
morning max el	15380 Sep 25 03:48	22° $\text{♎}$ 23'59	27°23'25	morning rise	15381 Aug 19 12:00	0° $\text{♎}$ 31'14	
	15380 Oct 01 20:42	0° $\text{♎}$			15381 Aug 20 03:18	30° $\text{♎}$	
	15380 Oct 21 19:38	0° $\text{♎}$		desc. node	15381 Aug 24 15:53	27° $\text{♎}$ 57'46	
morning set	15380 Oct 30 11:36	16° $\text{♎}$ 02'52		direct	15381 Aug 25 17:02	27° $\text{♎}$ 53'34	
asc. node	15380 Nov 01 04:20	19° $\text{♎}$ 24'58			15381 Aug 31 23:08	0° $\text{♎}$	
max. Earth dist.	15380 Nov 03 23:48	25° $\text{♎}$ 09'08	1.32941 AU	morning max el	15381 Sep 07 15:23	5° $\text{♎}$ 34'17	26°22'55
	15380 Nov 06 07:16	0° $\text{♎}$			15381 Sep 26 10:51	0° $\text{♎}$	
superior conj	15380 Nov 07 16:09	2° $\text{♏}$ 55'12	0°57'13	morning set	15381 Oct 13 12:48	28° $\text{♎}$ 52'10	
					15381 Oct 14 03:13	0° $\text{♎}$	

max. Earth dist.	15381 Oct 17 09:43	6°♍17'35	1.34649 AU	superior conj	15382 Oct 06 02:19	0°♍04'43	0°01'45
asc. node	15381 Oct 19 01:04	9°♍32'16		minimum elong	15382 Oct 06 02:11	0°♍04'02	0°02'07
				behind sun begin	15382 Oct 05 19:44	29°♌32'19	
superior conj	15381 Oct 22 14:04	16°♍44'05	0°32'11	behind sun end	15382 Oct 06 08:37	0°♍35'49	
minimum elong	15381 Oct 22 12:24	16°♍35'27	0°32'29		15382 Oct 06 01:22	0°♍	
	15381 Oct 28 22:00	0°♌		evening rise	15382 Oct 14 06:51	16°♍34'58	
evening rise	15381 Oct 30 01:35	2°♌24'43			15382 Oct 21 04:09	0°♌	
	15381 Nov 14 16:08	0°♍		evening max el	15382 Oct 31 12:09	14°♌58'03	19°40'31
evening max el	15381 Nov 18 04:36	3°♍59'17	20°56'33	desc. node	15382 Nov 07 09:57	19°♌28'49	
desc. node	15381 Nov 20 12:45	6°♍04'37		retrograde	15382 Nov 10 10:35	19°♌55'46	
retrograde	15381 Nov 29 18:23	9°♍43'55		evening set	15382 Nov 12 09:36	19°♌45'05	
evening set	15381 Dec 02 07:58	9°♍28'13		inferior conj	15382 Nov 21 02:58	15°♌42'22	-4°09'30
inferior conj	15381 Dec 11 03:51	5°♍35'55	-5°31'21	minimum elong	15382 Nov 20 17:14	15°♌57'39	4°05'33
minimum elong	15381 Dec 10 19:36	5°♍47'40	5°28'58	min. Earth dist.	15382 Nov 23 08:50	14°♌17'55	0.55277 AU
min. Earth dist.	15381 Dec 12 00:39	5°♍06'17	0.54475 AU	morning rise	15382 Nov 28 23:08	11°♌24'46	
morning rise	15381 Dec 19 07:24	1°♍42'56		direct	15382 Dec 04 03:34	10°♌25'01	
direct	15381 Dec 23 12:30	1°♍04'48		morning max el	15382 Dec 18 00:22	17°♌21'14	24°54'03
morning max el	15382 Jan 05 15:34	7°♍27'54	23°04'49		15382 Dec 28 07:36	0°♍	
asc. node	15382 Jan 15 00:41	19°♍07'45		asc. node	15383 Jan 01 21:55	7°♍21'53	
	15382 Jan 21 09:42	0°♌		morning set	15383 Jan 13 01:04	29°♍07'09	
morning set	15382 Jan 28 13:08	14°♌25'27			15383 Jan 13 10:52	0°♌	
superior conj	15382 Feb 04 11:12	29°♌21'35	1°27'15	superior conj	15383 Jan 19 19:14	13°♌57'16	1°35'40
minimum elong	15382 Feb 04 13:05	29°♌31'42	1°27'38	minimum elong	15383 Jan 19 20:10	14°♌02'24	1°36'21
	15382 Feb 04 18:22	0°♌		max. Earth dist.	15383 Jan 21 17:55	18°♌12'52	1.32072 AU
max. Earth dist.	15382 Feb 07 17:19	6°♌15'45	1.33354 AU	evening rise	15383 Jan 27 03:18	29°♌38'17	
evening rise	15382 Feb 12 09:22	15°♌45'15			15383 Jan 27 07:33	0°♌	
desc. node	15382 Feb 16 13:05	23°♌42'34		desc. node	15383 Feb 03 09:44	13°♌44'00	
	15382 Feb 20 00:32	0°♍			15383 Feb 13 02:23	0°♍	
	15382 Mar 12 01:26	0°♌		evening max el	15383 Mar 01 09:14	20°♍36'45	27°35'32
evening max el	15382 Mar 18 21:30	7°♌31'19	27°17'19	retrograde	15383 Mar 15 06:30	28°♍05'33	
retrograde	15382 Apr 01 11:26	15°♌02'41		evening set	15383 Mar 22 02:22	25°♍44'49	
evening set	15382 Apr 08 03:30	12°♌32'22		min. Earth dist.	15383 Mar 25 20:42	22°♍36'41	0.62954 AU
min. Earth dist.	15382 Apr 12 00:07	8°♌56'35	0.64948 AU	inferior conj	15383 Mar 28 17:55	19°♍46'00	-0°39'18
asc. node	15382 Apr 12 21:31	7°♌58'29		minimum elong	15383 Mar 28 19:13	19°♍42'48	0°39'01
inferior conj	15382 Apr 14 10:43	6°♌15'24	0°29'04	asc. node	15383 Mar 30 18:54	17°♍48'48	
minimum elong	15382 Apr 14 09:56	6°♌17'36	0°28'17	morning rise	15383 Apr 04 14:48	14°♍34'38	
morning rise	15382 Apr 20 18:15	0°♌48'22		direct	15383 Apr 06 23:10	14°♍08'27	
direct	15382 Apr 23 10:39	0°♌10'33		morning max el	15383 Apr 13 11:58	17°♍27'46	17°46'08
morning max el	15382 Apr 29 18:14	3°♌26'21	17°55'19		15383 Apr 22 13:58	0°♌	
desc. node	15382 May 15 14:50	26°♌38'32		morning set	15383 Apr 29 16:42	12°♌08'46	
morning set	15382 May 17 10:35	29°♌39'22		desc. node	15383 May 02 11:37	16°♌58'19	
	15382 May 17 15:34	0°♌			15383 May 10 03:46	0°♌	
superior conj	15382 May 31 11:43	22°♌28'00	-1°45'37	superior conj	15383 May 11 22:07	2°♌55'31	-1°10'40
minimum elong	15382 May 31 02:56	21°♌53'07	1°45'43	minimum elong	15383 May 11 15:24	2°♌27'46	1°10'32
max. Earth dist.	15382 Jun 04 10:55	28°♌43'28	1.45596 AU	max. Earth dist.	15383 May 18 04:42	13°♌06'20	1.44527 AU
	15382 Jun 05 06:27	0°♌		evening rise	15383 May 26 22:42	26°♌47'59	
evening rise	15382 Jun 16 11:42	17°♌21'38			15383 May 29 00:53	0°♌	
	15382 Jun 24 19:08	0°♌			15383 Jun 18 18:57	0°♌	
greatest brilliancy	15382 Jun 30 17:30	8°♌48'32	-0.6m	evening max el	15383 Jun 25 11:37	7°♌51'19	20°48'42
asc. node	15382 Jul 09 20:07	21°♌06'25		asc. node	15383 Jun 26 16:59	9°♌01'20	
evening max el	15382 Jul 12 11:08	23°♌58'37	19°44'12	retrograde	15383 Jul 03 19:17	12°♌38'44	
retrograde	15382 Jul 19 20:17	28°♌07'43		evening set	15383 Jul 08 01:03	10°♌57'44	
evening set	15382 Jul 23 15:26	26°♌44'13		inferior conj	15383 Jul 13 06:47	4°♌49'22	3°09'27
inferior conj	15382 Jul 28 23:19	20°♌47'16	3°02'18	minimum elong	15383 Jul 13 06:56	4°♌48'53	3°08'38
minimum elong	15382 Jul 29 00:25	20°♌43'32	3°01'32	min. Earth dist.	15383 Jul 13 19:56	4°♌03'52	0.68662 AU
min. Earth dist.	15382 Jul 30 02:08	19°♌17'26	0.67770 AU		15383 Jul 17 00:04	30°♌	
morning rise	15382 Aug 03 08:56	14°♌21'51		morning rise	15383 Jul 18 12:31	28°♌28'16	
direct	15382 Aug 09 03:45	11°♌50'22		direct	15383 Jul 23 19:37	26°♌09'33	
desc. node	15382 Aug 11 13:18	12°♌12'42		desc. node	15383 Jul 29 10:42	28°♌12'12	
morning max el	15382 Aug 21 02:23	18°♌59'45	25°03'42		15383 Jul 31 19:18	0°♌	
	15382 Aug 30 10:30	0°♌		morning max el	15383 Aug 03 13:07	2°♌33'36	23°35'26
	15382 Sep 19 12:43	0°♌			15383 Aug 24 11:30	0°♌	
morning set	15382 Sep 25 22:02	10°♌58'55		morning set	15383 Sep 07 10:53	22°♌11'56	
max. Earth dist.	15382 Sep 29 10:57	17°♌23'37	1.36788 AU	max. Earth dist.	15383 Sep 11 09:13	28°♌56'27	1.39167 AU
asc. node	15382 Oct 05 21:45	29°♌42'13			15383 Sep 11 23:44	0°♌	



superior conj	15383 Sep 19 01:06	12° $\Omega$ 47'36	-0°32'56	superior conj	15384 Aug 31 06:08	24° $\eta$ 43'07	-1°09'14
minimum elong	15383 Sep 19 03:30	12° $\Omega$ 58'50	0°32'23	minimum elong	15384 Aug 31 11:39	25° $\eta$ 07'29	1°08'36
asc. node	15383 Sep 22 18:23	19° $\Omega$ 50'47			15384 Sep 03 05:07	0° $\Omega$	
	15383 Sep 27 23:59	0° $\mathbb{M}$		asc. node	15384 Sep 08 14:58	9° $\Omega$ 54'31	
evening rise	15383 Sep 28 05:28	0° $\mathbb{M}$ 26'37		evening rise	15384 Sep 10 18:00	13° $\Omega$ 51'17	
evening max el	15383 Oct 14 09:22	26° $\mathbb{M}$ 46'31	18°46'36		15384 Sep 19 19:01	0° $\mathbb{M}$	
	15383 Oct 18 16:03	0° $\mathbb{A}$		evening max el	15384 Sep 26 16:32	9° $\mathbb{M}$ 17'55	18°14'14
retrograde	15383 Oct 22 19:19	1° $\mathbb{A}$ 01'12		retrograde	15384 Oct 03 23:39	13° $\mathbb{M}$ 01'14	
evening set	15383 Oct 24 16:59	0° $\mathbb{A}$ 48'59		evening set	15384 Oct 06 02:24	12° $\mathbb{M}$ 43'05	
desc. node	15383 Oct 25 07:15	0° $\mathbb{A}$ 40'22		desc. node	15384 Oct 11 04:36	9° $\mathbb{M}$ 53'46	
	15383 Oct 27 03:55	30° $\mathbb{R}\mathbb{M}$		inferior conj	15384 Oct 13 12:27	7° $\mathbb{M}$ 59'33	-0°44'31
inferior conj	15383 Nov 01 20:46	26° $\mathbb{M}$ 27'01	-2°24'53	minimum elong	15384 Oct 13 10:51	8° $\mathbb{M}$ 02'59	0°43'21
minimum elong	15383 Nov 01 14:49	26° $\mathbb{M}$ 37'50	2°21'51	min. Earth dist.	15384 Oct 16 18:49	5° $\mathbb{M}$ 13'55	0.58956 AU
min. Earth dist.	15383 Nov 04 21:58	24° $\mathbb{M}$ 14'32	0.56867 AU	morning rise	15384 Oct 20 15:53	2° $\mathbb{M}$ 30'24	
morning rise	15383 Nov 09 09:32	21° $\mathbb{M}$ 33'45		direct	15384 Oct 27 02:20	0° $\mathbb{M}$ 38'36	
direct	15383 Nov 15 08:12	20° $\mathbb{M}$ 08'19		morning max el	15384 Nov 10 09:22	8° $\mathbb{M}$ 19'51	27°33'06
morning max el	15383 Nov 29 12:50	27° $\mathbb{M}$ 29'41	26°28'55		15384 Nov 26 20:45	0° $\mathbb{A}$	
	15383 Dec 01 23:32	0° $\mathbb{A}$		asc. node	15384 Dec 05 16:06	15° $\mathbb{A}$ 36'02	
asc. node	15383 Dec 19 19:03	26° $\mathbb{A}$ 14'39		morning set	15384 Dec 11 19:01	28° $\mathbb{A}$ 01'14	
	15383 Dec 21 18:58	0° $\mathbb{Z}$			15384 Dec 12 17:14	0° $\mathbb{Z}$	
morning set	15383 Dec 28 11:37	13° $\mathbb{Z}$ 40'26					
				superior conj	15384 Dec 18 17:26	13° $\mathbb{Z}$ 15'26	1°34'16
superior conj	15384 Jan 04 05:57	28° $\mathbb{Z}$ 36'54	1°37'58	minimum elong	15384 Dec 18 16:18	13° $\mathbb{Z}$ 09'04	1°35'07
minimum elong	15384 Jan 04 05:49	28° $\mathbb{Z}$ 36'09	1°38'49	max. Earth dist.	15384 Dec 18 07:55	12° $\mathbb{Z}$ 22'08	1.31050 AU
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max. Earth dist.	15384 Jan 04 23:55	0° $\approx$ 17'06	1.31297 AU		15384 Dec 26 07:53	0° $\approx$	
evening rise	15384 Jan 11 04:37	13° $\approx$ 47'51		desc. node	15385 Jan 07 03:09	22° $\approx$ 33'01	
	15384 Jan 19 09:16	0° $\mathbb{H}$			15385 Jan 11 20:08	0° $\mathbb{H}$	
desc. node	15384 Jan 21 06:25	3° $\mathbb{H}$ 23'30		evening max el	15385 Jan 23 17:28	14° $\mathbb{H}$ 36'20	26°31'48
	15384 Feb 08 17:33	0° $\mathbb{Y}$		retrograde	15385 Feb 06 16:58	21° $\mathbb{H}$ 45'11	
evening max el	15384 Feb 11 16:51	3° $\mathbb{Y}$ 02'00	27°21'15	evening set	15385 Feb 13 02:58	20° $\mathbb{H}$ 04'49	
retrograde	15384 Feb 25 16:51	10° $\mathbb{Y}$ 21'56		min. Earth dist.	15385 Feb 17 07:00	17° $\mathbb{H}$ 27'24	0.58543 AU
evening set	15384 Mar 03 11:19	8° $\mathbb{Y}$ 18'11		inferior conj	15385 Feb 20 10:45	15° $\mathbb{H}$ 05'03	-3°28'34
min. Earth dist.	15384 Mar 07 07:08	5° $\mathbb{Y}$ 30'45	0.60758 AU	minimum elong	15385 Feb 20 18:33	14° $\mathbb{H}$ 50'21	3°25'30
inferior conj	15384 Mar 10 11:10	2° $\mathbb{Y}$ 45'57	-2°00'05	morning rise	15385 Feb 28 13:25	10° $\mathbb{H}$ 33'40	
minimum elong	15384 Mar 10 15:34	2° $\mathbb{Y}$ 36'22	1°58'17	direct	15385 Mar 02 13:01	10° $\mathbb{H}$ 20'01	
	15384 Mar 13 21:00	30° $\mathbb{R}\mathbb{H}$		asc. node	15385 Mar 03 13:45	10° $\mathbb{H}$ 23'51	
asc. node	15384 Mar 16 16:19	28° $\mathbb{H}$ 21'10		morning max el	15385 Mar 10 14:24	14° $\mathbb{H}$ 18'51	18°23'59
morning rise	15384 Mar 17 23:06	27° $\mathbb{H}$ 53'09			15385 Mar 21 07:17	0° $\mathbb{Y}$	
direct	15384 Mar 20 01:24	27° $\mathbb{H}$ 35'01		morning set	15385 Mar 26 09:30	9° $\mathbb{Y}$ 31'45	
	15384 Mar 25 21:20	0° $\mathbb{Y}$					
morning max el	15384 Mar 27 03:54	1° $\mathbb{Y}$ 08'43	17°55'14	superior conj	15385 Apr 04 15:54	26° $\mathbb{Y}$ 59'17	0°04'30
morning set	15384 Apr 11 18:13	25° $\mathbb{Y}$ 31'57		minimum elong	15385 Apr 04 16:11	27° $\mathbb{Y}$ 00'39	0°04'07
	15384 Apr 14 05:09	0° $\mathbb{B}$		behind sun begin	15385 Apr 04 09:09	26° $\mathbb{Y}$ 28'21	
desc. node	15384 Apr 18 08:19	7° $\mathbb{B}$ 26'27		behind sun end	15385 Apr 04 23:14	27° $\mathbb{Y}$ 32'52	
				desc. node	15385 Apr 05 04:55	27° $\mathbb{Y}$ 58'49	
superior conj	15384 Apr 22 08:13	14° $\mathbb{B}$ 28'10	-0°32'03		15385 Apr 06 07:38	0° $\mathbb{B}$	
minimum elong	15384 Apr 22 05:23	14° $\mathbb{B}$ 15'49	0°32'10	max. Earth dist.	15385 Apr 12 04:35	10° $\mathbb{B}$ 20'00	1.40764 AU
max. Earth dist.	15384 Apr 29 18:59	27° $\mathbb{B}$ 02'55	1.42857 AU	evening rise	15385 Apr 16 13:52	17° $\mathbb{B}$ 42'12	
	15384 May 01 14:21	0° $\mathbb{I}$			15385 Apr 24 06:57	0° $\mathbb{I}$	
evening rise	15384 May 05 20:31	6° $\mathbb{I}$ 48'45			15385 May 15 19:14	0° $\mathbb{E}$	
	15384 May 21 06:08	0° $\mathbb{E}$		evening max el	15385 May 20 21:42	5° $\mathbb{E}$ 37'39	23°24'45
evening max el	15384 Jun 07 06:36	21° $\mathbb{E}$ 44'25	22°03'53	asc. node	15385 May 30 10:56	11° $\mathbb{E}$ 47'26	
asc. node	15384 Jun 12 13:55	26° $\mathbb{E}$ 00'47		retrograde	15385 May 31 12:49	11° $\mathbb{E}$ 52'31	
retrograde	15384 Jun 16 17:14	27° $\mathbb{E}$ 15'45		evening set	15385 Jun 05 17:23	9° $\mathbb{E}$ 40'15	
evening set	15384 Jun 21 10:15	25° $\mathbb{E}$ 18'06		min. Earth dist.	15385 Jun 10 12:56	3° $\mathbb{E}$ 59'26	0.68986 AU
inferior conj	15384 Jun 26 16:21	18° $\mathbb{E}$ 59'49	3°05'31	inferior conj	15385 Jun 11 02:04	3° $\mathbb{E}$ 14'13	2°51'06
minimum elong	15384 Jun 26 15:33	19° $\mathbb{E}$ 02'36	3°04'33	minimum elong	15385 Jun 11 00:29	3° $\mathbb{E}$ 19'39	2°49'56
min. Earth dist.	15384 Jun 26 16:13	19° $\mathbb{E}$ 00'16	0.69068 AU		15385 Jun 13 12:41	30° $\mathbb{R}\mathbb{I}$	
morning rise	15384 Jul 01 20:41	12° $\mathbb{E}$ 45'16		morning rise	15385 Jun 16 07:33	27° $\mathbb{I}$ 07'36	
direct	15384 Jul 06 15:25	10° $\mathbb{E}$ 43'53		direct	15385 Jun 20 13:55	25° $\mathbb{I}$ 25'54	
desc. node	15384 Jul 15 08:01	15° $\mathbb{E}$ 31'54			15385 Jun 28 16:35	0° $\mathbb{E}$	
morning max el	15384 Jul 16 02:04	16° $\mathbb{E}$ 16'06	22°07'12	morning max el	15385 Jun 28 20:08	0° $\mathbb{E}$ 08'44	20°46'17
	15384 Jul 27 07:44	0° $\mathbb{O}$		desc. node	15385 Jul 02 05:14	3° $\mathbb{E}$ 50'34	
	15384 Aug 16 11:57	0° $\mathbb{P}$			15385 Jul 20 23:21	0° $\mathbb{O}$	
morning set	15384 Aug 17 24:00	2° $\mathbb{P}$ 24'00		morning set	15385 Jul 28 14:31	11° $\mathbb{O}$ 39'11	
max. Earth dist.	15384 Aug 23 11:07	11° $\mathbb{P}$ 20'22	1.41508 AU	max. Earth dist.	15385 Aug 05 19:14	24° $\mathbb{O}$ 36'34	1.43532 AU

































































































































	15385 Aug 09 02:46	0°♍		max. Earth dist.	15386 Jul 19 09:12	8°♌34'37	1.45022 AU
superior conj	15385 Aug 12 13:08	5°♍41'19 -1°42'44		superior conj	15386 Jul 23 20:40	15°♌41'33 -2°06'41	
minimum elong	15385 Aug 12 20:46	6°♍13'19 1°42'24		minimum elong	15386 Jul 24 02:32	16°♌05'00 2°07'06	
evening rise	15385 Aug 24 15:58	26°♍36'51			15386 Aug 01 15:38	0°♍	
asc. node	15385 Aug 26 11:32	29°♍49'03		evening rise	15386 Aug 06 18:09	8°♍30'34	
	15385 Aug 26 14:01	0°♎		asc. node	15386 Aug 13 08:08	19°♍30'12	
evening max el	15385 Sep 10 05:21	22°♎21'37 18°01'53			15386 Aug 20 02:01	0°♎	
retrograde	15385 Sep 16 20:21	25°♎46'59		evening max el	15386 Aug 24 20:06	5°♎48'41 18°08'15	
evening set	15385 Sep 19 06:37	25°♎19'07		retrograde	15386 Aug 31 04:51	9°♎09'24	
inferior conj	15385 Sep 25 23:52	20°♎15'49 0°38'30		evening set	15386 Sep 02 23:39	8°♎28'30	
minimum elong	15385 Sep 26 01:02	20°♎12'59 0°38'18		inferior conj	15386 Sep 09 03:07	3°♎07'56 1°41'08	
desc. node	15385 Sep 28 02:02	18°♎12'24		minimum elong	15386 Sep 09 05:23	3°♎01'39 1°40'23	
min. Earth dist.	15385 Sep 29 01:19	17°♎16'51 0.61241 AU		min. Earth dist.	15386 Sep 11 17:46	0°♎15'51 0.63469 AU	
morning rise	15385 Oct 02 16:33	14°♎18'33			15386 Sep 11 23:46	30°♏♍	
direct	15385 Oct 09 08:22	12°♎03'32		desc. node	15386 Sep 14 23:29	27°♏11'42	
morning max el	15385 Oct 23 13:27	19°♎58'59 27°58'41		morning rise	15386 Sep 15 09:07	26°♏52'52	
	15385 Nov 01 03:54	0°♏		direct	15386 Sep 22 00:29	24°♏21'46	
	15385 Nov 19 19:22	0°♐			15386 Oct 03 10:09	0°♎	
asc. node	15385 Nov 22 13:01	5°♐17'39		morning max el	15386 Oct 05 22:23	2°♎21'51 27°45'53	
morning set	15385 Nov 25 21:18	12°♐04'37			15386 Oct 26 11:58	0°♏	
max. Earth dist.	15385 Dec 01 14:01	24°♐18'25 1.31340 AU		asc. node	15386 Nov 09 09:51	25°♏13'10	
				morning set	15386 Nov 09 16:08	25°♏44'41	
superior conj	15385 Dec 03 03:51	27°♐47'42 1°24'36			15386 Nov 11 18:16	0°♐	
minimum elong	15385 Dec 03 01:56	27°♐37'02 1°25'19		max. Earth dist.	15386 Nov 14 14:17	5°♐56'37 1.32192 AU	
	15385 Dec 04 03:39	0°♑					
evening rise	15385 Dec 09 20:37	12°♑35'56		superior conj	15386 Nov 17 11:14	12°♐08'07 1°08'57	
	15385 Dec 18 11:34	0°♒		minimum elong	15386 Nov 17 08:55	11°♐55'29 1°09'27	
desc. node	15385 Dec 24 23:59	11°♒01'35		evening rise	15386 Nov 24 07:29	27°♐04'42	
evening max el	15386 Jan 05 09:33	25°♒18'25 25°11'05			15386 Nov 25 16:17	0°♑	
	15386 Jan 11 12:31	0°♓		desc. node	15386 Dec 11 20:56	28°♑33'30	
retrograde	15386 Jan 19 05:33	2°♓14'57			15386 Dec 12 23:40	0°♒	
evening set	15386 Jan 24 21:38	1°♓02'28		evening max el	15386 Dec 17 19:36	5°♒22'54 23°31'03	
	15386 Jan 27 02:03	30°♓♒		retrograde	15386 Dec 31 04:52	12°♒01'02	
min. Earth dist.	15386 Jan 29 21:48	28°♒19'38 0.56557 AU		evening set	15387 Jan 04 17:19	11°♒16'46	
inferior conj	15386 Feb 01 13:46	26°♒35'12 -4°52'36		min. Earth dist.	15387 Jan 11 06:29	8°♒09'51 0.55100 AU	
minimum elong	15386 Feb 01 22:58	26°♒20'09 4°49'42		inferior conj	15387 Jan 12 20:25	7°♒14'25 -5°50'14	
morning rise	15386 Feb 10 02:55	22°♒25'31		minimum elong	15387 Jan 13 01:32	7°♒06'56 5°48'55	
direct	15386 Feb 12 05:49	22°♒12'35		morning rise	15387 Jan 21 11:16	3°♒21'23	
asc. node	15386 Feb 18 11:11	24°♒12'19		direct	15387 Jan 24 03:19	3°♒04'02	
morning max el	15386 Feb 21 15:23	26°♒47'06 19°14'16		morning max el	15387 Feb 04 02:49	8°♒21'41 20°27'40	
	15386 Feb 24 12:33	0°♓		asc. node	15387 Feb 05 08:34	9°♒37'22	
morning set	15386 Mar 10 10:13	23°♓55'39			15387 Feb 18 10:56	0°♓	
	15386 Mar 13 11:21	0°♔		morning set	15387 Feb 22 17:03	8°♓33'07	
superior conj	15386 Mar 18 16:51	10°♔17'01 0°35'54		superior conj	15387 Mar 02 06:41	24°♓08'12 1°01'00	
minimum elong	15386 Mar 18 18:54	10°♔26'56 0°35'29		minimum elong	15387 Mar 02 09:17	24°♓21'21 1°00'49	
desc. node	15386 Mar 23 01:30	18°♔32'05			15387 Mar 05 05:05	0°♔	
max. Earth dist.	15386 Mar 25 10:50	22°♔54'06 1.38484 AU		max. Earth dist.	15387 Mar 07 18:01	4°♔55'59 1.36265 AU	
evening rise	15386 Mar 29 04:27	29°♔30'30		desc. node	15387 Mar 09 22:04	9°♔01'56	
	15386 Mar 29 11:16	0°♕		evening rise	15387 Mar 11 13:47	12°♔05'21	
	15386 Apr 17 15:15	0°♖			15387 Mar 22 00:34	0°♕	
evening max el	15386 May 03 11:12	19°♖31'52 24°44'56			15387 Apr 12 18:40	0°♖	
retrograde	15386 May 15 04:53	26°♖23'05		evening max el	15387 Apr 16 00:45	3°♖24'04 25°57'22	
asc. node	15386 May 17 08:05	26°♖03'42		retrograde	15387 Apr 28 16:18	10°♖39'53	
evening set	15386 May 20 20:54	23°♖59'29		asc. node	15387 May 04 05:20	8°♖36'41	
min. Earth dist.	15386 May 25 08:04	18°♖55'28 0.68425 AU		evening set	15387 May 04 19:03	8°♖09'24	
inferior conj	15386 May 26 10:03	17°♖29'03 2°26'13		min. Earth dist.	15387 May 08 23:31	3°♖41'09 0.67403 AU	
minimum elong	15386 May 26 07:59	17°♖35'57 2°24'51		inferior conj	15387 May 10 14:19	1°♖39'16 1°50'19	
morning rise	15386 May 31 19:17	11°♖31'25		minimum elong	15387 May 10 12:11	1°♖45'58 1°48'54	
direct	15386 Jun 04 13:52	10°♖09'44			15387 May 11 22:24	30°♗♕	
morning max el	15386 Jun 11 21:13	14°♖12'18 19°37'49		morning rise	15387 May 16 06:00	25°♗51'57	
desc. node	15386 Jun 19 02:21	22°♖52'43		direct	15387 May 19 13:40	24°♗49'06	
	15386 Jun 24 03:18	0°♗		morning max el	15387 May 26 05:27	28°♗23'31 18°44'47	
greatest brilliancy	15386 Jun 24 15:21	0°♗43'56 -0.6m			15387 May 27 18:23	0°♖	
morning set	15386 Jul 07 17:49	20°♗28'55		desc. node	15387 Jun 05 23:21	12°♖26'20	
	15386 Jul 13 21:43	0°♘		greatest brilliancy	15387 Jun 09 10:18	17°♖40'43 -0.8m	

morning set	15387 Jun 17 06:06	29°II48'27		superior conj	15388 Jun 11 19:24	4°☿13'45	-2°00'56
	15387 Jun 17 09:04	0°☿		minimum elong	15388 Jun 11 11:46	3°☿43'50	2°01'22
max. Earth dist.	15387 Jul 02 03:30	23°☿00'36	1.45834 AU	max. Earth dist.	15388 Jun 14 00:01	7°☿39'32	1.45901 AU
				evening rise	15388 Jun 27 22:11	29°☿16'25	
superior conj	15387 Jul 03 10:05	25°☿00'04	-2°13'52		15388 Jun 28 09:27	0°♊	
minimum elong	15387 Jul 03 09:03	24°☿56'00	2°14'44	greatest brilliancy	15388 Jul 09 18:09	17°♊24'27	-0.7m
	15387 Jul 06 14:42	0°♊		asc. node	15388 Jul 17 01:33	27°♊48'44	
evening rise	15387 Jul 18 20:07	19°♊22'29			15388 Jul 18 19:00	0°♋	
	15387 Jul 25 11:39	0°♋		evening max el	15388 Jul 21 19:09	3°♋20'59	19°13'29
asc. node	15387 Jul 31 04:48	8°♋52'37		retrograde	15388 Jul 28 18:02	7°♋11'50	
evening max el	15387 Aug 08 09:35	19°♋31'07	18°32'24	evening set	15388 Aug 01 07:32	5°♋58'13	
retrograde	15387 Aug 14 21:10	23°♋00'22		inferior conj	15388 Aug 06 17:54	0°♋08'33	2°52'39
evening set	15387 Aug 18 01:03	22°♋03'54		minimum elong	15388 Aug 06 19:31	0°♋03'16	2°51'51
inferior conj	15387 Aug 23 18:16	16°♋28'02	2°24'56		15388 Aug 06 20:31	30°♋♊	
minimum elong	15387 Aug 23 20:32	16°♋21'10	2°24'04	min. Earth dist.	15388 Aug 08 04:45	28°♊15'23	0.67047 AU
min. Earth dist.	15387 Aug 25 19:23	13°♋59'34	0.65446 AU	morning rise	15388 Aug 12 06:52	23°♊42'32	
morning rise	15387 Aug 29 14:48	10°♋04'14		direct	15388 Aug 18 07:54	21°♊06'39	
desc. node	15387 Sep 01 20:57	8°♋03'28		desc. node	15388 Aug 18 18:26	21°♊07'24	
direct	15387 Sep 05 00:50	7°♋26'15		morning max el	15388 Aug 30 20:40	28°♊35'06	25°51'01
morning max el	15387 Sep 18 09:25	15°♋17'49	27°00'31		15388 Sep 01 05:17	0°♋	
	15387 Sep 30 11:28	0°♌			15388 Sep 23 05:48	0°♌	
	15387 Oct 19 06:09	0°♌		morning set	15388 Oct 05 19:38	21°♌27'31	
morning set	15387 Oct 24 00:46	8°♌55'16		max. Earth dist.	15388 Oct 09 11:41	28°♌19'43	1.35520 AU
asc. node	15387 Oct 27 06:36	15°♌17'48			15388 Oct 10 08:34	0°♌	
max. Earth dist.	15387 Oct 28 05:43	17°♌14'17	1.33605 AU	asc. node	15388 Oct 13 03:17	5°♌26'44	
superior conj	15387 Nov 01 13:25	26°♌11'15	0°47'19	superior conj	15388 Oct 15 07:38	9°♌49'24	0°19'55
minimum elong	15387 Nov 01 11:17	25°♌59'59	0°47'39	minimum elong	15388 Oct 15 06:29	9°♌43'36	0°20'13
	15387 Nov 03 08:32	0°♍		evening rise	15388 Oct 23 01:35	25°♌48'36	
evening rise	15387 Nov 08 17:50	11°♍30'54			15388 Oct 25 02:40	0°♍	
	15387 Nov 18 03:28	0°♎		evening max el	15388 Nov 10 06:48	25°♍54'03	20°21'30
desc. node	15387 Nov 28 18:00	14°♎48'54		desc. node	15388 Nov 14 15:10	29°♍22'39	
evening max el	15387 Nov 29 07:44	15°♎23'19	21°49'25		15388 Nov 15 18:30	0°♎	
retrograde	15387 Dec 11 16:52	21°♎30'43		retrograde	15388 Nov 21 03:47	1°♎18'48	
evening set	15387 Dec 14 21:50	21°♎07'40		evening set	15388 Nov 23 09:31	1°♎06'06	
inferior conj	15387 Dec 23 13:24	17°♎16'26	-5°56'04		15388 Nov 26 22:10	30°♎♍	
minimum elong	15387 Dec 23 09:26	17°♎21'59	5°54'51	inferior conj	15388 Dec 02 05:59	27°♍10'37	-5°01'25
min. Earth dist.	15387 Dec 23 12:10	17°♎18'10	0.54443 AU	minimum elong	15388 Dec 01 20:09	27°♍25'03	4°58'08
morning rise	15387 Dec 31 21:46	13°♎28'43		min. Earth dist.	15388 Dec 03 18:04	26°♍17'35	0.54715 AU
direct	15388 Jan 04 12:44	12°♎59'54		morning rise	15388 Dec 10 06:18	23°♍09'41	
morning max el	15388 Jan 16 23:21	19°♎00'33	22°02'54	direct	15388 Dec 14 22:01	22°♍23'01	
asc. node	15388 Jan 23 05:55	26°♎21'56		morning max el	15388 Dec 28 09:43	29°♍00'21	23°51'47
	15388 Jan 25 17:24	0°♏			15388 Dec 29 10:04	0°♎	
morning set	15388 Feb 07 03:29	23°♏17'05		asc. node	15389 Jan 09 03:11	14°♎07'41	
	15388 Feb 10 07:14	0°♐			15389 Jan 17 19:16	0°♏	
				morning set	15389 Jan 21 15:25	8°♏01'20	
superior conj	15388 Feb 14 05:48	8°♐23'03	1°19'31				
minimum elong	15388 Feb 14 08:06	8°♐35'10	1°19'42	superior conj	15389 Jan 28 11:17	22°♏53'08	1°31'35
max. Earth dist.	15388 Feb 18 07:02	16°♐46'31	1.34313 AU	minimum elong	15389 Jan 28 12:48	23°♏01'20	1°32'06
evening rise	15388 Feb 22 14:25	25°♐17'21		max. Earth dist.	15389 Jan 31 03:47	28°♏40'28	1.32755 AU
desc. node	15388 Feb 24 18:38	29°♐24'35			15389 Jan 31 18:46	0°♐	
	15388 Feb 25 02:15	0°♑		evening rise	15389 Feb 05 02:53	8°♐57'27	
	15388 Mar 14 11:57	0°♒		desc. node	15389 Feb 10 15:16	19°♐35'28	
evening max el	15388 Mar 28 14:41	17°♒07'17	26°54'24		15389 Feb 16 13:04	0°♑	
retrograde	15388 Apr 10 21:58	24°♒35'15			15389 Mar 10 15:18	0°♒	
evening set	15388 Apr 17 09:56	22°♒03'15		evening max el	15389 Mar 11 03:44	0°♒30'19	27°28'43
asc. node	15388 Apr 20 02:40	19°♒32'36		retrograde	15389 Mar 24 21:02	8°♒00'42	
min. Earth dist.	15388 Apr 21 09:05	18°♒09'07	0.65957 AU	evening set	15389 Mar 31 15:24	5°♒33'35	
inferior conj	15388 Apr 23 12:34	15°♒39'37	1°02'27	min. Earth dist.	15389 Apr 04 10:47	2°♒10'24	0.64137 AU
minimum elong	15388 Apr 23 11:03	15°♒44'04	1°01'18		15389 Apr 06 12:29	30°♒♑	
morning rise	15388 Apr 29 13:30	10°♒04'23		inferior conj	15389 Apr 07 02:11	29°♑23'41	0°01'42
direct	15388 May 02 11:15	9°♒18'08		minimum elong	15389 Apr 07 02:09	29°♑23'47	0°01'18
morning max el	15388 May 08 19:23	12°♒37'03	18°08'26	transit middle	15389 Apr 07 02:09	29°♑23'47	0°01'18
	15388 May 21 08:28	0°♓		transit begin	15389 Apr 06 23:03	29°♑31'59	
desc. node	15388 May 22 20:16	2°♓22'51		transit end	15389 Apr 07 05:15	29°♑15'36	
morning set	15388 May 27 18:53	10°♓20'08		asc. node	15389 Apr 07 00:03	29°♑29'20	
	15388 Jun 09 02:47	0°☿		morning rise	15389 Apr 13 15:06	24°♑02'58	

direct	15389 Apr 16 04:02	23° $\Upsilon$ 30'23		direct	15390 Mar 30 12:36	7° $\Upsilon$ 16'45	
morning max el	15389 Apr 22 12:38	26° $\Upsilon$ 45'58	17°49'16	morning max el	15390 Apr 06 06:05	10° $\Upsilon$ 40'35	17°47'46
	15389 Apr 25 09:28	0° $\text{B}$			15390 Apr 19 05:02	0° $\text{B}$	
morning set	15389 May 09 11:08	22° $\text{B}$ 10'53		morning set	15390 Apr 22 02:14	5° $\text{B}$ 05'25	
desc. node	15389 May 09 17:06	22° $\text{B}$ 36'00		desc. node	15390 Apr 26 13:49	12° $\text{B}$ 59'58	
	15389 May 14 02:54	0° $\text{II}$					
superior conj	15389 May 22 17:33	14° $\text{II}$ 07'07	-1°31'44	superior conj	15390 May 03 14:03	25° $\text{B}$ 03'02	-0°54'20
minimum elong	15389 May 22 09:11	13° $\text{II}$ 33'21	1°31'38	minimum elong	15390 May 03 08:58	24° $\text{B}$ 41'35	0°54'17
max. Earth dist.	15389 May 27 19:57	22° $\text{II}$ 14'49	1.45223 AU		15390 May 06 13:16	0° $\text{II}$	
	15389 Jun 01 18:49	0° $\text{B}$		max. Earth dist.	15390 May 10 12:21	6° $\text{II}$ 28'06	1.43876 AU
evening rise	15389 Jun 07 10:05	8° $\text{B}$ 41'12		evening rise	15390 May 17 23:59	18° $\text{II}$ 18'08	
	15389 Jun 21 15:42	0° $\Omega$			15390 May 25 16:24	0° $\text{B}$	
asc. node	15389 Jul 03 22:23	16° $\Omega$ 09'45			15390 Jun 16 19:22	0° $\Omega$	
evening max el	15389 Jul 04 23:04	17° $\Omega$ 13'37	20°10'02	evening max el	15390 Jun 17 20:54	1° $\Omega$ 05'53	21°19'34
retrograde	15389 Jul 12 16:57	21° $\Omega$ 37'57		asc. node	15390 Jun 20 19:18	3° $\Omega$ 43'02	
evening set	15389 Jul 16 16:37	20° $\Omega$ 06'45		retrograde	15390 Jun 26 15:48	6° $\Omega$ 12'13	
inferior conj	15389 Jul 21 23:13	14° $\Omega$ 04'35	3°06'45	evening set	15390 Jul 01 02:14	4° $\Omega$ 23'55	
minimum elong	15389 Jul 21 23:55	14° $\Omega$ 02'10	3°05'58		15390 Jul 05 00:08	30° $\text{R}$ $\text{B}$	
min. Earth dist.	15389 Jul 22 20:04	12° $\Omega$ 53'34	0.68206 AU	inferior conj	15390 Jul 06 07:49	28° $\text{B}$ 10'51	3°09'04
morning rise	15389 Jul 27 06:54	7° $\Omega$ 40'47		minimum elong	15390 Jul 06 07:33	28° $\text{B}$ 11'47	3°08'13
direct	15389 Aug 01 20:47	5° $\Omega$ 14'22		min. Earth dist.	15390 Jul 06 15:14	27° $\text{B}$ 45'00	0.68890 AU
desc. node	15389 Aug 05 15:50	6° $\Omega$ 10'14		morning rise	15390 Jul 11 12:38	21° $\text{B}$ 52'09	
morning max el	15389 Aug 13 07:34	12° $\Omega$ 05'32	24°26'49	direct	15390 Jul 16 14:22	19° $\text{B}$ 40'34	
	15389 Aug 27 17:07	0° $\text{np}$		desc. node	15390 Jul 23 13:10	22° $\text{B}$ 46'31	
	15389 Sep 15 23:56	0° $\underline{\text{A}}$		morning max el	15390 Jul 26 19:01	25° $\text{B}$ 43'28	22°57'26
morning set	15389 Sep 17 20:44	3° $\underline{\text{A}}$ 12'45			15390 Jul 30 16:33	0° $\Omega$	
max. Earth dist.	15389 Sep 21 11:17	9° $\underline{\text{A}}$ 35'37	1.37789 AU		15390 Aug 21 04:50	0° $\text{np}$	
				morning set	15390 Aug 29 23:46	14° $\text{np}$ 00'44	
superior conj	15389 Sep 28 14:37	22° $\underline{\text{A}}$ 55'07	-0°12'33	max. Earth dist.	15390 Sep 03 10:10	21° $\text{np}$ 27'19	1.40178 AU
minimum elong	15389 Sep 28 15:27	22° $\underline{\text{A}}$ 59'06	0°12'08		15390 Sep 08 07:39	0° $\underline{\text{A}}$	
behind sun begin	15389 Sep 28 10:55	22° $\underline{\text{A}}$ 37'17		superior conj	15390 Sep 11 06:21	5° $\underline{\text{A}}$ 18'47	-0°48'20
behind sun end	15389 Sep 28 19:58	23° $\underline{\text{A}}$ 20'56		minimum elong	15390 Sep 11 10:03	5° $\underline{\text{A}}$ 35'43	0°47'44
asc. node	15389 Sep 29 23:56	25° $\underline{\text{A}}$ 36'38		asc. node	15390 Sep 16 20:32	15° $\underline{\text{A}}$ 43'41	
	15389 Oct 02 05:32	0° $\text{ml}$		evening rise	15390 Sep 20 23:11	23° $\underline{\text{A}}$ 33'43	
evening rise	15389 Oct 07 04:23	9° $\text{ml}$ 52'17			15390 Sep 24 08:42	0° $\text{ml}$	
	15389 Oct 18 04:28	0° $\text{A}$		evening max el	15390 Oct 06 22:18	19° $\text{ml}$ 21'57	18°30'20
evening max el	15389 Oct 23 20:21	7° $\text{A}$ 13'51	19°14'46	retrograde	15390 Oct 14 19:46	23° $\text{ml}$ 21'56	
desc. node	15389 Nov 01 12:24	11° $\text{A}$ 51'37		evening set	15390 Oct 16 18:56	23° $\text{ml}$ 07'49	
retrograde	15389 Nov 02 02:33	11° $\text{A}$ 52'42		desc. node	15390 Oct 19 09:42	22° $\text{ml}$ 08'56	
evening set	15389 Nov 03 23:41	11° $\text{A}$ 42'01		inferior conj	15390 Oct 24 15:21	18° $\text{ml}$ 36'56	-1°40'47
inferior conj	15389 Nov 12 12:11	7° $\text{A}$ 31'22	-3°26'01	minimum elong	15390 Oct 24 11:22	18° $\text{ml}$ 44'42	1°38'32
minimum elong	15389 Nov 12 03:44	7° $\text{A}$ 45'28	3°22'12	min. Earth dist.	15390 Oct 27 20:23	16° $\text{ml}$ 07'49	0.57705 AU
min. Earth dist.	15389 Nov 15 03:53	5° $\text{A}$ 45'22	0.55872 AU	morning rise	15390 Nov 01 00:20	13° $\text{ml}$ 27'29	
morning rise	15389 Nov 20 05:22	2° $\text{A}$ 59'10		direct	15390 Nov 07 04:41	11° $\text{ml}$ 50'32	
direct	15389 Nov 25 17:59	1° $\text{A}$ 49'10		morning max el	15390 Nov 21 11:14	19° $\text{ml}$ 22'01	27°00'38
morning max el	15389 Dec 09 19:22	8° $\text{A}$ 56'43	25°37'21		15390 Nov 30 12:17	0° $\text{A}$	
	15389 Dec 25 11:38	0° $\text{B}$		asc. node	15390 Dec 13 21:25	21° $\text{A}$ 46'05	
asc. node	15389 Dec 27 00:21	2° $\text{B}$ 39'43			15390 Dec 18 02:12	0° $\text{B}$	
morning set	15390 Jan 06 02:58	22° $\text{B}$ 40'26		morning set	15390 Dec 21 12:25	7° $\text{B}$ 09'45	
	15390 Jan 09 11:21	0° $\approx$					
superior conj	15390 Jan 12 20:41	7° $\approx$ 31'26	1°37'23	superior conj	15390 Dec 28 07:59	22° $\text{B}$ 12'11	1°37'08
minimum elong	15390 Jan 12 21:11	7° $\approx$ 34'08	1°38'09	minimum elong	15390 Dec 28 07:25	22° $\text{B}$ 08'58	1°38'00
max. Earth dist.	15390 Jan 14 07:04	10° $\approx$ 41'30	1.31677 AU	max. Earth dist.	15390 Dec 28 14:13	22° $\text{B}$ 47'04	1.31120 AU
evening rise	15390 Jan 20 00:13	22° $\approx$ 58'12			15390 Dec 31 20:01	0° $\approx$	
	15390 Jan 23 11:31	0° $\text{H}$		evening rise	15391 Jan 04 03:59	7° $\approx$ 13'51	
desc. node	15390 Jan 28 11:54	9° $\text{H}$ 28'37		desc. node	15391 Jan 15 08:36	28° $\approx$ 57'06	
	15390 Feb 10 08:01	0° $\Upsilon$			15391 Jan 15 23:11	0° $\text{H}$	
evening max el	15390 Feb 21 13:50	13° $\Upsilon$ 19'41	27°33'37	evening max el	15391 Feb 03 18:39	25° $\text{H}$ 24'26	27°04'28
retrograde	15390 Mar 07 12:32	20° $\Upsilon$ 45'37			15391 Feb 09 13:52	0° $\Upsilon$	
evening set	15390 Mar 14 08:46	18° $\Upsilon$ 30'51		retrograde	15391 Feb 17 19:11	2° $\Upsilon$ 40'46	
min. Earth dist.	15390 Mar 18 02:58	15° $\Upsilon$ 32'56	0.62035 AU	evening set	15391 Feb 24 10:52	0° $\Upsilon$ 46'08	
inferior conj	15390 Mar 21 03:53	12° $\Upsilon$ 42'30	-1°12'14		15391 Feb 25 17:14	30° $\text{R}$ $\text{H}$	
minimum elong	15390 Mar 21 06:24	12° $\Upsilon$ 36'37	1°11'19	min. Earth dist.	15391 Feb 28 08:58	28° $\text{H}$ 04'27	0.59802 AU
asc. node	15390 Mar 24 21:28	9° $\Upsilon$ 29'57		inferior conj	15391 Mar 03 14:05	25° $\text{H}$ 26'49	-2°37'09
morning rise	15390 Mar 28 07:05	7° $\Upsilon$ 39'03		minimum elong	15391 Mar 03 19:58	25° $\text{H}$ 14'44	2°34'43
				morning rise	15391 Mar 11 08:32	20° $\text{H}$ 43'05	

asc. node	15391 Mar 11 18:52	20° $\text{K}$ 37'11		inferior conj	15392 Feb 13 05:11	7° $\text{K}$ 26'19	-4°05'46
direct	15391 Mar 13 08:59	20° $\text{K}$ 27'26		minimum elong	15392 Feb 13 14:01	7° $\text{K}$ 10'38	4°02'34
morning max el	15391 Mar 20 20:17	24° $\text{K}$ 10'44	18°04'55	morning rise	15392 Feb 21 13:04	3° $\text{K}$ 03'55	
	15391 Mar 25 13:39	0° $\text{Y}$		direct	15392 Feb 23 13:00	2° $\text{K}$ 51'07	
morning set	15391 Apr 05 10:13	18° $\text{Y}$ 46'15		asc. node	15392 Feb 26 16:17	3° $\text{K}$ 24'26	
	15391 Apr 11 12:02	0° $\text{B}$		morning max el	15392 Mar 03 03:11	7° $\text{K}$ 04'22	18°42'31
desc. node	15391 Apr 13 10:29	3° $\text{B}$ 30'38			15392 Mar 17 17:13	0° $\text{Y}$	
				morning set	15392 Mar 19 05:59	2° $\text{Y}$ 57'49	
superior conj	15391 Apr 15 09:50	7° $\text{B}$ 02'21	-0°16'06	superior conj	15392 Mar 28 01:22	19° $\text{Y}$ 54'35	0°18'32
minimum elong	15391 Apr 15 08:29	6° $\text{B}$ 56'20	0°16'21	minimum elong	15392 Mar 28 02:35	20° $\text{Y}$ 00'17	0°18'06
max. Earth dist.	15391 Apr 23 00:03	20° $\text{B}$ 07'03	1.42007 AU	desc. node	15392 Mar 30 07:05	24° $\text{Y}$ 03'50	
evening rise	15391 Apr 28 05:33	28° $\text{B}$ 40'32			15392 Apr 02 13:50	0° $\text{B}$	
	15391 Apr 29 01:25	0° $\text{II}$		max. Earth dist.	15392 Apr 04 07:49	3° $\text{B}$ 05'16	1.39810 AU
	15391 May 19 06:41	0° $\text{E}$		evening rise	15392 Apr 08 08:07	9° $\text{B}$ 58'23	
evening max el	15391 May 31 13:56	14° $\text{E}$ 58'49	22°37'56		15392 Apr 20 23:00	0° $\text{II}$	
asc. node	15391 Jun 07 16:16	20° $\text{E}$ 13'38		evening max el	15392 May 13 04:17	28° $\text{II}$ 53'34	23°59'24
retrograde	15391 Jun 10 12:58	20° $\text{E}$ 49'31			15392 May 14 07:52	0° $\text{E}$	
evening set	15391 Jun 15 10:44	18° $\text{E}$ 45'34		retrograde	15392 May 24 07:05	5° $\text{E}$ 24'34	
inferior conj	15391 Jun 20 17:41	12° $\text{E}$ 23'34	3°00'39	asc. node	15392 May 24 13:21	5° $\text{E}$ 24'16	
minimum elong	15391 Jun 20 16:32	12° $\text{E}$ 27'35	2°59'37	evening set	15392 May 29 16:32	3° $\text{E}$ 07'16	
min. Earth dist.	15391 Jun 20 12:04	12° $\text{E}$ 43'08	0.69093 AU		15392 Jun 01 14:22	30° $\text{R}$ $\text{II}$	
morning rise	15391 Jun 25 22:10	6° $\text{E}$ 11'58		min. Earth dist.	15392 Jun 03 08:25	27° $\text{II}$ 42'05	0.68808 AU
direct	15391 Jun 30 11:35	4° $\text{E}$ 18'40		inferior conj	15392 Jun 04 02:55	26° $\text{II}$ 39'07	2°41'52
morning max el	15391 Jul 09 09:41	9° $\text{E}$ 29'33	21°31'23	minimum elong	15392 Jun 04 01:05	26° $\text{II}$ 45'21	2°40'36
desc. node	15391 Jul 10 10:27	10° $\text{E}$ 33'19		morning rise	15392 Jun 09 09:40	20° $\text{II}$ 36'03	
	15391 Jul 25 09:08	0° $\text{O}$		direct	15392 Jun 13 11:02	19° $\text{II}$ 02'41	
morning set	15391 Aug 10 02:32	23° $\text{O}$ 46'18		morning max el	15392 Jun 21 06:30	23° $\text{II}$ 26'46	20°15'22
	15391 Aug 14 00:09	0° $\text{M}$		desc. node	15392 Jun 26 07:39	29° $\text{II}$ 12'20	
max. Earth dist.	15391 Aug 16 13:56	4° $\text{M}$ 11'32	1.42419 AU		15392 Jun 26 22:37	0° $\text{E}$	
					15392 Jul 17 15:12	0° $\text{O}$	
superior conj	15391 Aug 24 02:24	16° $\text{M}$ 50'35	-1°24'10	morning set	15392 Jul 19 10:14	2° $\text{O}$ 45'07	
minimum elong	15391 Aug 24 09:05	17° $\text{M}$ 19'25	1°23'35	max. Earth dist.	15392 Jul 29 00:56	17° $\text{O}$ 48'28	1.44245 AU
	15391 Aug 31 13:12	0° $\text{A}$		superior conj	15392 Aug 03 23:25	27° $\text{O}$ 24'22	-1°54'31
asc. node	15391 Sep 03 17:06	5° $\text{A}$ 43'50		minimum elong	15392 Aug 04 06:57	27° $\text{O}$ 55'18	1°54'28
evening rise	15391 Sep 04 06:04	6° $\text{A}$ 42'44			15392 Aug 05 13:14	0° $\text{M}$	
	15391 Sep 18 10:00	0° $\text{M}$		evening rise	15392 Aug 16 20:17	19° $\text{M}$ 08'05	
evening max el	15391 Sep 20 08:25	2° $\text{M}$ 08'32	18°06'43	asc. node	15392 Aug 20 13:42	25° $\text{M}$ 33'34	
retrograde	15391 Sep 27 07:18	5° $\text{M}$ 42'15			15392 Aug 23 04:18	0° $\text{A}$	
evening set	15391 Sep 29 13:08	5° $\text{M}$ 20'23		evening max el	15392 Sep 02 22:34	15° $\text{A}$ 23'50	18°02'23
desc. node	15391 Oct 06 07:06	0° $\text{M}$ 48'05		retrograde	15392 Sep 09 09:32	18° $\text{A}$ 45'17	
inferior conj	15391 Oct 06 15:47	0° $\text{M}$ 28'30	-0°06'50	evening set	15392 Sep 11 23:30	18° $\text{A}$ 12'04	
minimum elong	15391 Oct 06 15:34	0° $\text{M}$ 29'00	0°06'22	inferior conj	15392 Sep 18 10:26	13° $\text{A}$ 01'01	1°07'32
transit middle	15391 Oct 06 15:34	0° $\text{M}$ 29'00	0°06'22	minimum elong	15392 Sep 18 12:14	12° $\text{A}$ 56'22	1°07'01
transit begin	15391 Oct 06 12:29	0° $\text{M}$ 35'58		min. Earth dist.	15392 Sep 21 07:44	10° $\text{A}$ 02'58	0.62212 AU
transit end	15391 Oct 06 18:39	0° $\text{M}$ 22'00		desc. node	15392 Sep 22 04:34	9° $\text{A}$ 12'42	
	15391 Oct 07 04:19	30° $\text{R}$ $\text{A}$		morning rise	15392 Sep 24 22:32	6° $\text{A}$ 55'19	
min. Earth dist.	15391 Oct 09 21:12	27° $\text{A}$ 34'28	0.59918 AU	direct	15392 Oct 01 14:55	4° $\text{A}$ 32'34	
morning rise	15391 Oct 13 14:44	24° $\text{A}$ 46'25		morning max el	15392 Oct 15 17:17	12° $\text{A}$ 30'22	27°57'43
direct	15391 Oct 20 04:28	22° $\text{A}$ 43'43			15392 Oct 29 16:07	0° $\text{M}$	
	15391 Nov 02 21:42	0° $\text{M}$			15392 Nov 16 02:11	0° $\text{A}$	
morning max el	15391 Nov 03 10:58	0° $\text{M}$ 32'09	27°48'50	asc. node	15392 Nov 16 15:17	1° $\text{A}$ 05'01	
	15391 Nov 24 16:05	0° $\text{A}$		morning set	15392 Nov 18 17:16	5° $\text{A}$ 17'31	
asc. node	15391 Nov 30 18:24	11° $\text{A}$ 16'52		max. Earth dist.	15392 Nov 24 01:52	16° $\text{A}$ 38'35	1.31638 AU
morning set	15391 Dec 05 17:52	21° $\text{A}$ 23'43		superior conj	15392 Nov 26 04:37	21° $\text{A}$ 16'43	1°18'42
	15391 Dec 09 17:35	0° $\text{B}$		minimum elong	15392 Nov 26 02:28	21° $\text{A}$ 04'52	1°19'20
max. Earth dist.	15391 Dec 11 21:44	4° $\text{B}$ 48'58	1.31102 AU		15392 Nov 30 03:15	0° $\text{B}$	
				evening rise	15392 Dec 02 22:18	6° $\text{B}$ 06'44	
superior conj	15391 Dec 12 19:15	6° $\text{B}$ 48'58	1°30'55		15392 Dec 15 06:29	0° $\text{A}$	
minimum elong	15391 Dec 12 17:44	6° $\text{B}$ 40'33	1°31'43	desc. node	15392 Dec 19 02:16	5° $\text{A}$ 57'19	
evening rise	15391 Dec 19 11:57	21° $\text{B}$ 38'14		evening max el	15392 Dec 28 04:52	17° $\text{A}$ 00'11	24°29'55
	15391 Dec 23 11:39	0° $\text{A}$		retrograde	15393 Jan 10 21:06	23° $\text{A}$ 49'06	
desc. node	15392 Jan 02 05:23	17° $\text{A}$ 50'54		evening set	15393 Jan 16 02:44	22° $\text{A}$ 48'58	
	15392 Jan 10 15:52	0° $\text{K}$		min. Earth dist.	15393 Jan 21 16:39	19° $\text{A}$ 58'28	0.55863 AU
evening max el	15392 Jan 16 15:50	6° $\text{K}$ 36'51	26°00'54	inferior conj	15393 Jan 23 23:10	18° $\text{A}$ 34'09	-5°21'49
retrograde	15392 Jan 30 14:40	13° $\text{K}$ 40'28					
evening set	15392 Feb 05 18:00	12° $\text{K}$ 11'57					
min. Earth dist.	15392 Feb 10 05:02	9° $\text{K}$ 34'01	0.57656 AU				

minimum elong	15393 Jan 24 07:29	18° $\approx$ 21'17	5°19'32	min. Earth dist.	15394 Jan 02 23:16	29° $\approx$ 27'30	0.54707 AU
morning rise	15393 Feb 01 14:17	14° $\approx$ 32'22		inferior conj	15394 Jan 03 22:41	28° $\approx$ 54'19	-6°00'13
direct	15393 Feb 03 21:41	14° $\approx$ 18'08		minimum elong	15394 Jan 04 00:11	28° $\approx$ 52'11	5°59'19
asc. node	15393 Feb 12 13:43	17° $\approx$ 55'26		morning rise	15394 Jan 12 11:31	25° $\approx$ 05'57	
morning max el	15393 Feb 13 22:41	19° $\approx$ 10'10	19°42'34	direct	15394 Jan 15 12:28	24° $\approx$ 34'41	
	15393 Feb 22 02:24	0° $\approx$			15394 Jan 26 19:00	0° $\approx$	
morning set	15393 Mar 03 09:40	17° $\approx$ 28'40		morning max el	15394 Jan 27 03:42	0° $\approx$ 20'34	21°05'56
	15393 Mar 09 14:25	0° $\approx$		asc. node	15394 Jan 30 11:05	3° $\approx$ 56'36	
					15394 Feb 14 17:11	0° $\approx$	
superior conj	15393 Mar 11 08:16	3° $\approx$ 27'41	0°47'21	morning set	15394 Feb 15 18:21	2° $\approx$ 10'19	
minimum elong	15393 Mar 11 10:40	3° $\approx$ 39'35	0°47'01				
desc. node	15393 Mar 17 03:38	14° $\approx$ 35'57		superior conj	15394 Feb 23 02:31	17° $\approx$ 30'50	1°09'40
max. Earth dist.	15393 Mar 17 14:18	15° $\approx$ 25'26	1.37526 AU	minimum elong	15394 Feb 23 05:04	17° $\approx$ 43'58	1°09'36
evening rise	15393 Mar 21 07:02	22° $\approx$ 07'21		max. Earth dist.	15394 Feb 27 23:42	27° $\approx$ 21'21	1.35388 AU
	15393 Mar 25 20:26	0° $\approx$			15394 Mar 01 08:17	0° $\approx$	
	15393 Apr 14 19:36	0° $\approx$		evening rise	15394 Mar 03 23:20	4° $\approx$ 59'28	
evening max el	15393 Apr 25 17:47	12° $\approx$ 47'53	25°17'09	desc. node	15394 Mar 04 00:12	5° $\approx$ 03'33	
retrograde	15393 May 07 21:09	19° $\approx$ 50'21			15394 Mar 18 16:42	0° $\approx$	
asc. node	15393 May 11 10:33	18° $\approx$ 57'35		evening max el	15394 Apr 08 07:24	26° $\approx$ 37'17	26°23'50
evening set	15393 May 13 17:59	17° $\approx$ 23'10			15394 Apr 12 03:03	0° $\approx$	
min. Earth dist.	15393 May 18 02:08	12° $\approx$ 34'45	0.68049 AU	retrograde	15394 Apr 21 06:16	3° $\approx$ 59'57	
inferior conj	15393 May 19 09:35	10° $\approx$ 52'29	2°12'25	evening set	15394 Apr 27 13:20	1° $\approx$ 27'44	
minimum elong	15393 May 19 07:25	10° $\approx$ 59'32	2°10'59	asc. node	15394 Apr 28 07:51	0° $\approx$ 47'41	
morning rise	15393 May 24 21:15	4° $\approx$ 59'15			15394 Apr 29 03:44	30° $\approx$	
direct	15393 May 28 11:10	3° $\approx$ 45'42		min. Earth dist.	15394 May 01 15:15	27° $\approx$ 14'35	0.66842 AU
morning max el	15393 Jun 04 10:46	7° $\approx$ 34'16	19°13'19	inferior conj	15394 May 03 11:36	24° $\approx$ 59'33	1°31'34
desc. node	15393 Jun 13 04:43	18° $\approx$ 29'01		minimum elong	15394 May 03 09:38	25° $\approx$ 05'33	1°30'12
greatest brilliancy	15393 Jun 17 05:41	24° $\approx$ 22'14	-0.7m	morning rise	15394 May 09 06:55	19° $\approx$ 17'25	
	15393 Jun 20 23:35	0° $\approx$		direct	15394 May 12 10:12	18° $\approx$ 22'04	
morning set	15393 Jun 28 14:52	11° $\approx$ 41'07		morning max el	15394 May 18 21:47	21° $\approx$ 48'15	18°27'16
	15393 Jul 10 10:19	0° $\approx$			15394 May 25 13:25	0° $\approx$	
max. Earth dist.	15393 Jul 11 17:41	2° $\approx$ 02'53	1.45460 AU	desc. node	15394 May 31 01:41	8° $\approx$ 13'29	
				morning set	15394 Jun 08 12:25	21° $\approx$ 28'29	
					15394 Jun 13 22:20	0° $\approx$	
superior conj	15393 Jul 14 22:00	7° $\approx$ 03'17	-2°12'07				
minimum elong	15393 Jul 15 01:24	7° $\approx$ 16'44	2°12'50	superior conj	15394 Jun 24 07:33	16° $\approx$ 14'15	-2°10'46
	15393 Jul 29 03:40	0° $\approx$		minimum elong	15394 Jun 24 03:12	15° $\approx$ 57'17	2°11'33
evening rise	15393 Jul 29 12:36	0° $\approx$ 36'37		max. Earth dist.	15394 Jun 24 13:14	16° $\approx$ 36'26	1.45956 AU
asc. node	15393 Aug 07 10:21	15° $\approx$ 07'36			15394 Jul 03 03:09	0° $\approx$	
evening max el	15393 Aug 17 13:07	28° $\approx$ 58'07	18°16'19	evening rise	15394 Jul 10 03:56	11° $\approx$ 02'23	
	15393 Aug 18 16:02	0° $\approx$		greatest brilliancy	15394 Jul 19 01:15	24° $\approx$ 58'37	-0.8m
retrograde	15393 Aug 23 21:57	2° $\approx$ 20'58			15394 Jul 22 08:10	0° $\approx$	
evening set	15393 Aug 26 20:35	1° $\approx$ 33'36		asc. node	15394 Jul 25 07:04	4° $\approx$ 19'53	
	15393 Aug 29 01:38	30° $\approx$		evening max el	15394 Aug 01 01:07	12° $\approx$ 44'00	18°47'47
inferior conj	15393 Sep 01 19:13	26° $\approx$ 05'58	2°01'51	retrograde	15394 Aug 07 16:41	16° $\approx$ 21'17	
minimum elong	15393 Sep 01 21:35	25° $\approx$ 59'07	2°01'01	evening set	15394 Aug 11 00:30	15° $\approx$ 17'46	
min. Earth dist.	15393 Sep 04 04:10	23° $\approx$ 22'27	0.64351 AU	inferior conj	15394 Aug 16 14:23	9° $\approx$ 35'43	2°38'28
morning rise	15393 Sep 07 21:00	19° $\approx$ 46'09		minimum elong	15394 Aug 16 16:26	9° $\approx$ 29'18	2°37'38
desc. node	15393 Sep 09 02:03	18° $\approx$ 53'45		min. Earth dist.	15394 Aug 18 09:26	7° $\approx$ 21'03	0.66178 AU
direct	15393 Sep 14 10:27	17° $\approx$ 11'21		morning rise	15394 Aug 22 07:25	3° $\approx$ 09'57	
morning max el	15393 Sep 28 03:36	25° $\approx$ 09'07	27°30'10	desc. node	15394 Aug 26 23:31	0° $\approx$ 41'34	
	15393 Oct 02 14:06	0° $\approx$		direct	15394 Aug 28 13:49	0° $\approx$ 31'53	
	15393 Oct 23 03:48	0° $\approx$		morning max el	15394 Sep 10 15:08	8° $\approx$ 16'13	26°33'17
morning set	15393 Nov 02 08:07	18° $\approx$ 45'30			15394 Sep 27 15:06	0° $\approx$	
asc. node	15393 Nov 03 12:06	21° $\approx$ 04'43			15394 Oct 15 13:53	0° $\approx$	
max. Earth dist.	15393 Nov 06 22:54	28° $\approx$ 08'41	1.32729 AU	morning set	15394 Oct 16 11:22	1° $\approx$ 40'48	
	15393 Nov 07 20:07	0° $\approx$		max. Earth dist.	15394 Oct 20 10:10	9° $\approx$ 18'50	1.34362 AU
				asc. node	15394 Oct 21 08:50	11° $\approx$ 11'33	
superior conj	15393 Nov 10 10:04	5° $\approx$ 29'56	1°00'30				
minimum elong	15393 Nov 10 07:44	5° $\approx$ 17'25	1°00'55	superior conj	15394 Oct 25 09:11	19° $\approx$ 22'53	0°36'22
evening rise	15393 Nov 17 09:11	20° $\approx$ 34'44		minimum elong	15394 Oct 25 07:22	19° $\approx$ 13'24	0°36'39
	15393 Nov 21 21:46	0° $\approx$			15394 Oct 30 10:18	0° $\approx$	
desc. node	15393 Dec 05 23:17	22° $\approx$ 59'18		evening rise	15394 Nov 01 18:41	4° $\approx$ 57'34	
evening max el	15393 Dec 09 14:24	26° $\approx$ 57'11	22°46'54		15394 Nov 15 09:59	0° $\approx$	
	15393 Dec 13 04:56	0° $\approx$		evening max el	15394 Nov 21 06:10	7° $\approx$ 06'11	21°09'41
retrograde	15393 Dec 22 15:03	3° $\approx$ 24'30		desc. node	15394 Nov 22 20:23	8° $\approx$ 34'25	
evening set	15393 Dec 26 14:09	2° $\approx$ 50'15		retrograde	15394 Dec 03 01:26	12° $\approx$ 57'08	
	15394 Jan 02 00:04	30° $\approx$					

evening set	15394 Dec 05 18:28	12°  39'56		desc. node	15395 Nov 09 17:36	22°  17'57	
inferior conj	15394 Dec 14 13:35	8°  48'24	-5°39'44	retrograde	15395 Nov 13 15:40	23°  02'18	
minimum elong	15394 Dec 14 06:14	8°  58'48	5°37'42	evening set	15395 Nov 15 16:01	22°  51'17	
min. Earth dist.	15394 Dec 15 04:51	8°  26'49	0.54432 AU	inferior conj	15395 Nov 24 10:36	18°  50'53	-4°24'04
morning rise	15394 Dec 22 18:19	4°  57'20		minimum elong	15395 Nov 24 00:38	19°  06'14	4°20'12
direct	15394 Dec 26 19:42	4°  21'48		min. Earth dist.	15395 Nov 26 12:21	17°  34'21	0.55108 AU
morning max el	15395 Jan 08 19:05	10°  39'40	22°48'33	morning rise	15395 Dec 02 07:49	14°  38'04	
asc. node	15395 Jan 17 08:24	21°  08'57		direct	15395 Dec 07 09:14	13°  41'45	
	15395 Jan 22 17:16	0° 		morning max el	15395 Dec 21 03:53	20°  33'17	24°38'12
morning set	15395 Jan 31 05:38	16°  54'45			15395 Dec 29 05:05	0° 	
	15395 Feb 06 07:34	0° 		asc. node	15396 Jan 04 05:37	9°  16'03	
					15396 Jan 14 23:29	0° 	
superior conj	15395 Feb 07 04:40	1°  53'04	1°25'25	morning set	15396 Jan 15 17:34	1°  36'53	
minimum elong	15395 Feb 07 06:40	2°  03'48	1°25'44				
max. Earth dist.	15395 Feb 10 15:35	9°  10'15	1.33585 AU	superior conj	15396 Jan 22 12:03	16°  27'07	1°34'47
evening rise	15395 Feb 15 05:21	18°  12'41		minimum elong	15396 Jan 22 13:09	16°  33'07	1°35'26
desc. node	15395 Feb 18 20:47	25°  12'38		max. Earth dist.	15396 Jan 24 15:11	21°  06'04	1.32234 AU
	15395 Feb 21 09:47	0° 			15396 Jan 28 19:52	0° 	
	15395 Mar 12 21:20	0° 		evening rise	15396 Jan 29 21:55	2°  13'50	
evening max el	15395 Mar 21 20:56	10°  12'42	27°12'11	desc. node	15396 Feb 05 17:24	15°  12'53	
retrograde	15395 Apr 04 09:29	17°  43'44			15396 Feb 14 06:41	0° 	
evening set	15395 Apr 11 00:31	15°  12'49		evening max el	15396 Mar 03 09:08	23°  03'03	27°34'49
min. Earth dist.	15395 Apr 14 21:43	11°  32'20	0.65221 AU		15396 Mar 12 20:43	0° 	
asc. node	15395 Apr 15 05:12	11°  11'54		retrograde	15396 Mar 17 05:32	0° 	
inferior conj	15395 Apr 17 06:31	8°  53'44	0°38'19		15396 Mar 21 09:01	30° 	
minimum elong	15395 Apr 17 05:30	8°  56'36	0°37'25	evening set	15396 Mar 24 01:07	28°  09'48	
morning rise	15395 Apr 23 12:15	3°  24'28		min. Earth dist.	15396 Mar 27 19:41	25°  17'53	0.63266 AU
direct	15395 Apr 26 05:59	2°  44'35		inferior conj	15396 Mar 30 15:27	22°  07'51	-0°28'07
morning max el	15395 May 02 13:29	6°  00'56	17°58'07	minimum elong	15396 Mar 30 16:21	22°  05'34	0°28'00
desc. node	15395 May 17 22:33	28°  17'37		asc. node	15396 Apr 01 02:35	21°  01'07	
	15395 May 18 23:30	0° 		morning rise	15396 Apr 06 10:11	17°  13'51	
morning set	15395 May 20 13:06	2°  13'41		direct	15396 Apr 08 19:41	16°  07'07	
				morning max el	15396 Apr 15 07:07	20°  04'08	17°46'22
superior conj	15395 Jun 03 20:35	25°  14'39	-1°50'06		15396 Apr 22 18:53	0° 	
minimum elong	15395 Jun 03 11:54	25°  06'18	1°50'15	morning set	15396 May 01 15:47	14°  05'15	
	15395 Jun 06 14:27	0° 		desc. node	15396 May 03 19:18	18°  03'37	
max. Earth dist.	15395 Jun 07 09:09	1°  13'16	1.45700 AU		15396 May 10 12:50	0° 	
evening rise	15395 Jun 19 22:08	20°  38'34		superior conj	15396 May 14 03:34	5°  15'39	-1°16'21
	15395 Jun 26 01:04	0° 		minimum elong	15396 May 13 20:20	5°  12'58	1°16'14
greatest brilliancy	15395 Jul 03 15:08	11°  22'08	-0.6m	max. Earth dist.	15396 May 20 03:42	15°  14'02	1.44728 AU
asc. node	15395 Jul 12 03:50	23°  02'28		evening rise	15396 May 29 08:47	0° 	
evening max el	15395 Jul 15 08:23	26°  35'30	19°35'47		15396 May 29 07:57	0° 	
	15395 Jul 19 20:57	0° 			15396 Jun 18 18:29	0° 	
retrograde	15395 Jul 22 14:40	0° 		evening max el	15396 Jun 27 09:45	10°  28'27	20°38'19
	15395 Jul 25 05:25	30°  08'02		asc. node	15396 Jun 28 00:40	11°  04'49	
evening set	15395 Jul 26 08:19	29°  18'36		retrograde	15396 Jul 05 13:37	15°  09'27	
inferior conj	15395 Jul 31 16:45	23°  23'36	3°00'07	evening set	15396 Jul 09 17:49	13°  30'55	
minimum elong	15395 Jul 31 18:00	23°  19'26	2°59'22	inferior conj	15396 Jul 14 23:41	7°  24'12	3°09'04
min. Earth dist.	15395 Aug 01 21:41	21°  24'26	0.67597 AU	minimum elong	15396 Jul 14 23:59	7°  23'11	3°08'17
morning rise	15395 Aug 06 03:10	16°  25'56		min. Earth dist.	15396 Jul 15 14:50	6°  32'02	0.68561 AU
direct	15395 Aug 11 23:42	14°  24'59		morning rise	15396 Jul 20 05:52	1°  02'24	
desc. node	15395 Aug 13 20:58	14°  38'47			15396 Jul 21 13:56	30° 	
morning max el	15395 Aug 24 02:07	21°  39'48	25°16'18	direct	15396 Jul 25 14:47	28°  04'32	
	15395 Aug 31 08:28	0° 			15396 Jul 30 01:42	0° 	
	15395 Sep 20 20:38	0° 		desc. node	15396 Jul 30 18:21	0° 	
morning set	15395 Sep 28 23:15	13°  25'50		morning max el	15396 Aug 05 12:46	5°  12'39	23°48'48
max. Earth dist.	15395 Oct 02 12:24	20°  23'54	1.36449 AU		15396 Aug 24 16:27	0° 	
	15395 Oct 07 12:54	0° 		morning set	15396 Sep 09 15:19	25°  16'12	
asc. node	15395 Oct 08 05:30	1°  21'37			15396 Sep 12 09:18	0° 	
superior conj	15395 Oct 08 23:06	2°  48'43	0°06'42	max. Earth dist.	15396 Sep 13 10:50	1°  25'47	1.38812 AU
minimum elong	15395 Oct 08 22:40	2°  46'34	0°07'02				
behind sun begin	15395 Oct 08 16:52	2°  17'51		superior conj	15396 Sep 21 00:06	15°  23'47	-0°27'28
behind sun end	15395 Oct 09 04:27	3°  15'21		minimum elong	15396 Sep 21 02:03	15°  24'02	0°26'58
evening rise	15395 Oct 17 00:40	19°  10'13		asc. node	15396 Sep 24 02:05	21°  30'35	
	15395 Oct 22 11:52	0° 			15396 Sep 28 10:38	0° 	
evening max el	15395 Nov 03 11:32	17°  57'51	19°50'25	evening rise	15396 Sep 30 00:25	3°  10'09	

evening max el	15396 Oct 16 06:51	29° $\mathbb{M}$ 38'59	18°53'11	evening max el	15397 Sep 29 12:44	12° $\mathbb{M}$ 04'12	18°17'43
	15396 Oct 16 15:24	0° $\mathbb{A}$		retrograde	15397 Oct 06 23:17	15° $\mathbb{M}$ 51'34	
retrograde	15396 Oct 24 21:41	3° $\mathbb{A}$ 59'35		evening set	15397 Oct 09 00:58	15° $\mathbb{M}$ 34'37	
evening set	15396 Oct 26 19:02	3° $\mathbb{A}$ 47'52		desc. node	15397 Oct 13 12:14	13° $\mathbb{M}$ 18'09	
desc. node	15396 Oct 26 14:53	3° $\mathbb{A}$ 49'53		inferior conj	15397 Oct 16 13:42	10° $\mathbb{M}$ 54'12	-0°58'45
	15396 Nov 03 07:36	30° $\mathbb{K}$ $\mathbb{M}$		minimum elong	15397 Oct 16 11:31	10° $\mathbb{M}$ 58'46	0°57'19
inferior conj	15396 Nov 04 01:14	29° $\mathbb{M}$ 28'49	-2°40'56	min. Earth dist.	15397 Oct 19 20:01	8° $\mathbb{M}$ 12'15	0.58624 AU
minimum elong	15396 Nov 03 18:35	29° $\mathbb{M}$ 40'37	2°37'38	morning rise	15397 Oct 23 18:36	5° $\mathbb{M}$ 29'52	
min. Earth dist.	15396 Nov 07 00:23	27° $\mathbb{M}$ 22'54	0.56594 AU	direct	15397 Oct 30 03:35	3° $\mathbb{M}$ 41'53	
morning rise	15396 Nov 11 15:13	24° $\mathbb{M}$ 41'11		morning max el	15397 Nov 13 10:46	11° $\mathbb{M}$ 20'50	27°25'56
direct	15396 Nov 17 11:31	23° $\mathbb{M}$ 19'52			15397 Nov 27 23:58	0° $\mathbb{A}$	
	15396 Nov 30 23:29	0° $\mathbb{A}$		asc. node	15397 Dec 07 23:45	17° $\mathbb{A}$ 21'09	
morning max el	15396 Dec 01 15:24	0° $\mathbb{A}$ 37'29	26°16'26		15397 Dec 14 05:50	0° $\mathbb{B}$	
asc. node	15396 Dec 21 02:44	28° $\mathbb{A}$ 03'39		morning set	15397 Dec 14 12:24	0° $\mathbb{B}$ 34'57	
	15396 Dec 22 03:56	0° $\mathbb{B}$					
morning set	15396 Dec 30 04:25	16° $\mathbb{B}$ 11'47		superior conj	15397 Dec 21 09:57	15° $\mathbb{B}$ 45'37	1°35'13
	15397 Jan 05 10:33	0° $\mathbb{A}$		minimum elong	15397 Dec 21 08:57	15° $\mathbb{B}$ 40'03	1°36'04
				max. Earth dist.	15397 Dec 21 04:35	15° $\mathbb{B}$ 15'33	1.31048 AU
superior conj	15397 Jan 05 22:27	1° $\mathbb{A}$ 06'27	1°38'01		15397 Dec 27 20:28	0° $\mathbb{A}$	
minimum elong	15397 Jan 05 22:29	1° $\mathbb{A}$ 06'37	1°38'50	evening rise	15397 Dec 28 04:03	0° $\mathbb{A}$ 40'46	
max. Earth dist.	15397 Jan 06 20:39	3° $\mathbb{A}$ 10'00	1.31380 AU	desc. node	15398 Jan 09 10:50	24° $\mathbb{A}$ 23'56	
evening rise	15397 Jan 12 22:16	16° $\mathbb{A}$ 21'15			15398 Jan 12 21:28	0° $\mathbb{K}$	
	15397 Jan 19 18:32	0° $\mathbb{K}$		evening max el	15398 Jan 26 19:13	17° $\mathbb{K}$ 37'09	26°41'21
desc. node	15397 Jan 22 14:05	5° $\mathbb{K}$ 09'00		retrograde	15398 Feb 09 19:03	24° $\mathbb{K}$ 48'12	
	15397 Feb 08 05:35	0° $\mathbb{Y}$		evening set	15398 Feb 16 06:50	23° $\mathbb{K}$ 03'50	
evening max el	15397 Feb 13 17:31	5° $\mathbb{Y}$ 55'04	27°25'37	min. Earth dist.	15398 Feb 20 08:55	20° $\mathbb{K}$ 25'52	0.58861 AU
retrograde	15397 Feb 27 17:09	13° $\mathbb{Y}$ 16'26		inferior conj	15398 Feb 23 13:26	17° $\mathbb{K}$ 58'56	-3°15'04
evening set	15397 Mar 06 12:21	11° $\mathbb{Y}$ 09'39		minimum elong	15398 Feb 23 20:46	17° $\mathbb{K}$ 44'48	3°12'08
min. Earth dist.	15397 Mar 10 07:35	8° $\mathbb{Y}$ 19'51	0.61088 AU	morning rise	15398 Mar 03 14:05	13° $\mathbb{K}$ 24'27	
inferior conj	15397 Mar 13 11:01	5° $\mathbb{Y}$ 33'08	-1°47'11	direct	15398 Mar 05 13:44	13° $\mathbb{K}$ 10'24	
minimum elong	15397 Mar 13 14:53	5° $\mathbb{Y}$ 24'31	1°45'37	asc. node	15398 Mar 05 21:25	13° $\mathbb{K}$ 10'47	
asc. node	15397 Mar 18 23:59	1° $\mathbb{Y}$ 23'28		morning max el	15398 Mar 13 11:10	17° $\mathbb{K}$ 04'47	18°18'26
morning rise	15397 Mar 20 20:39	0° $\mathbb{Y}$ 37'29			15398 Mar 22 14:34	0° $\mathbb{Y}$	
direct	15397 Mar 22 23:45	0° $\mathbb{Y}$ 18'20		morning set	15398 Mar 29 04:20	12° $\mathbb{Y}$ 06'03	
morning max el	15397 Mar 29 23:33	3° $\mathbb{Y}$ 49'01	17°52'44				
morning set	15397 Apr 14 14:48	28° $\mathbb{Y}$ 10'52		superior conj	15398 Apr 07 14:58	29° $\mathbb{Y}$ 45'35	-0°00'49
	15397 Apr 15 14:57	0° $\mathbb{B}$		minimum elong	15398 Apr 07 14:52	29° $\mathbb{Y}$ 45'08	0°01'10
desc. node	15397 Apr 20 15:59	9° $\mathbb{B}$ 02'55		behind sun begin	15398 Apr 07 07:30	29° $\mathbb{Y}$ 11'39	
				behind sun end	15398 Apr 07 22:14	0° $\mathbb{B}$ 18'33	
superior conj	15397 Apr 25 10:13	17° $\mathbb{B}$ 22'15	-0°37'53	desc. node	15398 Apr 07 12:36	29° $\mathbb{Y}$ 34'50	
minimum elong	15397 Apr 25 06:48	17° $\mathbb{B}$ 07'32	0°37'57		15398 Apr 07 18:08	0° $\mathbb{B}$	
	15397 May 02 23:00	0° $\mathbb{I}$		max. Earth dist.	15398 Apr 15 04:51	13° $\mathbb{B}$ 05'24	1.41091 AU
max. Earth dist.	15397 May 02 18:47	29° $\mathbb{B}$ 42'45	1.43135 AU	evening rise	15398 Apr 19 18:27	20° $\mathbb{B}$ 42'27	
evening rise	15397 May 09 04:15	9° $\mathbb{I}$ 57'24			15398 Apr 25 14:04	0° $\mathbb{I}$	
	15397 May 22 10:34	0° $\mathbb{E}$			15398 May 16 15:30	0° $\mathbb{E}$	
evening max el	15397 Jun 10 05:26	24° $\mathbb{E}$ 21'33	21°52'06	evening max el	15398 May 23 20:56	8° $\mathbb{E}$ 14'28	23°12'32
asc. node	15397 Jun 14 21:37	28° $\mathbb{E}$ 14'03		asc. node	15398 Jun 01 18:40	14° $\mathbb{E}$ 12'54	
retrograde	15397 Jun 19 11:51	29° $\mathbb{E}$ 46'19		retrograde	15398 Jun 03 07:57	14° $\mathbb{E}$ 23'28	
evening set	15397 Jun 24 03:11	27° $\mathbb{E}$ 50'56		evening set	15398 Jun 08 10:46	12° $\mathbb{E}$ 13'13	
inferior conj	15397 Jun 29 09:04	21° $\mathbb{E}$ 33'54	3°06'47	inferior conj	15398 Jun 13 18:54	5° $\mathbb{E}$ 48'02	2°53'59
minimum elong	15397 Jun 29 08:25	21° $\mathbb{E}$ 36'12	3°05'51	minimum elong	15398 Jun 13 17:26	5° $\mathbb{E}$ 53'07	2°52'50
min. Earth dist.	15397 Jun 29 10:52	21° $\mathbb{E}$ 27'39	0.69041 AU	min. Earth dist.	15398 Jun 13 07:42	6° $\mathbb{E}$ 26'47	0.69028 AU
morning rise	15397 Jul 04 13:28	15° $\mathbb{E}$ 18'17			15398 Jun 18 14:38	30° $\mathbb{K}$ $\mathbb{I}$	
direct	15397 Jul 09 10:00	13° $\mathbb{E}$ 14'15		morning rise	15398 Jun 19 00:03	29° $\mathbb{I}$ 40'03	
desc. node	15397 Jul 17 15:38	17° $\mathbb{E}$ 33'28		direct	15398 Jun 23 08:11	27° $\mathbb{I}$ 55'24	
morning max el	15397 Jul 19 01:16	18° $\mathbb{E}$ 54'17	22°20'02		15398 Jun 28 14:19	0° $\mathbb{E}$	
	15397 Jul 28 08:27	0° $\mathbb{Q}$		morning max el	15398 Jul 01 18:27	2° $\mathbb{E}$ 45'24	20°57'37
	15397 Aug 17 19:28	0° $\mathbb{P}$		desc. node	15398 Jul 04 12:51	5° $\mathbb{E}$ 44'14	
morning set	15397 Aug 21 08:03	5° $\mathbb{P}$ 37'35			15398 Jul 22 05:09	0° $\mathbb{Q}$	
max. Earth dist.	15397 Aug 26 11:57	14° $\mathbb{P}$ 07'36	1.41177 AU	morning set	15398 Aug 01 01:35	15° $\mathbb{Q}$ 00'22	
				max. Earth dist.	15398 Aug 08 18:55	27° $\mathbb{Q}$ 15'41	1.43259 AU
superior conj	15397 Sep 03 08:00	27° $\mathbb{P}$ 40'41	-1°03'48		15398 Aug 10 11:19	0° $\mathbb{P}$	
minimum elong	15397 Sep 03 13:03	28° $\mathbb{P}$ 03'12	1°03'09				
	15397 Sep 04 15:08	0° $\mathbb{U}$		superior conj	15398 Aug 15 18:32	8° $\mathbb{P}$ 47'59	-1°38'07
asc. node	15397 Sep 10 22:40	11° $\mathbb{U}$ 35'18		minimum elong	15398 Aug 16 02:01	9° $\mathbb{P}$ 19'36	1°37'41
evening rise	15397 Sep 13 14:42	16° $\mathbb{U}$ 34'27		evening rise	15398 Aug 27 15:12	29° $\mathbb{P}$ 26'51	
	15397 Sep 20 23:37	0° $\mathbb{M}$			15398 Aug 27 22:39	0° $\mathbb{U}$	

































































































































asc. node	15398 Aug 28 19:17	1°♄31'44			15399 Aug 21 02:29	0°♄	
evening max el	15398 Sep 13 01:00	25°♄04'02	18°02'31	evening max el	15399 Aug 27 15:45	8°♄28'32	18°06'11
retrograde	15398 Sep 19 17:46	28°♄31'12		retrograde	15399 Sep 03 00:47	11°♄48'56	
evening set	15398 Sep 22 02:49	28°♄05'03		evening set	15399 Sep 05 18:18	11°♄10'07	
inferior conj	15398 Sep 28 22:26	23°♄04'44	0°27'14	inferior conj	15399 Sep 11 23:37	5°♄52'03	1°32'52
minimum elong	15398 Sep 28 23:17	23°♄02'42	0°27'11	minimum elong	15399 Sep 12 01:48	5°♄46'06	1°32'09
desc. node	15398 Sep 30 09:39	21°♄39'35		min. Earth dist.	15399 Sep 14 16:07	2°♄57'49	0.63151 AU
min. Earth dist.	15398 Oct 02 01:10	20°♄06'16	0.60897 AU	desc. node	15399 Sep 17 07:07	0°♄27'16	
morning rise	15398 Oct 05 16:44	17°♄10'59			15399 Sep 17 20:23	30°♄	
direct	15398 Oct 12 08:11	14°♄58'53		morning rise	15399 Sep 18 07:10	29°♄39'12	
morning max el	15398 Oct 26 13:53	22°♄53'07	27°57'23	direct	15399 Sep 24 23:02	27°♄09'51	
	15398 Nov 01 22:08	0°♄			15399 Oct 02 19:29	0°♄	
	15398 Nov 21 04:51	0°♄		morning max el	15399 Oct 08 22:11	5°♄09'42	27°50'01
asc. node	15398 Nov 24 20:42	7°♄00'19			15399 Oct 27 17:19	0°♄	
morning set	15398 Nov 28 15:37	14°♄41'39		asc. node	15399 Nov 11 17:33	26°♄54'00	
max. Earth dist.	15398 Dec 04 11:11	27°♄13'45	1.31258 AU	morning set	15399 Nov 12 11:44	28°♄25'24	
					15399 Nov 13 06:22	0°♄	
superior conj	15398 Dec 05 20:41	0°♄19'38	1°26'28	max. Earth dist.	15399 Nov 17 12:28	8°♄54'36	1.32031 AU
minimum elong	15398 Dec 05 18:52	0°♄09'30	1°27'12				
	15398 Dec 05 17:09	0°♄		superior conj	15399 Nov 20 04:41	14°♄42'10	1°11'44
evening rise	15398 Dec 12 13:18	15°♄07'40		minimum elong	15399 Nov 20 02:23	14°♄29'38	1°12'16
	15398 Dec 19 19:56	0°♄		evening rise	15399 Nov 27 00:06	29°♄36'27	
desc. node	15398 Dec 27 07:41	12°♄59'47			15399 Nov 27 04:28	0°♄	
evening max el	15399 Jan 08 12:35	28°♄26'52	25°24'46		15399 Dec 13 16:40	0°♄	
	15399 Jan 10 05:56	0°♄		desc. node	15399 Dec 14 04:38	0°♄41'17	
retrograde	15399 Jan 22 09:38	5°♄25'35		evening max el	15399 Dec 20 23:16	8°♄35'23	23°46'31
evening set	15399 Jan 28 04:53	4°♄08'54		retrograde	15400 Jan 03 10:44	15°♄16'28	
min. Earth dist.	15399 Feb 02 01:08	1°♄27'50	0.56826 AU	evening set	15400 Jan 08 03:50	14°♄28'20	
	15399 Feb 04 05:55	30°♄		min. Earth dist.	15400 Jan 14 10:34	11°♄26'14	0.55276 AU
inferior conj	15399 Feb 04 19:39	29°♄36'55	-4°40'58	inferior conj	15400 Jan 16 05:07	10°♄23'15	-5°44'19
minimum elong	15399 Feb 05 04:55	29°♄21'26	4°37'55	minimum elong	15400 Jan 16 11:17	10°♄14'07	5°42'45
morning rise	15399 Feb 13 07:43	25°♄24'02		morning rise	15400 Jan 24 20:21	6°♄28'07	
direct	15399 Feb 15 09:28	25°♄11'20		direct	15400 Jan 27 09:49	6°♄11'45	
asc. node	15399 Feb 20 18:50	26°♄43'17		morning max el	15400 Feb 07 03:29	11°♄22'51	20°15'12
morning max el	15399 Feb 24 13:52	29°♄40'10	19°05'17	asc. node	15400 Feb 07 16:14	11°♄54'24	
	15399 Feb 24 21:52	0°♄			15400 Feb 19 20:08	0°♄	
morning set	15399 Mar 13 03:54	26°♄26'49		morning set	15400 Feb 25 10:01	11°♄02'41	
	15399 Mar 14 22:57	0°♄					
superior conj	15399 Mar 21 13:37	12°♄56'51	0°31'30	superior conj	15400 Mar 05 01:46	26°♄43'26	0°57'37
minimum elong	15399 Mar 21 15:30	13°♄05'50	0°31'05	minimum elong	15400 Mar 05 04:21	26°♄56'24	0°57'22
desc. node	15399 Mar 25 09:13	20°♄08'06			15400 Mar 06 17:08	0°♄	
max. Earth dist.	15399 Mar 28 11:10	25°♄44'24	1.38828 AU	max. Earth dist.	15400 Mar 10 18:01	7°♄50'13	1.36587 AU
	15399 Mar 30 21:00	0°♄		desc. node	15400 Mar 12 05:48	10°♄38'32	
evening rise	15399 Apr 01 05:59	2°♄22'50		evening rise	15400 Mar 14 12:45	14°♄51'16	
	15399 Apr 18 18:53	0°♄			15400 Mar 23 08:07	0°♄	
evening max el	15399 May 06 10:34	22°♄08'26	24°33'21	evening max el	15400 Apr 13 11:08	0°♄	
retrograde	15399 May 18 00:39	28°♄54'57		retrograde	15400 Apr 19 00:12	6°♄01'38	25°47'27
asc. node	15399 May 19 15:49	28°♄43'33			15400 May 01 12:46	13°♄14'12	
evening set	15399 May 23 14:56	26°♄32'54		asc. node	15400 May 06 13:03	11°♄32'24	
min. Earth dist.	15399 May 28 03:17	21°♄23'18	0.68536 AU	evening set	15400 May 07 14:01	10°♄44'31	
inferior conj	15399 May 29 03:18	20°♄02'51	2°30'44	min. Earth dist.	15400 May 11 19:25	6°♄11'02	0.67582 AU
minimum elong	15399 May 29 01:17	20°♄09'38	2°29'23	inferior conj	15400 May 13 08:17	4°♄14'07	1°56'33
morning rise	15399 Jun 03 11:48	14°♄03'41		minimum elong	15400 May 13 06:08	4°♄20'58	1°55'07
direct	15399 Jun 07 08:06	12°♄38'58			15400 May 17 00:02	30°♄	
morning max el	15399 Jun 14 18:24	16°♄46'55	19°47'04	morning rise	15400 May 18 22:49	28°♄25'08	
desc. node	15399 Jun 21 10:00	24°♄40'19		direct	15400 May 22 08:07	27°♄19'30	
	15399 Jun 25 06:31	0°♄			15400 May 28 00:48	0°♄	
morning set	15399 Jul 11 05:23	23°♄50'24		morning max el	15400 May 29 01:37	0°♄57'07	18°51'39
	15399 Jul 15 05:15	0°♄		desc. node	15400 Jun 08 07:02	14°♄09'41	
max. Earth dist.	15399 Jul 22 07:58	11°♄07'50	1.44839 AU	greatest brilliancy	15400 Jun 11 15:26	19°♄11'11	-0.8m
					15400 Jun 18 16:07	0°♄	
superior conj	15399 Jul 27 05:30	18°♄56'34	-2°03'59	morning set	15400 Jun 20 15:07	3°♄02'13	
minimum elong	15399 Jul 27 11:59	19°♄22'42	2°04'17	max. Earth dist.	15400 Jul 05 02:02	25°♄31'37	1.45759 AU
	15399 Aug 03 00:05	0°♄					
evening rise	15399 Aug 09 20:41	11°♄29'01		superior conj	15400 Jul 06 20:54	28°♄19'19	-2°14'04
asc. node	15399 Aug 15 15:55	21°♄15'20		minimum elong	15400 Jul 06 21:05	28°♄20'02	2°14'55
					15400 Jul 07 22:36	0°♄	

evening rise	15400 Jul 22 02:26	22°♎30'26		asc. node	15401 Jul 20 09:20	29°♎41'25	
	15400 Jul 26 18:05	0°♎			15401 Jul 20 14:54	0°♎	
asc. node	15400 Aug 02 12:36	10°♎41'02		evening max el	15401 Jul 25 15:53	5°♎57'53	19°06'18
evening max el	15400 Aug 11 05:40	22°♎09'15	18°27'42	retrograde	15401 Aug 01 12:36	9°♎44'49	
retrograde	15400 Aug 17 16:11	25°♎36'18		evening set	15401 Aug 05 00:37	8°♎33'48	
evening set	15400 Aug 20 18:44	24°♎42'11		inferior conj	15401 Aug 10 11:47	2°♎45'57	2°49'18
inferior conj	15400 Aug 26 13:15	19°♎08'24	2°19'19	minimum elong	15401 Aug 10 13:32	2°♎40'19	2°48'31
minimum elong	15400 Aug 26 15:33	19°♎01'28	2°18'28	min. Earth dist.	15401 Aug 12 00:42	0°♎47'05	0.66834 AU
min. Earth dist.	15400 Aug 28 16:24	16°♎35'44	0.65174 AU		15401 Aug 12 15:43	30°♎	
morning rise	15400 Sep 01 11:06	12°♎45'30		morning rise	15401 Aug 16 01:44	26°♎19'51	
desc. node	15400 Sep 04 04:35	10°♎59'31		direct	15401 Aug 22 04:12	23°♎43'17	
direct	15400 Sep 07 22:09	10°♎08'07		desc. node	15401 Aug 22 02:02	23°♎43'19	
morning max el	15400 Sep 21 09:03	18°♎01'22	27°09'01		15401 Sep 02 13:23	0°♎	
	15400 Oct 01 11:03	0°♎		morning max el	15401 Sep 03 20:27	1°♎16'14	26°02'32
	15400 Oct 20 15:33	0°♎			15401 Sep 25 11:57	0°♎	
morning set	15400 Oct 26 22:04	11°♎40'25		morning set	15401 Oct 09 19:14	24°♎18'47	
asc. node	15400 Oct 29 14:20	16°♎57'23			15401 Oct 12 19:49	0°♎	
max. Earth dist.	15400 Oct 31 05:28	20°♎15'26	1.33366 AU	max. Earth dist.	15401 Oct 13 12:51	1°♎21'49	1.35208 AU
				asc. node	15401 Oct 16 11:02	7°♎05'48	
superior conj	15400 Nov 04 07:47	28°♎47'56	0°51'00	superior conj	15401 Oct 19 03:22	12°♎29'59	0°24'26
minimum elong	15400 Nov 04 05:34	28°♎36'12	0°51'21	minimum elong	15401 Oct 19 02:00	12°♎23'04	0°24'43
	15400 Nov 04 21:21	0°♎		evening rise	15401 Oct 26 18:56	28°♎22'20	
evening rise	15400 Nov 11 10:39	14°♎03'06			15401 Oct 27 13:49	0°♎	
	15400 Nov 19 09:41	0°♎		evening max el	15401 Nov 14 07:22	28°♎57'35	20°33'18
desc. node	15400 Dec 01 01:41	17°♎09'15			15401 Nov 15 09:44	0°♎	
evening max el	15400 Dec 02 10:23	18°♎33'17	22°03'52	desc. node	15401 Nov 17 22:48	1°♎59'59	
retrograde	15400 Dec 14 23:49	24°♎46'03		retrograde	15401 Nov 25 10:19	4°♎29'29	
evening set	15400 Dec 18 09:25	24°♎20'25		evening set	15401 Nov 27 18:30	4°♎15'54	
inferior conj	15400 Dec 26 23:19	20°♎28'30	-5°59'08	inferior conj	15401 Dec 06 15:00	0°♎21'42	-5°13'03
minimum elong	15400 Dec 26 20:44	20°♎32'07	5°58'07	minimum elong	15401 Dec 06 05:34	0°♎35'23	5°10'03
min. Earth dist.	15400 Dec 26 16:13	20°♎38'26	0.54486 AU		15401 Dec 07 05:55	30°♎	
morning rise	15401 Jan 04 08:58	16°♎41'16		min. Earth dist.	15401 Dec 07 21:52	29°♎36'53	0.54612 AU
direct	15401 Jan 07 20:16	16°♎14'35		morning rise	15401 Dec 14 16:25	26°♎24'00	
morning max el	15401 Jan 20 02:02	22°♎08'49	21°47'37	direct	15401 Dec 19 04:28	25°♎40'29	
asc. node	15401 Jan 25 13:34	28°♎27'39			15401 Dec 30 00:04	0°♎	
	15401 Jan 26 16:17	0°♎		morning max el	15402 Jan 01 13:26	2°♎12'54	23°35'22
morning set	15401 Feb 09 20:02	25°♎46'00		asc. node	15402 Jan 12 10:49	16°♎05'12	
	15401 Feb 11 20:05	0°♎			15402 Jan 20 05:41	0°♎	
superior conj	15401 Feb 16 23:42	10°♎55'09	1°17'09	morning set	15402 Jan 25 07:52	10°♎30'45	
minimum elong	15401 Feb 17 02:05	11°♎07'38	1°17'14	superior conj	15402 Feb 01 04:24	25°♎23'41	1°30'09
max. Earth dist.	15401 Feb 21 06:08	19°♎41'58	1.34580 AU	minimum elong	15402 Feb 01 06:03	25°♎32'37	1°30'37
evening rise	15401 Feb 25 11:18	27°♎58'02			15402 Feb 03 07:50	0°♎	
	15401 Feb 26 13:03	0°♎		max. Earth dist.	15402 Feb 04 01:40	1°♎34'45	1.32955 AU
desc. node	15401 Feb 27 02:22	1°♎02'21		evening rise	15402 Feb 08 22:12	11°♎34'34	
	15401 Mar 16 14:34	0°♎		desc. node	15402 Feb 13 22:57	21°♎15'20	
evening max el	15401 Apr 01 14:05	19°♎46'39	26°47'11		15402 Feb 18 20:44	0°♎	
retrograde	15401 Apr 14 19:16	27°♎13'20			15402 Mar 12 00:16	0°♎	
evening set	15401 Apr 21 06:06	24°♎41'04		evening max el	15402 Mar 15 03:14	3°♎13'02	27°25'15
asc. node	15401 Apr 23 10:22	22°♎41'19		retrograde	15402 Mar 28 19:23	10°♎43'58	
min. Earth dist.	15401 Apr 25 05:55	20°♎42'10	0.66199 AU	evening set	15402 Apr 04 13:05	8°♎15'31	
inferior conj	15401 Apr 27 07:35	18°♎16'08	1°10'32	min. Earth dist.	15402 Apr 08 08:49	4°♎48'07	0.64431 AU
minimum elong	15401 Apr 27 05:55	18°♎21'04	1°09'20	asc. node	15402 Apr 10 07:42	2°♎43'13	
morning rise	15401 May 03 06:58	12°♎39'05		inferior conj	15402 Apr 10 22:38	2°♎02'58	0°11'47
direct	15401 May 06 06:10	11°♎50'31		minimum elong	15402 Apr 10 22:18	2°♎03'52	0°11'15
morning max el	15401 May 12 14:51	15°♎10'47	18°12'47	transit middle	15402 Apr 10 22:18	2°♎03'52	0°11'15
	15401 May 23 14:13	0°♎		transit begin	15402 Apr 10 20:06	2°♎09'46	
desc. node	15401 May 26 03:57	4°♎02'58		transit end	15402 Apr 11 00:29	1°♎57'59	
morning set	15401 May 31 23:45	13°♎21'45			15402 Apr 12 22:02	30°♎	
	15401 Jun 11 10:52	0°♎		morning rise	15402 Apr 17 09:37	26°♎40'05	
superior conj	15401 Jun 16 05:39	7°♎30'17	-2°04'06	direct	15402 Apr 19 23:45	26°♎05'44	
minimum elong	15401 Jun 15 22:42	7°♎03'05	2°04'38	morning max el	15402 Apr 26 07:48	29°♎21'03	17°51'01
max. Earth dist.	15401 Jun 17 22:36	10°♎10'14	1.45938 AU		15402 Apr 26 23:16	0°♎	
	15401 Jun 30 16:37	0°♎		desc. node	15402 May 13 00:46	24°♎13'44	
evening rise	15401 Jul 02 07:41	2°♎31'40		morning set	15402 May 13 12:04	25°♎01'01	
greatest brilliancy	15401 Jul 13 10:12	19°♎38'22	-0.7m		15402 May 16 11:38	0°♎	

superior conj	15402 May 27 01:04	17° $\Pi$ 15'35	-1°36'52	superior conj	15403 May 07 18:00	28° $\text{8}$ 01'29	-1°00'12
minimum elong	15402 May 26 16:27	16° $\Pi$ 41'03	1°36'50	minimum elong	15403 May 07 12:18	27° $\text{8}$ 37'41	1°00'06
max. Earth dist.	15402 May 31 18:31	24° $\Pi$ 45'54	1.45370 AU		15403 May 08 22:28	0° $\Pi$	
	15402 Jun 04 02:44	0° $\text{6}$		max. Earth dist.	15403 May 14 11:18	9° $\Pi$ 02'14	1.44116 AU
evening rise	15402 Jun 11 20:40	11° $\text{6}$ 57'36		evening rise	15403 May 22 09:13	21° $\Pi$ 29'55	
	15402 Jun 23 20:03	0° $\Omega$			15403 May 27 22:55	0° $\text{6}$	
greatest brilliancy	15402 Jun 26 17:17	4° $\Omega$ 12'47	-0.6m		15403 Jun 18 10:18	0° $\Omega$	
asc. node	15402 Jul 07 06:08	18° $\Omega$ 07'56		evening max el	15403 Jun 21 19:19	3° $\Omega$ 41'50	21°08'34
evening max el	15402 Jul 08 20:36	19° $\Omega$ 49'30	20°00'41	asc. node	15403 Jun 24 03:00	5° $\Omega$ 49'12	
retrograde	15402 Jul 16 11:19	24° $\Omega$ 08'25		retrograde	15403 Jun 30 10:16	8° $\Omega$ 41'32	
evening set	15402 Jul 20 09:23	22° $\Omega$ 39'53		evening set	15403 Jul 04 19:01	6° $\Omega$ 55'50	
inferior conj	15402 Jul 25 16:22	16° $\Omega$ 39'28	3°05'23	inferior conj	15403 Jul 10 00:36	0° $\Omega$ 44'23	3°09'27
minimum elong	15402 Jul 25 17:14	16° $\Omega$ 36'34	3°04'37	minimum elong	15403 Jul 10 00:29	0° $\Omega$ 44'47	3°08'36
min. Earth dist.	15402 Jul 26 15:18	15° $\Omega$ 21'47	0.68062 AU	min. Earth dist.	15403 Jul 10 10:03	0° $\Omega$ 11'32	0.68820 AU
morning rise	15402 Jul 31 00:41	10° $\Omega$ 14'57			15403 Jul 10 13:22	30° $\text{R}$ $\text{6}$	
direct	15402 Aug 05 16:15	7° $\Omega$ 46'42		morning rise	15403 Jul 15 05:42	24° $\text{6}$ 24'42	
desc. node	15402 Aug 08 23:26	8° $\Omega$ 28'59		direct	15403 Jul 20 09:19	22° $\text{6}$ 10'31	
morning max el	15402 Aug 17 07:22	14° $\Omega$ 44'37	24°39'52	desc. node	15403 Jul 26 20:47	24° $\text{6}$ 52'33	
	15402 Aug 29 19:18	0° $\text{7}$		morning max el	15403 Jul 30 18:31	28° $\text{6}$ 21'06	23°10'39
	15402 Sep 18 08:51	0° $\text{5}$			15403 Aug 01 08:18	0° $\Omega$	
morning set	15402 Sep 21 23:13	6° $\text{5}$ 11'18			15403 Aug 23 11:25	0° $\text{7}$	
max. Earth dist.	15402 Sep 25 12:49	12° $\text{5}$ 33'06	1.37431 AU	morning set	15403 Sep 03 05:44	17° $\text{7}$ 08'06	
				max. Earth dist.	15403 Sep 07 11:14	24° $\text{7}$ 17'16	1.39824 AU
					15403 Sep 10 17:45	0° $\text{5}$	
superior conj	15402 Oct 02 12:12	25° $\text{5}$ 40'33	-0°07'22				
minimum elong	15402 Oct 02 12:40	25° $\text{5}$ 42'48	0°06'59	superior conj	15403 Sep 15 06:28	8° $\text{5}$ 11'01	-0°42'50
behind sun begin	15402 Oct 02 06:36	25° $\text{5}$ 13'20		minimum elong	15403 Sep 15 09:42	8° $\text{5}$ 25'54	0°42'14
behind sun end	15402 Oct 02 18:44	26° $\text{5}$ 12'21		asc. node	15403 Sep 20 04:17	17° $\text{5}$ 23'02	
asc. node	15402 Oct 03 07:40	27° $\text{5}$ 15'28		evening rise	15403 Sep 24 18:47	26° $\text{5}$ 13'00	
	15402 Oct 04 17:08	0° $\text{7}$			15403 Sep 26 18:10	0° $\text{7}$	
evening rise	15402 Oct 10 22:36	12° $\text{7}$ 28'01		evening max el	15403 Oct 10 19:12	22° $\text{7}$ 11'06	18°35'40
	15402 Oct 20 06:21	0° $\text{7}$		retrograde	15403 Oct 18 20:49	26° $\text{7}$ 15'56	
evening max el	15402 Oct 27 18:48	10° $\text{7}$ 09'41	19°23'21	evening set	15403 Oct 20 19:22	26° $\text{7}$ 02'34	
desc. node	15402 Nov 04 20:02	14° $\text{7}$ 48'47		desc. node	15403 Oct 22 17:22	25° $\text{7}$ 24'53	
retrograde	15402 Nov 06 06:39	14° $\text{7}$ 55'09		inferior conj	15403 Oct 28 18:25	21° $\text{7}$ 34'56	-1°56'18
evening set	15402 Nov 08 04:09	14° $\text{7}$ 44'35		minimum elong	15403 Oct 28 13:45	21° $\text{7}$ 43'49	1°53'46
inferior conj	15402 Nov 16 18:32	10° $\text{7}$ 36'52	-3°41'51	min. Earth dist.	15403 Oct 31 22:25	19° $\text{7}$ 11'16	0.57400 AU
minimum elong	15402 Nov 16 09:33	10° $\text{7}$ 51'33	3°37'54	morning rise	15403 Nov 05 04:45	16° $\text{7}$ 31'07	
min. Earth dist.	15402 Nov 19 07:06	8° $\text{7}$ 58'12	0.55646 AU	direct	15403 Nov 11 07:18	14° $\text{7}$ 58'05	
morning rise	15402 Nov 24 12:45	6° $\text{7}$ 09'53		morning max el	15403 Nov 25 13:15	22° $\text{7}$ 26'17	26°50'14
direct	15402 Nov 29 22:34	5° $\text{7}$ 03'33			15403 Dec 02 06:29	0° $\text{7}$	
morning max el	15402 Dec 13 22:39	12° $\text{7}$ 07'26	25°22'36	asc. node	15403 Dec 17 05:04	23° $\text{7}$ 32'27	
	15402 Dec 27 15:58	0° $\text{8}$			15403 Dec 20 13:18	0° $\text{8}$	
asc. node	15402 Dec 30 07:59	4° $\text{8}$ 30'53		morning set	15403 Dec 25 05:25	9° $\text{8}$ 41'18	
morning set	15403 Jan 09 19:33	25° $\text{8}$ 10'37					
	15403 Jan 12 00:43	0° $\approx$		superior conj	15404 Jan 01 00:28	24° $\text{8}$ 41'23	1°37'33
superior conj	15403 Jan 16 13:20	10° $\approx$ 01'00	1°36'53	minimum elong	15404 Jan 01 00:03	24° $\text{8}$ 39'04	1°38'25
minimum elong	15403 Jan 16 13:59	10° $\approx$ 04'35	1°37'38	max. Earth dist.	15404 Jan 01 10:47	25° $\text{8}$ 39'01	1.31171 AU
max. Earth dist.	15403 Jan 18 03:59	13° $\approx$ 33'59	1.31804 AU		15404 Jan 03 09:37	0° $\approx$	
evening rise	15403 Jan 23 18:22	25° $\approx$ 32'26		evening rise	15404 Jan 07 21:19	9° $\approx$ 46'01	
	15403 Jan 25 22:56	0° $\text{8}$			15404 Jan 18 06:19	0° $\text{8}$	
desc. node	15403 Jan 31 19:35	11° $\text{8}$ 11'21		desc. node	15404 Jan 18 16:18	0° $\text{8}$ 43'54	
	15403 Feb 12 08:15	0° $\text{9}$		evening max el	15404 Feb 07 19:45	28° $\text{8}$ 19'57	27°11'04
evening max el	15403 Feb 25 13:52	16° $\text{9}$ 07'50	27°34'57		15404 Feb 09 16:06	0° $\text{9}$	
retrograde	15403 Mar 11 12:14	23° $\text{9}$ 35'05		retrograde	15404 Feb 21 20:13	5° $\text{9}$ 37'36	
evening set	15403 Mar 18 08:24	21° $\text{9}$ 18'02		evening set	15404 Feb 28 13:00	3° $\text{9}$ 39'43	
min. Earth dist.	15403 Mar 22 02:32	18° $\text{9}$ 16'44	0.62360 AU	min. Earth dist.	15404 Mar 03 10:11	0° $\text{9}$ 56'09	0.60137 AU
inferior conj	15403 Mar 25 02:17	15° $\text{9}$ 25'47	-1°00'13		15404 Mar 04 13:34	30° $\text{R}$ $\text{8}$	
minimum elong	15403 Mar 25 04:20	15° $\text{9}$ 20'53	0°59'31	inferior conj	15404 Mar 06 15:03	28° $\text{8}$ 15'41	-2°23'48
asc. node	15403 Mar 28 05:05	12° $\text{9}$ 38'17		minimum elong	15404 Mar 06 20:24	28° $\text{8}$ 04'27	2°21'36
morning rise	15403 Apr 01 03:15	10° $\text{9}$ 19'33		morning rise	15404 Mar 14 07:14	23° $\text{8}$ 28'40	
direct	15403 Apr 03 09:41	9° $\text{9}$ 56'00		asc. node	15404 Mar 14 02:30	23° $\text{8}$ 31'56	
morning max el	15403 Apr 10 01:24	13° $\text{9}$ 18'05	17°46'49	direct	15404 Mar 16 08:14	23° $\text{8}$ 12'14	
	15403 Apr 21 13:12	0° $\text{8}$		morning max el	15404 Mar 23 16:16	26° $\text{8}$ 52'01	18°01'05
morning set	15403 Apr 26 00:07	7° $\text{8}$ 46'54			15404 Mar 26 10:32	0° $\text{9}$	
desc. node	15403 Apr 29 21:30	14° $\text{8}$ 36'02		morning set	15404 Apr 08 05:56	21° $\text{9}$ 21'41	
					15404 Apr 12 22:39	0° $\text{8}$	

desc. node	15404 Apr 15 18:09	5°♄05'36		superior conj	15405 Mar 31 23:22	22°♄36'56	0°13'36
				minimum elong	15405 Apr 01 00:17	22°♄41'11	0°13'11
superior conj	15404 Apr 18 10:26	9°♄51'24	-0°21'44	behind sun begin	15405 Mar 31 20:19	22°♄22'42	
minimum elong	15404 Apr 18 08:34	9°♄43'12	0°21'56	behind sun end	15405 Apr 01 04:16	22°♄59'40	
max. Earth dist.	15404 Apr 25 23:51	22°♄47'12	1.42313 AU	desc. node	15405 Apr 02 14:47	25°♄38'50	
	15404 Apr 30 09:50	0°♄			15405 Apr 05 00:24	0°♄	
evening rise	15404 May 01 11:56	1°♄44'25		max. Earth dist.	15405 Apr 08 08:26	5°♄53'03	1.40149 AU
	15404 May 20 09:17	0°♄		evening rise	15405 Apr 12 11:22	12°♄54'18	
evening max el	15404 Jun 03 13:02	17°♄34'59	22°25'57		15405 Apr 23 05:13	0°♄	
asc. node	15404 Jun 09 24:00	22°♄30'35			15405 May 15 16:46	0°♄	
retrograde	15404 Jun 13 07:43	23°♄18'53		evening max el	15405 May 17 03:42	1°♄29'41	23°47'16
evening set	15404 Jun 18 03:49	21°♄17'08		asc. node	15405 May 27 21:05	7°♄54'48	
inferior conj	15404 Jun 23 10:26	14°♄56'28	3°02'38	retrograde	15405 May 28 02:23	7°♄55'00	
minimum elong	15404 Jun 23 09:24	15°♄00'03	3°01'36	evening set	15405 Jun 02 10:10	5°♄39'22	
min. Earth dist.	15404 Jun 23 06:45	15°♄09'17	0.69096 AU	min. Earth dist.	15405 Jun 07 03:17	0°♄08'46	0.68884 AU
morning rise	15404 Jun 28 14:49	8°♄43'46			15405 Jun 07 05:51	30°♄	
direct	15404 Jul 03 06:06	6°♄47'33		inferior conj	15405 Jun 07 19:55	29°♄11'57	2°45'24
morning max el	15404 Jul 12 08:29	12°♄05'45	21°43'42	minimum elong	15405 Jun 07 18:10	29°♄17'55	2°44'10
desc. node	15404 Jul 12 18:04	12°♄30'00		morning rise	15405 Jun 13 02:10	23°♄07'40	
	15404 Jul 26 12:58	0°♄		direct	15405 Jun 17 05:18	21°♄31'21	
morning set	15404 Aug 13 12:03	27°♄02'34		morning max el	15405 Jun 25 04:21	26°♄01'38	20°25'53
	15404 Aug 15 08:30	0°♄			15405 Jun 28 18:50	0°♄	
max. Earth dist.	15404 Aug 19 14:18	6°♄54'14	1.42111 AU	desc. node	15405 Jun 29 15:14	1°♄02'05	
					15405 Jul 19 22:09	0°♄	
superior conj	15404 Aug 27 05:46	19°♄51'13	-1°18'56	morning set	15405 Jul 23 21:54	6°♄06'39	
minimum elong	15404 Aug 27 12:04	20°♄18'38	1°18'20	max. Earth dist.	15405 Aug 02 00:33	20°♄25'08	1.44014 AU
	15404 Sep 01 23:08	0°♄			15405 Aug 07 22:09	0°♄	
asc. node	15404 Sep 06 00:52	7°♄24'29					
evening rise	15404 Sep 07 03:45	9°♄27'33		superior conj	15405 Aug 08 06:20	0°♄33'47	-1°50'33
	15404 Sep 19 04:18	0°♄		minimum elong	15405 Aug 08 14:01	1°♄05'30	1°50'24
evening max el	15404 Sep 23 04:22	4°♄52'19	18°08'57	evening rise	15405 Aug 20 20:52	22°♄00'31	
retrograde	15404 Sep 30 05:52	8°♄29'01		asc. node	15405 Aug 23 21:31	27°♄16'16	
evening set	15404 Oct 02 10:37	8°♄08'30			15405 Aug 25 11:26	0°♄	
desc. node	15404 Oct 08 14:46	4°♄14'17		evening max el	15405 Sep 06 18:09	18°♄03'39	18°01'45
inferior conj	15404 Oct 09 15:50	3°♄19'28	-0°19'50	retrograde	15405 Sep 13 06:19	21°♄26'13	
minimum elong	15404 Oct 09 15:09	3°♄20'59	0°19'09	evening set	15405 Sep 15 18:58	20°♄54'55	
min. Earth dist.	15404 Oct 12 21:46	0°♄28'00	0.59580 AU	inferior conj	15405 Sep 22 08:02	15°♄46'24	0°57'34
	15404 Oct 13 11:15	30°♄		minimum elong	15405 Sep 22 09:38	15°♄42'20	0°57'09
morning rise	15404 Oct 16 16:22	27°♄41'50		min. Earth dist.	15405 Sep 25 06:51	12°♄47'42	0.61879 AU
direct	15404 Oct 23 05:09	25°♄42'50		desc. node	15405 Sep 25 12:11	12°♄34'49	
	15404 Nov 02 12:49	0°♄		morning rise	15405 Sep 28 21:44	9°♄43'26	
morning max el	15404 Nov 06 11:48	3°♄28'40	27°44'12	direct	15405 Oct 05 14:00	7°♄23'17	
	15404 Nov 25 22:55	0°♄		morning max el	15405 Oct 19 17:27	15°♄20'18	27°58'51
asc. node	15404 Dec 03 02:05	12°♄59'42			15405 Oct 31 17:10	0°♄	
morning set	15404 Dec 08 11:37	23°♄57'27			15405 Nov 18 13:20	0°♄	
	15404 Dec 11 07:02	0°♄		asc. node	15405 Nov 19 23:00	2°♄45'28	
				morning set	15405 Nov 22 12:05	7°♄54'27	
superior conj	15404 Dec 15 11:52	9°♄18'43	1°32'14	max. Earth dist.	15405 Nov 27 23:30	19°♄33'53	1.31520 AU
minimum elong	15404 Dec 15 10:30	9°♄11'00	1°33'04				
max. Earth dist.	15404 Dec 14 18:33	7°♄41'54	1.31070 AU	superior conj	15405 Nov 29 21:40	23°♄47'48	1°20'57
evening rise	15404 Dec 22 04:49	24°♄09'08		minimum elong	15405 Nov 29 19:35	23°♄36'18	1°21'36
	15404 Dec 24 23:11	0°♄			15405 Dec 02 16:48	0°♄	
desc. node	15405 Jan 04 13:08	19°♄43'38		evening rise	15405 Dec 06 14:56	8°♄37'01	
	15405 Jan 11 09:29	0°♄			15405 Dec 17 11:22	0°♄	
evening max el	15405 Jan 19 18:17	9°♄40'28	26°12'26	desc. node	15405 Dec 22 10:01	7°♄58'06	
retrograde	15405 Feb 02 17:24	16°♄45'48		evening max el	15406 Jan 01 08:18	20°♄09'34	24°44'42
evening set	15405 Feb 08 23:15	15°♄13'09		retrograde	15406 Jan 15 01:57	27°♄01'18	
min. Earth dist.	15405 Feb 13 07:36	12°♄35'43	0.57958 AU	evening set	15406 Jan 20 11:29	25°♄56'49	
inferior conj	15405 Feb 16 09:15	10°♄22'38	-3°52'41	min. Earth dist.	15406 Jan 25 20:10	23°♄09'30	0.56088 AU
minimum elong	15405 Feb 16 17:46	10°♄07'11	3°49'29	inferior conj	15406 Jan 28 06:21	21°♄37'56	-5°12'10
morning rise	15405 Feb 24 15:24	5°♄57'02		minimum elong	15406 Jan 28 15:07	21°♄24'07	5°09'37
direct	15405 Feb 26 15:07	5°♄43'59		morning rise	15406 Feb 05 20:59	17°♄33'35	
asc. node	15405 Feb 28 23:55	6°♄03'23		direct	15406 Feb 08 02:35	17°♄19'56	
morning max el	15405 Mar 07 00:35	9°♄51'59	18°35'33	asc. node	15406 Feb 15 21:20	20°♄19'10	
	15405 Mar 20 03:20	0°♄		morning max el	15406 Feb 17 22:05	22°♄05'38	19°32'15
morning set	15405 Mar 23 00:18	5°♄29'55			15406 Feb 24 04:49	0°♄	
				morning set	15406 Mar 07 03:02	19°♄58'35	

	15406 Mar 12 02:35	0°♿		asc. node	15407 Feb 02 18:42	6°♿07'42	
					15407 Feb 17 04:44	0°♿	
superior conj	15406 Mar 15 04:18	6°♿04'59	0°43'22	morning set	15407 Feb 19 11:06	4°♿38'45	
minimum elong	15406 Mar 15 06:36	6°♿16'16	0°42'59				
desc. node	15406 Mar 20 11:22	16°♿11'28		superior conj	15407 Feb 26 21:04	20°♿04'03	1°06'42
max. Earth dist.	15406 Mar 21 14:51	18°♿18'18	1.37857 AU	minimum elong	15407 Feb 26 23:39	20°♿17'16	1°06'34
evening rise	15406 Mar 25 07:26	24°♿56'10			15407 Mar 03 20:08	0°♿	
	15406 Mar 28 05:38	0°♿		max. Earth dist.	15407 Mar 03 23:14	0°♿15'07	1.35686 AU
	15406 Apr 16 20:29	0°♿		desc. node	15407 Mar 07 07:58	6°♿40'01	
evening max el	15406 Apr 29 17:09	15°♿23'57	25°06'01	evening rise	15407 Mar 07 21:20	7°♿42'16	
retrograde	15406 May 11 17:11	22°♿22'43			15407 Mar 20 22:54	0°♿	
asc. node	15406 May 14 18:16	21°♿43'44		evening max el	15407 Apr 12 06:40	29°♿14'11	26°14'55
evening set	15406 May 17 12:23	19°♿56'36			15407 Apr 13 01:45	0°♿	
min. Earth dist.	15406 May 21 21:32	15°♿02'49	0.68194 AU	retrograde	15407 Apr 25 03:09	6°♿34'56	
inferior conj	15406 May 23 03:06	13°♿25'53	2°17'35	evening set	15407 May 01 08:45	4°♿03'08	
minimum elong	15406 May 23 00:57	13°♿32'55	2°16'12	asc. node	15407 May 01 15:30	3°♿48'55	
morning rise	15406 May 28 13:52	7°♿31'09			15407 May 05 06:27	30°♿	
direct	15406 Jun 01 05:23	6°♿14'49		min. Earth dist.	15407 May 05 11:30	29°♿44'46	0.67047 AU
morning max el	15406 Jun 08 07:33	10°♿07'58	19°21'32	inferior conj	15407 May 07 05:56	27°♿34'04	1°38'33
desc. node	15406 Jun 16 12:19	20°♿13'38		minimum elong	15407 May 07 03:54	27°♿40'22	1°37'10
greatest brilliancy	15406 Jun 20 23:33	26°♿40'11	-0.7m	morning rise	15407 May 12 23:56	21°♿50'05	
	15406 Jun 23 05:16	0°♿		direct	15407 May 16 04:42	20°♿52'12	
morning set	15406 Jul 03 01:39	14°♿59'18		morning max el	15407 May 22 17:37	24°♿21'03	18°33'00
	15406 Jul 12 18:21	0°♿			15407 May 27 13:15	0°♿	
max. Earth dist.	15406 Jul 15 16:23	4°♿34'11	1.45323 AU	desc. node	15407 Jun 03 09:18	9°♿54'18	
				morning set	15407 Jun 12 19:38	24°♿35'58	
superior conj	15406 Jul 19 07:54	10°♿19'39	-2°10'35		15407 Jun 16 06:14	0°♿	
minimum elong	15406 Jul 19 12:17	10°♿37'03	2°11'11				
	15406 Jul 31 11:50	0°♿		superior conj	15407 Jun 28 18:24	19°♿32'12	-2°12'18
evening rise	15406 Aug 02 16:43	3°♿38'12		minimum elong	15407 Jun 28 15:11	19°♿19'38	2°13'07
asc. node	15406 Aug 10 18:10	16°♿53'13		max. Earth dist.	15407 Jun 28 11:21	19°♿04'41	1.45929 AU
	15406 Aug 19 21:01	0°♿			15407 Jul 05 11:08	0°♿	
evening max el	15406 Aug 21 08:50	1°♿35'45	18°13'06	evening rise	15407 Jul 14 11:40	14°♿12'39	
retrograde	15406 Aug 27 17:30	4°♿57'40		greatest brilliancy	15407 Jul 22 12:23	26°♿53'10	-0.8m
evening set	15406 Aug 30 14:45	4°♿12'39			15407 Jul 24 12:31	0°♿	
	15406 Sep 04 13:06	30°♿		asc. node	15407 Jul 28 14:51	6°♿09'14	
inferior conj	15406 Sep 05 15:00	28°♿47'26	1°54'44	evening max el	15407 Aug 04 21:22	15°♿20'23	18°42'05
minimum elong	15406 Sep 05 17:21	28°♿40'44	1°53'56	retrograde	15407 Aug 11 11:25	18°♿54'40	
min. Earth dist.	15406 Sep 08 01:58	26°♿00'36	0.64047 AU	evening set	15407 Aug 14 17:49	17°♿53'41	
morning rise	15406 Sep 11 18:13	22°♿29'01		inferior conj	15407 Aug 20 08:49	12°♿13'49	2°33'52
desc. node	15406 Sep 12 09:38	22°♿00'17		minimum elong	15407 Aug 20 10:56	12°♿07'12	2°33'03
direct	15406 Sep 18 08:24	19°♿55'21		min. Earth dist.	15407 Aug 22 06:01	9°♿54'01	0.65929 AU
morning max el	15406 Oct 02 03:26	27°♿54'24	27°36'19	morning rise	15407 Aug 26 03:01	5°♿48'35	
	15406 Oct 04 03:32	0°♿		desc. node	15407 Aug 30 07:04	3°♿27'49	
	15406 Oct 25 11:27	0°♿		direct	15407 Sep 01 10:44	3°♿10'18	
morning set	15406 Nov 06 04:26	21°♿27'15		morning max el	15407 Sep 14 14:46	10°♿57'39	26°43'14
asc. node	15406 Nov 06 19:51	22°♿44'14			15407 Sep 29 18:28	0°♿	
	15406 Nov 10 08:55	0°♿			15407 Oct 18 00:21	0°♿	
max. Earth dist.	15406 Nov 10 21:46	1°♿07'23	1.32529 AU	morning set	15407 Oct 20 09:34	4°♿27'57	
				max. Earth dist.	15407 Oct 24 10:24	12°♿19'33	1.34086 AU
superior conj	15406 Nov 14 03:51	8°♿04'01	1°03'40	asc. node	15407 Oct 24 16:35	12°♿50'27	
minimum elong	15406 Nov 14 01:31	7°♿51'23	1°04'07				
evening rise	15406 Nov 21 01:52	23°♿05'40		superior conj	15407 Oct 29 04:03	22°♿00'32	0°40'25
	15406 Nov 24 08:34	0°♿		minimum elong	15407 Oct 29 02:06	21°♿50'19	0°40'43
desc. node	15406 Dec 09 07:00	25°♿11'19			15407 Nov 01 22:54	0°♿	
evening max el	15406 Dec 13 17:45	0°♿08'19	23°02'17	evening rise	15407 Nov 05 11:40	7°♿29'36	
	15406 Dec 13 14:20	0°♿			15407 Nov 17 09:06	0°♿	
retrograde	15406 Dec 26 21:46	6°♿39'53		evening max el	15407 Nov 25 08:03	10°♿13'33	21°23'14
evening set	15406 Dec 31 01:34	6°♿02'17		desc. node	15407 Nov 26 04:05	11°♿01'13	
min. Earth dist.	15407 Jan 07 03:28	2°♿45'25	0.54824 AU	retrograde	15407 Dec 07 08:26	16°♿10'26	
inferior conj	15407 Jan 08 08:09	2°♿04'22	-5°57'52	evening set	15407 Dec 10 05:23	15°♿51'28	
minimum elong	15407 Jan 08 11:02	2°♿00'15	5°56'54	inferior conj	15407 Dec 18 23:27	12°♿00'24	-5°46'47
	15407 Jan 12 03:41	30°♿		minimum elong	15407 Dec 18 17:11	12°♿09'13	5°45'05
morning rise	15407 Jan 16 21:53	28°♿14'41		min. Earth dist.	15407 Dec 19 09:03	11°♿46'53	0.54416 AU
direct	15407 Jan 19 19:27	27°♿55'00		morning rise	15407 Dec 27 05:26	8°♿10'50	
	15407 Jan 26 20:27	0°♿		direct	15407 Dec 31 03:12	7°♿37'45	
morning max el	15407 Jan 31 05:23	3°♿24'36	20°52'08	morning max el	15408 Jan 12 22:24	13°♿49'57	22°32'21

asc. node	15408 Jan 20 16:00	23°  10'16		direct	15408 Dec 10 15:06	16°  57'57	
	15408 Jan 24 23:21	0° 		morning max el	15408 Dec 24 07:26	23°  44'34	24°22'07
morning set	15408 Feb 03 22:04	19°  22'47			15408 Dec 29 22:35	0° 	
	15408 Feb 08 20:54	0° 		asc. node	15409 Jan 06 13:14	11°  10'02	
					15409 Jan 16 11:45	0° 	
superior conj	15408 Feb 10 22:10	4°  23'34	1°23'26	morning set	15409 Jan 18 10:01	4°  05'36	
minimum elong	15408 Feb 11 00:17	4°  34'51	1°23'41				
max. Earth dist.	15408 Feb 14 13:58	12°  03'42	1.33829 AU	superior conj	15409 Jan 25 04:54	18°  56'11	1°33'45
evening rise	15408 Feb 19 01:31	21°  02'32		minimum elong	15409 Jan 25 06:09	19°  03'00	1°34'22
desc. node	15408 Feb 22 04:33	26°  59'48		max. Earth dist.	15409 Jan 27 12:38	23°  58'55	1.32407 AU
	15408 Feb 23 19:43	0° 			15409 Jan 30 08:37	0° 	
	15408 Mar 13 19:57	0° 		evening rise	15409 Feb 01 16:41	4°  48'54	
evening max el	15408 Mar 24 20:23	12°  52'40	27°06'32	desc. node	15409 Feb 08 01:10	17°  06'16	
retrograde	15408 Apr 07 07:18	20°  22'56			15409 Feb 15 12:18	0° 	
evening set	15408 Apr 13 21:15	17°  51'34		evening max el	15409 Mar 07 08:57	26°  07'44	27°33'22
asc. node	15408 Apr 17 12:48	14°  23'39			15409 Mar 11 22:45	0° 	
min. Earth dist.	15408 Apr 17 19:07	14°  06'19	0.65482 AU	retrograde	15409 Mar 21 04:20	3°  37'22	
inferior conj	15408 Apr 20 02:04	11°  30'40	0°47'16	evening set	15409 Mar 27 23:35	1°  13'13	
minimum elong	15408 Apr 20 00:51	11°  34'08	0°46'16		15409 Mar 29 13:15	30°  R 	
morning rise	15408 Apr 26 06:02	5°  59'13		min. Earth dist.	15409 Mar 31 18:24	27°  57'27	0.63573 AU
direct	15408 Apr 29 01:09	5°  17'10		inferior conj	15409 Apr 03 12:40	25°  08'22	-0°17'09
morning max el	15408 May 05 08:43	8°  34'15	18°01'22	minimum elong	15409 Apr 03 13:13	25°  06'58	0°17'14
desc. node	15408 May 20 06:12	29°  56'07		asc. node	15409 Apr 04 10:10	24°  13'50	
	15408 May 20 07:09	0° 		morning rise	15409 Apr 10 05:18	19°  51'53	
morning set	15408 May 23 16:13	5°  30'21		direct	15409 Apr 12 16:00	19°  22'29	
				morning max el	15409 Apr 19 02:15	22°  39'25	17°47'03
superior conj	15408 Jun 07 05:53	28°  53'53	-1°54'15		15409 Apr 24 21:55	0° 	
minimum elong	15408 Jun 06 21:26	28°  20'36	1°54'32	morning set	15409 May 05 15:22	17°  40'27	
	15408 Jun 07 22:41	0° 		desc. node	15409 May 07 03:00	20°  12'32	
max. Earth dist.	15408 Jun 10 07:34	3°  54'3'02	1.45786 AU		15409 May 12 22:00	0° 	
evening rise	15408 Jun 23 08:25	23°  54'48					
	15408 Jun 27 07:34	0° 		superior conj	15409 May 18 09:37	9°  12'49	-1°21'58
greatest brilliancy	15408 Jul 06 10:41	13°  04'7'53	-0.7m	minimum elong	15409 May 18 01:54	8°  13'24	1°21'50
asc. node	15408 Jul 14 11:35	24°  05'7'05		max. Earth dist.	15409 May 24 02:43	18°  13'36	1.44915 AU
evening max el	15408 Jul 18 05:30	29°  11'51	19°27'39		15409 May 31 15:27	0° 	
	15408 Jul 19 01:40	0° 		evening rise	15409 Jun 02 19:10	3°  51'8'41	
retrograde	15408 Jul 25 09:00	3°  10'51			15409 Jun 20 19:59	0° 	
evening set	15408 Jul 29 01:12	1°  52'33		asc. node	15409 Jul 01 08:25	13°  06'27	
	15408 Jul 31 03:40	30°  R 		evening max el	15409 Jul 01 07:46	13°  04'52	20°28'07
inferior conj	15408 Aug 03 10:15	25°  05'9'28	2°57'40	retrograde	15409 Jul 09 07:57	17°  03'9'45	
minimum elong	15408 Aug 03 11:39	25°  05'4'52	2°56'54	evening set	15409 Jul 13 10:35	16°  03'42	
min. Earth dist.	15408 Aug 04 17:16	24°  01'7'10	0.67417 AU	inferior conj	15409 Jul 18 16:40	9°  05'8'34	3°08'28
morning rise	15408 Aug 08 21:32	19°  03'3'35		minimum elong	15409 Jul 18 17:07	9°  05'7'03	3°07'40
direct	15408 Aug 14 19:43	16°  05'9'26		min. Earth dist.	15409 Jul 19 09:47	8°  05'9'40	0.68450 AU
desc. node	15408 Aug 16 04:29	17°  06'4'0		morning rise	15409 Jul 23 23:20	3°  03'6'05	
morning max el	15408 Aug 27 01:47	24°  01'9'12	25°28'38	direct	15409 Jul 29 10:01	1°  01'3'12	
	15408 Sep 01 04:22	0° 		desc. node	15409 Aug 03 01:53	2°  03'7'30	
	15408 Sep 22 04:18	0° 		morning max el	15409 Aug 09 12:29	7°  05'1'18	24°02'09
morning set	15408 Oct 01 23:56	16°  04'8'23			15409 Aug 26 20:56	0° 	
max. Earth dist.	15408 Oct 05 13:46	23°  02'3'54	1.36120 AU	morning set	15409 Sep 13 19:15	28°  18'18	
	15408 Oct 09 00:31	0° 			15409 Sep 14 18:54	0° 	
asc. node	15408 Oct 10 13:15	3°  00'0'23		max. Earth dist.	15409 Sep 17 12:32	4°  04'7'20	1.38456 AU
superior conj	15408 Oct 11 19:31	5°  00'3'51	0°11'31	superior conj	15409 Sep 24 22:42	18°  05'2'58	-0°22'06
minimum elong	15408 Oct 11 18:48	5°  00'2'7'18	0°11'51	minimum elong	15409 Sep 25 00:14	18°  03'3'17	0°21'36
behind sun begin	15408 Oct 11 14:30	5°  00'5'47		asc. node	15409 Sep 27 09:53	23°  09'5'3	
behind sun end	15408 Oct 11 23:07	5°  00'4'8'51			15409 Sep 30 21:46	0° 	
evening rise	15408 Oct 19 18:17	21°  00'4'44'04		evening rise	15409 Oct 03 19:10	5°  00'4'42'16	
	15408 Oct 23 21:01	0° 			15409 Oct 17 22:30	0° 	
evening max el	15408 Nov 06 11:11	20°  57'4'2	20°00'49	evening max el	15409 Oct 20 04:31	2°  57'3'1'23	19°00'16
desc. node	15408 Nov 12 01:13	25°  57'0'3'03		retrograde	15409 Oct 29 00:33	6°  57'5'8'15	
retrograde	15408 Nov 16 21:07	26°  57'0'9'04		desc. node	15409 Oct 29 22:28	6°  57'5'5'33	
evening set	15408 Nov 18 23:06	25°  57'3'5'35		evening set	15409 Oct 30 21:40	6°  57'4'6'58	
inferior conj	15408 Nov 27 18:36	21°  57'0'8'03	-4°38'03	inferior conj	15409 Nov 08 06:11	2°  30'5'2	-2°57'01
minimum elong	15408 Nov 27 08:32	22°  57'1'4'22	4°34'19	minimum elong	15409 Nov 07 22:51	2°  43'3'35	2°53'29
min. Earth dist.	15408 Nov 29 15:51	20°  50'4'46	0.54956 AU	min. Earth dist.	15409 Nov 11 03:00	0°  50'3'1'44	0.56328 AU
morning rise	15408 Dec 05 16:53	17°  50'5'52			15409 Nov 11 22:15	30°  R	

morning rise	15409 Nov 15 21:18	27° $\mathbb{M}$ 48'46		morning rise	15410 Oct 27 21:46	8° $\mathbb{M}$ 30'06	
direct	15409 Nov 21 15:01	26° $\mathbb{M}$ 31'32		direct	15410 Nov 03 05:14	6° $\mathbb{M}$ 45'56	
	15409 Dec 01 05:23	0° $\mathbb{A}$		morning max el	15410 Nov 17 12:24	14° $\mathbb{M}$ 22'36	27°17'56
morning max el	15409 Dec 05 18:11	3° $\mathbb{A}$ 45'36	26°03'23		15410 Nov 30 01:32	0° $\mathbb{A}$	
asc. node	15409 Dec 24 10:24	29° $\mathbb{A}$ 52'43		asc. node	15410 Dec 11 07:28	19° $\mathbb{A}$ 06'32	
	15409 Dec 24 12:00	0° $\mathbb{B}$			15410 Dec 16 18:09	0° $\mathbb{B}$	
morning set	15410 Jan 02 21:11	18° $\mathbb{B}$ 42'34		morning set	15410 Dec 18 05:44	3° $\mathbb{B}$ 08'02	
	15410 Jan 08 00:19	0° $\approx$					
superior conj	15410 Jan 09 15:01	3° $\approx$ 35'40	1°37'54	superior conj	15410 Dec 25 02:29	18° $\mathbb{B}$ 15'28	1°36'02
minimum elong	15410 Jan 09 15:13	3° $\approx$ 36'45	1°38'43	minimum elong	15410 Dec 25 01:38	18° $\mathbb{B}$ 10'44	1°36'54
max. Earth dist.	15410 Jan 10 17:30	6° $\approx$ 02'45	1.31472 AU	max. Earth dist.	15410 Dec 25 01:14	18° $\mathbb{B}$ 08'29	1.31058 AU
evening rise	15410 Jan 16 16:03	18° $\approx$ 54'32			15410 Dec 30 09:28	0° $\approx$	
	15410 Jan 22 04:36	0° $\mathbb{H}$		evening rise	15410 Dec 31 21:10	3° $\approx$ 12'41	
desc. node	15410 Jan 25 21:50	6° $\mathbb{H}$ 53'40		desc. node	15411 Jan 12 18:34	26° $\approx$ 13'39	
	15410 Feb 09 22:32	0° $\mathbb{Y}$			15411 Jan 15 00:53	0° $\mathbb{H}$	
evening max el	15410 Feb 17 18:01	8° $\mathbb{Y}$ 46'24	27°29'08	evening max el	15411 Jan 30 20:48	20° $\mathbb{H}$ 36'24	26°50'10
retrograde	15410 Mar 03 17:19	16° $\mathbb{Y}$ 09'23		retrograde	15411 Feb 13 20:59	27° $\mathbb{H}$ 49'33	
evening set	15410 Mar 10 13:02	13° $\mathbb{Y}$ 59'38		evening set	15411 Feb 20 10:18	26° $\mathbb{H}$ 01'24	
min. Earth dist.	15410 Mar 14 07:47	11° $\mathbb{Y}$ 07'15	0.61423 AU	min. Earth dist.	15411 Feb 24 10:45	23° $\mathbb{H}$ 22'28	0.59187 AU
inferior conj	15410 Mar 17 10:30	8° $\mathbb{Y}$ 18'52	-1°34'27	inferior conj	15411 Feb 27 15:44	20° $\mathbb{H}$ 51'22	-3°01'32
minimum elong	15410 Mar 17 13:52	8° $\mathbb{Y}$ 11'14	1°33'07	minimum elong	15411 Feb 27 22:34	20° $\mathbb{H}$ 37'54	2°58'45
asc. node	15410 Mar 22 07:35	4° $\mathbb{Y}$ 27'24		morning rise	15411 Mar 07 14:17	16° $\mathbb{H}$ 13'42	
morning rise	15410 Mar 24 17:52	3° $\mathbb{Y}$ 20'29		asc. node	15411 Mar 09 05:02	15° $\mathbb{H}$ 59'43	
direct	15410 Mar 26 21:48	3° $\mathbb{Y}$ 00'16		direct	15411 Mar 09 14:04	15° $\mathbb{H}$ 59'12	
morning max el	15410 Apr 02 19:09	6° $\mathbb{Y}$ 28'13	17°50'38	morning max el	15411 Mar 17 07:47	19° $\mathbb{H}$ 49'27	18°13'16
morning set	15410 Apr 18 11:44	0° $\mathbb{B}$ 49'51			15411 Mar 24 20:20	0° $\mathbb{Y}$	
	15410 Apr 18 00:37	0° $\mathbb{B}$		morning set	15411 Apr 01 23:25	14° $\mathbb{Y}$ 40'10	
desc. node	15410 Apr 23 23:43	10° $\mathbb{B}$ 38'56			15411 Apr 10 04:51	0° $\mathbb{B}$	
				desc. node	15411 Apr 10 20:22	1° $\mathbb{B}$ 10'31	
superior conj	15410 Apr 29 12:45	20° $\mathbb{B}$ 16'58	-0°43'46	superior conj	15411 Apr 11 14:26	2° $\mathbb{B}$ 32'08	-0°06'12
minimum elong	15410 Apr 29 08:44	19° $\mathbb{B}$ 59'51	0°43'46	minimum elong	15411 Apr 11 13:55	2° $\mathbb{B}$ 29'48	0°06'31
	15410 May 05 08:01	0° $\mathbb{I}$		behind sun begin	15411 Apr 11 07:00	1° $\mathbb{B}$ 58'37	
max. Earth dist.	15410 May 06 18:23	2° $\mathbb{I}$ 20'27	1.43406 AU	behind sun end	15411 Apr 11 20:50	3° $\mathbb{B}$ 00'56	
evening rise	15410 May 13 12:27	13° $\mathbb{I}$ 06'18		max. Earth dist.	15411 Apr 19 04:55	15° $\mathbb{B}$ 48'35	1.41417 AU
	15410 May 24 15:52	0° $\mathbb{E}$		evening rise	15411 Apr 23 23:31	23° $\mathbb{B}$ 43'11	
evening max el	15410 Jun 14 04:11	26° $\mathbb{E}$ 57'40	21°40'31		15411 Apr 27 21:46	0° $\mathbb{I}$	
	15410 Jun 17 15:23	0° $\mathbb{Q}$			15411 May 18 14:16	0° $\mathbb{E}$	
asc. node	15410 Jun 18 05:20	0° $\mathbb{Q}$ 24'39		evening max el	15411 May 27 20:09	10° $\mathbb{E}$ 50'32	23°00'24
retrograde	15410 Jun 23 06:30	2° $\mathbb{Q}$ 15'56		asc. node	15411 Jun 05 02:23	16° $\mathbb{E}$ 35'26	
evening set	15410 Jun 27 20:07	0° $\mathbb{Q}$ 22'56		retrograde	15411 Jun 07 03:04	16° $\mathbb{E}$ 53'27	
	15410 Jun 28 06:37	30° $\mathbb{R}$ $\mathbb{E}$		evening set	15411 Jun 12 04:05	14° $\mathbb{E}$ 45'19	
inferior conj	15410 Jul 03 01:50	24° $\mathbb{E}$ 07'11	3°07'49	inferior conj	15411 Jun 17 11:45	8° $\mathbb{E}$ 21'10	2°56'35
minimum elong	15410 Jul 03 01:19	24° $\mathbb{E}$ 09'00	3°06'55	minimum elong	15411 Jun 17 10:24	8° $\mathbb{E}$ 25'53	2°55'30
min. Earth dist.	15410 Jul 03 05:34	23° $\mathbb{E}$ 54'09	0.69000 AU	min. Earth dist.	15411 Jun 17 02:30	8° $\mathbb{E}$ 53'15	0.69059 AU
morning rise	15410 Jul 08 06:21	17° $\mathbb{E}$ 50'28		morning rise	15411 Jun 22 16:37	2° $\mathbb{E}$ 11'50	
direct	15410 Jul 13 04:40	15° $\mathbb{E}$ 43'50		direct	15411 Jun 27 02:33	0° $\mathbb{E}$ 24'09	
desc. node	15410 Jul 20 23:14	19° $\mathbb{E}$ 35'27		morning max el	15411 Jul 05 16:56	5° $\mathbb{E}$ 21'32	21°09'12
morning max el	15410 Jul 23 00:38	21° $\mathbb{E}$ 31'52	22°33'00	desc. node	15411 Jul 07 20:29	7° $\mathbb{E}$ 38'09	
	15410 Jul 30 07:48	0° $\mathbb{Q}$			15411 Jul 24 10:39	0° $\mathbb{Q}$	
	15410 Aug 20 02:55	0° $\mathbb{P}$		morning set	15411 Aug 05 12:21	18° $\mathbb{Q}$ 20'14	
morning set	15410 Aug 25 15:39	8° $\mathbb{P}$ 49'13			15411 Aug 12 19:54	0° $\mathbb{P}$	
max. Earth dist.	15410 Aug 30 12:55	16° $\mathbb{P}$ 55'02	1.40834 AU	max. Earth dist.	15411 Aug 12 18:42	29° $\mathbb{Q}$ 55'06	1.42974 AU
superior conj	15410 Sep 07 09:27	0° $\mathbb{L}$ 36'22	-0°58'18	superior conj	15411 Aug 19 23:27	11° $\mathbb{P}$ 52'57	-1°33'16
minimum elong	15410 Sep 07 14:02	0° $\mathbb{L}$ 56'57	0°57'40	minimum elong	15411 Aug 20 06:43	12° $\mathbb{P}$ 23'51	1°32'48
	15410 Sep 07 01:21	0° $\mathbb{L}$			15411 Aug 30 07:51	0° $\mathbb{L}$	
asc. node	15410 Sep 14 06:29	13° $\mathbb{L}$ 15'31		evening rise	15411 Aug 31 14:03	2° $\mathbb{L}$ 15'19	
evening rise	15410 Sep 17 11:09	19° $\mathbb{L}$ 16'12		asc. node	15411 Sep 01 03:06	3° $\mathbb{L}$ 13'46	
	15410 Sep 23 06:13	0° $\mathbb{M}$		evening max el	15411 Sep 16 20:47	27° $\mathbb{L}$ 46'48	18°03'35
evening max el	15410 Oct 03 09:07	14° $\mathbb{M}$ 50'46	18°21'41		15411 Sep 19 14:27	0° $\mathbb{M}$	
retrograde	15410 Oct 10 23:19	18° $\mathbb{M}$ 42'23		retrograde	15411 Sep 23 15:30	1° $\mathbb{M}$ 15'58	
evening set	15410 Oct 13 00:00	18° $\mathbb{M}$ 26'33		evening set	15411 Sep 25 23:22	0° $\mathbb{M}$ 51'25	
desc. node	15410 Oct 16 19:50	16° $\mathbb{M}$ 40'30			15411 Sep 27 19:19	30° $\mathbb{R}$ $\mathbb{L}$	
inferior conj	15410 Oct 20 15:26	13° $\mathbb{M}$ 49'26	-1°13'23	inferior conj	15411 Oct 02 21:25	25° $\mathbb{L}$ 54'05	0°15'26
minimum elong	15410 Oct 20 12:38	13° $\mathbb{M}$ 55'08	1°11'41	minimum elong	15411 Oct 02 21:55	25° $\mathbb{L}$ 52'54	0°15'34
min. Earth dist.	15410 Oct 23 21:33	11° $\mathbb{M}$ 11'31	0.58294 AU	transit middle	15411 Oct 02 21:55	25° $\mathbb{L}$ 52'54	0°15'34

transit begin	15411 Oct 02 21:00	25° $\Omega$ 55'02		retrograde	15412 Sep 05 20:53	14° $\Omega$ 28'50	
transit end	15411 Oct 02 22:50	25° $\Omega$ 50'45		evening set	15412 Sep 08 13:10	13° $\Omega$ 52'02	
desc. node	15411 Oct 03 17:15	25° $\Omega$ 07'08		inferior conj	15412 Sep 14 20:23	8° $\Omega$ 36'24	1°24'09
min. Earth dist.	15411 Oct 06 01:15	22° $\Omega$ 56'41	0.60556 AU	minimum elong	15412 Sep 14 22:27	8° $\Omega$ 30'52	1°23'30
morning rise	15411 Oct 09 17:20	20° $\Omega$ 04'11		min. Earth dist.	15412 Sep 17 14:39	5° $\Omega$ 40'29	0.62829 AU
direct	15411 Oct 16 08:21	17° $\Omega$ 55'07		desc. node	15412 Sep 19 14:41	3° $\Omega$ 44'58	
morning max el	15411 Oct 30 14:25	25° $\Omega$ 47'38	27°55'10	morning rise	15412 Sep 21 05:30	2° $\Omega$ 25'56	
	15411 Nov 03 12:35	0° $\mathbb{M}$			15412 Sep 27 06:10	30° $\mathbb{R}$ $\mathbb{M}$	
	15411 Nov 23 13:49	0° $\mathbb{A}$		direct	15412 Sep 27 21:43	29° $\mathbb{M}$ 58'41	
asc. node	15411 Nov 28 04:26	8° $\mathbb{A}$ 42'59			15412 Sep 28 13:26	0° $\Omega$	
morning set	15411 Dec 02 09:47	17° $\mathbb{A}$ 17'28		morning max el	15412 Oct 11 22:00	7° $\Omega$ 57'51	27°53'23
	15411 Dec 08 06:46	0° $\mathbb{Z}$			15412 Oct 28 21:42	0° $\mathbb{M}$	
max. Earth dist.	15411 Dec 08 08:10	0° $\mathbb{Z}$ 07'46	1.31191 AU	asc. node	15412 Nov 14 01:19	28° $\mathbb{M}$ 34'53	
					15412 Nov 14 18:16	0° $\mathbb{A}$	
superior conj	15411 Dec 09 13:28	2° $\mathbb{Z}$ 50'42	1°28'12	morning set	15412 Nov 15 07:06	1° $\mathbb{A}$ 04'54	
minimum elong	15411 Dec 09 11:45	2° $\mathbb{Z}$ 41'09	1°28'57	max. Earth dist.	15412 Nov 20 10:30	11° $\mathbb{A}$ 51'46	1.31884 AU
evening rise	15411 Dec 16 06:02	17° $\mathbb{Z}$ 38'49					
	15411 Dec 22 05:28	0° $\approx$		superior conj	15412 Nov 22 22:00	17° $\mathbb{A}$ 15'17	1°14'23
desc. node	15411 Dec 30 15:24	14° $\approx$ 56'06		minimum elong	15412 Nov 22 19:45	17° $\mathbb{A}$ 02'57	1°14'56
	15412 Jan 11 01:41	0° $\mathbb{H}$			15412 Nov 28 17:09	0° $\mathbb{Z}$	
evening max el	15412 Jan 12 15:29	1° $\mathbb{H}$ 33'46	25°37'56	evening rise	15412 Nov 29 16:42	2° $\mathbb{Z}$ 07'42	
retrograde	15412 Jan 26 13:22	8° $\mathbb{H}$ 34'23			15412 Dec 14 14:25	0° $\approx$	
evening set	15412 Feb 01 11:34	7° $\mathbb{H}$ 13'36		desc. node	15412 Dec 16 12:19	2° $\approx$ 46'46	
min. Earth dist.	15412 Feb 06 04:19	4° $\mathbb{H}$ 33'56	0.57105 AU	evening max el	15412 Dec 24 02:54	11° $\approx$ 47'03	24°01'51
inferior conj	15412 Feb 09 01:03	2° $\mathbb{H}$ 36'52	-4°28'51	retrograde	15413 Jan 06 16:15	18° $\approx$ 30'53	
minimum elong	15412 Feb 09 10:16	2° $\mathbb{H}$ 21'09	4°25'42	evening set	15413 Jan 11 13:51	17° $\approx$ 38'44	
	15412 Feb 13 04:39	30° $\mathbb{R}$ $\approx$		min. Earth dist.	15413 Jan 17 14:27	14° $\approx$ 41'04	0.55463 AU
morning rise	15412 Feb 17 11:50	28° $\approx$ 20'42		inferior conj	15413 Jan 19 13:23	13° $\approx$ 30'37	-5°37'16
direct	15412 Feb 19 12:42	28° $\approx$ 08'05		minimum elong	15413 Jan 19 20:27	13° $\approx$ 20'00	5°35'28
asc. node	15412 Feb 24 02:28	29° $\approx$ 15'52		morning rise	15413 Jan 28 04:47	9° $\approx$ 33'17	
	15412 Feb 25 09:24	0° $\mathbb{H}$		direct	15413 Jan 30 15:55	9° $\approx$ 17'47	
morning max el	15412 Feb 28 12:03	2° $\mathbb{H}$ 31'24	18°56'50	asc. node	15413 Feb 09 23:50	14° $\approx$ 12'56	
morning set	15412 Mar 15 21:42	28° $\mathbb{H}$ 57'51		morning max el	15413 Feb 10 03:44	14° $\approx$ 22'18	20°03'21
	15412 Mar 16 10:21	0° $\mathbb{Y}$			15413 Feb 21 04:02	0° $\mathbb{H}$	
				morning set	15413 Feb 28 03:02	13° $\mathbb{H}$ 32'29	
superior conj	15412 Mar 24 10:40	15° $\mathbb{Y}$ 36'52	0°26'59				
minimum elong	15412 Mar 24 12:20	15° $\mathbb{Y}$ 44'47	0°26'33	superior conj	15413 Mar 07 21:04	29° $\mathbb{H}$ 19'17	0°54'04
desc. node	15412 Mar 27 16:59	21° $\mathbb{Y}$ 43'47		minimum elong	15413 Mar 07 23:36	29° $\mathbb{H}$ 31'57	0°53'47
max. Earth dist.	15412 Mar 31 11:31	28° $\mathbb{Y}$ 33'36	1.39172 AU		15413 Mar 08 05:14	0° $\mathbb{Y}$	
	15412 Apr 01 07:04	0° $\mathbb{B}$		max. Earth dist.	15413 Mar 13 18:16	10° $\mathbb{Y}$ 44'56	1.36909 AU
evening rise	15412 Apr 04 07:56	5° $\mathbb{B}$ 15'48		desc. node	15413 Mar 14 13:33	12° $\mathbb{Y}$ 15'13	
	15412 Apr 19 23:27	0° $\mathbb{I}$		evening rise	15413 Mar 17 12:03	17° $\mathbb{Y}$ 38'05	
evening max el	15412 May 09 10:00	24° $\mathbb{I}$ 44'51	24°21'38		15413 Mar 24 16:06	0° $\mathbb{B}$	
	15412 May 16 00:15	0° $\mathbb{E}$			15413 Apr 14 06:45	0° $\mathbb{I}$	
retrograde	15412 May 20 20:17	1° $\mathbb{E}$ 26'13		evening max el	15413 Apr 21 23:38	8° $\mathbb{I}$ 39'10	25°37'07
asc. node	15412 May 21 23:30	1° $\mathbb{E}$ 20'41		retrograde	15413 May 04 09:02	15° $\mathbb{I}$ 48'14	
	15412 May 25 04:47	30° $\mathbb{R}$ $\mathbb{I}$		asc. node	15413 May 08 20:41	14° $\mathbb{I}$ 25'52	
evening set	15412 May 26 08:52	29° $\mathbb{I}$ 05'49		evening set	15413 May 10 08:47	13° $\mathbb{I}$ 19'21	
min. Earth dist.	15412 May 30 22:25	23° $\mathbb{I}$ 50'42	0.68640 AU	min. Earth dist.	15413 May 14 15:08	8° $\mathbb{I}$ 40'42	0.67757 AU
inferior conj	15412 May 31 20:30	22° $\mathbb{I}$ 36'20	2°34'56	inferior conj	15413 May 16 02:06	6° $\mathbb{I}$ 48'49	2°02'29
minimum elong	15412 May 31 18:32	22° $\mathbb{I}$ 42'57	2°33'38	minimum elong	15413 May 15 23:55	6° $\mathbb{I}$ 55'47	2°01'04
morning rise	15412 Jun 06 04:18	16° $\mathbb{I}$ 35'43		morning rise	15413 May 21 15:34	0° $\mathbb{I}$ 58'17	
direct	15412 Jun 10 02:22	15° $\mathbb{I}$ 07'58			15413 May 23 18:24	30° $\mathbb{R}$ $\mathbb{B}$	
morning max el	15412 Jun 17 15:44	19° $\mathbb{I}$ 21'22	19°56'38	direct	15413 May 25 02:29	29° $\mathbb{B}$ 49'51	
desc. node	15412 Jun 23 17:38	26° $\mathbb{I}$ 28'19			15413 May 26 11:11	0° $\mathbb{I}$	
	15412 Jun 26 08:30	0° $\mathbb{E}$		morning max el	15413 May 31 21:55	3° $\mathbb{I}$ 30'58	18°58'53
morning set	15412 Jul 14 17:04	27° $\mathbb{E}$ 12'04		desc. node	15413 Jun 10 14:40	15° $\mathbb{I}$ 53'32	
	15412 Jul 16 12:42	0° $\Omega$		greatest brilliancy	15413 Jun 14 03:14	21° $\mathbb{I}$ 07'23	-0.7m
max. Earth dist.	15412 Jul 25 06:57	13° $\Omega$ 41'48	1.44644 AU		15413 Jun 19 22:49	0° $\mathbb{E}$	
				morning set	15413 Jun 24 00:37	6° $\mathbb{E}$ 17'27	
superior conj	15412 Jul 30 13:52	22° $\Omega$ 10'15	-2°00'55	max. Earth dist.	15413 Jul 08 00:43	28° $\mathbb{E}$ 03'14	1.45673 AU
minimum elong	15412 Jul 30 20:51	22° $\Omega$ 38'33	2°01'06		15413 Jul 09 06:32	0° $\Omega$	
	15412 Aug 04 08:42	0° $\mathbb{M}$					
evening rise	15412 Aug 12 22:42	14° $\mathbb{M}$ 25'49		superior conj	15413 Jul 10 07:31	1° $\Omega$ 38'00	-2°13'48
asc. node	15412 Aug 17 23:43	22° $\mathbb{M}$ 59'44		minimum elong	15413 Jul 10 08:55	1° $\Omega$ 43'27	2°14'37
	15412 Aug 22 05:43	0° $\Omega$		evening rise	15413 Jul 25 08:09	25° $\Omega$ 36'47	
evening max el	15412 Aug 30 11:25	11° $\Omega$ 08'27	18°04'28		15413 Jul 28 01:05	0° $\mathbb{M}$	



asc. node	15413 Aug 04 20:22	12° $\cap$ 28'34		evening max el	15414 Jul 28 12:25	8° $\cap$ 34'41	18°59'30
evening max el	15413 Aug 14 01:35	24° $\cap$ 47'03	18°23'21	retrograde	15414 Aug 04 07:11	12° $\cap$ 18'04	
retrograde	15413 Aug 20 11:17	28° $\cap$ 12'18		evening set	15414 Aug 07 17:43	11° $\cap$ 09'41	
evening set	15413 Aug 23 12:29	27° $\cap$ 20'32		inferior conj	15414 Aug 13 05:46	5° $\cap$ 23'44	2°45'42
inferior conj	15413 Aug 29 08:22	21° $\cap$ 48'49	2°13'22	minimum elong	15414 Aug 13 07:37	5° $\cap$ 17'48	2°44'53
minimum elong	15413 Aug 29 10:43	21° $\cap$ 41'52	2°12'31	min. Earth dist.	15414 Aug 14 20:48	3° $\cap$ 19'13	0.66612 AU
min. Earth dist.	15413 Aug 31 13:32	19° $\cap$ 12'11	0.64895 AU		15414 Aug 17 18:08	30° $\Re$ 0	
morning rise	15413 Sep 04 07:34	15° $\cap$ 26'53		morning rise	15414 Aug 18 20:46	28° $\Re$ 57'38	
desc. node	15413 Sep 06 12:08	13° $\cap$ 58'07		desc. node	15414 Aug 24 09:34	26° $\Re$ 21'59	
direct	15413 Sep 10 19:31	12° $\cap$ 50'19		direct	15414 Aug 25 00:36	26° $\Re$ 20'29	
morning max el	15413 Sep 24 08:42	20° $\cap$ 45'13	27°16'58		15414 Sep 02 10:45	0° $\cap$	
	15413 Oct 02 08:47	0° $\Omega$		morning max el	15414 Sep 06 20:13	3° $\cap$ 57'48	26°13'42
	15413 Oct 22 00:30	0° $\cap$			15414 Sep 26 17:22	0° $\Omega$	
morning set	15413 Oct 29 19:03	14° $\cap$ 24'34		morning set	15414 Oct 12 18:26	27° $\Omega$ 09'22	
asc. node	15413 Oct 31 22:06	18° $\cap$ 37'10			15414 Oct 14 06:46	0° $\cap$	
max. Earth dist.	15413 Nov 03 04:59	23° $\cap$ 16'05	1.33135 AU	max. Earth dist.	15414 Oct 16 13:46	4° $\cap$ 24'09	1.34900 AU
	15413 Nov 06 10:11	0° $\Re$		asc. node	15414 Oct 18 18:49	8° $\cap$ 45'25	
superior conj	15413 Nov 07 01:57	1° $\Re$ 23'53	0°54'32	superior conj	15414 Oct 21 22:49	15° $\cap$ 10'08	0°28'49
minimum elong	15413 Nov 06 23:41	1° $\Re$ 11'47	0°54'54	minimum elong	15414 Oct 21 21:16	15° $\cap$ 02'12	0°29'07
evening rise	15413 Nov 14 03:23	16° $\Re$ 35'04			15414 Oct 29 01:24	0° $\Re$	
	15413 Nov 20 17:29	0° $\Re$		evening rise	15414 Oct 29 12:08	0° $\Re$ 56'02	
desc. node	15413 Dec 03 09:19	19° $\Re$ 27'23			15414 Nov 15 10:28	0° $\Re$	
evening max el	15413 Dec 05 13:14	21° $\Re$ 43'53	22°18'40	evening max el	15414 Nov 17 08:16	2° $\Re$ 02'46	20°45'40
retrograde	15413 Dec 18 06:46	28° $\Re$ 01'56		desc. node	15414 Nov 20 06:26	4° $\Re$ 34'56	
evening set	15413 Dec 21 21:05	27° $\Re$ 33'27		retrograde	15414 Nov 28 17:07	7° $\Re$ 41'40	
inferior conj	15413 Dec 30 09:10	23° $\Re$ 40'29	-6°00'50	evening set	15414 Dec 01 04:07	7° $\Re$ 26'59	
minimum elong	15413 Dec 30 08:02	23° $\Re$ 42'04	5°59'56	inferior conj	15414 Dec 10 00:21	3° $\Re$ 33'54	-5°23'38
min. Earth dist.	15413 Dec 29 20:15	23° $\Re$ 58'34	0.54544 AU	minimum elong	15414 Dec 09 15:30	3° $\Re$ 46'38	5°20'58
morning rise	15414 Jan 07 20:02	19° $\Re$ 53'16		min. Earth dist.	15414 Dec 11 01:52	2° $\Re$ 57'16	0.54530 AU
direct	15414 Jan 11 03:37	19° $\Re$ 28'38			15414 Dec 17 01:39	30° $\Re$ 0	
morning max el	15414 Jan 23 04:27	25° $\Re$ 16'26	21°32'43	morning rise	15414 Dec 18 02:54	29° $\Re$ 38'55	
	15414 Jan 27 10:16	0° $\approx$		direct	15414 Dec 22 11:12	28° $\Re$ 58'23	
asc. node	15414 Jan 27 21:11	0° $\approx$ 35'04			15414 Dec 27 16:39	0° $\Re$	
morning set	15414 Feb 12 12:37	28° $\approx$ 15'21		morning max el	15415 Jan 04 17:09	5° $\Re$ 25'50	23°18'52
	15414 Feb 13 08:33	0° $\Re$		asc. node	15415 Jan 14 18:28	18° $\Re$ 04'15	
superior conj	15414 Feb 19 17:44	13° $\Re$ 28'03	1°14'35		15415 Jan 21 15:07	0° $\approx$	
minimum elong	15414 Feb 19 20:12	13° $\Re$ 40'51	1°14'38	morning set	15415 Jan 28 00:17	13° $\approx$ 00'15	
max. Earth dist.	15414 Feb 24 05:24	22° $\Re$ 37'56	1.34852 AU	superior conj	15415 Feb 03 21:36	27° $\approx$ 54'44	1°28'34
evening rise	15414 Feb 28 08:27	0° $\Upsilon$ 39'46		minimum elong	15415 Feb 03 23:23	28° $\approx$ 04'21	1°28'59
	15414 Feb 28 00:05	0° $\Upsilon$			15415 Feb 04 20:55	0° $\Re$	
desc. node	15414 Mar 01 10:06	2° $\Upsilon$ 40'26		max. Earth dist.	15415 Feb 06 23:37	4° $\Re$ 29'03	1.33167 AU
	15414 Mar 17 18:09	0° $\Re$		evening rise	15415 Feb 11 17:43	14° $\Re$ 12'22	
evening max el	15414 Apr 04 13:23	22° $\Re$ 25'48	26°39'26	desc. node	15415 Feb 16 06:43	22° $\Re$ 55'23	
retrograde	15414 Apr 17 16:24	29° $\Re$ 51'14			15415 Feb 20 05:03	0° $\Upsilon$	
evening set	15414 Apr 24 02:01	27° $\Re$ 18'49			15415 Mar 12 14:36	0° $\Re$	
asc. node	15414 Apr 25 17:57	25° $\Re$ 48'58		evening max el	15415 Mar 18 02:38	5° $\Re$ 55'14	27°21'12
min. Earth dist.	15414 Apr 28 02:31	23° $\Re$ 15'05	0.66434 AU	retrograde	15415 Mar 31 17:39	13° $\Re$ 26'33	
inferior conj	15414 Apr 30 02:22	20° $\Re$ 52'40	1°18'22	evening set	15415 Apr 07 10:30	10° $\Re$ 57'00	
minimum elong	15414 Apr 30 00:34	20° $\Re$ 58'02	1°17'06	min. Earth dist.	15415 Apr 11 06:40	7° $\Re$ 25'11	0.64714 AU
morning rise	15414 May 06 00:16	15° $\Re$ 13'52		asc. node	15415 Apr 12 15:17	5° $\Re$ 57'19	
direct	15414 May 09 00:54	14° $\Re$ 22'57		inferior conj	15415 Apr 13 18:48	4° $\Re$ 41'58	0°21'35
morning max el	15414 May 15 10:24	17° $\Re$ 44'55	18°17'31	minimum elong	15415 Apr 13 18:12	4° $\Re$ 43'36	0°20'54
	15414 May 24 18:47	0° $\cap$			15415 Apr 18 20:43	30° $\Re$ 0	
desc. node	15414 May 28 11:37	5° $\cap$ 43'50		morning rise	15415 Apr 20 03:54	29° $\Upsilon$ 16'53	
morning set	15414 Jun 04 05:13	16° $\cap$ 25'28		direct	15415 Apr 22 19:15	28° $\Upsilon$ 40'41	
	15414 Jun 12 18:47	0° $\Re$			15415 Apr 26 18:03	0° $\Re$	
superior conj	15414 Jun 19 16:08	10° $\Re$ 47'56	-2°06'52	morning max el	15415 Apr 29 02:58	1° $\Re$ 56'07	17°53'09
minimum elong	15414 Jun 19 10:00	10° $\Re$ 23'57	2°07'30	desc. node	15415 May 15 08:28	25° $\Re$ 52'20	
max. Earth dist.	15414 Jun 20 21:01	12° $\Re$ 40'37	1.45963 AU	morning set	15415 May 16 13:30	27° $\Re$ 53'01	
	15414 Jul 01 23:57	0° $\Re$			15415 May 17 20:04	0° $\cap$	
evening rise	15414 Jul 05 16:46	5° $\Re$ 46'11		superior conj	15415 May 30 09:04	20° $\cap$ 25'58	-1°41'48
greatest brilliancy	15414 Jul 16 01:10	21° $\Re$ 48'36	-0.8m	minimum elong	15415 May 30 00:18	19° $\cap$ 51'03	1°41'50
	15414 Jul 21 14:15	0° $\cap$		max. Earth dist.	15415 Jun 03 16:56	27° $\cap$ 16'46	1.45500 AU
asc. node	15414 Jul 22 17:04	1° $\cap$ 33'18			15415 Jun 05 10:35	0° $\Re$	

evening rise	15415 Jun 15 07:14	15°☿14'42		evening rise	15416 May 24 18:51	24°♄43'50	
	15415 Jun 25 00:58	0°♌			15416 May 28 05:32	0°☿	
greatest brilliancy	15415 Jun 29 21:57	7°♌11'15	-0.6m		15416 Jun 18 05:23	0°♌	
asc. node	15415 Jul 09 13:50	20°♌05'43		evening max el	15416 Jun 23 17:43	6°♌19'15	20°57'45
evening max el	15415 Jul 11 18:01	22°♌26'12	19°51'41	asc. node	15416 Jun 25 10:42	7°♌55'12	
retrograde	15415 Jul 19 05:42	26°♌39'46		retrograde	15416 Jul 02 04:43	11°♌12'17	
evening set	15415 Jul 23 02:11	25°♌13'57		evening set	15416 Jul 06 11:50	9°♌29'08	
inferior conj	15415 Jul 28 09:37	19°♌15'24	3°03'44	inferior conj	15416 Jul 11 17:29	3°♌19'20	3°09'31
minimum elong	15415 Jul 28 10:37	19°♌12'01	3°02'58	minimum elong	15416 Jul 11 17:31	3°♌19'14	3°08'42
min. Earth dist.	15415 Jul 29 10:39	17°♌51'06	0.67908 AU	min. Earth dist.	15416 Jul 12 04:56	2°♌39'38	0.68740 AU
morning rise	15415 Aug 02 18:37	12°♌50'18			15416 Jul 14 04:34	30°♌☿	
direct	15415 Aug 08 11:55	10°♌20'18		morning rise	15416 Jul 16 22:54	26°☿58'50	
desc. node	15415 Aug 11 07:01	10°♌50'41		direct	15416 Jul 22 04:25	24°☿42'09	
morning max el	15415 Aug 20 07:10	17°♌24'36	24°52'45	desc. node	15416 Jul 28 04:24	27°☿01'28	
	15415 Aug 30 19:59	0°♍			15416 Jul 31 17:37	0°♌	
	15415 Sep 19 17:18	0°♌		morning max el	15416 Aug 01 18:05	1°♌00'05	23°23'58
morning set	15415 Sep 25 01:14	9°♌09'21			15416 Aug 23 17:16	0°♍	
max. Earth dist.	15415 Sep 28 14:19	15°♌32'01	1.37081 AU	morning set	15416 Sep 05 11:12	20°♍15'05	
				max. Earth dist.	15416 Sep 09 12:32	27°♍09'43	1.39475 AU
superior conj	15415 Oct 05 09:29	28°♌25'52	-0°02'17		15416 Sep 11 03:32	0°♌	
minimum elong	15415 Oct 05 09:36	28°♌26'29	0°01'54	superior conj	15416 Sep 17 06:15	11°♌03'14	-0°37'19
behind sun begin	15415 Oct 05 03:04	27°♌54'30		minimum elong	15416 Sep 17 09:01	11°♌16'05	0°36'45
behind sun end	15415 Oct 05 16:09	28°♌58'32		asc. node	15416 Sep 21 12:05	19°♌03'21	
asc. node	15415 Oct 05 15:28	28°♌55'12		evening rise	15416 Sep 26 14:12	28°♌52'37	
	15415 Oct 06 04:38	0°♍			15416 Sep 27 04:09	0°♍	
evening rise	15415 Oct 13 16:39	15°♍03'57		evening max el	15416 Oct 12 16:19	25°♍01'47	18°41'20
	15415 Oct 21 10:58	0°♎		retrograde	15416 Oct 20 22:18	29°♍11'44	
evening max el	15415 Oct 30 17:35	13°♎07'27	19°32'25	evening set	15416 Oct 22 20:20	28°♍59'02	
desc. node	15415 Nov 07 03:39	17°♎43'29		desc. node	15416 Oct 24 00:57	28°♍38'59	
retrograde	15415 Nov 09 11:07	17°♎59'29		inferior conj	15416 Oct 30 21:58	24°♍34'28	-2°12'02
evening set	15415 Nov 11 09:20	17°♎48'55		minimum elong	15416 Oct 30 16:35	24°♍44'26	2°09'13
inferior conj	15415 Nov 20 01:24	13°♎44'00	-3°57'16	min. Earth dist.	15416 Nov 03 00:35	22°♍16'40	0.57111 AU
minimum elong	15415 Nov 19 15:58	13°♎59'05	3°53'18	morning rise	15416 Nov 07 09:35	19°♍36'22	
min. Earth dist.	15415 Nov 22 10:30	12°♎12'54	0.55440 AU	direct	15416 Nov 13 10:11	18°♍07'20	
morning rise	15415 Nov 27 20:38	9°♎22'09		morning max el	15416 Nov 27 15:25	25°♍31'53	26°39'06
direct	15415 Dec 03 03:38	8°♎19'22			15416 Dec 01 19:55	0°♎	
morning max el	15415 Dec 17 02:03	15°♎19'17	25°07'22	asc. node	15416 Dec 18 12:50	25°♎20'19	
	15415 Dec 28 18:06	0°♏			15416 Dec 20 23:40	0°♏	
asc. node	15416 Jan 01 15:41	6°♏23'36		morning set	15416 Dec 26 22:23	12°♏13'03	
morning set	15416 Jan 12 12:07	27°♏41'01					
	15416 Jan 13 13:48	0°♐		superior conj	15417 Jan 02 17:00	27°♏11'05	1°37'51
superior conj	15416 Jan 19 06:04	12°♐31'07	1°36'16	minimum elong	15417 Jan 02 16:45	27°♏09'39	1°38'42
minimum elong	15416 Jan 19 06:53	12°♐35'35	1°36'58	max. Earth dist.	15417 Jan 03 07:24	28°♏31'28	1.31232 AU
max. Earth dist.	15416 Jan 21 01:01	16°♐27'02	1.31945 AU		15417 Jan 03 23:16	0°♐	
evening rise	15416 Jan 26 12:42	28°♐07'35		evening rise	15417 Jan 09 14:47	12°♐19'01	
	15416 Jan 27 10:41	0°♑			15417 Jan 18 14:19	0°♑	
desc. node	15416 Feb 03 03:21	12°♑54'17		desc. node	15417 Jan 20 00:02	2°♑30'41	
	15416 Feb 13 10:14	0°♒			15417 Feb 08 14:06	0°♒	
evening max el	15416 Feb 28 13:53	18°♒55'43	27°35'34	evening max el	15417 Feb 09 20:46	1°♒15'15	27°16'56
retrograde	15416 Mar 13 11:44	26°♒23'58		retrograde	15417 Feb 23 21:03	8°♒34'10	
evening set	15416 Mar 20 07:45	24°♒04'52		evening set	15417 Mar 02 14:46	6°♒33'09	
min. Earth dist.	15416 Mar 24 01:58	20°♒59'55	0.62679 AU	min. Earth dist.	15417 Mar 06 11:11	3°♒47'34	0.60468 AU
inferior conj	15416 Mar 27 00:24	18°♒08'58	-0°48'28	inferior conj	15417 Mar 09 15:39	1°♒04'35	-2°10'36
minimum elong	15416 Mar 27 02:01	18°♒05'00	0°48'00	minimum elong	15417 Mar 09 20:29	0°♒54'16	2°08'36
asc. node	15416 Mar 29 12:41	15°♒48'44			15417 Mar 10 22:17	30°♒♈	
morning rise	15416 Apr 02 23:08	12°♒59'57		asc. node	15417 Mar 16 10:09	26°♈30'10	
direct	15416 Apr 05 06:35	12°♒35'02		morning rise	15417 Mar 17 05:33	26°♈14'24	
morning max el	15416 Apr 11 20:40	15°♒55'34	17°46'18	direct	15417 Mar 19 07:13	25°♈57'06	
	15416 Apr 21 20:16	0°♉		morning max el	15417 Mar 26 12:11	29°♈33'31	17°57'45
morning set	15416 Apr 27 22:27	10°♉30'20			15417 Mar 26 22:43	0°♒	
desc. node	15416 May 01 05:15	16°♉13'21		morning set	15417 Apr 11 02:01	23°♒59'03	
	15416 May 09 07:32	0°♊			15417 Apr 14 08:56	0°♉	
superior conj	15416 May 09 22:30	1°♊02'14	-1°06'02	desc. node	15417 Apr 18 01:56	6°♉42'05	
minimum elong	15416 May 09 16:14	0°♊36'12	1°05'55	superior conj	15417 Apr 21 11:33	12°♉42'49	-0°27'26
max. Earth dist.	15416 May 16 10:17	11°♊36'57	1.44339 AU	minimum elong	15417 Apr 21 09:09	12°♉32'21	0°27'36

max. Earth dist.	15417 Apr 28 23:44	25°♄28'03	1.42609 AU	desc. node	15418 Apr 04 22:33	27°♅14'59	
	15417 May 01 18:16	0°♄			15418 Apr 06 10:54	0°♄	
evening rise	15417 May 04 18:50	4°♄50'41		max. Earth dist.	15418 Apr 11 09:00	8°♄40'46	1.40485 AU
	15417 May 21 12:35	0°♄		evening rise	15418 Apr 15 15:04	15°♄52'03	
evening max el	15417 Jun 06 12:07	20°♄12'21	22°14'01		15418 Apr 24 11:44	0°♄	
asc. node	15417 Jun 12 07:41	24°♄46'52			15418 May 16 07:35	0°♄	
retrograde	15417 Jun 16 02:26	25°♄49'25		evening max el	15418 May 20 03:01	4°♄06'13	23°35'06
evening set	15417 Jun 20 20:53	23°♄49'51		asc. node	15418 May 30 04:45	10°♄23'41	
inferior conj	15417 Jun 26 03:12	17°♄30'31	3°04'18	retrograde	15418 May 30 21:36	10°♄25'50	
minimum elong	15417 Jun 26 02:18	17°♄33'38	3°03'20	evening set	15418 Jun 05 03:41	8°♄11'56	
min. Earth dist.	15417 Jun 26 01:27	17°♄36'38	0.69088 AU	min. Earth dist.	15418 Jun 09 22:05	2°♄35'52	0.68949 AU
morning rise	15417 Jul 01 07:33	11°♄16'47		inferior conj	15418 Jun 10 12:50	1°♄45'14	2°48'40
direct	15417 Jul 06 00:41	9°♄17'45		minimum elong	15418 Jun 10 11:11	1°♄50'54	2°47'29
desc. node	15417 Jul 15 01:42	14°♄29'05			15418 Jun 11 19:52	30°♄	
morning max el	15417 Jul 15 07:28	14°♄43'23	21°56'15	morning rise	15418 Jun 15 18:40	25°♄39'42	
	15417 Jul 27 15:36	0°♄		direct	15418 Jun 19 23:32	24°♄00'29	
morning set	15417 Aug 16 21:09	0°♄18'52		morning max el	15418 Jun 28 02:21	28°♄37'21	20°36'40
	15417 Aug 16 16:25	0°♄			15418 Jun 29 10:17	0°♄	
max. Earth dist.	15417 Aug 22 14:59	9°♄39'44	1.41796 AU	desc. node	15418 Jul 01 22:54	2°♄53'36	
					15418 Jul 21 04:37	0°♄	
superior conj	15417 Aug 30 08:40	22°♄51'41	-1°13'35	morning set	15418 Jul 27 09:22	9°♄28'19	
minimum elong	15417 Aug 30 14:33	23°♄17'28	1°12'58	max. Earth dist.	15418 Aug 05 00:10	23°♄02'55	1.43762 AU
	15417 Sep 03 09:00	0°♄			15418 Aug 09 06:51	0°♄	
asc. node	15417 Sep 08 08:40	9°♄06'00					
evening rise	15417 Sep 10 01:08	12°♄12'35		superior conj	15418 Aug 11 12:40	3°♄42'24	-1°46'20
	15417 Sep 20 04:01	0°♄		minimum elong	15418 Aug 11 20:23	4°♄14'27	1°46'05
evening max el	15417 Sep 26 00:26	7°♄37'33	18°11'33	evening rise	15418 Aug 23 20:54	24°♄52'22	
retrograde	15417 Oct 03 04:49	11°♄17'40		asc. node	15418 Aug 26 05:16	28°♄59'16	
evening set	15417 Oct 05 08:29	10°♄58'27			15418 Aug 26 19:09	0°♄	
desc. node	15417 Oct 10 22:19	7°♄40'56		evening max el	15418 Sep 09 13:43	20°♄44'50	18°01'38
inferior conj	15417 Oct 12 16:17	6°♄12'18	-0°33'21	retrograde	15418 Sep 16 03:19	24°♄08'48	
minimum elong	15417 Oct 12 15:06	6°♄14'52	0°32'24	evening set	15418 Sep 18 14:40	23°♄39'24	
min. Earth dist.	15417 Oct 15 22:33	3°♄23'47	0.59245 AU	inferior conj	15418 Sep 25 05:58	18°♄33'37	0°47'08
morning rise	15417 Oct 19 18:22	0°♄39'12		minimum elong	15418 Sep 25 07:20	18°♄30'12	0°46'50
	15417 Oct 20 23:49	30°♄		desc. node	15418 Sep 27 19:45	15°♄59'44	
direct	15417 Oct 26 05:59	28°♄44'00		min. Earth dist.	15418 Sep 28 06:12	15°♄34'37	0.61536 AU
	15417 Oct 31 17:02	0°♄		morning rise	15418 Oct 01 21:14	12°♄33'36	
morning max el	15417 Nov 09 12:52	6°♄27'21	27°38'41	direct	15418 Oct 08 13:19	10°♄16'10	
	15417 Nov 27 04:26	0°♄		morning max el	15418 Oct 22 17:43	18°♄12'26	27°59'10
asc. node	15417 Dec 05 09:52	14°♄44'19			15418 Nov 01 15:56	0°♄	
morning set	15417 Dec 11 05:16	26°♄31'47			15418 Nov 19 23:45	0°♄	
	15417 Dec 12 20:09	0°♄		asc. node	15418 Nov 22 06:46	4°♄27'43	
max. Earth dist.	15417 Dec 17 15:22	10°♄35'47	1.31048 AU	morning set	15418 Nov 25 06:42	10°♄32'04	
				max. Earth dist.	15418 Nov 30 20:58	22°♄29'59	1.31415 AU
superior conj	15417 Dec 18 04:29	11°♄49'09	1°33'26				
minimum elong	15417 Dec 18 03:14	11°♄42'11	1°34'16	superior conj	15418 Dec 02 14:36	26°♄19'46	1°23'04
evening rise	15417 Dec 24 21:45	26°♄41'03		minimum elong	15418 Dec 02 12:37	26°♄08'43	1°23'44
	15417 Dec 26 11:06	0°♄			15418 Dec 04 06:16	0°♄	
desc. node	15418 Jan 06 20:48	21°♄36'02		evening rise	15418 Dec 09 07:34	11°♄08'23	
	15418 Jan 12 06:38	0°♄			15418 Dec 18 17:41	0°♄	
evening max el	15418 Jan 22 20:31	12°♄43'42	26°23'16	desc. node	15418 Dec 24 17:40	9°♄58'11	
retrograde	15418 Feb 05 19:52	19°♄50'56		evening max el	15419 Jan 04 11:32	23°♄19'03	24°59'06
evening set	15418 Feb 12 04:01	18°♄14'07			15419 Jan 15 20:31	0°♄	
min. Earth dist.	15418 Feb 16 09:55	15°♄36'54	0.58268 AU	retrograde	15419 Jan 18 06:31	0°♄13'30	
inferior conj	15418 Feb 19 12:51	13°♄18'39	-3°39'23		15419 Jan 20 16:44	30°♄	
minimum elong	15418 Feb 19 20:59	13°♄03'34	3°36'15	evening set	15419 Jan 23 19:41	29°♄04'41	
morning rise	15418 Feb 27 17:11	8°♄49'55		min. Earth dist.	15419 Jan 28 23:37	26°♄19'59	0.56332 AU
direct	15418 Mar 01 16:46	8°♄36'35		inferior conj	15419 Jan 31 13:03	24°♄41'25	-5°01'40
asc. node	15418 Mar 03 07:36	8°♄45'51		minimum elong	15419 Jan 31 22:07	24°♄26'50	4°58'55
morning max el	15418 Mar 09 21:45	12°♄39'32	18°29'05	morning rise	15419 Feb 09 03:01	20°♄34'17	
	15418 Mar 21 12:29	0°♄		direct	15419 Feb 11 07:01	20°♄21'06	
morning set	15418 Mar 25 18:47	8°♄03'16		asc. node	15419 Feb 18 05:01	22°♄45'59	
				morning max el	15419 Feb 20 21:08	25°♄00'41	19°22'21
superior conj	15418 Apr 03 21:44	25°♄21'04	0°08'34		15419 Feb 25 03:01	0°♄	
minimum elong	15418 Apr 03 22:19	25°♄23'47	0°08'09	morning set	15419 Mar 09 20:27	22°♄29'05	
behind sun begin	15418 Apr 03 16:08	24°♄55'12			15419 Mar 13 14:31	0°♄	
behind sun end	15418 Apr 04 04:31	25°♄52'18					

superior conj	15419 Mar 18 00:33	8° $\Upsilon$ 43'23	0°39'14	superior conj	15420 Feb 29 15:44	22° $\text{X}$ 37'53	1°03'33
minimum elong	15419 Mar 18 02:43	8° $\Upsilon$ 53'56	0°38'50	minimum elong	15420 Feb 29 18:20	22° $\text{X}$ 51'06	1°03'24
desc. node	15419 Mar 22 19:07	17° $\Upsilon$ 47'41			15420 Mar 04 08:03	0° $\Upsilon$	
max. Earth dist.	15419 Mar 24 15:14	21° $\Upsilon$ 10'14	1.38195 AU	max. Earth dist.	15420 Mar 05 22:48	3° $\Upsilon$ 08'42	1.35994 AU
evening rise	15419 Mar 28 08:10	27° $\Upsilon$ 46'21		desc. node	15420 Mar 08 15:41	8° $\Upsilon$ 16'37	
	15419 Mar 29 15:00	0° $\text{Z}$		evening rise	15420 Mar 09 19:37	10° $\Upsilon$ 26'07	
	15419 Apr 17 22:29	0° $\Pi$			15420 Mar 21 05:40	0° $\text{Z}$	
evening max el	15419 May 02 16:26	18° $\Pi$ 00'09	24°54'43		15420 Apr 12 10:08	0° $\Pi$	
retrograde	15419 May 14 13:06	24° $\Pi$ 55'02		evening max el	15420 Apr 14 05:57	1° $\Pi$ 51'22	26°05'39
asc. node	15419 May 17 01:54	24° $\Pi$ 27'51		retrograde	15420 Apr 26 23:54	9° $\Pi$ 09'41	
evening set	15419 May 20 06:37	22° $\Pi$ 30'09		asc. node	15420 May 02 23:09	6° $\Pi$ 48'21	
min. Earth dist.	15419 May 24 16:49	17° $\Pi$ 30'53	0.68325 AU	evening set	15420 May 03 03:57	6° $\Pi$ 38'32	
inferior conj	15419 May 25 20:28	15° $\Pi$ 59'31	2°22'33	min. Earth dist.	15420 May 07 07:35	2° $\Pi$ 14'53	0.67242 AU
minimum elong	15419 May 25 18:22	16° $\Pi$ 06'30	2°21'10	inferior conj	15420 May 09 00:05	0° $\Pi$ 08'47	1°45'17
morning rise	15419 May 31 06:23	10° $\Pi$ 03'13		minimum elong	15420 May 08 21:59	0° $\Pi$ 15'20	1°43'52
direct	15419 Jun 03 23:32	8° $\Pi$ 44'03			15420 May 09 02:54	30° $\text{R}$ $\text{Z}$	
morning max el	15419 Jun 11 04:26	12° $\Pi$ 42'08	19°30'06	morning rise	15420 May 14 16:48	24° $\text{Z}$ 22'59	
desc. node	15419 Jun 18 20:00	21° $\Pi$ 59'52		direct	15420 May 17 23:07	23° $\text{Z}$ 22'27	
greatest brilliancy	15419 Jun 23 19:54	29° $\Pi$ 07'50	-0.7m	morning max el	15420 May 24 13:31	26° $\text{Z}$ 54'13	18°39'10
	15419 Jun 24 10:05	0° $\text{Z}$			15420 May 27 09:11	0° $\Pi$	
morning set	15419 Jul 06 12:42	18° $\text{Z}$ 18'55		desc. node	15420 Jun 04 17:01	11° $\Pi$ 36'36	
	15419 Jul 14 02:06	0° $\Omega$		morning set	15420 Jun 15 03:30	27° $\Pi$ 45'59	
max. Earth dist.	15419 Jul 18 14:57	7° $\Omega$ 05'58	1.45167 AU		15420 Jun 16 13:48	0° $\text{Z}$	
				max. Earth dist.	15420 Jun 30 09:34	21° $\text{Z}$ 34'03	1.45886 AU
superior conj	15419 Jul 22 17:23	13° $\Omega$ 35'48	-2°08'37	superior conj	15420 Jul 01 05:19	22° $\text{Z}$ 51'06	-2°13'21
minimum elong	15419 Jul 22 22:38	13° $\Omega$ 56'45	2°09'06	minimum elong	15420 Jul 01 03:16	22° $\text{Z}$ 43'09	2°14'13
	15419 Aug 01 20:03	0° $\text{R}$			15420 Jul 05 19:00	0° $\Omega$	
evening rise	15419 Aug 05 20:13	6° $\text{R}$ 38'53		evening rise	15420 Jul 16 18:55	17° $\Omega$ 22'25	
asc. node	15419 Aug 13 01:52	18° $\text{R}$ 38'43		greatest brilliancy	15420 Jul 23 19:48	28° $\Omega$ 33'31	-0.9m
	15419 Aug 20 13:40	0° $\text{Z}$			15420 Jul 24 17:46	0° $\text{R}$	
evening max el	15419 Aug 24 04:28	4° $\text{Z}$ 14'25	18°10'20		15420 Jul 29 22:32	7° $\text{R}$ 58'09	
retrograde	15419 Aug 30 13:08	7° $\text{Z}$ 35'39		asc. node	15420 Aug 06 17:32	17° $\text{R}$ 57'37	18°36'43
evening set	15419 Sep 02 09:02	6° $\text{Z}$ 52'55		evening max el	15420 Aug 13 06:11	21° $\text{R}$ 29'02	
inferior conj	15419 Sep 08 10:59	1° $\text{Z}$ 30'10	1°47'17	retrograde	15420 Aug 16 11:13	20° $\text{R}$ 30'32	
minimum elong	15419 Sep 08 13:18	1° $\text{Z}$ 23'41	1°46'30	evening set	15420 Aug 22 03:23	14° $\text{R}$ 52'50	2°28'59
	15419 Sep 09 19:03	30° $\text{R}$ $\text{R}$		inferior conj	15420 Aug 22 05:35	14° $\text{R}$ 46'04	2°28'08
min. Earth dist.	15419 Sep 10 23:56	28° $\text{R}$ 40'21	0.63737 AU	minimum elong	15420 Aug 24 02:42	12° $\text{R}$ 28'14	0.65674 AU
morning rise	15419 Sep 14 15:41	25° $\text{R}$ 13'27		min. Earth dist.	15420 Aug 27 22:50	8° $\text{R}$ 28'17	
desc. node	15419 Sep 14 17:11	25° $\text{R}$ 10'33		morning rise	15420 Aug 31 14:40	6° $\text{R}$ 17'43	
direct	15419 Sep 21 06:31	22° $\text{R}$ 41'03		desc. node	15420 Sep 03 07:49	5° $\text{R}$ 50'03	
	15419 Oct 04 10:36	0° $\text{Z}$		direct	15420 Sep 16 14:21	13° $\text{R}$ 39'51	26°52'42
morning max el	15419 Oct 05 03:11	0° $\text{Z}$ 40'51	27°41'47	morning max el	15420 Sep 29 20:32	0° $\text{Z}$	
	15419 Oct 26 18:12	0° $\text{R}$			15420 Oct 18 10:23	0° $\text{R}$	
morning set	15419 Nov 09 00:24	24° $\text{R}$ 08'52		morning set	15420 Oct 22 07:24	7° $\text{R}$ 14'25	
asc. node	15419 Nov 09 03:34	24° $\text{R}$ 24'44		asc. node	15420 Oct 26 00:18	14° $\text{R}$ 29'46	
	15419 Nov 11 21:22	0° $\text{Z}$		max. Earth dist.	15420 Oct 26 10:23	15° $\text{R}$ 20'22	1.33823 AU
max. Earth dist.	15419 Nov 13 20:19	4° $\text{Z}$ 06'02	1.32343 AU				
superior conj	15419 Nov 16 21:27	10° $\text{Z}$ 38'16	1°06'41	superior conj	15420 Oct 30 22:42	24° $\text{R}$ 37'56	0°44'19
minimum elong	15419 Nov 16 19:07	10° $\text{Z}$ 25'37	1°07'10	minimum elong	15420 Oct 30 20:39	24° $\text{R}$ 27'05	0°44'39
evening rise	15419 Nov 23 18:28	25° $\text{Z}$ 37'04			15420 Nov 02 11:34	0° $\text{Z}$	
	15419 Nov 25 19:55	0° $\text{Z}$		evening rise	15420 Nov 07 04:32	10° $\text{Z}$ 01'42	
desc. node	15419 Dec 11 14:36	27° $\text{Z}$ 21'45			15420 Nov 17 11:37	0° $\text{Z}$	
	15419 Dec 13 18:03	0° $\approx$		desc. node	15420 Nov 27 11:40	13° $\text{Z}$ 25'39	
evening max el	15419 Dec 16 21:10	3° $\approx$ 20'07	23°17'43	evening max el	15420 Nov 27 10:12	13° $\text{Z}$ 22'04	21°37'09
retrograde	15419 Dec 30 04:09	9° $\approx$ 55'21		retrograde	15420 Dec 09 15:23	19° $\text{Z}$ 24'37	
evening set	15420 Jan 03 12:39	9° $\approx$ 14'14		evening set	15420 Dec 12 16:33	19° $\text{Z}$ 03'34	
min. Earth dist.	15420 Jan 10 07:36	6° $\approx$ 02'50	0.54965 AU	inferior conj	15420 Dec 21 09:20	15° $\text{Z}$ 12'35	-5°52'29
inferior conj	15420 Jan 11 17:19	5° $\approx$ 14'03	-5°54'14	minimum elong	15420 Dec 21 04:17	15° $\text{Z}$ 19'41	5°51'05
minimum elong	15420 Jan 11 21:28	5° $\approx$ 08'02	5°53'06	min. Earth dist.	15420 Dec 21 13:11	15° $\text{Z}$ 07'13	0.54420 AU
morning rise	15420 Jan 20 07:46	1° $\approx$ 22'40		morning rise	15420 Dec 29 16:36	11° $\text{Z}$ 24'11	
direct	15420 Jan 23 02:14	1° $\approx$ 04'19		direct	15421 Jan 02 10:44	10° $\text{Z}$ 53'25	
morning max el	15420 Feb 03 06:38	6° $\approx$ 27'36	20°38'48	morning max el	15421 Jan 15 01:27	16° $\text{Z}$ 59'37	22°16'28
asc. node	15420 Feb 05 02:22	8° $\approx$ 21'09		asc. node	15421 Jan 21 23:40	25° $\text{Z}$ 13'33	
	15420 Feb 18 15:31	0° $\text{X}$			15421 Jan 25 03:13	0° $\approx$	
morning set	15420 Feb 22 03:51	7° $\text{X}$ 07'25		morning set	15421 Feb 05 14:32	21° $\approx$ 51'19	
					15421 Feb 09 10:03	0° $\text{X}$	

superior conj	15421 Feb 12 15:48	6° $\text{H}$ 54'50	1°21'18	superior conj	15422 Jan 27 21:52	21° $\approx$ 26'00	1°32'36
minimum elong	15421 Feb 12 18:01	7° $\text{H}$ 06'37	1°21'30	minimum elong	15422 Jan 27 23:15	21° $\approx$ 33'36	1°33'09
max. Earth dist.	15421 Feb 16 12:38	14° $\text{H}$ 58'19	1.34081 AU	max. Earth dist.	15422 Jan 30 10:18	26° $\approx$ 52'50	1.32588 AU
evening rise	15421 Feb 20 21:55	23° $\text{H}$ 42'00			15422 Jan 31 21:30	0° $\text{H}$	
desc. node	15421 Feb 23 12:16	28° $\text{H}$ 37'59		evening rise	15422 Feb 04 11:40	7° $\text{H}$ 24'57	
	15421 Feb 24 05:57	0° $\text{Y}$		desc. node	15422 Feb 10 08:52	18° $\text{H}$ 46'44	
	15421 Mar 14 20:19	0° $\text{B}$			15422 Feb 16 18:45	0° $\text{Y}$	
evening max el	15421 Mar 27 19:50	15° $\text{B}$ 32'48	27°00'18	evening max el	15422 Mar 10 08:42	28° $\text{Y}$ 52'04	27°31'11
retrograde	15421 Apr 10 04:53	23° $\text{B}$ 01'58			15422 Mar 11 13:49	0° $\text{B}$	
evening set	15421 Apr 16 17:47	20° $\text{B}$ 30'14		retrograde	15422 Mar 24 03:00	6° $\text{B}$ 22'09	
asc. node	15421 Apr 19 20:28	17° $\text{B}$ 34'46		evening set	15422 Mar 30 21:48	3° $\text{B}$ 56'22	
min. Earth dist.	15421 Apr 20 16:19	16° $\text{B}$ 40'14	0.65739 AU	min. Earth dist.	15422 Apr 03 16:54	0° $\text{B}$ 36'41	0.63879 AU
inferior conj	15421 Apr 22 21:25	14° $\text{B}$ 07'47	0°55'56		15422 Apr 04 07:21	30° $\text{R}$ $\text{Y}$	
minimum elong	15421 Apr 22 20:01	14° $\text{B}$ 11'50	0°54'50	inferior conj	15422 Apr 06 09:40	27° $\text{Y}$ 48'43	-0°06'30
morning rise	15421 Apr 28 23:42	8° $\text{B}$ 34'15		minimum elong	15422 Apr 06 09:53	27° $\text{Y}$ 48'11	0°06'45
direct	15421 May 01 20:14	7° $\text{B}$ 49'57		transit middle	15422 Apr 06 09:53	27° $\text{Y}$ 48'11	0°06'45
morning max el	15421 May 08 04:02	11° $\text{B}$ 07'55	18°05'02	transit begin	15422 Apr 06 07:02	27° $\text{Y}$ 55'35	
	15421 May 21 14:09	0° $\text{II}$		transit end	15422 Apr 06 12:43	27° $\text{Y}$ 40'47	
desc. node	15421 May 22 13:55	1° $\text{II}$ 35'39		asc. node	15422 Apr 06 17:52	27° $\text{Y}$ 27'27	
morning set	15421 May 26 19:58	8° $\text{II}$ 28'39		morning rise	15422 Apr 13 00:16	22° $\text{Y}$ 29'57	
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superior conj	15421 Jun 10 15:34	2° $\text{E}$ 08'36	-1°58'06	morning set	15422 May 08 15:26	20° $\text{B}$ 28'10	
minimum elong	15421 Jun 10 07:31	1° $\text{E}$ 36'58	1°58'27	desc. node	15422 May 09 10:43	21° $\text{B}$ 49'58	
max. Earth dist.	15421 Jun 13 06:04	6° $\text{E}$ 13'20	1.45858 AU		15422 May 14 07:03	0° $\text{II}$	
evening rise	15421 Jun 26 18:30	27° $\text{E}$ 11'03					
	15421 Jun 28 14:20	0° $\text{O}$					
greatest brilliancy	15421 Jul 09 04:37	16° $\text{O}$ 08'11	-0.7m	superior conj	15422 May 21 16:13	12° $\text{II}$ 08'40	-1°27'27
asc. node	15421 Jul 16 19:18	26° $\text{O}$ 50'52		minimum elong	15422 May 21 08:06	11° $\text{II}$ 35'51	1°27'20
	15421 Jul 19 09:43	0° $\text{O}$		max. Earth dist.	15422 May 27 01:41	20° $\text{II}$ 46'26	1.45090 AU
evening max el	15421 Jul 21 02:29	1° $\text{O}$ 48'29	19°19'49		15422 Jun 01 23:08	0° $\text{E}$	
retrograde	15421 Jul 28 03:24	5° $\text{O}$ 42'51		evening rise	15422 Jun 06 05:42	6° $\text{E}$ 34'46	
evening set	15421 Jul 31 18:09	4° $\text{O}$ 27'04			15422 Jun 21 22:49	0° $\text{O}$	
	15421 Aug 05 01:53	30° $\text{R}$ $\text{O}$		asc. node	15422 Jul 03 16:09	15° $\text{O}$ 06'45	
inferior conj	15421 Aug 06 03:54	28° $\text{O}$ 35'49	2°54'54	evening max el	15422 Jul 04 05:40	15° $\text{O}$ 41'10	20°18'12
minimum elong	15421 Aug 06 05:25	28° $\text{O}$ 30'49	2°54'08	retrograde	15422 Jul 12 02:22	20° $\text{O}$ 10'13	
min. Earth dist.	15421 Aug 07 12:58	26° $\text{O}$ 47'37	0.67228 AU	evening set	15422 Jul 16 03:25	18° $\text{O}$ 36'45	
morning rise	15421 Aug 11 16:05	22° $\text{O}$ 09'50		inferior conj	15422 Jul 21 09:45	12° $\text{O}$ 33'11	3°07'32
direct	15421 Aug 17 15:50	19° $\text{O}$ 34'42		minimum elong	15422 Jul 21 10:21	12° $\text{O}$ 31'09	3°06'47
desc. node	15421 Aug 18 12:07	19° $\text{O}$ 37'28		min. Earth dist.	15422 Jul 22 04:53	11° $\text{O}$ 27'48	0.68327 AU
morning max el	15421 Aug 30 01:30	26° $\text{O}$ 59'07	25°40'43	morning rise	15422 Jul 26 16:58	6° $\text{O}$ 09'57	
	15421 Sep 01 21:07	0° $\text{O}$		direct	15422 Aug 01 05:21	3° $\text{O}$ 45'11	
	15421 Sep 23 11:28	0° $\text{A}$		desc. node	15422 Aug 05 09:32	4° $\text{O}$ 52'50	
morning set	15421 Oct 05 00:14	19° $\text{A}$ 41'01		morning max el	15422 Aug 12 12:19	10° $\text{O}$ 30'17	24°15'25
max. Earth dist.	15421 Oct 08 15:04	26° $\text{A}$ 24'33	1.35796 AU		15422 Aug 28 00:41	0° $\text{O}$	
	15421 Oct 10 12:02	0° $\text{M}$			15422 Sep 16 04:16	0° $\text{A}$	
asc. node	15421 Oct 12 21:00	4° $\text{M}$ 39'03		morning set	15422 Sep 16 22:44	1° $\text{A}$ 19'22	
				max. Earth dist.	15422 Sep 20 14:20	7° $\text{A}$ 44'09	1.38097 AU
superior conj	15421 Oct 14 15:41	8° $\text{M}$ 12'23	0°16'15	superior conj	15422 Sep 27 21:00	21° $\text{A}$ 13'24	-0°16'45
minimum elong	15421 Oct 14 14:44	8° $\text{M}$ 07'32	0°16'33	minimum elong	15422 Sep 27 22:08	21° $\text{A}$ 18'50	0°16'18
evening rise	15421 Oct 22 11:47	24° $\text{M}$ 17'48		asc. node	15422 Sep 29 17:39	24° $\text{A}$ 48'51	
	15421 Oct 25 07:06	0° $\text{J}$			15422 Oct 02 09:08	0° $\text{M}$	
evening max el	15421 Nov 09 11:09	23° $\text{J}$ 58'52	20°11'45	evening rise	15422 Oct 06 13:47	8° $\text{M}$ 19'11	
desc. node	15421 Nov 14 08:51	27° $\text{J}$ 45'25			15422 Oct 18 16:17	0° $\text{J}$	
retrograde	15421 Nov 20 03:01	29° $\text{J}$ 17'23		evening max el	15422 Oct 23 02:30	5° $\text{J}$ 25'11	19°07'52
evening set	15421 Nov 22 06:55	29° $\text{J}$ 05'18		retrograde	15422 Nov 01 03:56	9° $\text{J}$ 58'32	
inferior conj	15421 Dec 01 03:01	25° $\text{J}$ 08'33	-4°51'15	desc. node	15422 Nov 01 06:06	9° $\text{J}$ 58'30	
minimum elong	15421 Nov 30 17:00	25° $\text{J}$ 23'26	4°47'45	evening set	15422 Nov 03 01:00	9° $\text{J}$ 47'36	
min. Earth dist.	15421 Dec 02 19:28	24° $\text{J}$ 08'24	0.54816 AU	inferior conj	15422 Nov 11 11:42	5° $\text{J}$ 34'27	-3°13'06
morning rise	15421 Dec 09 02:21	21° $\text{J}$ 04'27		minimum elong	15422 Nov 11 03:44	5° $\text{J}$ 47'59	3°09'24
direct	15421 Dec 13 21:10	20° $\text{J}$ 14'55		min. Earth dist.	15422 Nov 14 05:54	3° $\text{J}$ 42'17	0.56074 AU
morning max el	15421 Dec 27 11:05	26° $\text{J}$ 56'33	24°05'54	morning rise	15422 Nov 19 03:55	0° $\text{J}$ 57'45	
	15421 Dec 30 09:51	0° $\text{Z}$			15422 Nov 22 05:19	30° $\text{R}$ $\text{M}$	
asc. node	15422 Jan 08 20:56	13° $\text{Z}$ 05'42		direct	15422 Nov 24 18:56	29° $\text{M}$ 44'27	
	15422 Jan 17 23:23	0° $\approx$			15422 Nov 27 08:39	0° $\text{J}$	
morning set	15422 Jan 21 02:29	6° $\approx$ 34'53		morning max el	15422 Dec 08 21:15	6° $\text{J}$ 55'03	25°49'39


































































































































	15422 Dec 25 18:53	0°♄		asc. node	15423 Dec 13 15:11	20°♄52'01	
asc. node	15422 Dec 26 18:06	1°♄42'38			15423 Dec 18 06:06	0°♄	
morning set	15423 Jan 05 13:55	21°♄13'11		morning set	15423 Dec 20 22:58	5°♄40'25	
	15423 Jan 09 14:00	0°♄					
superior conj	15423 Jan 12 07:38	6°♄04'58	1°37'41	superior conj	15423 Dec 27 19:02	20°♄44'58	1°36'43
minimum elong	15423 Jan 12 08:00	6°♄06'57	1°38'27	minimum elong	15423 Dec 27 18:20	20°♄41'05	1°37'34
max. Earth dist.	15423 Jan 13 14:24	8°♄55'28	1.31577 AU	max. Earth dist.	15423 Dec 27 21:49	21°♄00'34	1.31084 AU
evening rise	15423 Jan 19 09:59	21°♄28'02			15423 Dec 31 22:49	0°♄	
	15423 Jan 23 15:18	0°♄		evening rise	15424 Jan 03 14:22	5°♄44'26	
desc. node	15423 Jan 28 05:32	8°♄37'20		desc. node	15424 Jan 15 02:15	28°♄01'44	
	15423 Feb 10 18:57	0°♄			15424 Jan 16 06:01	0°♄	
evening max el	15423 Feb 20 18:20	11°♄36'20	27°31'51	evening max el	15424 Feb 02 22:10	23°♄33'51	26°58'12
retrograde	15423 Mar 06 17:18	19°♄00'55			15424 Feb 12 11:42	0°♄	
evening set	15423 Mar 13 13:22	16°♄48'22		retrograde	15424 Feb 16 22:37	0°♄48'52	
min. Earth dist.	15423 Mar 17 07:46	13°♄53'08	0.61755 AU		15424 Feb 21 07:06	30°♄♄	
inferior conj	15423 Mar 20 09:36	11°♄03'26	-1°21'59	evening set	15424 Feb 23 13:16	28°♄57'11	
minimum elong	15423 Mar 20 12:29	10°♄56'47	1°20'54	min. Earth dist.	15424 Feb 27 12:22	26°♄16'52	0.59515 AU
asc. node	15423 Mar 24 15:16	7°♄32'42		inferior conj	15424 Mar 01 17:31	23°♄42'03	-2°48'00
morning rise	15423 Mar 27 14:43	6°♄02'18		minimum elong	15424 Mar 01 23:50	23°♄29'19	2°45'25
direct	15423 Mar 29 19:29	5°♄41'00		morning rise	15424 Mar 09 13:54	19°♄01'09	
morning max el	15423 Apr 05 14:39	9°♄06'33	17°48'54	asc. node	15424 Mar 10 12:41	18°♄50'19	
	15423 Apr 19 09:55	0°♄		direct	15424 Mar 11 13:59	18°♄46'05	
morning set	15423 Apr 21 08:58	3°♄29'13		morning max el	15424 Mar 19 04:09	22°♄32'29	18°08'35
desc. node	15423 Apr 26 07:27	12°♄14'44			15424 Mar 24 23:49	0°♄	
				morning set	15424 Apr 03 18:41	17°♄14'19	
superior conj	15423 May 02 15:45	23°♄12'35	-0°49'37		15424 Apr 10 15:39	0°♄	
minimum elong	15423 May 02 11:08	22°♄53'03	0°49'36	desc. node	15424 Apr 12 04:06	2°♄45'38	
	15423 May 06 17:12	0°♄					
max. Earth dist.	15423 May 09 17:44	4°♄56'31	1.43664 AU	superior conj	15424 Apr 13 14:16	5°♄19'09	-0°11'40
evening rise	15423 May 16 20:59	16°♄15'50		minimum elong	15424 Apr 13 13:18	5°♄14'49	0°11'57
	15423 May 25 21:46	0°♄		behind sun begin	15424 Apr 13 08:11	4°♄51'56	
evening max el	15423 Jun 17 02:49	29°♄33'29	21°29'09	behind sun end	15424 Apr 13 18:24	5°♄37'41	
	15423 Jun 17 13:35	0°♄		max. Earth dist.	15424 Apr 21 04:47	18°♄30'00	1.41733 AU
asc. node	15423 Jun 20 13:05	2°♄33'25		evening rise	15424 Apr 26 05:01	26°♄44'40	
retrograde	15423 Jun 26 01:07	4°♄45'20			15424 Apr 28 05:49	0°♄	
evening set	15423 Jun 30 13:02	2°♄54'50			15424 May 18 14:50	0°♄	
	15423 Jul 03 07:18	30°♄♄		evening max el	15424 May 29 19:19	13°♄26'26	22°48'19
inferior conj	15423 Jul 05 18:39	26°♄40'29	3°08'35	asc. node	15424 Jun 06 10:04	18°♄55'36	
minimum elong	15423 Jul 05 18:16	26°♄41'48	3°07'43	retrograde	15424 Jun 08 22:02	19°♄22'56	
min. Earth dist.	15423 Jul 06 00:21	26°♄20'34	0.68946 AU	evening set	15424 Jun 13 21:19	17°♄17'01	
morning rise	15423 Jul 10 23:18	20°♄22'39		inferior conj	15424 Jun 19 04:33	10°♄54'00	2°58'59
direct	15423 Jul 15 23:26	18°♄13'22		minimum elong	15424 Jun 19 03:19	10°♄58'20	2°57'55
desc. node	15423 Jul 23 06:53	21°♄38'50		min. Earth dist.	15424 Jun 18 21:16	11°♄19'20	0.69079 AU
morning max el	15423 Jul 26 00:07	24°♄09'30	22°46'05	morning rise	15424 Jun 24 09:11	4°♄43'24	
	15423 Jul 31 04:59	0°♄		direct	15424 Jun 28 20:59	2°♄52'41	
	15423 Aug 21 10:05	0°♄		morning max el	15424 Jul 07 15:31	7°♄57'23	21°21'05
morning set	15423 Aug 28 22:45	11°♄59'36		desc. node	15424 Jul 09 04:08	9°♄32'55	
max. Earth dist.	15423 Sep 02 13:57	19°♄43'26	1.40485 AU		15424 Jul 24 15:40	0°♄	
	15423 Sep 08 11:33	0°♄		morning set	15424 Aug 07 22:43	21°♄38'42	
					15424 Aug 13 04:27	0°♄	
superior conj	15423 Sep 10 10:30	3°♄31'02	-0°52'46	max. Earth dist.	15424 Aug 14 18:36	2°♄35'04	1.42681 AU
minimum elong	15423 Sep 10 14:35	3°♄49'37	0°52'09				
asc. node	15423 Sep 16 14:16	14°♄55'13		superior conj	15424 Aug 22 03:49	14°♄56'12	-1°28'17
evening rise	15423 Sep 20 07:21	21°♄57'18		minimum elong	15424 Aug 22 10:47	15°♄26'04	1°27'44
	15423 Sep 24 14:10	0°♄			15424 Aug 30 17:27	0°♄	
evening max el	15423 Oct 06 05:43	17°♄38'21	18°26'06	asc. node	15424 Sep 02 10:51	4°♄54'48	
retrograde	15423 Oct 13 23:44	21°♄34'21		evening rise	15424 Sep 02 12:29	5°♄02'10	
evening set	15423 Oct 15 23:32	21°♄19'30			15424 Sep 18 05:01	0°♄	
desc. node	15423 Oct 19 03:27	20°♄00'54		evening max el	15424 Sep 18 16:36	0°♄29'36	18°05'01
inferior conj	15423 Oct 23 17:41	16°♄45'45	-1°28'26	retrograde	15424 Sep 25 13:28	4°♄01'03	
minimum elong	15423 Oct 23 14:14	16°♄52'36	1°26'25	evening set	15424 Sep 27 20:12	3°♄37'59	
min. Earth dist.	15423 Oct 26 23:19	14°♄12'22	0.57975 AU		15424 Oct 03 10:53	30°♄♄	
morning rise	15423 Oct 31 01:25	11°♄31'39		inferior conj	15424 Oct 04 20:44	28°♄43'33	0°03'13
direct	15423 Nov 06 07:19	9°♄51'18		minimum elong	15424 Oct 04 20:51	28°♄43'17	0°03'32
morning max el	15423 Nov 20 14:13	17°♄25'20	27°09'01	transit middle	15424 Oct 04 20:51	28°♄43'17	0°03'32
	15423 Dec 01 00:53	0°♄		transit begin	15424 Oct 04 17:36	28°♄50'46	
				transit end	15424 Oct 05 00:05	28°♄35'47	

desc. node	15424 Oct 05 00:50	28° $\Omega$ 34'04		min. Earth dist.	15425 Sep 20 13:19	8° $\Omega$ 23'21	0.62501 AU
min. Earth dist.	15424 Oct 08 01:30	25° $\Omega$ 47'46	0.60218 AU	desc. node	15425 Sep 21 22:17	7° $\Omega$ 03'48	
morning rise	15424 Oct 11 18:17	22° $\Omega$ 57'48		morning rise	15425 Sep 24 04:07	5° $\Omega$ 12'34	
direct	15424 Oct 18 08:42	20° $\Omega$ 52'00		direct	15425 Sep 30 20:30	2° $\Omega$ 47'41	
morning max el	15424 Nov 01 15:00	28° $\Omega$ 42'18	27°52'05	morning max el	15425 Oct 14 21:54	10° $\Omega$ 46'07	27°56'02
	15424 Nov 02 21:40	0° $\mathbb{M}$			15425 Oct 30 01:03	0° $\mathbb{M}$	
	15424 Nov 23 22:09	0° $\mathbb{A}$		asc. node	15425 Nov 16 09:02	0° $\mathbb{A}$ 15'12	
asc. node	15424 Nov 29 12:09	10° $\mathbb{A}$ 25'14			15425 Nov 16 05:59	0° $\mathbb{A}$	
morning set	15424 Dec 04 03:47	19° $\mathbb{A}$ 52'04		morning set	15425 Nov 18 02:14	3° $\mathbb{A}$ 43'07	
	15424 Dec 08 20:24	0° $\mathbb{B}$		max. Earth dist.	15425 Nov 23 08:24	14° $\mathbb{A}$ 48'11	1.31745 AU
max. Earth dist.	15424 Dec 10 05:02	3° $\mathbb{B}$ 00'46	1.31138 AU				
				superior conj	15425 Nov 25 15:11	19° $\mathbb{A}$ 47'26	1°16'51
superior conj	15424 Dec 11 06:11	5° $\mathbb{B}$ 20'51	1°29'46	minimum elong	15425 Nov 25 12:59	19° $\mathbb{A}$ 35'20	1°17'28
minimum elong	15424 Dec 11 04:35	5° $\mathbb{B}$ 11'56	1°30'33		15425 Nov 30 06:14	0° $\mathbb{B}$	
evening rise	15424 Dec 17 22:46	20° $\mathbb{B}$ 09'25		evening rise	15425 Dec 02 09:18	4° $\mathbb{B}$ 38'24	
	15424 Dec 22 15:57	0° $\approx$			15425 Dec 15 15:32	0° $\approx$	
desc. node	15424 Dec 31 23:03	16° $\approx$ 50'17		desc. node	15425 Dec 18 19:57	4° $\approx$ 50'05	
	15425 Jan 10 09:17	0° $\mathbb{H}$		evening max el	15425 Dec 27 06:32	14° $\approx$ 58'04	24°17'06
evening max el	15425 Jan 14 18:13	4° $\mathbb{H}$ 39'07	25°50'35	retrograde	15426 Jan 09 21:30	21° $\approx$ 44'38	
retrograde	15425 Jan 28 16:44	11° $\mathbb{H}$ 41'26		evening set	15426 Jan 14 23:30	20° $\approx$ 48'14	
evening set	15425 Feb 03 17:43	10° $\mathbb{H}$ 16'33		min. Earth dist.	15426 Jan 20 18:13	17° $\approx$ 54'38	0.55668 AU
min. Earth dist.	15425 Feb 08 07:16	7° $\mathbb{H}$ 37'57	0.57392 AU	inferior conj	15426 Jan 22 21:20	16° $\approx$ 36'43	-5°29'12
inferior conj	15425 Feb 11 05:57	5° $\mathbb{H}$ 35'04	-4°16'17	minimum elong	15426 Jan 23 05:10	16° $\approx$ 24'47	5°27'08
minimum elong	15425 Feb 11 15:00	5° $\mathbb{H}$ 19'18	4°13'05	morning rise	15426 Jan 31 12:42	12° $\approx$ 37'03	
morning rise	15425 Feb 19 15:16	1° $\mathbb{H}$ 15'33		direct	15426 Feb 02 21:42	12° $\approx$ 22'18	
direct	15425 Feb 21 15:31	1° $\mathbb{H}$ 02'53		asc. node	15426 Feb 12 07:30	16° $\approx$ 33'07	
asc. node	15425 Feb 25 10:07	1° $\mathbb{H}$ 50'12		morning max el	15426 Feb 13 03:41	17° $\approx$ 20'06	19°51'58
morning max el	15425 Mar 02 09:54	5° $\mathbb{H}$ 20'50	18°48'56		15426 Feb 22 10:23	0° $\mathbb{H}$	
	15425 Mar 17 21:25	0° $\mathbb{Y}$		morning set	15426 Mar 02 20:10	16° $\mathbb{H}$ 01'57	
morning set	15425 Mar 18 15:39	1° $\mathbb{Y}$ 28'50			15426 Mar 09 17:28	0° $\mathbb{Y}$	
				superior conj	15426 Mar 10 16:36	1° $\mathbb{Y}$ 55'10	0°50'21
superior conj	15425 Mar 27 08:00	18° $\mathbb{Y}$ 17'15	0°22'19	minimum elong	15426 Mar 10 19:04	2° $\mathbb{Y}$ 07'26	0°50'02
minimum elong	15425 Mar 27 09:26	18° $\mathbb{Y}$ 23'58	0°21'53	desc. node	15426 Mar 16 21:14	13° $\mathbb{Y}$ 50'45	
desc. node	15425 Mar 30 00:40	23° $\mathbb{Y}$ 18'45		max. Earth dist.	15426 Mar 16 18:41	13° $\mathbb{Y}$ 38'52	1.37240 AU
	15425 Apr 02 17:24	0° $\mathbb{B}$		evening rise	15426 Mar 20 11:43	20° $\mathbb{Y}$ 25'08	
max. Earth dist.	15425 Apr 03 11:59	1° $\mathbb{B}$ 22'09	1.39513 AU		15426 Mar 26 00:42	0° $\mathbb{B}$	
evening rise	15425 Apr 07 10:17	8° $\mathbb{B}$ 09'24			15426 Apr 15 04:58	0° $\mathbb{B}$	
	15425 Apr 21 04:47	0° $\mathbb{B}$		evening max el	15426 Apr 24 23:00	11° $\mathbb{B}$ 15'26	25°26'25
evening max el	15425 May 12 09:25	27° $\mathbb{B}$ 20'52	24°09'44	retrograde	15426 May 07 05:09	18° $\mathbb{B}$ 20'56	
	15425 May 15 06:56	0° $\mathbb{B}$		asc. node	15426 May 11 04:21	17° $\mathbb{B}$ 15'53	
retrograde	15425 May 23 15:43	3° $\mathbb{B}$ 56'42		evening set	15426 May 13 03:22	15° $\mathbb{B}$ 52'52	
asc. node	15425 May 24 07:10	3° $\mathbb{B}$ 54'55		min. Earth dist.	15426 May 17 10:41	11° $\mathbb{B}$ 08'59	0.67925 AU
evening set	15425 May 29 02:37	1° $\mathbb{B}$ 37'57		inferior conj	15426 May 18 19:45	9° $\mathbb{B}$ 22'15	2°08'11
	15425 May 30 18:16	30° $\mathbb{B}$		minimum elong	15426 May 18 17:34	9° $\mathbb{B}$ 29'17	2°06'45
min. Earth dist.	15425 Jun 02 17:25	26° $\mathbb{B}$ 17'24	0.68735 AU	morning rise	15426 May 24 08:13	3° $\mathbb{B}$ 30'13	
inferior conj	15425 Jun 03 13:33	25° $\mathbb{B}$ 09'10	2°38'57	direct	15426 May 27 20:45	2° $\mathbb{B}$ 19'01	
minimum elong	15425 Jun 03 11:40	25° $\mathbb{B}$ 15'34	2°37'39	morning max el	15426 Jun 03 18:19	6° $\mathbb{B}$ 03'56	19°06'26
morning rise	15425 Jun 08 20:46	19° $\mathbb{B}$ 07'11		desc. node	15426 Jun 12 22:20	17° $\mathbb{B}$ 37'06	
direct	15425 Jun 12 20:37	17° $\mathbb{B}$ 36'23		greatest brilliancy	15426 Jun 16 17:32	23° $\mathbb{B}$ 12'05	-0.7m
morning max el	15425 Jun 20 13:11	21° $\mathbb{B}$ 55'25	20°06'33		15426 Jun 21 05:21	0° $\mathbb{B}$	
desc. node	15425 Jun 26 01:17	28° $\mathbb{B}$ 16'38		morning set	15426 Jun 27 10:32	9° $\mathbb{B}$ 32'52	
	15425 Jun 27 08:58	0° $\mathbb{B}$			15426 Jul 10 14:43	0° $\mathbb{B}$	
	15425 Jul 17 20:06	0° $\mathbb{B}$		max. Earth dist.	15426 Jul 10 23:21	0° $\mathbb{B}$ 33'51	1.45569 AU
morning set	15425 Jul 18 04:47	0° $\mathbb{B}$ 33'18					
max. Earth dist.	15425 Jul 28 06:09	16° $\mathbb{B}$ 16'20	1.44438 AU	superior conj	15426 Jul 13 17:50	4° $\mathbb{B}$ 54'55	-2°13'04
				minimum elong	15426 Jul 13 20:21	5° $\mathbb{B}$ 04'53	2°13'50
superior conj	15425 Aug 02 21:42	25° $\mathbb{B}$ 21'53	-1°57'31	evening rise	15426 Jul 28 13:13	28° $\mathbb{B}$ 40'26	
minimum elong	15425 Aug 03 05:03	25° $\mathbb{B}$ 51'51	1°57'33		15426 Jul 29 08:43	0° $\mathbb{B}$	
	15425 Aug 05 17:30	0° $\mathbb{B}$		asc. node	15426 Aug 07 04:04	14° $\mathbb{B}$ 14'20	
evening rise	15425 Aug 16 00:07	17° $\mathbb{B}$ 20'22		evening max el	15426 Aug 16 21:22	27° $\mathbb{B}$ 23'51	18°19'26
asc. node	15425 Aug 20 07:26	24° $\mathbb{B}$ 42'46			15426 Aug 20 06:51	0° $\mathbb{B}$	
	15425 Aug 23 10:54	0° $\mathbb{B}$		retrograde	15426 Aug 23 06:32	0° $\mathbb{B}$ 47'43	
evening max el	15425 Sep 02 07:00	13° $\mathbb{B}$ 47'48	18°03'10	evening set	15426 Aug 26 06:21	29° $\mathbb{B}$ 58'21	
retrograde	15425 Sep 08 17:10	17° $\mathbb{B}$ 08'35			15426 Aug 26 05:07	30° $\mathbb{B}$	
evening set	15425 Sep 11 08:12	16° $\mathbb{B}$ 33'44		inferior conj	15426 Sep 01 03:40	24° $\mathbb{B}$ 28'45	2°07'03
inferior conj	15425 Sep 17 17:24	11° $\mathbb{B}$ 20'33	1°15'02	minimum elong	15426 Sep 01 06:02	24° $\mathbb{B}$ 21'50	2°06'13
minimum elong	15425 Sep 17 19:20	11° $\mathbb{B}$ 15'28	1°14'27				

min. Earth dist.	15426 Sep 03 10:51	21° $\mathbb{M}$ 48'22	0.64603 AU	evening set	15427 Aug 10 10:53	13° $\mathbb{M}$ 45'00	
morning rise	15426 Sep 07 04:14	18° $\mathbb{M}$ 07'55		inferior conj	15427 Aug 15 23:54	8° $\mathbb{M}$ 01'08	2°41'44
desc. node	15426 Sep 08 19:45	16° $\mathbb{M}$ 58'34		minimum elong	15427 Aug 16 01:51	7° $\mathbb{M}$ 54'54	2°40'56
direct	15426 Sep 13 17:02	15° $\mathbb{M}$ 32'16		min. Earth dist.	15427 Aug 17 17:06	5° $\mathbb{M}$ 51'02	0.66379 AU
morning max el	15426 Sep 27 08:24	23° $\mathbb{M}$ 28'48	27°24'22	morning rise	15427 Aug 21 15:58	1° $\mathbb{M}$ 35'06	
	15426 Oct 03 04:19	0° $\mathbb{L}$			15427 Aug 23 22:13	30° $\mathbb{R}$ 00	
	15426 Oct 23 09:06	0° $\mathbb{M}$		desc. node	15427 Aug 26 17:13	29° $\mathbb{L}$ 02'36	
morning set	15426 Nov 01 15:46	17° $\mathbb{M}$ 07'24		direct	15427 Aug 27 21:10	28° $\mathbb{L}$ 57'26	
asc. node	15426 Nov 03 05:48	20° $\mathbb{M}$ 16'09			15427 Sep 01 04:23	0° $\mathbb{M}$	
max. Earth dist.	15426 Nov 06 04:18	26° $\mathbb{M}$ 15'54	1.32910 AU	morning max el	15427 Sep 09 19:58	6° $\mathbb{M}$ 38'45	26°24'27
	15426 Nov 07 23:06	0° $\mathbb{X}$			15427 Sep 27 22:17	0° $\mathbb{L}$	
				morning set	15427 Oct 15 17:17	29° $\mathbb{L}$ 58'02	
superior conj	15426 Nov 09 19:57	3° $\mathbb{X}$ 58'38	0°57'56		15427 Oct 15 17:42	0° $\mathbb{M}$	
minimum elong	15426 Nov 09 17:39	3° $\mathbb{X}$ 46'16	0°58'20	max. Earth dist.	15427 Oct 19 14:27	7° $\mathbb{M}$ 25'12	1.34604 AU
evening rise	15426 Nov 16 20:06	19° $\mathbb{X}$ 06'17		asc. node	15427 Oct 21 02:32	10° $\mathbb{M}$ 23'45	
	15426 Nov 22 02:41	0° $\mathbb{Z}$					
desc. node	15426 Dec 05 16:58	21° $\mathbb{Z}$ 42'54		superior conj	15427 Oct 24 18:04	17° $\mathbb{M}$ 48'38	0°33'06
evening max el	15426 Dec 08 16:18	24° $\mathbb{Z}$ 54'35	22°33'48	minimum elong	15427 Oct 24 16:21	17° $\mathbb{M}$ 39'47	0°33'23
	15426 Dec 15 19:02	0° $\mathbb{X}$			15427 Oct 30 13:36	0° $\mathbb{X}$	
retrograde	15426 Dec 21 13:45	1° $\mathbb{X}$ 17'44		evening rise	15427 Nov 01 05:17	3° $\mathbb{X}$ 28'22	
evening set	15426 Dec 25 08:51	0° $\mathbb{X}$ 46'12			15427 Nov 15 23:56	0° $\mathbb{Z}$	
	15426 Dec 27 15:29	30° $\mathbb{R}$ 00		evening max el	15427 Nov 20 09:31	5° $\mathbb{Z}$ 07'58	20°58'26
min. Earth dist.	15427 Jan 02 00:23	27° $\mathbb{Z}$ 18'00	0.54624 AU	desc. node	15427 Nov 22 14:06	7° $\mathbb{Z}$ 06'09	
inferior conj	15427 Jan 02 19:00	26° $\mathbb{Z}$ 51'47	-6°01'06	retrograde	15427 Dec 02 00:04	10° $\mathbb{Z}$ 53'30	
minimum elong	15427 Jan 02 19:20	26° $\mathbb{Z}$ 51'19	6°00'14	evening set	15427 Dec 04 14:13	10° $\mathbb{Z}$ 37'32	
morning rise	15427 Jan 11 07:00	23° $\mathbb{Z}$ 04'07		inferior conj	15427 Dec 13 09:55	6° $\mathbb{Z}$ 45'24	-5°33'00
direct	15427 Jan 14 10:56	22° $\mathbb{Z}$ 41'23		minimum elong	15427 Dec 13 01:49	6° $\mathbb{Z}$ 56'55	5°30'42
morning max el	15427 Jan 26 06:41	28° $\mathbb{Z}$ 22'45	21°18'07	min. Earth dist.	15427 Dec 14 05:57	6° $\mathbb{Z}$ 16'52	0.54469 AU
	15427 Jan 27 20:51	0° $\mathbb{X}$		morning rise	15427 Dec 21 13:38	2° $\mathbb{Z}$ 52'40	
asc. node	15427 Jan 30 04:51	2° $\mathbb{X}$ 43'33		direct	15427 Dec 25 18:13	2° $\mathbb{Z}$ 14'54	
	15427 Feb 14 20:50	0° $\mathbb{X}$		morning max el	15428 Jan 07 20:47	8° $\mathbb{Z}$ 37'20	23°02'27
morning set	15427 Feb 15 05:16	0° $\mathbb{X}$ 43'59		asc. node	15428 Jan 17 02:09	20° $\mathbb{Z}$ 03'34	
					15428 Jan 22 23:39	0° $\mathbb{X}$	
superior conj	15427 Feb 22 11:59	16° $\mathbb{X}$ 00'42	1°11'53	morning set	15428 Jan 30 16:45	15° $\mathbb{X}$ 28'40	
minimum elong	15427 Feb 22 14:30	16° $\mathbb{X}$ 13'43	1°11'52		15428 Feb 06 10:17	0° $\mathbb{X}$	
max. Earth dist.	15427 Feb 27 04:47	25° $\mathbb{X}$ 32'40	1.35138 AU				
	15427 Mar 01 11:35	0° $\mathbb{Y}$		superior conj	15428 Feb 06 14:57	0° $\mathbb{X}$ 25'05	1°26'52
evening rise	15427 Mar 03 05:56	3° $\mathbb{Y}$ 21'25		minimum elong	15428 Feb 06 16:52	0° $\mathbb{X}$ 35'20	1°27'13
desc. node	15427 Mar 03 17:49	4° $\mathbb{Y}$ 17'06		max. Earth dist.	15428 Feb 09 21:44	7° $\mathbb{X}$ 22'26	1.33390 AU
	15427 Mar 18 23:01	0° $\mathbb{X}$		evening rise	15428 Feb 14 13:29	16° $\mathbb{X}$ 49'49	
evening max el	15427 Apr 07 12:39	25° $\mathbb{X}$ 03'21	26°31'11	desc. node	15428 Feb 18 14:25	24° $\mathbb{X}$ 33'47	
	15427 Apr 13 12:55	0° $\mathbb{I}$			15428 Feb 21 14:13	0° $\mathbb{Y}$	
retrograde	15427 Apr 20 13:28	2° $\mathbb{I}$ 27'25			15428 Mar 12 09:02	0° $\mathbb{X}$	
evening set	15427 Apr 26 21:45	29° $\mathbb{X}$ 55'01		evening max el	15428 Mar 20 02:04	8° $\mathbb{X}$ 36'02	27°16'35
	15427 Apr 26 19:17	30° $\mathbb{R}$ 00		retrograde	15428 Apr 02 15:50	16° $\mathbb{X}$ 07'24	
asc. node	15427 Apr 28 01:38	28° $\mathbb{X}$ 53'36		evening set	15428 Apr 09 07:43	13° $\mathbb{X}$ 37'00	
min. Earth dist.	15427 Apr 30 22:59	25° $\mathbb{X}$ 46'18	0.66659 AU	min. Earth dist.	15428 Apr 13 04:25	10° $\mathbb{X}$ 00'36	0.64989 AU
inferior conj	15427 May 02 20:58	23° $\mathbb{X}$ 27'42	1°25'53	asc. node	15428 Apr 13 23:00	9° $\mathbb{X}$ 10'05	
minimum elong	15427 May 02 19:04	23° $\mathbb{X}$ 33'27	1°24'34	inferior conj	15428 Apr 15 14:47	7° $\mathbb{X}$ 19'42	0°31'02
morning rise	15427 May 08 17:27	17° $\mathbb{X}$ 47'09		minimum elong	15428 Apr 15 13:56	7° $\mathbb{X}$ 22'02	0°30'15
direct	15427 May 11 19:31	16° $\mathbb{X}$ 53'52		morning rise	15428 Apr 21 22:02	1° $\mathbb{X}$ 52'22	
morning max el	15427 May 18 06:03	20° $\mathbb{X}$ 17'55	18°22'36	direct	15428 Apr 24 14:39	1° $\mathbb{X}$ 14'14	
	15427 May 25 22:13	0° $\mathbb{I}$		morning max el	15428 Apr 30 22:12	4° $\mathbb{X}$ 30'06	17°55'40
desc. node	15427 May 30 19:18	7° $\mathbb{I}$ 24'07		desc. node	15428 May 16 16:10	27° $\mathbb{X}$ 30'14	
morning set	15427 Jun 07 11:19	19° $\mathbb{I}$ 29'50			15428 May 18 04:26	0° $\mathbb{I}$	
	15427 Jun 14 02:52	0° $\mathbb{S}$		morning set	15428 May 18 15:33	0° $\mathbb{I}$ 45'54	
superior conj	15427 Jun 23 02:50	14° $\mathbb{S}$ 05'14	-2°09'13	superior conj	15428 Jun 01 17:35	23° $\mathbb{I}$ 36'59	-1°46'30
minimum elong	15427 Jun 22 21:38	13° $\mathbb{S}$ 44'57	2°09'55	minimum elong	15428 Jun 01 08:49	23° $\mathbb{I}$ 02'11	1°46'36
max. Earth dist.	15427 Jun 23 19:19	15° $\mathbb{S}$ 09'33	1.45967 AU	max. Earth dist.	15428 Jun 05 15:19	29° $\mathbb{I}$ 46'33	1.45613 AU
	15427 Jul 03 07:43	0° $\mathbb{L}$			15428 Jun 05 18:44	0° $\mathbb{S}$	
evening rise	15427 Jul 09 01:26	8° $\mathbb{L}$ 58'46		evening rise	15428 Jun 17 17:48	18° $\mathbb{S}$ 31'15	
greatest brilliancy	15427 Jul 18 15:19	23° $\mathbb{L}$ 54'55	-0.8m		15428 Jun 25 06:43	0° $\mathbb{L}$	
	15427 Jul 22 16:10	0° $\mathbb{M}$		greatest brilliancy	15428 Jul 01 21:53	9° $\mathbb{L}$ 52'16	-0.6m
asc. node	15427 Jul 25 00:47	3° $\mathbb{M}$ 23'35		asc. node	15428 Jul 10 21:35	22° $\mathbb{L}$ 02'02	
evening max el	15427 Jul 31 08:51	11° $\mathbb{M}$ 10'43	18°53'03	evening max el	15428 Jul 13 15:22	25° $\mathbb{L}$ 02'26	19°42'58
retrograde	15427 Aug 07 01:50	14° $\mathbb{M}$ 50'45		retrograde	15428 Jul 21 00:06	29° $\mathbb{L}$ 10'44	



evening set	15428 Jul 24 19:02	27° $\Omega$ 47'37		evening set	15429 Jul 09 04:39	12° $\Omega$ 01'41	
inferior conj	15428 Jul 30 02:59	21° $\Omega$ 50'58	3°01'47	inferior conj	15429 Jul 14 10:24	5° $\Omega$ 53'35	3°09'19
minimum elong	15428 Jul 30 04:08	21° $\Omega$ 47'08	3°01'01	minimum elong	15429 Jul 14 10:35	5° $\Omega$ 52'57	3°08'31
min. Earth dist.	15428 Jul 31 06:07	20° $\Omega$ 20'11	0.67747 AU	min. Earth dist.	15429 Jul 14 23:51	5° $\Omega$ 07'05	0.68653 AU
morning rise	15428 Aug 04 12:44	15° $\Omega$ 25'28			15429 Jul 19 04:18	30° $\mathbb{R}$ $\mathfrak{E}$	
direct	15428 Aug 10 07:47	12° $\Omega$ 53'48		morning rise	15429 Jul 19 16:13	29° $\mathfrak{E}$ 32'19	
desc. node	15428 Aug 12 14:40	13° $\Omega$ 14'08		direct	15429 Jul 24 23:34	27° $\mathfrak{E}$ 13'20	
morning max el	15428 Aug 22 06:57	20° $\Omega$ 03'59	25°05'28	desc. node	15429 Jul 30 12:01	29° $\mathfrak{E}$ 11'24	
	15428 Aug 30 19:19	0° $\mathbb{M}$			15429 Jul 31 15:36	0° $\Omega$	
	15428 Sep 20 01:37	0° $\mathfrak{A}$		morning max el	15429 Aug 04 17:41	3° $\Omega$ 38'20	23°37'15
morning set	15428 Sep 27 02:48	12° $\mathfrak{A}$ 05'18			15429 Aug 24 22:47	0° $\mathbb{M}$	
max. Earth dist.	15428 Sep 30 15:44	18° $\mathfrak{A}$ 30'28	1.36740 AU	morning set	15429 Sep 08 16:05	23° $\mathbb{M}$ 19'41	
asc. node	15428 Oct 06 23:11	0° $\mathbb{M}$ 33'33		max. Earth dist.	15429 Sep 12 13:58	0° $\mathfrak{A}$ 02'41	1.39124 AU
	15428 Oct 06 16:21	0° $\mathbb{M}$			15429 Sep 12 13:21	0° $\mathfrak{A}$	
superior conj	15428 Oct 07 06:29	1° $\mathbb{M}$ 09'32	0°02'47	superior conj	15429 Sep 20 05:35	13° $\mathfrak{A}$ 53'27	-0°31'50
minimum elong	15428 Oct 07 06:17	1° $\mathbb{M}$ 08'33	0°03'07	minimum elong	15429 Sep 20 07:54	14° $\mathfrak{A}$ 04'18	0°31'18
behind sun begin	15428 Oct 06 23:55	0° $\mathbb{M}$ 37'09		asc. node	15429 Sep 23 19:49	20° $\mathfrak{A}$ 42'29	
behind sun end	15428 Oct 07 12:39	1° $\mathbb{M}$ 40'02			15429 Sep 28 14:44	0° $\mathbb{M}$	
evening rise	15428 Oct 15 10:34	17° $\mathbb{M}$ 38'29		evening rise	15429 Sep 29 09:21	1° $\mathbb{M}$ 30'43	
	15428 Oct 21 17:55	0° $\mathfrak{A}$		evening max el	15429 Oct 15 13:35	27° $\mathbb{M}$ 52'25	18°47'28
evening max el	15428 Nov 01 16:40	16° $\mathfrak{A}$ 05'11	19°41'54		15429 Oct 18 00:49	0° $\mathfrak{A}$	
desc. node	15428 Nov 08 11:20	20° $\mathfrak{A}$ 33'56		retrograde	15429 Oct 24 00:12	2° $\mathfrak{A}$ 07'56	
retrograde	15428 Nov 11 15:53	21° $\mathfrak{A}$ 03'49		evening set	15429 Oct 25 21:49	1° $\mathfrak{A}$ 55'47	
evening set	15428 Nov 13 15:07	20° $\mathfrak{A}$ 53'04		desc. node	15429 Oct 26 08:37	1° $\mathfrak{A}$ 49'29	
inferior conj	15428 Nov 22 08:38	16° $\mathfrak{A}$ 50'43	-4°12'15		15429 Oct 30 11:46	30° $\mathbb{R}$ $\mathbb{M}$	
minimum elong	15428 Nov 21 22:51	17° $\mathfrak{A}$ 06'02	4°08'19	inferior conj	15429 Nov 03 01:56	27° $\mathbb{M}$ 34'11	-2°27'55
min. Earth dist.	15428 Nov 24 13:57	15° $\mathfrak{A}$ 27'21	0.55252 AU	minimum elong	15429 Nov 02 19:51	27° $\mathbb{M}$ 45'12	2°24'49
morning rise	15428 Nov 30 04:54	12° $\mathfrak{A}$ 33'51		min. Earth dist.	15429 Nov 06 02:52	25° $\mathbb{M}$ 22'36	0.56829 AU
direct	15428 Dec 05 09:00	11° $\mathfrak{A}$ 34'31		morning rise	15429 Nov 10 14:49	22° $\mathbb{M}$ 41'47	
morning max el	15428 Dec 19 05:30	18° $\mathfrak{A}$ 30'08	24°51'52	direct	15429 Nov 16 13:14	21° $\mathbb{M}$ 16'51	
	15428 Dec 28 17:53	0° $\mathfrak{E}$		morning max el	15429 Nov 30 17:44	28° $\mathbb{M}$ 37'40	26°27'19
asc. node	15429 Jan 02 23:22	8° $\mathfrak{E}$ 16'06			15429 Dec 02 02:46	0° $\mathfrak{A}$	
morning set	15429 Jan 14 04:40	0° $\approx$ 10'22		asc. node	15429 Dec 20 20:29	27° $\mathfrak{A}$ 07'50	
	15429 Jan 14 02:45	0° $\approx$			15429 Dec 22 09:20	0° $\mathfrak{E}$	
superior conj	15429 Jan 20 22:52	15° $\approx$ 00'26	1°35'30	morning set	15429 Dec 29 15:15	14° $\mathfrak{E}$ 43'58	
minimum elong	15429 Jan 20 23:50	15° $\approx$ 05'45	1°36'09	superior conj	15430 Jan 05 09:31	29° $\mathfrak{E}$ 40'07	1°37'59
max. Earth dist.	15429 Jan 22 22:11	19° $\approx$ 19'25	1.32092 AU	minimum elong	15430 Jan 05 09:25	29° $\mathfrak{E}$ 39'35	1°38'50
	15429 Jan 27 22:57	0° $\mathfrak{H}$			15430 Jan 05 13:04	0° $\approx$	
evening rise	15429 Jan 28 07:12	0° $\mathfrak{H}$ 42'20		max. Earth dist.	15430 Jan 06 04:05	1° $\approx$ 23'42	1.31302 AU
desc. node	15429 Feb 04 11:04	14° $\mathfrak{H}$ 35'48		evening rise	15430 Jan 12 08:21	14° $\approx$ 51'42	
	15429 Feb 13 13:53	0° $\mathbb{Y}$			15430 Jan 19 23:14	0° $\mathfrak{H}$	
evening max el	15429 Mar 02 13:53	21° $\mathbb{Y}$ 42'31	27°35'32	desc. node	15430 Jan 22 07:45	4° $\mathfrak{H}$ 16'21	
retrograde	15429 Mar 16 11:04	29° $\mathbb{Y}$ 11'29			15430 Feb 08 22:10	0° $\mathbb{Y}$	
evening set	15429 Mar 23 06:52	26° $\mathbb{Y}$ 50'34		evening max el	15430 Feb 12 21:38	4° $\mathbb{Y}$ 09'09	27°22'02
min. Earth dist.	15429 Mar 27 01:15	23° $\mathbb{Y}$ 41'55	0.62995 AU	retrograde	15430 Feb 26 21:38	11° $\mathbb{Y}$ 29'25	
inferior conj	15429 Mar 29 22:16	20° $\mathbb{Y}$ 51'15	-0°36'59	evening set	15430 Mar 05 16:10	9° $\mathbb{Y}$ 25'17	
minimum elong	15429 Mar 29 23:29	20° $\mathbb{Y}$ 48'14	0°36'43	min. Earth dist.	15430 Mar 09 11:53	6° $\mathbb{Y}$ 37'34	0.60801 AU
asc. node	15429 Mar 31 20:24	19° $\mathbb{Y}$ 00'14		inferior conj	15430 Mar 12 15:53	3° $\mathbb{Y}$ 52'23	-1°57'28
morning rise	15429 Apr 05 18:49	15° $\mathbb{Y}$ 39'32		minimum elong	15430 Mar 12 20:11	3° $\mathbb{Y}$ 43'00	1°55'44
direct	15429 Apr 08 03:21	15° $\mathbb{Y}$ 13'08			15430 Mar 17 18:47	30° $\mathbb{R}$ $\mathfrak{H}$	
morning max el	15429 Apr 14 15:56	18° $\mathbb{Y}$ 32'12	17°46'09	asc. node	15430 Mar 18 17:49	29° $\mathfrak{H}$ 30'36	
	15429 Apr 23 02:14	0° $\mathfrak{B}$		morning rise	15430 Mar 20 03:29	28° $\mathfrak{H}$ 59'12	
morning set	15429 Apr 30 21:13	13° $\mathfrak{B}$ 14'30		direct	15430 Mar 22 05:54	28° $\mathfrak{H}$ 40'55	
desc. node	15429 May 03 12:55	17° $\mathfrak{B}$ 49'53			15430 Mar 26 12:50	0° $\mathbb{Y}$	
	15429 May 10 16:46	0° $\mathbb{I}$		morning max el	15430 Mar 29 07:58	2° $\mathbb{Y}$ 14'09	17°54'50
superior conj	15429 May 13 03:33	4° $\mathbb{I}$ 03'49	-1°11'48	morning set	15430 Apr 13 22:23	26° $\mathbb{Y}$ 36'58	
minimum elong	15429 May 12 20:44	3° $\mathbb{I}$ 35'42	1°11'40		15430 Apr 15 19:03	0° $\mathfrak{B}$	
max. Earth dist.	15429 May 19 09:17	14° $\mathbb{I}$ 10'44	1.44556 AU	desc. node	15430 Apr 20 09:36	8° $\mathfrak{B}$ 17'53	
evening rise	15429 May 28 04:47	27° $\mathbb{I}$ 58'03		superior conj	15430 Apr 24 13:09	15° $\mathfrak{B}$ 35'22	-0°33'15
	15429 May 29 12:37	0° $\mathfrak{E}$		minimum elong	15430 Apr 24 10:12	15° $\mathfrak{B}$ 22'33	0°33'20
	15429 Jun 19 03:45	0° $\Omega$		max. Earth dist.	15430 May 01 23:40	28° $\mathfrak{B}$ 08'19	1.42900 AU
evening max el	15429 Jun 26 16:01	8° $\Omega$ 55'55	20°47'08		15430 May 03 02:58	0° $\mathbb{I}$	
asc. node	15429 Jun 27 18:29	9° $\Omega$ 59'17		evening rise	15430 May 08 02:14	7° $\mathbb{I}$ 57'53	
retrograde	15429 Jul 04 23:06	13° $\Omega$ 42'20			15430 May 22 16:47	0° $\mathfrak{E}$	

evening max el	15430 Jun 09 11:06	22°  48'59	22°02'07	evening max el	15431 May 23 02:14	6°  42'18	23°22'56
asc. node	15430 Jun 14 15:27	27°  00'51		asc. node	15431 Jun 01 12:28	12°  50'12	
retrograde	15430 Jun 18 21:06	28°  019'17		retrograde	15431 Jun 02 16:46	12°  56'16	
evening set	15430 Jun 23 13:53	26°  021'56		evening set	15431 Jun 07 21:07	10°  044'14	
inferior conj	15430 Jun 28 19:57	20°  03'50	3°05'45	min. Earth dist.	15431 Jun 12 16:51	5°  02'37	0.69000 AU
minimum elong	15430 Jun 28 19:11	20°  06'30	3°04'49	inferior conj	15431 Jun 13 05:42	4°  18'19	2°51'45
min. Earth dist.	15430 Jun 28 20:06	20°  03'18	0.69072 AU	minimum elong	15431 Jun 13 04:08	4°  23'41	2°50'35
morning rise	15430 Jul 04 00:18	13°  049'06			15431 Jun 16 14:07	30°  	
direct	15430 Jul 08 19:16	11°  047'22		morning rise	15431 Jun 18 11:08	28°  11'29	
desc. node	15430 Jul 17 09:18	16°  028'47		direct	15431 Jun 22 17:45	26°  129'22	
morning max el	15430 Jul 18 06:34	17°  020'39	22°08'54		15431 Jun 29 17:30	0° 	
	15430 Jul 28 17:19	0° 		morning max el	15431 Jul 01 00:31	1°  13'13	20°47'46
	15430 Aug 18 00:14	0° 		desc. node	15431 Jul 04 06:31	4°  045'50	
morning set	15430 Aug 20 05:41	3°  11'33'07			15431 Jul 22 10:46	0° 	
max. Earth dist.	15430 Aug 25 15:47	12°  11'25'43	1.41467 AU	morning set	15431 Jul 30 20:38	12°  11'49'34	
				max. Earth dist.	15431 Aug 07 23:46	25°  11'41'02	1.43498 AU
					15431 Aug 10 15:31	0° 	
superior conj	15430 Sep 02 11:00	25°  11'50'06	-1°08'12				
minimum elong	15430 Sep 02 16:26	26°  11'14'08	1°07'32	superior conj	15431 Aug 14 18:30	6°  11'49'44	-1°41'53
	15430 Sep 04 19:03	0° 		minimum elong	15431 Aug 15 02:08	7°  11'21'44	1°41'32
asc. node	15430 Sep 10 16:26	10°  11'04'46		evening rise	15431 Aug 26 20:30	27°  11'43'02	
evening rise	15430 Sep 12 22:09	14°  11'05'13			15431 Aug 28 03:30	0° 	
	15430 Sep 21 07:14	0° 		asc. node	15431 Aug 28 13:02	0° 	
evening max el	15430 Sep 28 20:33	10°  11'23'05	18°14'39	evening max el	15431 Sep 12 09:19	23°  11'04'31	18°01'55
retrograde	15430 Oct 06 04:08	14°  11'07'00		retrograde	15431 Sep 19 00:34	26°  11'05'20'09	
evening set	15430 Oct 08 06:43	13°  11'49'02		evening set	15431 Sep 21 10:38	26°  11'04'24'33	
desc. node	15430 Oct 13 05:56	11°  11'06'14		inferior conj	15431 Sep 28 04:14	21°  11'02'14'00	0°36'14
inferior conj	15430 Oct 15 17:10	9°  11'05'55	-0°47'16	minimum elong	15431 Sep 28 05:20	21°  11'01'19'00	0°36'03
minimum elong	15430 Oct 15 15:26	9°  11'09'35	0°46'04	desc. node	15431 Sep 30 03:21	19°  11'04'25'57	
min. Earth dist.	15430 Oct 18 23:32	6°  11'20'46	0.58908 AU	min. Earth dist.	15431 Oct 01 05:50	18°  11'04'22'47	0.61193 AU
morning rise	15430 Oct 22 20:45	3°  11'37'29		morning rise	15431 Oct 04 21:07	15°  11'04'24'55	
direct	15430 Oct 29 07:01	1°  11'46'09		direct	15431 Oct 11 12:55	13°  11'04'10'15	
morning max el	15430 Nov 12 14:07	9°  11'27'08	27°32'17	morning max el	15431 Oct 25 18:04	21°  11'05'05'33	27°58'35
	15430 Nov 28 08:38	0° 			15431 Nov 02 12:10	0° 	
asc. node	15430 Dec 07 17:29	16°  11'07'28'39			15431 Nov 21 09:36	0° 	
morning set	15430 Dec 13 22:45	29°  11'07'05'27		asc. node	15431 Nov 24 14:25	6°  11'07'09'49	
	15430 Dec 14 08:59	0° 		morning set	15431 Nov 28 01:08	13°  11'07'09'05	
				max. Earth dist.	15431 Dec 03 18:13	25°  11'07'25'20	1.31325 AU
superior conj	15430 Dec 20 21:00	14°  11'03'19'04	1°34'29				
minimum elong	15430 Dec 20 19:54	14°  11'03'12'52	1°35'20	superior conj	15431 Dec 05 07:27	28°  11'07'51'23	1°25'02
max. Earth dist.	15430 Dec 20 12:06	13°  11'03'29'13	1.31041 AU	minimum elong	15431 Dec 05 05:33	28°  11'07'40'50	1°25'44
evening rise	15430 Dec 27 14:41	29°  11'03'12'41			15431 Dec 05 19:48	0° 	
	15430 Dec 27 23:31	0° 		evening rise	15431 Dec 12 00:11	13°  11'03'39'35	
desc. node	15431 Jan 09 04:31	23°  11'03'07'20			15431 Dec 20 01:25	0° 	
	15431 Jan 13 06:42	0° 		desc. node	15431 Dec 27 01:21	11°  11'03'07'01	
evening max el	15431 Jan 25 22:25	15°  11'03'44'57	26°33'20	evening max el	15432 Jan 07 14:35	26°  11'03'27'21	25°13'04
retrograde	15431 Feb 08 22:00	22°  11'03'54'13			15432 Jan 11 21:51	0° 	
evening set	15431 Feb 15 08:13	21°  11'03'13'18		retrograde	15432 Jan 21 10:45	3°  11'03'14'14	
min. Earth dist.	15431 Feb 19 11:58	18°  11'03'35'51	0.58585 AU	evening set	15432 Jan 27 03:16	2°  11'03'11'12	
inferior conj	15431 Feb 22 15:52	16°  11'03'12'46	-3°25'56		15432 Jan 31 06:54	30°  11'03'06'54	
minimum elong	15431 Feb 22 23:35	15°  11'03'58'10	3°22'55	min. Earth dist.	15432 Feb 01 02:55	29°  11'03'07'28'35	0.56590 AU
morning rise	15431 Mar 02 18:16	11°  11'03'40'58		inferior conj	15432 Feb 03 19:13	27°  11'03'04'31'17	-4°50'33
direct	15431 Mar 04 17:50	11°  11'03'27'17		minimum elong	15432 Feb 04 04:27	27°  11'03'28'07	4°47'38
asc. node	15431 Mar 05 15:12	11°  11'03'30'08		morning rise	15432 Feb 12 08:17	23°  11'03'07'33'09	
morning max el	15431 Mar 12 18:39	15°  11'03'25'26	18°23'09	direct	15432 Feb 14 10:57	23°  11'03'20'17	
	15431 Mar 22 20:42	0° 		asc. node	15432 Feb 20 12:35	25°  11'03'07'14'29	
morning set	15431 Mar 28 13:26	10°  11'03'07'36'27		morning max el	15432 Feb 23 19:49	27°  11'03'07'54'05	19°13'01
					15432 Feb 25 18:49	0° 	
superior conj	15431 Apr 06 20:26	28°  11'03'05'42	0°03'24	morning set	15432 Mar 11 13:58	24°  11'03'07'11'59'31	
minimum elong	15431 Apr 06 20:40	28°  11'03'06'44	0°03'01		15432 Mar 14 02:20	0° 	
behind sun begin	15431 Apr 06 13:30	27°  11'03'03'33'55					
behind sun end	15431 Apr 07 03:50	28°  11'03'03'39'28		superior conj	15432 Mar 19 21:02	11°  11'03'07'22'10	0°34'59
desc. node	15431 Apr 07 06:15	28°  11'03'03'50'29		minimum elong	15432 Mar 19 23:03	11°  11'03'07'31'53	0°34'33
	15431 Apr 07 21:32	0° 		desc. node	15432 Mar 24 02:50	19°  11'03'07'23'33	
max. Earth dist.	15431 Apr 14 09:21	11°  11'03'08'26'30	1.40816 AU	max. Earth dist.	15432 Mar 26 15:29	24°  11'03'07'00'38	1.38531 AU
evening rise	15431 Apr 18 19:11	18°  11'03'08'50'28		evening rise	15432 Mar 30 09:17	0°  11'03'07'37'20	
	15431 Apr 25 18:47	0° 			15432 Mar 30 00:41	0° 	
	15431 May 17 02:21	0° 					

	15432 Apr 18 01:33	0°♂			15433 Mar 22 12:55	0°♂	
evening max el	15432 May 04 15:45	20°♂36'38	24°43'19		15433 Apr 13 00:04	0°♂	
retrograde	15432 May 16 08:57	27°♂27'15		evening max el	15433 Apr 17 05:20	4°♂29'08	25°56'02
asc. node	15432 May 18 09:35	27°♂09'46		retrograde	15433 Apr 29 20:30	11°♂44'33	
evening set	15432 May 22 00:44	25°♂03'50		asc. node	15433 May 05 06:50	9°♂46'08	
min. Earth dist.	15432 May 26 12:04	19°♂59'03	0.68442 AU	evening set	15433 May 05 23:02	9°♂14'09	
inferior conj	15432 May 27 13:46	18°♂33'27	2°27'16	min. Earth dist.	15433 May 10 03:36	4°♂45'13	0.67428 AU
minimum elong	15432 May 27 11:42	18°♂40'20	2°25'54	inferior conj	15433 May 11 18:09	2°♂43'59	1°51'43
morning rise	15432 Jun 01 22:54	12°♂35'36		minimum elong	15433 May 11 16:00	2°♂50'43	1°50'19
direct	15432 Jun 05 17:43	11°♂13'29			15433 May 14 00:19	30°♂♂	
morning max el	15432 Jun 13 01:29	15°♂16'48	19°39'06	morning rise	15433 May 17 09:39	26°♂56'25	
desc. node	15432 Jun 20 03:38	23°♂46'57		direct	15433 May 20 17:34	25°♂53'09	
	15432 Jun 24 13:55	0°♂		morning max el	15433 May 27 09:34	29°♂28'00	18°45'44
greatest brilliancy	15432 Jun 25 20:40	1°♂51'42	-0.6m		15433 May 27 22:23	0°♂	
morning set	15432 Jul 09 00:06	21°♂39'59		desc. node	15433 Jun 07 00:40	13°♂19'43	
	15432 Jul 14 09:41	0°♂		greatest brilliancy	15433 Jun 10 11:18	18°♂32'22	-0.8m
max. Earth dist.	15432 Jul 20 13:39	9°♂38'49	1.44999 AU		15433 Jun 17 20:59	0°♂	
				morning set	15433 Jun 18 12:02	0°♂58'34	
superior conj	15432 Jul 25 02:34	16°♂51'41	-2°06'13	max. Earth dist.	15433 Jul 03 08:01	24°♂04'51	1.45828 AU
minimum elong	15432 Jul 25 08:34	17°♂15'42	2°06'36				
	15432 Aug 02 04:23	0°♂		superior conj	15433 Jul 04 16:15	26°♂10'46	-2°13'57
evening rise	15432 Aug 07 23:13	9°♂38'31		minimum elong	15433 Jul 04 15:26	26°♂07'36	2°14'48
asc. node	15432 Aug 14 09:39	20°♂24'12			15433 Jul 07 02:49	0°♂	
	15432 Aug 20 11:58	0°♂		evening rise	15433 Jul 20 01:43	20°♂31'42	
evening max el	15432 Aug 26 00:07	6°♂53'43	18°07'55		15433 Jul 25 23:43	0°♂	
retrograde	15432 Sep 01 08:54	10°♂14'23		asc. node	15433 Aug 01 06:20	9°♂47'16	
evening set	15432 Sep 04 03:30	9°♂33'49		evening max el	15433 Aug 09 13:41	20°♂35'43	18°31'41
inferior conj	15432 Sep 10 07:15	4°♂13'35	1°39'20	retrograde	15433 Aug 16 01:06	24°♂04'35	
minimum elong	15432 Sep 10 09:30	4°♂07'23	1°38'36	evening set	15433 Aug 19 04:47	23°♂08'28	
min. Earth dist.	15432 Sep 12 22:09	1°♂21'14	0.63426 AU	inferior conj	15433 Aug 24 22:11	17°♂32'52	2°23'39
	15432 Sep 14 05:59	30°♂♂		minimum elong	15433 Aug 25 00:27	17°♂25'59	2°22'49
desc. node	15432 Sep 16 00:48	28°♂23'47		min. Earth dist.	15433 Aug 26 23:35	15°♂03'50	0.65413 AU
morning rise	15432 Sep 16 13:28	27°♂58'51		morning rise	15433 Aug 30 18:56	11°♂09'09	
direct	15432 Sep 23 04:54	25°♂27'59		desc. node	15433 Sep 02 22:17	9°♂11'25	
	15432 Oct 03 07:26	0°♂		direct	15433 Sep 06 05:05	8°♂31'18	
morning max el	15432 Oct 07 02:58	3°♂27'57	27°46'27	morning max el	15433 Sep 19 13:59	16°♂23'02	27°01'39
	15432 Oct 27 00:09	0°♂			15433 Sep 30 21:05	0°♂	
asc. node	15432 Nov 10 11:17	26°♂05'16			15433 Oct 19 20:00	0°♂	
morning set	15432 Nov 10 20:09	26°♂49'43		morning set	15433 Oct 25 04:59	10°♂00'31	
	15432 Nov 12 09:36	0°♂		asc. node	15433 Oct 28 08:04	16°♂09'37	
max. Earth dist.	15432 Nov 15 18:38	7°♂03'57	1.32171 AU	max. Earth dist.	15433 Oct 29 10:14	18°♂21'30	1.33571 AU
superior conj	15432 Nov 18 14:56	13°♂12'09	1°09'34	superior conj	15433 Nov 02 17:14	27°♂15'23	0°48'07
minimum elong	15432 Nov 18 12:37	12°♂59'32	1°10'05	minimum elong	15433 Nov 02 15:05	27°♂04'00	0°48'27
evening rise	15432 Nov 25 11:03	28°♂08'21			15433 Nov 04 00:17	0°♂	
	15432 Nov 26 07:52	0°♂		evening rise	15433 Nov 09 21:24	12°♂34'20	
desc. node	15432 Dec 12 22:18	29°♂30'40			15433 Nov 18 16:33	0°♂	
	15432 Dec 13 07:10	0°♂		desc. node	15433 Nov 29 19:22	15°♂48'33	
evening max el	15432 Dec 19 00:44	6°♂32'11	23°33'12	evening max el	15433 Nov 30 12:44	16°♂32'15	21°51'28
retrograde	15433 Jan 01 10:18	13°♂10'38		retrograde	15433 Dec 12 22:27	22°♂40'22	
evening set	15433 Jan 05 23:24	12°♂25'50		evening set	15433 Dec 16 04:07	22°♂16'56	
min. Earth dist.	15433 Jan 12 11:41	9°♂19'34	0.55121 AU	inferior conj	15433 Dec 24 19:23	18°♂25'41	-5°56'46
inferior conj	15433 Jan 14 02:12	8°♂23'11	-5°49'20	minimum elong	15433 Dec 24 15:39	18°♂30'54	5°55'37
minimum elong	15433 Jan 14 07:31	8°♂15'23	5°47'59	min. Earth dist.	15433 Dec 24 17:22	18°♂28'30	0.54443 AU
morning rise	15433 Jan 22 17:11	4°♂29'50		morning rise	15434 Jan 02 03:56	14°♂38'06	
direct	15433 Jan 25 08:49	4°♂12'38		direct	15434 Jan 05 18:22	14°♂09'35	
morning max el	15433 Feb 05 07:32	9°♂29'32	20°25'57	morning max el	15434 Jan 18 04:22	20°♂09'28	22°00'49
asc. node	15433 Feb 06 09:59	10°♂36'25		asc. node	15434 Jan 24 07:19	27°♂18'52	
	15433 Feb 19 01:22	0°♂			15434 Jan 26 04:07	0°♂	
morning set	15433 Feb 23 20:41	9°♂36'36		morning set	15434 Feb 08 07:05	24°♂20'48	
					15434 Feb 10 22:56	0°♂	
superior conj	15433 Mar 03 10:36	25°♂12'32	1°00'18				
minimum elong	15433 Mar 03 13:12	25°♂25'38	1°00'05	superior conj	15434 Feb 15 09:35	9°♂27'14	1°19'01
	15433 Mar 05 20:02	0°♂		minimum elong	15434 Feb 15 11:54	9°♂39'26	1°19'09
max. Earth dist.	15433 Mar 08 22:37	6°♂02'59	1.36306 AU	max. Earth dist.	15434 Feb 19 11:35	17°♂54'14	1.34345 AU
desc. node	15433 Mar 10 23:25	9°♂53'27		evening rise	15434 Feb 23 18:38	26°♂22'51	
evening rise	15433 Mar 12 18:15	13°♂11'12		desc. node	15434 Feb 25 20:00	0°♂	

	15434 Feb 25 16:27	0°♿		max. Earth dist.	15435 Feb 02 08:08	29°≈47'42	1.32781 AU
	15434 Mar 15 22:03	0°♿		evening rise	15435 Feb 07 06:51	10°♿02'10	
evening max el	15434 Mar 30 19:16	18°♿12'56	26°53'26	desc. node	15435 Feb 12 16:36	20°♿27'31	
retrograde	15434 Apr 13 02:17	25°♿40'49			15435 Feb 18 01:53	0°♿	
evening set	15434 Apr 19 14:06	23°♿08'46			15435 Mar 11 17:53	0°♿	
asc. node	15434 Apr 22 04:08	20°♿44'58		evening max el	15435 Mar 13 08:18	1°♿35'51	27°28'15
min. Earth dist.	15434 Apr 23 13:19	19°♿13'59	0.65992 AU	retrograde	15435 Mar 27 01:27	9°♿06'23	
inferior conj	15434 Apr 25 16:34	16°♿44'54	1°04'15	evening set	15435 Apr 02 19:43	6°♿39'06	
minimum elong	15434 Apr 25 15:00	16°♿49'29	1°03'05	min. Earth dist.	15435 Apr 06 15:07	3°♿15'20	0.64180 AU
morning rise	15434 May 01 17:15	11°♿09'26		inferior conj	15435 Apr 09 06:20	0°♿28'44	0°03'50
direct	15434 May 04 15:14	10°♿22'49		minimum elong	15435 Apr 09 06:14	0°♿29'01	0°03'25
morning max el	15434 May 10 23:25	13°♿41'51	18°09'02	transit middle	15435 Apr 09 06:14	0°♿29'01	0°03'25
	15434 May 22 20:22	0°♿		transit begin	15435 Apr 09 03:12	0°♿37'04	
desc. node	15434 May 24 21:35	3°♿15'44		transit end	15435 Apr 09 09:16	0°♿20'59	
morning set	15434 May 30 00:17	11°♿28'55		asc. node	15435 Apr 09 01:30	0°♿41'35	
	15434 Jun 10 14:56	0°♿			15435 Apr 09 17:15	30°♿	
superior conj	15434 Jun 14 01:33	5°♿24'30	-2°01'34	morning rise	15435 Apr 15 18:58	25°♿07'45	
minimum elong	15434 Jun 13 18:03	4°♿55'06	2°02'02	direct	15435 Apr 18 08:05	24°♿34'53	
max. Earth dist.	15434 Jun 16 04:34	8°♿43'57	1.45913 AU	morning max el	15435 Apr 24 16:34	27°♿50'22	17°49'29
	15434 Jun 29 21:17	0°♿			15435 Apr 26 16:27	0°♿	
evening rise	15434 Jun 30 04:17	0°♿27'02		morning set	15435 May 11 15:53	23°♿17'19	
greatest brilliancy	15434 Jul 11 21:35	18°♿25'31	-0.7m	desc. node	15435 May 11 18:23	23°♿27'52	
asc. node	15434 Jul 19 03:05	28°♿44'26			15435 May 15 15:50	0°♿	
	15434 Jul 20 02:28	0°♿		superior conj	15435 May 24 23:14	15°♿16'07	-1°32'43
evening max el	15434 Jul 23 23:21	4°♿25'33	19°12'21	minimum elong	15435 May 24 14:49	14°♿42'12	1°32'39
retrograde	15434 Jul 30 21:53	8°♿15'45		max. Earth dist.	15435 May 30 00:24	23°♿18'39	1.45246 AU
evening set	15434 Aug 03 11:11	7°♿02'30			15435 Jun 03 06:53	0°♿	
inferior conj	15434 Aug 08 21:40	1°♿13'03	2°51'51	evening rise	15435 Jun 09 16:13	9°♿51'19	
minimum elong	15434 Aug 08 23:19	1°♿07'41	2°51'04		15435 Jun 23 02:29	0°♿	
	15434 Aug 09 20:07	30°♿		asc. node	15435 Jul 05 23:54	17°♿06'33	
min. Earth dist.	15434 Aug 10 08:49	29°♿19'04	0.67024 AU	evening max el	15435 Jul 07 03:21	18°♿17'53	20°08'39
morning rise	15434 Aug 14 10:48	24°♿46'58		retrograde	15435 Jul 14 20:47	22°♿41'23	
direct	15434 Aug 20 12:01	22°♿11'03		evening set	15435 Jul 18 20:13	21°♿10'33	
desc. node	15434 Aug 20 19:44	22°♿11'27		inferior conj	15435 Jul 24 02:52	15°♿08'39	3°06'25
morning max el	15434 Sep 02 01:15	29°♿40'02	25°52'33	minimum elong	15435 Jul 24 03:36	15°♿06'07	3°05'39
	15434 Sep 02 09:05	0°♿		min. Earth dist.	15435 Jul 25 00:01	13°♿56'38	0.68187 AU
	15434 Sep 24 17:53	0°♿		morning rise	15435 Jul 29 10:39	8°♿44'41	
morning set	15434 Oct 08 00:11	22°♿33'34		direct	15435 Aug 04 00:45	6°♿18'03	
max. Earth dist.	15434 Oct 11 16:23	29°♿26'55	1.35476 AU	desc. node	15435 Aug 07 17:08	7°♿10'46	
	15434 Oct 11 23:17	0°♿		morning max el	15435 Aug 15 12:10	13°♿10'12	24°28'39
asc. node	15434 Oct 15 04:47	6°♿18'34			15435 Aug 29 03:17	0°♿	
					15435 Sep 17 13:09	0°♿	
superior conj	15434 Oct 17 11:40	10°♿54'04	0°20'52	morning set	15435 Sep 20 01:43	4°♿20'02	
minimum elong	15434 Oct 17 10:28	10°♿48'01	0°21'09	max. Earth dist.	15435 Sep 23 16:06	10°♿42'35	1.37739 AU
evening rise	15434 Oct 25 05:15	26°♿52'15					
	15434 Oct 26 17:48	0°♿		superior conj	15435 Sep 30 18:56	24°♿00'39	-0°11'30
evening max el	15434 Nov 12 11:28	27°♿01'59	20°23'09	minimum elong	15435 Sep 30 19:41	24°♿04'17	0°11'04
	15434 Nov 16 00:35	0°♿		behind sun begin	15435 Sep 30 14:43	23°♿40'16	
desc. node	15434 Nov 16 16:31	0°♿25'41		behind sun end	15435 Oct 01 00:40	24°♿28'20	
retrograde	15434 Nov 23 09:18	2°♿27'46		asc. node	15435 Oct 02 01:26	26°♿28'35	
evening set	15434 Nov 25 15:24	2°♿14'55			15435 Oct 03 20:30	0°♿	
	15434 Dec 01 13:03	30°♿		evening rise	15435 Oct 09 08:12	10°♿56'21	
inferior conj	15434 Dec 04 11:49	28°♿19'40	-5°03'41		15435 Oct 19 15:36	0°♿	
minimum elong	15434 Dec 04 02:03	28°♿34'00	5°00'26	evening max el	15435 Oct 26 00:44	8°♿20'43	19°15'56
min. Earth dist.	15434 Dec 05 23:13	27°♿27'45	0.54696 AU	desc. node	15435 Nov 03 13:46	12°♿58'47	
morning rise	15434 Dec 12 12:15	24°♿19'15		retrograde	15435 Nov 04 07:43	13°♿00'32	
direct	15434 Dec 17 03:28	23°♿33'01		evening set	15435 Nov 06 04:54	12°♿49'51	
	15434 Dec 30 10:43	0°♿		inferior conj	15435 Nov 14 17:40	8°♿39'39	-3°29'02
morning max el	15434 Dec 30 14:51	0°♿09'44	23°49'32	minimum elong	15435 Nov 14 09:06	8°♿53'53	3°25'11
asc. node	15435 Jan 11 04:36	15°♿02'58		min. Earth dist.	15435 Nov 17 08:57	6°♿54'39	0.55838 AU
	15435 Jan 19 10:12	0°♿		morning rise	15435 Nov 22 10:55	4°♿08'14	
morning set	15435 Jan 23 18:59	9°≈04'56		direct	15435 Nov 27 23:13	2°♿58'42	
				morning max el	15435 Dec 12 00:27	10°♿05'48	25°35'20
superior conj	15435 Jan 30 14:56	23°≈56'51	1°31'16		15435 Dec 27 00:11	0°♿	
minimum elong	15435 Jan 30 16:28	24°≈05'13	1°31'47	asc. node	15435 Dec 29 01:46	3°♿33'40	
	15435 Feb 02 10:27	0°♿		morning set	15436 Jan 08 06:34	23°♿44'02	

	15436 Jan 11 03:26	0°♊		superior conj	15436 Dec 29 11:32	23°♊14'57	1°37'14
				minimum elong	15436 Dec 29 11:00	23°♊11'57	1°38'06
superior conj	15436 Jan 15 00:16	8°♊34'51	1°37'17	max. Earth dist.	15436 Dec 29 18:19	23°♊52'55	1.31122 AU
minimum elong	15436 Jan 15 00:48	8°♊37'45	1°38'03		15437 Jan 01 12:13	0°♊	
max. Earth dist.	15436 Jan 16 11:17	11°♊48'22	1.31693 AU	evening rise	15437 Jan 05 07:38	8°♊17'03	
evening rise	15436 Jan 22 04:01	24°♊02'19		desc. node	15437 Jan 16 09:59	29°♊50'01	
	15436 Jan 25 02:24	0°♋			15437 Jan 16 12:17	0°♋	
desc. node	15436 Jan 30 13:15	10°♋21'04		evening max el	15437 Feb 04 23:26	26°♋31'16	27°05'33
	15436 Feb 11 17:45	0°♌			15437 Feb 09 02:52	0°♌	
evening max el	15436 Feb 23 18:27	14°♌25'40	27°33'51	retrograde	15437 Feb 19 00:01	3°♌47'55	
retrograde	15436 Mar 08 17:07	21°♌51'50		evening set	15437 Feb 25 15:49	1°♌52'55	
evening set	15436 Mar 15 13:19	19°♌36'46			15437 Feb 28 12:14	30°♌♋	
min. Earth dist.	15436 Mar 19 07:31	16°♌38'22	0.62081 AU	min. Earth dist.	15437 Mar 01 13:48	29°♌10'59	0.59843 AU
inferior conj	15436 Mar 22 08:19	13°♌47'47	-1°09'46	inferior conj	15437 Mar 04 18:54	26°♌32'53	-2°34'32
minimum elong	15436 Mar 22 10:43	13°♌42'06	1°08'54	minimum elong	15437 Mar 05 00:41	26°♌20'57	2°32'10
asc. node	15436 Mar 25 22:54	10°♌40'16		morning rise	15437 Mar 12 13:02	21°♌48'43	
morning rise	15436 Mar 29 11:11	8°♌43'56		asc. node	15437 Mar 12 20:18	21°♌44'24	
direct	15436 Mar 31 16:49	8°♌21'29		direct	15437 Mar 14 13:33	21°♌32'58	
morning max el	15436 Apr 07 10:02	11°♌45'00	17°47'35	morning max el	15437 Mar 22 00:21	25°♌15'45	18°04'22
	15436 Apr 19 18:26	0°♍			15437 Mar 25 23:27	0°♌	
morning set	15436 Apr 23 06:30	6°♍10'11		morning set	15437 Apr 06 14:13	19°♌50'20	
desc. node	15436 Apr 27 15:06	13°♍51'10		desc. node	15437 Apr 12 02:09	0°♍	
					15437 Apr 14 11:46	4°♍21'36	
superior conj	15436 May 04 19:11	26°♍10'13	-0°55'30	superior conj	15437 Apr 16 14:32	8°♍08'25	-0°17'15
minimum elong	15436 May 04 13:58	25°♍48'19	0°55'25	minimum elong	15437 Apr 16 13:04	8°♍01'58	0°17'29
	15436 May 07 02:13	0°♎		max. Earth dist.	15437 Apr 24 04:39	21°♍11'56	1.42048 AU
max. Earth dist.	15436 May 11 16:48	7°♎31'57	1.43910 AU	evening rise	15437 Apr 29 11:02	29°♍48'37	
evening rise	15436 May 19 05:50	19°♎27'05			15437 Apr 29 13:53	0°♎	
	15436 May 26 03:53	0°♏			15437 May 19 16:29	0°♏	
	15436 Jun 17 00:13	0°♏		evening max el	15437 Jun 01 18:28	16°♏03'17	22°36'13
evening max el	15436 Jun 19 01:18	2°♏10'03	21°18'01	asc. node	15437 Jun 08 17:46	21°♏14'36	
asc. node	15436 Jun 21 20:47	4°♏41'28		retrograde	15437 Jun 11 16:52	21°♏52'59	
retrograde	15436 Jun 27 19:38	7°♏15'27		evening set	15437 Jun 16 14:25	19°♏49'19	
evening set	15436 Jul 02 05:51	5°♏27'29		inferior conj	15437 Jun 21 21:18	13°♏27'33	3°01'06
	15436 Jul 06 22:22	30°♏♍		minimum elong	15437 Jun 21 20:10	13°♏31'28	3°00'04
inferior conj	15436 Jul 07 11:25	29°♏14'41	3°09'09	min. Earth dist.	15437 Jun 21 15:58	13°♏46'06	0.69095 AU
minimum elong	15436 Jul 07 11:11	29°♏15'29	3°08'18	morning rise	15437 Jun 27 01:46	7°♏15'45	
min. Earth dist.	15436 Jul 07 19:08	28°♏47'47	0.68881 AU	direct	15437 Jul 01 15:27	5°♏22'02	
morning rise	15436 Jul 12 16:17	22°♏55'48		morning max el	15437 Jul 10 14:09	10°♏33'58	21°33'07
direct	15436 Jul 17 18:16	20°♏43'51		desc. node	15437 Jul 11 11:41	11°♏29'11	
desc. node	15436 Jul 24 14:27	23°♏44'22			15437 Jul 25 19:47	0°♏	
morning max el	15436 Jul 27 23:34	26°♏47'54	22°59'18	morning set	15437 Aug 11 08:31	24°♏56'14	
	15436 Jul 30 22:51	0°♐			15437 Aug 14 12:43	0°♐	
	15436 Aug 21 16:40	0°♑		max. Earth dist.	15437 Aug 17 18:39	5°♑16'46	1.42381 AU
morning set	15436 Aug 31 05:13	15°♑09'11					
max. Earth dist.	15436 Sep 04 14:56	22°♑33'18	1.40133 AU	superior conj	15437 Aug 25 07:33	17°♑58'20	-1°23'09
	15436 Sep 08 21:29	0°♒		minimum elong	15437 Aug 25 14:10	18°♑26'56	1°22'34
superior conj	15436 Sep 12 11:01	6°♒25'10	-0°47'15		15437 Sep 01 03:06	0°♒	
minimum elong	15436 Sep 12 14:38	6°♒41'43	0°46'38	asc. node	15437 Sep 04 18:37	6°♒36'17	
asc. node	15436 Sep 17 22:01	16°♒35'39		evening rise	15437 Sep 05 10:25	7°♒48'10	
evening rise	15436 Sep 22 03:12	24°♒38'12			15437 Sep 18 17:25	0°♓	
	15436 Sep 24 22:56	0°♓		evening max el	15437 Sep 21 12:27	3°♓13'27	18°06'57
evening max el	15436 Oct 08 02:27	20°♓27'32	18°31'00	retrograde	15437 Sep 28 11:41	6°♓47'33	
retrograde	15436 Oct 16 00:28	24°♓28'09		evening set	15437 Sep 30 17:21	6°♓25'54	
evening set	15436 Oct 17 23:32	24°♓14'08		desc. node	15437 Oct 07 08:26	2°♓01'11	
desc. node	15436 Oct 20 11:05	23°♓19'35		inferior conj	15437 Oct 07 20:23	1°♓34'20	-0°09'25
inferior conj	15436 Oct 25 20:20	19°♓43'41	-1°43'42	minimum elong	15437 Oct 07 20:05	1°♓35'02	0°08'55
minimum elong	15436 Oct 25 16:13	19°♓51'40	1°41'25	transit middle	15437 Oct 07 20:05	1°♓35'02	0°08'55
min. Earth dist.	15436 Oct 29 01:14	17°♓15'19	0.57666 AU	transit begin	15437 Oct 07 17:17	1°♓41'22	
morning rise	15436 Nov 02 05:28	14°♓35'03		transit end	15437 Oct 07 22:53	1°♓28'42	
direct	15436 Nov 08 09:40	12°♓58'32			15437 Oct 09 13:58	30°♓♑	
morning max el	15436 Nov 22 16:05	20°♓29'30	26°59'15	min. Earth dist.	15437 Oct 11 01:52	28°♓40'41	0.59876 AU
	15436 Nov 30 21:10	0°♒		morning rise	15437 Oct 14 19:32	25°♓52'54	
asc. node	15436 Dec 14 22:50	22°♒38'33		direct	15437 Oct 21 09:11	23°♓50'39	
	15436 Dec 18 17:25	0°♓			15437 Nov 02 21:41	0°♓	
morning set	15436 Dec 22 16:04	8°♓12'56		morning max el	15437 Nov 04 15:40	1°♓38'31	27°48'12

	15437 Nov 25 05:24	0°♊			15438 Nov 17 17:09	0°♊	
asc. node	15437 Dec 01 19:50	12°♊08'31		asc. node	15438 Nov 18 16:45	1°♊56'32	
morning set	15437 Dec 06 21:38	22°♊27'00		morning set	15438 Nov 20 21:13	6°♊21'40	
	15437 Dec 10 09:47	0°♊		max. Earth dist.	15438 Nov 26 06:13	17°♊45'17	1.31618 AU
max. Earth dist.	15437 Dec 13 01:53	5°♊54'43	1.31095 AU				
				superior conj	15438 Nov 28 08:19	22°♊20'00	1°19'14
superior conj	15437 Dec 13 22:50	7°♊51'39	1°31'13	minimum elong	15438 Nov 28 06:10	22°♊08'13	1°19'51
minimum elong	15437 Dec 13 21:21	7°♊43'23	1°32'01		15438 Dec 01 19:27	0°♊	
evening rise	15437 Dec 20 15:34	22°♊41'05		evening rise	15438 Dec 05 01:56	7°♊09'55	
	15437 Dec 24 02:57	0°♊			15438 Dec 16 18:56	0°♊	
desc. node	15438 Jan 03 06:47	18°♊44'44		desc. node	15438 Dec 21 03:41	6°♊52'58	
	15438 Jan 10 23:29	0°♊		evening max el	15438 Dec 30 10:04	18°♊09'06	24°32'05
evening max el	15438 Jan 17 20:51	7°♊44'39	26°02'39	retrograde	15439 Jan 13 02:28	24°♊58'23	
retrograde	15438 Jan 31 19:45	14°♊48'33		evening set	15439 Jan 18 08:41	23°♊57'38	
evening set	15438 Feb 06 23:23	13°♊19'32		min. Earth dist.	15439 Jan 23 21:51	21°♊07'34	0.55890 AU
min. Earth dist.	15438 Feb 11 10:03	10°♊41'42	0.57689 AU	inferior conj	15439 Jan 26 04:53	19°♊42'17	-5°20'09
inferior conj	15438 Feb 14 10:26	8°♊33'14	-4°03'24	minimum elong	15439 Jan 26 13:18	19°♊29'14	5°17'49
minimum elong	15438 Feb 14 19:13	8°♊17'35	4°00'11	morning rise	15439 Feb 03 20:00	15°♊40'08	
morning rise	15438 Feb 22 18:06	4°♊10'25		direct	15439 Feb 06 03:03	15°♊26'02	
direct	15438 Feb 24 17:57	3°♊57'37		asc. node	15439 Feb 14 15:06	18°♊55'43	
asc. node	15438 Feb 27 17:42	4°♊27'58		morning max el	15439 Feb 16 03:19	20°♊17'12	19°41'07
morning max el	15438 Mar 05 07:30	8°♊10'12	18°41'33		15439 Feb 23 14:25	0°♊	
	15438 Mar 19 07:46	0°♊		morning set	15439 Mar 05 13:25	18°♊32'03	
morning set	15438 Mar 21 09:50	4°♊01'27			15439 Mar 11 05:38	0°♊	
superior conj	15438 Mar 30 05:45	20°♊59'43	0°17'30	superior conj	15439 Mar 13 12:24	4°♊32'09	0°46'31
minimum elong	15438 Mar 30 06:54	21°♊05'07	0°17'04	minimum elong	15439 Mar 13 14:47	4°♊43'55	0°46'08
desc. node	15438 Apr 01 08:24	24°♊54'41		desc. node	15439 Mar 19 05:02	15°♊26'56	
	15438 Apr 04 03:45	0°♊		max. Earth dist.	15439 Mar 19 19:07	16°♊32'15	1.37573 AU
max. Earth dist.	15438 Apr 06 12:38	4°♊11'32	1.39857 AU	evening rise	15439 Mar 23 11:47	23°♊13'26	
evening rise	15438 Apr 10 13:12	11°♊05'21			15439 Mar 27 09:39	0°♊	
	15438 Apr 22 10:30	0°♊			15439 Apr 16 04:52	0°♊	
	15438 May 15 09:47	0°♊		evening max el	15439 Apr 27 22:21	13°♊51'54	25°15'30
evening max el	15438 May 15 08:52	29°♊57'42	23°57'38	retrograde	15439 May 10 01:13	20°♊53'50	
retrograde	15438 May 26 11:03	6°♊27'48		asc. node	15439 May 13 12:01	20°♊04'12	
asc. node	15438 May 26 14:51	6°♊27'42		evening set	15439 May 15 21:52	18°♊26'44	
evening set	15438 May 31 20:18	4°♊10'41		min. Earth dist.	15439 May 20 06:08	13°♊37'34	0.68077 AU
	15438 Jun 04 13:51	30°♊		inferior conj	15439 May 21 13:20	11°♊56'02	2°13'34
min. Earth dist.	15438 Jun 05 12:20	28°♊44'44	0.68826 AU	minimum elong	15439 May 21 11:10	12°♊03'05	2°12'10
inferior conj	15438 Jun 06 06:35	27°♊42'38	2°42'38	morning rise	15439 May 27 00:52	6°♊02'34	
minimum elong	15438 Jun 06 04:46	27°♊48'48	2°41'24	direct	15439 May 30 15:01	4°♊48'37	
morning rise	15438 Jun 11 13:15	21°♊39'23		morning max el	15439 Jun 06 14:57	8°♊37'45	19°14'24
direct	15438 Jun 15 14:52	20°♊05'35		desc. node	15439 Jun 15 05:59	19°♊21'41	
morning max el	15438 Jun 23 10:50	24°♊30'30	20°16'46	greatest brilliancy	15439 Jun 19 09:35	25°♊23'49	-0.7m
desc. node	15438 Jun 28 08:53	0°♊			15439 Jun 22 11:17	0°♊	
	15438 Jun 28 06:54	0°♊		morning set	15439 Jun 30 20:59	12°♊50'30	
	15438 Jul 19 03:07	0°♊			15439 Jul 11 22:41	0°♊	
morning set	15438 Jul 21 16:27	3°♊55'06		max. Earth dist.	15439 Jul 13 22:04	3°♊05'29	1.45445 AU
max. Earth dist.	15438 Jul 31 05:29	18°♊52'11	1.44217 AU				
				superior conj	15439 Jul 17 03:59	8°♊12'14	-2°11'53
superior conj	15438 Aug 06 05:00	28°♊32'40	-1°53'48	minimum elong	15439 Jul 17 07:34	8°♊26'27	2°12'33
minimum elong	15438 Aug 06 12:35	29°♊03'49	1°53'43		15439 Jul 30 16:34	0°♊	
	15438 Aug 07 02:14	0°♊		evening rise	15439 Jul 31 17:49	1°♊43'39	
evening rise	15438 Aug 19 01:01	20°♊14'06		asc. node	15439 Aug 09 11:53	16°♊00'41	
asc. node	15438 Aug 22 15:15	26°♊26'17		evening max el	15439 Aug 19 17:07	0°♊01'36	18°15'52
	15438 Aug 24 17:16	0°♊			15439 Aug 19 16:28	0°♊	
evening max el	15438 Sep 05 02:33	16°♊27'58	18°02'18	retrograde	15439 Aug 26 01:57	3°♊24'21	
retrograde	15438 Sep 11 13:42	19°♊49'36		evening set	15439 Aug 29 00:22	2°♊37'21	
evening set	15438 Sep 14 03:27	19°♊16'42			15439 Sep 01 08:55	30°♊	
inferior conj	15438 Sep 20 14:43	14°♊05'59	1°05'26	inferior conj	15439 Sep 03 23:14	27°♊10'02	2°00'18
minimum elong	15438 Sep 20 16:28	14°♊01'26	1°04'57	minimum elong	15439 Sep 04 01:36	27°♊03'13	1°59'29
min. Earth dist.	15438 Sep 23 12:11	11°♊07'52	0.62163 AU	min. Earth dist.	15439 Sep 06 08:27	24°♊26'04	0.64305 AU
desc. node	15438 Sep 24 05:51	10°♊25'12		morning rise	15439 Sep 10 01:12	20°♊50'25	
morning rise	15438 Sep 27 03:01	8°♊00'40		desc. node	15439 Sep 11 03:19	20°♊02'55	
direct	15438 Oct 03 19:24	5°♊38'17		direct	15439 Sep 16 14:45	18°♊15'47	
morning max el	15438 Oct 17 21:56	13°♊35'59	27°57'59	morning max el	15439 Sep 30 08:11	26°♊13'48	27°31'07
	15438 Oct 31 02:49	0°♊			15439 Oct 03 20:21	0°♊	

	15439 Oct 24 17:01	0°♌		direct	15440 Aug 29 18:00	1°♎35'39	
morning set	15439 Nov 04 12:16	19°♌50'03		morning max el	15440 Sep 11 19:42	9°♎20'26	26°34'41
asc. node	15439 Nov 05 13:34	21°♌56'00			15440 Sep 28 02:16	0°♌	
max. Earth dist.	15439 Nov 09 03:24	29°♌15'41	1.32697 AU		15440 Oct 16 04:19	0°♌	
	15439 Nov 09 11:52	0°♌		morning set	15440 Oct 17 15:45	2°♌45'47	
				max. Earth dist.	15440 Oct 21 14:48	10°♌25'37	1.34321 AU
superior conj	15439 Nov 12 13:50	6°♌33'23	1°01'13	asc. node	15440 Oct 22 10:19	12°♌02'42	
minimum elong	15439 Nov 12 11:30	6°♌20'50	1°01'38				
evening rise	15439 Nov 19 12:47	21°♌37'43		superior conj	15440 Oct 26 13:05	20°♌26'31	0°37'14
	15439 Nov 23 12:51	0°♌		minimum elong	15440 Oct 26 11:14	20°♌16'52	0°37'32
desc. node	15439 Dec 08 00:41	23°♌56'56			15440 Oct 31 02:05	0°♌	
evening max el	15439 Dec 11 19:32	28°♌05'56	22°49'06	evening rise	15440 Nov 02 22:18	6°♌00'20	
	15439 Dec 13 22:23	0°♌			15440 Nov 15 20:12	0°♌	
retrograde	15439 Dec 24 20:38	4°♌33'48		evening max el	15440 Nov 22 11:04	8°♌14'06	21°11'37
evening set	15439 Dec 28 20:29	3°♌59'03		desc. node	15440 Nov 23 21:45	9°♌34'39	
min. Earth dist.	15440 Jan 05 04:33	0°♌37'07	0.54724 AU	retrograde	15440 Dec 04 07:04	14°♌05'50	
inferior conj	15440 Jan 06 04:41	0°♌02'51	-5°59'54	evening set	15440 Dec 07 00:42	13°♌48'22	
minimum elong	15440 Jan 06 06:26	0°♌00'21	5°59'01	inferior conj	15440 Dec 15 19:36	9°♌56'57	-5°41'10
	15440 Jan 06 06:41	30°♌30		minimum elong	15440 Dec 15 12:26	10°♌07'04	5°39'12
morning rise	15440 Jan 14 17:42	26°♌14'16		min. Earth dist.	15440 Dec 16 10:06	9°♌36'27	0.54429 AU
direct	15440 Jan 17 18:07	25°♌53'16		morning rise	15440 Dec 24 00:30	6°♌06'05	
	15440 Jan 27 17:06	0°♌		direct	15440 Dec 28 01:25	5°♌30'53	
morning max el	15440 Jan 29 08:39	1°♌28'19	21°03'56	morning max el	15441 Jan 10 00:13	11°♌48'02	22°46'14
asc. node	15440 Feb 01 12:29	4°♌53'46		asc. node	15441 Jan 18 09:48	22°♌04'01	
	15440 Feb 16 08:38	0°♌			15441 Jan 23 06:45	0°♌	
morning set	15440 Feb 17 21:58	3°♌12'47		morning set	15441 Feb 01 09:11	17°♌57'04	
					15441 Feb 06 23:36	0°♌	
superior conj	15440 Feb 25 06:23	18°♌33'58	1°09'02				
minimum elong	15440 Feb 25 08:57	18°♌47'08	1°08'57	superior conj	15441 Feb 08 08:22	2°♌55'44	1°24'59
max. Earth dist.	15440 Mar 01 04:14	28°♌27'08	1.35430 AU	minimum elong	15441 Feb 08 10:24	3°♌06'35	1°25'17
	15440 Mar 01 23:16	0°♌		max. Earth dist.	15441 Feb 11 19:59	10°♌16'11	1.33619 AU
evening rise	15440 Mar 05 03:41	6°♌03'55		evening rise	15441 Feb 16 09:27	19°♌28'01	
desc. node	15440 Mar 05 01:37	5°♌54'16		desc. node	15441 Feb 19 22:12	26°♌12'37	
	15440 Mar 19 04:40	0°♌			15441 Feb 21 23:49	0°♌	
evening max el	15440 Apr 09 11:57	27°♌41'01	26°22'38		15441 Mar 13 06:07	0°♌	
	15440 Apr 12 00:29	0°♌		evening max el	15441 Mar 23 01:31	11°♌16'50	27°11'28
retrograde	15440 Apr 22 10:30	5°♌03'31		retrograde	15441 Apr 05 13:51	18°♌47'51	
evening set	15440 Apr 28 17:22	2°♌31'20		evening set	15441 Apr 12 04:44	16°♌16'52	
asc. node	15440 Apr 29 09:17	1°♌57'06		min. Earth dist.	15441 Apr 16 02:01	12°♌35'43	0.65257 AU
	15440 May 01 07:50	30°♌30		asc. node	15441 Apr 16 06:38	12°♌23'08	
min. Earth dist.	15440 May 02 19:22	28°♌17'31	0.66870 AU	inferior conj	15441 Apr 18 10:34	9°♌57'28	0°40'16
inferior conj	15440 May 04 15:28	26°♌03'01	1°33'07	minimum elong	15441 Apr 18 09:30	10°♌00'28	0°39'21
minimum elong	15440 May 04 13:29	26°♌09'05	1°31'46	morning rise	15441 Apr 24 16:01	4°♌27'54	
morning rise	15440 May 10 10:35	20°♌20'39		direct	15441 Apr 27 09:58	3°♌47'42	
direct	15440 May 13 14:05	19°♌24'55		morning max el	15441 May 03 17:27	7°♌04'07	17°58'33
morning max el	15440 May 20 01:51	22°♌51'28	18°28'04	desc. node	15441 May 18 23:51	29°♌08'49	
	15440 May 25 23:31	0°♌			15441 May 19 12:21	0°♌	
desc. node	15440 Jun 01 02:59	9°♌05'17		morning set	15441 May 21 18:11	3°♌40'45	
morning set	15440 Jun 09 18:06	22°♌36'41					
	15440 Jun 14 10:43	0°♌		superior conj	15441 Jun 05 02:33	26°♌49'31	-1°50'55
				minimum elong	15441 Jun 04 17:54	26°♌15'20	1°51'06
superior conj	15440 Jun 25 13:44	17°♌23'51	-2°11'07		15441 Jun 07 02:54	0°♌	
minimum elong	15440 Jun 25 09:35	17°♌07'43	2°11'53	max. Earth dist.	15441 Jun 08 13:39	2°♌16'17	1.45714 AU
max. Earth dist.	15440 Jun 25 17:40	17°♌39'13	1.45954 AU	evening rise	15441 Jun 21 04:17	21°♌48'01	
	15440 Jul 03 15:30	0°♌			15441 Jun 26 12:55	0°♌	
evening rise	15440 Jul 11 09:44	12°♌11'04		greatest brilliancy	15441 Jul 04 19:14	12°♌24'28	-0.7m
greatest brilliancy	15440 Jul 20 04:11	25°♌56'47	-0.8m	asc. node	15441 Jul 13 05:21	23°♌57'36	
	15440 Jul 22 19:35	0°♌		evening max el	15441 Jul 16 12:37	27°♌38'57	19°34'32
asc. node	15440 Jul 26 08:35	5°♌13'57			15441 Jul 19 06:18	0°♌	
evening max el	15440 Aug 02 05:14	13°♌47'32	18°46'56	retrograde	15441 Jul 23 18:29	1°♌42'07	
retrograde	15440 Aug 08 20:33	17°♌24'20		evening set	15441 Jul 27 11:55	0°♌21'37	
evening set	15440 Aug 12 04:09	16°♌21'12			15441 Jul 27 23:14	30°♌30	
inferior conj	15440 Aug 17 18:13	10°♌39'27	2°37'25	inferior conj	15441 Aug 01 20:27	24°♌26'53	2°59'32
minimum elong	15440 Aug 17 20:16	10°♌33'00	2°36'36	minimum elong	15441 Aug 01 21:44	24°♌22'37	2°58'46
min. Earth dist.	15440 Aug 19 13:34	8°♌24'01	0.66144 AU	min. Earth dist.	15441 Aug 03 01:41	22°♌49'50	0.67579 AU
morning rise	15440 Aug 23 11:26	4°♌13'44		morning rise	15441 Aug 07 07:00	18°♌01'08	
desc. node	15440 Aug 28 00:46	1°♌46'53		direct	15441 Aug 13 03:45	15°♌28'03	

desc. node	15441 Aug 14 22:12	15° $\Omega$ 40'12		morning rise	15442 Jul 22 09:36	2° $\Omega$ 05'22	
morning max el	15441 Aug 25 06:40	22° $\Omega$ 43'29	25°17'56		15442 Jul 25 22:31	30° $\mathcal{R}\mathfrak{G}$	
	15441 Aug 31 16:38	0° $\mathfrak{M}$		direct	15442 Jul 27 18:44	29° $\mathfrak{G}$ 44'16	
	15441 Sep 21 09:33	0° $\mathfrak{L}$			15442 Jul 29 17:00	0° $\Omega$	
morning set	15441 Sep 30 03:54	15° $\mathfrak{L}$ 00'01		desc. node	15442 Aug 01 19:35	1° $\Omega$ 22'40	
max. Earth dist.	15441 Oct 03 17:04	21° $\mathfrak{L}$ 29'29	1.36406 AU	morning max el	15442 Aug 07 17:20	6° $\Omega$ 16'17	23°50'35
	15441 Oct 08 04:00	0° $\mathfrak{M}$			15442 Aug 26 03:45	0° $\mathfrak{M}$	
asc. node	15441 Oct 09 07:00	2° $\mathfrak{M}$ 12'30		morning set	15442 Sep 11 20:27	26° $\mathfrak{M}$ 22'41	
					15442 Sep 13 23:05	0° $\mathfrak{L}$	
superior conj	15441 Oct 10 03:11	3° $\mathfrak{M}$ 52'25	0°07'41	max. Earth dist.	15442 Sep 15 15:37	2° $\mathfrak{L}$ 57'07	1.38767 AU
minimum elong	15441 Oct 10 02:41	3° $\mathfrak{M}$ 49'57	0°08'02				
behind sun begin	15441 Oct 09 21:07	3° $\mathfrak{M}$ 22'18		superior conj	15442 Sep 23 04:31	16° $\mathfrak{L}$ 42'27	-0°26'24
behind sun end	15441 Oct 10 08:16	4° $\mathfrak{M}$ 17'41		minimum elong	15442 Sep 23 06:24	16° $\mathfrak{L}$ 51'18	0°25'53
evening rise	15441 Oct 18 04:20	20° $\mathfrak{M}$ 12'39		asc. node	15442 Sep 26 03:37	22° $\mathfrak{L}$ 21'43	
	15441 Oct 23 02:21	0° $\mathfrak{X}$			15442 Sep 30 01:42	0° $\mathfrak{M}$	
evening max el	15441 Nov 04 16:02	19° $\mathfrak{X}$ 04'00	19°51'51	evening rise	15442 Oct 02 04:17	4° $\mathfrak{M}$ 08'09	
desc. node	15441 Nov 10 18:54	23° $\mathfrak{X}$ 21'19			15442 Oct 17 18:11	0° $\mathfrak{X}$	
retrograde	15441 Nov 14 20:59	24° $\mathfrak{X}$ 09'25		evening max el	15442 Oct 18 11:04	0° $\mathfrak{X}$ 43'56	18°54'06
evening set	15441 Nov 16 21:35	23° $\mathfrak{X}$ 58'20		retrograde	15442 Oct 27 02:36	5° $\mathfrak{X}$ 05'26	
inferior conj	15441 Nov 25 16:15	19° $\mathfrak{X}$ 58'15	-4°26'43	evening set	15442 Oct 28 23:55	4° $\mathfrak{X}$ 53'47	
minimum elong	15441 Nov 25 06:15	20° $\mathfrak{X}$ 13'36	4°22'52	desc. node	15442 Oct 28 16:10	4° $\mathfrak{X}$ 57'23	
min. Earth dist.	15441 Nov 27 17:26	18° $\mathfrak{X}$ 42'49	0.55081 AU	inferior conj	15442 Nov 06 06:26	0° $\mathfrak{X}$ 35'08	-2°43'56
morning rise	15441 Dec 03 13:33	15° $\mathfrak{X}$ 46'10		minimum elong	15442 Nov 05 23:40	0° $\mathfrak{X}$ 47'08	2°40'36
direct	15441 Dec 08 14:35	14° $\mathfrak{X}$ 50'17			15442 Nov 07 02:10	30° $\mathcal{R}\mathfrak{M}$	
morning max el	15441 Dec 22 08:58	21° $\mathfrak{X}$ 41'14	24°36'05	min. Earth dist.	15442 Nov 09 05:18	28° $\mathfrak{M}$ 30'07	0.56555 AU
	15441 Dec 29 14:10	0° $\mathfrak{Z}$		morning rise	15442 Nov 13 20:30	25° $\mathfrak{M}$ 48'20	
asc. node	15442 Jan 05 07:01	10° $\mathfrak{Z}$ 09'37		direct	15442 Nov 19 16:31	24° $\mathfrak{M}$ 27'32	
	15442 Jan 15 15:16	0° $\approx$			15442 Dec 01 22:09	0° $\mathfrak{X}$	
morning set	15442 Jan 16 21:10	2° $\approx$ 39'31		morning max el	15442 Dec 03 20:20	1° $\mathfrak{X}$ 44'43	26°14'48
				asc. node	15442 Dec 23 04:10	28° $\mathfrak{X}$ 56'13	
superior conj	15442 Jan 23 15:40	17° $\approx$ 29'47	1°34'34		15442 Dec 23 18:05	0° $\mathfrak{Z}$	
minimum elong	15442 Jan 23 16:48	17° $\approx$ 35'58	1°35'12	morning set	15443 Jan 01 08:03	17° $\mathfrak{Z}$ 14'32	
max. Earth dist.	15442 Jan 25 19:29	22° $\approx$ 12'19	1.32252 AU		15443 Jan 07 02:55	0° $\approx$	
	15442 Jan 29 11:29	0° $\mathfrak{X}$		superior conj	15443 Jan 08 02:01	2° $\approx$ 08'54	1°38'00
evening rise	15442 Jan 31 01:49	3° $\mathfrak{X}$ 17'27		minimum elong	15443 Jan 08 02:05	2° $\approx$ 09'16	1°38'49
desc. node	15442 Feb 06 18:48	16° $\mathfrak{X}$ 17'10		max. Earth dist.	15443 Jan 09 00:51	4° $\approx$ 16'00	1.31386 AU
	15442 Feb 14 18:46	0° $\mathfrak{Y}$		evening rise	15443 Jan 15 02:00	17° $\approx$ 24'22	
evening max el	15442 Mar 05 13:48	24° $\mathfrak{Y}$ 28'24	27°34'43		15443 Jan 21 08:58	0° $\mathfrak{X}$	
	15442 Mar 12 17:52	0° $\mathfrak{B}$		desc. node	15443 Jan 24 15:27	6° $\mathfrak{X}$ 01'07	
retrograde	15442 Mar 19 10:05	1° $\mathfrak{B}$ 57'47			15443 Feb 09 12:30	0° $\mathfrak{Y}$	
	15442 Mar 25 14:40	30° $\mathcal{R}\mathfrak{Y}$		evening max el	15443 Feb 15 22:15	7° $\mathfrak{Y}$ 01'06	27°26'14
evening set	15442 Mar 26 05:36	29° $\mathfrak{Y}$ 35'06		retrograde	15443 Mar 01 21:52	14° $\mathfrak{Y}$ 22'46	
min. Earth dist.	15442 Mar 30 00:11	26° $\mathfrak{Y}$ 22'40	0.63310 AU	evening set	15443 Mar 08 17:06	12° $\mathfrak{Y}$ 15'35	
inferior conj	15442 Apr 01 19:47	23° $\mathfrak{Y}$ 32'39	-0°25'45	min. Earth dist.	15443 Mar 12 12:16	9° $\mathfrak{Y}$ 25'28	0.61136 AU
minimum elong	15442 Apr 01 20:37	23° $\mathfrak{Y}$ 30'33	0°25'42	inferior conj	15443 Mar 15 15:38	6° $\mathfrak{Y}$ 38'25	-1°44'36
asc. node	15442 Apr 03 03:59	22° $\mathfrak{Y}$ 12'47		minimum elong	15443 Mar 15 19:25	6° $\mathfrak{Y}$ 30'00	1°43'05
morning rise	15442 Apr 08 14:11	18° $\mathfrak{Y}$ 18'18		asc. node	15443 Mar 21 01:23	2° $\mathfrak{Y}$ 32'27	
direct	15442 Apr 10 23:53	17° $\mathfrak{Y}$ 50'18		morning rise	15443 Mar 23 00:57	1° $\mathfrak{Y}$ 42'23	
morning max el	15442 Apr 17 11:06	21° $\mathfrak{Y}$ 08'05	17°46'25	direct	15443 Mar 25 04:11	1° $\mathfrak{Y}$ 23'05	
	15442 Apr 24 06:33	0° $\mathfrak{B}$		morning max el	15443 Apr 01 03:35	4° $\mathfrak{Y}$ 53'18	17°52'23
morning set	15442 May 03 20:24	15° $\mathfrak{B}$ 59'35		morning set	15443 Apr 16 19:00	29° $\mathfrak{Y}$ 14'52	
desc. node	15442 May 05 20:39	19° $\mathfrak{B}$ 26'44			15443 Apr 17 05:00	0° $\mathfrak{B}$	
	15442 May 12 02:01	0° $\mathfrak{H}$		desc. node	15443 Apr 22 17:21	9° $\mathfrak{B}$ 53'38	
superior conj	15442 May 16 09:06	7° $\mathfrak{H}$ 06'30	-1°17'29	superior conj	15443 Apr 27 15:13	18° $\mathfrak{B}$ 28'28	-0°39'04
minimum elong	15442 May 16 01:46	6° $\mathfrak{H}$ 36'29	1°17'20	minimum elong	15443 Apr 27 11:41	18° $\mathfrak{B}$ 13'16	0°39'07
max. Earth dist.	15442 May 22 08:15	16° $\mathfrak{H}$ 43'55	1.44760 AU		15443 May 04 12:00	0° $\mathfrak{H}$	
	15442 May 30 20:02	0° $\mathfrak{G}$		max. Earth dist.	15443 May 04 23:24	0° $\mathfrak{H}$ 46'39	1.43178 AU
evening rise	15442 May 31 14:57	1° $\mathfrak{G}$ 12'37		evening rise	15443 May 11 10:00	11° $\mathfrak{H}$ 05'23	
	15442 Jun 20 04:20	0° $\Omega$			15443 May 23 21:47	0° $\mathfrak{G}$	
evening max el	15442 Jun 29 14:09	11° $\Omega$ 31'58	20°36'45	evening max el	15443 Jun 12 09:54	25° $\mathfrak{G}$ 24'52	21°50'26
asc. node	15442 Jun 30 02:10	12° $\Omega$ 01'26		asc. node	15443 Jun 16 23:05	29° $\mathfrak{G}$ 12'27	
retrograde	15442 Jul 07 17:26	16° $\Omega$ 11'59			15443 Jun 18 09:20	0° $\Omega$	
evening set	15442 Jul 11 21:25	14° $\Omega$ 33'48		retrograde	15443 Jun 21 15:44	0° $\Omega$ 48'39	
inferior conj	15442 Jul 17 03:20	8° $\Omega$ 27'19	3°08'54		15443 Jun 24 16:33	30° $\mathcal{R}\mathfrak{G}$	
minimum elong	15442 Jul 17 03:39	8° $\Omega$ 26'11	3°08'06	evening set	15443 Jun 26 06:50	28° $\mathfrak{G}$ 53'34	
min. Earth dist.	15442 Jul 17 18:45	7° $\Omega$ 34'10	0.68553 AU				





































































































































inferior conj	15443 Jul 01 12:41	22°☿36'43	3°06'59	inferior conj	15444 Jun 14 22:33	6°☿51'03	2°54'33
minimum elong	15443 Jul 01 12:04	22°☿38'54	3°06'04	minimum elong	15444 Jun 14 21:06	6°☿56'04	2°53'26
min. Earth dist.	15443 Jul 01 14:45	22°☿29'29	0.69039 AU	min. Earth dist.	15444 Jun 14 11:38	7°☿28'50	0.69036 AU
morning rise	15443 Jul 06 17:07	16°☿20'56		morning rise	15444 Jun 20 03:39	0°☿42'51	
direct	15443 Jul 11 13:53	14°☿16'34			15444 Jun 21 03:25	30°☿II	
desc. node	15443 Jul 19 16:54	18°☿29'26		direct	15444 Jun 24 12:02	28°☿II57'47	
morning max el	15443 Jul 21 05:49	19°☿57'45	22°21'48		15444 Jun 28 03:03	0°☿	
	15443 Jul 29 17:48	0°☿		morning max el	15444 Jul 02 22:53	3°☿48'50	20°59'11
	15443 Aug 19 07:54	0°☿		desc. node	15444 Jul 05 14:10	6°☿38'42	
morning set	15443 Aug 23 13:44	6°☿45'44			15444 Jul 22 16:40	0°☿	
max. Earth dist.	15443 Aug 28 16:43	15°☿12'23	1.41129 AU	morning set	15444 Aug 02 07:41	16°☿09'42	
				max. Earth dist.	15444 Aug 09 23:28	28°☿19'21	1.43223 AU
					15444 Aug 11 00:15	0°☿	
superior conj	15443 Sep 05 12:52	28°☿46'45	-1°02'43				
minimum elong	15443 Sep 05 17:50	29°☿08'55	1°02'04	superior conj	15444 Aug 16 23:51	9°☿55'16	-1°37'12
	15443 Sep 06 05:15	0°☿		minimum elong	15444 Aug 17 07:18	10°☿26'48	1°36'46
asc. node	15443 Sep 13 00:12	12°☿26'53		evening rise	15444 Aug 28 19:41	0°☿31'55	
evening rise	15443 Sep 15 18:51	17°☿38'34			15444 Aug 28 12:31	0°☿	
	15443 Sep 22 12:49	0°☿		asc. node	15444 Aug 29 20:48	2°☿23'41	
evening max el	15443 Oct 01 16:50	13°☿08'54	18°18'14	evening max el	15444 Sep 14 05:01	26°☿08'08	18°02'38
retrograde	15443 Oct 09 03:54	16°☿56'53		retrograde	15444 Sep 20 22:04	29°☿35'36	
evening set	15443 Oct 11 05:25	16°☿40'07		evening set	15444 Sep 23 06:55	29°☿09'42	
desc. node	15443 Oct 15 13:31	14°☿29'54		inferior conj	15444 Sep 30 02:54	24°☿09'46	0°24'50
inferior conj	15443 Oct 18 18:33	12°☿00'09	-1°01'37	minimum elong	15444 Sep 30 03:41	24°☿07'54	0°24'49
minimum elong	15443 Oct 18 16:14	12°☿04'56	1°00'08	desc. node	15444 Oct 01 10:57	22°☿52'29	
min. Earth dist.	15443 Oct 22 00:49	9°☿18'47	0.58578 AU	min. Earth dist.	15444 Oct 03 05:46	21°☿11'29	0.60853 AU
morning rise	15443 Oct 25 23:36	6°☿36'34		morning rise	15444 Oct 06 21:24	18°☿16'35	
direct	15443 Nov 01 08:26	4°☿49'03		direct	15444 Oct 13 12:49	16°☿04'50	
morning max el	15443 Nov 15 15:36	12°☿27'41	27°24'54	morning max el	15444 Oct 27 18:33	23°☿58'46	27°57'05
	15443 Nov 29 11:27	0°☿			15444 Nov 02 05:26	0°☿	
asc. node	15443 Dec 10 01:13	18°☿13'15			15444 Nov 21 19:06	0°☿	
	15443 Dec 15 21:37	0°☿		asc. node	15444 Nov 25 22:11	7°☿51'45	
morning set	15443 Dec 16 16:07	1°☿38'05		morning set	15444 Nov 29 19:25	15°☿44'44	
				max. Earth dist.	15444 Dec 05 15:20	28°☿19'11	1.31247 AU
superior conj	15443 Dec 23 13:31	16°☿48'12	1°35'25		15444 Dec 06 09:32	0°☿	
minimum elong	15443 Dec 23 12:34	16°☿42'49	1°36'16	superior conj	15444 Dec 07 00:17	1°☿21'59	1°26'52
max. Earth dist.	15443 Dec 23 08:45	16°☿21'29	1.31047 AU	minimum elong	15444 Dec 06 22:29	1°☿11'58	1°27'36
	15443 Dec 29 12:28	0°☿		evening rise	15444 Dec 13 16:53	16°☿10'02	
evening rise	15443 Dec 30 07:43	1°☿43'41			15444 Dec 20 10:30	0°☿	
desc. node	15444 Jan 11 12:12	25°☿16'52		desc. node	15444 Dec 28 09:03	13°☿53'40	
	15444 Jan 14 09:10	0°☿		evening max el	15445 Jan 09 17:37	29°☿34'24	25°26'41
evening max el	15444 Jan 29 00:05	18°☿44'02	26°42'41		15445 Jan 10 04:32	0°☿	
retrograde	15444 Feb 11 23:59	25°☿55'28		retrograde	15445 Jan 23 14:50	6°☿33'26	
evening set	15444 Feb 18 11:57	24°☿10'37		evening set	15445 Jan 29 10:26	5°☿16'16	
min. Earth dist.	15444 Feb 22 13:50	21°☿32'30	0.58904 AU	min. Earth dist.	15445 Feb 03 06:12	2°☿35'23	0.56857 AU
inferior conj	15444 Feb 25 18:26	19°☿04'56	-3°12'30	inferior conj	15445 Feb 06 01:01	0°☿43'39	-4°38'50
minimum elong	15444 Feb 26 01:41	18°☿50'56	3°09'35	minimum elong	15445 Feb 06 10:18	0°☿28'07	4°35'46
morning rise	15444 Mar 04 18:49	14°☿30'02			15445 Feb 07 03:17	30°☿☿	
direct	15444 Mar 06 18:26	14°☿15'57		morning rise	15445 Feb 14 12:57	26°☿30'20	
asc. node	15444 Mar 06 22:49	14°☿16'04		direct	15445 Feb 16 14:31	26°☿17'41	
morning max el	15444 Mar 14 15:20	18°☿09'43	18°17'41	asc. node	15445 Feb 21 20:14	27°☿44'49	
	15444 Mar 23 03:41	0°☿			15445 Feb 24 22:37	0°☿	
morning set	15444 Mar 30 08:16	13°☿09'19		morning max el	15445 Feb 25 18:16	0°☿45'54	19°04'09
	15444 Apr 08 08:23	0°☿		morning set	15445 Mar 14 07:40	27°☿29'51	
superior conj	15444 Apr 08 19:31	0°☿50'38	-0°01'55		15445 Mar 15 14:02	0°☿	
minimum elong	15444 Apr 08 19:21	0°☿49'50	0°02'17	superior conj	15445 Mar 22 17:51	14°☿01'16	0°30'34
behind sun begin	15444 Apr 08 12:00	0°☿16'29		minimum elong	15445 Mar 22 19:41	14°☿10'01	0°30'07
behind sun end	15444 Apr 09 02:41	1°☿23'07		desc. node	15445 Mar 26 10:37	20°☿58'57	
desc. node	15444 Apr 08 13:59	0°☿25'31		max. Earth dist.	15445 Mar 29 15:53	26°☿50'16	1.38871 AU
max. Earth dist.	15444 Apr 16 09:30	14°☿09'59	1.41138 AU		15445 Mar 31 10:44	0°☿	
evening rise	15444 Apr 20 23:46	21°☿49'22		evening rise	15445 Apr 02 10:53	3°☿29'05	
	15444 Apr 26 02:23	0°☿			15445 Apr 19 05:44	0°☿	
evening max el	15444 May 16 23:58	0°☿		evening max el	15445 May 07 15:10	23°☿II12'41	24°31'41
asc. node	15444 May 25 01:27	9°☿17'56	23°10'49	retrograde	15445 May 19 04:43	29°☿II58'29	
retrograde	15444 Jun 02 20:07	15°☿14'04		asc. node	15445 May 20 17:15	29°☿II48'34	
evening set	15444 Jun 09 14:29	13°☿16'05					

evening set	15445 May 24 18:46	27° $\Pi$ 36'39		evening set	15446 May 08 17:56	11° $\Pi$ 48'37	
min. Earth dist.	15445 May 29 07:16	22° $\Pi$ 26'17	0.68554 AU	min. Earth dist.	15446 May 12 23:28	7° $\Pi$ 14'26	0.67611 AU
inferior conj	15445 May 30 07:01	21° $\Pi$ 06'41	2°31'41	inferior conj	15446 May 14 12:04	5° $\Pi$ 18'12	1°57'53
minimum elong	15445 May 30 05:00	21° $\Pi$ 13'25	2°30'22	minimum elong	15446 May 14 09:54	5° $\Pi$ 25'05	1°56'28
morning rise	15445 Jun 04 15:24	15° $\Pi$ 07'17			15446 May 19 08:59	30° $\mathbb{R}$ 8	
direct	15445 Jun 08 11:59	13° $\Pi$ 42'07		morning rise	15446 May 20 02:26	29° $\mathbb{B}$ 28'59	
morning max el	15445 Jun 15 22:43	17° $\Pi$ 50'50	19°48'24	direct	15446 May 23 11:59	28° $\mathbb{B}$ 22'56	
desc. node	15445 Jun 22 11:18	25° $\Pi$ 34'04			15446 May 27 20:27	0° $\Pi$	
	15445 Jun 25 16:52	0° $\mathfrak{C}$		morning max el	15446 May 30 05:45	2° $\Pi$ 01'00	18°52'39
morning set	15445 Jul 12 11:42	25° $\mathfrak{C}$ 00'49		desc. node	15446 Jun 09 08:21	15° $\Pi$ 02'37	
	15445 Jul 15 17:22	0° $\Omega$		greatest brilliancy	15446 Jun 12 18:22	20° $\Pi$ 09'39	-0.8m
max. Earth dist.	15445 Jul 23 12:32	12° $\Omega$ 11'34	1.44819 AU		15446 Jun 19 04:06	0° $\mathfrak{C}$	
				morning set	15446 Jun 21 21:07	4° $\mathfrak{C}$ 11'50	
superior conj	15445 Jul 28 11:21	20° $\Omega$ 05'43	-2°03'27	max. Earth dist.	15446 Jul 06 06:31	26° $\mathfrak{C}$ 35'00	1.45755 AU
minimum elong	15445 Jul 28 17:57	20° $\Omega$ 32'19	2°03'42				
	15445 Aug 03 13:05	0° $\mathbb{P}$		superior conj	15446 Jul 08 03:03	29° $\mathfrak{C}$ 29'13	-2°14'04
evening rise	15445 Aug 11 01:41	12° $\mathbb{P}$ 35'49		minimum elong	15446 Jul 08 03:28	29° $\mathfrak{C}$ 30'51	2°14'54
asc. node	15445 Aug 16 17:26	22° $\mathbb{P}$ 08'09			15446 Jul 08 10:54	0° $\Omega$	
	15445 Aug 21 13:54	0° $\mathfrak{L}$		evening rise	15446 Jul 23 07:56	23° $\Omega$ 38'39	
evening max el	15445 Aug 28 19:47	9° $\mathfrak{L}$ 32'29	18°05'51		15446 Jul 27 06:33	0° $\mathbb{P}$	
retrograde	15445 Sep 04 04:50	12° $\mathfrak{L}$ 52'49		asc. node	15446 Aug 03 14:06	11° $\mathbb{P}$ 34'38	
evening set	15445 Sep 06 22:11	12° $\mathfrak{L}$ 14'19		evening max el	15446 Aug 12 09:42	23° $\mathbb{P}$ 12'57	18°27'01
inferior conj	15445 Sep 13 03:46	6° $\mathfrak{L}$ 56'34	1°31'01	retrograde	15446 Aug 18 20:06	26° $\mathbb{P}$ 39'42	
minimum elong	15445 Sep 13 05:56	6° $\mathfrak{L}$ 50'42	1°30'19	evening set	15446 Aug 21 22:26	25° $\mathbb{P}$ 45'57	
min. Earth dist.	15445 Sep 15 20:31	4° $\mathfrak{L}$ 02'07	0.63111 AU	inferior conj	15446 Aug 27 17:09	20° $\mathbb{P}$ 12'25	2°18'01
desc. node	15445 Sep 18 08:24	1° $\mathfrak{L}$ 38'37		minimum elong	15446 Aug 27 19:28	20° $\mathbb{P}$ 05'28	2°17'11
morning rise	15445 Sep 19 11:33	0° $\mathfrak{L}$ 44'02		min. Earth dist.	15446 Aug 29 20:35	17° $\mathbb{P}$ 39'12	0.65138 AU
	15445 Sep 20 13:04	30° $\mathbb{R}$ $\mathbb{P}$		morning rise	15446 Sep 02 15:13	13° $\mathbb{P}$ 49'38	
direct	15445 Sep 26 03:29	28° $\mathbb{P}$ 14'59		desc. node	15446 Sep 05 05:51	12° $\mathbb{P}$ 07'13	
	15445 Oct 02 05:12	0° $\mathfrak{L}$		direct	15446 Sep 09 02:23	11° $\mathbb{P}$ 12'24	
morning max el	15445 Oct 10 02:46	6° $\mathfrak{L}$ 14'39	27°50'28	morning max el	15446 Sep 22 13:36	19° $\mathbb{P}$ 05'52	27°10'09
	15445 Oct 28 05:24	0° $\mathbb{M}$			15446 Oct 01 20:12	0° $\mathfrak{L}$	
asc. node	15445 Nov 12 19:04	27° $\mathbb{M}$ 45'21			15446 Oct 21 05:21	0° $\mathbb{M}$	
morning set	15445 Nov 13 15:43	29° $\mathbb{M}$ 29'07		morning set	15446 Oct 28 02:17	12° $\mathbb{M}$ 45'09	
	15445 Nov 13 21:48	0° $\mathfrak{X}$		asc. node	15446 Oct 30 15:51	17° $\mathbb{M}$ 48'54	
max. Earth dist.	15445 Nov 18 16:47	10° $\mathfrak{X}$ 00'35	1.32008 AU	max. Earth dist.	15446 Nov 01 09:58	21° $\mathbb{M}$ 22'11	1.33329 AU
superior conj	15445 Nov 21 08:22	15° $\mathfrak{X}$ 44'59	1°12'19	superior conj	15446 Nov 05 11:36	29° $\mathbb{M}$ 51'35	0°51'46
minimum elong	15445 Nov 21 06:04	15° $\mathfrak{X}$ 32'29	1°12'51	minimum elong	15446 Nov 05 09:22	29° $\mathbb{M}$ 39'46	0°52'07
	15445 Nov 27 20:27	0° $\mathfrak{Z}$			15446 Nov 05 13:11	0° $\mathfrak{X}$	
evening rise	15445 Nov 28 03:40	0° $\mathfrak{Z}$ 38'59		evening rise	15446 Nov 12 14:14	15° $\mathfrak{X}$ 06'09	
	15445 Dec 14 02:22	0° $\approx$			15446 Nov 19 23:32	0° $\mathfrak{Z}$	
desc. node	15445 Dec 15 05:59	1° $\approx$ 37'02		desc. node	15446 Dec 02 03:00	18° $\mathfrak{Z}$ 08'05	
evening max el	15445 Dec 22 04:25	9° $\approx$ 43'46	23°48'43	evening max el	15446 Dec 03 15:27	19° $\mathfrak{Z}$ 42'09	22°06'02
retrograde	15446 Jan 04 16:09	16° $\approx$ 25'10		retrograde	15446 Dec 16 05:27	25° $\mathfrak{Z}$ 55'41	
evening set	15446 Jan 09 09:52	15° $\approx$ 36'29		evening set	15446 Dec 19 15:47	25° $\mathfrak{Z}$ 29'37	
min. Earth dist.	15446 Jan 15 15:45	12° $\approx$ 35'01	0.55295 AU	inferior conj	15446 Dec 28 05:22	21° $\mathfrak{Z}$ 37'39	-5°59'39
inferior conj	15446 Jan 17 10:52	11° $\approx$ 31'06	-5°43'12	minimum elong	15446 Dec 28 03:03	21° $\mathfrak{Z}$ 40'54	5°58'40
minimum elong	15446 Jan 17 17:13	11° $\approx$ 21'40	5°41'37	min. Earth dist.	15446 Dec 27 21:28	21° $\mathfrak{Z}$ 48'41	0.54488 AU
morning rise	15446 Jan 26 02:11	7° $\approx$ 35'39		morning rise	15447 Jan 05 15:13	17° $\mathfrak{Z}$ 50'27	
direct	15446 Jan 28 15:14	7° $\approx$ 19'27		direct	15447 Jan 09 01:56	17° $\mathfrak{Z}$ 24'07	
morning max el	15446 Feb 08 08:09	12° $\approx$ 29'47	20°13'35	morning max el	15447 Jan 21 07:03	23° $\mathfrak{Z}$ 17'32	21°45'29
asc. node	15446 Feb 08 17:39	12° $\approx$ 53'11		asc. node	15447 Jan 26 15:00	29° $\mathfrak{Z}$ 24'43	
	15446 Feb 20 10:14	0° $\mathfrak{X}$			15447 Jan 27 01:27	0° $\approx$	
morning set	15446 Feb 26 13:40	12° $\mathfrak{X}$ 05'39		morning set	15447 Feb 10 23:38	26° $\approx$ 49'19	
					15447 Feb 12 11:45	0° $\mathfrak{X}$	
superior conj	15446 Mar 06 05:45	27° $\mathfrak{X}$ 47'20	0°56'52	superior conj	15447 Feb 18 03:30	11° $\mathfrak{X}$ 58'57	1°16'35
minimum elong	15446 Mar 06 08:19	28° $\mathfrak{X}$ 00'13	0°56'36	minimum elong	15447 Feb 18 05:54	12° $\mathfrak{X}$ 11'30	1°16'40
	15446 Mar 07 08:16	0° $\mathbb{Y}$		max. Earth dist.	15447 Feb 22 10:42	20° $\mathfrak{X}$ 49'12	1.34617 AU
max. Earth dist.	15446 Mar 11 22:44	8° $\mathbb{Y}$ 57'03	1.36627 AU	evening rise	15447 Feb 26 15:33	29° $\mathfrak{X}$ 03'08	
desc. node	15446 Mar 13 07:10	11° $\mathbb{Y}$ 29'36			15447 Feb 27 03:31	0° $\mathbb{Y}$	
evening rise	15446 Mar 15 17:17	15° $\mathbb{Y}$ 56'46		desc. node	15447 Feb 28 03:45	1° $\mathbb{Y}$ 53'56	
	15446 Mar 23 20:49	0° $\mathfrak{B}$			15447 Mar 17 01:18	0° $\mathfrak{B}$	
	15446 Apr 13 18:08	0° $\Pi$		evening max el	15447 Apr 02 18:38	20° $\mathfrak{B}$ 51'27	26°46'06
evening max el	15446 Apr 20 04:46	7° $\Pi$ 06'05	25°45'59	retrograde	15447 Apr 15 23:31	28° $\mathfrak{B}$ 18'00	
retrograde	15446 May 02 16:54	14° $\Pi$ 18'13		evening set	15447 Apr 22 10:11	25° $\mathfrak{B}$ 45'42	
asc. node	15446 May 07 14:29	12° $\Pi$ 40'49					

asc. node	15447 Apr 24 11:46	23° $\text{♄}$ 52'34		evening max el	15448 Mar 15 07:46	4° $\text{♄}$ 17'57	27°24'46
min. Earth dist.	15447 Apr 26 10:04	21° $\text{♄}$ 46'09	0.66236 AU	retrograde	15448 Mar 28 23:47	11° $\text{♄}$ 49'04	
inferior conj	15447 Apr 28 11:30	19° $\text{♄}$ 20'34	1°12'17	evening set	15448 Apr 04 17:21	9° $\text{♄}$ 20'28	
minimum elong	15447 Apr 28 09:48	19° $\text{♄}$ 25'36	1°11'03	min. Earth dist.	15448 Apr 08 13:08	5° $\text{♄}$ 52'28	0.64469 AU
morning rise	15447 May 04 10:39	13° $\text{♄}$ 43'18		asc. node	15448 Apr 10 09:07	3° $\text{♄}$ 55'08	
direct	15447 May 07 10:05	12° $\text{♄}$ 54'21		inferior conj	15448 Apr 11 02:44	3° $\text{♄}$ 07'31	0°13'53
morning max el	15447 May 13 18:51	16° $\text{♄}$ 14'48	18°13'24	minimum elong	15448 Apr 11 02:21	3° $\text{♄}$ 08'34	0°13'18
	15447 May 24 01:54	0° $\text{♄}$		transit middle	15448 Apr 11 02:21	3° $\text{♄}$ 08'34	0°13'18
desc. node	15447 May 27 05:16	4° $\text{♄}$ 55'23		transit begin	15448 Apr 11 00:38	3° $\text{♄}$ 13'11	
morning set	15447 Jun 02 05:09	14° $\text{♄}$ 29'54		transit end	15448 Apr 11 04:04	3° $\text{♄}$ 03'58	
	15447 Jun 11 23:09	0° $\text{♄}$			15448 Apr 14 05:32	30° $\text{♄}$	
superior conj	15447 Jun 17 11:46	8° $\text{♄}$ 40'19	-2°04'40	morning rise	15448 Apr 17 13:26	27° $\text{♄}$ 44'21	
minimum elong	15447 Jun 17 04:57	8° $\text{♄}$ 13'41	2°05'13	direct	15448 Apr 20 03:45	27° $\text{♄}$ 09'44	
max. Earth dist.	15447 Jun 19 03:02	11° $\text{♄}$ 13'40	1.45947 AU		15448 Apr 26 01:06	0° $\text{♄}$	
	15447 Jul 01 04:40	0° $\text{♄}$		morning max el	15448 Apr 26 11:44	0° $\text{♄}$ 25'02	17°51'18
evening rise	15447 Jul 03 13:39	3° $\text{♄}$ 41'23		desc. node	15448 May 13 02:06	25° $\text{♄}$ 05'42	
greatest brilliancy	15447 Jul 14 13:33	20° $\text{♄}$ 38'42	-0.7m	morning set	15448 May 13 16:52	26° $\text{♄}$ 07'25	
asc. node	15447 Jul 21 10:48	0° $\text{♄}$ 36'16			15448 May 16 00:33	0° $\text{♄}$	
	15447 Jul 21 00:06	0° $\text{♄}$		superior conj	15448 May 27 06:48	18° $\text{♄}$ 24'41	-1°37'51
evening max el	15447 Jul 26 20:01	7° $\text{♄}$ 01'51	19°05'16	minimum elong	15448 May 26 22:09	17° $\text{♄}$ 50'03	1°37'49
retrograde	15447 Aug 02 16:26	10° $\text{♄}$ 48'14		max. Earth dist.	15448 May 31 22:59	25° $\text{♄}$ 49'44	1.45386 AU
evening set	15447 Aug 06 04:14	9° $\text{♄}$ 37'36			15448 Jun 03 14:50	0° $\text{♄}$	
inferior conj	15447 Aug 11 15:32	3° $\text{♄}$ 50'00	2°48'29	evening rise	15448 Jun 12 02:48	13° $\text{♄}$ 07'49	
minimum elong	15447 Aug 11 17:18	3° $\text{♄}$ 44'18	2°47'41		15448 Jun 23 07:05	0° $\text{♄}$	
min. Earth dist.	15447 Aug 13 04:45	1° $\text{♄}$ 50'18	0.66806 AU	greatest brilliancy	15448 Jun 26 23:20	5° $\text{♄}$ 23'09	-0.6m
	15447 Aug 14 16:50	30° $\text{♄}$		asc. node	15448 Jul 07 07:35	19° $\text{♄}$ 04'39	
morning rise	15447 Aug 17 05:39	27° $\text{♄}$ 23'51		evening max el	15448 Jul 09 00:53	20° $\text{♄}$ 54'08	19°59'22
direct	15447 Aug 23 08:17	24° $\text{♄}$ 47'16		retrograde	15448 Jul 16 15:10	25° $\text{♄}$ 12'14	
desc. node	15447 Aug 23 03:17	24° $\text{♄}$ 47'25		evening set	15448 Jul 20 13:00	23° $\text{♄}$ 44'07	
	15447 Sep 02 13:55	0° $\text{♄}$		inferior conj	15448 Jul 25 20:02	17° $\text{♄}$ 43'58	3°04'58
morning max el	15447 Sep 05 01:01	2° $\text{♄}$ 20'48	26°04'05	minimum elong	15448 Jul 25 20:55	17° $\text{♄}$ 40'58	3°04'13
	15447 Sep 25 23:50	0° $\text{♄}$		min. Earth dist.	15448 Jul 26 19:16	16° $\text{♄}$ 25'19	0.68041 AU
morning set	15447 Oct 10 23:44	25° $\text{♄}$ 24'30		morning rise	15448 Jul 31 04:27	11° $\text{♄}$ 19'20	
	15447 Oct 13 10:28	0° $\text{♄}$		direct	15448 Aug 05 20:16	8° $\text{♄}$ 50'52	
max. Earth dist.	15447 Oct 14 17:34	2° $\text{♄}$ 29'05	1.35164 AU	desc. node	15448 Aug 09 00:41	9° $\text{♄}$ 30'19	
asc. node	15447 Oct 17 12:32	7° $\text{♄}$ 57'26		morning max el	15448 Aug 17 11:59	15° $\text{♄}$ 49'46	24°41'41
					15448 Aug 29 04:53	0° $\text{♄}$	
superior conj	15447 Oct 20 07:20	13° $\text{♄}$ 34'19	0°25'21		15448 Sep 17 21:51	0° $\text{♄}$	
minimum elong	15447 Oct 20 05:56	13° $\text{♄}$ 27'11	0°25'39	morning set	15448 Sep 22 04:08	7° $\text{♄}$ 18'44	
evening rise	15447 Oct 27 22:34	29° $\text{♄}$ 25'41		max. Earth dist.	15448 Sep 25 17:40	13° $\text{♄}$ 40'38	1.37387 AU
	15447 Oct 28 05:11	0° $\text{♄}$					
	15447 Nov 15 09:55	0° $\text{♄}$		superior conj	15448 Oct 02 16:29	26° $\text{♄}$ 46'14	-0°06'19
evening max el	15447 Nov 15 12:05	0° $\text{♄}$ 05'25	20°35'01	minimum elong	15448 Oct 02 16:52	26° $\text{♄}$ 48'08	0°05'55
desc. node	15447 Nov 19 00:08	3° $\text{♄}$ 02'08		behind sun begin	15448 Oct 02 10:38	26° $\text{♄}$ 17'47	
retrograde	15447 Nov 26 15:51	5° $\text{♄}$ 38'19		behind sun end	15448 Oct 02 23:07	27° $\text{♄}$ 18'33	
evening set	15447 Nov 29 00:29	5° $\text{♄}$ 24'34		asc. node	15448 Oct 03 09:10	28° $\text{♄}$ 07'40	
inferior conj	15447 Dec 07 20:54	1° $\text{♄}$ 30'34	-5°15'04		15448 Oct 04 08:03	0° $\text{♄}$	
minimum elong	15447 Dec 07 11:33	1° $\text{♄}$ 44'07	5°12'09	evening rise	15448 Oct 11 02:24	13° $\text{♄}$ 32'15	
min. Earth dist.	15447 Dec 09 03:03	0° $\text{♄}$ 46'52	0.54598 AU		15448 Oct 19 18:43	0° $\text{♄}$	
	15447 Dec 10 12:07	30° $\text{♄}$		evening max el	15448 Oct 27 23:13	11° $\text{♄}$ 16'44	19°24'32
morning rise	15447 Dec 15 22:27	27° $\text{♄}$ 33'18		desc. node	15448 Nov 04 21:20	15° $\text{♄}$ 55'10	
direct	15447 Dec 20 10:00	26° $\text{♄}$ 50'12		retrograde	15448 Nov 06 11:51	16° $\text{♄}$ 03'02	
	15447 Dec 29 15:19	0° $\text{♄}$		evening set	15448 Nov 08 09:27	15° $\text{♄}$ 52'28	
morning max el	15448 Jan 02 18:35	3° $\text{♄}$ 22'00	23°33'03	inferior conj	15448 Nov 17 00:04	11° $\text{♄}$ 45'08	-3°44'41
asc. node	15448 Jan 13 12:16	17° $\text{♄}$ 00'27		minimum elong	15448 Nov 16 14:59	11° $\text{♄}$ 59'54	3°40'45
	15448 Jan 20 20:22	0° $\text{♄}$		min. Earth dist.	15448 Nov 19 12:11	10° $\text{♄}$ 07'28	0.55621 AU
morning set	15448 Jan 26 11:25	11° $\text{♄}$ 33'48		morning rise	15448 Nov 24 18:21	7° $\text{♄}$ 18'54	
				direct	15448 Nov 30 03:53	6° $\text{♄}$ 12'57	
superior conj	15448 Feb 02 08:03	26° $\text{♄}$ 26'54	1°29'49	morning max el	15448 Dec 14 03:43	13° $\text{♄}$ 16'18	25°20'31
minimum elong	15448 Feb 02 09:44	26° $\text{♄}$ 35'58	1°30'16		15448 Dec 27 03:51	0° $\text{♄}$	
	15448 Feb 03 23:40	0° $\text{♄}$		asc. node	15448 Dec 30 09:27	5° $\text{♄}$ 24'57	
max. Earth dist.	15448 Feb 05 06:00	2° $\text{♄}$ 41'19	1.32983 AU	morning set	15449 Jan 09 23:09	26° $\text{♄}$ 13'54	
evening rise	15448 Feb 10 02:11	12° $\text{♄}$ 38'45			15449 Jan 11 16:46	0° $\text{♄}$	
desc. node	15448 Feb 15 00:20	22° $\text{♄}$ 07'04					
	15448 Feb 19 09:59	0° $\text{♄}$		superior conj	15449 Jan 16 16:56	11° $\text{♄}$ 04'12	1°36'46
	15448 Mar 11 05:26	0° $\text{♄}$		minimum elong	15449 Jan 16 17:37	11° $\text{♄}$ 07'59	1°37'29

max. Earth dist.	15449 Jan 18 08:10	14° $\approx$ 40'21	1.31821 AU		15450 Jan 03 01:47	0° $\approx$	
evening rise	15449 Jan 23 22:11	26° $\approx$ 36'23		evening rise	15450 Jan 08 01:02	10° $\approx$ 49'59	
	15449 Jan 25 14:04	0° $\text{H}$			15450 Jan 17 19:43	0° $\text{H}$	
desc. node	15449 Jan 31 20:58	12° $\text{H}$ 03'41		desc. node	15450 Jan 18 17:40	1° $\text{H}$ 37'08	
	15449 Feb 11 18:47	0° $\text{Y}$		evening max el	15450 Feb 08 00:35	29° $\text{H}$ 27'33	27°12'03
evening max el	15449 Feb 25 18:29	17° $\text{Y}$ 13'45	27°35'09		15450 Feb 08 14:28	0° $\text{Y}$	
retrograde	15449 Mar 11 16:50	24° $\text{Y}$ 41'18		retrograde	15450 Feb 22 01:06	6° $\text{Y}$ 45'30	
evening set	15449 Mar 18 12:57	22° $\text{Y}$ 24'01		evening set	15450 Feb 28 17:56	4° $\text{Y}$ 47'16	
min. Earth dist.	15449 Mar 22 07:06	19° $\text{Y}$ 22'13	0.62401 AU	min. Earth dist.	15450 Mar 04 15:01	2° $\text{Y}$ 03'27	0.60177 AU
inferior conj	15449 Mar 25 06:42	16° $\text{Y}$ 31'10	-0°57'48		15450 Mar 07 02:10	30° $\text{R}$ $\text{H}$	
minimum elong	15449 Mar 28 08:40	16° $\text{Y}$ 26'27	0°57'10	inferior conj	15450 Mar 07 19:52	29° $\text{H}$ 22'33	-2°21'11
asc. node	15449 Mar 28 06:31	13° $\text{Y}$ 49'13		minimum elong	15450 Mar 08 01:07	29° $\text{H}$ 11'29	2°19'01
morning rise	15449 Apr 01 07:20	11° $\text{Y}$ 24'34		morning rise	15450 Mar 15 11:43	24° $\text{H}$ 35'06	
direct	15449 Apr 03 13:54	11° $\text{Y}$ 00'50		asc. node	15450 Mar 15 03:57	24° $\text{H}$ 40'39	
morning max el	15449 Apr 10 05:22	14° $\text{Y}$ 22'39	17°46'43	direct	15450 Mar 17 12:47	24° $\text{H}$ 18'33	
	15449 Apr 21 02:14	0° $\text{B}$		morning max el	15450 Mar 24 20:24	27° $\text{H}$ 57'52	18°00'37
morning set	15449 Apr 26 04:29	8° $\text{B}$ 52'15			15450 Mar 26 17:21	0° $\text{Y}$	
desc. node	15449 Apr 29 22:51	15° $\text{B}$ 27'53		morning set	15450 Apr 09 10:04	22° $\text{Y}$ 26'53	
					15450 Apr 13 12:37	0° $\text{B}$	
superior conj	15449 May 07 23:14	29° $\text{B}$ 09'20	-1°01'21	desc. node	15450 Apr 16 19:33	5° $\text{B}$ 57'42	
minimum elong	15449 May 07 17:26	28° $\text{B}$ 45'07	1°01'15				
	15449 May 08 11:24	0° $\text{II}$		superior conj	15450 Apr 19 15:17	10° $\text{B}$ 58'37	-0°22'54
max. Earth dist.	15449 May 14 15:48	10° $\text{II}$ 06'34	1.44146 AU	minimum elong	15450 Apr 19 13:19	10° $\text{B}$ 49'57	0°23'06
evening rise	15449 May 22 15:10	22° $\text{II}$ 39'36		max. Earth dist.	15450 Apr 27 04:35	23° $\text{B}$ 53'06	1.42357 AU
	15449 May 27 10:27	0° $\text{E}$			15450 Apr 30 22:16	0° $\text{II}$	
	15449 Jun 17 17:05	0° $\text{O}$		evening rise	15450 May 02 17:34	2° $\text{II}$ 53'35	
evening max el	15449 Jun 21 23:45	4° $\text{O}$ 46'39	21°07'00		15450 May 20 19:21	0° $\text{E}$	
asc. node	15449 Jun 24 04:28	6° $\text{O}$ 47'49		evening max el	15450 Jun 04 17:35	18° $\text{E}$ 39'56	22°24'11
retrograde	15449 Jun 30 14:07	9° $\text{O}$ 45'23		asc. node	15450 Jun 11 01:26	23° $\text{E}$ 31'29	
evening set	15449 Jul 04 22:40	8° $\text{O}$ 00'01		retrograde	15450 Jun 14 11:37	24° $\text{E}$ 22'44	
inferior conj	15449 Jul 10 04:14	1° $\text{O}$ 48'50	3°09'24	evening set	15450 Jun 19 07:30	22° $\text{E}$ 21'16	
minimum elong	15449 Jul 10 04:09	1° $\text{O}$ 49'08	3°08'35	inferior conj	15450 Jun 24 14:03	16° $\text{E}$ 00'48	3°02'58
min. Earth dist.	15449 Jul 10 13:59	1° $\text{O}$ 14'58	0.68810 AU	minimum elong	15450 Jun 24 13:04	16° $\text{E}$ 04'16	3°01'59
	15449 Jul 11 11:46	30° $\text{R}$ $\text{E}$		min. Earth dist.	15450 Jun 24 10:40	16° $\text{E}$ 12'37	0.69101 AU
morning rise	15449 Jul 15 09:23	25° $\text{E}$ 29'00		morning rise	15450 Jun 29 18:27	9° $\text{E}$ 47'55	
direct	15449 Jul 20 13:15	23° $\text{E}$ 14'29		direct	15450 Jul 04 10:00	7° $\text{E}$ 51'19	
desc. node	15449 Jul 26 22:04	25° $\text{E}$ 51'17		morning max el	15450 Jul 13 12:59	13° $\text{E}$ 10'32	21°45'24
morning max el	15449 Jul 30 23:05	29° $\text{E}$ 26'07	23°12'31	desc. node	15450 Jul 13 19:23	13° $\text{E}$ 26'41	
	15449 Jul 31 12:20	0° $\text{O}$			15450 Jul 26 23:11	0° $\text{O}$	
	15449 Aug 22 22:57	0° $\text{M}$		morning set	15450 Aug 14 17:56	28° $\text{O}$ 12'31	
morning set	15449 Sep 03 11:07	18° $\text{M}$ 16'50			15450 Aug 15 20:54	0° $\text{M}$	
max. Earth dist.	15449 Sep 07 16:01	25° $\text{M}$ 23'49	1.39781 AU	max. Earth dist.	15450 Aug 20 19:00	7° $\text{M}$ 59'50	1.42070 AU
	15449 Sep 10 07:23	0° $\text{A}$					
				superior conj	15450 Aug 28 10:49	20° $\text{M}$ 59'04	-1°17'55
superior conj	15449 Sep 15 11:06	9° $\text{A}$ 17'45	-0°41'43	minimum elong	15450 Aug 28 17:02	21° $\text{M}$ 26'12	1°17'18
minimum elong	15449 Sep 15 14:15	9° $\text{A}$ 32'15	0°41'08		15450 Sep 02 12:59	0° $\text{A}$	
asc. node	15449 Sep 20 05:47	18° $\text{A}$ 15'29		asc. node	15450 Sep 07 02:22	8° $\text{A}$ 17'17	
evening rise	15449 Sep 24 22:47	27° $\text{A}$ 17'51		evening rise	15450 Sep 08 08:02	10° $\text{A}$ 33'12	
	15449 Sep 26 08:34	0° $\text{M}$			15450 Sep 19 14:13	0° $\text{M}$	
evening max el	15449 Oct 10 23:22	23° $\text{M}$ 17'13	18°36'22	evening max el	15450 Sep 24 08:26	5° $\text{M}$ 57'56	18°09'18
retrograde	15449 Oct 19 01:35	27° $\text{M}$ 22'45		retrograde	15450 Oct 01 10:20	9° $\text{M}$ 35'08	
evening set	15449 Oct 21 00:03	27° $\text{M}$ 09'28		evening set	15450 Oct 03 14:54	9° $\text{M}$ 14'49	
desc. node	15449 Oct 22 18:38	26° $\text{M}$ 35'32		desc. node	15450 Oct 09 16:02	5° $\text{M}$ 28'05	
inferior conj	15449 Oct 28 23:28	22° $\text{M}$ 42'15	-1°59'19	inferior conj	15450 Oct 10 20:30	4° $\text{M}$ 26'10	-0°22'34
minimum elong	15449 Oct 28 18:40	22° $\text{M}$ 51'21	1°56'43	minimum elong	15450 Oct 10 19:43	4° $\text{M}$ 27'53	0°21'48
min. Earth dist.	15449 Nov 01 03:19	20° $\text{M}$ 19'22	0.57363 AU	min. Earth dist.	15450 Oct 14 02:27	1° $\text{M}$ 35'09	0.59532 AU
morning rise	15449 Nov 05 09:56	17° $\text{M}$ 39'16			15450 Oct 16 02:41	30° $\text{R}$ $\text{A}$	
direct	15449 Nov 11 12:18	16° $\text{M}$ 06'43		morning rise	15450 Oct 17 21:13	28° $\text{A}$ 49'13	
morning max el	15449 Nov 25 18:07	23° $\text{M}$ 34'20	26°48'46	direct	15450 Oct 24 09:52	26° $\text{A}$ 50'43	
	15449 Dec 01 13:42	0° $\text{A}$			15450 Nov 02 04:14	0° $\text{M}$	
asc. node	15449 Dec 17 06:34	24° $\text{A}$ 25'49		morning max el	15450 Nov 07 16:33	4° $\text{M}$ 36'09	27°43'30
	15449 Dec 20 04:10	0° $\text{B}$			15450 Nov 26 11:34	0° $\text{A}$	
morning set	15449 Dec 25 09:06	10° $\text{B}$ 45'05		asc. node	15450 Dec 04 03:35	13° $\text{A}$ 52'48	
				morning set	15450 Dec 09 15:23	25° $\text{A}$ 01'51	
superior conj	15450 Jan 01 04:04	25° $\text{B}$ 44'51	1°37'39		15450 Dec 11 22:57	0° $\text{B}$	
minimum elong	15450 Jan 01 03:41	25° $\text{B}$ 42'43	1°38'29	max. Earth dist.	15450 Dec 15 22:46	8° $\text{B}$ 49'06	1.31064 AU
max. Earth dist.	15450 Jan 01 14:56	26° $\text{B}$ 45'34	1.31174 AU				

superior conj	15450 Dec 16 15:28	10°  22'30	1°32'32	superior conj	15451 Dec 01 01:19	24°  52'11	1°21'26
minimum elong	15450 Dec 16 14:07	10°  14'57	1°33'20	minimum elong	15451 Nov 30 23:15	24°  40'47	1°22'06
evening rise	15450 Dec 23 08:27	25°  13'11			15451 Dec 03 08:50	0° 	
	15450 Dec 25 14:31	0° 		evening rise	15451 Dec 07 18:33	9°  41'20	
desc. node	15451 Jan 05 14:27	20°  37'58			15451 Dec 18 00:15	0° 	
	15451 Jan 11 18:23	0° 		desc. node	15451 Dec 23 11:20	8°  54'09	
evening max el	15451 Jan 20 23:17	10°  49'04	26°14'02	evening max el	15452 Jan 02 13:26	21°  19'16	24°46'46
retrograde	15451 Feb 03 22:25	17°  54'40		retrograde	15452 Jan 16 07:14	28°  11'20	
evening set	15451 Feb 10 04:34	16°  21'29		evening set	15452 Jan 21 17:19	27°  06'14	
min. Earth dist.	15451 Feb 14 12:36	13°  44'04	0.57999 AU	min. Earth dist.	15452 Jan 27 01:20	24°  19'14	0.56124 AU
inferior conj	15451 Feb 17 14:26	11°  30'16	-3°50'12	inferior conj	15452 Jan 29 11:58	22°  46'42	-5°10'17
minimum elong	15451 Feb 17 22:54	11°  14'53	3°47'01	minimum elong	15452 Jan 29 20:49	22°  32'43	5°07'43
morning rise	15451 Feb 25 20:23	7°  04'14		morning rise	15452 Feb 07 02:36	18°  41'56	
direct	15451 Feb 27 20:02	6°  51'10		direct	15452 Feb 09 07:54	18°  28'23	
asc. node	15451 Mar 02 01:24	7°  08'20		asc. node	15452 Feb 16 22:49	21°  20'50	
morning max el	15451 Mar 08 04:52	10°  58'27	18°34'38	morning max el	15452 Feb 19 02:38	23°  13'12	19°30'46
	15451 Mar 20 17:28	0° 			15452 Feb 24 15:13	0° 	
morning set	15451 Mar 24 04:10	6°  34'15		morning set	15452 Mar 07 06:43	21°  02'21	
					15452 Mar 11 17:39	0° 	
superior conj	15451 Apr 02 03:49	23°  09'42'50	0°12'33	superior conj	15452 Mar 15 08:24	7°  09'53	0°42'30
minimum elong	15451 Apr 02 04:39	23°  09'46'46	0°12'08	minimum elong	15452 Mar 15 10:41	7°  21'01	0°42'07
behind sun begin	15451 Apr 02 00:03	23°  09'25'23		desc. node	15452 Mar 20 12:45	17°  03'02	
behind sun end	15451 Apr 02 09:16	24°  08'08'07		max. Earth dist.	15452 Mar 21 19:30	19°  24'53	1.37907 AU
desc. node	15451 Apr 03 16:10	26°  09'30'34		evening rise	15452 Mar 25 12:10	26°  02'40	
	15451 Apr 05 14:16	0° 			15452 Mar 27 18:52	0° 	
max. Earth dist.	15451 Apr 09 13:12	6°  59'34	1.40198 AU		15452 Apr 16 06:07	0° 	
evening rise	15451 Apr 13 16:31	14°  01'59		evening max el	15452 Apr 29 21:41	16°  28'29	25°04'26
	15451 Apr 23 16:47	0° 		retrograde	15452 May 11 21:15	23°  26'45	
	15451 May 15 21:22	0° 		asc. node	15452 May 14 19:44	22°  50'30	
evening max el	15451 May 18 08:15	2°  34'18	23°45'32	evening set	15452 May 17 16:14	21°  00'45	
asc. node	15451 May 28 22:32	8°  58'20		min. Earth dist.	15452 May 22 01:30	16°  26'14	0.68214 AU
retrograde	15451 May 29 06:20	8°  58'47		inferior conj	15452 May 23 06:49	14°  30'02	2°18'44
evening set	15451 Jun 03 13:55	6°  43'20		minimum elong	15452 May 23 04:40	14°  37'04	2°17'20
inferior conj	15451 Jun 08 23:34	0°  16'02	2°46'08	morning rise	15452 May 28 17:26	8°  35'06	
minimum elong	15451 Jun 08 21:50	0°  21'56	2°44'55	direct	15452 Jun 01 09:12	7°  18'21	
min. Earth dist.	15451 Jun 08 07:12	1°  11'58	0.68898 AU	morning max el	15452 Jun 08 11:44	11°  12'11	19°22'42
	15451 Jun 09 04:15	30°  08'11		desc. node	15452 Jun 16 13:41	21°  07'40	
morning rise	15451 Jun 14 05:45	24°  11'33		greatest brilliancy	15452 Jun 21 03:23	27°  42'27	-0.7m
direct	15451 Jun 18 09:08	22°  34'50			15452 Jun 22 16:29	0° 	
morning max el	15451 Jun 26 08:42	27°  06'01	20°27'20	morning set	15452 Jul 03 07:49	16°  09'51	
	15451 Jun 29 01:19	0° 			15452 Jul 12 06:26	0° 	
desc. node	15451 Jun 30 16:36	1°  15'08		max. Earth dist.	15452 Jul 15 20:49	5°  38'03	1.45304 AU
	15451 Jul 20 09:46	0° 					
morning set	15451 Jul 25 04:07	7°  01'18		superior conj	15452 Jul 19 13:51	11°  29'37	-2°10'15
max. Earth dist.	15451 Aug 03 05:04	21°  02'29'33	1.43979 AU	minimum elong	15452 Jul 19 18:25	11°  47'44	2°10'50
	15451 Aug 08 10:56	0° 			15452 Jul 31 00:33	0° 	
superior conj	15451 Aug 09 11:51	1°  09'42'40	-1°49'48	evening rise	15452 Aug 02 21:54	4°  06'10	
minimum elong	15451 Aug 09 19:33	2°  09'14'31	1°49'36	asc. node	15452 Aug 10 19:37	17°  09'46'51	
evening rise	15451 Aug 22 01:30	23°  07'11			15452 Aug 19 03:19	0° 	
asc. node	15451 Aug 24 22:59	28°  09'27		evening max el	15452 Aug 21 12:49	2°  40'14	18°12'40
	15451 Aug 26 00:30	0° 		retrograde	15452 Aug 27 21:29	6°  02'02	
evening max el	15451 Sep 07 22:09	19°  08'51	18°01'46	evening set	15452 Aug 30 18:31	5°  17'23	
retrograde	15451 Sep 14 10:32	22°  03'14		inferior conj	15452 Sep 05 19:01	29°  05'29	1°53'11
evening set	15451 Sep 16 22:58	22°  00'42		minimum elong	15452 Sep 05 21:22	29°  45'50	1°52'22
inferior conj	15451 Sep 23 12:22	16°  05'23'4	0°55'25		15452 Sep 05 16:22	30°  08'00	
minimum elong	15451 Sep 23 13:56	16°  05'48'37	0°55'01	min. Earth dist.	15452 Sep 08 06:15	27°  05'13	0.64005 AU
min. Earth dist.	15451 Sep 26 11:22	13°  05'53'52	0.61825 AU	morning rise	15452 Sep 11 22:26	23°  07'34'17	
desc. node	15451 Sep 26 13:28	13°  05'48'46		desc. node	15452 Sep 12 10:56	23°  07'10'49	
morning rise	15451 Sep 30 02:16	10°  05'50'03		direct	15452 Sep 18 12:42	21°  07'00'48	
direct	15451 Oct 06 18:31	8°  05'30'17		morning max el	15452 Oct 02 07:59	28°  07'59'57	27°37'07
morning max el	15451 Oct 20 22:06	16°  05'27'13	27°59'01		15452 Oct 03 07:27	0° 	
	15451 Nov 01 02:50	0° 			15452 Oct 25 00:12	0° 	
	15451 Nov 19 03:50	0° 		morning set	15452 Nov 06 08:28	22°  06'32'14	
asc. node	15451 Nov 21 00:29	3°  07'38'26		asc. node	15452 Nov 06 21:18	23°  06'36'17	
morning set	15451 Nov 23 16:00	8°  07'59'42			15452 Nov 10 00:25	0° 	
max. Earth dist.	15451 Nov 29 03:50	20°  07'41'54	1.31503 AU	max. Earth dist.	15452 Nov 11 02:09	2°  07'14'40	1.32500 AU

superior conj	15452 Nov 14 07:33	9°♄07'56	1°04'20	asc. node	15453 Oct 24 18:02	13°♄42'08	
minimum elong	15452 Nov 14 05:12	8°♄55'17	1°04'47				
evening rise	15452 Nov 21 05:24	24°♄09'09		superior conj	15453 Oct 29 07:55	23°♄04'40	0°41'15
	15452 Nov 23 23:47	0°♄		minimum elong	15453 Oct 29 05:56	22°♄54'19	0°41'33
desc. node	15452 Dec 09 08:18	26°♄08'57			15453 Nov 01 14:37	0°♄	
	15452 Dec 12 16:05	0°♄		evening rise	15453 Nov 05 15:14	8°♄32'53	
evening max el	15452 Dec 13 22:51	1°♄17'40	23°04'30		15453 Nov 16 20:38	0°♄	
retrograde	15452 Dec 27 03:18	7°♄49'43		evening max el	15453 Nov 25 12:56	11°♄22'05	21°25'12
evening set	15452 Dec 31 07:47	7°♄11'38		desc. node	15453 Nov 26 05:22	12°♄01'26	
min. Earth dist.	15453 Jan 07 08:40	3°♄55'33	0.54839 AU	retrograde	15453 Dec 07 14:00	17°♄19'45	
inferior conj	15453 Jan 08 14:03	3°♄13'27	-5°57'25	evening set	15453 Dec 10 11:34	17°♄00'28	
minimum elong	15453 Jan 08 17:10	3°♄08'59	5°56'24	inferior conj	15453 Dec 19 05:24	13°♄09'31	-5°47'59
	15453 Jan 15 01:51	30°♄		minimum elong	15453 Dec 18 23:19	13°♄18'03	5°46'21
morning rise	15453 Jan 17 03:56	29°♄23'32		min. Earth dist.	15453 Dec 19 14:15	12°♄57'04	0.54410 AU
direct	15453 Jan 20 00:59	29°♄04'05		morning rise	15453 Dec 27 11:33	9°♄20'09	
	15453 Jan 24 18:15	0°♄		direct	15453 Dec 31 08:47	8°♄47'25	
morning max el	15453 Jan 31 10:13	4°♄32'57	20°50'15	morning max el	15454 Jan 13 03:26	14°♄58'56	22°30'11
asc. node	15453 Feb 02 20:09	7°♄06'22		asc. node	15454 Jan 20 17:28	24°♄06'49	
	15453 Feb 16 19:42	0°♄			15454 Jan 24 11:50	0°♄	
morning set	15453 Feb 19 14:41	5°♄42'12		morning set	15454 Feb 04 01:38	20°♄26'19	
					15454 Feb 08 12:41	0°♄	
superior conj	15453 Feb 27 00:56	21°♄08'17	1°06'01	superior conj	15454 Feb 11 01:53	5°♄27'29	1°22'59
minimum elong	15453 Feb 27 03:31	21°♄21'30	1°05'53	minimum elong	15454 Feb 11 04:02	5°♄38'52	1°23'12
	15453 Mar 03 10:57	0°♄		max. Earth dist.	15454 Feb 14 18:26	13°♄11'09	1.33860 AU
max. Earth dist.	15453 Mar 04 03:48	1°♄22'12	1.35727 AU	evening rise	15454 Feb 19 05:38	22°♄07'41	
desc. node	15453 Mar 07 09:18	7°♄31'35		desc. node	15454 Feb 22 05:51	27°♄51'34	
evening rise	15453 Mar 08 01:43	8°♄47'56			15454 Feb 23 09:39	0°♄	
	15453 Mar 20 10:52	0°♄			15454 Mar 14 05:08	0°♄	
	15453 Apr 12 03:26	0°♄		evening max el	15454 Mar 26 00:57	13°♄58'03	27°05'41
evening max el	15453 Apr 12 11:13	0°♄19'08	26°13'39	retrograde	15454 Apr 08 11:37	21°♄28'14	
retrograde	15453 Apr 25 07:22	7°♄39'38		evening set	15454 Apr 15 01:26	18°♄56'49	
evening set	15453 May 01 12:45	5°♄07'54		asc. node	15454 Apr 18 14:17	15°♄35'52	
asc. node	15453 May 01 16:58	4°♄59'05		min. Earth dist.	15454 Apr 18 23:23	15°♄10'55	0.65522 AU
min. Earth dist.	15453 May 05 15:36	0°♄48'49	0.67075 AU	inferior conj	15454 Apr 21 06:05	12°♄35'38	0°49'09
	15453 May 06 07:32	30°♄		minimum elong	15454 Apr 21 04:49	12°♄39'14	0°48'09
inferior conj	15453 May 07 09:47	28°♄38'43	1°40'05	morning rise	15454 Apr 27 09:48	7°♄03'53	
minimum elong	15453 May 07 07:43	28°♄45'04	1°38'41	direct	15454 Apr 30 05:08	6°♄21'29	
morning rise	15453 May 13 03:34	22°♄54'28		morning max el	15454 May 06 12:42	9°♄38'37	18°01'50
direct	15453 May 16 08:34	21°♄56'11			15454 May 20 19:34	0°♄	
morning max el	15453 May 22 21:42	25°♄25'28	18°33'52	desc. node	15454 May 21 07:32	0°♄48'32	
	15453 May 26 21:41	0°♄		morning set	15454 May 24 21:22	6°♄37'59	
desc. node	15453 Jun 03 10:39	10°♄47'39					
morning set	15453 Jun 13 01:26	25°♄45'41		superior conj	15454 Jun 08 11:51	0°♄03'41	-1°55'02
	15453 Jun 15 18:17	0°♄		minimum elong	15454 Jun 08 03:29	29°♄30'41	1°55'17
max. Earth dist.	15453 Jun 28 15:50	20°♄08'47	1.45927 AU		15454 Jun 08 10:55	0°♄	
				max. Earth dist.	15454 Jun 11 11:59	4°♄46'36	1.45802 AU
superior conj	15453 Jun 29 00:38	20°♄43'08	-2°12'33	evening rise	15454 Jun 24 14:30	25°♄04'52	
minimum elong	15453 Jun 28 21:38	20°♄31'25	2°13'22		15454 Jun 27 19:20	0°♄	
	15453 Jul 04 23:13	0°♄		greatest brilliancy	15454 Jul 07 14:31	14°♄50'05	-0.7m
evening rise	15453 Jul 14 17:27	15°♄22'27		asc. node	15454 Jul 15 13:04	25°♄52'39	
greatest brilliancy	15453 Jul 22 14:53	27°♄50'40	-0.8m		15454 Jul 19 03:19	0°♄	
	15453 Jul 24 00:05	0°♄		evening max el	15454 Jul 19 09:43	0°♄16'03	19°26'29
asc. node	15453 Jul 28 16:19	7°♄03'56		retrograde	15454 Jul 26 12:49	4°♄14'19	
evening max el	15453 Aug 05 01:28	16°♄24'58	18°41'13	evening set	15454 Jul 30 04:49	2°♄56'21	
retrograde	15453 Aug 11 15:17	19°♄58'44			15454 Aug 02 06:12	30°♄	
evening set	15453 Aug 14 21:29	18°♄58'09		inferior conj	15454 Aug 04 13:58	27°♄03'32	2°56'59
inferior conj	15453 Aug 20 12:39	13°♄18'34	2°32'46	minimum elong	15454 Aug 04 15:24	26°♄58'51	2°56'14
minimum elong	15453 Aug 20 14:48	13°♄11'54	2°31'56	min. Earth dist.	15454 Aug 05 21:18	25°♄20'23	0.67394 AU
min. Earth dist.	15453 Aug 22 10:09	10°♄58'04	0.65899 AU	morning rise	15454 Aug 10 01:24	20°♄37'37	
morning rise	15453 Aug 26 07:04	6°♄53'22		direct	15454 Aug 15 23:46	18°♄03'22	
desc. node	15453 Aug 30 08:23	4°♄34'39		desc. node	15454 Aug 17 05:49	18°♄09'26	
direct	15453 Sep 01 14:58	4°♄15'06		morning max el	15454 Aug 28 06:21	25°♄23'43	25°30'18
morning max el	15453 Sep 14 19:19	12°♄02'44	26°44'31		15454 Sep 01 11:10	0°♄	
	15453 Sep 29 04:59	0°♄			15454 Sep 22 16:48	0°♄	
	15453 Oct 17 14:29	0°♄		morning set	15454 Oct 03 04:36	17°♄54'38	
morning set	15453 Oct 20 13:52	5°♄33'20		max. Earth dist.	15454 Oct 06 18:29	24°♄30'53	1.36074 AU
max. Earth dist.	15453 Oct 24 14:54	13°♄26'28	1.34049 AU				

	15454 Oct 09 15:22	0°♍		morning max el	15455 Aug 10 17:05	8°♏55'33	24°03'57
asc. node	15454 Oct 11 14:43	3°♍51'58			15455 Aug 27 07:46	0°♐	
				morning set	15455 Sep 15 00:20	29°♐25'29	
superior conj	15454 Oct 12 23:37	6°♍35'38	0°12'31		15455 Sep 15 08:22	0°♑	
minimum elong	15454 Oct 12 22:51	6°♍31'48	0°12'50	max. Earth dist.	15455 Sep 18 17:24	5°♑53'57	1.38407 AU
behind sun begin	15454 Oct 12 19:01	6°♍12'36					
behind sun end	15454 Oct 13 02:41	6°♍51'02		superior conj	15455 Sep 26 03:06	19°♑31'27	-0°21'00
evening rise	15454 Oct 20 21:59	22°♍47'39		minimum elong	15455 Sep 26 04:34	19°♑38'23	0°20'32
	15454 Oct 24 11:42	0°♒		asc. node	15455 Sep 28 11:21	24°♑01'25	
evening max el	15454 Nov 07 15:47	22°♒05'15	20°02'21		15455 Oct 01 12:44	0°♒	
desc. node	15454 Nov 13 02:32	26°♒07'03		evening rise	15455 Oct 04 23:03	6°♒46'13	
retrograde	15454 Nov 18 02:32	27°♒17'39			15455 Oct 18 06:03	0°♓	
evening set	15454 Nov 20 04:50	27°♒06'04		evening max el	15455 Oct 21 08:51	3°♓37'41	19°01'18
inferior conj	15454 Nov 29 00:22	23°♒07'55	-4°40'32	retrograde	15455 Oct 30 05:37	8°♓05'27	
minimum elong	15454 Nov 28 14:18	23°♒23'06	4°36'52	desc. node	15455 Oct 30 23:49	8°♓03'36	
min. Earth dist.	15454 Nov 30 20:59	22°♒00'38	0.54930 AU	evening set	15455 Nov 01 02:44	7°♓54'13	
morning rise	15454 Dec 06 22:44	19°♒00'18		inferior conj	15455 Nov 09 11:32	3°♓38'30	-3°00'04
direct	15454 Dec 11 20:31	18°♒07'51		minimum elong	15455 Nov 09 04:06	3°♓51'23	2°56'30
morning max el	15454 Dec 25 12:34	24°♒53'51	24°19'56	min. Earth dist.	15455 Nov 12 07:59	1°♓40'19	0.56293 AU
	15454 Dec 30 05:22	0°♊			15455 Nov 15 00:34	30°♒♍	
asc. node	15455 Jan 07 14:41	12°♊05'01		morning rise	15455 Nov 17 02:45	28°♒57'11	
	15455 Jan 17 03:09	0°♋		direct	15455 Nov 22 20:11	27°♒40'26	
morning set	15455 Jan 19 13:37	5°♋09'20			15455 Nov 30 15:23	0°♌	
				morning max el	15455 Dec 06 23:13	4°♌54'00	26°01'33
superior conj	15455 Jan 26 08:33	19°♋59'57	1°33'32	asc. node	15455 Dec 25 11:51	0°♍46'02	
minimum elong	15455 Jan 26 09:50	20°♋06'56	1°34'05		15455 Dec 25 01:35	0°♍	
max. Earth dist.	15455 Jan 28 17:00	25°♋06'22	1.32428 AU	morning set	15456 Jan 04 00:49	19°♍45'49	
	15455 Jan 31 00:10	0°♎			15456 Jan 08 16:35	0°♎	
evening rise	15455 Feb 02 20:38	5°♎53'38					
desc. node	15455 Feb 09 02:29	17°♎58'27		superior conj	15456 Jan 10 18:37	4°♎38'38	1°37'53
	15455 Feb 16 00:34	0°♏		minimum elong	15456 Jan 10 18:51	4°♎39'55	1°38'40
evening max el	15455 Mar 08 13:36	27°♏13'46	27°33'06	max. Earth dist.	15456 Jan 11 21:42	7°♎09'08	1.31484 AU
	15455 Mar 11 16:46	0°♐		evening rise	15456 Jan 17 19:50	19°♎58'09	
retrograde	15455 Mar 22 08:49	4°♐43'29			15456 Jan 22 19:14	0°♐	
evening set	15455 Mar 29 04:00	2°♐19'06		desc. node	15456 Jan 26 23:10	7°♐45'50	
	15455 Mar 31 23:07	30°♒♏			15456 Feb 10 06:47	0°♏	
min. Earth dist.	15455 Apr 01 22:51	29°♏02'49	0.63621 AU	evening max el	15456 Feb 18 22:42	9°♏52'26	27°29'36
inferior conj	15455 Apr 04 16:57	26°♏13'47	-0°14'53	retrograde	15456 Mar 03 21:58	17°♏15'43	
minimum elong	15455 Apr 04 17:25	26°♏12'34	0°15'00	evening set	15456 Mar 10 17:43	15°♏05'38	
transit middle	15455 Apr 04 17:25	26°♏12'34	0°15'00	min. Earth dist.	15456 Mar 14 12:25	12°♏12'52	0.61466 AU
transit begin	15455 Apr 04 16:21	26°♏15'21		inferior conj	15456 Mar 17 15:02	9°♏24'14	-1°31'56
transit end	15455 Apr 04 18:30	26°♏09'47		minimum elong	15456 Mar 17 18:19	9°♏16'47	1°30'40
asc. node	15455 Apr 05 11:38	25°♏26'11		asc. node	15456 Mar 22 09:03	5°♏36'54	
morning rise	15455 Apr 11 09:17	20°♏56'58		morning rise	15456 Mar 24 22:05	4°♏25'29	
direct	15455 Apr 13 20:10	20°♏27'19		direct	15456 Mar 27 02:08	4°♏05'07	
morning max el	15455 Apr 20 06:13	23°♏44'01	17°47'07	morning max el	15456 Apr 02 23:09	7°♏32'41	17°50'23
	15455 Apr 25 08:19	0°♐			15456 Apr 17 14:26	0°♐	
morning set	15455 May 06 19:59	18°♐46'26		morning set	15456 Apr 18 15:58	1°♐54'23	
desc. node	15455 May 08 04:20	21°♐04'21		desc. node	15456 Apr 24 01:04	11°♐30'07	
	15455 May 13 11:02	0°♑					
superior conj	15455 May 19 15:09	10°♑11'15	-1°23'02	superior conj	15456 Apr 29 17:48	21°♐23'52	-0°44'55
minimum elong	15455 May 19 07:22	9°♑39'35	1°22'55	minimum elong	15456 Apr 29 13:41	21°♐06'16	0°44'57
max. Earth dist.	15455 May 25 07:13	19°♑17'30	1.44946 AU		15456 May 04 20:57	0°♑	
	15455 Jun 01 03:27	0°♒		max. Earth dist.	15456 May 06 22:58	3°♑24'43	1.43442 AU
evening rise	15455 Jun 04 01:15	4°♒28'26		evening rise	15456 May 13 18:15	14°♑15'02	
	15455 Jun 21 06:14	0°♓			15456 May 24 03:07	0°♒	
asc. node	15455 Jul 02 09:54	14°♓03'16		evening max el	15456 Jun 14 08:38	28°♒01'43	21°38'52
evening max el	15455 Jul 02 12:07	14°♓08'51	20°26'41		15456 Jun 16 11:36	0°♓	
retrograde	15455 Jul 10 11:47	18°♓42'49		asc. node	15456 Jun 18 06:49	1°♓23'29	
evening set	15455 Jul 14 14:13	17°♓07'07		retrograde	15456 Jun 23 10:22	3°♓19'03	
inferior conj	15455 Jul 19 20:19	11°♓02'12	3°08'11	evening set	15456 Jun 27 23:46	1°♓26'22	
minimum elong	15455 Jul 19 20:48	11°♓00'33	3°07'26		15456 Jun 29 11:39	30°♒♒	
min. Earth dist.	15455 Jul 20 13:44	10°♓02'28	0.68436 AU	inferior conj	15456 Jul 03 05:28	25°♒10'51	3°07'58
morning rise	15455 Jul 25 03:05	4°♓39'33		minimum elong	15456 Jul 03 04:59	25°♒12'32	3°07'05
direct	15455 Jul 30 13:59	2°♓16'28		min. Earth dist.	15456 Jul 03 09:29	24°♒56'48	0.68995 AU
desc. node	15455 Aug 04 03:13	3°♓36'57		morning rise	15456 Jul 08 10:00	18°♒53'56	
				direct	15456 Jul 13 08:34	16°♒46'56	

desc. node	15456 Jul 21 00:34	20° $\text{☿}$ 32'36		morning max el	15457 Jul 05 21:23	6° $\text{☿}$ 25'25	21°10'49
morning max el	15456 Jul 23 05:13	22° $\text{☿}$ 36'09	22°34'49	desc. node	15457 Jul 07 21:49	8° $\text{☿}$ 33'22	
	15456 Jul 29 16:08	0° $\text{♊}$			15457 Jul 23 21:52	0° $\text{♊}$	
	15456 Aug 19 15:03	0° $\text{♋}$		morning set	15457 Aug 05 18:23	19° $\text{♊}$ 29'39	
morning set	15456 Aug 25 21:16	9° $\text{♋}$ 57'55			15457 Aug 12 08:43	0° $\text{♋}$	
max. Earth dist.	15456 Aug 30 17:41	18° $\text{♋}$ 00'38	1.40788 AU	max. Earth dist.	15457 Aug 12 23:16	0° $\text{♋}$ 59'06	1.42940 AU
	15456 Sep 06 15:18	0° $\text{♌}$					
superior conj	15456 Sep 07 14:16	1° $\text{♌}$ 42'58	-0°57'13	superior conj	15457 Aug 20 04:40	13° $\text{♋}$ 00'11	-1°32'21
minimum elong	15456 Sep 07 18:46	2° $\text{♌}$ 03'11	0°56'34	minimum elong	15457 Aug 20 11:54	13° $\text{♋}$ 30'56	1°31'50
asc. node	15456 Sep 14 07:58	14° $\text{♌}$ 07'22			15457 Aug 29 21:47	0° $\text{♌}$	
evening rise	15456 Sep 17 15:17	20° $\text{♌}$ 20'52		evening rise	15457 Aug 31 18:28	3° $\text{♌}$ 20'13	
	15456 Sep 22 19:51	0° $\text{♍}$		asc. node	15457 Sep 01 04:34	4° $\text{♌}$ 05'32	
evening max el	15456 Oct 03 13:16	15° $\text{♍}$ 56'10	18°22'15	evening max el	15457 Sep 17 00:46	28° $\text{♌}$ 50'52	18°03'44
retrograde	15456 Oct 11 04:01	19° $\text{♍}$ 48'25			15457 Sep 18 07:07	0° $\text{♍}$	
evening set	15456 Oct 13 04:33	19° $\text{♍}$ 32'43		retrograde	15457 Sep 23 19:47	2° $\text{♍}$ 20'21	
desc. node	15456 Oct 16 21:10	17° $\text{♍}$ 52'18		evening set	15457 Sep 26 03:29	1° $\text{♍}$ 56'01	
inferior conj	15456 Oct 20 20:23	14° $\text{♍}$ 56'02	-1°16'20		15457 Sep 29 14:15	30° $\text{♌}$ 00	
minimum elong	15456 Oct 20 17:27	15° $\text{♍}$ 01'58	1°14'34	inferior conj	15457 Oct 03 01:54	26° $\text{♌}$ 59'04	0°13'01
min. Earth dist.	15456 Oct 24 02:24	12° $\text{♍}$ 18'47	0.58253 AU	minimum elong	15457 Oct 03 02:19	26° $\text{♌}$ 58'04	0°13'10
morning rise	15456 Oct 28 02:51	9° $\text{♍}$ 37'28		transit middle	15457 Oct 03 02:19	26° $\text{♌}$ 58'04	0°13'10
direct	15456 Nov 03 10:10	7° $\text{♍}$ 53'44		transit begin	15457 Oct 03 00:24	27° $\text{♌}$ 02'34	
morning max el	15456 Nov 17 17:16	15° $\text{♍}$ 29'56	27°16'43	transit end	15457 Oct 03 04:15	26° $\text{♌}$ 53'33	
	15456 Nov 29 12:10	0° $\text{♎}$		desc. node	15457 Oct 03 18:34	26° $\text{♌}$ 19'43	
asc. node	15456 Dec 11 08:56	19° $\text{♎}$ 58'49		min. Earth dist.	15457 Oct 06 05:52	24° $\text{♌}$ 01'53	0.60511 AU
	15456 Dec 16 09:44	0° $\text{♏}$		morning rise	15457 Oct 09 22:01	21° $\text{♌}$ 09'47	
morning set	15456 Dec 18 09:26	4° $\text{♏}$ 11'13		direct	15457 Oct 16 12:59	19° $\text{♌}$ 01'06	
				morning max el	15457 Oct 30 19:05	26° $\text{♌}$ 53'18	27°54'49
superior conj	15456 Dec 25 06:04	19° $\text{♏}$ 18'10	1°36'12		15457 Nov 02 18:06	0° $\text{♍}$	
minimum elong	15456 Dec 25 05:16	19° $\text{♏}$ 13'38	1°37'03		15457 Nov 23 03:45	0° $\text{♎}$	
max. Earth dist.	15456 Dec 25 05:22	19° $\text{♏}$ 14'15	1.31060 AU	asc. node	15457 Nov 28 05:54	9° $\text{♎}$ 34'27	
	15456 Dec 30 01:35	0° $\text{♐}$		morning set	15457 Dec 02 13:36	18° $\text{♎}$ 20'45	
evening rise	15457 Jan 01 00:51	4° $\text{♐}$ 15'42			15457 Dec 07 23:04	0° $\text{♏}$	
desc. node	15457 Jan 12 19:55	27° $\text{♐}$ 06'17		max. Earth dist.	15457 Dec 08 12:20	1° $\text{♏}$ 13'31	1.31177 AU
	15457 Jan 14 13:14	0° $\text{♑}$					
evening max el	15457 Jan 31 01:37	21° $\text{♑}$ 43'05	26°51'23	superior conj	15457 Dec 09 17:04	3° $\text{♏}$ 53'18	1°28'33
retrograde	15457 Feb 14 01:53	28° $\text{♑}$ 56'35		minimum elong	15457 Dec 09 15:23	3° $\text{♏}$ 43'52	1°29'19
evening set	15457 Feb 20 15:20	27° $\text{♑}$ 08'01		evening rise	15457 Dec 16 09:37	18° $\text{♏}$ 41'29	
min. Earth dist.	15457 Feb 24 15:36	24° $\text{♑}$ 28'52	0.59226 AU		15457 Dec 21 20:20	0° $\text{♐}$	
inferior conj	15457 Feb 27 20:38	21° $\text{♑}$ 57'12	-2°58'56	desc. node	15457 Dec 30 16:44	15° $\text{♐}$ 49'54	
minimum elong	15457 Feb 28 03:23	21° $\text{♑}$ 43'52	2°56'13		15458 Jan 10 05:09	0° $\text{♑}$	
morning rise	15457 Mar 07 18:53	17° $\text{♑}$ 19'07		evening max el	15458 Jan 12 20:34	2° $\text{♑}$ 41'49	25°39'53
asc. node	15457 Mar 09 06:30	17° $\text{♑}$ 05'31		retrograde	15458 Jan 26 18:34	9° $\text{♑}$ 42'43	
direct	15457 Mar 09 18:42	17° $\text{♑}$ 04'33		evening set	15458 Feb 01 17:08	8° $\text{♑}$ 21'24	
morning max el	15457 Mar 17 11:55	20° $\text{♑}$ 54'18	18°12'39	min. Earth dist.	15458 Feb 06 09:25	5° $\text{♑}$ 41'53	0.57137 AU
	15457 Mar 24 08:33	0° $\text{♒}$		inferior conj	15458 Feb 09 06:27	3° $\text{♑}$ 44'01	-4°26'34
morning set	15457 Apr 02 03:23	15° $\text{♒}$ 43'48		minimum elong	15458 Feb 09 15:38	3° $\text{♑}$ 28'17	4°23'25
	15457 Apr 09 19:04	0° $\text{♓}$			15458 Feb 15 19:55	30° $\text{♒}$ 00	
desc. node	15457 Apr 10 21:43	2° $\text{♓}$ 01'17		morning rise	15458 Feb 17 17:03	29° $\text{♒}$ 27'22	
				direct	15458 Feb 19 17:45	29° $\text{♒}$ 14'47	
superior conj	15457 Apr 11 19:03	3° $\text{♓}$ 37'41	-0°07'19		15458 Feb 23 11:25	0° $\text{♑}$	
minimum elong	15457 Apr 11 18:27	3° $\text{♓}$ 34'57	0°07'38	asc. node	15458 Feb 24 03:55	0° $\text{♑}$ 18'24	
behind sun begin	15457 Apr 11 11:47	3° $\text{♓}$ 04'53		morning max el	15458 Feb 28 16:26	3° $\text{♑}$ 37'26	18°55'44
behind sun end	15457 Apr 12 01:07	4° $\text{♓}$ 04'58		morning set	15458 Mar 17 01:31	0° $\text{♒}$ 01'15	
max. Earth dist.	15457 Apr 19 09:34	16° $\text{♓}$ 53'28	1.41458 AU		15458 Mar 17 01:15	0° $\text{♓}$	
evening rise	15457 Apr 24 04:54	24° $\text{♓}$ 50'41		superior conj	15458 Mar 25 14:58	16° $\text{♒}$ 41'42	0°26'00
	15457 Apr 27 10:07	0° $\text{♈}$		minimum elong	15458 Mar 25 16:35	16° $\text{♒}$ 49'22	0°25'33
	15457 May 17 23:19	0° $\text{☿}$		desc. node	15458 Mar 28 18:18	22° $\text{♒}$ 34'31	
evening max el	15457 May 28 00:40	11° $\text{☿}$ 54'33	22°58'38	max. Earth dist.	15458 Apr 01 16:19	29° $\text{♒}$ 39'54	1.39218 AU
asc. node	15457 Jun 05 03:51	17° $\text{☿}$ 36'40			15458 Apr 01 20:52	0° $\text{♓}$	
retrograde	15457 Jun 07 06:59	17° $\text{☿}$ 56'31		evening rise	15458 Apr 05 12:56	6° $\text{♓}$ 22'29	
evening set	15457 Jun 12 07:47	15° $\text{☿}$ 48'41			15458 Apr 20 10:35	0° $\text{♈}$	
inferior conj	15457 Jun 17 15:23	9° $\text{☿}$ 24'41	2°57'08	evening max el	15458 May 10 14:35	25° $\text{♈}$ 49'02	24°19'52
minimum elong	15457 Jun 17 14:03	9° $\text{☿}$ 29'19	2°56'03		15458 May 15 11:59	0° $\text{☿}$	
min. Earth dist.	15457 Jun 17 06:25	9° $\text{☿}$ 55'48	0.69066 AU	retrograde	15458 May 22 00:17	2° $\text{☿}$ 29'34	
morning rise	15457 Jun 22 20:13	3° $\text{☿}$ 15'08		asc. node	15458 May 23 00:58	2° $\text{☿}$ 25'01	
direct	15457 Jun 27 06:25	1° $\text{☿}$ 27'02		evening set	15458 May 27 12:38	0° $\text{☿}$ 09'22	



	15458 May 27 16:54	30° $\mathbb{R}\mathbb{I}$		inferior conj	15459 May 17 05:50	7° $\mathbb{I}\mathbb{I}52'01$	2°03'47
min. Earth dist.	15458 Jun 01 02:22	24° $\mathbb{I}\mathbb{I}53'28$	0.68661 AU	minimum elong	15459 May 17 03:40	7° $\mathbb{I}\mathbb{I}59'00$	2°02'21
inferior conj	15458 Jun 02 00:09	23° $\mathbb{I}\mathbb{I}39'59$	2°35'53	morning rise	15459 May 22 19:09	2° $\mathbb{I}\mathbb{I}01'17$	
minimum elong	15458 Jun 01 22:13	23° $\mathbb{I}\mathbb{I}46'33$	2°34'34	direct	15459 May 26 06:19	0° $\mathbb{I}\mathbb{I}52'26$	
morning rise	15458 Jun 07 07:53	17° $\mathbb{I}\mathbb{I}39'08$		morning max el	15459 Jun 02 02:01	4° $\mathbb{I}\mathbb{I}34'02$	18°59'54
direct	15458 Jun 11 06:13	16° $\mathbb{I}\mathbb{I}10'55$		desc. node	15459 Jun 11 15:59	16° $\mathbb{I}\mathbb{I}45'55$	
morning max el	15458 Jun 18 20:01	20° $\mathbb{I}\mathbb{I}25'05$	19°57'58	greatest brilliancy	15459 Jun 15 06:12	22° $\mathbb{I}\mathbb{I}05'22$	-0.7m
desc. node	15458 Jun 24 18:57	27° $\mathbb{I}\mathbb{I}22'08$			15459 Jun 20 10:49	0° $\mathbb{I}\mathbb{I}$	
	15458 Jun 26 18:18	0° $\mathbb{I}\mathbb{I}$		morning set	15459 Jun 25 06:38	7° $\mathbb{I}\mathbb{I}26'30$	
morning set	15458 Jul 15 23:20	28° $\mathbb{I}\mathbb{I}22'02$		max. Earth dist.	15459 Jul 09 05:09	29° $\mathbb{I}\mathbb{I}05'56$	1.45662 AU
	15458 Jul 17 00:49	0° $\mathbb{I}\mathbb{I}$			15459 Jul 09 18:58	0° $\mathbb{I}\mathbb{I}$	
max. Earth dist.	15458 Jul 26 11:27	14° $\mathbb{I}\mathbb{I}45'06$	1.44625 AU				
				superior conj	15459 Jul 11 13:36	2° $\mathbb{I}\mathbb{I}47'13$	-2°13'42
superior conj	15458 Jul 31 19:35	23° $\mathbb{I}\mathbb{I}18'41$	-2°00'19	minimum elong	15459 Jul 11 15:12	2° $\mathbb{I}\mathbb{I}53'31$	2°14'31
minimum elong	15458 Aug 01 02:40	23° $\mathbb{I}\mathbb{I}47'22$	2°00'27	evening rise	15459 Jul 26 13:33	26° $\mathbb{I}\mathbb{I}44'17$	
	15458 Aug 04 21:45	0° $\mathbb{I}\mathbb{I}$			15459 Jul 28 13:47	0° $\mathbb{I}\mathbb{I}$	
evening rise	15458 Aug 14 03:32	15° $\mathbb{I}\mathbb{I}31'49$		asc. node	15459 Aug 05 21:50	13° $\mathbb{I}\mathbb{I}21'31$	
asc. node	15458 Aug 19 01:10	23° $\mathbb{I}\mathbb{I}51'54$		evening max el	15459 Aug 15 05:35	25° $\mathbb{I}\mathbb{I}50'23$	18°22'44
	15458 Aug 22 17:58	0° $\mathbb{I}\mathbb{I}$		retrograde	15459 Aug 21 15:12	29° $\mathbb{I}\mathbb{I}15'25$	
evening max el	15458 Aug 31 15:22	12° $\mathbb{I}\mathbb{I}11'53$	18°04'13	evening set	15459 Aug 24 16:11	28° $\mathbb{I}\mathbb{I}24'01$	
retrograde	15458 Sep 07 00:55	15° $\mathbb{I}\mathbb{I}32'18$		inferior conj	15459 Aug 30 12:16	22° $\mathbb{I}\mathbb{I}52'35$	2°11'59
evening set	15458 Sep 09 17:00	14° $\mathbb{I}\mathbb{I}55'47$		minimum elong	15459 Aug 30 14:38	22° $\mathbb{I}\mathbb{I}45'37$	2°11'09
inferior conj	15458 Sep 16 00:31	9° $\mathbb{I}\mathbb{I}40'28$	1°22'16	min. Earth dist.	15459 Sep 01 17:44	20° $\mathbb{I}\mathbb{I}15'25$	0.64855 AU
minimum elong	15458 Sep 16 02:34	9° $\mathbb{I}\mathbb{I}35'01$	1°21'38	morning rise	15459 Sep 05 11:41	16° $\mathbb{I}\mathbb{I}30'47$	
min. Earth dist.	15458 Sep 18 19:00	6° $\mathbb{I}\mathbb{I}44'23$	0.62786 AU	desc. node	15459 Sep 07 13:27	15° $\mathbb{I}\mathbb{I}05'57$	
desc. node	15458 Sep 20 16:01	4° $\mathbb{I}\mathbb{I}55'56$		direct	15459 Sep 11 23:45	13° $\mathbb{I}\mathbb{I}54'21$	
morning rise	15458 Sep 22 09:52	3° $\mathbb{I}\mathbb{I}30'21$		morning max el	15459 Sep 25 13:14	21° $\mathbb{I}\mathbb{I}49'27$	27°18'03
direct	15458 Sep 29 02:08	1° $\mathbb{I}\mathbb{I}03'25$			15459 Oct 02 17:09	0° $\mathbb{I}\mathbb{I}$	
morning max el	15458 Oct 13 02:33	9° $\mathbb{I}\mathbb{I}02'27$	27°53'49		15459 Oct 22 14:09	0° $\mathbb{I}\mathbb{I}$	
	15458 Oct 29 09:24	0° $\mathbb{I}\mathbb{I}$		morning set	15459 Oct 30 23:13	15° $\mathbb{I}\mathbb{I}28'49$	
asc. node	15458 Nov 15 02:45	29° $\mathbb{I}\mathbb{I}25'48$		asc. node	15459 Nov 01 23:31	19° $\mathbb{I}\mathbb{I}27'54$	
	15458 Nov 15 09:36	0° $\mathbb{I}\mathbb{I}$		max. Earth dist.	15459 Nov 04 09:29	24° $\mathbb{I}\mathbb{I}22'39$	1.33101 AU
morning set	15458 Nov 16 11:02	2° $\mathbb{I}\mathbb{I}08'24$			15459 Nov 07 02:03	0° $\mathbb{I}\mathbb{I}$	
max. Earth dist.	15458 Nov 21 14:47	12° $\mathbb{I}\mathbb{I}57'39$	1.31858 AU				
				superior conj	15459 Nov 08 05:43	2° $\mathbb{I}\mathbb{I}26'59$	0°55'17
superior conj	15458 Nov 24 01:39	18° $\mathbb{I}\mathbb{I}17'57$	1°14'55	minimum elong	15459 Nov 08 03:26	2° $\mathbb{I}\mathbb{I}14'49$	0°55'39
minimum elong	15458 Nov 23 23:24	18° $\mathbb{I}\mathbb{I}05'39$	1°15'30	evening rise	15459 Nov 15 06:58	17° $\mathbb{I}\mathbb{I}37'39$	
	15458 Nov 29 09:15	0° $\mathbb{I}\mathbb{I}$			15459 Nov 21 07:58	0° $\mathbb{I}\mathbb{I}$	
evening rise	15458 Nov 30 20:15	3° $\mathbb{I}\mathbb{I}10'09$		desc. node	15459 Dec 04 10:40	20° $\mathbb{I}\mathbb{I}25'14$	
	15458 Dec 15 01:25	0° $\mathbb{I}\mathbb{I}$		evening max el	15459 Dec 06 18:18	22° $\mathbb{I}\mathbb{I}52'12$	22°20'50
desc. node	15458 Dec 17 13:39	3° $\mathbb{I}\mathbb{I}42'16$		retrograde	15459 Dec 19 12:23	29° $\mathbb{I}\mathbb{I}10'57$	
evening max el	15458 Dec 25 08:05	12° $\mathbb{I}\mathbb{I}55'39$	24°04'08	evening set	15459 Dec 23 03:26	28° $\mathbb{I}\mathbb{I}42'01$	
retrograde	15459 Jan 07 21:39	19° $\mathbb{I}\mathbb{I}39'52$		min. Earth dist.	15459 Dec 31 01:29	25° $\mathbb{I}\mathbb{I}08'06$	0.54553 AU
evening set	15459 Jan 12 19:56	18° $\mathbb{I}\mathbb{I}47'05$		inferior conj	15459 Dec 31 15:11	24° $\mathbb{I}\mathbb{I}48'53$	-6°01'02
min. Earth dist.	15459 Jan 18 19:40	15° $\mathbb{I}\mathbb{I}50'03$	0.55487 AU	minimum elong	15459 Dec 31 14:19	24° $\mathbb{I}\mathbb{I}50'07$	6°00'10
inferior conj	15459 Jan 20 19:11	14° $\mathbb{I}\mathbb{I}38'35$	-5°35'58	morning rise	15460 Jan 09 02:15	21° $\mathbb{I}\mathbb{I}01'38$	
minimum elong	15459 Jan 21 02:25	14° $\mathbb{I}\mathbb{I}27'42$	5°34'07	direct	15460 Jan 12 09:17	20° $\mathbb{I}\mathbb{I}37'19$	
morning rise	15459 Jan 29 10:39	10° $\mathbb{I}\mathbb{I}40'55$		morning max el	15460 Jan 24 09:26	26° $\mathbb{I}\mathbb{I}24'16$	21°30'37
direct	15459 Jan 31 21:25	10° $\mathbb{I}\mathbb{I}25'34$			15460 Jan 27 17:15	0° $\mathbb{I}\mathbb{I}$	
asc. node	15459 Feb 11 01:18	15° $\mathbb{I}\mathbb{I}12'12$		asc. node	15460 Jan 28 22:38	1° $\mathbb{I}\mathbb{I}31'40$	
morning max el	15459 Feb 11 08:24	15° $\mathbb{I}\mathbb{I}29'10$	20°01'42	morning set	15460 Feb 13 16:13	29° $\mathbb{I}\mathbb{I}17'44$	
	15459 Feb 21 17:34	0° $\mathbb{I}\mathbb{I}$			15460 Feb 14 00:17	0° $\mathbb{I}\mathbb{I}$	
morning set	15459 Mar 01 06:42	14° $\mathbb{I}\mathbb{I}35'11$					
	15459 Mar 08 20:29	0° $\mathbb{I}\mathbb{I}$		superior conj	15460 Feb 20 21:33	14° $\mathbb{I}\mathbb{I}30'59$	1°14'01
superior conj	15459 Mar 09 01:04	0° $\mathbb{I}\mathbb{I}22'53$	0°53'17	minimum elong	15460 Feb 21 00:01	14° $\mathbb{I}\mathbb{I}43'49$	1°14'02
minimum elong	15459 Mar 09 03:35	0° $\mathbb{I}\mathbb{I}35'28$	0°52'58	max. Earth dist.	15460 Feb 25 09:57	23° $\mathbb{I}\mathbb{I}44'00$	1.34893 AU
max. Earth dist.	15459 Mar 14 22:58	11° $\mathbb{I}\mathbb{I}51'10$	1.36957 AU		15460 Feb 28 14:53	0° $\mathbb{I}\mathbb{I}$	
desc. node	15459 Mar 15 14:52	13° $\mathbb{I}\mathbb{I}05'31$		evening rise	15460 Feb 29 12:44	1° $\mathbb{I}\mathbb{I}43'57$	
evening rise	15459 Mar 18 16:38	18° $\mathbb{I}\mathbb{I}43'16$		desc. node	15460 Mar 01 11:26	3° $\mathbb{I}\mathbb{I}30'44$	
	15459 Mar 25 05:08	0° $\mathbb{I}\mathbb{I}$			15460 Mar 17 05:36	0° $\mathbb{I}\mathbb{I}$	
	15459 Apr 14 14:59	0° $\mathbb{I}\mathbb{I}$		evening max el	15460 Apr 04 17:55	23° $\mathbb{I}\mathbb{I}29'25$	26°38'18
evening max el	15459 Apr 23 04:10	9° $\mathbb{I}\mathbb{I}42'47$	25°35'35	retrograde	15460 Apr 17 20:38	0° $\mathbb{I}\mathbb{I}$	
retrograde	15459 May 05 13:07	16° $\mathbb{I}\mathbb{I}51'23$			15460 Apr 21 17:30	30° $\mathbb{I}\mathbb{I}08'32$	
asc. node	15459 May 09 22:10	15° $\mathbb{I}\mathbb{I}32'52$		evening set	15460 Apr 24 06:04	28° $\mathbb{I}\mathbb{I}22'14$	
evening set	15459 May 11 12:40	14° $\mathbb{I}\mathbb{I}22'35$		asc. node	15460 Apr 25 19:27	26° $\mathbb{I}\mathbb{I}58'32$	
min. Earth dist.	15459 May 15 19:09	9° $\mathbb{I}\mathbb{I}43'12$	0.67785 AU	min. Earth dist.	15460 Apr 28 06:39	24° $\mathbb{I}\mathbb{I}17'50$	0.66467 AU

inferior conj	15460 Apr 30 06:15	21°♄55'53	1°20'01	asc. node	15461 Apr 12 16:47	7°♄08'42	
minimum elong	15460 Apr 30 04:26	22°♄01'20	1°18'44	inferior conj	15461 Apr 13 22:56	5°♄45'58	0°23'37
morning rise	15460 May 06 03:56	16°♄16'52		minimum elong	15461 Apr 13 22:17	5°♄47'45	0°22'55
direct	15460 May 09 04:47	15°♄25'35		morning rise	15461 Apr 20 07:45	0°♄20'35	
morning max el	15460 May 15 14:24	18°♄47'49	18°18'12		15461 Apr 21 05:29	30°♄09'00	
	15460 May 24 06:14	0°♄		direct	15461 Apr 22 23:17	29°♄44'07	
desc. node	15460 May 28 12:55	6°♄35'16			15461 Apr 24 17:12	0°♄	
morning set	15460 Jun 04 10:41	17°♄32'48		morning max el	15461 Apr 29 06:58	2°♄59'34	17°53'30
	15460 Jun 12 07:16	0°♄		desc. node	15461 May 15 09:46	26°♄43'22	
				morning set	15461 May 16 18:28	28°♄59'09	
superior conj	15460 Jun 19 22:15	11°♄57'05	-2°07'22		15461 May 17 09:07	0°♄	
minimum elong	15460 Jun 19 16:17	11°♄33'46	2°07'59	superior conj	15461 May 30 14:56	21°♄34'40	-1°42'44
max. Earth dist.	15460 Jun 21 01:29	13°♄43'16	1.45963 AU	minimum elong	15461 May 30 06:10	20°♄59'47	1°42'47
	15460 Jul 01 12:16	0°♄		max. Earth dist.	15461 Jun 03 21:25	28°♄19'49	1.45516 AU
evening rise	15460 Jul 05 22:41	6°♄54'58			15461 Jun 04 22:58	0°♄	
greatest brilliancy	15460 Jul 16 04:33	22°♄48'20	-0.8m	evening rise	15461 Jun 15 13:26	16°♄24'18	
	15460 Jul 21 00:41	0°♄			15461 Jun 24 12:30	0°♄	
asc. node	15460 Jul 22 18:33	2°♄27'22		greatest brilliancy	15461 Jun 30 02:56	8°♄16'50	-0.6m
evening max el	15460 Jul 28 16:33	9°♄38'03	18°58'31	asc. node	15461 Jul 09 15:21	21°♄01'27	
retrograde	15460 Aug 04 11:03	13°♄20'54		evening max el	15461 Jul 11 22:20	23°♄29'57	19°50'23
evening set	15460 Aug 07 21:21	12°♄12'55		retrograde	15461 Jul 19 09:34	27°♄42'44	
inferior conj	15460 Aug 13 09:32	6°♄27'16	2°44'46	evening set	15461 Jul 23 05:50	26°♄17'18	
minimum elong	15460 Aug 13 11:25	6°♄21'15	2°43'59	inferior conj	15461 Jul 28 13:20	20°♄19'02	3°03'14
min. Earth dist.	15460 Aug 15 00:53	4°♄21'57	0.66581 AU	minimum elong	15461 Jul 28 14:22	20°♄15'32	3°02'29
morning rise	15460 Aug 19 00:42	0°♄01'07		min. Earth dist.	15461 Jul 29 14:41	18°♄53'46	0.67888 AU
	15460 Aug 19 01:13	30°♄00'00		morning rise	15461 Aug 02 22:27	13°♄53'49	
desc. node	15460 Aug 24 10:54	27°♄26'02		direct	15461 Aug 08 15:59	11°♄23'36	
direct	15460 Aug 25 04:43	27°♄23'56		desc. node	15461 Aug 11 08:19	11°♄51'35	
	15460 Sep 01 04:18	0°♄		morning max el	15461 Aug 20 11:47	18°♄28'44	24°54'30
morning max el	15460 Sep 07 00:48	5°♄01'49	26°15'11		15461 Aug 30 05:18	0°♄	
	15460 Sep 26 05:09	0°♄			15461 Sep 19 06:25	0°♄	
morning set	15460 Oct 12 22:52	28°♄14'06		morning set	15461 Sep 25 06:05	10°♄15'26	
	15460 Oct 13 21:28	0°♄		max. Earth dist.	15461 Sep 28 19:06	16°♄38'13	1.37038 AU
max. Earth dist.	15460 Oct 16 18:27	5°♄30'29	1.34863 AU				
asc. node	15460 Oct 18 20:14	9°♄35'51		superior conj	15461 Oct 05 13:43	29°♄30'18	-0°01'13
superior conj	15460 Oct 22 02:46	16°♄13'27	0°29'44	minimum elong	15461 Oct 05 13:46	29°♄30'32	0°00'51
minimum elong	15460 Oct 22 01:11	16°♄05'19	0°30'01	behind sun begin	15461 Oct 05 07:13	28°♄58'29	
	15460 Oct 28 17:07	0°♄		behind sun end	15461 Oct 05 20:19	0°♄02'40	
evening rise	15460 Oct 29 15:46	1°♄58'23		asc. node	15461 Oct 05 16:55	29°♄46'01	
	15460 Nov 14 16:41	0°♄			15461 Oct 05 19:46	0°♄	
evening max el	15460 Nov 17 12:59	3°♄09'29	20°47'21	evening rise	15461 Oct 13 20:26	16°♄06'56	
desc. node	15460 Nov 20 07:47	5°♄35'22			15461 Oct 21 00:30	0°♄	
retrograde	15460 Nov 28 22:37	8°♄49'14		evening max el	15461 Oct 30 22:02	14°♄13'24	19°33'39
evening set	15460 Dec 01 10:04	8°♄34'23		desc. node	15461 Nov 07 05:01	18°♄48'02	
inferior conj	15460 Dec 10 06:12	4°♄41'28	-5°25'23	retrograde	15461 Nov 09 16:19	19°♄06'18	
minimum elong	15460 Dec 09 21:27	4°♄54'00	5°22'48	evening set	15461 Nov 11 14:41	18°♄55'41	
min. Earth dist.	15460 Dec 11 07:01	4°♄05'52	0.54520 AU	inferior conj	15461 Nov 20 06:57	14°♄51'08	-4°00'04
morning rise	15460 Dec 18 08:53	0°♄46'49		minimum elong	15461 Nov 19 21:26	15°♄06'17	3°56'06
direct	15460 Dec 22 16:41	0°♄06'39		min. Earth dist.	15461 Nov 22 15:35	13°♄21'01	0.55416 AU
morning max el	15461 Jan 04 22:15	6°♄33'34	23°16'40	morning rise	15461 Nov 28 02:16	10°♄30'00	
asc. node	15461 Jan 14 19:53	18°♄58'28		direct	15461 Dec 03 08:57	9°♄27'37	
	15461 Jan 21 05:36	0°♄		morning max el	15461 Dec 17 07:06	16°♄26'57	25°05'17
morning set	15461 Jan 28 03:52	14°♄02'23			15461 Dec 28 05:20	0°♄	
				asc. node	15462 Jan 01 17:06	7°♄16'31	
superior conj	15461 Feb 04 01:18	28°♄57'07	1°28'13	morning set	15462 Jan 12 15:43	28°♄43'19	
minimum elong	15461 Feb 04 03:06	29°♄06'53	1°28'36		15462 Jan 13 05:54	0°♄	
	15461 Feb 04 12:59	0°♄		superior conj	15462 Jan 19 09:40	13°♄33'23	1°36'06
max. Earth dist.	15461 Feb 07 03:59	5°♄34'44	1.33192 AU	minimum elong	15462 Jan 19 10:31	13°♄38'03	1°36'48
evening rise	15461 Feb 11 21:44	15°♄15'49		max. Earth dist.	15462 Jan 21 05:13	17°♄32'27	1.31960 AU
desc. node	15461 Feb 16 08:03	23°♄45'58		evening rise	15462 Jan 26 16:33	29°♄10'42	
	15461 Feb 19 18:45	0°♄			15462 Jan 27 02:10	0°♄	
evening max el	15461 Mar 11 21:37	0°♄		desc. node	15462 Feb 03 04:42	13°♄45'31	
retrograde	15461 Mar 18 07:12	6°♄59'32	27°20'41		15462 Feb 12 21:36	0°♄	
evening set	15461 Mar 31 22:05	14°♄31'03		evening max el	15462 Feb 28 18:33	20°♄01'01	27°35'43
min. Earth dist.	15461 Apr 07 14:48	12°♄01'23		retrograde	15462 Mar 14 16:23	27°♄29'32	
	15461 Apr 11 11:01	8°♄28'58	0.64750 AU				

evening set	15462 Mar 21 12:19	25° $\Upsilon$ 10'15		evening max el	15463 Feb 11 01:34	2° $\Upsilon$ 21'45	27°17'43
min. Earth dist.	15462 Mar 25 06:32	22° $\Upsilon$ 04'50	0.62720 AU	retrograde	15463 Feb 25 01:49	9° $\Upsilon$ 40'52	
inferior conj	15462 Mar 28 04:49	19° $\Upsilon$ 13'46	-0°46'04	evening set	15463 Mar 03 19:37	7° $\Upsilon$ 39'29	
minimum elong	15462 Mar 28 06:21	19° $\Upsilon$ 10'01	0°45'39	min. Earth dist.	15463 Mar 07 15:58	4° $\Upsilon$ 53'35	0.60515 AU
asc. node	15462 Mar 30 14:11	16° $\Upsilon$ 59'32		inferior conj	15463 Mar 10 20:23	2° $\Upsilon$ 10'15	-2°07'56
morning rise	15462 Apr 04 03:14	14° $\Upsilon$ 04'24		minimum elong	15463 Mar 11 01:07	2° $\Upsilon$ 00'07	2°06'01
direct	15462 Apr 06 10:50	13° $\Upsilon$ 39'16			15463 Mar 13 11:58	30° $\Re$ $\text{H}$	
morning max el	15462 Apr 13 00:41	16° $\Upsilon$ 59'34	17°46'15	asc. node	15463 Mar 17 11:35	27° $\text{H}$ 38'19	
	15462 Apr 22 09:04	0° $\text{B}$		morning rise	15463 Mar 18 09:57	27° $\text{H}$ 19'39	
morning set	15462 Apr 29 02:56	11° $\text{B}$ 35'15		direct	15463 Mar 20 11:43	27° $\text{H}$ 02'12	
desc. node	15462 May 02 06:32	17° $\text{B}$ 04'00			15463 Mar 26 23:59	0° $\Upsilon$	
	15462 May 09 20:44	0° $\text{II}$		morning max el	15463 Mar 27 16:15	0° $\Upsilon$ 38'07	17°57'19
				morning set	15463 Apr 12 06:09	25° $\Upsilon$ 03'09	
superior conj	15462 May 11 03:52	2° $\text{II}$ 09'33	-1°07'11		15463 Apr 14 23:05	0° $\text{B}$	
minimum elong	15462 May 10 21:30	1° $\text{II}$ 43'07	1°07'03	desc. node	15463 Apr 19 03:15	7° $\text{B}$ 32'43	
max. Earth dist.	15462 May 17 14:51	12° $\text{II}$ 40'30	1.44374 AU				
evening rise	15462 May 26 00:53	25° $\text{II}$ 52'47		superior conj	15463 Apr 22 16:27	13° $\text{B}$ 49'03	-0°28'38
	15462 May 28 17:28	0° $\text{B}$		minimum elong	15463 Apr 22 13:57	13° $\text{B}$ 38'07	0°28'46
	15462 Jun 18 13:55	0° $\Omega$		max. Earth dist.	15463 Apr 30 04:26	26° $\text{B}$ 32'39	1.42654 AU
evening max el	15462 Jun 24 22:08	7° $\Omega$ 22'47	20°56'12		15463 May 02 07:05	0° $\text{II}$	
asc. node	15462 Jun 26 12:15	8° $\Omega$ 52'24		evening rise	15463 May 06 00:32	5° $\text{II}$ 58'50	
retrograde	15462 Jul 03 08:34	12° $\Omega$ 14'46			15463 May 21 23:19	0° $\text{B}$	
evening set	15462 Jul 07 15:29	10° $\Omega$ 31'57		evening max el	15463 Jun 07 16:38	21° $\text{B}$ 15'59	22°12'16
inferior conj	15462 Jul 12 21:08	4° $\Omega$ 22'25	3°09'26	asc. node	15463 Jun 13 09:13	25° $\text{B}$ 46'15	
minimum elong	15462 Jul 12 21:12	4° $\Omega$ 22'12	3°08'38	retrograde	15463 Jun 17 06:18	26° $\text{B}$ 52'00	
min. Earth dist.	15462 Jul 13 08:53	3° $\Omega$ 41'41	0.68732 AU	evening set	15463 Jun 22 00:33	24° $\text{B}$ 52'41	
	15462 Jul 16 04:54	30° $\Re$ $\text{B}$		inferior conj	15463 Jun 27 06:49	18° $\text{B}$ 33'32	3°04'37
morning rise	15462 Jul 18 02:38	28° $\text{B}$ 01'46		minimum elong	15463 Jun 27 05:57	18° $\text{B}$ 36'33	3°03'39
direct	15462 Jul 23 08:22	25° $\text{B}$ 44'47		min. Earth dist.	15463 Jun 27 05:20	18° $\text{B}$ 38'41	0.69092 AU
desc. node	15462 Jul 29 05:41	27° $\text{B}$ 59'11		morning rise	15463 Jul 02 11:10	12° $\text{B}$ 19'38	
	15462 Jul 31 18:33	0° $\Omega$		direct	15463 Jul 07 04:34	10° $\text{B}$ 20'14	
morning max el	15462 Aug 02 22:40	2° $\Omega$ 03'43	23°25'46	desc. node	15463 Jul 16 02:59	15° $\text{B}$ 24'42	
	15462 Aug 24 04:56	0° $\text{M}$		morning max el	15463 Jul 16 11:58	15° $\text{B}$ 46'55	21°57'57
morning set	15462 Sep 06 16:30	21° $\text{M}$ 22'19			15463 Jul 28 01:47	0° $\Omega$	
max. Earth dist.	15462 Sep 10 17:19	28° $\text{M}$ 15'09	1.39425 AU		15463 Aug 17 05:01	0° $\text{M}$	
	15462 Sep 11 17:22	0° $\text{B}$		morning set	15463 Aug 18 02:56	1° $\text{M}$ 27'19	
superior conj	15462 Sep 18 10:48	12° $\text{B}$ 08'37	-0°36'13	max. Earth dist.	15463 Aug 23 19:39	10° $\text{M}$ 44'04	1.41750 AU
minimum elong	15462 Sep 18 13:29	12° $\text{B}$ 21'05	0°35'39	superior conj	15463 Aug 31 13:37	23° $\text{M}$ 58'06	-1°12'35
asc. node	15462 Sep 22 13:34	19° $\text{B}$ 54'34		minimum elong	15463 Aug 31 19:25	24° $\text{M}$ 23'35	1°11'55
evening rise	15462 Sep 27 18:09	29° $\text{B}$ 56'15			15463 Sep 03 23:05	0° $\text{B}$	
	15462 Sep 27 18:56	0° $\text{M}$		asc. node	15463 Sep 09 10:10	9° $\text{B}$ 57'41	
evening max el	15462 Oct 13 20:33	26° $\text{M}$ 07'17	18°42'12	evening rise	15463 Sep 11 05:21	13° $\text{B}$ 16'57	
	15462 Oct 19 21:28	0° $\text{A}$			15463 Sep 20 15:44	0° $\text{M}$	
retrograde	15462 Oct 22 03:11	0° $\text{A}$ 18'05		evening max el	15463 Sep 27 04:29	8° $\text{M}$ 42'16	18°12'00
evening set	15462 Oct 24 01:09	0° $\text{A}$ 05'27		retrograde	15463 Oct 04 09:20	12° $\text{M}$ 22'59	
	15462 Oct 24 10:21	30° $\Re$ $\text{M}$		evening set	15463 Oct 06 12:49	12° $\text{M}$ 03'57	
desc. node	15462 Oct 25 02:18	29° $\text{M}$ 48'23		desc. node	15463 Oct 11 23:40	8° $\text{M}$ 53'24	
inferior conj	15462 Nov 01 03:08	25° $\text{M}$ 41'18	-2°15'06	inferior conj	15463 Oct 13 21:01	7° $\text{M}$ 18'13	-0°36'05
minimum elong	15462 Oct 31 21:38	25° $\text{M}$ 51'29	2°12'14	minimum elong	15463 Oct 13 19:43	7° $\text{M}$ 21'00	0°35'06
min. Earth dist.	15462 Nov 04 05:32	23° $\text{M}$ 24'24	0.57069 AU	min. Earth dist.	15463 Oct 17 03:15	4° $\text{M}$ 30'14	0.59194 AU
morning rise	15462 Nov 08 14:53	20° $\text{M}$ 44'06		morning rise	15463 Oct 20 23:16	1° $\text{M}$ 45'51	
direct	15462 Nov 14 15:15	19° $\text{M}$ 15'35			15463 Oct 25 15:29	30° $\Re$ $\text{B}$	
morning max el	15462 Nov 28 20:21	26° $\text{M}$ 39'35	26°37'31	direct	15463 Oct 27 10:43	29° $\text{B}$ 51'09	
	15462 Dec 02 01:11	0° $\text{A}$			15463 Oct 29 06:34	0° $\text{M}$	
asc. node	15462 Dec 19 14:13	26° $\text{A}$ 12'44		morning max el	15463 Nov 10 17:38	7° $\text{M}$ 34'09	27°37'53
	15462 Dec 21 14:20	0° $\text{B}$			15463 Nov 27 16:47	0° $\text{A}$	
morning set	15462 Dec 28 02:02	13° $\text{B}$ 16'09		asc. node	15463 Dec 06 11:15	15° $\text{A}$ 36'11	
				morning set	15463 Dec 12 08:59	27° $\text{A}$ 35'14	
superior conj	15463 Jan 03 20:35	28° $\text{B}$ 13'52	1°37'53		15463 Dec 13 12:05	0° $\text{B}$	
minimum elong	15463 Jan 03 20:22	28° $\text{B}$ 12'38	1°38'44	superior conj	15463 Dec 19 08:03	12° $\text{B}$ 51'59	1°33'41
max. Earth dist.	15463 Jan 04 11:36	29° $\text{B}$ 37'43	1.31241 AU	minimum elong	15463 Dec 19 06:50	12° $\text{B}$ 45'11	1°34'31
	15463 Jan 04 15:36	0° $\approx$		max. Earth dist.	15463 Dec 18 19:34	11° $\text{B}$ 42'08	1.31047 AU
evening rise	15463 Jan 10 18:32	13° $\approx$ 22'24		evening rise	15463 Dec 26 01:22	27° $\text{B}$ 44'09	
	15463 Jan 19 04:15	0° $\text{H}$			15463 Dec 27 02:48	0° $\approx$	
desc. node	15463 Jan 21 01:25	3° $\text{H}$ 23'07		desc. node	15464 Jan 07 22:11	22° $\approx$ 29'29	
	15463 Feb 08 17:15	0° $\Upsilon$					

	15464 Jan 12 16:57	0°♄				15464 Dec 18 07:23	0°♁	
evening max el	15464 Jan 24 01:24	13°♄50'50	26°24'41	desc. node		15464 Dec 24 19:02	10°♁53'09	
retrograde	15464 Feb 07 00:47	20°♄58'20		evening max el		15465 Jan 04 16:36	24°♁27'23	25°01'08
evening set	15464 Feb 13 09:12	19°♄21'00				15465 Jan 12 11:53	0°♄	
min. Earth dist.	15464 Feb 17 14:50	16°♄43'42	0.58313 AU	retrograde		15465 Jan 18 11:46	1°♄22'10	
inferior conj	15464 Feb 20 17:54	14°♄24'46	-3°36'51	evening set		15465 Jan 24 01:23	0°♄12'47	
minimum elong	15464 Feb 21 01:58	14°♄09'46	3°33'45			15465 Jan 24 13:37	30°♁	
morning rise	15464 Feb 28 21:59	9°♄55'38		min. Earth dist.		15465 Jan 29 04:42	27°♁28'23	0.56366 AU
direct	15464 Mar 01 21:33	9°♄42'15		inferior conj		15465 Jan 31 18:33	25°♁48'51	-4°59'44
asc. node	15464 Mar 03 08:59	9°♄49'59		minimum elong		15465 Feb 01 03:41	25°♁34'09	4°56'57
morning max el	15464 Mar 10 01:56	13°♄44'30	18°28'14	morning rise		15465 Feb 09 08:27	21°♁41'19	
	15464 Mar 21 02:29	0°♄		direct		15465 Feb 11 12:11	21°♁28'12	
morning set	15464 Mar 25 22:38	9°♄06'21		asc. node		15465 Feb 18 06:23	23°♁47'00	
				morning max el		15465 Feb 21 01:35	26°♁07'02	19°21'00
superior conj	15464 Apr 04 02:10	26°♄25'52	0°07'30			15465 Feb 24 11:30	0°♄	
minimum elong	15464 Apr 04 02:41	26°♄28'13	0°07'06	morning set		15465 Mar 10 00:07	23°♄31'59	
behind sun begin	15464 Apr 03 20:13	25°♄58'24				15465 Mar 13 05:40	0°♄	
behind sun end	15464 Apr 04 09:09	26°♄57'57						
desc. node	15464 Apr 04 23:52	28°♄05'27		superior conj		15465 Mar 18 04:38	9°♄47'31	0°38'22
	15464 Apr 06 01:03	0°♄		minimum elong		15465 Mar 18 06:47	9°♄57'54	0°37'56
max. Earth dist.	15464 Apr 11 13:38	9°♄45'36	1.40531 AU	desc. node		15465 Mar 22 20:26	18°♄38'24	
evening rise	15464 Apr 15 20:14	16°♄58'41		max. Earth dist.		15465 Mar 24 19:52	22°♄16'03	1.38241 AU
	15464 Apr 23 23:44	0°♄		evening rise		15465 Mar 28 12:54	28°♄52'09	
	15464 May 15 14:13	0°♄				15465 Mar 29 04:31	0°♄	
evening max el	15464 May 20 07:33	5°♄10'04	23°33'23			15465 Apr 17 08:43	0°♄	
asc. node	15464 May 30 06:15	11°♄26'07		evening max el		15465 May 02 20:57	19°♄04'09	24°53'08
retrograde	15464 May 31 01:34	11°♄28'57		retrograde		15465 May 14 17:09	25°♄58'31	
evening set	15464 Jun 05 07:25	9°♄15'15		asc. node		15465 May 17 03:23	25°♄33'34	
min. Earth dist.	15464 Jun 10 01:59	3°♄38'25	0.68957 AU	evening set		15465 May 20 10:26	23°♄33'48	
inferior conj	15464 Jun 10 16:28	2°♄48'41	2°49'23	min. Earth dist.		15465 May 24 20:47	18°♄33'47	0.68343 AU
minimum elong	15464 Jun 10 14:50	2°♄54'17	2°48'12	inferior conj		15465 May 26 00:09	17°♄03'13	2°23'36
	15464 Jun 12 19:04	30°♄		minimum elong		15465 May 25 22:03	17°♄10'10	2°22'14
morning rise	15464 Jun 15 22:14	26°♄42'58		morning rise		15465 May 31 09:57	11°♄06'42	
direct	15464 Jun 20 03:21	25°♄03'21		direct		15465 Jun 04 03:20	9°♄47'05	
morning max el	15464 Jun 28 06:44	29°♄41'14	20°38'15	morning max el		15465 Jun 11 08:39	13°♄45'57	19°31'21
	15464 Jun 28 14:14	0°♄		desc. node		15465 Jun 18 21:16	22°♄53'16	
desc. node	15464 Jul 02 00:11	3°♄48'05				15465 Jun 23 21:06	0°♄	
	15464 Jul 20 16:16	0°♄		greatest brilliancy		15465 Jun 24 00:17	0°♄11'39	-0.6m
morning set	15464 Jul 27 15:38	10°♄38'40		morning set		15465 Jul 06 18:56	19°♄29'16	
max. Earth dist.	15464 Aug 05 04:46	24°♄07'07	1.43728 AU			15465 Jul 13 14:15	0°♄	
	15464 Aug 08 19:45	0°♄		max. Earth dist.		15465 Jul 18 19:28	8°♄09'43	1.45149 AU
superior conj	15464 Aug 11 18:11	4°♄50'45	-1°45'31	superior conj		15465 Jul 22 23:19	14°♄45'20	-2°08'12
minimum elong	15464 Aug 12 01:54	5°♄22'52	1°45'13	minimum elong		15465 Jul 23 04:43	15°♄06'54	2°08'40
evening rise	15464 Aug 24 01:32	25°♄58'22				15465 Aug 01 08:56	0°♄	
asc. node	15464 Aug 26 06:47	29°♄51'55		evening rise		15465 Aug 06 01:20	7°♄46'14	
	15464 Aug 26 08:38	0°♄		asc. node		15465 Aug 13 03:24	19°♄32'03	
evening max el	15464 Sep 09 17:43	21°♄49'12	18°01'36			15465 Aug 19 22:51	0°♄	
retrograde	15464 Sep 16 07:33	25°♄13'26		evening max el		15465 Aug 24 08:28	5°♄18'23	18°09'54
evening set	15464 Sep 18 18:41	24°♄44'19		retrograde		15465 Aug 30 17:07	8°♄39'29	
inferior conj	15464 Sep 25 10:19	19°♄38'55	0°44'53	evening set		15465 Sep 02 12:49	7°♄57'05	
minimum elong	15464 Sep 25 11:38	19°♄35'40	0°44'37	inferior conj		15465 Sep 08 15:03	2°♄34'40	1°45'34
desc. node	15464 Sep 27 21:04	17°♄12'49		minimum elong		15465 Sep 08 17:21	2°♄28'14	1°44'48
min. Earth dist.	15464 Sep 28 10:45	16°♄39'56	0.61489 AU			15465 Sep 10 22:32	30°♄	
morning rise	15464 Oct 02 01:49	13°♄39'23		min. Earth dist.		15465 Sep 11 04:16	29°♄44'30	0.63698 AU
direct	15464 Oct 08 17:51	11°♄22'18		morning rise		15465 Sep 14 19:57	26°♄18'12	
morning max el	15464 Oct 22 22:22	19°♄18'24	27°59'09	desc. node		15465 Sep 14 18:30	26°♄21'01	
	15464 Nov 01 01:03	0°♄		direct		15465 Sep 21 10:53	23°♄46'00	
	15464 Nov 19 14:16	0°♄				15465 Oct 03 11:37	0°♄	
asc. node	15464 Nov 22 08:11	5°♄19'20		morning max el		15465 Oct 05 07:45	1°♄45'49	27°42'26
morning set	15464 Nov 25 10:33	11°♄35'58				15465 Oct 26 06:49	0°♄	
max. Earth dist.	15464 Dec 01 01:12	23°♄36'26	1.31399 AU	morning set		15465 Nov 09 04:26	25°♄13'05	
				asc. node		15465 Nov 09 05:02	25°♄16'06	
superior conj	15464 Dec 02 18:13	27°♄22'48	1°23'30			15465 Nov 11 12:55	0°♄	
minimum elong	15464 Dec 02 16:14	27°♄11'51	1°24'11	max. Earth dist.		15465 Nov 14 00:38	5°♄12'18	1.32312 AU
	15464 Dec 03 22:31	0°♄						
evening rise	15464 Dec 09 11:07	12°♄11'21		superior conj		15465 Nov 17 01:09	11°♄41'31	1°07'20

minimum elong	15465 Nov 16 22:49	11° $\mathbb{A}$ 28'52	1°07'48	minimum elong	15466 Nov 01 00:29	25° $\mathbb{M}$ 31'00	0°45'28
evening rise	15465 Nov 23 22:01	26° $\mathbb{A}$ 39'54		evening rise	15466 Nov 03 03:22	0° $\mathbb{A}$	
	15465 Nov 25 11:31	0° $\mathbb{B}$			15466 Nov 08 08:09	11° $\mathbb{A}$ 05'01	
desc. node	15465 Dec 11 15:59	28° $\mathbb{B}$ 18'50			15466 Nov 18 00:14	0° $\mathbb{B}$	
	15465 Dec 12 24:00	0° $\mathbb{A}$		evening max el	15466 Nov 28 15:12	14° $\mathbb{B}$ 30'54	21°39'12
evening max el	15465 Dec 17 02:20	4° $\mathbb{A}$ 29'15	23°20'02	desc. node	15466 Nov 28 13:03	14° $\mathbb{B}$ 25'36	
retrograde	15465 Dec 30 09:43	11° $\mathbb{A}$ 05'00		retrograde	15466 Dec 10 21:00	20° $\mathbb{B}$ 34'13	
evening set	15466 Jan 03 18:53	10° $\mathbb{A}$ 23'22		evening set	15466 Dec 13 22:52	20° $\mathbb{B}$ 12'49	
min. Earth dist.	15466 Jan 10 12:51	7° $\mathbb{A}$ 12'47	0.54977 AU	inferior conj	15466 Dec 22 15:22	16° $\mathbb{B}$ 21'56	-5°53'26
inferior conj	15466 Jan 11 23:14	6° $\mathbb{A}$ 22'59	-5°53'32	minimum elong	15466 Dec 22 10:32	16° $\mathbb{B}$ 28'41	5°52'05
minimum elong	15466 Jan 12 03:37	6° $\mathbb{A}$ 16'38	5°52'22	min. Earth dist.	15466 Dec 22 18:26	16° $\mathbb{B}$ 17'37	0.54417 AU
morning rise	15466 Jan 20 13:48	2° $\mathbb{A}$ 31'21		morning rise	15466 Dec 30 22:49	12° $\mathbb{B}$ 33'41	
direct	15466 Jan 23 07:46	2° $\mathbb{A}$ 13'14		direct	15467 Jan 03 16:25	12° $\mathbb{B}$ 03'16	
morning max el	15466 Feb 03 11:27	7° $\mathbb{A}$ 35'47	20°36'59	morning max el	15467 Jan 16 06:32	18° $\mathbb{B}$ 08'45	22°14'18
asc. node	15466 Feb 05 03:46	9° $\mathbb{A}$ 19'54		asc. node	15467 Jan 23 01:05	26° $\mathbb{B}$ 10'13	
	15466 Feb 18 06:11	0° $\mathbb{H}$			15467 Jan 25 14:43	0° $\mathbb{A}$	
morning set	15466 Feb 22 07:29	8° $\mathbb{H}$ 10'59		morning set	15467 Feb 06 18:09	22° $\mathbb{A}$ 54'57	
					15467 Feb 10 01:50	0° $\mathbb{H}$	
superior conj	15466 Mar 01 19:39	23° $\mathbb{H}$ 42'16	1°02'52	superior conj	15467 Feb 13 19:34	7° $\mathbb{H}$ 58'52	1°20'49
minimum elong	15466 Mar 01 22:15	23° $\mathbb{H}$ 55'27	1°02'40	minimum elong	15467 Feb 13 21:49	8° $\mathbb{H}$ 10'44	1°20'59
	15466 Mar 04 22:58	0° $\mathbb{Y}$		max. Earth dist.	15467 Feb 17 17:10	16° $\mathbb{H}$ 05'52	1.34117 AU
max. Earth dist.	15466 Mar 07 03:29	4° $\mathbb{Y}$ 16'11	1.36036 AU	evening rise	15467 Feb 22 02:07	24° $\mathbb{H}$ 47'17	
desc. node	15466 Mar 09 17:02	9° $\mathbb{Y}$ 08'09		desc. node	15467 Feb 24 13:38	29° $\mathbb{H}$ 29'49	
evening rise	15466 Mar 11 00:05	11° $\mathbb{Y}$ 32'01			15467 Feb 24 20:07	0° $\mathbb{Y}$	
	15466 Mar 21 17:54	0° $\mathbb{B}$			15467 Mar 15 06:12	0° $\mathbb{B}$	
	15466 Apr 12 14:31	0° $\mathbb{I}$		evening max el	15467 Mar 29 00:24	16° $\mathbb{B}$ 37'55	26°59'19
evening max el	15466 Apr 15 10:31	2° $\mathbb{I}$ 56'12	26°04'15	retrograde	15467 Apr 11 09:10	24° $\mathbb{B}$ 06'53	
retrograde	15466 Apr 28 04:04	10° $\mathbb{I}$ 14'07		evening set	15467 Apr 17 21:55	21° $\mathbb{B}$ 35'07	
evening set	15466 May 04 07:56	7° $\mathbb{I}$ 43'03		asc. node	15467 Apr 20 21:54	18° $\mathbb{B}$ 46'33	
asc. node	15466 May 04 00:36	7° $\mathbb{I}$ 57'55		min. Earth dist.	15467 Apr 21 20:33	17° $\mathbb{B}$ 44'28	0.65781 AU
min. Earth dist.	15466 May 08 11:41	3° $\mathbb{I}$ 18'39	0.67275 AU	inferior conj	15467 Apr 24 01:24	15° $\mathbb{B}$ 12'25	0°57'44
inferior conj	15466 May 10 03:55	1° $\mathbb{I}$ 13'13	1°46'43	minimum elong	15467 Apr 23 23:57	15° $\mathbb{B}$ 16'34	0°56'39
minimum elong	15466 May 10 01:48	1° $\mathbb{I}$ 19'48	1°45'19	morning rise	15467 Apr 30 03:27	9° $\mathbb{B}$ 38'36	
	15466 May 11 03:36	30° $\mathbb{R}$ $\mathbb{B}$		direct	15467 May 03 00:12	8° $\mathbb{B}$ 53'57	
morning rise	15466 May 15 20:27	25° $\mathbb{B}$ 27'09		morning max el	15467 May 09 08:01	12° $\mathbb{B}$ 11'58	18°05'30
direct	15466 May 19 03:00	24° $\mathbb{B}$ 26'12			15467 May 22 02:23	0° $\mathbb{I}$	
morning max el	15466 May 25 17:36	27° $\mathbb{B}$ 58'20	18°40'01	desc. node	15467 May 23 15:12	2° $\mathbb{I}$ 27'47	
	15466 May 27 15:28	0° $\mathbb{I}$		morning set	15467 May 28 01:09	9° $\mathbb{I}$ 36'08	
desc. node	15466 Jun 05 18:17	12° $\mathbb{I}$ 29'26			15467 Jun 09 19:10	0° $\mathbb{E}$	
morning set	15466 Jun 16 09:19	28° $\mathbb{I}$ 55'19		superior conj	15467 Jun 11 21:32	3° $\mathbb{E}$ 18'08	-1°58'47
	15466 Jun 17 01:52	0° $\mathbb{E}$		minimum elong	15467 Jun 11 13:35	2° $\mathbb{E}$ 46'53	1°59'09
max. Earth dist.	15466 Jul 01 13:57	22° $\mathbb{E}$ 37'22	1.45885 AU	max. Earth dist.	15467 Jun 14 10:27	7° $\mathbb{E}$ 16'39	1.45871 AU
superior conj	15466 Jul 02 11:28	24° $\mathbb{E}$ 01'20	-2°13'31	evening rise	15467 Jun 28 00:29	28° $\mathbb{E}$ 20'42	
minimum elong	15466 Jul 02 09:39	23° $\mathbb{E}$ 54'16	2°14'21		15467 Jun 29 02:14	0° $\mathbb{I}$	
	15466 Jul 06 07:13	0° $\mathbb{I}$		greatest brilliancy	15467 Jul 10 08:19	17° $\mathbb{I}$ 09'52	-0.7m
evening rise	15466 Jul 18 00:34	18° $\mathbb{I}$ 31'20		asc. node	15467 Jul 17 20:49	27° $\mathbb{I}$ 46'19	
greatest brilliancy	15466 Jul 24 21:16	29° $\mathbb{I}$ 26'28	-0.9m		15467 Jul 19 15:50	0° $\mathbb{H}$	
	15466 Jul 25 05:46	0° $\mathbb{H}$		evening max el	15467 Jul 22 06:41	2° $\mathbb{H}$ 52'37	19°18'45
asc. node	15466 Jul 31 00:05	8° $\mathbb{H}$ 52'32		retrograde	15467 Jul 29 07:14	6° $\mathbb{H}$ 46'21	
evening max el	15466 Aug 07 21:37	19° $\mathbb{H}$ 01'45	18°35'57	evening set	15467 Aug 01 21:47	5° $\mathbb{H}$ 30'56	
retrograde	15466 Aug 14 10:04	22° $\mathbb{H}$ 32'47		inferior conj	15467 Aug 07 07:38	29° $\mathbb{I}$ 39'57	2°54'12
evening set	15466 Aug 17 14:55	21° $\mathbb{H}$ 34'37		minimum elong	15467 Aug 07 09:11	29° $\mathbb{I}$ 34'52	2°53'26
inferior conj	15466 Aug 23 07:16	15° $\mathbb{H}$ 57'12	2°27'45		15467 Aug 07 01:29	30° $\mathbb{R}$ $\mathbb{I}$	
minimum elong	15466 Aug 23 09:29	15° $\mathbb{H}$ 50'24	2°26'56	min. Earth dist.	15467 Aug 08 17:00	27° $\mathbb{I}$ 50'55	0.67199 AU
min. Earth dist.	15466 Aug 25 06:52	13° $\mathbb{H}$ 31'59	0.65641 AU	morning rise	15467 Aug 12 19:58	23° $\mathbb{I}$ 13'55	
morning rise	15466 Aug 29 02:54	9° $\mathbb{H}$ 32'45		direct	15467 Aug 18 19:52	20° $\mathbb{I}$ 38'45	
desc. node	15466 Sep 01 15:57	7° $\mathbb{H}$ 24'48		desc. node	15467 Aug 19 13:24	20° $\mathbb{I}$ 40'49	
direct	15466 Sep 04 12:03	6° $\mathbb{H}$ 54'36		morning max el	15467 Aug 31 06:04	28° $\mathbb{I}$ 03'50	25°42'23
morning max el	15466 Sep 17 18:53	14° $\mathbb{H}$ 44'35	26°53'55		15467 Sep 02 02:17	0° $\mathbb{H}$	
	15466 Sep 30 06:36	0° $\mathbb{E}$			15467 Sep 23 23:40	0° $\mathbb{E}$	
	15466 Oct 19 00:25	0° $\mathbb{M}$		morning set	15467 Oct 06 04:52	20° $\mathbb{E}$ 47'31	
morning set	15466 Oct 23 11:42	8° $\mathbb{M}$ 19'36		max. Earth dist.	15467 Oct 09 19:53	27° $\mathbb{E}$ 32'24	1.35750 AU
asc. node	15466 Oct 27 01:48	15° $\mathbb{M}$ 21'22			15467 Oct 11 02:45	0° $\mathbb{M}$	
max. Earth dist.	15466 Oct 27 14:55	16° $\mathbb{M}$ 27'16	1.33785 AU	asc. node	15467 Oct 13 22:30	5° $\mathbb{M}$ 31'05	
superior conj	15466 Nov 01 02:35	25° $\mathbb{M}$ 41'58	0°45'09				

superior conj	15467 Oct 15 19:47	9° $\mathbb{M}$ 17'30	0°17'13	morning set	15468 Sep 17 03:43	2° $\underline{\Omega}$ 26'44	
minimum elong	15467 Oct 15 18:47	9° $\mathbb{M}$ 12'23	0°17'31	max. Earth dist.	15468 Sep 20 19:09	8° $\underline{\Omega}$ 51'11	1.38050 AU
evening rise	15467 Oct 23 15:31	25° $\mathbb{M}$ 21'49					
	15467 Oct 25 22:03	0° $\mathcal{A}$		superior conj	15468 Sep 28 01:19	22° $\underline{\Omega}$ 19'01	-0°15'42
evening max el	15467 Nov 10 15:50	25° $\mathcal{A}$ 06'55	20°13'19	minimum elong	15468 Sep 28 02:23	22° $\underline{\Omega}$ 24'06	0°15'14
desc. node	15467 Nov 15 10:13	28° $\mathcal{A}$ 49'08		behind sun begin	15468 Sep 28 00:05	22° $\underline{\Omega}$ 13'05	
	15467 Nov 18 05:48	0° $\mathcal{B}$		behind sun end	15468 Sep 28 04:41	22° $\underline{\Omega}$ 35'07	
retrograde	15467 Nov 21 08:30	0° $\mathcal{B}$ 26'25		asc. node	15468 Sep 29 19:08	25° $\underline{\Omega}$ 40'57	
evening set	15467 Nov 23 12:45	0° $\mathcal{B}$ 14'13			15468 Oct 02 00:03	0° $\mathbb{M}$	
	15467 Nov 24 14:01	30° $\mathcal{R}$ $\mathcal{A}$		evening rise	15468 Oct 06 17:36	9° $\mathbb{M}$ 23'22	
inferior conj	15467 Dec 02 08:51	26° $\mathcal{A}$ 17'41	-4°53'38		15468 Oct 18 02:21	0° $\mathcal{A}$	
minimum elong	15467 Dec 01 22:52	26° $\mathcal{A}$ 32'29	4°50'10	evening max el	15468 Oct 23 06:50	6° $\mathcal{A}$ 31'50	19°08'57
min. Earth dist.	15467 Dec 04 00:37	25° $\mathcal{A}$ 18'38	0.54799 AU	retrograde	15468 Nov 01 09:02	11° $\mathcal{A}$ 06'03	
morning rise	15467 Dec 10 08:18	22° $\mathcal{A}$ 14'08		desc. node	15468 Nov 01 07:28	11° $\mathcal{A}$ 06'03	
direct	15467 Dec 15 02:40	21° $\mathcal{A}$ 25'01		evening set	15468 Nov 03 06:07	10° $\mathcal{A}$ 55'10	
morning max el	15467 Dec 28 16:15	28° $\mathcal{A}$ 06'01	24°03'40	inferior conj	15468 Nov 11 17:05	6° $\mathcal{A}$ 42'23	-3°16'04
	15467 Dec 30 13:35	0° $\mathcal{B}$		minimum elong	15468 Nov 11 09:01	6° $\mathcal{A}$ 56'04	3°12'20
asc. node	15468 Jan 09 22:21	14° $\mathcal{B}$ 00'45		min. Earth dist.	15468 Nov 14 10:54	4° $\mathcal{A}$ 51'12	0.56044 AU
	15468 Jan 18 14:32	0° $\approx$		morning rise	15468 Nov 19 09:23	2° $\mathcal{A}$ 06'27	
morning set	15468 Jan 22 06:07	7° $\approx$ 38'34		direct	15468 Nov 25 00:06	0° $\mathcal{A}$ 53'35	
				morning max el	15468 Dec 09 02:17	8° $\mathcal{A}$ 03'42	25°47'45
superior conj	15468 Jan 29 01:33	22° $\approx$ 29'43	1°32'18		15468 Dec 25 07:52	0° $\mathcal{B}$	
minimum elong	15468 Jan 29 02:58	22° $\approx$ 37'30	1°32'51	asc. node	15468 Dec 26 19:32	2° $\mathcal{B}$ 36'17	
max. Earth dist.	15468 Jan 31 14:40	28° $\approx$ 00'05	1.32612 AU	morning set	15469 Jan 05 17:32	22° $\mathcal{B}$ 16'41	
	15468 Feb 01 13:11	0° $\mathcal{H}$			15469 Jan 09 06:10	0° $\approx$	
evening rise	15468 Feb 05 15:39	8° $\mathcal{H}$ 29'39					
desc. node	15468 Feb 11 10:16	19° $\mathcal{H}$ 38'58		superior conj	15469 Jan 12 11:14	7° $\approx$ 08'16	1°37'36
	15468 Feb 17 07:25	0° $\mathcal{Y}$		minimum elong	15469 Jan 12 11:37	7° $\approx$ 10'27	1°38'22
evening max el	15468 Mar 10 13:17	29° $\mathcal{Y}$ 57'43	27°30'49	max. Earth dist.	15469 Jan 13 18:34	10° $\approx$ 01'55	1.31587 AU
	15468 Mar 10 14:15	0° $\mathcal{B}$		evening rise	15469 Jan 19 13:46	22° $\approx$ 32'00	
retrograde	15468 Mar 24 07:25	7° $\mathcal{B}$ 27'55			15469 Jan 23 06:06	0° $\mathcal{H}$	
evening set	15468 Mar 31 02:09	5° $\mathcal{B}$ 01'56		desc. node	15469 Jan 28 06:56	9° $\mathcal{H}$ 30'06	
min. Earth dist.	15468 Apr 03 21:18	1° $\mathcal{B}$ 41'43	0.63922 AU		15469 Feb 10 04:06	0° $\mathcal{Y}$	
	15468 Apr 05 12:40	30° $\mathcal{R}$ $\mathcal{Y}$		evening max el	15469 Feb 20 23:00	12° $\mathcal{Y}$ 42'53	27°32'18
inferior conj	15468 Apr 06 13:52	28° $\mathcal{Y}$ 53'51	-0°04'17	retrograde	15469 Mar 06 22:00	20° $\mathcal{Y}$ 07'54	
minimum elong	15468 Apr 06 14:01	28° $\mathcal{Y}$ 53'29	0°04'36	evening set	15469 Mar 13 18:02	17° $\mathcal{Y}$ 55'03	
transit middle	15468 Apr 06 14:01	28° $\mathcal{Y}$ 53'29	0°04'36	min. Earth dist.	15469 Mar 17 12:23	14° $\mathcal{Y}$ 59'26	0.61793 AU
transit begin	15468 Apr 06 11:01	29° $\mathcal{Y}$ 01'20		inferior conj	15469 Mar 20 14:07	12° $\mathcal{Y}$ 09'30	-1°19'28
transit end	15468 Apr 06 17:00	28° $\mathcal{Y}$ 45'40		minimum elong	15469 Mar 20 16:54	12° $\mathcal{Y}$ 03'02	1°18'26
asc. node	15468 Apr 06 19:17	28° $\mathcal{Y}$ 39'45		asc. node	15469 Mar 24 16:41	8° $\mathcal{Y}$ 43'33	
morning rise	15468 Apr 13 04:10	23° $\mathcal{Y}$ 34'47		morning rise	15469 Mar 27 18:54	7° $\mathcal{Y}$ 08'03	
direct	15468 Apr 15 16:16	23° $\mathcal{Y}$ 03'25		direct	15469 Mar 29 23:47	6° $\mathcal{Y}$ 46'35	
morning max el	15468 Apr 22 01:22	26° $\mathcal{Y}$ 19'18	17°48'15	morning max el	15469 Apr 05 18:40	10° $\mathcal{Y}$ 11'50	17°48'45
	15468 Apr 25 06:27	0° $\mathcal{B}$			15469 Apr 18 23:21	0° $\mathcal{B}$	
morning set	15468 May 08 20:06	21° $\mathcal{B}$ 34'22		morning set	15469 Apr 21 13:17	4° $\mathcal{B}$ 34'55	
desc. node	15468 May 09 12:02	22° $\mathcal{B}$ 41'51		desc. node	15469 Apr 26 08:46	13° $\mathcal{B}$ 06'41	
	15468 May 13 20:01	0° $\mathbb{I}$					
superior conj	15468 May 21 21:48	13° $\mathbb{I}$ 17'22	-1°28'28	superior conj	15469 May 02 20:55	24° $\mathcal{B}$ 20'45	-0°50'50
minimum elong	15468 May 21 13:38	12° $\mathbb{I}$ 44'20	1°28'22	minimum elong	15469 May 02 16:11	24° $\mathcal{B}$ 00'46	0°50'47
max. Earth dist.	15468 May 27 06:10	21° $\mathbb{I}$ 50'24	1.45114 AU		15469 May 06 05:58	0° $\mathbb{I}$	
	15468 Jun 01 11:09	0° $\mathcal{E}$		max. Earth dist.	15469 May 09 22:20	6° $\mathbb{I}$ 01'44	1.43698 AU
evening rise	15468 Jun 06 11:46	7° $\mathcal{E}$ 44'42		evening rise	15469 May 17 02:54	17° $\mathbb{I}$ 25'51	
	15468 Jun 21 09:22	0° $\mathcal{Q}$			15469 May 25 08:57	0° $\mathcal{E}$	
asc. node	15468 Jul 03 17:38	16° $\mathcal{Q}$ 03'44		evening max el	15469 Jun 16 16:11	0° $\mathcal{Q}$	
evening max el	15468 Jul 04 09:58	16° $\mathcal{Q}$ 45'27	20°16'50	asc. node	15469 Jun 17 07:16	0° $\mathcal{Q}$ 38'26	21°27'28
retrograde	15468 Jul 12 06:12	21° $\mathcal{Q}$ 13'41		retrograde	15469 Jun 20 14:33	3° $\mathcal{Q}$ 32'48	
evening set	15468 Jul 16 07:01	19° $\mathcal{Q}$ 40'33		evening set	15469 Jun 26 04:59	5° $\mathcal{Q}$ 49'17	
inferior conj	15468 Jul 21 13:23	13° $\mathcal{Q}$ 37'14	3°07'17		15469 Jun 30 16:39	3° $\mathcal{Q}$ 59'08	
minimum elong	15468 Jul 21 14:01	13° $\mathcal{Q}$ 35'05	3°06'31	inferior conj	15469 Jul 04 06:54	30° $\mathcal{R}$ $\mathcal{E}$	
min. Earth dist.	15468 Jul 22 08:48	12° $\mathcal{Q}$ 30'54	0.68310 AU	minimum elong	15469 Jul 05 22:15	27° $\mathcal{E}$ 45'01	3°08'41
morning rise	15468 Jul 26 20:42	7° $\mathcal{Q}$ 13'52			15469 Jul 05 21:55	27° $\mathcal{E}$ 46'12	3°07'50
direct	15468 Aug 01 09:18	4° $\mathcal{Q}$ 48'52		min. Earth dist.	15469 Jul 06 04:16	27° $\mathcal{E}$ 24'03	0.68943 AU
desc. node	15468 Aug 05 10:49	5° $\mathcal{Q}$ 53'03		morning rise	15469 Jul 11 02:58	21° $\mathcal{E}$ 26'58	
morning max el	15468 Aug 12 16:54	11° $\mathcal{Q}$ 35'00	24°17'14	direct	15469 Jul 16 03:21	19° $\mathcal{E}$ 17'21	
	15468 Aug 27 11:02	0° $\mathbb{P}$		desc. node	15469 Jul 23 08:08	22° $\mathcal{E}$ 36'57	
	15468 Sep 15 17:30	0° $\underline{\Omega}$		morning max el	15469 Jul 26 04:40	25° $\mathcal{E}$ 14'33	22°47'52
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































































































































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morning set	15469 Aug 29 04:12	13° $\mathbb{M}$ 08'23			15470 Jul 25 02:24	0° $\mathbb{Q}$	
max. Earth dist.	15469 Sep 02 18:38	20° $\mathbb{M}$ 49'22	1.40443 AU	morning set	15470 Aug 09 04:39	22° $\mathbb{Q}$ 48'36	
	15469 Sep 08 01:18	0° $\mathbb{L}$			15470 Aug 13 17:00	0° $\mathbb{M}$	
				max. Earth dist.	15470 Aug 15 23:08	3° $\mathbb{M}$ 39'50	1.42646 AU
superior conj	15469 Sep 10 15:09	4° $\mathbb{L}$ 37'41	-0°51'42				
minimum elong	15469 Sep 10 19:10	4° $\mathbb{L}$ 55'53	0°51'04	superior conj	15470 Aug 23 08:56	16° $\mathbb{M}$ 03'59	-1°27'19
asc. node	15469 Sep 16 15:45	15° $\mathbb{L}$ 47'41		minimum elong	15470 Aug 23 15:51	16° $\mathbb{M}$ 33'39	1°26'45
evening rise	15469 Sep 20 11:22	23° $\mathbb{L}$ 02'01			15470 Aug 31 07:14	0° $\mathbb{L}$	
	15469 Sep 24 04:05	0° $\mathbb{M}$		evening rise	15470 Sep 03 16:47	6° $\mathbb{L}$ 07'39	
evening max el	15469 Oct 06 09:48	18° $\mathbb{M}$ 44'03	18°26'44	asc. node	15470 Sep 03 12:22	5° $\mathbb{L}$ 47'38	
retrograde	15469 Oct 14 04:23	22° $\mathbb{M}$ 40'43			15470 Sep 18 09:32	0° $\mathbb{M}$	
evening set	15469 Oct 16 04:05	22° $\mathbb{M}$ 25'59		evening max el	15470 Sep 19 20:34	1° $\mathbb{M}$ 34'37	18°05'16
desc. node	15469 Oct 19 04:46	21° $\mathbb{M}$ 12'15		retrograde	15470 Sep 26 17:46	5° $\mathbb{M}$ 06'26	
inferior conj	15469 Oct 23 22:36	17° $\mathbb{M}$ 52'41	-1°31'19	evening set	15470 Sep 29 00:19	4° $\mathbb{M}$ 43'36	
minimum elong	15469 Oct 23 19:02	17° $\mathbb{M}$ 59'45	1°29'17		15470 Oct 05 20:40	30° $\mathbb{R}$ $\mathbb{L}$	
min. Earth dist.	15469 Oct 27 04:09	15° $\mathbb{M}$ 19'57	0.57934 AU	inferior conj	15470 Oct 06 01:13	29° $\mathbb{L}$ 49'33	0°00'42
morning rise	15469 Oct 31 06:28	12° $\mathbb{M}$ 39'23		minimum elong	15470 Oct 06 01:15	29° $\mathbb{L}$ 49'29	0°01'04
direct	15469 Nov 06 12:12	10° $\mathbb{M}$ 59'28		transit middle	15470 Oct 06 01:15	29° $\mathbb{L}$ 49'29	0°01'04
morning max el	15469 Nov 20 19:01	18° $\mathbb{M}$ 33'03	27°07'44	transit begin	15470 Oct 05 21:56	29° $\mathbb{L}$ 57'06	
	15469 Nov 30 10:23	0° $\mathbb{X}$		transit end	15470 Oct 06 04:35	29° $\mathbb{L}$ 41'49	
asc. node	15469 Dec 13 16:37	21° $\mathbb{X}$ 44'57		desc. node	15470 Oct 06 02:07	29° $\mathbb{L}$ 47'29	
	15469 Dec 17 21:20	0° $\mathbb{Z}$		min. Earth dist.	15470 Oct 09 06:05	26° $\mathbb{L}$ 54'04	0.60169 AU
morning set	15469 Dec 21 02:37	6° $\mathbb{Z}$ 44'07		morning rise	15470 Oct 12 22:58	24° $\mathbb{L}$ 04'27	
				direct	15470 Oct 19 13:20	21° $\mathbb{L}$ 59'06	
superior conj	15469 Dec 27 22:35	21° $\mathbb{Z}$ 48'15	1°36'50	morning max el	15470 Nov 02 19:38	29° $\mathbb{L}$ 49'05	27°51'41
minimum elong	15469 Dec 27 21:55	21° $\mathbb{Z}$ 44'34	1°37'42		15470 Nov 03 00:03	0° $\mathbb{M}$	
max. Earth dist.	15469 Dec 28 01:55	22° $\mathbb{Z}$ 06'59	1.31084 AU		15470 Nov 24 11:28	0° $\mathbb{X}$	
	15469 Dec 31 14:52	0° $\mathbb{A}$		asc. node	15470 Nov 30 13:35	11° $\mathbb{X}$ 17'52	
evening rise	15470 Jan 03 18:01	6° $\mathbb{A}$ 48'09		morning set	15470 Dec 05 07:33	20° $\mathbb{X}$ 56'27	
desc. node	15470 Jan 15 03:39	28° $\mathbb{A}$ 55'23			15470 Dec 09 12:26	0° $\mathbb{Z}$	
	15470 Jan 15 18:42	0° $\mathbb{H}$		max. Earth dist.	15470 Dec 11 09:13	4° $\mathbb{Z}$ 07'51	1.31126 AU
evening max el	15470 Feb 03 03:01	24° $\mathbb{H}$ 41'32	26°59'24				
	15470 Feb 10 04:06	0° $\mathbb{Y}$		superior conj	15470 Dec 12 09:45	6° $\mathbb{Z}$ 24'38	1°30'07
retrograde	15470 Feb 17 03:32	1° $\mathbb{Y}$ 56'55		minimum elong	15470 Dec 12 08:11	6° $\mathbb{Z}$ 15'51	1°30'53
evening set	15470 Feb 23 18:17	0° $\mathbb{Y}$ 04'50		evening rise	15470 Dec 19 02:22	21° $\mathbb{Z}$ 13'21	
	15470 Feb 23 21:45	30° $\mathbb{R}$ $\mathbb{H}$			15470 Dec 23 06:52	0° $\mathbb{A}$	
min. Earth dist.	15470 Feb 27 17:14	27° $\mathbb{H}$ 24'18	0.59554 AU	desc. node	15471 Jan 02 00:27	17° $\mathbb{A}$ 45'25	
inferior conj	15470 Mar 02 22:24	24° $\mathbb{H}$ 48'58	-2°45'25		15471 Jan 10 15:14	0° $\mathbb{H}$	
minimum elong	15470 Mar 03 04:38	24° $\mathbb{H}$ 36'23	2°42'52	evening max el	15471 Jan 15 23:16	5° $\mathbb{H}$ 48'15	25°52'25
morning rise	15470 Mar 10 18:28	20° $\mathbb{H}$ 07'38		retrograde	15471 Jan 29 21:51	12° $\mathbb{H}$ 50'48	
asc. node	15470 Mar 11 14:07	19° $\mathbb{H}$ 57'51		evening set	15471 Feb 04 23:12	11° $\mathbb{H}$ 25'22	
direct	15470 Mar 12 18:34	19° $\mathbb{H}$ 52'29		min. Earth dist.	15471 Feb 09 12:21	8° $\mathbb{H}$ 46'52	0.57431 AU
morning max el	15470 Mar 20 08:17	23° $\mathbb{H}$ 38'25	18°08'00	inferior conj	15471 Feb 12 11:17	6° $\mathbb{H}$ 43'12	-4°13'55
	15470 Mar 25 10:30	0° $\mathbb{Y}$		minimum elong	15471 Feb 12 20:18	6° $\mathbb{H}$ 27'26	4°10'43
morning set	15470 Apr 04 22:42	18° $\mathbb{Y}$ 19'12		morning rise	15471 Feb 20 20:24	2° $\mathbb{H}$ 23'12	
	15470 Apr 11 05:38	0° $\mathbb{B}$		direct	15471 Feb 22 20:33	2° $\mathbb{H}$ 10'32	
desc. node	15470 Apr 13 05:25	3° $\mathbb{B}$ 37'24		asc. node	15471 Feb 26 11:30	2° $\mathbb{H}$ 54'15	
				morning max el	15471 Mar 03 14:14	6° $\mathbb{H}$ 27'43	18°47'51
superior conj	15470 Apr 14 18:58	6° $\mathbb{B}$ 26'02	-0°12'49		15471 Mar 18 11:58	0° $\mathbb{Y}$	
minimum elong	15470 Apr 14 17:54	6° $\mathbb{B}$ 21'17	0°13'06	morning set	15471 Mar 19 19:29	2° $\mathbb{Y}$ 33'11	
behind sun begin	15470 Apr 14 13:28	6° $\mathbb{B}$ 01'29					
behind sun end	15470 Apr 14 22:20	6° $\mathbb{B}$ 41'02		superior conj	15471 Mar 28 12:21	19° $\mathbb{Y}$ 23'03	0°21'19
max. Earth dist.	15470 Apr 22 09:30	19° $\mathbb{B}$ 36'07	1.41778 AU	minimum elong	15471 Mar 28 13:43	19° $\mathbb{Y}$ 29'30	0°20'52
evening rise	15470 Apr 27 10:31	27° $\mathbb{B}$ 53'33		desc. node	15471 Mar 31 02:03	24° $\mathbb{Y}$ 10'33	
	15470 Apr 28 18:03	0° $\mathbb{I}$			15471 Apr 03 07:08	0° $\mathbb{B}$	
	15470 May 19 00:10	0° $\mathbb{Q}$		max. Earth dist.	15471 Apr 04 16:45	2° $\mathbb{B}$ 28'57	1.39564 AU
evening max el	15470 May 30 23:51	14° $\mathbb{Q}$ 31'22	22°46'30	evening rise	15471 Apr 08 15:21	9° $\mathbb{B}$ 17'04	
asc. node	15470 Jun 07 11:33	19° $\mathbb{Q}$ 57'16			15471 Apr 21 15:58	0° $\mathbb{I}$	
retrograde	15470 Jun 10 01:56	20° $\mathbb{Q}$ 26'49		evening max el	15471 May 13 14:00	28° $\mathbb{I}$ 25'45	24°07'59
evening set	15470 Jun 15 00:59	18° $\mathbb{Q}$ 21'11			15471 May 15 05:41	0° $\mathbb{Q}$	
inferior conj	15470 Jun 20 08:09	11° $\mathbb{Q}$ 58'21	2°59'25	retrograde	15471 May 24 19:42	5° $\mathbb{Q}$ 00'44	
minimum elong	15470 Jun 20 06:56	12° $\mathbb{Q}$ 02'35	2°58'23	asc. node	15471 May 25 08:38	4° $\mathbb{Q}$ 59'29	
min. Earth dist.	15470 Jun 20 01:10	12° $\mathbb{Q}$ 22'41	0.69089 AU	evening set	15471 Jun 30 06:23	2° $\mathbb{Q}$ 42'11	
morning rise	15470 Jun 25 12:47	5° $\mathbb{Q}$ 47'32			15471 Jun 01 20:10	30° $\mathbb{R}$ $\mathbb{I}$	
direct	15470 Jun 30 00:51	3° $\mathbb{Q}$ 56'23		min. Earth dist.	15471 Jun 03 21:21	27° $\mathbb{I}$ 20'51	0.68753 AU
morning max el	15470 Jul 08 19:57	9° $\mathbb{Q}$ 02'05	21°22'41	inferior conj	15471 Jun 04 17:13	26° $\mathbb{I}$ 13'30	2°39'45
































































































































minimum elong	15471 Jun 04 15:20	26° $\Pi$ 19'52	2°38'30	direct	15472 May 28 00:36	3° $\Pi$ 22'44	
morning rise	15471 Jun 10 00:20	20° $\Pi$ 11'20		morning max el	15472 Jun 03 22:30	7° $\Pi$ 08'15	19°07'35
direct	15471 Jun 14 00:27	18° $\Pi$ 40'05		desc. node	15472 Jun 12 23:38	18° $\Pi$ 30'40	
morning max el	15471 Jun 21 17:29	22° $\Pi$ 59'54	20°07'57	greatest brilliancy	15472 Jun 16 20:38	24° $\Pi$ 11'45	-0.7m
desc. node	15471 Jun 27 02:32	29° $\Pi$ 11'15			15472 Jun 20 16:54	0° $\mathfrak{C}$	
	15471 Jun 27 17:40	0° $\mathfrak{C}$		morning set	15472 Jun 27 16:43	10° $\mathfrak{C}$ 43'42	
	15471 Jul 18 07:53	0° $\Omega$			15472 Jul 10 02:48	0° $\Omega$	
morning set	15471 Jul 19 11:03	1° $\Omega$ 44'15		max. Earth dist.	15472 Jul 11 03:56	1° $\Omega$ 38'23	1.45551 AU
max. Earth dist.	15471 Jul 29 10:39	17° $\Omega$ 20'38	1.44411 AU				
				superior conj	15472 Jul 13 23:59	6° $\Omega$ 05'42	-2°12'54
superior conj	15471 Aug 04 03:22	26° $\Omega$ 31'14	-1°56'51	minimum elong	15472 Jul 14 02:43	6° $\Omega$ 16'30	2°13'37
minimum elong	15471 Aug 04 10:47	27° $\Omega$ 01'29	1°56'51	evening rise	15472 Jul 28 18:38	29° $\Omega$ 49'26	
	15471 Aug 06 06:19	0° $\mathfrak{N}$			15472 Jul 28 21:14	0° $\mathfrak{N}$	
evening rise	15471 Aug 17 04:55	18° $\mathfrak{N}$ 27'21		asc. node	15472 Aug 07 05:37	15° $\mathfrak{N}$ 08'48	
asc. node	15471 Aug 21 08:58	25° $\mathfrak{N}$ 36'13		evening max el	15472 Aug 17 01:26	28° $\mathfrak{N}$ 28'47	18°18'51
	15471 Aug 23 23:25	0° $\mathfrak{A}$			15472 Aug 18 18:50	0° $\mathfrak{A}$	
evening max el	15471 Sep 03 10:57	14° $\mathfrak{A}$ 52'28	18°02'58	retrograde	15472 Aug 23 10:32	1° $\mathfrak{A}$ 52'27	
retrograde	15471 Sep 09 21:15	18° $\mathfrak{A}$ 13'23		evening set	15472 Aug 26 10:07	1° $\mathfrak{A}$ 03'26	
evening set	15471 Sep 12 12:04	17° $\mathfrak{A}$ 38'49			15472 Aug 27 23:57	30° $\mathfrak{R}$ $\mathfrak{N}$	
inferior conj	15471 Sep 18 21:35	12° $\mathfrak{A}$ 25'56	1°13'01	inferior conj	15472 Sep 01 07:41	25° $\mathfrak{N}$ 34'09	2°05'32
minimum elong	15471 Sep 18 23:28	12° $\mathfrak{A}$ 20'58	1°12'28	minimum elong	15472 Sep 01 10:03	25° $\mathfrak{N}$ 27'15	2°04'43
min. Earth dist.	15471 Sep 21 17:42	9° $\mathfrak{A}$ 28'38	0.62456 AU	min. Earth dist.	15472 Sep 03 15:08	22° $\mathfrak{N}$ 53'16	0.64564 AU
desc. node	15471 Sep 22 23:33	8° $\mathfrak{A}$ 16'30		morning rise	15472 Sep 07 08:28	19° $\mathfrak{N}$ 13'26	
morning rise	15471 Sep 25 08:31	6° $\mathfrak{A}$ 18'22		desc. node	15472 Sep 08 21:00	18° $\mathfrak{N}$ 08'44	
direct	15471 Oct 02 00:55	3° $\mathfrak{A}$ 53'48		direct	15472 Sep 13 21:21	16° $\mathfrak{N}$ 37'58	
morning max el	15471 Oct 16 02:28	11° $\mathfrak{A}$ 52'02	27°56'22	morning max el	15472 Sep 27 13:01	24° $\mathfrak{N}$ 34'37	27°25'18
	15471 Oct 30 11:55	0° $\mathfrak{M}$			15472 Oct 02 11:08	0° $\mathfrak{A}$	
	15471 Nov 16 20:54	0° $\mathfrak{J}$			15472 Oct 22 22:16	0° $\mathfrak{M}$	
asc. node	15471 Nov 17 10:29	1° $\mathfrak{J}$ 07'21		morning set	15472 Nov 01 19:55	18° $\mathfrak{M}$ 12'32	
morning set	15471 Nov 19 06:09	4° $\mathfrak{J}$ 47'41		asc. node	15472 Nov 03 07:18	21° $\mathfrak{M}$ 08'14	
max. Earth dist.	15471 Nov 24 12:41	15° $\mathfrak{J}$ 55'16	1.31725 AU	max. Earth dist.	15472 Nov 06 08:48	27° $\mathfrak{M}$ 23'20	1.32883 AU
					15472 Nov 07 14:46	0° $\mathfrak{J}$	
superior conj	15471 Nov 26 18:49	20° $\mathfrak{J}$ 51'06	1°17'24				
minimum elong	15471 Nov 26 16:37	20° $\mathfrak{J}$ 39'04	1°17'59	superior conj	15472 Nov 09 23:43	5° $\mathfrak{J}$ 02'37	0°58'39
	15471 Nov 30 22:14	0° $\mathfrak{Z}$		minimum elong	15472 Nov 09 21:24	4° $\mathfrak{J}$ 50'12	0°59'03
evening rise	15471 Dec 03 12:50	5° $\mathfrak{Z}$ 41'54		evening rise	15472 Nov 16 23:41	20° $\mathfrak{J}$ 09'42	
	15471 Dec 16 03:19	0° $\mathfrak{A}$			15472 Nov 21 17:26	0° $\mathfrak{Z}$	
desc. node	15471 Dec 19 21:20	5° $\mathfrak{A}$ 46'24		desc. node	15472 Dec 05 18:19	22° $\mathfrak{Z}$ 41'02	
evening max el	15471 Dec 28 11:38	16° $\mathfrak{A}$ 07'14	24°19'15	evening max el	15472 Dec 08 21:21	26° $\mathfrak{Z}$ 03'27	22°35'54
retrograde	15472 Jan 11 02:49	22° $\mathfrak{A}$ 54'08			15472 Dec 13 20:16	0° $\mathfrak{A}$	
evening set	15472 Jan 16 05:25	21° $\mathfrak{A}$ 57'09		retrograde	15472 Dec 21 19:19	2° $\mathfrak{A}$ 27'12	
min. Earth dist.	15472 Jan 21 23:20	19° $\mathfrak{A}$ 04'03	0.55696 AU	evening set	15472 Dec 25 15:05	1° $\mathfrak{A}$ 55'12	
inferior conj	15472 Jan 24 03:01	17° $\mathfrak{A}$ 45'08	-5°27'39		15472 Dec 30 09:32	30° $\mathfrak{R}$ $\mathfrak{Z}$	
minimum elong	15472 Jan 24 10:57	17° $\mathfrak{A}$ 32'59	5°25'34	min. Earth dist.	15473 Jan 02 05:35	28° $\mathfrak{Z}$ 27'51	0.54635 AU
morning rise	15472 Feb 01 18:24	13° $\mathfrak{A}$ 45'08		inferior conj	15473 Jan 03 00:55	28° $\mathfrak{Z}$ 00'35	-6°01'02
direct	15472 Feb 04 03:05	13° $\mathfrak{A}$ 30'30		minimum elong	15473 Jan 03 01:30	27° $\mathfrak{Z}$ 59'46	6°00'11
asc. node	15472 Feb 13 08:53	17° $\mathfrak{A}$ 33'20		morning rise	15473 Jan 11 13:07	24° $\mathfrak{Z}$ 12'48	
morning max el	15472 Feb 14 08:16	18° $\mathfrak{A}$ 27'26	19°50'25	direct	15473 Jan 14 16:30	23° $\mathfrak{Z}$ 50'22	
	15472 Feb 22 22:56	0° $\mathfrak{H}$		morning max el	15473 Jan 26 11:35	29° $\mathfrak{Z}$ 30'58	21°16'09
morning set	15472 Mar 02 23:49	17° $\mathfrak{H}$ 05'22			15473 Jan 26 23:28	0° $\mathfrak{A}$	
	15472 Mar 09 08:36	0° $\mathfrak{Y}$		asc. node	15473 Jan 30 06:15	3° $\mathfrak{A}$ 41'01	
					15473 Feb 14 12:14	0° $\mathfrak{H}$	
superior conj	15472 Mar 10 20:37	2° $\mathfrak{Y}$ 59'35	0°49'34	morning set	15473 Feb 15 08:51	1° $\mathfrak{H}$ 47'08	
minimum elong	15472 Mar 10 23:04	3° $\mathfrak{Y}$ 11'44	0°49'12				
desc. node	15472 Mar 16 22:39	14° $\mathfrak{Y}$ 42'17		superior conj	15473 Feb 22 15:48	17° $\mathfrak{H}$ 04'29	1°11'17
max. Earth dist.	15472 Mar 16 23:20	14° $\mathfrak{Y}$ 45'30	1.37285 AU	minimum elong	15473 Feb 22 18:19	17° $\mathfrak{H}$ 17'32	1°11'14
evening rise	15472 Mar 20 16:19	21° $\mathfrak{Y}$ 31'04		max. Earth dist.	15473 Feb 27 09:20	26° $\mathfrak{H}$ 39'32	1.35175 AU
	15472 Mar 25 13:43	0° $\mathfrak{B}$			15473 Mar 01 02:19	0° $\mathfrak{Y}$	
	15472 Apr 14 13:42	0° $\Pi$		evening rise	15473 Mar 03 10:13	4° $\mathfrak{Y}$ 26'30	
evening max el	15472 Apr 25 03:33	12° $\Pi$ 20'04	25°24'57	desc. node	15473 Mar 03 19:14	5° $\mathfrak{Y}$ 08'44	
retrograde	15472 May 07 09:16	19° $\Pi$ 25'09			15473 Mar 18 10:33	0° $\mathfrak{B}$	
asc. node	15472 May 11 05:48	18° $\Pi$ 23'39		evening max el	15473 Apr 07 17:11	26° $\mathfrak{B}$ 08'04	26°30'04
evening set	15472 May 13 07:16	16° $\Pi$ 57'11			15473 Apr 12 04:12	0° $\Pi$	
min. Earth dist.	15472 May 17 14:42	12° $\Pi$ 12'36	0.67945 AU	retrograde	15473 Apr 20 17:43	3° $\Pi$ 32'03	
inferior conj	15472 May 18 23:30	10° $\Pi$ 26'33	2°09'23	evening set	15473 Apr 27 01:49	0° $\Pi$ 59'38	
minimum elong	15472 May 18 21:20	10° $\Pi$ 33'35	2°07'59	asc. node	15473 Apr 28 03:04	0° $\Pi$ 04'20	
morning rise	15472 May 24 11:49	4° $\Pi$ 34'21			15473 Apr 28 04:55	30° $\mathfrak{R}$ $\mathfrak{B}$	



min. Earth dist.	15473 May 01 03:08	26° $\text{♄}$ 50'15	0.66688 AU	inferior conj	15474 Apr 16 18:54	8° $\text{♄}$ 24'46	0°33'06
inferior conj	15473 May 03 00:53	24° $\text{♄}$ 32'09	1°27'30	minimum elong	15474 Apr 16 18:00	8° $\text{♄}$ 27'15	0°32'15
minimum elong	15473 May 02 22:58	24° $\text{♄}$ 37'58	1°26'10	morning rise	15474 Apr 23 01:52	2° $\text{♄}$ 57'08	
morning rise	15473 May 08 21:09	18° $\text{♄}$ 51'21		direct	15474 Apr 25 18:42	2° $\text{♄}$ 18'41	
direct	15473 May 11 23:26	17° $\text{♄}$ 57'43		morning max el	15474 May 02 02:12	5° $\text{♄}$ 34'33	17°56'02
morning max el	15473 May 18 10:08	21° $\text{♄}$ 22'06	18°23'21	desc. node	15474 May 17 17:32	28° $\text{♄}$ 22'29	
	15473 May 25 08:40	0° $\text{♄}$			15474 May 18 17:10	0° $\text{♄}$	
desc. node	15473 May 30 20:37	8° $\text{♄}$ 16'48		morning set	15474 May 19 20:35	1° $\text{♄}$ 53'07	
morning set	15473 Jun 07 16:55	20° $\text{♄}$ 38'41					
	15473 Jun 13 15:04	0° $\text{♄}$		superior conj	15474 Jun 02 23:30	24° $\text{♄}$ 46'35	-1°47'22
superior conj	15473 Jun 23 09:00	15° $\text{♄}$ 15'41	-2°09'37	minimum elong	15474 Jun 02 14:45	24° $\text{♄}$ 11'53	1°47'29
minimum elong	15473 Jun 23 04:00	14° $\text{♄}$ 56'10	2°10'20		15474 Jun 06 06:59	0° $\text{♄}$	
max. Earth dist.	15473 Jun 23 23:49	16° $\text{♄}$ 13'25	1.45966 AU	max. Earth dist.	15474 Jun 06 19:44	0° $\text{♄}$ 50'04	1.45634 AU
	15473 Jul 02 19:49	0° $\text{♄}$		evening rise	15474 Jun 18 23:59	19° $\text{♄}$ 41'24	
evening rise	15473 Jul 09 07:20	10° $\text{♄}$ 08'35			15474 Jun 25 18:17	0° $\text{♄}$	
greatest brilliancy	15473 Jul 18 18:30	24° $\text{♄}$ 54'54	-0.8m	greatest brilliancy	15474 Jul 03 02:18	10° $\text{♄}$ 56'23	-0.6m
	15473 Jul 22 03:00	0° $\text{♄}$		asc. node	15474 Jul 11 23:05	22° $\text{♄}$ 57'52	
asc. node	15473 Jul 25 02:19	4° $\text{♄}$ 18'38		evening max el	15474 Jul 14 19:39	26° $\text{♄}$ 06'33	19°41'43
evening max el	15473 Jul 31 13:01	12° $\text{♄}$ 15'13	18°52'08		15474 Jul 20 13:12	0° $\text{♄}$	
retrograde	15473 Aug 07 05:45	15° $\text{♄}$ 54'45		retrograde	15474 Jul 22 03:56	0° $\text{♄}$ 14'02	
evening set	15473 Aug 10 14:35	14° $\text{♄}$ 49'24			15474 Jul 23 17:35	30° $\text{♄}$	
inferior conj	15473 Aug 16 03:45	9° $\text{♄}$ 05'48	2°40'44	evening set	15474 Jul 25 22:40	28° $\text{♄}$ 51'17	
minimum elong	15473 Aug 16 05:44	8° $\text{♄}$ 59'32	2°39'56	inferior conj	15474 Jul 31 06:42	22° $\text{♄}$ 54'56	3°01'15
min. Earth dist.	15473 Aug 17 21:15	6° $\text{♄}$ 54'58	0.66349 AU	minimum elong	15474 Jul 31 07:53	22° $\text{♄}$ 51'00	3°00'29
morning rise	15473 Aug 21 20:00	2° $\text{♄}$ 39'47		min. Earth dist.	15474 Aug 01 10:09	21° $\text{♄}$ 23'12	0.67727 AU
desc. node	15473 Aug 26 18:28	0° $\text{♄}$ 08'25		morning rise	15474 Aug 05 16:35	16° $\text{♄}$ 29'20	
direct	15473 Aug 28 01:23	0° $\text{♄}$ 02'04		direct	15474 Aug 11 11:51	13° $\text{♄}$ 57'30	
morning max el	15473 Sep 10 00:34	7° $\text{♄}$ 43'52	26°25'51	desc. node	15474 Aug 13 15:55	14° $\text{♄}$ 15'50	
	15473 Sep 27 09:29	0° $\text{♄}$		morning max el	15474 Aug 23 11:32	21° $\text{♄}$ 08'24	25°07'10
	15473 Oct 15 08:04	0° $\text{♄}$			15474 Aug 31 03:47	0° $\text{♄}$	
morning set	15473 Oct 15 21:42	1° $\text{♄}$ 03'42		morning set	15474 Sep 20 14:27	0° $\text{♄}$	
max. Earth dist.	15473 Oct 19 19:05	8° $\text{♄}$ 32'19	1.34565 AU		15474 Sep 28 07:36	13° $\text{♄}$ 11'48	
asc. node	15473 Oct 21 04:04	11° $\text{♄}$ 15'39		max. Earth dist.	15474 Oct 01 20:30	19° $\text{♄}$ 37'18	1.36692 AU
					15474 Oct 07 07:19	0° $\text{♄}$	
superior conj	15473 Oct 24 22:01	18° $\text{♄}$ 52'56	0°33'58	superior conj	15474 Oct 08 10:40	2° $\text{♄}$ 14'27	0°03'48
minimum elong	15473 Oct 24 20:16	18° $\text{♄}$ 43'54	0°34'17	minimum elong	15474 Oct 08 10:25	2° $\text{♄}$ 13'11	0°04'09
	15473 Oct 30 05:15	0° $\text{♄}$		behind sun begin	15474 Oct 08 04:09	1° $\text{♄}$ 42'15	
evening rise	15473 Nov 01 08:55	4° $\text{♄}$ 31'45		behind sun end	15474 Oct 08 16:41	2° $\text{♄}$ 44'12	
	15473 Nov 15 08:47	0° $\text{♄}$		asc. node	15474 Oct 08 00:44	1° $\text{♄}$ 25'25	
evening max el	15473 Nov 20 14:20	6° $\text{♄}$ 16'07	21°00'15	evening rise	15474 Oct 16 14:19	18° $\text{♄}$ 42'06	
desc. node	15473 Nov 22 15:25	8° $\text{♄}$ 07'08			15474 Oct 22 07:55	0° $\text{♄}$	
retrograde	15473 Dec 02 05:38	12° $\text{♄}$ 02'27		evening max el	15474 Nov 02 21:12	17° $\text{♄}$ 12'22	19°43'18
evening set	15473 Dec 04 20:18	11° $\text{♄}$ 46'16		desc. node	15474 Nov 09 12:36	21° $\text{♄}$ 38'54	
inferior conj	15473 Dec 13 15:51	7° $\text{♄}$ 54'18	-5°34'39	retrograde	15474 Nov 12 21:11	22° $\text{♄}$ 11'57	
minimum elong	15473 Dec 13 07:54	8° $\text{♄}$ 05'36	5°32'24	evening set	15474 Nov 14 20:40	22° $\text{♄}$ 01'08	
min. Earth dist.	15473 Dec 14 11:11	7° $\text{♄}$ 26'47	0.54460 AU	inferior conj	15474 Nov 23 14:19	17° $\text{♄}$ 59'08	-4°15'00
morning rise	15473 Dec 21 19:42	4° $\text{♄}$ 01'50		minimum elong	15474 Nov 23 04:29	18° $\text{♄}$ 14'29	4°11'05
direct	15473 Dec 25 23:46	3° $\text{♄}$ 24'26		min. Earth dist.	15474 Nov 25 19:04	16° $\text{♄}$ 36'51	0.55226 AU
morning max el	15474 Jan 08 01:54	9° $\text{♄}$ 46'16	23°00'15	morning rise	15474 Dec 01 10:39	13° $\text{♄}$ 43'00	
asc. node	15474 Jan 17 03:34	20° $\text{♄}$ 59'11		direct	15474 Dec 06 14:24	12° $\text{♄}$ 44'05	
	15474 Jan 22 13:22	0° $\text{♄}$		morning max el	15474 Dec 20 10:36	19° $\text{♄}$ 39'04	24°49'41
morning set	15474 Jan 30 20:20	16° $\text{♄}$ 32'01			15474 Dec 29 03:39	0° $\text{♄}$	
	15474 Feb 06 02:09	0° $\text{♄}$		asc. node	15475 Jan 04 00:49	9° $\text{♄}$ 10'23	
superior conj	15474 Feb 06 18:40	1° $\text{♄}$ 28'44	1°26'27		15475 Jan 14 18:32	0° $\text{♄}$	
minimum elong	15474 Feb 06 20:36	1° $\text{♄}$ 39'08	1°26'47	morning set	15475 Jan 15 08:15	1° $\text{♄}$ 13'34	
max. Earth dist.	15474 Feb 10 02:08	8° $\text{♄}$ 29'26	1.33416 AU	superior conj	15475 Jan 22 02:28	16° $\text{♄}$ 03'37	1°35'18
evening rise	15474 Feb 14 17:34	17° $\text{♄}$ 54'38		minimum elong	15475 Jan 22 03:29	16° $\text{♄}$ 09'08	1°35'57
desc. node	15474 Feb 18 15:50	25° $\text{♄}$ 25'49		max. Earth dist.	15475 Jan 24 02:27	20° $\text{♄}$ 26'03	1.32114 AU
	15474 Feb 21 03:54	0° $\text{♄}$			15475 Jan 28 14:24	0° $\text{♄}$	
	15474 Mar 12 16:52	0° $\text{♄}$		evening rise	15475 Jan 29 11:04	1° $\text{♄}$ 46'24	
evening max el	15474 Mar 21 06:39	9° $\text{♄}$ 41'29	27°15'56	desc. node	15475 Feb 05 12:26	15° $\text{♄}$ 27'49	
retrograde	15474 Apr 03 20:16	17° $\text{♄}$ 12'55			15475 Feb 14 01:37	0° $\text{♄}$	
evening set	15474 Apr 10 12:00	14° $\text{♄}$ 42'27		evening max el	15475 Mar 03 18:31	22° $\text{♄}$ 48'04	27°35'27
min. Earth dist.	15474 Apr 14 08:45	11° $\text{♄}$ 05'25	0.65029 AU		15475 Mar 15 04:15	0° $\text{♄}$	
asc. node	15474 Apr 15 00:23	10° $\text{♄}$ 22'53		retrograde	15475 Mar 17 15:34	0° $\text{♄}$ 17'07	

	15475 Mar 20 01:10	30° $\Upsilon$			15476 Feb 09 03:55	0° $\Upsilon$	
evening set	15475 Mar 24 11:18	27° $\Upsilon$ 55'59		evening max el	15476 Feb 14 02:21	5° $\Upsilon$ 15'14	27°22'38
min. Earth dist.	15475 Mar 28 05:43	24° $\Upsilon$ 46'48	0.63041 AU	retrograde	15476 Feb 28 02:16	12° $\Upsilon$ 35'40	
inferior conj	15475 Mar 31 02:34	21° $\Upsilon$ 56'10	-0°34'38	evening set	15476 Mar 05 20:54	10° $\Upsilon$ 31'10	
minimum elong	15475 Mar 31 03:42	21° $\Upsilon$ 53'21	0°34'25	min. Earth dist.	15476 Mar 09 16:34	7° $\Upsilon$ 43'04	0.60850 AU
asc. node	15475 Apr 01 21:47	20° $\Upsilon$ 11'36		inferior conj	15476 Mar 12 20:30	4° $\Upsilon$ 57'34	-1°54'56
morning rise	15475 Apr 06 22:48	16° $\Upsilon$ 44'03		minimum elong	15476 Mar 13 00:41	4° $\Upsilon$ 48'23	1°53'13
direct	15475 Apr 09 07:31	16° $\Upsilon$ 17'25		asc. node	15476 Mar 18 19:13	0° $\Upsilon$ 38'54	
morning max el	15475 Apr 15 19:52	19° $\Upsilon$ 36'16	17°46'10	morning rise	15476 Mar 20 07:46	0° $\Upsilon$ 03'59	
	15475 Apr 23 14:20	0° $\text{♄}$			15476 Mar 20 13:39	30° $\text{♄}$	
morning set	15475 May 02 01:43	14° $\text{♄}$ 19'45		direct	15476 Mar 22 10:18	29° $\text{♄}$ 45'34	
desc. node	15475 May 04 14:18	18° $\text{♄}$ 41'20			15476 Mar 24 06:16	0° $\Upsilon$	
	15475 May 11 05:54	0° $\text{♅}$		morning max el	15476 Mar 29 11:57	3° $\Upsilon$ 18'17	17°54'27
				morning set	15476 Apr 14 02:29	27° $\Upsilon$ 40'45	
superior conj	15475 May 14 08:57	5° $\text{♅}$ 11'32	-1°12'55		15476 Apr 15 09:08	0° $\text{♄}$	
minimum elong	15475 May 14 02:03	4° $\text{♅}$ 43'03	1°12'47	desc. node	15476 Apr 20 10:58	9° $\text{♄}$ 08'47	
max. Earth dist.	15475 May 20 13:47	15° $\text{♅}$ 14'22	1.44588 AU				
evening rise	15475 May 29 10:50	29° $\text{♅}$ 07'19		superior conj	15476 Apr 24 18:02	16° $\text{♄}$ 41'19	-0°34'24
	15475 May 30 00:34	0° $\text{♅}$		minimum elong	15476 Apr 24 14:58	16° $\text{♄}$ 28'03	0°34'30
	15475 Jun 19 13:05	0° $\Omega$		max. Earth dist.	15476 May 02 04:13	29° $\text{♄}$ 12'12	1.42939 AU
evening max el	15475 Jun 27 20:23	9° $\Omega$ 59'40	20°45'38		15476 May 02 15:53	0° $\text{♅}$	
asc. node	15475 Jun 28 19:55	10° $\Omega$ 56'17		evening rise	15476 May 08 07:53	9° $\text{♅}$ 05'46	
retrograde	15475 Jul 06 02:55	14° $\Omega$ 45'05			15476 May 22 03:46	0° $\text{♅}$	
evening set	15475 Jul 10 08:15	13° $\Omega$ 04'45		evening max el	15476 Jun 09 15:32	23° $\text{♅}$ 52'35	22°00'27
inferior conj	15475 Jul 15 14:01	6° $\Omega$ 56'54	3°09'12	asc. node	15476 Jun 14 16:51	27° $\text{♅}$ 59'50	
minimum elong	15475 Jul 15 14:14	6° $\Omega$ 56'10	3°08'25	retrograde	15476 Jun 19 00:56	29° $\text{♅}$ 21'57	
min. Earth dist.	15475 Jul 16 03:45	6° $\Omega$ 09'25	0.68641 AU	evening set	15476 Jun 23 17:31	27° $\text{♅}$ 24'52	
morning rise	15475 Jul 20 19:55	0° $\Omega$ 35'31		inferior conj	15476 Jun 28 23:32	21° $\text{♅}$ 06'59	3°06'00
	15475 Jul 21 13:03	30° $\text{♄}$		minimum elong	15476 Jun 28 22:48	21° $\text{♅}$ 09'32	3°05'05
direct	15475 Jul 26 03:30	28° $\text{♅}$ 16'15		min. Earth dist.	15476 Jun 28 23:58	21° $\text{♅}$ 05'28	0.69069 AU
	15475 Jul 31 07:07	0° $\Omega$		morning rise	15476 Jul 04 03:54	14° $\text{♅}$ 52'04	
desc. node	15475 Jul 31 13:18	0° $\Omega$ 09'48		direct	15476 Jul 08 23:07	12° $\text{♅}$ 49'59	
morning max el	15475 Aug 05 22:16	4° $\Omega$ 42'16	23°39'07	desc. node	15476 Jul 17 10:36	17° $\text{♅}$ 24'56	
	15475 Aug 25 10:07	0° $\text{♄}$		morning max el	15476 Jul 18 11:04	18° $\text{♅}$ 24'22	22°10'42
morning set	15475 Sep 09 21:20	24° $\text{♄}$ 27'10			15476 Jul 28 02:56	0° $\Omega$	
	15475 Sep 13 03:01	0° $\text{♅}$			15476 Aug 17 12:40	0° $\text{♄}$	
max. Earth dist.	15475 Sep 13 18:47	1° $\text{♅}$ 08'46	1.39071 AU	morning set	15476 Aug 20 11:24	4° $\text{♄}$ 41'34	
				max. Earth dist.	15476 Aug 25 20:30	13° $\text{♄}$ 30'30	1.41424 AU
superior conj	15475 Sep 21 10:06	14° $\text{♅}$ 59'09	-0°30'44				
minimum elong	15475 Sep 21 12:19	15° $\text{♅}$ 09'36	0°30'12	superior conj	15476 Sep 02 15:53	26° $\text{♄}$ 56'22	-1°07'08
asc. node	15475 Sep 24 21:20	21° $\text{♅}$ 34'18		minimum elong	15476 Sep 02 21:14	27° $\text{♄}$ 20'04	1°06'29
	15475 Sep 29 05:33	0° $\text{♄}$			15476 Sep 04 09:06	0° $\text{♅}$	
evening rise	15475 Sep 30 13:16	2° $\text{♄}$ 34'43		asc. node	15476 Sep 10 17:55	11° $\text{♅}$ 38'19	
evening max el	15475 Oct 16 17:51	28° $\text{♄}$ 58'34	18°48'25	evening rise	15476 Sep 13 02:18	16° $\text{♅}$ 00'25	
	15475 Oct 17 19:57	0° $\text{♄}$			15476 Sep 20 19:57	0° $\text{♄}$	
retrograde	15475 Oct 25 05:11	3° $\text{♄}$ 14'59		evening max el	15476 Sep 29 00:36	11° $\text{♄}$ 27'35	18°15'06
evening set	15475 Oct 27 02:45	3° $\text{♄}$ 02'54		retrograde	15476 Oct 06 08:41	15° $\text{♄}$ 12'06	
desc. node	15475 Oct 27 09:53	2° $\text{♄}$ 58'54		evening set	15476 Oct 08 11:05	14° $\text{♄}$ 54'19	
	15475 Nov 02 10:52	30° $\text{♄}$		desc. node	15476 Oct 13 07:14	12° $\text{♄}$ 18'04	
inferior conj	15475 Nov 04 07:12	28° $\text{♄}$ 41'43	-2°31'01	inferior conj	15476 Oct 15 21:56	10° $\text{♄}$ 11'37	-0°50'04
minimum elong	15475 Nov 04 01:00	28° $\text{♄}$ 52'56	2°27'52	minimum elong	15476 Oct 15 20:06	10° $\text{♄}$ 15'29	0°48'48
min. Earth dist.	15475 Nov 07 07:50	26° $\text{♄}$ 31'07	0.56787 AU	min. Earth dist.	15476 Oct 19 04:17	7° $\text{♄}$ 26'59	0.58863 AU
morning rise	15475 Nov 11 20:12	23° $\text{♄}$ 50'12		morning rise	15476 Oct 23 01:41	4° $\text{♄}$ 43'53	
direct	15475 Nov 17 18:21	22° $\text{♄}$ 25'48		direct	15476 Oct 29 11:47	2° $\text{♄}$ 53'01	
morning max el	15475 Dec 01 22:44	29° $\text{♄}$ 46'02	26°25'36	morning max el	15476 Nov 12 18:54	10° $\text{♄}$ 33'38	27°31'20
	15475 Dec 02 04:30	0° $\text{♄}$			15476 Nov 27 20:32	0° $\text{♄}$	
asc. node	15475 Dec 21 21:57	28° $\text{♄}$ 01'12		asc. node	15476 Dec 07 18:59	17° $\text{♄}$ 20'40	
	15475 Dec 22 23:34	0° $\text{♅}$		morning set	15476 Dec 14 02:27	0° $\text{♅}$ 08'24	
morning set	15475 Dec 30 18:53	15° $\text{♅}$ 47'20			15476 Dec 14 00:52	0° $\text{♅}$	
	15476 Jan 06 05:22	0° $\text{♄}$		max. Earth dist.	15476 Dec 20 16:15	14° $\text{♅}$ 34'53	1.31036 AU
superior conj	15476 Jan 06 13:05	0° $\text{♄}$ 43'07	1°38'00				
minimum elong	15476 Jan 06 13:01	0° $\text{♄}$ 42'48	1°38'50	superior conj	15476 Dec 21 00:33	15° $\text{♅}$ 21'26	1°34'43
max. Earth dist.	15476 Jan 07 08:17	2° $\text{♄}$ 30'14	1.31314 AU	minimum elong	15476 Dec 20 23:29	15° $\text{♅}$ 15'25	1°35'33
evening rise	15476 Jan 13 12:05	15° $\text{♄}$ 55'18		evening rise	15476 Dec 27 18:18	0° $\text{♄}$ 15'21	
	15476 Jan 20 13:27	0° $\text{♄}$			15476 Dec 27 15:27	0° $\text{♄}$	
desc. node	15476 Jan 23 09:06	5° $\text{♄}$ 08'44		desc. node	15477 Jan 09 05:51	24° $\text{♄}$ 20'15	
					15477 Jan 12 17:57	0° $\text{♄}$	

































































































































evening max el	15477 Jan 26 03:19	16°  51'57	26°34'48	desc. node	15477 Dec 27 02:42	12°  51'03	
retrograde	15477 Feb 09 02:59	24°  01'37		evening max el	15478 Jan 07 19:41	27°  35'18	25°15'09
evening set	15477 Feb 15 13:24	22°  20'11			15478 Jan 10 14:12	0° 	
min. Earth dist.	15477 Feb 19 16:52	19°  42'40	0.58624 AU	retrograde	15478 Jan 21 16:03	4°  32'35	
inferior conj	15477 Feb 22 20:55	17°  18'54	-3°23'24	evening set	15478 Jan 27 08:59	3°  19'00	
minimum elong	15477 Feb 23 04:34	17°  04'24	3°20'24	min. Earth dist.	15478 Feb 01 08:04	0°  36'40	0.56619 AU
morning rise	15477 Mar 02 23:03	12°  46'40			15478 Feb 02 06:39	30° 	
direct	15477 Mar 04 22:35	12°  32'57		inferior conj	15478 Feb 04 00:44	28°  50'28	-4°48'28
asc. node	15477 Mar 05 16:38	12°  35'00		minimum elong	15478 Feb 04 10:00	28°  35'13	4°45'32
morning max el	15477 Mar 12 22:50	16°  30'29	18°22'21	morning rise	15478 Feb 12 13:41	24°  39'55	
	15477 Mar 22 10:10	0° 		direct	15478 Feb 14 16:06	24°  27'08	
morning set	15477 Mar 28 17:19	11°  39'45		asc. node	15478 Feb 20 14:03	26°  15'56	
				morning max el	15478 Feb 24 00:17	29°  00'12	19°11'45
superior conj	15477 Apr 07 00:57	29°  10'50	0°02'18		15478 Feb 24 23:39	0° 	
minimum elong	15477 Apr 07 01:05	29°  11'27	0°01'55	morning set	15478 Mar 12 17:43	26°  02'31	
behind sun begin	15477 Apr 06 17:50	28°  38'18			15478 Mar 14 17:29	0° 	
behind sun end	15477 Apr 07 08:20	29°  44'32					
desc. node	15477 Apr 07 07:37	29°  41'19		superior conj	15478 Mar 21 01:14	12°  26'28	0°34'03
	15477 Apr 07 11:43	0° 		minimum elong	15478 Mar 21 03:13	12°  35'59	0°33'37
max. Earth dist.	15477 Apr 14 14:03	12°  31'36	1.40860 AU	desc. node	15478 Mar 25 04:12	20°  14'10	
evening rise	15477 Apr 19 00:26	19°  57'27		max. Earth dist.	15478 Mar 27 20:16	25°  06'42	1.38579 AU
	15477 Apr 25 06:57	0° 			15478 Mar 30 14:23	0° 	
	15477 May 16 10:10	0° 		evening rise	15478 Mar 31 14:09	1°  34'22	
evening max el	15477 May 23 06:47	7°  46'11	23°21'10		15478 Apr 18 12:16	0° 	
asc. node	15477 Jun 01 13:54	13°  52'07		evening max el	15478 May 05 20:18	21°  40'18	24°41'37
retrograde	15477 Jun 02 20:43	13°  59'18		retrograde	15478 May 17 12:59	28°  30'14	
evening set	15477 Jun 08 00:50	11°  47'31		asc. node	15478 May 19 11:03	28°  14'33	
inferior conj	15477 Jun 13 09:19	5°  21'44	2°52'21	evening set	15478 May 23 04:33	26°  06'59	
minimum elong	15477 Jun 13 07:47	5°  27'01	2°51'13	min. Earth dist.	15478 May 27 16:02	21°  01'23	0.68465 AU
min. Earth dist.	15477 Jun 12 20:45	6°  05'06	0.69008 AU	inferior conj	15478 May 28 17:28	19°  36'39	2°28'14
	15477 Jun 17 18:08	30°  08'11		minimum elong	15478 May 28 15:25	19°  43'30	2°26'54
morning rise	15477 Jun 18 14:43	29°  14'41		morning rise	15478 Jun 03 02:29	13°  38'32	
direct	15477 Jun 22 21:35	27°  32'09		direct	15478 Jun 06 21:33	12°  15'58	
	15477 Jun 28 15:31	0° 		morning max el	15478 Jun 14 05:44	16°  20'01	19°40'19
morning max el	15477 Jul 01 04:56	2°  41'02	20°49'22	desc. node	15478 Jun 21 04:57	24°  40'00	
desc. node	15477 Jul 04 07:48	5°  40'29			15478 Jun 25 00:44	0° 	
	15477 Jul 21 22:19	0° 		greatest brilliancy	15478 Jun 27 02:25	2°  59'48	-0.6m
morning set	15477 Jul 31 02:50	13°  09'26		morning set	15478 Jul 10 06:19	22°  49'28	
max. Earth dist.	15477 Aug 08 04:25	26°  04'59	1.43467 AU		15478 Jul 14 21:59	0° 	
	15477 Aug 10 04:26	0° 		max. Earth dist.	15478 Jul 21 18:04	10°  41'26	1.44979 AU
superior conj	15477 Aug 14 23:55	7°  07'28	-1°41'01	superior conj	15478 Jul 26 08:25	18°  00'10	-2°05'45
minimum elong	15477 Aug 15 07:31	8°  29'25	1°40'38	minimum elong	15478 Jul 26 14:32	18°  24'43	2°06'05
evening rise	15477 Aug 27 01:03	28°  48'22			15478 Aug 02 17:29	0° 	
	15477 Aug 27 17:15	0° 		evening rise	15478 Aug 09 04:14	10°  44'47	
asc. node	15477 Aug 28 14:31	1°  33'56		asc. node	15478 Aug 15 11:09	21°  16'30	
evening max el	15477 Sep 12 13:19	24°  30'20	18°01'55		15478 Aug 20 22:51	0° 	
retrograde	15477 Sep 19 04:47	27°  56'11		evening max el	15478 Aug 27 04:07	7°  57'04	18°07'35
evening set	15477 Sep 21 14:40	27°  52'51		retrograde	15478 Sep 02 12:56	11°  17'41	
inferior conj	15477 Sep 28 08:37	22°  26'21	0°33'55	evening set	15478 Sep 05 07:20	10°  37'26	
minimum elong	15477 Sep 28 09:39	22°  23'50	0°33'47	inferior conj	15478 Sep 11 11:21	5°  17'33	1°37'35
desc. node	15477 Sep 30 04:38	20°  38'28		minimum elong	15478 Sep 11 13:35	5°  11'24	1°36'52
min. Earth dist.	15477 Oct 01 10:24	19°  27'32	0.61150 AU	min. Earth dist.	15478 Sep 14 02:30	2°  24'54	0.63383 AU
morning rise	15477 Oct 05 01:43	16°  30'04			15478 Sep 16 13:57	30° 	
direct	15477 Oct 11 17:30	14°  15'46		desc. node	15478 Sep 17 02:05	29°  34'13	
morning max el	15477 Oct 25 22:44	22°  10'51	27°58'25	morning rise	15478 Sep 17 17:47	29°  03'07	
	15477 Nov 01 20:26	0° 		direct	15478 Sep 24 09:17	26°  32'29	
	15477 Nov 21 00:03	0° 			15478 Oct 03 02:25	0° 	
asc. node	15477 Nov 24 15:55	7°  01'04		morning max el	15478 Oct 08 07:31	4°  32'24	27°47'04
morning set	15477 Nov 28 04:58	14°  12'09			15478 Oct 27 12:33	0° 	
max. Earth dist.	15477 Dec 03 22:24	26°  30'44	1.31308 AU	asc. node	15478 Nov 11 12:47	26°  15'17	
				morning set	15478 Nov 12 00:11	27°  15'31	
superior conj	15477 Dec 05 11:04	29°  33'41	1°25'27		15478 Nov 13 01:09	0° 	
minimum elong	15477 Dec 05 09:11	29°  43'14	1°26'09	max. Earth dist.	15478 Nov 16 22:59	8°  09'51	1.32143 AU
	15477 Dec 05 12:12	0° 					
evening rise	15477 Dec 12 03:46	14°  34'15		superior conj	15478 Nov 19 18:40	14°  15'02	1°10'11
	15477 Dec 19 15:44	0° 		minimum elong	15478 Nov 19 16:21	14°  02'26	1°10'42

evening rise	15478 Nov 26 14:39	29°  10'53		evening rise	15479 Nov 04 16:13	0° 	
	15478 Nov 26 23:47	0° 			15479 Nov 11 01:01	13° 	36'48
desc. node	15478 Dec 13 23:39	0°  26'42		desc. node	15479 Nov 19 06:10	0° 	
	15478 Dec 13 15:45	0° 			15479 Nov 30 20:42	16° 	346'51
evening max el	15478 Dec 20 05:56	7°  40'50	23°35'29	evening max el	15479 Dec 01 17:43	17° 	340'02 21°53'28
retrograde	15479 Jan 02 15:49	14°  19'43		retrograde	15479 Dec 14 04:00	23° 	348'49
evening set	15479 Jan 07 05:37	13°  34'23		evening set	15479 Dec 17 10:23	23° 	325'00
min. Earth dist.	15479 Jan 13 16:59	10°  28'49	0.55139 AU	inferior conj	15479 Dec 26 01:21	19° 	333'42 -5°57'27
inferior conj	15479 Jan 15 08:07	9°  31'26	-5°48'22	minimum elong	15479 Dec 25 21:51	19° 	338'35 5°56'20
minimum elong	15479 Jan 15 13:38	9°  23'20	5°47'00	min. Earth dist.	15479 Dec 25 22:33	19° 	337'36 0.54449 AU
morning rise	15479 Jan 23 23:12	5°  37'49		morning rise	15480 Jan 03 10:07	15° 	346'11
direct	15479 Jan 26 14:24	5°  20'49		direct	15480 Jan 07 00:02	15° 	317'59
morning max el	15479 Feb 06 12:21	10°  36'55	20°24'12	morning max el	15480 Jan 19 09:23	21° 	317'05 21°58'42
asc. node	15479 Feb 07 11:26	11°  35'01		asc. node	15480 Jan 25 08:47	28° 	314'38
	15479 Feb 19 15:49	0° 			15480 Jan 26 14:39	0° 	
morning set	15479 Feb 25 00:22	10° 	39'32	morning set	15480 Feb 09 10:40	25° 	322'59
					15480 Feb 11 14:54	0° 	
superior conj	15479 Mar 04 14:37	26° 	16'18 0°59'33	superior conj	15480 Feb 16 13:22	10° 	329'51 1°18'30
minimum elong	15479 Mar 04 17:12	26° 	29'21 0°59'19	minimum elong	15480 Feb 16 15:42	10° 	342'07 1°18'37
	15479 Mar 06 11:14	0° 		max. Earth dist.	15480 Feb 20 16:05	19° 	300'08 1.34380 AU
max. Earth dist.	15479 Mar 10 03:21	7° 	09'34 1.36352 AU	evening rise	15480 Feb 24 22:49	27° 	326'41
desc. node	15479 Mar 12 00:48	10° 	44'13		15480 Feb 26 07:05	0° 	
evening rise	15479 Mar 13 22:48	14° 	16'29	desc. node	15480 Feb 26 21:23	1° 	307'06
	15479 Mar 23 01:37	0° 			15480 Mar 15 08:50	0° 	
	15479 Apr 13 06:31	0° 		evening max el	15480 Mar 30 23:50	19° 	316'50 26°52'30
evening max el	15479 Apr 18 09:55	5° 	33'00 25°54'34	retrograde	15480 Apr 13 06:34	26° 	344'36
retrograde	15479 May 01 00:39	12° 	47'55	evening set	15480 Apr 19 18:13	24° 	312'30
asc. node	15479 May 06 08:16	10° 	54'14	asc. node	15480 Apr 22 05:34	21° 	355'29
evening set	15479 May 07 02:59	10° 	17'36	min. Earth dist.	15480 Apr 23 17:31	20° 	317'07 0.66026 AU
min. Earth dist.	15479 May 11 07:41	5° 	47'56 0.67461 AU	inferior conj	15480 Apr 25 20:32	17° 	348'27 1°06'03
inferior conj	15479 May 12 21:57	3° 	47'21 1°53'07	minimum elong	15480 Apr 25 18:56	17° 	353'07 1°04'52
minimum elong	15479 May 12 19:49	3° 	54'08 1°51'42	morning rise	15480 May 01 20:59	12° 	312'44
	15479 May 16 03:36	30° 		direct	15480 May 04 19:11	11° 	325'47
morning rise	15479 May 18 13:18	27° 	59'33	morning max el	15480 May 11 03:25	14° 	344'58 18°09'38
direct	15479 May 21 21:27	26° 	55'51		15480 May 22 08:31	0° 	
	15479 May 28 00:31	0° 		desc. node	15480 May 24 22:56	4° 	307'19
morning max el	15479 May 28 13:40	0° 	31'04 18°46'37	morning set	15480 May 30 05:36	12° 	335'59
desc. node	15479 Jun 08 02:00	14° 	11'52		15480 Jun 10 03:26	0° 	
greatest brilliancy	15479 Jun 11 12:56	19° 	25'07 -0.8m	superior conj	15480 Jun 14 07:36	6° 	333'33 -2°02'12
	15479 Jun 18 09:14	0° 		minimum elong	15480 Jun 14 00:13	6° 	304'38 2°02'40
morning set	15479 Jun 19 17:54	2° 	06'58	max. Earth dist.	15480 Jun 16 09:03	9° 	346'51 1.45919 AU
max. Earth dist.	15479 Jul 04 12:23	25° 	07'06 1.45823 AU		15480 Jun 29 09:28	0° 	
superior conj	15479 Jul 05 22:20	27° 	19'46 -2°14'01	evening rise	15480 Jun 30 10:16	1° 	336'04
minimum elong	15479 Jul 05 21:45	27° 	17'29 2°14'52	greatest brilliancy	15480 Jul 12 01:03	19° 	325'37 -0.7m
	15479 Jul 07 15:17	0° 		asc. node	15480 Jul 19 04:33	29° 	338'47
evening rise	15479 Jul 21 07:14	21° 	39'15		15480 Jul 19 11:00	0° 	
	15479 Jul 26 12:12	0° 		evening max el	15480 Jul 24 03:31	5° 	329'00 19°11'19
asc. node	15479 Aug 02 07:49	10° 	40'17	retrograde	15480 Jul 31 01:45	9° 	318'36
evening max el	15479 Aug 10 17:44	21° 	38'53 18°31'00	evening set	15480 Aug 03 14:49	8° 	305'44
retrograde	15479 Aug 17 04:59	25° 	07'25	inferior conj	15480 Aug 09 01:25	2° 	316'32 2°51'03
evening set	15479 Aug 20 08:29	24° 	11'39	minimum elong	15480 Aug 09 03:06	2° 	311'05 2°50'17
inferior conj	15479 Aug 26 02:04	18° 	36'21 2°22'25	min. Earth dist.	15480 Aug 10 12:51	0° 	321'45 0.66995 AU
minimum elong	15479 Aug 26 04:21	18° 	29'27 2°21'35		15480 Aug 10 19:41	30° 	
min. Earth dist.	15479 Aug 28 03:45	16° 	06'43 0.65374 AU	morning rise	15480 Aug 14 14:43	25° 	350'25
morning rise	15479 Aug 31 23:00	12° 	12'44	direct	15480 Aug 20 16:06	23° 	314'27
desc. node	15479 Sep 03 23:34	10° 	18'08	desc. node	15480 Aug 20 21:00	23° 	314'37
direct	15479 Sep 07 09:17	9° 	35'01		15480 Sep 01 12:06	0° 	
morning max el	15479 Sep 20 18:30	17° 	26'58 27°02'51	morning max el	15480 Sep 02 05:50	0° 	344'05 25°54'09
	15479 Oct 01 06:47	0° 			15480 Sep 24 06:04	0° 	
	15479 Oct 20 10:01	0° 		morning set	15480 Oct 08 04:43	23° 	338'49
morning set	15479 Oct 26 09:14	11° 	04'49		15480 Oct 11 14:06	0° 	
asc. node	15479 Oct 29 09:33	17° 	00'24	max. Earth dist.	15480 Oct 11 21:09	0° 	333'42 1.35435 AU
max. Earth dist.	15479 Oct 30 14:49	19° 	28'00 1.33537 AU	asc. node	15480 Oct 15 06:15	7° 	309'31
superior conj	15479 Nov 03 21:04	28° 	18'32 0°48'54	superior conj	15480 Oct 17 15:40	11° 	357'53 0°21'48
minimum elong	15479 Nov 03 18:54	28°	07'03 0°49'15				

minimum elong	15480 Oct 17 14:26	11°♄51'35	0°22'06	max. Earth dist.	15481 Sep 23 20:48	11°♄48'13	1.37693 AU
evening rise	15480 Oct 25 08:55	27°♄55'01					
	15480 Oct 26 09:11	0°♄		superior conj	15481 Sep 30 23:10	25°♄04'55	-0°10'27
evening max el	15480 Nov 12 16:09	28°♄08'51	20°24'45	minimum elong	15481 Sep 30 23:51	25°♄08'12	0°10'02
	15480 Nov 14 17:17	0°♄		behind sun begin	15481 Sep 30 18:30	24°♄42'23	
desc. node	15480 Nov 16 17:49	1°♄27'24		behind sun end	15481 Oct 01 05:12	25°♄34'04	
retrograde	15480 Nov 23 14:46	3°♄35'34		asc. node	15481 Oct 02 02:54	27°♄19'31	
evening set	15480 Nov 25 21:16	3°♄22'34			15481 Oct 03 11:38	0°♄	
	15480 Dec 03 19:20	30°♄♂		evening rise	15481 Oct 09 11:57	11°♄59'12	
inferior conj	15480 Dec 04 17:38	29°♄27'28	-5°05'48		15481 Oct 19 03:32	0°♄	
minimum elong	15480 Dec 04 07:56	29°♄41'41	5°02'37	evening max el	15481 Oct 26 05:03	9°♄26'23	19°17'07
min. Earth dist.	15480 Dec 06 04:21	28°♄36'39	0.54684 AU	desc. node	15481 Nov 03 15:01	14°♄04'35	
morning rise	15480 Dec 12 18:11	25°♄27'29		retrograde	15481 Nov 04 12:50	14°♄07'09	
direct	15480 Dec 17 08:57	24°♄41'40		evening set	15481 Nov 06 10:05	13°♄56'29	
	15480 Dec 29 09:33	0°♄		inferior conj	15481 Nov 14 23:05	9°♄46'42	-3°31'58
morning max el	15480 Dec 30 19:57	1°♄17'43	23°47'16	minimum elong	15481 Nov 14 14:26	10°♄01'03	3°28'06
asc. node	15481 Jan 11 06:03	15°♄57'02		min. Earth dist.	15481 Nov 17 13:59	8°♄02'40	0.55806 AU
	15481 Jan 19 01:17	0°♄		morning rise	15481 Nov 22 16:25	5°♄16'04	
morning set	15481 Jan 23 22:32	10°♄07'04		direct	15481 Nov 28 04:23	4°♄06'58	
				morning max el	15481 Dec 12 05:28	11°♄13'37	25°33'23
superior conj	15481 Jan 30 18:34	24°♄59'06	1°30'59		15481 Dec 26 12:42	0°♄	
minimum elong	15481 Jan 30 20:08	25°♄07'37	1°31'27	asc. node	15481 Dec 29 03:13	4°♄26'50	
	15481 Feb 02 02:26	0°♄		morning set	15482 Jan 08 10:09	24°♄46'41	
max. Earth dist.	15481 Feb 02 12:25	0°♄53'12	1.32805 AU		15482 Jan 10 19:39	0°♄	
evening rise	15481 Feb 07 10:48	11°♄05'24					
desc. node	15481 Feb 12 17:59	21°♄18'21		superior conj	15482 Jan 15 03:51	9°♄37'24	1°37'12
	15481 Feb 17 15:10	0°♄		minimum elong	15482 Jan 15 04:24	9°♄40'30	1°37'56
	15481 Mar 10 22:00	0°♄		max. Earth dist.	15482 Jan 16 15:28	12°♄54'12	1.31705 AU
evening max el	15481 Mar 13 12:51	2°♄40'13	27°27'53	evening rise	15482 Jan 22 07:49	25°♄05'37	
retrograde	15481 Mar 27 05:54	10°♄11'02			15482 Jan 24 17:33	0°♄	
evening set	15481 Apr 03 00:03	7°♄43'34		desc. node	15482 Jan 30 14:36	11°♄12'44	
min. Earth dist.	15481 Apr 06 19:29	4°♄19'17	0.64216 AU		15482 Feb 11 03:59	0°♄	
inferior conj	15481 Apr 09 10:31	1°♄32'48	0°05'59	evening max el	15482 Feb 23 23:07	15°♄31'21	27°34'09
minimum elong	15481 Apr 09 10:21	1°♄33'15	0°05'32	retrograde	15482 Mar 09 21:49	22°♄57'52	
transit middle	15481 Apr 09 10:21	1°♄33'15	0°05'32	evening set	15482 Mar 16 17:56	20°♄42'31	
transit begin	15481 Apr 09 07:26	1°♄40'59		min. Earth dist.	15482 Mar 20 12:07	17°♄43'41	0.62123 AU
transit end	15481 Apr 09 13:15	1°♄25'31		inferior conj	15482 Mar 23 12:47	14°♄52'56	-1°07'18
asc. node	15481 Apr 09 02:56	1°♄52'56		minimum elong	15482 Mar 23 15:06	14°♄47'27	1°06'29
	15481 Apr 10 22:16	30°♄♂		asc. node	15482 Mar 27 00:20	11°♄50'39	
morning rise	15481 Apr 15 22:50	26°♄11'34		morning rise	15482 Mar 30 15:19	9°♄48'43	
direct	15481 Apr 18 12:08	25°♄38'27		direct	15482 Apr 01 21:04	9°♄26'04	
morning max el	15481 Apr 24 20:32	28°♄53'51	17°49'45	morning max el	15482 Apr 08 14:03	12°♄49'21	17°47'28
	15481 Apr 25 22:10	0°♄			15482 Apr 20 07:49	0°♄	
morning set	15481 May 11 20:41	24°♄23'04		morning set	15482 Apr 24 10:53	7°♄15'09	
desc. node	15481 May 11 19:45	24°♄19'11		desc. node	15482 Apr 28 16:29	14°♄42'29	
	15481 May 15 04:58	0°♄					
superior conj	15481 May 25 04:58	16°♄24'29	-1°33'45	superior conj	15482 May 06 00:27	27°♄17'42	-0°56'40
minimum elong	15481 May 24 20:30	15°♄50'26	1°33'40	minimum elong	15482 May 05 19:08	26°♄55'21	0°56'36
max. Earth dist.	15481 May 30 04:56	24°♄22'00	1.45267 AU		15482 May 07 15:18	0°♄	
	15481 Jun 02 19:10	0°♄		max. Earth dist.	15482 May 12 21:24	8°♄36'08	1.43946 AU
evening rise	15481 Jun 09 22:23	11°♄00'51		evening rise	15482 May 20 11:51	20°♄36'23	
	15481 Jun 22 13:35	0°♄			15482 May 26 15:31	0°♄	
asc. node	15481 Jul 06 01:21	18°♄02'23		evening max el	15482 Jun 20 05:44	3°♄13'55	21°16'20
evening max el	15481 Jul 07 07:39	19°♄21'25	20°07'14	asc. node	15482 Jun 22 22:15	5°♄39'20	
retrograde	15481 Jul 15 00:36	23°♄44'04		retrograde	15482 Jun 28 23:29	8°♄18'14	
evening set	15481 Jul 18 23:48	22°♄13'37		evening set	15482 Jul 03 09:28	6°♄30'39	
inferior conj	15481 Jul 24 06:31	16°♄11'58	3°06'01	inferior conj	15482 Jul 08 15:01	0°♄18'05	3°09'09
minimum elong	15481 Jul 24 07:17	16°♄09'19	3°05'17	minimum elong	15482 Jul 08 14:50	0°♄18'46	3°08'19
min. Earth dist.	15481 Jul 25 03:59	14°♄58'58	0.68173 AU		15482 Jul 08 20:13	30°♄♂	
morning rise	15481 Jul 29 14:25	9°♄47'50		min. Earth dist.	15482 Jul 08 23:02	29°♄50'09	0.68879 AU
direct	15481 Aug 04 04:43	7°♄21'00		morning rise	15482 Jul 13 19:57	23°♄59'00	
desc. node	15481 Aug 07 18:25	8°♄10'36		direct	15482 Jul 18 22:12	21°♄46'42	
morning max el	15481 Aug 15 16:44	14°♄14'02	24°30'23	desc. node	15482 Jul 25 15:46	24°♄41'49	
	15481 Aug 28 13:30	0°♄		morning max el	15482 Jul 29 04:08	27°♄51'49	23°01'03
	15481 Sep 17 02:30	0°♄			15482 Jul 31 04:38	0°♄	
morning set	15481 Sep 20 06:36	5°♄26'03			15482 Aug 22 04:37	0°♄	

morning set	15482 Sep 01 10:36	16° $\mathbb{M}$ 16'39			15483 Aug 15 01:20	0° $\mathbb{M}$	
max. Earth dist.	15482 Sep 05 19:36	23° $\mathbb{M}$ 38'06	1.40088 AU	max. Earth dist.	15483 Aug 18 23:19	6° $\mathbb{M}$ 21'25	1.42339 AU
	15482 Sep 09 11:24	0° $\underline{\mathbf{A}}$					
superior conj	15482 Sep 13 15:38	7° $\underline{\mathbf{A}}$ 30'36	-0°46'10	superior conj	15483 Aug 26 12:42	19° $\mathbb{M}$ 05'44	-1°22'10
minimum elong	15482 Sep 13 19:09	7° $\underline{\mathbf{A}}$ 46'45	0°45'33	minimum elong	15483 Aug 26 19:15	19° $\mathbb{M}$ 34'05	1°21'33
asc. node	15482 Sep 18 23:29	17° $\underline{\mathbf{A}}$ 26'53		asc. node	15483 Sep 01 17:04	0° $\underline{\mathbf{A}}$	
evening rise	15482 Sep 23 07:10	25° $\underline{\mathbf{A}}$ 41'44		evening rise	15483 Sep 05 20:05	7° $\underline{\mathbf{A}}$ 28'18	
	15482 Sep 25 13:23	0° $\mathbb{M}$			15483 Sep 06 14:45	8° $\underline{\mathbf{A}}$ 53'19	
evening max el	15482 Oct 09 06:33	21° $\mathbb{M}$ 32'23	18°31'42	evening max el	15483 Sep 19 02:07	0° $\mathbb{M}$	
retrograde	15482 Oct 17 05:09	25° $\mathbb{M}$ 33'41		retrograde	15483 Sep 22 16:30	4° $\mathbb{M}$ 18'20	18°07'13
evening set	15482 Oct 19 04:07	25° $\mathbb{M}$ 19'47		evening set	15483 Sep 29 16:06	7° $\mathbb{M}$ 52'53	
desc. node	15482 Oct 21 12:20	24° $\mathbb{M}$ 29'30		desc. node	15483 Oct 01 21:35	7° $\mathbb{M}$ 31'26	
inferior conj	15482 Oct 27 01:18	20° $\mathbb{M}$ 49'49	-1°46'43	inferior conj	15483 Oct 08 09:44	3° $\mathbb{M}$ 14'21	
minimum elong	15482 Oct 26 21:04	20° $\mathbb{M}$ 58'01	1°44'21	minimum elong	15483 Oct 09 01:00	2° $\mathbb{M}$ 40'15	-0°12'03
min. Earth dist.	15482 Oct 30 06:04	18° $\mathbb{M}$ 22'10	0.57622 AU	transit middle	15483 Oct 09 00:36	2° $\mathbb{M}$ 41'09	0°11'29
morning rise	15482 Nov 03 10:33	15° $\mathbb{M}$ 42'02		transit begin	15483 Oct 09 00:36	2° $\mathbb{M}$ 41'09	0°11'29
direct	15482 Nov 09 14:35	14° $\mathbb{M}$ 06'00		transit end	15483 Oct 08 22:14	2° $\mathbb{M}$ 46'29	
morning max el	15482 Nov 23 20:55	21° $\mathbb{M}$ 36'33	26°57'57		15483 Oct 09 02:58	2° $\mathbb{M}$ 35'49	
	15482 Dec 01 05:37	0° $\mathbb{X}$		min. Earth dist.	15483 Oct 12 00:30	30° $\mathbb{R}$ $\underline{\mathbf{A}}$	
asc. node	15482 Dec 16 00:18	23° $\mathbb{X}$ 31'07		morning rise	15483 Oct 12 06:32	29° $\underline{\mathbf{A}}$ 47'00	0.59828 AU
	15482 Dec 19 08:32	0° $\mathbb{Z}$		direct	15483 Oct 16 00:20	26° $\underline{\mathbf{A}}$ 59'31	
morning set	15482 Dec 23 19:42	9° $\mathbb{Z}$ 16'02			15483 Oct 22 13:54	24° $\underline{\mathbf{A}}$ 57'44	
superior conj	15482 Dec 30 15:04	24° $\mathbb{Z}$ 17'39	1°37'21	morning max el	15483 Nov 02 19:23	0° $\mathbb{M}$	
minimum elong	15482 Dec 30 14:34	24° $\mathbb{Z}$ 14'50	1°38'11		15483 Nov 05 20:22	2° $\mathbb{M}$ 45'11	27°47'38
max. Earth dist.	15482 Dec 30 22:28	24° $\mathbb{Z}$ 59'01	1.31124 AU	asc. node	15483 Nov 25 18:27	0° $\mathbb{X}$	
	15483 Jan 02 04:26	0° $\approx$		morning set	15483 Dec 02 21:18	13° $\mathbb{X}$ 00'48	
evening rise	15483 Jan 06 11:18	9° $\approx$ 20'14			15483 Dec 08 01:23	23° $\mathbb{X}$ 30'47	
desc. node	15483 Jan 17 11:17	0° $\mathbb{H}$ 42'30		max. Earth dist.	15483 Dec 11 01:51	0° $\mathbb{Z}$	
	15483 Jan 17 01:35	0° $\mathbb{H}$			15483 Dec 14 06:05	7° $\mathbb{Z}$ 01'15	1.31087 AU
evening max el	15483 Feb 06 04:13	27° $\mathbb{H}$ 37'56	27°06'34	superior conj	15483 Dec 15 02:25	8° $\mathbb{Z}$ 54'47	1°31'31
	15483 Feb 08 20:48	0° $\mathbb{Y}$		minimum elong	15483 Dec 15 00:58	8° $\mathbb{Z}$ 46'41	1°32'19
retrograde	15483 Feb 20 04:49	4° $\mathbb{Y}$ 54'50		evening rise	15483 Dec 21 19:11	23° $\mathbb{Z}$ 44'25	
evening set	15483 Feb 26 20:44	2° $\mathbb{Y}$ 59'26			15483 Dec 24 18:15	0° $\approx$	
min. Earth dist.	15483 Mar 02 18:37	0° $\mathbb{Y}$ 17'12	0.59889 AU	desc. node	15484 Jan 04 08:05	19° $\approx$ 38'31	
	15483 Mar 03 03:15	30° $\mathbb{R}$ $\mathbb{H}$			15484 Jan 11 07:38	0° $\mathbb{H}$	
inferior conj	15483 Mar 05 23:42	27° $\mathbb{H}$ 38'40	-2°31'57	evening max el	15484 Jan 19 01:50	8° $\mathbb{H}$ 52'39	26°04'20
minimum elong	15483 Mar 06 05:23	27° $\mathbb{H}$ 26'55	2°29'36	retrograde	15484 Feb 02 00:47	15° $\mathbb{H}$ 56'47	
morning rise	15483 Mar 13 17:31	22° $\mathbb{H}$ 54'02		evening set	15484 Feb 08 04:45	14° $\mathbb{H}$ 27'14	
asc. node	15483 Mar 13 21:45	22° $\mathbb{H}$ 51'26		min. Earth dist.	15484 Feb 12 15:03	11° $\mathbb{H}$ 49'27	0.57732 AU
direct	15483 Mar 15 18:05	22° $\mathbb{H}$ 38'11		inferior conj	15484 Feb 15 15:40	9° $\mathbb{H}$ 40'13	-4°00'56
morning max el	15483 Mar 23 04:26	26° $\mathbb{H}$ 20'27	18°03'48	minimum elong	15484 Feb 16 00:24	9° $\mathbb{H}$ 24'37	3°57'44
	15483 Mar 26 08:26	0° $\mathbb{Y}$		morning rise	15484 Feb 23 23:08	5° $\mathbb{H}$ 16'56	
morning set	15483 Apr 07 18:15	20° $\mathbb{Y}$ 54'05		direct	15484 Feb 25 22:55	5° $\mathbb{H}$ 04'06	
	15483 Apr 12 16:23	0° $\mathbb{B}$		asc. node	15484 Feb 28 19:11	5° $\mathbb{H}$ 31'41	
desc. node	15483 Apr 15 13:08	5° $\mathbb{B}$ 12'28		morning max el	15484 Mar 05 11:46	9° $\mathbb{H}$ 15'56	18°40'31
					15484 Mar 18 22:15	0° $\mathbb{Y}$	
superior conj	15483 Apr 17 19:15	9° $\mathbb{B}$ 14'08	-0°18'23	morning set	15484 Mar 21 13:38	5° $\mathbb{Y}$ 04'44	
minimum elong	15483 Apr 17 17:42	9° $\mathbb{B}$ 07'15	0°18'38	superior conj	15484 Mar 30 10:04	22° $\mathbb{Y}$ 04'28	0°16'29
max. Earth dist.	15483 Apr 25 09:15	22° $\mathbb{B}$ 16'19	1.42093 AU	minimum elong	15484 Mar 30 11:09	22° $\mathbb{Y}$ 09'34	0°16'03
	15483 Apr 30 02:31	0° $\mathbb{I}$		desc. node	15484 Apr 01 09:45	25° $\mathbb{Y}$ 45'29	
evening rise	15483 Apr 30 16:33	0° $\mathbb{I}$ 56'18			15484 Apr 03 17:45	0° $\mathbb{B}$	
	15483 May 20 02:37	0° $\mathbb{E}$		max. Earth dist.	15484 Apr 06 17:18	5° $\mathbb{B}$ 16'53	1.39906 AU
evening max el	15483 Jun 02 22:58	17° $\mathbb{E}$ 07'10	22°34'30	evening rise	15484 Apr 10 18:14	12° $\mathbb{B}$ 11'53	
asc. node	15483 Jun 09 19:14	22° $\mathbb{E}$ 14'52			15484 Apr 21 22:09	0° $\mathbb{I}$	
retrograde	15483 Jun 12 20:46	22° $\mathbb{E}$ 55'53			15484 May 14 13:06	0° $\mathbb{E}$	
evening set	15483 Jun 17 18:06	20° $\mathbb{E}$ 52'29		evening max el	15484 May 15 13:25	1° $\mathbb{E}$ 01'44	23°55'58
inferior conj	15483 Jun 23 00:55	14° $\mathbb{E}$ 30'57	3°01'30	retrograde	15484 May 26 15:02	7° $\mathbb{E}$ 31'05	
minimum elong	15483 Jun 22 23:49	14° $\mathbb{E}$ 34'46	3°00'30	asc. node	15484 May 26 16:20	7° $\mathbb{E}$ 31'04	
min. Earth dist.	15483 Jun 22 19:53	14° $\mathbb{E}$ 48'30	0.69098 AU	evening set	15484 Jun 01 00:04	5° $\mathbb{E}$ 14'09	
morning rise	15483 Jun 28 05:23	8° $\mathbb{E}$ 18'59		min. Earth dist.	15484 Jun 05 16:16	29° $\mathbb{I}$ 47'27	0.68836 AU
direct	15483 Jul 02 19:19	6° $\mathbb{E}$ 24'52			15484 Jun 05 12:34	30° $\mathbb{R}$ $\mathbb{I}$	
morning max el	15483 Jul 11 18:38	11° $\mathbb{E}$ 37'51	21°34'50	inferior conj	15484 Jun 06 10:14	28° $\mathbb{I}$ 46'14	2°43'27
desc. node	15483 Jul 12 13:03	12° $\mathbb{E}$ 24'54		minimum elong	15484 Jun 06 08:27	28° $\mathbb{I}$ 52'20	2°42'13
	15483 Jul 26 06:27	0° $\mathbb{Q}$		morning rise	15484 Jun 11 16:50	22° $\mathbb{I}$ 42'49	
morning set	15483 Aug 12 14:30	26° $\mathbb{Q}$ 05'44		direct	15484 Jun 15 18:43	21° $\mathbb{I}$ 08'36	

morning max el	15484 Jun 23 15:11	25° $\Pi$ 34'25	20°18'15	greatest brilliancy	15485 Jun 19 13:12	26° $\Pi$ 25'14	-0.7m
	15484 Jun 27 14:34	0° $\mathfrak{G}$			15485 Jun 21 22:40	0° $\mathfrak{G}$	
desc. node	15484 Jun 28 10:14	1° $\mathfrak{G}$ 00'42		morning set	15485 Jul 01 03:12	14° $\mathfrak{G}$ 01'12	
	15484 Jul 18 14:54	0° $\Omega$			15485 Jul 11 10:48	0° $\Omega$	
morning set	15484 Jul 21 22:45	5° $\Omega$ 05'45		max. Earth dist.	15485 Jul 14 02:37	4° $\Omega$ 09'44	1.45429 AU
max. Earth dist.	15484 Jul 31 10:09	19° $\Omega$ 56'45	1.44186 AU				
superior conj	15484 Aug 06 10:39	29° $\Omega$ 41'38	-1°53'04	superior conj	15485 Jul 17 10:03	9° $\Omega$ 22'36	-2°11'37
minimum elong	15484 Aug 06 18:16	0° $\mathfrak{M}$ 12'59	1°52'57	minimum elong	15485 Jul 17 13:51	9° $\Omega$ 37'36	2°12'16
	15484 Aug 06 15:07	0° $\mathfrak{M}$			15485 Jul 30 05:13	0° $\mathfrak{M}$	
evening rise	15484 Aug 19 05:48	21° $\mathfrak{M}$ 20'47		evening rise	15485 Jul 31 23:09	2° $\mathfrak{M}$ 52'07	
asc. node	15484 Aug 22 16:42	27° $\mathfrak{M}$ 19'01		asc. node	15485 Aug 09 13:22	16° $\mathfrak{M}$ 54'30	
	15484 Aug 24 06:15	0° $\mathfrak{L}$			15485 Aug 18 19:50	0° $\mathfrak{L}$	
evening max el	15484 Sep 05 06:34	17° $\mathfrak{L}$ 32'33	18°02'08	evening max el	15485 Aug 19 21:10	1° $\mathfrak{L}$ 06'15	18°15'21
retrograde	15484 Sep 11 17:52	20° $\mathfrak{L}$ 54'21		retrograde	15485 Aug 26 05:59	4° $\mathfrak{L}$ 28'51	
evening set	15484 Sep 14 07:25	20° $\mathfrak{L}$ 21'44		evening set	15485 Aug 29 04:10	3° $\mathfrak{L}$ 42'14	
inferior conj	15484 Sep 20 19:00	15° $\mathfrak{L}$ 11'20	1°03'22	inferior conj	15485 Sep 02 13:55	30° $\mathfrak{R}$ $\mathfrak{M}$	
minimum elong	15484 Sep 20 20:43	15° $\mathfrak{L}$ 06'55	1°02'53	minimum elong	15485 Sep 04 03:17	28° $\mathfrak{M}$ 15'13	1°58'45
min. Earth dist.	15484 Sep 23 16:40	12° $\mathfrak{L}$ 13'11	0.62121 AU	min. Earth dist.	15485 Sep 04 05:39	28° $\mathfrak{M}$ 08'26	1°57'56
desc. node	15484 Sep 24 07:12	11° $\mathfrak{L}$ 38'03		morning rise	15485 Sep 06 12:46	25° $\mathfrak{M}$ 30'49	0.64267 AU
morning rise	15484 Sep 27 07:31	9° $\mathfrak{L}$ 06'24		desc. node	15485 Sep 10 05:28	21° $\mathfrak{M}$ 55'47	
direct	15484 Oct 03 23:53	6° $\mathfrak{L}$ 44'24		direct	15485 Sep 11 04:39	21° $\mathfrak{M}$ 13'16	
morning max el	15484 Oct 03 23:53	6° $\mathfrak{L}$ 44'24			15485 Sep 16 19:07	19° $\mathfrak{M}$ 21'19	
	15484 Oct 18 02:33	14° $\mathfrak{L}$ 41'52	27°58'06	morning max el	15485 Sep 30 12:48	27° $\mathfrak{M}$ 19'27	27°31'56
	15484 Oct 30 13:12	0° $\mathfrak{M}$			15485 Oct 03 01:37	0° $\mathfrak{L}$	
	15484 Nov 17 08:00	0° $\mathfrak{X}$			15485 Oct 24 05:58	0° $\mathfrak{M}$	
asc. node	15484 Nov 18 18:12	2° $\mathfrak{X}$ 48'10		morning set	15485 Nov 04 16:23	20° $\mathfrak{M}$ 54'57	
morning set	15484 Nov 21 01:06	7° $\mathfrak{X}$ 25'33		asc. node	15485 Nov 05 15:02	22° $\mathfrak{M}$ 47'42	
max. Earth dist.	15484 Nov 26 10:28	18° $\mathfrak{X}$ 51'34	1.31601 AU		15485 Nov 09 03:30	0° $\mathfrak{X}$	
				max. Earth dist.	15485 Nov 09 07:50	0° $\mathfrak{X}$ 22'40	1.32670 AU
superior conj	15484 Nov 28 11:56	23° $\mathfrak{X}$ 23'00	1°19'43	superior conj	15485 Nov 12 17:36	7° $\mathfrak{X}$ 37'12	1°01'54
minimum elong	15484 Nov 28 09:49	23° $\mathfrak{X}$ 11'18	1°20'21	minimum elong	15485 Nov 12 15:15	7° $\mathfrak{X}$ 24'36	1°02'19
	15484 Dec 01 11:39	0° $\mathfrak{Z}$			15485 Nov 19 16:23	22° $\mathfrak{X}$ 41'02	
evening rise	15484 Dec 05 05:29	8° $\mathfrak{Z}$ 12'48		evening rise	15485 Nov 23 03:59	0° $\mathfrak{Z}$	
	15484 Dec 16 07:40	0° $\approx$			15485 Nov 23 03:59	0° $\mathfrak{Z}$	
desc. node	15484 Dec 21 05:00	7° $\approx$ 48'07		desc. node	15485 Dec 08 02:00	24° $\mathfrak{Z}$ 54'31	
evening max el	15484 Dec 30 15:10	19° $\approx$ 17'34	24°34'11	evening max el	15485 Dec 12 00:36	29° $\mathfrak{Z}$ 14'50	22°51'14
retrograde	15485 Jan 13 07:47	26° $\approx$ 07'16			15485 Dec 12 19:47	0° $\approx$	
evening set	15485 Jan 18 14:31	25° $\approx$ 05'55		retrograde	15485 Dec 25 02:11	5° $\approx$ 43'15	
min. Earth dist.	15485 Jan 24 02:58	22° $\approx$ 16'20	0.55915 AU	evening set	15485 Dec 29 02:41	5° $\approx$ 08'02	
inferior conj	15485 Jan 26 10:29	20° $\approx$ 50'06	-5°18'30	min. Earth dist.	15486 Jan 05 09:46	1° $\approx$ 46'54	0.54734 AU
minimum elong	15485 Jan 26 19:00	20° $\approx$ 36'51	5°16'08	inferior conj	15486 Jan 06 10:34	1° $\approx$ 11'39	-5°59'39
morning rise	15485 Feb 04 01:35	16° $\approx$ 47'37		minimum elong	15486 Jan 06 12:34	1° $\approx$ 08'48	5°58'45
direct	15485 Feb 06 08:19	16° $\approx$ 33'39			15486 Jan 08 13:51	30° $\mathfrak{R}$ $\mathfrak{Z}$	
asc. node	15485 Feb 14 16:34	19° $\approx$ 56'15		morning rise	15486 Jan 14 23:45	27° $\mathfrak{Z}$ 22'53	
morning max el	15485 Feb 16 07:52	21° $\approx$ 24'03	19°39'42	direct	15486 Jan 17 23:38	27° $\mathfrak{Z}$ 02'10	
	15485 Feb 23 01:53	0° $\mathfrak{H}$			15486 Jan 26 10:22	0° $\approx$	
morning set	15485 Mar 05 17:06	19° $\mathfrak{H}$ 35'25		morning max el	15486 Jan 29 13:30	2° $\approx$ 36'31	21°02'04
	15485 Mar 10 20:46	0° $\mathfrak{Y}$		asc. node	15486 Feb 01 13:56	5° $\approx$ 51'56	
					15486 Feb 15 23:47	0° $\mathfrak{H}$	
superior conj	15485 Mar 13 16:28	5° $\mathfrak{Y}$ 36'38	0°45'39	morning set	15486 Feb 18 01:35	4° $\mathfrak{H}$ 16'17	
minimum elong	15485 Mar 13 18:50	5° $\mathfrak{Y}$ 48'15	0°45'17				
desc. node	15485 Mar 19 06:21	16° $\mathfrak{Y}$ 18'01		superior conj	15486 Feb 25 10:15	19° $\mathfrak{H}$ 38'12	1°08'23
max. Earth dist.	15485 Mar 19 23:52	17° $\mathfrak{Y}$ 39'10	1.37616 AU	minimum elong	15486 Feb 25 12:49	19° $\mathfrak{H}$ 51'22	1°08'17
evening rise	15485 Mar 23 16:27	24° $\mathfrak{Y}$ 19'30		max. Earth dist.	15486 Mar 02 08:49	29° $\mathfrak{H}$ 34'26	1.35467 AU
	15485 Mar 26 22:51	0° $\mathfrak{B}$			15486 Mar 02 14:03	0° $\mathfrak{Y}$	
	15485 Apr 15 14:13	0° $\Pi$		evening rise	15486 Mar 06 08:02	7° $\mathfrak{Y}$ 09'34	
evening max el	15485 Apr 28 02:55	14° $\Pi$ 56'31	25°13'58	desc. node	15486 Mar 06 02:55	6° $\mathfrak{Y}$ 45'39	
retrograde	15485 May 10 05:20	21° $\Pi$ 58'00			15486 Mar 19 16:27	0° $\mathfrak{B}$	
asc. node	15485 May 13 13:30	21° $\Pi$ 11'25		evening max el	15486 Apr 10 16:27	28° $\mathfrak{B}$ 45'57	26°21'22
evening set	15485 May 16 01:45	19° $\Pi$ 31'00			15486 Apr 11 23:43	0° $\Pi$	
min. Earth dist.	15485 May 20 10:09	14° $\Pi$ 41'07	0.68098 AU	retrograde	15486 Apr 23 14:42	6° $\Pi$ 08'16	
inferior conj	15485 May 21 17:05	13° $\Pi$ 00'18	2°14'46	evening set	15486 Apr 29 21:22	3° $\Pi$ 36'07	
minimum elong	15485 May 21 14:56	13° $\Pi$ 07'20	2°13'21	asc. node	15486 Apr 30 10:46	3° $\Pi$ 07'30	
morning rise	15485 May 27 04:28	7° $\Pi$ 06'38			15486 May 03 10:31	30° $\mathfrak{R}$ $\mathfrak{B}$	
direct	15485 May 30 18:52	5° $\Pi$ 52'15		min. Earth dist.	15486 May 03 23:28	29° $\mathfrak{B}$ 21'35	0.66904 AU
morning max el	15485 Jun 06 19:10	9° $\Pi$ 42'04	19°15'33	inferior conj	15486 May 05 19:20	27° $\mathfrak{B}$ 07'37	1°34'40
desc. node	15485 Jun 15 07:19	20° $\Pi$ 15'27		minimum elong	15486 May 05 17:19	27° $\mathfrak{B}$ 13'46	1°33'19

morning rise	15486 May 11 14:14	21°  24'59		direct	15487 Apr 28 13:55	4°  52'05	
direct	15486 May 14 17:58	20°  8'28'53		morning max el	15487 May 04 21:24	8°  08'34	17°58'58
morning max el	15486 May 21 05:54	23°  55'45	18°28'49	desc. node	15487 May 20 01:09	0°  11'14	
	15486 May 26 08:52	0°  II			15487 May 20 00:51	0°  II	
desc. node	15486 Jun 02 04:18	9°  II58'13		morning set	15487 May 22 23:14	4°  II48'13	
morning set	15486 Jun 10 23:44	23°  II45'39					
	15486 Jun 14 22:53	0°  ☿		superior conj	15487 Jun 06 08:26	27°  II59'14	-1°51'44
				minimum elong	15487 Jun 05 23:50	27°  II25'17	1°51'55
superior conj	15486 Jun 26 19:51	18°  ☿34'04	-2°11'26		15487 Jun 07 15:05	0°  ☿	
minimum elong	15486 Jun 26 15:55	18°  ☿18'43	2°12'12	max. Earth dist.	15487 Jun 09 18:02	3°  ☿19'57	1.45732 AU
max. Earth dist.	15486 Jun 26 21:59	18°  ☿42'23	1.45956 AU	evening rise	15487 Jun 22 10:20	22°  ☿58'05	
	15486 Jul 04 03:38	0°  ♌			15487 Jun 27 00:33	0°  ♌	
evening rise	15486 Jul 12 15:28	13°  ♌20'17		greatest brilliancy	15487 Jul 05 23:07	13°  ♌27'01	-0.7m
greatest brilliancy	15486 Jul 21 07:02	26°  ♌55'26	-0.8m	asc. node	15487 Jul 14 06:49	24°  ♌53'26	
	15486 Jul 23 06:57	0°  ♍		evening max el	15487 Jul 17 16:49	28°  ♌43'13	19°33'22
asc. node	15486 Jul 27 10:04	6°  ♍08'33			15487 Jul 19 01:52	0°  ♍	
evening max el	15486 Aug 03 09:19	14°  ♍51'47	18°46'07	retrograde	15487 Jul 24 22:16	2°  ♍45'35	
retrograde	15486 Aug 10 00:26	18°  ♍28'09		evening set	15487 Jul 28 15:30	1°  ♍25'28	
evening set	15486 Aug 13 07:50	17°  ♍25'24			15487 Jul 30 07:04	30°  ♍♌	
inferior conj	15486 Aug 18 22:03	11°  ♍43'58	2°36'21	inferior conj	15487 Aug 03 00:07	25°  ♌31'01	2°58'55
minimum elong	15486 Aug 19 00:07	11°  ♍37'28	2°35'33	minimum elong	15487 Aug 03 01:26	25°  ♌26'39	2°58'11
min. Earth dist.	15486 Aug 20 17:43	9°  ♍27'47	0.66108 AU	min. Earth dist.	15487 Aug 04 05:39	23°  ♌53'03	0.67554 AU
morning rise	15486 Aug 24 15:26	5°  ♍18'18		morning rise	15487 Aug 08 10:49	19°  ♌05'11	
desc. node	15486 Aug 29 02:06	2°  ♍53'03		direct	15487 Aug 14 07:47	16°  ♌31'59	
direct	15486 Aug 30 22:10	2°  ♍40'14		desc. node	15487 Aug 15 23:32	16°  ♌42'39	
morning max el	15486 Sep 13 00:16	10°  ♍25'29	26°36'07	morning max el	15487 Aug 26 11:12	23°  ♌48'08	25°19'41
	15486 Sep 28 13:00	0°  ♌			15487 Sep 01 00:04	0°  ♍	
	15486 Oct 16 18:28	0°  ♌			15487 Sep 21 22:03	0°  ♌	
morning set	15486 Oct 18 20:09	3°  ♌51'56		morning set	15487 Oct 01 08:36	16°  ♌06'50	
max. Earth dist.	15486 Oct 22 19:28	11°  ♌33'31	1.34278 AU	max. Earth dist.	15487 Oct 04 21:50	22°  ♌37'07	1.36356 AU
asc. node	15486 Oct 23 11:46	12°  ♌54'40			15487 Oct 08 18:46	0°  ♌	
				asc. node	15487 Oct 10 08:25	3°  ♌04'24	
superior conj	15486 Oct 27 17:02	21°  ♌31'24	0°38'06				
minimum elong	15486 Oct 27 15:08	21°  ♌21'35	0°38'24	superior conj	15487 Oct 11 07:18	4°  ♌57'46	0°08'42
	15486 Oct 31 17:42	0°  ♌♋		minimum elong	15487 Oct 11 06:45	4°  ♌55'01	0°09'01
evening rise	15486 Nov 04 01:57	7°  ♌04'21		behind sun begin	15487 Oct 11 01:26	4°  ♌28'36	
	15486 Nov 16 06:44	0°  ♌		behind sun end	15487 Oct 11 12:04	5°  ♌21'30	
evening max el	15486 Nov 23 16:00	9°  ♌23'22	21°13'35	evening rise	15487 Oct 19 08:02	21°  ♌16'48	
desc. node	15486 Nov 24 23:05	10°  ♌36'02			15487 Oct 23 16:41	0°  ♌♋	
retrograde	15486 Dec 05 12:42	15°  ♌15'55		evening max el	15487 Nov 05 20:38	20°  ♌12'07	19°53'22
evening set	15486 Dec 08 06:58	14°  ♌58'10		desc. node	15487 Nov 11 20:16	24°  ♌26'31	
inferior conj	15486 Dec 17 01:39	11°  ♌06'54	-5°42'32	retrograde	15487 Nov 16 02:24	25°  ♌18'32	
minimum elong	15486 Dec 16 18:40	11°  ♌16'45	5°40'39	evening set	15487 Nov 18 03:16	25°  ♌07'21	
min. Earth dist.	15486 Dec 17 15:23	10°  ♌47'30	0.54424 AU	inferior conj	15487 Nov 26 22:02	21°  ♌07'34	-4°29'20
morning rise	15486 Dec 25 06:44	7°  ♌16'16		minimum elong	15487 Nov 26 12:01	21°  ♌22'54	4°25'32
direct	15486 Dec 29 07:08	6°  ♌41'25		min. Earth dist.	15487 Nov 28 22:33	19°  ♌53'19	0.55059 AU
morning max el	15487 Jan 11 05:22	12°  ♌57'53	22°43'55	morning rise	15487 Dec 04 19:26	16°  ♌56'12	
asc. node	15487 Jan 19 11:14	23°  ♌00'41		direct	15487 Dec 09 20:04	16°  ♌00'45	
	15487 Jan 23 19:39	0°  ♌		morning max el	15487 Dec 23 14:07	22°  ♌51'00	24°33'47
morning set	15487 Feb 02 12:46	19°  ♌00'54			15487 Dec 29 22:09	0°  ♌	
	15487 Feb 07 15:23	0°  ♌		asc. node	15488 Jan 06 08:27	11°  ♌04'39	
					15488 Jan 16 06:46	0°  ♌	
superior conj	15487 Feb 09 12:06	3°  ♌59'54	1°24'34	morning set	15488 Jan 18 00:43	3°  ♌43'12	
minimum elong	15487 Feb 09 14:09	4°  ♌10'52	1°24'49				
max. Earth dist.	15487 Feb 13 00:25	11°  ♌23'41	1.33653 AU	superior conj	15488 Jan 24 19:17	18°  ♌33'27	1°34'22
evening rise	15487 Feb 17 13:34	20°  ♌33'21		minimum elong	15488 Jan 24 20:27	18°  ♌39'48	1°34'57
desc. node	15487 Feb 20 23:31	27°  ♌04'31		max. Earth dist.	15488 Jan 26 23:46	23°  ♌19'28	1.32279 AU
	15487 Feb 22 13:38	0°  ♌			15488 Jan 30 02:59	0°  ♌	
	15487 Mar 13 14:49	0°  ♌		evening rise	15488 Feb 01 05:43	4°  ♌22'02	
evening max el	15487 Mar 24 06:04	12°  ♌22'19	27°10'39	desc. node	15488 Feb 07 20:08	17°  ♌09'23	
retrograde	15487 Apr 06 18:12	19°  ♌53'14			15488 Feb 15 06:50	0°  ♌	
evening set	15487 Apr 13 08:54	17°  ♌22'12		evening max el	15488 Mar 05 18:24	25°  ♌34'11	27°34'32
asc. node	15487 Apr 17 08:05	13°  ♌35'27			15488 Mar 11 03:36	0°  ♌	
min. Earth dist.	15487 Apr 17 06:16	13°  ♌40'24	0.65298 AU	retrograde	15488 Mar 19 14:32	3°  ♌03'39	
inferior conj	15487 Apr 19 14:35	11°  ♌02'30	0°42'11	evening set	15488 Mar 26 10:00	0°  ♌40'47	
minimum elong	15487 Apr 19 13:28	11°  ♌05'38	0°41'15		15488 Mar 27 08:02	30°  ♌♋	
morning rise	15487 Apr 25 19:46	5°  ♌32'37		min. Earth dist.	15488 Mar 30 04:38	27°  ♌27'48	0.63353 AU



inferior conj	15488 Apr 02 00:01	24° $\Upsilon$ 37'53	-0°23'30	inferior conj	15489 Mar 15 20:15	7° $\Upsilon$ 44'33	-1°42'02
minimum elong	15488 Apr 02 00:47	24° $\Upsilon$ 35'58	0°23'29	minimum elong	15489 Mar 15 23:55	7° $\Upsilon$ 36'20	1°40'35
asc. node	15488 Apr 03 05:27	23° $\Upsilon$ 24'33		asc. node	15489 Mar 21 02:51	3° $\Upsilon$ 42'18	
morning rise	15488 Apr 08 18:07	19° $\Upsilon$ 23'12		morning rise	15489 Mar 23 05:13	2° $\Upsilon$ 48'10	
direct	15488 Apr 11 03:59	18° $\Upsilon$ 54'57		direct	15489 Mar 25 08:34	2° $\Upsilon$ 28'43	
morning max el	15488 Apr 17 15:01	22° $\Upsilon$ 12'32	17°46'30	morning max el	15489 Apr 01 07:36	5° $\Upsilon$ 58'31	17°52'04
	15488 Apr 23 17:38	0° $\text{8}$		morning set	15489 Apr 16 23:11	0° $\text{8}$ 19'57	
morning set	15488 May 04 00:56	17° $\text{8}$ 05'36			15489 Apr 16 18:46	0° $\text{8}$	
desc. node	15488 May 05 21:57	20° $\text{8}$ 18'39		desc. node	15489 Apr 22 18:39	10° $\text{8}$ 45'18	
	15488 May 11 14:59	0° $\text{II}$					
superior conj	15488 May 16 14:33	8° $\text{II}$ 15'06	-1°18'34	superior conj	15489 Apr 27 20:12	19° $\text{8}$ 35'51	-0°40'14
minimum elong	15488 May 16 07:09	7° $\text{II}$ 44'46	1°18'26	minimum elong	15489 Apr 27 16:33	19° $\text{8}$ 20'11	0°40'17
max. Earth dist.	15488 May 22 12:45	17° $\text{II}$ 48'16	1.44785 AU		15489 May 04 00:44	0° $\text{II}$	
	15488 May 30 07:50	0° $\text{6}$		max. Earth dist.	15489 May 05 04:01	1° $\text{II}$ 51'47	1.43216 AU
evening rise	15488 May 31 21:01	2° $\text{6}$ 22'51		evening rise	15489 May 11 15:46	12° $\text{II}$ 14'42	
	15488 Jun 19 14:02	0° $\text{Q}$			15489 May 23 08:42	0° $\text{6}$	
evening max el	15488 Jun 29 18:30	12° $\text{Q}$ 36'47	20°35'17	evening max el	15489 Jun 12 14:23	26° $\text{6}$ 29'39	21°48'44
asc. node	15488 Jun 30 03:40	12° $\text{Q}$ 59'20			15489 Jun 16 17:09	0° $\text{Q}$	
retrograde	15488 Jul 07 21:14	17° $\text{Q}$ 15'53		asc. node	15489 Jun 17 00:36	0° $\text{Q}$ 12'20	
evening set	15488 Jul 12 01:01	15° $\text{Q}$ 38'02		retrograde	15489 Jun 21 19:36	1° $\text{Q}$ 52'28	
inferior conj	15488 Jul 17 06:57	9° $\text{Q}$ 31'47	3°08'41	evening set	15489 Jun 26 10:28	29° $\text{6}$ 57'41	
minimum elong	15488 Jul 17 07:18	9° $\text{Q}$ 30'32	3°07'56		15489 Jun 26 09:22	30° $\text{R}$ 6	
min. Earth dist.	15488 Jul 17 22:40	8° $\text{Q}$ 37'40	0.68538 AU	inferior conj	15489 Jul 01 16:17	23° $\text{6}$ 41'02	3°07'11
morning rise	15488 Jul 22 13:18	3° $\text{Q}$ 09'42		minimum elong	15489 Jul 01 15:42	23° $\text{6}$ 43'06	3°06'17
direct	15488 Jul 27 22:40	0° $\text{Q}$ 48'21		min. Earth dist.	15489 Jul 01 18:38	23° $\text{6}$ 32'49	0.69037 AU
desc. node	15488 Aug 01 20:53	2° $\text{Q}$ 22'37		morning rise	15489 Jul 06 20:44	17° $\text{6}$ 25'03	
morning max el	15488 Aug 07 21:54	7° $\text{Q}$ 21'20	23°52'28	direct	15489 Jul 11 17:45	15° $\text{6}$ 20'21	
	15488 Aug 25 14:32	0° $\text{P}$		desc. node	15489 Jul 19 18:12	19° $\text{6}$ 27'00	
morning set	15488 Sep 12 01:36	27° $\text{P}$ 30'49		morning max el	15489 Jul 21 10:21	21° $\text{6}$ 02'40	22°23'35
	15488 Sep 13 12:25	0° $\text{A}$			15489 Jul 29 02:25	0° $\text{Q}$	
max. Earth dist.	15488 Sep 15 20:26	4° $\text{A}$ 04'16	1.38719 AU		15489 Aug 18 19:57	0° $\text{P}$	
				morning set	15489 Aug 23 19:22	7° $\text{P}$ 54'58	
superior conj	15488 Sep 23 08:57	17° $\text{A}$ 48'44	-0°25'19	max. Earth dist.	15489 Aug 28 21:27	16° $\text{P}$ 18'16	1.41088 AU
minimum elong	15488 Sep 23 10:45	17° $\text{A}$ 57'13	0°24'48				
asc. node	15488 Sep 26 05:04	23° $\text{A}$ 13'57		superior conj	15489 Sep 05 17:41	29° $\text{P}$ 53'47	-1°01'40
	15488 Sep 29 16:27	0° $\text{M}$		minimum elong	15489 Sep 05 22:34	0° $\text{A}$ 15'36	1°01'00
evening rise	15488 Oct 02 08:10	5° $\text{M}$ 12'48			15489 Sep 05 19:04	0° $\text{A}$	
	15488 Oct 16 22:50	0° $\text{J}$		asc. node	15489 Sep 13 01:41	13° $\text{A}$ 19'16	
evening max el	15488 Oct 18 15:21	1° $\text{J}$ 50'45	18°55'05	evening rise	15489 Sep 15 22:58	18° $\text{A}$ 43'34	
retrograde	15488 Oct 27 07:37	6° $\text{J}$ 13'08			15489 Sep 22 02:01	0° $\text{M}$	
desc. node	15488 Oct 28 17:31	6° $\text{J}$ 06'36		evening max el	15489 Oct 01 20:53	14° $\text{M}$ 14'18	18°18'43
evening set	15488 Oct 29 04:55	6° $\text{J}$ 01'32		retrograde	15489 Oct 09 08:27	18° $\text{M}$ 02'54	
inferior conj	15488 Nov 06 11:45	1° $\text{J}$ 43'17	-2°47'01	evening set	15489 Oct 11 09:49	17° $\text{M}$ 46'18	
minimum elong	15488 Nov 06 04:51	1° $\text{J}$ 55'27	2°43'37	desc. node	15489 Oct 15 14:51	15° $\text{M}$ 42'01	
	15488 Nov 08 22:11	30° $\text{R}$ 11		inferior conj	15489 Oct 18 23:20	13° $\text{M}$ 06'47	-1°04'27
min. Earth dist.	15488 Nov 09 10:17	29° $\text{M}$ 39'12	0.56518 AU	minimum elong	15489 Oct 18 20:55	13° $\text{M}$ 11'48	1°02'55
morning rise	15488 Nov 14 01:55	26° $\text{M}$ 57'19		min. Earth dist.	15489 Oct 22 05:36	10° $\text{M}$ 25'56	0.58532 AU
direct	15488 Nov 19 21:37	25° $\text{M}$ 37'00		morning rise	15489 Oct 26 04:32	7° $\text{M}$ 43'55	
	15488 Nov 30 17:11	0° $\text{J}$		direct	15489 Nov 01 13:13	5° $\text{M}$ 56'51	
morning max el	15488 Dec 04 01:19	2° $\text{J}$ 53'37	26°13'01	morning max el	15489 Nov 15 20:25	13° $\text{M}$ 35'12	27°23'57
asc. node	15488 Dec 23 05:35	29° $\text{J}$ 50'00			15489 Nov 28 22:25	0° $\text{J}$	
	15488 Dec 23 07:47	0° $\text{Z}$		asc. node	15489 Dec 10 02:39	19° $\text{J}$ 06'04	
morning set	15489 Jan 01 11:40	18° $\text{Z}$ 18'26			15489 Dec 15 13:08	0° $\text{Z}$	
	15489 Jan 06 19:05	0° $\approx$		morning set	15489 Dec 16 19:51	2° $\text{Z}$ 42'17	
superior conj	15489 Jan 08 05:36	3° $\approx$ 12'31	1°37'59	superior conj	15489 Dec 23 17:07	17° $\text{Z}$ 51'53	1°35'36
minimum elong	15489 Jan 08 05:43	3° $\approx$ 13'06	1°38'47	minimum elong	15489 Dec 23 16:12	17° $\text{Z}$ 46'42	1°36'27
max. Earth dist.	15489 Jan 09 05:03	5° $\approx$ 23'01	1.31397 AU	max. Earth dist.	15489 Dec 23 12:56	17° $\text{Z}$ 28'28	1.31039 AU
evening rise	15489 Jan 15 05:46	18° $\approx$ 28'37			15489 Dec 29 04:20	0° $\approx$	
	15489 Jan 20 23:19	0° $\text{H}$		evening rise	15489 Dec 30 11:23	2° $\approx$ 47'43	
desc. node	15489 Jan 24 16:49	6° $\text{H}$ 54'06		desc. node	15490 Jan 11 13:34	26° $\approx$ 10'56	
	15489 Feb 08 19:43	0° $\Upsilon$			15490 Jan 13 20:50	0° $\text{H}$	
evening max el	15489 Feb 16 02:58	8° $\Upsilon$ 07'58	27°26'47	evening max el	15490 Jan 29 05:01	19° $\text{H}$ 52'31	26°44'07
retrograde	15489 Mar 02 02:34	15° $\Upsilon$ 29'57		retrograde	15490 Feb 12 05:01	27° $\text{H}$ 04'24	
evening set	15489 Mar 08 21:51	13° $\Upsilon$ 22'24		evening set	15490 Feb 18 17:10	25° $\text{H}$ 19'03	
min. Earth dist.	15489 Mar 12 16:56	10° $\Upsilon$ 31'56	0.61180 AU	min. Earth dist.	15490 Feb 22 18:48	22° $\text{H}$ 40'50	0.58945 AU
				inferior conj	15490 Feb 25 23:31	20° $\text{H}$ 12'37	-3°09'49

minimum elong	15490 Feb 26 06:40	19° $\text{H}$ 58'44	3°06'58	min. Earth dist.	15491 Feb 04 11:21	3° $\text{H}$ 44'34	0.56891 AU
morning rise	15490 Mar 05 23:36	15° $\text{H}$ 37'17		inferior conj	15491 Feb 07 06:30	1° $\text{H}$ 51'57	-4°36'37
direct	15490 Mar 07 23:12	15° $\text{H}$ 23'09		minimum elong	15491 Feb 07 15:47	1° $\text{H}$ 36'21	4°33'33
asc. node	15490 Mar 08 00:17	15° $\text{H}$ 23'10			15491 Feb 10 04:01	30° $\text{R}$ $\approx$	
morning max el	15490 Mar 15 19:35	19° $\text{H}$ 16'20	18°16'55	morning rise	15491 Feb 15 18:18	27° $\approx$ 38'11	
	15490 Mar 23 16:10	0° $\text{Y}$		direct	15491 Feb 17 19:40	27° $\approx$ 25'35	
morning set	15490 Mar 31 12:15	14° $\text{Y}$ 14'15		asc. node	15491 Feb 22 21:42	28° $\approx$ 47'56	
	15490 Apr 08 22:21	0° $\text{Z}$			15491 Feb 24 18:17	0° $\text{H}$	
desc. node	15490 Apr 09 15:18	1° $\text{Z}$ 17'17		morning max el	15491 Feb 26 22:43	1° $\text{H}$ 53'03	19°02'56
				morning set	15491 Mar 15 11:27	28° $\text{H}$ 33'56	
superior conj	15490 Apr 10 00:09	1° $\text{Z}$ 57'26	-0°03'03		15491 Mar 16 04:53	0° $\text{Y}$	
minimum elong	15490 Apr 09 23:54	1° $\text{Z}$ 56'15	0°03'24	superior conj	15491 Mar 23 22:07	15° $\text{Y}$ 06'39	0°29'36
behind sun begin	15490 Apr 09 16:37	1° $\text{Z}$ 23'13		minimum elong	15491 Mar 23 23:54	15° $\text{Y}$ 15'10	0°29'09
behind sun end	15490 Apr 10 07:10	2° $\text{Z}$ 29'13		desc. node	15491 Mar 27 11:56	21° $\text{Y}$ 50'18	
max. Earth dist.	15490 Apr 17 14:16	15° $\text{Z}$ 16'30	1.41188 AU	max. Earth dist.	15491 Mar 30 20:36	27° $\text{Y}$ 56'54	1.38923 AU
evening rise	15490 Apr 22 05:11	22° $\text{Z}$ 58'03			15491 Apr 01 00:21	0° $\text{Z}$	
	15490 Apr 26 14:26	0° $\text{II}$		evening rise	15491 Apr 03 15:50	4° $\text{Z}$ 36'11	
	15490 May 17 08:19	0° $\text{E}$			15491 Apr 19 16:34	0° $\text{II}$	
evening max el	15490 May 26 06:00	10° $\text{E}$ 22'46	23°08'59	evening max el	15491 May 08 19:43	24° $\text{II}$ 17'11	24°29'59
asc. node	15490 Jun 03 21:38	16° $\text{E}$ 16'28			15491 May 16 06:44	0° $\text{E}$	
retrograde	15490 Jun 05 15:51	16° $\text{E}$ 29'59		retrograde	15491 May 20 08:44	1° $\text{E}$ 02'13	
evening set	15490 Jun 10 18:12	14° $\text{E}$ 20'14		asc. node	15491 May 21 18:46	0° $\text{E}$ 53'37	
min. Earth dist.	15490 Jun 15 15:33	8° $\text{E}$ 32'10	0.69049 AU		15491 May 24 02:21	30° $\text{R}$ $\text{II}$	
inferior conj	15490 Jun 16 02:11	7° $\text{E}$ 55'22	2°55'08	evening set	15491 May 25 22:34	28° $\text{II}$ 40'34	
minimum elong	15490 Jun 16 00:46	8° $\text{E}$ 00'17	2°54'01	min. Earth dist.	15491 May 30 11:14	23° $\text{II}$ 29'25	0.68575 AU
morning rise	15490 Jun 21 07:16	1° $\text{E}$ 46'55		inferior conj	15491 May 31 10:42	22° $\text{II}$ 10'41	2°32'38
direct	15490 Jun 25 15:53	0° $\text{E}$ 01'25		minimum elong	15491 May 31 08:43	22° $\text{II}$ 17'24	2°31'19
morning max el	15490 Jul 04 03:19	4° $\text{E}$ 53'30	21°00'43	morning rise	15491 Jun 05 19:00	16° $\text{II}$ 11'04	
desc. node	15490 Jul 06 15:27	7° $\text{E}$ 34'24		direct	15491 Jun 09 15:49	14° $\text{II}$ 45'28	
	15490 Jul 23 03:49	0° $\text{O}$		morning max el	15491 Jun 17 02:58	18° $\text{II}$ 54'53	19°49'38
morning set	15490 Aug 03 13:46	17° $\text{O}$ 19'59		desc. node	15491 Jun 23 12:36	26° $\text{II}$ 28'08	
max. Earth dist.	15490 Aug 11 04:01	29° $\text{O}$ 23'54	1.43189 AU		15491 Jun 26 02:55	0° $\text{E}$	
	15490 Aug 11 12:55	0° $\text{np}$		morning set	15491 Jul 13 17:54	26° $\text{E}$ 11'10	
superior conj	15490 Aug 18 05:08	11° $\text{np}$ 03'29	-1°36'19		15491 Jul 16 05:21	0° $\text{O}$	
minimum elong	15490 Aug 18 12:34	11° $\text{np}$ 34'55	1°35'50	max. Earth dist.	15491 Jul 24 16:55	13° $\text{O}$ 15'08	1.44795 AU
	15490 Aug 29 02:12	0° $\text{E}$		superior conj	15491 Jul 29 17:06	21° $\text{O}$ 14'57	-2°02'54
evening rise	15490 Aug 30 00:09	1° $\text{E}$ 37'49		minimum elong	15491 Jul 29 23:49	21° $\text{O}$ 42'01	2°03'08
asc. node	15490 Aug 30 22:17	3° $\text{E}$ 16'27			15491 Aug 04 01:56	0° $\text{np}$	
evening max el	15490 Sep 15 09:00	27° $\text{E}$ 12'58	18°02'44	evening rise	15491 Aug 12 06:36	13° $\text{np}$ 42'50	
	15490 Sep 19 03:52	0° $\text{ml}$		asc. node	15491 Aug 17 18:55	23° $\text{np}$ 01'25	
retrograde	15490 Sep 22 02:19	0° $\text{ml}$ 40'42			15491 Aug 22 01:28	0° $\text{E}$	
evening set	15490 Sep 24 10:59	0° $\text{ml}$ 15'03		evening max el	15491 Aug 29 23:46	10° $\text{E}$ 37'02	18°05'37
	15490 Sep 25 02:02	30° $\text{R}$ $\text{E}$		retrograde	15491 Sep 05 08:54	13° $\text{E}$ 57'24	
inferior conj	15490 Oct 01 07:19	25° $\text{E}$ 15'31	0°22'28	evening set	15491 Sep 08 02:02	13° $\text{E}$ 19'12	
minimum elong	15490 Oct 01 08:02	25° $\text{E}$ 13'49	0°22'29	inferior conj	15491 Sep 14 07:55	8° $\text{O}$ 14'47	1°29'09
desc. node	15490 Oct 02 12:16	24° $\text{E}$ 05'53		minimum elong	15491 Sep 14 10:03	7° $\text{E}$ 56'00	1°28'29
min. Earth dist.	15490 Oct 04 10:20	22° $\text{E}$ 17'23	0.60805 AU	min. Earth dist.	15491 Sep 17 00:54	5° $\text{E}$ 07'07	0.63064 AU
morning rise	15490 Oct 08 02:01	19° $\text{E}$ 22'54		desc. node	15491 Sep 19 09:43	2° $\text{E}$ 50'36	
direct	15490 Oct 14 17:26	17° $\text{E}$ 11'30		morning rise	15491 Sep 20 15:54	1° $\text{E}$ 49'37	
morning max el	15490 Oct 28 23:11	25° $\text{E}$ 05'11	27°56'53		15491 Sep 23 21:07	30° $\text{R}$ $\text{np}$	
	15490 Nov 02 11:51	0° $\text{ml}$		direct	15491 Sep 27 07:53	29° $\text{np}$ 20'51	
	15490 Nov 22 09:00	0° $\text{Z}$			15491 Sep 30 22:59	0° $\text{E}$	
asc. node	15490 Nov 26 23:37	8° $\text{Z}$ 43'57		morning max el	15491 Oct 11 07:18	7° $\text{E}$ 20'22	27°51'00
morning set	15490 Nov 30 23:15	16° $\text{Z}$ 49'04			15491 Oct 28 17:04	0° $\text{ml}$	
max. Earth dist.	15490 Dec 06 19:31	29° $\text{Z}$ 25'56	1.31230 AU	asc. node	15491 Nov 13 20:29	28° $\text{ml}$ 37'13	
	15490 Dec 07 01:41	0° $\text{Z}$		morning set	15491 Nov 14 19:41	0° $\text{Z}$ 33'53	
superior conj	15490 Dec 08 03:54	2° $\text{Z}$ 25'37	1°27'15		15491 Nov 14 12:59	0° $\text{Z}$	
minimum elong	15490 Dec 08 02:07	2° $\text{Z}$ 15'44	1°27'59	max. Earth dist.	15491 Nov 19 21:07	11° $\text{Z}$ 07'47	1.31985 AU
evening rise	15490 Dec 14 20:29	17° $\text{Z}$ 13'41		superior conj	15491 Nov 22 12:02	16° $\text{Z}$ 48'48	1°12'54
	15490 Dec 21 00:57	0° $\approx$		minimum elong	15491 Nov 22 09:46	16° $\text{Z}$ 36'21	1°13'26
desc. node	15490 Dec 29 10:25	14° $\approx$ 48'49			15491 Nov 28 12:18	0° $\text{Z}$	
	15491 Jan 10 04:45	0° $\text{H}$		evening rise	15491 Nov 29 07:14	1° $\text{Z}$ 42'31	
evening max el	15491 Jan 10 22:42	0° $\text{H}$ 43'33	25°28'41		15491 Dec 14 12:21	0° $\approx$	
retrograde	15491 Jan 24 20:05	7° $\text{H}$ 42'57		desc. node	15491 Dec 16 07:20	2° $\approx$ 33'43	
evening set	15491 Jan 30 16:05	6° $\text{H}$ 25'14					

evening max el	15491 Dec 23 09:35	10° $\approx$ 53'08	23°50'55	evening max el	15492 Dec 03 20:24	20° $\approx$ 50'22	22°08'05
retrograde	15492 Jan 05 21:34	17° $\approx$ 34'51		retrograde	15492 Dec 16 10:57	27° $\approx$ 04'34	
evening set	15492 Jan 10 15:57	16° $\approx$ 45'35		evening set	15492 Dec 19 22:00	26° $\approx$ 38'03	
min. Earth dist.	15492 Jan 16 20:57	13° $\approx$ 44'44	0.55319 AU	inferior conj	15492 Dec 28 11:15	22° $\approx$ 46'00	-6°00'02
inferior conj	15492 Jan 18 16:40	12° $\approx$ 39'48	-5°42'03	minimum elong	15492 Dec 28 09:10	22° $\approx$ 48'54	5°59'06
minimum elong	15492 Jan 18 23:11	12° $\approx$ 30'07	5°40'25	min. Earth dist.	15492 Dec 28 02:37	22° $\approx$ 58'04	0.54493 AU
morning rise	15492 Jan 27 08:04	8° $\approx$ 44'02		morning rise	15493 Jan 05 21:17	18° $\approx$ 58'48	
direct	15492 Jan 29 20:45	8° $\approx$ 27'59		direct	15493 Jan 09 07:28	18° $\approx$ 32'46	
morning max el	15492 Feb 09 12:51	13° $\approx$ 37'27	20°11'55	morning max el	15493 Jan 21 11:58	24° $\approx$ 25'24	21°43'30
asc. node	15492 Feb 09 19:04	13° $\approx$ 52'41		asc. node	15493 Jan 26 09:57	0° $\approx$	
morning set	15492 Feb 20 24:00	0° $\approx$		morning set	15493 Jan 26 16:23	0° $\approx$ 21'12	
	15492 Feb 27 17:19	13° $\approx$ 09'04			15493 Feb 11 03:12	27° $\approx$ 52'14	
					15493 Feb 12 03:28	0° $\approx$	
superior conj	15492 Mar 06 09:44	28° $\approx$ 51'37	0°56'06	superior conj	15493 Feb 18 07:17	13° $\approx$ 02'23	1°16'03
minimum elong	15492 Mar 06 12:17	29° $\approx$ 04'27	0°55'49	minimum elong	15493 Feb 18 09:41	13° $\approx$ 15'00	1°16'06
	15492 Mar 06 23:23	0° $\approx$		max. Earth dist.	15493 Feb 22 15:13	21° $\approx$ 55'58	1.34649 AU
max. Earth dist.	15492 Mar 12 03:25	10° $\approx$ 03'59	1.36673 AU	evening rise	15493 Feb 26 19:46	0° $\approx$ 07'54	
desc. node	15492 Mar 13 08:31	12° $\approx$ 02'45			15493 Feb 26 18:07	0° $\approx$	
evening rise	15492 Mar 15 21:50	17° $\approx$ 02'35		desc. node	15493 Feb 28 05:05	2° $\approx$ 45'05	
	15492 Mar 23 09:34	0° $\approx$			15493 Mar 16 12:16	0° $\approx$	
	15492 Apr 13 01:34	0° $\approx$		evening max el	15493 Apr 02 23:11	21° $\approx$ 56'16	26°45'05
evening max el	15492 Apr 20 09:20	8° $\approx$ 10'36	25°44'32	retrograde	15493 Apr 16 03:47	29° $\approx$ 22'47	
retrograde	15492 May 02 21:01	15° $\approx$ 22'12		evening set	15493 Apr 22 14:17	26° $\approx$ 50'26	
asc. node	15492 May 07 15:58	13° $\approx$ 49'01		asc. node	15493 Apr 24 13:14	25° $\approx$ 03'50	
evening set	15492 May 08 21:52	12° $\approx$ 52'40		min. Earth dist.	15493 Apr 26 14:15	22° $\approx$ 50'16	0.66267 AU
min. Earth dist.	15492 May 13 03:31	8° $\approx$ 17'48	0.67639 AU	inferior conj	15493 Apr 28 15:27	20° $\approx$ 25'06	1°14'00
inferior conj	15492 May 14 15:51	6° $\approx$ 22'14	1°59'13	minimum elong	15493 Apr 28 13:43	20° $\approx$ 30'14	1°12'46
minimum elong	15492 May 14 13:41	6° $\approx$ 29'08	1°57'48	morning rise	15493 May 04 14:22	14° $\approx$ 47'37	
morning rise	15492 May 20 06:04	0° $\approx$ 32'48		direct	15493 May 07 14:01	13° $\approx$ 58'19	
	15492 May 21 05:37	30° $\approx$ 08'08		morning max el	15493 May 13 22:54	17° $\approx$ 18'58	18°14'06
direct	15492 May 23 15:51	29° $\approx$ 26'19			15493 May 23 13:24	0° $\approx$	
	15492 May 26 04:03	0° $\approx$		desc. node	15493 May 27 06:34	5° $\approx$ 47'44	
morning max el	15492 May 30 09:51	3° $\approx$ 04'51	18°53'36	morning set	15493 Jun 02 10:39	15° $\approx$ 38'25	
desc. node	15492 Jun 09 09:38	15° $\approx$ 55'34			15493 Jun 11 11:25	0° $\approx$	
greatest brilliancy	15492 Jun 12 21:06	21° $\approx$ 07'27	-0.8m	superior conj	15493 Jun 17 17:57	9° $\approx$ 50'41	-2°05'13
	15492 Jun 18 16:01	0° $\approx$		minimum elong	15493 Jun 17 11:17	9° $\approx$ 24'40	2°05'46
morning set	15492 Jun 22 03:03	5° $\approx$ 21'21		max. Earth dist.	15493 Jun 19 07:34	12° $\approx$ 17'33	1.45955 AU
max. Earth dist.	15492 Jul 06 11:00	27° $\approx$ 38'35	1.45747 AU		15493 Jun 30 16:43	0° $\approx$	
	15492 Jul 07 23:09	0° $\approx$		evening rise	15493 Jul 03 19:41	4° $\approx$ 51'22	
superior conj	15492 Jul 08 09:07	0° $\approx$ 39'05	-2°14'03	greatest brilliancy	15493 Jul 14 16:49	21° $\approx$ 38'42	-0.8m
minimum elong	15492 Jul 08 09:45	0° $\approx$ 41'34	2°14'52		15493 Jul 20 09:46	0° $\approx$	
evening rise	15492 Jul 23 13:23	24° $\approx$ 46'58		asc. node	15493 Jul 21 12:19	1° $\approx$ 31'12	
	15492 Jul 26 18:59	0° $\approx$		evening max el	15493 Jul 27 00:10	8° $\approx$ 05'48	19°04'11
asc. node	15492 Aug 03 15:35	12° $\approx$ 28'27		retrograde	15493 Aug 02 20:17	11° $\approx$ 51'37	
evening max el	15492 Aug 12 13:44	24° $\approx$ 16'57	18°26'22	evening set	15493 Aug 06 07:52	10° $\approx$ 41'22	
retrograde	15492 Aug 18 24:00	27° $\approx$ 43'24		inferior conj	15493 Aug 11 19:18	4° $\approx$ 54'01	2°47'36
evening set	15492 Aug 22 02:08	26° $\approx$ 49'59		minimum elong	15493 Aug 11 21:05	4° $\approx$ 48'14	2°46'49
inferior conj	15492 Aug 27 21:03	21° $\approx$ 16'44	2°16'40	min. Earth dist.	15493 Aug 13 08:50	2° $\approx$ 53'30	0.66782 AU
minimum elong	15492 Aug 27 23:22	21° $\approx$ 09'47	2°15'51		15493 Aug 15 19:36	30° $\approx$ 08'08	
min. Earth dist.	15492 Aug 30 00:45	18° $\approx$ 42'59	0.65102 AU	morning rise	15493 Aug 17 09:36	28° $\approx$ 02'48	
morning rise	15492 Sep 02 19:18	14° $\approx$ 54'03		desc. node	15493 Aug 23 04:36	25° $\approx$ 51'35	
desc. node	15492 Sep 05 07:10	13° $\approx$ 15'12		direct	15493 Aug 23 12:24	25° $\approx$ 51'10	
direct	15492 Sep 09 06:35	12° $\approx$ 16'59			15493 Sep 01 12:21	0° $\approx$	
morning max el	15492 Sep 22 18:07	20° $\approx$ 10'36	27°11'13	morning max el	15493 Sep 05 05:35	3° $\approx$ 25'13	26°05'33
	15492 Oct 01 04:55	0° $\approx$			15493 Sep 25 11:40	0° $\approx$	
	15492 Oct 20 19:00	0° $\approx$		morning set	15493 Oct 11 04:10	26° $\approx$ 29'40	
morning set	15492 Oct 28 06:25	13° $\approx$ 49'44			15493 Oct 13 01:07	0° $\approx$	
asc. node	15492 Oct 30 17:16	18° $\approx$ 40'05		max. Earth dist.	15493 Oct 14 22:11	3° $\approx$ 35'34	1.35124 AU
max. Earth dist.	15492 Nov 01 14:26	22° $\approx$ 28'55	1.33298 AU	asc. node	15493 Oct 17 13:59	8° $\approx$ 48'28	
	15492 Nov 05 04:58	0° $\approx$		superior conj	15493 Oct 20 11:17	14° $\approx$ 38'04	0°26'17
superior conj	15492 Nov 05 15:21	0° $\approx$ 55'02	0°52'32	minimum elong	15493 Oct 20 09:50	14° $\approx$ 30'42	0°26'33
minimum elong	15492 Nov 05 13:06	0° $\approx$ 43'08	0°52'53		15493 Oct 27 20:42	0° $\approx$	
evening rise	15492 Nov 12 17:47	16° $\approx$ 09'00		evening rise	15493 Oct 28 02:11	0° $\approx$ 28'28	
	15492 Nov 19 13:38	0° $\approx$			15493 Nov 14 12:56	0° $\approx$	
desc. node	15492 Dec 02 04:21	19° $\approx$ 06'31					

evening max el	15493 Nov 15 16:45	1° $\text{Z}$ 12'33	20°36'43	minimum elong	15494 Oct 03 21:02	27° $\text{Z}$ 52'16	0°04'53
desc. node	15493 Nov 19 01:29	4° $\text{Z}$ 03'34		behind sun begin	15494 Oct 03 14:39	27° $\text{Z}$ 21'14	
retrograde	15493 Nov 26 21:20	6° $\text{Z}$ 46'25		behind sun end	15494 Oct 04 03:24	28° $\text{Z}$ 23'21	
evening set	15493 Nov 29 06:23	6° $\text{Z}$ 32'29		asc. node	15494 Oct 04 10:39	28° $\text{Z}$ 58'47	
inferior conj	15493 Dec 08 02:43	2° $\text{Z}$ 38'41	-5°17'04		15494 Oct 04 23:08	0° $\text{M}$	
minimum elong	15493 Dec 07 17:28	2° $\text{Z}$ 52'04	5°14'11	evening rise	15494 Oct 12 06:09	14° $\text{M}$ 35'19	
min. Earth dist.	15493 Dec 09 08:11	1° $\text{Z}$ 56'01	0.54583 AU		15494 Oct 20 07:40	0° $\text{Z}$	
	15493 Dec 12 22:23	30° $\text{R}$ $\text{Z}$		evening max el	15494 Oct 29 03:38	12° $\text{Z}$ 22'58	19°25'48
morning rise	15493 Dec 16 04:23	28° $\text{Z}$ 41'47		desc. node	15494 Nov 05 22:42	17° $\text{Z}$ 00'44	
direct	15493 Dec 20 15:26	27° $\text{Z}$ 59'05		retrograde	15494 Nov 07 17:03	17° $\text{Z}$ 10'13	
	15493 Dec 27 23:36	0° $\text{Z}$		evening set	15494 Nov 09 14:46	16° $\text{Z}$ 59'39	
morning max el	15494 Jan 02 23:40	4° $\text{Z}$ 30'20	23°30'52	inferior conj	15494 Nov 18 05:36	12° $\text{Z}$ 52'46	-3°47'37
asc. node	15494 Jan 13 13:39	17° $\text{Z}$ 55'01		minimum elong	15494 Nov 17 20:26	13° $\text{Z}$ 07'38	3°43'40
	15494 Jan 20 10:56	0° $\approx$		min. Earth dist.	15494 Nov 20 17:16	11° $\text{Z}$ 16'07	0.55588 AU
morning set	15494 Jan 26 14:57	12° $\approx$ 36'31		morning rise	15494 Nov 25 23:58	8° $\text{Z}$ 27'19	
				direct	15494 Dec 01 09:11	7° $\text{Z}$ 21'49	
superior conj	15494 Feb 02 11:41	27° $\approx$ 29'49	1°29'29	morning max el	15494 Dec 15 08:48	14° $\text{Z}$ 24'43	25°18'28
minimum elong	15494 Feb 02 13:24	27° $\approx$ 39'03	1°29'54		15494 Dec 27 15:29	0° $\text{Z}$	
	15494 Feb 03 15:34	0° $\text{H}$		asc. node	15494 Dec 31 10:51	6° $\text{Z}$ 18'19	
max. Earth dist.	15494 Feb 05 10:19	3° $\text{H}$ 47'36	1.33005 AU	morning set	15495 Jan 11 02:44	27° $\text{Z}$ 16'53	
evening rise	15494 Feb 10 06:09	13° $\text{H}$ 42'42			15495 Jan 12 08:50	0° $\approx$	
desc. node	15494 Feb 15 01:40	22° $\text{H}$ 58'22					
	15494 Feb 18 23:23	0° $\text{Y}$		superior conj	15495 Jan 17 20:31	12° $\approx$ 07'04	1°36'38
	15494 Mar 11 11:19	0° $\text{Z}$		minimum elong	15495 Jan 17 21:15	12° $\approx$ 11'03	1°37'21
evening max el	15494 Mar 16 12:19	5° $\text{Z}$ 22'57	27°24'18	max. Earth dist.	15495 Jan 19 12:24	15° $\approx$ 46'42	1.31836 AU
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evening set	15494 Apr 05 21:40	10° $\text{Z}$ 25'30			15495 Jan 26 05:20	0° $\text{H}$	
min. Earth dist.	15494 Apr 09 17:28	6° $\text{Z}$ 56'57	0.64507 AU	desc. node	15495 Feb 01 22:20	12° $\text{H}$ 55'35	
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inferior conj	15494 Apr 12 06:53	4° $\text{Z}$ 12'09	0°15'58	evening max el	15495 Feb 26 23:08	18° $\text{Y}$ 19'20	27°35'18
minimum elong	15494 Apr 12 06:25	4° $\text{Z}$ 13'22	0°15'22	retrograde	15495 Mar 12 21:26	25° $\text{Y}$ 47'06	
transit middle	15494 Apr 12 06:25	4° $\text{Z}$ 13'22	0°15'22	evening set	15495 Mar 19 17:31	23° $\text{Y}$ 29'33	
transit begin	15494 Apr 12 05:34	4° $\text{Z}$ 15'40		min. Earth dist.	15495 Mar 23 11:40	20° $\text{Y}$ 27'13	0.62447 AU
transit end	15494 Apr 12 07:16	4° $\text{Z}$ 11'05		inferior conj	15495 Mar 26 11:07	17° $\text{Y}$ 36'06	-0°55'22
	15494 Apr 16 17:12	30° $\text{R}$ $\text{Y}$		minimum elong	15495 Mar 26 12:59	17° $\text{Y}$ 31'35	0°54'47
morning rise	15494 Apr 18 17:16	28° $\text{Y}$ 48'42		asc. node	15495 Mar 29 07:57	14° $\text{Y}$ 59'47	
direct	15494 Apr 21 07:47	28° $\text{Y}$ 13'48		morning rise	15495 Apr 02 11:24	12° $\text{Y}$ 29'06	
	15494 Apr 25 22:15	0° $\text{Z}$		direct	15495 Apr 04 18:08	12° $\text{Y}$ 05'10	
morning max el	15494 Apr 27 15:42	1° $\text{Z}$ 29'05	17°51'37	morning max el	15495 Apr 11 09:21	15° $\text{Y}$ 26'42	17°46'37
desc. node	15494 May 14 03:23	25° $\text{Z}$ 57'09			15495 Apr 21 15:16	0° $\text{Z}$	
morning set	15494 May 14 21:45	27° $\text{Z}$ 13'55		morning set	15495 Apr 27 08:53	9° $\text{Z}$ 56'59	
	15494 May 16 13:33	0° $\text{II}$		desc. node	15495 May 01 00:09	16° $\text{Z}$ 18'39	
superior conj	15494 May 28 12:37	19° $\text{II}$ 33'43	-1°38'49	superior conj	15495 May 09 04:31	0° $\text{II}$ 16'31	-1°02'31
minimum elong	15494 May 28 03:57	18° $\text{II}$ 59'02	1°38'48	minimum elong	15495 May 08 22:36	29° $\text{Z}$ 51'53	1°02'24
max. Earth dist.	15494 Jun 02 03:29	26° $\text{II}$ 53'17	1.45409 AU		15495 May 09 00:33	0° $\text{II}$	
	15494 Jun 04 03:05	0° $\text{Z}$		max. Earth dist.	15495 May 15 20:19	11° $\text{II}$ 10'06	1.44180 AU
evening rise	15494 Jun 13 09:00	14° $\text{Z}$ 17'44		evening rise	15495 May 23 21:09	23° $\text{II}$ 48'31	
	15494 Jun 23 18:24	0° $\text{Z}$			15495 May 27 22:16	0° $\text{Z}$	
greatest brilliancy	15494 Jun 28 04:40	6° $\text{Z}$ 30'09	-0.6m		15495 Jun 18 00:49	0° $\text{Z}$	
asc. node	15494 Jul 08 09:07	20° $\text{Z}$ 00'38		evening max el	15495 Jun 23 04:10	5° $\text{Z}$ 50'22	21°05'27
evening max el	15494 Jul 10 05:10	21° $\text{Z}$ 57'51	19°58'00	asc. node	15495 Jun 25 06:00	7° $\text{Z}$ 45'25	
retrograde	15494 Jul 17 19:00	26° $\text{Z}$ 15'05		retrograde	15495 Jul 01 17:58	10° $\text{Z}$ 48'05	
evening set	15494 Jul 21 16:36	24° $\text{Z}$ 47'22		evening set	15495 Jul 06 02:18	9° $\text{Z}$ 03'03	
inferior conj	15494 Jul 26 23:43	18° $\text{Z}$ 47'30	3°04'32	inferior conj	15495 Jul 11 07:52	2° $\text{Z}$ 52'07	3°09'23
minimum elong	15494 Jul 27 00:38	18° $\text{Z}$ 44'22	3°03'47	minimum elong	15495 Jul 11 07:49	2° $\text{Z}$ 52'18	3°08'35
min. Earth dist.	15494 Jul 27 23:15	17° $\text{Z}$ 27'51	0.68025 AU	min. Earth dist.	15495 Jul 11 17:55	2° $\text{Z}$ 17'14	0.68803 AU
morning rise	15494 Aug 01 08:16	12° $\text{Z}$ 22'41			15495 Jul 13 10:25	30° $\text{R}$ $\text{Z}$	
direct	15494 Aug 07 00:18	9° $\text{Z}$ 54'02		morning rise	15495 Jul 16 13:05	26° $\text{Z}$ 32'08	
desc. node	15494 Aug 10 01:59	10° $\text{Z}$ 30'46		direct	15495 Jul 21 17:12	24° $\text{Z}$ 17'16	
morning max el	15494 Aug 18 16:35	16° $\text{Z}$ 53'48	24°43'25	desc. node	15495 Jul 27 23:21	26° $\text{Z}$ 48'54	
	15494 Aug 29 14:34	0° $\text{M}$			15495 Jul 31 15:37	0° $\text{Z}$	
	15494 Sep 18 11:01	0° $\text{Z}$		morning max el	15495 Aug 01 03:40	0° $\text{Z}$ 29'57	23°14'20
morning set	15494 Sep 23 09:00	8° $\text{Z}$ 24'52			15495 Aug 23 10:42	0° $\text{M}$	
max. Earth dist.	15494 Sep 26 22:24	14° $\text{Z}$ 46'37	1.37339 AU	morning set	15495 Sep 04 16:30	19° $\text{M}$ 24'19	
				max. Earth dist.	15495 Sep 08 20:47	26° $\text{M}$ 29'08	1.39735 AU
superior conj	15494 Oct 03 20:42	27° $\text{Z}$ 50'41	-0°05'17		15495 Sep 10 21:15	0° $\text{Z}$	





























































































































superior conj	15495 Sep 16 15:43	10° $\Omega$ 23'18	-0°40'38	minimum elong	15496 Aug 28 22:06	22° $\Pi$ 33'13	1°16'14
minimum elong	15495 Sep 16 18:47	10° $\Omega$ 37'24	0°40'02		15496 Sep 02 03:00	0° $\Omega$	
asc. node	15495 Sep 21 07:17	19° $\Omega$ 06'49		asc. node	15496 Sep 07 03:55	9° $\Omega$ 09'21	
evening rise	15495 Sep 26 02:47	28° $\Omega$ 21'34		evening rise	15496 Sep 08 12:23	11° $\Omega$ 38'15	
	15495 Sep 26 23:15	0° $\Pi$			15496 Sep 19 01:06	0° $\Pi$	
evening max el	15495 Oct 12 03:34	24° $\Pi$ 22'23	18°37'06	evening max el	15496 Sep 24 12:31	7° $\Pi$ 02'37	18°09'33
retrograde	15495 Oct 20 06:23	28° $\Pi$ 28'37		retrograde	15496 Oct 01 14:48	10° $\Pi$ 40'18	
evening set	15495 Oct 22 04:46	28° $\Pi$ 15'26		evening set	15496 Oct 03 19:12	10° $\Pi$ 20'10	
desc. node	15495 Oct 23 20:00	27° $\Pi$ 45'00		desc. node	15496 Oct 09 17:21	6° $\Pi$ 40'44	
inferior conj	15495 Oct 30 04:34	23° $\Pi$ 48'36	-2°02'17	inferior conj	15496 Oct 11 01:11	5° $\Pi$ 31'52	-0°25'15
minimum elong	15495 Oct 29 23:37	23° $\Pi$ 57'55	1°59'39	minimum elong	15496 Oct 11 00:19	5° $\Pi$ 33'48	0°24'27
min. Earth dist.	15495 Nov 02 08:12	21° $\Pi$ 26'33	0.57325 AU	min. Earth dist.	15496 Oct 14 07:10	2° $\Pi$ 41'18	0.59492 AU
morning rise	15495 Nov 06 15:09	18° $\Pi$ 46'31			15496 Oct 17 23:08	30° $\mathbb{R}$ $\Omega$	
direct	15495 Nov 12 17:19	17° $\Pi$ 14'25		morning rise	15496 Oct 18 02:06	29° $\Omega$ 55'34	
morning max el	15495 Nov 26 23:00	24° $\Pi$ 41'27	26°47'16	direct	15496 Oct 24 14:38	27° $\Omega$ 57'32	
	15495 Dec 01 20:32	0° $\mathbb{X}$			15496 Oct 31 13:58	0° $\Pi$	
asc. node	15495 Dec 18 07:58	25° $\mathbb{X}$ 17'51		morning max el	15496 Nov 07 21:19	5° $\Pi$ 42'28	27°42'43
	15495 Dec 20 19:05	0° $\mathbb{Z}$			15496 Nov 26 00:22	0° $\mathbb{X}$	
morning set	15495 Dec 26 12:44	11° $\mathbb{Z}$ 47'42		asc. node	15496 Dec 04 05:01	14° $\mathbb{X}$ 44'06	
				morning set	15496 Dec 09 19:07	26° $\mathbb{X}$ 04'38	
superior conj	15496 Jan 02 07:37	26° $\mathbb{Z}$ 47'06	1°37'42		15496 Dec 11 15:06	0° $\mathbb{Z}$	
minimum elong	15496 Jan 02 07:16	26° $\mathbb{Z}$ 45'11	1°38'33	max. Earth dist.	15496 Dec 16 02:55	9° $\mathbb{Z}$ 54'27	1.31062 AU
max. Earth dist.	15496 Jan 02 19:03	27° $\mathbb{Z}$ 51'04	1.31181 AU				
	15496 Jan 03 18:10	0° $\approx$		superior conj	15496 Dec 16 19:03	11° $\mathbb{Z}$ 24'38	1°32'48
evening rise	15496 Jan 09 04:43	11° $\approx$ 52'45		minimum elong	15496 Dec 16 17:44	11° $\mathbb{Z}$ 17'15	1°33'36
	15496 Jan 18 09:32	0° $\mathbb{X}$		evening rise	15496 Dec 23 12:05	26° $\mathbb{Z}$ 15'32	
desc. node	15496 Jan 19 19:04	2° $\mathbb{X}$ 29'23			15496 Dec 25 06:15	0° $\approx$	
	15496 Feb 08 15:28	0° $\mathbb{Y}$		desc. node	15497 Jan 05 15:51	21° $\approx$ 30'59	
evening max el	15496 Feb 09 05:20	0° $\mathbb{Y}$ 33'27	27°12'56		15497 Jan 11 04:12	0° $\mathbb{X}$	
retrograde	15496 Feb 23 05:51	7° $\mathbb{Y}$ 51'37		evening max el	15497 Jan 21 04:13	11° $\mathbb{X}$ 55'49	26°15'35
evening set	15496 Feb 29 22:47	5° $\mathbb{Y}$ 53'01		retrograde	15497 Feb 04 03:24	19° $\mathbb{X}$ 01'42	
min. Earth dist.	15496 Mar 04 19:46	3° $\mathbb{Y}$ 08'54	0.60221 AU	evening set	15497 Feb 10 09:49	17° $\mathbb{X}$ 27'59	
inferior conj	15496 Mar 08 00:35	0° $\mathbb{Y}$ 27'36	-2°18'34	min. Earth dist.	15497 Feb 14 17:32	14° $\mathbb{X}$ 50'37	0.58036 AU
minimum elong	15496 Mar 08 05:44	0° $\mathbb{Y}$ 16'44	2°16'29	inferior conj	15497 Feb 17 19:33	12° $\mathbb{X}$ 36'06	-3°47'45
	15496 Mar 08 13:43	30° $\mathbb{R}$ $\mathbb{X}$		minimum elong	15497 Feb 18 03:58	12° $\mathbb{X}$ 20'46	3°44'35
asc. node	15496 Mar 15 05:21	25° $\mathbb{X}$ 47'39		morning rise	15497 Feb 26 01:16	8° $\mathbb{X}$ 09'39	
morning rise	15496 Mar 15 16:07	25° $\mathbb{X}$ 39'43		direct	15497 Feb 28 00:52	7° $\mathbb{X}$ 56'34	
direct	15496 Mar 17 17:17	25° $\mathbb{X}$ 23'03		asc. node	15497 Mar 02 02:47	8° $\mathbb{X}$ 11'38	
morning max el	15496 Mar 25 00:26	29° $\mathbb{X}$ 01'52	18°00'08	morning max el	15497 Mar 08 09:05	12° $\mathbb{X}$ 03'11	18°33'45
	15496 Mar 25 22:55	0° $\mathbb{Y}$			15497 Mar 20 07:47	0° $\mathbb{Y}$	
morning set	15496 Apr 09 14:07	23° $\mathbb{Y}$ 30'13		morning set	15497 Mar 24 08:00	7° $\mathbb{Y}$ 37'01	
	15496 Apr 13 02:54	0° $\mathbb{Z}$					
desc. node	15496 Apr 16 20:52	6° $\mathbb{Z}$ 48'00		superior conj	15497 Apr 02 08:11	24° $\mathbb{Y}$ 47'10	0°11'31
				minimum elong	15497 Apr 02 08:58	24° $\mathbb{Y}$ 50'47	0°11'06
superior conj	15496 Apr 19 20:02	12° $\mathbb{Z}$ 04'00	-0°24'03	behind sun begin	15497 Apr 02 03:51	24° $\mathbb{Y}$ 27'03	
minimum elong	15496 Apr 19 17:58	11° $\mathbb{Z}$ 54'54	0°24'14	behind sun end	15497 Apr 02 14:04	25° $\mathbb{Y}$ 14'28	
max. Earth dist.	15496 Apr 27 09:09	24° $\mathbb{Z}$ 57'00	1.42395 AU	desc. node	15497 Apr 03 17:30	27° $\mathbb{Y}$ 20'48	
	15496 Apr 30 11:05	0° $\Pi$			15497 Apr 05 04:28	0° $\mathbb{Z}$	
evening rise	15496 May 02 23:06	4° $\Pi$ 00'59		max. Earth dist.	15497 Apr 09 17:56	8° $\mathbb{Z}$ 04'37	1.40242 AU
	15496 May 20 05:55	0° $\mathbb{Z}$		evening rise	15497 Apr 13 21:37	15° $\mathbb{Z}$ 08'08	
evening max el	15496 Jun 04 22:07	19° $\mathbb{Z}$ 43'45	22°22'31		15497 Apr 23 04:45	0° $\Pi$	
asc. node	15496 Jun 11 02:58	24° $\mathbb{Z}$ 31'24			15497 May 15 03:10	0° $\mathbb{Z}$	
retrograde	15496 Jun 14 15:31	25° $\mathbb{Z}$ 25'36		evening max el	15497 May 18 12:46	3° $\mathbb{Z}$ 37'48	23°43'50
evening set	15496 Jun 19 11:12	23° $\mathbb{Z}$ 24'24		retrograde	15497 May 29 10:18	10° $\mathbb{Z}$ 01'29	
inferior conj	15496 Jun 24 17:41	17° $\mathbb{Z}$ 04'09	3°03'21	asc. node	15497 May 29 00:01	10° $\mathbb{Z}$ 00'42	
minimum elong	15496 Jun 24 16:43	17° $\mathbb{Z}$ 07'32	3°02'22	evening set	15497 Jun 03 17:39	7° $\mathbb{Z}$ 46'13	
min. Earth dist.	15496 Jun 24 14:35	17° $\mathbb{Z}$ 15'00	0.69098 AU	min. Earth dist.	15497 Jun 08 11:06	2° $\mathbb{Z}$ 14'06	0.68908 AU
morning rise	15496 Jun 29 22:04	10° $\mathbb{Z}$ 51'07		inferior conj	15497 Jun 09 03:12	1° $\mathbb{Z}$ 19'02	2°46'51
direct	15496 Jul 04 13:53	8° $\mathbb{Z}$ 54'07		minimum elong	15497 Jun 09 01:29	1° $\mathbb{Z}$ 24'52	2°45'40
morning max el	15496 Jul 13 17:30	14° $\mathbb{Z}$ 14'26	21°47'13		15497 Jun 10 02:28	30° $\mathbb{R}$ $\Pi$	
desc. node	15496 Jul 13 20:38	14° $\mathbb{Z}$ 22'18		morning rise	15497 Jun 14 09:20	25° $\Pi$ 14'23	
	15496 Jul 26 09:32	0° $\mathbb{Z}$		direct	15497 Jun 18 12:57	23° $\Pi$ 37'14	
morning set	15496 Aug 14 23:55	29° $\mathbb{Z}$ 22'00		morning max el	15497 Jun 26 13:04	28° $\Pi$ 09'23	20°28'51
	15496 Aug 15 09:28	0° $\mathbb{Z}$			15497 Jun 28 07:15	0° $\mathbb{Z}$	
max. Earth dist.	15496 Aug 20 23:50	9° $\mathbb{Z}$ 05'05	1.42029 AU	desc. node	15497 Jun 30 17:50	2° $\mathbb{Z}$ 50'52	
					15497 Jul 19 21:37	0° $\mathbb{Z}$	
superior conj	15496 Aug 28 15:57	22° $\mathbb{Z}$ 06'22	-1°16'53	morning set	15497 Jul 25 10:21	8° $\mathbb{Z}$ 27'06	

max. Earth dist.	15497 Aug 03 09:43	22°♎33'23	1.43947 AU	superior conj	15498 Jul 20 19:45	12°♎38'15	-2°09'55
	15497 Aug 07 23:56	0°♎		minimum elong	15498 Jul 21 00:29	12°♎57'03	2°10'28
					15498 Jul 31 13:32	0°♎	
superior conj	15497 Aug 09 17:23	2°♎50'35	-1°49'00	evening rise	15498 Aug 04 03:00	5°♎52'44	
minimum elong	15497 Aug 10 01:06	3°♎22'33	1°48'47	asc. node	15498 Aug 11 21:08	18°♎39'34	
evening rise	15497 Aug 22 06:11	24°♎12'47			15498 Aug 19 11:17	0°♎	
asc. node	15497 Aug 25 00:31	29°♎01'44		evening max el	15498 Aug 22 16:48	3°♎43'33	18°12'17
	15497 Aug 25 13:56	0°♎		retrograde	15498 Aug 29 01:29	7°♎05'18	
evening max el	15497 Sep 08 02:08	20°♎12'40	18°01'42	evening set	15498 Aug 31 22:18	6°♎21'00	
retrograde	15497 Sep 14 14:44	23°♎35'42		inferior conj	15498 Sep 06 23:03	0°♎56'26	1°51'31
evening set	15497 Sep 17 02:58	23°♎05'00		minimum elong	15498 Sep 07 01:24	0°♎49'49	1°50'45
inferior conj	15497 Sep 23 16:42	17°♎57'13	0°53'12		15498 Sep 07 18:54	30°♎	
minimum elong	15497 Sep 23 18:12	17°♎53'25	0°52'51	min. Earth dist.	15498 Sep 09 10:34	28°♎08'45	0.63959 AU
min. Earth dist.	15497 Sep 26 15:52	14°♎58'31	0.61780 AU	morning rise	15498 Sep 13 02:41	24°♎38'29	
desc. node	15497 Sep 26 14:46	15°♎01'10		desc. node	15498 Sep 13 12:12	24°♎20'29	
morning rise	15497 Sep 30 06:48	11°♎55'07		direct	15498 Sep 19 17:02	22°♎05'10	
direct	15497 Oct 06 23:03	9°♎35'43			15498 Oct 03 10:45	0°♎	
morning max el	15497 Oct 21 02:46	17°♎32'30	27°59'05	morning max el	15498 Oct 03 12:32	0°♎04'27	27°37'56
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	15497 Nov 18 18:37	0°♎		morning set	15498 Nov 07 12:33	23°♎36'24	
asc. node	15497 Nov 21 01:57	4°♎29'29		asc. node	15498 Nov 07 22:46	24°♎27'24	
morning set	15497 Nov 23 19:53	10°♎03'02			15498 Nov 10 16:04	0°♎	
max. Earth dist.	15497 Nov 29 08:06	21°♎47'39	1.31485 AU	max. Earth dist.	15498 Nov 12 06:35	3°♎21'11	1.32468 AU
superior conj	15497 Dec 01 04:57	25°♎54'41	1°21'55	superior conj	15498 Nov 15 11:17	10°♎11'04	1°05'00
minimum elong	15497 Dec 01 02:55	25°♎43'22	1°22'34	minimum elong	15498 Nov 15 08:57	9°♎58'24	1°05'27
	15497 Dec 03 01:12	0°♎		evening rise	15498 Nov 22 08:59	25°♎11'53	
evening rise	15497 Dec 07 22:08	10°♎43'44			15498 Nov 24 15:18	0°♎	
	15497 Dec 17 13:46	0°♎		desc. node	15498 Dec 10 09:40	27°♎05'57	
desc. node	15497 Dec 23 12:43	9°♎48'47			15498 Dec 12 19:53	0°♎	
evening max el	15498 Jan 02 18:32	22°♎27'14	24°48'52	evening max el	15498 Dec 15 04:01	2°♎26'24	23°06'45
retrograde	15498 Jan 16 12:33	29°♎19'45		retrograde	15498 Dec 28 08:53	8°♎58'57	
evening set	15498 Jan 21 23:07	28°♎14'04		evening set	15499 Jan 01 14:05	8°♎20'20	
min. Earth dist.	15498 Jan 27 06:29	25°♎27'27	0.56151 AU	min. Earth dist.	15499 Jan 08 13:57	5°♎05'03	0.54858 AU
inferior conj	15498 Jan 29 17:34	23°♎53'59	-5°08'28	inferior conj	15499 Jan 09 20:01	4°♎21'54	-5°56'50
minimum elong	15498 Jan 30 02:29	23°♎39'51	5°05'52	minimum elong	15499 Jan 09 23:22	4°♎17'05	5°55'49
morning rise	15498 Feb 07 08:09	19°♎48'52		morning rise	15499 Jan 18 10:04	0°♎31'43	
direct	15498 Feb 09 13:08	19°♎35'25		direct	15499 Jan 21 06:37	0°♎12'29	
asc. node	15498 Feb 17 00:11	22°♎21'10		morning max el	15499 Feb 01 15:05	5°♎40'33	20°48'18
morning max el	15498 Feb 19 07:10	24°♎19'29	19°29'24	asc. node	15499 Feb 03 21:33	8°♎04'03	
	15498 Feb 24 01:13	0°♎			15499 Feb 17 10:46	0°♎	
morning set	15498 Mar 08 10:26	22°♎05'13		morning set	15499 Feb 20 18:18	6°♎44'43	
	15498 Mar 12 08:54	0°♎					
superior conj	15498 Mar 16 12:32	8°♎13'58	0°41'38	superior conj	15499 Feb 28 04:49	22°♎11'33	1°05'21
minimum elong	15498 Mar 16 14:47	8°♎24'56	0°41'12	minimum elong	15499 Feb 28 07:24	22°♎24'45	1°05'11
desc. node	15498 Mar 21 14:06	17°♎53'40			15499 Mar 04 02:04	0°♎	
max. Earth dist.	15498 Mar 23 00:16	20°♎31'07	1.37953 AU	max. Earth dist.	15499 Mar 05 08:22	2°♎28'12	1.35773 AU
evening rise	15498 Mar 26 16:55	27°♎08'23		desc. node	15499 Mar 08 10:41	8°♎22'10	
	15498 Mar 28 08:22	0°♎		evening rise	15499 Mar 09 06:08	9°♎52'37	
	15498 Apr 16 16:11	0°♎			15499 Mar 20 23:14	0°♎	
evening max el	15498 May 01 02:12	17°♎32'08	25°02'46	evening max el	15499 Apr 12 06:52	0°♎	
retrograde	15498 May 13 01:18	24°♎29'53		retrograde	15499 Apr 13 15:43	1°♎22'41	26°12'18
asc. node	15498 May 15 21:09	23°♎56'15		evening set	15499 Apr 26 11:33	8°♎42'51	
evening set	15498 May 18 20:04	22°♎04'01		asc. node	15499 May 02 16:42	6°♎11'12	
min. Earth dist.	15498 May 23 05:29	17°♎08'43	0.68240 AU	min. Earth dist.	15499 May 02 18:23	6°♎07'42	
inferior conj	15498 May 24 10:31	15°♎33'18	2°19'49		15499 May 06 19:40	1°♎51'23	0.67108 AU
minimum elong	15498 May 24 08:23	15°♎40'18	2°18'26	inferior conj	15499 May 08 07:44	30°♎	
morning rise	15498 May 29 21:01	9°♎38'06		minimum elong	15499 May 08 13:35	29°♎41'54	1°41'32
direct	15498 May 29 21:01	9°♎38'06			15499 May 08 11:31	29°♎48'18	1°40'09
morning max el	15498 Jun 02 13:01	8°♎20'57		morning rise	15499 May 14 07:10	23°♎57'24	
desc. node	15498 Jun 09 15:56	12°♎15'26	19°23'51	direct	15499 May 17 12:25	22°♎58'43	
greatest brilliancy	15498 Jun 17 14:56	22°♎00'19		morning max el	15499 May 24 01:44	26°♎28'22	18°34'41
	15498 Jun 22 07:39	28°♎45'15	-0.7m		15499 May 27 05:47	0°♎	
	15498 Jun 23 03:53	0°♎		desc. node	15499 Jun 04 11:56	11°♎39'23	
morning set	15498 Jul 04 13:58	17°♎19'10		morning set	15499 Jun 14 07:07	26°♎53'37	
	15498 Jul 12 18:46	0°♎			15499 Jun 16 06:40	0°♎	
max. Earth dist.	15498 Jul 17 01:10	6°♎40'27	1.45287 AU				


































































































































superior conj	15499 Jun 30 06:44	21°☿52'10	-2°12'47	minimum elong	15500 Jun 09 09:30	0°☿39'44	1°56'03
minimum elong	15499 Jun 30 03:56	21°☿41'19	2°13'35	max. Earth dist.	15500 Jun 12 16:24	5°☿49'18	1.45813 AU
max. Earth dist.	15499 Jun 29 20:09	21°☿10'55	1.45924 AU	evening rise	15500 Jun 25 20:33	26°☿14'00	
	15499 Jul 05 11:38	0°♌			15500 Jun 28 07:21	0°♌	
evening rise	15499 Jul 15 23:05	16°♌30'18		greatest brilliancy	15500 Jul 08 18:18	15°♌51'17	-0.7m
greatest brilliancy	15499 Jul 23 17:21	28°♌46'43	-0.8m	asc. node	15500 Jul 16 14:33	26°♌47'26	
	15499 Jul 24 12:06	0°♍			15500 Jul 19 07:32	0°♍	
asc. node	15499 Jul 29 17:48	7°♍57'26		evening max el	15500 Jul 20 13:54	1°♍19'25	19°25'20
evening max el	15499 Aug 06 05:31	17°♍28'08	18°40'28	retrograde	15500 Jul 27 16:37	5°♍16'58	
retrograde	15499 Aug 12 19:08	21°♍01'28		evening set	15500 Jul 31 08:25	3°♍59'22	
evening set	15499 Aug 16 01:07	20°♍01'15			15500 Aug 04 06:38	30°♌♌	
inferior conj	15499 Aug 21 16:28	14°♍21'59	2°31'39	inferior conj	15500 Aug 05 17:40	28°♌06'48	2°56'21
minimum elong	15499 Aug 21 18:38	14°♍15'18	2°30'50	minimum elong	15500 Aug 05 19:07	28°♌02'02	2°55'36
min. Earth dist.	15499 Aug 23 14:16	12°♍00'48	0.65861 AU	min. Earth dist.	15500 Aug 07 01:16	26°♌22'49	0.67371 AU
morning rise	15499 Aug 27 11:03	7°♍56'53		morning rise	15500 Aug 11 05:14	21°♌40'50	
desc. node	15499 Aug 31 09:38	5°♍40'20		direct	15500 Aug 17 03:49	19°♌06'30	
direct	15499 Sep 02 19:08	5°♍18'39		desc. node	15500 Aug 18 07:05	19°♌11'31	
morning max el	15499 Sep 15 23:51	13°♍06'42	26°45'54	morning max el	15500 Aug 29 10:53	26°♌27'28	25°31'57
	15499 Sep 29 15:32	0°♎			15500 Sep 01 17:39	0°♎	
	15499 Oct 18 04:41	0°♏			15500 Sep 23 05:21	0°♎	
morning set	15499 Oct 21 18:12	6°♏38'16		morning set	15500 Oct 04 09:12	18°♎59'57	
asc. node	15499 Oct 25 19:31	14°♏33'20		max. Earth dist.	15500 Oct 07 23:11	25°♎37'05	1.36030 AU
max. Earth dist.	15499 Oct 25 19:32	14°♏33'23	1.34007 AU		15500 Oct 10 06:19	0°♏	
				asc. node	15500 Oct 12 16:13	4°♏42'58	
superior conj	15499 Oct 30 11:48	24°♏08'23	0°42'06				
minimum elong	15499 Oct 30 09:47	23°♏57'53	0°42'24	superior conj	15500 Oct 14 03:40	7°♏39'31	0°13'29
	15499 Nov 02 06:27	0°♐		minimum elong	15500 Oct 14 02:51	7°♏35'24	0°13'48
evening rise	15499 Nov 06 18:51	9°♐35'49		behind sun begin	15500 Oct 13 23:35	7°♏19'02	
	15499 Nov 17 08:43	0°♑		behind sun end	15500 Oct 14 06:07	7°♏51'48	
evening max el	15499 Nov 26 17:55	12°♑30'33	21°27'15	evening rise	15500 Oct 22 01:38	23°♏50'21	
desc. node	15499 Nov 27 06:43	13°♑01'22			15500 Oct 25 02:40	0°♐	
retrograde	15499 Dec 08 19:40	18°♑28'57		evening max el	15500 Nov 08 20:21	23°♐11'51	20°03'52
evening set	15499 Dec 11 17:54	18°♑09'20		desc. node	15500 Nov 14 03:53	27°♐10'00	
inferior conj	15499 Dec 20 11:28	14°♑18'27	-5°49'08	retrograde	15500 Nov 19 07:56	28°♐25'15	
minimum elong	15499 Dec 20 05:37	14°♑26'40	5°47'34	evening set	15500 Nov 21 10:31	28°♐13'34	
min. Earth dist.	15499 Dec 20 19:31	14°♑07'08	0.54410 AU	inferior conj	15500 Nov 30 06:06	24°♐15'40	-4°43'01
morning rise	15499 Dec 28 17:49	10°♑29'15		minimum elong	15500 Nov 29 20:02	24°♐30'49	4°39'22
direct	15500 Jan 01 14:33	9°♑56'49		min. Earth dist.	15500 Dec 02 02:06	23°♐09'30	0.54908 AU
morning max el	15500 Jan 14 08:34	16°♑07'33	22°27'52	morning rise	15500 Dec 08 04:34	20°♐08'43	
asc. node	15500 Jan 21 18:52	25°♑02'31		direct	15500 Dec 13 01:55	19°♐16'41	
	15500 Jan 25 00:09	0°♒		morning max el	15500 Dec 26 17:40	26°♐02'04	24°17'47
morning set	15500 Feb 05 05:13	21°♒28'53			15500 Dec 30 11:32	0°♑	
	15500 Feb 09 04:41	0°♓		asc. node	15501 Jan 08 16:07	12°♑59'00	
					15501 Jan 17 18:37	0°♒	
superior conj	15500 Feb 12 05:38	6°♓30'25	1°22'30	morning set	15501 Jan 20 17:13	6°♒12'05	
minimum elong	15500 Feb 12 07:48	6°♓41'55	1°22'43				
max. Earth dist.	15500 Feb 15 22:54	14°♓17'25	1.33900 AU	superior conj	15501 Jan 27 12:12	21°♒02'44	1°33'16
evening rise	15500 Feb 20 09:47	23°♓11'50		minimum elong	15501 Jan 27 13:31	21°♒09'54	1°33'49
desc. node	15500 Feb 23 07:16	28°♓42'31		max. Earth dist.	15501 Jan 29 21:19	26°♒12'39	1.32448 AU
	15500 Feb 23 23:58	0°♔			15501 Jan 31 15:57	0°♓	
	15500 Mar 14 15:00	0°♕		evening rise	15501 Feb 04 00:34	6°♓57'23	
evening max el	15500 Mar 27 05:30	15°♕02'01	27°04'47	desc. node	15501 Feb 10 03:54	18°♓50'02	
retrograde	15500 Apr 09 15:54	22°♕32'03			15501 Feb 16 13:12	0°♔	
evening set	15500 Apr 16 05:34	20°♕00'36		evening max el	15501 Mar 09 18:14	28°♔19'00	27°32'53
asc. node	15500 Apr 19 15:42	16°♕46'41			15501 Mar 11 14:16	0°♕	
min. Earth dist.	15500 Apr 20 03:37	16°♕14'02	0.65561 AU	retrograde	15501 Mar 23 13:21	5°♕48'54	
inferior conj	15500 Apr 22 10:04	13°♕39'10	0°51'02	evening set	15501 Mar 30 08:26	3°♕24'19	
minimum elong	15500 Apr 22 08:46	13°♕42'53	0°49'59	min. Earth dist.	15501 Apr 03 03:19	0°♕07'32	0.63662 AU
morning rise	15500 Apr 28 13:32	8°♕07'08			15501 Apr 03 06:21	30°♔♔	
direct	15500 May 01 09:04	7°♕24'24		inferior conj	15501 Apr 05 21:14	27°♔18'33	-0°12'36
morning max el	15500 May 07 16:39	10°♕41'36	18°02'19	minimum elong	15501 Apr 05 21:38	27°♔17'31	0°12'46
	15500 May 21 08:11	0°♖		transit middle	15501 Apr 05 21:38	27°♔17'31	0°12'46
desc. node	15500 May 22 08:50	1°♖39'49		transit begin	15501 Apr 05 19:45	27°♔22'24	
morning set	15500 May 26 02:30	7°♖44'27		transit end	15501 Apr 05 23:32	27°♔12'39	
	15500 Jun 08 23:25	0°♗		asc. node	15501 Apr 06 13:04	26°♔38'04	
				morning rise	15501 Apr 12 13:15	22°♔01'27	
superior conj	15500 Jun 09 17:49	1°♗12'26	-1°55'46	direct	15501 Apr 15 00:20	21°♔31'31	

morning max el	15501 Apr 21 10:13	24° $\Upsilon$ 48'03	17°47'15	morning max el	15502 Apr 05 03:13	8° $\Upsilon$ 37'34	17°50'06
	15501 Apr 25 18:15	0° $\mathcal{B}$			15502 Apr 19 04:10	0° $\mathcal{B}$	
morning set	15501 May 08 00:40	19° $\mathcal{B}$ 52'13		morning set	15502 Apr 20 20:15	2° $\mathcal{B}$ 59'13	
desc. node	15501 May 09 05:40	21° $\mathcal{B}$ 55'43		desc. node	15502 Apr 26 02:24	12° $\mathcal{B}$ 21'22	
	15501 May 14 00:10	0° $\Pi$					
superior conj	15501 May 20 20:46	11° $\Pi$ 19'37	-1°24'08	superior conj	15502 May 01 22:54	22° $\mathcal{B}$ 31'01	-0°46'08
minimum elong	15501 May 20 12:55	10° $\Pi$ 47'41	1°24'00	minimum elong	15502 May 01 18:40	22° $\mathcal{B}$ 12'57	0°46'07
max. Earth dist.	15501 May 26 11:48	20° $\Pi$ 21'21	1.44973 AU		15502 May 06 09:54	0° $\Pi$	
	15501 Jun 01 15:34	0° $\mathcal{E}$		max. Earth dist.	15502 May 09 03:37	4° $\Pi$ 29'19	1.43484 AU
evening rise	15501 Jun 05 07:26	5° $\mathcal{E}$ 38'16		evening rise	15502 May 16 00:06	15° $\Pi$ 23'58	
	15501 Jun 21 16:40	0° $\Omega$			15502 May 25 14:27	0° $\mathcal{E}$	
asc. node	15501 Jul 03 11:24	15° $\Omega$ 00'02		evening max el	15502 Jun 16 13:06	29° $\mathcal{E}$ 05'36	21°37'11
evening max el	15501 Jul 03 16:30	15° $\Omega$ 12'50	20°25'11		15502 Jun 17 11:32	0° $\Omega$	
retrograde	15501 Jul 11 15:38	19° $\Omega$ 45'53		asc. node	15502 Jun 20 08:19	2° $\Omega$ 22'05	
evening set	15501 Jul 15 17:50	18° $\Omega$ 10'33		retrograde	15502 Jun 25 14:15	4° $\Omega$ 21'58	
inferior conj	15501 Jul 20 23:58	12° $\Omega$ 05'53	3°07'57	evening set	15502 Jun 30 03:25	2° $\Omega$ 29'37	
minimum elong	15501 Jul 21 00:29	12° $\Omega$ 04'07	3°07'11		15502 Jul 02 13:19	30° $\mathcal{R}$ $\mathcal{E}$	
min. Earth dist.	15501 Jul 21 17:41	11° $\Omega$ 05'10	0.68425 AU	inferior conj	15502 Jul 05 09:05	26° $\mathcal{E}$ 14'17	3°08'04
morning rise	15501 Jul 26 06:50	5° $\Omega$ 43'04		minimum elong	15502 Jul 05 08:38	26° $\mathcal{E}$ 15'52	3°07'13
direct	15501 Jul 31 17:57	3° $\Omega$ 19'46		min. Earth dist.	15502 Jul 05 13:24	25° $\mathcal{E}$ 59'14	0.68995 AU
desc. node	15501 Aug 05 04:28	4° $\Omega$ 36'24		morning rise	15502 Jul 10 13:40	19° $\mathcal{E}$ 57'10	
morning max el	15501 Aug 11 21:40	9° $\Omega$ 59'47	24°05'45	direct	15502 Jul 15 12:28	17° $\mathcal{E}$ 49'51	
	15501 Aug 27 18:31	0° $\mathcal{M}$		desc. node	15502 Jul 23 01:48	21° $\mathcal{E}$ 29'28	
	15501 Sep 15 21:52	0° $\underline{\mathcal{A}}$		morning max el	15502 Jul 25 09:46	23° $\mathcal{E}$ 40'13	22°36'33
morning set	15501 Sep 16 05:23	0° $\underline{\mathcal{A}}$ 32'14			15502 Jul 31 00:07	0° $\Omega$	
max. Earth dist.	15501 Sep 19 22:12	7° $\underline{\mathcal{A}}$ 00'00	1.38363 AU	morning set	15502 Aug 21 03:10	0° $\mathcal{M}$	
				max. Earth dist.	15502 Aug 28 02:49	11° $\mathcal{M}$ 06'06	
superior conj	15501 Sep 27 07:28	20° $\underline{\mathcal{A}}$ 36'21	-0°19'57		15502 Sep 01 22:22	19° $\mathcal{M}$ 05'40	1.40743 AU
minimum elong	15501 Sep 27 08:51	20° $\underline{\mathcal{A}}$ 42'55	0°19'27		15502 Sep 08 05:14	0° $\underline{\mathcal{A}}$	
asc. node	15501 Sep 29 12:52	24° $\underline{\mathcal{A}}$ 52'49		superior conj	15502 Sep 09 19:01	2° $\underline{\mathcal{A}}$ 49'06	-0°56'09
	15501 Oct 02 03:47	0° $\mathcal{M}$		minimum elong	15502 Sep 09 23:25	3° $\underline{\mathcal{A}}$ 08'57	0°55'29
evening rise	15501 Oct 06 02:53	7° $\mathcal{M}$ 49'33		asc. node	15502 Sep 16 09:30	14° $\underline{\mathcal{A}}$ 59'16	
	15501 Oct 18 14:58	0° $\mathcal{J}$		evening rise	15502 Sep 19 19:21	21° $\underline{\mathcal{A}}$ 25'06	
evening max el	15501 Oct 22 13:07	4° $\mathcal{J}$ 43'09	19°02'17		15502 Sep 24 09:41	0° $\mathcal{M}$	
retrograde	15501 Oct 31 10:36	9° $\mathcal{J}$ 11'50		evening max el	15502 Oct 05 17:21	17° $\mathcal{M}$ 01'15	18°22'50
desc. node	15501 Nov 01 01:08	9° $\mathcal{J}$ 10'39		retrograde	15502 Oct 13 08:38	20° $\mathcal{M}$ 54'08	
evening set	15501 Nov 02 07:43	9° $\mathcal{J}$ 00'39		evening set	15502 Oct 15 09:02	20° $\mathcal{M}$ 38'35	
inferior conj	15501 Nov 10 16:50	4° $\mathcal{J}$ 45'20	-3°03'01	desc. node	15502 Oct 18 22:27	19° $\mathcal{M}$ 03'39	
minimum elong	15501 Nov 10 09:16	4° $\mathcal{J}$ 58'23	2°59'26	inferior conj	15502 Oct 23 01:14	16° $\mathcal{M}$ 02'24	-1°19'13
min. Earth dist.	15501 Nov 13 12:57	2° $\mathcal{J}$ 48'03	0.56256 AU	minimum elong	15502 Oct 22 22:12	16° $\mathcal{M}$ 08'33	1°17'24
morning rise	15501 Nov 18 08:07	0° $\mathcal{J}$ 04'48		min. Earth dist.	15502 Oct 26 07:12	13° $\mathcal{M}$ 25'45	0.58207 AU
	15501 Nov 18 12:37	30° $\mathcal{R}$ $\mathcal{M}$		morning rise	15502 Oct 30 07:52	10° $\mathcal{M}$ 44'37	
direct	15501 Nov 24 01:15	28° $\mathcal{M}$ 48'31		direct	15502 Nov 05 15:02	9° $\mathcal{M}$ 01'19	
	15501 Nov 29 14:13	0° $\mathcal{J}$		morning max el	15502 Nov 19 22:05	16° $\mathcal{M}$ 37'12	27°15'37
morning max el	15501 Dec 08 04:12	6° $\mathcal{J}$ 01'41	25°59'49		15502 Nov 30 22:24	0° $\mathcal{J}$	
	15501 Dec 25 15:02	0° $\mathcal{Z}$		asc. node	15502 Dec 13 10:22	20° $\mathcal{J}$ 51'22	
asc. node	15501 Dec 26 13:17	1° $\mathcal{Z}$ 39'00			15502 Dec 18 01:08	0° $\mathcal{Z}$	
morning set	15502 Jan 05 04:26	20° $\mathcal{Z}$ 48'48		morning set	15502 Dec 20 13:08	5° $\mathcal{Z}$ 14'52	
	15502 Jan 09 08:53	0° $\approx$					
superior conj	15502 Jan 11 22:11	5° $\approx$ 41'23	1°37'50	superior conj	15502 Dec 27 09:39	20° $\mathcal{Z}$ 21'22	1°36'22
minimum elong	15502 Jan 11 22:27	5° $\approx$ 42'52	1°38'37	minimum elong	15502 Dec 27 08:52	20° $\mathcal{Z}$ 17'01	1°37'12
max. Earth dist.	15502 Jan 13 01:55	8° $\approx$ 15'19	1.31489 AU	max. Earth dist.	15502 Dec 27 09:32	20° $\mathcal{Z}$ 20'42	1.31057 AU
evening rise	15502 Jan 18 23:36	21° $\approx$ 01'35			15502 Dec 31 17:38	0° $\approx$	
	15502 Jan 23 10:00	0° $\mathcal{H}$		evening rise	15503 Jan 03 04:31	5° $\approx$ 19'17	
desc. node	15502 Jan 28 00:34	8° $\mathcal{H}$ 38'13		desc. node	15503 Jan 14 21:19	27° $\approx$ 59'52	
	15502 Feb 10 15:27	0° $\Upsilon$			15503 Jan 16 01:39	0° $\mathcal{H}$	
evening max el	15502 Feb 20 03:26	10° $\Upsilon$ 58'50	27°30'09	evening max el	15503 Feb 02 06:29	22° $\mathcal{H}$ 50'43	26°52'39
retrograde	15502 Mar 06 02:42	18° $\Upsilon$ 22'31			15503 Feb 14 22:13	0° $\Upsilon$	
evening set	15502 Mar 12 22:28	16° $\Upsilon$ 12'04		retrograde	15503 Feb 16 06:50	0° $\Upsilon$ 04'38	
min. Earth dist.	15502 Mar 16 17:06	13° $\Upsilon$ 18'58	0.61510 AU		15503 Feb 17 15:13	30° $\mathcal{R}$ $\mathcal{H}$	
inferior conj	15502 Mar 19 19:39	10° $\Upsilon$ 30'00	-1°29'22	evening set	15503 Feb 22 20:26	28° $\mathcal{H}$ 15'37	
minimum elong	15502 Mar 19 22:50	10° $\Upsilon$ 22'46	1°28'09	min. Earth dist.	15503 Feb 26 20:31	25° $\mathcal{H}$ 36'17	0.59269 AU
asc. node	15502 Mar 24 10:29	6° $\Upsilon$ 47'04		inferior conj	15503 Mar 02 01:36	23° $\mathcal{H}$ 04'02	-2°56'18
morning rise	15502 Mar 27 02:21	5° $\Upsilon$ 30'54		minimum elong	15503 Mar 02 08:15	22° $\mathcal{H}$ 50'50	2°53'37
direct	15502 Mar 29 06:31	5° $\Upsilon$ 10'24		morning rise	15503 Mar 09 23:33	18° $\mathcal{H}$ 25'30	
				asc. node	15503 Mar 11 07:53	18° $\mathcal{H}$ 12'26	



direct	15503 Mar 11 23:22	18°  10'52		min. Earth dist.	15504 Feb 08 14:26	6°  49'48	0.57173 AU
morning max el	15503 Mar 19 16:05	22°  00'03	18°11'57	inferior conj	15504 Feb 11 11:43	4°  51'10	-4°24'18
	15503 Mar 25 20:10	0°  Y		minimum elong	15504 Feb 11 20:54	4°  35'25	4°21'09
morning set	15503 Apr 04 07:22	16°  Y48'06		morning rise	15504 Feb 19 22:09	0°  34'03	
	15503 Apr 11 09:11	0°  8		direct	15504 Feb 21 22:44	0°  32'29	
desc. node	15503 Apr 12 23:05	2°  852'43		asc. node	15504 Feb 26 05:17	1°  32'03	
				morning max el	15504 Mar 01 20:44	4°  34'28	18°54'40
superior conj	15503 Apr 13 23:43	4°  843'52	-0°08'27		15504 Mar 17 16:03	0°  Y	
minimum elong	15503 Apr 13 23:01	4°  840'45	0°08'46	morning set	15504 Mar 18 05:17	1°  Y04'47	
behind sun begin	15503 Apr 13 16:39	4°  812'05					
behind sun end	15503 Apr 14 05:23	5°  809'21		superior conj	15504 Mar 26 19:13	17°  Y46'39	0°25'02
max. Earth dist.	15503 Apr 21 14:14	17°  858'49	1.41508 AU	minimum elong	15504 Mar 26 20:47	17°  Y54'04	0°24'34
evening rise	15503 Apr 26 10:21	25°  858'45		desc. node	15504 Mar 29 19:42	23°  Y25'55	
	15503 Apr 28 22:27	0°  II			15504 Apr 02 10:39	0°  8	
	15503 May 19 08:32	0°  8		max. Earth dist.	15504 Apr 02 21:00	0°  845'59	1.39263 AU
evening max el	15503 May 30 05:12	12°  858'43	22°56'52	evening rise	15504 Apr 06 17:52	7°  829'16	
asc. node	15503 Jun 07 05:19	18°  837'56			15504 Apr 20 21:43	0°  II	
retrograde	15503 Jun 09 10:54	18°  859'42		evening max el	15504 May 11 19:09	26°  II53'39	24°18'13
evening set	15503 Jun 14 11:29	16°  852'09			15504 May 15 06:00	0°  8	
inferior conj	15503 Jun 19 19:00	10°  828'19	2°57'36	retrograde	15504 May 23 04:18	3°  833'23	
minimum elong	15503 Jun 19 17:42	10°  832'52	2°56'33	asc. node	15504 May 24 02:23	3°  829'45	
min. Earth dist.	15503 Jun 19 10:20	10°  858'26	0.69076 AU	evening set	15504 May 28 16:25	1°  813'23	
morning rise	15503 Jun 24 23:49	4°  818'33			15504 May 29 23:00	30°  RII	
direct	15503 Jun 29 10:16	2°  830'02		min. Earth dist.	15504 Jun 02 06:19	25°  II56'45	0.68675 AU
morning max el	15503 Jul 08 01:48	7°  829'25	21°12'23	inferior conj	15504 Jun 03 03:50	24°  II44'08	2°36'45
desc. node	15503 Jul 09 23:04	9°  828'36		minimum elong	15504 Jun 03 01:54	24°  II50'39	2°35'28
	15503 Jul 25 08:56	0°  Q		morning rise	15504 Jun 08 11:28	18°  II43'06	
morning set	15503 Aug 08 00:23	20°  Q39'13		direct	15504 Jun 12 10:04	17°  II14'25	
	15503 Aug 13 21:24	0°  P		morning max el	15504 Jun 20 00:19	21°  II29'23	19°59'22
max. Earth dist.	15503 Aug 15 03:46	2°  P03'09	1.42902 AU	desc. node	15504 Jun 25 20:14	28°  II16'31	
					15504 Jun 27 03:36	0°  8	
superior conj	15503 Aug 22 09:53	14°  P07'47	-1°31'24	morning set	15504 Jul 17 05:38	29°  833'00	
minimum elong	15503 Aug 22 17:03	14°  P38'23	1°30'53		15504 Jul 17 12:40	0°  Q	
	15503 Aug 31 11:37	0°  Q		max. Earth dist.	15504 Jul 27 16:02	15°  Q49'35	1.44599 AU
evening rise	15503 Sep 02 22:52	4°  Q25'35					
asc. node	15503 Sep 03 06:05	4°  Q58'02		superior conj	15504 Aug 02 01:21	24°  Q28'15	-1°59'42
evening max el	15503 Sep 19 04:46	29°  Q55'35	18°03'54	minimum elong	15504 Aug 02 08:30	24°  Q57'17	1°59'47
	15503 Sep 19 06:33	0°  P			15504 Aug 05 10:33	0°  P	
retrograde	15503 Sep 26 00:05	3°  P25'25		evening rise	15504 Aug 15 08:26	16°  P39'02	
evening set	15503 Sep 28 07:35	3°  P01'20		asc. node	15504 Aug 20 02:42	24°  P45'21	
	15503 Oct 03 03:15	30°  RQ			15504 Aug 23 06:10	0°  Q	
inferior conj	15503 Oct 05 06:22	28°  Q04'46	0°10'31	evening max el	15504 Sep 01 19:22	13°  Q16'39	18°03'59
minimum elong	15503 Oct 05 06:43	28°  Q03'56	0°10'44	retrograde	15504 Sep 08 05:01	16°  Q37'06	
transit middle	15503 Oct 05 06:43	28°  Q03'56	0°10'44	evening set	15504 Sep 10 20:54	16°  Q00'54	
transit begin	15503 Oct 05 04:15	28°  Q09'44		inferior conj	15504 Sep 17 04:43	10°  Q45'54	1°20'18
transit end	15503 Oct 05 09:11	27°  Q58'09		minimum elong	15504 Sep 17 06:44	10°  Q40'33	1°19'42
desc. node	15503 Oct 05 19:50	27°  Q33'06		min. Earth dist.	15504 Sep 19 23:25	7°  Q49'41	0.62743 AU
min. Earth dist.	15503 Oct 08 10:27	25°  Q07'51	0.60464 AU	desc. node	15504 Sep 21 17:15	6°  Q08'37	
morning rise	15503 Oct 12 02:41	22°  Q16'07		morning rise	15504 Sep 23 14:17	4°  Q36'08	
direct	15503 Oct 18 17:36	20°  Q07'51		direct	15504 Sep 30 06:35	2°  Q09'33	
morning max el	15503 Nov 01 23:42	27°  Q59'39	27°54'26	morning max el	15504 Oct 14 07:08	10°  Q08'23	27°54'09
	15503 Nov 03 22:28	0°  P			15504 Oct 29 20:36	0°  P	
	15503 Nov 24 17:22	0°  P		asc. node	15504 Nov 16 04:14	0°  P17'56	
asc. node	15503 Nov 30 07:20	10°  P26'33			15504 Nov 16 00:38	0°  P	
morning set	15503 Dec 04 17:21	19°  P24'32		morning set	15504 Nov 17 14:57	3°  P12'47	
	15503 Dec 09 15:13	0°  8		max. Earth dist.	15504 Nov 22 19:04	14°  P04'30	1.31840 AU
max. Earth dist.	15503 Dec 10 16:29	2°  819'48	1.31169 AU				
				superior conj	15504 Nov 25 05:17	19°  P21'27	1°15'29
superior conj	15503 Dec 11 20:38	4°  856'25	1°28'56	minimum elong	15504 Nov 25 03:03	19°  P09'12	1°16'02
minimum elong	15503 Dec 11 18:58	4°  847'07	1°29'40		15504 Nov 30 01:15	0°  8	
evening rise	15503 Dec 18 13:11	19°  844'40		evening rise	15504 Dec 01 23:48	4°  813'25	
	15503 Dec 23 11:13	0°  8			15504 Dec 15 12:41	0°  8	
desc. node	15504 Jan 01 18:06	16°  844'20		desc. node	15504 Dec 18 14:59	4°  838'19	
	15504 Jan 11 09:43	0°  P		evening max el	15504 Dec 26 13:11	14°  804'29	24°06'15
evening max el	15504 Jan 15 01:32	3°  P49'53	25°41'41	retrograde	15505 Jan 09 02:57	20°  848'59	
retrograde	15504 Jan 28 23:39	10°  P51'01		evening set	15505 Jan 14 01:50	19°  855'37	
evening set	15504 Feb 03 22:33	9°  P29'12		min. Earth dist.	15505 Jan 20 00:47	16°  859'07	0.55511 AU

inferior conj	15505 Jan 22 00:50	15° $\approx$ 46'42	-5°34'35	evening set	15505 Dec 24 09:46	29° $\approx$ 51'31	
minimum elong	15505 Jan 22 08:13	15° $\approx$ 35'35	5°32'43	inferior conj	15506 Jan 01 21:10	25° $\approx$ 58'17	-6°01'15
morning rise	15505 Jan 30 16:21	11° $\approx$ 48'43		minimum elong	15506 Jan 01 20:34	25° $\approx$ 59'08	6°00'23
direct	15505 Feb 02 02:45	11° $\approx$ 33'29		min. Earth dist.	15506 Jan 01 06:43	26° $\approx$ 18'34	0.54558 AU
asc. node	15505 Feb 12 02:42	16° $\approx$ 11'50		morning rise	15506 Jan 10 08:26	22° $\approx$ 11'00	
morning max el	15505 Feb 12 12:59	16° $\approx$ 36'16	20°00'10	direct	15506 Jan 13 14:53	21° $\approx$ 46'59	
	15505 Feb 22 06:39	0° $\approx$		morning max el	15506 Jan 25 14:24	27° $\approx$ 33'11	21°28'36
morning set	15505 Mar 02 10:19	15° $\approx$ 38'31			15506 Jan 27 22:34	0° $\approx$	
	15505 Mar 09 11:36	0° $\approx$		asc. node	15506 Jan 30 00:03	2° $\approx$ 29'30	
				morning set	15506 Feb 14 19:48	0° $\approx$ 21'32	
					15506 Feb 14 15:41	0° $\approx$	
superior conj	15505 Mar 10 05:02	1° $\approx$ 27'12	0°52'30	superior conj	15506 Feb 22 01:22	15° $\approx$ 35'22	1°13'25
minimum elong	15505 Mar 10 07:32	1° $\approx$ 39'41	0°52'11	minimum elong	15506 Feb 22 03:51	15° $\approx$ 48'15	1°13'25
max. Earth dist.	15505 Mar 16 03:38	12° $\approx$ 58'06	1.36997 AU	max. Earth dist.	15506 Feb 26 14:31	24° $\approx$ 51'41	1.34929 AU
desc. node	15505 Mar 16 16:15	13° $\approx$ 57'06			15506 Mar 01 05:27	0° $\approx$	
evening rise	15505 Mar 19 21:10	19° $\approx$ 49'10			15506 Mar 02 17:00	2° $\approx$ 49'40	
	15505 Mar 25 18:01	0° $\approx$		evening rise	15506 Mar 03 12:50	4° $\approx$ 22'52	
	15505 Apr 14 23:11	0° $\approx$		desc. node	15506 Mar 18 16:46	0° $\approx$	
evening max el	15505 Apr 24 08:42	10° $\approx$ 47'40	25°34'09		15506 Apr 06 22:28	24° $\approx$ 34'50	26°37'10
retrograde	15505 May 06 17:13	17° $\approx$ 55'51			15506 Apr 13 17:23	0° $\approx$	
asc. node	15505 May 10 23:34	16° $\approx$ 41'14		evening max el	15506 Apr 20 00:54	2° $\approx$ 00'01	
evening set	15505 May 12 16:34	15° $\approx$ 27'07		retrograde	15506 Apr 25 17:07	30° $\approx$	
min. Earth dist.	15505 May 16 23:09	10° $\approx$ 47'04	0.67808 AU		15506 Apr 26 10:08	29° $\approx$ 27'32	
inferior conj	15505 May 18 09:36	8° $\approx$ 56'35	2°05'03	evening set	15506 Apr 27 20:51	28° $\approx$ 10'14	
minimum elong	15505 May 18 07:25	9° $\approx$ 03'34	2°03'38	asc. node	15506 Apr 30 10:48	25° $\approx$ 22'29	0.66501 AU
morning rise	15505 May 23 22:45	3° $\approx$ 05'38		min. Earth dist.	15506 Apr 30 10:48	25° $\approx$ 22'29	0.66501 AU
direct	15505 May 27 10:09	1° $\approx$ 56'22		inferior conj	15506 May 02 10:10	23° $\approx$ 00'59	1°21'43
morning max el	15505 Jun 03 06:10	5° $\approx$ 38'30	19°00'59	minimum elong	15506 May 02 08:19	23° $\approx$ 06'31	1°20'24
desc. node	15505 Jun 12 17:17	17° $\approx$ 39'36		morning rise	15506 May 08 07:37	17° $\approx$ 21'44	
greatest brilliancy	15505 Jun 16 09:30	23° $\approx$ 05'52	-0.7m	direct	15506 May 11 08:42	16° $\approx$ 30'06	
	15505 Jun 20 22:27	0° $\approx$		morning max el	15506 May 17 18:27	19° $\approx$ 52'35	18°18'54
morning set	15505 Jun 26 12:44	8° $\approx$ 37'04			15506 May 25 17:00	0° $\approx$	
	15505 Jul 10 07:04	0° $\approx$		desc. node	15506 May 30 14:16	7° $\approx$ 28'31	
max. Earth dist.	15505 Jul 10 09:41	0° $\approx$ 10'16	1.45653 AU	morning set	15506 Jun 06 16:15	18° $\approx$ 42'01	
					15506 Jun 13 19:23	0° $\approx$	
superior conj	15505 Jul 12 19:42	3° $\approx$ 57'44	-2°13'37	superior conj	15506 Jun 22 04:27	13° $\approx$ 07'59	-2°07'49
minimum elong	15505 Jul 12 21:32	4° $\approx$ 04'55	2°14'22	minimum elong	15506 Jun 21 22:39	12° $\approx$ 45'21	2°08'28
evening rise	15505 Jul 27 18:58	27° $\approx$ 53'00		max. Earth dist.	15506 Jun 23 05:57	14° $\approx$ 47'26	1.45970 AU
	15505 Jul 29 02:15	0° $\approx$			15506 Jul 03 00:15	0° $\approx$	
asc. node	15505 Aug 06 23:20	14° $\approx$ 15'38		evening rise	15506 Jul 08 04:38	8° $\approx$ 05'13	
evening max el	15505 Aug 16 09:37	26° $\approx$ 54'46	18°22'07	greatest brilliancy	15506 Jul 18 07:44	23° $\approx$ 04'35	-0.8m
	15505 Aug 20 21:40	0° $\approx$			15506 Jul 22 11:03	0° $\approx$	
retrograde	15505 Aug 22 19:09	0° $\approx$ 19'34		asc. node	15506 Jul 24 20:02	3° $\approx$ 22'33	
	15505 Aug 24 16:06	30° $\approx$		evening max el	15506 Jul 30 20:41	10° $\approx$ 42'34	18°57'31
evening set	15505 Aug 25 19:55	29° $\approx$ 28'32		retrograde	15506 Aug 06 14:54	14° $\approx$ 24'53	
inferior conj	15505 Aug 31 16:14	23° $\approx$ 57'21	2°10'34	evening set	15506 Aug 10 01:00	13° $\approx$ 17'17	
minimum elong	15505 Aug 31 18:35	23° $\approx$ 50'24	2°09'45	inferior conj	15506 Aug 15 13:20	7° $\approx$ 31'55	2°43'51
min. Earth dist.	15505 Sep 02 21:57	21° $\approx$ 19'41	0.64820 AU	minimum elong	15506 Aug 15 15:14	7° $\approx$ 25'50	2°43'03
morning rise	15505 Sep 06 15:51	17° $\approx$ 35'41		min. Earth dist.	15506 Aug 17 05:00	5° $\approx$ 25'46	0.66554 AU
desc. node	15505 Sep 08 14:42	16° $\approx$ 15'02		morning rise	15506 Aug 21 04:41	1° $\approx$ 05'42	
direct	15505 Sep 13 04:01	14° $\approx$ 59'25			15506 Aug 22 15:10	30° $\approx$	
morning max el	15505 Sep 26 17:48	22° $\approx$ 54'40	27°19'01	desc. node	15506 Aug 26 12:10	28° $\approx$ 03'12	
	15505 Oct 03 00:49	0° $\approx$		direct	15506 Aug 27 08:51	28° $\approx$ 02'29	
	15505 Oct 23 03:30	0° $\approx$		morning max el	15506 Sep 01 14:34	0° $\approx$	
morning set	15505 Nov 01 03:21	16° $\approx$ 33'49			15506 Sep 09 05:22	6° $\approx$ 06'53	26°16'37
asc. node	15505 Nov 03 01:02	20° $\approx$ 19'59		morning set	15506 Sep 27 16:30	0° $\approx$	
max. Earth dist.	15505 Nov 05 13:56	25° $\approx$ 29'46	1.33067 AU		15506 Oct 15 03:19	29° $\approx$ 20'01	
	15505 Nov 07 17:44	0° $\approx$			15506 Oct 15 11:52	0° $\approx$	
superior conj	15505 Nov 09 09:29	3° $\approx$ 30'54	0°56'00	max. Earth dist.	15506 Oct 18 23:05	6° $\approx$ 37'50	1.34820 AU
minimum elong	15505 Nov 09 07:11	3° $\approx$ 18'40	0°56'23	asc. node	15506 Oct 20 21:46	10° $\approx$ 27'58	
evening rise	15505 Nov 16 10:31	18° $\approx$ 41'02					
	15505 Nov 21 22:26	0° $\approx$		superior conj	15506 Oct 24 06:43	17° $\approx$ 18'02	0°30'37
desc. node	15505 Dec 05 11:59	21° $\approx$ 23'53		minimum elong	15506 Oct 24 05:06	17° $\approx$ 09'42	0°30'55
evening max el	15505 Dec 07 23:21	24° $\approx$ 01'24	22°23'01		15506 Oct 30 08:37	0° $\approx$	
	15505 Dec 17 18:01	0° $\approx$		evening rise	15506 Oct 31 19:25	3° $\approx$ 02'04	
retrograde	15505 Dec 20 17:59	0° $\approx$ 20'55			15506 Nov 15 23:42	0° $\approx$	
	15505 Dec 23 19:44	30° $\approx$					

evening max el	15506 Nov 19 17:47	4°  18'02	20°49'11	evening max el	15507 Nov 02 02:32	15°  21'04	19°34'56
desc. node	15506 Nov 22 09:06	6°  37'17		desc. node	15507 Nov 09 06:18	19°  54'05	
retrograde	15506 Dec 01 04:14	9°  58'44		retrograde	15507 Nov 11 21:36	20°  14'50	
evening set	15506 Dec 03 16:10	9°  43'41		evening set	15507 Nov 13 20:08	20°  04'11	
inferior conj	15506 Dec 12 12:09	5°  50'59	-5°27'14	inferior conj	15507 Nov 22 12:35	16°  00'01	-4°02'51
minimum elong	15506 Dec 12 03:32	6°  03'19	5°24'42	minimum elong	15507 Nov 22 03:00	16°  15'13	3°58'54
min. Earth dist.	15506 Dec 13 12:13	5°  16'29	0.54506 AU	min. Earth dist.	15507 Nov 24 20:42	14°  30'58	0.55390 AU
morning rise	15506 Dec 20 14:58	1°  56'41		morning rise	15507 Nov 30 07:59	11°  39'38	
direct	15506 Dec 24 22:17	1°  16'55		direct	15507 Dec 05 14:20	10°  37'39	
morning max el	15507 Jan 07 03:25	7°  43'16	23°14'23	morning max el	15507 Dec 19 12:13	17°  36'25	25°03'09
asc. node	15507 Jan 16 21:22	19°  54'40		asc. node	15507 Dec 29 15:45	0° 	
	15507 Jan 22 19:31	0° 			15508 Jan 03 18:36	8°  11'21	
morning set	15507 Jan 30 07:26	15°  06'07		morning set	15508 Jan 14 19:19	29°  47'07	
					15508 Jan 14 21:42	0° 	
superior conj	15507 Feb 06 04:59	0°  01'06	1°27'50	superior conj	15508 Jan 21 13:18	14°  37'06	1°35'56
minimum elong	15507 Feb 06 06:49	0°  11'00	1°28'12	minimum elong	15508 Jan 21 14:10	14°  41'57	1°36'36
	15507 Feb 06 04:46	0° 			15508 Jan 23 09:27	18°  39'30	1.31980 AU
max. Earth dist.	15507 Feb 09 08:22	6°  42'11	1.33222 AU	max. Earth dist.	15508 Jan 28 20:24	0°  15'13	
evening rise	15507 Feb 14 01:47	16°  20'51		evening rise	15508 Jan 28 17:27	0° 	
desc. node	15507 Feb 18 09:25	24°  38'11		desc. node	15508 Feb 05 06:04	14°  38'01	
	15507 Feb 21 08:15	0° 			15508 Feb 14 08:54	0° 	
evening max el	15507 Mar 13 04:45	0° 		evening max el	15508 Mar 01 23:09	21°  07'03	27°35'44
retrograde	15507 Mar 20 11:45	8°  04'58	27°20'02	retrograde	15508 Mar 15 20:55	28°  35'42	
evening set	15507 Apr 03 02:29	15°  36'33		evening set	15508 Mar 22 16:48	26°  16'13	
min. Earth dist.	15507 Apr 09 19:03	13°  06'46		min. Earth dist.	15508 Mar 26 11:03	23°  10'15	0.62765 AU
asc. node	15507 Apr 13 15:20	9°  33'42	0.64791 AU	asc. node	15508 Mar 29 09:10	20°  19'10	-0°43'43
inferior conj	15507 Apr 14 18:12	8°  21'10		inferior conj	15508 Mar 29 09:10	20°  19'10	-0°43'43
minimum elong	15507 Apr 16 03:01	6°  50'58	0°25'40	minimum elong	15508 Mar 31 10:37	20°  15'37	0°43'20
morning rise	15507 Apr 16 02:19	6°  52'54	0°24'55	morning rise	15508 Mar 31 10:37	18°  09'59	
direct	15507 Apr 22 11:32	1°  25'16		direct	15508 Apr 05 07:15	15°  09'26	
morning max el	15507 Apr 25 03:16	0°  48'31		morning max el	15508 Apr 07 15:01	14°  44'05	
desc. node	15507 May 01 10:54	4°  03'59	17°53'49	desc. node	15508 Apr 14 04:37	18°  04'06	17°46'11
morning set	15507 May 17 11:08	27°  35'49		morning set	15508 Apr 22 21:26	0° 	
	15507 May 18 23:22	0°  06'10			15508 Apr 30 07:20	12°  40'42	
	15507 May 18 21:53	0° 			15508 May 03 07:54	17°  55'58	
					15508 May 10 09:44	0° 	
superior conj	15507 Jun 01 20:45	22°  44'15	-1°43'40	superior conj	15508 May 12 09:09	3°  11'27	-1°08'18
minimum elong	15507 Jun 01 11:59	22°  09'22	1°43'42	minimum elong	15508 May 12 02:41	2°  50'39	1°08'10
max. Earth dist.	15507 Jun 06 01:49	29°  23'38	1.45533 AU	max. Earth dist.	15508 May 18 19:16	13°  44'28	1.44403 AU
	15507 Jun 06 11:05	0° 			15508 May 27 06:50	27°  02'26	
evening rise	15507 Jun 17 19:34	17°  34'43		evening rise	15508 May 29 05:10	0° 	
	15507 Jun 25 23:48	0° 			15508 Jun 18 22:28	0° 	
greatest brilliancy	15507 Jul 02 07:46	9°  22'59	-0.6m	greatest brilliancy	15508 Jun 26 02:32	8°  27'29	20°54'43
asc. node	15507 Jul 11 16:49	21°  25'58		asc. node	15508 Jun 27 13:41	9°  50'32	
evening max el	15507 Jul 14 02:36	24°  34'39	19°49'07	evening max el	15508 Jul 04 12:23	13°  18'31	
retrograde	15507 Jul 21 13:25	28°  46'38		retrograde	15508 Jul 08 19:06	11°  36'02	
evening set	15507 Jul 25 09:27	27°  21'36		evening set	15508 Jul 14 00:45	5°  26'47	3°09'20
inferior conj	15507 Jul 30 17:01	21°  23'37	3°02'45	inferior conj	15508 Jul 14 00:51	5°  26'27	3°08'33
minimum elong	15507 Jul 30 18:05	21°  20'01	3°02'01	minimum elong	15508 Jul 14 12:48	4°  45'02	0.68719 AU
min. Earth dist.	15507 Jul 31 18:40	19°  57'23	0.67866 AU	min. Earth dist.	15508 Jul 18 07:51	30°  05'59	
morning rise	15507 Aug 05 02:16	14°  58'19		morning rise	15508 Jul 19 06:19	29°  05'59	
direct	15507 Aug 10 20:02	12°  27'53		direct	15508 Jul 24 12:18	26°  48'43	
desc. node	15507 Aug 13 09:37	12°  53'33		desc. node	15508 Jul 30 06:59	28°  58'21	
morning max el	15507 Aug 22 16:23	19°  33'54	24°56'19	morning max el	15508 Jul 31 16:15	0° 	
	15507 Aug 31 14:00	0° 			15508 Aug 04 03:13	3°  08'39	23°27'40
	15507 Sep 20 19:09	0° 			15508 Aug 24 16:09	0° 	
morning set	15507 Sep 27 10:58	11°  22'53		morning set	15508 Sep 07 21:49	22°  30'51	
max. Earth dist.	15507 Sep 30 23:55	17°  45'49	1.36991 AU	max. Earth dist.	15508 Sep 11 22:09	29°  22'06	1.39380 AU
	15507 Oct 07 10:37	0° 			15508 Sep 12 06:52	0° 	
superior conj	15507 Oct 07 17:58	0°  36'05	-0°00'10	superior conj	15508 Sep 19 15:22	13°  27'17	-0°35'06
minimum elong	15507 Oct 07 17:57	0°  36'01	0°00'12	minimum elong	15508 Sep 19 17:58	13°  27'17	0°34'33
behind sun begin	15507 Oct 07 11:26	0°  04'03		behind sun begin	15508 Sep 23 15:02	20°  46'55	
behind sun end	15507 Oct 08 00:29	1°  08'03		behind sun end	15508 Sep 28 09:32	0° 	
asc. node	15507 Oct 07 18:26	0° 		asc. node	15508 Sep 28 22:07	1°  01'01	
evening rise	15507 Oct 16 00:14	17°  11'20		evening rise	15508 Oct 15 00:45	27°  13'32	18°42'57
	15507 Oct 22 13:59	0° 					

	15508 Oct 18 12:02	0°♊			15509 Sep 21 03:39	0°♍	
retrograde	15508 Oct 23 08:00	1°♊25'03		evening max el	15509 Sep 28 08:32	9°♍47'46	18°12'23
evening set	15508 Oct 25 05:56	1°♊12'30		retrograde	15509 Oct 05 13:50	13°♍29'00	
desc. node	15508 Oct 26 03:36	0°♊58'15		evening set	15509 Oct 07 17:09	13°♍10'10	
	15508 Oct 28 11:24	30°♋♍		desc. node	15509 Oct 13 00:57	10°♍06'35	
inferior conj	15508 Nov 02 08:16	26°♍48'43	-2°18'06	inferior conj	15509 Oct 15 01:43	8°♍24'49	-0°38'52
minimum elong	15508 Nov 02 02:37	26°♍59'06	2°15'11	minimum elong	15509 Oct 15 00:20	8°♍27'49	0°37'49
min. Earth dist.	15508 Nov 05 10:26	24°♍32'38	0.57035 AU	min. Earth dist.	15509 Oct 18 07:57	5°♍37'19	0.59151 AU
morning rise	15508 Nov 09 20:08	21°♍52'19		morning rise	15509 Oct 22 04:09	2°♍53'06	
direct	15508 Nov 15 20:16	20°♍24'17		direct	15509 Oct 28 15:29	0°♍58'53	
morning max el	15508 Nov 30 01:15	27°♍47'39	26°35'56	morning max el	15509 Nov 11 22:24	8°♍41'26	27°37'01
	15508 Dec 02 05:16	0°♊			15509 Nov 28 04:49	0°♊	
asc. node	15508 Dec 20 15:43	27°♊06'09		asc. node	15509 Dec 07 12:43	16°♊28'52	
	15508 Dec 22 04:46	0°♋		morning set	15509 Dec 13 12:42	28°♊38'59	
morning set	15508 Dec 29 05:41	14°♋19'39			15509 Dec 14 03:54	0°♋	
superior conj	15509 Jan 05 00:09	29°♋17'01	1°37'57	superior conj	15509 Dec 20 11:36	13°♋55'09	1°33'56
minimum elong	15509 Jan 04 23:58	29°♋16'00	1°38'45	minimum elong	15509 Dec 20 10:25	13°♋48'32	1°34'45
	15509 Jan 05 07:51	0°♌		max. Earth dist.	15509 Dec 19 23:42	12°♋48'33	1.31042 AU
max. Earth dist.	15509 Jan 05 15:44	0°♌44'02	1.31245 AU	evening rise	15509 Dec 27 04:59	28°♋47'38	
evening rise	15509 Jan 11 22:14	14°♌26'07			15509 Dec 27 18:30	0°♌	
	15509 Jan 19 18:11	0°♋		desc. node	15510 Jan 08 23:31	23°♌23'14	
desc. node	15509 Jan 22 02:45	4°♋15'59			15510 Jan 13 03:29	0°♋	
	15509 Feb 08 21:17	0°♎		evening max el	15510 Jan 25 06:20	14°♋58'49	26°26'14
evening max el	15509 Feb 12 06:21	3°♎28'51	27°18'35	retrograde	15510 Feb 08 05:46	22°♋06'42	
retrograde	15509 Feb 26 06:36	10°♎48'17		evening set	15510 Feb 14 14:26	20°♋28'51	
evening set	15509 Mar 05 00:28	8°♎46'32		min. Earth dist.	15510 Feb 18 19:46	17°♋51'32	0.58349 AU
min. Earth dist.	15509 Mar 08 20:42	6°♎00'23	0.60555 AU	inferior conj	15510 Feb 21 23:00	15°♋31'55	-3°34'20
inferior conj	15509 Mar 12 01:06	3°♎16'40	-2°05'22	minimum elong	15510 Feb 22 07:00	15°♋17'00	3°31'15
minimum elong	15509 Mar 12 05:44	3°♎06'43	2°03'29	morning rise	15510 Mar 02 02:50	11°♋02'23	
	15509 Mar 16 06:12	30°♋♋		direct	15510 Mar 04 02:21	10°♋48'59	
asc. node	15509 Mar 18 13:02	28°♋47'22		asc. node	15510 Mar 05 10:27	10°♋55'20	
morning rise	15509 Mar 19 14:20	28°♋25'40		morning max el	15510 Mar 12 06:09	14°♋50'34	18°27'25
direct	15509 Mar 21 16:12	28°♋08'06			15510 Mar 22 16:06	0°♎	
	15509 Mar 26 19:40	0°♎		morning set	15510 Mar 28 02:31	10°♎10'37	
morning max el	15509 Mar 28 20:19	1°♎43'33	17°56'54				
morning set	15509 Apr 13 10:16	26°♎08'09		superior conj	15510 Apr 06 06:39	27°♎31'50	0°06'26
	15509 Apr 15 13:01	0°♏		minimum elong	15510 Apr 06 07:05	27°♎33'50	0°06'01
desc. node	15509 Apr 20 04:36	8°♏24'36		behind sun begin	15510 Apr 06 00:23	27°♎02'59	
				behind sun end	15510 Apr 06 13:47	28°♎04'37	
superior conj	15509 Apr 23 21:18	14°♏56'09	-0°29'48	desc. node	15510 Apr 07 01:13	28°♎57'00	
minimum elong	15509 Apr 23 18:42	14°♏44'45	0°29'56		15510 Apr 07 15:02	0°♏	
max. Earth dist.	15509 May 01 09:08	27°♏38'19	1.42694 AU	max. Earth dist.	15510 Apr 13 18:26	10°♏52'02	1.40578 AU
	15509 May 02 19:41	0°♐		evening rise	15510 Apr 18 01:27	18°♏06'30	
evening rise	15509 May 07 06:11	7°♐07'53			15510 Apr 25 11:36	0°♐	
	15509 May 22 09:49	0°♑			15510 May 16 21:09	0°♑	
evening max el	15509 Jun 08 21:08	22°♑20'52	22°10'33	evening max el	15510 May 22 12:03	6°♑14'28	23°31'35
asc. node	15509 Jun 14 10:38	26°♑46'42		asc. node	15510 Jun 01 07:41	12°♑28'54	
retrograde	15509 Jun 18 10:11	27°♑55'51		retrograde	15510 Jun 02 05:29	12°♑32'29	
evening set	15509 Jun 23 04:12	25°♑56'50		evening set	15510 Jun 07 11:07	10°♑19'00	
inferior conj	15509 Jun 28 10:25	19°♑37'52	3°04'53	min. Earth dist.	15510 Jun 12 05:53	4°♑41'21	0.68972 AU
minimum elong	15509 Jun 28 09:35	19°♑40'47	3°03'57	inferior conj	15510 Jun 12 20:05	3°♑52'33	2°50'01
min. Earth dist.	15509 Jun 28 09:13	19°♑42'03	0.69093 AU	minimum elong	15510 Jun 12 18:28	3°♑58'05	2°48'52
morning rise	15509 Jul 03 14:48	13°♑23'48			15510 Jun 15 19:44	30°♋♐	
direct	15509 Jul 08 08:26	11°♑24'03		morning rise	15510 Jun 18 01:48	27°♐46'36	
desc. node	15509 Jul 17 04:17	16°♑21'45		direct	15510 Jun 22 07:09	26°♐06'35	
morning max el	15509 Jul 17 16:28	16°♑51'48	21°59'43		15510 Jun 29 16:12	0°♑	
	15509 Jul 28 11:24	0°♒		morning max el	15510 Jun 30 11:06	0°♑45'25	20°39'43
	15509 Aug 17 17:14	0°♓		desc. node	15510 Jul 04 01:29	4°♑43'03	
morning set	15509 Aug 19 08:43	2°♓37'07			15510 Jul 22 03:46	0°♒	
max. Earth dist.	15509 Aug 25 00:25	11°♓50'06	1.41709 AU	morning set	15510 Jul 29 21:45	11°♒48'45	
				max. Earth dist.	15510 Aug 07 09:14	25°♒11'04	1.43694 AU
superior conj	15509 Sep 01 18:35	25°♓05'43	-1°11'31		15510 Aug 10 08:32	0°♓	
minimum elong	15509 Sep 02 00:18	25°♓30'54	1°10'51				
	15509 Sep 04 12:53	0°♈		superior conj	15510 Aug 13 23:33	5°♓58'54	-1°44'43
asc. node	15509 Sep 10 11:38	10°♈50'14		minimum elong	15510 Aug 14 07:16	6°♓31'03	1°44'22
evening rise	15509 Sep 12 09:33	14°♈22'25		evening rise	15510 Aug 26 06:04	27°♓04'18	

	15510 Aug 27 22:05	0°♄		evening rise	15511 Aug 08 06:23	8°♄53'17	
asc. node	15510 Aug 28 08:14	0°♄44'32		asc. node	15511 Aug 15 04:51	20°♄25'02	
evening max el	15510 Sep 11 21:40	22°♄53'52	18°01'40		15511 Aug 21 08:42	0°♄	
retrograde	15510 Sep 18 11:46	26°♄18'24		evening max el	15511 Aug 26 12:26	6°♄22'23	18°09'33
evening set	15510 Sep 20 22:41	25°♄49'34		retrograde	15511 Sep 01 21:07	9°♄43'24	
inferior conj	15510 Sep 27 14:40	20°♄44'34	0°42'38	evening set	15511 Sep 04 16:36	9°♄01'20	
minimum elong	15510 Sep 27 15:55	20°♄41'28	0°42'24	inferior conj	15511 Sep 10 19:06	3°♄39'17	1°43'54
desc. node	15510 Sep 29 22:20	18°♄26'20		minimum elong	15511 Sep 10 21:23	3°♄32'55	1°43'09
min. Earth dist.	15510 Sep 30 15:16	17°♄45'38	0.61437 AU	min. Earth dist.	15511 Sep 13 08:36	0°♄48'45	0.63653 AU
morning rise	15510 Oct 04 06:21	14°♄45'32			15511 Sep 14 03:08	30°♄♄	
direct	15510 Oct 10 22:23	12°♄28'48		desc. node	15511 Sep 16 19:48	27°♄31'42	
morning max el	15510 Oct 25 03:00	20°♄24'48	27°59'10	morning rise	15511 Sep 17 00:13	27°♄23'06	
	15510 Nov 02 09:36	0°♄		direct	15511 Sep 23 15:14	24°♄51'08	
	15510 Nov 21 04:32	0°♄			15511 Oct 04 10:39	0°♄	
asc. node	15510 Nov 24 09:38	6°♄11'41		morning max el	15511 Oct 07 12:17	2°♄50'59	27°43'09
morning set	15510 Nov 27 14:25	12°♄40'33			15511 Oct 27 19:12	0°♄	
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superior conj	15510 Dec 04 21:50	28°♄26'35	1°23'58		15511 Nov 13 04:20	0°♄	
minimum elong	15510 Dec 04 19:53	28°♄15'44	1°24'38	max. Earth dist.	15511 Nov 16 05:01	6°♄19'19	1.32285 AU
	15510 Dec 05 14:40	0°♄					
evening rise	15510 Dec 11 14:43	13°♄15'07		superior conj	15511 Nov 19 04:50	12°♄45'07	1°07'58
	15510 Dec 19 21:09	0°♄		minimum elong	15511 Nov 19 02:30	12°♄32'27	1°08'26
desc. node	15510 Dec 26 20:21	11°♄48'34		evening rise	15511 Nov 26 01:34	27°♄43'05	
evening max el	15511 Jan 06 21:43	25°♄36'33	25°03'11		15511 Nov 27 03:09	0°♄	
	15511 Jan 12 12:29	0°♄		desc. node	15511 Dec 13 17:18	29°♄15'45	
retrograde	15511 Jan 20 17:03	2°♄31'41			15511 Dec 14 06:58	0°♄	
evening set	15511 Jan 26 07:08	1°♄21'43		evening max el	15511 Dec 19 07:28	5°♄38'18	23°22'15
	15511 Jan 29 02:37	30°♄♄		retrograde	15512 Jan 01 15:13	12°♄14'24	
min. Earth dist.	15511 Jan 31 09:51	28°♄37'34	0.56400 AU	evening set	15512 Jan 06 01:04	11°♄32'14	
inferior conj	15511 Feb 03 00:06	26°♄57'06	-4°57'41	min. Earth dist.	15512 Jan 12 18:05	8°♄22'20	0.54999 AU
minimum elong	15511 Feb 03 09:17	26°♄42'17	4°54'54	inferior conj	15512 Jan 14 05:06	7°♄31'31	-5°52'44
morning rise	15511 Feb 11 13:57	22°♄49'07		minimum elong	15512 Jan 14 09:42	7°♄24'50	5°51'33
direct	15511 Feb 13 17:26	22°♄36'05		morning rise	15512 Jan 22 19:49	3°♄39'33	
asc. node	15511 Feb 20 07:50	24°♄48'54		direct	15512 Jan 25 13:19	3°♄21'37	
morning max el	15511 Feb 23 06:06	27°♄14'08	19°19'39	morning max el	15512 Feb 05 16:15	8°♄43'20	20°35'09
	15511 Feb 25 18:36	0°♄		asc. node	15512 Feb 07 05:13	10°♄18'22	
morning set	15511 Mar 12 03:51	24°♄35'40			15512 Feb 19 20:51	0°♄	
	15511 Mar 14 20:44	0°♄		morning set	15512 Feb 24 11:05	9°♄13'46	
superior conj	15511 Mar 20 08:49	10°♄52'27	0°37'26	superior conj	15512 Mar 02 23:34	24°♄45'51	1°02'10
minimum elong	15511 Mar 20 10:56	11°♄02'38	0°37'01	minimum elong	15512 Mar 03 02:09	24°♄59'00	1°01'57
desc. node	15511 Mar 24 21:49	19°♄29'44			15512 Mar 05 14:06	0°♄	
max. Earth dist.	15511 Mar 27 00:34	23°♄22'28	1.38291 AU	max. Earth dist.	15512 Mar 08 08:04	5°♄22'22	1.36080 AU
evening rise	15511 Mar 30 17:44	29°♄58'43		desc. node	15512 Mar 10 18:24	9°♄59'02	
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	15511 Apr 18 19:03	0°♄			15512 Mar 22 06:26	0°♄	
evening max el	15511 May 05 01:29	20°♄08'27	24°51'28		15512 Apr 12 19:55	0°♄	
retrograde	15511 May 16 21:12	27°♄02'10		evening max el	15512 Apr 16 15:04	4°♄00'19	26°02'58
asc. node	15511 May 19 04:50	26°♄39'24		retrograde	15512 Apr 29 08:15	11°♄17'54	
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min. Earth dist.	15511 May 27 00:44	19°♄36'50	0.68366 AU	asc. node	15512 May 05 02:04	9°♄06'41	
inferior conj	15511 May 28 03:51	18°♄07'03	2°24'39	min. Earth dist.	15512 May 09 15:47	4°♄21'48	0.67300 AU
minimum elong	15511 May 28 01:45	18°♄13'59	2°23'18	inferior conj	15512 May 11 07:44	2°♄17'01	1°48'11
morning rise	15511 Jun 02 13:31	12°♄10'18		minimum elong	15512 May 11 05:37	2°♄23'39	1°46'46
direct	15511 Jun 06 07:10	10°♄50'16			15512 May 13 04:51	30°♄♄	
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desc. node	15511 Jun 20 22:36	23°♄47'00		direct	15512 May 20 06:52	25°♄29'21	
	15511 Jun 25 07:59	0°♄		morning max el	15512 May 26 21:42	29°♄01'56	18°40'57
greatest brilliancy	15511 Jun 26 04:57	1°♄16'29	-0.6m		15512 May 27 20:30	0°♄	
morning set	15511 Jul 09 01:07	20°♄39'21		desc. node	15512 Jun 06 19:38	13°♄22'10	
	15511 Jul 15 02:23	0°♄		morning set	15512 Jun 17 15:12	0°♄04'36	
max. Earth dist.	15511 Jul 20 23:50	9°♄12'53	1.45129 AU		15512 Jun 17 14:01	0°♄	
				max. Earth dist.	15512 Jul 02 18:27	23°♄40'55	1.45878 AU
superior conj	15511 Jul 25 05:11	15°♄54'34	-2°07'48				
minimum elong	15511 Jul 25 10:45	16°♄16'45	2°08'13	superior conj	15512 Jul 03 17:41	25°♄11'33	-2°13'40
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































































































































	15512 Jul 06 19:28	0°♎			15513 Jun 29 14:16	0°♎	
evening rise	15512 Jul 19 06:15	19°♎40'15		greatest brilliancy	15513 Jul 11 12:01	18°♎11'04	-0.7m
	15512 Jul 25 17:53	0°♐		asc. node	15513 Jul 18 22:19	28°♎41'10	
greatest brilliancy	15512 Jul 25 22:29	0°♐18'10	-0.9m		15513 Jul 19 23:08	0°♐	
asc. node	15512 Aug 01 01:33	9°♐46'31		evening max el	15513 Jul 23 10:54	3°♐56'22	19°17'38
evening max el	15512 Aug 09 01:43	20°♐05'51	18°35'10	retrograde	15513 Jul 30 11:05	7°♐49'27	
retrograde	15512 Aug 15 13:58	23°♐36'26		evening set	15513 Aug 03 01:26	6°♐34'23	
evening set	15512 Aug 18 18:36	22°♐38'39		inferior conj	15513 Aug 08 11:23	0°♐43'39	2°53'25
inferior conj	15512 Aug 24 11:08	17°♐01'30	2°26'33	minimum elong	15513 Aug 08 12:57	0°♐38'28	2°52'40
minimum elong	15512 Aug 24 13:22	16°♐54'41	2°25'44		15513 Aug 09 00:42	30°♐♊	
min. Earth dist.	15512 Aug 26 11:02	14°♐35'40	0.65607 AU	min. Earth dist.	15513 Aug 09 21:03	28°♐53'47	0.67176 AU
morning rise	15512 Aug 30 06:59	10°♐37'09		morning rise	15513 Aug 13 23:52	24°♐17'32	
desc. node	15512 Sep 02 17:15	8°♐31'56		direct	15513 Aug 19 23:58	21°♐42'18	
direct	15512 Sep 05 16:18	7°♐59'05		desc. node	15513 Aug 20 14:42	21°♐43'46	
morning max el	15512 Sep 18 23:27	15°♐49'16	26°55'09	morning max el	15513 Sep 01 10:38	29°♐07'56	25°43'58
	15512 Sep 30 16:30	0°♑			15513 Sep 02 06:51	0°♐	
	15512 Oct 19 14:24	0°♒			15513 Sep 24 11:58	0°♑	
morning set	15512 Oct 24 15:58	9°♒24'28		morning set	15513 Oct 07 09:27	21°♑52'50	
asc. node	15512 Oct 28 03:15	16°♒12'37		max. Earth dist.	15513 Oct 11 00:36	28°♑38'47	1.35708 AU
max. Earth dist.	15512 Oct 28 19:27	17°♒33'59	1.33751 AU		15513 Oct 11 17:37	0°♒	
				asc. node	15513 Oct 14 23:58	6°♒21'59	
superior conj	15512 Nov 02 06:25	26°♒45'38	0°45'57				
minimum elong	15512 Nov 02 04:19	26°♒34'32	0°46'16	superior conj	15513 Oct 16 23:50	10°♒21'21	0°18'10
	15512 Nov 03 19:11	0°♓		minimum elong	15513 Oct 16 22:46	10°♒16'00	0°18'29
evening rise	15512 Nov 09 11:44	12°♓07'54		evening rise	15513 Oct 24 19:11	26°♒24'35	
	15512 Nov 18 13:17	0°♓			15513 Oct 26 13:17	0°♓	
desc. node	15512 Nov 29 14:22	15°♓24'45		evening max el	15513 Nov 11 20:27	26°♓13'43	20°14'53
evening max el	15512 Nov 29 20:09	15°♓39'07	21°41'12	desc. node	15513 Nov 16 11:30	29°♓51'29	
retrograde	15512 Dec 12 02:34	21°♓43'08			15513 Nov 16 17:38	0°♓	
evening set	15512 Dec 15 05:08	21°♓21'22		retrograde	15513 Nov 22 13:56	1°♓34'16	
inferior conj	15512 Dec 23 21:21	17°♓30'30	-5°54'19	evening set	15513 Nov 24 18:32	1°♓21'56	
minimum elong	15512 Dec 23 16:45	17°♓36'57	5°53'01		15513 Nov 28 21:23	30°♓♈	
min. Earth dist.	15512 Dec 23 23:39	17°♓27'16	0.54418 AU	inferior conj	15513 Dec 03 14:38	27°♓25'40	-4°55'56
morning rise	15513 Jan 01 05:00	13°♓42'22		minimum elong	15513 Dec 03 04:41	27°♓40'24	4°52'32
direct	15513 Jan 04 22:04	13°♓12'16		min. Earth dist.	15513 Dec 05 05:45	26°♓27'43	0.54777 AU
morning max el	15513 Jan 17 11:34	19°♓16'57	22°12'07	morning rise	15513 Dec 11 14:11	23°♓22'42	
asc. node	15513 Jan 24 02:33	27°♓06'20		direct	15513 Dec 16 08:05	22°♓34'03	
	15513 Jan 26 01:57	0°♈		morning max el	15513 Dec 29 21:23	29°♓14'29	24°01'29
morning set	15513 Feb 07 21:43	23°♈57'35			15513 Dec 30 16:06	0°♓	
	15513 Feb 10 17:45	0°♉		asc. node	15514 Jan 10 23:48	14°♓55'11	
					15514 Jan 19 05:42	0°♈	
superior conj	15513 Feb 14 23:18	9°♉01'53	1°20'19	morning set	15514 Jan 23 09:42	8°♈41'29	
minimum elong	15513 Feb 15 01:34	9°♉13'51	1°20'28				
max. Earth dist.	15513 Feb 18 21:38	17°♉12'14	1.34151 AU	superior conj	15514 Jan 30 05:12	23°♈32'44	1°32'02
evening rise	15513 Feb 23 06:16	25°♉51'33		minimum elong	15514 Jan 30 06:39	23°♈40'40	1°32'32
	15513 Feb 25 10:33	0°♊		max. Earth dist.	15514 Feb 01 19:02	29°♈06'43	1.32634 AU
desc. node	15513 Feb 25 14:59	0°♊20'45			15514 Feb 02 05:02	0°♉	
	15513 Mar 15 16:33	0°♋		evening rise	15514 Feb 06 19:37	9°♉33'39	
evening max el	15513 Mar 30 04:58	17°♋42'20	26°58'26	desc. node	15514 Feb 12 11:36	20°♉30'22	
retrograde	15513 Apr 12 13:29	25°♋11'13			15514 Feb 17 20:21	0°♊	
evening set	15513 Apr 19 02:05	22°♋39'24			15514 Mar 11 16:22	0°♋	
asc. node	15513 Apr 21 23:23	19°♋57'40		evening max el	15514 Mar 12 17:55	1°♋02'57	27°30'29
min. Earth dist.	15513 Apr 23 00:47	18°♋48'07	0.65815 AU	retrograde	15514 Mar 26 11:54	8°♋33'18	
inferior conj	15513 Apr 25 05:24	16°♋16'27	0°59'34	evening set	15514 Apr 02 06:33	6°♋07'06	
minimum elong	15513 Apr 25 03:56	16°♋20'44	0°58'27	min. Earth dist.	15514 Apr 06 01:43	2°♋46'21	0.63966 AU
morning rise	15513 May 01 07:12	10°♋42'23		inferior conj	15514 Apr 08 18:07	29°♊58'34	-0°02'04
direct	15513 May 04 04:11	9°♋57'23		minimum elong	15514 Apr 08 18:11	29°♊58'23	0°02'25
morning max el	15513 May 10 12:01	13°♋15'30	18°06'03	transit middle	15514 Apr 08 18:11	29°♊58'23	0°02'25
	15513 May 22 14:40	0°♌		transit begin	15514 Apr 08 15:06	0°♋06'29	
desc. node	15513 May 24 16:33	3°♌19'39		transit end	15514 Apr 08 21:17	29°♊50'18	
morning set	15513 May 29 06:25	10°♌43'25		asc. node	15514 Apr 08 20:44	29°♊51'43	
	15513 Jun 10 07:35	0°♍			15514 Apr 08 17:34	30°♋♈	
				morning rise	15514 Apr 15 08:06	24°♋39'11	
superior conj	15513 Jun 13 03:35	4°♍27'32	-1°59'29	direct	15514 Apr 17 20:24	24°♋07'33	
minimum elong	15513 Jun 12 19:44	3°♍56'41	1°59'51	morning max el	15514 Apr 24 05:22	27°♋23'17	17°48'24
max. Earth dist.	15513 Jun 15 14:57	8°♍19'54	1.45880 AU		15514 Apr 26 14:11	0°♋	
evening rise	15513 Jun 29 06:34	29°♍30'17		morning set	15514 May 11 00:50	22°♋40'05	

desc. node	15514 May 11 13:23	23°♄33'15		desc. node	15515 Apr 28 10:07	13°♄57'19	
	15514 May 15 09:10	0°♄					
superior conj	15514 May 24 03:27	14°♄25'35	-1°29'31	superior conj	15515 May 05 02:01	25°♄27'06	-0°51'58
minimum elong	15514 May 23 19:14	13°♄52'22	1°29'25	minimum elong	15515 May 04 21:11	25°♄06'39	0°51'57
max. Earth dist.	15514 May 29 10:42	22°♄53'50	1.45143 AU	max. Earth dist.	15515 May 07 19:09	0°♄	
	15514 Jun 02 23:25	0°♄		evening rise	15515 May 12 02:48	7°♄04'51	1.43737 AU
evening rise	15514 Jun 08 17:56	8°♄54'06			15515 May 19 08:43	18°♄33'54	
	15514 Jun 22 20:18	0°♄			15515 May 26 20:39	0°♄	
asc. node	15514 Jul 05 19:08	16°♄59'41		evening max el	15515 Jun 17 20:52	0°♄	
evening max el	15514 Jul 06 14:17	17°♄48'52	20°15'24	asc. node	15515 Jun 19 11:40	1°♄41'33	21°25'53
retrograde	15514 Jul 14 10:02	22°♄16'12		retrograde	15515 Jun 22 16:01	4°♄30'19	
evening set	15514 Jul 18 10:38	20°♄43'27		evening set	15515 Jun 28 08:49	6°♄51'28	
inferior conj	15514 Jul 23 17:03	14°♄40'21	3°06'55		15515 Jul 02 20:16	5°♄01'38	
minimum elong	15514 Jul 23 17:42	14°♄38'05	3°06'11	inferior conj	15515 Jul 07 05:02	30°♄	
min. Earth dist.	15514 Jul 24 12:45	13°♄33'02	0.68296 AU	minimum elong	15515 Jul 08 01:51	28°♄47'46	3°08'46
morning rise	15514 Jul 29 00:27	8°♄16'48		minimum elong	15515 Jul 08 01:33	28°♄48'50	3°07'55
direct	15514 Aug 03 13:17	5°♄51'37		min. Earth dist.	15515 Jul 08 08:10	28°♄25'46	0.68936 AU
desc. node	15514 Aug 07 12:07	6°♄52'25		morning rise	15515 Jul 13 06:36	22°♄29'31	
morning max el	15514 Aug 14 21:29	12°♄38'43	24°19'00	direct	15515 Jul 18 07:13	20°♄19'33	
	15514 Aug 28 21:33	0°♄		desc. node	15515 Jul 25 09:28	23°♄33'40	
	15514 Sep 17 06:56	0°♄		morning max el	15515 Jul 28 09:12	26°♄17'55	22°49'42
morning set	15514 Sep 19 08:42	3°♄32'58			15515 Jul 31 18:55	0°♄	
max. Earth dist.	15514 Sep 22 23:56	9°♄56'54	1.38002 AU	morning set	15515 Aug 22 10:00	0°♄	
				max. Earth dist.	15515 Aug 31 09:43	14°♄16'05	
superior conj	15514 Sep 30 05:39	23°♄23'32	-0°14'38		15515 Sep 04 23:19	21°♄54'07	1.40392 AU
minimum elong	15514 Sep 30 06:38	23°♄28'15	0°14'11		15515 Sep 09 15:17	0°♄	
behind sun begin	15514 Sep 30 03:19	23°♄12'21		superior conj	15515 Sep 12 19:52	5°♄43'23	-0°50'37
behind sun end	15514 Sep 30 09:57	23°♄44'09		minimum elong	15515 Sep 12 23:48	6°♄01'12	0°49'58
asc. node	15514 Oct 01 20:37	26°♄31'48		asc. node	15515 Sep 18 17:13	16°♄38'51	
	15514 Oct 03 15:11	0°♄		evening rise	15515 Sep 22 15:25	24°♄05'52	
evening rise	15514 Oct 08 21:26	10°♄26'24			15515 Sep 25 18:22	0°♄	
	15514 Oct 19 13:24	0°♄		evening max el	15515 Oct 08 13:57	19°♄49'05	18°27'25
evening max el	15514 Oct 25 11:09	7°♄37'24	19°10'02	retrograde	15515 Oct 16 09:06	23°♄46'25	
desc. node	15514 Nov 03 08:45	12°♄12'22		evening set	15515 Oct 18 08:41	23°♄31'49	
retrograde	15514 Nov 03 14:07	12°♄12'32		desc. node	15515 Oct 21 06:04	22°♄22'58	
evening set	15514 Nov 05 11:13	12°♄01'40		inferior conj	15515 Oct 26 03:35	18°♄58'58	-1°34'20
inferior conj	15514 Nov 13 22:27	7°♄49'20	-3°19'04	minimum elong	15515 Oct 25 23:53	19°♄06'16	1°32'13
minimum elong	15514 Nov 13 14:16	8°♄03'09	3°15'18	min. Earth dist.	15515 Oct 29 09:01	16°♄26'59	0.57890 AU
min. Earth dist.	15514 Nov 16 15:53	5°♄59'05	0.56008 AU	morning rise	15515 Nov 02 11:36	13°♄46'30	
morning rise	15514 Nov 21 14:49	3°♄14'11		direct	15515 Nov 08 17:09	12°♄07'02	
direct	15514 Nov 27 05:15	2°♄01'46		morning max el	15515 Nov 22 23:53	19°♄40'09	27°06'26
morning max el	15514 Dec 11 07:17	9°♄11'28	25°45'53		15515 Dec 01 19:41	0°♄	
	15514 Dec 26 20:47	0°♄		asc. node	15515 Dec 15 18:03	22°♄37'05	
asc. node	15514 Dec 28 20:59	3°♄29'16			15515 Dec 19 12:39	0°♄	
morning set	15515 Jan 07 21:08	23°♄19'24		morning set	15515 Dec 23 06:17	7°♄47'00	
	15515 Jan 10 22:26	0°♄					
superior conj	15515 Jan 14 14:48	8°♄10'47	1°37'32	superior conj	15515 Dec 30 02:08	22°♄50'41	1°36'58
minimum elong	15515 Jan 14 15:14	8°♄13'11	1°38'17	minimum elong	15515 Dec 30 01:31	22°♄47'12	1°37'49
max. Earth dist.	15515 Jan 15 22:47	11°♄07'53	1.31599 AU	max. Earth dist.	15515 Dec 30 06:03	23°♄12'37	1.31088 AU
evening rise	15515 Jan 21 17:33	23°♄35'13			15516 Jan 02 07:08	0°♄	
	15515 Jan 24 21:09	0°♄		evening rise	15516 Jan 05 21:42	7°♄50'59	
desc. node	15515 Jan 30 08:14	10°♄21'35		desc. node	15516 Jan 17 04:57	29°♄47'29	
	15515 Feb 11 13:53	0°♄			15516 Jan 17 07:50	0°♄	
evening max el	15515 Feb 23 03:38	13°♄48'16	27°32'37	evening max el	15516 Feb 05 07:48	25°♄47'46	27°00'28
retrograde	15515 Mar 09 02:36	21°♄13'37			15516 Feb 10 12:33	0°♄	
evening set	15515 Mar 15 22:38	19°♄00'27		retrograde	15516 Feb 19 08:22	3°♄03'24	
min. Earth dist.	15515 Mar 19 16:58	16°♄04'22	0.61840 AU	evening set	15516 Feb 25 23:13	1°♄10'56	
inferior conj	15515 Mar 22 18:35	13°♄14'14	-1°16'59		15516 Feb 27 20:59	30°♄	
minimum elong	15515 Mar 22 21:17	13°♄07'58	1°16'00	min. Earth dist.	15516 Feb 29 22:02	28°♄30'09	0.59598 AU
asc. node	15515 Mar 26 18:07	9°♄53'02		inferior conj	15516 Mar 04 03:13	25°♄54'18	-2°42'48
morning rise	15515 Mar 29 23:02	8°♄12'25		minimum elong	15516 Mar 04 09:21	25°♄41'53	2°40'18
direct	15515 Apr 01 04:03	7°♄50'47		morning rise	15516 Mar 11 22:59	21°♄12'31	
morning max el	15515 Apr 07 22:39	11°♄15'41	17°48'31	asc. node	15516 Mar 12 15:32	21°♄03'54	
	15515 Apr 20 13:01	0°♄		direct	15516 Mar 13 23:08	20°♄57'17	
morning set	15515 Apr 23 17:33	5°♄38'55		morning max el	15516 Mar 21 12:22	24°♄42'42	18°07'24
					15516 Mar 25 20:54	0°♄	

morning set	15516 Apr 06 02:40	19° $\Upsilon$ 22'21		morning rise	15517 Feb 22 01:27	3° $\text{X}$ 29'02	
	15516 Apr 11 19:59	0° $\text{B}$		direct	15517 Feb 24 01:29	3° $\text{X}$ 16'23	
desc. node	15516 Apr 14 06:45	4° $\text{B}$ 27'40		asc. node	15517 Feb 27 12:57	3° $\text{X}$ 56'47	
				morning max el	15517 Mar 04 18:31	7° $\text{X}$ 32'53	18°46'51
superior conj	15516 Apr 15 23:36	7° $\text{B}$ 31'04	-0°13'57		15517 Mar 19 02:42	0° $\Upsilon$	
minimum elong	15516 Apr 15 22:27	7° $\text{B}$ 25'54	0°14'13	morning set	15517 Mar 20 23:17	3° $\Upsilon$ 36'06	
behind sun begin	15516 Apr 15 18:56	7° $\text{B}$ 10'11					
behind sun end	15516 Apr 16 01:58	7° $\text{B}$ 41'36		superior conj	15517 Mar 29 16:40	20° $\Upsilon$ 27'29	0°20'18
max. Earth dist.	15516 Apr 23 14:04	20° $\text{B}$ 40'01	1.41822 AU	minimum elong	15517 Mar 29 17:58	20° $\Upsilon$ 33'39	0°19'51
evening rise	15516 Apr 28 15:56	29° $\text{B}$ 00'30		desc. node	15517 Apr 01 03:21	25° $\Upsilon$ 00'49	
	15516 Apr 29 06:44	0° $\text{II}$			15517 Apr 03 21:11	0° $\text{B}$	
	15516 May 19 10:09	0° $\text{E}$		max. Earth dist.	15517 Apr 05 21:32	3° $\text{B}$ 34'39	1.39609 AU
evening max el	15516 Jun 01 04:20	15° $\text{E}$ 34'40	22°44'48	evening rise	15517 Apr 09 20:24	10° $\text{B}$ 23'24	
asc. node	15516 Jun 08 13:00	20° $\text{E}$ 57'15			15517 Apr 22 03:33	0° $\text{II}$	
retrograde	15516 Jun 11 05:49	21° $\text{E}$ 29'06		evening max el	15517 May 14 18:34	29° $\text{II}$ 29'38	24°06'14
evening set	15516 Jun 16 04:38	19° $\text{E}$ 23'46			15517 May 15 06:58	0° $\text{E}$	
inferior conj	15516 Jun 21 11:45	13° $\text{E}$ 01'09	2°59'54	retrograde	15517 May 25 23:41	6° $\text{E}$ 03'48	
minimum elong	15516 Jun 21 10:34	13° $\text{E}$ 05'16	2°58'52	asc. node	15517 May 26 10:06	6° $\text{E}$ 02'59	
min. Earth dist.	15516 Jun 21 05:02	13° $\text{E}$ 24'29	0.69093 AU	evening set	15517 May 31 10:09	3° $\text{E}$ 45'26	
morning rise	15516 Jun 26 16:21	6° $\text{E}$ 50'08			15517 Jun 03 20:06	30° $\text{R}$ $\text{II}$	
direct	15516 Jul 01 04:41	4° $\text{E}$ 58'34		min. Earth dist.	15517 Jun 05 01:17	28° $\text{II}$ 23'22	0.68770 AU
morning max el	15516 Jul 10 00:22	10° $\text{E}$ 05'17	21°24'20	inferior conj	15517 Jun 05 20:52	27° $\text{II}$ 16'53	2°40'37
desc. node	15516 Jul 11 06:43	11° $\text{E}$ 23'53		minimum elong	15517 Jun 05 19:01	27° $\text{II}$ 23'12	2°39'21
	15516 Jul 25 13:24	0° $\Omega$		morning rise	15517 Jun 11 03:55	21° $\text{II}$ 14'31	
morning set	15516 Aug 10 10:35	23° $\Omega$ 57'18		direct	15517 Jun 15 04:17	19° $\text{II}$ 42'50	
	15516 Aug 14 05:48	0° $\text{M}$		morning max el	15517 Jun 22 21:48	24° $\text{II}$ 03'29	20°09'22
max. Earth dist.	15516 Aug 17 03:45	4° $\text{M}$ 43'40	1.42607 AU	desc. node	15517 Jun 28 03:52	0° $\text{E}$ 05'06	
					15517 Jun 28 02:16	0° $\text{E}$	
superior conj	15516 Aug 24 14:03	17° $\text{M}$ 10'35	-1°26'22		15517 Jul 18 19:54	0° $\Omega$	
minimum elong	15516 Aug 24 20:55	17° $\text{M}$ 40'03	1°25'46	morning set	15517 Jul 20 17:19	2° $\Omega$ 54'08	
	15516 Aug 31 21:18	0° $\text{E}$		max. Earth dist.	15517 Jul 30 15:14	18° $\Omega$ 24'09	1.44389 AU
evening rise	15516 Sep 04 21:07	7° $\text{E}$ 11'59					
asc. node	15516 Sep 04 13:48	6° $\text{E}$ 38'52		superior conj	15517 Aug 05 09:01	27° $\Omega$ 39'24	-1°56'10
	15516 Sep 18 16:26	0° $\text{M}$		minimum elong	15517 Aug 05 16:30	28° $\Omega$ 09'55	1°56'08
evening max el	15516 Sep 21 00:35	2° $\text{M}$ 38'32	18°05'30		15517 Aug 06 19:21	0° $\text{M}$	
retrograde	15516 Sep 27 22:06	6° $\text{M}$ 10'44		evening rise	15517 Aug 18 09:42	19° $\text{M}$ 33'06	
evening set	15516 Sep 30 04:30	5° $\text{M}$ 48'06		asc. node	15517 Aug 22 10:25	26° $\text{M}$ 28'07	
inferior conj	15516 Oct 07 05:46	0° $\text{M}$ 54'26	-0°01'49		15517 Aug 24 12:23	0° $\text{E}$	
minimum elong	15516 Oct 07 05:43	0° $\text{M}$ 54'33	0°01'25	evening max el	15517 Sep 04 14:56	15° $\text{E}$ 55'55	18°02'47
transit middle	15516 Oct 07 05:43	0° $\text{M}$ 54'33	0°01'25	retrograde	15517 Sep 11 01:21	19° $\text{E}$ 16'55	
transit begin	15516 Oct 07 02:24	1° $\text{M}$ 02'10		evening set	15517 Sep 13 15:59	18° $\text{E}$ 42'40	
transit end	15516 Oct 07 09:02	0° $\text{M}$ 46'56		inferior conj	15517 Sep 20 01:48	13° $\text{E}$ 30'04	1°11'02
desc. node	15516 Oct 07 03:28	0° $\text{M}$ 59'43		minimum elong	15517 Sep 20 03:40	13° $\text{E}$ 25'12	1°10'30
	15516 Oct 08 05:23	30° $\text{R}$ $\text{E}$		min. Earth dist.	15517 Sep 22 22:07	10° $\text{E}$ 32'41	0.62413 AU
min. Earth dist.	15516 Oct 10 10:43	27° $\text{E}$ 59'18	0.60124 AU	desc. node	15517 Sep 24 00:54	9° $\text{E}$ 27'51	
morning rise	15516 Oct 14 03:42	25° $\text{E}$ 09'59		morning rise	15517 Sep 26 12:57	7° $\text{E}$ 22'51	
direct	15516 Oct 20 18:00	23° $\text{E}$ 05'04		direct	15517 Oct 03 05:22	4° $\text{E}$ 58'38	
	15516 Nov 03 01:33	0° $\text{M}$		morning max el	15517 Oct 17 07:03	12° $\text{E}$ 56'41	27°56'38
morning max el	15516 Nov 04 00:18	0° $\text{M}$ 54'37	27°51'09		15517 Oct 30 22:56	0° $\text{M}$	
	15516 Nov 25 00:58	0° $\text{X}$			15517 Nov 17 12:01	0° $\text{X}$	
asc. node	15516 Dec 01 15:01	12° $\text{X}$ 08'57		asc. node	15517 Nov 18 11:55	1° $\text{X}$ 58'03	
morning set	15516 Dec 06 11:18	21° $\text{X}$ 59'07		morning set	15517 Nov 20 10:03	5° $\text{X}$ 50'50	
	15516 Dec 10 04:43	0° $\text{B}$		max. Earth dist.	15517 Nov 25 16:56	17° $\text{X}$ 00'48	1.31703 AU
max. Earth dist.	15516 Dec 12 13:21	5° $\text{B}$ 13'03	1.31117 AU				
				superior conj	15517 Nov 27 22:27	21° $\text{X}$ 53'26	1°17'55
superior conj	15516 Dec 13 13:19	7° $\text{B}$ 26'39	1°30'26	minimum elong	15517 Nov 27 20:17	21° $\text{X}$ 41'28	1°18'31
minimum elong	15516 Dec 13 11:46	7° $\text{B}$ 18'01	1°31'13		15517 Dec 01 14:32	0° $\text{B}$	
evening rise	15516 Dec 20 05:56	22° $\text{B}$ 15'31		evening rise	15517 Dec 04 16:24	6° $\text{B}$ 44'07	
	15516 Dec 23 22:14	0° $\approx$			15517 Dec 16 15:45	0° $\approx$	
desc. node	15517 Jan 03 01:46	18° $\approx$ 38'28		desc. node	15517 Dec 20 22:41	6° $\approx$ 41'15	
	15517 Jan 10 22:35	0° $\text{X}$		evening max el	15517 Dec 29 16:47	17° $\approx$ 15'22	24°21'27
evening max el	15517 Jan 17 04:16	6° $\text{X}$ 55'26	25°54'13	retrograde	15518 Jan 12 08:09	24° $\approx$ 02'41	
retrograde	15517 Jan 31 02:55	13° $\text{X}$ 58'14		evening set	15518 Jan 17 11:22	23° $\approx$ 05'05	
evening set	15517 Feb 06 04:36	12° $\text{X}$ 32'17		min. Earth dist.	15518 Jan 23 04:31	20° $\approx$ 12'31	0.55719 AU
min. Earth dist.	15517 Feb 10 17:23	9° $\text{X}$ 53'53	0.57465 AU	inferior conj	15518 Jan 25 08:43	18° $\approx$ 52'36	-5°26'10
inferior conj	15517 Feb 13 16:32	7° $\text{X}$ 49'28	-4°11'33	minimum elong	15518 Jan 25 16:47	18° $\approx$ 40'14	5°24'01
minimum elong	15517 Feb 14 01:31	7° $\text{X}$ 33'44	4°08'22	morning rise	15518 Feb 03 00:08	14° $\approx$ 52'17	



direct	15518 Feb 05 08:27	14° $\approx$ 37'48		minimum elong	15519 Jan 05 07:48	29° $\approx$ 08'05	6°00'07
asc. node	15518 Feb 14 10:22	18° $\approx$ 32'57		morning rise	15519 Jan 13 19:21	25° $\approx$ 21'23	
morning max el	15518 Feb 15 12:53	19° $\approx$ 33'54	19°48'55	direct	15519 Jan 16 22:10	24° $\approx$ 59'14	
	15518 Feb 23 11:17	0° $\approx$			15519 Jan 27 23:47	0° $\approx$	
morning set	15518 Mar 05 03:30	18° $\approx$ 08'08		morning max el	15519 Jan 28 16:34	0° $\approx$ 39'05	21°14'08
	15518 Mar 10 23:54	0° $\approx$		asc. node	15519 Feb 01 07:43	4° $\approx$ 38'22	
					15519 Feb 16 03:41	0° $\approx$	
superior conj	15518 Mar 13 00:40	4° $\approx$ 03'22	0°48'43	morning set	15519 Feb 17 12:29	2° $\approx$ 49'59	
minimum elong	15518 Mar 13 03:06	4° $\approx$ 15'25	0°48'22				
desc. node	15518 Mar 18 23:57	15° $\approx$ 32'34		superior conj	15519 Feb 24 19:40	18° $\approx$ 07'59	1°10'40
max. Earth dist.	15518 Mar 19 04:06	15° $\approx$ 51'53	1.37329 AU	minimum elong	15519 Feb 24 22:12	18° $\approx$ 21'03	1°10'35
evening rise	15518 Mar 22 20:59	22° $\approx$ 36'30		max. Earth dist.	15519 Mar 01 13:56	27° $\approx$ 46'09	1.35216 AU
	15518 Mar 27 03:01	0° $\approx$			15519 Mar 02 17:15	0° $\approx$	
	15518 Apr 15 22:55	0° $\approx$		evening rise	15519 Mar 05 14:34	5° $\approx$ 31'18	
evening max el	15518 Apr 27 08:06	13° $\approx$ 23'53	25°23'22	desc. node	15519 Mar 05 20:33	5° $\approx$ 59'20	
retrograde	15518 May 09 13:21	20° $\approx$ 28'29			15519 Mar 19 22:24	0° $\approx$	
asc. node	15518 May 13 07:18	19° $\approx$ 30'19		evening max el	15519 Apr 09 21:43	27° $\approx$ 12'03	26°28'51
evening set	15518 May 15 11:09	18° $\approx$ 00'37			15519 Apr 13 00:07	0° $\approx$	
min. Earth dist.	15518 May 19 18:42	13° $\approx$ 15'19	0.67972 AU	retrograde	15519 Apr 22 21:57	4° $\approx$ 35'51	
inferior conj	15518 May 21 03:15	11° $\approx$ 29'58	2°10'36	evening set	15519 Apr 29 05:51	2° $\approx$ 03'26	
minimum elong	15518 May 21 01:05	11° $\approx$ 37'00	2°09'12	asc. node	15519 Apr 30 04:35	1° $\approx$ 13'56	
morning rise	15518 May 26 15:25	5° $\approx$ 37'34			15519 May 01 10:21	30° $\approx$	
direct	15518 May 30 04:27	4° $\approx$ 25'32		min. Earth dist.	15519 May 03 07:16	27° $\approx$ 53'21	0.66722 AU
morning max el	15518 Jun 06 02:40	8° $\approx$ 11'37	19°08'39	inferior conj	15519 May 05 04:45	25° $\approx$ 35'46	1°29'04
desc. node	15518 Jun 15 00:56	19° $\approx$ 23'18		minimum elong	15519 May 05 02:49	25° $\approx$ 41'40	1°27'45
greatest brilliancy	15518 Jun 19 00:08	25° $\approx$ 11'46	-0.7m	morning rise	15519 May 11 00:48	19° $\approx$ 54'43	
	15518 Jun 22 04:40	0° $\approx$		direct	15519 May 14 03:18	19° $\approx$ 00'43	
morning set	15518 Jun 29 22:50	11° $\approx$ 53'04		morning max el	15519 May 20 14:10	22° $\approx$ 25'25	18°24'04
	15518 Jul 11 15:12	0° $\approx$			15519 May 26 18:57	0° $\approx$	
max. Earth dist.	15518 Jul 13 08:23	2° $\approx$ 41'08	1.45541 AU	desc. node	15519 Jun 01 21:54	9° $\approx$ 08'38	
				morning set	15519 Jun 09 22:29	21° $\approx$ 46'36	
superior conj	15518 Jul 16 06:02	7° $\approx$ 14'50	-2°12'42		15519 Jun 15 03:28	0° $\approx$	
minimum elong	15518 Jul 16 08:58	7° $\approx$ 26'26	2°13'24				
	15518 Jul 30 10:05	0° $\approx$		superior conj	15519 Jun 25 15:09	16° $\approx$ 25'11	-2°10'01
evening rise	15518 Jul 30 23:57	0° $\approx$ 56'40		minimum elong	15519 Jun 25 10:20	16° $\approx$ 06'25	2°10'43
asc. node	15518 Aug 09 07:06	16° $\approx$ 01'36		max. Earth dist.	15519 Jun 26 04:13	17° $\approx$ 16'08	1.45968 AU
evening max el	15518 Aug 19 05:26	29° $\approx$ 32'00	18°18'17		15519 Jul 04 08:08	0° $\approx$	
	15518 Aug 19 17:07	0° $\approx$		evening rise	15519 Jul 11 13:10	11° $\approx$ 17'20	
retrograde	15518 Aug 25 14:29	2° $\approx$ 55'30		greatest brilliancy	15519 Jul 20 21:37	25° $\approx$ 53'50	-0.8m
evening set	15518 Aug 28 13:51	2° $\approx$ 06'52			15519 Jul 23 14:16	0° $\approx$	
	15518 Aug 31 08:52	30° $\approx$		asc. node	15519 Jul 27 03:49	5° $\approx$ 12'42	
inferior conj	15518 Sep 03 11:38	26° $\approx$ 37'52	2°04'04	evening max el	15519 Aug 02 17:07	13° $\approx$ 18'41	18°51'13
minimum elong	15518 Sep 03 14:00	26° $\approx$ 30'59	2°03'16	retrograde	15519 Aug 09 09:36	16° $\approx$ 57'43	
min. Earth dist.	15518 Sep 05 19:23	23° $\approx$ 56'28	0.64524 AU	evening set	15519 Aug 12 18:13	15° $\approx$ 52'47	
morning rise	15518 Sep 09 12:38	20° $\approx$ 17'18		inferior conj	15519 Aug 18 07:32	10° $\approx$ 09'30	2°39'43
desc. node	15518 Sep 10 22:20	19° $\approx$ 17'05		minimum elong	15519 Aug 18 09:32	10° $\approx$ 03'10	2°38'56
direct	15518 Sep 16 01:36	17° $\approx$ 42'00		min. Earth dist.	15519 Aug 20 01:21	7° $\approx$ 57'52	0.66317 AU
morning max el	15518 Sep 29 17:34	25° $\approx$ 38'53	27°26'16	morning rise	15519 Aug 23 23:58	3° $\approx$ 43'28	
	15518 Oct 03 17:50	0° $\approx$		desc. node	15519 Aug 28 19:48	1° $\approx$ 13'18	
	15518 Oct 24 11:36	0° $\approx$		direct	15519 Aug 30 05:31	1° $\approx$ 05'45	
morning set	15518 Nov 04 00:04	19° $\approx$ 16'44		morning max el	15519 Sep 12 05:08	8° $\approx$ 48'04	26°27'17
asc. node	15518 Nov 05 08:45	21° $\approx$ 58'58			15519 Sep 28 20:43	0° $\approx$	
max. Earth dist.	15518 Nov 08 13:17	28° $\approx$ 29'46	1.32847 AU		15519 Oct 16 22:30	0° $\approx$	
	15518 Nov 09 06:34	0° $\approx$		morning set	15519 Oct 18 02:06	2° $\approx$ 08'42	
superior conj	15518 Nov 12 03:30	6° $\approx$ 05'43	0°59'22	max. Earth dist.	15519 Oct 21 23:43	9° $\approx$ 38'57	1.34526 AU
minimum elong	15518 Nov 12 01:10	5° $\approx$ 53'15	0°59'46	asc. node	15519 Oct 23 05:28	12° $\approx$ 06'24	
evening rise	15518 Nov 19 03:16	21° $\approx$ 12'21					
	15518 Nov 23 08:29	0° $\approx$		superior conj	15519 Oct 27 01:56	19° $\approx$ 56'35	0°34'52
desc. node	15518 Dec 07 19:42	23° $\approx$ 38'39		minimum elong	15519 Oct 27 00:09	19° $\approx$ 47'23	0°35'09
evening max el	15518 Dec 11 02:29	27° $\approx$ 12'05	22°38'08		15519 Oct 31 21:01	0° $\approx$	
	15518 Dec 14 08:51	0° $\approx$		evening rise	15519 Nov 03 12:32	5° $\approx$ 34'30	
retrograde	15518 Dec 24 00:58	3° $\approx$ 36'32			15519 Nov 16 18:34	0° $\approx$	
evening set	15518 Dec 27 21:28	3° $\approx$ 04'04		evening max el	15519 Nov 22 19:09	7° $\approx$ 23'41	21°02'05
	15519 Jan 03 18:54	30° $\approx$		desc. node	15519 Nov 24 16:48	9° $\approx$ 07'37	
min. Earth dist.	15519 Jan 04 10:51	29° $\approx$ 37'39	0.54643 AU	retrograde	15519 Dec 04 11:13	13° $\approx$ 10'50	
inferior conj	15519 Jan 05 06:57	29° $\approx$ 09'16	-6°00'57	evening set	15519 Dec 07 02:24	12° $\approx$ 54'26	
				inferior conj	15519 Dec 15 21:47	9° $\approx$ 02'37	-5°36'09

minimum elong	15519 Dec 15 14:00	9°  13'40	5°33'59	evening set	15520 Nov 16 02:09	23°  08'42	
min. Earth dist.	15519 Dec 16 16:24	8°  36'10	0.54453 AU	inferior conj	15520 Nov 24 19:56	19°  07'00	-4°17'40
morning rise	15519 Dec 24 01:48	5°  10'26		minimum elong	15520 Nov 24 10:03	19°  22'22	4°13'46
direct	15519 Dec 28 05:22	4°  33'22		min. Earth dist.	15520 Nov 27 00:10	17°  45'46	0.55207 AU
morning max el	15520 Jan 10 07:01	10°  54'35	22°57'59	morning rise	15520 Dec 02 16:23	14°  51'33	
asc. node	15520 Jan 19 05:00	21°  54'13		direct	15520 Dec 07 19:46	13°  53'03	
	15520 Jan 24 02:59	0°  ≈		morning max el	15520 Dec 21 15:40	20°  47'21	24°47'31
morning set	15520 Feb 01 23:54	17°  ≈34'29			15520 Dec 29 13:03	0°  ≈	
	15520 Feb 07 18:10	0°  ✕		asc. node	15521 Jan 05 02:12	10°  ≈03'58	
					15521 Jan 15 10:20	0°  ≈	
superior conj	15520 Feb 08 22:21	2°  ✕31'30	1°26'04	morning set	15521 Jan 16 11:49	2°  ≈16'13	
minimum elong	15520 Feb 09 00:19	2°  ✕42'01	1°26'21				
max. Earth dist.	15520 Feb 12 06:30	9°  ✕35'26	1.33446 AU	superior conj	15521 Jan 23 06:04	17°  ≈06'16	1°35'07
evening rise	15520 Feb 16 21:36	18°  ✕58'28		minimum elong	15521 Jan 23 07:06	17°  ≈11'59	1°35'44
desc. node	15520 Feb 20 17:10	26°  ✕16'40		max. Earth dist.	15521 Jan 25 06:39	21°  ≈31'55	1.32133 AU
	15520 Feb 22 17:53	0°  Υ			15521 Jan 29 06:00	0°  ✕	
	15520 Mar 13 01:23	0°  ♄		evening rise	15521 Jan 30 14:56	2°  ✕49'56	
evening max el	15520 Mar 22 11:11	10°  ♄45'50	27°15'18	desc. node	15521 Feb 06 13:48	16°  ✕19'26	
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evening set	15520 Apr 11 16:13	15°  ♄46'49		evening max el	15521 Mar 04 23:08	23°  Υ53'31	27°35'28
min. Earth dist.	15520 Apr 15 13:03	12°  ♄09'08	0.65064 AU		15521 Mar 13 06:38	0°  ♄	
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inferior conj	15520 Apr 17 22:58	9°  ♄28'48	0°35'02		15521 Mar 24 01:28	30°  ♄Υ	
minimum elong	15520 Apr 17 22:01	9°  ♄31'25	0°34'12	evening set	15521 Mar 25 15:47	29°  Υ01'25	
morning rise	15520 Apr 24 05:39	4°  ♄00'52		min. Earth dist.	15521 Mar 29 10:13	25°  Υ51'45	0.63081 AU
direct	15520 Apr 26 22:40	3°  ♄22'07		inferior conj	15521 Apr 01 06:54	23°  Υ01'06	-0°32'18
morning max el	15520 May 03 06:09	6°  ♄38'02	17°56'25	minimum elong	15521 Apr 01 07:57	22°  Υ58'28	0°32'08
desc. node	15520 May 18 18:47	29°  ♄13'50		asc. node	15521 Apr 02 23:15	21°  Υ22'58	
	15520 May 19 06:00	0°  ♄		morning rise	15521 Apr 08 02:48	17°  Υ48'39	
morning set	15520 May 21 01:34	2°  ♄59'35		direct	15521 Apr 10 11:41	17°  Υ21'47	
				morning max el	15521 Apr 16 23:50	20°  Υ40'25	17°46'11
superior conj	15520 Jun 04 05:22	25°  ♄55'34	-1°48'14		15521 Apr 24 02:07	0°  ♄	
minimum elong	15520 Jun 03 20:39	25°  ♄21'00	1°48'21	morning set	15521 May 03 06:14	15°  ♄25'11	
	15520 Jun 06 19:19	0°  ♄		desc. node	15521 May 05 15:34	19°  ♄32'33	
max. Earth dist.	15520 Jun 08 00:08	1°  ♄53'10	1.45645 AU		15521 May 11 19:01	0°  ♄	
evening rise	15520 Jun 20 06:06	20°  ♄51'11					
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greatest brilliancy	15520 Jul 04 06:47	12°  ♄00'41	-0.6m	minimum elong	15521 May 15 07:21	5°  ♄50'36	1°13'54
asc. node	15520 Jul 13 00:36	23°  ♄53'46		max. Earth dist.	15521 May 21 18:19	16°  ♄18'23	1.44617 AU
evening max el	15520 Jul 15 23:55	27°  ♄10'43	19°40'29	evening rise	15521 May 30 16:52	0°  ♄16'53	
	15520 Jul 19 10:08	0°  ♄			15521 May 30 12:28	0°  ♄	
retrograde	15520 Jul 23 07:47	1°  ♄17'27			15521 Jun 19 22:35	0°  ♄	
	15520 Jul 26 23:33	30°  ♄♄		evening max el	15521 Jun 29 00:46	11°  ♄03'51	20°44'07
evening set	15520 Jul 27 02:18	29°  ♄55'04		asc. node	15521 Jun 29 21:27	11°  ♄53'48	
inferior conj	15520 Aug 01 10:24	23°  ♄59'01	3°00'39	retrograde	15521 Jul 07 06:44	15°  ♄48'17	
minimum elong	15520 Aug 01 11:36	23°  ♄54'58	2°59'55	evening set	15521 Jul 11 11:52	14°  ♄08'17	
min. Earth dist.	15520 Aug 02 14:10	22°  ♄26'21	0.67703 AU	inferior conj	15521 Jul 16 17:38	8°  ♄00'41	3°09'02
morning rise	15520 Aug 06 20:25	17°  ♄33'21		minimum elong	15521 Jul 16 17:53	7°  ♄59'49	3°08'16
direct	15520 Aug 12 15:54	15°  ♄01'22		min. Earth dist.	15521 Jul 17 07:40	7°  ♄12'13	0.68630 AU
desc. node	15520 Aug 14 17:12	15°  ♄17'48		morning rise	15521 Jul 21 23:37	1°  ♄39'09	
morning max el	15520 Aug 24 16:07	22°  ♄13'00	25°08'56		15521 Jul 24 09:41	30°  ♄♄	
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	15520 Sep 21 03:09	0°  ♄			15521 Jul 30 10:23	0°  ♄	
morning set	15520 Sep 29 12:22	14°  ♄18'18		desc. node	15521 Aug 01 14:34	1°  ♄08'43	
max. Earth dist.	15520 Oct 03 01:17	20°  ♄44'20	1.36650 AU	morning max el	15521 Aug 07 02:49	5°  ♄46'38	23°40'57
	15520 Oct 07 22:13	0°  ♄			15521 Aug 25 21:13	0°  ♄	
asc. node	15520 Oct 09 02:09	2°  ♄16'46		morning set	15521 Sep 11 02:31	25°  ♄34'45	
					15521 Sep 13 16:33	0°  ♄	
superior conj	15520 Oct 09 14:51	3°  ♄19'23	0°04'50	max. Earth dist.	15521 Sep 14 23:36	2°  ♄15'10	1.39025 AU
minimum elong	15520 Oct 09 14:32	3°  ♄17'46	0°05'10				
behind sun begin	15520 Oct 09 08:23	2°  ♄47'26		superior conj	15521 Sep 22 14:33	16°  ♄04'55	-0°29'39
behind sun end	15520 Oct 09 20:40	3°  ♄48'09		minimum elong	15521 Sep 22 16:42	16°  ♄14'58	0°29'06
evening rise	15520 Oct 17 18:04	19°  ♄45'39		asc. node	15521 Sep 25 22:48	22°  ♄26'04	
	15520 Oct 22 22:08	0°  ♄			15521 Sep 29 20:21	0°  ♄	
evening max el	15520 Nov 04 01:42	18°  ♄19'09	19°44'36	evening rise	15521 Oct 01 17:10	3°  ♄38'46	
desc. node	15520 Nov 10 13:58	22°  ♄43'22			15521 Oct 17 20:16	0°  ♄	
retrograde	15520 Nov 14 02:26	23°  ♄19'35		evening max el	15521 Oct 17 22:05	0°  ♄04'33	18°49'18

































































































































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evening set	15521 Oct 28 07:37	4°♄09'48		retrograde	15522 Oct 08 13:16	16°♍18'07	
desc. node	15521 Oct 28 11:12	4°♄07'52		evening set	15522 Oct 10 15:29	16°♍00'32	
	15521 Nov 05 06:19	30°♍♍		desc. node	15522 Oct 15 08:33	13°♍30'45	
inferior conj	15521 Nov 05 12:24	29°♍49'02	-2°34'04	inferior conj	15522 Oct 18 02:42	11°♍18'16	-0°52'52
minimum elong	15521 Nov 05 06:04	0°♄00'26	2°30'52	minimum elong	15522 Oct 18 00:46	11°♍22'22	0°51'34
min. Earth dist.	15521 Nov 08 12:44	27°♍39'19	0.56750 AU	min. Earth dist.	15522 Oct 21 09:02	8°♍34'12	0.58813 AU
morning rise	15521 Nov 13 01:30	24°♍58'21		morning rise	15522 Oct 25 06:37	5°♍51'18	
direct	15521 Nov 18 23:23	23°♍34'27		direct	15522 Oct 31 16:34	4°♍00'54	
	15521 Dec 02 04:29	0°♄		morning max el	15522 Nov 14 23:41	11°♍41'13	27°30'26
morning max el	15521 Dec 03 03:40	0°♄54'11	26°23'56		15522 Nov 29 07:54	0°♄	
asc. node	15521 Dec 22 23:20	28°♄54'10		asc. node	15522 Dec 09 20:22	18°♄13'24	
	15521 Dec 23 13:37	0°♄			15522 Dec 15 16:28	0°♄	
morning set	15521 Dec 31 22:31	16°♄50'48		morning set	15522 Dec 16 06:09	1°♄12'34	
	15522 Jan 06 21:37	0°♄					
				superior conj	15522 Dec 23 04:08	16°♄25'03	1°34'55
superior conj	15522 Jan 07 16:39	1°♄46'18	1°38'01	minimum elong	15522 Dec 23 03:05	16°♄19'13	1°35'46
minimum elong	15522 Jan 07 16:38	1°♄46'11	1°38'50	max. Earth dist.	15522 Dec 22 20:26	15°♄41'58	1.31034 AU
max. Earth dist.	15522 Jan 08 12:29	3°♄36'50	1.31322 AU		15522 Dec 29 07:14	0°♄	
evening rise	15522 Jan 14 15:50	16°♄59'08		evening rise	15522 Dec 29 21:57	1°♄19'17	
	15522 Jan 21 03:43	0°♄		desc. node	15523 Jan 11 07:13	25°♄14'15	
desc. node	15522 Jan 24 10:28	6°♄01'34			15523 Jan 14 05:16	0°♄	
	15522 Feb 09 10:12	0°♄		evening max el	15523 Jan 28 08:11	17°♄59'51	26°36'09
evening max el	15522 Feb 15 07:07	6°♄22'10	27°23'20	retrograde	15523 Feb 11 07:55	25°♄09'52	
retrograde	15522 Mar 01 07:01	13°♄42'56		evening set	15523 Feb 17 18:33	23°♄27'56	
evening set	15522 Mar 08 01:42	11°♄38'03		min. Earth dist.	15523 Feb 21 21:47	20°♄50'17	0.58670 AU
min. Earth dist.	15522 Mar 11 21:18	8°♄49'38	0.60892 AU	inferior conj	15523 Feb 25 01:57	18°♄25'51	-3°20'48
inferior conj	15522 Mar 15 01:10	6°♄03'50	-1°52'17	minimum elong	15523 Feb 25 09:30	18°♄11'28	3°17'50
minimum elong	15522 Mar 15 05:16	5°♄54'50	1°50'39	morning rise	15523 Mar 05 03:49	13°♄53'12	
asc. node	15522 Mar 20 20:37	1°♄48'28		direct	15523 Mar 07 03:21	13°♄39'27	
morning rise	15522 Mar 22 12:06	1°♄09'52		asc. node	15523 Mar 07 18:03	13°♄40'48	
direct	15522 Mar 24 14:45	0°♄51'18		morning max el	15523 Mar 15 03:01	17°♄36'20	18°21'34
morning max el	15522 Mar 31 16:01	4°♄23'34	17°54'07		15523 Mar 23 23:15	0°♄	
morning set	15522 Apr 16 06:41	28°♄45'53		morning set	15523 Mar 30 21:13	12°♄43'49	
	15522 Apr 16 23:02	0°♄					
desc. node	15522 Apr 22 12:17	10°♄00'19		superior conj	15523 Apr 09 05:28	0°♄16'39	0°01'12
				minimum elong	15523 Apr 09 05:32	0°♄16'56	0°00'50
superior conj	15522 Apr 26 23:02	17°♄48'40	-0°35'36	behind sun begin	15523 Apr 08 22:14	29°♄43'36	
minimum elong	15522 Apr 26 19:51	17°♄34'56	0°35'41	behind sun end	15523 Apr 09 12:49	0°♄50'10	
	15522 May 04 04:39	0°♄		desc. node	15523 Apr 09 08:56	0°♄32'27	
max. Earth dist.	15522 May 04 08:57	0°♄17'39	1.42983 AU		15523 Apr 09 01:49	0°♄	
evening rise	15522 May 10 13:40	10°♄15'00		max. Earth dist.	15523 Apr 16 18:41	13°♄37'01	1.40907 AU
	15522 May 23 14:38	0°♄		evening rise	15523 Apr 21 05:43	21°♄05'06	
evening max el	15522 Jun 11 20:01	24°♄56'59	21°58'41		15523 Apr 26 19:03	0°♄	
asc. node	15522 Jun 16 18:22	28°♄59'32			15523 May 17 18:10	0°♄	
	15522 Jun 18 20:44	0°♄		evening max el	15523 May 25 11:18	8°♄50'33	23°19'26
retrograde	15522 Jun 21 04:48	0°♄25'19		asc. node	15523 Jun 03 15:24	14°♄54'29	
	15522 Jun 23 09:53	30°♄♄		retrograde	15523 Jun 05 00:40	15°♄02'51	
evening set	15522 Jun 25 21:09	28°♄28'30		evening set	15523 Jun 10 04:33	12°♄51'19	
inferior conj	15522 Jul 01 03:08	22°♄10'48	3°06'15	min. Earth dist.	15523 Jun 15 00:39	7°♄08'05	0.69016 AU
minimum elong	15522 Jul 01 02:26	22°♄13'14	3°05'20	inferior conj	15523 Jun 15 12:57	6°♄25'40	2°52'59
min. Earth dist.	15522 Jul 01 03:51	22°♄08'18	0.69072 AU	minimum elong	15523 Jun 15 11:27	6°♄30'52	2°51'52
morning rise	15522 Jul 06 07:32	15°♄55'41		morning rise	15523 Jun 20 18:18	0°♄18'24	
direct	15522 Jul 11 02:59	13°♄53'16			15523 Jun 21 03:52	30°♄♄	
desc. node	15522 Jul 19 11:53	18°♄21'42		direct	15523 Jun 25 01:25	28°♄35'28	
morning max el	15522 Jul 20 15:35	19°♄28'44	22°12'26		15523 Jun 29 07:26	0°♄	
	15522 Jul 29 12:09	0°♄		morning max el	15523 Jul 03 09:21	3°♄21'22	20°50'56
	15522 Aug 19 00:54	0°♄		desc. node	15523 Jul 06 09:06	6°♄35'45	
morning set	15522 Aug 22 17:05	5°♄50'29			15523 Jul 23 09:38	0°♄	
max. Earth dist.	15522 Aug 28 01:09	14°♄35'39	1.41379 AU	morning set	15523 Aug 02 08:59	15°♄09'52	
				max. Earth dist.	15523 Aug 10 08:56	27°♄49'33	1.43429 AU
superior conj	15522 Sep 04 20:45	28°♄03'11	-1°06'06		15523 Aug 11 17:08	0°♄	
minimum elong	15522 Sep 05 02:01	28°♄26'33	1°05'25				
	15522 Sep 05 23:00	0°♄		superior conj	15523 Aug 17 05:17	9°♄05'53	-1°40'09
asc. node	15522 Sep 12 19:24	12°♄30'35		minimum elong	15523 Aug 17 12:53	9°♄37'49	1°39'44
evening rise	15522 Sep 15 06:26	17°♄05'15		evening rise	15523 Aug 29 05:35	29°♄54'31	
	15522 Sep 22 08:47	0°♄			15523 Aug 29 06:49	0°♄	

asc. node	15523 Aug 30 16:01	2°♊26'57		asc. node	15524 Aug 16 12:40	22°♏10'11	
evening max el	15523 Sep 14 17:18	25°♊35'25	18°02'02		15524 Aug 21 09:49	0°♊	
retrograde	15523 Sep 21 09:04	29°♊01'35		evening max el	15524 Aug 28 08:07	9°♊01'44	18°07'13
evening set	15523 Sep 23 18:44	28°♊34'32		retrograde	15524 Sep 03 16:57	12°♊22'16	
inferior conj	15523 Sep 30 13:03	23°♊32'27	0°31'35	evening set	15524 Sep 06 11:09	11°♊42'20	
minimum elong	15523 Sep 30 14:01	23°♊30'06	0°31'29	inferior conj	15524 Sep 12 15:27	6°♊22'46	1°35'47
desc. node	15523 Oct 02 05:58	21°♊52'24		minimum elong	15524 Sep 12 17:40	6°♊16'41	1°35'05
min. Earth dist.	15523 Oct 03 15:00	20°♊33'44	0.61099 AU	min. Earth dist.	15524 Sep 15 06:51	3°♊29'51	0.63343 AU
morning rise	15523 Oct 07 06:21	17°♊36'43		desc. node	15524 Sep 18 03:25	0°♊45'52	
direct	15523 Oct 13 22:05	15°♊22'48		morning rise	15524 Sep 18 22:07	0°♊08'38	
morning max el	15523 Oct 28 03:24	23°♊17'43	27°58'19		15524 Sep 19 02:44	30°♏	
	15523 Nov 03 03:41	0°♏		direct	15524 Sep 25 13:43	27°♏38'15	
	15523 Nov 22 14:01	0°♏			15524 Oct 02 16:00	0°♊	
asc. node	15523 Nov 26 17:21	7°♏53'37		morning max el	15524 Oct 09 12:04	5°♊38'03	27°47'37
morning set	15523 Nov 30 08:49	15°♏16'56			15524 Oct 28 00:29	0°♏	
max. Earth dist.	15523 Dec 06 02:40	27°♏38'15	1.31294 AU	asc. node	15524 Nov 12 14:13	27°♏48'09	
	15523 Dec 07 04:17	0°♏		morning set	15524 Nov 13 04:10	28°♏58'08	
					15524 Nov 13 16:25	0°♏	
superior conj	15523 Dec 07 14:41	0°♏57'41	1°25'52	max. Earth dist.	15524 Nov 18 03:16	9°♏16'37	1.32117 AU
minimum elong	15523 Dec 07 12:49	0°♏47'21	1°26'34				
evening rise	15523 Dec 14 07:22	15°♏45'51		superior conj	15524 Nov 20 22:20	15°♏18'43	1°10'48
	15523 Dec 21 05:55	0°♏		minimum elong	15524 Nov 20 20:02	15°♏06'08	1°11'17
desc. node	15523 Dec 29 04:04	13°♏46'37		evening rise	15524 Nov 27 18:11	0°♏14'13	
evening max el	15524 Jan 10 00:47	28°♏44'34	25°17'08		15524 Nov 27 15:33	0°♏	
	15524 Jan 11 09:54	0°♏			15524 Dec 14 00:45	0°♏	
retrograde	15524 Jan 23 21:19	5°♏42'06		desc. node	15524 Dec 15 01:01	1°♏23'47	
evening set	15524 Jan 29 14:39	4°♏27'58		evening max el	15524 Dec 21 11:05	8°♏50'16	23°37'45
min. Earth dist.	15524 Feb 03 13:11	1°♏45'51	0.56658 AU	retrograde	15525 Jan 03 21:17	15°♏29'34	
inferior conj	15524 Feb 06 06:14	29°♏58'43	-4°46'21	evening set	15525 Jan 08 11:45	14°♏43'41	
minimum elong	15524 Feb 06 15:31	29°♏43'24	4°43'22	min. Earth dist.	15525 Jan 14 22:12	11°♏38'51	0.55156 AU
	15524 Feb 06 05:27	30°♏		inferior conj	15525 Jan 16 13:57	10°♏40'28	-5°47'23
morning rise	15524 Feb 14 19:05	25°♏47'41		minimum elong	15525 Jan 16 19:40	10°♏32'05	5°45'59
direct	15524 Feb 16 21:16	25°♏34'57		morning rise	15525 Jan 25 05:09	6°♏46'34	
asc. node	15524 Feb 22 15:28	27°♏18'26		direct	15525 Jan 27 19:53	6°♏29'45	
morning max el	15524 Feb 26 04:44	0°♏07'16	19°10'26	morning max el	15525 Feb 07 17:05	11°♏45'04	20°22'28
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morning set	15524 Mar 13 21:26	27°♏06'10			15525 Feb 20 05:49	0°♏	
	15524 Mar 15 08:26	0°♏		morning set	15525 Feb 26 04:01	11°♏43'22	
superior conj	15524 Mar 22 05:25	13°♏31'25	0°33'07	superior conj	15525 Mar 05 18:33	27°♏21'00	0°58'49
minimum elong	15524 Mar 22 07:21	13°♏40'44	0°32'40	minimum elong	15525 Mar 05 21:08	27°♏34'00	0°58'34
desc. node	15524 Mar 26 05:32	21°♏05'29			15525 Mar 07 02:13	0°♏	
max. Earth dist.	15524 Mar 29 00:54	26°♏12'57	1.38630 AU	max. Earth dist.	15525 Mar 11 08:02	8°♏17'11	1.36395 AU
	15524 Mar 31 03:58	0°♏		desc. node	15525 Mar 13 02:08	11°♏35'58	
evening rise	15524 Apr 01 18:59	2°♏50'01		evening rise	15525 Mar 15 03:18	15°♏22'46	
	15524 Apr 18 22:56	0°♏			15525 Mar 23 14:07	0°♏	
evening max el	15524 May 07 00:51	22°♏44'50	24°40'00		15525 Apr 13 13:02	0°♏	
retrograde	15524 May 18 17:03	29°♏34'08		evening max el	15525 Apr 19 14:29	6°♏38'14	25°53'09
asc. node	15524 May 20 12:33	29°♏20'08		retrograde	15525 May 02 04:48	13°♏52'43	
evening set	15524 May 24 08:23	27°♏11'04		asc. node	15525 May 07 09:45	12°♏03'38	
min. Earth dist.	15524 May 28 20:01	22°♏04'42	0.68482 AU	evening set	15525 May 08 06:57	11°♏22'30	
inferior conj	15524 May 29 21:10	20°♏40'48	2°29'14	min. Earth dist.	15525 May 12 11:46	6°♏52'06	0.67490 AU
minimum elong	15524 May 29 19:07	20°♏47'37	2°27'54	inferior conj	15525 May 14 01:46	4°♏52'13	1°54'29
morning rise	15524 Jun 04 06:04	14°♏42'28		minimum elong	15525 May 13 23:37	4°♏59'01	1°53'05
direct	15524 Jun 08 01:23	13°♏19'27			15525 May 18 10:57	30°♏	
morning max el	15524 Jun 15 09:59	17°♏24'18	19°41'36	morning rise	15525 May 19 16:56	29°♏04'10	
desc. node	15524 Jun 22 06:14	25°♏34'09		direct	15525 May 23 01:21	28°♏00'03	
	15524 Jun 25 11:04	0°♏			15525 May 27 22:05	0°♏	
greatest brilliancy	15524 Jun 28 08:04	4°♏08'37	-0.6m	morning max el	15525 May 29 17:47	1°♏35'41	18°47'34
morning set	15524 Jul 11 12:35	24°♏00'21		desc. node	15525 Jun 09 03:16	15°♏05'19	
	15524 Jul 15 09:56	0°♏		greatest brilliancy	15525 Jun 12 14:44	20°♏19'58	-0.8m
max. Earth dist.	15524 Jul 22 22:36	11°♏45'45	1.44957 AU		15525 Jun 18 21:04	0°♏	
				morning set	15525 Jun 20 23:51	3°♏17'17	
superior conj	15524 Jul 27 14:17	19°♏10'03	-2°05'15	max. Earth dist.	15525 Jul 05 16:52	26°♏11'20	1.45819 AU
minimum elong	15524 Jul 27 20:32	19°♏35'08	2°05'34				
	15524 Aug 03 06:15	0°♏		superior conj	15525 Jul 07 04:32	28°♏30'41	-2°14'05
evening rise	15524 Aug 10 09:16	11°♏52'25		minimum elong	15525 Jul 07 04:11	28°♏29'18	2°14'54

































































































































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evening rise	15525 Jul 22 12:51	22°♎48'41			15526 Jul 20 19:49	0°♎	
	15525 Jul 27 00:23	0°♎		asc. node	15526 Jul 21 06:05	0°♎34'16	
asc. node	15525 Aug 03 09:21	11°♎35'00		evening max el	15526 Jul 26 07:40	6°♎33'18	19°10'16
evening max el	15525 Aug 11 21:49	22°♎43'34	18°30'15	retrograde	15526 Aug 02 05:35	10°♎22'19	
retrograde	15525 Aug 18 08:54	26°♎11'44		evening set	15526 Aug 05 18:26	9°♎09'50	
evening set	15525 Aug 21 12:11	25°♎16'19		inferior conj	15526 Aug 11 05:09	3°♎20'53	2°50'15
inferior conj	15525 Aug 27 05:59	19°♎41'16	2°21'07	minimum elong	15526 Aug 11 06:51	3°♎15'22	2°49'29
minimum elong	15525 Aug 27 08:16	19°♎34'21	2°20'18	min. Earth dist.	15526 Aug 12 16:53	1°♎25'16	0.66967 AU
min. Earth dist.	15525 Aug 29 07:56	17°♎11'04	0.65343 AU		15526 Aug 13 20:16	30°♎♊	
morning rise	15525 Sep 02 03:07	13°♎17'46		morning rise	15526 Aug 16 18:37	26°♎54'42	
desc. node	15525 Sep 05 00:51	11°♎26'24		direct	15526 Aug 22 20:10	24°♎18'43	
direct	15525 Sep 08 13:31	10°♎40'09		desc. node	15526 Aug 22 22:17	24°♎18'45	
morning max el	15525 Sep 21 23:02	18°♎32'11	27°03'58		15526 Sep 02 13:20	0°♎	
	15525 Oct 01 15:51	0°♎		morning max el	15526 Sep 04 10:24	1°♎49'00	25°55'44
	15525 Oct 20 23:41	0°♎			15526 Sep 25 17:52	0°♎	
morning set	15525 Oct 27 13:27	12°♎10'03		morning set	15526 Oct 10 09:16	24°♎45'06	
asc. node	15525 Oct 30 11:01	17°♎52'12			15526 Oct 13 04:39	0°♎	
max. Earth dist.	15525 Oct 31 19:17	20°♎35'02	1.33502 AU	max. Earth dist.	15526 Oct 14 01:53	1°♎41'22	1.35389 AU
				asc. node	15526 Oct 17 07:44	8°♎01'29	
superior conj	15525 Nov 05 00:53	29°♎22'37	0°49'42				
minimum elong	15525 Nov 04 22:42	29°♎11'02	0°50'01	superior conj	15526 Oct 19 19:42	13°♎02'48	0°22'45
	15525 Nov 05 07:57	0°♎		minimum elong	15526 Oct 19 18:25	12°♎56'16	0°23'03
evening rise	15525 Nov 12 04:36	14°♎40'13		evening rise	15526 Oct 27 12:35	28°♎58'54	
	15525 Nov 19 19:48	0°♎			15526 Oct 28 00:25	0°♎	
desc. node	15525 Dec 01 22:03	17°♎46'16		evening max el	15526 Nov 14 20:50	29°♎17'04	20°26'25
evening max el	15525 Dec 02 22:41	18°♎48'53	21°55'31		15526 Nov 15 14:40	0°♎	
retrograde	15525 Dec 15 09:33	24°♎58'26		desc. node	15526 Nov 18 19:11	2°♎30'27	
evening set	15525 Dec 18 16:38	24°♎34'13		retrograde	15526 Nov 25 20:17	4°♎44'46	
inferior conj	15525 Dec 27 07:17	20°♎42'57	-5°58'05	evening set	15526 Nov 28 03:11	4°♎31'38	
minimum elong	15525 Dec 27 04:03	20°♎47'29	5°57'02	inferior conj	15526 Dec 06 23:29	0°♎36'45	-5°07'59
min. Earth dist.	15525 Dec 27 03:45	20°♎47'54	0.54446 AU	minimum elong	15526 Dec 06 13:51	0°♎50'51	5°04'51
morning rise	15526 Jan 04 16:15	16°♎55'32			15526 Dec 08 00:35	30°♎♊	
direct	15526 Jan 08 05:37	16°♎27'41		min. Earth dist.	15526 Dec 08 09:29	29°♎47'02	0.54665 AU
morning max el	15526 Jan 20 14:23	22°♎26'04	21°56'39	morning rise	15526 Dec 15 00:09	26°♎37'16	
asc. node	15526 Jan 26 10:10	29°♎11'46		direct	15526 Dec 19 14:26	25°♎51'52	
	15526 Jan 27 00:09	0°♎			15526 Dec 30 04:23	0°♎	
morning set	15526 Feb 10 14:16	26°♎26'51		morning max el	15527 Jan 02 01:07	2°♎27'22	23°45'03
	15526 Feb 12 06:31	0°♎		asc. node	15527 Jan 13 07:26	16°♎52'28	
					15527 Jan 20 15:54	0°♎	
superior conj	15526 Feb 17 17:08	11°♎34'11	1°17'59	morning set	15527 Jan 26 02:07	11°♎10'59	
minimum elong	15526 Feb 17 19:29	11°♎46'32	1°18'04				
max. Earth dist.	15526 Feb 21 20:39	20°♎08'04	1.34413 AU	superior conj	15527 Feb 01 22:14	26°♎03'08	1°30'39
evening rise	15526 Feb 26 03:01	28°♎32'18		minimum elong	15527 Feb 01 23:50	26°♎11'49	1°31'06
	15526 Feb 26 21:25	0°♎			15527 Feb 03 18:09	0°♎	
desc. node	15526 Feb 27 22:43	1°♎59'07		max. Earth dist.	15527 Feb 04 16:48	2°♎00'51	1.32829 AU
	15526 Mar 16 19:20	0°♎		evening rise	15527 Feb 09 14:47	12°♎10'26	
evening max el	15526 Apr 02 04:23	20°♎22'21	26°51'27	desc. node	15527 Feb 14 19:20	22°♎10'49	
retrograde	15526 Apr 15 10:49	27°♎49'58			15527 Feb 19 04:12	0°♎	
evening set	15526 Apr 21 22:19	25°♎17'48			15527 Mar 12 02:27	0°♎	
asc. node	15526 Apr 24 07:01	23°♎07'27		evening max el	15527 Mar 15 17:24	3°♎46'03	27°27'25
min. Earth dist.	15526 Apr 25 21:42	21°♎21'48	0.66066 AU	retrograde	15527 Mar 29 10:18	11°♎17'01	
inferior conj	15526 Apr 28 00:29	18°♎53'32	1°07'47	evening set	15527 Apr 05 04:21	8°♎49'22	
minimum elong	15526 Apr 27 22:52	18°♎58'18	1°06'36	min. Earth dist.	15527 Apr 08 23:50	5°♎24'31	0.64261 AU
morning rise	15526 May 04 00:42	13°♎17'34		asc. node	15527 Apr 11 04:21	3°♎05'42	
direct	15526 May 06 23:08	12°♎30'15		inferior conj	15527 Apr 11 14:40	2°♎38'10	0°08'09
morning max el	15526 May 13 07:25	15°♎49'34	18°10'11	minimum elong	15527 Apr 11 14:26	2°♎38'47	0°07'39
	15526 May 23 20:11	0°♎		transit middle	15527 Apr 11 14:26	2°♎38'47	0°07'39
desc. node	15526 May 27 00:11	4°♎59'53		transit begin	15527 Apr 11 11:43	2°♎46'02	
morning set	15526 Jun 01 10:55	13°♎44'16		transit end	15527 Apr 11 17:09	2°♎31'32	
	15526 Jun 11 15:38	0°♎			15527 Apr 14 05:20	30°♎♊	
superior conj	15526 Jun 16 13:38	7°♎43'42	-2°02'48	morning rise	15527 Apr 18 02:42	27°♎16'37	
minimum elong	15526 Jun 16 06:23	7°♎15'19	2°03'16	direct	15527 Apr 20 16:11	26°♎43'15	
max. Earth dist.	15526 Jun 18 13:29	10°♎50'41	1.45931 AU	morning max el	15527 Apr 27 00:29	29°♎58'32	17°49'57
	15526 Jun 30 21:22	0°♎			15527 Apr 27 01:05	0°♎	
evening rise	15526 Jul 02 16:14	2°♎46'03		desc. node	15527 May 13 21:01	25°♎11'12	
				morning set	15527 May 14 01:25	25°♎29'40	

	15527 May 16 17:52	0°♄		desc. node	15528 Apr 29 17:48	15°♄34'09	
superior conj	15527 May 27 10:36	17°♄33'33	-1°34'44	superior conj	15528 May 07 05:39	28°♄25'33	-0°57'51
minimum elong	15527 May 27 02:06	16°♄59'23	1°34'40	minimum elong	15528 May 07 00:14	28°♄02'46	0°57'46
max. Earth dist.	15527 Jun 01 09:20	25°♄25'49	1.45293 AU		15528 May 08 04:14	0°♄	
	15527 Jun 04 07:14	0°♄		max. Earth dist.	15528 May 14 01:55	9°♄40'36	1.43978 AU
evening rise	15527 Jun 12 04:28	12°♄10'53		evening rise	15528 May 21 17:46	21°♄46'03	
	15527 Jun 24 00:33	0°♄			15528 May 27 03:00	0°♄	
greatest brilliancy	15527 Jun 26 19:51	4°♄05'47	-0.6m		15528 Jun 17 12:38	0°♄	
asc. node	15527 Jul 08 02:51	18°♄59'03		evening max el	15528 Jun 21 10:10	4°♄18'37	21°14'44
evening max el	15527 Jul 09 11:54	20°♄25'36	20°05'55	asc. node	15528 Jun 23 23:44	6°♄38'06	
retrograde	15527 Jul 17 04:24	24°♄47'27		retrograde	15528 Jun 30 03:20	9°♄21'56	
evening set	15527 Jul 21 03:23	23°♄17'23		evening set	15528 Jul 04 13:05	7°♄34'42	
inferior conj	15527 Jul 26 10:09	17°♄15'58	3°05'40	inferior conj	15528 Jul 09 18:38	1°♄22'23	3°09'11
minimum elong	15527 Jul 26 10:57	17°♄13'13	3°04'56	minimum elong	15528 Jul 09 18:28	1°♄22'57	3°08'22
min. Earth dist.	15527 Jul 27 07:55	16°♄02'00	0.68155 AU	min. Earth dist.	15528 Jul 10 02:57	0°♄53'24	0.68871 AU
morning rise	15527 Jul 31 18:10	10°♄51'42			15528 Jul 10 18:23	30°♄	
direct	15527 Aug 06 08:41	8°♄24'39		morning rise	15528 Jul 14 23:37	25°♄03'07	
desc. node	15527 Aug 09 19:40	9°♄11'14		direct	15528 Jul 20 02:07	22°♄50'30	
morning max el	15527 Aug 17 21:18	15°♄18'40	24°32'10	desc. node	15528 Jul 26 17:00	25°♄40'07	
	15527 Aug 29 23:15	0°♄		morning max el	15528 Jul 30 08:41	28°♄56'39	23°02'53
	15527 Sep 18 15:31	0°♄			15528 Jul 31 09:12	0°♄	
morning set	15527 Sep 22 11:30	6°♄33'13		morning set	15528 Aug 22 16:12	0°♄	
max. Earth dist.	15527 Sep 26 01:35	12°♄55'14	1.37644 AU	max. Earth dist.	15528 Sep 02 16:01	17°♄25'16	
					15528 Sep 07 00:21	24°♄44'24	1.40044 AU
superior conj	15527 Oct 03 03:26	26°♄10'25	-0°09'24		15528 Sep 10 01:03	0°♄	
minimum elong	15527 Oct 03 04:02	26°♄13'20	0°08'58				
behind sun begin	15527 Oct 02 22:23	25°♄46'00		superior conj	15528 Sep 14 20:16	8°♄37'12	-0°45'05
behind sun end	15527 Oct 03 09:42	26°♄40'43		minimum elong	15528 Sep 14 23:42	8°♄52'58	0°44'27
asc. node	15527 Oct 04 04:22	28°♄11'32		asc. node	15528 Sep 20 01:00	18°♄19'18	
	15527 Oct 05 02:31	0°♄		evening rise	15528 Sep 24 11:10	26°♄46'26	
evening rise	15527 Oct 11 15:44	13°♄03'19			15528 Sep 26 03:43	0°♄	
	15527 Oct 20 15:40	0°♄		evening max el	15528 Oct 10 10:44	22°♄38'22	18°32'25
evening max el	15527 Oct 28 09:26	10°♄33'20	19°18'18	retrograde	15528 Oct 18 09:53	26°♄40'21	
desc. node	15527 Nov 05 16:24	15°♄11'27		evening set	15528 Oct 20 08:47	26°♄26'33	
retrograde	15527 Nov 06 18:00	15°♄14'59		desc. node	15528 Oct 22 13:40	25°♄40'23	
evening set	15527 Nov 08 15:19	15°♄04'19		inferior conj	15528 Oct 28 06:21	21°♄56'59	-1°49'40
inferior conj	15527 Nov 17 04:34	10°♄54'56	-3°34'52	minimum elong	15528 Oct 28 01:58	22°♄05'24	1°47'16
minimum elong	15527 Nov 16 19:49	11°♄09'24	3°31'00	min. Earth dist.	15528 Oct 31 10:57	19°♄30'07	0.57584 AU
min. Earth dist.	15527 Nov 19 19:02	9°♄11'54	0.55777 AU	morning rise	15528 Nov 04 15:43	16°♄50'02	
morning rise	15527 Nov 24 21:59	6°♄25'02		direct	15528 Nov 10 19:35	15°♄14'27	
direct	15527 Nov 30 09:38	5°♄16'20		morning max el	15528 Nov 25 01:47	22°♄44'25	26°56'29
morning max el	15527 Dec 14 10:30	12°♄22'27	25°31'21		15528 Dec 01 13:20	0°♄	
	15527 Dec 28 00:44	0°♄		asc. node	15528 Dec 17 01:44	24°♄23'51	
asc. node	15527 Dec 31 04:37	5°♄20'33			15528 Dec 19 23:29	0°♄	
morning set	15528 Jan 10 13:43	25°♄50'01		morning set	15528 Dec 24 23:21	10°♄19'22	
	15528 Jan 12 11:41	0°♄					
superior conj	15528 Jan 17 07:25	10°♄40'36	1°37'05	superior conj	15528 Dec 31 18:38	25°♄20'38	1°37'27
minimum elong	15528 Jan 17 08:01	10°♄43'54	1°37'48	minimum elong	15528 Dec 31 18:10	25°♄18'00	1°38'17
max. Earth dist.	15528 Jan 18 19:37	14°♄00'29	1.31721 AU	max. Earth dist.	15529 Jan 01 02:35	26°♄05'05	1.31130 AU
evening rise	15528 Jan 24 11:36	26°♄09'30			15529 Jan 02 20:40	0°♄	
	15528 Jan 26 08:39	0°♄		evening rise	15529 Jan 07 14:59	10°♄23'41	
desc. node	15528 Feb 01 16:00	12°♄05'17			15529 Jan 17 15:02	0°♄	
	15528 Feb 12 14:22	0°♄		desc. node	15529 Jan 18 12:43	1°♄35'35	
evening max el	15528 Feb 26 03:43	16°♄37'21	27°34'26	evening max el	15529 Feb 07 09:01	28°♄44'49	27°07'34
retrograde	15528 Mar 11 02:25	24°♄04'13			15529 Feb 08 17:53	0°♄	
evening set	15528 Mar 17 22:30	21°♄48'37		retrograde	15529 Feb 21 09:38	6°♄01'57	
min. Earth dist.	15528 Mar 21 16:40	18°♄49'19	0.62163 AU	evening set	15529 Feb 28 01:38	4°♄06'11	
inferior conj	15528 Mar 24 17:11	15°♄58'25	-1°04'50	min. Earth dist.	15529 Mar 03 23:24	1°♄23'40	0.59928 AU
minimum elong	15528 Mar 24 19:25	15°♄53'08	1°04'05		15529 Mar 05 16:24	30°♄	
asc. node	15528 Mar 28 01:43	13°♄01'28		inferior conj	15529 Mar 07 04:28	28°♄44'44	-2°29'21
morning rise	15528 Mar 31 19:23	10°♄53'51		minimum elong	15529 Mar 07 10:04	28°♄33'08	2°27'04
direct	15528 Apr 03 01:17	10°♄31'01		morning rise	15529 Mar 14 21:58	23°♄59'39	
morning max el	15528 Apr 09 18:00	13°♄54'03	17°47'22	asc. node	15529 Mar 14 23:08	23°♄58'53	
	15528 Apr 20 20:56	0°♄		direct	15529 Mar 16 22:35	23°♄43'42	
morning set	15528 Apr 25 15:14	8°♄20'32		morning max el	15529 Mar 24 08:30	27°♄25'31	18°03'20
					15529 Mar 26 16:07	0°♄	

morning set	15529 Apr 08 22:18	21° $\Upsilon$ 58'30		asc. node	15530 Mar 01 20:34	6° $\Upsilon$ 35'50	
	15529 Apr 13 06:30	0° $\Upsilon$		morning max el	15530 Mar 07 16:04	10° $\Upsilon$ 22'06	18°39'33
desc. node	15529 Apr 16 14:29	6° $\Upsilon$ 03'52			15530 Mar 20 12:33	0° $\Upsilon$	
				morning set	15530 Mar 23 17:30	6° $\Upsilon$ 08'45	
superior conj	15529 Apr 19 00:01	10° $\Upsilon$ 20'37	-0°19'33				
minimum elong	15529 Apr 18 22:22	10° $\Upsilon$ 13'18	0°19'46	superior conj	15530 Apr 01 14:29	23° $\Upsilon$ 10'01	0°15'27
max. Earth dist.	15529 Apr 26 13:58	23° $\Upsilon$ 21'50	1.42133 AU	minimum elong	15530 Apr 01 15:30	23° $\Upsilon$ 14'48	0°15'00
	15529 Apr 30 15:02	0° $\Upsilon$		behind sun begin	15530 Apr 01 13:09	23° $\Upsilon$ 03'47	
evening rise	15529 May 01 22:06	2° $\Upsilon$ 04'50		behind sun end	15530 Apr 01 17:52	23° $\Upsilon$ 25'49	
	15529 May 20 12:41	0° $\Upsilon$		desc. node	15530 Apr 03 11:08	26° $\Upsilon$ 36'55	
evening max el	15529 Jun 04 03:30	18° $\Upsilon$ 11'47	22°32'44		15530 Apr 05 07:44	0° $\Upsilon$	
asc. node	15529 Jun 10 20:43	23° $\Upsilon$ 15'46		max. Earth dist.	15530 Apr 08 22:06	6° $\Upsilon$ 23'19	1.39953 AU
retrograde	15529 Jun 14 00:39	23° $\Upsilon$ 59'27		evening rise	15530 Apr 12 23:23	13° $\Upsilon$ 19'18	
evening set	15529 Jun 18 21:46	21° $\Upsilon$ 56'20			15530 Apr 23 09:46	0° $\Upsilon$	
inferior conj	15529 Jun 24 04:31	15° $\Upsilon$ 35'00	3°01'53		15530 May 15 17:21	0° $\Upsilon$	
minimum elong	15529 Jun 24 03:27	15° $\Upsilon$ 38'43	3°00'54	evening max el	15530 May 17 17:59	2° $\Upsilon$ 06'15	23°54'10
min. Earth dist.	15529 Jun 23 23:46	15° $\Upsilon$ 51'34	0.69104 AU	retrograde	15530 May 28 19:00	8° $\Upsilon$ 34'45	
morning rise	15529 Jun 29 08:59	9° $\Upsilon$ 22'51		asc. node	15530 May 28 17:47	8° $\Upsilon$ 34'44	
direct	15529 Jul 03 23:12	7° $\Upsilon$ 28'19		evening set	15530 Jun 03 03:49	6° $\Upsilon$ 18'00	
morning max el	15529 Jul 12 23:06	12° $\Upsilon$ 42'18	21°36'31	min. Earth dist.	15530 Jun 07 20:12	0° $\Upsilon$ 50'32	0.68852 AU
desc. node	15529 Jul 13 14:17	13° $\Upsilon$ 20'58			15530 Jun 08 11:01	30° $\Upsilon$	
	15529 Jul 26 16:51	0° $\Upsilon$		inferior conj	15530 Jun 08 13:53	29° $\Upsilon$ 50'12	2°44'12
morning set	15529 Aug 13 20:23	27° $\Upsilon$ 15'10		minimum elong	15530 Jun 08 12:07	29° $\Upsilon$ 56'15	2°42'59
	15529 Aug 15 13:50	0° $\Upsilon$		morning rise	15530 Jun 13 20:26	23° $\Upsilon$ 46'35	
max. Earth dist.	15529 Aug 20 03:57	7° $\Upsilon$ 26'16	1.42305 AU	direct	15530 Jun 17 22:33	22° $\Upsilon$ 11'56	
				morning max el	15530 Jun 25 19:31	26° $\Upsilon$ 38'35	20°19'42
superior conj	15529 Aug 27 17:45	20° $\Upsilon$ 12'58	-1°21'10		15530 Jun 28 21:30	0° $\Upsilon$	
minimum elong	15529 Aug 28 00:14	20° $\Upsilon$ 41'05	1°20'32	desc. node	15530 Jun 30 11:30	1° $\Upsilon$ 55'08	
	15529 Sep 02 06:59	0° $\Upsilon$			15530 Jul 20 02:39	0° $\Upsilon$	
asc. node	15529 Sep 06 21:37	8° $\Upsilon$ 20'43		morning set	15530 Jul 24 05:00	6° $\Upsilon$ 16'10	
evening rise	15529 Sep 07 19:01	9° $\Upsilon$ 58'17		max. Earth dist.	15530 Aug 02 14:42	21° $\Upsilon$ 00'44	1.44159 AU
	15529 Sep 19 11:48	0° $\Upsilon$			15530 Aug 08 04:00	0° $\Upsilon$	
evening max el	15529 Sep 23 20:30	5° $\Upsilon$ 22'58	18°07'30				
retrograde	15529 Sep 30 20:28	8° $\Upsilon$ 57'57		superior conj	15530 Aug 08 16:14	0° $\Upsilon$ 50'12	-1°52'20
evening set	15529 Oct 03 01:47	8° $\Upsilon$ 36'42		minimum elong	15530 Aug 08 23:54	1° $\Upsilon$ 21'43	1°52'11
desc. node	15529 Oct 09 11:02	4° $\Upsilon$ 27'08		evening rise	15530 Aug 21 10:31	22° $\Upsilon$ 26'57	
inferior conj	15529 Oct 10 05:34	3° $\Upsilon$ 45'54	-0°14'39	asc. node	15530 Aug 24 18:14	28° $\Upsilon$ 11'48	
minimum elong	15529 Oct 10 05:05	3° $\Upsilon$ 47'00	0°14'02		15530 Aug 25 19:24	0° $\Upsilon$	
transit middle	15529 Oct 10 05:05	3° $\Upsilon$ 47'00	0°14'02	evening max el	15530 Sep 07 10:31	18° $\Upsilon$ 36'37	18°02'00
transit begin	15529 Oct 10 03:24	3° $\Upsilon$ 50'46		retrograde	15530 Sep 13 22:00	21° $\Upsilon$ 58'36	
transit end	15529 Oct 10 06:45	3° $\Upsilon$ 43'14		evening set	15530 Sep 16 11:20	21° $\Upsilon$ 26'17	
min. Earth dist.	15529 Oct 13 11:10	0° $\Upsilon$ 53'02	0.59783 AU	inferior conj	15530 Sep 22 23:14	16° $\Upsilon$ 16'12	1°01'15
	15529 Oct 14 12:47	30° $\Upsilon$		minimum elong	15530 Sep 23 00:55	16° $\Upsilon$ 11'54	1°00'49
morning rise	15529 Oct 17 05:06	28° $\Upsilon$ 05'49		min. Earth dist.	15530 Sep 25 21:07	13° $\Upsilon$ 17'58	0.62075 AU
direct	15529 Oct 23 18:34	26° $\Upsilon$ 04'30		desc. node	15530 Sep 26 08:27	12° $\Upsilon$ 50'30	
	15529 Nov 02 14:11	0° $\Upsilon$		morning rise	15530 Sep 29 11:58	10° $\Upsilon$ 11'40	
morning max el	15529 Nov 07 01:04	3° $\Upsilon$ 51'36	27°47'04	direct	15530 Oct 06 04:20	7° $\Upsilon$ 49'59	
	15529 Nov 26 07:22	0° $\Upsilon$		morning max el	15530 Oct 20 07:09	15° $\Upsilon$ 47'20	27°58'19
asc. node	15529 Dec 03 22:46	13° $\Upsilon$ 52'59			15530 Oct 31 23:22	0° $\Upsilon$	
morning set	15529 Dec 09 05:10	24° $\Upsilon$ 34'29			15530 Nov 18 22:46	0° $\Upsilon$	
	15529 Dec 11 17:53	0° $\Upsilon$		asc. node	15530 Nov 20 19:41	3° $\Upsilon$ 39'57	
max. Earth dist.	15529 Dec 15 10:15	8° $\Upsilon$ 07'35	1.31077 AU	morning set	15530 Nov 23 05:00	8° $\Upsilon$ 29'34	
				max. Earth dist.	15530 Nov 28 14:45	19° $\Upsilon$ 58'11	1.31579 AU
superior conj	15529 Dec 16 06:00	9° $\Upsilon$ 57'54	1°31'50				
minimum elong	15529 Dec 16 04:35	9° $\Upsilon$ 49'57	1°32'37	superior conj	15530 Nov 30 15:34	24° $\Upsilon$ 26'09	1°20'13
evening rise	15529 Dec 22 22:48	24° $\Upsilon$ 47'44		minimum elong	15530 Nov 30 13:27	24° $\Upsilon$ 14'32	1°20'50
	15529 Dec 25 09:41	0° $\Upsilon$			15530 Dec 03 03:51	0° $\Upsilon$	
desc. node	15530 Jan 05 09:30	20° $\Upsilon$ 32'45		evening rise	15530 Dec 07 09:03	9° $\Upsilon$ 15'52	
	15530 Jan 11 16:21	0° $\Upsilon$			15530 Dec 17 20:38	0° $\Upsilon$	
evening max el	15530 Jan 20 06:52	10° $\Upsilon$ 00'56	26°06'05	desc. node	15530 Dec 23 06:23	8° $\Upsilon$ 43'40	
retrograde	15530 Feb 03 05:51	17° $\Upsilon$ 05'23		evening max el	15531 Jan 01 20:18	20° $\Upsilon$ 26'26	24°36'22
evening set	15530 Feb 09 10:09	15° $\Upsilon$ 35'17		retrograde	15531 Jan 15 13:08	27° $\Upsilon$ 16'33	
min. Earth dist.	15530 Feb 13 20:06	12° $\Upsilon$ 57'34	0.57768 AU	evening set	15531 Jan 20 20:25	26° $\Upsilon$ 14'36	
inferior conj	15530 Feb 16 20:55	10° $\Upsilon$ 47'35	-3°58'30	min. Earth dist.	15531 Jan 26 08:07	23° $\Upsilon$ 25'28	0.55945 AU
minimum elong	15530 Feb 17 05:37	10° $\Upsilon$ 32'00	3°55'18	inferior conj	15531 Jan 28 16:11	21° $\Upsilon$ 58'11	-5°16'45
morning rise	15530 Feb 25 04:10	6° $\Upsilon$ 23'52		minimum elong	15531 Jan 29 00:47	21° $\Upsilon$ 44'46	5°14'22
direct	15530 Feb 27 03:54	6° $\Upsilon$ 11'01		morning rise	15531 Feb 06 07:17	17° $\Upsilon$ 55'21	

direct	15531 Feb 08 13:41	17°  41'29		15532 Jan 13 01:38	30° 		
asc. node	15531 Feb 16 18:00	20°  56'49	morning rise	15532 Jan 17 05:53	28°  31'05		
morning max el	15531 Feb 18 12:28	22°  31'01	19°38'11	direct	15532 Jan 20 05:12	28°  10'37	
	15531 Feb 24 12:50	0° 			15532 Jan 26 20:14	0° 	
morning set	15531 Mar 07 20:47	20°  38'28		morning max el	15532 Jan 31 18:23	3°  44'11	21°00'06
	15531 Mar 12 12:00	0° 		asc. node	15532 Feb 03 15:21	6°  49'24	
					15532 Feb 17 15:00	0° 	
superior conj	15531 Mar 15 20:32	6°  40'45	0°44'49	morning set	15532 Feb 20 05:10	5°  18'50	
minimum elong	15531 Mar 15 22:52	6°  52'14	0°44'25				
desc. node	15531 Mar 21 07:44	17°  09'00		superior conj	15532 Feb 27 14:06	20°  41'26	1°07'44
max. Earth dist.	15531 Mar 22 04:33	18°  09'45'20	1.37664 AU	minimum elong	15532 Feb 27 16:39	20°  45'36	1°07'37
evening rise	15531 Mar 25 21:07	25°  09'25'08			15532 Mar 03 05:06	0° 	
	15531 Mar 28 12:15	0° 		max. Earth dist.	15532 Mar 03 13:22	0°  40'32	1.35510 AU
	15531 Apr 16 23:58	0° 		desc. node	15532 Mar 07 04:19	7°  09'36'32	
evening max el	15531 Apr 30 07:27	16°  00'23	25°12'25	evening rise	15532 Mar 07 12:22	8°  09'14'07	
retrograde	15531 May 12 09:25	23°  01'23			15532 Mar 20 04:38	0° 	
asc. node	15531 May 15 14:57	22°  01'747		evening max el	15532 Apr 11 20:58	29°  49'39	26°20'09
evening set	15531 May 18 05:37	20°  02'34'29			15532 Apr 12 01:13	0° 	
min. Earth dist.	15531 May 22 14:08	15°  02'43'52	0.68120 AU	retrograde	15532 Apr 24 18:54	7°  02'11'45	
inferior conj	15531 May 23 20:48	14°  03'46	2°15'53	evening set	15532 May 01 01:22	4°  02'39'38	
minimum elong	15531 May 23 18:39	14°  03'10'48	2°14'30	asc. node	15532 May 01 12:11	4°  02'16'41	
morning rise	15531 May 29 08:03	8°  02'09'54		min. Earth dist.	15532 May 05 03:35	0°  02'24'23	0.66932 AU
direct	15531 Jun 01 22:41	6°  02'55'07			15532 May 05 11:39	30° 	
morning max el	15531 Jun 08 23:21	10°  02'45'35	19°16'41	inferior conj	15532 May 06 23:10	28°  02'10'59	1°36'12
desc. node	15531 Jun 17 08:36	21°  02'08'25		minimum elong	15532 May 06 21:09	28°  02'17'11	1°34'50
greatest brilliancy	15531 Jun 21 16:35	27°  02'25'10	-0.7m	morning rise	15532 May 12 17:52	22°  02'28'06	
	15531 Jun 23 10:08	0° 		direct	15532 May 15 21:49	21°  02'31'37	
morning set	15531 Jul 03 09:21	15°  02'51'10'06		morning max el	15532 May 22 09:56	24°  02'58'51	18°29'36
	15531 Jul 12 23:02	0° 			15532 May 26 17:58	0° 	
max. Earth dist.	15531 Jul 16 07:06	5°  02'13'08	1.45410 AU	desc. node	15532 Jun 03 05:36	10°  02'50'10	
				morning set	15532 Jun 12 05:22	24°  02'53'43	
superior conj	15531 Jul 19 16:04	10°  02'32'11	-2°11'22		15532 Jun 15 11:14	0° 	
minimum elong	15531 Jul 19 20:03	10°  02'47'56	2°11'58				
	15531 Jul 31 18:01	0° 		superior conj	15532 Jun 28 01:59	19°  02'43'36	-2°11'43
evening rise	15531 Aug 03 04:24	3°  02'59'47		minimum elong	15532 Jun 27 22:15	19°  02'29'05	2°12'30
asc. node	15531 Aug 11 14:53	17°  02'47'56		max. Earth dist.	15532 Jun 28 02:22	19°  02'45'06	1.45950 AU
	15531 Aug 20 01:31	0° 			15532 Jul 04 15:57	0° 	
evening max el	15531 Aug 22 01:11	2°  02'10'16	18°14'51	evening rise	15532 Jul 13 21:13	14°  02'28'59	
retrograde	15531 Aug 28 09:57	5°  02'32'43		greatest brilliancy	15532 Jul 22 09:59	27°  02'53'49	-0.8m
evening set	15531 Aug 31 07:55	4°  02'46'27			15532 Jul 23 18:37	0° 	
	15531 Sep 05 17:10	30° 		asc. node	15532 Jul 28 11:33	7°  02'02'36	
inferior conj	15531 Sep 06 07:17	29°  02'19'47	1°57'09	evening max el	15532 Aug 04 13:25	15°  02'55'29	18°45'16
minimum elong	15531 Sep 06 09:38	29°  02'13'02	1°56'22	retrograde	15532 Aug 11 04:18	19°  02'31'24	
min. Earth dist.	15531 Sep 08 17:03	26°  02'34'55	0.64224 AU	evening set	15532 Aug 14 11:29	18°  02'29'02	
morning rise	15531 Sep 12 09:41	23°  02'00'31		inferior conj	15532 Aug 20 01:52	12°  02'47'54	2°35'18
desc. node	15531 Sep 13 05:53	22°  02'23'10		minimum elong	15532 Aug 20 03:58	12°  02'41'21	2°34'29
direct	15531 Sep 18 23:25	20°  02'26'14		min. Earth dist.	15532 Aug 21 21:50	10°  02'31'01	0.66076 AU
morning max el	15531 Oct 02 17:22	28°  02'24'32	27°32'47	morning rise	15532 Aug 25 19:27	6°  02'22'16	
	15531 Oct 04 06:15	0° 		desc. node	15532 Aug 30 03:20	3°  02'58'47	
	15531 Oct 25 18:54	0° 		direct	15532 Sep 01 02:21	3°  02'44'12	
morning set	15531 Nov 06 20:28	21°  02'59'26		morning max el	15532 Sep 14 04:48	11°  02'29'48	26°37'27
asc. node	15531 Nov 07 16:31	23°  02'39'14			15532 Sep 28 23:47	0° 	
	15531 Nov 10 19:07	0° 			15532 Oct 17 08:45	0° 	
max. Earth dist.	15531 Nov 11 12:16	1°  02'29'27	1.32642 AU	morning set	15532 Oct 20 00:29	4°  02'56'40	
				max. Earth dist.	15532 Oct 24 00:01	12°  02'39'52	1.34244 AU
superior conj	15531 Nov 14 21:19	8°  02'40'34	1°02'35	asc. node	15532 Oct 24 13:15	13°  02'45'44	
minimum elong	15531 Nov 14 18:59	8°  02'27'57	1°03'00				
evening rise	15531 Nov 21 19:56	23°  02'43'55		superior conj	15532 Oct 28 20:54	22°  02'34'49	0°38'57
	15531 Nov 24 19:17	0° 		minimum elong	15532 Oct 28 18:59	22°  02'24'50	0°39'15
desc. node	15531 Dec 10 03:20	25°  02'51'46			15532 Nov 01 09:32	0° 	
	15531 Dec 13 20:09	0° 		evening rise	15532 Nov 05 05:32	8°  02'40'54	
evening max el	15531 Dec 14 05:42	0°  02'23'28	22°53'25		15532 Nov 16 18:11	0° 	
retrograde	15531 Dec 27 07:45	6°  02'52'24		evening max el	15532 Nov 24 20:48	10°  02'30'41	21°15'24
evening set	15531 Dec 31 08:57	6°  02'16'41		desc. node	15532 Nov 26 00:23	11°  02'35'32	
min. Earth dist.	15532 Jan 07 15:00	2°  02'56'22	0.54750 AU	retrograde	15532 Dec 06 18:10	16°  02'23'57	
inferior conj	15532 Jan 08 16:30	2°  02'20'04	-5°59'17	evening set	15532 Dec 09 13:02	16°  02'05'56	
minimum elong	15532 Jan 08 18:45	2°  02'16'52	5°58'23	inferior conj	15532 Dec 18 07:31	12°  02'14'47	-5°43'52



minimum elong	15532 Dec 18 00:43	12°  24'22	5°42'02	evening set	15533 Nov 19 08:52	26°  14'39	
min. Earth dist.	15532 Dec 18 20:34	11°  56'23	0.54420 AU	inferior conj	15533 Nov 28 03:42	22°  15'08	-4°31'54
morning rise	15532 Dec 26 12:46	8°  24'21		minimum elong	15533 Nov 27 17:40	22°  30'28	4°28'08
direct	15532 Dec 30 12:40	7°  349'51		min. Earth dist.	15533 Nov 30 03:38	21°  01'58	0.55038 AU
morning max el	15533 Jan 12 10:24	14°  305'40	22°41'46	morning rise	15533 Dec 06 01:12	18°  04'26	
asc. node	15533 Jan 20 12:38	23°  355'42		direct	15533 Dec 11 01:28	17°  09'24	
	15533 Jan 24 08:35	0° 		morning max el	15533 Dec 24 19:11	23°  58'59	24°31'37
morning set	15533 Feb 03 16:20	20°  03'16			15533 Dec 30 05:53	0° 	
	15533 Feb 08 07:24	0° 		asc. node	15534 Jan 07 09:53	11°  358'18	
					15534 Jan 16 22:24	0° 	
superior conj	15533 Feb 10 15:48	5°  02'38	1°24'07	morning set	15534 Jan 19 04:17	4°  45'37	
minimum elong	15533 Feb 10 17:53	5°  13'43	1°24'22				
max. Earth dist.	15533 Feb 14 04:48	12°  29'39	1.33682 AU	superior conj	15534 Jan 25 22:53	19°  35'52	1°34'07
evening rise	15533 Feb 18 17:39	21°  37'17		minimum elong	15534 Jan 26 00:05	19°  42'25	1°34'43
desc. node	15533 Feb 22 00:54	27°  355'35		max. Earth dist.	15534 Jan 28 04:03	24°  25'22	1.32298 AU
	15533 Feb 23 03:49	0° 			15534 Jan 30 18:45	0° 	
	15533 Mar 14 00:09	0° 		evening rise	15534 Feb 02 09:36	5°  25'24	
evening max el	15533 Mar 25 10:38	13°  26'50	27°09'55	desc. node	15534 Feb 08 21:30	18°  00'41	
retrograde	15533 Apr 07 22:34	20°  357'45			15534 Feb 15 19:19	0° 	
evening set	15533 Apr 14 13:07	18°  26'40		evening max el	15534 Mar 07 23:01	26°  39'12	27°34'23
asc. node	15533 Apr 18 09:29	14°  347'12			15534 Mar 11 19:57	0° 	
min. Earth dist.	15533 Apr 18 10:33	14°  344'15	0.65334 AU	retrograde	15534 Mar 21 19:02	4°  08'49	
inferior conj	15533 Apr 20 18:38	12°  306'40	0°44'10	evening set	15534 Mar 28 14:25	1°  345'44	
minimum elong	15533 Apr 20 17:29	12°  309'56	0°43'11		15534 Mar 30 19:30	30°  08'49	
morning rise	15533 Apr 26 23:33	6°  336'29		min. Earth dist.	15534 Apr 01 09:05	28°  32'15	0.63396 AU
direct	15533 Apr 29 17:56	5°  355'37		inferior conj	15534 Apr 04 04:18	25°  42'23	-0°21'11
morning max el	15533 May 06 01:24	9°  312'09	17°59'25	minimum elong	15534 Apr 04 04:59	25°  40'40	0°21'13
	15533 May 20 13:33	0° 		asc. node	15534 Apr 05 06:51	24°  35'56	
desc. node	15533 May 21 02:30	0°  352'52		morning rise	15534 Apr 10 22:05	20°  27'22	
morning set	15533 May 24 04:21	5°  355'03		direct	15534 Apr 13 08:08	19°  58'52	
				morning max el	15534 Apr 19 18:59	23°  16'15	17°46'36
superior conj	15533 Jun 07 14:25	29°  308'23	-1°52'32		15534 Apr 25 04:32	0° 	
minimum elong	15533 Jun 07 05:52	28°  334'38	1°52'44	morning set	15534 May 06 05:33	18°  310'49	
	15533 Jun 08 03:31	0° 		desc. node	15534 May 07 23:18	21°  309'42	
max. Earth dist.	15533 Jun 10 22:29	4°  322'59	1.45746 AU		15534 May 13 04:15	0° 	
evening rise	15533 Jun 23 16:28	24°  307'40					
	15533 Jun 27 12:26	0° 		superior conj	15534 May 18 20:05	9°  322'45	-1°19'41
greatest brilliancy	15533 Jul 07 03:11	14°  329'26	-0.7m	minimum elong	15534 May 18 12:35	8°  352'08	1°19'32
asc. node	15533 Jul 15 08:17	25°  3048'31		max. Earth dist.	15534 May 24 17:19	18°  351'41	1.44818 AU
evening max el	15533 Jul 18 21:04	29°  3046'54	19°32'10		15534 May 31 20:01	0° 	
	15533 Jul 19 02:24	0° 		evening rise	15534 Jun 03 03:07	3°  331'53	
retrograde	15533 Jul 26 02:05	3°  3048'29			15534 Jun 21 00:21	0° 	
evening set	15533 Jul 29 19:08	2°  3028'43		evening max el	15534 Jul 01 22:51	13°  3040'01	20°33'48
	15533 Aug 01 10:25	30°  3048'02		asc. node	15534 Jul 02 05:07	13°  3055'30	
inferior conj	15533 Aug 04 03:50	26°  3034'33	2°58'19	retrograde	15534 Jul 10 01:03	18°  3018'09	
minimum elong	15533 Aug 04 05:11	26°  3030'05	2°57'34	evening set	15534 Jul 14 04:38	16°  3040'37	
min. Earth dist.	15533 Aug 05 09:41	24°  3055'41	0.67531 AU	inferior conj	15534 Jul 19 10:35	10°  3034'37	3°08'29
morning rise	15533 Aug 09 14:41	20°  3008'39		minimum elong	15534 Jul 19 10:59	10°  3033'14	3°07'44
direct	15533 Aug 15 11:51	17°  3035'20		min. Earth dist.	15534 Jul 20 02:35	9°  3039'31	0.68526 AU
desc. node	15533 Aug 17 00:46	17°  3044'33		morning rise	15534 Jul 24 17:02	4°  3012'23	
morning max el	15533 Aug 27 15:47	24°  3052'07	25°21'22	direct	15534 Jul 30 02:38	1°  3050'48	
	15533 Sep 01 07:18	0° 		desc. node	15534 Aug 03 22:10	3°  3020'59	
	15533 Sep 22 10:42	0° 		morning max el	15534 Aug 10 02:30	8°  3024'47	23°54'18
morning set	15533 Oct 02 13:18	17°  3012'30			15534 Aug 27 01:38	0° 	
max. Earth dist.	15533 Oct 06 02:36	23°  3043'36	1.36312 AU	morning set	15534 Sep 14 06:44	28°  3037'25	
	15533 Oct 09 09:44	0° 			15534 Sep 15 02:03	0° 	
asc. node	15533 Oct 11 09:55	3°  3035'53		max. Earth dist.	15534 Sep 18 01:14	5°  3009'49	1.38666 AU
superior conj	15533 Oct 12 11:25	6°  3001'55	0°09'41	superior conj	15534 Sep 25 13:23	18°  3053'35	-0°24'14
minimum elong	15533 Oct 12 10:49	5°  3058'53	0°10'02	minimum elong	15534 Sep 25 15:06	19°  3001'41	0°23'43
behind sun begin	15533 Oct 12 05:48	5°  3033'56		asc. node	15534 Sep 28 06:34	24°  3005'07	
behind sun end	15533 Oct 12 15:50	6°  3023'52			15534 Oct 01 07:28	0° 	
evening rise	15533 Oct 20 11:45	22°  3019'40		evening rise	15534 Oct 04 12:01	6°  3016'05	
	15533 Oct 24 07:26	0° 			15534 Oct 18 05:41	0° 	
evening max el	15533 Nov 07 01:10	21°  3018'35	19°54'47	evening max el	15534 Oct 20 19:39	2°  3056'30	18°56'09
desc. node	15533 Nov 12 21:33	25°  3029'51		retrograde	15534 Oct 29 12:41	7°  3019'51	
retrograde	15533 Nov 17 07:42	26°  3025'55		desc. node	15534 Oct 30 18:49	7°  3014'42	

evening set	15534 Oct 31 09:57	7°♄08'19		evening set	15535 Oct 13 14:17	18°♄51'40	
inferior conj	15534 Nov 08 17:06	2°♄50'28	-2°50'05	desc. node	15535 Oct 17 16:10	16°♄53'23	
minimum elong	15534 Nov 08 10:04	3°♄02'50	2°46'40	inferior conj	15535 Oct 21 04:12	14°♄12'36	-1°07'20
min. Earth dist.	15534 Nov 11 15:16	0°♄47'25	0.56477 AU	minimum elong	15535 Oct 21 01:39	14°♄17'50	1°05'44
	15534 Nov 12 20:00	30°♄		min. Earth dist.	15535 Oct 24 10:25	11°♄32'20	0.58485 AU
morning rise	15534 Nov 16 07:21	28°♄05'23		morning rise	15535 Oct 28 09:33	8°♄50'30	
direct	15534 Nov 22 02:46	26°♄45'35		direct	15535 Nov 03 18:02	7°♄03'53	
	15534 Dec 01 08:28	0°♄		morning max el	15535 Nov 18 01:14	14°♄41'54	27°22'53
morning max el	15534 Dec 06 06:21	4°♄01'42	26°11'13		15535 Nov 30 09:21	0°♄	
	15534 Dec 24 21:31	0°♄		asc. node	15535 Dec 12 04:07	19°♄58'04	
asc. node	15534 Dec 25 07:02	0°♄43'01			15535 Dec 17 04:47	0°♄	
morning set	15535 Jan 03 15:18	19°♄21'29		morning set	15535 Dec 18 23:33	3°♄45'11	
	15535 Jan 08 11:25	0°♄					
superior conj	15535 Jan 10 09:12	4°♄15'15	1°37'58	superior conj	15535 Dec 25 20:41	18°♄54'15	1°35'48
minimum elong	15535 Jan 10 09:20	4°♄16'03	1°38'45	minimum elong	15535 Dec 25 19:47	18°♄49'15	1°36'37
max. Earth dist.	15535 Jan 11 09:17	6°♄29'20	1.31409 AU	max. Earth dist.	15535 Dec 25 17:06	18°♄34'13	1.31039 AU
evening rise	15535 Jan 17 09:33	19°♄32'01			15535 Dec 30 20:28	0°♄	
	15535 Jan 22 14:00	0°♄		evening rise	15536 Jan 01 15:02	3°♄50'24	
desc. node	15535 Jan 26 18:11	7°♄46'11		desc. node	15536 Jan 13 14:56	27°♄03'35	
	15535 Feb 10 03:49	0°♄			15536 Jan 15 09:08	0°♄	
evening max el	15535 Feb 18 07:41	9°♄13'46	27°27'17	evening max el	15536 Jan 31 09:51	20°♄59'00	26°45'22
retrograde	15535 Mar 04 07:14	16°♄36'02		retrograde	15536 Feb 14 09:57	28°♄11'13	
evening set	15535 Mar 11 02:34	14°♄28'07		evening set	15536 Feb 20 22:14	26°♄25'24	
min. Earth dist.	15535 Mar 14 21:36	11°♄37'16	0.61229 AU	min. Earth dist.	15536 Feb 24 23:40	23°♄47'01	0.58989 AU
inferior conj	15535 Mar 18 00:50	8°♄49'35	-1°39'29	inferior conj	15536 Feb 28 04:28	21°♄18'11	-3°07'15
minimum elong	15535 Mar 18 04:25	8°♄41'34	1°38'04	minimum elong	15536 Feb 28 11:32	21°♄04'25	3°04'26
asc. node	15535 Mar 23 04:16	4°♄51'13		morning rise	15536 Mar 07 04:16	16°♄42'24	
morning rise	15535 Mar 25 09:29	3°♄52'50		direct	15536 Mar 09 03:52	16°♄28'13	
direct	15535 Mar 27 12:57	3°♄33'14		asc. node	15536 Mar 09 01:41	16°♄28'15	
morning max el	15535 Apr 03 11:37	7°♄02'34	17°51'45	morning max el	15536 Mar 16 23:43	20°♄20'50	18°16'12
	15535 Apr 18 08:46	0°♄			15536 Mar 24 04:42	0°♄	
morning set	15535 Apr 19 03:23	1°♄23'51		morning set	15536 Apr 01 16:10	15°♄17'12	
desc. node	15535 Apr 24 20:01	11°♄36'01			15536 Apr 09 12:42	0°♄	
superior conj	15535 Apr 30 01:13	20°♄42'02	-0°41'25	desc. node	15536 Apr 10 16:42	2°♄07'47	
minimum elong	15535 Apr 29 21:28	20°♄25'55	0°41'27	superior conj	15536 Apr 11 04:42	3°♄02'16	-0°04'09
	15535 May 05 13:50	0°♄		minimum elong	15536 Apr 11 04:21	3°♄00'40	0°04'30
max. Earth dist.	15535 May 07 08:35	2°♄55'27	1.43257 AU	behind sun begin	15536 Apr 10 21:10	2°♄28'08	
evening rise	15535 May 13 21:33	13°♄22'44		behind sun end	15536 Apr 11 11:32	3°♄33'09	
	15535 May 24 20:05	0°♄		max. Earth dist.	15536 Apr 18 18:53	16°♄20'47	1.41231 AU
evening max el	15535 Jun 14 18:50	27°♄32'56	21°47'03	evening rise	15536 Apr 23 10:29	24°♄04'47	
	15535 Jun 17 11:36	0°♄			15536 Apr 27 02:55	0°♄	
asc. node	15535 Jun 19 02:04	1°♄10'34			15536 May 17 17:22	0°♄	
retrograde	15535 Jun 23 23:28	2°♄54'47		evening max el	15536 May 27 10:32	11°♄26'22	23°07'16
evening set	15535 Jun 28 14:07	1°♄00'19		asc. node	15536 Jun 04 23:05	17°♄17'34	
	15535 Jun 29 15:59	30°♄		retrograde	15536 Jun 06 19:49	17°♄32'43	
inferior conj	15535 Jul 03 19:54	24°♄43'52	3°07'20	evening set	15536 Jun 11 21:55	15°♄23'15	
minimum elong	15535 Jul 03 19:20	24°♄45'49	3°06'28	inferior conj	15536 Jun 17 05:48	8°♄58'33	2°55'39
min. Earth dist.	15535 Jul 03 22:32	24°♄34'38	0.69035 AU	minimum elong	15536 Jun 17 04:25	9°♄03'23	2°54'35
morning rise	15535 Jul 09 00:23	18°♄27'40		min. Earth dist.	15536 Jun 16 19:28	9°♄34'23	0.69053 AU
direct	15535 Jul 13 21:37	16°♄22'38		morning rise	15536 Jun 22 10:51	2°♄49'54	
desc. node	15535 Jul 21 19:30	20°♄23'06		direct	15536 Jun 26 19:44	1°♄03'59	
morning max el	15535 Jul 23 14:53	22°♄06'04	22°25'21	morning max el	15536 Jul 05 07:45	5°♄57'09	21°02'23
	15535 Jul 30 11:11	0°♄		desc. node	15536 Jul 07 16:45	8°♄29'07	
	15535 Aug 20 08:18	0°♄			15536 Jul 23 15:09	0°♄	
morning set	15535 Aug 26 01:00	9°♄02'48		morning set	15536 Aug 04 19:56	18°♄29'45	
max. Earth dist.	15535 Aug 31 02:07	17°♄22'37	1.41042 AU		15536 Aug 12 01:45	0°♄	
	15535 Sep 07 09:09	0°♄		max. Earth dist.	15536 Aug 12 08:41	0°♄28'06	1.43154 AU
superior conj	15535 Sep 07 22:30	0°♄59'32	-1°00'35	superior conj	15536 Aug 19 10:30	12°♄11'07	-1°35'23
minimum elong	15535 Sep 08 03:17	1°♄20'59	0°59'56	minimum elong	15536 Aug 19 17:55	12°♄42'27	1°34'53
asc. node	15535 Sep 15 03:11	14°♄10'32			15536 Aug 29 16:06	0°♄	
evening rise	15535 Sep 18 03:05	19°♄47'23		evening rise	15536 Aug 31 04:41	2°♄43'05	
	15535 Sep 23 15:41	0°♄		asc. node	15536 Aug 31 23:49	4°♄08'25	
evening max el	15535 Oct 04 00:59	15°♄18'51	18°19'17	evening max el	15536 Sep 16 13:01	28°♄17'03	18°02'48
retrograde	15535 Oct 11 13:05	19°♄08'07			15536 Sep 18 12:47	0°♄	
				retrograde	15536 Sep 23 06:36	1°♄45'02	

evening set	15536 Sep 25 15:04	1°♍19'38		15537 Aug 22 13:32	0°♎	
	15536 Sep 28 04:06	30°♏♎		evening max el	15537 Aug 31 03:45	11°♎40'35 18°05'19
inferior conj	15536 Oct 02 11:46	26°♎20'30 0°20'02		retrograde	15537 Sep 06 12:56	15°♎00'56
minimum elong	15536 Oct 02 12:25	26°♎18'58 0°20'06		evening set	15537 Sep 09 05:52	14°♎23'03
desc. node	15536 Oct 03 13:32	25°♎18'43		inferior conj	15537 Sep 15 12:02	9°♎05'56 1°27'18
min. Earth dist.	15536 Oct 05 14:56	23°♎22'31 0.60762 AU		minimum elong	15537 Sep 15 14:09	9°♎00'13 1°26'38
morning rise	15536 Oct 09 06:41	20°♎28'26		min. Earth dist.	15537 Sep 18 05:15	6°♎11'04 0.63024 AU
direct	15536 Oct 15 22:04	18°♎17'24		desc. node	15537 Sep 20 10:58	4°♎01'41
morning max el	15536 Oct 30 03:52	26°♎10'48 27°56'36		morning rise	15537 Sep 21 20:15	2°♎54'06
	15536 Nov 02 17:55	0°♍		direct	15537 Sep 28 12:18	0°♎25'37
	15536 Nov 22 23:00	0°♏		morning max el	15537 Oct 12 11:51	8°♎24'59 27°51'28
asc. node	15536 Nov 28 01:06	9°♏35'21			15537 Oct 29 04:51	0°♍
morning set	15536 Dec 02 03:04	17°♏52'11		asc. node	15537 Nov 14 21:59	29°♍28'23
	15536 Dec 07 18:01	0°♏			15537 Nov 15 04:19	0°♏
max. Earth dist.	15536 Dec 07 23:42	0°♏31'26 1.31217 AU		morning set	15537 Nov 15 23:40	1°♏37'31
				max. Earth dist.	15537 Nov 21 01:24	12°♏13'34 1.31959 AU
superior conj	15536 Dec 09 07:30	3°♏28'01 1°27'39				
minimum elong	15536 Dec 09 05:44	3°♏18'15 1°28'22		superior conj	15537 Nov 23 15:43	17°♏51'33 1°13'29
evening rise	15536 Dec 16 00:03	18°♏16'04		minimum elong	15537 Nov 23 13:27	17°♏39'08 1°14'01
	15536 Dec 21 15:48	0°♏			15537 Nov 29 04:23	0°♏
desc. node	15536 Dec 30 11:45	15°♏42'33		evening rise	15537 Nov 30 10:48	2°♏45'00
	15537 Jan 10 07:18	0°♏			15537 Dec 14 23:04	0°♏
evening max el	15537 Jan 12 03:45	1°♏51'12 25°30'38		desc. node	15537 Dec 17 08:39	3°♏29'24
retrograde	15537 Jan 26 01:15	8°♏50'53		evening max el	15537 Dec 24 14:45	12°♏01'48 23°53'13
evening set	15537 Jan 31 21:38	7°♏32'38		retrograde	15538 Jan 07 03:02	18°♏43'58
min. Earth dist.	15537 Feb 05 16:27	4°♏52'09 0.56923 AU		evening set	15538 Jan 11 22:04	17°♏54'09
inferior conj	15537 Feb 08 11:53	2°♏58'43 -4°34'24		min. Earth dist.	15538 Jan 18 02:11	14°♏54'00 0.55336 AU
minimum elong	15537 Feb 08 21:10	2°♏43'05 4°31'19		inferior conj	15538 Jan 19 22:30	13°♏48'03 -5°40'50
	15537 Feb 13 09:57	30°♏♏		minimum elong	15538 Jan 20 05:12	13°♏38'05 5°39'11
morning rise	15537 Feb 16 23:32	28°♏44'29		morning rise	15538 Jan 28 13:59	9°♏52'01
direct	15537 Feb 19 00:43	28°♏31'55		direct	15538 Jan 31 02:16	9°♏36'07
asc. node	15537 Feb 23 23:07	29°♏49'41		morning max el	15538 Feb 10 17:34	14°♏44'49 20°10'15
	15537 Feb 24 06:39	0°♏		asc. node	15538 Feb 10 20:30	14°♏51'57
morning max el	15537 Feb 28 03:05	2°♏58'41 19°01'45			15538 Feb 21 13:35	0°♏
morning set	15537 Mar 16 15:11	29°♏36'43		morning set	15538 Feb 28 20:59	14°♏12'17
	15537 Mar 16 19:55	0°♏				
superior conj	15537 Mar 25 02:19	16°♏10'47 0°28'39		superior conj	15538 Mar 08 13:43	29°♏55'44 0°55'19
minimum elong	15537 Mar 25 04:03	16°♏19'04 0°28'11		minimum elong	15538 Mar 08 16:16	0°♏08'29 0°55'01
desc. node	15537 Mar 28 13:18	22°♏40'54			15538 Mar 08 14:34	0°♏
max. Earth dist.	15537 Apr 01 01:19	29°♏02'30 1.38969 AU		max. Earth dist.	15538 Mar 14 08:09	11°♏11'01 1.36717 AU
	15537 Apr 01 14:14	0°♏		desc. node	15538 Mar 15 09:53	13°♏11'53
evening rise	15537 Apr 04 20:42	5°♏42'07		evening rise	15538 Mar 18 02:23	18°♏08'16
	15537 Apr 20 03:45	0°♏			15538 Mar 24 22:28	0°♏
evening max el	15537 May 10 00:16	25°♏20'54 24°28'18			15538 Apr 14 09:27	0°♏
	15537 May 15 14:13	0°♏		evening max el	15538 Apr 22 13:54	9°♏14'52 25°43'00
retrograde	15537 May 21 12:45	2°♏05'13		retrograde	15538 May 05 01:07	16°♏25'57
asc. node	15537 May 22 20:12	1°♏57'52		asc. node	15538 May 09 17:22	14°♏57'00
	15537 May 26 18:37	30°♏♏		evening set	15538 May 11 01:47	13°♏56'29
evening set	15537 May 27 02:21	29°♏43'46		min. Earth dist.	15538 May 15 07:33	9°♏20'55 0.67671 AU
min. Earth dist.	15537 May 31 15:11	24°♏31'50 0.68594 AU		inferior conj	15538 May 16 19:38	7°♏26'01 2°00'33
inferior conj	15537 Jun 01 14:22	23°♏13'59 2°33'33		minimum elong	15538 May 16 17:27	7°♏32'56 1°59'08
minimum elong	15537 Jun 01 12:23	23°♏20'39 2°32'15		morning rise	15538 May 22 09:41	1°♏36'21
morning rise	15537 Jun 06 22:34	17°♏14'09		direct	15538 May 25 19:42	0°♏29'27
direct	15537 Jun 10 19:38	15°♏48'06		morning max el	15538 Jun 01 13:58	4°♏08'24 18°54'32
morning max el	15537 Jun 18 07:13	19°♏58'17 19°50'58		desc. node	15538 Jun 11 10:57	16°♏48'17
desc. node	15537 Jun 24 13:54	27°♏21'35		greatest brilliancy	15538 Jun 14 23:58	22°♏05'26 -0.8m
	15537 Jun 26 12:55	0°♏			15538 Jun 20 03:59	0°♏
morning set	15537 Jul 15 00:10	27°♏21'05		morning set	15538 Jun 24 08:59	6°♏30'28
	15537 Jul 16 17:29	0°♏		max. Earth dist.	15538 Jul 08 15:24	28°♏41'29 1.45741 AU
max. Earth dist.	15537 Jul 25 21:25	14°♏18'20 1.44774 AU			15538 Jul 09 11:29	0°♏
superior conj	15537 Jul 30 22:54	22°♏23'37 -2°02'21		superior conj	15538 Jul 10 15:10	1°♏48'26 -2°14'01
minimum elong	15537 Jul 31 05:42	22°♏51'06 2°02'31		minimum elong	15538 Jul 10 16:02	1°♏51'49 2°14'49
	15537 Aug 04 14:57	0°♏		evening rise	15538 Jul 25 18:49	25°♏54'42
evening rise	15537 Aug 13 11:32	14°♏49'09			15538 Jul 28 07:34	0°♏
asc. node	15537 Aug 18 20:25	23°♏53'50		asc. node	15538 Aug 05 17:03	13°♏21'38
				evening max el	15538 Aug 14 17:45	25°♏20'25 18°25'44

retrograde	15538 Aug 21 03:53	28° $\cap$ 46'36		evening max el	15539 Jul 29 04:17	9° $\cap$ 09'29	19°03'14
evening set	15538 Aug 24 05:50	27° $\cap$ 53'33		retrograde	15539 Aug 05 00:08	12° $\cap$ 54'47	
inferior conj	15538 Aug 30 00:57	22° $\cap$ 20'34	2°15'21	evening set	15539 Aug 08 11:29	11° $\cap$ 44'56	
minimum elong	15538 Aug 30 03:17	22° $\cap$ 13'37	2°14'31	inferior conj	15539 Aug 13 23:03	5° $\cap$ 57'51	2°46'45
min. Earth dist.	15538 Sep 01 04:56	19° $\cap$ 46'17	0.65064 AU	minimum elong	15539 Aug 14 00:52	5° $\cap$ 52'00	2°45'58
morning rise	15538 Sep 04 23:25	15° $\cap$ 58'00		min. Earth dist.	15539 Aug 15 12:52	3° $\cap$ 56'33	0.66750 AU
desc. node	15538 Sep 07 08:25	14° $\cap$ 22'55			15539 Aug 19 00:55	30° $\mathbb{R}$ $\cap$	
direct	15538 Sep 11 10:47	13° $\cap$ 21'06		morning rise	15539 Aug 19 13:30	29° $\cap$ 31'37	
morning max el	15538 Sep 24 22:39	21° $\cap$ 14'55	27°12'19	desc. node	15539 Aug 25 05:52	26° $\cap$ 55'42	
	15538 Oct 02 13:26	0° $\underline{\cap}$		direct	15539 Aug 25 16:28	26° $\cap$ 54'57	
	15538 Oct 22 08:37	0° $\mathbb{L}$			15539 Sep 02 07:42	0° $\cap$	
morning set	15538 Oct 30 10:36	14° $\mathbb{L}$ 54'11		morning max el	15539 Sep 07 10:09	4° $\cap$ 29'41	26°07'07
asc. node	15538 Nov 01 18:45	19° $\mathbb{L}$ 31'16			15539 Sep 26 23:18	0° $\underline{\cap}$	
max. Earth dist.	15538 Nov 03 18:58	23° $\mathbb{L}$ 35'35	1.33263 AU	morning set	15539 Oct 13 08:40	27° $\underline{\cap}$ 35'24	
	15538 Nov 06 20:48	0° $\mathbb{L}$			15539 Oct 14 15:38	0° $\mathbb{L}$	
				max. Earth dist.	15539 Oct 17 02:55	4° $\mathbb{L}$ 42'56	1.35081 AU
superior conj	15538 Nov 07 19:08	1° $\mathbb{L}$ 58'24	0°53'17	asc. node	15539 Oct 19 15:27	9° $\mathbb{L}$ 40'00	
minimum elong	15538 Nov 07 16:53	1° $\mathbb{L}$ 46'24	0°53'39				
evening rise	15538 Nov 14 21:22	17° $\mathbb{L}$ 11'47		superior conj	15539 Oct 22 15:16	15° $\mathbb{L}$ 42'25	0°27'11
	15538 Nov 21 03:58	0° $\mathbb{L}$		minimum elong	15539 Oct 22 13:47	15° $\mathbb{L}$ 34'50	0°27'29
desc. node	15538 Dec 04 05:40	20° $\mathbb{L}$ 04'45			15539 Oct 29 12:12	0° $\mathbb{L}$	
evening max el	15538 Dec 06 01:27	21° $\mathbb{L}$ 58'50	22°10'12	evening rise	15539 Oct 30 05:51	1° $\mathbb{L}$ 31'53	
retrograde	15538 Dec 18 16:34	28° $\mathbb{L}$ 13'46			15539 Nov 15 17:43	0° $\mathbb{L}$	
evening set	15538 Dec 22 04:20	27° $\mathbb{L}$ 46'50		evening max el	15539 Nov 17 21:30	2° $\mathbb{L}$ 20'27	20°38'26
inferior conj	15538 Dec 30 17:14	23° $\mathbb{L}$ 54'41	-6°00'28	desc. node	15539 Nov 21 02:46	5° $\mathbb{L}$ 05'22	
minimum elong	15538 Dec 30 15:26	23° $\mathbb{L}$ 57'13	5°59'32	retrograde	15539 Nov 29 02:54	7° $\mathbb{L}$ 55'13	
min. Earth dist.	15538 Dec 30 07:49	24° $\mathbb{L}$ 07'52	0.54497 AU	evening set	15539 Dec 01 12:24	7° $\mathbb{L}$ 41'07	
morning rise	15539 Jan 08 03:29	20° $\mathbb{L}$ 07'31		inferior conj	15539 Dec 10 08:37	3° $\mathbb{L}$ 47'28	-5°19'00
direct	15539 Jan 11 13:06	19° $\mathbb{L}$ 41'48		minimum elong	15539 Dec 09 23:28	4° $\mathbb{L}$ 00'42	5°16'12
morning max el	15539 Jan 23 16:58	25° $\mathbb{L}$ 33'40	21°41'26	min. Earth dist.	15539 Dec 11 13:23	3° $\mathbb{L}$ 05'54	0.54574 AU
	15539 Jan 27 17:31	0° $\approx$			15539 Dec 17 23:11	30° $\mathbb{R}$ $\mathbb{L}$	
asc. node	15539 Jan 28 17:50	1° $\approx$ 18'03		morning rise	15539 Dec 18 10:25	29° $\mathbb{L}$ 50'56	
morning set	15539 Feb 13 06:48	28° $\approx$ 55'11		direct	15539 Dec 22 20:58	29° $\mathbb{L}$ 08'37	
	15539 Feb 13 19:08	0° $\mathbb{H}$			15539 Dec 27 15:36	0° $\mathbb{L}$	
				morning max el	15540 Jan 05 04:49	5° $\mathbb{L}$ 39'14	23°28'34
superior conj	15539 Feb 20 11:05	14° $\mathbb{H}$ 05'50	1°15'29	asc. node	15540 Jan 15 15:07	18° $\mathbb{L}$ 50'10	
minimum elong	15539 Feb 20 13:30	14° $\mathbb{H}$ 18'31	1°15'31		15540 Jan 22 01:19	0° $\approx$	
max. Earth dist.	15539 Feb 24 19:48	23° $\mathbb{H}$ 02'52	1.34687 AU	morning set	15540 Jan 28 18:32	13° $\approx$ 39'29	
	15539 Feb 28 08:48	0° $\mathbb{Y}$					
evening rise	15539 Mar 01 00:01	1° $\mathbb{Y}$ 12'37		superior conj	15540 Feb 04 15:23	28° $\approx$ 32'59	1°29'08
desc. node	15539 Mar 02 06:27	3° $\mathbb{Y}$ 36'13		minimum elong	15540 Feb 04 17:07	28° $\approx$ 42'22	1°29'32
	15539 Mar 17 23:29	0° $\mathbb{B}$			15540 Feb 05 07:31	0° $\mathbb{H}$	
evening max el	15539 Apr 05 03:42	23° $\mathbb{B}$ 00'32	26°43'59	max. Earth dist.	15540 Feb 07 14:39	4° $\mathbb{H}$ 53'58	1.33035 AU
	15539 Apr 15 10:30	0° $\mathbb{H}$		evening rise	15540 Feb 12 10:10	14° $\mathbb{H}$ 46'52	
retrograde	15539 Apr 18 08:01	0° $\mathbb{H}$ 26'55		desc. node	15540 Feb 17 03:03	23° $\mathbb{H}$ 49'46	
	15539 Apr 21 02:01	30° $\mathbb{R}$ $\mathbb{B}$			15540 Feb 20 12:56	0° $\mathbb{Y}$	
evening set	15539 Apr 24 18:20	27° $\mathbb{B}$ 54'31			15540 Mar 11 17:53	0° $\mathbb{B}$	
asc. node	15539 Apr 26 14:39	26° $\mathbb{B}$ 14'24		evening max el	15540 Mar 17 16:51	6° $\mathbb{B}$ 27'45	27°23'46
min. Earth dist.	15539 Apr 28 18:24	23° $\mathbb{B}$ 53'42	0.66304 AU	retrograde	15540 Mar 31 08:38	13° $\mathbb{B}$ 59'14	
inferior conj	15539 Apr 30 19:21	21° $\mathbb{B}$ 28'59	1°15'44	evening set	15540 Apr 07 01:56	11° $\mathbb{B}$ 30'20	
minimum elong	15539 Apr 30 17:35	21° $\mathbb{B}$ 34'13	1°14'28	min. Earth dist.	15540 Apr 10 21:47	8° $\mathbb{B}$ 01'12	0.64545 AU
morning rise	15539 May 06 18:02	15° $\mathbb{B}$ 51'15		asc. node	15540 Apr 12 12:00	6° $\mathbb{B}$ 18'59	
direct	15539 May 09 17:54	15° $\mathbb{B}$ 01'37		inferior conj	15540 Apr 13 10:59	5° $\mathbb{B}$ 16'35	0°18'03
morning max el	15539 May 16 02:53	18° $\mathbb{B}$ 22'27	18°14'43	minimum elong	15540 Apr 13 10:29	5° $\mathbb{B}$ 17'57	0°17'25
	15539 May 25 00:50	0° $\mathbb{H}$		morning rise	15540 Apr 19 21:06	29° $\mathbb{Y}$ 52'52	
desc. node	15539 May 29 07:54	6° $\mathbb{H}$ 39'50			15540 Apr 19 14:56	30° $\mathbb{R}$ $\mathbb{Y}$	
morning set	15539 Jun 04 16:01	16° $\mathbb{H}$ 45'57		direct	15540 Apr 22 11:48	29° $\mathbb{Y}$ 17'41	
	15539 Jun 12 23:49	0° $\mathbb{B}$			15540 Apr 25 08:45	0° $\mathbb{B}$	
				morning max el	15540 Apr 28 19:39	2° $\mathbb{B}$ 32'57	17°51'55
superior conj	15539 Jun 19 23:59	11° $\mathbb{B}$ 00'00	-2°05'45	desc. node	15540 May 15 04:46	26° $\mathbb{B}$ 49'01	
minimum elong	15539 Jun 19 17:28	10° $\mathbb{B}$ 34'35	2°06'19	morning set	15540 May 16 02:36	28° $\mathbb{B}$ 20'12	
max. Earth dist.	15539 Jun 21 11:58	13° $\mathbb{B}$ 20'27	1.45960 AU		15540 May 17 02:31	0° $\mathbb{H}$	
	15539 Jul 02 04:53	0° $\mathbb{L}$					
evening rise	15539 Jul 06 01:34	6° $\mathbb{L}$ 00'23		superior conj	15540 May 29 18:22	20° $\mathbb{H}$ 42'34	-1°39'47
greatest brilliancy	15539 Jul 16 20:09	22° $\mathbb{L}$ 38'42	-0.8m	minimum elong	15540 May 29 09:41	20° $\mathbb{H}$ 07'51	1°39'45
	15539 Jul 21 19:52	0° $\cap$		max. Earth dist.	15540 Jun 03 07:53	27° $\mathbb{H}$ 56'35	1.45427 AU
asc. node	15539 Jul 23 13:45	2° $\cap$ 25'35			15540 Jun 04 15:20	0° $\mathbb{B}$	

evening rise	15540 Jun 14 15:07	15°☿27'31		evening rise	15541 May 25 03:13	24°♄58'44	
	15540 Jun 24 05:42	0°♌			15541 May 28 09:53	0°☿	
greatest brilliancy	15540 Jun 29 10:03	7°♌37'41	-0.6m		15541 Jun 18 08:44	0°♌	
asc. node	15540 Jul 09 10:33	20°♌56'36		evening max el	15541 Jun 24 08:37	6°♌55'06	21°03'48
evening max el	15540 Jul 11 09:26	23°♌01'49	19°56'42	asc. node	15541 Jun 26 07:27	8°♌43'43	
retrograde	15540 Jul 18 22:48	27°♌18'16		retrograde	15541 Jul 02 21:50	11°♌51'44	
evening set	15540 Jul 22 20:12	25°♌50'55		evening set	15541 Jul 07 05:55	10°♌07'04	
inferior conj	15540 Jul 28 03:22	19°♌51'20	3°04'05	inferior conj	15541 Jul 12 11:30	3°♌56'24	3°09'19
minimum elong	15540 Jul 28 04:19	19°♌48'06	3°03'22	minimum elong	15541 Jul 12 11:29	3°♌56'26	3°08'32
min. Earth dist.	15540 Jul 29 03:14	18°♌30'42	0.68006 AU	min. Earth dist.	15541 Jul 12 21:50	3°♌20'29	0.68798 AU
morning rise	15540 Aug 02 12:02	13°♌26'24			15541 Jul 15 10:28	30°♌☿	
direct	15540 Aug 08 04:17	10°♌57'33		morning rise	15541 Jul 17 16:47	27°☿36'14	
desc. node	15540 Aug 11 03:18	11°♌31'42		direct	15541 Jul 22 21:10	25°☿21'03	
morning max el	15540 Aug 19 21:08	17°♌58'10	24°45'09	desc. node	15541 Jul 29 00:41	27°☿47'38	
	15540 Aug 29 23:52	0°♎			15541 Jul 31 16:56	0°♌	
	15540 Sep 18 23:59	0°♊		morning max el	15541 Aug 02 08:14	1°♌34'42	23°16'07
morning set	15540 Sep 24 13:50	9°♊31'24			15541 Aug 23 22:09	0°♎	
max. Earth dist.	15540 Sep 28 03:09	15°♊53'12	1.37294 AU	morning set	15541 Sep 05 21:48	20°♎32'17	
				max. Earth dist.	15541 Sep 10 01:30	27°♎35'03	1.39692 AU
					15541 Sep 11 10:53	0°♊	
superior conj	15540 Oct 05 00:55	28°♊55'34	-0°04'15	superior conj	15541 Sep 17 20:16	11°♊29'17	-0°39'32
minimum elong	15540 Oct 05 01:10	28°♊56'47	0°03'51	minimum elong	15541 Sep 17 23:14	11°♊43'00	0°38'57
behind sun begin	15540 Oct 04 18:41	28°♊25'15		asc. node	15541 Sep 22 08:44	19°♊58'37	
behind sun end	15540 Oct 05 07:38	29°♊28'23		evening rise	15541 Sep 27 06:43	29°♊25'42	
asc. node	15540 Oct 05 12:06	29°♊50'14			15541 Sep 27 13:50	0°♎	
	15540 Oct 05 14:06	0°♎		evening max el	15541 Oct 13 07:43	25°♎28'00	18°37'52
evening rise	15540 Oct 13 09:54	15°♎38'47		retrograde	15541 Oct 21 11:08	29°♎34'57	
	15540 Oct 20 20:52	0°♈		evening set	15541 Oct 23 09:27	29°♎21'52	
evening max el	15540 Oct 30 08:01	13°♈29'27	19°27'01	desc. node	15541 Oct 24 21:18	28°♎54'50	
desc. node	15540 Nov 06 23:59	18°♈06'19		inferior conj	15541 Oct 31 09:36	24°♎55'28	-2°05'18
retrograde	15540 Nov 08 22:12	18°♈17'35		minimum elong	15541 Oct 31 04:32	25°♎04'59	2°02'36
evening set	15540 Nov 10 20:04	18°♈06'59		min. Earth dist.	15541 Nov 03 13:03	22°♎34'13	0.57285 AU
inferior conj	15540 Nov 19 11:06	14°♈00'31	-3°50'25	morning rise	15541 Nov 07 20:19	19°♎54'14	
minimum elong	15540 Nov 19 01:52	14°♈15'27	3°46'29	direct	15541 Nov 13 22:17	18°♎22'36	
min. Earth dist.	15540 Nov 21 22:20	12°♈24'51	0.55561 AU	morning max el	15541 Nov 28 03:51	25°♎49'08	26°45'49
morning rise	15540 Nov 27 05:33	9°♈35'48			15541 Dec 02 02:22	0°♈	
direct	15540 Dec 02 14:27	8°♈30'43		asc. node	15541 Dec 19 09:27	26°♈11'02	
morning max el	15540 Dec 16 13:51	15°♈33'06	25°16'26		15541 Dec 21 09:43	0°♈	
	15540 Dec 28 02:46	0°♉		morning set	15541 Dec 27 16:21	12°♉51'10	
asc. node	15541 Jan 01 12:20	7°♉12'11					
morning set	15541 Jan 12 06:20	28°♉19'56		superior conj	15542 Jan 03 11:10	27°♉50'14	1°37'47
	15541 Jan 13 00:50	0°♊		minimum elong	15542 Jan 03 10:51	27°♉48'30	1°38'36
superior conj	15541 Jan 19 00:08	13°♊10'04	1°36'31	max. Earth dist.	15542 Jan 03 23:12	28°♉57'30	1.31184 AU
minimum elong	15541 Jan 19 00:53	13°♊14'15	1°37'11		15542 Jan 04 10:23	0°♊	
max. Earth dist.	15541 Jan 20 16:36	16°♊52'51	1.31851 AU	evening rise	15542 Jan 10 08:24	12°♊56'27	
evening rise	15541 Jan 26 05:51	28°♊43'50			15542 Jan 18 23:17	0°♈	
	15541 Jan 26 20:40	0°♈		desc. node	15542 Jan 20 20:23	3°♈22'16	
desc. node	15541 Feb 02 23:41	13°♈47'32			15542 Feb 08 17:30	0°♎	
	15541 Feb 12 16:45	0°♎		evening max el	15542 Feb 10 10:08	1°♎40'42	27°13'53
evening max el	15541 Feb 28 03:49	19°♎25'26	27°35'32	retrograde	15542 Feb 24 10:39	8°♎59'10	
retrograde	15541 Mar 14 02:06	26°♎53'29		evening set	15542 Mar 03 03:41	7°♎00'11	
evening set	15541 Mar 20 22:06	24°♎35'43		min. Earth dist.	15542 Mar 07 00:35	4°♎15'48	0.60263 AU
min. Earth dist.	15541 Mar 24 16:15	21°♎32'55	0.62485 AU	inferior conj	15542 Mar 10 05:22	1°♎34'06	-2°16'00
inferior conj	15541 Mar 27 15:32	18°♎41'43	-0°52'58	minimum elong	15542 Mar 10 10:25	1°♎23'24	2°13'55
minimum elong	15541 Mar 27 17:20	18°♎37'24	0°52'25		15542 Mar 12 03:05	30°♎♈	
asc. node	15541 Mar 30 09:25	16°♎11'09		asc. node	15542 Mar 17 06:51	26°♈56'12	
morning rise	15541 Apr 03 15:30	13°♎34'21		morning rise	15542 Mar 17 20:34	26°♈45'47	
direct	15541 Apr 05 22:22	13°♎10'13		direct	15542 Mar 19 21:49	26°♈29'01	
morning max el	15541 Apr 12 13:21	16°♎31'33	17°46'35	morning max el	15542 Mar 27 04:31	0°♎07'19	17°59'39
	15541 Apr 22 03:59	0°♏			15542 Mar 27 01:30	0°♎	
morning set	15541 Apr 28 13:21	11°♏02'51		morning set	15542 Apr 11 18:13	24°♎35'04	
desc. node	15541 May 02 01:31	17°♏10'38			15542 Apr 14 16:56	0°♏	
	15541 May 09 13:33	0°♐		desc. node	15542 Apr 18 22:12	7°♏39'36	
superior conj	15541 May 10 09:53	1°♐24'56	-1°03'41	superior conj	15542 Apr 22 00:52	13°♏10'55	-0°25'13
minimum elong	15541 May 10 03:52	0°♐59'53	1°03'34	minimum elong	15542 Apr 21 22:42	13°♏01'21	0°25'24
max. Earth dist.	15541 May 17 00:57	12°♐15'01	1.44212 AU				

max. Earth dist.	15542 Apr 29 13:51	26°♄02'34	1.42439 AU	desc. node	15543 Apr 05 18:50	28°♄12'18	
	15542 May 01 23:41	0°♄			15543 Apr 06 18:26	0°♄	
evening rise	15542 May 05 04:44	5°♄09'53		max. Earth dist.	15543 Apr 11 22:37	9°♄10'45	1.40291 AU
	15542 May 21 16:19	0°♄		evening rise	15543 Apr 16 02:45	16°♄15'42	
evening max el	15542 Jun 07 02:38	20°♄48'25	22°20'45		15543 Apr 24 16:31	0°♄	
asc. node	15542 Jun 13 04:27	25°♄31'58			15543 May 16 09:15	0°♄	
retrograde	15542 Jun 16 19:23	26°♄29'13		evening max el	15543 May 20 17:19	4°♄42'26	23°42'05
evening set	15542 Jun 21 14:52	24°♄28'17		asc. node	15543 May 31 01:30	11°♄04'05	
inferior conj	15542 Jun 26 21:18	18°♄08'16	3°03'39	retrograde	15543 May 31 14:15	11°♄05'19	
minimum elong	15542 Jun 26 20:22	18°♄11'32	3°02'42	evening set	15543 Jun 05 21:23	8°♄50'14	
min. Earth dist.	15542 Jun 26 18:29	18°♄18'06	0.69103 AU	min. Earth dist.	15543 Jun 10 15:01	3°♄17'21	0.68920 AU
morning rise	15542 Jul 02 01:42	11°♄55'03		inferior conj	15543 Jun 11 06:50	2°♄23'10	2°47'34
direct	15542 Jul 06 17:45	9°♄57'40		minimum elong	15543 Jun 11 05:09	2°♄28'56	2°46'23
desc. node	15542 Jul 15 21:57	15°♄18'56			15543 Jun 13 01:35	30°♄	
morning max el	15542 Jul 15 21:59	15°♄18'59	21°48'54	morning rise	15543 Jun 16 12:54	26°♄18'20	
	15542 Jul 27 19:30	0°♄		direct	15543 Jun 20 16:46	24°♄40'47	
	15542 Aug 16 21:48	0°♄		morning max el	15543 Jun 28 17:25	29°♄13'53	20°30'21
morning set	15542 Aug 17 05:44	0°♄31'31			15543 Jun 29 11:34	0°♄	
max. Earth dist.	15542 Aug 23 04:27	10°♄10'12	1.41988 AU	desc. node	15543 Jul 02 19:09	3°♄46'04	
					15543 Jul 21 09:06	0°♄	
superior conj	15542 Aug 30 20:57	23°♄13'47	-1°15'51	morning set	15543 Jul 27 16:35	9°♄38'01	
minimum elong	15542 Aug 31 03:02	23°♄40'21	1°15'11	max. Earth dist.	15543 Aug 05 14:18	23°♄38'13	1.43914 AU
	15542 Sep 03 16:50	0°♄			15543 Aug 09 12:38	0°♄	
asc. node	15542 Sep 09 05:22	10°♄01'40					
evening rise	15542 Sep 10 16:36	12°♄43'29		superior conj	15543 Aug 11 22:55	3°♄59'41	-1°48'14
	15542 Sep 20 12:20	0°♄		minimum elong	15543 Aug 12 06:39	4°♄31'45	1°47'58
evening max el	15542 Sep 26 16:31	8°♄07'49	18°09'54	evening rise	15543 Aug 24 10:51	25°♄19'35	
retrograde	15542 Oct 03 19:14	11°♄46'01		asc. node	15543 Aug 27 01:58	29°♄54'49	
evening set	15542 Oct 05 23:27	11°♄26'06			15543 Aug 27 03:10	0°♄	
desc. node	15542 Oct 11 18:39	7°♄53'49		evening max el	15543 Sep 10 06:06	21°♄17'38	18°01'36
inferior conj	15542 Oct 13 05:49	6°♄38'11	-0°27'56	retrograde	15543 Sep 16 18:53	24°♄40'53	
minimum elong	15542 Oct 13 04:50	6°♄40'19	0°27'05	evening set	15543 Sep 19 06:54	24°♄10'28	
min. Earth dist.	15542 Oct 16 11:50	3°♄48'03	0.59443 AU	inferior conj	15543 Sep 25 20:59	19°♄03'03	0°51'03
morning rise	15542 Oct 20 06:54	1°♄02'36		minimum elong	15543 Sep 25 22:26	18°♄59'23	0°50'43
	15542 Oct 22 08:32	30°♄		desc. node	15543 Sep 28 16:04	16°♄14'37	
direct	15542 Oct 26 19:19	29°♄05'02		min. Earth dist.	15543 Sep 28 20:20	16°♄04'19	0.61735 AU
	15542 Oct 31 09:51	0°♄		morning rise	15543 Oct 02 11:17	13°♄01'22	
morning max el	15542 Nov 10 02:01	6°♄49'36	27°42'03	direct	15543 Oct 09 03:31	10°♄42'19	
	15542 Nov 27 12:39	0°♄		morning max el	15543 Oct 23 07:22	18°♄38'56	27°59'07
asc. node	15542 Dec 06 06:27	15°♄36'55			15543 Nov 01 21:49	0°♄	
morning set	15542 Dec 11 22:51	27°♄08'52			15543 Nov 20 09:02	0°♄	
	15542 Dec 13 06:55	0°♄		asc. node	15543 Nov 23 03:22	5°♄21'37	
				morning set	15543 Nov 25 23:43	11°♄07'24	
superior conj	15542 Dec 18 22:37	12°♄28'16	1°33'04	max. Earth dist.	15543 Dec 01 12:18	22°♄54'31	1.31471 AU
minimum elong	15542 Dec 18 21:19	12°♄21'04	1°33'52				
max. Earth dist.	15542 Dec 18 07:06	11°♄01'33	1.31054 AU	superior conj	15543 Dec 03 08:32	26°♄58'10	1°22'22
evening rise	15542 Dec 25 15:41	27°♄19'27		minimum elong	15543 Dec 03 06:31	26°♄46'57	1°23'01
	15542 Dec 26 21:45	0°♄			15543 Dec 04 17:20	0°♄	
desc. node	15543 Jan 07 17:10	22°♄25'17		evening rise	15543 Dec 10 01:40	11°♄47'08	
	15543 Jan 12 13:59	0°♄			15543 Dec 19 03:15	0°♄	
evening max el	15543 Jan 23 09:10	13°♄04'23	26°17'12	desc. node	15543 Dec 25 14:01	10°♄44'10	
retrograde	15543 Feb 06 08:25	20°♄10'35		evening max el	15544 Jan 04 23:34	23°♄35'55	24°50'53
evening set	15543 Feb 12 15:07	18°♄36'19			15544 Jan 15 04:51	0°♄	
min. Earth dist.	15543 Feb 16 22:30	15°♄58'58	0.58079 AU	retrograde	15544 Jan 18 17:47	0°♄28'48	
inferior conj	15543 Feb 20 00:44	13°♄43'40	-3°45'11		15544 Jan 22 07:22	30°♄	
minimum elong	15543 Feb 20 09:04	13°♄28'25	3°42'03	evening set	15544 Jan 24 04:49	29°♄22'32	
morning rise	15543 Feb 28 06:13	9°♄16'48		min. Earth dist.	15544 Jan 29 11:33	26°♄36'16	0.56181 AU
direct	15543 Mar 02 05:46	9°♄03'41		inferior conj	15544 Jan 31 23:03	25°♄01'53	-5°06'36
asc. node	15543 Mar 04 04:15	9°♄16'47		minimum elong	15544 Feb 01 08:02	24°♄47'36	5°03'59
morning max el	15543 Mar 10 13:20	13°♄09'34	18°32'47	morning rise	15544 Feb 09 13:36	20°♄56'23	
	15543 Mar 21 21:39	0°♄		direct	15544 Feb 11 18:17	20°♄43'03	
morning set	15543 Mar 26 11:50	8°♄41'11		asc. node	15544 Feb 19 01:37	23°♄22'26	
				morning max el	15544 Feb 21 11:37	25°♄26'20	19°28'03
superior conj	15543 Apr 04 12:35	25°♄52'56	0°10'28		15544 Feb 25 10:06	0°♄	
minimum elong	15543 Apr 04 13:18	25°♄56'13	0°10'03	morning set	15544 Mar 09 14:06	23°♄08'40	
behind sun begin	15543 Apr 04 07:45	25°♄30'31			15544 Mar 12 23:59	0°♄	
behind sun end	15543 Apr 04 18:50	26°♄21'52					

superior conj	15544 Mar 17 16:36	9° $\Upsilon$ 18'36	0°40'45	superior conj	15545 Mar 01 08:40	23° $\text{X}$ 15'40	1°04'41
minimum elong	15544 Mar 17 18:49	9° $\Upsilon$ 29'24	0°40'20	minimum elong	15545 Mar 01 11:15	23° $\text{X}$ 28'52	1°04'30
desc. node	15544 Mar 22 15:26	18° $\Upsilon$ 45'00			15545 Mar 04 17:00	0° $\Upsilon$	
max. Earth dist.	15544 Mar 24 04:54	21° $\Upsilon$ 37'38	1.37997 AU	max. Earth dist.	15545 Mar 06 12:54	3° $\Upsilon$ 35'05	1.35810 AU
evening rise	15544 Mar 27 21:35	28° $\Upsilon$ 14'37		desc. node	15545 Mar 09 12:00	9° $\Upsilon$ 13'40	
	15544 Mar 28 21:45	0° $\text{Z}$		evening rise	15545 Mar 10 10:28	10° $\Upsilon$ 58'10	
	15544 Apr 17 02:10	0° $\Pi$			15545 Mar 21 11:25	0° $\text{Z}$	
evening max el	15544 May 02 06:42	18° $\Pi$ 36'45	25°01'15		15545 Apr 12 10:46	0° $\Pi$	
retrograde	15544 May 14 05:22	25° $\Pi$ 34'03		evening max el	15545 Apr 14 20:14	2° $\Pi$ 27'37	26°11'03
asc. node	15544 May 16 22:38	25° $\Pi$ 02'55		retrograde	15545 Apr 27 15:44	9° $\Pi$ 47'31	
evening set	15544 May 19 23:55	23° $\Pi$ 08'19		evening set	15545 May 03 20:41	7° $\Pi$ 15'57	
min. Earth dist.	15544 May 24 09:27	18° $\Pi$ 12'16	0.68256 AU	asc. node	15545 May 03 19:51	7° $\Pi$ 17'39	
inferior conj	15544 May 25 14:13	16° $\Pi$ 37'38	2°20'56	min. Earth dist.	15545 May 07 23:45	2° $\Pi$ 55'26	0.67135 AU
minimum elong	15544 May 25 12:06	16° $\Pi$ 44'37	2°19'33	inferior conj	15545 May 09 17:24	0° $\Pi$ 46'31	1°43'03
morning rise	15544 May 31 00:36	10° $\Pi$ 42'13		minimum elong	15545 May 09 15:19	0° $\Pi$ 52'59	1°41'39
direct	15544 Jun 03 16:50	9° $\Pi$ 24'38			15545 May 10 08:30	30° $\text{R}$ $\text{Z}$	
morning max el	15544 Jun 10 20:09	13° $\Pi$ 19'53	19°25'05	morning rise	15545 May 15 10:48	25° $\text{Z}$ 01'47	
desc. node	15544 Jun 18 16:15	22° $\Pi$ 54'28		direct	15545 May 18 16:17	24° $\text{Z}$ 02'42	
greatest brilliancy	15544 Jun 23 11:35	29° $\Pi$ 48'06	-0.7m	morning max el	15545 May 25 05:48	27° $\text{Z}$ 32'43	18°35'32
	15544 Jun 23 14:49	0° $\text{S}$			15545 May 27 12:29	0° $\Pi$	
morning set	15544 Jul 05 20:13	18° $\text{S}$ 30'19		desc. node	15545 Jun 05 13:15	12° $\Pi$ 32'39	
	15544 Jul 13 06:44	0° $\Omega$		morning set	15545 Jun 15 12:53	28° $\Pi$ 03'11	
max. Earth dist.	15544 Jul 18 05:42	7° $\Omega$ 45'00	1.45265 AU		15545 Jun 16 18:42	0° $\text{S}$	
				max. Earth dist.	15545 Jul 01 00:32	22° $\text{S}$ 14'38	1.45921 AU
superior conj	15544 Jul 22 01:46	13° $\Omega$ 48'54	-2°09'34	superior conj	15545 Jul 01 12:52	23° $\text{S}$ 02'46	-2°13'00
minimum elong	15544 Jul 22 06:40	14° $\Omega$ 08'23	2°10'05	minimum elong	15545 Jul 01 10:18	22° $\text{S}$ 52'45	2°13'48
	15544 Aug 01 02:09	0° $\text{P}$			15545 Jul 05 23:43	0° $\Omega$	
evening rise	15544 Aug 05 08:13	7° $\text{P}$ 01'21		evening rise	15545 Jul 17 04:45	17° $\Omega$ 39'43	
asc. node	15544 Aug 12 22:36	19° $\text{P}$ 33'43			15545 Jul 24 23:52	0° $\text{P}$	
	15544 Aug 19 19:43	0° $\text{Z}$		greatest brilliancy	15545 Jul 24 19:38	29° $\Omega$ 43'26	-0.8m
evening max el	15544 Aug 23 20:50	4° $\text{Z}$ 48'42	18°11'50	asc. node	15545 Jul 30 19:17	8° $\text{P}$ 52'10	
retrograde	15544 Aug 30 05:30	8° $\text{Z}$ 10'19		evening max el	15545 Aug 07 09:38	18° $\text{P}$ 32'48	18°39'42
evening set	15544 Sep 02 02:06	7° $\text{Z}$ 26'23		retrograde	15545 Aug 13 23:02	22° $\text{P}$ 05'44	
inferior conj	15544 Sep 08 03:08	2° $\text{Z}$ 02'09	1°49'51	evening set	15545 Aug 17 04:50	21° $\text{P}$ 05'52	
minimum elong	15544 Sep 08 05:27	1° $\text{Z}$ 55'35	1°49'05	inferior conj	15545 Aug 22 20:21	15° $\text{P}$ 26'54	2°30'29
	15544 Sep 09 22:17	30° $\text{R}$ $\text{P}$		minimum elong	15545 Aug 22 22:31	15° $\text{P}$ 20'11	2°29'42
min. Earth dist.	15544 Sep 10 14:54	29° $\text{P}$ 14'06	0.63919 AU	min. Earth dist.	15545 Aug 24 18:27	13° $\text{P}$ 05'03	0.65826 AU
morning rise	15544 Sep 14 06:59	25° $\text{P}$ 44'25		morning rise	15545 Aug 28 15:08	9° $\text{P}$ 01'53	
desc. node	15544 Sep 14 13:30	25° $\text{P}$ 31'59		desc. node	15545 Sep 01 10:57	6° $\text{P}$ 47'38	
direct	15544 Sep 20 21:25	23° $\text{P}$ 11'18		direct	15545 Sep 03 23:21	6° $\text{P}$ 23'42	
	15544 Oct 03 12:09	0° $\text{Z}$		morning max el	15545 Sep 17 04:24	14° $\text{P}$ 12'02	26°47'12
morning max el	15544 Oct 04 17:07	1° $\text{Z}$ 10'35	27°38'38		15545 Sep 30 01:33	0° $\text{Z}$	
	15544 Oct 26 01:29	0° $\text{M}$			15545 Oct 18 18:34	0° $\text{M}$	
morning set	15544 Nov 08 16:36	24° $\text{M}$ 41'30		morning set	15545 Oct 22 22:32	7° $\text{M}$ 44'12	
asc. node	15544 Nov 09 00:12	25° $\text{M}$ 19'26		asc. node	15545 Oct 26 20:58	15° $\text{M}$ 25'21	
	15544 Nov 11 07:28	0° $\text{X}$		max. Earth dist.	15545 Oct 27 00:08	15° $\text{M}$ 41'11	1.33968 AU
max. Earth dist.	15544 Nov 13 10:56	4° $\text{X}$ 28'22	1.32445 AU				
superior conj	15544 Nov 16 15:00	11° $\text{X}$ 15'05	1°05'39	superior conj	15545 Oct 31 15:41	25° $\text{M}$ 13'06	0°42'56
minimum elong	15544 Nov 16 12:39	11° $\text{X}$ 02'24	1°06'06	minimum elong	15545 Oct 31 13:39	25° $\text{M}$ 02'27	0°43'15
evening rise	15544 Nov 23 12:33	26° $\text{X}$ 15'24			15545 Nov 02 22:06	0° $\text{X}$	
	15544 Nov 25 06:45	0° $\text{Z}$		evening rise	15545 Nov 07 22:28	10° $\text{X}$ 39'43	
desc. node	15544 Dec 11 10:59	28° $\text{Z}$ 03'18			15545 Nov 17 20:59	0° $\text{Z}$	
	15544 Dec 13 00:54	0° $\approx$		evening max el	15545 Nov 27 22:53	13° $\text{Z}$ 39'46	21°29'14
evening max el	15544 Dec 16 09:03	3° $\approx$ 35'23	23°08'52	desc. node	15545 Nov 28 08:02	14° $\text{Z}$ 01'58	
retrograde	15544 Dec 29 14:19	10° $\approx$ 08'21		retrograde	15545 Dec 10 01:15	19° $\text{Z}$ 38'54	
evening set	15545 Jan 02 20:11	9° $\approx$ 29'14		evening set	15545 Dec 13 00:10	19° $\text{Z}$ 18'58	
min. Earth dist.	15545 Jan 09 19:09	6° $\approx$ 14'40	0.54873 AU	inferior conj	15545 Dec 21 17:29	15° $\text{Z}$ 28'09	-5°50'13
inferior conj	15545 Jan 11 01:49	5° $\approx$ 30'34	-5°56'17	minimum elong	15545 Dec 21 11:51	15° $\text{Z}$ 36'04	5°48'43
minimum elong	15545 Jan 11 05:24	5° $\approx$ 25'25	5°55'15	min. Earth dist.	15545 Dec 22 00:46	15° $\text{Z}$ 17'56	0.54408 AU
morning rise	15545 Jan 19 16:01	1° $\approx$ 40'07		morning rise	15545 Dec 30 00:01	11° $\text{Z}$ 39'08	
direct	15545 Jan 22 12:04	1° $\approx$ 21'07		direct	15546 Jan 02 20:16	11° $\text{Z}$ 07'02	
morning max el	15545 Feb 02 19:51	6° $\approx$ 48'27	20°46'31	morning max el	15546 Jan 15 13:39	17° $\text{Z}$ 17'02	22°25'38
asc. node	15545 Feb 04 22:58	9° $\approx$ 02'33		asc. node	15546 Jan 22 20:17	25° $\text{Z}$ 59'21	
	15545 Feb 18 01:31	0° $\text{X}$			15546 Jan 25 11:49	0° $\approx$	
morning set	15545 Feb 21 21:53	7° $\text{X}$ 48'04		morning set	15546 Feb 06 08:48	22° $\approx$ 32'40	
					15546 Feb 09 20:26	0° $\text{X}$	

superior conj	15546 Feb 13 09:23	7° $\text{H}$ 34'36	1°22'03	morning set	15547 Jan 21 20:48	7° $\approx$ 15'49	
minimum elong	15546 Feb 13 11:34	7° $\text{H}$ 46'12	1°22'13				
max. Earth dist.	15546 Feb 17 03:23	15° $\text{H}$ 25'01	1.33933 AU	superior conj	15547 Jan 28 15:51	22° $\approx$ 06'28	1°33'01
evening rise	15546 Feb 21 13:56	24° $\text{H}$ 17'15		minimum elong	15547 Jan 28 17:11	22° $\approx$ 13'49	1°33'32
desc. node	15546 Feb 24 08:36	29° $\text{H}$ 34'30		max. Earth dist.	15547 Jan 31 01:40	27° $\approx$ 20'00	1.32477 AU
	15546 Feb 24 14:04	0° $\text{Y}$			15547 Feb 01 07:37	0° $\text{H}$	
	15546 Mar 15 00:41	0° $\text{B}$		evening rise	15547 Feb 05 04:31	8° $\text{H}$ 02'05	
evening max el	15546 Mar 28 10:05	16° $\text{B}$ 07'39	27°03'55	desc. node	15547 Feb 11 05:13	19° $\text{H}$ 42'04	
retrograde	15546 Apr 10 20:14	23° $\text{B}$ 37'32			15547 Feb 17 01:50	0° $\text{Y}$	
evening set	15546 Apr 17 09:44	21° $\text{B}$ 06'02		evening max el	15547 Mar 10 22:48	29° $\text{Y}$ 24'31	27°32'32
asc. node	15546 Apr 20 17:09	17° $\text{B}$ 59'08			15547 Mar 11 13:48	0° $\text{B}$	
min. Earth dist.	15546 Apr 21 07:52	17° $\text{B}$ 18'50	0.65600 AU	retrograde	15547 Mar 24 17:45	6° $\text{B}$ 54'29	
inferior conj	15546 Apr 23 14:05	14° $\text{B}$ 44'21	0°52'55	evening set	15547 Mar 31 12:47	4° $\text{B}$ 29'42	
minimum elong	15546 Apr 23 12:44	14° $\text{B}$ 48'12	0°51'51	min. Earth dist.	15547 Apr 04 07:42	1° $\text{B}$ 12'21	0.63708 AU
morning rise	15546 Apr 29 17:17	9° $\text{B}$ 12'01			15547 Apr 05 12:13	30° $\text{R}$ $\text{Y}$	
direct	15546 May 02 13:03	8° $\text{B}$ 28'56		inferior conj	15547 Apr 07 01:26	28° $\text{Y}$ 23'29	-0°10'25
morning max el	15546 May 08 20:39	11° $\text{B}$ 46'13	18°02'48	minimum elong	15547 Apr 07 01:46	28° $\text{Y}$ 22'38	0°10'36
	15546 May 21 20:24	0° $\text{II}$		transit middle	15547 Apr 07 01:46	28° $\text{Y}$ 22'38	0°10'36
desc. node	15546 May 23 10:10	2° $\text{II}$ 32'32		transit begin	15547 Apr 06 23:25	28° $\text{Y}$ 28'42	
morning set	15546 May 27 07:41	8° $\text{II}$ 52'26		transit end	15547 Apr 07 04:07	28° $\text{Y}$ 16'33	
	15546 Jun 09 11:38	0° $\text{E}$		asc. node	15547 Apr 07 14:32	27° $\text{Y}$ 49'52	
				morning rise	15547 Apr 13 17:08	23° $\text{Y}$ 06'04	
superior conj	15546 Jun 10 23:49	2° $\text{E}$ 22'29	-1°56'30	direct	15547 Apr 16 04:25	22° $\text{Y}$ 35'53	
minimum elong	15546 Jun 10 15:35	1° $\text{E}$ 50'08	1°56'48	morning max el	15547 Apr 22 14:08	25° $\text{Y}$ 52'13	17°47'23
max. Earth dist.	15546 Jun 13 20:52	6° $\text{E}$ 53'16	1.45830 AU		15547 Apr 26 03:21	0° $\text{B}$	
evening rise	15546 Jun 27 02:37	27° $\text{E}$ 24'11		morning set	15547 May 09 05:18	20° $\text{B}$ 58'07	
	15546 Jun 28 19:07	0° $\text{Q}$		desc. node	15547 May 10 06:59	22° $\text{B}$ 47'29	
greatest brilliancy	15546 Jul 09 21:55	16° $\text{Q}$ 52'51	-0.7m		15547 May 14 13:14	0° $\text{II}$	
asc. node	15546 Jul 17 16:02	27° $\text{Q}$ 43'03					
	15546 Jul 19 12:59	0° $\text{P}$		superior conj	15547 May 22 02:18	12° $\text{II}$ 28'03	-1°25'10
evening max el	15546 Jul 21 18:06	2° $\text{P}$ 23'43	19°24'12	minimum elong	15547 May 21 18:23	11° $\text{II}$ 55'52	1°25'03
retrograde	15546 Jul 28 20:27	6° $\text{P}$ 20'32		max. Earth dist.	15547 May 27 16:17	21° $\text{II}$ 25'10	1.44998 AU
evening set	15546 Aug 01 12:02	5° $\text{P}$ 03'19			15547 Jun 02 03:37	0° $\text{E}$	
	15546 Aug 06 06:25	30° $\text{R}$ $\text{Q}$		evening rise	15547 Jun 06 13:31	6° $\text{E}$ 48'06	
inferior conj	15546 Aug 06 21:23	29° $\text{Q}$ 11'00	2°55'39		15547 Jun 22 03:09	0° $\text{Q}$	
minimum elong	15546 Aug 06 22:52	29° $\text{Q}$ 06'08	2°54'55	asc. node	15547 Jul 04 12:52	15° $\text{Q}$ 57'01	
min. Earth dist.	15546 Aug 08 05:18	27° $\text{Q}$ 26'09	0.67346 AU	evening max el	15547 Jul 04 20:48	16° $\text{Q}$ 17'03	20°23'46
morning rise	15546 Aug 12 09:07	22° $\text{Q}$ 44'57		retrograde	15547 Jul 12 19:26	20° $\text{Q}$ 49'15	
direct	15546 Aug 18 07:53	20° $\text{Q}$ 10'33		evening set	15547 Jul 16 21:25	19° $\text{Q}$ 14'15	
desc. node	15546 Aug 19 08:25	20° $\text{Q}$ 14'37		inferior conj	15547 Jul 22 03:36	13° $\text{Q}$ 09'48	3°07'40
morning max el	15546 Aug 30 15:27	27° $\text{Q}$ 32'11	25°33'37	minimum elong	15547 Jul 22 04:09	13° $\text{Q}$ 07'56	3°06'56
	15546 Sep 01 23:12	0° $\text{P}$		min. Earth dist.	15547 Jul 22 21:36	12° $\text{Q}$ 08'07	0.68408 AU
	15546 Sep 23 17:35	0° $\text{A}$		morning rise	15547 Jul 27 10:33	6° $\text{Q}$ 46'51	
morning set	15546 Oct 05 13:51	20° $\text{A}$ 06'26		direct	15547 Aug 01 21:53	4° $\text{Q}$ 23'19	
max. Earth dist.	15546 Oct 09 03:57	26° $\text{A}$ 44'33	1.35981 AU	desc. node	15547 Aug 06 05:49	5° $\text{Q}$ 36'21	
	15546 Oct 10 21:00	0° $\text{M}$		morning max el	15547 Aug 13 02:16	11° $\text{Q}$ 04'21	24°07'37
asc. node	15546 Oct 13 17:40	5° $\text{M}$ 34'49			15547 Aug 28 04:59	0° $\text{P}$	
					15547 Sep 16 11:07	0° $\text{A}$	
superior conj	15546 Oct 15 07:46	8° $\text{M}$ 44'37	0°14'28	morning set	15547 Sep 17 10:30	1° $\text{A}$ 39'53	
minimum elong	15546 Oct 15 06:54	8° $\text{M}$ 40'14	0°14'47	max. Earth dist.	15547 Sep 21 03:02	8° $\text{A}$ 06'52	1.38311 AU
behind sun begin	15546 Oct 15 04:23	8° $\text{M}$ 27'36					
behind sun end	15546 Oct 15 09:25	8° $\text{M}$ 52'53		superior conj	15547 Sep 28 11:53	21° $\text{A}$ 42'14	-0°18'51
evening rise	15546 Oct 23 05:21	24° $\text{M}$ 54'20		minimum elong	15547 Sep 28 13:11	21° $\text{A}$ 48'25	0°18'23
	15546 Oct 25 17:31	0° $\text{J}$		asc. node	15547 Sep 30 14:20	25° $\text{A}$ 44'44	
evening max el	15546 Nov 10 01:01	24° $\text{J}$ 20'04	20°05'28		15547 Oct 02 18:39	0° $\text{M}$	
desc. node	15546 Nov 15 05:13	28° $\text{J}$ 14'19		evening rise	15547 Oct 07 06:45	8° $\text{M}$ 53'54	
retrograde	15546 Nov 20 13:25	29° $\text{J}$ 34'29			15547 Oct 19 00:31	0° $\text{J}$	
evening set	15546 Nov 22 16:20	29° $\text{J}$ 22'42		evening max el	15547 Oct 23 17:27	5° $\text{J}$ 50'02	19°03'22
inferior conj	15546 Dec 01 11:56	25° $\text{J}$ 25'03	-4°45'30	retrograde	15547 Nov 01 15:45	10° $\text{J}$ 19'41	
minimum elong	15546 Dec 01 01:53	25° $\text{J}$ 40'08	4°41'54	desc. node	15547 Nov 02 02:28	10° $\text{J}$ 19'03	
min. Earth dist.	15546 Dec 03 07:15	24° $\text{J}$ 20'03	0.54887 AU	evening set	15547 Nov 03 12:51	10° $\text{J}$ 08'33	
morning rise	15546 Dec 09 10:31	21° $\text{J}$ 18'44		inferior conj	15547 Nov 11 22:15	5° $\text{J}$ 53'39	-3°06'07
direct	15546 Dec 14 07:26	20° $\text{J}$ 27'08		minimum elong	15547 Nov 11 14:34	6° $\text{J}$ 06'52	3°02'29
morning max el	15546 Dec 27 22:50	27° $\text{J}$ 11'49	24°15'28	min. Earth dist.	15547 Nov 14 18:01	3° $\text{J}$ 57'22	0.56219 AU
	15546 Dec 30 16:09	0° $\text{B}$		morning rise	15547 Nov 19 13:37	1° $\text{J}$ 13'57	
asc. node	15547 Jan 09 17:33	13° $\text{B}$ 54'16			15547 Nov 24 09:18	30° $\text{R}$ $\text{M}$	
	15547 Jan 18 09:46	0° $\approx$		direct	15547 Nov 25 06:25	29° $\text{M}$ 58'09	



	15547 Nov 26 03:33	0°♊		morning max el	15548 Nov 20 02:55	17°♎44'22	27°14'29
morning max el	15547 Dec 09 09:16	7°♊10'49	25°57'54		15548 Nov 30 08:19	0°♊	
	15547 Dec 26 04:04	0°♊		asc. node	15548 Dec 13 11:48	21°♊43'44	
asc. node	15547 Dec 27 14:44	2°♊32'58			15548 Dec 17 16:30	0°♊	
morning set	15548 Jan 06 08:04	21°♊52'39		morning set	15548 Dec 20 16:49	6°♊18'15	
	15548 Jan 10 01:01	0°♋					
				superior conj	15548 Dec 27 13:12	21°♊24'15	1°36'31
superior conj	15548 Jan 13 01:47	6°♋44'56	1°37'46	minimum elong	15548 Dec 27 12:28	21°♊20'05	1°37'21
minimum elong	15548 Jan 13 02:06	6°♋46'38	1°38'32	max. Earth dist.	15548 Dec 27 13:39	21°♊26'48	1.31053 AU
max. Earth dist.	15548 Jan 14 06:09	9°♋22'21	1.31504 AU		15548 Dec 31 09:46	0°♋	
evening rise	15548 Jan 20 03:23	22°♋05'47		evening rise	15549 Jan 03 08:09	6°♋22'32	
	15548 Jan 24 00:46	0°♌		desc. node	15549 Jan 14 22:38	28°♋52'52	
desc. node	15548 Jan 29 01:53	9°♌30'40			15549 Jan 15 14:20	0°♌	
	15548 Feb 11 00:28	0°♍		evening max el	15549 Feb 02 11:21	23°♌58'06	26°53'57
evening max el	15548 Feb 21 08:06	12°♍05'05	27°30'31		15549 Feb 11 00:44	0°♍	
retrograde	15548 Mar 06 07:20	19°♍29'01		retrograde	15549 Feb 16 11:46	1°♍12'24	
evening set	15548 Mar 13 03:07	17°♍18'12			15549 Feb 21 19:38	30°♌♌	
min. Earth dist.	15548 Mar 16 21:42	14°♍24'41	0.61558 AU	evening set	15549 Feb 23 01:31	29°♌22'57	
inferior conj	15548 Mar 20 00:09	11°♍35'28	-1°26'52	min. Earth dist.	15549 Feb 27 01:24	26°♌43'27	0.59309 AU
minimum elong	15548 Mar 20 03:14	11°♍28'25	1°25'42	inferior conj	15549 Mar 02 06:33	24°♌10'36	-2°53'39
asc. node	15548 Mar 24 11:57	7°♍56'50		minimum elong	15549 Mar 02 13:06	23°♌57'33	2°51'01
morning rise	15548 Mar 27 06:32	6°♍35'59		morning rise	15549 Mar 10 04:12	19°♌31'38	
direct	15548 Mar 29 10:49	6°♍15'19		asc. node	15549 Mar 11 09:21	19°♌19'14	
morning max el	15548 Apr 05 07:11	9°♍42'05	17°49'49	direct	15549 Mar 12 04:01	19°♌16'57	
	15548 Apr 18 17:50	0°♎		morning max el	15549 Mar 19 20:14	23°♌05'34	18°11'16
morning set	15548 Apr 21 00:26	4°♎03'43			15549 Mar 25 07:16	0°♍	
desc. node	15548 Apr 26 03:42	13°♎12'31		morning set	15549 Apr 04 11:20	17°♍52'14	
					15549 Apr 10 23:21	0°♎	
superior conj	15548 May 02 03:55	23°♎37'51	-0°47'17	desc. node	15549 Apr 13 00:21	3°♎43'43	
minimum elong	15548 May 01 23:34	23°♎19'20	0°47'16				
	15548 May 05 22:53	0°♏		superior conj	15549 Apr 14 04:20	5°♎49'55	-0°09'36
max. Earth dist.	15548 May 09 08:06	5°♏33'19	1.43519 AU	minimum elong	15549 Apr 14 03:33	5°♎46'22	0°09'54
evening rise	15548 May 16 05:52	16°♏32'37		behind sun begin	15549 Apr 13 21:33	5°♎19'24	
	15548 May 25 01:48	0°♐		behind sun end	15549 Apr 14 09:33	6°♎13'17	
evening max el	15548 Jun 16 17:31	0°♑09'42	21°35'34	max. Earth dist.	15549 Apr 21 18:54	19°♎04'14	1.41553 AU
	15548 Jun 16 13:39	0°♑		evening rise	15549 Apr 26 15:45	27°♎06'44	
asc. node	15548 Jun 20 09:48	3°♑20'53			15549 Apr 28 10:51	0°♏	
retrograde	15548 Jun 25 18:06	5°♑25'07			15549 May 18 17:56	0°♐	
evening set	15548 Jun 30 07:01	3°♑33'06		evening max el	15549 May 30 09:43	14°♐02'58	22°55'05
	15548 Jul 03 13:09	30°♑♐		asc. node	15549 Jun 07 06:48	19°♐39'13	
inferior conj	15548 Jul 05 12:40	27°♐18'00	3°08'13	retrograde	15549 Jun 09 14:49	20°♐02'59	
minimum elong	15548 Jul 05 12:15	27°♐19'27	3°07'22	evening set	15549 Jun 14 15:09	17°♐55'42	
min. Earth dist.	15548 Jul 05 17:16	27°♐01'55	0.68988 AU	inferior conj	15549 Jun 19 22:36	11°♐32'04	2°58'07
morning rise	15548 Jul 10 17:17	21°♐00'41		minimum elong	15549 Jun 19 21:19	11°♐36'30	2°57'04
direct	15548 Jul 15 16:19	18°♐53'01		min. Earth dist.	15549 Jun 19 14:13	12°♐01'10	0.69085 AU
desc. node	15548 Jul 23 03:08	22°♐26'53		morning rise	15549 Jun 25 03:23	5°♐22'04	
morning max el	15548 Jul 25 14:18	24°♐44'32	22°38'23	direct	15549 Jun 29 14:06	3°♐33'07	
	15548 Jul 30 07:34	0°♒		morning max el	15549 Jul 08 06:13	8°♐33'31	21°14'00
	15548 Aug 20 15:08	0°♓		desc. node	15549 Jul 10 00:21	10°♐24'04	
morning set	15548 Aug 28 08:22	12°♓14'39			15549 Jul 24 19:54	0°♒	
max. Earth dist.	15548 Sep 02 03:07	20°♓11'18	1.40699 AU	morning set	15549 Aug 08 06:23	21°♒48'50	
	15548 Sep 07 19:04	0°♑			15549 Aug 13 10:04	0°♓	
				max. Earth dist.	15549 Aug 15 08:21	3°♓07'27	1.42869 AU
superior conj	15548 Sep 09 23:45	3°♑55'30	-0°55'04				
minimum elong	15548 Sep 10 04:04	4°♑14'58	0°54'24	superior conj	15549 Aug 22 15:04	15°♓15'15	-1°30'28
asc. node	15548 Sep 16 10:56	15°♑50'59		minimum elong	15549 Aug 22 22:12	15°♓45'41	1°29'54
evening rise	15548 Sep 19 23:25	22°♑29'31			15549 Aug 31 01:29	0°♑	
	15548 Sep 23 23:37	0°♒		evening rise	15549 Sep 03 03:15	5°♑30'43	
evening max el	15548 Oct 05 21:26	18°♒06'22	18°23'24	asc. node	15549 Sep 03 07:32	5°♑50'01	
retrograde	15548 Oct 13 13:14	21°♒59'50			15549 Sep 18 09:56	0°♒	
evening set	15548 Oct 15 13:30	21°♒44'26		evening max el	15549 Sep 19 08:44	0°♒59'52	18°04'03
desc. node	15548 Oct 18 23:48	20°♒14'43		retrograde	15549 Sep 26 04:21	4°♒30'00	
inferior conj	15548 Oct 23 06:06	17°♒08'42	-1°22'06	evening set	15549 Sep 28 11:41	4°♒06'08	
minimum elong	15548 Oct 23 02:56	17°♒15'05	1°20'14		15549 Oct 04 13:07	30°♒♑	
min. Earth dist.	15548 Oct 26 12:01	14°♒32'39	0.58165 AU	inferior conj	15549 Oct 05 10:49	29°♑09'55	0°08'06
morning rise	15548 Oct 30 12:52	11°♒51'41		minimum elong	15549 Oct 05 11:06	29°♑09'17	0°08'20
direct	15548 Nov 05 19:53	10°♒08'49		transit middle	15549 Oct 05 11:06	29°♑09'17	0°08'20

transit begin	15549 Oct 05 08:16	29°♄15'54		inferior conj	15550 Sep 18 08:52	11°♄50'17	1°18'22
transit end	15549 Oct 05 13:56	29°♄02'39		minimum elong	15550 Sep 18 10:50	11°♄45'02	1°17'47
desc. node	15549 Oct 05 21:10	28°♄45'41		min. Earth dist.	15550 Sep 21 03:47	8°♄53'55	0.62696 AU
min. Earth dist.	15549 Oct 08 15:01	26°♄13'15	0.60421 AU	desc. node	15550 Sep 22 18:34	7°♄20'03	
morning rise	15549 Oct 12 07:21	23°♄21'52		morning rise	15550 Sep 24 18:38	5°♄40'54	
direct	15549 Oct 18 22:14	21°♄13'59		direct	15550 Oct 01 10:57	3°♄14'38	
morning max el	15549 Nov 02 04:20	29°♄05'24	27°54'04	morning max el	15550 Oct 15 11:40	11°♄13'20	27°54'35
	15549 Nov 03 02:02	0°♄			15550 Oct 30 07:47	0°♄	
	15549 Nov 24 06:59	0°♄			15550 Nov 16 15:43	0°♄	
asc. node	15549 Nov 30 08:45	11°♄17'59		asc. node	15550 Nov 17 05:38	1°♄08'59	
morning set	15549 Dec 04 21:08	20°♄27'52		morning set	15550 Nov 18 18:54	4°♄16'43	
	15549 Dec 09 07:26	0°♄		max. Earth dist.	15550 Nov 23 23:23	15°♄10'56	1.31817 AU
max. Earth dist.	15549 Dec 10 20:36	3°♄25'29	1.31154 AU				
				superior conj	15550 Nov 26 08:56	20°♄24'31	1°16'02
superior conj	15549 Dec 12 00:13	5°♄59'06	1°29'16	minimum elong	15550 Nov 26 06:43	20°♄12'19	1°16'36
minimum elong	15549 Dec 11 22:34	5°♄49'58	1°30'01		15550 Nov 30 17:22	0°♄	
evening rise	15549 Dec 18 16:46	20°♄47'28		evening rise	15550 Dec 03 03:22	5°♄16'18	
	15549 Dec 23 02:17	0°♄			15550 Dec 16 00:26	0°♄	
desc. node	15550 Jan 01 19:27	17°♄38'23		desc. node	15550 Dec 19 16:22	5°♄34'07	
	15550 Jan 10 15:21	0°♄		evening max el	15550 Dec 27 18:22	15°♄13'20	24°08'28
evening max el	15550 Jan 15 06:36	4°♄58'09	25°43'38	retrograde	15551 Jan 10 08:22	21°♄58'12	
retrograde	15550 Jan 29 04:50	11°♄59'38		evening set	15551 Jan 15 07:52	21°♄04'14	
evening set	15550 Feb 04 04:06	10°♄37'17		min. Earth dist.	15551 Jan 21 05:58	18°♄08'19	0.55536 AU
min. Earth dist.	15550 Feb 08 19:32	7°♄58'04	0.57205 AU	inferior conj	15551 Jan 23 06:37	16°♄54'53	-5°33'12
inferior conj	15550 Feb 11 17:06	5°♄58'36	-4°21'59	minimum elong	15551 Jan 23 14:08	16°♄43'31	5°31'17
minimum elong	15550 Feb 12 02:16	5°♄42'50	4°18'49	morning rise	15551 Jan 31 22:10	12°♄56'34	
morning rise	15550 Feb 20 03:22	1°♄41'03		direct	15551 Feb 03 08:13	12°♄41'29	
direct	15550 Feb 22 03:48	1°♄28'29		asc. node	15551 Feb 13 04:06	17°♄11'25	
asc. node	15550 Feb 26 06:45	2°♄24'07		morning max el	15551 Feb 13 17:39	17°♄43'24	19°58'35
morning max el	15550 Mar 03 01:07	5°♄49'46	18°53'32		15551 Feb 22 19:29	0°♄	
	15550 Mar 18 06:47	0°♄		morning set	15551 Mar 03 14:01	16°♄41'39	
morning set	15550 Mar 19 09:04	2°♄08'23			15551 Mar 10 02:52	0°♄	
				superior conj	15551 Mar 11 09:05	2°♄31'17	0°51'42
superior conj	15550 Mar 27 23:31	18°♄51'38	0°24'01	minimum elong	15551 Mar 11 11:35	2°♄43'40	0°51'21
minimum elong	15550 Mar 28 01:01	18°♄58'47	0°23'34	max. Earth dist.	15551 Mar 17 08:25	14°♄04'51	1.37045 AU
desc. node	15550 Mar 30 20:58	24°♄16'36		desc. node	15551 Mar 17 17:35	14°♄47'44	
	15550 Apr 03 00:33	0°♄		evening rise	15551 Mar 21 01:49	20°♄54'48	
max. Earth dist.	15550 Apr 04 01:47	1°♄52'15	1.39314 AU		15551 Mar 26 07:10	0°♄	
evening rise	15550 Apr 07 22:52	8°♄36'03			15551 Apr 15 08:00	0°♄	
	15550 Apr 21 09:04	0°♄		evening max el	15551 Apr 25 13:16	11°♄51'33	25°32'34
evening max el	15550 May 12 23:42	27°♄57'35	24°16'26	retrograde	15551 May 07 21:18	18°♄59'10	
	15550 May 15 04:02	0°♄		asc. node	15551 May 12 01:04	17°♄48'13	
retrograde	15550 May 24 08:15	4°♄36'27		evening set	15551 May 13 20:27	16°♄30'30	
asc. node	15550 May 25 03:54	4°♄33'34		min. Earth dist.	15551 May 18 03:10	11°♄49'44	0.67838 AU
evening set	15550 May 29 20:11	2°♄16'39		inferior conj	15551 May 19 13:21	9°♄59'56	2°06'18
	15550 Jun 01 01:29	30°♄		minimum elong	15551 May 19 11:10	10°♄06'56	2°04'53
min. Earth dist.	15550 Jun 03 10:14	26°♄59'13	0.68698 AU	morning rise	15551 May 25 02:21	4°♄08'46	
inferior conj	15550 Jun 04 07:29	25°♄47'28	2°37'37	direct	15551 May 28 14:01	2°♄59'06	
minimum elong	15550 Jun 04 05:34	25°♄53'57	2°36'20	morning max el	15551 Jun 04 10:18	6°♄41'43	19°01'59
morning rise	15550 Jun 09 15:02	19°♄46'13		desc. node	15551 Jun 13 18:34	18°♄31'58	
direct	15550 Jun 13 13:53	18°♄17'07		greatest brilliancy	15551 Jun 17 12:49	24°♄05'11	-0.7m
morning max el	15550 Jun 21 04:34	22°♄32'47	20°00'39		15551 Jun 21 10:22	0°♄	
desc. node	15550 Jun 26 21:30	29°♄10'05		morning set	15551 Jun 27 18:43	9°♄45'58	
	15550 Jun 27 12:48	0°♄			15551 Jul 10 19:29	0°♄	
morning set	15550 Jul 18 11:48	0°♄42'33		max. Earth dist.	15551 Jul 11 14:07	1°♄12'54	1.45642 AU
	15550 Jul 18 00:43	0°♄					
max. Earth dist.	15550 Jul 28 20:26	16°♄52'31	1.44574 AU	superior conj	15551 Jul 14 01:43	5°♄06'38	-2°13'29
				minimum elong	15551 Jul 14 03:45	5°♄14'38	2°14'14
superior conj	15550 Aug 03 06:59	25°♄36'25	-1°59'05	evening rise	15551 Jul 29 00:18	29°♄00'11	
minimum elong	15550 Aug 03 14:13	26°♄05'48	1°59'08		15551 Jul 29 15:01	0°♄	
	15550 Aug 05 23:32	0°♄		asc. node	15551 Aug 08 00:49	15°♄08'35	
evening rise	15550 Aug 16 13:13	17°♄44'56		evening max el	15551 Aug 17 13:37	27°♄58'01	18°21'33
asc. node	15550 Aug 21 04:10	25°♄37'42			15551 Aug 20 00:03	0°♄	
	15550 Aug 23 18:46	0°♄		retrograde	15551 Aug 23 23:05	1°♄22'37	
evening max el	15550 Sep 02 23:19	14°♄20'20	18°03'48	evening set	15551 Aug 26 23:37	0°♄31'57	
retrograde	15550 Sep 09 09:03	17°♄40'53			15551 Aug 27 20:05	30°♄	
evening set	15550 Sep 12 00:45	17°♄04'58					

inferior conj	15551 Sep 01 20:09	25° $\cap$ 01'02	2°09'09	evening max el	15552 Jul 31 00:50	11° $\cap$ 46'02	18°56'33
minimum elong	15551 Sep 01 22:31	24° $\cap$ 54'06	2°08'21	retrograde	15552 Aug 06 18:47	15° $\cap$ 27'50	
min. Earth dist.	15551 Sep 04 02:09	22° $\cap$ 22'52	0.64778 AU	evening set	15552 Aug 10 04:39	14° $\cap$ 20'39	
morning rise	15551 Sep 07 19:58	18° $\cap$ 39'30		inferior conj	15552 Aug 15 17:08	8° $\cap$ 35'33	2°42'52
desc. node	15551 Sep 09 16:02	17° $\cap$ 23'00		minimum elong	15552 Aug 15 19:04	8° $\cap$ 29'25	2°42'06
direct	15551 Sep 14 08:14	16° $\cap$ 03'25		min. Earth dist.	15552 Aug 17 09:06	6° $\cap$ 28'36	0.66524 AU
morning max el	15551 Sep 27 22:20	23° $\cap$ 58'54	27°20'04	morning rise	15552 Aug 21 08:39	2° $\cap$ 09'18	
	15551 Oct 03 08:19	0° $\underline{\cap}$			15552 Aug 24 21:13	30° $\mathbb{R}$ $\underline{\cap}$	
	15551 Oct 23 16:56	0° $\mathbb{L}$		desc. node	15552 Aug 26 13:28	29° $\mathbb{Q}$ 35'45	
morning set	15551 Nov 02 07:29	17° $\mathbb{L}$ 37'55		direct	15552 Aug 27 13:00	29° $\mathbb{Q}$ 32'03	
asc. node	15551 Nov 04 02:26	21° $\mathbb{L}$ 10'34			15552 Sep 30 08:31	0° $\cap$	
max. Earth dist.	15551 Nov 06 18:26	26° $\mathbb{L}$ 36'12	1.33036 AU	morning max el	15552 Sep 09 09:57	7° $\cap$ 10'56	26°18'04
	15551 Nov 08 09:33	0° $\mathbb{X}$			15552 Sep 27 03:59	0° $\underline{\cap}$	
				morning set	15552 Oct 15 07:44	0° $\mathbb{L}$ 24'48	
superior conj	15551 Nov 10 13:14	4° $\mathbb{X}$ 33'53	0°56'45		15552 Oct 15 02:24	0° $\mathbb{L}$	
minimum elong	15551 Nov 10 10:56	4° $\mathbb{X}$ 21'35	0°57'07	max. Earth dist.	15552 Oct 19 03:44	7° $\mathbb{L}$ 44'12	1.34780 AU
evening rise	15551 Nov 17 14:05	19° $\mathbb{X}$ 43'29		asc. node	15552 Oct 20 23:12	11° $\mathbb{L}$ 18'35	
	15551 Nov 22 13:17	0° $\mathbb{Z}$					
desc. node	15551 Dec 06 13:22	22° $\mathbb{Z}$ 21'29		superior conj	15552 Oct 24 10:38	18° $\mathbb{L}$ 21'25	0°31'31
evening max el	15551 Dec 09 04:22	25° $\mathbb{Z}$ 09'18	22°25'07	minimum elong	15552 Oct 24 08:59	18° $\mathbb{L}$ 12'53	0°31'48
	15551 Dec 15 19:07	0° $\approx$			15552 Oct 30 00:23	0° $\mathbb{X}$	
retrograde	15551 Dec 21 23:31	1° $\approx$ 29'26		evening rise	15552 Oct 31 23:02	4° $\mathbb{X}$ 04'30	
evening set	15551 Dec 25 16:00	0° $\approx$ 59'34			15552 Nov 15 08:12	0° $\mathbb{Z}$	
	15551 Dec 28 12:30	30° $\mathbb{R}$ $\mathbb{Z}$		evening max el	15552 Nov 19 22:32	5° $\mathbb{Z}$ 25'03	20°50'57
min. Earth dist.	15552 Jan 02 11:54	27° $\mathbb{Z}$ 27'29	0.54568 AU	desc. node	15552 Nov 22 10:28	7° $\mathbb{Z}$ 37'47	
inferior conj	15552 Jan 03 03:05	27° $\mathbb{Z}$ 06'10	-6°01'19	retrograde	15552 Dec 01 09:45	11° $\mathbb{Z}$ 06'37	
minimum elong	15552 Jan 03 02:43	27° $\mathbb{Z}$ 06'40	6°00'30	evening set	15552 Dec 03 22:11	10° $\mathbb{Z}$ 51'21	
morning rise	15552 Jan 11 14:33	23° $\mathbb{Z}$ 18'47		inferior conj	15552 Dec 12 18:02	6° $\mathbb{Z}$ 58'48	-5°28'56
direct	15552 Jan 14 20:27	22° $\mathbb{Z}$ 55'03		minimum elong	15552 Dec 12 09:34	7° $\mathbb{Z}$ 10'56	5°26'29
morning max el	15552 Jan 26 19:19	28° $\mathbb{Z}$ 40'29	21°26'38	min. Earth dist.	15552 Dec 13 17:25	6° $\mathbb{Z}$ 25'20	0.54498 AU
	15552 Jan 28 02:53	0° $\approx$		morning rise	15552 Dec 20 21:00	3° $\mathbb{Z}$ 04'47	
asc. node	15552 Jan 31 01:27	3° $\approx$ 25'44		direct	15552 Dec 25 03:49	2° $\mathbb{Z}$ 25'23	
	15552 Feb 15 07:20	0° $\mathbb{X}$		morning max el	15553 Jan 07 08:31	8° $\mathbb{Z}$ 51'07	23°12'08
morning set	15552 Feb 15 23:24	1° $\mathbb{X}$ 23'48		asc. node	15553 Jan 16 22:45	20° $\mathbb{Z}$ 48'54	
					15553 Jan 22 09:34	0° $\approx$	
superior conj	15552 Feb 23 05:12	16° $\mathbb{X}$ 38'14	1°12'51	morning set	15553 Jan 30 10:59	16° $\approx$ 08'10	
minimum elong	15552 Feb 23 07:41	16° $\mathbb{X}$ 51'09	1°12'48		15553 Feb 05 20:52	0° $\mathbb{X}$	
max. Earth dist.	15552 Feb 27 19:02	25° $\mathbb{X}$ 57'34	1.34965 AU				
	15552 Feb 29 20:25	0° $\mathbb{Y}$		superior conj	15553 Feb 06 08:39	1° $\mathbb{X}$ 03'26	1°27'28
evening rise	15552 Mar 02 21:17	3° $\mathbb{Y}$ 53'50		minimum elong	15553 Feb 06 10:31	1° $\mathbb{X}$ 13'28	1°27'48
desc. node	15552 Mar 03 14:12	5° $\mathbb{Y}$ 13'19		max. Earth dist.	15553 Feb 09 12:41	7° $\mathbb{X}$ 47'41	1.33248 AU
	15552 Mar 18 04:30	0° $\mathbb{Z}$		evening rise	15553 Feb 14 05:48	17° $\mathbb{X}$ 24'15	
evening max el	15552 Apr 07 03:00	25° $\mathbb{Z}$ 38'43	26°36'05	desc. node	15553 Feb 18 10:48	25° $\mathbb{X}$ 28'54	
	15552 Apr 12 06:20	0° $\mathbb{L}$			15553 Feb 20 22:11	0° $\mathbb{Y}$	
retrograde	15552 Apr 20 05:09	3° $\mathbb{L}$ 03'52			15553 Mar 12 12:44	0° $\mathbb{Z}$	
evening set	15552 Apr 26 14:13	0° $\mathbb{L}$ 31'23		evening max el	15553 Mar 20 16:20	9° $\mathbb{Z}$ 09'20	27°19'31
	15552 Apr 27 05:05	30° $\mathbb{R}$ $\mathbb{Z}$		retrograde	15553 Apr 03 06:56	16° $\mathbb{Z}$ 41'05	
asc. node	15552 Apr 27 22:20	29° $\mathbb{Z}$ 20'15		evening set	15553 Apr 09 23:20	14° $\mathbb{Z}$ 11'11	
min. Earth dist.	15552 Apr 30 14:58	26° $\mathbb{Z}$ 25'40	0.66530 AU	min. Earth dist.	15553 Apr 13 19:40	10° $\mathbb{Z}$ 37'33	0.64826 AU
inferior conj	15552 May 02 14:05	24° $\mathbb{Z}$ 04'39	1°23'21	asc. node	15553 Apr 14 19:41	9° $\mathbb{Z}$ 32'41	
minimum elong	15552 May 02 12:13	24° $\mathbb{Z}$ 10'16	1°22'03	inferior conj	15553 Apr 16 07:08	7° $\mathbb{Z}$ 55'02	0°27'41
morning rise	15552 May 08 11:19	18° $\mathbb{Z}$ 25'11		minimum elong	15553 Apr 16 06:23	7° $\mathbb{Z}$ 57'07	0°26'56
direct	15552 May 11 12:37	17° $\mathbb{Z}$ 33'11		morning rise	15553 Apr 22 15:22	2° $\mathbb{Z}$ 29'03	
morning max el	15552 May 17 22:31	20° $\mathbb{Z}$ 55'57	18°19'38	direct	15553 Apr 25 07:18	1° $\mathbb{Z}$ 51'59	
	15552 May 25 03:51	0° $\mathbb{L}$		morning max el	15553 May 01 14:54	5° $\mathbb{Z}$ 07'31	17°54'12
desc. node	15552 May 30 15:33	8° $\mathbb{L}$ 20'12		desc. node	15553 May 17 12:25	28° $\mathbb{Z}$ 26'55	
morning set	15552 Jun 06 21:49	19° $\mathbb{L}$ 49'59			15553 May 18 10:52	0° $\mathbb{L}$	
	15552 Jun 13 07:50	0° $\mathbb{Z}$		morning set	15553 May 19 04:21	1° $\mathbb{L}$ 12'30	
superior conj	15552 Jun 22 10:38	14° $\mathbb{Z}$ 17'37	-2°08'17	superior conj	15553 Jun 02 02:39	23° $\mathbb{L}$ 53'07	-1°44'34
minimum elong	15552 Jun 22 05:01	13° $\mathbb{Z}$ 55'43	2°08'56	minimum elong	15553 Jun 01 17:54	23° $\mathbb{L}$ 18'17	1°44'37
max. Earth dist.	15552 Jun 23 10:25	15° $\mathbb{Z}$ 50'24	1.45972 AU		15553 Jun 05 23:30	0° $\mathbb{Z}$	
	15552 Jul 02 12:32	0° $\mathbb{L}$		max. Earth dist.	15553 Jun 06 06:21	0° $\mathbb{Z}$ 26'53	1.45552 AU
evening rise	15552 Jul 08 10:34	9° $\mathbb{L}$ 14'17		evening rise	15553 Jun 18 01:46	18° $\mathbb{Z}$ 44'21	
greatest brilliancy	15552 Jul 18 10:54	24° $\mathbb{L}$ 47'41	-0.8m		15553 Jun 25 11:28	0° $\mathbb{L}$	
	15552 Jul 21 21:58	0° $\cap$		greatest brilliancy	15553 Jul 02 12:19	10° $\mathbb{L}$ 26'53	-0.6m
asc. node	15552 Jul 24 21:33	4° $\cap$ 16'48		asc. node	15553 Jul 11 18:22	22° $\mathbb{L}$ 53'25	

evening max el	15553 Jul 14 06:53	25° $\Omega$ 38'04	19°47'47	asc. node	15554 Jun 28 15:13	10° $\Omega$ 47'40	
retrograde	15553 Jul 21 17:14	29° $\Omega$ 49'11		retrograde	15554 Jul 05 16:13	14° $\Omega$ 21'04	
evening set	15553 Jul 25 13:03	28° $\Omega$ 24'32		evening set	15554 Jul 09 22:43	12° $\Omega$ 38'55	
inferior conj	15553 Jul 30 20:42	22° $\Omega$ 26'49	3°02'13	inferior conj	15554 Jul 15 04:22	6° $\Omega$ 29'55	3°09'14
minimum elong	15553 Jul 30 21:48	22° $\Omega$ 23'08	3°01'30	minimum elong	15554 Jul 15 04:30	6° $\Omega$ 29'27	3°08'27
min. Earth dist.	15553 Jul 31 22:40	20° $\Omega$ 59'39	0.67851 AU	min. Earth dist.	15554 Jul 15 16:43	5° $\Omega$ 47'10	0.68714 AU
morning rise	15553 Aug 05 06:05	16° $\Omega$ 01'24		morning rise	15554 Jul 20 10:01	0° $\Omega$ 08'58	
direct	15553 Aug 11 00:05	13° $\Omega$ 30'48			15554 Jul 20 14:08	30° $\Re$ $\Im$	
desc. node	15553 Aug 13 10:53	13° $\Omega$ 54'13		direct	15554 Jul 25 16:15	27° $\Im$ 51'24	
morning max el	15553 Aug 22 20:58	20° $\Omega$ 37'32	24°57'58	desc. node	15554 Jul 31 08:14	29° $\Im$ 56'14	
	15553 Aug 30 22:52	0° $\Re$			15554 Jul 31 10:28	0° $\Omega$	
	15553 Sep 20 08:11	0° $\Im$		morning max el	15554 Aug 05 07:47	4° $\Omega$ 12'17	23°29'27
morning set	15553 Sep 27 15:43	12° $\Im$ 28'16			15554 Aug 25 03:38	0° $\Re$	
max. Earth dist.	15553 Oct 01 04:35	18° $\Im$ 51'15	1.36945 AU	morning set	15554 Sep 09 03:03	23° $\Re$ 37'39	
	15553 Oct 07 01:43	0° $\Re$			15554 Sep 12 20:38	0° $\Im$	
				max. Earth dist.	15554 Sep 13 02:51	0° $\Im$ 27'01	1.39335 AU
superior conj	15553 Oct 07 22:07	1° $\Re$ 39'50	0°00'51				
minimum elong	15553 Oct 07 22:02	1° $\Re$ 39'29	0°01'13	superior conj	15554 Sep 20 19:53	14° $\Im$ 20'09	-0°34'02
behind sun begin	15553 Oct 07 15:32	1° $\Re$ 07'31		minimum elong	15554 Sep 20 22:23	14° $\Im$ 31'49	0°33'27
behind sun end	15553 Oct 08 04:33	2° $\Re$ 11'30		asc. node	15554 Sep 24 16:33	21° $\Im$ 37'58	
asc. node	15553 Oct 07 19:54	1° $\Re$ 28'57			15554 Sep 29 00:27	0° $\Re$	
evening rise	15553 Oct 16 03:56	18° $\Re$ 13'47		evening rise	15554 Sep 30 02:01	2° $\Re$ 04'10	
	15553 Oct 22 04:03	0° $\Re$		evening max el	15554 Oct 16 04:56	28° $\Re$ 18'24	18°43'47
evening max el	15553 Nov 02 06:58	16° $\Re$ 26'57	19°36'17		15554 Oct 18 02:24	0° $\Re$	
desc. node	15553 Nov 09 07:39	20° $\Re$ 58'21		retrograde	15554 Oct 24 12:50	2° $\Re$ 30'44	
retrograde	15553 Nov 12 02:50	21° $\Re$ 21'39		evening set	15554 Oct 26 10:41	2° $\Re$ 18'15	
evening set	15553 Nov 14 01:33	21° $\Re$ 10'58		desc. node	15554 Oct 27 04:55	2° $\Re$ 06'40	
inferior conj	15553 Nov 22 18:09	17° $\Re$ 07'12	-4°05'40		15554 Oct 31 13:40	30° $\Re$ $\Re$	
minimum elong	15553 Nov 22 08:31	17° $\Re$ 22'28	4°01'43	inferior conj	15554 Nov 03 13:21	27° $\Re$ 54'53	-2°21'06
min. Earth dist.	15553 Nov 25 01:46	15° $\Re$ 39'12	0.55359 AU	minimum elong	15554 Nov 03 07:35	28° $\Re$ 05'28	2°18'08
morning rise	15553 Nov 30 13:38	12° $\Re$ 47'36		min. Earth dist.	15554 Nov 06 15:18	25° $\Re$ 39'40	0.56994 AU
direct	15553 Dec 05 19:39	11° $\Re$ 46'03		morning rise	15554 Nov 11 01:20	22° $\Re$ 59'23	
morning max el	15553 Dec 19 17:17	18° $\Re$ 44'18	25°01'05	direct	15554 Nov 17 01:14	21° $\Re$ 31'50	
	15553 Dec 29 02:05	0° $\Im$		morning max el	15554 Dec 01 06:07	28° $\Re$ 54'40	26°34'24
asc. node	15554 Jan 03 19:58	9° $\Im$ 04'28			15554 Dec 02 08:29	0° $\Re$	
morning set	15554 Jan 14 22:53	0° $\Re$ 49'40		asc. node	15554 Dec 21 17:06	27° $\Re$ 58'21	
	15554 Jan 14 13:39	0° $\Re$			15554 Dec 22 19:12	0° $\Im$	
				morning set	15554 Dec 30 09:17	15° $\Im$ 22'19	
superior conj	15554 Jan 21 16:53	15° $\Re$ 39'37	1°35'46				
minimum elong	15554 Jan 21 17:48	15° $\Re$ 44'40	1°36'25	superior conj	15555 Jan 06 03:41	0° $\Re$ 19'22	1°37'58
max. Earth dist.	15554 Jan 23 13:43	19° $\Re$ 45'32	1.31996 AU	minimum elong	15555 Jan 06 03:32	0° $\Re$ 18'32	1°38'47
	15554 Jan 28 09:01	0° $\Re$			15555 Jan 06 00:13	0° $\Re$	
evening rise	15554 Jan 29 00:15	1° $\Re$ 18'36		max. Earth dist.	15555 Jan 06 19:53	1° $\Re$ 49'49	1.31251 AU
desc. node	15554 Feb 05 07:26	15° $\Re$ 29'35		evening rise	15555 Jan 13 01:55	15° $\Re$ 29'01	
	15554 Feb 13 20:40	0° $\Re$			15555 Jan 20 08:26	0° $\Re$	
evening max el	15554 Mar 03 03:49	22° $\Re$ 12'26	27°35'48	desc. node	15555 Jan 23 04:07	5° $\Re$ 08'08	
retrograde	15554 Mar 17 01:30	29° $\Re$ 41'17			15555 Feb 09 02:38	0° $\Re$	
evening set	15554 Mar 23 21:20	27° $\Re$ 21'34		evening max el	15555 Feb 13 11:04	4° $\Re$ 34'45	27°19'20
min. Earth dist.	15554 Mar 27 15:37	24° $\Re$ 15'05	0.62809 AU	retrograde	15555 Feb 27 11:18	11° $\Re$ 54'24	
inferior conj	15554 Mar 30 13:33	21° $\Re$ 23'59	-0°41'17	evening set	15555 Mar 06 05:14	9° $\Re$ 52'16	
minimum elong	15554 Mar 30 14:55	21° $\Re$ 20'37	0°40'59	min. Earth dist.	15555 Mar 10 01:24	7° $\Re$ 05'47	0.60602 AU
asc. node	15554 Apr 01 17:02	19° $\Re$ 22'02		inferior conj	15555 Mar 13 05:46	4° $\Re$ 21'42	-2°02'45
morning rise	15554 Apr 06 11:18	16° $\Re$ 13'52		minimum elong	15555 Mar 13 10:17	4° $\Re$ 11'56	2°00'56
direct	15554 Apr 08 19:14	15° $\Re$ 48'17			15555 Mar 19 09:56	30° $\Re$ $\Re$	
morning max el	15554 Apr 15 08:36	19° $\Re$ 08'03	17°46'10	asc. node	15555 Mar 19 14:25	29° $\Re$ 55'09	
	15554 Apr 23 09:46	0° $\Re$		morning rise	15555 Mar 20 18:40	29° $\Re$ 30'17	
morning set	15554 May 01 11:50	13° $\Re$ 45'44		direct	15555 Mar 22 20:38	29° $\Re$ 12'34	
desc. node	15554 May 04 09:12	18° $\Re$ 46'48			15555 Mar 26 04:50	0° $\Re$	
	15554 May 10 22:58	0° $\Re$		morning max el	15555 Mar 30 00:19	2° $\Re$ 47'31	17°56'28
				morning set	15555 Apr 14 14:21	27° $\Re$ 11'37	
superior conj	15554 May 13 14:34	4° $\Re$ 25'02	-1°09'27		15555 Apr 16 03:14	0° $\Re$	
minimum elong	15554 May 13 08:00	3° $\Re$ 57'50	1°09'19	desc. node	15555 Apr 21 05:54	9° $\Re$ 14'54	
max. Earth dist.	15554 May 19 23:51	14° $\Re$ 48'10	1.44438 AU				
evening rise	15554 May 28 12:56	28° $\Re$ 11'44		superior conj	15555 Apr 25 02:08	16° $\Re$ 01'44	-0°30'58
	15554 May 29 17:10	0° $\Re$		minimum elong	15555 Apr 24 23:25	15° $\Re$ 49'53	0°31'05
	15554 Jun 19 07:41	0° $\Omega$		max. Earth dist.	15555 May 02 13:41	28° $\Re$ 42'01	1.42735 AU
evening max el	15554 Jun 27 06:57	9° $\Omega$ 31'05	20°53'06		15555 May 03 08:40	0° $\Re$	

evening rise	15555 May 08 11:47	8° $\Pi$ 15'24			15556 Apr 24 23:49	0° $\Pi$	
	15555 May 22 20:49	0° $\mathfrak{E}$			15556 May 16 04:50	0° $\mathfrak{E}$	
evening max el	15555 Jun 10 01:38	23° $\mathfrak{E}$ 24'24	22°08'53	evening max el	15556 May 22 16:33	7° $\mathfrak{E}$ 17'58	23°29'55
asc. node	15555 Jun 15 12:08	27° $\mathfrak{E}$ 45'52		asc. node	15556 Jun 01 09:09	13° $\mathfrak{E}$ 30'47	
retrograde	15555 Jun 19 14:03	28° $\mathfrak{E}$ 58'25		retrograde	15556 Jun 02 09:26	13° $\mathfrak{E}$ 35'14	
evening set	15555 Jun 24 07:52	26° $\mathfrak{E}$ 59'40		evening set	15556 Jun 07 14:50	11° $\mathfrak{E}$ 21'58	
inferior conj	15555 Jun 29 14:01	20° $\mathfrak{E}$ 40'56	3°05'12	inferior conj	15556 Jun 12 23:42	4° $\mathfrak{E}$ 55'39	2°50'42
minimum elong	15555 Jun 29 13:13	20° $\mathfrak{E}$ 43'44	3°04'16	minimum elong	15556 Jun 12 22:07	5° $\mathfrak{E}$ 01'06	2°49'33
min. Earth dist.	15555 Jun 29 13:06	20° $\mathfrak{E}$ 44'07	0.69089 AU	min. Earth dist.	15556 Jun 12 09:46	5° $\mathfrak{E}$ 43'33	0.68978 AU
morning rise	15555 Jul 04 18:24	14° $\mathfrak{E}$ 26'42			15556 Jun 16 22:25	30° $\mathfrak{R}$ $\Pi$	
direct	15555 Jul 09 12:17	12° $\mathfrak{E}$ 26'35		morning rise	15556 Jun 18 05:22	28° $\Pi$ 49'31	
desc. node	15555 Jul 18 05:32	17° $\mathfrak{E}$ 17'33		direct	15556 Jun 22 10:58	27° $\Pi$ 09'05	
morning max el	15555 Jul 18 20:59	17° $\mathfrak{E}$ 55'29	22°01'32		15556 Jun 28 15:47	0° $\mathfrak{E}$	
	15555 Jul 28 21:09	0° $\Omega$		morning max el	15556 Jun 30 15:29	1° $\mathfrak{E}$ 48'58	20°41'18
	15555 Aug 18 05:39	0° $\mathfrak{M}$		desc. node	15556 Jul 04 02:45	5° $\mathfrak{E}$ 37'18	
morning set	15555 Aug 20 14:35	3° $\mathfrak{M}$ 46'04			15556 Jul 21 15:21	0° $\Omega$	
max. Earth dist.	15555 Aug 26 05:12	12° $\mathfrak{M}$ 55'10	1.41665 AU	morning set	15556 Jul 30 03:58	12° $\Omega$ 58'45	
				max. Earth dist.	15556 Aug 07 13:53	26° $\Omega$ 15'18	1.43660 AU
superior conj	15555 Sep 02 23:36	26° $\mathfrak{M}$ 12'31	-1°10'28		15556 Aug 09 21:24	0° $\mathfrak{M}$	
minimum elong	15555 Sep 03 05:14	26° $\mathfrak{M}$ 37'23	1°09'47				
	15555 Sep 05 02:54	0° $\mathfrak{L}$		superior conj	15556 Aug 14 05:01	7° $\mathfrak{M}$ 06'57	-1°43'51
asc. node	15555 Sep 11 13:09	11° $\mathfrak{L}$ 42'06		minimum elong	15556 Aug 14 12:44	7° $\mathfrak{M}$ 39'07	1°43'30
evening rise	15555 Sep 13 13:48	15° $\mathfrak{L}$ 27'05		evening rise	15556 Aug 26 10:41	28° $\mathfrak{M}$ 10'04	
	15555 Sep 21 16:09	0° $\mathfrak{M}$			15556 Aug 27 11:41	0° $\mathfrak{L}$	
evening max el	15555 Sep 29 12:36	10° $\mathfrak{M}$ 52'27	18°12'44	asc. node	15556 Aug 28 09:45	1° $\mathfrak{L}$ 36'55	
retrograde	15555 Oct 06 18:20	14° $\mathfrak{M}$ 34'16		evening max el	15556 Sep 12 01:41	23° $\mathfrak{L}$ 58'07	18°01'39
evening set	15555 Oct 08 21:29	14° $\mathfrak{M}$ 15'37		retrograde	15556 Sep 18 16:00	27° $\mathfrak{L}$ 22'52	
desc. node	15555 Oct 14 02:15	11° $\mathfrak{M}$ 18'52		evening set	15556 Sep 21 02:43	26° $\mathfrak{L}$ 54'19	
inferior conj	15555 Oct 16 06:27	9° $\mathfrak{M}$ 30'39	-0°41'37	inferior conj	15556 Sep 27 19:03	21° $\mathfrak{L}$ 49'42	0°40'21
minimum elong	15555 Oct 16 04:57	9° $\mathfrak{M}$ 33'52	0°40'32	minimum elong	15556 Sep 27 20:15	21° $\mathfrak{L}$ 46'44	0°40'09
min. Earth dist.	15555 Oct 19 12:42	6° $\mathfrak{M}$ 43'39	0.59107 AU	desc. node	15556 Sep 29 23:39	19° $\mathfrak{L}$ 39'17	
morning rise	15555 Oct 23 09:03	3° $\mathfrak{M}$ 59'38		min. Earth dist.	15556 Sep 30 19:49	18° $\mathfrak{L}$ 50'51	0.61395 AU
direct	15555 Oct 29 20:14	2° $\mathfrak{M}$ 05'54		morning rise	15556 Oct 04 10:58	15° $\mathfrak{L}$ 51'07	
morning max el	15555 Nov 13 03:10	9° $\mathfrak{M}$ 48'03	27°36'08	direct	15556 Oct 11 02:58	13° $\mathfrak{L}$ 34'45	
	15555 Nov 28 16:48	0° $\mathfrak{X}$		morning max el	15556 Oct 25 07:40	21° $\mathfrak{L}$ 30'32	27°59'02
asc. node	15555 Dec 08 14:08	17° $\mathfrak{X}$ 20'35			15556 Nov 01 18:01	0° $\mathfrak{M}$	
morning set	15555 Dec 14 16:24	29° $\mathfrak{X}$ 42'02			15556 Nov 20 18:56	0° $\mathfrak{X}$	
	15555 Dec 14 19:47	0° $\mathfrak{Z}$		asc. node	15556 Nov 24 11:04	7° $\mathfrak{X}$ 02'55	
max. Earth dist.	15555 Dec 21 03:52	13° $\mathfrak{Z}$ 54'21	1.31039 AU	morning set	15556 Nov 27 18:16	13° $\mathfrak{X}$ 43'50	
				max. Earth dist.	15556 Dec 03 09:39	25° $\mathfrak{X}$ 49'14	1.31369 AU
superior conj	15555 Dec 21 15:09	14° $\mathfrak{Z}$ 57'34	1°34'10				
minimum elong	15555 Dec 21 14:00	14° $\mathfrak{Z}$ 51'07	1°34'59	superior conj	15556 Dec 05 01:26	29° $\mathfrak{X}$ 29'04	1°24'24
evening rise	15555 Dec 28 08:36	29° $\mathfrak{Z}$ 50'19		minimum elong	15556 Dec 04 23:30	29° $\mathfrak{X}$ 18'19	1°25'04
	15555 Dec 28 10:24	0° $\approx$			15556 Dec 05 07:01	0° $\mathfrak{Z}$	
desc. node	15556 Jan 10 00:52	24° $\approx$ 16'18		evening rise	15556 Dec 11 18:17	14° $\mathfrak{Z}$ 17'31	
	15556 Jan 13 14:35	0° $\mathfrak{H}$			15556 Dec 19 11:22	0° $\approx$	
evening max el	15556 Jan 26 11:12	16° $\mathfrak{H}$ 05'43	26°27'42	desc. node	15556 Dec 26 21:44	12° $\approx$ 42'58	
retrograde	15556 Feb 09 10:41	23° $\mathfrak{H}$ 13'55		evening max el	15557 Jan 07 02:46	26° $\approx$ 44'21	25°05'13
evening set	15556 Feb 15 19:36	21° $\mathfrak{H}$ 35'31			15557 Jan 11 00:23	0° $\mathfrak{H}$	
min. Earth dist.	15556 Feb 20 00:39	18° $\mathfrak{H}$ 58'11	0.58391 AU	retrograde	15557 Jan 20 22:18	3° $\mathfrak{H}$ 39'55	
inferior conj	15556 Feb 23 04:03	16° $\mathfrak{H}$ 37'51	-3°31'48	evening set	15557 Jan 26 12:48	2° $\mathfrak{H}$ 29'25	
minimum elong	15556 Feb 23 11:59	16° $\mathfrak{H}$ 23'02	3°28'44		15557 Jan 31 05:45	30° $\mathfrak{R}$ $\approx$	
morning rise	15556 Mar 02 07:38	12° $\mathfrak{H}$ 07'54		min. Earth dist.	15557 Jan 31 14:58	29° $\approx$ 45'33	0.56427 AU
direct	15556 Mar 04 07:06	11° $\mathfrak{H}$ 54'29		inferior conj	15557 Feb 03 05:35	28° $\approx$ 04'12	-4°55'44
asc. node	15556 Mar 05 11:49	11° $\mathfrak{H}$ 59'35		minimum elong	15557 Feb 03 14:48	27° $\approx$ 49'17	4°52'55
morning max el	15556 Mar 12 10:20	15° $\mathfrak{H}$ 55'23	18°26'34	morning rise	15557 Feb 11 19:20	23° $\approx$ 55'52	
	15556 Mar 22 05:45	0° $\mathfrak{Y}$		direct	15557 Feb 13 22:33	23° $\approx$ 42'55	
morning set	15556 Mar 28 06:21	11° $\mathfrak{Y}$ 13'30		asc. node	15557 Feb 20 09:13	25° $\approx$ 49'54	
				morning max el	15557 Feb 23 10:33	28° $\approx$ 20'16	19°18'24
superior conj	15556 Apr 06 11:03	28° $\mathfrak{Y}$ 36'21	0°05'22		15557 Feb 25 00:28	0° $\mathfrak{H}$	
minimum elong	15556 Apr 06 11:25	28° $\mathfrak{Y}$ 38'02	0°04'58	morning set	15557 Mar 12 07:35	25° $\mathfrak{H}$ 38'46	
behind sun begin	15556 Apr 06 04:32	28° $\mathfrak{Y}$ 06'21			15557 Mar 14 11:54	0° $\mathfrak{Y}$	
behind sun end	15556 Apr 06 18:18	29° $\mathfrak{Y}$ 09'37					
desc. node	15556 Apr 07 02:32	29° $\mathfrak{Y}$ 47'18		superior conj	15557 Mar 20 12:59	11° $\mathfrak{Y}$ 56'50	0°36'32
	15556 Apr 07 05:19	0° $\mathfrak{B}$		minimum elong	15557 Mar 20 15:03	12° $\mathfrak{Y}$ 06'50	0°36'05
max. Earth dist.	15556 Apr 13 23:04	11° $\mathfrak{B}$ 56'44	1.40623 AU	desc. node	15557 Mar 24 23:10	20° $\mathfrak{Y}$ 20'34	
evening rise	15556 Apr 18 06:35	19° $\mathfrak{B}$ 12'48		max. Earth dist.	15557 Mar 27 05:17	24° $\mathfrak{Y}$ 28'41	1.38335 AU

	15557 Mar 30 07:40	0°♄		desc. node	15558 Mar 11 19:46	10°♄50'09	
evening rise	15557 Mar 30 22:32	1°♄04'50		evening rise	15558 Mar 13 08:59	13°♄42'31	
	15557 Apr 18 05:36	0°♄			15558 Mar 22 19:00	0°♄	
evening max el	15557 May 05 06:01	21°♄12'36	24°49'49		15558 Apr 13 01:52	0°♄	
retrograde	15557 May 17 01:15	28°♄05'45		evening max el	15558 Apr 17 19:37	5°♄04'46	26°01'33
asc. node	15557 May 19 06:17	27°♄45'05		retrograde	15558 Apr 30 12:25	12°♄21'55	
evening set	15557 May 22 18:05	25°♄41'23		asc. node	15558 May 06 03:30	10°♄15'39	
min. Earth dist.	15557 May 27 04:44	20°♄39'47	0.68386 AU	evening set	15558 May 06 15:51	9°♄51'01	
inferior conj	15557 May 28 07:33	19°♄10'50	2°25'41	min. Earth dist.	15558 May 10 19:51	5°♄25'11	0.67332 AU
minimum elong	15557 May 28 05:28	19°♄17'44	2°24'21	inferior conj	15558 May 12 11:32	3°♄21'03	1°49'34
morning rise	15557 Jun 02 17:07	13°♄13'50		minimum elong	15558 May 12 09:25	3°♄27'43	1°48'11
direct	15557 Jun 06 11:00	11°♄53'22			15558 May 15 07:39	30°♄♄	
morning max el	15557 Jun 13 17:06	15°♄53'38	19°33'47	morning rise	15558 May 18 03:42	27°♄34'29	
desc. node	15557 Jun 20 23:52	24°♄40'23		direct	15558 May 21 10:45	26°♄32'41	
	15557 Jun 24 18:46	0°♄			15558 May 27 23:26	0°♄	
greatest brilliancy	15557 Jun 26 09:49	2°♄21'59	-0.6m	morning max el	15558 May 28 01:47	0°♄05'40	18°41'49
morning set	15557 Jul 09 07:22	21°♄49'33		desc. node	15558 Jun 07 20:55	14°♄14'42	
	15557 Jul 14 14:32	0°♄			15558 Jun 18 02:09	0°♄	
max. Earth dist.	15557 Jul 21 04:16	10°♄16'09	1.45110 AU	morning set	15558 Jun 18 21:01	1°♄13'35	
				max. Earth dist.	15558 Jul 03 22:50	24°♄43'51	1.45875 AU
superior conj	15557 Jul 25 11:06	17°♄03'52	-2°07'22				
minimum elong	15557 Jul 25 16:48	17°♄26'38	2°07'45	superior conj	15558 Jul 04 23:47	26°♄21'15	-2°13'48
	15557 Aug 02 10:42	0°♄		minimum elong	15558 Jul 04 22:26	26°♄15'58	2°14'36
evening rise	15557 Aug 08 11:28	10°♄00'24			15558 Jul 07 07:46	0°♄	
asc. node	15557 Aug 15 06:22	21°♄18'09		evening rise	15558 Jul 20 11:49	20°♄48'32	
	15557 Aug 20 19:07	0°♄			15558 Jul 26 06:07	0°♄	
evening max el	15557 Aug 26 16:28	7°♄26'27	18°09'12	greatest brilliancy	15558 Jul 26 23:15	1°♄07'59	-0.9m
retrograde	15557 Sep 02 01:09	10°♄47'25		asc. node	15558 Aug 02 03:04	10°♄40'24	
evening set	15557 Sep 04 20:27	10°♄05'40		evening max el	15558 Aug 10 05:46	21°♄09'36	18°34'28
inferior conj	15557 Sep 10 23:13	4°♄43'57	1°42'08	retrograde	15558 Aug 16 17:51	24°♄39'49	
minimum elong	15557 Sep 11 01:29	4°♄37'38	1°41'24	evening set	15558 Aug 19 22:17	23°♄42'23	
min. Earth dist.	15557 Sep 13 12:58	1°♄53'06	0.63611 AU	inferior conj	15558 Aug 25 15:00	18°♄05'32	2°25'21
	15557 Sep 15 09:40	30°♄♄		minimum elong	15558 Aug 25 17:15	17°♄58'42	2°24'33
desc. node	15557 Sep 16 21:05	28°♄42'40		min. Earth dist.	15558 Aug 27 15:12	15°♄39'04	0.65569 AU
morning rise	15557 Sep 17 04:33	28°♄28'03		morning rise	15558 Aug 31 11:03	11°♄41'17	
direct	15557 Sep 23 19:38	25°♄56'18		desc. node	15558 Sep 03 18:32	9°♄38'54	
	15557 Oct 03 07:15	0°♄		direct	15558 Sep 06 20:30	9°♄03'20	
morning max el	15557 Oct 07 16:52	3°♄56'06	27°43'47	morning max el	15558 Sep 20 03:59	16°♄53'51	26°56'28
	15557 Oct 27 07:30	0°♄			15558 Oct 01 02:07	0°♄	
asc. node	15557 Nov 11 07:57	26°♄59'10			15558 Oct 20 04:15	0°♄	
morning set	15557 Nov 11 12:30	27°♄21'58		morning set	15558 Oct 25 20:17	10°♄29'51	
	15557 Nov 12 19:46	0°♄		asc. node	15558 Oct 29 04:45	17°♄04'19	
max. Earth dist.	15557 Nov 16 09:24	7°♄25'48	1.32260 AU	max. Earth dist.	15558 Oct 30 00:04	18°♄41'26	1.33710 AU
superior conj	15557 Nov 19 08:34	13°♄48'25	1°08'36	superior conj	15558 Nov 03 10:18	27°♄49'53	0°46'47
minimum elong	15557 Nov 19 06:14	13°♄35'45	1°09'04	minimum elong	15558 Nov 03 08:10	27°♄38'40	0°47'06
evening rise	15557 Nov 26 05:09	28°♄46'01			15558 Nov 04 10:56	0°♄	
	15557 Nov 26 18:57	0°♄		evening rise	15558 Nov 10 15:22	13°♄11'27	
desc. node	15557 Dec 13 18:42	0°♄12'27			15558 Nov 19 02:31	0°♄	
	15557 Dec 13 14:56	0°♄		desc. node	15558 Nov 30 15:44	16°♄24'45	
evening max el	15557 Dec 19 12:38	6°♄47'06	23°24'27	evening max el	15558 Dec 01 01:12	16°♄48'20	21°43'17
retrograde	15558 Jan 01 20:44	13°♄23'36		retrograde	15558 Dec 13 08:15	22°♄53'06	
evening set	15558 Jan 06 07:14	12°♄40'55		evening set	15558 Dec 16 11:31	22°♄30'57	
min. Earth dist.	15558 Jan 12 23:20	9°♄31'45	0.55016 AU	inferior conj	15558 Dec 25 03:27	18°♄40'05	-5°55'10
inferior conj	15558 Jan 14 10:59	8°♄39'56	-5°51'55	minimum elong	15558 Dec 24 23:05	18°♄46'12	5°53'56
minimum elong	15558 Jan 14 15:47	8°♄32'57	5°50'43	min. Earth dist.	15558 Dec 25 04:56	18°♄38'01	0.54420 AU
morning rise	15558 Jan 23 01:49	4°♄47'42		morning rise	15559 Jan 02 11:18	14°♄52'05	
direct	15558 Jan 25 18:52	4°♄29'58		direct	15559 Jan 06 03:49	14°♄22'20	
morning max el	15558 Feb 05 21:02	9°♄50'57	20°33'22	morning max el	15559 Jan 18 16:40	20°♄26'10	22°09'52
asc. node	15558 Feb 07 06:37	11°♄16'50		asc. node	15559 Jan 25 03:57	28°♄03'04	
	15558 Feb 19 11:18	0°♄			15559 Jan 26 12:29	0°♄	
morning set	15558 Feb 24 14:44	10°♄16'52		morning set	15559 Feb 09 01:19	25°♄00'59	
					15559 Feb 11 09:32	0°♄	
superior conj	15558 Mar 04 03:30	25°♄49'48	1°01'27				
minimum elong	15558 Mar 04 06:05	26°♄02'55	1°01'13	superior conj	15559 Feb 16 03:05	10°♄05'41	1°19'48
	15558 Mar 06 05:14	0°♄		minimum elong	15559 Feb 16 05:22	10°♄17'44	1°19'56
max. Earth dist.	15558 Mar 09 12:43	6°♄29'11	1.36122 AU	max. Earth dist.	15559 Feb 20 02:10	18°♄19'29	1.34191 AU

evening rise	15559 Feb 24 10:29	26° $\text{H}$ 56'36		minimum elong	15560 Jan 31 10:19	24° $\approx$ 44'08	1°32'13
	15559 Feb 26 00:57	0° $\text{Y}$			15560 Feb 02 20:50	0° $\text{H}$	
desc. node	15559 Feb 26 16:22	1° $\text{Y}$ 12'22		max. Earth dist.	15560 Feb 02 23:21	0° $\text{H}$ 13'25	1.32660 AU
	15559 Mar 16 03:00	0° $\text{B}$		evening rise	15560 Feb 07 23:33	10° $\text{H}$ 37'52	
evening max el	15559 Mar 31 09:31	18° $\text{B}$ 47'03	26°57'26	desc. node	15560 Feb 13 13:00	21° $\text{H}$ 22'23	
retrograde	15559 Apr 13 17:43	26° $\text{B}$ 15'45			15560 Feb 18 09:22	0° $\text{Y}$	
evening set	15559 Apr 20 06:11	23° $\text{B}$ 43'53			15560 Mar 10 19:37	0° $\text{B}$	
asc. node	15559 Apr 23 00:49	21° $\text{B}$ 09'01		evening max el	15560 Mar 12 22:28	2° $\text{B}$ 08'12	27°30'07
min. Earth dist.	15559 Apr 24 04:59	19° $\text{B}$ 51'57	0.65855 AU	retrograde	15560 Mar 26 16:21	9° $\text{B}$ 38'45	
inferior conj	15559 Apr 26 09:21	17° $\text{B}$ 20'43	1°01'22	evening set	15560 Apr 02 10:53	7° $\text{B}$ 12'22	
minimum elong	15559 Apr 26 07:50	17° $\text{B}$ 25'07	1°00'14	min. Earth dist.	15560 Apr 06 06:04	3° $\text{B}$ 51'05	0.64007 AU
morning rise	15559 May 02 10:54	11° $\text{B}$ 46'24		inferior conj	15560 Apr 08 22:18	1° $\text{B}$ 03'25	0°00'07
direct	15559 May 05 08:06	11° $\text{B}$ 01'02		minimum elong	15560 Apr 08 22:18	1° $\text{B}$ 03'23	0°00'16
morning max el	15559 May 11 15:58	14° $\text{B}$ 19'15	18°06'35	transit middle	15560 Apr 08 22:18	1° $\text{B}$ 03'23	0°00'16
	15559 May 23 02:44	0° $\text{II}$		transit begin	15560 Apr 08 19:11	1° $\text{B}$ 11'35	
desc. node	15559 May 25 17:50	4° $\text{II}$ 11'39		transit end	15560 Apr 09 01:25	0° $\text{B}$ 55'13	
morning set	15559 May 30 11:39	11° $\text{II}$ 50'52		asc. node	15560 Apr 08 22:09	1° $\text{B}$ 03'47	
	15559 Jun 10 19:56	0° $\text{E}$			15560 Apr 09 22:47	30° $\text{R}$ $\text{Y}$	
superior conj	15559 Jun 14 09:35	5° $\text{E}$ 37'03	-2°00'08	morning rise	15560 Apr 15 11:59	25° $\text{Y}$ 43'46	
minimum elong	15559 Jun 14 01:50	5° $\text{E}$ 06'39	2°00'31	direct	15560 Apr 18 00:28	25° $\text{Y}$ 11'52	
max. Earth dist.	15559 Jun 16 19:22	9° $\text{E}$ 23'10	1.45891 AU	morning max el	15560 Apr 24 09:18	28° $\text{Y}$ 27'29	17°48'35
	15559 Jun 30 02:14	0° $\text{O}$			15560 Apr 25 20:22	0° $\text{B}$	
evening rise	15559 Jun 30 12:34	0° $\text{O}$ 39'53		morning set	15560 May 11 05:31	23° $\text{B}$ 46'18	
greatest brilliancy	15559 Jul 12 15:33	19° $\text{O}$ 11'56	-0.7m	desc. node	15560 May 11 14:40	24° $\text{B}$ 25'01	
asc. node	15559 Jul 19 23:48	29° $\text{O}$ 36'18			15560 May 14 22:10	0° $\text{II}$	
	15559 Jul 20 07:08	0° $\text{P}$		superior conj	15560 May 24 09:04	15° $\text{II}$ 34'26	-1°30'33
evening max el	15559 Jul 24 15:02	5° $\text{P}$ 00'14	19°16'33	minimum elong	15560 May 24 00:47	15° $\text{II}$ 01'02	1°30'27
retrograde	15559 Jul 31 14:53	8° $\text{P}$ 52'41		max. Earth dist.	15560 May 29 15:11	23° $\text{II}$ 57'50	1.45163 AU
evening set	15559 Aug 04 05:01	7° $\text{P}$ 37'59			15560 Jun 02 11:29	0° $\text{E}$	
inferior conj	15559 Aug 09 15:04	1° $\text{P}$ 47'29	2°52'43	evening rise	15560 Jun 09 00:03	10° $\text{E}$ 04'19	
minimum elong	15559 Aug 09 16:41	1° $\text{P}$ 42'14	2°51'57		15560 Jun 22 07:03	0° $\text{O}$	
min. Earth dist.	15559 Aug 11 01:02	29° $\text{O}$ 56'48	0.67148 AU	asc. node	15560 Jul 05 20:37	17° $\text{O}$ 56'49	
	15559 Aug 11 00:02	30° $\text{R}$ $\text{O}$		evening max el	15560 Jul 06 18:36	18° $\text{O}$ 53'28	20°13'59
morning rise	15559 Aug 15 03:44	25° $\text{O}$ 21'20		retrograde	15560 Jul 14 13:51	23° $\text{O}$ 19'58	
direct	15559 Aug 21 04:00	22° $\text{O}$ 46'03		evening set	15560 Jul 18 14:13	21° $\text{O}$ 47'35	
desc. node	15559 Aug 21 15:58	22° $\text{O}$ 47'01		inferior conj	15560 Jul 23 20:41	15° $\text{O}$ 44'44	3°06'36
	15559 Sep 02 10:17	0° $\text{P}$		minimum elong	15560 Jul 23 21:22	15° $\text{O}$ 42'21	3°05'52
morning max el	15559 Sep 02 15:11	0° $\text{P}$ 12'19	25°45'37	min. Earth dist.	15560 Jul 24 16:41	14° $\text{O}$ 36'26	0.68278 AU
	15559 Sep 25 00:01	0° $\text{E}$		morning rise	15560 Jul 29 04:11	9° $\text{O}$ 21'02	
morning set	15559 Oct 08 14:01	22° $\text{E}$ 58'49		direct	15560 Aug 03 17:14	6° $\text{O}$ 55'38	
max. Earth dist.	15559 Oct 12 05:20	29° $\text{E}$ 46'01	1.35662 AU	desc. node	15560 Aug 07 13:20	7° $\text{O}$ 53'03	
	15559 Oct 12 08:16	0° $\text{M}$		morning max el	15560 Aug 15 02:04	13° $\text{O}$ 43'42	24°20'50
asc. node	15559 Oct 16 01:27	7° $\text{M}$ 13'39			15560 Aug 28 07:31	0° $\text{P}$	
					15560 Sep 16 20:01	0° $\text{E}$	
superior conj	15559 Oct 18 03:51	11° $\text{M}$ 25'56	0°19'08	morning set	15560 Sep 19 13:41	4° $\text{E}$ 40'26	
minimum elong	15559 Oct 18 02:45	11° $\text{M}$ 20'18	0°19'26	max. Earth dist.	15560 Sep 23 04:46	11° $\text{E}$ 04'06	1.37957 AU
evening rise	15559 Oct 25 22:51	27° $\text{M}$ 28'05					
	15559 Oct 27 04:27	0° $\text{J}$		superior conj	15560 Sep 30 09:57	24° $\text{E}$ 29'10	-0°13'34
evening max el	15559 Nov 13 01:06	27° $\text{J}$ 21'27	20°16'31	minimum elong	15560 Sep 30 10:52	24° $\text{E}$ 33'31	0°13'07
	15559 Nov 16 03:09	0° $\text{B}$		behind sun begin	15560 Sep 30 06:50	24° $\text{E}$ 14'09	
desc. node	15559 Nov 17 12:52	0° $\text{B}$ 54'39		behind sun end	15560 Sep 30 14:53	24° $\text{E}$ 52'54	
retrograde	15559 Nov 23 19:25	2° $\text{B}$ 43'01		asc. node	15560 Oct 01 22:06	27° $\text{E}$ 23'57	
evening set	15559 Nov 26 00:23	2° $\text{B}$ 30'33			15560 Oct 03 06:03	0° $\text{M}$	
	15559 Dec 02 09:10	30° $\text{R}$ $\text{J}$		evening rise	15560 Oct 09 01:13	11° $\text{M}$ 30'31	
inferior conj	15559 Dec 04 20:28	28° $\text{J}$ 34'31	-4°58'14		15560 Oct 19 00:46	0° $\text{J}$	
minimum elong	15559 Dec 04 10:34	28° $\text{J}$ 49'09	4°54'53	evening max el	15560 Oct 25 15:28	8° $\text{J}$ 43'58	19°11'07
min. Earth dist.	15559 Dec 06 10:54	27° $\text{J}$ 37'41	0.54760 AU	desc. node	15560 Nov 03 10:04	13° $\text{J}$ 19'33	
morning rise	15559 Dec 12 20:08	24° $\text{J}$ 32'05		retrograde	15560 Nov 03 19:11	13° $\text{J}$ 20'00	
direct	15559 Dec 17 13:33	23° $\text{J}$ 43'52		evening set	15560 Nov 05 16:19	13° $\text{J}$ 09'10	
	15559 Dec 30 16:25	0° $\text{B}$		inferior conj	15560 Nov 14 03:51	8° $\text{J}$ 57'14	-3°21'59
morning max el	15559 Dec 31 02:32	0° $\text{B}$ 23'40	23°59'12	minimum elong	15560 Nov 13 19:33	9° $\text{J}$ 11'12	3°18'13
asc. node	15560 Jan 12 01:13	15° $\text{B}$ 50'03		min. Earth dist.	15560 Nov 16 20:54	7° $\text{J}$ 07'56	0.55977 AU
	15560 Jan 19 20:38	0° $\approx$		morning rise	15560 Nov 21 20:17	4° $\text{J}$ 22'51	
morning set	15560 Jan 24 13:15	9° $\approx$ 44'42		direct	15560 Nov 27 10:24	3° $\text{J}$ 10'53	
				morning max el	15560 Dec 11 12:19	10° $\text{J}$ 20'08	25°43'58
superior conj	15560 Jan 31 08:50	24° $\approx$ 36'01	1°31'44		15560 Dec 26 09:16	0° $\text{B}$	

asc. node	15560 Dec 28 22:23	4°♄22'57			15561 Dec 19 03:39	0°♄	
morning set	15561 Jan 08 00:43	24°♄22'49		morning set	15561 Dec 23 09:57	8°♄50'58	
	15561 Jan 10 14:31	0°♄					
superior conj	15561 Jan 14 18:22	9°♄14'02	1°37'27	superior conj	15561 Dec 30 05:42	23°♄54'17	1°37'06
minimum elong	15561 Jan 14 18:50	9°♄16'37	1°38'11	minimum elong	15561 Dec 30 05:07	23°♄50'59	1°37'56
max. Earth dist.	15561 Jan 16 02:57	12°♄14'26	1.31611 AU	max. Earth dist.	15561 Dec 30 10:11	24°♄19'22	1.31086 AU
evening rise	15561 Jan 21 21:19	24°♄39'10		evening rise	15562 Jan 01 23:14	0°♄	
	15561 Jan 24 12:08	0°♄			15562 Jan 06 01:22	8°♄55'01	
desc. node	15561 Jan 30 09:39	11°♄14'21		desc. node	15562 Jan 16 20:52	0°♄	
	15561 Feb 10 23:46	0°♄			15562 Jan 17 06:21	0°♄41'23	
evening max el	15561 Feb 23 08:17	14°♄54'41	27°33'01	evening max el	15562 Feb 05 12:38	26°♄55'47	27°01'39
retrograde	15561 Mar 09 07:16	22°♄20'24		retrograde	15562 Feb 09 02:52	0°♄	
evening set	15561 Mar 16 03:17	20°♄06'55		evening set	15562 Feb 19 13:17	4°♄11'48	
min. Earth dist.	15561 Mar 19 21:35	17°♄10'26	0.61882 AU		15562 Feb 26 04:15	2°♄18'56	
inferior conj	15561 Mar 22 23:05	14°♄20'05	-1°14'29	min. Earth dist.	15562 Mar 01 15:27	30°♄18'48	
minimum elong	15561 Mar 23 01:41	14°♄14'01	1°13'34	inferior conj	15562 Mar 02 02:55	29°♄37'55	0.59640 AU
asc. node	15561 Mar 26 19:32	11°♄03'51		minimum elong	15562 Mar 05 08:07	27°♄01'34	-2°40'08
morning rise	15561 Mar 30 03:12	9°♄17'54		morning rise	15562 Mar 05 14:09	26°♄49'18	2°37'42
direct	15561 Apr 01 08:20	8°♄56'07		asc. node	15562 Mar 13 03:34	22°♄19'19	
morning max el	15561 Apr 08 02:38	12°♄20'43	17°48'19	direct	15562 Mar 13 16:55	22°♄12'04	
	15561 Apr 20 02:19	0°♄		morning max el	15562 Mar 15 03:46	22°♄04'00	
morning set	15561 Apr 23 21:50	6°♄44'13			15562 Mar 22 16:30	25°♄48'54	18°06'48
desc. node	15561 Apr 28 11:25	14°♄49'04		morning set	15562 Mar 26 05:59	0°♄	
					15562 Apr 07 06:43	20°♄27'26	
superior conj	15561 May 05 07:09	26°♄34'50	-0°53'10	desc. node	15562 Apr 12 10:01	0°♄	
minimum elong	15561 May 05 02:12	26°♄13'57	0°53'06		15562 Apr 15 08:08	5°♄19'45	
	15561 May 07 08:03	0°♄		superior conj	15562 Apr 17 04:21	8°♄38'07	-0°15'06
max. Earth dist.	15561 May 12 07:23	8°♄09'40	1.43773 AU	minimum elong	15562 Apr 17 03:06	8°♄32'30	0°15'22
evening rise	15561 May 19 14:36	19°♄43'27		behind sun begin	15562 Apr 17 01:01	8°♄23'15	
	15561 May 26 08:03	0°♄		behind sun end	15562 Apr 17 05:10	8°♄41'45	
	15561 Jun 17 02:08	0°♄		max. Earth dist.	15562 Apr 24 18:44	21°♄45'57	1.41871 AU
evening max el	15561 Jun 19 16:05	2°♄46'05	21°24'14	evening rise	15562 Apr 29 21:28	0°♄09'29	
asc. node	15561 Jun 22 17:30	5°♄29'12			15562 Apr 29 19:06	0°♄	
retrograde	15561 Jun 28 12:39	7°♄55'01			15562 May 19 19:54	0°♄	
evening set	15561 Jul 02 23:52	6°♄05'32		evening max el	15562 Jun 02 08:52	16°♄39'26	22°43'00
inferior conj	15561 Jul 08 05:26	29°♄51'53	3°08'48	asc. node	15562 Jun 09 14:27	21°♄58'34	
minimum elong	15561 Jul 08 05:10	29°♄52'50	3°07'59	retrograde	15562 Jun 12 09:42	22°♄32'49	
	15561 Jul 08 03:07	30°♄08'51		evening set	15562 Jun 17 08:18	20°♄27'46	
min. Earth dist.	15561 Jul 08 12:02	29°♄28'51	0.68933 AU	inferior conj	15562 Jun 22 15:22	14°♄05'21	3°00'18
morning rise	15561 Jul 13 10:14	23°♄33'27		minimum elong	15562 Jun 22 14:12	14°♄09'23	2°59'18
direct	15561 Jul 18 11:06	21°♄23'07		min. Earth dist.	15562 Jun 22 08:57	14°♄27'40	0.69103 AU
desc. node	15561 Jul 25 10:40	24°♄31'33		morning rise	15562 Jun 27 19:58	7°♄54'07	
morning max el	15561 Jul 28 13:44	27°♄22'36	22°51'27	direct	15562 Jul 02 08:33	6°♄02'09	
	15561 Jul 31 00:45	0°♄		morning max el	15562 Jul 11 04:48	11°♄09'49	21°25'57
	15561 Aug 21 21:42	0°♄		desc. node	15562 Jul 12 07:58	12°♄19'55	
morning set	15561 Aug 31 15:08	15°♄24'34			15562 Jul 25 23:57	0°♄	
max. Earth dist.	15561 Sep 05 03:58	22°♄59'47	1.40349 AU	morning set	15562 Aug 11 16:30	25°♄07'08	
	15561 Sep 09 04:58	0°♄			15562 Aug 14 18:15	0°♄	
superior conj	15561 Sep 13 00:31	6°♄49'50	-0°49'32	max. Earth dist.	15562 Aug 18 08:17	5°♄48'21	1.42569 AU
minimum elong	15561 Sep 13 04:21	7°♄07'16	0°48'53	superior conj	15562 Aug 25 19:10	18°♄18'22	-1°25'23
asc. node	15561 Sep 18 18:44	17°♄31'14		minimum elong	15562 Aug 26 01:58	18°♄47'37	1°24'47
evening rise	15561 Sep 22 19:24	25°♄10'24			15562 Sep 01 11:05	0°♄	
	15561 Sep 25 08:32	0°♄		asc. node	15562 Sep 05 15:19	7°♄31'43	
evening max el	15561 Oct 08 18:02	20°♄54'40	18°28'03	evening rise	15562 Sep 06 01:26	8°♄17'32	
retrograde	15561 Oct 16 13:44	24°♄52'39			15562 Sep 19 00:21	0°♄	
evening set	15561 Oct 18 13:12	24°♄38'10		evening max el	15562 Sep 22 04:35	3°♄43'43	18°05'45
desc. node	15561 Oct 21 07:20	23°♄34'00		retrograde	15562 Sep 29 02:26	7°♄16'20	
inferior conj	15561 Oct 26 08:28	20°♄05'47	-1°37'15	evening set	15562 Oct 01 08:40	6°♄53'55	
minimum elong	15561 Oct 26 04:39	20°♄13'18	1°35'05	inferior conj	15562 Oct 08 10:17	2°♄00'37	-0°04'24
min. Earth dist.	15561 Oct 29 13:49	17°♄34'27	0.57847 AU	minimum elong	15562 Oct 08 10:09	2°♄00'56	0°03'56
morning rise	15561 Nov 02 16:37	14°♄54'08		transit middle	15562 Oct 08 10:09	2°♄00'56	0°03'56
direct	15561 Nov 08 22:01	13°♄15'06		transit begin	15562 Oct 08 06:55	2°♄08'19	
morning max el	15561 Nov 23 04:40	20°♄47'49	27°05'13	transit end	15562 Oct 08 13:24	1°♄53'31	
	15561 Dec 01 04:16	0°♄		desc. node	15562 Oct 08 04:43	2°♄13'20	
asc. node	15561 Dec 15 19:29	23°♄30'09			15562 Oct 10 14:55	30°♄08'48	



min. Earth dist.	15562 Oct 11 15:20	29° $\Omega$ 05'48	0.60076 AU	desc. node	15563 Sep 25 02:09	10° $\Omega$ 41'14	
morning rise	15562 Oct 15 08:25	26° $\Omega$ 16'50		morning rise	15563 Sep 27 17:25	8° $\Omega$ 29'04	
direct	15562 Oct 21 22:38	24° $\Omega$ 12'21		direct	15563 Oct 04 09:50	6° $\Omega$ 05'13	
	15562 Nov 03 00:39	0° $\mathbb{M}$		morning max el	15563 Oct 18 11:40	14° $\Omega$ 03'07	27°56'55
morning max el	15562 Nov 05 04:57	2° $\mathbb{M}$ 01'30	27°50'42		15563 Oct 31 09:14	0° $\mathbb{M}$	
	15562 Nov 25 13:58	0° $\mathcal{A}$			15563 Nov 18 02:43	0° $\mathcal{A}$	
asc. node	15562 Dec 02 16:29	13° $\mathcal{A}$ 01'43		asc. node	15563 Nov 19 13:24	2° $\mathcal{A}$ 50'40	
morning set	15562 Dec 07 15:04	23° $\mathcal{A}$ 03'31		morning set	15563 Nov 21 13:58	6° $\mathcal{A}$ 55'41	
	15562 Dec 10 20:40	0° $\mathcal{B}$		max. Earth dist.	15563 Nov 26 21:15	18° $\mathcal{A}$ 08'16	1.31685 AU
max. Earth dist.	15562 Dec 13 17:32	6° $\mathcal{B}$ 20'07	1.31107 AU				
				superior conj	15563 Nov 29 02:06	22° $\mathcal{A}$ 57'23	1°18'26
superior conj	15562 Dec 14 16:54	8° $\mathcal{B}$ 30'24	1°30'46	minimum elong	15563 Nov 28 23:56	22° $\mathcal{A}$ 45'29	1°19'02
minimum elong	15562 Dec 14 15:22	8° $\mathcal{B}$ 21'55	1°31'32		15563 Dec 02 06:34	0° $\mathcal{B}$	
evening rise	15562 Dec 21 09:32	23° $\mathcal{B}$ 19'27		evening rise	15563 Dec 05 19:59	7° $\mathcal{B}$ 47'54	
	15562 Dec 24 13:23	0° $\approx$			15563 Dec 17 04:09	0° $\approx$	
desc. node	15563 Jan 04 03:08	19° $\approx$ 33'18		desc. node	15563 Dec 22 00:01	7° $\approx$ 37'25	
	15563 Jan 11 06:06	0° $\mathcal{H}$		evening max el	15563 Dec 30 21:55	18° $\approx$ 24'41	24°23'34
evening max el	15563 Jan 18 09:17	8° $\mathcal{H}$ 04'17	25°55'59	retrograde	15564 Jan 13 13:27	25° $\approx$ 12'20	
retrograde	15563 Feb 01 08:00	15° $\mathcal{H}$ 07'19		evening set	15564 Jan 18 17:16	24° $\approx$ 14'05	
evening set	15563 Feb 07 10:00	13° $\mathcal{H}$ 40'51		min. Earth dist.	15564 Jan 24 09:39	21° $\approx$ 21'59	0.55748 AU
min. Earth dist.	15563 Feb 11 22:24	11° $\mathcal{H}$ 02'33	0.57504 AU	inferior conj	15564 Jan 26 14:22	20° $\approx$ 01'07	-5°24'33
inferior conj	15563 Feb 14 21:49	8° $\mathcal{H}$ 57'20	-4°09'09	minimum elong	15564 Jan 26 22:33	19° $\approx$ 48'33	5°22'22
minimum elong	15563 Feb 15 06:45	8° $\mathcal{H}$ 41'37	4°05'58	morning rise	15564 Feb 04 05:48	16° $\approx$ 00'26	
morning rise	15563 Feb 23 06:32	4° $\mathcal{H}$ 36'26		direct	15564 Feb 06 13:47	15° $\approx$ 46'03	
direct	15563 Feb 25 06:29	4° $\mathcal{H}$ 23'46		asc. node	15564 Feb 15 11:46	19° $\approx$ 33'29	
asc. node	15563 Feb 28 14:20	5° $\mathcal{H}$ 00'52		morning max el	15564 Feb 16 17:27	20° $\approx$ 41'16	19°47'26
morning max el	15563 Mar 05 22:50	8° $\mathcal{H}$ 39'33	18°45'49		15564 Feb 23 22:55	0° $\mathcal{H}$	
	15563 Mar 19 17:06	0° $\mathcal{Y}$		morning set	15564 Mar 05 07:11	19° $\mathcal{H}$ 11'46	
morning set	15563 Mar 22 03:06	4° $\mathcal{Y}$ 40'20			15564 Mar 10 15:02	0° $\mathcal{Y}$	
				superior conj	15564 Mar 13 04:42	5° $\mathcal{Y}$ 08'02	0°47'54
superior conj	15563 Mar 30 21:01	21° $\mathcal{Y}$ 33'09	0°19'18	minimum elong	15564 Mar 13 07:07	5° $\mathcal{Y}$ 19'57	0°47'32
minimum elong	15563 Mar 30 22:16	21° $\mathcal{Y}$ 39'02	0°18'50	desc. node	15564 Mar 19 01:21	16° $\mathcal{Y}$ 24'18	
desc. node	15563 Apr 02 04:46	25° $\mathcal{Y}$ 52'40		max. Earth dist.	15564 Mar 19 08:47	16° $\mathcal{Y}$ 58'50	1.37374 AU
	15563 Apr 04 11:03	0° $\mathcal{B}$		evening rise	15564 Mar 23 01:36	23° $\mathcal{Y}$ 42'43	
max. Earth dist.	15563 Apr 07 02:16	4° $\mathcal{B}$ 41'12	1.39658 AU		15564 Mar 26 16:10	0° $\mathcal{B}$	
evening rise	15563 Apr 11 01:26	11° $\mathcal{B}$ 30'50			15564 Apr 15 08:07	0° $\mathbb{I}$	
	15563 Apr 22 14:59	0° $\mathbb{I}$		evening max el	15564 Apr 27 12:39	14° $\mathbb{I}$ 28'38	25°21'52
	15563 May 15 09:27	0° $\mathcal{E}$		retrograde	15564 May 09 17:26	21° $\mathbb{I}$ 32'48	
evening max el	15563 May 15 23:08	0° $\mathcal{E}$ 34'24	24°04'31	asc. node	15564 May 13 08:43	20° $\mathbb{I}$ 38'01	
retrograde	15563 May 27 03:40	7° $\mathcal{E}$ 07'43		evening set	15564 May 15 15:03	19° $\mathbb{I}$ 05'01	
asc. node	15563 May 27 11:32	7° $\mathcal{E}$ 07'15		min. Earth dist.	15564 May 19 22:42	14° $\mathbb{I}$ 19'01	0.67994 AU
evening set	15563 Jun 01 13:55	4° $\mathcal{E}$ 49'31		inferior conj	15564 May 21 07:00	12° $\mathbb{I}$ 34'21	2°11'48
	15563 Jun 05 19:19	30° $\mathcal{R}$ $\mathbb{I}$		minimum elong	15564 May 21 04:50	12° $\mathbb{I}$ 41'24	2°10'25
min. Earth dist.	15563 Jun 06 05:13	29° $\mathbb{I}$ 26'43	0.68786 AU	morning rise	15564 May 26 19:02	6° $\mathbb{I}$ 41'46	
inferior conj	15563 Jun 07 00:32	28° $\mathbb{I}$ 21'07	2°41'25	direct	15564 May 30 08:18	5° $\mathbb{I}$ 29'20	
minimum elong	15563 Jun 06 22:42	28° $\mathbb{I}$ 27'21	2°40'11	morning max el	15564 Jun 06 06:51	9° $\mathbb{I}$ 16'00	19°09'46
morning rise	15563 Jun 12 07:31	22° $\mathbb{I}$ 18'34		desc. node	15564 Jun 15 02:16	20° $\mathbb{I}$ 17'09	
direct	15563 Jun 16 08:09	20° $\mathbb{I}$ 46'27		greatest brilliancy	15564 Jun 19 03:36	26° $\mathbb{I}$ 12'49	-0.7m
morning max el	15563 Jun 24 02:08	25° $\mathbb{I}$ 07'56	20°10'46		15564 Jun 21 16:05	0° $\mathcal{E}$	
	15563 Jun 28 10:03	0° $\mathcal{E}$		morning set	15564 Jun 30 04:57	13° $\mathcal{E}$ 03'37	
desc. node	15563 Jun 29 05:11	0° $\mathcal{E}$ 59'51			15564 Jul 11 03:16	0° $\mathcal{Q}$	
	15563 Jul 19 07:35	0° $\mathcal{Q}$		max. Earth dist.	15564 Jul 13 12:53	3° $\mathcal{Q}$ 45'19	1.45528 AU
morning set	15563 Jul 21 23:34	4° $\mathcal{Q}$ 05'01					
max. Earth dist.	15563 Jul 31 19:48	19° $\mathcal{Q}$ 28'46	1.44359 AU	superior conj	15564 Jul 16 12:04	8° $\mathcal{Q}$ 25'08	-2°12'30
				minimum elong	15564 Jul 16 15:13	8° $\mathcal{Q}$ 37'33	2°13'10
superior conj	15563 Aug 06 14:40	28° $\mathcal{Q}$ 48'43	-1°55'29		15564 Jul 29 22:39	0° $\mathbb{P}$	
minimum elong	15563 Aug 06 22:11	29° $\mathcal{Q}$ 19'29	1°55'25	evening rise	15564 Jul 31 05:17	2° $\mathbb{P}$ 05'07	
	15563 Aug 07 08:05	0° $\mathbb{P}$		asc. node	15564 Aug 09 08:35	16° $\mathbb{P}$ 55'34	
evening rise	15563 Aug 19 14:28	20° $\mathbb{P}$ 40'08			15564 Aug 18 19:09	0° $\mathcal{A}$	
asc. node	15563 Aug 23 11:56	27° $\mathbb{P}$ 21'37		evening max el	15564 Aug 19 09:27	0° $\mathcal{A}$ 36'28	18°17'44
	15563 Aug 25 01:08	0° $\mathcal{A}$		retrograde	15564 Aug 25 18:27	3° $\mathcal{A}$ 59'48	
evening max el	15563 Sep 05 18:56	17° $\mathcal{A}$ 00'57	18°02'39	evening set	15564 Aug 28 17:36	3° $\mathcal{A}$ 11'32	
retrograde	15563 Sep 12 05:30	20° $\mathcal{A}$ 22'06			15564 Sep 01 14:35	30° $\mathcal{R}$ $\mathbb{P}$	
evening set	15563 Sep 14 19:55	19° $\mathcal{A}$ 48'09		inferior conj	15564 Sep 03 15:38	27° $\mathbb{P}$ 42'49	2°02'35
inferior conj	15563 Sep 21 06:03	14° $\mathcal{A}$ 35'53	1°08'58	minimum elong	15564 Sep 03 17:59	27° $\mathbb{P}$ 35'58	2°01'46
minimum elong	15563 Sep 21 07:52	14° $\mathcal{A}$ 31'09	1°08'28	min. Earth dist.	15564 Sep 05 23:39	25° $\mathbb{P}$ 00'58	0.64487 AU
min. Earth dist.	15563 Sep 24 02:34	11° $\mathcal{A}$ 38'26	0.62365 AU				

morning rise	15564 Sep 09 16:50	21° $\mathbb{M}$ 22'25		inferior conj	15565 Aug 18 11:21	11° $\mathbb{M}$ 14'06	2°38'43
desc. node	15564 Sep 10 23:37	20° $\mathbb{M}$ 26'57		minimum elong	15565 Aug 18 13:22	11° $\mathbb{M}$ 07'42	2°37'56
direct	15564 Sep 16 05:53	18° $\mathbb{M}$ 47'16		min. Earth dist.	15565 Aug 20 05:28	9° $\mathbb{M}$ 01'41	0.66291 AU
morning max el	15564 Sep 29 22:08	26° $\mathbb{M}$ 44'16	27°27'08	morning rise	15565 Aug 24 03:58	4° $\mathbb{M}$ 48'03	
	15564 Oct 02 23:32	0° $\mathbb{L}$		desc. node	15565 Aug 28 21:04	2° $\mathbb{M}$ 19'13	
	15564 Oct 24 00:34	0° $\mathbb{M}$		direct	15565 Aug 30 09:42	2° $\mathbb{M}$ 10'19	
morning set	15564 Nov 04 04:09	20° $\mathbb{M}$ 21'33		morning max el	15565 Sep 12 09:42	9° $\mathbb{M}$ 53'01	26°28'37
asc. node	15564 Nov 05 10:14	22° $\mathbb{M}$ 50'59			15565 Sep 28 07:35	0° $\mathbb{L}$	
max. Earth dist.	15564 Nov 08 17:40	29° $\mathbb{M}$ 36'43	1.32818 AU		15565 Oct 16 12:44	0° $\mathbb{M}$	
	15564 Nov 08 22:08	0° $\mathbb{X}$		morning set	15565 Oct 18 06:27	3° $\mathbb{M}$ 14'07	
				max. Earth dist.	15565 Oct 22 04:16	10° $\mathbb{M}$ 45'49	1.34487 AU
superior conj	15564 Nov 12 07:13	7° $\mathbb{X}$ 09'26	1°00'04	asc. node	15565 Oct 23 06:59	12° $\mathbb{M}$ 58'14	
minimum elong	15564 Nov 12 04:53	6° $\mathbb{X}$ 56'56	1°00'28				
evening rise	15564 Nov 19 06:49	22° $\mathbb{X}$ 15'35		superior conj	15565 Oct 27 05:49	21° $\mathbb{M}$ 00'41	0°35'43
	15564 Nov 22 23:31	0° $\mathbb{Z}$		minimum elong	15565 Oct 27 04:01	20° $\mathbb{M}$ 51'18	0°36'01
desc. node	15564 Dec 07 21:00	24° $\mathbb{Z}$ 36'36			15565 Oct 31 12:41	0° $\mathbb{X}$	
evening max el	15564 Dec 11 07:30	28° $\mathbb{Z}$ 21'01	22°40'19	evening rise	15565 Nov 03 16:08	6° $\mathbb{X}$ 37'41	
	15564 Dec 13 03:06	0° $\approx$			15565 Nov 16 04:53	0° $\mathbb{Z}$	
retrograde	15564 Dec 24 06:31	4° $\approx$ 46'07		evening max el	15565 Nov 22 23:57	8° $\mathbb{Z}$ 31'48	21°03'56
evening set	15564 Dec 28 03:43	4° $\approx$ 13'10		desc. node	15565 Nov 24 18:04	10° $\mathbb{Z}$ 08'21	
min. Earth dist.	15565 Jan 04 16:03	0° $\approx$ 47'36	0.54652 AU	retrograde	15565 Dec 04 16:46	14° $\mathbb{Z}$ 19'48	
inferior conj	15565 Jan 05 12:51	0° $\approx$ 18'13	-6°00'52	evening set	15565 Dec 07 08:29	14° $\mathbb{Z}$ 03'09	
minimum elong	15565 Jan 05 13:57	0° $\approx$ 16'39	6°00'01	inferior conj	15565 Dec 16 03:41	10° $\mathbb{Z}$ 11'32	-5°37'43
	15565 Jan 06 01:45	30° $\mathbb{R}$ $\mathbb{Z}$		minimum elong	15565 Dec 15 20:03	10° $\mathbb{Z}$ 22'21	5°35'37
morning rise	15565 Jan 14 01:26	26° $\mathbb{Z}$ 30'11		min. Earth dist.	15565 Dec 16 21:34	9° $\mathbb{Z}$ 46'08	0.54443 AU
direct	15565 Jan 17 03:42	26° $\mathbb{Z}$ 08'19		morning rise	15565 Dec 24 07:51	6° $\mathbb{Z}$ 19'38	
	15565 Jan 26 20:31	0° $\approx$		direct	15565 Dec 28 10:55	5° $\mathbb{Z}$ 42'55	
morning max el	15565 Jan 28 21:27	1° $\approx$ 47'27	21°12'13	morning max el	15566 Jan 10 12:05	12° $\mathbb{Z}$ 03'34	22°55'47
asc. node	15565 Feb 01 09:08	5° $\approx$ 36'18		asc. node	15566 Jan 19 06:27	22° $\mathbb{Z}$ 50'15	
	15565 Feb 15 18:52	0° $\mathbb{X}$			15566 Jan 23 16:08	0° $\approx$	
morning set	15565 Feb 17 16:04	3° $\mathbb{X}$ 53'29		morning set	15566 Feb 02 03:26	18° $\approx$ 37'48	
					15566 Feb 07 10:02	0° $\mathbb{X}$	
superior conj	15565 Feb 24 23:30	19° $\mathbb{X}$ 12'10	1°10'02				
minimum elong	15565 Feb 25 02:02	19° $\mathbb{X}$ 25'16	1°09'57	superior conj	15566 Feb 09 02:01	3° $\mathbb{X}$ 35'08	1°25'38
max. Earth dist.	15565 Mar 01 18:29	28° $\mathbb{X}$ 53'22	1.35251 AU	minimum elong	15566 Feb 09 04:00	3° $\mathbb{X}$ 45'47	1°25'56
	15565 Mar 02 08:03	0° $\mathbb{Y}$		max. Earth dist.	15566 Feb 12 10:53	10° $\mathbb{X}$ 42'32	1.33475 AU
evening rise	15565 Mar 05 18:52	6° $\mathbb{Y}$ 36'52		evening rise	15566 Feb 17 01:38	20° $\mathbb{X}$ 03'15	
desc. node	15565 Mar 05 21:56	6° $\mathbb{Y}$ 51'12		desc. node	15566 Feb 20 18:30	27° $\mathbb{X}$ 08'30	
	15565 Mar 19 10:08	0° $\mathbb{B}$			15566 Feb 22 07:45	0° $\mathbb{Y}$	
evening max el	15565 Apr 10 02:17	28° $\mathbb{B}$ 17'19	26°27'40		15566 Mar 13 09:59	0° $\mathbb{B}$	
	15565 Apr 11 22:13	0° $\mathbb{I}$		evening max el	15566 Mar 23 15:44	11° $\mathbb{B}$ 51'07	27°14'37
retrograde	15565 Apr 23 02:13	5° $\mathbb{I}$ 41'01		retrograde	15566 Apr 06 05:00	19° $\mathbb{B}$ 22'39	
evening set	15565 Apr 29 09:55	3° $\mathbb{I}$ 08'37		evening set	15566 Apr 12 20:26	16° $\mathbb{B}$ 52'02	
asc. node	15565 Apr 30 05:59	2° $\mathbb{I}$ 25'10		min. Earth dist.	15566 Apr 16 17:20	13° $\mathbb{B}$ 13'42	0.65104 AU
	15565 May 02 14:03	30° $\mathbb{R}$ $\mathbb{B}$		asc. node	15566 Apr 17 03:18	12° $\mathbb{B}$ 46'35	
min. Earth dist.	15565 May 03 11:24	28° $\mathbb{B}$ 57'51	0.66752 AU	inferior conj	15566 Apr 19 03:00	10° $\mathbb{B}$ 33'40	0°37'02
inferior conj	15565 May 05 08:39	26° $\mathbb{B}$ 40'46	1°30'42	minimum elong	15566 Apr 19 02:00	10° $\mathbb{B}$ 36'26	0°36'09
minimum elong	15565 May 05 06:41	26° $\mathbb{B}$ 46'44	1°29'22	morning rise	15566 Apr 25 09:25	5° $\mathbb{B}$ 05'24	
morning rise	15565 May 11 04:29	20° $\mathbb{B}$ 59'29		direct	15566 Apr 28 02:38	4° $\mathbb{B}$ 26'20	
direct	15565 May 14 07:13	20° $\mathbb{B}$ 05'05		morning max el	15566 May 04 10:06	7° $\mathbb{B}$ 42'18	17°56'49
morning max el	15565 May 20 18:14	23° $\mathbb{B}$ 30'08	18°24'51	desc. node	15566 May 19 20:07	0° $\mathbb{I}$ 06'08	
	15565 May 26 04:28	0° $\mathbb{I}$			15566 May 19 18:38	0° $\mathbb{I}$	
desc. node	15565 Jun 01 23:15	10° $\mathbb{I}$ 01'58		morning set	15566 May 22 06:35	4° $\mathbb{I}$ 06'48	
morning set	15565 Jun 10 04:11	22° $\mathbb{I}$ 56'11					
	15565 Jun 14 15:34	0° $\mathbb{G}$		superior conj	15566 Jun 05 11:16	27° $\mathbb{I}$ 05'12	-1°49'06
superior conj	15565 Jun 25 21:24	17° $\mathbb{G}$ 36'14	-2°10'22	minimum elong	15566 Jun 05 02:35	26° $\mathbb{I}$ 30'46	1°49'13
minimum elong	15565 Jun 25 16:47	17° $\mathbb{G}$ 18'15	2°11'06		15566 Jun 07 07:33	0° $\mathbb{G}$	
max. Earth dist.	15565 Jun 26 08:43	18° $\mathbb{G}$ 20'21	1.45972 AU	max. Earth dist.	15566 Jun 09 04:34	2° $\mathbb{G}$ 56'49	1.45664 AU
	15565 Jul 03 20:10	0° $\mathbb{Q}$		evening rise	15566 Jun 21 12:14	22° $\mathbb{G}$ 01'22	
evening rise	15565 Jul 11 19:05	12° $\mathbb{Q}$ 27'30			15566 Jun 26 17:33	0° $\mathbb{Q}$	
greatest brilliancy	15565 Jul 21 00:38	26° $\mathbb{Q}$ 53'19	-0.8m	greatest brilliancy	15566 Jul 05 10:57	13° $\mathbb{Q}$ 04'06	-0.6m
	15565 Jul 23 01:26	0° $\mathbb{M}$		asc. node	15566 Jul 14 02:03	24° $\mathbb{Q}$ 49'36	
asc. node	15565 Jul 27 05:18	6° $\mathbb{M}$ 07'36		evening max el	15566 Jul 17 04:09	28° $\mathbb{Q}$ 14'56	19°39'15
evening max el	15565 Aug 02 21:14	14° $\mathbb{M}$ 23'09	18°50'15		15566 Jul 19 02:40	0° $\mathbb{M}$	
retrograde	15565 Aug 09 13:28	18° $\mathbb{M}$ 01'38		retrograde	15566 Jul 24 11:35	2° $\mathbb{M}$ 20'51	
evening set	15565 Aug 12 21:52	16° $\mathbb{M}$ 57'05		evening set	15566 Jul 28 05:53	0° $\mathbb{M}$ 58'51	
					15566 Jul 29 10:09	30° $\mathbb{R}$ $\mathbb{Q}$	

inferior conj	15566 Aug 02 14:05	25°03'04	3°00'06	retrograde	15567 Jul 08 10:32	16°051'26	
minimum elong	15566 Aug 02 15:19	24°058'56	2°59'22	evening set	15567 Jul 12 15:28	15°011'46	
min. Earth dist.	15566 Aug 03 18:08	23°029'30	0.67682 AU	inferior conj	15567 Jul 17 21:15	9°004'25	3°08'52
morning rise	15566 Aug 08 00:14	18°037'20		minimum elong	15567 Jul 17 21:32	9°003'26	3°08'07
direct	15566 Aug 13 19:57	16°005'11		min. Earth dist.	15567 Jul 18 11:34	8°014'58	0.68616 AU
desc. node	15566 Aug 15 18:28	16°019'50		morning rise	15567 Jul 23 03:18	2°042'45	
morning max el	15566 Aug 25 20:41	23°017'32	25°10'39	direct	15567 Jul 28 11:22	0°022'59	
	15566 Aug 31 19:33	0°00		desc. node	15567 Aug 02 15:51	2°007'42	
	15566 Sep 21 15:45	0°00		morning max el	15567 Aug 08 07:22	6°050'57	23°42'50
morning set	15566 Sep 30 17:07	15°024'48			15567 Aug 26 08:13	0°00	
max. Earth dist.	15566 Oct 04 06:00	21°051'07	1.36603 AU	morning set	15567 Sep 12 07:44	26°042'26	
	15566 Oct 08 13:03	0°00			15567 Sep 14 06:01	0°00	
asc. node	15566 Oct 10 03:39	3°008'34		max. Earth dist.	15567 Sep 16 04:27	3°021'46	1.38978 AU
superior conj	15566 Oct 10 19:00	4°0024'19	0°05'50	superior conj	15567 Sep 23 19:03	17°010'45	-0°28'33
minimum elong	15566 Oct 10 18:37	4°0022'24	0°06'11	minimum elong	15567 Sep 23 21:06	17°020'25	0°28'01
behind sun begin	15566 Oct 10 12:38	3°0052'51		asc. node	15567 Sep 27 00:16	23°017'47	
behind sun end	15566 Oct 11 00:36	4°0052'02			15567 Sep 30 11:11	0°00	
evening rise	15566 Oct 18 21:47	20°0049'17		evening rise	15567 Oct 02 21:04	4°0042'54	
	15566 Oct 23 12:28	0°00			15567 Oct 17 23:48	0°00	
evening max el	15566 Nov 05 06:12	19°0026'23	19°46'00	evening max el	15567 Oct 19 02:19	1°0010'29	18°50'10
desc. node	15566 Nov 11 15:15	23°0048'07		retrograde	15567 Oct 27 14:59	5°0028'35	
retrograde	15566 Nov 15 07:46	24°0027'47		evening set	15567 Oct 29 12:30	5°0016'38	
evening set	15566 Nov 17 07:41	24°0016'50		desc. node	15567 Oct 29 12:31	5°0016'37	
inferior conj	15566 Nov 26 01:35	20°0015'29	-4°20'19	inferior conj	15567 Nov 06 17:37	0°0056'13	-2°37'04
minimum elong	15566 Nov 25 15:40	20°0030'52	4°16'28	minimum elong	15567 Nov 06 11:09	1°0007'49	2°33'50
min. Earth dist.	15566 Nov 28 05:16	18°0055'21	0.55180 AU		15567 Nov 08 00:44	30°0000	
morning rise	15566 Dec 03 22:08	16°0000'48		min. Earth dist.	15567 Nov 09 17:40	28°0047'25	0.56716 AU
direct	15566 Dec 09 01:09	15°0002'44		morning rise	15567 Nov 14 06:49	26°0006'20	
morning max el	15566 Dec 22 20:45	21°0056'25	24°45'21	direct	15567 Nov 20 04:26	24°0042'57	
	15566 Dec 29 21:38	0°00			15567 Dec 02 02:18	0°00	
asc. node	15567 Jan 06 03:40	10°0058'38		morning max el	15567 Dec 04 08:37	2°0002'05	26°22'12
	15567 Jan 16 01:55	0°00		asc. node	15567 Dec 24 00:47	29°0047'11	
morning set	15567 Jan 17 15:23	3°0019'39			15567 Dec 24 03:35	0°00	
superior conj	15567 Jan 24 09:40	18°0009'40	1°34'54	morning set	15568 Jan 02 02:07	17°0053'43	
minimum elong	15567 Jan 24 10:44	18°0015'33	1°35'30		15568 Jan 07 13:57	0°00	
max. Earth dist.	15567 Jan 26 10:55	22°0038'51	1.32153 AU	superior conj	15568 Jan 08 20:12	2°0048'53	1°38'02
	15567 Jan 29 21:32	0°00		minimum elong	15568 Jan 08 20:13	2°0048'57	1°38'49
evening rise	15567 Jan 31 18:47	3°0054'13		max. Earth dist.	15568 Jan 09 16:37	4°0042'42	1.31332 AU
desc. node	15567 Feb 07 15:08	17°0011'33		evening rise	15568 Jan 15 19:32	18°0002'18	
	15567 Feb 15 01:38	0°00			15568 Jan 21 18:13	0°00	
evening max el	15567 Mar 06 03:44	24°0059'12	27°35'22	desc. node	15568 Jan 25 11:49	6°0053'47	
	15567 Mar 12 10:55	0°00			15568 Feb 09 17:22	0°00	
retrograde	15567 Mar 20 00:37	2°0028'31		evening max el	15568 Feb 16 11:49	7°0028'13	27°24'00
evening set	15567 Mar 26 20:13	0°0006'58		retrograde	15568 Mar 01 11:42	14°0049'15	
	15567 Mar 27 00:13	30°0000		evening set	15568 Mar 08 06:26	12°0044'00	
min. Earth dist.	15567 Mar 30 14:40	26°0056'46	0.63127 AU	min. Earth dist.	15568 Mar 12 01:57	9°0055'17	0.60935 AU
inferior conj	15567 Apr 02 11:11	24°0006'09	-0°29'59	inferior conj	15568 Mar 15 05:46	7°0009'08	-1°49'45
minimum elong	15567 Apr 02 12:10	24°0003'42	0°29'51	minimum elong	15568 Mar 15 09:46	7°0000'20	1°48'10
asc. node	15567 Apr 04 00:40	22°0034'31		asc. node	15568 Mar 20 22:03	2°0057'09	
morning rise	15567 Apr 09 06:46	18°0053'19		morning rise	15568 Mar 22 16:22	2°0014'48	
direct	15567 Apr 11 15:50	18°0026'12		direct	15568 Mar 24 19:08	1°0056'06	
morning max el	15567 Apr 18 03:45	21°0044'34	17°46'11	morning max el	15568 Mar 31 20:01	5°0027'55	17°53'46
	15567 Apr 24 13:30	0°00		morning set	15568 Apr 16 10:49	29°0050'00	
morning set	15567 May 04 10:42	16°0030'30			15568 Apr 16 13:01	0°00	
desc. node	15567 May 06 16:54	20°0024'07		desc. node	15568 Apr 22 13:38	10°0051'24	
	15567 May 12 08:09	0°00		superior conj	15568 Apr 27 03:56	18°0055'01	-0°36'45
superior conj	15567 May 16 19:43	7°0027'12	-1°15'09	minimum elong	15568 Apr 27 00:38	18°0040'48	0°36'50
minimum elong	15567 May 16 12:38	6°0058'03	1°15'00		15568 May 03 17:35	0°00	
max. Earth dist.	15567 May 22 22:45	17°0021'56	1.44646 AU	max. Earth dist.	15568 May 04 13:33	1°0022'05	1.43019 AU
	15567 May 31 00:25	0°00		evening rise	15568 May 10 19:20	11°0023'16	
evening rise	15567 May 31 22:52	1°0026'16			15568 May 23 01:41	0°00	
	15567 Jun 20 08:19	0°00		evening max el	15568 Jun 12 00:30	26°0001'10	21°57'03
evening max el	15567 Jun 30 05:08	12°0007'57	20°42'39	asc. node	15568 Jun 16 19:48	29°0058'55	
asc. node	15567 Jun 30 22:53	12°0051'02			15568 Jun 16 20:31	0°00	

retrograde	15568 Jun 21 08:41	1°♂28'34		asc. node	15569 Jun 03 16:50	15°♂56'12	
	15568 Jun 25 10:40	30°♂		retrograde	15569 Jun 05 04:36	16°♂05'52	
evening set	15568 Jun 26 00:49	29°♂32'02		evening set	15569 Jun 10 08:15	13°♂54'34	
inferior conj	15568 Jul 01 06:44	23°♂14'31	3°06'27	min. Earth dist.	15569 Jun 15 04:34	8°♂10'31	0.69027 AU
minimum elong	15568 Jul 01 06:04	23°♂16'51	3°05'35	inferior conj	15569 Jun 15 16:34	7°♂29'04	2°53'34
min. Earth dist.	15568 Jul 01 07:44	23°♂11'03	0.69066 AU	minimum elong	15569 Jun 15 15:06	7°♂34'10	2°52'28
morning rise	15568 Jul 06 11:10	16°♂59'15		morning rise	15569 Jun 20 21:53	1°♂21'33	
direct	15568 Jul 11 06:51	14°♂56'28			15569 Jun 23 05:12	30°♂II	
desc. node	15568 Jul 19 13:09	19°♂18'29		direct	15569 Jun 25 05:14	29°♂II38'12	
morning max el	15568 Jul 20 20:08	20°♂33'08	22°14'17		15569 Jun 27 07:30	0°♂	
	15568 Jul 28 21:06	0°♂		morning max el	15569 Jul 03 13:45	4°♂25'07	20°52'29
	15568 Aug 18 13:03	0°♂		desc. node	15569 Jul 06 10:25	7°♂30'29	
morning set	15568 Aug 22 22:51	6°♂59'48			15569 Jul 22 21:03	0°♂	
max. Earth dist.	15568 Aug 28 06:01	15°♂41'39	1.41335 AU	morning set	15569 Aug 02 15:07	16°♂19'29	
				max. Earth dist.	15569 Aug 10 13:27	28°♂53'12	1.43394 AU
					15569 Aug 11 05:58	0°♂	
superior conj	15568 Sep 05 01:41	29°♂10'19	-1°05'00	superior conj	15569 Aug 17 10:38	10°♂13'27	-1°39'17
minimum elong	15568 Sep 05 06:52	29°♂33'20	1°04'20	minimum elong	15569 Aug 17 18:12	10°♂45'19	1°38'49
	15568 Sep 05 12:51	0°♂			15569 Aug 28 20:35	0°♂	
asc. node	15568 Sep 12 20:53	13°♂22'39			15569 Aug 29 10:05	0°♂59'48	
evening rise	15568 Sep 15 10:39	18°♂10'18		evening rise	15569 Aug 30 17:30	3°♂18'58	
	15568 Sep 21 21:55	0°♂		asc. node	15569 Sep 14 21:18	26°♂39'37	18°02'09
evening max el	15568 Oct 01 08:46	13°♂38'14	18°16'04	evening max el	15569 Sep 20 10:15	0°♂	
retrograde	15568 Oct 08 17:51	17°♂23'58		retrograde	15569 Sep 21 13:20	0°♂06'06	
evening set	15568 Oct 10 19:55	17°♂06'33			15569 Sep 22 16:34	30°♂♂	
desc. node	15568 Oct 15 09:51	14°♂43'14		evening set	15569 Sep 23 22:49	29°♂39'18	
inferior conj	15568 Oct 18 07:32	12°♂24'40	-0°55'45	inferior conj	15569 Sep 30 17:28	24°♂37'37	0°29'12
minimum elong	15568 Oct 18 05:28	12°♂29'00	0°54'22	minimum elong	15569 Sep 30 18:22	24°♂35'26	0°29'09
min. Earth dist.	15568 Oct 21 13:49	9°♂41'11	0.58773 AU	desc. node	15569 Oct 02 07:14	23°♂05'30	
morning rise	15568 Oct 25 11:36	6°♂58'23		min. Earth dist.	15569 Oct 03 19:35	21°♂39'02	0.61050 AU
direct	15568 Oct 31 21:25	5°♂08'26		morning rise	15569 Oct 07 10:58	18°♂42'27	
morning max el	15568 Nov 15 04:31	12°♂48'19	27°29'22	direct	15569 Oct 14 02:41	16°♂28'52	
	15568 Nov 28 19:13	0°♂		morning max el	15569 Oct 28 08:04	24°♂23'35	27°58'10
asc. node	15568 Dec 09 21:50	19°♂05'29			15569 Nov 02 10:42	0°♂	
	15568 Dec 15 08:11	0°♂			15569 Nov 22 04:06	0°♂	
morning set	15568 Dec 16 09:52	2°♂15'39		asc. node	15569 Nov 26 18:49	8°♂45'19	
				morning set	15569 Nov 30 12:41	16°♂20'43	
superior conj	15568 Dec 23 07:42	17°♂27'34	1°35'09	max. Earth dist.	15569 Dec 06 06:55	28°♂44'29	1.31278 AU
minimum elong	15568 Dec 23 06:42	17°♂21'55	1°35'57		15569 Dec 06 20:34	0°♂	
max. Earth dist.	15568 Dec 23 00:34	16°♂47'36	1.31035 AU				
	15568 Dec 28 23:18	0°♂		superior conj	15569 Dec 07 18:20	2°♂00'43	1°26'17
evening rise	15568 Dec 30 01:36	2°♂22'06		minimum elong	15569 Dec 07 16:29	1°♂50'30	1°26'59
desc. node	15569 Jan 11 08:35	26°♂07'06		evening rise	15569 Dec 14 10:59	16°♂48'52	
	15569 Jan 13 17:08	0°♂			15569 Dec 20 20:29	0°♂	
evening max el	15569 Jan 28 13:03	19°♂06'40	26°37'31	desc. node	15569 Dec 29 05:25	14°♂40'58	
retrograde	15569 Feb 11 12:51	26°♂17'06		evening max el	15570 Jan 10 05:54	29°♂52'56	25°19'07
evening set	15569 Feb 17 23:41	24°♂34'42			15570 Jan 10 08:53	0°♂	
min. Earth dist.	15569 Feb 22 02:41	21°♂56'57	0.58707 AU	retrograde	15570 Jan 24 02:36	6°♂50'48	
inferior conj	15569 Feb 25 06:57	19°♂31'53	-3°18'15	evening set	15570 Jan 29 20:19	5°♂36'07	
minimum elong	15569 Feb 25 14:25	19°♂17'37	3°15'19	min. Earth dist.	15570 Feb 03 18:21	2°♂54'13	0.56691 AU
morning rise	15569 Mar 05 08:33	14°♂58'51		inferior conj	15570 Feb 06 11:44	1°♂06'13	-4°44'09
direct	15569 Mar 07 08:02	14°♂45'04		minimum elong	15570 Feb 06 21:02	0°♂50'49	4°41'11
asc. node	15569 Mar 07 19:29	14°♂45'54			15570 Feb 08 04:25	30°♂	
morning max el	15569 Mar 15 07:12	18°♂41'23	18°20'50	morning rise	15570 Feb 15 00:28	26°♂54'44	
	15569 Mar 23 12:11	0°♂		direct	15570 Feb 17 02:27	26°♂42'04	
morning set	15569 Mar 31 01:08	13°♂47'20		asc. node	15570 Feb 22 16:54	28°♂20'20	
	15569 Apr 08 16:04	0°♂			15570 Feb 25 00:43	0°♂	
superior conj	15569 Apr 09 10:00	1°♂21'58	0°00'06	morning max el	15570 Feb 26 09:13	1°♂13'39	19°09'11
minimum elong	15569 Apr 09 09:59	1°♂21'54	0°00'17	morning set	15570 Mar 15 01:13	28°♂09'28	
behind sun begin	15569 Apr 09 02:40	0°♂48'33			15570 Mar 15 23:30	0°♂	
behind sun end	15569 Apr 09 17:17	1°♂55'10		superior conj	15570 Mar 23 09:39	14°♂36'03	0°32'10
desc. node	15569 Apr 09 10:17	1°♂23'18		minimum elong	15570 Mar 23 11:33	14°♂45'08	0°31'43
max. Earth dist.	15569 Apr 16 23:25	14°♂42'22	1.40951 AU	desc. node	15570 Mar 27 06:55	21°♂56'24	
evening rise	15569 Apr 21 10:59	22°♂12'19		max. Earth dist.	15570 Mar 30 05:39	27°♂19'02	1.38678 AU
	15569 Apr 26 07:20	0°♂			15570 Mar 31 17:47	0°♂	
	15569 May 17 02:39	0°♂					
evening max el	15569 May 25 15:49	9°♂54'25	23°17'40				

evening rise	15570 Apr 02 23:54	3°♄56'23		max. Earth dist.	15571 Mar 12 12:40	9°♄23'11	1.36444 AU
	15570 Apr 19 09:54	0°♄		desc. node	15571 Mar 14 03:30	12°♄26'23	
evening max el	15570 May 08 05:25	23°♄48'47	24°38'16	evening rise	15571 Mar 16 07:48	16°♄27'37	
	15570 May 16 17:47	0°♄			15571 Mar 24 03:04	0°♄	
retrograde	15570 May 19 21:05	0°♄37'19			15571 Apr 13 20:33	0°♄	
asc. node	15570 May 21 13:58	0°♄24'57		evening max el	15571 Apr 20 19:02	7°♄41'44	25°51'44
	15570 May 22 19:18	30°♄		retrograde	15571 May 03 08:55	14°♄55'47	
evening set	15570 May 25 12:11	28°♄14'27		asc. node	15571 May 08 11:11	13°♄11'12	
min. Earth dist.	15570 May 29 23:58	23°♄07'17	0.68505 AU	evening set	15571 May 09 10:52	12°♄25'38	
inferior conj	15570 May 31 00:50	21°♄44'15	2°30'13	min. Earth dist.	15571 May 13 15:49	7°♄54'32	0.67518 AU
minimum elong	15570 May 30 22:49	21°♄51'01	2°28'54	inferior conj	15571 May 15 05:33	5°♄55'20	1°55'52
morning rise	15570 Jun 05 09:39	15°♄45'40		minimum elong	15571 May 15 03:23	6°♄02'10	1°54'27
direct	15570 Jun 09 05:14	14°♄22'12		morning rise	15571 May 20 20:32	0°♄07'04	
morning max el	15570 Jun 16 14:13	18°♄27'45	19°42'50		15571 May 21 01:05	30°♄	
desc. node	15570 Jun 23 07:34	26°♄27'35		direct	15571 May 24 05:11	29°♄02'32	
	15570 Jun 25 21:27	0°♄			15571 May 27 12:27	0°♄	
greatest brilliancy	15570 Jun 29 15:08	5°♄21'38	-0.6m	morning max el	15571 May 30 21:52	2°♄38'37	18°48'30
morning set	15570 Jul 12 18:47	25°♄09'57		desc. node	15571 Jun 10 04:36	15°♄57'36	
	15570 Jul 15 22:08	0°♄		greatest brilliancy	15571 Jun 13 16:45	21°♄14'18	-0.8m
max. Earth dist.	15570 Jul 24 02:59	12°♄48'24	1.44937 AU		15571 Jun 19 09:14	0°♄	
				morning set	15571 Jun 22 05:45	4°♄25'56	
superior conj	15570 Jul 28 20:05	20°♄18'31	-2°04'46	max. Earth dist.	15571 Jul 06 21:18	27°♄14'01	1.45810 AU
minimum elong	15570 Jul 29 02:27	20°♄44'07	2°05'02				
	15570 Aug 03 19:16	0°♄		superior conj	15571 Jul 08 10:39	29°♄39'57	-2°14'06
evening rise	15570 Aug 11 14:12	12°♄58'34		minimum elong	15571 Jul 08 10:31	29°♄39'27	2°14'56
asc. node	15570 Aug 17 14:07	23°♄02'25			15571 Jul 08 15:46	0°♄	
	15570 Aug 21 21:25	0°♄		evening rise	15571 Jul 23 18:22	23°♄56'29	
evening max el	15570 Aug 29 12:05	10°♄05'11	18°06'57		15571 Jul 27 12:54	0°♄	
retrograde	15570 Sep 04 20:58	13°♄25'40		asc. node	15571 Aug 04 10:48	12°♄28'03	
evening set	15570 Sep 07 14:59	12°♄46'03		evening max el	15571 Aug 13 01:51	23°♄46'55	18°29'34
inferior conj	15570 Sep 13 19:33	7°♄26'49	1°34'01	retrograde	15571 Aug 19 12:46	27°♄14'46	
minimum elong	15570 Sep 13 21:44	7°♄20'50	1°33'19	evening set	15571 Aug 22 15:51	26°♄19'43	
min. Earth dist.	15570 Sep 16 11:12	4°♄33'38	0.63295 AU	inferior conj	15571 Aug 28 09:51	20°♄44'56	2°19'51
desc. node	15570 Sep 19 04:41	1°♄56'32		minimum elong	15571 Aug 28 12:08	20°♄38'00	2°19'02
morning rise	15570 Sep 20 02:25	1°♄13'02		min. Earth dist.	15571 Aug 30 12:05	18°♄14'09	0.65304 AU
	15570 Sep 21 23:16	30°♄		morning rise	15571 Sep 03 07:11	14°♄21'32	
direct	15570 Sep 26 18:05	28°♄42'54		desc. node	15571 Sep 06 02:08	12°♄33'30	
	15570 Oct 01 21:28	0°♄		direct	15571 Sep 09 17:43	11°♄44'03	
morning max el	15570 Oct 10 16:38	6°♄42'42	27°48'17	morning max el	15571 Sep 23 03:34	19°♄36'19	27°05'11
	15570 Oct 28 12:28	0°♄			15571 Oct 02 00:54	0°♄	
asc. node	15570 Nov 13 15:41	28°♄39'26			15571 Oct 21 13:27	0°♄	
morning set	15570 Nov 14 08:11	0°♄02'14		morning set	15571 Oct 28 17:40	13°♄14'32	
	15570 Nov 14 07:45	0°♄		asc. node	15571 Oct 31 12:28	18°♄43'10	
max. Earth dist.	15570 Nov 19 07:39	10°♄23'14	1.32088 AU	max. Earth dist.	15571 Nov 01 23:50	21°♄41'40	1.33466 AU
					15571 Nov 05 23:47	0°♄	
superior conj	15570 Nov 22 02:02	16°♄21'52	1°11'23				
minimum elong	15570 Nov 21 23:44	16°♄09'19	1°11'54	superior conj	15571 Nov 06 04:42	0°♄25'57	0°50'28
	15570 Nov 28 07:30	0°♄		minimum elong	15571 Nov 06 02:29	0°♄14'16	0°50'49
evening rise	15570 Nov 28 21:45	1°♄17'04		evening rise	15571 Nov 13 08:10	15°♄42'54	
	15570 Dec 14 10:32	0°♄			15571 Nov 20 09:50	0°♄	
desc. node	15570 Dec 16 02:20	2°♄19'56		desc. node	15571 Dec 02 23:20	18°♄44'44	
evening max el	15570 Dec 22 16:18	9°♄59'14	23°40'02	evening max el	15571 Dec 04 03:42	19°♄57'13	21°57'39
retrograde	15571 Jan 05 02:48	16°♄38'52		retrograde	15571 Dec 16 15:09	26°♄07'29	
evening set	15571 Jan 09 17:56	15°♄52'24		evening set	15571 Dec 19 22:59	25°♄42'51	
min. Earth dist.	15571 Jan 16 03:28	12°♄48'15	0.55181 AU	inferior conj	15571 Dec 28 13:20	21°♄51'31	-5°58'42
inferior conj	15571 Jan 17 19:52	11°♄48'50	-5°46'20	minimum elong	15571 Dec 28 10:20	21°♄55'42	5°57'40
minimum elong	15571 Jan 18 01:46	11°♄40'07	5°44'53	min. Earth dist.	15571 Dec 28 08:59	21°♄57'35	0.54451 AU
morning rise	15571 Jan 26 11:10	7°♄54'35		morning rise	15572 Jan 05 22:30	18°♄04'08	
direct	15571 Jan 29 01:29	7°♄37'56		direct	15572 Jan 09 11:18	17°♄36'37	
morning max el	15571 Feb 08 21:52	12°♄52'20	20°20'39	morning max el	15572 Jan 21 19:24	23°♄34'07	21°54'27
asc. node	15571 Feb 09 14:18	13°♄33'18		asc. node	15572 Jan 27 11:38	0°♄08'03	
	15571 Feb 20 19:52	0°♄			15572 Jan 27 09:15	0°♄	
morning set	15571 Feb 27 07:38	12°♄45'54		morning set	15572 Feb 11 17:50	27°♄29'13	
					15572 Feb 12 22:22	0°♄	
superior conj	15571 Mar 06 22:30	28°♄24'22	0°58'04				
minimum elong	15571 Mar 07 01:04	28°♄37'18	0°57'48	superior conj	15572 Feb 18 20:54	12°♄36'59	1°17'26
	15571 Mar 07 17:31	0°♄		minimum elong	15572 Feb 18 23:16	12°♄49'24	1°17'30

max. Earth dist.	15572 Feb 23 01:09	21° $\text{H}$ 14'10	1.34453 AU	superior conj	15573 Feb 02 01:53	27° $\approx$ 05'44	1°30'21
evening rise	15572 Feb 27 07:13	29° $\text{H}$ 36'22		minimum elong	15573 Feb 02 03:31	27° $\approx$ 14'34	1°30'46
	15572 Feb 27 12:10	0° $\text{Y}$			15573 Feb 03 10:10	0° $\text{H}$	
desc. node	15572 Feb 29 00:04	2° $\text{Y}$ 49'36		max. Earth dist.	15573 Feb 04 21:09	3° $\text{H}$ 06'56	1.32851 AU
	15572 Mar 16 06:29	0° $\text{B}$		evening rise	15573 Feb 09 18:45	13° $\text{H}$ 14'02	
evening max el	15572 Apr 02 08:55	21° $\text{B}$ 26'03	26°50'26	desc. node	15573 Feb 14 20:40	23° $\text{H}$ 01'41	
retrograde	15572 Apr 15 15:04	28° $\text{B}$ 53'31			15573 Feb 18 17:40	0° $\text{Y}$	
evening set	15572 Apr 22 02:25	26° $\text{B}$ 21'18			15573 Mar 11 08:07	0° $\text{B}$	
asc. node	15572 Apr 24 08:29	24° $\text{B}$ 17'30		evening max el	15573 Mar 15 22:00	4° $\text{B}$ 50'50	27°27'00
min. Earth dist.	15572 Apr 26 01:52	22° $\text{B}$ 24'39	0.66101 AU	retrograde	15573 Mar 29 14:46	12° $\text{B}$ 22'00	
inferior conj	15572 Apr 28 04:25	19° $\text{B}$ 56'49	1°09'33	evening set	15573 Apr 05 08:42	9° $\text{B}$ 54'10	
minimum elong	15572 Apr 28 02:45	20° $\text{B}$ 01'41	1°08'20	min. Earth dist.	15573 Apr 09 04:12	6° $\text{B}$ 28'46	0.64301 AU
morning rise	15572 May 04 04:23	14° $\text{B}$ 20'38		asc. node	15573 Apr 11 05:48	4° $\text{B}$ 17'27	
direct	15572 May 07 03:02	13° $\text{B}$ 32'58		inferior conj	15573 Apr 11 18:51	3° $\text{B}$ 42'32	0°10'17
morning max el	15572 May 13 11:23	16° $\text{B}$ 52'25	18°10'46	minimum elong	15573 Apr 11 18:34	3° $\text{B}$ 43'19	0°09'46
	15572 May 23 08:05	0° $\text{II}$		transit middle	15573 Apr 11 18:34	3° $\text{B}$ 43'19	0°09'46
desc. node	15572 May 27 01:32	5° $\text{II}$ 51'22		transit begin	15573 Apr 11 16:06	3° $\text{B}$ 49'52	
morning set	15572 Jun 01 16:13	14° $\text{II}$ 51'10		transit end	15573 Apr 11 21:01	3° $\text{B}$ 36'47	
	15572 Jun 11 04:10	0° $\text{E}$			15573 Apr 15 15:04	30° $\text{R}$ $\text{Y}$	
superior conj	15572 Jun 16 19:41	8° $\text{E}$ 52'38	-2°03'24	morning rise	15573 Apr 18 06:35	28° $\text{Y}$ 20'43	
minimum elong	15572 Jun 16 12:34	8° $\text{E}$ 24'46	2°03'53	direct	15573 Apr 20 20:15	27° $\text{Y}$ 47'04	
max. Earth dist.	15572 Jun 18 17:55	11° $\text{E}$ 53'18	1.45937 AU		15573 Apr 26 00:41	0° $\text{B}$	
	15572 Jun 30 09:36	0° $\text{O}$		morning max el	15573 Apr 27 04:28	1° $\text{B}$ 02'18	17°50'12
evening rise	15572 Jul 02 22:13	3° $\text{O}$ 54'57		desc. node	15573 May 13 22:22	26° $\text{B}$ 02'30	
greatest brilliancy	15572 Jul 14 08:05	21° $\text{O}$ 27'05	-0.7m	morning set	15573 May 14 06:15	26° $\text{B}$ 35'35	
	15572 Jul 20 05:26	0° $\text{np}$			15573 May 16 07:00	0° $\text{II}$	
asc. node	15572 Jul 21 07:31	1° $\text{np}$ 28'22		superior conj	15573 May 27 16:22	18° $\text{II}$ 42'03	-1°35'45
evening max el	15572 Jul 26 11:49	7° $\text{np}$ 36'32	19°09'11	minimum elong	15573 May 27 07:50	18° $\text{II}$ 07'47	1°35'40
retrograde	15572 Aug 02 09:24	11° $\text{np}$ 24'58		max. Earth dist.	15573 Jun 01 13:52	26° $\text{II}$ 29'10	1.45317 AU
evening set	15572 Aug 05 22:02	10° $\text{np}$ 12'52			15573 Jun 03 19:35	0° $\text{E}$	
inferior conj	15572 Aug 11 08:52	4° $\text{np}$ 24'10	2°49'25	evening rise	15573 Jun 12 10:39	13° $\text{E}$ 20'27	
minimum elong	15572 Aug 11 10:36	4° $\text{np}$ 18'35	2°48'40		15573 Jun 23 11:52	0° $\text{O}$	
min. Earth dist.	15572 Aug 12 20:54	2° $\text{np}$ 27'44	0.66941 AU	greatest brilliancy	15573 Jun 27 04:49	5° $\text{O}$ 25'33	-0.6m
	15572 Aug 14 21:47	30° $\text{R}$ $\text{O}$		asc. node	15573 Jul 08 04:19	19° $\text{O}$ 54'43	
morning rise	15572 Aug 16 22:30	27° $\text{O}$ 57'55		evening max el	15573 Jul 09 16:12	21° $\text{O}$ 29'04	20°04'30
desc. node	15572 Aug 22 23:34	25° $\text{O}$ 21'54		retrograde	15573 Jul 17 08:14	25° $\text{O}$ 50'03	
direct	15572 Aug 23 00:13	25° $\text{O}$ 21'54		evening set	15573 Jul 21 07:00	24° $\text{O}$ 20'23	
	15572 Sep 01 13:11	0° $\text{np}$		inferior conj	15573 Jul 26 13:48	18° $\text{O}$ 19'14	3°05'14
morning max el	15572 Sep 04 14:56	2° $\text{np}$ 52'43	25°57'16	minimum elong	15573 Jul 26 14:39	18° $\text{O}$ 16'21	3°04'31
	15572 Sep 25 05:52	0° $\text{A}$		min. Earth dist.	15573 Jul 27 11:53	17° $\text{O}$ 04'17	0.68140 AU
morning set	15572 Oct 10 13:45	25° $\text{A}$ 49'50		morning rise	15573 Jul 31 21:56	11° $\text{O}$ 54'48	
	15572 Oct 12 19:24	0° $\text{M}$		direct	15573 Aug 06 12:41	9° $\text{O}$ 27'32	
max. Earth dist.	15572 Oct 14 06:33	2° $\text{M}$ 47'26	1.35349 AU	desc. node	15573 Aug 09 20:59	10° $\text{O}$ 11'13	
asc. node	15572 Oct 17 09:10	8° $\text{M}$ 51'57		morning max el	15573 Aug 18 01:54	16° $\text{O}$ 22'30	24°33'54
					15573 Aug 29 09:06	0° $\text{np}$	
superior conj	15572 Oct 19 23:39	14° $\text{M}$ 06'05	0°23'41		15573 Sep 18 04:45	0° $\text{A}$	
minimum elong	15572 Oct 19 22:19	13° $\text{M}$ 59'19	0°23'58	morning set	15573 Sep 22 16:24	7° $\text{A}$ 39'07	
evening rise	15572 Oct 27 16:12	0° $\text{A}$ 01'10		max. Earth dist.	15573 Sep 26 06:19	14° $\text{A}$ 00'53	1.37600 AU
	15572 Oct 27 15:58	0° $\text{A}$					
	15572 Nov 14 16:10	0° $\text{B}$		superior conj	15573 Oct 03 07:41	27° $\text{A}$ 14'35	-0°08'21
evening max el	15572 Nov 15 01:27	0° $\text{B}$ 23'30	20°28'03	minimum elong	15573 Oct 03 08:13	27° $\text{A}$ 17'10	0°07'56
desc. node	15572 Nov 18 20:27	3° $\text{B}$ 31'34		behind sun begin	15573 Oct 03 02:19	26° $\text{A}$ 48'34	
retrograde	15572 Nov 26 01:43	5° $\text{B}$ 52'13		behind sun end	15573 Oct 03 14:07	27° $\text{A}$ 45'49	
evening set	15572 Nov 28 09:01	5° $\text{B}$ 38'56		asc. node	15573 Oct 04 05:49	29° $\text{A}$ 02'09	
inferior conj	15572 Dec 07 05:15	1° $\text{B}$ 44'18	-5°10'03		15573 Oct 04 17:39	0° $\text{M}$	
minimum elong	15572 Dec 06 19:41	1° $\text{B}$ 58'15	5°07'00	evening rise	15573 Oct 11 19:31	14° $\text{M}$ 06'02	
min. Earth dist.	15572 Dec 08 14:36	0° $\text{B}$ 55'37	0.54647 AU		15573 Oct 20 04:31	0° $\text{A}$	
	15572 Dec 10 05:52	30° $\text{R}$ $\text{A}$		evening max el	15573 Oct 28 13:46	11° $\text{A}$ 38'46	19°19'26
morning rise	15572 Dec 15 06:02	27° $\text{A}$ 45'16		desc. node	15573 Nov 05 17:41	16° $\text{A}$ 16'37	
direct	15572 Dec 19 19:51	27° $\text{A}$ 00'17		retrograde	15573 Nov 06 23:06	16° $\text{A}$ 21'16	
	15572 Dec 28 19:16	0° $\text{B}$		evening set	15573 Nov 08 20:29	16° $\text{A}$ 10'38	
morning max el	15573 Jan 02 06:12	3° $\text{B}$ 35'17	23°42'53	inferior conj	15573 Nov 17 09:58	12° $\text{A}$ 01'40	-3°37'46
asc. node	15573 Jan 13 08:52	17° $\text{B}$ 46'42		minimum elong	15573 Nov 17 01:07	12° $\text{A}$ 16'14	3°33'53
	15573 Jan 20 06:39	0° $\approx$		min. Earth dist.	15573 Nov 20 00:02	10° $\text{A}$ 19'34	0.55745 AU
morning set	15573 Jan 26 05:41	12° $\approx$ 13'24		morning rise	15573 Nov 25 03:27	7° $\text{A}$ 32'32	
				direct	15573 Nov 30 14:50	6° $\text{A}$ 24'14	

morning max el	15573 Dec 14 15:30	13° $\text{♊}$ 29'57	25°29'27			15574 Dec 01 20:36	0° $\text{♊}$	
	15573 Dec 27 12:43	0° $\text{♊}$		asc. node		15574 Dec 18 03:09	25° $\text{♊}$ 16'10	
asc. node	15573 Dec 31 06:03	6° $\text{♊}$ 13'29				15574 Dec 20 14:24	0° $\text{♊}$	
morning set	15574 Jan 10 17:19	26° $\text{♊}$ 52'33		morning set		15574 Dec 26 03:00	11° $\text{♊}$ 22'25	
	15574 Jan 12 03:51	0° $\text{♊}$						
				superior conj		15575 Jan 01 22:12	26° $\text{♊}$ 23'18	1°37'33
superior conj	15574 Jan 17 11:00	11° $\text{♊}$ 43'01	1°36'59	minimum elong		15575 Jan 01 21:46	26° $\text{♊}$ 20'53	1°38'22
minimum elong	15574 Jan 17 11:37	11° $\text{♊}$ 46'30	1°37'41	max. Earth dist.		15575 Jan 02 06:44	27° $\text{♊}$ 11'03	1.31134 AU
max. Earth dist.	15574 Jan 18 23:48	15° $\text{♊}$ 06'15	1.31730 AU			15575 Jan 03 12:59	0° $\text{♊}$	
evening rise	15574 Jan 24 15:23	27° $\text{♊}$ 12'41		evening rise		15575 Jan 08 18:41	11° $\text{♊}$ 26'52	
	15574 Jan 25 23:59	0° $\text{♊}$				15575 Jan 18 04:43	0° $\text{♊}$	
desc. node	15574 Feb 01 17:18	12° $\text{♋}$ 56'39		desc. node		15575 Jan 19 14:02	2° $\text{♋}$ 27'55	
	15574 Feb 12 01:12	0° $\text{♋}$		evening max el		15575 Feb 08 13:50	29° $\text{♋}$ 51'28	27°08'33
evening max el	15574 Feb 26 08:22	17° $\text{♋}$ 42'53	27°34'44			15575 Feb 08 17:26	0° $\text{♋}$	
retrograde	15574 Mar 12 07:04	25° $\text{♋}$ 10'06		retrograde		15575 Feb 22 14:28	7° $\text{♋}$ 08'50	
evening set	15574 Mar 19 03:06	22° $\text{♋}$ 54'14		evening set		15575 Mar 01 06:33	5° $\text{♋}$ 12'41	
min. Earth dist.	15574 Mar 22 21:16	19° $\text{♋}$ 54'28	0.62206 AU	min. Earth dist.		15575 Mar 05 04:13	2° $\text{♋}$ 29'55	0.59973 AU
inferior conj	15574 Mar 25 21:39	17° $\text{♋}$ 03'24	-1°02'23	inferior conj		15575 Mar 08 09:16	29° $\text{♋}$ 50'31	-2°26'42
minimum elong	15574 Mar 25 23:48	16° $\text{♋}$ 58'19	1°01'41	minimum elong		15575 Mar 08 14:46	29° $\text{♋}$ 39'06	2°24'29
asc. node	15574 Mar 29 03:11	14° $\text{♋}$ 11'49				15575 Mar 08 04:43	30° $\text{♋}$	
morning rise	15574 Apr 01 23:31	11° $\text{♋}$ 58'28		morning rise		15575 Mar 16 02:27	25° $\text{♋}$ 04'58	
direct	15574 Apr 04 05:34	11° $\text{♋}$ 35'28		asc. node		15575 Mar 16 00:36	25° $\text{♋}$ 06'11	
morning max el	15574 Apr 10 22:01	14° $\text{♋}$ 58'11	17°47'13	direct		15575 Mar 18 03:09	24° $\text{♋}$ 48'54	
	15574 Apr 21 10:07	0° $\text{♋}$		morning max el		15575 Mar 25 12:35	28° $\text{♋}$ 30'13	18°02'48
morning set	15574 Apr 26 19:36	9° $\text{♋}$ 25'08				15575 Mar 26 22:26	0° $\text{♋}$	
desc. node	15574 Apr 30 19:07	16° $\text{♋}$ 24'57		morning set		15575 Apr 10 02:21	23° $\text{♋}$ 02'19	
						15575 Apr 13 20:46	0° $\text{♋}$	
superior conj	15574 May 08 10:54	29° $\text{♋}$ 32'32	-0°59'00	desc. node		15575 Apr 17 15:49	6° $\text{♋}$ 54'30	
minimum elong	15574 May 08 05:22	29° $\text{♋}$ 09'19	0°58'55					
	15574 May 08 17:27	0° $\text{♋}$		superior conj		15575 Apr 20 04:47	11° $\text{♋}$ 26'24	-0°20'42
max. Earth dist.	15574 May 15 06:25	10° $\text{♋}$ 44'01	1.44017 AU	minimum elong		15575 Apr 20 03:01	11° $\text{♋}$ 18'38	0°20'55
evening rise	15574 May 22 23:43	22° $\text{♋}$ 54'41		max. Earth dist.		15575 Apr 27 18:36	24° $\text{♋}$ 26'17	1.42179 AU
	15574 May 27 14:51	0° $\text{♋}$				15575 May 01 03:49	0° $\text{♋}$	
	15574 Jun 17 20:10	0° $\text{♋}$		evening rise		15575 May 03 03:38	3° $\text{♋}$ 12'32	
evening max el	15574 Jun 22 14:35	5° $\text{♋}$ 21'57	21°13'09			15575 May 20 23:09	0° $\text{♋}$	
asc. node	15574 Jun 25 01:12	7° $\text{♋}$ 35'24		evening max el		15575 Jun 05 08:02	19° $\text{♋}$ 15'28	22°31'01
retrograde	15574 Jul 01 07:10	10° $\text{♋}$ 24'15		asc. node		15575 Jun 11 22:12	24° $\text{♋}$ 15'37	
evening set	15574 Jul 05 16:43	8° $\text{♋}$ 37'21		retrograde		15575 Jun 15 04:32	25° $\text{♋}$ 02'04	
inferior conj	15574 Jul 10 22:16	2° $\text{♋}$ 25'18	3°09'10	evening set		15575 Jun 20 01:27	22° $\text{♋}$ 59'13	
minimum elong	15574 Jul 10 22:08	2° $\text{♋}$ 25'45	3°08'22	inferior conj		15575 Jun 25 08:09	16° $\text{♋}$ 38'05	3°02'17
min. Earth dist.	15574 Jul 11 06:53	1° $\text{♋}$ 55'16	0.68866 AU	minimum elong		15575 Jun 25 07:07	16° $\text{♋}$ 41'41	3°01'18
	15574 Jul 12 16:36	30° $\text{♋}$		min. Earth dist.		15575 Jun 25 03:40	16° $\text{♋}$ 53'41	0.69109 AU
morning rise	15574 Jul 16 03:18	26° $\text{♋}$ 05'52		morning rise		15575 Jun 30 12:37	10° $\text{♋}$ 25'45	
direct	15574 Jul 21 06:02	23° $\text{♋}$ 52'55		direct		15575 Jul 05 03:04	8° $\text{♋}$ 30'50	
desc. node	15574 Jul 27 18:20	26° $\text{♋}$ 37'19		morning max el		15575 Jul 14 03:34	13° $\text{♋}$ 45'49	21°38'10
morning max el	15574 Jul 31 13:14	0° $\text{♋}$ 00'07	23°04'40	desc. node		15575 Jul 14 15:38	14° $\text{♋}$ 16'25	
	15574 Jul 31 13:11	0° $\text{♋}$				15575 Jul 27 03:21	0° $\text{♋}$	
	15574 Aug 23 04:02	0° $\text{♋}$		morning set		15575 Aug 15 02:15	28° $\text{♋}$ 23'57	
morning set	15574 Sep 03 21:24	18° $\text{♋}$ 32'35				15575 Aug 16 02:27	0° $\text{♋}$	
max. Earth dist.	15574 Sep 08 05:01	25° $\text{♋}$ 49'09	1.39996 AU	max. Earth dist.		15575 Aug 21 08:37	8° $\text{♋}$ 30'37	1.42264 AU
	15574 Sep 10 14:54	0° $\text{♋}$						
				superior conj		15575 Aug 28 22:49	21° $\text{♋}$ 19'44	-1°20'10
superior conj	15574 Sep 16 00:53	9° $\text{♋}$ 42'37	-0°43'59	minimum elong		15575 Aug 29 05:14	21° $\text{♋}$ 47'36	1°19'30
minimum elong	15574 Sep 16 04:14	9° $\text{♋}$ 57'59	0°43'21			15575 Sep 02 20:59	0° $\text{♋}$	
asc. node	15574 Sep 21 02:27	19° $\text{♋}$ 10'19		asc. node		15575 Sep 07 23:04	9° $\text{♋}$ 12'13	
evening rise	15574 Sep 25 15:10	27° $\text{♋}$ 50'03		evening rise		15575 Sep 08 23:19	11° $\text{♋}$ 02'53	
	15574 Sep 26 18:20	0° $\text{♋}$				15575 Sep 19 22:20	0° $\text{♋}$	
evening max el	15574 Oct 11 14:54	23° $\text{♋}$ 43'28	18°33'10	evening max el		15575 Sep 25 00:33	6° $\text{♋}$ 27'27	18°07'48
retrograde	15574 Oct 19 14:39	27° $\text{♋}$ 46'11		retrograde		15575 Oct 02 00:53	10° $\text{♋}$ 02'53	
evening set	15574 Oct 21 13:28	27° $\text{♋}$ 32'29		evening set		15575 Oct 04 06:02	9° $\text{♋}$ 41'51	
desc. node	15574 Oct 23 15:00	26° $\text{♋}$ 50'19		desc. node		15575 Oct 10 12:23	5° $\text{♋}$ 39'41	
inferior conj	15574 Oct 29 11:23	23° $\text{♋}$ 03'21	-1°52'42	inferior conj		15575 Oct 11 10:12	4° $\text{♋}$ 51'25	-0°17'16
minimum elong	15574 Oct 29 06:53	23° $\text{♋}$ 12'00	1°50'13	minimum elong		15575 Oct 11 09:37	4° $\text{♋}$ 52'44	0°16'37
min. Earth dist.	15574 Nov 01 15:51	20° $\text{♋}$ 37'17	0.57541 AU	min. Earth dist.		15575 Oct 14 15:49	1° $\text{♋}$ 58'59	0.59737 AU
morning rise	15574 Nov 05 20:53	17° $\text{♋}$ 57'17				15575 Oct 17 04:36	30° $\text{♋}$	
direct	15574 Nov 12 00:33	16° $\text{♋}$ 22'10		morning rise		15575 Oct 18 09:54	29° $\text{♋}$ 12'00	
morning max el	15574 Nov 26 06:39	23° $\text{♋}$ 51'38	26°55'05	direct		15575 Oct 24 23:16	27° $\text{♋}$ 11'11	

	15575 Nov 02 04:41	0°♌		morning rise	15576 Sep 29 16:27	11°♑17'03	
morning max el	15575 Nov 08 05:46	4°♌57'50	27°46'24	direct	15576 Oct 06 08:49	8°♑55'44	
	15575 Nov 26 20:10	0°♏		morning max el	15576 Oct 20 11:46	16°♑52'52	27°58'26
asc. node	15575 Dec 05 00:10	14°♏44'30			15576 Oct 31 09:15	0°♌	
morning set	15575 Dec 10 08:53	25°♏37'31			15576 Nov 18 13:28	0°♏	
	15575 Dec 12 09:58	0°♐		asc. node	15576 Nov 20 21:06	4°♏31'15	
max. Earth dist.	15575 Dec 16 14:24	9°♐13'19	1.31074 AU	morning set	15576 Nov 23 08:52	9°♏33'12	
				max. Earth dist.	15576 Nov 28 18:59	21°♏04'14	1.31563 AU
superior conj	15575 Dec 17 09:33	11°♐00'18	1°32'07				
minimum elong	15575 Dec 17 08:10	10°♐52'30	1°32'54	superior conj	15576 Nov 30 19:10	25°♏28'56	1°20'42
evening rise	15575 Dec 24 02:24	25°♐50'21		minimum elong	15576 Nov 30 17:05	25°♏17'23	1°21'19
	15575 Dec 26 01:18	0°♑			15576 Dec 02 20:07	0°♐	
desc. node	15576 Jan 06 10:50	21°♑25'57		evening rise	15576 Dec 07 12:36	10°♐18'31	
	15576 Jan 12 01:48	0°♒			15576 Dec 17 09:57	0°♑	
evening max el	15576 Jan 21 11:48	11°♒08'02	26°07'41	desc. node	15576 Dec 23 07:43	9°♑38'34	
retrograde	15576 Feb 04 10:49	18°♒12'43		evening max el	15577 Jan 02 01:21	21°♑34'28	24°38'26
evening set	15576 Feb 10 15:24	16°♒42'07		retrograde	15577 Jan 15 18:22	28°♑25'00	
min. Earth dist.	15576 Feb 15 01:03	14°♒04'25	0.57806 AU	evening set	15577 Jan 21 02:11	27°♑22'28	
inferior conj	15576 Feb 18 02:03	11°♒53'45	-3°56'02	min. Earth dist.	15577 Jan 26 13:12	24°♑33'43	0.55972 AU
minimum elong	15576 Feb 18 10:41	11°♒38'14	3°52'53	inferior conj	15577 Jan 28 21:43	23°♑05'30	-5°15'03
morning rise	15576 Feb 26 09:05	7°♒29'36		minimum elong	15577 Jan 29 06:24	22°♑51'55	5°12'37
direct	15576 Feb 28 08:44	7°♒16'45		morning rise	15577 Feb 06 12:48	19°♑02'21	
asc. node	15576 Mar 01 22:00	7°♒39'05		direct	15577 Feb 08 18:54	18°♑48'35	
morning max el	15576 Mar 07 20:17	11°♒27'09	18°38'39	asc. node	15577 Feb 16 19:25	21°♑57'02	
	15576 Mar 20 02:53	0°♓		morning max el	15577 Feb 18 16:57	23°♑37'20	19°36'48
morning set	15576 Mar 23 21:19	7°♓11'51			15577 Feb 23 23:10	0°♒	
				morning set	15577 Mar 08 00:26	21°♒41'23	
superior conj	15576 Apr 01 18:50	24°♓14'42	0°14'25		15577 Mar 12 03:14	0°♓	
minimum elong	15576 Apr 01 19:48	24°♓19'11	0°13'58				
behind sun begin	15576 Apr 01 16:25	24°♓03'25		superior conj	15577 Mar 16 00:34	7°♓44'48	0°43'57
behind sun end	15576 Apr 01 23:10	24°♓34'55		minimum elong	15577 Mar 16 02:53	7°♓56'08	0°43'33
desc. node	15576 Apr 03 12:27	27°♓27'25		desc. node	15577 Mar 21 09:02	17°♓59'41	
	15576 Apr 04 21:53	0°♔		max. Earth dist.	15577 Mar 22 09:12	19°♓51'33	1.37706 AU
max. Earth dist.	15576 Apr 09 02:50	7°♔28'51	1.39996 AU	evening rise	15577 Mar 26 01:46	26°♓30'50	
evening rise	15576 Apr 13 04:27	14°♔25'51			15577 Mar 28 01:40	0°♔	
	15576 Apr 22 21:36	0°♕			15577 Apr 16 09:48	0°♕	
	15576 May 14 22:36	0°♖		evening max el	15577 Apr 30 11:57	17°♕04'38	25°10'52
evening max el	15576 May 17 22:32	3°♖10'20	23°52'28	retrograde	15577 May 12 13:29	24°♕05'12	
retrograde	15576 May 28 22:58	9°♖38'04		asc. node	15577 May 15 16:26	23°♕24'26	
asc. node	15576 May 28 19:16	9°♖37'58		evening set	15577 May 18 09:28	21°♕38'25	
evening set	15576 Jun 03 07:35	7°♖21'29		min. Earth dist.	15577 May 22 18:06	16°♕47'04	0.68141 AU
min. Earth dist.	15576 Jun 08 00:07	1°♖53'17	0.68864 AU	inferior conj	15577 May 24 00:30	15°♕07'42	2°17'02
inferior conj	15576 Jun 08 17:32	0°♖53'50	2°44'59	minimum elong	15577 May 23 22:22	15°♕14'43	2°15'39
minimum elong	15576 Jun 08 15:47	0°♖59'49	2°43'47	morning rise	15577 May 29 11:37	9°♕13'38	
	15576 Jun 09 09:23	30°♗♐		direct	15577 Jun 02 02:29	7°♕58'26	
morning rise	15576 Jun 14 00:00	24°♕50'02		morning max el	15577 Jun 09 03:31	11°♕49'34	19°17'52
direct	15576 Jun 18 02:23	23°♕14'58		desc. node	15577 Jun 17 09:53	22°♕01'51	
morning max el	15576 Jun 25 23:53	27°♕42'33	20°21'12	greatest brilliancy	15577 Jun 21 20:22	28°♕26'58	-0.7m
	15576 Jun 28 03:41	0°♘			15577 Jun 22 21:25	0°♘	
desc. node	15576 Jun 30 12:49	2°♘49'33		morning set	15577 Jul 03 15:32	16°♘21'24	
	15576 Jul 19 14:23	0°♙			15577 Jul 12 11:11	0°♙	
morning set	15576 Jul 24 11:18	7°♙26'37		max. Earth dist.	15577 Jul 16 11:34	6°♙16'42	1.45396 AU
max. Earth dist.	15576 Aug 02 19:20	22°♙05'01	1.44131 AU				
	15576 Aug 07 16:52	0°♚		superior conj	15577 Jul 19 22:05	11°♙41'55	-2°11'03
superior conj	15576 Aug 08 21:50	1°♚58'49	-1°51'35	minimum elong	15577 Jul 20 02:14	11°♙58'25	2°11'39
minimum elong	15576 Aug 09 05:32	2°♚30'31	1°51'24		15577 Jul 31 06:47	0°♚	
evening rise	15576 Aug 21 15:15	23°♚33'12		evening rise	15577 Aug 03 09:37	5°♚07'27	
asc. node	15576 Aug 24 19:42	29°♚04'16		asc. node	15577 Aug 11 16:21	18°♚41'15	
	15576 Aug 25 08:38	0°♛			15577 Aug 19 08:43	0°♛	
evening max el	15576 Sep 07 14:31	19°♛40'49	18°01'52	evening max el	15577 Aug 22 05:09	3°♛14'08	18°14'21
retrograde	15576 Sep 14 02:10	23°♛02'57		retrograde	15577 Aug 28 13:54	6°♛36'27	
evening set	15576 Sep 16 15:17	22°♛30'56		evening set	15577 Aug 31 11:39	5°♛50'33	
inferior conj	15576 Sep 23 03:31	17°♛21'11	0°59'09	inferior conj	15577 Sep 06 11:17	0°♛24'13	1°55'35
minimum elong	15576 Sep 23 05:08	17°♛17'01	0°58'44	minimum elong	15577 Sep 06 13:37	0°♛17'29	1°54'48
min. Earth dist.	15576 Sep 26 01:35	14°♛22'55	0.62032 AU		15577 Sep 06 19:43	30°♗♐	
desc. node	15576 Sep 26 09:48	14°♛03'00		min. Earth dist.	15577 Sep 08 21:20	27°♗38'52	0.64185 AU
				morning rise	15577 Sep 12 13:53	24°♗05'07	



desc. node	15577 Sep 13 07:13	23° $\cap$ 32'50		minimum elong	15578 Aug 21 07:47	13° $\cap$ 45'36	2°33'24
direct	15577 Sep 19 03:43	21° $\cap$ 31'01		min. Earth dist.	15578 Aug 23 01:56	11° $\cap$ 34'35	0.66044 AU
morning max el	15577 Oct 02 21:56	29° $\cap$ 29'27	27°33'38	morning rise	15578 Aug 26 23:26	7° $\cap$ 26'36	
	15577 Oct 03 09:59	0° $\Omega$		desc. node	15578 Aug 31 04:39	5° $\cap$ 04'57	
	15577 Oct 25 07:41	0° $\cap$		direct	15578 Sep 02 06:31	4° $\cap$ 48'32	
morning set	15577 Nov 07 00:33	23° $\cap$ 03'59		morning max el	15578 Sep 15 09:20	12° $\cap$ 34'31	26°38'48
asc. node	15577 Nov 07 17:57	24° $\cap$ 30'36			15578 Sep 29 10:14	0° $\Omega$	
	15577 Nov 10 10:40	0° $\mathcal{A}$			15578 Oct 17 22:49	0° $\cap$	
max. Earth dist.	15577 Nov 11 16:40	2° $\mathcal{A}$ 36'11	1.32608 AU	morning set	15578 Oct 21 04:48	6° $\cap$ 02'05	
				max. Earth dist.	15578 Oct 25 04:34	13° $\cap$ 46'52	1.34203 AU
superior conj	15577 Nov 15 01:02	9° $\mathcal{A}$ 44'03	1°03'15	asc. node	15578 Oct 25 14:41	14° $\cap$ 37'13	
minimum elong	15577 Nov 14 22:42	9° $\mathcal{A}$ 31'25	1°03'41				
evening rise	15577 Nov 21 23:29	24° $\mathcal{A}$ 46'57		superior conj	15578 Oct 30 00:46	23° $\cap$ 39'00	0°39'49
	15577 Nov 24 10:39	0° $\mathcal{B}$		minimum elong	15578 Oct 29 22:50	23° $\cap$ 28'52	0°40'06
desc. node	15577 Dec 10 04:40	26° $\mathcal{B}$ 49'25			15578 Nov 02 01:14	0° $\mathcal{A}$	
	15577 Dec 12 22:28	0° $\approx$		evening rise	15578 Nov 06 09:08	9° $\mathcal{A}$ 10'14	
evening max el	15577 Dec 14 10:49	1° $\approx$ 32'38	22°55'42		15578 Nov 17 05:53	0° $\mathcal{B}$	
retrograde	15577 Dec 27 13:23	8° $\approx$ 02'12		evening max el	15578 Nov 26 01:42	11° $\mathcal{B}$ 39'21	21°17'22
evening set	15577 Dec 31 15:15	7° $\approx$ 26'00		desc. node	15578 Nov 27 01:45	12° $\mathcal{B}$ 36'12	
min. Earth dist.	15578 Jan 07 20:14	4° $\approx$ 06'34	0.54760 AU	retrograde	15578 Dec 07 23:48	17° $\mathcal{B}$ 33'26	
inferior conj	15578 Jan 08 22:28	3° $\approx$ 29'12	-5°58'56	evening set	15578 Dec 10 19:16	17° $\mathcal{B}$ 15'07	
minimum elong	15578 Jan 09 00:58	3° $\approx$ 25'38	5°58'01	inferior conj	15578 Dec 19 13:31	13° $\mathcal{B}$ 24'07	-5°45'08
	15578 Jan 16 06:02	30° $\mathcal{R}$ $\mathcal{B}$		minimum elong	15578 Dec 19 06:55	13° $\mathcal{B}$ 33'25	5°43'24
morning rise	15578 Jan 17 12:01	29° $\mathcal{B}$ 40'03		min. Earth dist.	15578 Dec 20 01:48	13° $\mathcal{B}$ 06'49	0.54414 AU
direct	15578 Jan 20 10:47	29° $\mathcal{B}$ 19'50		morning rise	15578 Dec 27 18:57	9° $\mathcal{B}$ 33'55	
	15578 Jan 24 11:27	0° $\approx$		direct	15578 Dec 31 18:18	8° $\mathcal{B}$ 59'46	
morning max el	15578 Jan 31 23:17	4° $\approx$ 52'41	20°58'09	morning max el	15579 Jan 13 15:30	15° $\mathcal{B}$ 14'54	22°39'29
asc. node	15578 Feb 03 16:46	7° $\approx$ 47'45		asc. node	15579 Jan 21 14:03	24° $\mathcal{B}$ 52'01	
	15578 Feb 17 05:56	0° $\mathcal{H}$			15579 Jan 24 20:56	0° $\approx$	
morning set	15578 Feb 20 08:45	6° $\mathcal{H}$ 22'14		morning set	15579 Feb 04 19:53	21° $\approx$ 06'37	
					15579 Feb 08 23:15	0° $\mathcal{H}$	
superior conj	15578 Feb 27 17:57	21° $\mathcal{H}$ 45'36	1°07'05				
minimum elong	15578 Feb 27 20:31	21° $\mathcal{H}$ 58'46	1°06'56	superior conj	15579 Feb 11 19:30	6° $\mathcal{H}$ 06'18	1°23'41
	15578 Mar 03 20:01	0° $\mathcal{Y}$		minimum elong	15579 Feb 11 21:36	6° $\mathcal{H}$ 17'30	1°23'54
max. Earth dist.	15578 Mar 04 17:58	1° $\mathcal{Y}$ 47'47	1.35551 AU	max. Earth dist.	15579 Feb 15 09:13	13° $\mathcal{H}$ 36'44	1.33717 AU
desc. node	15578 Mar 08 05:37	8° $\mathcal{Y}$ 27'51		evening rise	15579 Feb 19 21:44	22° $\mathcal{H}$ 42'07	
evening rise	15578 Mar 08 16:44	9° $\mathcal{Y}$ 19'41		desc. node	15579 Feb 23 02:13	28° $\mathcal{H}$ 47'08	
	15578 Mar 20 16:43	0° $\mathcal{B}$			15579 Feb 23 17:55	0° $\mathcal{Y}$	
	15578 Apr 12 03:39	0° $\cap$			15579 Mar 14 09:36	0° $\mathcal{B}$	
evening max el	15578 Apr 13 01:29	0° $\cap$ 54'25	26°18'52	evening max el	15579 Mar 26 15:09	14° $\mathcal{B}$ 31'41	27°09'06
retrograde	15578 Apr 25 23:06	8° $\cap$ 16'16		retrograde	15579 Apr 09 02:52	22° $\mathcal{B}$ 02'31	
evening set	15578 May 02 05:21	5° $\cap$ 44'11		evening set	15579 Apr 15 17:15	19° $\mathcal{B}$ 31'24	
asc. node	15578 May 02 13:39	5° $\cap$ 26'42		asc. node	15579 Apr 19 10:57	15° $\mathcal{B}$ 58'51	
min. Earth dist.	15578 May 06 07:40	1° $\cap$ 28'13	0.66966 AU	min. Earth dist.	15579 Apr 19 14:48	15° $\mathcal{B}$ 48'19	0.65374 AU
	15578 May 07 12:31	30° $\mathcal{R}$ $\mathcal{B}$		inferior conj	15579 Apr 21 22:38	13° $\mathcal{B}$ 11'06	0°46'02
inferior conj	15578 May 08 03:00	29° $\mathcal{B}$ 15'24	1°37'43	minimum elong	15579 Apr 21 21:26	13° $\mathcal{B}$ 14'30	0°45'03
minimum elong	15578 May 08 00:58	29° $\mathcal{B}$ 21'40	1°36'21	morning rise	15579 Apr 28 03:17	7° $\mathcal{B}$ 40'38	
morning rise	15578 May 13 21:29	23° $\mathcal{B}$ 32'14		direct	15579 Apr 30 21:52	6° $\mathcal{B}$ 59'26	
direct	15578 May 17 01:40	22° $\mathcal{B}$ 35'22		morning max el	15579 May 07 05:19	10° $\mathcal{B}$ 16'01	17°59'50
morning max el	15578 May 23 13:58	26° $\mathcal{B}$ 02'59	18°30'23		15579 May 21 02:01	0° $\cap$	
	15578 May 27 02:04	0° $\cap$		desc. node	15579 May 22 03:46	1° $\cap$ 44'53	
desc. node	15578 Jun 04 06:52	11° $\cap$ 42'56		morning set	15579 May 25 09:23	7° $\cap$ 02'09	
morning set	15578 Jun 13 11:02	26° $\cap$ 02'45					
	15578 Jun 15 23:23	0° $\mathcal{G}$		superior conj	15579 Jun 08 20:18	0° $\mathcal{G}$ 17'51	-1°53'19
				minimum elong	15579 Jun 08 11:49	29° $\cap$ 44'21	1°53'32
superior conj	15578 Jun 29 08:08	20° $\mathcal{G}$ 53'55	-2°12'01		15579 Jun 08 15:47	0° $\mathcal{G}$	
minimum elong	15578 Jun 29 04:37	20° $\mathcal{G}$ 40'13	2°12'47	max. Earth dist.	15579 Jun 12 02:50	5° $\mathcal{G}$ 26'20	1.45757 AU
max. Earth dist.	15578 Jun 29 06:45	20° $\mathcal{G}$ 48'32	1.45952 AU	evening rise	15579 Jun 24 22:31	25° $\mathcal{G}$ 17'43	
	15578 Jul 05 04:05	0° $\Omega$			15579 Jun 28 00:08	0° $\Omega$	
evening rise	15578 Jul 15 02:58	15° $\Omega$ 38'14		greatest brilliancy	15579 Jul 08 07:18	15° $\Omega$ 32'55	-0.7m
greatest brilliancy	15578 Jul 23 12:39	28° $\Omega$ 51'40	-0.8m	asc. node	15579 Jul 16 09:47	26° $\Omega$ 44'33	
	15578 Jul 24 06:16	0° $\cap$			15579 Jul 19 05:17	0° $\cap$	
asc. node	15578 Jul 29 13:02	7° $\cap$ 57'07		evening max el	15579 Jul 20 01:17	0° $\cap$ 51'27	19°31'02
evening max el	15578 Aug 05 17:29	16° $\cap$ 59'34	18°44'25	retrograde	15579 Jul 27 05:55	4° $\cap$ 52'19	
retrograde	15578 Aug 12 08:09	20° $\cap$ 35'00		evening set	15579 Jul 30 22:44	3° $\cap$ 32'55	
evening set	15578 Aug 15 15:07	19° $\cap$ 33'01			15579 Aug 03 11:48	30° $\mathcal{R}$ $\Omega$	
inferior conj	15578 Aug 21 05:40	13° $\cap$ 52'11	2°34'11	inferior conj	15579 Aug 05 07:32	27° $\Omega$ 39'03	2°57'40

minimum elong	15579 Aug 05 08:54	27°Ω34'29	2°56'56	evening set	15580 Jul 14 08:14	17°Ω44'43	
min. Earth dist.	15579 Aug 06 13:41	25°Ω59'17	0.67504 AU	inferior conj	15580 Jul 19 14:12	11°Ω38'57	3°08'17
morning rise	15579 Aug 10 18:31	21°Ω13'06		minimum elong	15580 Jul 19 14:39	11°Ω37'28	3°07'32
direct	15579 Aug 16 15:53	18°Ω39'40		min. Earth dist.	15580 Jul 20 06:30	10°Ω42'54	0.68510 AU
desc. node	15579 Aug 18 02:04	18°Ω47'34		morning rise	15580 Jul 24 20:45	5°Ω16'35	
morning max el	15579 Aug 28 20:20	25°Ω57'08	25°23'08	direct	15580 Jul 30 06:34	2°Ω54'47	
	15579 Sep 01 13:38	0°♐		desc. node	15580 Aug 03 23:28	4°Ω21'01	
	15579 Sep 22 22:58	0°♑		morning max el	15580 Aug 10 07:04	9°Ω29'48	23°56'10
morning set	15579 Oct 03 18:02	18°♑19'32			15580 Aug 26 12:10	0°♐	
max. Earth dist.	15579 Oct 07 07:26	24°♑51'31	1.36268 AU	morning set	15580 Sep 14 11:52	29°♐45'30	
	15579 Oct 10 00:23	0°♒			15580 Sep 14 15:16	0°♑	
asc. node	15579 Oct 12 11:22	4°♒47'34		max. Earth dist.	15580 Sep 18 06:08	6°♑17'17	1.38621 AU
superior conj	15579 Oct 13 15:35	7°♒07'26	0°10'43	superior conj	15580 Sep 25 17:49	19°♑59'51	-0°23'08
minimum elong	15579 Oct 13 14:54	7°♒04'06	0°11'02	minimum elong	15580 Sep 25 19:27	20°♑07'33	0°22'38
behind sun begin	15579 Oct 13 10:15	6°♒40'53		asc. node	15580 Sep 28 08:01	24°♑57'19	
behind sun end	15579 Oct 13 19:34	7°♒27'21			15580 Sep 30 22:15	0°♒	
evening rise	15579 Oct 21 15:29	23°♒23'56		evening rise	15580 Oct 04 15:55	7°♒20'43	
	15579 Oct 24 22:05	0°♓			15580 Oct 17 13:36	0°♓	
evening max el	15579 Nov 08 05:45	22°♓26'29	19°56'13	evening max el	15580 Oct 20 23:56	4°♓03'07	18°57'04
desc. node	15579 Nov 13 22:54	26°♓34'30		retrograde	15580 Oct 29 17:40	8°♓27'19	
retrograde	15579 Nov 18 13:04	27°♓34'45		desc. node	15580 Oct 30 20:10	8°♓23'20	
evening set	15579 Nov 20 14:31	27°♓23'23		evening set	15580 Oct 31 14:55	8°♓15'50	
inferior conj	15579 Nov 29 09:27	23°♓24'08	-4°34'28	inferior conj	15580 Nov 08 22:22	3°♓58'22	-2°53'07
minimum elong	15579 Nov 28 23:23	23°♓39'27	4°30'43	minimum elong	15580 Nov 08 15:14	4°♓10'54	2°49'39
min. Earth dist.	15579 Dec 01 08:47	22°♓12'02	0.55019 AU	min. Earth dist.	15580 Nov 11 20:13	1°♓56'13	0.56444 AU
morning rise	15579 Dec 07 07:03	19°♓14'03			15580 Nov 14 23:32	30°♒♒	
direct	15579 Dec 12 06:55	18°♓19'28		morning rise	15580 Nov 16 12:44	29°♒14'03	
morning max el	15579 Dec 26 00:19	25°♓08'22	24°29'23	direct	15580 Nov 22 07:52	27°♒54'44	
	15579 Dec 30 12:25	0°♑			15580 Nov 29 16:33	0°♓	
asc. node	15580 Jan 08 11:17	12°♑53'03		morning max el	15580 Dec 06 11:21	5°♓10'22	26°09'28
	15580 Jan 17 13:46	0°♒			15580 Dec 24 10:53	0°♑	
morning set	15580 Jan 20 07:53	5°♒49'11		asc. node	15580 Dec 25 08:27	1°♑36'31	
superior conj	15580 Jan 27 02:32	20°♒39'28	1°33'54	morning set	15581 Jan 03 18:57	20°♑25'13	
minimum elong	15580 Jan 27 03:45	20°♒46'11	1°34'27		15581 Jan 08 03:37	0°♒	
max. Earth dist.	15580 Jan 29 08:20	25°♒32'20	1.32322 AU	superior conj	15581 Jan 10 12:47	5°♒18'43	1°37'56
	15580 Jan 31 10:24	0°♐		minimum elong	15581 Jan 10 12:58	5°♒19'42	1°38'43
evening rise	15580 Feb 03 13:32	6°♐29'54		max. Earth dist.	15581 Jan 11 13:29	7°♒36'05	1.31417 AU
desc. node	15580 Feb 09 22:51	18°♐52'51		evening rise	15581 Jan 17 13:19	20°♒36'08	
	15580 Feb 16 07:45	0°♑			15581 Jan 22 04:37	0°♐	
evening max el	15580 Mar 08 03:37	27°♑45'00	27°34'11	desc. node	15581 Jan 26 19:33	8°♐39'05	
	15580 Mar 10 15:38	0°♒			15581 Feb 09 12:03	0°♑	
retrograde	15580 Mar 21 23:30	5°♒14'41		evening max el	15581 Feb 18 12:25	10°♑20'49	27°27'54
evening set	15580 Mar 28 18:49	2°♒51'24		retrograde	15581 Mar 04 11:57	17°♑43'28	
	15580 Apr 01 04:12	30°♒♑		evening set	15581 Mar 11 07:19	15°♑35'13	
min. Earth dist.	15580 Apr 01 13:31	29°♑37'25	0.63440 AU	min. Earth dist.	15581 Mar 15 02:17	12°♑44'01	0.61269 AU
inferior conj	15580 Apr 04 08:34	26°♑47'36	-0°18'55	inferior conj	15581 Mar 18 05:27	9°♑56'03	-1°36'53
minimum elong	15580 Apr 04 09:10	26°♑46'04	0°18'59	minimum elong	15581 Mar 18 08:56	9°♑48'14	1°35'33
asc. node	15580 Apr 05 08:18	25°♑47'54		asc. node	15581 Mar 23 05:42	6°♑01'42	
morning rise	15580 Apr 11 02:02	21°♑32'15		morning rise	15581 Mar 25 13:46	4°♑58'57	
direct	15580 Apr 13 12:16	21°♑03'30		direct	15581 Mar 27 17:21	4°♑39'13	
morning max el	15580 Apr 19 22:55	24°♑20'40	17°46'40	morning max el	15581 Apr 03 15:41	8°♑08'09	17°51'30
	15580 Apr 24 14:38	0°♒			15581 Apr 17 22:24	0°♒	
morning set	15580 May 06 10:06	19°♒16'41		morning set	15581 Apr 19 07:39	2°♒29'29	
desc. node	15580 May 08 00:35	22°♒01'28		desc. node	15581 Apr 24 21:20	12°♒27'56	
	15580 May 12 17:17	0°♓		superior conj	15581 Apr 30 06:17	21°♒49'59	-0°42'37
superior conj	15580 May 19 01:32	10°♓31'08	-1°20'45	minimum elong	15581 Apr 30 02:25	21°♒33'24	0°42'38
minimum elong	15580 May 18 17:57	10°♓00'13	1°20'37		15581 May 05 02:36	0°♓	
max. Earth dist.	15580 May 24 21:49	19°♓55'51	1.44843 AU	max. Earth dist.	15581 May 07 13:17	4°♓01'08	1.43296 AU
	15580 May 31 07:57	0°♑		evening rise	15581 May 14 03:23	14°♓32'32	
evening rise	15580 Jun 03 09:09	4°♑41'49			15581 May 24 07:08	0°♑	
	15580 Jun 20 10:29	0°♒		evening max el	15581 Jun 14 23:18	28°♑37'48	21°45'20
evening max el	15580 Jul 02 03:12	14°♒44'40	20°32'22		15581 Jun 16 09:48	0°♒	
asc. node	15580 Jul 02 06:38	14°♒53'08		asc. node	15581 Jun 19 03:33	2°♒10'20	
retrograde	15580 Jul 10 04:53	19°♒21'54		retrograde	15581 Jun 24 03:20	3°♒58'40	

evening set	15581 Jun 28 17:45	2°Ω04'31		retrograde	15582 Jun 07 23:43	18°Ω36'27	
	15581 Jun 30 19:04	30°RΩ		evening set	15582 Jun 13 01:36	16°Ω27'16	
inferior conj	15581 Jul 03 23:30	25°Ω48'16	3°07'31	inferior conj	15582 Jun 18 09:25	10°Ω02'42	2°56'13
minimum elong	15581 Jul 03 22:59	25°Ω50'06	3°06'39	minimum elong	15582 Jun 18 08:03	10°Ω07'27	2°55'08
min. Earth dist.	15581 Jul 04 02:27	25°Ω38'00	0.69035 AU	min. Earth dist.	15582 Jun 17 23:21	10°Ω37'34	0.69065 AU
morning rise	15581 Jul 09 04:02	19°Ω31'51		morning rise	15582 Jun 23 14:26	3°Ω53'50	
direct	15581 Jul 14 01:30	17°Ω26'28		direct	15582 Jun 27 23:34	2°Ω07'29	
desc. node	15581 Jul 21 20:47	21°Ω20'49		morning max el	15582 Jul 06 12:09	7°Ω01'39	21°03'55
morning max el	15581 Jul 23 19:27	23°Ω11'02	22°27'07	desc. node	15582 Jul 08 18:01	9°Ω24'46	
	15581 Jul 29 19:07	0°Ω			15582 Jul 24 02:08	0°Ω	
	15581 Aug 19 20:11	0°Π		morning set	15582 Aug 06 01:57	19°Ω39'49	
morning set	15581 Aug 26 06:36	10°Π12'02			15582 Aug 12 14:18	0°Π	
max. Earth dist.	15581 Aug 31 06:48	18°Π28'28	1.40997 AU	max. Earth dist.	15582 Aug 13 13:08	1°Π32'23	1.43117 AU
	15581 Sep 06 22:52	0°Ω					
superior conj	15581 Sep 08 03:17	2°Ω06'38	-0°59'32	superior conj	15582 Aug 20 15:44	13°Π19'09	-1°34'29
minimum elong	15581 Sep 08 08:00	2°Ω27'43	0°58'50	minimum elong	15582 Aug 20 23:06	13°Π50'23	1°33'57
asc. node	15581 Sep 15 04:39	15°Ω03'01			15582 Aug 30 05:45	0°Ω	
evening rise	15581 Sep 18 07:10	20°Ω52'31		evening rise	15582 Sep 01 09:05	3°Ω48'51	
	15581 Sep 23 05:12	0°Π		asc. node	15582 Sep 02 01:17	5°Ω01'14	
evening max el	15581 Oct 04 05:04	16°Π24'41	18°19'51	evening max el	15582 Sep 17 16:59	29°Ω22'09	18°02'59
retrograde	15581 Oct 11 17:43	20°Π14'35			15582 Sep 18 08:55	0°Π	
evening set	15581 Oct 13 18:45	19°Π58'18		retrograde	15582 Sep 24 10:52	2°Π50'30	
desc. node	15581 Oct 17 17:30	18°Π05'48		evening set	15582 Sep 26 19:09	2°Π25'20	
inferior conj	15581 Oct 21 09:03	15°Π19'41	-1°10'11		15582 Sep 30 19:41	30°RΩ	
minimum elong	15581 Oct 21 06:23	15°Π25'09	1°08'33	inferior conj	15582 Oct 03 16:13	27°Ω26'37	0°17'38
min. Earth dist.	15581 Oct 24 15:13	12°Π40'01	0.58439 AU	minimum elong	15582 Oct 03 16:47	27°Ω25'16	0°17'44
morning rise	15581 Oct 28 14:32	9°Π58'20		desc. node	15582 Oct 04 14:52	26°Ω32'28	
direct	15581 Nov 03 22:53	8°Π12'10		min. Earth dist.	15582 Oct 06 19:32	24°Ω28'49	0.60709 AU
morning max el	15581 Nov 18 06:03	15°Π49'50	27°21'48	morning rise	15582 Oct 10 11:19	21°Ω35'11	
	15581 Nov 29 19:37	0°♄		direct	15582 Oct 17 02:39	19°Ω24'33	
asc. node	15581 Dec 12 05:31	20°♄51'01		morning max el	15582 Oct 31 08:30	27°Ω17'43	27°56'23
	15581 Dec 16 20:06	0°♄			15582 Nov 02 22:40	0°Π	
morning set	15581 Dec 19 03:15	4°♄49'24			15582 Nov 23 12:31	0°♄	
superior conj	15581 Dec 26 00:15	19°♄57'58	1°35'58	asc. node	15582 Nov 29 02:29	10°♄27'56	
minimum elong	15581 Dec 25 23:23	19°♄53'09	1°36'48	morning set	15582 Dec 03 06:53	18°♄57'03	
max. Earth dist.	15581 Dec 25 21:15	19°♄41'10	1.31036 AU		15582 Dec 08 10:00	0°♄	
	15581 Dec 30 12:25	0°♁		max. Earth dist.	15582 Dec 09 03:55	1°♄39'02	1.31203 AU
evening rise	15582 Jan 01 18:41	4°♁54'28					
desc. node	15582 Jan 13 16:18	27°♁57'35		superior conj	15582 Dec 10 11:05	4°♄32'09	1°28'01
	15582 Jan 14 21:19	0°♁		minimum elong	15582 Dec 10 09:21	4°♄22'31	1°28'45
evening max el	15582 Jan 31 14:44	22°♁07'08	26°46'42	evening rise	15582 Dec 17 03:39	19°♄20'16	
retrograde	15582 Feb 14 14:55	29°♁19'45			15582 Dec 22 06:27	0°♁	
evening set	15582 Feb 21 03:22	27°♁33'29		desc. node	15582 Dec 31 13:08	16°♁38'06	
min. Earth dist.	15582 Feb 25 04:35	24°♁54'56	0.59030 AU		15583 Jan 10 10:37	0°♁	
inferior conj	15582 Feb 28 09:27	22°♁25'28	-3°04'37	evening max el	15583 Jan 13 08:50	3°♁00'43	25°32'35
minimum elong	15582 Feb 28 16:26	22°♁11'51	3°01'51	retrograde	15583 Jan 27 06:28	10°♁00'36	
morning rise	15582 Mar 08 08:58	17°♁49'17		evening set	15583 Feb 02 03:14	8°♁41'48	
direct	15582 Mar 10 08:35	17°♁35'03		min. Earth dist.	15583 Feb 06 21:34	6°♁01'28	0.56964 AU
asc. node	15582 Mar 10 03:08	17°♁35'14		inferior conj	15583 Feb 09 17:20	4°♁07'09	-4°32'08
morning max el	15582 Mar 18 03:54	21°♁27'05	18°15'29	minimum elong	15583 Feb 10 02:36	3°♁51'29	4°29'02
	15582 Mar 24 16:26	0°♂			15583 Feb 17 15:27	30°R♁	
morning set	15582 Apr 02 20:08	16°♂21'56		morning rise	15583 Feb 18 04:50	29°♁52'24	
	15582 Apr 10 02:46	0°♂		direct	15583 Feb 20 05:50	29°♁39'52	
desc. node	15582 Apr 11 18:00	2°♂59'23			15583 Feb 22 18:23	0°♁	
superior conj	15582 Apr 12 09:19	4°♂08'50	-0°05'17	asc. node	15583 Feb 25 00:31	0°♁53'04	
minimum elong	15582 Apr 12 08:53	4°♂06'52	0°05'37	morning max el	15583 Mar 01 07:29	4°♁05'51	19°00'31
behind sun begin	15582 Apr 12 01:51	3°♂35'02			15583 Mar 17 10:39	0°♂	
behind sun end	15582 Apr 12 15:55	4°♂38'38		morning set	15583 Mar 17 18:56	0°♂40'45	
max. Earth dist.	15582 Apr 19 23:34	17°♂26'50	1.41279 AU	superior conj	15583 Mar 26 06:33	17°♂16'11	0°27'40
evening rise	15582 Apr 24 15:52	25°♂13'14		minimum elong	15583 Mar 26 08:15	17°♂24'14	0°27'13
	15582 Apr 27 15:07	0°♂		desc. node	15583 Mar 29 14:36	23°♂32'20	
	15582 May 18 02:17	0°♂			15583 Apr 02 03:58	0°♂	
evening max el	15582 May 28 15:03	12°♂31'03	23°05'27	max. Earth dist.	15583 Apr 02 06:00	0°♂09'04	1.39022 AU
asc. node	15582 Jun 06 00:35	18°♂19'38		evening rise	15583 Apr 06 01:38	6°♂49'16	
					15583 Apr 20 14:48	0°♂	
				evening max el	15583 May 11 04:49	26°♂25'31	24°26'36

	15583 May 15 06:04	0°☿		retrograde	15584 May 05 05:13	17°♊30'14	
retrograde	15583 May 22 16:44	3°☿09'01		asc. node	15584 May 09 18:51	16°♊05'19	
asc. node	15583 May 23 21:42	3°☿02'48		evening set	15584 May 11 05:41	15°♊00'51	
evening set	15583 May 28 06:07	0°☿47'46		min. Earth dist.	15584 May 15 11:34	10°♊24'34	0.67695 AU
	15583 May 29 02:42	30°♋♊		inferior conj	15584 May 16 23:23	8°♊30'22	2°01'49
min. Earth dist.	15583 Jun 01 19:07	25°♊35'04	0.68613 AU	minimum elong	15584 May 16 21:13	8°♊37'19	2°00'26
inferior conj	15583 Jun 02 18:02	24°♊18'05	2°34'27	morning rise	15584 May 22 13:16	2°♊40'30	
minimum elong	15583 Jun 02 16:03	24°♊24'42	2°33'10	direct	15584 May 25 23:33	1°♊33'11	
morning rise	15583 Jun 08 02:07	18°♊18'01		morning max el	15584 Jun 01 18:05	5°♊12'37	18°55'36
direct	15583 Jun 11 23:27	16°♊51'31		desc. node	15584 Jun 11 12:12	17°♊41'32	
morning max el	15583 Jun 19 11:27	21°♊02'28	19°52'16	greatest brilliancy	15584 Jun 15 02:41	23°♊03'35	-0.7m
desc. node	15583 Jun 25 15:09	28°♊15'47			15584 Jun 19 15:42	0°☿	
	15583 Jun 26 22:24	0°☿		morning set	15584 Jun 24 15:02	7°☿40'49	
morning set	15583 Jul 16 06:23	28°☿31'43			15584 Jul 08 23:35	0°♊	
	15583 Jul 17 05:22	0°♊		max. Earth dist.	15584 Jul 08 19:56	29°☿45'40	1.45730 AU
max. Earth dist.	15583 Jul 27 01:53	15°♊22'21	1.44751 AU				
				superior conj	15584 Jul 10 21:20	2°♊59'07	-2°13'58
superior conj	15583 Aug 01 04:38	23°♊33'02	-2°01'46	minimum elong	15584 Jul 10 22:26	3°♊03'23	2°14'44
minimum elong	15583 Aug 01 11:33	24°♊00'55	2°01'55	evening rise	15584 Jul 26 00:20	27°♊03'45	
	15583 Aug 05 03:43	0°♎			15584 Jul 27 19:57	0°♎	
evening rise	15583 Aug 14 16:25	15°♎56'15		asc. node	15584 Aug 05 18:35	14°♎16'04	
asc. node	15583 Aug 19 21:55	24°♎47'13		evening max el	15584 Aug 14 21:48	26°♎24'59	18°25'02
	15583 Aug 23 01:35	0°♏		retrograde	15584 Aug 21 07:49	29°♎50'53	
evening max el	15583 Sep 01 07:42	12°♏45'05	18°05'02	evening set	15584 Aug 24 09:32	28°♎58'12	
retrograde	15583 Sep 07 16:56	16°♏05'25		inferior conj	15584 Aug 30 04:52	23°♎25'28	2°13'56
evening set	15583 Sep 10 09:41	15°♏27'50		minimum elong	15584 Aug 30 07:12	23°♎18'31	2°13'09
inferior conj	15583 Sep 16 16:08	10°♏11'02	1°25'25	min. Earth dist.	15584 Sep 01 09:08	20°♎50'38	0.65030 AU
minimum elong	15583 Sep 16 18:13	10°♏05'25	1°24'48	morning rise	15584 Sep 05 03:32	17°♎03'01	
min. Earth dist.	15583 Sep 19 09:35	7°♏15'59	0.62980 AU	desc. node	15584 Sep 07 09:42	15°♎31'47	
desc. node	15583 Sep 21 12:17	5°♏13'33		direct	15584 Sep 11 15:02	14°♎26'14	
morning rise	15583 Sep 23 00:34	3°♏59'33		morning max el	15584 Sep 25 03:11	22°♎20'09	27°13'21
direct	15583 Sep 29 16:40	1°♏31'22			15584 Oct 01 21:18	0°♏	
morning max el	15583 Oct 13 16:22	9°♏30'36	27°51'58		15584 Oct 21 21:59	0°♎	
	15583 Oct 29 16:08	0°♎		morning set	15584 Oct 30 14:46	15°♎59'07	
asc. node	15583 Nov 15 23:22	0°♐20'09		asc. node	15584 Nov 01 20:11	20°♎22'50	
	15583 Nov 15 19:19	0°♐		max. Earth dist.	15584 Nov 03 23:26	24°♎42'37	1.33232 AU
morning set	15583 Nov 17 03:36	2°♐42'05			15584 Nov 06 12:29	0°♐	
max. Earth dist.	15583 Nov 22 05:41	13°♐20'30	1.31935 AU				
				superior conj	15584 Nov 07 22:54	3°♐02'10	0°54'02
superior conj	15583 Nov 24 19:21	18°♐55'14	1°14'03	minimum elong	15584 Nov 07 20:38	2°♐50'05	0°54'23
minimum elong	15583 Nov 24 17:05	18°♐42'50	1°14'35	evening rise	15584 Nov 15 00:55	18°♐14'57	
	15583 Nov 29 20:18	0°♑			15584 Nov 20 18:23	0°♑	
evening rise	15583 Dec 01 14:19	3°♑48'23		desc. node	15584 Dec 04 07:02	21°♑03'23	
	15583 Dec 15 10:00	0°♒		evening max el	15584 Dec 06 06:25	23°♑07'25	22°12'16
desc. node	15583 Dec 18 10:02	4°♒26'05		retrograde	15584 Dec 18 22:05	29°♑23'04	
evening max el	15583 Dec 25 19:52	13°♒11'04	23°55'25	evening set	15584 Dec 22 10:34	28°♑55'42	
retrograde	15584 Jan 08 08:22	19°♒53'34		inferior conj	15584 Dec 30 23:09	25°♑03'29	-6°00'46
evening set	15584 Jan 13 04:04	19°♒03'10		minimum elong	15584 Dec 30 21:36	25°♑05'39	5°59'54
min. Earth dist.	15584 Jan 19 07:21	16°♒03'37	0.55360 AU	min. Earth dist.	15584 Dec 30 12:59	25°♑17'42	0.54501 AU
inferior conj	15584 Jan 21 04:14	14°♒56'41	-5°39'35	morning rise	15585 Jan 08 09:37	21°♑16'20	
minimum elong	15584 Jan 21 11:06	14°♒46'27	5°37'54	direct	15585 Jan 11 18:41	20°♑50'55	
morning rise	15584 Jan 29 19:48	11°♒00'20		morning max el	15585 Jan 23 21:55	26°♑42'03	21°39'25
direct	15584 Feb 01 07:42	10°♒44'35			15585 Jan 26 23:54	0°♒	
asc. node	15584 Feb 11 21:52	15°♒51'35		asc. node	15585 Jan 28 19:12	2°♒44'59	
morning max el	15584 Feb 11 22:13	15°♒52'24	20°08'36	morning set	15585 Feb 13 10:22	29°♒58'27	
	15584 Feb 22 02:46	0°♓			15585 Feb 13 10:40	0°♓	
morning set	15584 Mar 01 00:36	15°♓15'43					
	15584 Mar 08 05:42	0°♈		superior conj	15585 Feb 20 14:51	15°♓09'38	1°14'56
				minimum elong	15585 Feb 20 17:17	15°♓22'22	1°14'55
superior conj	15584 Mar 08 17:40	1°♈00'04	0°54'34	max. Earth dist.	15585 Feb 25 00:19	24°♓10'00	1.34720 AU
minimum elong	15584 Mar 08 20:12	1°♈12'44	0°54'14		15585 Feb 27 23:28	0°♈	
max. Earth dist.	15584 Mar 14 12:47	12°♈17'56	1.36762 AU	evening rise	15585 Mar 01 04:13	2°♈17'42	
desc. node	15584 Mar 15 11:12	14°♈03'13		desc. node	15585 Mar 02 07:48	4°♈27'44	
evening rise	15584 Mar 18 06:54	19°♈14'10			15585 Mar 17 10:44	0°♉	
	15584 Mar 24 11:21	0°♉		evening max el	15585 Apr 05 08:14	24°♉05'31	26°42'56
	15584 Apr 13 17:33	0°♊			15585 Apr 13 00:24	0°♊	
evening max el	15584 Apr 22 18:26	10°♊19'35	25°41'35	retrograde	15585 Apr 18 12:16	1°♊31'48	

	15585 Apr 23 12:26	30°♄		evening max el	15586 Mar 18 21:26	7°♄33'17	27°23'12
evening set	15585 Apr 24 22:26	28°♄59'20		retrograde	15586 Apr 01 13:05	15°♄04'56	
asc. node	15585 Apr 26 16:06	27°♄25'37		evening set	15586 Apr 08 06:15	12°♄35'53	
min. Earth dist.	15585 Apr 28 22:33	24°♄57'54	0.66338 AU	min. Earth dist.	15586 Apr 12 02:10	9°♄06'08	0.64588 AU
inferior conj	15585 Apr 30 23:17	22°♄33'37	1°17'24	asc. node	15586 Apr 13 13:24	7°♄31'44	
minimum elong	15585 Apr 30 21:30	22°♄38'55	1°16'09	inferior conj	15586 Apr 14 15:09	6°♄21'42	0°20'11
morning rise	15585 May 06 21:45	16°♄55'39		minimum elong	15586 Apr 14 14:35	6°♄23'14	0°19'30
direct	15585 May 09 21:50	16°♄05'38		morning rise	15586 Apr 21 00:58	0°♄57'40	
morning max el	15585 May 16 06:55	19°♄26'42	18°15'22	direct	15586 Apr 23 15:51	0°♄22'12	
	15585 May 24 11:54	0°♄		morning max el	15586 Apr 29 23:39	3°♄37'25	17°52'10
desc. node	15585 May 29 09:09	7°♄32'10		desc. node	15586 May 16 06:03	27°♄40'50	
morning set	15585 Jun 04 21:27	17°♄54'20		morning set	15586 May 17 07:29	29°♄26'54	
	15585 Jun 12 12:05	0°♄			15586 May 17 15:26	0°♄	
superior conj	15585 Jun 20 06:05	12°♄10'08	-2°06'16	superior conj	15586 May 31 00:10	21°♄51'42	-1°40'43
minimum elong	15585 Jun 19 23:45	11°♄45'21	2°06'50	minimum elong	15586 May 30 15:28	21°♄16'58	1°40'43
max. Earth dist.	15585 Jun 21 16:28	14°♄24'15	1.45967 AU	max. Earth dist.	15586 Jun 04 12:19	29°♄00'05	1.45452 AU
	15585 Jul 01 16:57	0°♄			15586 Jun 05 03:35	0°♄	
evening rise	15585 Jul 06 07:31	7°♄10'07		evening rise	15586 Jun 15 21:16	16°♄37'27	
greatest brilliancy	15585 Jul 16 23:28	23°♄39'01	-0.8m		15586 Jun 24 17:07	0°♄	
	15585 Jul 21 06:10	0°♄		greatest brilliancy	15586 Jun 30 15:10	8°♄44'05	-0.6m
asc. node	15585 Jul 23 15:18	3°♄20'39		asc. node	15586 Jul 10 12:05	21°♄52'39	
evening max el	15585 Jul 29 08:26	10°♄13'34	19°02'14	evening max el	15586 Jul 12 13:43	24°♄05'39	19°55'23
retrograde	15585 Aug 05 03:59	13°♄58'18		retrograde	15586 Jul 20 02:39	28°♄21'18	
evening set	15585 Aug 08 15:08	12°♄48'50		evening set	15586 Jul 23 23:49	26°♄54'20	
inferior conj	15585 Aug 14 02:50	7°♄02'01	2°45'50	inferior conj	15586 Jul 29 07:03	20°♄54'59	3°03'38
minimum elong	15585 Aug 14 04:40	6°♄56'06	2°45'05	minimum elong	15586 Jul 29 08:03	20°♄51'39	3°02'55
min. Earth dist.	15585 Aug 15 16:57	4°♄59'54	0.66722 AU	min. Earth dist.	15586 Jul 30 07:13	19°♄33'24	0.67989 AU
morning rise	15585 Aug 19 17:28	0°♄35'43		morning rise	15586 Aug 03 15:51	14°♄29'56	
	15585 Aug 20 10:59	30°♄		direct	15586 Aug 09 08:19	12°♄00'51	
desc. node	15585 Aug 25 07:08	28°♄00'14		desc. node	15586 Aug 12 04:33	12°♄32'26	
direct	15585 Aug 25 20:36	27°♄59'02		morning max el	15586 Aug 21 01:43	19°♄02'20	24°46'53
	15585 Aug 31 21:59	0°♄			15586 Aug 30 08:59	0°♄	
morning max el	15585 Sep 07 14:44	5°♄34'20	26°08'35		15586 Sep 19 12:57	0°♄	
	15585 Sep 26 10:49	0°♄		morning set	15586 Sep 25 18:41	10°♄37'48	
morning set	15585 Oct 13 13:08	28°♄40'57		max. Earth dist.	15586 Sep 29 07:52	16°♄59'26	1.37245 AU
	15585 Oct 14 06:07	0°♄					
max. Earth dist.	15585 Oct 17 07:35	5°♄49'50	1.35039 AU	superior conj	15586 Oct 06 05:09	0°♄00'22	-0°03'13
asc. node	15585 Oct 19 16:56	10°♄31'29		minimum elong	15586 Oct 06 05:20	0°♄01'15	0°02'49
superior conj	15585 Oct 22 19:14	16°♄46'36	0°28'06	behind sun begin	15586 Oct 05 22:48	29°♄29'21	
minimum elong	15585 Oct 22 17:43	16°♄38'48	0°28'24	behind sun end	15586 Oct 06 11:52	0°♄33'12	
	15585 Oct 29 03:45	0°♄			15586 Oct 06 05:05	0°♄	
evening rise	15585 Oct 30 09:29	2°♄35'05		asc. node	15586 Oct 06 13:37	0°♄41'45	
	15585 Nov 15 00:03	0°♄		evening rise	15586 Oct 14 13:41	16°♄42'14	
evening max el	15585 Nov 18 02:14	3°♄28'14	20°40'11		15586 Oct 21 10:23	0°♄	
desc. node	15585 Nov 21 04:08	6°♄07'08		evening max el	15586 Oct 31 12:28	14°♄36'05	19°28'18
retrograde	15585 Nov 29 08:28	9°♄03'57		desc. node	15586 Nov 08 01:20	19°♄11'56	
evening set	15585 Dec 01 18:23	8°♄49'41		retrograde	15586 Nov 10 03:26	19°♄25'08	
inferior conj	15585 Dec 10 14:30	4°♄56'15	-5°20'57	evening set	15586 Nov 12 01:25	19°♄14'31	
minimum elong	15585 Dec 10 05:27	5°♄09'18	5°18'13	inferior conj	15586 Nov 20 16:40	15°♄08'25	-3°53'18
min. Earth dist.	15585 Dec 11 18:34	4°♄15'45	0.54557 AU	minimum elong	15586 Nov 20 07:20	15°♄23'27	3°49'21
morning rise	15585 Dec 18 16:26	1°♄00'08		min. Earth dist.	15586 Nov 23 03:25	13°♄33'47	0.55531 AU
direct	15585 Dec 23 02:28	0°♄18'13		morning rise	15586 Nov 28 11:11	10°♄44'28	
morning max el	15586 Jan 05 09:58	6°♄48'20	23°26'22	direct	15586 Dec 03 19:45	9°♄39'47	
asc. node	15586 Jan 15 16:29	19°♄45'20		morning max el	15586 Dec 17 18:54	16°♄41'38	25°14'22
	15586 Jan 21 15:26	0°♄			15586 Dec 28 13:39	0°♄	
morning set	15586 Jan 28 22:08	14°♄42'58		asc. node	15587 Jan 02 13:43	8°♄05'44	
				morning set	15587 Jan 13 09:55	29°♄23'00	
					15587 Jan 13 16:47	0°♄	
superior conj	15586 Feb 04 19:04	29°♄36'41	1°28'47	superior conj	15587 Jan 20 03:44	14°♄13'04	1°36'21
minimum elong	15586 Feb 04 20:50	29°♄46'13	1°29'09	minimum elong	15587 Jan 20 04:31	14°♄17'26	1°37'01
	15586 Feb 04 23:23	0°♄		max. Earth dist.	15587 Jan 21 20:49	17°♄59'06	1.31868 AU
max. Earth dist.	15586 Feb 07 19:04	6°♄01'15	1.33059 AU	evening rise	15587 Jan 27 09:41	29°♄47'37	
evening rise	15586 Feb 12 14:12	15°♄51'39			15587 Jan 27 12:05	0°♄	
desc. node	15586 Feb 17 04:26	24°♄41'51		desc. node	15587 Feb 04 01:05	14°♄39'37	
	15586 Feb 20 02:28	0°♄			15587 Feb 13 04:08	0°♄	
	15586 Mar 12 00:46	0°♄					

evening max el	15587 Mar 01 08:26	20° $\Upsilon$ 30'58	27°35'37	desc. node	15588 Jan 21 21:47	4° $\text{X}$ 14'39	
retrograde	15587 Mar 15 06:41	27° $\Upsilon$ 59'12			15588 Feb 08 21:12	0° $\Upsilon$	
evening set	15587 Mar 22 02:37	25° $\Upsilon$ 41'14		evening max el	15588 Feb 11 14:54	2° $\Upsilon$ 46'50	27°14'43
min. Earth dist.	15587 Mar 25 20:47	22° $\Upsilon$ 37'55	0.62530 AU	retrograde	15588 Feb 25 15:22	10° $\Upsilon$ 05'28	
inferior conj	15587 Mar 28 19:55	19° $\Upsilon$ 46'38	-0°50'30	evening set	15588 Mar 03 08:29	8° $\Upsilon$ 06'07	
minimum elong	15587 Mar 28 21:37	19° $\Upsilon$ 42'31	0°50'02	min. Earth dist.	15588 Mar 07 05:19	5° $\Upsilon$ 21'24	0.60307 AU
asc. node	15587 Mar 31 10:47	17° $\Upsilon$ 22'00		inferior conj	15588 Mar 10 10:03	2° $\Upsilon$ 39'22	-2°13'23
morning rise	15587 Apr 04 19:32	14° $\Upsilon$ 38'54		minimum elong	15588 Mar 10 15:00	2° $\Upsilon$ 28'51	2°11'23
direct	15587 Apr 07 02:34	14° $\Upsilon$ 14'33			15588 Mar 13 18:27	30° $\text{X}$	
morning max el	15587 Apr 13 17:19	17° $\Upsilon$ 35'38	17°46'30	asc. node	15588 Mar 17 08:13	28° $\text{X}$ 03'41	
	15587 Apr 22 16:39	0° $\text{B}$		morning rise	15588 Mar 18 00:55	27° $\text{X}$ 50'37	
morning set	15587 Apr 29 17:46	12° $\text{B}$ 07'43		direct	15588 Mar 20 02:16	27° $\text{X}$ 33'43	
desc. node	15587 May 03 02:51	18° $\text{B}$ 01'46			15588 Mar 26 00:38	0° $\Upsilon$	
	15587 May 10 02:44	0° $\text{II}$		morning max el	15588 Mar 27 08:32	1° $\Upsilon$ 11'32	17°59'13
				morning set	15588 Apr 11 22:16	25° $\Upsilon$ 38'47	
superior conj	15587 May 11 15:10	2° $\text{II}$ 32'14	-1°04'50		15588 Apr 14 07:09	0° $\text{B}$	
minimum elong	15587 May 11 09:03	2° $\text{II}$ 06'46	1°04'43	desc. node	15588 Apr 18 23:33	8° $\text{B}$ 30'21	
max. Earth dist.	15587 May 18 05:25	13° $\text{II}$ 18'31	1.44246 AU				
evening rise	15587 May 26 09:11	26° $\text{II}$ 07'45		superior conj	15588 Apr 22 05:40	14° $\text{B}$ 16'43	-0°26'23
	15587 May 28 21:46	0° $\text{B}$		minimum elong	15588 Apr 22 03:23	14° $\text{B}$ 06'43	0°26'33
	15587 Jun 18 17:19	0° $\Omega$		max. Earth dist.	15588 Apr 29 18:29	27° $\text{B}$ 06'59	1.42479 AU
evening max el	15587 Jun 25 13:02	7° $\Omega$ 58'56	21°02'16		15588 May 01 12:34	0° $\text{II}$	
asc. node	15587 Jun 27 08:56	9° $\Omega$ 41'15		evening rise	15588 May 05 10:18	6° $\text{II}$ 17'41	
retrograde	15587 Jul 04 01:39	12° $\Omega$ 54'32			15588 May 21 03:03	0° $\text{B}$	
evening set	15587 Jul 08 09:32	11° $\Omega$ 10'13		evening max el	15588 Jun 07 07:07	21° $\text{B}$ 52'13	22°19'02
inferior conj	15587 Jul 13 15:07	4° $\Omega$ 59'48	3°09'18	asc. node	15588 Jun 13 05:53	26° $\text{B}$ 31'35	
minimum elong	15587 Jul 13 15:08	4° $\Omega$ 59'44	3°08'31	retrograde	15588 Jun 16 23:15	27° $\text{B}$ 31'59	
min. Earth dist.	15587 Jul 14 01:45	4° $\Omega$ 22'52	0.68788 AU	evening set	15588 Jun 21 18:30	25° $\text{B}$ 31'19	
	15587 Jul 17 12:01	30° $\text{X}$ $\text{B}$		inferior conj	15588 Jun 27 00:53	19° $\text{B}$ 11'31	3°04'00
morning rise	15587 Jul 18 20:28	28° $\text{B}$ 39'29		minimum elong	15588 Jun 26 23:59	19° $\text{B}$ 14'40	3°03'03
direct	15587 Jul 24 01:06	26° $\text{B}$ 24'00		min. Earth dist.	15588 Jun 26 22:20	19° $\text{B}$ 20'23	0.69105 AU
desc. node	15587 Jul 30 01:56	28° $\text{B}$ 45'32		morning rise	15588 Jul 02 05:17	12° $\text{B}$ 58'07	
	15587 Jul 31 16:20	0° $\Omega$		direct	15588 Jul 06 21:36	11° $\text{B}$ 00'22	
morning max el	15587 Aug 03 12:48	2° $\Omega$ 38'40	23°17'59	desc. node	15588 Jul 15 23:13	16° $\text{B}$ 14'40	
	15587 Aug 24 09:39	0° $\text{M}$		morning max el	15588 Jul 16 02:27	16° $\text{B}$ 22'44	21°50'39
morning set	15587 Sep 07 03:09	21° $\text{M}$ 40'03			15588 Jul 27 05:32	0° $\Omega$	
max. Earth dist.	15587 Sep 11 06:18	28° $\text{M}$ 40'53	1.39643 AU		15588 Aug 16 10:18	0° $\text{M}$	
	15587 Sep 12 00:33	0° $\text{B}$		morning set	15588 Aug 17 11:32	1° $\text{M}$ 40'10	
				max. Earth dist.	15588 Aug 23 09:09	11° $\text{M}$ 14'48	1.41950 AU
superior conj	15587 Sep 19 00:52	12° $\text{B}$ 35'10	-0°38'27				
minimum elong	15587 Sep 19 03:45	12° $\text{B}$ 48'28	0°37'50	superior conj	15588 Aug 31 01:55	24° $\text{M}$ 20'14	-1°14'49
asc. node	15587 Sep 23 10:16	20° $\text{B}$ 50'26		minimum elong	15588 Aug 31 07:56	24° $\text{M}$ 46'31	1°14'09
evening rise	15587 Sep 28 10:42	0° $\text{M}$ 29'44			15588 Sep 03 06:51	0° $\text{B}$	
	15587 Sep 28 04:32	0° $\text{M}$		asc. node	15588 Sep 09 06:52	10° $\text{B}$ 53'21	
evening max el	15587 Oct 14 11:57	26° $\text{M}$ 33'41	18°38'39	evening rise	15588 Sep 10 20:49	13° $\text{B}$ 47'45	
	15587 Oct 19 07:36	0° $\text{X}$			15588 Sep 20 00:18	0° $\text{M}$	
retrograde	15587 Oct 22 15:58	0° $\text{X}$ 41'23		evening max el	15588 Sep 26 20:32	9° $\text{M}$ 11'59	18°10'15
evening set	15587 Oct 24 14:13	0° $\text{X}$ 28'23		retrograde	15588 Oct 03 23:39	12° $\text{M}$ 50'41	
desc. node	15587 Oct 25 22:37	0° $\text{X}$ 04'40		evening set	15588 Oct 06 03:43	12° $\text{M}$ 30'57	
	15587 Oct 26 03:38	30° $\text{X}$ $\text{M}$		desc. node	15588 Oct 11 19:57	9° $\text{M}$ 05'45	
inferior conj	15587 Nov 01 14:44	26° $\text{M}$ 02'23	-2°08'19	inferior conj	15588 Oct 13 10:27	7° $\text{M}$ 43'23	-0°30'36
minimum elong	15587 Nov 01 09:32	26° $\text{M}$ 12'07	2°05'34	minimum elong	15588 Oct 13 09:23	7° $\text{M}$ 45'44	0°29'42
min. Earth dist.	15587 Nov 04 17:58	23° $\text{M}$ 42'00	0.57246 AU	min. Earth dist.	15588 Oct 16 16:29	4° $\text{M}$ 53'43	0.59400 AU
morning rise	15587 Nov 09 01:34	21° $\text{M}$ 02'00		morning rise	15588 Oct 20 11:43	2° $\text{M}$ 08'28	
direct	15587 Nov 15 03:20	19° $\text{M}$ 30'52		direct	15588 Oct 27 00:01	0° $\text{M}$ 11'23	
morning max el	15587 Nov 29 08:46	26° $\text{M}$ 56'47	26°44'15	morning max el	15588 Nov 10 06:44	7° $\text{M}$ 55'32	27°41'19
	15587 Dec 02 07:23	0° $\text{X}$			15588 Nov 27 01:03	0° $\text{X}$	
asc. node	15587 Dec 20 10:52	27° $\text{X}$ 03'32		asc. node	15588 Dec 06 07:54	16° $\text{X}$ 28'27	
	15587 Dec 22 00:18	0° $\text{B}$		morning set	15588 Dec 12 02:34	28° $\text{X}$ 11'38	
morning set	15587 Dec 28 20:00	13° $\text{B}$ 54'07			15588 Dec 12 22:55	0° $\text{B}$	
				max. Earth dist.	15588 Dec 18 11:13	12° $\text{B}$ 06'56	1.31046 AU
superior conj	15588 Jan 04 14:44	28° $\text{B}$ 52'49	1°37'50				
minimum elong	15588 Jan 04 14:27	28° $\text{B}$ 51'17	1°38'39	superior conj	15588 Dec 19 02:09	13° $\text{B}$ 30'26	1°33'20
max. Earth dist.	15588 Jan 05 03:21	0° $\approx$ 03'23	1.31193 AU	minimum elong	15588 Dec 19 00:54	13° $\text{B}$ 23'23	1°34'07
	15588 Jan 05 02:45	0° $\approx$		evening rise	15588 Dec 25 19:16	28° $\text{B}$ 21'51	
evening rise	15588 Jan 11 12:07	13° $\approx$ 59'32			15588 Dec 26 13:35	0° $\approx$	
	15588 Jan 19 13:21	0° $\text{X}$		desc. node	15589 Jan 07 18:33	23° $\approx$ 18'26	

	15589 Jan 12 00:33	0°♄				15589 Dec 18 17:11	0°♁	
evening max el	15589 Jan 23 14:06	14°♄11'30	26°18'50	desc. node		15589 Dec 25 15:24	11°♁38'42	
retrograde	15589 Feb 06 13:24	21°♄18'05		evening max el		15590 Jan 05 04:40	24°♁43'57	24°53'03
evening set	15589 Feb 12 20:24	19°♄43'18				15590 Jan 12 10:14	0°♄	
min. Earth dist.	15589 Feb 17 03:27	17°♄05'58	0.58115 AU	retrograde		15590 Jan 18 23:07	1°♄37'17	
inferior conj	15589 Feb 20 05:52	14°♄49'56	-3°42'44	evening set		15590 Jan 24 10:37	0°♄30'26	
minimum elong	15589 Feb 20 14:09	14°♄34'46	3°39'36			15590 Jan 25 14:59	30°♁	
morning rise	15589 Feb 28 11:06	10°♄22'41		min. Earth dist.		15590 Jan 29 16:40	27°♁44'33	0.56209 AU
direct	15589 Mar 02 10:36	10°♄09'33		inferior conj		15590 Feb 01 04:38	26°♁09'09	-5°04'43
asc. node	15589 Mar 04 05:38	10°♄20'48		minimum elong		15590 Feb 01 13:41	25°♁54'45	5°02'04
morning max el	15589 Mar 10 17:33	14°♄14'44	18°31'56	morning rise		15590 Feb 09 19:08	22°♁03'17	
	15589 Mar 21 11:33	0°♄		direct		15590 Feb 11 23:32	21°♁50'03	
morning set	15589 Mar 26 15:41	9°♄44'30		asc. node		15590 Feb 19 03:02	24°♁23'03	
				morning max el		15590 Feb 21 16:08	26°♁32'35	19°26'40
superior conj	15589 Apr 04 17:01	26°♄57'56	0°09'25			15590 Feb 24 18:11	0°♄	
minimum elong	15589 Apr 04 17:39	27°♄00'52	0°08'59	morning set		15590 Mar 10 17:48	24°♄11'24	
behind sun begin	15589 Apr 04 11:44	26°♄33'30				15590 Mar 13 15:14	0°♄	
behind sun end	15589 Apr 04 23:34	27°♄28'12						
desc. node	15589 Apr 05 20:10	29°♄03'01		superior conj		15590 Mar 18 20:42	10°♄22'32	0°39'52
	15589 Apr 06 08:38	0°♄		minimum elong		15590 Mar 18 22:53	10°♄33'10	0°39'26
max. Earth dist.	15589 Apr 12 03:23	10°♄16'24	1.40335 AU	desc. node		15590 Mar 23 16:47	19°♄35'29	
evening rise	15589 Apr 16 07:55	17°♄22'36		max. Earth dist.		15590 Mar 25 09:37	22°♄43'35	1.38044 AU
	15589 Apr 24 04:33	0°♄		evening rise		15590 Mar 29 02:20	29°♄20'11	
	15589 May 15 16:07	0°♄				15590 Mar 29 11:26	0°♄	
evening max el	15589 May 20 21:51	5°♄46'25	23°40'17			15590 Apr 17 12:38	0°♄	
asc. node	15589 May 31 02:56	12°♄06'43		evening max el		15590 May 03 11:14	19°♄40'20	24°59'36
retrograde	15589 May 31 18:12	12°♄08'28		retrograde		15590 May 15 09:25	26°♄37'04	
evening set	15589 Jun 06 01:07	9°♄53'36		asc. node		15590 May 18 00:04	26°♄08'22	
inferior conj	15589 Jun 11 10:27	3°♄26'39	2°48'16	evening set		15590 May 21 03:44	24°♄11'28	
minimum elong	15589 Jun 11 08:47	3°♄32'20	2°47'06	min. Earth dist.		15590 May 25 13:25	19°♄14'39	0.68280 AU
min. Earth dist.	15589 Jun 10 18:54	4°♄19'56	0.68934 AU	inferior conj		15590 May 26 17:54	17°♄40'47	2°21'58
	15589 Jun 14 01:34	30°♁		minimum elong		15590 May 26 15:47	17°♄47'46	2°20'38
morning rise	15589 Jun 16 16:28	27°♄21'36		morning rise		15590 Jun 01 04:09	11°♄45'09	
direct	15589 Jun 20 20:35	25°♄43'39		direct		15590 Jun 04 20:38	10°♄27'09	
	15589 Jun 28 14:33	0°♄		morning max el		15590 Jun 12 00:20	14°♄23'06	19°26'16
morning max el	15589 Jun 28 21:46	0°♄17'40	20°31'51	desc. node		15590 Jun 19 17:30	23°♄47'11	
desc. node	15589 Jul 02 20:24	4°♄40'19				15590 Jun 24 01:58	0°♄	
	15589 Jul 20 20:47	0°♄		greatest brilliancy		15590 Jun 24 15:37	0°♄50'03	-0.7m
morning set	15589 Jul 27 22:48	10°♄47'52		morning set		15590 Jul 07 02:23	19°♄39'51	
max. Earth dist.	15589 Aug 05 18:51	24°♄41'49	1.43888 AU			15590 Jul 13 19:01	0°♄	
	15589 Aug 09 01:34	0°♄		max. Earth dist.		15590 Jul 19 10:08	8°♄47'49	1.45248 AU
superior conj	15589 Aug 12 04:23	5°♄07'28	-1°47'25	superior conj		15590 Jul 23 07:43	14°♄57'46	-2°09'12
minimum elong	15589 Aug 12 12:08	5°♄39'36	1°47'08	minimum elong		15590 Jul 23 12:47	15°♄17'55	2°09'40
evening rise	15589 Aug 24 15:28	26°♄24'58				15590 Aug 01 15:08	0°♄	
	15589 Aug 26 16:43	0°♄		evening rise		15590 Aug 06 13:21	8°♄08'07	
asc. node	15589 Aug 27 03:28	0°♄46'51		asc. node		15590 Aug 14 00:06	20°♄26'23	
evening max el	15589 Sep 10 10:02	22°♄21'06	18°01'32			15590 Aug 20 05:23	0°♄	
retrograde	15589 Sep 16 23:02	25°♄44'33		evening max el		15590 Aug 25 00:48	5°♄52'02	18°11'23
evening set	15589 Sep 19 10:51	25°♄14'26		retrograde		15590 Aug 31 09:28	9°♄13'32	
inferior conj	15589 Sep 26 01:15	20°♄07'21	0°48'51	evening set		15590 Sep 03 05:51	8°♄29'56	
minimum elong	15589 Sep 26 02:39	20°♄03'50	0°48'33	inferior conj		15590 Sep 09 07:09	3°♄06'03	1°48'11
desc. node	15589 Sep 28 17:20	17°♄26'39		minimum elong		15590 Sep 09 09:27	2°♄59'33	1°47'27
min. Earth dist.	15589 Sep 29 00:48	17°♄08'36	0.61692 AU	min. Earth dist.		15590 Sep 11 19:12	0°♄17'36	0.63878 AU
morning rise	15589 Oct 02 15:47	14°♄06'05				15590 Sep 12 01:43	30°♁	
direct	15589 Oct 09 07:59	11°♄47'22		morning rise		15590 Sep 15 11:12	26°♄48'34	
morning max el	15589 Oct 23 11:58	19°♄43'50	27°59'09	desc. node		15590 Sep 15 14:45	26°♄41'46	
	15589 Nov 01 07:01	0°♄		direct		15590 Sep 22 01:45	24°♄15'38	
	15589 Nov 19 23:37	0°♄				15590 Oct 03 12:37	0°♄	
asc. node	15589 Nov 23 04:49	6°♄12'41		morning max el		15590 Oct 05 21:40	2°♄15'01	27°39'23
morning set	15589 Nov 26 03:34	12°♄10'27				15590 Oct 26 14:06	0°♄	
max. Earth dist.	15589 Dec 01 16:31	24°♄00'01	1.31450 AU	morning set		15590 Nov 09 20:39	25°♄45'21	
				asc. node		15590 Nov 10 01:40	26°♄10'23	
superior conj	15589 Dec 03 12:07	28°♄00'23	1°22'50			15590 Nov 11 23:02	0°♄	
minimum elong	15589 Dec 03 10:07	27°♄49'16	1°23'29	max. Earth dist.		15590 Nov 14 15:19	5°♄34'25	1.32416 AU
	15589 Dec 04 09:42	0°♄						
evening rise	15589 Dec 10 05:12	12°♄49'19		superior conj		15590 Nov 17 18:42	12°♄17'55	1°06'19

































































































































minimum elong	15590 Nov 17 16:22	12° $\mathbb{A}$ 05'14	1°06'45	minimum elong	15591 Nov 01 17:29	26° $\mathbb{M}$ 05'32	0°44'04
evening rise	15590 Nov 24 16:06	27° $\mathbb{A}$ 17'49			15591 Nov 03 14:00	0° $\mathbb{A}$	
	15590 Nov 25 22:29	0° $\mathbb{B}$		evening rise	15591 Nov 09 02:04	11° $\mathbb{A}$ 42'07	
desc. node	15590 Dec 12 12:20	28° $\mathbb{B}$ 59'53			15591 Nov 18 09:59	0° $\mathbb{B}$	
	15590 Dec 13 07:22	0° $\mathbb{A}$		evening max el	15591 Nov 29 03:46	14° $\mathbb{B}$ 47'06	21°31'07
evening max el	15590 Dec 17 14:12	4° $\mathbb{A}$ 43'51	23°11'08	desc. node	15591 Nov 29 09:24	15° $\mathbb{B}$ 00'49	
retrograde	15590 Dec 30 19:53	11° $\mathbb{A}$ 17'18		retrograde	15591 Dec 11 06:44	20° $\mathbb{B}$ 46'54	
evening set	15591 Jan 04 02:26	10° $\mathbb{A}$ 37'40		evening set	15591 Dec 14 06:19	20° $\mathbb{B}$ 26'37	
min. Earth dist.	15591 Jan 11 00:24	7° $\mathbb{A}$ 23'53	0.54889 AU	inferior conj	15591 Dec 22 23:24	16° $\mathbb{B}$ 35'53	-5°51'14
inferior conj	15591 Jan 12 07:45	6° $\mathbb{A}$ 38'46	-5°55'37	minimum elong	15591 Dec 22 17:58	16° $\mathbb{B}$ 43'30	5°49'47
minimum elong	15591 Jan 12 11:34	6° $\mathbb{A}$ 33'16	5°54'35	min. Earth dist.	15591 Dec 23 05:58	16° $\mathbb{B}$ 26'40	0.54410 AU
morning rise	15591 Jan 20 22:06	2° $\mathbb{A}$ 48'02		morning rise	15591 Dec 31 06:08	12° $\mathbb{B}$ 46'59	
direct	15591 Jan 23 17:38	2° $\mathbb{A}$ 29'16		direct	15592 Jan 04 01:51	12° $\mathbb{B}$ 15'14	
morning max el	15591 Feb 04 00:42	7° $\mathbb{A}$ 55'49	20°44'38	morning max el	15592 Jan 16 18:41	18° $\mathbb{B}$ 24'30	22°23'30
asc. node	15591 Feb 06 00:23	10° $\mathbb{A}$ 00'18		asc. node	15592 Jan 23 21:42	26° $\mathbb{B}$ 54'24	
	15591 Feb 18 16:21	0° $\mathbb{H}$			15592 Jan 25 23:31	0° $\mathbb{A}$	
morning set	15591 Feb 23 01:30	8° $\mathbb{H}$ 50'33		morning set	15592 Feb 07 12:22	23° $\mathbb{A}$ 34'41	
					15592 Feb 10 12:30	0° $\mathbb{H}$	
superior conj	15591 Mar 02 12:35	24° $\mathbb{H}$ 18'54	1°03'59	superior conj	15592 Feb 14 13:06	8° $\mathbb{H}$ 37'01	1°21'34
minimum elong	15591 Mar 02 15:09	24° $\mathbb{H}$ 32'05	1°03'47	minimum elong	15592 Feb 14 15:19	8° $\mathbb{H}$ 48'42	1°21'44
	15591 Mar 05 08:14	0° $\mathbb{Y}$		max. Earth dist.	15592 Feb 18 07:48	16° $\mathbb{H}$ 30'36	1.33964 AU
max. Earth dist.	15591 Mar 07 17:31	4° $\mathbb{Y}$ 41'11	1.35855 AU	evening rise	15592 Feb 22 18:04	25° $\mathbb{H}$ 20'52	
desc. node	15591 Mar 10 13:23	10° $\mathbb{Y}$ 04'15		desc. node	15592 Feb 25 10:00	0° $\mathbb{Y}$ 25'12	
evening rise	15591 Mar 11 14:54	12° $\mathbb{Y}$ 02'50			15592 Feb 25 04:37	0° $\mathbb{Y}$	
	15591 Mar 22 00:03	0° $\mathbb{B}$			15592 Mar 14 11:04	0° $\mathbb{B}$	
	15591 Apr 12 16:01	0° $\mathbb{I}$		evening max el	15592 Mar 28 14:38	17° $\mathbb{B}$ 11'40	27°03'08
evening max el	15591 Apr 16 00:45	3° $\mathbb{I}$ 31'08	26°09'44	retrograde	15592 Apr 11 00:34	24° $\mathbb{B}$ 41'30	
retrograde	15591 Apr 28 19:53	10° $\mathbb{I}$ 50'41		evening set	15592 Apr 17 13:55	22° $\mathbb{B}$ 09'57	
asc. node	15591 May 04 21:17	8° $\mathbb{I}$ 26'04		asc. node	15592 Apr 20 18:34	19° $\mathbb{B}$ 10'06	
evening set	15591 May 05 00:39	8° $\mathbb{I}$ 19'11		min. Earth dist.	15592 Apr 21 12:07	18° $\mathbb{B}$ 22'09	0.65633 AU
min. Earth dist.	15591 May 09 03:50	3° $\mathbb{I}$ 57'55	0.67166 AU	inferior conj	15592 Apr 23 18:06	15° $\mathbb{B}$ 48'01	0°54'47
inferior conj	15591 May 10 21:13	1° $\mathbb{I}$ 49'38	1°44'29	minimum elong	15592 Apr 23 16:43	15° $\mathbb{B}$ 51'59	0°53'42
minimum elong	15591 May 10 19:08	1° $\mathbb{I}$ 56'09	1°43'06	morning rise	15592 Apr 29 21:02	10° $\mathbb{B}$ 15'25	
	15591 May 12 09:16	30° $\mathbb{R}$ $\mathbb{B}$		direct	15592 May 02 17:02	9° $\mathbb{B}$ 32'00	
morning rise	15591 May 16 14:25	26° $\mathbb{B}$ 04'38		morning max el	15592 May 09 00:38	12° $\mathbb{B}$ 49'22	18°03'19
direct	15591 May 19 20:08	25° $\mathbb{B}$ 05'09			15592 May 21 08:51	0° $\mathbb{I}$	
morning max el	15591 May 26 09:50	28° $\mathbb{B}$ 35'33	18°36'22	desc. node	15592 May 23 11:29	3° $\mathbb{I}$ 23'54	
	15591 May 27 18:25	0° $\mathbb{I}$		morning set	15592 May 27 12:54	9° $\mathbb{I}$ 59'15	
desc. node	15591 Jun 06 14:32	13° $\mathbb{I}$ 24'23			15592 Jun 09 00:09	0° $\mathbb{E}$	
morning set	15591 Jun 16 18:37	29° $\mathbb{I}$ 11'14		superior conj	15592 Jun 11 05:49	3° $\mathbb{E}$ 31'33	-1°57'14
	15591 Jun 17 07:04	0° $\mathbb{E}$		minimum elong	15592 Jun 10 21:41	2° $\mathbb{E}$ 59'32	1°57'32
max. Earth dist.	15591 Jul 02 04:53	23° $\mathbb{E}$ 16'55	1.45915 AU	max. Earth dist.	15592 Jun 14 01:21	7° $\mathbb{E}$ 56'15	1.45838 AU
superior conj	15591 Jul 02 19:00	24° $\mathbb{E}$ 11'58	-2°13'12	evening rise	15592 Jun 27 08:42	28° $\mathbb{E}$ 33'37	
minimum elong	15591 Jul 02 16:40	24° $\mathbb{E}$ 02'50	2°14'00		15592 Jun 28 07:09	0° $\mathbb{I}$	
	15591 Jul 06 12:08	0° $\mathbb{I}$		greatest brilliancy	15592 Jul 10 01:48	17° $\mathbb{I}$ 54'39	-0.7m
evening rise	15591 Jul 18 10:25	18° $\mathbb{I}$ 47'50		asc. node	15592 Jul 17 17:32	28° $\mathbb{I}$ 38'01	
	15591 Jul 25 12:03	0° $\mathbb{M}$			15592 Jul 18 19:49	0° $\mathbb{M}$	
greatest brilliancy	15591 Jul 25 22:00	0° $\mathbb{M}$ 39'07	-0.9m	evening max el	15592 Jul 21 22:21	3° $\mathbb{M}$ 27'34	19°23'05
asc. node	15591 Jul 31 20:47	9° $\mathbb{M}$ 45'42		retrograde	15592 Jul 29 00:19	7° $\mathbb{M}$ 23'42	
evening max el	15591 Aug 08 13:42	19° $\mathbb{M}$ 36'10	18°38'55	evening set	15592 Aug 01 15:41	6° $\mathbb{M}$ 06'50	
retrograde	15591 Aug 15 02:55	23° $\mathbb{M}$ 08'42		inferior conj	15592 Aug 07 01:08	0° $\mathbb{M}$ 14'48	2°54'57
evening set	15591 Aug 18 08:30	22° $\mathbb{M}$ 09'12		minimum elong	15592 Aug 07 02:39	0° $\mathbb{M}$ 09'50	2°54'13
inferior conj	15591 Aug 24 00:11	16° $\mathbb{M}$ 30'32	2°29'21		15592 Aug 07 05:38	30° $\mathbb{R}$ $\mathbb{I}$	
minimum elong	15591 Aug 24 02:23	16° $\mathbb{M}$ 23'47	2°28'33	min. Earth dist.	15592 Aug 08 09:20	28° $\mathbb{I}$ 29'06	0.67319 AU
min. Earth dist.	15591 Aug 25 22:35	14° $\mathbb{M}$ 08'02	0.65791 AU	morning rise	15592 Aug 12 13:01	23° $\mathbb{I}$ 48'42	
morning rise	15591 Aug 29 19:10	10° $\mathbb{M}$ 05'37		direct	15592 Aug 18 11:58	21° $\mathbb{I}$ 14'14	
desc. node	15591 Sep 02 12:13	7° $\mathbb{M}$ 53'48		desc. node	15592 Aug 19 09:39	21° $\mathbb{I}$ 17'24	
direct	15591 Sep 05 03:33	7° $\mathbb{M}$ 27'30		morning max el	15592 Aug 30 20:03	28° $\mathbb{I}$ 36'30	25°35'18
morning max el	15591 Sep 18 08:55	15° $\mathbb{M}$ 16'05	26°48'30		15592 Sep 01 04:09	0° $\mathbb{M}$	
	15591 Sep 30 11:40	0° $\mathbb{L}$			15592 Sep 23 05:52	0° $\mathbb{L}$	
	15591 Oct 19 08:39	0° $\mathbb{M}$		morning set	15592 Oct 05 18:31	21° $\mathbb{L}$ 12'14	
morning set	15591 Oct 24 02:50	8° $\mathbb{M}$ 48'39		max. Earth dist.	15592 Oct 09 08:48	27° $\mathbb{L}$ 51'42	1.35940 AU
asc. node	15591 Oct 27 22:26	16° $\mathbb{M}$ 16'10			15592 Oct 10 11:48	0° $\mathbb{M}$	
max. Earth dist.	15591 Oct 28 04:42	16° $\mathbb{M}$ 47'29	1.33935 AU	asc. node	15592 Oct 13 19:09	6° $\mathbb{M}$ 26'02	
superior conj	15591 Nov 01 19:32	26° $\mathbb{M}$ 16'18	0°43'46				



superior conj	15592 Oct 15 11:52	9° $\mathbb{M}$ 48'54	0°15'27		15593 Aug 27 15:31	0° $\mathbb{M}$	
minimum elong	15592 Oct 15 10:57	9° $\mathbb{M}$ 44'15	0°15'46		15593 Sep 16 00:30	0° $\mathbb{L}$	
behind sun begin	15592 Oct 15 09:38	9° $\mathbb{M}$ 37'42		morning set	15593 Sep 17 15:31	2° $\mathbb{L}$ 46'26	
behind sun end	15592 Oct 15 12:15	9° $\mathbb{M}$ 50'47		max. Earth dist.	15593 Sep 21 07:48	9° $\mathbb{L}$ 12'43	1.38261 AU
evening rise	15592 Oct 23 09:04	25° $\mathbb{M}$ 57'25					
	15592 Oct 25 08:40	0° $\mathbb{J}$		superior conj	15593 Sep 28 16:13	22° $\mathbb{L}$ 47'02	-0°17'48
evening max el	15592 Nov 10 05:36	25° $\mathbb{J}$ 26'47	20°06'55	minimum elong	15593 Sep 28 17:26	22° $\mathbb{L}$ 52'51	0°17'18
desc. node	15592 Nov 15 06:32	29° $\mathbb{J}$ 17'00		asc. node	15593 Sep 30 15:50	26° $\mathbb{L}$ 36'03	
	15592 Nov 16 21:22	0° $\mathbb{Z}$			15593 Oct 02 09:40	0° $\mathbb{M}$	
retrograde	15592 Nov 20 18:48	0° $\mathbb{Z}$ 42'06		evening rise	15593 Oct 07 10:34	9° $\mathbb{M}$ 57'13	
evening set	15592 Nov 22 22:03	0° $\mathbb{Z}$ 30'12			15593 Oct 18 11:05	0° $\mathbb{J}$	
	15592 Nov 24 20:48	30° $\mathbb{R}$ $\mathbb{J}$		evening max el	15593 Oct 23 21:46	6° $\mathbb{J}$ 55'56	19°04'29
inferior conj	15592 Dec 01 17:41	26° $\mathbb{J}$ 32'45	-4°47'52	retrograde	15593 Nov 01 20:51	11° $\mathbb{J}$ 26'33	
minimum elong	15592 Dec 01 07:39	26° $\mathbb{J}$ 47'47	4°44'19	desc. node	15593 Nov 02 03:45	11° $\mathbb{J}$ 26'17	
min. Earth dist.	15592 Dec 03 12:21	25° $\mathbb{J}$ 28'51	0.54873 AU	evening set	15593 Nov 03 17:57	11° $\mathbb{J}$ 15'27	
morning rise	15592 Dec 09 16:22	22° $\mathbb{J}$ 26'59		inferior conj	15593 Nov 12 03:37	7° $\mathbb{J}$ 00'59	-3°09'07
direct	15592 Dec 14 12:53	21° $\mathbb{J}$ 35'50		minimum elong	15593 Nov 11 19:50	7° $\mathbb{J}$ 14'22	3°05'29
morning max el	15592 Dec 28 03:57	28° $\mathbb{J}$ 19'50	24°13'14	min. Earth dist.	15593 Nov 14 23:00	5° $\mathbb{J}$ 05'42	0.56182 AU
	15592 Dec 29 20:03	0° $\mathbb{Z}$		morning rise	15593 Nov 19 19:05	2° $\mathbb{J}$ 22'07	
asc. node	15593 Jan 09 18:58	14° $\mathbb{Z}$ 47'57		direct	15593 Nov 25 11:33	1° $\mathbb{J}$ 06'48	
	15593 Jan 18 01:05	0° $\approx$		morning max el	15593 Dec 09 14:17	8° $\mathbb{J}$ 19'01	25°56'01
morning set	15593 Jan 22 00:21	8° $\approx$ 17'59			15593 Dec 25 17:01	0° $\mathbb{Z}$	
				asc. node	15593 Dec 27 16:09	3° $\mathbb{Z}$ 26'07	
superior conj	15593 Jan 28 19:28	23° $\approx$ 08'42	1°32'45	morning set	15594 Jan 06 11:40	22° $\mathbb{Z}$ 55'42	
minimum elong	15593 Jan 28 20:50	23° $\approx$ 16'12	1°33'15		15594 Jan 09 17:14	0° $\approx$	
max. Earth dist.	15593 Jan 31 05:56	28° $\approx$ 25'35	1.32498 AU				
	15593 Jan 31 23:35	0° $\mathbb{H}$		superior conj	15594 Jan 13 05:22	7° $\approx$ 47'47	1°37'44
evening rise	15593 Feb 05 08:26	9° $\mathbb{H}$ 05'16		minimum elong	15594 Jan 13 05:42	7° $\approx$ 49'41	1°38'28
desc. node	15593 Feb 11 06:38	20° $\mathbb{H}$ 33'16		max. Earth dist.	15594 Jan 14 10:21	10° $\approx$ 28'36	1.31517 AU
	15593 Feb 16 14:53	0° $\mathbb{Y}$		evening rise	15594 Jan 20 07:10	23° $\approx$ 09'19	
	15593 Mar 10 15:22	0° $\mathbb{B}$			15594 Jan 23 15:45	0° $\mathbb{H}$	
evening max el	15593 Mar 11 03:25	0° $\mathbb{B}$ 29'16	27°32'20	desc. node	15594 Jan 29 03:17	10° $\mathbb{H}$ 22'56	
retrograde	15593 Mar 24 22:14	7° $\mathbb{B}$ 59'28			15594 Feb 10 09:59	0° $\mathbb{Y}$	
evening set	15593 Mar 31 17:11	5° $\mathbb{B}$ 34'29		evening max el	15594 Feb 21 12:46	13° $\mathbb{Y}$ 11'00	27°30'56
min. Earth dist.	15593 Apr 04 12:08	2° $\mathbb{B}$ 16'39	0.63746 AU	retrograde	15594 Mar 07 12:00	20° $\mathbb{Y}$ 35'19	
	15593 Apr 06 17:18	30° $\mathbb{R}$ $\mathbb{Y}$		evening set	15594 Mar 14 07:47	18° $\mathbb{Y}$ 24'10	
inferior conj	15593 Apr 07 05:41	29° $\mathbb{Y}$ 27'51	-0°08'09	min. Earth dist.	15594 Mar 18 02:20	15° $\mathbb{Y}$ 30'14	0.61603 AU
minimum elong	15593 Apr 07 05:56	29° $\mathbb{Y}$ 27'11	0°08'24	inferior conj	15594 Mar 21 04:41	12° $\mathbb{Y}$ 40'46	-1°24'19
transit middle	15593 Apr 07 05:56	29° $\mathbb{Y}$ 27'11	0°08'24	minimum elong	15594 Mar 21 07:41	12° $\mathbb{Y}$ 33'56	1°23'13
transit begin	15593 Apr 07 03:16	29° $\mathbb{Y}$ 34'06		asc. node	15594 Mar 25 13:19	9° $\mathbb{Y}$ 06'46	
transit end	15593 Apr 07 08:37	29° $\mathbb{Y}$ 20'16		morning rise	15594 Mar 28 10:44	7° $\mathbb{Y}$ 40'56	
asc. node	15593 Apr 07 15:57	29° $\mathbb{Y}$ 01'24		direct	15594 Mar 30 15:09	7° $\mathbb{Y}$ 20'07	
morning rise	15593 Apr 13 21:05	24° $\mathbb{Y}$ 10'09		morning max el	15594 Apr 06 11:12	10° $\mathbb{Y}$ 46'32	17°49'36
direct	15593 Apr 16 08:32	23° $\mathbb{Y}$ 39'43			15594 Apr 19 07:29	0° $\mathbb{B}$	
morning max el	15593 Apr 22 18:06	26° $\mathbb{Y}$ 55'54	17°47'33	morning set	15594 Apr 22 04:43	5° $\mathbb{B}$ 08'20	
	15593 Apr 25 11:41	0° $\mathbb{B}$		desc. node	15594 Apr 27 05:05	14° $\mathbb{B}$ 03'47	
morning set	15593 May 09 09:58	22° $\mathbb{B}$ 03'36					
desc. node	15593 May 10 08:20	23° $\mathbb{B}$ 38'40		superior conj	15594 May 03 09:03	24° $\mathbb{B}$ 44'52	-0°48'28
	15593 May 14 02:27	0° $\mathbb{I}$		minimum elong	15594 May 03 04:35	24° $\mathbb{B}$ 25'53	0°48'27
					15594 May 06 11:58	0° $\mathbb{I}$	
superior conj	15593 May 22 07:54	13° $\mathbb{I}$ 36'03	-1°26'15	max. Earth dist.	15594 May 10 12:41	6° $\mathbb{I}$ 37'26	1.43559 AU
minimum elong	15593 May 21 23:55	13° $\mathbb{I}$ 03'39	1°26'07	evening rise	15594 May 17 11:45	17° $\mathbb{I}$ 41'27	
max. Earth dist.	15593 May 27 20:52	22° $\mathbb{I}$ 28'47	1.45024 AU		15594 May 25 13:19	0° $\mathbb{E}$	
	15593 Jun 01 15:51	0° $\mathbb{E}$			15594 Jun 16 17:33	0° $\mathbb{L}$	
evening rise	15593 Jun 06 19:38	7° $\mathbb{E}$ 57'25		evening max el	15594 Jun 17 21:57	1° $\mathbb{L}$ 13'24	21°33'52
	15593 Jun 21 13:58	0° $\mathbb{L}$		asc. node	15594 Jun 21 11:15	4° $\mathbb{L}$ 19'06	
asc. node	15593 Jul 04 14:21	16° $\mathbb{L}$ 53'12		retrograde	15594 Jun 26 21:56	6° $\mathbb{L}$ 27'48	
evening max el	15593 Jul 05 01:08	17° $\mathbb{L}$ 20'32	20°22'19	evening set	15594 Jul 01 10:38	4° $\mathbb{L}$ 36'08	
retrograde	15593 Jul 12 23:16	21° $\mathbb{L}$ 51'51			15594 Jul 05 11:42	30° $\mathbb{R}$ $\mathbb{E}$	
evening set	15593 Jul 17 01:02	20° $\mathbb{L}$ 17'12		inferior conj	15594 Jul 06 16:16	28° $\mathbb{E}$ 21'14	3°08'18
inferior conj	15593 Jul 22 07:15	14° $\mathbb{L}$ 12'58	3°07'23	minimum elong	15594 Jul 06 15:53	28° $\mathbb{E}$ 22'34	3°07'28
minimum elong	15593 Jul 22 07:49	14° $\mathbb{L}$ 10'59	3°06'40	min. Earth dist.	15594 Jul 06 21:10	28° $\mathbb{E}$ 04'06	0.68986 AU
min. Earth dist.	15593 Jul 23 01:32	13° $\mathbb{L}$ 10'19	0.68394 AU	morning rise	15594 Jul 11 20:55	22° $\mathbb{E}$ 03'40	
morning rise	15593 Jul 27 14:18	7° $\mathbb{L}$ 49'52		direct	15594 Jul 16 20:12	19° $\mathbb{E}$ 55'40	
direct	15593 Aug 02 01:51	5° $\mathbb{L}$ 26'08		desc. node	15594 Jul 24 04:23	23° $\mathbb{E}$ 23'41	
desc. node	15593 Aug 06 07:03	6° $\mathbb{L}$ 35'28		morning max el	15594 Jul 26 18:49	25° $\mathbb{E}$ 48'17	22°40'08
morning max el	15593 Aug 13 06:51	12° $\mathbb{L}$ 08'09	24°09'24		15594 Jul 30 14:40	0° $\mathbb{L}$	

	15594 Aug 21 03:10	0°♎		desc. node	15595 Jul 11 01:39	11°♊19'24	
morning set	15594 Aug 29 13:53	13°♎22'33			15595 Jul 25 06:47	0°♎	
max. Earth dist.	15594 Sep 03 07:43	21°♎15'49	1.40651 AU	morning set	15595 Aug 09 12:27	22°♎58'43	
	15594 Sep 08 08:57	0°♏			15595 Aug 13 22:40	0°♎	
				max. Earth dist.	15595 Aug 16 12:58	4°♎12'02	1.42829 AU
superior conj	15594 Sep 11 04:28	5°♏01'21	-0°53'59				
minimum elong	15594 Sep 11 08:42	5°♏20'26	0°53'20	superior conj	15595 Aug 23 20:19	16°♎23'02	-1°29'30
asc. node	15594 Sep 17 12:26	16°♏42'37		minimum elong	15595 Aug 24 03:24	16°♎53'17	1°28'55
evening rise	15594 Sep 21 03:26	23°♏33'27			15595 Aug 31 15:19	0°♏	
	15594 Sep 24 13:44	0°♐		evening rise	15595 Sep 04 07:39	6°♏36'11	
evening max el	15594 Oct 07 01:31	19°♐11'25	18°24'04	asc. node	15595 Sep 04 09:02	6°♏42'25	
retrograde	15594 Oct 14 17:53	23°♐05'37			15595 Sep 18 15:34	0°♐	
evening set	15594 Oct 16 18:01	22°♐50'21		evening max el	15595 Sep 20 12:45	2°♐04'41	18°04'14
desc. node	15594 Oct 20 01:03	21°♐25'57		retrograde	15595 Sep 27 08:40	5°♐35'09	
inferior conj	15594 Oct 24 11:00	18°♐15'07	-1°25'04	evening set	15595 Sep 29 15:49	5°♐11'31	
minimum elong	15594 Oct 24 07:43	18°♐21'43	1°23'07	inferior conj	15595 Oct 06 15:20	0°♐15'42	0°05'33
min. Earth dist.	15594 Oct 27 16:51	15°♐39'43	0.58115 AU	minimum elong	15595 Oct 06 15:31	0°♐15'16	0°05'51
morning rise	15594 Oct 31 17:54	12°♐58'56		transit middle	15595 Oct 06 15:31	0°♐15'16	0°05'51
direct	15594 Nov 07 00:44	11°♐16'33		transit begin	15595 Oct 06 12:26	0°♐22'26	
morning max el	15594 Nov 21 07:43	18°♐51'45	27°13'18	transit end	15595 Oct 06 18:37	0°♐08'04	
	15594 Nov 30 17:44	0°♑		desc. node	15595 Oct 06 22:25	29°♏59'11	
asc. node	15594 Dec 14 13:14	22°♑36'27			15595 Oct 06 22:04	30°♑♏	
	15594 Dec 18 07:42	0°♒		min. Earth dist.	15595 Oct 09 19:38	27°♏19'19	0.60372 AU
morning set	15594 Dec 21 20:29	7°♒21'49		morning rise	15595 Oct 13 12:03	24°♏28'18	
				direct	15595 Oct 20 02:54	22°♏20'50	
superior conj	15594 Dec 28 16:45	22°♒27'22	1°36'40		15595 Nov 03 04:08	0°♐	
minimum elong	15594 Dec 28 16:02	22°♒23'23	1°37'29	morning max el	15595 Nov 03 09:00	0°♐11'56	27°53'41
max. Earth dist.	15594 Dec 28 17:50	22°♒33'24	1.31055 AU		15595 Nov 24 20:18	0°♑	
	15595 Jan 01 01:54	0°♒		asc. node	15595 Dec 01 10:14	12°♑10'20	
evening rise	15595 Jan 04 11:48	7°♒26'02		morning set	15595 Dec 06 00:54	21°♑31'48	
desc. node	15595 Jan 15 23:58	29°♒45'59			15595 Dec 09 23:31	0°♒	
	15595 Jan 16 03:14	0°♓		max. Earth dist.	15595 Dec 12 00:47	4°♒32'04	1.31144 AU
evening max el	15595 Feb 03 16:09	25°♓05'06	26°55'04				
	15595 Feb 10 00:38	0°♑		superior conj	15595 Dec 13 03:47	7°♒02'21	1°29'37
retrograde	15595 Feb 17 16:38	2°♑19'39		minimum elong	15595 Dec 13 02:10	6°♒53'21	1°30'21
evening set	15595 Feb 24 06:30	0°♑29'46		evening rise	15595 Dec 19 20:20	21°♒50'48	
	15595 Feb 25 03:13	30°♑♓			15595 Dec 23 17:23	0°♒	
min. Earth dist.	15595 Feb 28 06:14	27°♓50'01	0.59358 AU	desc. node	15596 Jan 02 20:46	18°♒32'38	
inferior conj	15595 Mar 03 11:25	25°♓16'37	-2°51'03		15596 Jan 10 21:48	0°♓	
minimum elong	15595 Mar 03 17:53	25°♓03'44	2°48'27	evening max el	15596 Jan 16 11:36	6°♓06'27	25°45'27
morning rise	15595 Mar 11 08:46	20°♓37'11		retrograde	15596 Jan 30 09:55	13°♓08'08	
asc. node	15595 Mar 12 10:44	20°♓25'33		evening set	15596 Feb 05 09:33	11°♓45'15	
direct	15595 Mar 13 08:37	20°♓22'25		min. Earth dist.	15596 Feb 10 00:35	9°♓06'09	0.57246 AU
morning max el	15595 Mar 21 00:20	24°♓10'29	18°10'35	inferior conj	15596 Feb 12 22:25	7°♓05'53	-4°19'37
	15595 Mar 25 17:53	0°♑		minimum elong	15596 Feb 13 07:33	6°♓50'07	4°16'28
morning set	15595 Apr 05 15:16	18°♑55'43		morning rise	15596 Feb 21 08:30	2°♓47'51	
	15595 Apr 11 13:38	0°♒		direct	15596 Feb 23 08:49	2°♓35'19	
desc. node	15595 Apr 14 01:44	4°♒34'42		asc. node	15596 Feb 27 08:09	3°♓27'07	
				morning max el	15596 Mar 03 05:25	6°♓55'48	18°52'23
superior conj	15595 Apr 15 08:56	6°♒55'18	-0°10'42		15596 Mar 17 21:28	0°♑	
minimum elong	15595 Apr 15 08:03	6°♒51'21	0°11'01	morning set	15596 Mar 19 12:48	3°♑11'37	
behind sun begin	15595 Apr 15 02:30	6°♒26'27					
behind sun end	15595 Apr 15 13:36	7°♒16'14		superior conj	15596 Mar 28 03:44	19°♑56'16	0°23'03
max. Earth dist.	15595 Apr 22 23:27	20°♒08'34	1.41600 AU	minimum elong	15596 Mar 28 05:11	20°♑03'09	0°22'35
evening rise	15595 Apr 27 21:07	28°♒14'03		desc. node	15596 Mar 30 22:20	25°♑07'41	
	15595 Apr 28 23:25	0°♓			15596 Apr 02 14:30	0°♒	
	15595 May 19 03:40	0°♊		max. Earth dist.	15596 Apr 04 06:25	2°♒57'53	1.39364 AU
evening max el	15595 May 31 14:13	15°♊06'50	22°53'23	evening rise	15596 Apr 08 03:47	9°♒42'28	
asc. node	15595 Jun 08 08:14	20°♊40'02			15596 Apr 20 20:31	0°♓	
retrograde	15595 Jun 10 18:43	21°♊05'56		evening max el	15596 May 13 04:13	29°♓01'40	24°14'47
evening set	15595 Jun 15 18:49	18°♊58'56			15596 May 14 04:22	0°♊	
inferior conj	15595 Jun 21 02:12	12°♊35'30	2°58'35	retrograde	15596 May 24 12:13	5°♊39'46	
minimum elong	15595 Jun 21 00:57	12°♊39'51	2°57'34	asc. node	15596 May 25 05:19	5°♊37'36	
min. Earth dist.	15595 Jun 20 18:06	13°♊03'36	0.69088 AU	evening set	15596 May 29 23:56	3°♊20'10	
morning rise	15595 Jun 26 06:58	6°♊25'18			15596 Jun 02 02:06	30°♒♓	
direct	15595 Jun 30 17:57	4°♊35'55		min. Earth dist.	15596 Jun 03 14:10	28°♓01'59	0.68711 AU
morning max el	15595 Jul 09 10:39	9°♊37'26	21°15'41	inferior conj	15596 Jun 04 11:07	26°♓51'08	2°38'28

minimum elong	15596 Jun 04 09:14	26° $\Pi$ 57'33	2°37'13	direct	15597 May 28 17:53	4° $\Pi$ 02'58	
morning rise	15596 Jun 09 18:35	20° $\Pi$ 49'41		morning max el	15597 Jun 04 14:28	7° $\Pi$ 46'06	19°03'00
direct	15596 Jun 13 17:42	19° $\Pi$ 20'09		desc. node	15597 Jun 13 19:54	19° $\Pi$ 25'38	
morning max el	15596 Jun 21 08:50	23° $\Pi$ 36'38	20°02'04	greatest brilliancy	15597 Jun 17 16:01	25° $\Pi$ 05'08	-0.7m
desc. node	15596 Jun 26 22:49	0° $\mathfrak{S}$ 04'17			15597 Jun 20 21:56	0° $\mathfrak{S}$	
	15596 Jun 26 21:29	0° $\mathfrak{S}$		morning set	15597 Jun 28 00:46	10° $\mathfrak{S}$ 56'14	
	15596 Jul 17 12:34	0° $\Omega$			15597 Jul 10 07:36	0° $\Omega$	
morning set	15596 Jul 18 18:04	1° $\Omega$ 53'06		max. Earth dist.	15597 Jul 11 18:37	2° $\Omega$ 16'53	1.45634 AU
max. Earth dist.	15596 Jul 29 00:59	17° $\Omega$ 56'40	1.44548 AU				
				superior conj	15597 Jul 14 07:48	6° $\Omega$ 16'52	-2°13'21
superior conj	15596 Aug 03 12:42	26° $\Omega$ 45'32	-1°58'27	minimum elong	15597 Jul 14 10:03	6° $\Omega$ 25'44	2°14'04
minimum elong	15596 Aug 03 20:00	27° $\Omega$ 15'15	1°58'27	evening rise	15597 Jul 29 05:42	0° $\mathfrak{N}$ 08'41	
	15596 Aug 05 12:21	0° $\mathfrak{N}$			15597 Jul 29 03:34	0° $\mathfrak{N}$	
evening rise	15596 Aug 16 18:04	18° $\mathfrak{N}$ 51'44		asc. node	15597 Aug 08 02:17	16° $\mathfrak{N}$ 02'23	
asc. node	15596 Aug 21 05:38	26° $\mathfrak{N}$ 30'37		evening max el	15597 Aug 17 17:39	29° $\mathfrak{N}$ 02'20	18°20'57
	15596 Aug 23 07:24	0° $\underline{\mathfrak{A}}$			15597 Aug 18 18:35	0° $\underline{\mathfrak{A}}$	
evening max el	15596 Sep 03 03:18	15° $\underline{\mathfrak{A}}$ 24'42	18°03'34	retrograde	15597 Aug 24 03:02	2° $\underline{\mathfrak{A}}$ 26'43	
retrograde	15596 Sep 09 13:09	18° $\underline{\mathfrak{A}}$ 45'18		evening set	15597 Aug 27 03:22	1° $\underline{\mathfrak{A}}$ 36'25	
evening set	15596 Sep 12 04:38	18° $\underline{\mathfrak{A}}$ 09'41			15597 Aug 29 08:20	30° $\mathfrak{R}$ $\mathfrak{N}$	
inferior conj	15596 Sep 18 13:03	12° $\underline{\mathfrak{A}}$ 55'17	1°16'25	inferior conj	15597 Sep 02 00:08	26° $\mathfrak{N}$ 05'47	2°07'43
minimum elong	15596 Sep 18 15:00	12° $\underline{\mathfrak{A}}$ 50'08	1°15'50	minimum elong	15597 Sep 02 02:29	25° $\mathfrak{N}$ 58'52	2°06'55
min. Earth dist.	15596 Sep 21 08:10	9° $\underline{\mathfrak{A}}$ 58'48	0.62655 AU	min. Earth dist.	15597 Sep 04 06:24	23° $\mathfrak{N}$ 27'06	0.64742 AU
desc. node	15596 Sep 22 19:51	8° $\underline{\mathfrak{A}}$ 32'19		morning rise	15597 Sep 08 00:09	19° $\mathfrak{N}$ 44'22	
morning rise	15596 Sep 24 23:03	6° $\underline{\mathfrak{A}}$ 46'15		desc. node	15597 Sep 09 17:19	18° $\mathfrak{N}$ 32'14	
direct	15596 Oct 01 15:24	4° $\underline{\mathfrak{A}}$ 20'18		direct	15597 Sep 14 12:30	17° $\mathfrak{N}$ 08'27	
morning max el	15596 Oct 15 16:14	12° $\underline{\mathfrak{A}}$ 18'45	27°54'55	morning max el	15597 Sep 28 02:54	25° $\mathfrak{N}$ 04'05	27°21'01
	15596 Oct 29 18:41	0° $\mathfrak{M}$			15597 Oct 02 15:02	0° $\underline{\mathfrak{A}}$	
	15596 Nov 16 06:41	0° $\mathfrak{J}$			15597 Oct 23 06:06	0° $\mathfrak{M}$	
asc. node	15596 Nov 17 07:07	2° $\mathfrak{J}$ 00'47		morning set	15597 Nov 02 11:39	18° $\mathfrak{M}$ 42'48	
morning set	15596 Nov 18 22:50	5° $\mathfrak{J}$ 20'47		asc. node	15597 Nov 04 03:56	22° $\mathfrak{M}$ 02'21	
max. Earth dist.	15596 Nov 24 03:38	16° $\mathfrak{J}$ 17'15	1.31793 AU	max. Earth dist.	15597 Nov 06 22:54	27° $\mathfrak{M}$ 43'10	1.33003 AU
					15597 Nov 08 01:12	0° $\mathfrak{J}$	
superior conj	15596 Nov 26 12:35	21° $\mathfrak{J}$ 27'42	1°16'34				
minimum elong	15596 Nov 26 10:22	21° $\mathfrak{J}$ 15'34	1°17'08	superior conj	15597 Nov 10 17:01	5° $\mathfrak{J}$ 37'40	0°57'28
	15596 Nov 30 09:29	0° $\mathfrak{Z}$		minimum elong	15597 Nov 10 14:42	5° $\mathfrak{J}$ 25'19	0°57'51
evening rise	15596 Dec 03 06:55	6° $\mathfrak{Z}$ 19'18		evening rise	15597 Nov 17 17:41	20° $\mathfrak{J}$ 46'45	
	15596 Dec 15 12:28	0° $\approx$			15597 Nov 22 04:08	0° $\mathfrak{Z}$	
desc. node	15596 Dec 19 17:40	6° $\approx$ 29'56		desc. node	15597 Dec 06 14:40	23° $\mathfrak{Z}$ 19'41	
evening max el	15596 Dec 27 23:30	16° $\approx$ 22'22	24°10'43	evening max el	15597 Dec 09 09:26	26° $\mathfrak{Z}$ 18'19	22°27'16
retrograde	15597 Jan 10 13:45	23° $\approx$ 07'42			15597 Dec 13 23:01	0° $\approx$	
evening set	15597 Jan 15 13:52	22° $\approx$ 13'10		retrograde	15597 Dec 22 05:09	2° $\approx$ 39'10	
min. Earth dist.	15597 Jan 21 11:08	19° $\approx$ 17'51	0.55556 AU	evening set	15597 Dec 25 22:19	2° $\approx$ 08'52	
inferior conj	15597 Jan 23 12:21	18° $\approx$ 03'24	-5°31'45		15597 Dec 31 04:43	30° $\mathfrak{R}$ $\mathfrak{Z}$	
minimum elong	15597 Jan 23 20:01	17° $\approx$ 51'48	5°29'49	min. Earth dist.	15598 Jan 02 17:06	28° $\mathfrak{Z}$ 37'44	0.54571 AU
morning rise	15597 Feb 01 03:58	14° $\approx$ 04'49		inferior conj	15598 Jan 03 09:02	28° $\mathfrak{Z}$ 15'20	-6°01'28
direct	15597 Feb 03 13:38	13° $\approx$ 49'53		minimum elong	15598 Jan 03 08:57	28° $\mathfrak{Z}$ 15'28	6°00'38
asc. node	15597 Feb 13 05:32	18° $\approx$ 11'42		morning rise	15598 Jan 11 20:42	24° $\mathfrak{Z}$ 27'55	
morning max el	15597 Feb 13 22:18	18° $\approx$ 51'01	19°57'01	direct	15598 Jan 15 02:02	24° $\mathfrak{Z}$ 04'30	
	15597 Feb 22 07:49	0° $\mathfrak{H}$		morning max el	15598 Jan 27 00:16	29° $\mathfrak{Z}$ 49'14	21°24'40
morning set	15597 Mar 03 17:42	17° $\mathfrak{H}$ 45'25			15598 Jan 27 04:44	0° $\approx$	
	15597 Mar 09 18:00	0° $\mathfrak{Y}$		asc. node	15598 Jan 31 02:54	4° $\approx$ 23'41	
					15598 Feb 14 22:39	0° $\mathfrak{H}$	
superior conj	15597 Mar 11 13:07	3° $\mathfrak{Y}$ 36'02	0°50'53	morning set	15598 Feb 16 03:01	2° $\mathfrak{H}$ 27'34	
minimum elong	15597 Mar 11 15:35	3° $\mathfrak{Y}$ 48'19	0°50'31				
max. Earth dist.	15597 Mar 17 13:10	15° $\mathfrak{Y}$ 12'23	1.37089 AU	superior conj	15598 Feb 23 09:02	17° $\mathfrak{H}$ 42'37	1°12'14
desc. node	15597 Mar 17 18:57	15° $\mathfrak{Y}$ 39'22		minimum elong	15598 Feb 23 11:32	17° $\mathfrak{H}$ 55'34	1°12'11
evening rise	15597 Mar 21 06:25	22° $\mathfrak{Y}$ 01'09		max. Earth dist.	15598 Feb 27 23:40	27° $\mathfrak{H}$ 05'24	1.35001 AU
	15597 Mar 25 20:13	0° $\mathfrak{B}$			15598 Mar 01 11:09	0° $\mathfrak{Y}$	
	15597 Apr 14 16:48	0° $\Pi$		evening rise	15598 Mar 04 01:35	4° $\mathfrak{Y}$ 59'34	
evening max el	15597 Apr 25 17:51	12° $\Pi$ 56'29	25°31'01	desc. node	15598 Mar 04 15:32	6° $\mathfrak{Y}$ 05'07	
retrograde	15597 May 08 01:25	20° $\Pi$ 03'36			15598 Mar 18 16:02	0° $\mathfrak{B}$	
asc. node	15597 May 12 02:29	18° $\Pi$ 56'23		evening max el	15598 Apr 08 07:31	26° $\mathfrak{B}$ 43'47	26°34'52
evening set	15597 May 14 00:22	17° $\Pi$ 35'01			15598 Apr 11 24:00	0° $\Pi$	
min. Earth dist.	15597 May 18 07:12	12° $\Pi$ 53'32	0.67867 AU	retrograde	15598 Apr 21 09:23	4° $\Pi$ 08'48	
inferior conj	15597 May 19 17:07	11° $\Pi$ 04'25	2°07'34	evening set	15598 Apr 27 18:16	1° $\Pi$ 36'17	
minimum elong	15597 May 19 14:57	11° $\Pi$ 11'26	2°06'09	asc. node	15598 Apr 28 23:45	0° $\Pi$ 31'19	
morning rise	15597 May 25 05:59	5° $\Pi$ 13'04			15598 Apr 29 12:33	30° $\mathfrak{R}$ $\mathfrak{B}$	

min. Earth dist.	15598 May 01 19:06	27°  29'54	0.66568 AU	inferior conj	15599 Apr 17 11:13	9°  00'07	0°29'43
inferior conj	15598 May 03 17:59	25°  09'21	1°25'00	minimum elong	15599 Apr 17 10:24	9°  02'22	0°28'56
minimum elong	15598 May 03 16:05	25°  15'03	1°23'41	morning rise	15599 Apr 23 19:10	3°  33'50	
morning rise	15598 May 09 15:00	19°  29'37		direct	15599 Apr 26 11:18	2°  56'28	
direct	15598 May 12 16:31	18°  37'17		morning max el	15599 May 02 18:51	6°  12'00	17°54'31
morning max el	15598 May 19 02:33	22°  00'17	18°20'17	desc. node	15599 May 18 13:46	29°  19'23	
	15598 May 25 14:06	0°  II			15599 May 18 23:34	0°  II	
desc. node	15598 May 31 16:53	9°  II13'05		morning set	15599 May 20 09:16	2°  II19'32	
morning set	15598 Jun 08 03:17	20°  II58'29					
	15598 Jun 13 20:03	0°  ☿		superior conj	15599 Jun 03 08:26	25°  II02'33	-1°45'28
				minimum elong	15599 Jun 02 23:42	24°  II27'47	1°45'31
superior conj	15598 Jun 23 16:42	15°  ☿27'41	-2°08'43		15599 Jun 06 11:41	0°  ☿	
minimum elong	15598 Jun 23 11:16	15°  ☿06'28	2°09'22	max. Earth dist.	15599 Jun 07 10:41	1°  ☿30'24	1.45572 AU
max. Earth dist.	15598 Jun 24 14:47	16°  ☿53'45	1.45979 AU	evening rise	15599 Jun 19 07:51	19°  ☿54'28	
	15598 Jul 03 00:37	0°  ♊			15599 Jun 25 22:56	0°  ♊	
evening rise	15598 Jul 09 16:24	10°  ♊23'43		greatest brilliancy	15599 Jul 03 16:51	11°  ♊31'47	-0.6m
greatest brilliancy	15598 Jul 19 14:05	25°  ♊47'35	-0.8m	asc. node	15599 Jul 12 19:47	23°  ♊49'28	
	15598 Jul 22 08:53	0°  ♊		evening max el	15599 Jul 15 11:06	26°  ♊42'21	19°46'33
asc. node	15598 Jul 25 23:00	5°  ♊11'29			15599 Jul 19 16:20	0°  ♊	
evening max el	15598 Aug 01 04:56	12°  ♊50'10	18°55'39	retrograde	15599 Jul 22 21:01	0°  ♊52'40	
retrograde	15598 Aug 07 22:39	16°  ♊31'29			15599 Jul 25 21:33	30°  ♊	
evening set	15598 Aug 11 08:17	15°  ♊24'42		evening set	15599 Jul 26 16:38	29°  ♊28'24	
inferior conj	15598 Aug 16 20:55	9°  ♊39'53	2°41'57	inferior conj	15599 Aug 01 00:21	23°  ♊31'00	3°01'43
minimum elong	15598 Aug 16 22:52	9°  ♊33'41	2°41'10	minimum elong	15599 Aug 01 01:29	23°  ♊27'11	3°01'00
min. Earth dist.	15598 Aug 18 13:11	7°  ♊32'09	0.66492 AU	min. Earth dist.	15599 Aug 02 02:38	22°  ♊02'51	0.67829 AU
morning rise	15598 Aug 22 12:36	3°  ♊13'39		morning rise	15599 Aug 06 09:52	17°  ♊05'28	
desc. node	15598 Aug 27 14:46	0°  ♊41'00		direct	15599 Aug 12 04:05	14°  ♊34'42	
direct	15598 Aug 28 17:07	0°  ♊36'22		desc. node	15599 Aug 14 12:11	14°  ♊56'03	
morning max el	15598 Sep 10 14:31	8°  ♊15'52	26°19'33	morning max el	15599 Aug 24 01:30	21°  ♊42'13	24°59'42
	15598 Sep 27 15:03	0°  ♋			15599 Aug 31 07:02	0°  ♋	
	15598 Oct 15 16:38	0°  ♋			15599 Sep 20 20:47	0°  ♋	
morning set	15598 Oct 16 12:12	1°  ♋30'56		morning set	15599 Sep 28 20:29	13°  ♋35'09	
max. Earth dist.	15598 Oct 20 08:24	8°  ♋51'48	1.34736 AU	max. Earth dist.	15599 Oct 02 09:20	19°  ♋58'30	1.36899 AU
asc. node	15598 Oct 22 00:41	12°  ♋10'34			15599 Oct 07 16:29	0°  ♋	
				asc. node	15599 Oct 08 21:20	2°  ♋20'51	
superior conj	15598 Oct 25 14:37	19°  ♋26'12	0°32'25				
minimum elong	15598 Oct 25 12:55	19°  ♋17'28	0°32'43	superior conj	15599 Oct 09 02:17	2°  ♋45'12	0°01'53
	15598 Oct 30 15:56	0°  ♌		minimum elong	15599 Oct 09 02:08	2°  ♋44'28	0°02'15
evening rise	15598 Nov 02 02:41	5°  ♌08'24		behind sun begin	15599 Oct 08 19:40	2°  ♋12'42	
	15598 Nov 15 17:11	0°  ♌		behind sun end	15599 Oct 09 08:36	3°  ♋16'18	
evening max el	15598 Nov 21 03:22	6°  ♌33'46	20°52'47	evening rise	15599 Oct 17 07:39	19°  ♋17'46	
desc. node	15598 Nov 23 11:47	8°  ♌39'34			15599 Oct 22 18:01	0°  ♌	
retrograde	15598 Dec 02 15:21	12°  ♌16'13		evening max el	15599 Nov 03 11:26	17°  ♌34'17	19°37'37
evening set	15598 Dec 05 04:18	12°  ♌00'44		desc. node	15599 Nov 10 08:58	22°  ♌03'51	
inferior conj	15598 Dec 13 24:00	8°  ♌08'22	-5°30'39	retrograde	15599 Nov 13 08:03	22°  ♌29'53	
minimum elong	15598 Dec 13 15:39	8°  ♌20'17	5°28'17	evening set	15599 Nov 15 06:58	22°  ♌19'08	
min. Earth dist.	15598 Dec 14 22:40	7°  ♌35'58	0.54487 AU	inferior conj	15599 Nov 23 23:44	18°  ♌15'43	-4°08'21
morning rise	15598 Dec 22 03:06	4°  ♌14'39		minimum elong	15599 Nov 23 14:03	18°  ♌31'02	4°04'26
direct	15598 Dec 26 09:23	3°  ♌35'37		min. Earth dist.	15599 Nov 26 06:51	16°  ♌48'46	0.55336 AU
morning max el	15599 Jan 08 13:40	10°  ♌00'46	23°09'53	morning rise	15599 Dec 01 19:19	13°  ♌56'49	
asc. node	15599 Jan 18 00:13	21°  ♌45'08		direct	15599 Dec 07 01:01	12°  ♌55'41	
	15599 Jan 22 23:03	0°  ♍		morning max el	15599 Dec 20 22:21	19°  ♌53'19	24°58'56
morning set	15599 Jan 31 14:35	17°  ♍11'59			15599 Dec 29 11:38	0°  ♍	
	15599 Feb 06 12:42	0°  ♍		asc. node	15600 Jan 04 21:25	9°  ♍58'56	
					15600 Jan 15 05:21	0°  ♍	
superior conj	15599 Feb 07 12:21	2°  ♍07'31	1°27'05	morning set	15600 Jan 16 02:27	1°  ♍52'59	
minimum elong	15599 Feb 07 14:15	2°  ♍17'41	1°27'23				
max. Earth dist.	15599 Feb 10 17:05	8°  ♍55'02	1.33278 AU	superior conj	15600 Jan 22 20:28	16°  ♍42'54	1°35'37
evening rise	15599 Feb 15 09:52	18°  ♍29'24		minimum elong	15600 Jan 22 21:25	16°  ♍48'08	1°36'13
desc. node	15599 Feb 19 12:09	26°  ♍20'58		max. Earth dist.	15600 Jan 24 17:54	20°  ♍52'00	1.32014 AU
	15599 Feb 21 11:54	0°  ♎			15600 Jan 29 00:29	0°  ♎	
	15599 Mar 12 20:43	0°  ♎		evening rise	15600 Jan 30 04:05	2°  ♎22'44	
evening max el	15599 Mar 21 20:52	10°  ♎14'50	27°18'51	desc. node	15600 Feb 06 08:47	16°  ♎21'47	
retrograde	15599 Apr 04 11:19	17°  ♎46'39			15600 Feb 14 08:26	0°  ♎	
evening set	15599 Apr 11 03:34	15°  ♎16'40		evening max el	15600 Mar 03 08:27	23°  ♎18'32	27°35'54
min. Earth dist.	15599 Apr 14 23:58	11°  ♎42'24	0.64867 AU		15600 Mar 13 01:36	0°  ♎	
asc. node	15599 Apr 15 21:06	10°  ♎45'16		retrograde	15600 Mar 17 06:04	0°  ♎47'34	

	15600 Mar 21 05:52	30° $\kappa$ $\Upsilon$			15601 Feb 08 08:27	0° $\Upsilon$	
evening set	15600 Mar 24 01:49	28° $\Upsilon$ 27'38		evening max el	15601 Feb 13 15:48	5° $\Upsilon$ 41'45	27°20'09
min. Earth dist.	15600 Mar 27 20:07	25° $\Upsilon$ 20'41	0.62848 AU	retrograde	15601 Feb 27 16:01	13° $\Upsilon$ 01'42	
inferior conj	15600 Mar 30 17:52	22° $\Upsilon$ 29'34	-0°38'57	evening set	15601 Mar 06 10:03	10° $\Upsilon$ 59'12	
minimum elong	15600 Mar 30 19:10	22° $\Upsilon$ 26'23	0°38'40	min. Earth dist.	15601 Mar 10 06:07	8° $\Upsilon$ 12'26	0.60642 AU
asc. node	15600 Apr 01 18:28	20° $\Upsilon$ 33'48		inferior conj	15601 Mar 13 10:26	5° $\Upsilon$ 28'00	-2°00'12
morning rise	15600 Apr 06 15:17	17° $\Upsilon$ 19'04		minimum elong	15601 Mar 13 14:51	5° $\Upsilon$ 18'25	1°58'25
direct	15600 Apr 08 23:23	16° $\Upsilon$ 53'17		asc. node	15601 Mar 19 15:53	1° $\Upsilon$ 04'17	
morning max el	15600 Apr 15 12:33	20° $\Upsilon$ 12'51	17°46'11	morning rise	15601 Mar 20 23:00	0° $\Upsilon$ 36'12	
	15600 Apr 22 21:32	0° $\text{B}$		direct	15601 Mar 23 01:05	0° $\Upsilon$ 18'21	
morning set	15600 May 01 16:19	14° $\text{B}$ 51'49		morning max el	15601 Mar 30 04:20	3° $\Upsilon$ 52'50	17°56'07
desc. node	15600 May 04 10:32	19° $\text{B}$ 39'00		morning set	15601 Apr 14 18:28	28° $\Upsilon$ 16'45	
	15600 May 10 11:57	0° $\text{II}$			15601 Apr 15 17:07	0° $\text{B}$	
				desc. node	15601 Apr 21 07:14	10° $\text{B}$ 06'47	
superior conj	15600 May 13 19:56	5° $\text{II}$ 33'39	-1°10'36	superior conj	15601 Apr 25 07:02	17° $\text{B}$ 09'03	-0°32'08
minimum elong	15600 May 13 13:16	5° $\text{II}$ 06'05	1°10'27	minimum elong	15601 Apr 25 04:12	16° $\text{B}$ 56'44	0°32'15
max. Earth dist.	15600 May 20 04:25	15° $\text{II}$ 53'05	1.44466 AU		15601 May 02 21:21	0° $\text{II}$	
evening rise	15600 May 28 18:59	29° $\text{II}$ 22'07		max. Earth dist.	15601 May 02 18:23	29° $\text{B}$ 47'47	1.42774 AU
	15600 May 29 04:51	0° $\text{B}$		evening rise	15601 May 08 17:29	9° $\text{II}$ 24'46	
	15600 Jun 18 16:46	0° $\Omega$			15601 May 22 07:30	0° $\text{B}$	
evening max el	15600 Jun 27 11:21	10° $\Omega$ 36'05	20°51'32	evening max el	15601 Jun 10 06:07	24° $\text{B}$ 29'20	22°07'06
asc. node	15600 Jun 28 16:39	11° $\Omega$ 45'56		asc. node	15601 Jun 15 13:36	28° $\text{B}$ 46'18	
retrograde	15600 Jul 05 20:02	15° $\Omega$ 25'01			15601 Jun 19 01:07	0° $\Omega$	
evening set	15600 Jul 10 02:18	13° $\Omega$ 43'13		retrograde	15601 Jun 19 17:54	0° $\Omega$ 02'21	
inferior conj	15600 Jul 15 07:59	7° $\Omega$ 34'28	3°09'05		15601 Jun 20 10:24	30° $\kappa$ $\text{B}$	
minimum elong	15600 Jul 15 08:09	7° $\Omega$ 33'53	3°08'21	evening set	15601 Jun 24 11:29	28° $\text{B}$ 03'52	
min. Earth dist.	15600 Jul 15 20:36	6° $\Omega$ 50'44	0.68705 AU	inferior conj	15601 Jun 29 17:36	21° $\text{B}$ 45'19	3°05'26
morning rise	15600 Jul 20 13:42	1° $\Omega$ 13'23		minimum elong	15601 Jun 29 16:50	21° $\text{B}$ 48'01	3°04'32
	15600 Jul 22 04:57	30° $\kappa$ $\text{B}$		min. Earth dist.	15601 Jun 29 16:58	21° $\text{B}$ 47'32	0.69093 AU
direct	15600 Jul 25 20:11	28° $\text{B}$ 55'32		morning rise	15601 Jul 04 22:00	15° $\text{B}$ 30'54	
	15600 Jul 29 19:38	0° $\Omega$		direct	15601 Jul 09 16:08	13° $\text{B}$ 30'26	
desc. node	15600 Jul 31 09:32	0° $\Omega$ 55'43		desc. node	15601 Jul 18 06:49	18° $\text{B}$ 14'45	
morning max el	15600 Aug 05 12:21	5° $\Omega$ 17'23	23°31'17	morning max el	15601 Jul 19 01:28	19° $\text{B}$ 00'22	22°03'15
	15600 Aug 24 14:37	0° $\text{M}$			15601 Jul 28 06:19	0° $\Omega$	
morning set	15600 Sep 09 08:16	24° $\text{M}$ 45'50			15601 Aug 17 17:46	0° $\text{M}$	
	15600 Sep 12 10:01	0° $\text{B}$		morning set	15601 Aug 20 20:17	4° $\text{M}$ 55'28	
max. Earth dist.	15600 Sep 13 07:38	1° $\text{B}$ 33'48	1.39292 AU	max. Earth dist.	15601 Aug 26 09:51	14° $\text{M}$ 00'36	1.41626 AU
superior conj	15600 Sep 21 00:21	15° $\text{B}$ 26'27	-0°32'56	superior conj	15601 Sep 03 04:29	27° $\text{M}$ 19'43	-1°09'25
minimum elong	15600 Sep 21 02:46	15° $\text{B}$ 37'43	0°32'22	minimum elong	15601 Sep 03 10:02	27° $\text{M}$ 44'15	1°08'43
asc. node	15600 Sep 24 17:58	22° $\text{B}$ 30'08			15601 Sep 04 16:40	0° $\text{B}$	
	15600 Sep 28 15:05	0° $\text{M}$		asc. node	15601 Sep 11 14:36	12° $\text{B}$ 34'28	
evening rise	15600 Sep 30 05:55	3° $\text{M}$ 08'41		evening rise	15601 Sep 13 17:57	16° $\text{B}$ 32'10	
evening max el	15600 Oct 16 09:07	29° $\text{M}$ 24'39	18°44'37		15601 Sep 21 04:46	0° $\text{M}$	
	15600 Oct 16 23:43	0° $\text{B}$		evening max el	15601 Sep 29 16:36	11° $\text{M}$ 57'38	18°13'08
retrograde	15600 Oct 24 17:40	3° $\text{B}$ 37'45		retrograde	15601 Oct 06 22:48	15° $\text{M}$ 40'02	
evening set	15600 Oct 26 15:28	3° $\text{B}$ 25'21		evening set	15601 Oct 09 01:46	15° $\text{M}$ 21'34	
desc. node	15600 Oct 27 06:13	3° $\text{B}$ 16'18		desc. node	15601 Oct 14 03:31	12° $\text{M}$ 31'30	
	15600 Nov 02 10:34	30° $\kappa$ $\text{M}$		inferior conj	15601 Oct 16 11:07	10° $\text{M}$ 37'01	-0°44'23
inferior conj	15600 Nov 03 18:29	29° $\text{M}$ 02'21	-2°24'08	minimum elong	15601 Oct 16 09:31	10° $\text{M}$ 40'27	0°43'13
minimum elong	15600 Nov 03 12:36	29° $\text{M}$ 13'08	2°21'06	min. Earth dist.	15601 Oct 19 17:23	7° $\text{M}$ 50'29	0.59060 AU
min. Earth dist.	15600 Nov 06 20:10	26° $\text{M}$ 48'02	0.56958 AU	morning rise	15601 Oct 23 13:53	5° $\text{M}$ 06'42	
morning rise	15600 Nov 11 06:35	24° $\text{M}$ 07'41		direct	15601 Oct 30 00:55	3° $\text{M}$ 13'26	
direct	15600 Nov 17 06:16	22° $\text{M}$ 40'38		morning max el	15601 Nov 13 07:53	10° $\text{M}$ 55'17	27°35'20
	15600 Dec 01 09:48	0° $\text{B}$			15601 Nov 28 04:19	0° $\text{B}$	
morning max el	15600 Dec 01 11:00	0° $\text{B}$ 02'53	26°32'47	asc. node	15601 Dec 08 15:34	18° $\text{B}$ 13'26	
asc. node	15600 Dec 21 18:32	28° $\text{B}$ 51'47			15601 Dec 14 11:24	0° $\text{B}$	
	15600 Dec 22 09:16	0° $\text{B}$		morning set	15601 Dec 14 20:07	0° $\text{B}$ 46'11	
morning set	15600 Dec 30 12:53	16° $\text{B}$ 25'48					
	15601 Jan 05 16:27	0° $\approx$		superior conj	15601 Dec 21 18:43	16° $\text{B}$ 01'09	1°34'25
superior conj	15601 Jan 06 07:13	1° $\approx$ 22'33	1°38'01	minimum elong	15601 Dec 21 17:35	15° $\text{B}$ 54'52	1°35'12
minimum elong	15601 Jan 06 07:06	1° $\approx$ 21'55	1°38'48	max. Earth dist.	15601 Dec 21 08:01	15° $\text{B}$ 01'18	1.31032 AU
max. Earth dist.	15601 Jan 07 00:00	2° $\approx$ 56'16	1.31259 AU		15601 Dec 28 02:09	0° $\approx$	
evening rise	15601 Jan 13 05:37	16° $\approx$ 32'49		evening rise	15601 Dec 28 12:13	0° $\approx$ 54'12	
	15601 Jan 19 22:38	0° $\text{H}$		desc. node	15602 Jan 10 02:12	25° $\approx$ 10'28	
desc. node	15601 Jan 23 05:27	6° $\text{H}$ 01'01			15602 Jan 13 01:40	0° $\text{H}$	