

opposition	11100 Feb 19 09:00	5° \mathring{M} 31'37	-0°53'18	conjunction	11106 Sep 02 13:21	20° \mathring{M} 08'19	-0°45'33
min. Earth dist.	11100 Feb 18 18:54	5° \mathring{M} 32'35	28.80268 AU	minimum elong	11106 Sep 02 13:21	20° \mathring{M} 08'19	0°45'43
direct	11100 May 08 16:24	4° \mathring{M} 07'58		max. Earth dist.	11106 Sep 03 07:23	20° \mathring{M} 10'01	30.78113 AU
evening set	11100 Aug 03 19:46	6° \mathring{M} 02'13		morning rise	11106 Sep 18 09:16	20° \mathring{M} 44'04	
				retrograde	11106 Dec 18 01:30	22° \mathring{M} 42'42	
conjunction	11100 Aug 19 11:04	6° \mathring{M} 37'35	-0°49'37	min. Earth dist.	11107 Mar 07 10:28	21° \mathring{M} 18'52	28.78191 AU
minimum elong	11100 Aug 19 11:04	6° \mathring{M} 37'35	0°49'56	opposition	11107 Mar 08 03:10	21° \mathring{M} 17'42	-0°48'13
max. Earth dist.	11100 Aug 20 02:04	6° \mathring{M} 39'00	30.79937 AU	direct	11107 May 25 05:25	19° \mathring{M} 54'01	
morning rise	11100 Sep 04 04:47	7° \mathring{M} 13'10		evening set	11107 Aug 20 08:12	21° \mathring{M} 48'12	
retrograde	11100 Dec 03 20:36	9° \mathring{M} 11'41					
opposition	11101 Feb 21 22:02	7° \mathring{M} 46'49	-0°52'49	conjunction	11107 Sep 05 01:57	22° \mathring{M} 23'43	-0°44'37
min. Earth dist.	11101 Feb 21 06:51	7° \mathring{M} 47'52	28.79668 AU	minimum elong	11107 Sep 05 01:57	22° \mathring{M} 23'43	0°44'46
direct	11101 May 11 06:06	6° \mathring{M} 23'08		max. Earth dist.	11107 Sep 05 19:09	22° \mathring{M} 25'20	30.78229 AU
evening set	11101 Aug 06 07:39	8° \mathring{M} 17'21		morning rise	11107 Sep 20 22:22	22° \mathring{M} 59'29	
				retrograde	11107 Dec 20 16:09	24° \mathring{M} 58'09	
conjunction	11101 Aug 21 23:15	8° \mathring{M} 52'44	-0°49'07	opposition	11108 Mar 09 15:46	23° \mathring{M} 33'11	-0°47'11
minimum elong	11101 Aug 21 23:15	8° \mathring{M} 52'44	0°49'25	min. Earth dist.	11108 Mar 08 22:39	23° \mathring{M} 34'22	28.78338 AU
max. Earth dist.	11101 Aug 22 14:39	8° \mathring{M} 54'11	30.79347 AU	direct	11108 May 26 15:37	22° \mathring{M} 09'31	
morning rise	11101 Sep 06 17:21	9° \mathring{M} 28'21		evening set	11108 Aug 21 20:35	24° \mathring{M} 03'44	
retrograde	11101 Dec 06 09:49	11° \mathring{M} 26'53					
opposition	11102 Feb 24 11:10	10° \mathring{M} 01'56	-0°52'15	conjunction	11108 Sep 06 14:46	24° \mathring{M} 39'16	-0°43'37
min. Earth dist.	11102 Feb 23 20:40	10° \mathring{M} 02'57	28.79117 AU	minimum elong	11108 Sep 06 14:46	24° \mathring{M} 39'16	0°43'44
direct	11102 May 13 18:29	8° \mathring{M} 38'13		max. Earth dist.	11108 Sep 07 08:48	24° \mathring{M} 40'58	30.78383 AU
evening set	11102 Aug 08 19:37	10° \mathring{M} 32'24		morning rise	11108 Sep 22 11:27	25° \mathring{M} 15'04	
				retrograde	11108 Dec 22 04:48	27° \mathring{M} 13'45	
conjunction	11102 Aug 24 11:39	11° \mathring{M} 07'48	-0°48'33	opposition	11109 Mar 12 04:35	25° \mathring{M} 48'48	-0°46'04
minimum elong	11102 Aug 24 11:39	11° \mathring{M} 07'48	0°48'49	min. Earth dist.	11109 Mar 11 12:10	25° \mathring{M} 49'57	28.78493 AU
max. Earth dist.	11102 Aug 25 03:47	11° \mathring{M} 09'20	30.78847 AU	direct	11109 May 29 03:24	24° \mathring{M} 25'11	
morning rise	11102 Sep 09 06:05	11° \mathring{M} 43'27		evening set	11109 Aug 24 09:01	26° \mathring{M} 19'24	
retrograde	11102 Dec 08 22:52	13° \mathring{M} 41'59					
opposition	11103 Feb 26 23:53	12° \mathring{M} 17'00	-0°51'36	conjunction	11109 Sep 09 03:32	26° \mathring{M} 54'57	-0°42'33
min. Earth dist.	11103 Feb 26 08:01	12° \mathring{M} 18'06	28.78668 AU	minimum elong	11109 Sep 09 03:33	26° \mathring{M} 54'57	0°42'38
direct	11103 May 16 07:41	10° \mathring{M} 53'16		max. Earth dist.	11109 Sep 09 21:04	26° \mathring{M} 56'37	30.78534 AU
evening set	11103 Aug 11 07:43	12° \mathring{M} 47'26		morning rise	11109 Sep 25 00:39	27° \mathring{M} 30'47	
				retrograde	11109 Dec 24 20:18	29° \mathring{M} 29'28	
conjunction	11103 Aug 26 23:59	13° \mathring{M} 22'51	-0°47'55	opposition	11110 Mar 14 17:17	28° \mathring{M} 04'32	-0°44'53
minimum elong	11103 Aug 26 23:59	13° \mathring{M} 22'51	0°48'10	min. Earth dist.	11110 Mar 14 00:14	28° \mathring{M} 05'43	28.78613 AU
max. Earth dist.	11103 Aug 27 15:48	13° \mathring{M} 24'21	30.78454 AU	direct	11110 May 31 16:52	26° \mathring{M} 40'54	
morning rise	11103 Sep 11 18:54	13° \mathring{M} 58'32		evening set	11110 Aug 26 21:42	28° \mathring{M} 35'08	
retrograde	11103 Dec 11 11:51	15° \mathring{M} 57'04					
opposition	11104 Feb 29 12:49	14° \mathring{M} 32'04	-0°50'52	conjunction	11110 Sep 11 16:35	29° \mathring{M} 10'43	-0°41'25
min. Earth dist.	11104 Feb 28 21:24	14° \mathring{M} 33'08	28.78349 AU	minimum elong	11110 Sep 11 16:35	29° \mathring{M} 10'43	0°41'29
direct	11104 May 17 18:42	13° \mathring{M} 08'19		max. Earth dist.	11110 Sep 12 09:57	29° \mathring{M} 12'21	30.78605 AU
evening set	11104 Aug 12 19:37	15° \mathring{M} 02'28		morning rise	11110 Sep 27 14:05	29° \mathring{M} 46'33	
					11110 Oct 03 17:34	0° \mathring{A}	
conjunction	11104 Aug 28 12:23	15° \mathring{M} 37'55	-0°47'12	retrograde	11110 Dec 27 09:17	1° \mathring{A} 45'14	
minimum elong	11104 Aug 28 12:23	15° \mathring{M} 37'55	0°47'25	opposition	11111 Mar 17 05:58	0° \mathring{A} 20'17	-0°43'39
max. Earth dist.	11104 Aug 29 05:36	15° \mathring{M} 39'33	30.78202 AU	min. Earth dist.	11111 Mar 16 14:14	0° \mathring{A} 21'22	28.78644 AU
morning rise	11104 Sep 13 07:30	16° \mathring{M} 13'37			11111 Mar 29 10:53	30° \mathring{R} \mathring{M}	
retrograde	11104 Dec 13 00:29	18° \mathring{M} 12'11		direct	11111 Jun 03 04:55	28° \mathring{M} 56'38	
min. Earth dist.	11105 Mar 02 09:05	16° \mathring{M} 48'19	28.78161 AU		11111 Aug 04 18:50	0° \mathring{A}	
opposition	11105 Mar 03 01:34	16° \mathring{M} 47'10	-0°50'04	evening set	11111 Aug 29 10:21	0° \mathring{A} 50'50	
direct	11105 May 20 06:59	15° \mathring{M} 23'26					
evening set	11105 Aug 15 07:47	17° \mathring{M} 17'36		conjunction	11111 Sep 14 05:43	1° \mathring{A} 26'26	-0°40'13
				minimum elong	11111 Sep 14 05:44	1° \mathring{A} 26'26	0°40'16
conjunction	11105 Aug 31 00:45	17° \mathring{M} 53'04	-0°46'25	max. Earth dist.	11111 Sep 14 23:00	1° \mathring{A} 28'04	30.78601 AU
minimum elong	11105 Aug 31 00:45	17° \mathring{M} 53'04	0°46'37	morning rise	11111 Sep 30 03:32	2° \mathring{A} 02'18	
max. Earth dist.	11105 Aug 31 17:22	17° \mathring{M} 54'38	30.78092 AU	retrograde	11111 Dec 29 23:27	4° \mathring{A} 00'55	
morning rise	11105 Sep 15 20:25	18° \mathring{M} 28'47		opposition	11112 Mar 18 18:29	2° \mathring{A} 35'56	-0°42'20
retrograde	11105 Dec 15 13:43	20° \mathring{M} 27'23		min. Earth dist.	11112 Mar 18 01:58	2° \mathring{A} 37'05	28.78595 AU
opposition	11106 Mar 05 14:24	19° \mathring{M} 02'22	-0°49'11	direct	11112 Jun 04 18:35	1° \mathring{A} 12'15	
min. Earth dist.	11106 Mar 04 21:56	19° \mathring{M} 03'31	28.78126 AU	evening set	11112 Aug 30 22:56	3° \mathring{A} 06'25	
direct	11106 May 22 17:31	17° \mathring{M} 38'40					
evening set	11106 Aug 17 19:50	19° \mathring{M} 32'49		conjunction	11112 Sep 15 18:33	3° \mathring{A} 42'02	-0°38'58
				minimum elong	11112 Sep 15 18:33	3° \mathring{A} 42'02	0°38'59

max. Earth dist.	11112 Sep 16 11:01	3° <u>♂</u> 43'35	30.78524 AU	conjunction	11119 Oct 02 13:37	19° <u>♂</u> 27'11	-0°28'41
morning rise	11112 Oct 01 16:50	4° <u>♂</u> 17'54		minimum elong	11119 Oct 02 13:37	19° <u>♂</u> 27'11	0°28'32
retrograde	11112 Dec 31 13:20	6° <u>♂</u> 16'28		max. Earth dist.	11119 Oct 03 07:01	19° <u>♂</u> 28'49	30.80268 AU
opposition	11113 Mar 21 07:06	4° <u>♂</u> 51'26	-0°40'57	morning rise	11119 Oct 18 14:18	20° <u>♂</u> 03'09	
min. Earth dist.	11113 Mar 20 15:35	4° <u>♂</u> 52'31	28.78513 AU	retrograde	11120 Jan 17 04:59	22° <u>♂</u> 01'18	
direct	11113 Jun 07 06:56	3° <u>♂</u> 27'42		opposition	11120 Apr 05 20:11	20° <u>♂</u> 36'14	-0°29'45
evening set	11113 Sep 02 11:27	5° <u>♂</u> 21'49		min. Earth dist.	11120 Apr 05 04:34	20° <u>♂</u> 37'20	28.80659 AU
				direct	11120 Jun 22 17:04	19° <u>♂</u> 12'23	
conjunction	11113 Sep 18 07:38	5° <u>♂</u> 57'27	-0°37'39	evening set	11120 Sep 18 03:56	21° <u>♂</u> 06'25	
minimum elong	11113 Sep 18 07:38	5° <u>♂</u> 57'27	0°37'39				
max. Earth dist.	11113 Sep 19 00:58	5° <u>♂</u> 59'05	30.78453 AU	conjunction	11120 Oct 04 02:41	21° <u>♂</u> 42'10	-0°27'01
morning rise	11113 Oct 04 06:09	6° <u>♂</u> 33'20		minimum elong	11120 Oct 04 02:41	21° <u>♂</u> 42'10	0°26'51
retrograde	11114 Jan 03 02:03	8° <u>♂</u> 31'50		max. Earth dist.	11120 Oct 04 20:11	21° <u>♂</u> 43'48	30.81027 AU
opposition	11114 Mar 23 19:24	7° <u>♂</u> 06'45	-0°39'31	morning rise	11120 Oct 20 03:39	22° <u>♂</u> 18'09	
min. Earth dist.	11114 Mar 23 03:15	7° <u>♂</u> 07'52	28.78453 AU	retrograde	11121 Jan 18 19:31	24° <u>♂</u> 16'15	
direct	11114 Jun 09 20:36	5° <u>♂</u> 42'57		opposition	11121 Apr 08 08:08	22° <u>♂</u> 51'16	-0°27'57
evening set	11114 Sep 05 00:06	7° <u>♂</u> 37'01		min. Earth dist.	11121 Apr 07 15:44	22° <u>♂</u> 52'25	28.81435 AU
				direct	11121 Jun 25 06:11	21° <u>♂</u> 27'27	
conjunction	11114 Sep 20 20:30	8° <u>♂</u> 12'40	-0°36'17	evening set	11121 Sep 20 16:59	23° <u>♂</u> 21'31	
minimum elong	11114 Sep 20 20:31	8° <u>♂</u> 12'40	0°36'15				
max. Earth dist.	11114 Sep 21 12:53	8° <u>♂</u> 14'13	30.78430 AU	conjunction	11121 Oct 06 15:57	23° <u>♂</u> 57'17	-0°25'19
morning rise	11114 Oct 06 19:35	8° <u>♂</u> 48'35		minimum elong	11121 Oct 06 15:57	23° <u>♂</u> 57'17	0°25'06
retrograde	11115 Jan 05 14:27	10° <u>♂</u> 47'00		max. Earth dist.	11121 Oct 07 08:34	23° <u>♂</u> 58'50	30.81807 AU
opposition	11115 Mar 26 07:44	9° <u>♂</u> 21'52	-0°38'02	morning rise	11121 Oct 22 17:19	24° <u>♂</u> 33'17	
min. Earth dist.	11115 Mar 25 16:01	9° <u>♂</u> 22'58	28.78481 AU	retrograde	11122 Jan 21 09:50	26° <u>♂</u> 31'21	
direct	11115 Jun 12 07:41	7° <u>♂</u> 58'02		opposition	11122 Apr 10 20:09	25° <u>♂</u> 06'25	-0°26'06
evening set	11115 Sep 07 12:39	9° <u>♂</u> 52'03		min. Earth dist.	11122 Apr 10 05:05	25° <u>♂</u> 07'29	28.82214 AU
				direct	11122 Jun 27 17:58	23° <u>♂</u> 42'38	
conjunction	11115 Sep 23 09:34	10° <u>♂</u> 27'43	-0°34'52	evening set	11122 Sep 23 05:59	25° <u>♂</u> 36'43	
minimum elong	11115 Sep 23 09:34	10° <u>♂</u> 27'43	0°34'48				
max. Earth dist.	11115 Sep 24 03:08	10° <u>♂</u> 29'23	30.78503 AU	conjunction	11122 Oct 09 05:29	26° <u>♂</u> 12'31	-0°23'34
morning rise	11115 Oct 09 08:48	11° <u>♂</u> 03'38		minimum elong	11122 Oct 09 05:29	26° <u>♂</u> 12'31	0°23'20
retrograde	11116 Jan 08 01:31	13° <u>♂</u> 01'59		max. Earth dist.	11122 Oct 09 22:21	26° <u>♂</u> 14'06	30.82559 AU
opposition	11116 Mar 27 19:51	11° <u>♂</u> 36'50	-0°36'29	morning rise	11122 Oct 25 07:01	26° <u>♂</u> 48'31	
min. Earth dist.	11116 Mar 27 03:58	11° <u>♂</u> 37'57	28.78614 AU	retrograde	11123 Jan 23 23:08	28° <u>♂</u> 46'32	
direct	11116 Jun 13 20:01	10° <u>♂</u> 12'58		opposition	11123 Apr 13 08:04	27° <u>♂</u> 21'40	-0°24'12
evening set	11116 Sep 09 01:18	12° <u>♂</u> 06'58		min. Earth dist.	11123 Apr 12 16:48	27° <u>♂</u> 22'44	28.82917 AU
				direct	11123 Jun 30 07:38	25° <u>♂</u> 57'53	
conjunction	11116 Sep 24 22:28	12° <u>♂</u> 42'38	-0°33'24	evening set	11123 Sep 25 19:12	27° <u>♂</u> 51'59	
minimum elong	11116 Sep 24 22:28	12° <u>♂</u> 42'38	0°33'19				
max. Earth dist.	11116 Sep 25 15:06	12° <u>♂</u> 44'13	30.78717 AU	conjunction	11123 Oct 11 18:50	28° <u>♂</u> 27'47	-0°21'47
morning rise	11116 Oct 10 22:11	13° <u>♂</u> 18'34		minimum elong	11123 Oct 11 18:51	28° <u>♂</u> 27'47	0°21'31
retrograde	11117 Jan 09 15:23	15° <u>♂</u> 16'51		max. Earth dist.	11123 Oct 12 10:06	28° <u>♂</u> 29'13	30.83218 AU
opposition	11117 Mar 30 08:01	13° <u>♂</u> 51'41	-0°34'53	morning rise	11123 Oct 27 20:48	29° <u>♂</u> 03'48	
min. Earth dist.	11117 Mar 29 15:39	13° <u>♂</u> 52'50	28.78909 AU		11123 Nov 24 11:28	0° <u>♂</u>	
direct	11117 Jun 16 06:26	12° <u>♂</u> 27'48		retrograde	11124 Jan 26 12:11	1° <u>♂</u> 01'45	
evening set	11117 Sep 11 13:46	14° <u>♂</u> 21'47			11124 Mar 31 22:32	30° <u>♂</u>	
				opposition	11124 Apr 14 20:01	29° <u>♂</u> 36'54	-0°22'17
conjunction	11117 Sep 27 11:25	14° <u>♂</u> 57'29	-0°31'53	min. Earth dist.	11124 Apr 14 05:45	29° <u>♂</u> 37'54	28.83537 AU
minimum elong	11117 Sep 27 11:25	14° <u>♂</u> 57'29	0°31'46	direct	11124 Jul 01 18:45	28° <u>♂</u> 13'06	
max. Earth dist.	11117 Sep 28 05:03	14° <u>♂</u> 59'08	30.79083 AU		11124 Sep 24 01:09	0° <u>♂</u>	
morning rise	11117 Oct 13 11:23	15° <u>♂</u> 33'25		evening set	11124 Sep 27 08:12	0° <u>♂</u> 07'11	
retrograde	11118 Jan 12 02:28	17° <u>♂</u> 31'39					
opposition	11118 Apr 01 20:11	16° <u>♂</u> 06'30	-0°33'13	conjunction	11124 Oct 13 08:22	0° <u>♂</u> 43'00	-0°19'59
min. Earth dist.	11118 Apr 01 04:17	16° <u>♂</u> 07'37	28.79350 AU	minimum elong	11124 Oct 13 08:22	0° <u>♂</u> 43'00	0°19'42
direct	11118 Jun 18 18:10	14° <u>♂</u> 42'36		max. Earth dist.	11124 Oct 14 00:12	0° <u>♂</u> 44'29	30.83800 AU
evening set	11118 Sep 14 02:30	16° <u>♂</u> 36'35		morning rise	11124 Oct 29 10:26	1° <u>♂</u> 19'02	
				retrograde	11125 Jan 28 00:07	3° <u>♂</u> 16'53	
conjunction	11118 Sep 30 00:29	17° <u>♂</u> 12'18	-0°30'18	opposition	11125 Apr 17 07:50	1° <u>♂</u> 52'03	-0°20'20
minimum elong	11118 Sep 30 00:29	17° <u>♂</u> 12'18	0°30'11	min. Earth dist.	11125 Apr 16 17:57	1° <u>♂</u> 53'01	28.84082 AU
max. Earth dist.	11118 Sep 30 17:39	17° <u>♂</u> 13'55	30.79613 AU	direct	11125 Jul 04 07:29	0° <u>♂</u> 28'13	
morning rise	11118 Oct 16 00:52	17° <u>♂</u> 48'15		evening set	11125 Sep 29 21:15	2° <u>♂</u> 22'17	
retrograde	11119 Jan 14 16:35	19° <u>♂</u> 46'26					
opposition	11119 Apr 04 08:04	18° <u>♂</u> 21'20	-0°31'31	conjunction	11125 Oct 15 21:37	2° <u>♂</u> 58'07	-0°18'09
min. Earth dist.	11119 Apr 03 15:22	18° <u>♂</u> 22'30	28.79948 AU	minimum elong	11125 Oct 15 21:37	2° <u>♂</u> 58'07	0°17'50
direct	11119 Jun 21 06:10	16° <u>♂</u> 57'26		max. Earth dist.	11125 Oct 16 11:55	2° <u>♂</u> 59'27	30.84338 AU
evening set	11119 Sep 16 15:17	18° <u>♂</u> 51'27		morning rise	11125 Nov 01 00:09	3° <u>♂</u> 34'09	

retrograde	11126 Jan 30 13:35	5° <u>ℳ</u> 31'54		conjunction	11131 Oct 30 05:29	16° <u>ℳ</u> 25'43	-0°06'42
opposition	11126 Apr 19 19:34	4° <u>ℳ</u> 07'03	-0°18'21	minimum elong	11131 Oct 30 05:28	16° <u>ℳ</u> 25'43	0°06'16
min. Earth dist.	11126 Apr 19 05:49	4° <u>ℳ</u> 08'01	28.84614 AU	behind sun begin	11131 Oct 29 23:17	16° <u>ℳ</u> 25'10	
direct	11126 Jul 06 18:19	2° <u>ℳ</u> 43'11		behind sun end	11131 Oct 30 11:40	16° <u>ℳ</u> 26'16	
evening set	11126 Oct 02 10:18	4° <u>ℳ</u> 37'14		max. Earth dist.	11131 Oct 30 19:10	16° <u>ℳ</u> 26'59	30.88900 AU
				morning rise	11131 Nov 15 09:10	17° <u>ℳ</u> 01'44	
conjunction	11126 Oct 18 11:06	5° <u>ℳ</u> 13'04	-0°16'17	retrograde	11132 Feb 13 14:07	18° <u>ℳ</u> 58'49	
minimum elong	11126 Oct 18 11:06	5° <u>ℳ</u> 13'04	0°15'58	opposition	11132 May 02 15:54	17° <u>ℳ</u> 34'09	-0°06'01
max. Earth dist.	11126 Oct 19 01:52	5° <u>ℳ</u> 14'27	30.84867 AU	min. Earth dist.	11132 May 02 03:26	17° <u>ℳ</u> 35'02	28.89475 AU
morning rise	11126 Nov 03 13:45	5° <u>ℳ</u> 49'07		direct	11132 Jul 19 18:13	16° <u>ℳ</u> 10'09	
retrograde	11127 Feb 01 23:24	7° <u>ℳ</u> 46'44		evening set	11132 Oct 15 16:23	18° <u>ℳ</u> 04'12	
opposition	11127 Apr 22 07:04	6° <u>ℳ</u> 21'54	-0°16'20				
min. Earth dist.	11127 Apr 21 18:15	6° <u>ℳ</u> 22'48	28.85159 AU	conjunction	11132 Oct 31 18:43	18° <u>ℳ</u> 40'03	-0°04'45
direct	11127 Jul 09 06:15	4° <u>ℳ</u> 58'00		minimum elong	11132 Oct 31 18:44	18° <u>ℳ</u> 40'03	0°04'18
evening set	11127 Oct 04 23:21	6° <u>ℳ</u> 52'02		behind sun begin	11132 Oct 31 12:17	18° <u>ℳ</u> 39'29	
				behind sun end	11132 Nov 01 01:11	18° <u>ℳ</u> 40'38	
conjunction	11127 Oct 21 00:23	7° <u>ℳ</u> 27'52	-0°14'24	max. Earth dist.	11132 Nov 01 07:10	18° <u>ℳ</u> 41'12	30.90064 AU
minimum elong	11127 Oct 21 00:23	7° <u>ℳ</u> 27'52	0°14'03	morning rise	11132 Nov 16 22:45	19° <u>ℳ</u> 16'05	
behind sun begin	11127 Oct 20 21:14	7° <u>ℳ</u> 27'35		retrograde	11133 Feb 15 03:45	21° <u>ℳ</u> 13'04	
behind sun end	11127 Oct 21 03:33	7° <u>ℳ</u> 28'09		opposition	11133 May 05 03:12	19° <u>ℳ</u> 48'28	-0°03'54
max. Earth dist.	11127 Oct 21 14:14	7° <u>ℳ</u> 29'09	30.85453 AU	min. Earth dist.	11133 May 04 15:37	19° <u>ℳ</u> 49'17	28.90680 AU
morning rise	11127 Nov 06 03:22	8° <u>ℳ</u> 03'54		direct	11133 Jul 22 05:04	18° <u>ℳ</u> 24'30	
retrograde	11128 Feb 04 12:14	10° <u>ℳ</u> 01'24		evening set	11133 Oct 18 05:26	20° <u>ℳ</u> 18'34	
opposition	11128 Apr 23 18:30	8° <u>ℳ</u> 36'35	-0°14'18				
min. Earth dist.	11128 Apr 23 05:09	8° <u>ℳ</u> 37'32	28.85783 AU	conjunction	11133 Nov 03 08:13	20° <u>ℳ</u> 54'26	-0°02'46
direct	11128 Jul 10 17:47	7° <u>ℳ</u> 12'38		minimum elong	11133 Nov 03 08:13	20° <u>ℳ</u> 54'26	0°02'17
evening set	11128 Oct 06 12:14	9° <u>ℳ</u> 06'39		behind sun begin	11133 Nov 03 01:39	20° <u>ℳ</u> 53'51	
				behind sun end	11133 Nov 03 14:46	20° <u>ℳ</u> 55'01	
conjunction	11128 Oct 22 13:33	9° <u>ℳ</u> 42'29	-0°12'30	max. Earth dist.	11133 Nov 03 21:16	20° <u>ℳ</u> 55'39	30.91281 AU
minimum elong	11128 Oct 22 13:34	9° <u>ℳ</u> 42'29	0°12'08	morning rise	11133 Nov 19 12:15	21° <u>ℳ</u> 30'27	
behind sun begin	11128 Oct 22 09:11	9° <u>ℳ</u> 42'06		retrograde	11134 Feb 17 16:29	23° <u>ℳ</u> 27'21	
behind sun end	11128 Oct 22 17:56	9° <u>ℳ</u> 42'53		opposition	11134 May 07 14:26	22° <u>ℳ</u> 02'50	-0°01'48
max. Earth dist.	11128 Oct 23 03:35	9° <u>ℳ</u> 43'48	30.86117 AU	min. Earth dist.	11134 May 07 03:25	22° <u>ℳ</u> 03'37	28.91883 AU
morning rise	11128 Nov 07 16:43	10° <u>ℳ</u> 18'31		direct	11134 Jul 24 18:21	20° <u>ℳ</u> 38'53	
retrograde	11129 Feb 05 23:24	12° <u>ℳ</u> 15'56		evening set	11134 Oct 20 18:52	22° <u>ℳ</u> 32'59	
opposition	11129 Apr 26 06:04	10° <u>ℳ</u> 51'07	-0°12'15				
min. Earth dist.	11129 Apr 25 17:51	10° <u>ℳ</u> 51'59	28.86509 AU	conjunction	11134 Nov 05 21:40	23° <u>ℳ</u> 08'51	-0°00'44
direct	11129 Jul 13 03:55	9° <u>ℳ</u> 27'08		minimum elong	11134 Nov 05 21:42	23° <u>ℳ</u> 08'51	0°00'16
evening set	11129 Oct 09 01:12	11° <u>ℳ</u> 21'08		behind sun begin	11134 Nov 05 15:11	23° <u>ℳ</u> 08'16	
				behind sun end	11134 Nov 06 04:12	23° <u>ℳ</u> 09'26	
conjunction	11129 Oct 25 02:53	11° <u>ℳ</u> 56'59	-0°10'35	max. Earth dist.	11134 Nov 06 08:52	23° <u>ℳ</u> 09'53	30.92465 AU
minimum elong	11129 Oct 25 02:52	11° <u>ℳ</u> 56'59	0°10'11	morning rise	11134 Nov 22 02:01	23° <u>ℳ</u> 44'52	
behind sun begin	11129 Oct 24 21:41	11° <u>ℳ</u> 56'31		retrograde	11135 Feb 20 05:32	25° <u>ℳ</u> 41'39	
behind sun end	11129 Oct 25 08:04	11° <u>ℳ</u> 57'27		asc. node	11135 Mar 18 10:57	25° <u>ℳ</u> 30'23	
max. Earth dist.	11129 Oct 25 16:47	11° <u>ℳ</u> 58'16	30.86914 AU	opposition	11135 May 10 01:34	24° <u>ℳ</u> 17'13	0°00'19
morning rise	11129 Nov 10 06:15	12° <u>ℳ</u> 33'01		min. Earth dist.	11135 May 09 15:02	24° <u>ℳ</u> 17'57	28.93035 AU
retrograde	11130 Feb 08 12:34	14° <u>ℳ</u> 30'18		direct	11135 Jul 27 05:32	22° <u>ℳ</u> 53'15	
opposition	11130 Apr 28 17:16	13° <u>ℳ</u> 05'31	-0°10'11	evening set	11135 Oct 23 08:11	24° <u>ℳ</u> 47'22	
min. Earth dist.	11130 Apr 28 04:14	13° <u>ℳ</u> 06'26	28.87369 AU				
direct	11130 Jul 15 17:19	11° <u>ℳ</u> 41'30		conjunction	11135 Nov 08 11:20	25° <u>ℳ</u> 23'15	0°01'18
evening set	11130 Oct 11 14:18	13° <u>ℳ</u> 35'32		minimum elong	11135 Nov 08 11:20	25° <u>ℳ</u> 23'15	0°01'49
				behind sun begin	11135 Nov 08 04:46	25° <u>ℳ</u> 22'39	
conjunction	11130 Oct 27 16:10	14° <u>ℳ</u> 11'22	-0°08'39	behind sun end	11135 Nov 08 17:55	25° <u>ℳ</u> 23'50	
minimum elong	11130 Oct 27 16:10	14° <u>ℳ</u> 11'22	0°08'15	max. Earth dist.	11135 Nov 08 22:33	25° <u>ℳ</u> 24'17	30.93557 AU
behind sun begin	11130 Oct 27 10:23	14° <u>ℳ</u> 10'51		morning rise	11135 Nov 24 15:37	25° <u>ℳ</u> 59'15	
behind sun end	11130 Oct 27 21:57	14° <u>ℳ</u> 11'54		retrograde	11136 Feb 22 16:02	27° <u>ℳ</u> 55'56	
max. Earth dist.	11130 Oct 28 05:21	14° <u>ℳ</u> 12'36	30.87837 AU	opposition	11136 May 11 12:52	26° <u>ℳ</u> 31'33	0°02'26
morning rise	11130 Nov 12 19:49	14° <u>ℳ</u> 47'24		min. Earth dist.	11136 May 11 03:36	26° <u>ℳ</u> 32'12	28.94070 AU
	11130 Nov 18 15:20	15° <u>ℳ</u>		direct	11136 Jul 28 17:25	25° <u>ℳ</u> 07'34	
retrograde	11131 Feb 11 01:30	16° <u>ℳ</u> 44'35		evening set	11136 Oct 24 21:24	27° <u>ℳ</u> 01'41	
opposition	11131 May 01 04:41	15° <u>ℳ</u> 19'51	-0°08'06				
min. Earth dist.	11131 Apr 30 16:43	15° <u>ℳ</u> 20'41	28.88365 AU	conjunction	11136 Nov 10 00:42	27° <u>ℳ</u> 37'33	0°03'17
	11131 May 13 01:20	15° <u>ℳ</u>		minimum elong	11136 Nov 10 00:41	27° <u>ℳ</u> 37'33	0°03'48
direct	11131 Jul 18 04:57	13° <u>ℳ</u> 55'50		behind sun begin	11136 Nov 09 18:11	27° <u>ℳ</u> 36'58	
	11131 Sep 19 17:29	15° <u>ℳ</u>		behind sun end	11136 Nov 10 07:11	27° <u>ℳ</u> 38'08	
evening set	11131 Oct 14 03:13	15° <u>ℳ</u> 49'52		max. Earth dist.	11136 Nov 10 10:19	27° <u>ℳ</u> 38'26	30.94547 AU
				morning rise	11136 Nov 26 05:13	28° <u>ℳ</u> 13'33	

	11137 Jan 30 13:07	0°♈	min. Earth dist.	11142 May 25 00:11	9°♈54'31	28.99299 AU
retrograde	11137 Feb 24 04:54	0°♈10'06	direct	11142 Aug 11 15:46	8°♈29'51	
	11137 Mar 21 00:48	30°♈♌	evening set	11142 Nov 08 04:09	10°♈23'58	
opposition	11137 May 13 24:00	28°♌45'45 0°04'32				
min. Earth dist.	11137 May 13 14:40	28°♌46'24 28.95004 AU	conjunction	11142 Nov 24 08:30	10°♈59'49 0°14'47	
direct	11137 Jul 31 04:53	27°♌21'44	minimum elong	11142 Nov 24 08:29	10°♈59'49 0°15'22	
evening set	11137 Oct 27 10:42	29°♌15'51	behind sun begin	11142 Nov 24 06:54	10°♈59'40	
			behind sun end	11142 Nov 24 10:05	10°♈59'57	
conjunction	11137 Nov 12 14:14	29°♌51'43 0°05'15	max. Earth dist.	11142 Nov 24 15:31	11°♈00'27 30.99808 AU	
minimum elong	11137 Nov 12 14:14	29°♌51'43 0°05'47	morning rise	11142 Dec 10 13:14	11°♈35'44	
behind sun begin	11137 Nov 12 07:57	29°♌51'09	retrograde	11143 Mar 10 03:40	13°♈31'27	
behind sun end	11137 Nov 12 20:31	29°♌52'17	opposition	11143 May 27 16:49	12°♈07'18 0°16'49	
max. Earth dist.	11137 Nov 12 23:29	29°♌52'34 30.95428 AU	min. Earth dist.	11143 May 27 11:02	12°♈07'42 29.00361 AU	
	11137 Nov 16 06:55	0°♈	direct	11143 Aug 14 05:16	10°♈43'03	
morning rise	11137 Nov 28 18:48	0°♈27'43	evening set	11143 Nov 10 17:14	12°♈37'12	
retrograde	11138 Feb 26 15:21	2°♈24'07				
opposition	11138 May 16 11:02	0°♈59'48 0°06'37	conjunction	11143 Nov 26 21:30	13°♈13'02 0°16'38	
min. Earth dist.	11138 May 16 03:27	1°♈00'20 28.95851 AU	minimum elong	11143 Nov 26 21:30	13°♈13'02 0°17'15	
	11138 Jun 24 21:01	30°♈♌	max. Earth dist.	11143 Nov 27 03:02	13°♈13'33 31.00943 AU	
direct	11138 Aug 02 15:07	29°♌35'44	morning rise	11143 Dec 13 02:25	13°♈48'56	
	11138 Sep 09 21:20	0°♈	retrograde	11144 Mar 11 16:01	15°♈44'33	
evening set	11138 Oct 29 23:57	1°♈29'50	opposition	11144 May 29 03:26	14°♈20'28 0°18'47	
			min. Earth dist.	11144 May 28 21:37	14°♈20'53 29.01564 AU	
conjunction	11138 Nov 15 03:43	2°♈05'42 0°07'11	direct	11144 Aug 15 16:21	12°♈56'14	
minimum elong	11138 Nov 15 03:42	2°♈05'42 0°07'43	evening set	11144 Nov 12 06:01	14°♈50'25	
behind sun begin	11138 Nov 14 21:47	2°♈05'10				
behind sun end	11138 Nov 15 09:37	2°♈06'13	conjunction	11144 Nov 28 10:32	15°♈26'15 0°18'28	
max. Earth dist.	11138 Nov 15 12:11	2°♈06'28 30.96258 AU	minimum elong	11144 Nov 28 10:31	15°♈26'15 0°19'04	
morning rise	11138 Dec 01 08:23	2°♈41'41	max. Earth dist.	11144 Nov 28 16:40	15°♈26'48 31.02196 AU	
retrograde	11139 Mar 01 03:22	4°♈37'56	morning rise	11144 Dec 14 15:18	16°♈02'08	
opposition	11139 May 18 21:54	3°♈13'38 0°08'42	retrograde	11145 Mar 14 02:27	17°♈57'39	
min. Earth dist.	11139 May 18 13:58	3°♈14'12 28.96658 AU	opposition	11145 May 31 14:05	16°♈33'40 0°20'44	
direct	11139 Aug 05 04:24	1°♈49'32	min. Earth dist.	11145 May 31 09:16	16°♈34'00 29.02857 AU	
evening set	11139 Nov 01 13:05	3°♈43'38	direct	11145 Aug 18 03:56	15°♈09'27	
			evening set	11145 Nov 14 19:09	17°♈03'40	
conjunction	11139 Nov 17 16:53	4°♈19'29 0°09'06				
minimum elong	11139 Nov 17 16:53	4°♈19'29 0°09'41	conjunction	11145 Nov 30 23:38	17°♈39'30 0°20'16	
behind sun begin	11139 Nov 17 11:30	4°♈19'00	minimum elong	11145 Nov 30 23:38	17°♈39'30 0°20'54	
behind sun end	11139 Nov 17 22:15	4°♈19'58	max. Earth dist.	11145 Dec 01 04:24	17°♈39'56 31.03530 AU	
max. Earth dist.	11139 Nov 18 00:23	4°♈20'10 30.97055 AU	morning rise	11145 Dec 17 04:31	18°♈15'22	
morning rise	11139 Dec 03 21:39	4°♈55'27	retrograde	11146 Mar 16 15:33	20°♈10'47	
retrograde	11140 Mar 02 14:51	6°♈51'34	opposition	11146 Jun 03 00:27	18°♈46'54 0°22'38	
opposition	11140 May 20 08:50	5°♈27'18 0°10'45	min. Earth dist.	11146 Jun 02 19:30	18°♈47'15 29.04202 AU	
min. Earth dist.	11140 May 20 02:15	5°♈27'45 28.97473 AU	direct	11146 Aug 20 14:43	17°♈22'42	
direct	11140 Aug 06 15:37	4°♈03'08	evening set	11146 Nov 17 08:18	19°♈16'58	
evening set	11140 Nov 03 02:06	5°♈57'14				
			conjunction	11146 Dec 03 12:53	19°♈52'48 0°22'02	
conjunction	11140 Nov 19 06:11	6°♈33'05 0°11'01	minimum elong	11146 Dec 03 12:53	19°♈52'48 0°22'40	
minimum elong	11140 Nov 19 06:10	6°♈33'05 0°11'35	max. Earth dist.	11146 Dec 03 17:23	19°♈53'13 31.04858 AU	
behind sun begin	11140 Nov 19 01:32	6°♈32'40	morning rise	11146 Dec 19 17:37	20°♈28'40	
behind sun end	11140 Nov 19 10:48	6°♈33'30	retrograde	11147 Mar 19 01:33	22°♈23'58	
max. Earth dist.	11140 Nov 19 13:51	6°♈33'47 30.97895 AU	opposition	11147 Jun 05 11:07	21°♈00'11 0°24'31	
morning rise	11140 Dec 05 10:54	7°♈09'01	min. Earth dist.	11147 Jun 05 07:56	21°♈00'24 29.05511 AU	
retrograde	11141 Mar 05 02:43	9°♈05'01	direct	11147 Aug 23 00:17	19°♈36'00	
opposition	11141 May 22 19:31	7°♈40'46 0°12'48	evening set	11147 Nov 19 21:20	21°♈30'18	
min. Earth dist.	11141 May 22 12:38	7°♈41'15 28.98338 AU				
direct	11141 Aug 09 04:39	6°♈16'33	conjunction	11147 Dec 06 01:57	22°♈06'06 0°23'46	
evening set	11141 Nov 05 15:11	8°♈10'40	minimum elong	11147 Dec 06 01:57	22°♈06'06 0°24'25	
			max. Earth dist.	11147 Dec 06 05:30	22°♈06'26 31.06131 AU	
conjunction	11141 Nov 21 19:15	8°♈46'31 0°12'55	morning rise	11147 Dec 22 06:37	22°♈41'57	
minimum elong	11141 Nov 21 19:15	8°♈46'31 0°13'31	retrograde	11148 Mar 20 12:29	24°♈37'09	
behind sun begin	11141 Nov 21 15:43	8°♈46'12	opposition	11148 Jun 06 21:38	23°♈13'26 0°26'21	
behind sun end	11141 Nov 21 22:48	8°♈46'50	min. Earth dist.	11148 Jun 06 18:15	23°♈13'40 29.06732 AU	
max. Earth dist.	11141 Nov 22 01:34	8°♈47'05 30.98800 AU	direct	11148 Aug 24 13:03	21°♈49'15	
morning rise	11141 Dec 08 00:11	9°♈22'27	evening set	11148 Nov 21 10:32	23°♈43'34	
retrograde	11142 Mar 07 15:36	11°♈18'18				
opposition	11142 May 25 06:15	9°♈54'05 0°14'49	conjunction	11148 Dec 07 15:06	24°♈19'22 0°25'28	

minimum elong	11148 Dec 07 15:06	24° \mathring{A} 19'22	0°26'07	opposition	11155 Jun 22 21:47	8° \mathring{B} 40'55	0°37'54
max. Earth dist.	11148 Dec 07 17:22	24° \mathring{A} 19'34	31.07291 AU	min. Earth dist.	11155 Jun 22 22:42	8° \mathring{B} 40'51	29.13575 AU
morning rise	11148 Dec 23 19:44	24° \mathring{A} 55'11		direct	11155 Sep 10 00:05	7° \mathring{B} 16'24	
retrograde	11149 Mar 22 23:14	26° \mathring{A} 50'15		evening set	11155 Dec 08 04:18	9° \mathring{B} 10'43	
opposition	11149 Jun 09 08:11	25° \mathring{A} 26'36	0°28'08				
min. Earth dist.	11149 Jun 09 06:30	25° \mathring{A} 26'43	29.07847 AU	conjunction	11155 Dec 24 08:44	9° \mathring{B} 46'23	0°36'08
direct	11149 Aug 26 23:01	24° \mathring{A} 02'22		minimum elong	11155 Dec 24 08:44	9° \mathring{B} 46'23	0°36'47
evening set	11149 Nov 23 23:34	25° \mathring{A} 56'42		max. Earth dist.	11155 Dec 24 06:52	9° \mathring{B} 46'13	31.14125 AU
				morning rise	11156 Jan 09 12:25	10° \mathring{B} 22'00	
conjunction	11149 Dec 10 04:18	26° \mathring{A} 32'29	0°27'08	retrograde	11156 Apr 07 04:52	12° \mathring{B} 16'04	
minimum elong	11149 Dec 10 04:18	26° \mathring{A} 32'29	0°27'48	opposition	11156 Jun 24 08:03	10° \mathring{B} 52'38	0°39'21
max. Earth dist.	11149 Dec 10 06:11	26° \mathring{A} 32'39	31.08353 AU	min. Earth dist.	11156 Jun 24 10:14	10° \mathring{B} 52'28	29.14742 AU
morning rise	11149 Dec 26 08:47	27° \mathring{A} 08'17		direct	11156 Sep 11 10:07	9° \mathring{B} 28'07	
retrograde	11150 Mar 25 10:27	29° \mathring{A} 03'12		evening set	11156 Dec 09 16:52	11° \mathring{B} 22'27	
opposition	11150 Jun 11 18:37	27° \mathring{A} 39'35	0°29'53				
min. Earth dist.	11150 Jun 11 17:03	27° \mathring{A} 39'41	29.08846 AU	conjunction	11156 Dec 25 21:14	11° \mathring{B} 58'06	0°37'27
direct	11150 Aug 29 11:38	26° \mathring{A} 15'18		minimum elong	11156 Dec 25 21:14	11° \mathring{B} 58'06	0°38'06
evening set	11150 Nov 26 12:42	28° \mathring{A} 09'39		max. Earth dist.	11156 Dec 25 18:54	11° \mathring{B} 57'53	31.15361 AU
				morning rise	11157 Jan 11 00:48	12° \mathring{B} 33'42	
conjunction	11150 Dec 12 17:15	28° \mathring{A} 45'24	0°28'45	retrograde	11157 Apr 09 15:24	14° \mathring{B} 27'39	
minimum elong	11150 Dec 12 17:15	28° \mathring{A} 45'24	0°29'23	opposition	11157 Jun 26 18:00	13° \mathring{B} 04'18	0°40'44
max. Earth dist.	11150 Dec 12 17:21	28° \mathring{A} 45'24	31.09309 AU	min. Earth dist.	11157 Jun 26 19:36	13° \mathring{B} 04'12	29.16024 AU
morning rise	11150 Dec 28 21:45	29° \mathring{A} 21'10		direct	11157 Sep 13 21:50	11° \mathring{B} 39'48	
	11151 Jan 16 15:48	0° \mathring{B}		evening set	11157 Dec 12 05:32	13° \mathring{B} 34'12	
retrograde	11151 Mar 27 22:22	1° \mathring{B} 15'57					
	11151 Jun 09 15:24	30° \mathring{R} \mathring{A}		conjunction	11157 Dec 28 09:46	14° \mathring{B} 09'50	0°38'43
opposition	11151 Jun 14 04:59	29° \mathring{A} 52'20	0°31'36	minimum elong	11157 Dec 28 09:46	14° \mathring{B} 09'50	0°39'23
min. Earth dist.	11151 Jun 14 04:34	29° \mathring{A} 52'22	29.09777 AU	max. Earth dist.	11157 Dec 28 06:39	14° \mathring{B} 09'33	31.16682 AU
direct	11151 Aug 31 23:06	28° \mathring{A} 28'00		morning rise	11158 Jan 13 13:09	14° \mathring{B} 45'24	
	11151 Nov 18 12:14	0° \mathring{B}		retrograde	11158 Apr 12 01:51	16° \mathring{B} 39'17	
evening set	11151 Nov 29 01:32	0° \mathring{B} 22'20		opposition	11158 Jun 29 04:13	15° \mathring{B} 16'02	0°42'04
				min. Earth dist.	11158 Jun 29 07:08	15° \mathring{B} 15'50	29.17378 AU
conjunction	11151 Dec 15 06:15	0° \mathring{B} 58'05	0°30'19	direct	11158 Sep 16 06:49	13° \mathring{B} 51'35	
minimum elong	11151 Dec 15 06:15	0° \mathring{B} 58'05	0°30'59	evening set	11158 Dec 14 18:04	15° \mathring{B} 46'02	
max. Earth dist.	11151 Dec 15 06:43	0° \mathring{B} 58'07	31.10215 AU				
morning rise	11151 Dec 31 10:28	1° \mathring{B} 33'48		conjunction	11158 Dec 30 22:16	16° \mathring{B} 21'39	0°39'56
retrograde	11152 Mar 29 09:23	3° \mathring{B} 28'26		minimum elong	11158 Dec 30 22:16	16° \mathring{B} 21'39	0°40'35
opposition	11152 Jun 15 15:18	2° \mathring{B} 04'50	0°33'15	max. Earth dist.	11158 Dec 30 19:08	16° \mathring{B} 21'22	31.18042 AU
min. Earth dist.	11152 Jun 15 15:30	2° \mathring{B} 04'50	29.10666 AU	morning rise	11159 Jan 16 01:21	16° \mathring{B} 57'12	
direct	11152 Sep 02 12:46	0° \mathring{B} 40'27		retrograde	11159 Apr 14 12:32	18° \mathring{B} 51'00	
evening set	11152 Nov 30 14:19	2° \mathring{B} 34'46		opposition	11159 Jul 01 14:16	17° \mathring{B} 27'52	0°43'19
				min. Earth dist.	11159 Jul 01 17:13	17° \mathring{B} 27'40	29.18720 AU
conjunction	11152 Dec 16 18:52	3° \mathring{B} 10'29	0°31'51	direct	11159 Sep 18 18:21	16° \mathring{B} 03'27	
minimum elong	11152 Dec 16 18:52	3° \mathring{B} 10'29	0°32'29	evening set	11159 Dec 17 06:47	17° \mathring{B} 57'57	
max. Earth dist.	11152 Dec 16 17:38	3° \mathring{B} 10'23	31.11110 AU				
morning rise	11153 Jan 01 23:10	3° \mathring{B} 46'12		conjunction	11160 Jan 02 10:41	18° \mathring{B} 33'33	0°41'05
retrograde	11153 Mar 31 21:10	5° \mathring{B} 40'40		minimum elong	11160 Jan 02 10:41	18° \mathring{B} 33'33	0°41'45
opposition	11153 Jun 18 01:32	4° \mathring{B} 17'05	0°34'51	max. Earth dist.	11160 Jan 02 05:54	18° \mathring{B} 33'07	31.19356 AU
min. Earth dist.	11153 Jun 18 01:55	4° \mathring{B} 17'04	29.11575 AU	morning rise	11160 Jan 18 13:40	19° \mathring{B} 09'05	
direct	11153 Sep 05 00:10	2° \mathring{B} 52'39		retrograde	11160 Apr 16 00:23	21° \mathring{B} 02'49	
evening set	11153 Dec 03 03:04	4° \mathring{B} 46'57		opposition	11160 Jul 03 00:27	19° \mathring{B} 39'46	0°44'31
				min. Earth dist.	11160 Jul 03 04:28	19° \mathring{B} 39'30	29.20006 AU
conjunction	11153 Dec 19 07:43	5° \mathring{B} 22'39	0°33'19	direct	11160 Sep 20 04:53	18° \mathring{B} 15'22	
minimum elong	11153 Dec 19 07:42	5° \mathring{B} 22'39	0°33'59	evening set	11160 Dec 18 19:17	20° \mathring{B} 09'56	
max. Earth dist.	11153 Dec 19 06:54	5° \mathring{B} 22'35	31.12028 AU				
morning rise	11154 Jan 04 11:42	5° \mathring{B} 58'20		conjunction	11161 Jan 03 23:14	20° \mathring{B} 45'31	0°42'11
retrograde	11154 Apr 03 07:22	7° \mathring{B} 52'39		minimum elong	11161 Jan 03 23:14	20° \mathring{B} 45'31	0°42'48
opposition	11154 Jun 20 11:40	6° \mathring{B} 29'06	0°36'24	max. Earth dist.	11161 Jan 03 18:40	20° \mathring{B} 45'06	31.20582 AU
min. Earth dist.	11154 Jun 20 13:08	6° \mathring{B} 29'00	29.12524 AU	morning rise	11161 Jan 20 01:51	21° \mathring{B} 21'00	
direct	11154 Sep 07 12:28	5° \mathring{B} 04'37		retrograde	11161 Apr 18 11:15	23° \mathring{B} 14'40	
evening set	11154 Dec 05 15:50	6° \mathring{B} 58'55		opposition	11161 Jul 05 10:41	21° \mathring{B} 51'42	0°45'39
				min. Earth dist.	11161 Jul 05 15:36	21° \mathring{B} 51'21	29.21162 AU
conjunction	11154 Dec 21 20:17	7° \mathring{B} 34'36	0°34'45	direct	11161 Sep 22 17:55	20° \mathring{B} 27'19	
minimum elong	11154 Dec 21 20:17	7° \mathring{B} 34'36	0°35'24	evening set	11161 Dec 21 08:04	22° \mathring{B} 21'55	
max. Earth dist.	11154 Dec 21 18:12	7° \mathring{B} 34'25	31.13026 AU				
morning rise	11155 Jan 07 00:15	8° \mathring{B} 10'15		conjunction	11162 Jan 06 11:41	22° \mathring{B} 57'28	0°43'13
retrograde	11155 Apr 05 19:41	10° \mathring{B} 04'25		minimum elong	11162 Jan 06 11:41	22° \mathring{B} 57'28	0°43'50

max. Earth dist.	11162 Jan 06 05:03	22°35'51	31.21676 AU	min. Earth dist.	11168 Jul 20 17:28	7°11'08	29.27098 AU
morning rise	11162 Jan 22 14:13	23°32'56		direct	11168 Oct 08 01:26	5°47'08	
retrograde	11162 Apr 20 23:09	25°32'30		evening set	11169 Jan 05 21:57	7°41'45	
opposition	11162 Jul 07 20:44	24°30'35	0°46'43				
min. Earth dist.	11162 Jul 08 02:03	24°30'13	29.22198 AU	conjunction	11169 Jan 22 00:15	8°17'08	0°48'34
direct	11162 Sep 25 04:53	22°39'11		minimum elong	11169 Jan 22 00:15	8°17'08	0°49'07
evening set	11162 Dec 23 20:36	24°33'49		max. Earth dist.	11169 Jan 21 13:44	8°16'10	31.27542 AU
				morning rise	11169 Feb 07 00:54	8°52'23	
conjunction	11163 Jan 09 00:13	25°30'21	0°44'10	retrograde	11169 May 05 21:53	10°45'12	
minimum elong	11163 Jan 09 00:13	25°30'21	0°44'47	opposition	11169 Jul 22 19:08	9°22'31	0°52'11
max. Earth dist.	11163 Jan 08 17:42	25°30'45	31.22642 AU	min. Earth dist.	11169 Jul 23 03:58	9°21'55	29.28066 AU
morning rise	11163 Jan 25 02:20	25°34'47		direct	11169 Oct 10 11:27	7°57'57	
retrograde	11163 Apr 23 09:46	27°38'14		evening set	11170 Jan 08 09:55	9°52'35	
opposition	11163 Jul 10 07:00	26°31'52	0°47'43				
min. Earth dist.	11163 Jul 10 13:42	26°31'55	29.23105 AU	conjunction	11170 Jan 24 12:08	10°27'58	0°49'04
direct	11163 Sep 27 17:33	24°35'08		minimum elong	11170 Jan 24 12:08	10°27'58	0°49'36
evening set	11163 Dec 26 08:59	26°34'35		max. Earth dist.	11170 Jan 24 02:24	10°27'04	31.28545 AU
				morning rise	11170 Feb 09 12:19	11°03'11	
conjunction	11164 Jan 11 12:19	27°32'06	0°45'04	retrograde	11170 May 08 07:31	12°55'55	
minimum elong	11164 Jan 11 12:19	27°32'06	0°45'42	opposition	11170 Jul 25 05:08	11°33'19	0°52'40
max. Earth dist.	11164 Jan 11 04:13	27°32'22	31.23508 AU	min. Earth dist.	11170 Jul 25 14:31	11°32'40	29.29087 AU
morning rise	11164 Jan 27 14:20	27°35'31		direct	11170 Oct 12 23:10	10°08'47	
retrograde	11164 Apr 24 22:11	29°34'51		evening set	11171 Jan 10 22:01	12°03'28	
opposition	11164 Jul 11 17:03	28°32'01	0°48'38				
min. Earth dist.	11164 Jul 11 23:31	28°32'34	29.23928 AU	conjunction	11171 Jan 26 23:49	12°38'48	0°49'29
direct	11164 Sep 29 05:57	27°30'34		minimum elong	11171 Jan 26 23:49	12°38'48	0°50'00
evening set	11164 Dec 27 21:22	28°35'12		max. Earth dist.	11171 Jan 26 12:37	12°37'46	31.29588 AU
				morning rise	11171 Feb 11 23:52	13°14'00	
conjunction	11165 Jan 13 00:35	29°33'42	0°45'55		11171 Apr 20 22:54	15°	
minimum elong	11165 Jan 13 00:35	29°33'42	0°46'31	retrograde	11171 May 10 19:25	15°06'41	
max. Earth dist.	11165 Jan 12 16:20	29°31'56	31.24289 AU		11171 May 30 20:13	15°R	
	11165 Jan 25 09:10	0°		opposition	11171 Jul 27 15:11	13°44'10	0°53'05
morning rise	11165 Jan 29 02:15	0°08'04		min. Earth dist.	11171 Jul 28 00:29	13°43'31	29.30133 AU
retrograde	11165 Apr 27 06:55	2°01'17		direct	11171 Oct 15 09:21	12°19'39	
opposition	11165 Jul 14 03:05	0°38'29	0°49'30	evening set	11172 Jan 13 09:47	14°14'22	
min. Earth dist.	11165 Jul 14 11:13	0°37'55	29.24691 AU				
	11165 Aug 07 00:44	30°R3		conjunction	11172 Jan 29 11:30	14°49'41	0°49'50
direct	11165 Oct 01 16:40	29°31'40		minimum elong	11172 Jan 29 11:30	14°49'41	0°50'21
	11165 Nov 24 18:35	0°		max. Earth dist.	11172 Jan 29 00:48	14°48'42	31.30603 AU
evening set	11165 Dec 30 09:42	1°08'37			11172 Feb 03 03:03	15°	
				morning rise	11172 Feb 14 11:05	15°24'51	
conjunction	11166 Jan 15 12:44	1°44'05	0°46'41	retrograde	11172 May 12 05:52	17°17'30	
minimum elong	11166 Jan 15 12:44	1°44'05	0°47'17	opposition	11172 Jul 29 01:24	15°55'03	0°53'25
max. Earth dist.	11166 Jan 15 03:47	1°43'15	31.25046 AU	min. Earth dist.	11172 Jul 29 12:02	15°54'18	29.31109 AU
morning rise	11166 Jan 31 14:11	2°19'26			11172 Sep 03 01:57	15°R	
retrograde	11166 Apr 29 16:41	4°12'31		direct	11172 Oct 16 21:47	14°30'34	
opposition	11166 Jul 16 13:03	2°49'45	0°50'17		11172 Nov 28 21:22	15°	
min. Earth dist.	11166 Jul 16 20:43	2°49'12	29.25441 AU	evening set	11173 Jan 14 21:53	16°25'19	
direct	11166 Oct 04 04:48	1°25'13					
evening set	11167 Jan 01 21:52	3°19'49		conjunction	11173 Jan 30 23:13	17°00'37	0°50'06
				minimum elong	11173 Jan 30 23:13	17°00'37	0°50'36
conjunction	11167 Jan 18 00:37	3°55'16	0°47'23	max. Earth dist.	11173 Jan 30 10:59	16°59'29	31.31531 AU
minimum elong	11167 Jan 18 00:37	3°55'16	0°47'57	morning rise	11173 Feb 15 22:38	17°35'45	
max. Earth dist.	11167 Jan 17 15:01	3°54'23	31.25799 AU	retrograde	11173 May 14 18:06	19°28'20	
morning rise	11167 Feb 03 01:46	4°30'35		opposition	11173 Jul 31 11:24	18°05'56	0°53'40
retrograde	11167 May 02 02:20	6°23'34		min. Earth dist.	11173 Jul 31 21:48	18°05'13	29.31973 AU
opposition	11167 Jul 18 23:08	5°00'48	0°50'59	direct	11173 Oct 19 10:06	16°41'28	
min. Earth dist.	11167 Jul 19 07:51	5°00'12	29.26232 AU	evening set	11174 Jan 17 09:55	18°36'15	
direct	11167 Oct 06 13:45	3°36'14					
evening set	11168 Jan 04 09:53	5°30'51		conjunction	11174 Feb 02 11:02	19°11'32	0°50'18
				minimum elong	11174 Feb 02 11:02	19°11'32	0°50'47
conjunction	11168 Jan 20 12:31	6°06'16	0°48'01	max. Earth dist.	11174 Feb 01 22:30	19°10'23	31.32314 AU
minimum elong	11168 Jan 20 12:31	6°06'16	0°48'35	morning rise	11174 Feb 18 10:00	19°46'38	
max. Earth dist.	11168 Jan 20 03:13	6°05'24	31.26627 AU	retrograde	11174 May 17 03:28	21°39'10	
morning rise	11168 Feb 05 13:19	6°41'33		opposition	11174 Aug 02 21:43	20°16'49	0°53'50
retrograde	11168 May 03 11:28	8°34'26		min. Earth dist.	11174 Aug 03 09:51	20°15'59	29.32688 AU
opposition	11168 Jul 20 09:05	7°11'43	0°51'37	direct	11174 Oct 21 20:56	18°52'21	

evening set	11175 Jan 19 21:45	20° \approx 47'09		conjunction	11181 Feb 17 18:21	4° \mathbb{H} 25'04	0°49'43
				minimum elong	11181 Feb 17 18:21	4° \mathbb{H} 25'04	0°50'03
conjunction	11175 Feb 04 22:35	21° \approx 22'24	0°50'26	max. Earth dist.	11181 Feb 17 03:19	4° \mathbb{H} 23'41	31.34921 AU
minimum elong	11175 Feb 04 22:35	21° \approx 22'24	0°50'54	morning rise	11181 Mar 05 14:59	5° \mathbb{H} 00'00	
max. Earth dist.	11175 Feb 04 09:19	21° \approx 21'10	31.32956 AU	retrograde	11181 Jun 01 00:13	6° \mathbb{H} 52'09	
morning rise	11175 Feb 20 21:15	21° \approx 57'29		opposition	11181 Aug 17 20:53	5° \mathbb{H} 29'52	0°52'56
retrograde	11175 May 19 13:40	23° \approx 49'57		min. Earth dist.	11181 Aug 18 11:19	5° \mathbb{H} 28'52	29.35157 AU
opposition	11175 Aug 05 07:54	22° \approx 27'38	0°53'56	direct	11181 Nov 06 02:43	4° \mathbb{H} 05'17	
min. Earth dist.	11175 Aug 05 19:42	22° \approx 26'49	29.33248 AU	evening set	11182 Feb 04 06:34	6° \mathbb{H} 00'06	
direct	11175 Oct 24 09:17	21° \approx 03'09					
evening set	11176 Jan 22 09:38	22° \approx 57'57		conjunction	11182 Feb 20 05:19	6° \mathbb{H} 35'11	0°49'21
				minimum elong	11182 Feb 20 05:19	6° \mathbb{H} 35'11	0°49'41
conjunction	11176 Feb 07 10:09	23° \approx 33'11	0°50'30	max. Earth dist.	11182 Feb 19 13:30	6° \mathbb{H} 33'44	31.35350 AU
minimum elong	11176 Feb 07 10:09	23° \approx 33'11	0°50'57	morning rise	11182 Mar 08 01:45	7° \mathbb{H} 10'05	
max. Earth dist.	11176 Feb 06 19:53	23° \approx 31'52	31.33442 AU	retrograde	11182 Jun 03 12:15	9° \mathbb{H} 02'13	
morning rise	11176 Feb 23 08:31	24° \approx 08'14		opposition	11182 Aug 20 07:04	7° \mathbb{H} 39'59	0°52'31
retrograde	11176 May 20 23:32	26° \approx 00'38		min. Earth dist.	11182 Aug 20 20:32	7° \mathbb{H} 39'03	29.35622 AU
opposition	11176 Aug 06 18:05	24° \approx 38'20	0°53'57	direct	11182 Nov 08 14:56	6° \mathbb{H} 15'26	
min. Earth dist.	11176 Aug 07 07:12	24° \approx 37'26	29.33681 AU	evening set	11183 Feb 06 17:40	8° \mathbb{H} 10'17	
direct	11176 Oct 25 18:38	23° \approx 13'50					
evening set	11177 Jan 23 21:19	25° \approx 08'38		conjunction	11183 Feb 22 16:10	8° \mathbb{H} 45'21	0°48'55
				minimum elong	11183 Feb 22 16:10	8° \mathbb{H} 45'21	0°49'13
conjunction	11177 Feb 08 21:40	25° \approx 43'51	0°50'29	max. Earth dist.	11183 Feb 22 00:45	8° \mathbb{H} 43'56	31.35840 AU
minimum elong	11177 Feb 08 21:40	25° \approx 43'51	0°50'54	morning rise	11183 Mar 10 12:10	9° \mathbb{H} 20'14	
max. Earth dist.	11177 Feb 08 07:26	25° \approx 42'32	31.33818 AU	retrograde	11183 Jun 05 21:37	11° \mathbb{H} 12'22	
morning rise	11177 Feb 24 19:41	26° \approx 18'52		opposition	11183 Aug 22 17:26	9° \mathbb{H} 50'11	0°52'00
retrograde	11177 May 23 08:19	28° \approx 11'12		min. Earth dist.	11183 Aug 23 08:04	9° \mathbb{H} 49'11	29.36135 AU
opposition	11177 Aug 09 04:15	26° \approx 48'55	0°53'54	direct	11183 Nov 11 01:26	8° \mathbb{H} 25'41	
min. Earth dist.	11177 Aug 09 17:24	26° \approx 48'00	29.33992 AU	evening set	11184 Feb 09 04:54	10° \mathbb{H} 20'34	
direct	11177 Oct 28 06:46	25° \approx 24'23		max. Earth dist.	11184 Feb 24 11:33	10° \mathbb{H} 54'11	31.36360 AU
evening set	11178 Jan 26 09:04	27° \approx 19'10					
				conjunction	11184 Feb 25 03:05	10° \mathbb{H} 55'37	0°48'25
conjunction	11178 Feb 11 08:59	27° \approx 54'22	0°50'24	minimum elong	11184 Feb 25 03:05	10° \mathbb{H} 55'37	0°48'42
minimum elong	11178 Feb 11 08:59	27° \approx 54'22	0°50'48	morning rise	11184 Mar 11 22:48	11° \mathbb{H} 30'29	
max. Earth dist.	11178 Feb 10 17:21	27° \approx 52'55	31.34090 AU	retrograde	11184 Jun 07 08:06	13° \mathbb{H} 22'36	
morning rise	11178 Feb 27 06:45	28° \approx 29'22		opposition	11184 Aug 24 03:34	12° \mathbb{H} 00'30	0°51'25
	11178 Apr 19 19:08	0° \mathbb{H}		min. Earth dist.	11184 Aug 24 17:37	11° \mathbb{H} 59'31	29.36631 AU
retrograde	11178 May 25 18:12	0° \mathbb{H} 21'38		direct	11184 Nov 12 13:43	10° \mathbb{H} 36'02	
	11178 Jul 01 11:47	30° \mathbb{R}		evening set	11185 Feb 10 16:12	12° \mathbb{H} 30'56	
opposition	11178 Aug 11 14:22	28° \approx 59'21	0°53'47				
min. Earth dist.	11178 Aug 12 04:04	28° \approx 58'24	29.34248 AU	conjunction	11185 Feb 26 14:01	13° \mathbb{H} 05'59	0°47'50
direct	11178 Oct 30 16:43	27° \approx 34'47		minimum elong	11185 Feb 26 14:01	13° \mathbb{H} 05'59	0°48'05
evening set	11179 Jan 28 20:30	29° \approx 29'34		max. Earth dist.	11185 Feb 25 21:45	13° \mathbb{H} 04'29	31.36822 AU
	11179 Feb 11 17:11	0° \mathbb{H}		morning rise	11185 Mar 14 09:26	13° \mathbb{H} 40'50	
				retrograde	11185 Jun 09 18:44	15° \mathbb{H} 32'57	
conjunction	11179 Feb 13 20:17	0° \mathbb{H} 04'44	0°50'14	opposition	11185 Aug 26 14:01	14° \mathbb{H} 10'53	0°50'46
minimum elong	11179 Feb 13 20:17	0° \mathbb{H} 04'44	0°50'37	min. Earth dist.	11185 Aug 27 05:05	14° \mathbb{H} 09'51	29.37058 AU
max. Earth dist.	11179 Feb 13 05:30	0° \mathbb{H} 03'22	31.34331 AU	direct	11185 Nov 14 23:28	12° \mathbb{H} 46'27	
morning rise	11179 Mar 01 17:35	0° \mathbb{H} 39'42		evening set	11186 Feb 13 03:23	14° \mathbb{H} 41'22	
retrograde	11179 May 28 03:03	2° \mathbb{H} 31'55		max. Earth dist.	11186 Feb 28 09:00	15° \mathbb{H} 14'55	31.37191 AU
opposition	11179 Aug 14 00:35	1° \mathbb{H} 09'37	0°53'34				
min. Earth dist.	11179 Aug 14 14:44	1° \mathbb{H} 08'39	29.34487 AU	conjunction	11186 Mar 01 00:58	15° \mathbb{H} 16'24	0°47'11
	11179 Oct 02 08:25	30° \mathbb{R}		minimum elong	11186 Mar 01 00:58	15° \mathbb{H} 16'24	0°47'25
direct	11179 Nov 02 04:10	29° \approx 45'02		morning rise	11186 Mar 16 19:56	15° \mathbb{H} 51'13	
	11179 Dec 02 16:01	0° \mathbb{H}		retrograde	11186 Jun 12 03:05	17° \mathbb{H} 43'21	
evening set	11180 Jan 31 07:52	1° \mathbb{H} 39'48		opposition	11186 Aug 29 00:28	16° \mathbb{H} 21'19	0°50'02
				min. Earth dist.	11186 Aug 29 15:32	16° \mathbb{H} 20'16	29.37356 AU
conjunction	11180 Feb 16 07:11	2° \mathbb{H} 14'57	0°50'01	direct	11186 Nov 17 11:40	14° \mathbb{H} 56'54	
minimum elong	11180 Feb 16 07:11	2° \mathbb{H} 14'57	0°50'23	evening set	11187 Feb 15 14:41	16° \mathbb{H} 51'49	
max. Earth dist.	11180 Feb 15 15:17	2° \mathbb{H} 13'28	31.34593 AU				
morning rise	11180 Mar 03 04:20	2° \mathbb{H} 49'54		conjunction	11187 Mar 03 11:47	17° \mathbb{H} 26'50	0°46'29
retrograde	11180 May 29 14:13	4° \mathbb{H} 42'04		minimum elong	11187 Mar 03 11:47	17° \mathbb{H} 26'50	0°46'41
opposition	11180 Aug 15 10:43	3° \mathbb{H} 19'46	0°53'18	max. Earth dist.	11187 Mar 02 18:26	17° \mathbb{H} 25'13	31.37426 AU
min. Earth dist.	11180 Aug 16 00:19	3° \mathbb{H} 18'50	29.34784 AU	morning rise	11187 Mar 19 06:32	18° \mathbb{H} 01'38	
direct	11180 Nov 03 14:15	1° \mathbb{H} 55'10		retrograde	11187 Jun 14 12:50	19° \mathbb{H} 53'45	
evening set	11181 Feb 01 19:10	3° \mathbb{H} 49'58		opposition	11187 Aug 31 10:59	18° \mathbb{H} 31'43	0°49'15
				min. Earth dist.	11187 Sep 01 02:26	18° \mathbb{H} 30'39	29.37533 AU

direct	11187 Nov 19 21:09	17° $\mathbf{\text{X}}$ 07'18		minimum elong	11194 Mar 18 13:35	2° $\mathbf{\text{Y}}$ 36'49	0°39'48
evening set	11188 Feb 18 01:39	19° $\mathbf{\text{X}}$ 02'13		max. Earth dist.	11194 Mar 17 20:08	2° $\mathbf{\text{Y}}$ 35'12	31.36597 AU
				morning rise	11194 Apr 03 06:04	3° $\mathbf{\text{Y}}$ 11'29	
conjunction	11188 Mar 04 22:37	19° $\mathbf{\text{X}}$ 37'13	0°45'42	retrograde	11194 Jun 29 11:07	5° $\mathbf{\text{Y}}$ 03'33	
minimum elong	11188 Mar 04 22:38	19° $\mathbf{\text{X}}$ 37'13	0°45'53	opposition	11194 Sep 15 13:06	3° $\mathbf{\text{Y}}$ 41'22	0°41'50
max. Earth dist.	11188 Mar 04 06:01	19° $\mathbf{\text{X}}$ 35'41	31.37527 AU	min. Earth dist.	11194 Sep 16 05:02	3° $\mathbf{\text{Y}}$ 40'16	29.36623 AU
morning rise	11188 Mar 20 16:55	20° $\mathbf{\text{X}}$ 12'00		direct	11194 Dec 05 04:55	2° $\mathbf{\text{Y}}$ 16'53	
retrograde	11188 Jun 15 21:26	22° $\mathbf{\text{X}}$ 04'06		evening set	11195 Mar 05 05:12	4° $\mathbf{\text{Y}}$ 11'41	
opposition	11188 Sep 01 21:35	20° $\mathbf{\text{X}}$ 42'04	0°48'23				
min. Earth dist.	11188 Sep 02 13:47	20° $\mathbf{\text{X}}$ 40'57	29.37555 AU	conjunction	11195 Mar 20 23:54	4° $\mathbf{\text{Y}}$ 46'33	0°38'34
direct	11188 Nov 21 08:07	19° $\mathbf{\text{X}}$ 17'38		minimum elong	11195 Mar 20 23:54	4° $\mathbf{\text{Y}}$ 46'33	0°38'35
evening set	11189 Feb 19 12:51	21° $\mathbf{\text{X}}$ 12'32		max. Earth dist.	11195 Mar 20 07:31	4° $\mathbf{\text{Y}}$ 45'02	31.36604 AU
				morning rise	11195 Apr 05 16:01	5° $\mathbf{\text{Y}}$ 21'12	
conjunction	11189 Mar 07 09:20	21° $\mathbf{\text{X}}$ 47'30	0°44'52	retrograde	11195 Jul 01 19:43	7° $\mathbf{\text{Y}}$ 13'18	
minimum elong	11189 Mar 07 09:20	21° $\mathbf{\text{X}}$ 47'30	0°44'501	opposition	11195 Sep 17 23:48	5° $\mathbf{\text{Y}}$ 51'10	0°40'32
max. Earth dist.	11189 Mar 06 15:18	21° $\mathbf{\text{X}}$ 45'50	31.37488 AU	min. Earth dist.	11195 Sep 18 15:13	5° $\mathbf{\text{Y}}$ 50'07	29.36652 AU
morning rise	11189 Mar 23 03:28	22° $\mathbf{\text{X}}$ 22'16		direct	11195 Dec 07 16:51	4° $\mathbf{\text{Y}}$ 26'44	
retrograde	11189 Jun 18 08:21	24° $\mathbf{\text{X}}$ 14'21		evening set	11196 Mar 06 15:48	6° $\mathbf{\text{Y}}$ 21'34	
opposition	11189 Sep 04 07:59	22° $\mathbf{\text{X}}$ 52'17	0°47'27				
min. Earth dist.	11189 Sep 04 23:49	22° $\mathbf{\text{X}}$ 51'12	29.37457 AU	conjunction	11196 Mar 22 10:03	6° $\mathbf{\text{Y}}$ 56'25	0°37'19
direct	11189 Nov 23 18:32	21° $\mathbf{\text{X}}$ 27'50		minimum elong	11196 Mar 22 10:03	6° $\mathbf{\text{Y}}$ 56'25	0°37'18
evening set	11190 Feb 21 23:48	23° $\mathbf{\text{X}}$ 22'42		max. Earth dist.	11196 Mar 21 16:52	6° $\mathbf{\text{Y}}$ 54'49	31.36659 AU
				morning rise	11196 Apr 07 02:02	7° $\mathbf{\text{Y}}$ 31'04	
conjunction	11190 Mar 09 20:07	23° $\mathbf{\text{X}}$ 57'39	0°43'58	retrograde	11196 Jul 03 05:57	9° $\mathbf{\text{Y}}$ 23'14	
minimum elong	11190 Mar 09 20:07	23° $\mathbf{\text{X}}$ 57'39	0°44'06	opposition	11196 Sep 19 10:35	8° $\mathbf{\text{Y}}$ 01'08	0°39'10
max. Earth dist.	11190 Mar 09 02:45	23° $\mathbf{\text{X}}$ 56'03	31.37332 AU	min. Earth dist.	11196 Sep 20 01:52	8° $\mathbf{\text{Y}}$ 00'06	29.36714 AU
morning rise	11190 Mar 25 13:46	24° $\mathbf{\text{X}}$ 32'24		direct	11196 Dec 09 02:03	6° $\mathbf{\text{Y}}$ 36'46	
retrograde	11190 Jun 20 17:47	26° $\mathbf{\text{X}}$ 24'27		evening set	11197 Mar 09 02:22	8° $\mathbf{\text{Y}}$ 31'38	
opposition	11190 Sep 06 18:42	25° $\mathbf{\text{X}}$ 02'21	0°46'27				
min. Earth dist.	11190 Sep 07 11:34	25° $\mathbf{\text{X}}$ 01'12	29.37258 AU	conjunction	11197 Mar 24 20:27	9° $\mathbf{\text{Y}}$ 06'29	0°36'00
direct	11190 Nov 26 06:47	23° $\mathbf{\text{X}}$ 37'52		minimum elong	11197 Mar 24 20:27	9° $\mathbf{\text{Y}}$ 06'29	0°35'58
evening set	11191 Feb 24 10:35	25° $\mathbf{\text{X}}$ 32'43		max. Earth dist.	11197 Mar 24 04:26	9° $\mathbf{\text{Y}}$ 05'00	31.36703 AU
				morning rise	11197 Apr 09 11:57	9° $\mathbf{\text{Y}}$ 41'07	
conjunction	11191 Mar 12 06:28	26° $\mathbf{\text{X}}$ 07'38	0°43'00	retrograde	11197 Jul 05 14:51	11° $\mathbf{\text{Y}}$ 33'22	
minimum elong	11191 Mar 12 06:28	26° $\mathbf{\text{X}}$ 07'38	0°43'06	opposition	11197 Sep 21 21:29	10° $\mathbf{\text{Y}}$ 11'18	0°37'44
max. Earth dist.	11191 Mar 11 12:25	26° $\mathbf{\text{X}}$ 05'58	31.37114 AU	min. Earth dist.	11197 Sep 22 13:17	10° $\mathbf{\text{Y}}$ 10'13	29.36725 AU
morning rise	11191 Mar 27 23:57	26° $\mathbf{\text{X}}$ 42'21		direct	11197 Dec 11 12:23	8° $\mathbf{\text{Y}}$ 47'00	
retrograde	11191 Jun 23 04:57	28° $\mathbf{\text{X}}$ 34'24		evening set	11198 Mar 11 13:07	10° $\mathbf{\text{Y}}$ 41'54	
opposition	11191 Sep 09 05:12	27° $\mathbf{\text{X}}$ 12'15	0°45'24				
min. Earth dist.	11191 Sep 09 21:05	27° $\mathbf{\text{X}}$ 11'10	29.37022 AU	conjunction	11198 Mar 27 06:42	11° $\mathbf{\text{Y}}$ 16'43	0°34'39
direct	11191 Nov 28 18:59	25° $\mathbf{\text{X}}$ 47'44		minimum elong	11198 Mar 27 06:42	11° $\mathbf{\text{Y}}$ 16'43	0°34'34
evening set	11192 Feb 26 21:18	27° $\mathbf{\text{X}}$ 42'33		max. Earth dist.	11198 Mar 26 13:42	11° $\mathbf{\text{Y}}$ 15'09	31.36685 AU
				morning rise	11198 Apr 11 22:04	11° $\mathbf{\text{Y}}$ 51'22	
conjunction	11192 Mar 13 16:56	28° $\mathbf{\text{X}}$ 17'27	0°41'59	retrograde	11198 Jul 08 02:22	13° $\mathbf{\text{Y}}$ 43'41	
minimum elong	11192 Mar 13 16:56	28° $\mathbf{\text{X}}$ 17'27	0°42'04	opposition	11198 Sep 24 08:30	12° $\mathbf{\text{Y}}$ 21'39	0°36'15
max. Earth dist.	11192 Mar 12 23:18	28° $\mathbf{\text{X}}$ 15'49	31.36874 AU	min. Earth dist.	11198 Sep 24 23:34	12° $\mathbf{\text{Y}}$ 20'37	29.36663 AU
morning rise	11192 Mar 29 10:01	28° $\mathbf{\text{X}}$ 52'09		direct	11198 Dec 13 22:18	10° $\mathbf{\text{Y}}$ 57'24	
	11192 May 03 11:50	0° $\mathbf{\text{Y}}$		evening set	11199 Mar 13 23:34	12° $\mathbf{\text{Y}}$ 52'19	
retrograde	11192 Jun 24 14:19	0° $\mathbf{\text{Y}}$ 44'11					
	11192 Aug 17 16:30	30° $\mathbf{\text{R}}$ $\mathbf{\text{X}}$		conjunction	11199 Mar 29 16:58	13° $\mathbf{\text{Y}}$ 27'08	0°33'14
opposition	11192 Sep 10 15:46	29° $\mathbf{\text{X}}$ 22'00	0°44'16	minimum elong	11199 Mar 29 16:58	13° $\mathbf{\text{Y}}$ 27'08	0°33'08
min. Earth dist.	11192 Sep 11 08:35	29° $\mathbf{\text{X}}$ 20'51	29.36809 AU	max. Earth dist.	11199 Mar 29 00:45	13° $\mathbf{\text{Y}}$ 25'38	31.36556 AU
direct	11192 Nov 30 05:49	27° $\mathbf{\text{X}}$ 57'28		morning rise	11199 Apr 14 07:54	14° $\mathbf{\text{Y}}$ 01'46	
evening set	11193 Feb 28 08:02	29° $\mathbf{\text{X}}$ 52'17		retrograde	11199 Jul 10 12:27	15° $\mathbf{\text{Y}}$ 54'09	
	11193 Mar 03 21:13	0° $\mathbf{\text{Y}}$		opposition	11199 Sep 26 19:43	14° $\mathbf{\text{Y}}$ 32'08	0°34'43
max. Earth dist.	11193 Mar 15 10:04	0° $\mathbf{\text{Y}}$ 25'33	31.36697 AU	min. Earth dist.	11199 Sep 27 11:47	14° $\mathbf{\text{Y}}$ 31'02	29.36470 AU
				direct	11199 Dec 16 09:55	13° $\mathbf{\text{Y}}$ 07'55	
conjunction	11193 Mar 16 03:20	0° $\mathbf{\text{Y}}$ 27'09	0°40'54	evening set	11200 Mar 15 10:16	15° $\mathbf{\text{Y}}$ 02'51	
minimum elong	11193 Mar 16 03:20	0° $\mathbf{\text{Y}}$ 27'09	0°40'57	max. Earth dist.	11200 Mar 30 10:21	15° $\mathbf{\text{Y}}$ 36'05	31.36301 AU
morning rise	11193 Mar 31 20:08	1° $\mathbf{\text{Y}}$ 01'50					
retrograde	11193 Jun 27 00:37	2° $\mathbf{\text{Y}}$ 53'52		conjunction	11200 Mar 31 03:16	15° $\mathbf{\text{Y}}$ 37'40	0°31'47
opposition	11193 Sep 13 02:22	1° $\mathbf{\text{Y}}$ 31'40	0°43'05	minimum elong	11200 Mar 31 03:17	15° $\mathbf{\text{Y}}$ 37'40	0°31'40
min. Earth dist.	11193 Sep 13 18:03	1° $\mathbf{\text{Y}}$ 30'36	29.36664 AU	morning rise	11200 Apr 15 18:03	16° $\mathbf{\text{Y}}$ 12'17	
direct	11193 Dec 02 18:46	0° $\mathbf{\text{Y}}$ 07'09		retrograde	11200 Jul 12 00:11	18° $\mathbf{\text{Y}}$ 04'44	
evening set	11194 Mar 02 18:41	2° $\mathbf{\text{Y}}$ 01'57		opposition	11200 Sep 28 06:40	16° $\mathbf{\text{Y}}$ 42'42	0°33'08
				min. Earth dist.	11200 Sep 28 21:53	16° $\mathbf{\text{Y}}$ 41'40	29.36134 AU
conjunction	11194 Mar 18 13:34	2° $\mathbf{\text{Y}}$ 36'49	0°39'46	direct	11200 Dec 17 21:33	15° $\mathbf{\text{Y}}$ 18'30	

evening set	11201 Mar 17 20:57	17° Υ 13'27		minimum elong	11207 Apr 16 01:51	0° \mathcal{B} 50'34	0°20'11
				morning rise	11207 May 01 14:55	1° \mathcal{B} 25'10	
conjunction	11201 Apr 02 13:41	17° Υ 48'15	0°30'16	retrograde	11207 Jul 27 22:33	3° \mathcal{B} 17'55	
minimum elong	11201 Apr 02 13:41	17° Υ 48'15	0°30'08	opposition	11207 Oct 14 13:54	1° \mathcal{B} 55'37	0°20'54
max. Earth dist.	11201 Apr 01 20:45	17° Υ 46'41	31.35883 AU	min. Earth dist.	11207 Oct 15 03:19	1° \mathcal{B} 54'42	29.31713 AU
morning rise	11201 Apr 18 04:06	18° Υ 22'52		direct	11208 Jan 03 06:31	0° \mathcal{B} 31'24	
retrograde	11201 Jul 14 10:26	20° Υ 15'22		evening set	11208 Apr 01 21:06	2° \mathcal{B} 26'11	
opposition	11201 Sep 30 17:59	18° Υ 53'19	0°31'30				
min. Earth dist.	11201 Oct 01 10:21	18° Υ 52'12	29.35649 AU	conjunction	11208 Apr 17 11:53	3° \mathcal{B} 00'54	0°18'43
direct	11201 Dec 20 08:26	17° Υ 29'08		minimum elong	11208 Apr 17 11:53	3° \mathcal{B} 00'54	0°18'24
evening set	11202 Mar 20 07:26	19° Υ 24'04		max. Earth dist.	11208 Apr 16 21:41	2° \mathcal{B} 59'35	31.31445 AU
				morning rise	11208 May 03 00:35	3° \mathcal{B} 35'29	
conjunction	11202 Apr 04 23:53	19° Υ 58'50	0°28'44	retrograde	11208 Jul 29 08:05	5° \mathcal{B} 28'20	
minimum elong	11202 Apr 04 23:53	19° Υ 58'50	0°28'34	opposition	11208 Oct 16 01:21	4° \mathcal{B} 06'01	0°19'00
max. Earth dist.	11202 Apr 04 07:13	19° Υ 57'17	31.35333 AU	min. Earth dist.	11208 Oct 16 15:21	4° \mathcal{B} 05'04	29.31215 AU
morning rise	11202 Apr 20 14:02	20° Υ 33'27		direct	11209 Jan 04 17:02	2° \mathcal{B} 41'51	
retrograde	11202 Jul 16 21:30	22° Υ 25'58		evening set	11209 Apr 04 07:25	4° \mathcal{B} 36'38	
opposition	11202 Oct 03 05:13	21° Υ 03'54	0°29'50				
min. Earth dist.	11202 Oct 03 20:44	21° Υ 02'50	29.35024 AU	conjunction	11209 Apr 19 21:49	5° \mathcal{B} 11'22	0°16'56
direct	11202 Dec 22 22:21	19° Υ 39'42		minimum elong	11209 Apr 19 21:49	5° \mathcal{B} 11'22	0°16'36
evening set	11203 Mar 22 17:58	21° Υ 34'36		max. Earth dist.	11209 Apr 19 07:35	5° \mathcal{B} 10'02	31.30961 AU
				morning rise	11209 May 05 10:25	5° \mathcal{B} 45'56	
conjunction	11203 Apr 07 10:02	22° Υ 09'22	0°27'09	retrograde	11209 Jul 31 19:44	7° \mathcal{B} 38'53	
minimum elong	11203 Apr 07 10:02	22° Υ 09'22	0°26'58	opposition	11209 Oct 18 12:55	6° \mathcal{B} 16'35	0°17'05
max. Earth dist.	11203 Apr 06 16:52	22° Υ 07'46	31.34659 AU	min. Earth dist.	11209 Oct 19 01:34	6° \mathcal{B} 15'43	29.30715 AU
morning rise	11203 Apr 23 00:00	22° Υ 43'58		direct	11210 Jan 07 03:53	4° \mathcal{B} 52'27	
retrograde	11203 Jul 19 08:43	24° Υ 36'32		evening set	11210 Apr 06 17:36	6° \mathcal{B} 47'15	
opposition	11203 Oct 05 16:26	23° Υ 14'23	0°28'07				
min. Earth dist.	11203 Oct 06 08:24	23° Υ 13'18	29.34322 AU	conjunction	11210 Apr 22 07:44	7° \mathcal{B} 21'58	0°15'08
direct	11203 Dec 25 09:41	21° Υ 50'10		minimum elong	11210 Apr 22 07:44	7° \mathcal{B} 21'58	0°14'46
evening set	11204 Mar 24 04:12	23° Υ 45'02		behind sun begin	11210 Apr 22 05:03	7° \mathcal{B} 21'44	
				behind sun end	11210 Apr 22 10:25	7° \mathcal{B} 22'13	
conjunction	11204 Apr 08 20:08	24° Υ 19'47	0°25'32	max. Earth dist.	11210 Apr 21 17:55	7° \mathcal{B} 20'41	31.30436 AU
minimum elong	11204 Apr 08 20:09	24° Υ 19'47	0°25'18	morning rise	11210 May 07 20:04	7° \mathcal{B} 56'33	
max. Earth dist.	11204 Apr 08 04:04	24° Υ 18'18	31.33932 AU	retrograde	11210 Aug 03 06:46	9° \mathcal{B} 49'37	
morning rise	11204 Apr 24 09:47	24° Υ 54'23		opposition	11210 Oct 21 00:45	8° \mathcal{B} 27'18	0°15'08
retrograde	11204 Jul 20 16:54	26° Υ 46'58		min. Earth dist.	11210 Oct 21 14:09	8° \mathcal{B} 26'23	29.30167 AU
opposition	11204 Oct 07 03:43	25° Υ 24'46	0°26'22	direct	11211 Jan 09 14:28	7° \mathcal{B} 03'13	
min. Earth dist.	11204 Oct 07 19:09	25° Υ 23'43	29.33576 AU	evening set	11211 Apr 09 03:53	8° \mathcal{B} 58'02	
direct	11204 Dec 26 22:29	24° Υ 00'32					
evening set	11205 Mar 26 14:37	25° Υ 55'21		conjunction	11211 Apr 24 17:48	9° \mathcal{B} 32'44	0°13'18
				minimum elong	11211 Apr 24 17:48	9° \mathcal{B} 32'44	0°12'55
conjunction	11205 Apr 11 06:04	26° Υ 30'06	0°23'52	behind sun begin	11211 Apr 24 13:48	9° \mathcal{B} 32'23	
minimum elong	11205 Apr 11 06:04	26° Υ 30'06	0°23'38	behind sun end	11211 Apr 24 21:47	9° \mathcal{B} 33'06	
max. Earth dist.	11205 Apr 10 13:22	26° Υ 28'33	31.33199 AU	max. Earth dist.	11211 Apr 24 04:37	9° \mathcal{B} 31'31	31.29851 AU
morning rise	11205 Apr 26 19:36	27° Υ 04'41		morning rise	11211 May 10 05:55	10° \mathcal{B} 07'20	
retrograde	11205 Jul 23 02:50	28° Υ 57'18		retrograde	11211 Aug 05 18:26	12° \mathcal{B} 00'29	
opposition	11205 Oct 09 15:01	27° Υ 35'03	0°24'35	opposition	11211 Oct 23 12:24	10° \mathcal{B} 38'10	0°13'10
min. Earth dist.	11205 Oct 10 05:51	27° Υ 34'02	29.32877 AU	min. Earth dist.	11211 Oct 24 00:52	10° \mathcal{B} 37'19	29.29523 AU
direct	11205 Dec 29 08:59	26° Υ 10'48		direct	11212 Jan 12 03:45	9° \mathcal{B} 14'07	
evening set	11206 Mar 29 00:47	28° Υ 05'36		evening set	11212 Apr 10 14:17	11° \mathcal{B} 08'57	
conjunction	11206 Apr 13 16:07	28° Υ 40'20	0°22'11	conjunction	11212 Apr 26 03:52	11° \mathcal{B} 43'39	0°11'27
minimum elong	11206 Apr 13 16:07	28° Υ 40'20	0°21'55	minimum elong	11212 Apr 26 03:51	11° \mathcal{B} 43'39	0°11'03
max. Earth dist.	11206 Apr 13 01:04	28° Υ 38'56	31.32533 AU	behind sun begin	11212 Apr 25 23:00	11° \mathcal{B} 43'13	
morning rise	11206 Apr 29 05:13	29° Υ 14'55		behind sun end	11212 Apr 26 08:43	11° \mathcal{B} 44'05	
	11206 May 21 02:59	0° \mathcal{B}		max. Earth dist.	11212 Apr 25 14:06	11° \mathcal{B} 42'23	31.29146 AU
retrograde	11206 Jul 25 11:40	1° \mathcal{B} 07'36		morning rise	11212 May 11 15:52	12° \mathcal{B} 18'15	
	11206 Oct 03 01:53	30° \mathcal{R} Υ		retrograde	11212 Aug 07 06:35	14° \mathcal{B} 11'30	
opposition	11206 Oct 12 02:30	29° Υ 45'19	0°22'45	opposition	11212 Oct 25 00:20	12° \mathcal{B} 49'09	0°11'11
min. Earth dist.	11206 Oct 12 17:16	29° Υ 44'18	29.32251 AU	min. Earth dist.	11212 Oct 25 13:10	12° \mathcal{B} 48'17	29.28759 AU
direct	11206 Dec 31 20:08	28° Υ 21'04		direct	11213 Jan 13 14:56	11° \mathcal{B} 25'09	
	11207 Mar 24 01:40	0° \mathcal{B}		evening set	11213 Apr 13 00:34	13° \mathcal{B} 19'58	
evening set	11207 Mar 31 10:56	0° \mathcal{B} 15'51					
max. Earth dist.	11207 Apr 15 10:27	0° \mathcal{B} 49'09	31.31960 AU	conjunction	11213 Apr 28 14:01	13° \mathcal{B} 54'41	0°09'35
				minimum elong	11213 Apr 28 14:01	13° \mathcal{B} 54'41	0°09'10
conjunction	11207 Apr 16 01:51	0° \mathcal{B} 50'34	0°20'28	behind sun begin	11213 Apr 28 08:33	13° \mathcal{B} 54'11	

behind sun end	11213 Apr 28 19:29	13° 8 55'10		retrograde	11218 Aug 20 20:25	27° 8 18'27	
max. Earth dist.	11213 Apr 28 01:17	13° 8 53'30	31.28306 AU	opposition	11218 Nov 08 00:30	25° 8 55'45	-0°00'58
morning rise	11213 May 14 01:42	14° 8 29'16		min. Earth dist.	11218 Nov 08 10:03	25° 8 55'06	29.22068 AU
	11213 May 28 13:50	15° 8		direct	11219 Jan 27 11:35	24° 8 31'42	
retrograde	11213 Aug 09 16:00	16° 8 22'37		evening set	11219 Apr 26 13:39	26° 8 26'24	
opposition	11213 Oct 27 12:18	15° 8 00'15	0°09'10				
	11213 Oct 27 16:00	15° 8		conjunction	11219 May 12 01:44	27° 8 01'06	-0°01'54
min. Earth dist.	11213 Oct 28 00:45	14° 8 59'24	29.27837 AU	minimum elong	11219 May 12 01:42	27° 8 01'06	0°02'25
direct	11214 Jan 16 03:55	13° 8 36'15		behind sun begin	11219 May 11 19:17	27° 8 00'31	
	11214 Mar 31 18:06	15° 8		behind sun end	11219 May 12 08:08	27° 8 01'40	
evening set	11214 Apr 15 11:01	15° 8 31'04		max. Earth dist.	11219 May 11 15:19	27° 8 00'08	31.21539 AU
max. Earth dist.	11214 Apr 30 10:26	16° 8 04'31	31.27320 AU	morning rise	11219 May 27 12:38	27° 8 35'44	
				retrograde	11219 Aug 23 07:40	29° 8 29'38	
conjunction	11214 May 01 00:04	16° 8 05'47	0°07'43	opposition	11219 Nov 10 12:34	28° 8 06'54	-0°03'00
minimum elong	11214 May 01 00:04	16° 8 05'47	0°07'17	min. Earth dist.	11219 Nov 10 22:24	28° 8 06'14	29.21058 AU
behind sun begin	11214 Apr 30 18:09	16° 8 05'15		direct	11220 Jan 29 22:05	26° 8 42'52	
behind sun end	11214 May 01 05:59	16° 8 06'19		evening set	11220 Apr 27 23:43	28° 8 37'34	
morning rise	11214 May 16 11:44	16° 8 40'23					
retrograde	11214 Aug 12 03:14	18° 8 33'49		conjunction	11220 May 13 11:40	29° 8 12'16	-0°03'48
opposition	11214 Oct 30 00:20	17° 8 11'24	0°07'09	minimum elong	11220 May 13 11:40	29° 8 12'16	0°04'21
min. Earth dist.	11214 Oct 30 12:24	17° 8 10'34	29.26789 AU	behind sun begin	11220 May 13 05:21	29° 8 11'42	
direct	11215 Jan 18 15:04	15° 8 47'24		behind sun end	11220 May 13 17:59	29° 8 12'50	
evening set	11215 Apr 17 21:07	17° 8 42'11		max. Earth dist.	11220 May 13 02:30	29° 8 11'26	31.20583 AU
				morning rise	11220 May 28 22:27	29° 8 46'55	
conjunction	11215 May 03 10:08	18° 8 16'54	0°05'51		11220 Jun 03 22:52	0° II	
minimum elong	11215 May 03 10:08	18° 8 16'54	0°05'23	retrograde	11220 Aug 24 19:57	1° II 40'56	
behind sun begin	11215 May 03 03:55	18° 8 16'20		opposition	11220 Nov 12 00:41	0° II 18'10	-0°05'02
behind sun end	11215 May 03 16:21	18° 8 17'27		min. Earth dist.	11220 Nov 12 09:00	0° II 17'36	29.20132 AU
max. Earth dist.	11215 May 02 21:51	18° 8 15'45	31.26206 AU		11220 Nov 23 05:40	30° R 8	
morning rise	11215 May 18 21:31	18° 8 51'30		direct	11221 Jan 31 11:06	28° 8 54'11	
retrograde	11215 Aug 14 12:40	20° 8 45'01			11221 Apr 06 15:13	0° II	
opposition	11215 Nov 01 12:24	19° 8 22'32	0°05'08	evening set	11221 Apr 30 09:49	0° II 48'54	
min. Earth dist.	11215 Nov 02 00:46	19° 8 21'41	29.25616 AU				
direct	11216 Jan 21 03:08	17° 8 58'31		conjunction	11221 May 15 21:26	1° II 23'36	-0°05'42
evening set	11216 Apr 19 07:26	19° 8 53'17		minimum elong	11221 May 15 21:26	1° II 23'36	0°06'15
				behind sun begin	11221 May 15 15:21	1° II 23'03	
conjunction	11216 May 04 20:04	20° 8 27'59	0°03'57	behind sun end	11221 May 16 03:32	1° II 24'09	
minimum elong	11216 May 04 20:05	20° 8 27'59	0°03'28	max. Earth dist.	11221 May 15 12:15	1° II 22'46	31.19691 AU
behind sun begin	11216 May 04 13:41	20° 8 27'24		morning rise	11221 May 31 08:13	1° II 58'15	
behind sun end	11216 May 05 02:28	20° 8 28'33		retrograde	11221 Aug 27 08:42	3° II 52'25	
max. Earth dist.	11216 May 04 07:17	20° 8 26'47	31.25005 AU	opposition	11221 Nov 14 12:59	2° II 29'38	-0°07'04
morning rise	11216 May 20 07:28	21° 8 02'36		min. Earth dist.	11221 Nov 14 21:07	2° II 29'05	29.19273 AU
retrograde	11216 Aug 15 23:31	22° 8 56'11		direct	11222 Feb 02 21:47	1° II 05'41	
opposition	11216 Nov 03 00:14	21° 8 33'38	0°03'06	evening set	11222 May 02 19:52	3° II 00'25	
min. Earth dist.	11216 Nov 03 11:24	21° 8 32'52	29.24394 AU				
direct	11217 Jan 22 14:15	20° 8 09'35		conjunction	11222 May 18 07:29	3° II 35'08	-0°07'35
evening set	11217 Apr 21 17:33	22° 8 04'19		minimum elong	11222 May 18 07:29	3° II 35'08	0°08'09
				behind sun begin	11222 May 18 01:45	3° II 34'37	
conjunction	11217 May 07 06:05	22° 8 39'01	0°02'02	behind sun end	11222 May 18 13:12	3° II 35'39	
minimum elong	11217 May 07 06:04	22° 8 39'01	0°01'32	max. Earth dist.	11222 May 17 23:54	3° II 34'26	31.18846 AU
behind sun begin	11217 May 06 23:38	22° 8 38'27		morning rise	11222 Jun 02 18:02	4° II 09'48	
behind sun end	11217 May 07 12:30	22° 8 39'36		retrograde	11222 Aug 29 19:01	6° II 04'05	
max. Earth dist.	11217 May 06 18:31	22° 8 37'57	31.23776 AU	opposition	11222 Nov 17 01:21	4° II 41'17	-0°09'05
morning rise	11217 May 22 17:12	23° 8 13'38		min. Earth dist.	11222 Nov 17 08:43	4° II 40'47	29.18424 AU
retrograde	11217 Aug 18 09:01	25° 8 07'20		direct	11223 Feb 05 10:24	3° II 17'23	
opposition	11217 Nov 05 12:27	23° 8 44'41	0°01'04	evening set	11223 May 05 06:03	5° II 12'08	
min. Earth dist.	11217 Nov 05 23:53	23° 8 43'55	29.23189 AU				
direct	11218 Jan 25 01:04	22° 8 20'38		conjunction	11223 May 20 17:21	5° II 46'51	-0°09'27
evening set	11218 Apr 24 03:34	24° 8 15'20		minimum elong	11223 May 20 17:21	5° II 46'51	0°10'03
				behind sun begin	11223 May 20 12:09	5° II 46'23	
conjunction	11218 May 09 15:49	24° 8 50'02	0°00'03	behind sun end	11223 May 20 22:33	5° II 47'19	
minimum elong	11218 May 09 15:49	24° 8 50'02	0°00'27	max. Earth dist.	11223 May 20 09:15	5° II 46'06	31.17994 AU
behind sun begin	11218 May 09 09:25	24° 8 49'28		morning rise	11223 Jun 05 04:01	6° II 21'32	
behind sun end	11218 May 09 22:13	24° 8 50'37		retrograde	11223 Sep 01 07:45	8° II 15'57	
max. Earth dist.	11218 May 09 04:44	24° 8 49'01	31.22612 AU	opposition	11223 Nov 19 13:45	6° II 53'07	-0°11'06
desc. node	11218 May 24 23:14	25° 8 24'19		min. Earth dist.	11223 Nov 19 20:29	6° II 52'40	29.17557 AU
morning rise	11218 May 25 02:52	25° 8 24'39		direct	11224 Feb 07 22:17	5° II 29'16	

evening set	11224 May 06 16:16	7°II24'00		conjunction	11230 Jun 04 16:38	21°II11'13	-0°22'07
				minimum elong	11230 Jun 04 16:38	21°II11'13	0°22'47
conjunction	11224 May 22 03:33	7°II58'45	-0°11'19	max. Earth dist.	11230 Jun 04 12:08	21°II10'48	31.09770 AU
minimum elong	11224 May 22 03:33	7°II58'45	0°11'55	morning rise	11230 Jun 20 03:04	21°II45'59	
behind sun begin	11224 May 21 23:03	7°II58'20		retrograde	11230 Sep 16 15:19	23°II41'09	
behind sun end	11224 May 22 08:02	7°II59'09		opposition	11230 Dec 05 06:26	22°II17'50	-0°24'34
max. Earth dist.	11224 May 21 20:55	7°II58'08	31.17086 AU	min. Earth dist.	11230 Dec 05 09:58	22°II17'36	29.09160 AU
morning rise	11224 Jun 06 13:57	8°II33'26		direct	11231 Feb 23 07:19	20°II53'54	
retrograde	11224 Sep 02 18:20	10°II27'59		evening set	11231 May 22 16:19	22°II48'28	
opposition	11224 Nov 21 02:16	9°II05'08	-0°13'06				
min. Earth dist.	11224 Nov 21 09:13	9°II04'39	29.16605 AU	conjunction	11231 Jun 07 02:51	23°II23'14	-0°23'49
direct	11225 Feb 09 10:53	7°II41'18		minimum elong	11231 Jun 07 02:51	23°II23'14	0°24'29
evening set	11225 May 09 02:42	9°II36'02		max. Earth dist.	11231 Jun 07 00:12	23°II22'59	31.08557 AU
				morning rise	11231 Jun 22 13:09	23°II58'01	
conjunction	11225 May 24 13:41	10°II10'46	-0°13'11	retrograde	11231 Sep 19 02:26	25°II53'17	
minimum elong	11225 May 24 13:41	10°II10'46	0°13'47	opposition	11231 Dec 07 19:10	24°II29'55	-0°26'23
behind sun begin	11225 May 24 10:12	10°II10'27		min. Earth dist.	11231 Dec 07 21:33	24°II29'45	29.07997 AU
behind sun end	11225 May 24 17:10	10°II11'05		direct	11232 Feb 25 20:22	23°II06'00	
max. Earth dist.	11225 May 24 06:37	10°II10'07	31.16096 AU	evening set	11232 May 24 02:40	25°II00'34	
morning rise	11225 Jun 09 00:10	10°II45'29					
retrograde	11225 Sep 05 05:49	12°II40'08		conjunction	11232 Jun 08 12:58	25°II35'20	-0°25'29
opposition	11225 Nov 23 14:54	11°II17'15	-0°15'04	minimum elong	11232 Jun 08 12:58	25°II35'20	0°26'10
min. Earth dist.	11225 Nov 23 20:37	11°II16'52	29.15563 AU	max. Earth dist.	11232 Jun 08 10:06	25°II35'04	31.07458 AU
direct	11226 Feb 11 22:20	9°II53'26		morning rise	11232 Jun 23 23:26	26°II10'08	
evening set	11226 May 11 12:56	11°II48'09		retrograde	11232 Sep 20 16:01	28°II05'32	
				opposition	11232 Dec 09 07:53	26°II42'08	-0°28'09
conjunction	11226 May 26 23:52	12°II22'54	-0°15'01	min. Earth dist.	11232 Dec 09 09:12	26°II42'02	29.06963 AU
minimum elong	11226 May 26 23:52	12°II22'54	0°15'38	direct	11233 Feb 27 08:07	25°II18'15	
behind sun begin	11226 May 26 22:09	12°II22'44		evening set	11233 May 26 12:54	27°II12'49	
behind sun end	11226 May 27 01:36	12°II23'03					
max. Earth dist.	11226 May 26 17:42	12°II22'19	31.14985 AU	conjunction	11233 Jun 10 23:18	27°II47'37	-0°27'08
morning rise	11226 Jun 11 10:13	12°II57'37		minimum elong	11233 Jun 10 23:18	27°II47'37	0°27'47
retrograde	11226 Sep 07 15:41	14°II52'24		max. Earth dist.	11233 Jun 10 22:20	27°II47'31	31.06472 AU
opposition	11226 Nov 26 03:43	13°II29'26	-0°17'02	morning rise	11233 Jun 26 09:39	28°II22'26	
min. Earth dist.	11226 Nov 26 10:00	13°II29'00	29.14394 AU		11233 Aug 21 03:19	0°☾	
direct	11227 Feb 14 09:38	12°II05'37		retrograde	11233 Sep 23 03:25	0°☾17'59	
evening set	11227 May 13 23:20	14°II00'18			11233 Oct 26 22:14	30°☾II	
				opposition	11233 Dec 11 20:50	28°II54'33	-0°29'53
conjunction	11227 May 29 10:09	14°II35'03	-0°16'50	min. Earth dist.	11233 Dec 11 21:51	28°II54'29	29.06021 AU
minimum elong	11227 May 29 10:09	14°II35'03	0°17'27	direct	11234 Mar 01 20:38	27°II30'44	
max. Earth dist.	11227 May 29 04:05	14°II34'29	31.13767 AU	evening set	11234 May 28 23:12	29°II25'19	
morning rise	11227 Jun 13 20:32	15°II09'47					
retrograde	11227 Sep 10 03:26	17°II04'39		conjunction	11234 Jun 13 09:27	0°☾00'07	-0°28'44
opposition	11227 Nov 28 16:11	15°II41'37	-0°18'57	minimum elong	11234 Jun 13 09:27	0°☾00'07	0°29'24
min. Earth dist.	11227 Nov 28 21:04	15°II41'17	29.13116 AU	max. Earth dist.	11234 Jun 13 08:34	0°☾00'02	31.05578 AU
direct	11228 Feb 16 20:59	14°II17'46			11234 Jun 13 08:16	0°☾	
evening set	11228 May 15 09:43	16°II12'25		morning rise	11234 Jun 28 20:00	0°☾34'58	
				retrograde	11234 Sep 25 15:51	2°☾30'39	
conjunction	11228 May 30 20:24	16°II47'10	-0°18'37	opposition	11234 Dec 14 09:42	1°☾07'14	-0°31'34
minimum elong	11228 May 30 20:24	16°II47'10	0°19'16	min. Earth dist.	11234 Dec 14 09:12	1°☾07'16	29.05153 AU
max. Earth dist.	11228 May 30 14:36	16°II46'38	31.12442 AU		11235 Jan 30 23:08	30°☾II	
morning rise	11228 Jun 15 06:47	17°II21'55		direct	11235 Mar 04 08:03	29°II43'27	
retrograde	11228 Sep 11 14:44	19°II16'53			11235 Apr 04 19:50	0°☾	
opposition	11228 Nov 30 04:59	17°II53'45	-0°20'52	evening set	11235 May 31 09:38	1°☾38'03	
min. Earth dist.	11228 Nov 30 10:23	17°II53'23	29.11770 AU				
direct	11229 Feb 18 08:03	16°II29'52		conjunction	11235 Jun 15 19:55	2°☾12'53	-0°30'17
evening set	11229 May 17 19:52	18°II24'28		minimum elong	11235 Jun 15 19:55	2°☾12'53	0°30'57
				max. Earth dist.	11235 Jun 15 20:11	2°☾12'54	31.04715 AU
conjunction	11229 Jun 02 06:32	18°II59'13	-0°20'23	morning rise	11235 Jul 01 06:27	2°☾47'45	
minimum elong	11229 Jun 02 06:32	18°II59'13	0°21'02	retrograde	11235 Sep 28 02:36	4°☾43'36	
max. Earth dist.	11229 Jun 02 02:02	18°II58'48	31.11090 AU	opposition	11235 Dec 16 22:36	3°☾20'10	-0°33'13
morning rise	11229 Jun 17 16:50	19°II33'58		min. Earth dist.	11235 Dec 16 22:30	3°☾20'10	29.04298 AU
retrograde	11229 Sep 14 02:32	21°II29'02		direct	11236 Mar 05 19:13	1°☾56'27	
opposition	11229 Dec 02 17:42	20°II05'48	-0°22'44	evening set	11236 Jun 01 20:11	3°☾51'04	
min. Earth dist.	11229 Dec 02 21:34	20°II05'32	29.10421 AU				
direct	11230 Feb 20 20:54	18°II41'53		conjunction	11236 Jun 17 06:26	4°☾25'54	-0°31'48
evening set	11230 May 20 06:12	20°II36'28		minimum elong	11236 Jun 17 06:26	4°☾25'54	0°32'29

max. Earth dist.	11236 Jun 17 07:06	4°☾25'58	31.03860 AU	conjunction	11243 Jul 03 09:39	20°☾00'43	-0°40'58
morning rise	11236 Jul 02 17:04	5°☾00'48		minimum elong	11243 Jul 03 09:39	20°☾00'43	0°41'36
retrograde	11236 Sep 29 15:28	6°☾56'48		max. Earth dist.	11243 Jul 03 13:39	20°☾01'05	30.95765 AU
opposition	11236 Dec 18 11:37	5°☾33'22	-0°34'49	morning rise	11243 Jul 18 21:14	20°☾35'45	
min. Earth dist.	11236 Dec 18 09:56	5°☾33'29	29.03420 AU	retrograde	11243 Oct 16 08:33	22°☾32'30	
direct	11237 Mar 08 06:27	4°☾09'42		opposition	11244 Jan 04 07:55	21°☾08'33	-0°44'25
evening set	11237 Jun 04 06:48	6°☾04'20		min. Earth dist.	11244 Jan 04 02:41	21°☾08'55	28.95204 AU
				direct	11244 Mar 23 18:42	19°☾44'48	
				evening set	11244 Jun 19 09:56	21°☾39'17	
conjunction	11237 Jun 19 16:58	6°☾39'11	-0°33'16				
minimum elong	11237 Jun 19 16:58	6°☾39'11	0°33'56				
max. Earth dist.	11237 Jun 19 17:54	6°☾39'16	31.02944 AU	conjunction	11244 Jul 04 20:32	22°☾14'13	-0°42'02
morning rise	11237 Jul 05 03:41	7°☾14'06		minimum elong	11244 Jul 04 20:32	22°☾14'13	0°42'41
retrograde	11237 Oct 02 03:19	9°☾10'16		max. Earth dist.	11244 Jul 05 01:48	22°☾14'43	30.94632 AU
opposition	11237 Dec 21 00:54	7°☾46'48	-0°36'21	morning rise	11244 Jul 20 08:12	22°☾49'16	
min. Earth dist.	11237 Dec 20 23:48	7°☾46'53	29.02474 AU	retrograde	11244 Oct 17 20:18	24°☾46'08	
direct	11238 Mar 10 17:15	6°☾23'10		opposition	11245 Jan 05 21:13	23°☾22'06	-0°45'32
evening set	11238 Jun 06 17:28	8°☾17'49		min. Earth dist.	11245 Jan 05 16:01	23°☾22'28	28.94136 AU
				direct	11245 Mar 26 07:17	21°☾58'22	
				evening set	11245 Jun 21 20:35	23°☾52'48	
conjunction	11238 Jun 22 03:46	8°☾52'41	-0°34'41				
minimum elong	11238 Jun 22 03:46	8°☾52'41	0°35'22				
max. Earth dist.	11238 Jun 22 05:43	8°☾52'52	31.01950 AU	conjunction	11245 Jul 07 07:18	24°☾27'46	-0°43'03
morning rise	11238 Jul 07 14:30	9°☾27'37		minimum elong	11245 Jul 07 07:18	24°☾27'46	0°43'41
retrograde	11238 Oct 04 15:47	11°☾23'55		max. Earth dist.	11245 Jul 07 13:20	24°☾28'20	30.93633 AU
opposition	11238 Dec 23 13:59	10°☾00'24	-0°37'51	morning rise	11245 Jul 22 19:10	25°☾02'50	
min. Earth dist.	11238 Dec 23 11:44	10°☾00'33	29.01419 AU	retrograde	11245 Oct 20 09:27	26°☾59'49	
direct	11239 Mar 13 05:18	8°☾36'47		opposition	11246 Jan 08 10:23	25°☾35'44	-0°46'35
evening set	11239 Jun 09 04:19	10°☾31'26		min. Earth dist.	11246 Jan 08 03:16	25°☾36'14	28.93191 AU
				direct	11246 Mar 28 19:42	24°☾12'00	
				evening set	11246 Jun 24 07:28	26°☾06'27	
conjunction	11239 Jun 24 14:31	11°☾06'18	-0°36'03				
minimum elong	11239 Jun 24 14:31	11°☾06'18	0°36'43				
max. Earth dist.	11239 Jun 24 15:52	11°☾06'26	31.00833 AU	conjunction	11246 Jul 09 18:14	26°☾41'25	-0°44'01
morning rise	11239 Jul 10 01:31	11°☾41'16		minimum elong	11246 Jul 09 18:14	26°☾41'25	0°44'39
retrograde	11239 Oct 07 05:12	13°☾37'41		max. Earth dist.	11246 Jul 10 00:47	26°☾42'02	30.92735 AU
opposition	11239 Dec 26 03:16	12°☾14'06	-0°39'17	morning rise	11246 Jul 25 06:21	27°☾16'31	
min. Earth dist.	11239 Dec 26 01:14	12°☾14'15	29.00248 AU	retrograde	11246 Oct 22 20:47	29°☾13'36	
direct	11240 Mar 14 15:21	10°☾50'28		opposition	11247 Jan 10 23:35	27°☾49'30	-0°47'35
evening set	11240 Jun 10 15:00	12°☾45'06		min. Earth dist.	11247 Jan 10 16:48	27°☾49'58	28.92349 AU
				direct	11247 Mar 31 06:18	26°☾25'47	
				evening set	11247 Jun 26 18:19	28°☾20'13	
conjunction	11240 Jun 26 01:24	13°☾19'59	-0°37'22				
minimum elong	11240 Jun 26 01:24	13°☾19'59	0°38'02				
max. Earth dist.	11240 Jun 26 04:07	13°☾20'14	30.99602 AU	conjunction	11247 Jul 12 05:21	28°☾55'13	-0°44'54
morning rise	11240 Jul 11 12:21	13°☾54'57		minimum elong	11247 Jul 12 05:21	28°☾55'13	0°45'31
retrograde	11240 Oct 08 17:15	15°☾51'28		max. Earth dist.	11247 Jul 12 13:15	28°☾55'58	30.91933 AU
opposition	11240 Dec 27 16:27	14°☾27'49	-0°40'39	morning rise	11247 Jul 27 17:35	29°☾30'21	
min. Earth dist.	11240 Dec 27 13:42	14°☾28'00	28.98964 AU		11247 Aug 10 12:14	0°☾	
direct	11241 Mar 17 05:08	13°☾04'09		retrograde	11247 Oct 25 09:00	1°☾27'33	
evening set	11241 Jun 13 01:50	14°☾58'44		opposition	11248 Jan 13 12:46	0°☾03'25	-0°48'29
				min. Earth dist.	11248 Jan 13 04:32	0°☾03'59	28.91566 AU
					11248 Jan 15 14:33	30°☾	
conjunction	11241 Jun 28 12:07	15°☾33'38	-0°38'37	direct	11248 Apr 01 18:14	28°☾39'44	
minimum elong	11241 Jun 28 12:07	15°☾33'38	0°39'17		11248 Jun 12 04:54	0°☾	
max. Earth dist.	11241 Jun 28 14:19	15°☾33'50	30.98302 AU	evening set	11248 Jun 28 05:21	0°☾34'11	
morning rise	11241 Jul 13 23:24	16°☾08'37					
retrograde	11241 Oct 11 08:02	18°☾05'13					
opposition	11241 Dec 30 05:42	16°☾41'27	-0°41'58	conjunction	11248 Jul 13 16:20	1°☾09'12	-0°45'43
min. Earth dist.	11241 Dec 30 02:14	16°☾41'41	28.97662 AU	minimum elong	11248 Jul 13 16:20	1°☾09'12	0°46'21
direct	11242 Mar 19 17:26	15°☾17'45		max. Earth dist.	11248 Jul 13 24:00	1°☾09'55	30.91166 AU
evening set	11242 Jun 15 12:23	17°☾12'17		morning rise	11248 Jul 29 04:55	1°☾44'21	
				retrograde	11248 Oct 26 22:40	3°☾41'42	
conjunction	11242 Jun 30 22:53	17°☾47'12	-0°39'49	opposition	11249 Jan 15 02:08	2°☾17'33	-0°49'20
minimum elong	11242 Jun 30 22:53	17°☾47'12	0°40'29	min. Earth dist.	11249 Jan 14 18:00	2°☾18'06	28.90815 AU
max. Earth dist.	11242 Jul 01 02:50	17°☾47'34	30.96999 AU	direct	11249 Apr 04 03:59	0°☾53'54	
morning rise	11242 Jul 16 10:11	18°☾22'13		evening set	11249 Jun 30 16:24	2°☾48'22	
retrograde	11242 Oct 13 19:20	20°☾18'54					
opposition	11243 Jan 01 18:56	18°☾55'01	-0°43'13	conjunction	11249 Jul 16 03:42	3°☾23'23	-0°46'28
min. Earth dist.	11243 Jan 01 15:14	18°☾55'17	28.96383 AU	minimum elong	11249 Jul 16 03:42	3°☾23'23	0°47'04
direct	11243 Mar 22 06:19	17°☾31'18		max. Earth dist.	11249 Jul 16 12:52	3°☾24'15	30.90410 AU
evening set	11243 Jun 17 23:11	19°☾25'48		morning rise	11249 Jul 31 16:20	3°☾58'34	

retrograde	11249 Oct 29 11:21	5°Ω56'02		evening set	11256 Jul 15 23:33	18°Ω30'11	
opposition	11250 Jan 17 15:29	4°Ω31'52	-0°50'06				
min. Earth dist.	11250 Jan 17 06:36	4°Ω32'29	28.90040 AU	conjunction	11256 Jul 31 12:17	19°Ω05'21	-0°49'43
direct	11250 Apr 06 17:01	3°Ω08'15		minimum elong	11256 Jul 31 12:17	19°Ω05'22	0°50'13
evening set	11250 Jul 03 03:40	5°Ω02'44		max. Earth dist.	11256 Aug 01 00:20	19°Ω06'30	30.83570 AU
				morning rise	11256 Aug 16 02:52	19°Ω40'44	
conjunction	11250 Jul 18 14:58	5°Ω37'47	-0°47'09	retrograde	11256 Nov 14 07:33	21°Ω38'45	
minimum elong	11250 Jul 18 14:58	5°Ω37'47	0°47'45	opposition	11257 Feb 02 12:26	20°Ω14'08	-0°53'18
max. Earth dist.	11250 Jul 18 23:24	5°Ω38'35	30.89609 AU	min. Earth dist.	11257 Feb 02 00:16	20°Ω14'58	28.83181 AU
morning rise	11250 Aug 03 04:02	6°Ω12'59		direct	11257 Apr 22 07:39	18°Ω50'24	
retrograde	11250 Nov 01 02:39	8°Ω10'34		evening set	11257 Jul 18 11:01	20°Ω44'44	
opposition	11251 Jan 20 04:52	6°Ω46'22	-0°50'47				
min. Earth dist.	11251 Jan 19 19:38	6°Ω47'00	28.89205 AU	conjunction	11257 Aug 02 23:51	21°Ω19'56	-0°49'53
direct	11251 Apr 09 04:18	5°Ω22'46		minimum elong	11257 Aug 02 23:51	21°Ω19'56	0°50'21
evening set	11251 Jul 05 14:59	7°Ω17'15		max. Earth dist.	11257 Aug 03 11:44	21°Ω21'04	30.82772 AU
				morning rise	11257 Aug 18 14:53	21°Ω55'20	
conjunction	11251 Jul 21 02:36	7°Ω52'20	-0°47'46	retrograde	11257 Nov 16 20:45	23°Ω53'25	
minimum elong	11251 Jul 21 02:36	7°Ω52'20	0°48'19	opposition	11258 Feb 05 01:38	22°Ω28'45	-0°53'26
max. Earth dist.	11251 Jul 21 12:13	7°Ω53'14	30.88713 AU	min. Earth dist.	11258 Feb 04 13:27	22°Ω29'36	28.82470 AU
morning rise	11251 Aug 05 15:44	8°Ω27'34		direct	11258 Apr 24 17:31	21°Ω05'02	
retrograde	11251 Nov 03 14:47	10°Ω25'15		evening set	11258 Jul 20 22:17	22°Ω59'22	
opposition	11252 Jan 22 18:11	9°Ω01'00	-0°51'24				
min. Earth dist.	11252 Jan 22 09:11	9°Ω01'37	28.88253 AU	conjunction	11258 Aug 05 11:35	23°Ω34'34	-0°49'59
direct	11252 Apr 10 16:48	7°Ω37'24		minimum elong	11258 Aug 05 11:35	23°Ω34'34	0°50'27
evening set	11252 Jul 07 02:26	9°Ω31'53		max. Earth dist.	11258 Aug 06 01:11	23°Ω35'52	30.82130 AU
				morning rise	11258 Aug 21 02:48	24°Ω10'00	
conjunction	11252 Jul 22 14:09	10°Ω06'58	-0°48'18	retrograde	11258 Nov 19 08:33	26°Ω08'10	
minimum elong	11252 Jul 22 14:09	10°Ω06'58	0°48'52	opposition	11259 Feb 07 14:42	24°Ω43'28	-0°53'30
max. Earth dist.	11252 Jul 22 23:16	10°Ω07'50	30.87721 AU	min. Earth dist.	11259 Feb 07 01:29	24°Ω44'23	28.81889 AU
morning rise	11252 Aug 07 03:41	10°Ω42'14		direct	11259 Apr 27 06:22	23°Ω19'45	
retrograde	11252 Nov 05 05:35	12°Ω40'00		evening set	11259 Jul 23 09:52	25°Ω14'05	
opposition	11253 Jan 24 07:33	11°Ω15'41	-0°51'56				
min. Earth dist.	11253 Jan 23 21:35	11°Ω16'22	28.87215 AU	conjunction	11259 Aug 07 23:15	25°Ω49'19	-0°50'00
direct	11253 Apr 13 05:35	9°Ω52'03		minimum elong	11259 Aug 07 23:15	25°Ω49'19	0°50'25
evening set	11253 Jul 09 13:38	11°Ω46'31		max. Earth dist.	11259 Aug 08 12:21	25°Ω50'34	30.81620 AU
				morning rise	11259 Aug 23 14:57	26°Ω24'46	
conjunction	11253 Jul 25 01:37	12°Ω21'38	-0°48'46	retrograde	11259 Nov 21 22:58	28°Ω23'01	
minimum elong	11253 Jul 25 01:38	12°Ω21'38	0°49'18	opposition	11260 Feb 10 03:46	26°Ω58'18	-0°53'28
max. Earth dist.	11253 Jul 25 11:34	12°Ω22'34	30.86641 AU	min. Earth dist.	11260 Feb 09 14:00	26°Ω59'16	28.81443 AU
morning rise	11253 Aug 09 15:23	12°Ω56'55		direct	11260 Apr 28 16:24	25°Ω34'36	
retrograde	11253 Nov 07 18:28	14°Ω54'45		evening set	11260 Jul 24 21:22	27°Ω28'57	
opposition	11254 Jan 26 20:59	13°Ω30'21	-0°52'23				
min. Earth dist.	11254 Jan 26 11:31	13°Ω31'00	28.86118 AU	conjunction	11260 Aug 09 11:10	28°Ω04'13	-0°49'57
direct	11254 Apr 15 18:51	12°Ω06'42		minimum elong	11260 Aug 09 11:11	28°Ω04'13	0°50'22
evening set	11254 Jul 12 00:59	14°Ω01'07		max. Earth dist.	11260 Aug 10 01:52	28°Ω05'36	30.81220 AU
				morning rise	11260 Aug 25 03:03	28°Ω39'41	
conjunction	11254 Jul 27 13:13	14°Ω36'15	-0°49'09		11260 Oct 05 21:05	0°♊	
minimum elong	11254 Jul 27 13:13	14°Ω36'15	0°49'41	retrograde	11260 Nov 23 11:22	0°♊38'01	
max. Earth dist.	11254 Jul 27 23:33	14°Ω37'13	30.85553 AU		11261 Jan 12 21:49	30°♊	
	11254 Aug 06 23:38	15°Ω		opposition	11261 Feb 11 16:58	29°Ω13'18	-0°53'22
morning rise	11254 Aug 12 03:17	15°Ω11'34		min. Earth dist.	11261 Feb 11 03:04	29°Ω14'16	28.81083 AU
retrograde	11254 Nov 10 08:01	17°Ω09'27		direct	11261 May 01 03:57	27°Ω49'38	
opposition	11255 Jan 29 10:01	15°Ω44'58	-0°52'46	evening set	11261 Jul 27 09:00	29°Ω43'59	
min. Earth dist.	11255 Jan 28 23:03	15°Ω45'43	28.85045 AU		11261 Aug 03 12:17	0°♊	
	11255 Feb 27 01:09	15°♊					
direct	11255 Apr 18 07:55	14°Ω21'16		conjunction	11261 Aug 11 23:00	0°♊19'15	-0°49'48
	11255 Jun 05 11:55	15°Ω		minimum elong	11261 Aug 11 23:00	0°♊19'15	0°50'11
evening set	11255 Jul 14 12:22	16°Ω15'40		max. Earth dist.	11261 Aug 12 13:26	0°♊20'37	30.80902 AU
				morning rise	11261 Aug 27 15:21	0°♊54'45	
conjunction	11255 Jul 30 00:45	16°Ω50'49	-0°49'28	retrograde	11261 Nov 26 02:59	2°♊53'10	
minimum elong	11255 Jul 30 00:46	16°Ω50'49	0°49'59	opposition	11262 Feb 14 06:08	1°♊28'26	-0°53'11
max. Earth dist.	11255 Jul 30 11:23	16°Ω51'49	30.84504 AU	min. Earth dist.	11262 Feb 13 15:21	1°♊29'28	28.80782 AU
morning rise	11255 Aug 14 15:10	17°Ω26'09		direct	11262 May 03 16:28	0°♊04'47	
retrograde	11255 Nov 12 19:16	19°Ω24'06		evening set	11262 Jul 29 20:51	1°♊59'09	
opposition	11256 Jan 31 23:18	17°Ω59'33	-0°53'04				
min. Earth dist.	11256 Jan 31 12:44	18°Ω00'17	28.84052 AU	conjunction	11262 Aug 14 11:12	2°♊34'27	-0°49'36
direct	11256 Apr 19 19:15	16°Ω35'50		minimum elong	11262 Aug 14 11:12	2°♊34'27	0°49'58

max. Earth dist.	11262 Aug 15 02:22	2° \mathring{M} 35'54	30.80590 AU	conjunction	11269 Aug 30 01:38	18° \mathring{M} 20'59	-0°46'01
morning rise	11262 Aug 30 03:50	3° \mathring{M} 09'59		minimum elong	11269 Aug 30 01:38	18° \mathring{M} 20'59	0°46'13
retrograde	11262 Nov 28 16:33	5° \mathring{M} 08'27		max. Earth dist.	11269 Aug 30 18:34	18° \mathring{M} 22'35	30.77530 AU
opposition	11263 Feb 16 19:14	3° \mathring{M} 43'43	-0°52'54	morning rise	11269 Sep 14 20:46	18° \mathring{M} 56'41	
min. Earth dist.	11263 Feb 16 05:14	3° \mathring{M} 44'41	28.80462 AU	retrograde	11269 Dec 14 11:21	20° \mathring{M} 55'15	
direct	11263 May 06 05:11	2° \mathring{M} 20'05		opposition	11270 Mar 04 14:18	19° \mathring{M} 30'11	-0°48'48
evening set	11263 Aug 01 08:50	4° \mathring{M} 14'27		min. Earth dist.	11270 Mar 03 22:33	19° \mathring{M} 31'17	28.77463 AU
				direct	11270 May 21 18:03	18° \mathring{M} 06'24	
				evening set	11270 Aug 16 21:03	20° \mathring{M} 00'33	
conjunction	11263 Aug 16 23:30	4° \mathring{M} 49'47	-0°49'18				
minimum elong	11263 Aug 16 23:30	4° \mathring{M} 49'47	0°49'39				
max. Earth dist.	11263 Aug 17 14:33	4° \mathring{M} 51'12	30.80251 AU	conjunction	11270 Sep 01 14:05	20° \mathring{M} 36'01	-0°45'14
morning rise	11263 Sep 01 16:28	5° \mathring{M} 25'20		minimum elong	11270 Sep 01 14:05	20° \mathring{M} 36'01	0°45'25
retrograde	11263 Dec 01 07:02	7° \mathring{M} 23'51		max. Earth dist.	11270 Sep 02 06:36	20° \mathring{M} 37'35	30.77371 AU
opposition	11264 Feb 19 08:23	5° \mathring{M} 59'05	-0°52'33	morning rise	11270 Sep 17 09:43	21° \mathring{M} 11'44	
min. Earth dist.	11264 Feb 18 17:17	6° \mathring{M} 00'08	28.80084 AU	retrograde	11270 Dec 17 02:05	23° \mathring{M} 10'19	
direct	11264 May 07 18:13	4° \mathring{M} 35'28		min. Earth dist.	11271 Mar 06 10:16	21° \mathring{M} 46'24	28.77380 AU
evening set	11264 Aug 02 20:50	6° \mathring{M} 29'48		opposition	11271 Mar 07 02:53	21° \mathring{M} 45'14	-0°47'55
				direct	11271 May 24 05:55	20° \mathring{M} 21'27	
				evening set	11271 Aug 19 09:13	22° \mathring{M} 15'38	
conjunction	11264 Aug 18 11:44	7° \mathring{M} 05'09	-0°48'56				
minimum elong	11264 Aug 18 11:44	7° \mathring{M} 05'09	0°49'16				
max. Earth dist.	11264 Aug 19 02:34	7° \mathring{M} 06'34	30.79823 AU	conjunction	11271 Sep 04 02:39	22° \mathring{M} 51'07	-0°44'22
morning rise	11264 Sep 03 05:05	7° \mathring{M} 40'44		minimum elong	11271 Sep 04 02:40	22° \mathring{M} 51'07	0°44'30
retrograde	11264 Dec 02 20:01	9° \mathring{M} 39'17		max. Earth dist.	11271 Sep 04 20:08	22° \mathring{M} 52'46	30.77354 AU
opposition	11265 Feb 20 21:43	8° \mathring{M} 14'28	-0°52'07	morning rise	11271 Sep 19 22:35	23° \mathring{M} 26'52	
min. Earth dist.	11265 Feb 20 07:33	8° \mathring{M} 15'27	28.79618 AU	retrograde	11271 Dec 19 15:02	25° \mathring{M} 25'28	
direct	11265 May 10 06:24	6° \mathring{M} 50'50		opposition	11272 Mar 08 15:42	24° \mathring{M} 00'24	-0°46'56
evening set	11265 Aug 05 08:49	8° \mathring{M} 45'08		min. Earth dist.	11272 Mar 07 23:34	24° \mathring{M} 01'32	28.77434 AU
				direct	11272 May 25 17:55	22° \mathring{M} 36'39	
				evening set	11272 Aug 20 21:18	24° \mathring{M} 30'50	
conjunction	11265 Aug 21 00:12	9° \mathring{M} 20'30	-0°48'30				
minimum elong	11265 Aug 21 00:12	9° \mathring{M} 20'30	0°48'48				
max. Earth dist.	11265 Aug 21 15:43	9° \mathring{M} 21'59	30.79329 AU	conjunction	11272 Sep 05 15:07	25° \mathring{M} 06'21	-0°43'25
morning rise	11265 Sep 05 17:50	9° \mathring{M} 56'07		minimum elong	11272 Sep 05 15:07	25° \mathring{M} 06'21	0°43'33
retrograde	11265 Dec 05 09:47	11° \mathring{M} 54'39		max. Earth dist.	11272 Sep 06 08:44	25° \mathring{M} 08'01	30.77485 AU
opposition	11266 Feb 23 10:42	10° \mathring{M} 29'47	-0°51'37	morning rise	11272 Sep 21 11:27	25° \mathring{M} 42'07	
min. Earth dist.	11266 Feb 22 19:34	10° \mathring{M} 30'51	28.79090 AU	retrograde	11272 Dec 21 05:51	27° \mathring{M} 40'45	
direct	11266 May 12 20:02	9° \mathring{M} 06'07		min. Earth dist.	11273 Mar 10 10:59	26° \mathring{M} 16'55	28.77619 AU
evening set	11266 Aug 07 20:55	11° \mathring{M} 00'22		opposition	11273 Mar 11 04:25	26° \mathring{M} 15'42	-0°45'54
				direct	11273 May 28 06:19	24° \mathring{M} 51'59	
				evening set	11273 Aug 23 09:41	26° \mathring{M} 46'11	
conjunction	11266 Aug 23 12:30	11° \mathring{M} 35'46	-0°47'59				
minimum elong	11266 Aug 23 12:30	11° \mathring{M} 35'46	0°48'17				
max. Earth dist.	11266 Aug 24 03:21	11° \mathring{M} 37'10	30.78789 AU	conjunction	11273 Sep 08 03:49	27° \mathring{M} 21'44	-0°42'25
morning rise	11266 Sep 08 06:41	12° \mathring{M} 11'24		minimum elong	11273 Sep 08 03:49	27° \mathring{M} 21'44	0°42'31
retrograde	11266 Dec 07 22:22	14° \mathring{M} 09'57		max. Earth dist.	11273 Sep 08 21:29	27° \mathring{M} 23'24	30.77712 AU
opposition	11267 Feb 25 23:46	12° \mathring{M} 45'00	-0°51'01	morning rise	11273 Sep 24 00:34	27° \mathring{M} 57'32	
min. Earth dist.	11267 Feb 25 09:15	12° \mathring{M} 46'01	28.78558 AU	retrograde	11273 Dec 23 19:48	29° \mathring{M} 56'11	
direct	11267 May 15 07:03	11° \mathring{M} 21'17		opposition	11274 Mar 13 17:08	28° \mathring{M} 31'11	-0°44'47
evening set	11267 Aug 10 08:51	13° \mathring{M} 15'30		min. Earth dist.	11274 Mar 13 00:40	28° \mathring{M} 32'20	28.77886 AU
				direct	11274 May 30 18:18	27° \mathring{M} 07'31	
				evening set	11274 Aug 25 22:06	29° \mathring{M} 01'44	
conjunction	11267 Aug 26 00:55	13° \mathring{M} 50'55	-0°47'24				
minimum elong	11267 Aug 26 00:55	13° \mathring{M} 50'55	0°47'39				
max. Earth dist.	11267 Aug 26 17:05	13° \mathring{M} 52'27	30.78271 AU	conjunction	11274 Sep 10 16:43	29° \mathring{M} 37'18	-0°41'21
morning rise	11267 Sep 10 19:17	14° \mathring{M} 26'34		minimum elong	11274 Sep 10 16:44	29° \mathring{M} 37'18	0°41'25
retrograde	11267 Dec 10 09:42	16° \mathring{M} 25'06		max. Earth dist.	11274 Sep 11 10:58	29° \mathring{M} 39'02	30.78004 AU
opposition	11268 Feb 28 12:35	15° \mathring{M} 00'07	-0°50'22		11274 Sep 20 16:51	0° \mathring{A}	
min. Earth dist.	11268 Feb 27 21:17	15° \mathring{M} 01'11	28.78069 AU	morning rise	11274 Sep 26 13:46	0° \mathring{A} 13'07	
direct	11268 May 16 20:05	13° \mathring{M} 36'22		retrograde	11274 Dec 26 10:59	2° \mathring{A} 11'48	
evening set	11268 Aug 11 20:57	15° \mathring{M} 30'33		opposition	11275 Mar 16 05:45	0° \mathring{A} 46'50	-0°43'36
				min. Earth dist.	11275 Mar 15 12:29	0° \mathring{A} 48'02	28.78173 AU
					11275 Apr 14 20:56	30° \mathring{R} \mathring{M}	
conjunction	11268 Aug 27 13:12	16° \mathring{M} 05'58	-0°46'45	direct	11275 Jun 02 08:01	29° \mathring{M} 23'12	
minimum elong	11268 Aug 27 13:12	16° \mathring{M} 05'58	0°46'59		11275 Jul 19 02:30	0° \mathring{A}	
max. Earth dist.	11268 Aug 28 04:39	16° \mathring{M} 07'26	30.77838 AU	evening set	11275 Aug 28 10:45	1° \mathring{A} 17'26	
morning rise	11268 Sep 12 08:06	16° \mathring{M} 41'38					
retrograde	11268 Dec 11 23:24	18° \mathring{M} 40'12					
min. Earth dist.	11269 Mar 01 09:52	17° \mathring{M} 16'14	28.77704 AU	conjunction	11275 Sep 13 05:34	1° \mathring{A} 53'02	-0°40'12
opposition	11269 Mar 02 01:28	17° \mathring{M} 15'09	-0°49'37	minimum elong	11275 Sep 13 05:34	1° \mathring{A} 53'02	0°40'14
direct	11269 May 19 06:15	15° \mathring{M} 51'22		max. Earth dist.	11275 Sep 13 22:53	1° \mathring{A} 54'40	30.78272 AU
evening set	11269 Aug 14 08:53	17° \mathring{M} 45'32		morning rise	11275 Sep 29 03:04	2° \mathring{A} 28'53	

retrograde	11275 Dec 28 23:45	4° <u>♂</u> 27'34	minimum elong	11282 Sep 29 01:10	17° <u>♂</u> 41'52	0°30'32
opposition	11276 Mar 17 18:32	3° <u>♂</u> 02'38 -0°42'21	max. Earth dist.	11282 Sep 29 17:50	17° <u>♂</u> 43'26	30.79035 AU
min. Earth dist.	11276 Mar 17 02:17	3° <u>♂</u> 03'46 28.78422 AU	morning rise	11282 Oct 15 01:10	18° <u>♂</u> 17'49	
direct	11276 Jun 03 19:03	1° <u>♂</u> 39'01	retrograde	11283 Jan 13 17:05	20° <u>♂</u> 16'05	
evening set	11276 Aug 29 23:23	3° <u>♂</u> 33'16	opposition	11283 Apr 03 09:25	18° <u>♂</u> 50'59	-0°31'55
			min. Earth dist.	11283 Apr 02 18:10	18° <u>♂</u> 52'03	28.79227 AU
conjunction	11276 Sep 14 18:44	4° <u>♂</u> 08'52 -0°39'00	direct	11283 Jun 20 07:20	17° <u>♂</u> 27'07	
minimum elong	11276 Sep 14 18:44	4° <u>♂</u> 08'52 0°39'02	evening set	11283 Sep 15 16:11	19° <u>♂</u> 21'09	
max. Earth dist.	11276 Sep 15 12:46	4° <u>♂</u> 10'35 30.78483 AU				
morning rise	11276 Sep 30 16:27	4° <u>♂</u> 44'45	conjunction	11283 Oct 01 14:11	19° <u>♂</u> 56'52	-0°29'06
retrograde	11276 Dec 30 12:12	6° <u>♂</u> 43'24	minimum elong	11283 Oct 01 14:11	19° <u>♂</u> 56'52	0°28'55
opposition	11277 Mar 20 07:12	5° <u>♂</u> 18'29 -0°41'02	max. Earth dist.	11283 Oct 02 07:24	19° <u>♂</u> 58'29	30.79406 AU
min. Earth dist.	11277 Mar 19 14:42	5° <u>♂</u> 19'38 28.78580 AU	morning rise	11283 Oct 17 14:25	20° <u>♂</u> 32'49	
direct	11277 Jun 06 08:16	3° <u>♂</u> 54'52	retrograde	11284 Jan 16 07:04	22° <u>♂</u> 31'02	
evening set	11277 Sep 01 12:09	5° <u>♂</u> 49'05	opposition	11284 Apr 04 21:27	21° <u>♂</u> 05'56	-0°30'13
			min. Earth dist.	11284 Apr 04 05:08	21° <u>♂</u> 07'05	28.79662 AU
conjunction	11277 Sep 17 07:45	6° <u>♂</u> 24'43 -0°37'45	direct	11284 Jun 21 21:06	19° <u>♂</u> 42'03	
minimum elong	11277 Sep 17 07:45	6° <u>♂</u> 24'43 0°37'43	evening set	11284 Sep 17 05:01	21° <u>♂</u> 36'05	
max. Earth dist.	11277 Sep 18 00:19	6° <u>♂</u> 26'17 30.78600 AU				
morning rise	11277 Oct 03 06:02	7° <u>♂</u> 00'37	conjunction	11284 Oct 03 03:14	22° <u>♂</u> 11'49	-0°27'29
retrograde	11278 Jan 02 02:13	8° <u>♂</u> 59'14	minimum elong	11284 Oct 03 03:14	22° <u>♂</u> 11'49	0°27'18
opposition	11278 Mar 22 19:53	7° <u>♂</u> 34'17 -0°39'39	max. Earth dist.	11284 Oct 03 19:48	22° <u>♂</u> 13'22	30.79913 AU
min. Earth dist.	11278 Mar 22 03:49	7° <u>♂</u> 35'24 28.78656 AU	morning rise	11284 Oct 19 03:55	22° <u>♂</u> 47'47	
direct	11278 Jun 08 18:52	6° <u>♂</u> 10'38	retrograde	11285 Jan 17 20:05	24° <u>♂</u> 45'57	
evening set	11278 Sep 04 00:52	8° <u>♂</u> 04'50	opposition	11285 Apr 07 09:33	23° <u>♂</u> 20'52	-0°28'29
			min. Earth dist.	11285 Apr 06 18:04	23° <u>♂</u> 21'57	28.80246 AU
conjunction	11278 Sep 19 21:00	8° <u>♂</u> 40'29 -0°36'26	direct	11285 Jun 24 08:00	21° <u>♂</u> 56'59	
minimum elong	11278 Sep 19 21:00	8° <u>♂</u> 40'29 0°36'24	evening set	11285 Sep 19 17:41	23° <u>♂</u> 51'02	
max. Earth dist.	11278 Sep 20 14:19	8° <u>♂</u> 42'07 30.78636 AU				
morning rise	11278 Oct 05 19:29	9° <u>♂</u> 16'23	conjunction	11285 Oct 05 16:27	24° <u>♂</u> 26'47	-0°25'50
retrograde	11279 Jan 04 13:18	11° <u>♂</u> 14'57	minimum elong	11285 Oct 05 16:28	24° <u>♂</u> 26'47	0°25'36
opposition	11279 Mar 25 08:17	9° <u>♂</u> 49'58 -0°38'13	max. Earth dist.	11285 Oct 06 10:00	24° <u>♂</u> 28'26	30.80560 AU
min. Earth dist.	11279 Mar 24 16:39	9° <u>♂</u> 51'04 28.78662 AU	morning rise	11285 Oct 21 17:20	25° <u>♂</u> 02'46	
direct	11279 Jun 11 07:26	8° <u>♂</u> 26'16	retrograde	11286 Jan 20 09:19	27° <u>♂</u> 00'51	
evening set	11279 Sep 06 13:38	10° <u>♂</u> 20'25	opposition	11286 Apr 09 21:30	25° <u>♂</u> 35'50	-0°26'41
			min. Earth dist.	11286 Apr 09 05:36	25° <u>♂</u> 36'57	28.80931 AU
conjunction	11279 Sep 22 10:02	10° <u>♂</u> 56'05 -0°35'04	direct	11286 Jun 26 21:21	24° <u>♂</u> 11'59	
minimum elong	11279 Sep 22 10:03	10° <u>♂</u> 56'05 0°34'59	evening set	11286 Sep 22 06:44	26° <u>♂</u> 06'02	
max. Earth dist.	11279 Sep 23 02:22	10° <u>♂</u> 57'37 30.78649 AU				
morning rise	11279 Oct 08 09:01	11° <u>♂</u> 32'00	conjunction	11286 Oct 08 05:40	26° <u>♂</u> 41'49	-0°24'09
retrograde	11280 Jan 07 02:27	13° <u>♂</u> 30'30	minimum elong	11286 Oct 08 05:40	26° <u>♂</u> 41'49	0°23'54
opposition	11280 Mar 26 20:43	12° <u>♂</u> 05'28 -0°36'43	max. Earth dist.	11286 Oct 08 21:53	26° <u>♂</u> 43'20	30.81287 AU
min. Earth dist.	11280 Mar 26 04:42	12° <u>♂</u> 06'36 28.78684 AU	morning rise	11286 Oct 24 07:00	27° <u>♂</u> 17'49	
direct	11280 Jun 12 19:05	10° <u>♂</u> 41'43	retrograde	11287 Jan 22 23:22	29° <u>♂</u> 15'52	
evening set	11280 Sep 08 02:10	12° <u>♂</u> 35'50	opposition	11287 Apr 12 09:25	27° <u>♂</u> 50'54	-0°24'51
			min. Earth dist.	11287 Apr 11 18:01	27° <u>♂</u> 51'59	28.81686 AU
conjunction	11280 Sep 23 23:00	13° <u>♂</u> 11'31 -0°33'39	direct	11287 Jun 29 08:00	26° <u>♂</u> 27'04	
minimum elong	11280 Sep 23 23:00	13° <u>♂</u> 11'31 0°33'34	evening set	11287 Sep 24 19:42	28° <u>♂</u> 21'09	
max. Earth dist.	11280 Sep 24 16:02	13° <u>♂</u> 13'07 30.78684 AU				
morning rise	11280 Oct 09 22:15	13° <u>♂</u> 47'26	conjunction	11287 Oct 10 19:06	28° <u>♂</u> 56'57	-0°22'25
retrograde	11281 Jan 08 14:04	15° <u>♂</u> 45'52	minimum elong	11287 Oct 10 19:07	28° <u>♂</u> 56'57	0°22'08
opposition	11281 Mar 29 09:08	14° <u>♂</u> 20'48 -0°35'10	max. Earth dist.	11287 Oct 11 12:04	28° <u>♂</u> 58'32	30.82045 AU
min. Earth dist.	11281 Mar 28 17:56	14° <u>♂</u> 21'52 28.78754 AU	morning rise	11287 Oct 26 20:33	29° <u>♂</u> 32'58	
direct	11281 Jun 15 06:35	12° <u>♂</u> 57'00		11287 Nov 08 11:55	0° <u>♂</u>	
evening set	11281 Sep 10 14:52	14° <u>♂</u> 51'04	retrograde	11288 Jan 25 10:44	1° <u>♂</u> 30'58	
			opposition	11288 Apr 13 21:24	0° <u>♂</u> 06'04	-0°22'59
conjunction	11281 Sep 26 12:06	15° <u>♂</u> 26'46 -0°32'11	min. Earth dist.	11288 Apr 13 06:32	0° <u>♂</u> 07'06	28.82430 AU
minimum elong	11281 Sep 26 12:06	15° <u>♂</u> 26'46 0°32'03		11288 Apr 17 11:45	30° <u>♂</u>	
max. Earth dist.	11281 Sep 27 04:50	15° <u>♂</u> 28'20 30.78808 AU	direct	11288 Jun 30 20:19	28° <u>♂</u> 42'16	
morning rise	11281 Oct 12 11:44	16° <u>♂</u> 02'42		11288 Sep 09 02:05	0° <u>♂</u>	
retrograde	11282 Jan 11 04:06	18° <u>♂</u> 01'03	evening set	11288 Sep 26 08:46	0° <u>♂</u> 36'22	
opposition	11282 Mar 31 21:11	16° <u>♂</u> 35'57 -0°33'34				
min. Earth dist.	11282 Mar 31 05:01	16° <u>♂</u> 37'05 28.78930 AU	conjunction	11288 Oct 12 08:25	1° <u>♂</u> 12'10	-0°20'40
direct	11282 Jun 17 18:56	15° <u>♂</u> 12'06	minimum elong	11288 Oct 12 08:25	1° <u>♂</u> 12'10	0°20'22
evening set	11282 Sep 13 03:37	17° <u>♂</u> 06'10	max. Earth dist.	11288 Oct 12 23:55	1° <u>♂</u> 13'37	30.82772 AU
			morning rise	11288 Oct 28 10:18	1° <u>♂</u> 48'12	
conjunction	11282 Sep 29 01:10	17° <u>♂</u> 41'52 -0°30'40	retrograde	11289 Jan 27 00:03	3° <u>♂</u> 46'08	

opposition	11289 Apr 16 09:23	2°M.21'17 -0°21'05	max. Earth dist.	11294 Oct 27 06:44	14°M.43'10 30.86103 AU
min. Earth dist.	11289 Apr 15 18:37	2°M.22'19 28.83120 AU		11294 Nov 03 18:12	15°M.
direct	11289 Jul 03 07:22	0°M.57'29	morning rise	11294 Nov 11 20:10	15°M.17'56
evening set	11289 Sep 28 21:59	2°M.51'36	retrograde	11295 Feb 10 04:18	17°M.15'14
			opposition	11295 Apr 30 07:02	15°M.50'26 -0°09'10
conjunction	11289 Oct 14 22:02	3°M.27'25 -0°18'52	min. Earth dist.	11295 Apr 29 18:45	15°M.51'18 28.86464 AU
minimum elong	11289 Oct 14 22:02	3°M.27'25 0°18'33		11295 Jun 01 07:27	15°R.M.
max. Earth dist.	11289 Oct 15 13:39	3°M.28'52 30.83408 AU	direct	11295 Jul 17 09:37	14°M.26'24
morning rise	11289 Oct 31 00:06	4°M.03'27		11295 Aug 31 07:39	15°M.
retrograde	11290 Jan 29 11:36	6°M.01'19	evening set	11295 Oct 13 04:22	16°M.20'27
opposition	11290 Apr 18 21:14	4°M.36'29 -0°19'09			
min. Earth dist.	11290 Apr 18 07:50	4°M.37'26 28.83708 AU	conjunction	11295 Oct 29 06:07	16°M.56'19 -0°07'43
direct	11290 Jul 05 18:16	3°M.12'40	minimum elong	11295 Oct 29 06:07	16°M.56'19 0°07'15
evening set	11290 Oct 01 11:11	5°M.06'47	behind sun begin	11295 Oct 29 00:06	16°M.55'47
			behind sun end	11295 Oct 29 12:07	16°M.56'51
conjunction	11290 Oct 17 11:33	5°M.42'36 -0°17'04	max. Earth dist.	11295 Oct 29 18:37	16°M.57'29 30.86847 AU
minimum elong	11290 Oct 17 11:33	5°M.42'36 0°16'43	morning rise	11295 Nov 14 09:42	17°M.32'21
max. Earth dist.	11290 Oct 18 02:06	5°M.43'58 30.83965 AU	retrograde	11296 Feb 12 17:37	19°M.29'33
morning rise	11290 Nov 02 13:56	6°M.18'39	opposition	11296 May 01 18:24	18°M.04'46 -0°07'08
retrograde	11291 Feb 01 01:01	8°M.16'25	min. Earth dist.	11296 May 01 06:26	18°M.05'37 28.87289 AU
opposition	11291 Apr 21 08:59	6°M.51'36 -0°17'12	direct	11296 Jul 18 21:02	16°M.40'43
min. Earth dist.	11291 Apr 20 19:10	6°M.52'34 28.84225 AU	evening set	11296 Oct 14 17:10	18°M.34'45
direct	11291 Jul 08 06:30	5°M.27'44			
evening set	11291 Oct 04 00:13	7°M.21'50	conjunction	11296 Oct 30 19:22	19°M.10'37 -0°05'49
			minimum elong	11296 Oct 30 19:22	19°M.10'38 0°05'21
conjunction	11291 Oct 20 00:51	7°M.57'40 -0°15'13	behind sun begin	11296 Oct 30 13:02	19°M.10'03
minimum elong	11291 Oct 20 00:51	7°M.57'40 0°14'51	behind sun end	11296 Oct 31 01:42	19°M.11'12
behind sun begin	11291 Oct 19 22:27	7°M.57'27	max. Earth dist.	11296 Oct 31 08:48	19°M.11'52 30.87741 AU
behind sun end	11291 Oct 20 03:16	7°M.57'53	morning rise	11296 Nov 15 23:00	19°M.46'40
max. Earth dist.	11291 Oct 20 14:56	7°M.58'59 30.84452 AU	retrograde	11297 Feb 14 04:23	21°M.43'45
morning rise	11291 Nov 05 03:29	8°M.33'43	opposition	11297 May 04 05:42	20°M.19'01 -0°05'04
retrograde	11292 Feb 03 13:04	10°M.31'23	min. Earth dist.	11297 May 03 17:59	20°M.19'50 28.88250 AU
opposition	11292 Apr 22 20:47	9°M.06'34 -0°15'13	direct	11297 Jul 21 09:33	18°M.54'57
min. Earth dist.	11292 Apr 22 08:20	9°M.07'27 28.84708 AU	evening set	11297 Oct 17 06:18	20°M.49'01
direct	11292 Jul 09 18:51	7°M.42'40			
evening set	11292 Oct 05 13:14	9°M.36'45	conjunction	11297 Nov 02 08:38	21°M.24'53 -0°03'54
			minimum elong	11297 Nov 02 08:37	21°M.24'53 0°03'24
conjunction	11292 Oct 21 14:17	10°M.12'35 -0°13'22	behind sun begin	11297 Nov 02 02:06	21°M.24'18
minimum elong	11292 Oct 21 14:17	10°M.12'35 0°12'59	behind sun end	11297 Nov 02 15:08	21°M.25'28
behind sun begin	11292 Oct 21 10:22	10°M.12'14	max. Earth dist.	11297 Nov 02 20:48	21°M.26'00 30.88784 AU
behind sun end	11292 Oct 21 18:11	10°M.12'56	morning rise	11297 Nov 18 12:35	22°M.00'55
max. Earth dist.	11292 Oct 22 04:19	10°M.13'54 30.84949 AU	retrograde	11298 Feb 16 17:24	23°M.57'53
morning rise	11292 Nov 06 17:06	10°M.48'37	opposition	11298 May 06 16:47	22°M.33'14 -0°03'01
retrograde	11293 Feb 05 02:19	12°M.46'11	min. Earth dist.	11298 May 06 04:55	22°M.34'04 28.89359 AU
opposition	11293 Apr 25 08:13	11°M.21'22 -0°13'13	direct	11298 Jul 23 20:19	21°M.09'10
min. Earth dist.	11293 Apr 24 19:10	11°M.22'17 28.85214 AU	evening set	11298 Oct 19 19:21	23°M.03'15
direct	11293 Jul 12 08:24	9°M.57'24			
evening set	11293 Oct 08 02:21	11°M.51'29	conjunction	11298 Nov 04 21:59	23°M.39'07 -0°01'56
			minimum elong	11298 Nov 04 22:00	23°M.39'08 0°01'26
conjunction	11293 Oct 24 03:35	12°M.27'19 -0°11'30	behind sun begin	11298 Nov 04 15:26	23°M.38'32
minimum elong	11293 Oct 24 03:35	12°M.27'19 0°11'04	behind sun end	11298 Nov 05 04:34	23°M.39'43
behind sun begin	11293 Oct 23 22:43	12°M.26'53	max. Earth dist.	11298 Nov 05 10:44	23°M.40'18 30.89943 AU
behind sun end	11293 Oct 24 08:26	12°M.27'46	morning rise	11298 Nov 21 01:59	24°M.15'09
max. Earth dist.	11293 Oct 24 16:40	12°M.28'32 30.85481 AU	retrograde	11299 Feb 19 04:42	26°M.12'02
morning rise	11293 Nov 09 06:46	13°M.03'22	opposition	11299 May 09 04:04	24°M.47'27 -0°00'57
	11294 Jan 31 18:08	15°M.	min. Earth dist.	11299 May 08 17:19	24°M.48'13 28.90560 AU
retrograde	11294 Feb 07 15:01	15°M.00'48	direct	11299 Jul 26 06:42	23°M.23'26
	11294 Feb 14 12:15	15°R.M.	evening set	11299 Oct 22 08:21	25°M.17'31
opposition	11294 Apr 27 19:46	13°M.35'59 -0°11'12	asc. node	11299 Oct 29 23:30	25°M.34'23
min. Earth dist.	11294 Apr 27 07:51	13°M.36'49 28.85791 AU			
direct	11294 Jul 14 19:30	12°M.11'58	conjunction	11299 Nov 07 11:10	25°M.53'24 0°00'04
evening set	11294 Oct 10 15:18	14°M.06'02	minimum elong	11299 Nov 07 11:10	25°M.53'24 0°00'36
			behind sun begin	11299 Nov 07 04:37	25°M.52'49
conjunction	11294 Oct 26 16:57	14°M.41'54 -0°09'37	behind sun end	11299 Nov 07 17:43	25°M.53'59
minimum elong	11294 Oct 26 16:57	14°M.41'54 0°09'11	max. Earth dist.	11299 Nov 07 22:59	25°M.54'29 30.91181 AU
behind sun begin	11294 Oct 26 11:25	14°M.41'24	morning rise	11299 Nov 23 15:22	26°M.29'25
behind sun end	11294 Oct 26 22:28	14°M.42'23	retrograde	11300 Feb 21 16:54	28°M.26'13

opposition	11300 May 11 15:11	27° ℳ 01'43	0°01'07	conjunction	11305 Nov 21 19:49	9° ♊ 17'49	0°11'33
min. Earth dist.	11300 May 11 04:01	27° ℳ 02'30	28.91804 AU	minimum elong	11305 Nov 21 19:49	9° ♊ 17'49	0°12'10
direct	11300 Jul 28 18:23	25° ℳ 37'42		behind sun begin	11305 Nov 21 15:28	9° ♊ 17'25	
evening set	11300 Oct 24 21:37	27° ℳ 31'50		behind sun end	11305 Nov 22 00:10	9° ♊ 18'12	
				max. Earth dist.	11305 Nov 22 03:43	9° ♊ 18'32	30.97446 AU
conjunction	11300 Nov 10 00:38	28° ℳ 07'42	0°02'03	morning rise	11305 Dec 08 00:27	9° ♊ 53'46	
minimum elong	11300 Nov 10 00:37	28° ℳ 07'42	0°02'35	retrograde	11306 Mar 07 17:09	11° ♊ 49'46	
behind sun begin	11300 Nov 09 18:04	28° ℳ 07'07		opposition	11306 May 25 09:09	10° ♊ 25'31	0°13'21
behind sun end	11300 Nov 10 07:11	28° ℳ 08'17		min. Earth dist.	11306 May 25 02:41	10° ♊ 25'58	28.97908 AU
max. Earth dist.	11300 Nov 10 11:53	28° ℳ 08'44	30.92406 AU	direct	11306 Aug 11 19:38	9° ♊ 01'19	
morning rise	11300 Nov 26 04:55	28° ℳ 43'44		evening set	11306 Nov 08 05:00	10° ♊ 55'26	
	11301 Jan 05 01:02	0° ♊					
retrograde	11301 Feb 24 03:57	0° ♊ 40'25		conjunction	11306 Nov 24 08:59	11° ♊ 31'17	0°13'24
	11301 Apr 16 15:20	30° ♋		minimum elong	11306 Nov 24 08:58	11° ♊ 31'17	0°14'02
opposition	11301 May 14 02:21	29° ℳ 16'00	0°03'12	behind sun begin	11306 Nov 24 05:50	11° ♊ 31'00	
min. Earth dist.	11301 May 13 16:53	29° ℳ 16'40	28.93010 AU	behind sun end	11306 Nov 24 12:07	11° ♊ 31'34	
direct	11301 Jul 31 05:18	27° ℳ 51'59		max. Earth dist.	11306 Nov 24 15:18	11° ♊ 31'52	30.98384 AU
evening set	11301 Oct 27 10:55	29° ℳ 46'08		morning rise	11306 Dec 10 13:48	12° ♊ 07'13	
	11301 Nov 02 18:08	0° ♊		retrograde	11307 Mar 10 06:05	14° ♊ 03'05	
conjunction	11301 Nov 12 14:13	0° ♊ 22'00	0°03'59	opposition	11307 May 27 19:52	12° ♊ 38'52	0°15'20
minimum elong	11301 Nov 12 14:13	0° ♊ 22'00	0°04'33	min. Earth dist.	11307 May 27 13:22	12° ♊ 39'19	28.98881 AU
behind sun begin	11301 Nov 12 07:47	0° ♊ 21'26		direct	11307 Aug 14 07:03	11° ♊ 14'37	
behind sun end	11301 Nov 12 20:39	0° ♊ 22'35		evening set	11307 Nov 10 17:50	13° ♊ 08'45	
max. Earth dist.	11301 Nov 13 00:48	0° ♊ 22'58	30.93577 AU	conjunction	11307 Nov 26 22:02	13° ♊ 44'35	0°15'14
morning rise	11301 Nov 28 18:35	0° ♊ 58'00		minimum elong	11307 Nov 26 22:02	13° ♊ 44'35	0°15'53
retrograde	11302 Feb 26 16:44	2° ♊ 54'35		max. Earth dist.	11307 Nov 27 04:54	13° ♊ 45'13	30.99388 AU
opposition	11302 May 16 13:26	1° ♊ 30'13	0°05'15	morning rise	11307 Dec 13 02:44	14° ♊ 20'30	
min. Earth dist.	11302 May 16 03:45	1° ♊ 30'54	28.94124 AU	retrograde	11308 Mar 11 16:30	16° ♊ 16'14	
direct	11302 Aug 02 17:51	0° ♊ 06'11		opposition	11308 May 29 06:38	14° ♊ 52'04	0°17'17
evening set	11302 Oct 30 00:17	2° ♊ 00'21		min. Earth dist.	11308 May 29 01:14	14° ♊ 52'26	28.99935 AU
conjunction	11302 Nov 15 03:38	2° ♊ 36'13	0°05'53	direct	11308 Aug 15 17:58	13° ♊ 27'48	
minimum elong	11302 Nov 15 03:37	2° ♊ 36'13	0°06'28	evening set	11308 Nov 12 06:52	15° ♊ 21'56	
behind sun begin	11302 Nov 14 21:26	2° ♊ 35'40		conjunction	11308 Nov 28 11:08	15° ♊ 57'46	0°17'03
behind sun end	11302 Nov 15 09:47	2° ♊ 36'46		minimum elong	11308 Nov 28 11:07	15° ♊ 57'46	0°17'42
max. Earth dist.	11302 Nov 15 12:46	2° ♊ 37'03	30.94635 AU	max. Earth dist.	11308 Nov 28 17:02	15° ♊ 58'18	31.00505 AU
morning rise	11302 Dec 01 08:08	3° ♊ 12'12		morning rise	11308 Dec 14 15:56	16° ♊ 33'40	
retrograde	11303 Mar 01 04:54	5° ♊ 08'40		retrograde	11309 Mar 14 03:54	18° ♊ 29'16	
opposition	11303 May 19 00:34	3° ♊ 44'20	0°07'18	opposition	11309 May 31 17:05	17° ♊ 05'10	0°19'12
min. Earth dist.	11303 May 18 16:27	3° ♊ 44'54	28.95142 AU	min. Earth dist.	11309 May 31 11:06	17° ♊ 05'35	29.01111 AU
direct	11303 Aug 05 04:59	2° ♊ 20'15		direct	11309 Aug 18 05:31	15° ♊ 40'53	
evening set	11303 Nov 01 13:28	4° ♊ 14'24		evening set	11309 Nov 14 19:54	17° ♊ 35'03	
conjunction	11303 Nov 17 17:08	4° ♊ 50'16	0°07'47	conjunction	11309 Dec 01 00:16	18° ♊ 10'52	0°18'50
minimum elong	11303 Nov 17 17:08	4° ♊ 50'16	0°08'23	minimum elong	11309 Dec 01 00:16	18° ♊ 10'52	0°19'30
behind sun begin	11303 Nov 17 11:23	4° ♊ 49'46		max. Earth dist.	11309 Dec 01 05:57	18° ♊ 11'24	31.01735 AU
behind sun end	11303 Nov 17 22:53	4° ♊ 50'47		morning rise	11309 Dec 17 05:01	18° ♊ 46'46	
max. Earth dist.	11303 Nov 18 02:24	4° ♊ 51'07	30.95617 AU	retrograde	11310 Mar 16 14:05	20° ♊ 42'15	
morning rise	11303 Dec 03 21:37	5° ♊ 26'15		opposition	11310 Jun 03 03:47	19° ♊ 18'14	0°21'06
retrograde	11304 Mar 02 17:32	7° ♊ 22'33		min. Earth dist.	11310 Jun 02 23:05	19° ♊ 18'34	29.02407 AU
opposition	11304 May 20 11:31	5° ♊ 58'15	0°09'20	direct	11310 Aug 20 15:35	17° ♊ 53'58	
min. Earth dist.	11304 May 20 03:33	5° ♊ 58'49	28.96083 AU	evening set	11310 Nov 17 08:48	19° ♊ 48'10	
direct	11304 Aug 06 19:04	4° ♊ 34'08		conjunction	11310 Dec 03 13:16	20° ♊ 23'59	0°20'35
evening set	11304 Nov 03 02:41	6° ♊ 28'17		minimum elong	11310 Dec 03 13:16	20° ♊ 23'59	0°21'16
conjunction	11304 Nov 19 06:23	7° ♊ 04'09	0°09'41	max. Earth dist.	11310 Dec 03 18:40	20° ♊ 24'29	31.03092 AU
minimum elong	11304 Nov 19 06:22	7° ♊ 04'09	0°10'17	morning rise	11310 Dec 19 17:58	20° ♊ 59'51	
behind sun begin	11304 Nov 19 01:12	7° ♊ 03'41		retrograde	11311 Mar 19 02:03	22° ♊ 55'15	
behind sun end	11304 Nov 19 11:32	7° ♊ 04'36		opposition	11311 Jun 05 14:17	21° ♊ 31'20	0°22'58
max. Earth dist.	11304 Nov 19 13:51	7° ♊ 04'49	30.96540 AU	min. Earth dist.	11311 Jun 05 09:01	21° ♊ 31'42	29.03800 AU
morning rise	11304 Dec 05 11:07	7° ♊ 40'06		direct	11311 Aug 23 02:48	20° ♊ 07'05	
retrograde	11305 Mar 05 06:16	9° ♊ 36'16		evening set	11311 Nov 19 21:52	22° ♊ 01'21	
opposition	11305 May 22 22:27	8° ♊ 11'59	0°11'21	conjunction	11311 Dec 06 02:17	22° ♊ 37'09	0°22'19
min. Earth dist.	11305 May 22 15:18	8° ♊ 12'29	28.96999 AU	minimum elong	11311 Dec 06 02:17	22° ♊ 37'09	0°23'00
direct	11305 Aug 09 06:49	6° ♊ 47'49		max. Earth dist.	11311 Dec 06 06:41	22° ♊ 37'33	31.04519 AU
evening set	11305 Nov 05 15:49	8° ♊ 41'57					

morning rise	11311 Dec 22 07:01	23° 7 13'01	direct	11318 Sep 07 14:55	5° 3 38'22	
retrograde	11312 Mar 20 13:39	25° 7 08'19	evening set	11318 Dec 05 17:00	7° 3 32'43	
opposition	11312 Jun 07 00:52	23° 7 44'30 0°24'47				
min. Earth dist.	11312 Jun 06 21:01	23° 7 44'46 29.05253 AU	conjunction	11318 Dec 21 21:28	8° 3 08'26 0°33'17	
direct	11312 Aug 24 13:05	22° 7 20'18	minimum elong	11318 Dec 21 21:28	8° 3 08'26 0°33'59	
evening set	11312 Nov 21 10:50	24° 7 14'36	max. Earth dist.	11318 Dec 21 20:14	8° 3 08'19 31.12575 AU	
			morning rise	11319 Jan 07 01:25	8° 3 44'07	
conjunction	11312 Dec 07 15:28	24° 7 50'24 0°24'00	retrograde	11319 Apr 05 21:47	10° 3 38'30	
minimum elong	11312 Dec 07 15:28	24° 7 50'24 0°24'42	opposition	11319 Jun 23 02:01	9° 3 15'03 0°36'21	
max. Earth dist.	11312 Dec 07 19:59	24° 7 50'49 31.05965 AU	min. Earth dist.	11319 Jun 23 03:40	9° 3 14'56 29.13038 AU	
morning rise	11312 Dec 23 20:02	25° 7 26'14	direct	11319 Sep 10 01:13	7° 3 50'39	
retrograde	11313 Mar 23 01:58	27° 7 21'27	evening set	11319 Dec 08 05:42	9° 3 44'59	
opposition	11313 Jun 09 11:23	25° 7 57'44 0°26'35				
min. Earth dist.	11313 Jun 09 07:51	25° 7 57'59 29.06664 AU	conjunction	11319 Dec 24 10:10	10° 3 20'41 0°34'40	
direct	11313 Aug 27 02:35	24° 7 33'33	minimum elong	11319 Dec 24 10:10	10° 3 20'41 0°35'21	
evening set	11313 Nov 24 00:08	26° 7 27'55	max. Earth dist.	11319 Dec 24 08:27	10° 3 20'31 31.13486 AU	
			morning rise	11320 Jan 09 13:59	10° 3 56'20	
conjunction	11313 Dec 10 04:36	27° 7 03'42 0°25'40	retrograde	11320 Apr 07 08:27	12° 3 50'34	
minimum elong	11313 Dec 10 04:36	27° 7 03'42 0°26'21	opposition	11320 Jun 24 12:05	11° 3 27'08 0°37'47	
max. Earth dist.	11313 Dec 10 07:08	27° 7 03'56 31.07333 AU	min. Earth dist.	11320 Jun 24 13:16	11° 3 27'03 29.13965 AU	
morning rise	11313 Dec 26 09:13	27° 7 39'31	direct	11320 Sep 11 12:38	10° 3 02'40	
retrograde	11314 Mar 25 14:29	29° 7 34'38	evening set	11320 Dec 09 18:27	11° 3 57'01	
opposition	11314 Jun 11 21:55	28° 7 11'00 0°28'19				
min. Earth dist.	11314 Jun 11 19:23	28° 7 11'11 29.07990 AU	conjunction	11320 Dec 25 22:45	12° 3 32'41 0°36'00	
direct	11314 Aug 29 13:47	26° 7 46'49	minimum elong	11320 Dec 25 22:45	12° 3 32'41 0°36'41	
evening set	11314 Nov 26 13:12	28° 7 41'13	max. Earth dist.	11320 Dec 25 20:04	12° 3 32'26 31.14440 AU	
			morning rise	11321 Jan 11 02:29	13° 3 08'18	
conjunction	11314 Dec 12 17:50	29° 7 16'59 0°27'17	retrograde	11321 Apr 09 18:15	15° 3 02'24	
minimum elong	11314 Dec 12 17:50	29° 7 16'59 0°27'58	opposition	11321 Jun 26 22:20	13° 3 39'00 0°39'11	
max. Earth dist.	11314 Dec 12 20:26	29° 7 17'14 31.08591 AU	min. Earth dist.	11321 Jun 27 00:40	13° 3 38'50 29.14969 AU	
morning rise	11314 Dec 28 22:11	29° 7 52'47	direct	11321 Sep 13 23:07	12° 3 14'30	
	11315 Jan 01 06:34	0° 3	evening set	11321 Dec 12 07:02	14° 3 08'51	
retrograde	11315 Mar 28 01:49	1° 3 47'46				
opposition	11315 Jun 14 08:30	0° 3 24'12 0°30'02	conjunction	11321 Dec 28 11:23	14° 3 44'29 0°37'16	
min. Earth dist.	11315 Jun 14 06:56	0° 3 24'18 29.09180 AU	minimum elong	11321 Dec 28 11:22	14° 3 44'29 0°37'57	
	11315 Jun 28 22:39	30° 7 11'00	max. Earth dist.	11321 Dec 28 09:06	14° 3 44'17 31.15489 AU	
direct	11315 Sep 01 02:27	29° 7 00'00	morning rise	11322 Jan 13 14:47	15° 3 20'05	
	11315 Nov 01 23:19	0° 3	retrograde	11322 Apr 12 04:31	17° 3 14'03	
evening set	11315 Nov 29 02:12	0° 3 54'24	opposition	11322 Jun 29 08:24	15° 3 50'42 0°40'31	
			min. Earth dist.	11322 Jun 29 10:37	15° 3 50'33 29.16065 AU	
conjunction	11315 Dec 15 06:42	1° 3 30'10 0°28'51	direct	11322 Sep 16 11:32	14° 3 26'11	
minimum elong	11315 Dec 15 06:42	1° 3 30'10 0°29'32	evening set	11322 Dec 14 19:42	16° 3 20'34	
max. Earth dist.	11315 Dec 15 07:17	1° 3 30'13 31.09726 AU				
morning rise	11315 Dec 31 11:09	2° 3 05'55	conjunction	11322 Dec 30 23:47	16° 3 56'11 0°38'29	
retrograde	11316 Mar 29 15:17	4° 3 00'46	minimum elong	11322 Dec 30 23:46	16° 3 56'11 0°39'10	
opposition	11316 Jun 15 19:00	2° 3 37'15 0°31'41	max. Earth dist.	11322 Dec 30 20:07	16° 3 55'51 31.16645 AU	
min. Earth dist.	11316 Jun 15 17:45	2° 3 37'20 29.10257 AU	morning rise	11323 Jan 16 03:08	17° 3 31'45	
direct	11316 Sep 02 14:59	1° 3 13'01	retrograde	11323 Apr 14 16:19	19° 3 25'37	
evening set	11316 Nov 30 15:13	3° 3 07'24	opposition	11323 Jul 01 18:34	18° 3 02'20 0°41'47	
			min. Earth dist.	11323 Jul 01 21:10	18° 3 02'09 29.17281 AU	
conjunction	11316 Dec 16 19:49	3° 3 43'09 0°30'23	direct	11323 Sep 18 21:44	16° 3 37'50	
minimum elong	11316 Dec 16 19:49	3° 3 43'09 0°31'04	evening set	11323 Dec 17 08:02	18° 3 32'15	
max. Earth dist.	11316 Dec 16 20:26	3° 3 43'13 31.10742 AU				
morning rise	11317 Jan 02 00:01	4° 3 18'54	conjunction	11324 Jan 02 12:12	19° 3 07'51 0°39'39	
retrograde	11317 Apr 01 01:07	6° 3 13'35	minimum elong	11324 Jan 02 12:12	19° 3 07'51 0°40'19	
opposition	11317 Jun 18 05:22	4° 3 50'06 0°33'17	max. Earth dist.	11324 Jan 02 09:13	19° 3 07'35 31.17900 AU	
min. Earth dist.	11317 Jun 18 05:46	4° 3 50'04 29.11228 AU	morning rise	11324 Jan 18 15:14	19° 3 43'23	
direct	11317 Sep 05 02:50	3° 3 25'49	retrograde	11324 Apr 16 03:05	21° 3 37'10	
evening set	11317 Dec 03 04:13	5° 3 20'12	opposition	11324 Jul 03 04:43	20° 3 13'59 0°43'00	
			min. Earth dist.	11324 Jul 03 08:03	20° 3 13'45 29.18555 AU	
conjunction	11317 Dec 19 08:45	5° 3 55'55 0°31'51	direct	11324 Sep 20 09:56	18° 3 49'31	
minimum elong	11317 Dec 19 08:44	5° 3 55'55 0°32'33	evening set	11324 Dec 18 20:44	20° 3 43'59	
max. Earth dist.	11317 Dec 19 07:54	5° 3 55'51 31.11685 AU				
morning rise	11318 Jan 04 12:55	6° 3 31'38	conjunction	11325 Jan 04 00:37	21° 3 19'34 0°40'45	
retrograde	11318 Apr 03 12:12	8° 3 26'10	minimum elong	11325 Jan 04 00:37	21° 3 19'34 0°41'26	
opposition	11318 Jun 20 15:38	7° 3 02'42 0°34'51	max. Earth dist.	11325 Jan 03 19:54	21° 3 19'08 31.19190 AU	
min. Earth dist.	11318 Jun 20 15:47	7° 3 02'41 29.12142 AU	morning rise	11325 Jan 20 03:36	21° 3 55'05	

retrograde	11325 Apr 18 16:14	23° 3 48'47		min. Earth dist.	11331 Jul 19 11:31	5° ~ 34'52	29.25418 AU
opposition	11325 Jul 05 14:41	22° 3 25'41	0°44'08	direct	11331 Oct 06 16:41	4° ~ 10'54	
min. Earth dist.	11325 Jul 05 18:09	22° 3 25'27	29.19840 AU	evening set	11332 Jan 04 11:44	6° ~ 05'30	
direct	11325 Sep 22 21:47	21° 3 01'15					
evening set	11325 Dec 21 09:21	22° 3 55'46		conjunction	11332 Jan 20 14:26	6° ~ 40'57	0°46'43
				minimum elong	11332 Jan 20 14:26	6° ~ 40'57	0°47'19
conjunction	11326 Jan 06 13:12	23° 3 31'21	0°41'48	max. Earth dist.	11332 Jan 20 04:26	6° ~ 40'01	31.25738 AU
minimum elong	11326 Jan 06 13:12	23° 3 31'21	0°42'27	morning rise	11332 Feb 05 15:40	7° ~ 16'16	
max. Earth dist.	11326 Jan 06 08:40	23° 3 30'56	31.20438 AU	retrograde	11332 May 03 15:39	9° ~ 09'17	
morning rise	11326 Jan 22 15:47	24° 3 06'50		opposition	11332 Jul 20 13:30	7° ~ 46'32	0°50'16
retrograde	11326 Apr 21 02:18	26° 3 00'28		min. Earth dist.	11332 Jul 20 21:56	7° ~ 45'56	29.26110 AU
opposition	11326 Jul 08 00:58	24° 3 37'28	0°45'13	direct	11332 Oct 08 02:28	6° ~ 21'58	
min. Earth dist.	11326 Jul 08 06:03	24° 3 37'06	29.21049 AU	evening set	11333 Jan 05 23:45	8° ~ 16'34	
direct	11326 Sep 25 09:15	23° 3 13'03					
evening set	11326 Dec 23 21:52	25° 3 07'36		conjunction	11333 Jan 22 02:25	8° ~ 51'59	0°47'19
				minimum elong	11333 Jan 22 02:25	8° ~ 51'59	0°47'54
conjunction	11327 Jan 09 01:28	25° 3 43'10	0°42'47	max. Earth dist.	11333 Jan 21 17:03	8° ~ 51'07	31.26435 AU
minimum elong	11327 Jan 09 01:28	25° 3 43'10	0°43'26	morning rise	11333 Feb 07 03:12	9° ~ 27'16	
max. Earth dist.	11327 Jan 08 19:30	25° 3 42'37	31.21599 AU	retrograde	11333 May 06 01:21	11° ~ 20'11	
morning rise	11327 Jan 25 03:56	26° 3 18'37		opposition	11333 Jul 22 23:26	9° ~ 57'26	0°50'52
retrograde	11327 Apr 23 13:46	28° 3 12'09		min. Earth dist.	11333 Jul 23 08:31	9° ~ 56'48	29.26827 AU
opposition	11327 Jul 10 11:07	26° 3 49'14	0°46'14	direct	11333 Oct 10 14:58	8° ~ 32'51	
min. Earth dist.	11327 Jul 10 15:57	26° 3 48'54	29.22150 AU	evening set	11334 Jan 08 11:52	10° ~ 27'27	
direct	11327 Sep 27 21:07	25° 3 24'50					
evening set	11327 Dec 26 10:26	27° 3 19'25		conjunction	11334 Jan 24 14:07	11° ~ 02'50	0°47'50
				minimum elong	11334 Jan 24 14:07	11° ~ 02'50	0°48'24
conjunction	11328 Jan 11 13:55	27° 3 54'58	0°43'42	max. Earth dist.	11334 Jan 24 03:24	11° ~ 01'51	31.27196 AU
minimum elong	11328 Jan 11 13:55	27° 3 54'58	0°44'20	morning rise	11334 Feb 09 14:46	11° ~ 38'05	
max. Earth dist.	11328 Jan 11 07:20	27° 3 54'21	31.22627 AU	retrograde	11334 May 08 13:43	13° ~ 30'55	
morning rise	11328 Jan 27 16:04	28° 3 30'24		opposition	11334 Jul 25 09:24	12° ~ 08'11	0°51'23
	11328 Mar 18 00:55	0° ~		min. Earth dist.	11334 Jul 25 18:00	12° ~ 07'35	29.27642 AU
retrograde	11328 Apr 24 23:45	0° ~ 23'50		direct	11334 Oct 13 03:15	10° ~ 43'35	
	11328 Jun 02 13:28	30° ~ 13'28		evening set	11335 Jan 10 23:35	12° ~ 38'12	
opposition	11328 Jul 11 21:18	29° 3 00'58	0°47'11				
min. Earth dist.	11328 Jul 12 03:53	29° 3 00'31	29.23123 AU	conjunction	11335 Jan 27 01:44	13° ~ 13'34	0°48'18
direct	11328 Sep 29 07:07	27° 3 36'34		minimum elong	11335 Jan 27 01:44	13° ~ 13'34	0°48'51
evening set	11328 Dec 27 22:56	29° 3 31'10		max. Earth dist.	11335 Jan 26 15:47	13° ~ 12'39	31.28055 AU
	11329 Jan 10 02:09	0° ~		morning rise	11335 Feb 12 01:56	13° ~ 48'47	
					11335 Mar 21 09:15	15° ~	
conjunction	11329 Jan 13 02:18	0° ~ 06'41	0°44'33	retrograde	11335 May 10 22:57	15° ~ 41'32	
minimum elong	11329 Jan 13 02:18	0° ~ 06'41	0°45'12		11335 Jul 01 23:33	15° ~ 13'22	
max. Earth dist.	11329 Jan 12 18:52	0° ~ 06'00	31.23541 AU	opposition	11335 Jul 27 19:30	14° ~ 18'51	0°51'50
morning rise	11329 Jan 29 04:14	0° ~ 42'05		min. Earth dist.	11335 Jul 28 05:10	14° ~ 18'11	29.28557 AU
retrograde	11329 Apr 27 10:12	2° ~ 35'25		direct	11335 Oct 15 14:34	12° ~ 54'15	
opposition	11329 Jul 14 07:23	1° ~ 12'37	0°48'04	evening set	11336 Jan 13 11:31	14° ~ 48'54	
min. Earth dist.	11329 Jul 14 13:49	1° ~ 12'10	29.23968 AU		11336 Jan 18 14:12	15° ~	
	11329 Sep 04 15:14	30° ~ 13'28					
direct	11329 Oct 01 18:27	29° 3 48'10		conjunction	11336 Jan 29 13:22	15° ~ 24'14	0°48'41
	11329 Oct 28 15:11	0° ~		minimum elong	11336 Jan 29 13:22	15° ~ 24'14	0°49'13
evening set	11329 Dec 30 11:24	1° ~ 42'47		max. Earth dist.	11336 Jan 29 02:36	15° ~ 23'15	31.29031 AU
				morning rise	11336 Feb 14 13:23	15° ~ 59'25	
conjunction	11330 Jan 15 14:29	2° ~ 18'16	0°45'21	retrograde	11336 May 12 10:26	17° ~ 52'06	
minimum elong	11330 Jan 15 14:29	2° ~ 18'16	0°45'57	opposition	11336 Jul 29 05:19	16° ~ 29'30	0°52'12
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morning rise	11330 Jan 31 16:10	2° ~ 53'39		direct	11336 Oct 17 02:26	15° ~ 04'55	
retrograde	11330 Apr 29 19:19	4° ~ 46'54		evening set	11337 Jan 14 23:26	16° ~ 59'36	
opposition	11330 Jul 16 17:30	3° ~ 24'06	0°48'52				
min. Earth dist.	11330 Jul 17 01:18	3° ~ 23'34	29.24724 AU	conjunction	11337 Jan 31 01:05	17° ~ 34'55	0°49'00
direct	11330 Oct 04 04:48	1° ~ 59'38		minimum elong	11337 Jan 31 01:05	17° ~ 34'55	0°49'32
evening set	11331 Jan 01 23:36	3° ~ 54'14		max. Earth dist.	11337 Jan 30 14:12	17° ~ 33'55	31.30059 AU
				morning rise	11337 Feb 16 00:44	18° ~ 10'05	
conjunction	11331 Jan 18 02:38	4° ~ 29'43	0°46'04	retrograde	11337 May 14 20:56	20° ~ 02'42	
minimum elong	11331 Jan 18 02:38	4° ~ 29'43	0°46'41	opposition	11337 Jul 31 15:26	18° ~ 40'11	0°52'30
max. Earth dist.	11331 Jan 17 18:08	4° ~ 28'55	31.25053 AU	min. Earth dist.	11337 Aug 01 01:45	18° ~ 39'28	29.30609 AU
morning rise	11331 Feb 03 03:58	5° ~ 05'03		direct	11337 Oct 19 12:50	17° ~ 15'39	
retrograde	11331 May 02 04:41	6° ~ 58'11		evening set	11338 Jan 17 11:17	19° ~ 10'21	
opposition	11331 Jul 19 03:31	5° ~ 35'25	0°49'36				


























































































































conjunction	11338 Feb 02 12:39	19° \approx 45'39	0°49'14	retrograde	11344 May 29 18:27	5° \mathbb{H} 16'39	
minimum elong	11338 Feb 02 12:39	19° \approx 45'39	0°49'44	opposition	11344 Aug 15 14:28	3° \mathbb{H} 54'22	0°52'27
max. Earth dist.	11338 Feb 02 01:25	19° \approx 44'37	31.31092 AU	min. Earth dist.	11344 Aug 16 04:42	3° \mathbb{H} 53'23	29.35159 AU
morning rise	11338 Feb 18 11:59	20° \approx 20'47		direct	11344 Nov 03 18:30	2° \mathbb{H} 29'49	
retrograde	11338 May 17 06:58	22° \approx 13'21		evening set	11345 Feb 01 21:20	4° \mathbb{H} 24'35	
opposition	11338 Aug 03 01:27	20° \approx 50'55	0°52'43				
min. Earth dist.	11338 Aug 03 11:26	20° \approx 50'13	29.31607 AU	conjunction	11345 Feb 17 20:44	4° \mathbb{H} 59'42	0°48'58
direct	11338 Oct 22 00:30	19° \approx 26'24		minimum elong	11345 Feb 17 20:44	4° \mathbb{H} 59'42	0°49'20
evening set	11339 Jan 19 23:13	21° \approx 21'08		max. Earth dist.	11345 Feb 17 05:16	4° \mathbb{H} 58'17	31.35282 AU
max. Earth dist.	11339 Feb 04 11:53	21° \approx 55'16	31.32047 AU	morning rise	11345 Mar 05 17:53	5° \mathbb{H} 34'39	
				retrograde	11345 Jun 01 05:33	7° \mathbb{H} 26'49	
conjunction	11339 Feb 05 00:14	21° \approx 56'25	0°49'25	opposition	11345 Aug 18 00:35	6° \mathbb{H} 04'32	0°52'09
minimum elong	11339 Feb 05 00:14	21° \approx 56'25	0°49'54	min. Earth dist.	11345 Aug 18 14:02	6° \mathbb{H} 03'36	29.35464 AU
morning rise	11339 Feb 20 23:17	22° \approx 31'32		direct	11345 Nov 06 07:02	4° \mathbb{H} 39'58	
retrograde	11339 May 19 16:16	24° \approx 24'03		evening set	11346 Feb 04 08:37	6° \mathbb{H} 34'43	
opposition	11339 Aug 05 11:37	23° \approx 01'40	0°52'52				
min. Earth dist.	11339 Aug 05 22:49	23° \approx 00'53	29.32525 AU	conjunction	11346 Feb 20 07:43	7° \mathbb{H} 09'49	0°48'39
direct	11339 Oct 24 10:06	21° \approx 37'10		minimum elong	11346 Feb 20 07:43	7° \mathbb{H} 09'49	0°48'58
evening set	11340 Jan 22 10:57	23° \approx 31'55		max. Earth dist.	11346 Feb 19 16:21	7° \mathbb{H} 08'24	31.35589 AU
				morning rise	11346 Mar 08 04:27	7° \mathbb{H} 44'44	
conjunction	11340 Feb 07 11:52	24° \approx 07'11	0°49'31	retrograde	11346 Jun 03 15:44	9° \mathbb{H} 36'52	
minimum elong	11340 Feb 07 11:52	24° \approx 07'11	0°49'58	opposition	11346 Aug 20 10:53	8° \mathbb{H} 14'35	0°51'46
max. Earth dist.	11340 Feb 06 23:41	24° \approx 06'03	31.32899 AU	min. Earth dist.	11346 Aug 21 01:17	8° \mathbb{H} 13'36	29.35807 AU
morning rise	11340 Feb 23 10:31	24° \approx 42'16		direct	11346 Nov 08 17:56	6° \mathbb{H} 50'01	
retrograde	11340 May 21 01:19	26° \approx 34'43		evening set	11347 Feb 06 19:49	8° \mathbb{H} 44'46	
opposition	11340 Aug 06 21:47	25° \approx 12'23	0°52'56				
min. Earth dist.	11340 Aug 07 09:23	25° \approx 11'35	29.33298 AU	conjunction	11347 Feb 22 18:39	9° \mathbb{H} 19'51	0°48'15
direct	11340 Oct 25 21:28	23° \approx 47'54		minimum elong	11347 Feb 22 18:39	9° \mathbb{H} 19'51	0°48'35
evening set	11341 Jan 23 22:56	25° \approx 42'40		max. Earth dist.	11347 Feb 22 03:27	9° \mathbb{H} 18'27	31.35972 AU
				morning rise	11347 Mar 10 15:04	9° \mathbb{H} 54'45	
conjunction	11341 Feb 08 23:24	26° \approx 17'54	0°49'33	retrograde	11347 Jun 06 01:10	11° \mathbb{H} 46'50	
minimum elong	11341 Feb 08 23:24	26° \approx 17'54	0°49'59	opposition	11347 Aug 22 20:59	10° \mathbb{H} 24'36	0°51'19
max. Earth dist.	11341 Feb 08 09:29	26° \approx 16'37	31.33603 AU	min. Earth dist.	11347 Aug 23 10:32	10° \mathbb{H} 23'40	29.36225 AU
morning rise	11341 Feb 24 21:51	26° \approx 52'57		direct	11347 Nov 11 05:48	9° \mathbb{H} 00'03	
retrograde	11341 May 23 12:16	28° \approx 45'22		evening set	11348 Feb 09 07:02	10° \mathbb{H} 54'49	
opposition	11341 Aug 09 07:55	27° \approx 23'03	0°52'56				
min. Earth dist.	11341 Aug 09 20:01	27° \approx 22'13	29.33939 AU	conjunction	11348 Feb 25 05:30	11° \mathbb{H} 29'53	0°47'48
direct	11341 Oct 28 07:03	25° \approx 58'34		minimum elong	11348 Feb 25 05:31	11° \mathbb{H} 29'53	0°48'05
evening set	11342 Jan 26 10:39	27° \approx 53'20		max. Earth dist.	11348 Feb 24 13:41	11° \mathbb{H} 28'25	31.36434 AU
				morning rise	11348 Mar 12 01:39	12° \mathbb{H} 04'46	
conjunction	11342 Feb 11 11:00	28° \approx 28'32	0°49'30	retrograde	11348 Jun 07 10:18	13° \mathbb{H} 56'51	
minimum elong	11342 Feb 11 11:00	28° \approx 28'32	0°49'55	opposition	11348 Aug 24 07:17	12° \mathbb{H} 34'39	0°50'48
max. Earth dist.	11342 Feb 10 21:31	28° \approx 27'18	31.34170 AU	min. Earth dist.	11348 Aug 24 21:24	12° \mathbb{H} 33'41	29.36730 AU
morning rise	11342 Feb 27 08:58	29° \approx 03'34		direct	11348 Nov 12 15:17	11° \mathbb{H} 10'09	
	11342 Mar 27 18:19	0° \mathbb{H}		evening set	11349 Feb 10 18:10	13° \mathbb{H} 04'56	
retrograde	11342 May 25 21:31	0° \mathbb{H} 55'55					
	11342 Jul 26 13:40	30° \mathbb{R}		conjunction	11349 Feb 26 16:27	13° \mathbb{H} 39'59	0°47'17
opposition	11342 Aug 11 18:12	29° \approx 33'38	0°52'51	minimum elong	11349 Feb 26 16:27	13° \mathbb{H} 39'59	0°47'32
min. Earth dist.	11342 Aug 12 07:16	29° \approx 32'43	29.34437 AU	max. Earth dist.	11349 Feb 26 01:29	13° \mathbb{H} 38'36	31.36966 AU
direct	11342 Oct 30 19:15	28° \approx 09'08		morning rise	11349 Mar 14 12:09	14° \mathbb{H} 14'51	
	11343 Jan 27 02:50	0° \mathbb{H}		retrograde	11349 Jun 09 18:53	16° \mathbb{H} 06'56	
evening set	11343 Jan 28 22:15	0° \mathbb{H} 03'53		opposition	11349 Aug 26 17:31	14° \mathbb{H} 44'48	0°50'12
				min. Earth dist.	11349 Aug 27 07:39	14° \mathbb{H} 43'50	29.37264 AU
conjunction	11343 Feb 13 22:11	0° \mathbb{H} 39'04	0°49'23	direct	11349 Nov 15 01:54	13° \mathbb{H} 20'21	
minimum elong	11343 Feb 13 22:11	0° \mathbb{H} 39'04	0°49'48	evening set	11350 Feb 13 05:26	15° \mathbb{H} 15'10	
max. Earth dist.	11343 Feb 13 07:06	0° \mathbb{H} 37'40	31.34619 AU	max. Earth dist.	11350 Feb 28 11:06	15° \mathbb{H} 48'43	31.37505 AU
morning rise	11343 Mar 01 20:00	1° \mathbb{H} 14'04					
retrograde	11343 May 28 09:20	3° \mathbb{H} 06'21		conjunction	11350 Mar 01 03:14	15° \mathbb{H} 50'13	0°46'41
opposition	11343 Aug 14 04:21	1° \mathbb{H} 44'04	0°52'41	minimum elong	11350 Mar 01 03:14	15° \mathbb{H} 50'13	0°46'54
min. Earth dist.	11343 Aug 14 17:10	1° \mathbb{H} 43'11	29.34837 AU	morning rise	11350 Mar 16 22:44	16° \mathbb{H} 25'03	
direct	11343 Nov 02 07:11	0° \mathbb{H} 19'32		retrograde	11350 Jun 12 06:02	18° \mathbb{H} 17'10	
evening set	11344 Jan 31 09:47	2° \mathbb{H} 14'18		opposition	11350 Aug 29 03:53	16° \mathbb{H} 55'06	0°49'31
				min. Earth dist.	11350 Aug 29 18:00	16° \mathbb{H} 54'07	29.37795 AU
conjunction	11344 Feb 16 09:34	2° \mathbb{H} 49'27	0°49'13	direct	11350 Nov 17 10:39	15° \mathbb{H} 30'41	
minimum elong	11344 Feb 16 09:34	2° \mathbb{H} 49'27	0°49'35	evening set	11351 Feb 15 16:24	17° \mathbb{H} 25'33	
max. Earth dist.	11344 Feb 15 18:55	2° \mathbb{H} 48'06	31.34970 AU				
morning rise	11344 Mar 03 06:55	3° \mathbb{H} 24'25		conjunction	11351 Mar 03 14:04	18° \mathbb{H} 00'34	0°46'01

minimum elong	11351 Mar 03 14:04	18° ✕ 00'34	0°46'14	opposition	11357 Sep 13 05:49	2° ♀ 07'22	0°42'56
max. Earth dist.	11351 Mar 02 22:46	17° ✕ 59'09	31.37996 AU	min. Earth dist.	11357 Sep 13 22:28	2° ♀ 06'13	29.38002 AU
morning rise	11351 Mar 19 09:05	18° ✕ 35'23		direct	11357 Dec 02 20:22	0° ♀ 42'56	
retrograde	11351 Jun 14 15:03	20° ✕ 27'31		evening set	11358 Mar 02 21:35	2° ♀ 37'43	
opposition	11351 Aug 31 14:24	19° ✕ 05'29	0°48'47				
min. Earth dist.	11351 Sep 01 05:23	19° ✕ 04'28	29.38233 AU	conjunction	11358 Mar 18 16:59	3° ♀ 12'36	0°39'38
direct	11351 Nov 19 22:19	17° ✕ 41'08		minimum elong	11358 Mar 18 16:59	3° ♀ 12'36	0°39'39
evening set	11352 Feb 18 03:43	19° ✕ 36'00		max. Earth dist.	11358 Mar 17 23:46	3° ♀ 11'00	31.37807 AU
max. Earth dist.	11352 Mar 04 08:08	20° ✕ 09'27	31.38381 AU	morning rise	11358 Apr 03 09:46	3° ♀ 47'17	
				retrograde	11358 Jun 29 13:23	5° ♀ 39'19	
conjunction	11352 Mar 05 00:53	20° ✕ 11'00	0°45'18	opposition	11358 Sep 15 16:30	4° ♀ 17'11	0°41'44
minimum elong	11352 Mar 05 00:54	20° ✕ 11'00	0°45'28	min. Earth dist.	11358 Sep 16 08:55	4° ♀ 16'04	29.37677 AU
morning rise	11352 Mar 20 19:45	20° ✕ 45'49		direct	11358 Dec 05 08:14	2° ♀ 52'44	
retrograde	11352 Jun 16 02:50	22° ✕ 37'57		evening set	11359 Mar 05 08:12	4° ♀ 47'29	
opposition	11352 Sep 02 00:44	21° ✕ 15'57	0°47'58	max. Earth dist.	11359 Mar 20 09:08	5° ♀ 20'41	31.37509 AU
min. Earth dist.	11352 Sep 02 15:23	21° ✕ 14'57	29.38553 AU				
direct	11352 Nov 21 09:29	19° ✕ 51'36		conjunction	11359 Mar 21 03:08	5° ♀ 22'21	0°38'30
evening set	11353 Feb 19 14:55	21° ✕ 46'31		minimum elong	11359 Mar 21 03:08	5° ♀ 22'21	0°38'30
				morning rise	11359 Apr 05 19:46	5° ♀ 57'01	
conjunction	11353 Mar 07 11:53	22° ✕ 21'30	0°44'30	retrograde	11359 Jul 01 23:51	7° ♀ 49'03	
minimum elong	11353 Mar 07 11:53	22° ✕ 21'30	0°44'40	opposition	11359 Sep 18 03:09	6° ♀ 26'54	0°40'29
max. Earth dist.	11353 Mar 06 19:29	22° ✕ 19'59	31.38618 AU	min. Earth dist.	11359 Sep 18 19:00	6° ♀ 25'48	29.37420 AU
morning rise	11353 Mar 23 06:15	22° ✕ 56'17		direct	11359 Dec 07 17:55	5° ♀ 02'25	
retrograde	11353 Jun 18 12:20	24° ✕ 48'25		evening set	11360 Mar 06 18:45	6° ♀ 57'10	
opposition	11353 Sep 04 11:27	23° ✕ 26'26	0°47'05				
min. Earth dist.	11353 Sep 05 03:30	23° ✕ 25'20	29.38714 AU	conjunction	11360 Mar 22 13:32	7° ♀ 32'01	0°37'18
direct	11353 Nov 23 20:07	22° ✕ 02'06		minimum elong	11360 Mar 22 13:32	7° ♀ 32'01	0°37'16
evening set	11354 Feb 22 02:00	23° ✕ 57'00		max. Earth dist.	11360 Mar 21 20:50	7° ♀ 30'28	31.37287 AU
				morning rise	11360 Apr 07 05:42	8° ♀ 06'40	
conjunction	11354 Mar 09 22:33	24° ✕ 31'57	0°43'39	retrograde	11360 Jul 03 08:03	9° ♀ 58'44	
minimum elong	11354 Mar 09 22:33	24° ✕ 31'57	0°43'46	opposition	11360 Sep 19 13:50	8° ♀ 36'34	0°39'11
max. Earth dist.	11354 Mar 09 05:21	24° ✕ 30'22	31.38706 AU	min. Earth dist.	11360 Sep 20 06:00	8° ♀ 35'28	29.37237 AU
morning rise	11354 Mar 25 16:41	25° ✕ 06'43		direct	11360 Dec 09 05:06	7° ♀ 12'07	
retrograde	11354 Jun 20 23:52	26° ✕ 58'51		evening set	11361 Mar 09 05:26	9° ♀ 06'52	
opposition	11354 Sep 06 22:01	25° ✕ 36'52	0°46'08				
min. Earth dist.	11354 Sep 07 13:22	25° ✕ 35'48	29.38719 AU	conjunction	11361 Mar 24 23:45	9° ♀ 41'42	0°36'04
direct	11354 Nov 26 09:20	24° ✕ 12'31		minimum elong	11361 Mar 24 23:45	9° ♀ 41'42	0°36'01
evening set	11355 Feb 24 13:03	26° ✕ 07'24		max. Earth dist.	11361 Mar 24 06:22	9° ♀ 40'06	31.37157 AU
				morning rise	11361 Apr 09 15:46	10° ♀ 16'21	
conjunction	11355 Mar 12 09:19	26° ✕ 42'21	0°42'44	retrograde	11361 Jul 05 19:27	12° ♀ 08'28	
minimum elong	11355 Mar 12 09:19	26° ✕ 42'21	0°42'51	opposition	11361 Sep 22 00:34	10° ♀ 46'19	0°37'49
max. Earth dist.	11355 Mar 11 15:50	26° ✕ 40'44	31.38632 AU	min. Earth dist.	11361 Sep 22 15:38	10° ♀ 45'17	29.37138 AU
morning rise	11355 Mar 28 03:05	27° ✕ 17'05		direct	11361 Dec 11 15:23	9° ♀ 21'54	
retrograde	11355 Jun 23 10:42	29° ✕ 09'12		evening set	11362 Mar 11 15:48	11° ♀ 16'41	
opposition	11355 Sep 09 08:36	27° ✕ 47'11	0°45'08				
min. Earth dist.	11355 Sep 10 01:13	27° ✕ 46'03	29.38584 AU	conjunction	11362 Mar 27 09:54	11° ♀ 51'30	0°34'46
direct	11355 Nov 28 20:59	26° ✕ 22'49		minimum elong	11362 Mar 27 09:54	11° ♀ 51'30	0°34'40
evening set	11356 Feb 26 24:00	28° ✕ 17'41		max. Earth dist.	11362 Mar 26 17:31	11° ♀ 49'59	31.37074 AU
				morning rise	11362 Apr 12 01:30	12° ♀ 26'08	
conjunction	11356 Mar 13 20:01	28° ✕ 52'36	0°41'45	retrograde	11362 Jul 08 05:07	14° ♀ 18'19	
minimum elong	11356 Mar 13 20:01	28° ✕ 52'37	0°41'50	opposition	11362 Sep 24 11:30	12° ♀ 56'12	0°36'24
max. Earth dist.	11356 Mar 13 02:30	28° ✕ 50'59	31.38438 AU	min. Earth dist.	11362 Sep 25 03:28	12° ♀ 55'06	29.37064 AU
morning rise	11356 Mar 29 13:29	29° ✕ 27'20		direct	11362 Dec 14 01:19	11° ♀ 31'51	
	11356 Apr 14 05:09	0° ♀		evening set	11363 Mar 14 02:21	13° ♀ 26'39	
retrograde	11356 Jun 24 19:56	1° ♀ 19'24					
	11356 Sep 09 04:46	30° ♂		conjunction	11363 Mar 29 20:05	14° ♀ 01'27	0°33'25
opposition	11356 Sep 10 19:10	29° ✕ 57'22	0°44'03	minimum elong	11363 Mar 29 20:05	14° ♀ 01'27	0°33'19
min. Earth dist.	11356 Sep 11 11:16	29° ✕ 56'15	29.38322 AU	max. Earth dist.	11363 Mar 29 03:32	13° ♀ 59'55	31.37002 AU
direct	11356 Nov 30 10:01	28° ✕ 32'58		morning rise	11363 Apr 14 11:30	14° ♀ 36'05	
	11357 Feb 15 05:00	0° ♀		retrograde	11363 Jul 10 16:48	16° ♀ 28'20	
evening set	11357 Feb 28 10:55	0° ♀ 27'48		opposition	11363 Sep 26 22:13	15° ♀ 06'14	0°34'56
				min. Earth dist.	11363 Sep 27 13:11	15° ♀ 05'13	29.36964 AU
conjunction	11357 Mar 16 06:30	1° ♀ 02'42	0°40'44	direct	11363 Dec 16 13:50	13° ♀ 41'56	
minimum elong	11357 Mar 16 06:30	1° ♀ 02'42	0°40'47	evening set	11364 Mar 15 12:56	15° ♀ 36'47	
max. Earth dist.	11357 Mar 15 12:12	1° ♀ 01'00	31.38135 AU				
morning rise	11357 Mar 31 23:42	1° ♀ 37'24		conjunction	11364 Mar 31 06:21	16° ♀ 11'35	0°32'01
retrograde	11357 Jun 27 05:11	3° ♀ 29'27		minimum elong	11364 Mar 31 06:21	16° ♀ 11'35	0°31'52

max. Earth dist.	11364 Mar 30 13:44	16° Υ 10'03	31.36863 AU	direct	11370 Dec 31 20:32	28° Υ 54'42	
morning rise	11364 Apr 15 21:27	16° Υ 46'12			11371 Mar 07 06:30	0° \mathcal{B}	
retrograde	11364 Jul 12 04:24	18° Υ 38'32		evening set	11371 Mar 31 13:50	0° \mathcal{B} 49'28	
opposition	11364 Sep 28 09:18	17° Υ 16'27	0°33'25				
min. Earth dist.	11364 Sep 29 01:11	17° Υ 15'22	29.36787 AU	conjunction	11371 Apr 16 05:13	1° \mathcal{B} 24'12	0°21'05
direct	11364 Dec 18 01:00	15° Υ 52'12		minimum elong	11371 Apr 16 05:13	1° \mathcal{B} 24'12	0°20'47
evening set	11365 Mar 17 23:25	17° Υ 47'04		max. Earth dist.	11371 Apr 15 13:37	1° \mathcal{B} 22'45	31.32779 AU
				morning rise	11371 May 01 18:28	1° \mathcal{B} 58'47	
conjunction	11365 Apr 02 16:34	18° Υ 21'52	0°30'34	retrograde	11371 Jul 28 00:21	3° \mathcal{B} 51'28	
minimum elong	11365 Apr 02 16:34	18° Υ 21'52	0°30'25	opposition	11371 Oct 14 15:53	2° \mathcal{B} 29'10	0°21'35
max. Earth dist.	11365 Apr 02 00:19	18° Υ 20'21	31.36632 AU	min. Earth dist.	11371 Oct 15 07:09	2° \mathcal{B} 28'08	29.32425 AU
morning rise	11365 Apr 18 07:20	18° Υ 56'29		direct	11372 Jan 03 06:19	1° \mathcal{B} 04'55	
retrograde	11365 Jul 14 14:10	20° Υ 48'52		evening set	11372 Apr 02 00:05	2° \mathcal{B} 59'39	
opposition	11365 Sep 30 20:24	19° Υ 26'48	0°31'50				
min. Earth dist.	11365 Oct 01 11:38	19° Υ 25'46	29.36486 AU	conjunction	11372 Apr 17 15:07	3° \mathcal{B} 34'23	0°19'23
direct	11365 Dec 20 13:47	18° Υ 02'36		minimum elong	11372 Apr 17 15:07	3° \mathcal{B} 34'23	0°19'03
evening set	11366 Mar 20 10:03	19° Υ 57'28		max. Earth dist.	11372 Apr 16 23:53	3° \mathcal{B} 32'58	31.32061 AU
max. Earth dist.	11366 Apr 04 09:41	20° Υ 30'40	31.36267 AU	morning rise	11372 May 03 04:13	4° \mathcal{B} 08'58	
				retrograde	11372 Jul 29 11:50	6° \mathcal{B} 01'42	
conjunction	11366 Apr 05 02:46	20° Υ 32'15	0°29'05	opposition	11372 Oct 16 03:12	4° \mathcal{B} 39'22	0°19'45
minimum elong	11366 Apr 05 02:46	20° Υ 32'15	0°28'53	min. Earth dist.	11372 Oct 16 16:51	4° \mathcal{B} 38'26	29.31749 AU
morning rise	11366 Apr 20 17:21	21° Υ 06'52		direct	11373 Jan 04 19:18	3° \mathcal{B} 15'07	
retrograde	11366 Jul 17 00:31	22° Υ 59'19		evening set	11373 Apr 04 10:12	5° \mathcal{B} 09'51	
opposition	11366 Oct 03 07:36	21° Υ 37'15	0°30'14	max. Earth dist.	11373 Apr 19 10:08	5° \mathcal{B} 43'12	31.31432 AU
min. Earth dist.	11366 Oct 03 23:17	21° Υ 36'11	29.36064 AU				
direct	11366 Dec 23 00:09	20° Υ 13'04		conjunction	11373 Apr 20 00:56	5° \mathcal{B} 44'34	0°17'40
evening set	11367 Mar 22 20:25	22° Υ 07'56		minimum elong	11373 Apr 20 00:56	5° \mathcal{B} 44'34	0°17'19
				morning rise	11373 May 05 13:46	6° \mathcal{B} 19'09	
conjunction	11367 Apr 07 13:01	22° Υ 42'43	0°27'33	retrograde	11373 Jul 31 23:37	8° \mathcal{B} 11'58	
minimum elong	11367 Apr 07 13:01	22° Υ 42'43	0°27'21	opposition	11373 Oct 18 14:44	6° \mathcal{B} 49'36	0°17'54
max. Earth dist.	11367 Apr 06 20:53	22° Υ 41'14	31.35772 AU	min. Earth dist.	11373 Oct 19 04:36	6° \mathcal{B} 48'39	29.31175 AU
morning rise	11367 Apr 23 03:13	23° Υ 17'20		direct	11374 Jan 07 06:02	5° \mathcal{B} 25'24	
retrograde	11367 Jul 19 09:20	25° Υ 09'50		evening set	11374 Apr 06 20:17	7° \mathcal{B} 20'08	
opposition	11367 Oct 05 18:51	23° Υ 47'45	0°28'34				
min. Earth dist.	11367 Oct 06 10:36	23° Υ 46'40	29.35486 AU	conjunction	11374 Apr 22 10:50	7° \mathcal{B} 54'50	0°15'55
direct	11367 Dec 25 12:26	22° Υ 23'34		minimum elong	11374 Apr 22 10:50	7° \mathcal{B} 54'50	0°15'32
evening set	11368 Mar 24 07:03	24° Υ 18'26		behind sun begin	11374 Apr 22 09:03	7° \mathcal{B} 54'41	
				behind sun end	11374 Apr 22 12:37	7° \mathcal{B} 55'00	
conjunction	11368 Apr 08 23:10	24° Υ 53'12	0°25'59	max. Earth dist.	11374 Apr 21 21:08	7° \mathcal{B} 53'34	31.30905 AU
minimum elong	11368 Apr 08 23:10	24° Υ 53'12	0°25'44	morning rise	11374 May 07 23:25	8° \mathcal{B} 29'25	
max. Earth dist.	11368 Apr 08 05:55	24° Υ 51'36	31.35132 AU	retrograde	11374 Aug 03 09:38	10° \mathcal{B} 22'19	
morning rise	11368 Apr 24 13:16	25° Υ 27'48		opposition	11374 Oct 21 02:08	8° \mathcal{B} 59'58	0°16'01
retrograde	11368 Jul 20 20:13	27° Υ 20'21		min. Earth dist.	11374 Oct 21 14:52	8° \mathcal{B} 59'06	29.30667 AU
opposition	11368 Oct 07 05:59	25° Υ 58'14	0°26'53	direct	11375 Jan 09 18:26	7° \mathcal{B} 35'48	
min. Earth dist.	11368 Oct 07 21:23	25° Υ 57'11	29.34789 AU	evening set	11375 Apr 09 06:27	9° \mathcal{B} 30'32	
direct	11368 Dec 26 22:46	24° Υ 34'02					
evening set	11369 Mar 26 17:24	26° Υ 28'52		conjunction	11375 Apr 24 20:38	10° \mathcal{B} 05'15	0°14'09
				minimum elong	11375 Apr 24 20:38	10° \mathcal{B} 05'15	0°13'45
conjunction	11369 Apr 11 09:24	27° Υ 03'38	0°24'23	behind sun begin	11375 Apr 24 17:09	10° \mathcal{B} 04'56	
minimum elong	11369 Apr 11 09:24	27° Υ 03'38	0°24'08	behind sun end	11375 Apr 25 00:08	10° \mathcal{B} 05'34	
max. Earth dist.	11369 Apr 10 17:17	27° Υ 02'08	31.34382 AU	max. Earth dist.	11375 Apr 24 06:34	10° \mathcal{B} 03'57	31.30417 AU
morning rise	11369 Apr 26 23:05	27° Υ 38'14		morning rise	11375 May 10 09:09	10° \mathcal{B} 39'50	
retrograde	11369 Jul 23 04:06	29° Υ 30'49		retrograde	11375 Aug 05 21:10	12° \mathcal{B} 32'50	
opposition	11369 Oct 09 17:22	28° Υ 08'38	0°25'09	opposition	11375 Oct 23 13:44	11° \mathcal{B} 10'28	0°14'06
min. Earth dist.	11369 Oct 10 09:15	28° Υ 07'33	29.33997 AU	min. Earth dist.	11375 Oct 24 02:27	11° \mathcal{B} 09'36	29.30187 AU
direct	11369 Dec 29 10:16	26° Υ 44'26		direct	11376 Jan 12 05:16	9° \mathcal{B} 46'21	
evening set	11370 Mar 29 03:39	28° Υ 39'13		evening set	11376 Apr 10 16:36	11° \mathcal{B} 41'07	
conjunction	11370 Apr 13 19:12	29° Υ 13'58	0°22'45	conjunction	11376 Apr 26 06:40	12° \mathcal{B} 15'49	0°12'21
minimum elong	11370 Apr 13 19:13	29° Υ 13'58	0°22'27	minimum elong	11376 Apr 26 06:40	12° \mathcal{B} 15'49	0°11'55
max. Earth dist.	11370 Apr 13 02:33	29° Υ 12'25	31.33580 AU	behind sun begin	11376 Apr 26 02:10	12° \mathcal{B} 15'25	
morning rise	11370 Apr 29 08:49	29° Υ 48'33		behind sun end	11376 Apr 26 11:10	12° \mathcal{B} 16'13	
retrograde	11370 May 04 16:00	0° \mathcal{B}		max. Earth dist.	11376 Apr 25 18:00	12° \mathcal{B} 14'39	31.29921 AU
opposition	11370 Jul 25 14:57	0° \mathcal{B} 41'11		morning rise	11376 May 11 18:49	12° \mathcal{B} 50'24	
min. Earth dist.	11370 Oct 12 04:36	0° \mathcal{B} 18'57	0°23'23	retrograde	11376 Aug 07 06:56	14° \mathcal{B} 43'30	
				opposition	11376 Oct 25 01:24	13° \mathcal{B} 21'09	0°12'09
retrograde	11370 Oct 12 19:16	0° \mathcal{B} 17'57	29.33191 AU	min. Earth dist.	11376 Oct 25 13:56	13° \mathcal{B} 20'17	29.29660 AU
min. Earth dist.	11370 Oct 23 20:47	30° \mathcal{R} Υ					

direct	11377 Jan 13 18:07	11° 8 57'05		minimum elong	11382 May 09 18:46	25° 8 21'44	0°00'41
evening set	11377 Apr 13 02:58	13° 8 51'51		behind sun begin	11382 May 09 12:21	25° 8 21'10	
				behind sun end	11382 May 10 01:11	25° 8 22'18	
conjunction	11377 Apr 28 16:35	14° 8 26'33	0°10'32	max. Earth dist.	11382 May 09 06:48	25° 8 20'37	31.24829 AU
minimum elong	11377 Apr 28 16:35	14° 8 26'33	0°10'06	morning rise	11382 May 25 06:03	25° 8 56'21	
behind sun begin	11377 Apr 28 11:23	14° 8 26'05		retrograde	11382 Aug 21 00:34	27° 8 50'02	
behind sun end	11377 Apr 28 21:47	14° 8 27'01		opposition	11382 Nov 08 01:12	26° 8 27'26	0°00'15
max. Earth dist.	11377 Apr 28 03:11	14° 8 25'18	31.29370 AU	min. Earth dist.	11382 Nov 08 12:32	26° 8 26'40	29.24249 AU
	11377 May 13 16:13	15° 8		desc. node	11382 Dec 23 21:20	25° 8 22'03	
morning rise	11377 May 14 04:42	15° 8 01'08		direct	11383 Jan 27 12:32	25° 8 03'25	
retrograde	11377 Aug 09 18:32	16° 8 54'21		evening set	11383 Apr 26 16:18	26° 8 58'07	
opposition	11377 Oct 27 13:13	15° 8 31'59	0°10'12				
min. Earth dist.	11377 Oct 28 01:03	15° 8 31'10	29.29072 AU	conjunction	11383 May 12 04:45	27° 8 32'49	-0°00'43
	11377 Nov 16 15:13	15° 8		minimum elong	11383 May 12 04:45	27° 8 32'49	0°01'16
direct	11378 Jan 16 04:37	14° 8 07'57		behind sun begin	11383 May 11 22:19	27° 8 32'14	
	11378 Mar 14 21:28	15° 8		behind sun end	11383 May 12 11:10	27° 8 33'23	
evening set	11378 Apr 15 13:04	16° 8 02'43		max. Earth dist.	11383 May 11 17:57	27° 8 31'49	31.23654 AU
				morning rise	11383 May 27 15:51	28° 8 07'26	
conjunction	11378 May 01 02:37	16° 8 37'26	0°08'42		11383 Aug 15 00:37	0° II	
minimum elong	11378 May 01 02:36	16° 8 37'26	0°08'14	retrograde	11383 Aug 23 10:54	0° II 01'11	
behind sun begin	11378 Apr 30 20:53	16° 8 36'55			11383 Aug 31 21:10	30° 8	
behind sun end	11378 May 01 08:19	16° 8 37'56		opposition	11383 Nov 10 13:16	28° 8 38'32	-0°01'45
max. Earth dist.	11378 Apr 30 14:24	16° 8 36'18	31.28721 AU	min. Earth dist.	11383 Nov 10 23:21	28° 8 37'51	29.23072 AU
morning rise	11378 May 16 14:23	17° 8 12'01		direct	11384 Jan 30 01:23	27° 8 14'31	
retrograde	11378 Aug 12 03:14	19° 8 05'20		evening set	11384 Apr 28 02:29	29° 8 09'11	
opposition	11378 Oct 30 01:12	17° 8 42'57	0°08'14				
min. Earth dist.	11378 Oct 30 13:32	17° 8 42'07	29.28362 AU	conjunction	11384 May 13 14:33	29° 8 43'53	-0°02'37
direct	11379 Jan 18 16:08	16° 8 18'58		minimum elong	11384 May 13 14:33	29° 8 43'53	0°03'12
evening set	11379 Apr 17 23:28	18° 8 13'43		behind sun begin	11384 May 13 08:09	29° 8 43'18	
				behind sun end	11384 May 13 20:57	29° 8 44'27	
conjunction	11379 May 03 12:38	18° 8 48'26	0°06'52	max. Earth dist.	11384 May 13 03:34	29° 8 42'52	31.22501 AU
minimum elong	11379 May 03 12:38	18° 8 48'26	0°06'23		11384 May 20 18:07	0° II	
behind sun begin	11379 May 03 06:33	18° 8 47'53		morning rise	11384 May 29 01:38	0° II 18'30	
behind sun end	11379 May 03 18:43	18° 8 48'58		retrograde	11384 Aug 24 23:02	2° II 12'22	
max. Earth dist.	11379 May 02 23:45	18° 8 47'14	31.27952 AU	opposition	11384 Nov 12 01:26	0° II 49'39	-0°03'45
morning rise	11379 May 19 00:23	19° 8 23'02		min. Earth dist.	11384 Nov 12 11:04	0° II 48'59	29.21969 AU
retrograde	11379 Aug 14 14:43	21° 8 16'26			11384 Dec 14 13:36	30° 8	
opposition	11379 Nov 01 12:56	19° 8 54'01	0°06'15	direct	11385 Jan 31 12:48	29° 8 25'38	
min. Earth dist.	11379 Nov 02 00:15	19° 8 53'15	29.27519 AU		11385 Mar 18 19:43	0° II	
direct	11380 Jan 21 02:37	18° 8 30'03		evening set	11385 Apr 30 12:32	1° II 20'18	
evening set	11380 Apr 19 09:48	20° 8 24'48					
				conjunction	11385 May 16 00:34	1° II 55'01	-0°04'28
conjunction	11380 May 04 22:48	20° 8 59'31	0°05'01	minimum elong	11385 May 16 00:34	1° II 55'01	0°05'03
minimum elong	11380 May 04 22:49	20° 8 59'31	0°04'30	behind sun begin	11385 May 15 18:19	1° II 54'27	
behind sun begin	11380 May 04 16:30	20° 8 58'57		behind sun end	11385 May 16 06:49	1° II 55'34	
behind sun end	11380 May 05 05:08	21° 8 00'05		max. Earth dist.	11385 May 15 15:26	1° II 54'10	31.21442 AU
max. Earth dist.	11380 May 04 10:32	20° 8 58'22	31.27030 AU	morning rise	11385 May 31 11:22	2° II 29'38	
morning rise	11380 May 20 10:18	21° 8 34'07		retrograde	11385 Aug 27 09:37	4° II 23'37	
retrograde	11380 Aug 16 00:52	23° 8 27'37		opposition	11385 Nov 14 13:42	3° II 00'52	-0°05'44
opposition	11380 Nov 03 01:06	22° 8 05'10	0°04'15	min. Earth dist.	11385 Nov 14 22:36	3° II 00'15	29.20954 AU
min. Earth dist.	11380 Nov 03 13:18	22° 8 04'20	29.26529 AU	direct	11386 Feb 03 02:06	1° II 36'53	
direct	11381 Jan 22 12:56	20° 8 41'11		evening set	11386 May 02 22:36	3° II 31'33	
evening set	11381 Apr 21 20:01	22° 8 35'56					
				conjunction	11386 May 18 10:18	4° II 06'15	-0°06'20
conjunction	11381 May 07 08:47	23° 8 10'37	0°03'08	minimum elong	11386 May 18 10:18	4° II 06'15	0°06'56
minimum elong	11381 May 07 08:47	23° 8 10'37	0°02'37	behind sun begin	11386 May 18 04:20	4° II 05'43	
behind sun begin	11381 May 07 02:22	23° 8 10'03		behind sun end	11386 May 18 16:16	4° II 06'48	
behind sun end	11381 May 07 15:12	23° 8 11'12		max. Earth dist.	11386 May 18 00:56	4° II 05'24	31.20482 AU
max. Earth dist.	11381 May 06 20:44	23° 8 09'30	31.25983 AU	morning rise	11386 Jun 02 21:12	4° II 40'54	
morning rise	11381 May 22 20:10	23° 8 45'14		retrograde	11386 Aug 29 21:34	6° II 35'01	
retrograde	11381 Aug 18 12:32	25° 8 38'49		opposition	11386 Nov 17 01:54	5° II 12'14	-0°07'43
opposition	11381 Nov 05 13:08	24° 8 16'19	0°02'15	min. Earth dist.	11386 Nov 17 09:37	5° II 11'42	29.20035 AU
min. Earth dist.	11381 Nov 06 00:01	24° 8 15'34	29.25418 AU	direct	11387 Feb 05 12:47	3° II 48'18	
direct	11382 Jan 25 01:50	22° 8 52'19		evening set	11387 May 05 08:40	5° II 42'59	
evening set	11382 Apr 24 06:14	24° 8 47'02					
				conjunction	11387 May 20 20:21	6° II 17'42	-0°08'10
conjunction	11382 May 09 18:46	25° 8 21'44	0°01'14	minimum elong	11387 May 20 20:21	6° II 17'42	0°08'47

behind sun begin	11387 May 20 14:47	6°II17'12		conjunction	11393 Jun 02 09:21	19°II30'11	-0°18'58
behind sun end	11387 May 21 01:56	6°II18'12		minimum elong	11393 Jun 02 09:21	19°II30'11	0°19'38
max. Earth dist.	11387 May 20 12:34	6°II16'59	31.19586 AU	max. Earth dist.	11393 Jun 02 03:10	19°II29'36	31.13453 AU
morning rise	11387 Jun 05 07:00	6°II52'21		morning rise	11393 Jun 17 19:50	20°II04'55	
retrograde	11387 Sep 01 06:28	8°II46'35		retrograde	11393 Sep 14 06:21	21°II59'55	
opposition	11387 Nov 19 14:09	7°II23'48	-0°09'42	opposition	11393 Dec 02 17:51	20°II36'53	-0°21'12
min. Earth dist.	11387 Nov 19 21:59	7°II23'16	29.19157 AU	min. Earth dist.	11393 Dec 02 22:54	20°II36'33	29.12777 AU
direct	11388 Feb 08 00:33	5°II59'55		direct	11394 Feb 20 20:06	19°II13'06	
evening set	11388 May 06 18:55	7°II54'37		evening set	11394 May 20 08:53	21°II07'45	
conjunction	11388 May 22 06:20	8°II29'21	-0°10'01	conjunction	11394 Jun 04 19:40	21°II42'31	-0°20'41
minimum elong	11388 May 22 06:20	8°II29'21	0°10'39	minimum elong	11394 Jun 04 19:40	21°II42'31	0°21'23
behind sun begin	11388 May 22 01:20	8°II28'53		max. Earth dist.	11394 Jun 04 15:02	21°II42'05	31.12062 AU
behind sun end	11388 May 22 11:20	8°II29'48		morning rise	11394 Jun 20 06:00	22°II17'16	
max. Earth dist.	11388 May 21 22:26	8°II28'37	31.18728 AU	retrograde	11394 Sep 16 17:33	24°II12'21	
morning rise	11388 Jun 06 17:01	9°II04'01		opposition	11394 Dec 05 06:36	22°II49'13	-0°23'02
retrograde	11388 Sep 02 18:40	10°II58'23		min. Earth dist.	11394 Dec 05 11:16	22°II48'54	29.11339 AU
opposition	11388 Nov 21 02:31	9°II35'36	-0°11'40	direct	11395 Feb 23 09:59	21°II25'23	
min. Earth dist.	11388 Nov 21 08:52	9°II35'10	29.18295 AU	evening set	11395 May 22 19:19	23°II20'00	
direct	11389 Feb 09 11:08	8°II11'46		conjunction	11395 Jun 07 05:51	23°II54'46	-0°22'22
evening set	11389 May 09 05:02	10°II06'28		minimum elong	11395 Jun 07 05:51	23°II54'46	0°23'03
conjunction	11389 May 24 16:20	10°II41'12	-0°11'50	max. Earth dist.	11395 Jun 07 00:47	23°II54'17	31.10611 AU
minimum elong	11389 May 24 16:20	10°II41'12	0°12'28	morning rise	11395 Jun 22 16:22	24°II29'32	
behind sun begin	11389 May 24 12:06	10°II40'49		retrograde	11395 Sep 19 05:46	26°II24'42	
behind sun end	11389 May 24 20:34	10°II41'35		opposition	11395 Dec 07 19:12	25°II01'27	-0°24'49
max. Earth dist.	11389 May 24 09:25	10°II40'34	31.17847 AU	min. Earth dist.	11395 Dec 07 22:51	25°II01'12	29.09893 AU
morning rise	11389 Jun 09 02:52	11°II15'54		direct	11396 Feb 25 21:22	23°II37'35	
retrograde	11389 Sep 05 05:09	13°II10'25		evening set	11396 May 24 05:33	25°II32'10	
opposition	11389 Nov 23 15:10	11°II47'36	-0°13'37	conjunction	11396 Jun 08 16:08	26°II06'56	-0°24'01
min. Earth dist.	11389 Nov 23 22:06	11°II47'08	29.17397 AU	minimum elong	11396 Jun 08 16:08	26°II06'56	0°24'44
direct	11390 Feb 11 21:26	10°II23'49		max. Earth dist.	11396 Jun 08 12:43	26°II06'36	31.09176 AU
evening set	11390 May 11 15:21	12°II18'31		morning rise	11396 Jun 24 02:30	26°II41'43	
conjunction	11390 May 27 02:31	12°II53'15	-0°13'39	retrograde	11396 Sep 20 15:41	28°II36'58	
minimum elong	11390 May 27 02:30	12°II53'15	0°14'19	opposition	11396 Dec 09 08:05	27°II13'38	-0°26'34
behind sun begin	11390 May 26 23:24	12°II52'58		min. Earth dist.	11396 Dec 09 11:32	27°II13'24	29.08496 AU
behind sun end	11390 May 27 05:37	12°II53'32		direct	11397 Feb 27 10:26	25°II49'44	
max. Earth dist.	11390 May 26 20:05	12°II52'40	31.16922 AU	evening set	11397 May 26 15:46	27°II44'17	
morning rise	11390 Jun 11 13:01	13°II27'58		conjunction	11397 Jun 11 02:11	28°II19'03	-0°25'38
retrograde	11390 Sep 07 17:01	15°II22'37		minimum elong	11397 Jun 11 02:11	28°II19'03	0°26'20
opposition	11390 Nov 26 03:34	13°II59'47	-0°15'33	max. Earth dist.	11397 Jun 10 23:03	28°II18'46	31.07837 AU
min. Earth dist.	11390 Nov 26 09:10	13°II59'24	29.16424 AU	morning rise	11397 Jun 26 12:41	28°II53'51	
direct	11391 Feb 14 09:31	12°II36'01		retrograde	11397 Jul 29 18:08	0°☾	
evening set	11391 May 14 01:47	14°II30'44		retrograde	11397 Sep 23 04:19	0°☾49'13	
conjunction	11391 May 29 12:45	15°II05'29	-0°15'27		11397 Nov 20 08:33	30°☾II	
minimum elong	11391 May 29 12:45	15°II05'29	0°16'06	opposition	11397 Dec 11 20:51	29°II25'49	-0°28'17
behind sun begin	11391 May 29 12:04	15°II05'25		min. Earth dist.	11397 Dec 11 22:25	29°II25'42	29.07215 AU
behind sun end	11391 May 29 13:26	15°II05'32		direct	11398 Mar 01 22:11	28°II01'55	
max. Earth dist.	11391 May 29 06:13	15°II04'53	31.15890 AU	evening set	11398 May 29 02:04	29°II56'26	
morning rise	11391 Jun 13 23:15	15°II40'12			11398 May 30 16:32	0°☾	
retrograde	11391 Sep 10 05:30	17°II34'59		conjunction	11398 Jun 13 12:29	0°☾31'14	-0°27'13
opposition	11391 Nov 28 16:19	16°II12'06	-0°17'28	minimum elong	11398 Jun 13 12:29	0°☾31'14	0°27'56
min. Earth dist.	11391 Nov 28 22:26	16°II11'41	29.15341 AU	max. Earth dist.	11398 Jun 13 10:31	0°☾31'03	31.06606 AU
direct	11392 Feb 16 19:15	14°II48'20		morning rise	11398 Jun 28 22:58	1°☾06'03	
evening set	11392 May 15 12:08	16°II43'04		retrograde	11398 Sep 25 14:40	3°☾01'32	
conjunction	11392 May 30 23:04	17°II17'48	-0°17'13	opposition	11398 Dec 14 09:36	1°☾38'05	-0°29'58
minimum elong	11392 May 30 23:04	17°II17'48	0°17'54	min. Earth dist.	11398 Dec 14 11:24	1°☾37'58	29.06050 AU
max. Earth dist.	11392 May 30 17:32	17°II17'18	31.14740 AU	direct	11399 Mar 04 08:57	0°☾14'12	
morning rise	11392 Jun 15 09:25	17°II52'32		evening set	11399 May 31 12:23	2°☾08'44	
retrograde	11392 Sep 11 16:52	19°II47'26		conjunction	11399 Jun 15 22:48	2°☾43'32	-0°28'46
opposition	11392 Nov 30 05:03	18°II24'30	-0°19'21	minimum elong	11399 Jun 15 22:48	2°☾43'32	0°29'28
min. Earth dist.	11392 Nov 30 10:09	18°II24'09	29.14115 AU	max. Earth dist.	11399 Jun 15 21:48	2°☾43'26	31.05503 AU
direct	11393 Feb 18 08:19	17°II00'44		morning rise	11399 Jul 01 09:21	3°☾18'22	
evening set	11393 May 17 22:41	18°II55'26					

retrograde	11399 Sep 28 02:31	5°  14'00	minimum elong	11406 Jul 02 01:00	18°  15'43	0°39'01
opposition	11399 Dec 16 22:23	3°  50'31 -0°31'36	max. Earth dist.	11406 Jul 02 03:28	18°  15'57	30.98159 AU
min. Earth dist.	11399 Dec 16 22:21	3°  50'31 29.04988 AU	morning rise	11406 Jul 17 12:18	18°  50'43	
direct	11400 Mar 06 20:41	2°  26'40	retrograde	11406 Oct 14 21:40	20°  24'19	
evening set	11400 Jun 02 22:45	4°  21'13	opposition	11407 Jan 02 18:02	19°  23'34	-0°41'38
			min. Earth dist.	11407 Jan 02 14:21	19°  23'49	28.97518 AU
conjunction	11400 Jun 18 09:02	4°  56'02 -0°30'17	direct	11407 Mar 23 08:08	17°  25'52	
minimum elong	11400 Jun 18 09:01	4°  56'02 0°31'00	evening set	11407 Jun 19 01:23	19°  25'42	
max. Earth dist.	11400 Jun 18 08:24	4°  55'58 31.04478 AU				
morning rise	11400 Jul 03 19:41	5°  30'53	conjunction	11407 Jul 04 11:54	20°  29'23	-0°39'29
retrograde	11400 Sep 30 15:03	7°  26'41	minimum elong	11407 Jul 04 11:53	20°  29'23	0°40'10
opposition	11400 Dec 19 11:26	6°  03'10 -0°33'11	max. Earth dist.	11407 Jul 04 15:06	20°  29'41	30.96842 AU
min. Earth dist.	11400 Dec 19 11:29	6°  03'10 29.04004 AU	morning rise	11407 Jul 19 23:18	21°  20'42	
direct	11401 Mar 09 05:56	4°  23'22	retrograde	11407 Oct 17 07:53	23°  20'05	
evening set	11401 Jun 05 09:07	6°  23'56	opposition	11408 Jan 05 07:19	21°  23'15	-0°42'50
			min. Earth dist.	11408 Jan 05 04:08	21°  23'28	28.96199 AU
conjunction	11401 Jun 20 19:31	7°  28'45 -0°31'45	direct	11408 Mar 24 20:00	20°  23'32	
minimum elong	11401 Jun 20 19:31	7°  28'45 0°32'27	evening set	11408 Jun 20 12:01	22°  23'04	
max. Earth dist.	11401 Jun 20 20:23	7°  28'50 31.03521 AU				
morning rise	11401 Jul 06 06:09	7°  24'39	conjunction	11408 Jul 05 22:37	22°  23'00	-0°40'35
retrograde	11401 Oct 03 03:15	9°  23'35	minimum elong	11408 Jul 05 22:37	22°  23'00	0°41'16
opposition	11401 Dec 22 00:21	8°  21'04 -0°34'44	max. Earth dist.	11408 Jul 06 02:48	22°  23'23	30.95541 AU
min. Earth dist.	11401 Dec 21 23:04	8°  21'09 29.03056 AU	morning rise	11408 Jul 21 10:10	23°  23'02	
direct	11402 Mar 11 18:21	6°  25'18	retrograde	11408 Oct 18 19:22	25°  23'48	
evening set	11402 Jun 07 19:41	8°  24'54	opposition	11409 Jan 06 20:27	23°  25'52	-0°43'59
			min. Earth dist.	11409 Jan 06 15:29	23°  25'13	28.94925 AU
conjunction	11402 Jun 23 05:55	9°  21'45 -0°33'10	direct	11409 Mar 27 08:31	22°  27'07	
minimum elong	11402 Jun 23 05:55	9°  21'45 0°33'53	evening set	11409 Jun 22 22:50	24°  27'37	
max. Earth dist.	11402 Jun 23 06:26	9°  21'47 31.02576 AU				
morning rise	11402 Jul 08 16:48	9°  26'39	conjunction	11409 Jul 08 09:25	24°  26'34	-0°41'37
retrograde	11402 Oct 05 17:46	11°  25'45	minimum elong	11409 Jul 08 09:25	24°  26'34	0°42'17
opposition	11402 Dec 24 13:26	10°  29'13 -0°36'13	max. Earth dist.	11409 Jul 08 13:54	24°  26'59	30.94306 AU
min. Earth dist.	11402 Dec 24 11:59	10°  29'19 29.02108 AU	morning rise	11409 Jul 23 21:12	25°  23'37	
direct	11403 Mar 14 05:18	9°  25'30	retrograde	11409 Oct 21 07:32	27°  28'30	
evening set	11403 Jun 10 06:15	11°  20'07	opposition	11410 Jan 09 09:38	26°  24'28	-0°45'03
			min. Earth dist.	11410 Jan 09 04:44	26°  24'48	28.93761 AU
conjunction	11403 Jun 25 16:39	11°  24'59 -0°34'32	direct	11410 Mar 29 18:10	24°  24'42	
minimum elong	11403 Jun 25 16:39	11°  24'59 0°35'13	evening set	11410 Jun 25 09:30	26°  25'10	
max. Earth dist.	11403 Jun 25 18:44	11°  25'11 31.01597 AU				
morning rise	11403 Jul 11 03:26	12°  20'55	conjunction	11410 Jul 10 20:21	27°  21'07	-0°42'35
retrograde	11403 Oct 08 06:07	14°  20'09	minimum elong	11410 Jul 10 20:21	27°  21'07	0°43'16
opposition	11403 Dec 27 02:30	12°  24'36 -0°37'40	max. Earth dist.	11410 Jul 11 02:26	27°  21'42	30.93205 AU
min. Earth dist.	11403 Dec 27 00:40	12°  24'43 29.01093 AU	morning rise	11410 Jul 26 08:13	27°  24'13	
direct	11404 Mar 15 18:24	11°  21'55	retrograde	11410 Oct 23 19:22	29°  24'10	
evening set	11404 Jun 11 17:05	13°  21'34	opposition	11411 Jan 11 22:40	28°  24'05	-0°46'04
			min. Earth dist.	11411 Jan 11 16:10	28°  24'32	28.92719 AU
conjunction	11404 Jun 27 03:20	13°  28'26 -0°35'51	direct	11411 Apr 01 07:08	26°  25'18	
minimum elong	11404 Jun 27 03:20	13°  28'26 0°36'33	evening set	11411 Jun 27 20:21	28°  25'46	
max. Earth dist.	11404 Jun 27 04:50	13°  28'34 31.00550 AU				
morning rise	11404 Jul 12 14:22	14°  23'23	conjunction	11411 Jul 13 07:08	29°  23'44	-0°43'30
retrograde	11404 Oct 09 19:54	16°  21'46	minimum elong	11411 Jul 13 07:08	29°  23'44	0°44'09
opposition	11404 Dec 28 15:44	14°  25'10 -0°39'02	max. Earth dist.	11411 Jul 13 13:03	29°  24'18	30.92229 AU
min. Earth dist.	11404 Dec 28 13:06	14°  25'21 29.00006 AU	morning rise	11411 Jul 28 19:19	29°  25'51	
direct	11405 Mar 18 05:32	13°  23'30		11411 Jul 29 07:46	0°  23'00	
evening set	11405 Jun 14 03:44	15°  22'09	retrograde	11411 Oct 26 09:03	1°  22'55	
			opposition	11412 Jan 14 11:49	0°  22'47	-0°47'01
conjunction	11405 Jun 29 14:09	16°  20'02 -0°37'07	min. Earth dist.	11412 Jan 14 04:53	0°  22'16	28.91818 AU
minimum elong	11405 Jun 29 14:09	16°  20'02 0°37'48		11412 Feb 03 06:04	30°  22'00	
max. Earth dist.	11405 Jun 29 16:51	16°  20'18 30.99400 AU	direct	11412 Apr 02 17:17	29°  20'01	
morning rise	11405 Jul 15 01:11	16°  23'01		11412 May 29 07:05	0°  22'00	
retrograde	11405 Oct 12 07:36	18°  23'31	evening set	11412 Jun 29 07:08	1°  22'28	
opposition	11405 Dec 31 05:03	17°  20'51 -0°40'22				
min. Earth dist.	11405 Dec 31 02:39	17°  21'01 28.98802 AU	conjunction	11412 Jul 14 18:12	1°  23'28	-0°44'21
direct	11406 Mar 20 19:26	15°  24'12	minimum elong	11412 Jul 14 18:12	1°  23'28	0°45'00
evening set	11406 Jun 16 14:35	17°  24'48	max. Earth dist.	11412 Jul 15 02:03	1°  23'13	30.91387 AU
			morning rise	11412 Jul 30 06:26	2°  22'35	
conjunction	11406 Jul 02 01:00	18°  21'43 -0°38'19	retrograde	11412 Oct 27 21:17	4°  22'09	

opposition	11413 Jan 16 01:03	2°Ω45'37 -0°47'53			11419 May 15 02:24	15°Ω	
min. Earth dist.	11413 Jan 15 17:18	2°Ω46'09 28.91027 AU	evening set		11419 Jul 15 13:43	16°Ω43'03	
direct	11413 Apr 05 05:27	1°Ω21'52					
evening set	11413 Jul 01 18:02	3°Ω16'20	conjunction		11419 Jul 31 02:02	17°Ω18'11 -0°48'21	
			minimum elong		11419 Jul 31 02:02	17°Ω18'11 0°48'52	
conjunction	11413 Jul 17 05:07	3°Ω51'20 -0°45'08	max. Earth dist.		11419 Jul 31 12:47	17°Ω19'12 30.86024 AU	
minimum elong	11413 Jul 17 05:07	3°Ω51'20 0°45'45	morning rise		11419 Aug 15 16:02	17°Ω53'30	
max. Earth dist.	11413 Jul 17 12:46	3°Ω52'03 30.90652 AU	retrograde		11419 Nov 13 17:54	19°Ω51'24	
morning rise	11413 Aug 01 17:45	4°Ω26'29	opposition		11420 Feb 01 22:20	18°Ω26'59 -0°51'53	
retrograde	11413 Oct 30 11:56	6°Ω23'48	min. Earth dist.		11420 Feb 01 11:35	18°Ω27'43 28.85545 AU	
opposition	11414 Jan 18 14:17	4°Ω59'36 -0°48'41	direct		11420 Apr 20 19:15	17°Ω03'20	
min. Earth dist.	11414 Jan 18 05:35	5°Ω00'12 28.90333 AU	evening set		11420 Jul 17 01:13	18°Ω57'45	
direct	11414 Apr 07 16:27	3°Ω35'53					
evening set	11414 Jul 04 05:02	5°Ω30'22	conjunction		11420 Aug 01 13:36	19°Ω32'54 -0°48'38	
			minimum elong		11420 Aug 01 13:36	19°Ω32'54 0°49'09	
conjunction	11414 Jul 19 16:23	6°Ω05'23 -0°45'51	max. Earth dist.		11420 Aug 01 23:48	19°Ω33'52 30.85023 AU	
minimum elong	11414 Jul 19 16:23	6°Ω05'23 0°46'28	morning rise		11420 Aug 17 04:04	20°Ω08'15	
max. Earth dist.	11414 Jul 20 01:28	6°Ω06'15 30.89974 AU	retrograde		11420 Nov 15 07:13	22°Ω06'13	
morning rise	11414 Aug 04 05:08	6°Ω40'34	opposition		11421 Feb 03 11:42	20°Ω41'43 -0°52'09	
retrograde	11414 Nov 02 00:55	8°Ω37'59	min. Earth dist.		11421 Feb 03 00:56	20°Ω42'28 28.84564 AU	
opposition	11415 Jan 21 03:28	7°Ω13'47 -0°49'24	direct		11421 Apr 23 05:31	19°Ω18'02	
min. Earth dist.	11415 Jan 20 18:54	7°Ω14'22 28.89669 AU	evening set		11421 Jul 19 12:28	21°Ω12'25	
direct	11415 Apr 10 05:46	5°Ω50'07					
evening set	11415 Jul 06 16:16	7°Ω44'36	conjunction		11421 Aug 04 01:17	21°Ω47'36 -0°48'51	
			minimum elong		11421 Aug 04 01:17	21°Ω47'36 0°49'20	
conjunction	11415 Jul 22 03:42	8°Ω19'39 -0°46'29	max. Earth dist.		11421 Aug 04 13:11	21°Ω48'44 30.84061 AU	
minimum elong	11415 Jul 22 03:42	8°Ω19'39 0°47'05	morning rise		11421 Aug 19 15:54	22°Ω22'58	
max. Earth dist.	11415 Jul 22 12:40	8°Ω20'30 30.89322 AU	retrograde		11421 Nov 17 19:13	24°Ω21'00	
morning rise	11415 Aug 06 16:45	8°Ω54'51	opposition		11422 Feb 06 00:54	22°Ω56'26 -0°52'20	
retrograde	11415 Nov 04 15:53	10°Ω52'23	min. Earth dist.		11422 Feb 05 13:29	22°Ω57'13 28.83635 AU	
opposition	11416 Jan 23 16:46	9°Ω28'10 -0°50'04	direct		11422 Apr 25 17:38	21°Ω32'43	
min. Earth dist.	11416 Jan 23 06:55	9°Ω28'50 28.89007 AU	evening set		11422 Jul 22 00:02	23°Ω27'06	
direct	11416 Apr 11 18:11	8°Ω04'31					
evening set	11416 Jul 08 03:28	9°Ω59'01	conjunction		11422 Aug 06 12:56	24°Ω02'17 -0°48'59	
			minimum elong		11422 Aug 06 12:56	24°Ω02'17 0°49'27	
conjunction	11416 Jul 23 15:03	10°Ω34'06 -0°47'04	max. Earth dist.		11422 Aug 07 00:26	24°Ω03'22 30.83186 AU	
minimum elong	11416 Jul 23 15:03	10°Ω34'06 0°47'39	morning rise		11422 Aug 22 04:00	24°Ω37'40	
max. Earth dist.	11416 Jul 24 00:40	10°Ω35'00 30.88626 AU	retrograde		11422 Nov 20 09:44	26°Ω35'46	
morning rise	11416 Aug 08 04:19	11°Ω09'20	opposition		11423 Feb 08 13:58	25°Ω11'08 -0°52'27	
retrograde	11416 Nov 06 03:51	13°Ω06'59	min. Earth dist.		11423 Feb 08 01:45	25°Ω11'59 28.82825 AU	
opposition	11417 Jan 25 06:19	11°Ω42'44 -0°50'38	direct		11423 Apr 28 04:45	23°Ω47'25	
min. Earth dist.	11417 Jan 24 21:10	11°Ω43'22 28.88283 AU	evening set		11423 Jul 24 11:28	25°Ω41'47	
direct	11417 Apr 14 06:11	10°Ω19'08					
evening set	11417 Jul 10 14:52	12°Ω13'37	conjunction		11423 Aug 09 00:43	26°Ω17'00 -0°49'03	
			minimum elong		11423 Aug 09 00:44	26°Ω17'00 0°49'29	
conjunction	11417 Jul 26 02:43	12°Ω48'43 -0°47'34	max. Earth dist.		11423 Aug 09 13:45	26°Ω18'14 30.82429 AU	
minimum elong	11417 Jul 26 02:43	12°Ω48'43 0°48'08	morning rise		11423 Aug 24 15:58	26°Ω52'25	
max. Earth dist.	11417 Jul 26 12:45	12°Ω49'40 30.87863 AU	retrograde		11423 Nov 22 23:02	28°Ω50'35	
morning rise	11417 Aug 10 16:12	13°Ω23'59	opposition		11424 Feb 11 03:12	27°Ω25'55 -0°52'28	
	11417 Oct 03 05:32	15°Ω	min. Earth dist.		11424 Feb 10 14:50	27°Ω26'46 28.82136 AU	
retrograde	11417 Nov 08 17:11	15°Ω21'43	direct		11424 Apr 29 18:03	26°Ω02'12	
	11417 Dec 16 02:22	15°RΩ	evening set		11424 Jul 25 22:53	27°Ω56'34	
opposition	11418 Jan 27 19:35	13°Ω57'26 -0°51'08					
min. Earth dist.	11418 Jan 27 09:14	13°Ω58'09 28.87465 AU	conjunction		11424 Aug 10 12:22	28°Ω31'48 -0°49'02	
direct	11418 Apr 16 19:08	12°Ω33'50	minimum elong		11424 Aug 10 12:22	28°Ω31'48 0°49'28	
evening set	11418 Jul 13 02:23	14°Ω28'19	max. Earth dist.		11424 Aug 11 01:27	28°Ω33'02 30.81818 AU	
	11418 Jul 27 02:19	15°Ω	morning rise		11424 Aug 26 04:01	29°Ω07'14	
					11424 Sep 20 15:20	0°Π	
conjunction	11418 Jul 28 14:21	15°Ω03'26 -0°48'00	retrograde		11424 Nov 24 13:51	1°Π05'29	
minimum elong	11418 Jul 28 14:22	15°Ω03'26 0°48'33			11425 Feb 01 00:17	30°RΩ	
max. Earth dist.	11418 Jul 29 00:02	15°Ω04'21 30.86986 AU	opposition		11425 Feb 12 16:21	29°Ω40'47 -0°52'25	
morning rise	11418 Aug 13 04:13	15°Ω38'44	min. Earth dist.		11425 Feb 12 02:31	29°Ω41'44 28.81589 AU	
retrograde	11418 Nov 11 06:06	17°Ω36'33	direct		11425 May 02 06:07	28°Ω17'05	
opposition	11419 Jan 30 09:04	16°Ω12'13 -0°51'33			11425 Jul 23 05:39	0°Π	
min. Earth dist.	11419 Jan 29 23:27	16°Ω12'52 28.86543 AU	evening set		11425 Jul 28 10:30	0°Π11'27	
	11419 Mar 23 21:46	15°RΩ					
direct	11419 Apr 19 05:48	14°Ω48'36	conjunction		11425 Aug 13 00:16	0°Π46'43 -0°48'57	

minimum elong	11425 Aug 13 00:16	0° \mathring{M} 46'43	0°49'21	evening set	11432 Aug 12 22:08	15° \mathring{M} 58'58	
max. Earth dist.	11425 Aug 13 14:12	0° \mathring{M} 48'02	30.81322 AU				
morning rise	11425 Aug 28 16:15	1° \mathring{M} 22'11		conjunction	11432 Aug 28 14:12	16° \mathring{M} 34'22	-0°46'14
retrograde	11425 Nov 27 02:36	3° \mathring{M} 20'30		minimum elong	11432 Aug 28 14:12	16° \mathring{M} 34'22	0°46'28
opposition	11426 Feb 15 05:27	1° \mathring{M} 55'47	-0°52'17	max. Earth dist.	11432 Aug 29 05:51	16° \mathring{M} 35'51	30.78401 AU
min. Earth dist.	11426 Feb 14 16:08	1° \mathring{M} 56'42	28.81153 AU	morning rise	11432 Sep 13 08:36	17° \mathring{M} 10'02	
direct	11426 May 04 18:09	0° \mathring{M} 32'07		retrograde	11432 Dec 12 22:33	19° \mathring{M} 08'38	
evening set	11426 Jul 30 22:08	2° \mathring{M} 26'29		min. Earth dist.	11433 Mar 02 11:02	17° \mathring{M} 44'42	28.78138 AU
				opposition	11433 Mar 03 01:26	17° \mathring{M} 43'41	-0°49'06
conjunction	11426 Aug 15 12:16	3° \mathring{M} 01'46	-0°48'47	direct	11433 May 20 07:08	16° \mathring{M} 19'58	
minimum elong	11426 Aug 15 12:16	3° \mathring{M} 01'46	0°49'11	evening set	11433 Aug 15 10:18	18° \mathring{M} 14'13	
max. Earth dist.	11426 Aug 16 02:51	3° \mathring{M} 03'09	30.80941 AU				
morning rise	11426 Aug 31 04:33	3° \mathring{M} 37'16		conjunction	11433 Aug 31 02:40	18° \mathring{M} 49'39	-0°45'34
retrograde	11426 Nov 29 17:27	5° \mathring{M} 35'39		minimum elong	11433 Aug 31 02:40	18° \mathring{M} 49'39	0°45'46
opposition	11427 Feb 17 18:30	4° \mathring{M} 10'56	-0°52'04	max. Earth dist.	11433 Aug 31 17:52	18° \mathring{M} 51'05	30.77834 AU
min. Earth dist.	11427 Feb 17 03:48	4° \mathring{M} 11'57	28.80801 AU	morning rise	11433 Sep 15 21:32	19° \mathring{M} 25'19	
direct	11427 May 07 07:39	2° \mathring{M} 47'18		retrograde	11433 Dec 15 12:53	21° \mathring{M} 23'54	
evening set	11427 Aug 02 09:56	4° \mathring{M} 41'40		opposition	11434 Mar 05 14:10	19° \mathring{M} 58'54	-0°48'20
				min. Earth dist.	11434 Mar 04 22:48	19° \mathring{M} 59'58	28.77599 AU
conjunction	11427 Aug 18 00:13	5° \mathring{M} 16'59	-0°48'32	direct	11434 May 22 18:55	18° \mathring{M} 35'07	
minimum elong	11427 Aug 18 00:13	5° \mathring{M} 16'59	0°48'54	evening set	11434 Aug 17 22:27	20° \mathring{M} 29'20	
max. Earth dist.	11427 Aug 18 14:44	5° \mathring{M} 18'22	30.80609 AU				
morning rise	11427 Sep 02 16:55	5° \mathring{M} 52'31		conjunction	11434 Sep 02 15:10	21° \mathring{M} 04'47	-0°44'49
retrograde	11427 Dec 02 06:52	7° \mathring{M} 50'59		minimum elong	11434 Sep 02 15:10	21° \mathring{M} 04'47	0°45'00
opposition	11428 Feb 20 07:46	6° \mathring{M} 26'15	-0°51'46	max. Earth dist.	11434 Sep 03 06:59	21° \mathring{M} 06'17	30.77326 AU
min. Earth dist.	11428 Feb 19 17:47	6° \mathring{M} 27'14	28.80491 AU	morning rise	11434 Sep 18 10:22	21° \mathring{M} 40'29	
direct	11428 May 08 18:55	5° \mathring{M} 02'39		retrograde	11434 Dec 18 01:44	23° \mathring{M} 39'03	
evening set	11428 Aug 03 21:46	6° \mathring{M} 57'02		opposition	11435 Mar 08 03:05	22° \mathring{M} 13'59	-0°47'30
				min. Earth dist.	11435 Mar 07 12:19	22° \mathring{M} 15'01	28.77150 AU
conjunction	11428 Aug 19 12:30	7° \mathring{M} 32'22	-0°48'14	direct	11435 May 25 07:30	20° \mathring{M} 50'11	
minimum elong	11428 Aug 19 12:30	7° \mathring{M} 32'22	0°48'34	evening set	11435 Aug 20 10:26	22° \mathring{M} 44'21	
max. Earth dist.	11428 Aug 20 04:01	7° \mathring{M} 33'50	30.80303 AU				
morning rise	11428 Sep 04 05:24	8° \mathring{M} 07'56		conjunction	11435 Sep 05 03:32	23° \mathring{M} 19'50	-0°44'01
retrograde	11428 Dec 03 18:59	10° \mathring{M} 06'27		minimum elong	11435 Sep 05 03:32	23° \mathring{M} 19'50	0°44'10
opposition	11429 Feb 21 20:52	8° \mathring{M} 41'43	-0°51'23	max. Earth dist.	11435 Sep 05 19:55	23° \mathring{M} 21'23	30.76947 AU
min. Earth dist.	11429 Feb 21 05:55	8° \mathring{M} 42'46	28.80167 AU	morning rise	11435 Sep 20 23:04	23° \mathring{M} 55'33	
direct	11429 May 11 07:58	7° \mathring{M} 18'08		retrograde	11435 Dec 20 16:33	25° \mathring{M} 54'07	
evening set	11429 Aug 06 09:51	9° \mathring{M} 12'31		opposition	11436 Mar 09 15:49	24° \mathring{M} 29'00	-0°46'36
				min. Earth dist.	11436 Mar 08 23:38	24° \mathring{M} 30'08	28.76839 AU
conjunction	11429 Aug 22 00:46	9° \mathring{M} 47'52	-0°47'50	direct	11436 May 26 21:13	23° \mathring{M} 05'11	
minimum elong	11429 Aug 22 00:46	9° \mathring{M} 47'52	0°48'08	evening set	11436 Aug 21 22:39	24° \mathring{M} 59'21	
max. Earth dist.	11429 Aug 22 15:20	9° \mathring{M} 49'15	30.79951 AU				
morning rise	11429 Sep 06 18:12	10° \mathring{M} 23'28		conjunction	11436 Sep 06 16:00	25° \mathring{M} 34'51	-0°43'08
retrograde	11429 Dec 06 08:25	12° \mathring{M} 22'02		minimum elong	11436 Sep 06 16:01	25° \mathring{M} 34'51	0°43'16
opposition	11430 Feb 24 10:07	10° \mathring{M} 57'17	-0°50'56	max. Earth dist.	11436 Sep 07 08:24	25° \mathring{M} 36'24	30.76708 AU
min. Earth dist.	11430 Feb 23 19:42	10° \mathring{M} 58'17	28.79782 AU	morning rise	11436 Sep 22 12:00	26° \mathring{M} 10'35	
direct	11430 May 13 18:27	9° \mathring{M} 33'41		retrograde	11436 Dec 22 05:38	28° \mathring{M} 09'10	
evening set	11430 Aug 08 21:57	11° \mathring{M} 28'03		opposition	11437 Mar 12 04:36	26° \mathring{M} 44'02	-0°45'38
				min. Earth dist.	11437 Mar 11 13:03	26° \mathring{M} 45'07	28.76687 AU
conjunction	11430 Aug 24 13:21	12° \mathring{M} 03'26	-0°47'22	direct	11437 May 29 08:42	25° \mathring{M} 20'12	
minimum elong	11430 Aug 24 13:21	12° \mathring{M} 03'26	0°47'39	evening set	11437 Aug 24 10:45	27° \mathring{M} 14'22	
max. Earth dist.	11430 Aug 25 04:56	12° \mathring{M} 04'55	30.79512 AU				
morning rise	11430 Sep 09 06:57	12° \mathring{M} 39'03		conjunction	11437 Sep 09 04:38	27° \mathring{M} 49'53	-0°42'12
retrograde	11430 Dec 08 20:38	14° \mathring{M} 37'38		minimum elong	11437 Sep 09 04:39	27° \mathring{M} 49'53	0°42'17
opposition	11431 Feb 26 23:11	13° \mathring{M} 12'51	-0°50'23	max. Earth dist.	11437 Sep 09 22:07	27° \mathring{M} 51'32	30.76637 AU
min. Earth dist.	11431 Feb 26 08:36	13° \mathring{M} 13'52	28.79287 AU	morning rise	11437 Sep 25 00:54	28° \mathring{M} 25'39	
direct	11431 May 16 06:54	11° \mathring{M} 49'14			11437 Nov 16 03:24	0° \mathring{M}	
evening set	11431 Aug 11 10:11	13° \mathring{M} 43'34		retrograde	11437 Dec 24 18:30	0° \mathring{M} 24'14	
					11438 Feb 02 03:57	30° \mathring{R} \mathring{M}	
conjunction	11431 Aug 27 01:46	14° \mathring{M} 18'58	-0°46'50	opposition	11438 Mar 14 17:12	28° \mathring{M} 59'06	-0°44'35
minimum elong	11431 Aug 27 01:46	14° \mathring{M} 18'58	0°47'06	min. Earth dist.	11438 Mar 14 00:27	29° \mathring{M} 00'17	28.76682 AU
max. Earth dist.	11431 Aug 27 16:20	14° \mathring{M} 20'20	30.78985 AU	direct	11438 May 31 21:48	27° \mathring{M} 35'18	
morning rise	11431 Sep 11 19:54	14° \mathring{M} 54'36		evening set	11438 Aug 26 23:05	29° \mathring{M} 29'28	
retrograde	11431 Dec 11 10:25	16° \mathring{M} 53'12			11438 Sep 09 12:20	0° \mathring{M}	
opposition	11432 Feb 29 12:21	15° \mathring{M} 28'20	-0°49'47				
min. Earth dist.	11432 Feb 28 21:37	15° \mathring{M} 29'22	28.78729 AU	conjunction	11438 Sep 11 17:10	0° \mathring{M} 05'01	-0°41'11
direct	11432 May 17 18:24	14° \mathring{M} 04'40		minimum elong	11438 Sep 11 17:10	0° \mathring{M} 05'01	0°41'15

max. Earth dist.	11438 Sep 12 09:58	0° <u>06</u> '36	30.76702 AU	direct	11445 Jun 16 08:15	13° <u>02</u> '16	
morning rise	11438 Sep 27 13:56	0° <u>04</u> '49		evening set	11445 Sep 11 15:23	15° <u>01</u> '828	
retrograde	11438 Dec 27 08:14	2° <u>03</u> '24					
opposition	11439 Mar 17 05:52	1° <u>01</u> '18	-0°43'28	conjunction	11445 Sep 27 12:08	15° <u>05</u> '409	-0°32'27
min. Earth dist.	11439 Mar 16 13:26	1° <u>01</u> '527	28.76818 AU	minimum elong	11445 Sep 27 12:08	15° <u>05</u> '410	0°32'20
	11439 May 10 14:09	30° <u>08</u> ' <u>00</u>		max. Earth dist.	11445 Sep 28 04:29	15° <u>05</u> '542	30.78011 AU
direct	11439 Jun 03 08:16	29° <u>00</u> '50'32		morning rise	11445 Oct 13 11:25	16° <u>01</u> '30'06	
	11439 Jun 26 17:52	0° <u>00</u> '		retrograde	11446 Jan 12 04:53	18° <u>01</u> '28'34	
evening set	11439 Aug 29 11:21	1° <u>01</u> '44'43		opposition	11446 Apr 01 21:42	17° <u>01</u> '03'31	-0°33'54
				min. Earth dist.	11446 Apr 01 06:42	17° <u>01</u> '04'34	28.78080 AU
conjunction	11439 Sep 14 05:58	2° <u>01</u> '20'17	-0°40'07	direct	11446 Jun 18 20:03	15° <u>01</u> '39'43	
minimum elong	11439 Sep 14 05:58	2° <u>01</u> '20'17	0°40'09	evening set	11446 Sep 14 04:00	17° <u>01</u> '33'52	
max. Earth dist.	11439 Sep 15 00:07	2° <u>01</u> '22'00	30.76897 AU				
morning rise	11439 Sep 30 02:56	2° <u>01</u> '56'06		conjunction	11446 Sep 30 01:14	18° <u>01</u> '09'35	-0°31'00
retrograde	11439 Dec 29 20:38	4° <u>01</u> '54'43		minimum elong	11446 Sep 30 01:14	18° <u>01</u> '09'35	0°30'50
opposition	11440 Mar 18 18:31	3° <u>01</u> '29'40	-0°42'17	max. Earth dist.	11446 Sep 30 18:13	18° <u>01</u> '11'11	30.78118 AU
min. Earth dist.	11440 Mar 18 01:40	3° <u>01</u> '30'50	28.77052 AU	morning rise	11446 Oct 16 00:44	18° <u>01</u> '45'31	
direct	11440 Jun 04 20:23	2° <u>01</u> '05'56		retrograde	11447 Jan 14 18:25	20° <u>01</u> '43'55	
evening set	11440 Aug 30 23:47	4° <u>01</u> '00'08		opposition	11447 Apr 04 09:50	19° <u>01</u> '18'50	-0°32'19
				min. Earth dist.	11447 Apr 03 17:59	19° <u>01</u> '19'57	28.78216 AU
conjunction	11440 Sep 15 18:38	4° <u>01</u> '35'43	-0°38'59	direct	11447 Jun 21 09:59	17° <u>01</u> '54'59	
minimum elong	11440 Sep 15 18:38	4° <u>01</u> '35'43	0°39'00	evening set	11447 Sep 16 16:48	19° <u>01</u> '49'07	
max. Earth dist.	11440 Sep 16 11:54	4° <u>01</u> '37'21	30.77170 AU				
morning rise	11440 Oct 01 16:09	5° <u>01</u> '11'35		conjunction	11447 Oct 02 14:14	20° <u>01</u> '24'50	-0°29'30
retrograde	11440 Dec 31 10:11	7° <u>01</u> '10'13		minimum elong	11447 Oct 02 14:14	20° <u>01</u> '24'50	0°29'18
opposition	11441 Mar 21 07:11	5° <u>01</u> '45'12	-0°41'02	max. Earth dist.	11447 Oct 03 06:18	20° <u>01</u> '26'21	30.78304 AU
min. Earth dist.	11441 Mar 20 14:22	5° <u>01</u> '46'22	28.77344 AU	morning rise	11447 Oct 18 14:13	21° <u>01</u> '00'48	
direct	11441 Jun 07 07:07	4° <u>01</u> '21'30		retrograde	11448 Jan 17 08:43	22° <u>01</u> '59'06	
evening set	11441 Sep 02 12:24	6° <u>01</u> '15'43		opposition	11448 Apr 05 22:05	21° <u>01</u> '34'00	-0°30'41
				min. Earth dist.	11448 Apr 05 06:47	21° <u>01</u> '35'04	28.78470 AU
conjunction	11441 Sep 18 07:44	6° <u>01</u> '51'21	-0°37'47	direct	11448 Jun 22 21:50	20° <u>01</u> '10'07	
minimum elong	11441 Sep 18 07:44	6° <u>01</u> '51'21	0°37'46	evening set	11448 Sep 18 05:21	22° <u>01</u> '04'13	
max. Earth dist.	11441 Sep 19 01:49	6° <u>01</u> '53'03	30.77451 AU				
morning rise	11441 Oct 04 05:28	7° <u>01</u> '27'13		conjunction	11448 Oct 04 03:21	22° <u>01</u> '39'57	-0°27'57
retrograde	11442 Jan 02 22:08	9° <u>01</u> '25'52		minimum elong	11448 Oct 04 03:21	22° <u>01</u> '39'57	0°27'43
opposition	11442 Mar 23 19:42	8° <u>01</u> '00'53	-0°39'44	max. Earth dist.	11448 Oct 04 20:35	22° <u>01</u> '41'34	30.78620 AU
min. Earth dist.	11442 Mar 23 03:35	8° <u>01</u> '02'00	28.77605 AU	morning rise	11448 Oct 20 03:31	23° <u>01</u> '15'55	
direct	11442 Jun 09 18:42	6° <u>01</u> '37'12		retrograde	11449 Jan 18 20:09	25° <u>01</u> '14'09	
evening set	11442 Sep 05 01:12	8° <u>01</u> '31'27		opposition	11449 Apr 08 10:10	23° <u>01</u> '49'03	-0°29'00
				min. Earth dist.	11449 Apr 07 18:28	23° <u>01</u> '50'09	28.78846 AU
conjunction	11442 Sep 20 20:49	9° <u>01</u> '07'05	-0°36'32	direct	11449 Jun 25 10:59	22° <u>01</u> '25'09	
minimum elong	11442 Sep 20 20:49	9° <u>01</u> '07'05	0°36'29	evening set	11449 Sep 20 18:14	24° <u>01</u> '19'13	
max. Earth dist.	11442 Sep 21 13:50	9° <u>01</u> '08'41	30.77691 AU				
morning rise	11442 Oct 06 19:00	9° <u>01</u> '42'58		conjunction	11449 Oct 06 16:26	24° <u>01</u> '54'57	-0°26'21
retrograde	11443 Jan 05 12:48	11° <u>01</u> '41'37		minimum elong	11449 Oct 06 16:26	24° <u>01</u> '54'57	0°26'07
opposition	11443 Mar 26 08:18	10° <u>01</u> '16'38	-0°38'21	max. Earth dist.	11449 Oct 07 08:38	24° <u>01</u> '56'29	30.79075 AU
min. Earth dist.	11443 Mar 25 15:42	10° <u>01</u> '17'48	28.77807 AU	morning rise	11449 Oct 22 17:05	25° <u>01</u> '30'57	
direct	11443 Jun 12 05:36	8° <u>01</u> '52'57		retrograde	11450 Jan 21 09:04	27° <u>01</u> '29'06	
evening set	11443 Sep 07 13:50	10° <u>01</u> '47'12		opposition	11450 Apr 10 22:07	26° <u>01</u> '04'00	-0°27'16
				min. Earth dist.	11450 Apr 10 06:24	26° <u>01</u> '05'06	28.79381 AU
conjunction	11443 Sep 23 09:50	11° <u>01</u> '22'51	-0°35'14	direct	11450 Jun 27 21:48	24° <u>01</u> '40'05	
minimum elong	11443 Sep 23 09:50	11° <u>01</u> '22'51	0°35'09	evening set	11450 Sep 23 06:58	26° <u>01</u> '34'09	
max. Earth dist.	11443 Sep 24 02:57	11° <u>01</u> '24'28	30.77843 AU				
morning rise	11443 Oct 09 08:19	11° <u>01</u> '58'46		conjunction	11450 Oct 09 05:39	27° <u>01</u> '09'55	-0°24'43
retrograde	11444 Jan 08 01:27	13° <u>01</u> '57'23		minimum elong	11450 Oct 09 05:39	27° <u>01</u> '09'55	0°24'27
opposition	11444 Mar 27 20:58	12° <u>01</u> '32'23	-0°36'55	max. Earth dist.	11450 Oct 09 22:56	27° <u>01</u> '11'32	30.79677 AU
min. Earth dist.	11444 Mar 27 05:30	12° <u>01</u> '33'28	28.77923 AU	morning rise	11450 Oct 25 06:27	27° <u>01</u> '45'54	
direct	11444 Jun 13 18:27	11° <u>01</u> '08'41		retrograde	11451 Jan 23 20:27	29° <u>01</u> '44'00	
evening set	11444 Sep 09 02:35	13° <u>01</u> '02'54		opposition	11451 Apr 13 10:11	28° <u>01</u> '18'56	-0°25'30
				min. Earth dist.	11451 Apr 12 18:48	28° <u>01</u> '20'01	28.80051 AU
conjunction	11444 Sep 24 23:02	13° <u>01</u> '38'34	-0°33'52	direct	11451 Jun 30 09:14	26° <u>01</u> '55'02	
minimum elong	11444 Sep 24 23:02	13° <u>01</u> '38'34	0°33'46	evening set	11451 Sep 25 19:42	28° <u>01</u> '49'06	
max. Earth dist.	11444 Sep 25 15:52	13° <u>01</u> '40'10	30.77944 AU				
morning rise	11444 Oct 10 21:53	14° <u>01</u> '14'30		conjunction	11451 Oct 11 18:38	29° <u>01</u> '24'52	-0°23'03
retrograde	11445 Jan 09 16:10	16° <u>01</u> '13'02		minimum elong	11451 Oct 11 18:38	29° <u>01</u> '24'52	0°22'46
opposition	11445 Mar 30 09:16	14° <u>01</u> '48'01	-0°35'26	max. Earth dist.	11451 Oct 12 11:09	29° <u>01</u> '26'25	30.80427 AU
min. Earth dist.	11445 Mar 29 17:06	14° <u>01</u> '49'09	28.77999 AU	morning rise	11451 Oct 27 19:53	0° <u>01</u> '00'53	

	11451 Oct 27 10:20	0° \mathbb{M}		max. Earth dist.	11457 Oct 25 17:52	12° \mathbb{M} 57'06	30.85053 AU
retrograde	11452 Jan 26 10:21	1° \mathbb{M} 58'55		morning rise	11457 Nov 10 06:10	13° \mathbb{M} 31'49	
opposition	11452 Apr 14 22:10	0° \mathbb{M} 33'54 -0°23'41			11457 Dec 28 02:40	15° \mathbb{M}	
min. Earth dist.	11452 Apr 14 06:09	0° \mathbb{M} 35'02 28.80856 AU		retrograde	11458 Feb 08 16:38	15° \mathbb{M} 29'24	
	11452 May 05 14:50	30° \mathbb{R} 2			11458 Mar 24 01:33	15° \mathbb{R} \mathbb{M}	
direct	11452 Jul 01 20:01	29° \mathbb{A} 10'01		opposition	11458 Apr 28 21:13	14° \mathbb{M} 04'38 -0°12'10	
	11452 Aug 26 02:33	0° \mathbb{M}		min. Earth dist.	11458 Apr 28 08:29	14° \mathbb{M} 05'32 28.85343 AU	
evening set	11452 Sep 27 08:39	1° \mathbb{M} 04'06		direct	11458 Jul 15 22:50	12° \mathbb{M} 40'44	
				evening set	11458 Oct 11 15:42	14° \mathbb{M} 34'52	
conjunction	11452 Oct 13 07:58	1° \mathbb{M} 39'54 -0°21'21			11458 Oct 22 22:46	15° \mathbb{M}	
minimum elong	11452 Oct 13 07:58	1° \mathbb{M} 39'54 0°21'02					
max. Earth dist.	11452 Oct 14 00:49	1° \mathbb{M} 41'28 30.81269 AU		conjunction	11458 Oct 27 16:49	15° \mathbb{M} 10'43 -0°10'32	
morning rise	11452 Oct 29 09:27	2° \mathbb{M} 15'55		minimum elong	11458 Oct 27 16:50	15° \mathbb{M} 10'43 0°10'04	
retrograde	11453 Jan 27 21:52	4° \mathbb{M} 13'54		behind sun begin	11458 Oct 27 11:35	15° \mathbb{M} 10'15	
opposition	11453 Apr 17 10:05	2° \mathbb{M} 48'57 -0°21'50		behind sun end	11458 Oct 27 22:04	15° \mathbb{M} 11'11	
min. Earth dist.	11453 Apr 16 19:15	2° \mathbb{M} 50'00 28.81728 AU		max. Earth dist.	11458 Oct 28 05:40	15° \mathbb{M} 11'55 30.85623 AU	
direct	11453 Jul 04 07:37	1° \mathbb{M} 25'06		morning rise	11458 Nov 12 19:55	15° \mathbb{M} 46'46	
evening set	11453 Sep 29 21:43	3° \mathbb{M} 19'13		retrograde	11459 Feb 11 05:52	17° \mathbb{M} 44'14	
				opposition	11459 May 01 08:50	16° \mathbb{M} 19'29 -0°10'11	
conjunction	11453 Oct 15 21:24	3° \mathbb{M} 55'01 -0°19'36		min. Earth dist.	11459 Apr 30 20:32	16° \mathbb{M} 20'21 28.85924 AU	
minimum elong	11453 Oct 15 21:24	3° \mathbb{M} 55'01 0°19'16			11459 Jul 02 04:16	15° \mathbb{R} \mathbb{M}	
max. Earth dist.	11453 Oct 16 13:43	3° \mathbb{M} 56'32 30.82161 AU		direct	11459 Jul 18 10:12	14° \mathbb{M} 55'32	
morning rise	11453 Oct 31 23:10	4° \mathbb{M} 31'02			11459 Aug 03 11:59	15° \mathbb{M}	
retrograde	11454 Jan 30 12:02	6° \mathbb{M} 28'59		evening set	11459 Oct 14 04:37	16° \mathbb{M} 49'38	
opposition	11454 Apr 19 21:56	5° \mathbb{M} 04'06 -0°19'57					
min. Earth dist.	11454 Apr 19 06:36	5° \mathbb{M} 05'10 28.82607 AU		conjunction	11459 Oct 30 06:12	17° \mathbb{M} 25'31 -0°08'41	
direct	11454 Jul 06 20:08	3° \mathbb{M} 40'16		minimum elong	11459 Oct 30 06:11	17° \mathbb{M} 25'31 0°08'12	
evening set	11454 Oct 02 10:53	5° \mathbb{M} 34'24		behind sun begin	11459 Oct 30 00:24	17° \mathbb{M} 24'59	
				behind sun end	11459 Oct 30 11:59	17° \mathbb{M} 26'02	
conjunction	11454 Oct 18 10:47	6° \mathbb{M} 10'13 -0°17'50		max. Earth dist.	11459 Oct 30 19:49	17° \mathbb{M} 26'47 30.86215 AU	
minimum elong	11454 Oct 18 10:47	6° \mathbb{M} 10'13 0°17'27		morning rise	11459 Nov 15 09:21	18° \mathbb{M} 01'33	
max. Earth dist.	11454 Oct 19 02:24	6° \mathbb{M} 11'41 30.83006 AU		retrograde	11460 Feb 13 17:11	19° \mathbb{M} 58'55	
morning rise	11454 Nov 03 12:50	6° \mathbb{M} 46'15		opposition	11460 May 02 20:21	18° \mathbb{M} 34'10 -0°08'11	
retrograde	11455 Feb 02 00:49	8° \mathbb{M} 44'08		min. Earth dist.	11460 May 02 08:44	18° \mathbb{M} 34'59 28.86540 AU	
opposition	11455 Apr 22 09:59	7° \mathbb{M} 19'19 -0°18'03		direct	11460 Jul 19 22:09	17° \mathbb{M} 10'11	
min. Earth dist.	11455 Apr 21 20:11	7° \mathbb{M} 20'17 28.83422 AU		evening set	11460 Oct 15 17:47	19° \mathbb{M} 04'17	
direct	11455 Jul 09 07:17	5° \mathbb{M} 55'29					
evening set	11455 Oct 05 00:03	7° \mathbb{M} 49'38		conjunction	11460 Oct 31 19:31	19° \mathbb{M} 40'09 -0°06'49	
				minimum elong	11460 Oct 31 19:31	19° \mathbb{M} 40'09 0°06'18	
conjunction	11455 Oct 21 00:23	8° \mathbb{M} 25'28 -0°16'02		behind sun begin	11460 Oct 31 13:20	19° \mathbb{M} 39'35	
minimum elong	11455 Oct 21 00:23	8° \mathbb{M} 25'28 0°15'39		behind sun end	11460 Nov 01 01:43	19° \mathbb{M} 40'42	
behind sun begin	11455 Oct 20 23:14	8° \mathbb{M} 25'22		max. Earth dist.	11460 Nov 01 07:57	19° \mathbb{M} 41'18 30.86877 AU	
behind sun end	11455 Oct 21 01:33	8° \mathbb{M} 25'34		morning rise	11460 Nov 16 23:01	20° \mathbb{M} 16'11	
max. Earth dist.	11455 Oct 21 15:56	8° \mathbb{M} 26'55 30.83781 AU		retrograde	11461 Feb 15 05:51	22° \mathbb{M} 13'25	
morning rise	11455 Nov 06 02:36	9° \mathbb{M} 01'30		opposition	11461 May 05 07:35	20° \mathbb{M} 48'42 -0°06'10	
retrograde	11456 Feb 04 14:52	10° \mathbb{M} 59'18		min. Earth dist.	11461 May 04 19:36	20° \mathbb{M} 49'33 28.87250 AU	
opposition	11456 Apr 23 21:47	9° \mathbb{M} 34'31 -0°16'06		direct	11461 Jul 22 09:12	19° \mathbb{M} 24'41	
min. Earth dist.	11456 Apr 23 07:42	9° \mathbb{M} 35'30 28.84141 AU		evening set	11461 Oct 18 06:53	21° \mathbb{M} 18'46	
direct	11456 Jul 10 21:12	8° \mathbb{M} 10'41					
evening set	11456 Oct 06 13:19	10° \mathbb{M} 04'50		conjunction	11461 Nov 03 08:57	21° \mathbb{M} 54'38 -0°04'56	
				minimum elong	11461 Nov 03 08:56	21° \mathbb{M} 54'38 0°04'25	
conjunction	11456 Oct 22 13:51	10° \mathbb{M} 40'40 -0°14'13		behind sun begin	11461 Nov 03 02:30	21° \mathbb{M} 54'04	
minimum elong	11456 Oct 22 13:51	10° \mathbb{M} 40'40 0°13'48		behind sun end	11461 Nov 03 15:23	21° \mathbb{M} 55'13	
behind sun begin	11456 Oct 22 10:30	10° \mathbb{M} 40'22		max. Earth dist.	11461 Nov 03 21:38	21° \mathbb{M} 55'49 30.87630 AU	
behind sun end	11456 Oct 22 17:13	10° \mathbb{M} 40'58		morning rise	11461 Nov 19 12:31	22° \mathbb{M} 30'41	
max. Earth dist.	11456 Oct 23 03:49	10° \mathbb{M} 41'58 30.84453 AU		retrograde	11462 Feb 17 15:46	24° \mathbb{M} 27'48	
morning rise	11456 Nov 07 16:29	11° \mathbb{M} 16'43		opposition	11462 May 07 19:00	23° \mathbb{M} 03'07 -0°04'09	
retrograde	11457 Feb 06 05:05	13° \mathbb{M} 14'25		min. Earth dist.	11462 May 07 08:02	23° \mathbb{M} 03'53 28.88066 AU	
opposition	11457 Apr 26 09:41	11° \mathbb{M} 49'38 -0°14'09		direct	11462 Jul 24 20:36	21° \mathbb{M} 39'04	
min. Earth dist.	11457 Apr 25 20:48	11° \mathbb{M} 50'33 28.84774 AU		evening set	11462 Oct 20 19:50	23° \mathbb{M} 33'10	
direct	11457 Jul 13 09:23	10° \mathbb{M} 25'46					
evening set	11457 Oct 09 02:28	12° \mathbb{M} 19'55		conjunction	11462 Nov 05 22:06	24° \mathbb{M} 09'02 -0°03'02	
				minimum elong	11462 Nov 05 22:07	24° \mathbb{M} 09'02 0°02'30	
conjunction	11457 Oct 25 03:29	12° \mathbb{M} 55'46 -0°12'23		behind sun begin	11462 Nov 05 15:34	24° \mathbb{M} 08'27	
minimum elong	11457 Oct 25 03:29	12° \mathbb{M} 55'46 0°11'57		behind sun end	11462 Nov 06 04:40	24° \mathbb{M} 09'37	
behind sun begin	11457 Oct 24 23:01	12° \mathbb{M} 55'22		max. Earth dist.	11462 Nov 06 10:22	24° \mathbb{M} 10'10 30.88518 AU	
behind sun end	11457 Oct 25 07:57	12° \mathbb{M} 56'10		morning rise	11462 Nov 22 01:54	24° \mathbb{M} 45'04	

retrograde	11463 Feb 20 04:42	26° M 42'05		direct	11468 Aug 06 20:20	5° X 04'56	
opposition	11463 May 10 06:13	25° M 17'27	-0°02'07	evening set	11468 Nov 03 03:06	6° X 59'09	
min. Earth dist.	11463 May 09 18:26	25° M 18'16	28.89017 AU				
direct	11463 Jul 27 08:03	23° M 53'23		conjunction	11468 Nov 19 06:42	7° X 35'03	0°08'24
evening set	11463 Oct 23 08:57	25° M 47'30		minimum elong	11468 Nov 19 06:42	7° X 35'03	0°09'03
				behind sun begin	11468 Nov 19 01:07	7° X 34'33	
conjunction	11463 Nov 08 11:25	26° M 23'22	-0°01'06	behind sun end	11468 Nov 19 12:16	7° X 35'32	
minimum elong	11463 Nov 08 11:25	26° M 23'22	0°00'33	max. Earth dist.	11468 Nov 19 16:04	7° X 35'54	30.95235 AU
behind sun begin	11463 Nov 08 04:53	26° M 22'47		morning rise	11468 Dec 05 11:07	8° X 11'02	
behind sun end	11463 Nov 08 17:58	26° M 23'57		retrograde	11469 Mar 05 08:17	10° X 07'24	
max. Earth dist.	11463 Nov 08 23:20	26° M 24'28	30.89533 AU	opposition	11469 May 23 01:07	8° X 43'08	0°09'58
morning rise	11463 Nov 24 15:23	26° M 59'24		min. Earth dist.	11469 May 22 17:37	8° X 43'39	28.95714 AU
retrograde	11464 Feb 22 16:15	28° M 56'19		direct	11469 Aug 09 09:09	7° X 19'03	
opposition	11464 May 11 17:30	27° M 31'44	-0°00'06	evening set	11469 Nov 05 16:28	9° X 13'15	
min. Earth dist.	11464 May 11 07:00	27° M 32'29	28.90100 AU				
asc. node	11464 May 27 21:28	27° M 04'54		conjunction	11469 Nov 21 20:06	9° X 49'08	0°10'15
direct	11464 Jul 28 18:10	26° M 07'41		minimum elong	11469 Nov 21 20:07	9° X 49'08	0°10'53
evening set	11464 Oct 24 21:59	28° M 01'49		behind sun begin	11469 Nov 21 15:11	9° X 48'41	
				behind sun end	11469 Nov 22 01:03	9° X 49'34	
conjunction	11464 Nov 10 00:51	28° M 37'41	0°00'52	max. Earth dist.	11469 Nov 22 03:40	9° X 49'49	30.96170 AU
minimum elong	11464 Nov 10 00:50	28° M 37'41	0°01'27	morning rise	11469 Dec 08 00:45	10° X 25'06	
behind sun begin	11464 Nov 09 18:16	28° M 37'06		retrograde	11470 Mar 07 20:38	12° X 21'19	
behind sun end	11464 Nov 10 07:24	28° M 38'17		opposition	11470 May 25 12:05	10° X 57'04	0°11'57
max. Earth dist.	11464 Nov 10 12:55	28° M 38'48	30.90678 AU	min. Earth dist.	11470 May 25 04:38	10° X 57'36	28.96613 AU
morning rise	11464 Nov 26 04:54	29° M 13'43		direct	11470 Aug 11 20:58	9° X 32'57	
	11464 Dec 18 15:17	0° X		evening set	11470 Nov 08 05:31	11° X 27'08	
retrograde	11465 Feb 24 05:27	1° X 10'32					
	11465 May 05 21:07	30° R 11		conjunction	11470 Nov 24 09:23	12° X 03'00	0°12'05
opposition	11465 May 14 04:38	29° M 46'02	0°01'56	minimum elong	11470 Nov 24 09:22	12° X 03'00	0°12'45
min. Earth dist.	11465 May 13 17:39	29° M 46'48	28.91273 AU	behind sun begin	11470 Nov 24 05:20	12° X 02'38	
direct	11465 Jul 31 07:55	28° M 22'00		behind sun end	11470 Nov 24 13:24	12° X 03'21	
	11465 Oct 19 22:46	0° X		max. Earth dist.	11470 Nov 24 16:55	12° X 03'41	30.97032 AU
evening set	11465 Oct 27 11:18	0° X 16'10		morning rise	11470 Dec 10 13:57	12° X 38'57	
				retrograde	11471 Mar 10 06:21	14° X 35'01	
conjunction	11465 Nov 12 14:10	0° X 52'03	0°02'47	opposition	11471 May 27 23:04	13° X 10'47	0°13'54
minimum elong	11465 Nov 12 14:10	0° X 52'03	0°03'23	min. Earth dist.	11471 May 27 17:02	13° X 11'13	28.97460 AU
behind sun begin	11465 Nov 12 07:39	0° X 51'28		direct	11471 Aug 14 08:21	11° X 46'36	
behind sun end	11465 Nov 12 20:42	0° X 52'38		evening set	11471 Nov 10 18:40	13° X 40'46	
max. Earth dist.	11465 Nov 13 00:56	0° X 53'02	30.91873 AU				
morning rise	11465 Nov 28 18:27	1° X 28'04		conjunction	11471 Nov 26 22:38	14° X 16'37	0°13'53
retrograde	11466 Feb 26 18:47	3° X 24'48		minimum elong	11471 Nov 26 22:38	14° X 16'37	0°14'33
opposition	11466 May 16 15:46	2° X 00'22	0°03'58	behind sun begin	11471 Nov 26 19:58	14° X 16'23	
min. Earth dist.	11466 May 16 06:01	2° X 01'03	28.92485 AU	behind sun end	11471 Nov 27 01:18	14° X 16'52	
direct	11466 Aug 02 19:29	0° X 36'20		max. Earth dist.	11471 Nov 27 05:11	14° X 17'13	30.97887 AU
evening set	11466 Oct 30 00:29	2° X 30'33		morning rise	11471 Dec 13 03:20	14° X 52'34	
				retrograde	11472 Mar 11 18:42	16° X 48'28	
conjunction	11466 Nov 15 03:44	3° X 06'26	0°04'40	opposition	11472 May 29 09:43	15° X 24'16	0°15'49
minimum elong	11466 Nov 15 03:43	3° X 06'25	0°05'18	min. Earth dist.	11472 May 29 03:16	15° X 24'43	28.98318 AU
behind sun begin	11466 Nov 14 21:22	3° X 05'51		direct	11472 Aug 15 19:50	14° X 00'01	
behind sun end	11466 Nov 15 10:04	3° X 06'59		evening set	11472 Nov 12 07:47	15° X 54'10	
max. Earth dist.	11466 Nov 15 14:47	3° X 07'27	30.93074 AU				
morning rise	11466 Dec 01 07:56	3° X 42'26		conjunction	11472 Nov 28 11:51	16° X 30'01	0°15'40
retrograde	11467 Mar 01 06:52	5° X 39'04		minimum elong	11472 Nov 28 11:51	16° X 30'01	0°16'22
opposition	11467 May 19 02:55	4° X 14'42	0°05'59	max. Earth dist.	11472 Nov 28 17:51	16° X 30'34	30.98754 AU
min. Earth dist.	11467 May 18 17:28	4° X 15'22	28.93654 AU	morning rise	11472 Dec 14 16:34	17° X 05'57	
direct	11467 Aug 05 08:22	2° X 50'41		retrograde	11473 Mar 14 04:45	19° X 01'42	
evening set	11467 Nov 01 13:47	4° X 44'54		opposition	11473 May 31 20:29	17° X 37'31	0°17'43
				min. Earth dist.	11473 May 31 15:31	17° X 37'52	28.99220 AU
conjunction	11467 Nov 17 17:02	5° X 20'47	0°06'33	direct	11473 Aug 18 06:08	16° X 13'13	
minimum elong	11467 Nov 17 17:03	5° X 20'47	0°07'10	evening set	11473 Nov 14 20:44	18° X 07'23	
behind sun begin	11467 Nov 17 11:00	5° X 20'14					
behind sun end	11467 Nov 17 23:05	5° X 21'19		conjunction	11473 Dec 01 00:58	18° X 43'12	0°17'26
max. Earth dist.	11467 Nov 18 02:13	5° X 21'37	30.94206 AU	minimum elong	11473 Dec 01 00:58	18° X 43'12	0°18'07
morning rise	11467 Dec 03 21:33	5° X 56'47		max. Earth dist.	11473 Dec 01 06:58	18° X 43'45	30.99695 AU
retrograde	11468 Mar 02 20:56	7° X 53'17		morning rise	11473 Dec 17 05:37	19° X 19'07	
opposition	11468 May 20 14:07	6° X 28'59	0°07'59	retrograde	11474 Mar 16 16:13	21° X 14'44	
min. Earth dist.	11468 May 20 05:27	6° X 29'36	28.94743 AU	opposition	11474 Jun 03 07:00	19° X 50'35	0°19'36

min. Earth dist.	11474 Jun 03 01:32	19° \mathring{A} 50'58	29.00203 AU	evening set	11480 Nov 30 15:38	3° \mathring{B} 38'30	
direct	11474 Aug 20 19:20	18° \mathring{A} 26'15					
evening set	11474 Nov 17 09:46	20° \mathring{A} 20'25		conjunction	11480 Dec 16 20:07	4° \mathring{B} 14'16	0°28'54
				minimum elong	11480 Dec 16 20:07	4° \mathring{B} 14'16	0°29'38
conjunction	11474 Dec 03 13:57	20° \mathring{A} 56'14	0°19'10	max. Earth dist.	11480 Dec 16 21:35	4° \mathring{B} 14'24	31.08776 AU
minimum elong	11474 Dec 03 13:57	20° \mathring{A} 56'14	0°19'53	morning rise	11481 Jan 02 00:27	4° \mathring{B} 50'03	
max. Earth dist.	11474 Dec 03 18:49	20° \mathring{A} 56'41	31.00735 AU	retrograde	11481 Apr 01 04:03	6° \mathring{B} 44'55	
morning rise	11474 Dec 19 18:40	21° \mathring{A} 32'07		opposition	11481 Jun 18 08:33	5° \mathring{B} 21'22	0°31'43
retrograde	11475 Mar 19 04:12	23° \mathring{A} 27'37		min. Earth dist.	11481 Jun 18 06:45	5° \mathring{B} 21'30	29.09391 AU
opposition	11475 Jun 05 17:38	22° \mathring{A} 03'31	0°21'26	direct	11481 Sep 05 03:46	3° \mathring{B} 57'07	
min. Earth dist.	11475 Jun 05 13:01	22° \mathring{A} 03'50	29.01320 AU	evening set	11481 Dec 03 04:41	5° \mathring{B} 51'32	
direct	11475 Aug 23 06:07	20° \mathring{A} 39'09					
evening set	11475 Nov 19 22:30	22° \mathring{A} 33'21		conjunction	11481 Dec 19 09:06	6° \mathring{B} 27'18	0°30'23
				minimum elong	11481 Dec 19 09:06	6° \mathring{B} 27'18	0°31'06
conjunction	11475 Dec 06 02:57	23° \mathring{A} 09'10	0°20'53	max. Earth dist.	11481 Dec 19 09:41	6° \mathring{B} 27'21	31.09957 AU
minimum elong	11475 Dec 06 02:57	23° \mathring{A} 09'10	0°21'34	morning rise	11482 Jan 04 13:16	7° \mathring{B} 03'03	
max. Earth dist.	11475 Dec 06 08:26	23° \mathring{A} 09'40	31.01918 AU	retrograde	11482 Apr 03 13:03	8° \mathring{B} 57'48	
morning rise	11475 Dec 22 07:32	23° \mathring{A} 45'01		opposition	11482 Jun 20 19:05	7° \mathring{B} 34'18	0°33'16
retrograde	11476 Mar 20 15:35	25° \mathring{A} 40'24		min. Earth dist.	11482 Jun 20 19:04	7° \mathring{B} 34'18	29.10526 AU
opposition	11476 Jun 07 04:10	24° \mathring{A} 16'23	0°23'15	direct	11482 Sep 07 13:56	6° \mathring{B} 10'02	
min. Earth dist.	11476 Jun 06 23:29	24° \mathring{A} 16'43	29.02560 AU	evening set	11482 Dec 05 17:35	8° \mathring{B} 04'27	
direct	11476 Aug 24 18:29	22° \mathring{A} 52'02					
evening set	11476 Nov 21 11:36	24° \mathring{A} 46'16		conjunction	11482 Dec 21 22:04	8° \mathring{B} 40'11	0°31'49
				minimum elong	11482 Dec 21 22:04	8° \mathring{B} 40'11	0°32'33
conjunction	11476 Dec 07 15:56	25° \mathring{A} 22'04	0°22'33	max. Earth dist.	11482 Dec 21 22:10	8° \mathring{B} 40'11	31.11050 AU
minimum elong	11476 Dec 07 15:56	25° \mathring{A} 22'04	0°23'16	morning rise	11483 Jan 07 02:05	9° \mathring{B} 15'54	
max. Earth dist.	11476 Dec 07 19:53	25° \mathring{A} 22'26	31.03227 AU	retrograde	11483 Apr 05 23:28	11° \mathring{B} 10'30	
morning rise	11476 Dec 23 20:38	25° \mathring{A} 57'55		opposition	11483 Jun 23 05:22	9° \mathring{B} 47'03	0°34'47
retrograde	11477 Mar 23 05:16	27° \mathring{A} 53'11		min. Earth dist.	11483 Jun 23 05:17	9° \mathring{B} 47'04	29.11571 AU
opposition	11477 Jun 09 14:35	26° \mathring{A} 29'16	0°25'01	direct	11483 Sep 10 02:39	8° \mathring{B} 22'44	
min. Earth dist.	11477 Jun 09 10:19	26° \mathring{A} 29'34	29.03928 AU	evening set	11483 Dec 08 06:29	10° \mathring{B} 17'09	
direct	11477 Aug 27 06:00	25° \mathring{A} 04'56					
evening set	11477 Nov 24 00:30	26° \mathring{A} 59'13		conjunction	11483 Dec 24 10:51	10° \mathring{B} 52'52	0°33'12
				minimum elong	11483 Dec 24 10:51	10° \mathring{B} 52'52	0°33'55
conjunction	11477 Dec 10 05:02	27° \mathring{A} 35'02	0°24'12	max. Earth dist.	11483 Dec 24 09:26	10° \mathring{B} 52'44	31.12063 AU
minimum elong	11477 Dec 10 05:02	27° \mathring{A} 35'02	0°24'54	morning rise	11484 Jan 09 14:50	11° \mathring{B} 28'34	
max. Earth dist.	11477 Dec 10 09:39	27° \mathring{A} 35'27	31.04632 AU	retrograde	11484 Apr 07 10:26	13° \mathring{B} 23'01	
morning rise	11477 Dec 26 09:30	28° \mathring{A} 10'51		opposition	11484 Jun 24 15:44	11° \mathring{B} 59'36	0°36'14
	11478 Mar 06 17:12	0° \mathring{B}		min. Earth dist.	11484 Jun 24 16:54	11° \mathring{B} 59'31	29.12568 AU
retrograde	11478 Mar 25 16:34	0° \mathring{B} 06'02		direct	11484 Sep 11 12:45	10° \mathring{B} 35'13	
	11478 Apr 13 17:29	30° \mathring{R} \mathring{A}		evening set	11484 Dec 09 19:16	12° \mathring{B} 29'38	
opposition	11478 Jun 12 01:08	28° \mathring{A} 42'13	0°26'45				
min. Earth dist.	11478 Jun 11 21:48	28° \mathring{A} 42'27	29.05354 AU	conjunction	11484 Dec 25 23:43	13° \mathring{B} 05'19	0°34'32
direct	11478 Aug 29 18:23	27° \mathring{A} 17'56		minimum elong	11484 Dec 25 23:43	13° \mathring{B} 05'19	0°35'16
evening set	11478 Nov 26 13:26	29° \mathring{A} 12'16		max. Earth dist.	11484 Dec 25 22:31	13° \mathring{B} 05'13	31.13042 AU
				morning rise	11485 Jan 11 03:26	13° \mathring{B} 40'59	
conjunction	11478 Dec 12 17:51	29° \mathring{A} 48'04	0°25'48	retrograde	11485 Apr 09 20:48	15° \mathring{B} 35'17	
minimum elong	11478 Dec 12 17:51	29° \mathring{A} 48'04	0°26'32	opposition	11485 Jun 27 01:52	14° \mathring{B} 11'53	0°37'38
max. Earth dist.	11478 Dec 12 20:54	29° \mathring{A} 48'20	31.06074 AU	min. Earth dist.	11485 Jun 27 03:21	14° \mathring{B} 11'47	29.13536 AU
	11478 Dec 18 02:25	0° \mathring{B}		direct	11485 Sep 14 01:15	12° \mathring{B} 47'28	
morning rise	11478 Dec 28 22:24	0° \mathring{B} 23'52		evening set	11485 Dec 12 08:04	14° \mathring{B} 41'52	
retrograde	11479 Mar 28 05:06	2° \mathring{B} 18'58					
opposition	11479 Jun 14 11:37	0° \mathring{B} 55'15	0°28'27	conjunction	11485 Dec 28 12:17	15° \mathring{B} 17'32	0°35'49
min. Earth dist.	11479 Jun 14 08:16	0° \mathring{B} 55'29	29.06788 AU	minimum elong	11485 Dec 28 12:16	15° \mathring{B} 17'32	0°36'32
	11479 Jul 20 07:07	30° \mathring{R} \mathring{A}		max. Earth dist.	11485 Dec 28 09:25	15° \mathring{B} 17'16	31.14024 AU
direct	11479 Sep 01 05:46	29° \mathring{A} 31'00		morning rise	11486 Jan 13 15:59	15° \mathring{B} 53'10	
	11479 Oct 13 07:02	0° \mathring{B}		retrograde	11486 Apr 12 09:20	17° \mathring{B} 47'19	
evening set	11479 Nov 29 02:30	1° \mathring{B} 25'23		opposition	11486 Jun 29 12:05	16° \mathring{B} 23'56	0°38'58
				min. Earth dist.	11486 Jun 29 13:55	16° \mathring{B} 23'48	29.14549 AU
conjunction	11479 Dec 15 07:01	2° \mathring{B} 01'10	0°27'22	direct	11486 Sep 16 13:13	14° \mathring{B} 59'28	
minimum elong	11479 Dec 15 07:00	2° \mathring{B} 01'10	0°28'05	evening set	11486 Dec 14 20:28	16° \mathring{B} 53'51	
max. Earth dist.	11479 Dec 15 09:56	2° \mathring{B} 01'26	31.07467 AU				
morning rise	11479 Dec 31 11:21	2° \mathring{B} 36'58		conjunction	11486 Dec 31 00:45	17° \mathring{B} 29'30	0°37'03
retrograde	11480 Mar 29 15:18	4° \mathring{B} 31'57		minimum elong	11486 Dec 31 00:45	17° \mathring{B} 29'30	0°37'46
opposition	11480 Jun 15 22:07	3° \mathring{B} 08'20	0°30'06	max. Earth dist.	11486 Dec 30 22:39	17° \mathring{B} 29'19	31.15060 AU
min. Earth dist.	11480 Jun 15 20:28	3° \mathring{B} 08'27	29.08144 AU	morning rise	11487 Jan 16 04:07	18° \mathring{B} 05'06	
direct	11480 Sep 02 16:40	1° \mathring{B} 44'06		retrograde	11487 Apr 14 19:17	19° \mathring{B} 59'08	

opposition	11487 Jul 01 22:20	18°33'54" 0°40'16"	conjunction	11494 Jan 15 15:38	2°51'25" 0°44'02"
min. Earth dist.	11487 Jul 02 00:59	18°33'55" 29.15623 AU	minimum elong	11494 Jan 15 15:38	2°51'25" 0°44'40"
direct	11487 Sep 19 01:55	17°31'16"	max. Earth dist.	11494 Jan 15 09:11	2°50'50" 31.23808 AU
evening set	11487 Dec 17 09:06	19°30'54"	morning rise	11494 Jan 31 17:26	3°26'50"
			retrograde	11494 Apr 29 22:13	5°20'12"
conjunction	11488 Jan 02 13:10	19°34'17" 0°38'14"	opposition	11494 Jul 16 21:21	3°57'25" 0°47'29"
minimum elong	11488 Jan 02 13:10	19°34'17" 0°38'55"	min. Earth dist.	11494 Jul 17 03:40	3°56'58" 29.24327 AU
max. Earth dist.	11488 Jan 02 09:42	19°34'05" 31.16189 AU	direct	11494 Oct 04 06:50	2°33'01"
morning rise	11488 Jan 18 16:31	20°31'6"	evening set	11495 Jan 02 00:43	4°27'38"
retrograde	11488 Apr 16 07:23	22°310'44"			
opposition	11488 Jul 03 08:19	20°347'26" 0°41'29"	conjunction	11495 Jan 18 03:44	5°03'07" 0°44'47"
min. Earth dist.	11488 Jul 03 10:33	20°347'17" 29.16809 AU	minimum elong	11495 Jan 18 03:44	5°03'07" 0°45'25"
direct	11488 Sep 20 13:24	19°322'55"	max. Earth dist.	11495 Jan 17 19:20	5°02'21" 31.24772 AU
evening set	11488 Dec 18 21:39	21°317'20"	morning rise	11495 Feb 03 05:28	5°38'30"
			retrograde	11495 May 02 10:29	7°31'47"
conjunction	11489 Jan 04 01:43	21°352'56" 0°39'21"	opposition	11495 Jul 19 07:32	6°09'02" 0°48'15"
minimum elong	11489 Jan 04 01:43	21°352'56" 0°40'03"	min. Earth dist.	11495 Jul 19 14:28	6°08'33" 29.25230 AU
max. Earth dist.	11489 Jan 03 22:35	21°352'39" 31.17420 AU	direct	11495 Oct 06 18:27	4°44'36"
morning rise	11489 Jan 20 04:43	22°328'28"	evening set	11496 Jan 04 13:05	6°39'15"
retrograde	11489 Apr 18 17:37	24°322'15"			
opposition	11489 Jul 05 18:35	22°359'02" 0°42'39"	conjunction	11496 Jan 20 16:06	7°14'42" 0°45'28"
min. Earth dist.	11489 Jul 05 22:01	22°358'47" 29.18092 AU	minimum elong	11496 Jan 20 16:06	7°14'42" 0°46'05"
direct	11489 Sep 23 00:42	21°334'32"	max. Earth dist.	11496 Jan 20 07:59	7°13'58" 31.25606 AU
evening set	11489 Dec 21 10:05	23°328'58"	morning rise	11496 Feb 05 17:24	7°50'03"
			retrograde	11496 May 03 20:06	9°43'14"
conjunction	11490 Jan 06 13:57	24°304'33" 0°40'24"	opposition	11496 Jul 20 17:37	8°20'31" 0°48'56"
minimum elong	11490 Jan 06 13:57	24°304'33" 0°41'06"	min. Earth dist.	11496 Jul 21 01:51	8°19'56" 29.26003 AU
max. Earth dist.	11490 Jan 06 09:58	24°304'11" 31.18754 AU	direct	11496 Oct 08 06:53	6°56'04"
morning rise	11490 Jan 22 16:50	24°340'04"	evening set	11497 Jan 06 01:31	8°50'43"
retrograde	11490 Apr 21 05:41	26°333'45"			
opposition	11490 Jul 08 04:37	25°310'37" 0°43'45"	conjunction	11497 Jan 22 04:11	9°26'09" 0°46'05"
min. Earth dist.	11490 Jul 08 07:29	25°310'25" 29.19450 AU	minimum elong	11497 Jan 22 04:11	9°26'09" 0°46'42"
direct	11490 Sep 25 12:04	23°346'09"	max. Earth dist.	11497 Jan 21 18:23	9°25'15" 31.26341 AU
evening set	11490 Dec 23 22:36	25°340'38"	morning rise	11497 Feb 07 05:23	10°01'28"
			retrograde	11497 May 06 08:04	11°54'32"
conjunction	11491 Jan 09 02:20	26°316'12" 0°41'24"	opposition	11497 Jul 23 03:40	10°31'50" 0°49'34"
minimum elong	11491 Jan 09 02:20	26°316'12" 0°42'06"	min. Earth dist.	11497 Jul 23 11:43	10°31'17" 29.26703 AU
max. Earth dist.	11491 Jan 08 21:52	26°315'48" 31.20120 AU	direct	11497 Oct 10 18:40	9°07'21"
morning rise	11491 Jan 25 04:57	26°351'42"	evening set	11498 Jan 08 13:32	11°02'00"
retrograde	11491 Apr 23 14:55	28°345'18"			
opposition	11491 Jul 10 14:47	27°322'17" 0°44'47"	conjunction	11498 Jan 24 16:06	11°37'25" 0°46'38"
min. Earth dist.	11491 Jul 10 19:16	27°321'58" 29.20820 AU	minimum elong	11498 Jan 24 16:06	11°37'25" 0°47'13"
direct	11491 Sep 27 21:42	25°357'51"	max. Earth dist.	11498 Jan 24 06:31	11°36'32" 31.27007 AU
evening set	11491 Dec 26 11:07	27°352'22"	morning rise	11498 Feb 09 16:52	12°12'41"
			retrograde	11498 May 08 18:06	14°05'40"
conjunction	11492 Jan 11 14:46	28°327'55" 0°42'21"	opposition	11498 Jul 25 13:50	12°42'59" 0°50'07"
minimum elong	11492 Jan 11 14:46	28°327'55" 0°43'01"	min. Earth dist.	11498 Jul 25 23:14	12°42'19" 29.27362 AU
max. Earth dist.	11492 Jan 11 09:56	28°327'28" 31.21467 AU	direct	11498 Oct 13 06:46	11°18'28"
morning rise	11492 Jan 27 17:10	29°303'23"	evening set	11499 Jan 11 01:37	13°13'06"
	11492 Feb 25 03:39	0°			
retrograde	11492 Apr 25 01:18	0°56'55"	conjunction	11499 Jan 27 03:54	13°48'29" 0°47'07"
	11492 Jun 26 05:18	30°R3	minimum elong	11499 Jan 27 03:54	13°48'29" 0°47'42"
opposition	11492 Jul 12 00:55	29°333'59" 0°45'45"	max. Earth dist.	11499 Jan 26 17:28	13°47'32" 31.27674 AU
min. Earth dist.	11492 Jul 12 05:23	29°333'40" 29.22115 AU	morning rise	11499 Feb 12 04:30	14°23'44"
direct	11492 Sep 29 09:30	28°309'34"		11499 Mar 01 17:16	15°
	11492 Dec 26 01:35	0°	retrograde	11499 May 11 05:36	16°16'36"
evening set	11492 Dec 27 23:48	0°04'08"		11499 Jul 24 08:25	15°R
			opposition	11499 Jul 27 23:41	14°53'56" 0°50'35"
conjunction	11493 Jan 13 03:10	0°39'40" 0°43'14"	min. Earth dist.	11499 Jul 28 08:27	14°53'19" 29.28042 AU
minimum elong	11493 Jan 13 03:10	0°39'40" 0°43'53"	direct	11499 Oct 15 18:57	13°29'23"
max. Earth dist.	11493 Jan 12 20:44	0°39'05" 31.22700 AU		11500 Jan 02 03:28	15°
morning rise	11493 Jan 29 05:22	1°15'06"	evening set	11500 Jan 13 13:37	15°24'01"
retrograde	11493 Apr 27 12:07	3°08'34"			
opposition	11493 Jul 14 11:06	1°45'43" 0°46'39"	conjunction	11500 Jan 29 15:41	15°59'23" 0°47'32"
min. Earth dist.	11493 Jul 14 16:53	1°45'19" 29.23296 AU	minimum elong	11500 Jan 29 15:41	15°59'23" 0°48'05"
direct	11493 Oct 01 18:47	0°21'18"	max. Earth dist.	11500 Jan 29 04:57	15°58'23" 31.28372 AU
evening set	11493 Dec 30 12:17	2°15'55"	morning rise	11500 Feb 14 15:58	16°34'36"

retrograde	11500 May 13 13:51	18° \approx 27'22	evening set	11507 Jan 30 00:13	0° \mathbb{H} 39'17	
opposition	11500 Jul 30 09:48	17° \approx 04'44 0°51'00	max. Earth dist.	11507 Feb 14 11:09	1° \mathbb{H} 13'15	31.34191 AU
min. Earth dist.	11500 Jul 30 19:45	17° \approx 04'02 29.28785 AU				
direct	11500 Oct 18 05:02	15° \approx 40'10	conjunction	11507 Feb 15 00:32	1° \mathbb{H} 14'29	0°48'30
evening set	11501 Jan 16 01:30	17° \approx 34'48	minimum elong	11507 Feb 15 00:32	1° \mathbb{H} 14'29	0°48'55
			morning rise	11507 Mar 02 22:33	1° \mathbb{H} 49'31	
conjunction	11501 Feb 01 03:22	18° \approx 10'08 0°47'52	retrograde	11507 May 29 13:22	3° \mathbb{H} 41'54	
minimum elong	11501 Feb 01 03:23	18° \approx 10'08 0°48'25	opposition	11507 Aug 15 08:29	2° \mathbb{H} 19'37	0°51'45
max. Earth dist.	11501 Jan 31 16:48	18° \approx 09'10 31.29161 AU	min. Earth dist.	11507 Aug 15 21:33	2° \mathbb{H} 18'42	29.34487 AU
morning rise	11501 Feb 17 03:18	18° \approx 45'20	direct	11507 Nov 03 10:02	0° \mathbb{H} 55'08	
retrograde	11501 May 15 23:08	20° \approx 38'01	evening set	11508 Feb 01 11:57	2° \mathbb{H} 49'54	
opposition	11501 Aug 01 19:45	19° \approx 15'26 0°51'19				
min. Earth dist.	11501 Aug 02 05:09	19° \approx 14'46 29.29613 AU	conjunction	11508 Feb 17 11:57	3° \mathbb{H} 25'05	0°48'21
direct	11501 Oct 20 16:34	17° \approx 50'52	minimum elong	11508 Feb 17 11:57	3° \mathbb{H} 25'05	0°48'45
evening set	11502 Jan 18 13:24	19° \approx 45'31	max. Earth dist.	11508 Feb 16 21:30	3° \mathbb{H} 23'45	31.34684 AU
			morning rise	11508 Mar 04 09:45	4° \mathbb{H} 00'05	
conjunction	11502 Feb 03 14:56	20° \approx 20'50 0°48'09	retrograde	11508 May 31 00:35	5° \mathbb{H} 52'24	
minimum elong	11502 Feb 03 14:56	20° \approx 20'50 0°48'40	opposition	11508 Aug 16 18:38	4° \mathbb{H} 30'07	0°51'34
max. Earth dist.	11502 Feb 03 03:26	20° \approx 19'47 31.30037 AU	min. Earth dist.	11508 Aug 17 07:16	4° \mathbb{H} 29'14	29.34905 AU
morning rise	11502 Feb 19 14:39	20° \approx 56'00	direct	11508 Nov 04 22:51	3° \mathbb{H} 05'37	
retrograde	11502 May 18 09:27	22° \approx 48'38	evening set	11509 Feb 02 23:34	5° \mathbb{H} 00'22	
opposition	11502 Aug 04 05:49	21° \approx 26'06 0°51'35				
min. Earth dist.	11502 Aug 04 15:49	21° \approx 25'24 29.30539 AU	conjunction	11509 Feb 18 23:15	5° \mathbb{H} 35'32	0°48'09
direct	11502 Oct 23 00:53	20° \approx 01'34	minimum elong	11509 Feb 18 23:15	5° \mathbb{H} 35'32	0°48'31
evening set	11503 Jan 21 01:01	21° \approx 56'14	max. Earth dist.	11509 Feb 18 08:14	5° \mathbb{H} 34'08	31.35036 AU
			morning rise	11509 Mar 06 20:40	6° \mathbb{H} 10'30	
conjunction	11503 Feb 06 02:28	22° \approx 31'32 0°48'22	retrograde	11509 Jun 02 09:23	8° \mathbb{H} 02'45	
minimum elong	11503 Feb 06 02:28	22° \approx 31'32 0°48'52	opposition	11509 Aug 19 04:54	6° \mathbb{H} 40'28	0°51'18
max. Earth dist.	11503 Feb 05 15:38	22° \approx 30'32 31.30989 AU	min. Earth dist.	11509 Aug 19 18:55	6° \mathbb{H} 39'30	29.35215 AU
morning rise	11503 Feb 22 01:47	23° \approx 06'41	direct	11509 Nov 07 09:17	5° \mathbb{H} 15'57	
retrograde	11503 May 20 18:27	24° \approx 59'15	evening set	11510 Feb 05 11:00	7° \mathbb{H} 10'40	
opposition	11503 Aug 06 15:53	23° \approx 36'48 0°51'46				
min. Earth dist.	11503 Aug 07 02:10	23° \approx 36'05 29.31487 AU	conjunction	11510 Feb 21 10:28	7° \mathbb{H} 45'48	0°47'52
direct	11503 Oct 25 12:41	22° \approx 12'18	minimum elong	11510 Feb 21 10:28	7° \mathbb{H} 45'48	0°48'13
evening set	11504 Jan 23 12:58	24° \approx 07'00	max. Earth dist.	11510 Feb 20 19:31	7° \mathbb{H} 44'26	31.35309 AU
			morning rise	11510 Mar 09 07:33	8° \mathbb{H} 20'45	
conjunction	11504 Feb 08 14:00	24° \approx 42'16 0°48'30	retrograde	11510 Jun 04 18:33	10° \mathbb{H} 12'56	
minimum elong	11504 Feb 08 14:00	24° \approx 42'16 0°48'58	opposition	11510 Aug 21 15:00	8° \mathbb{H} 50'39	0°50'59
max. Earth dist.	11504 Feb 08 01:34	24° \approx 41'08 31.31931 AU	min. Earth dist.	11510 Aug 22 04:42	8° \mathbb{H} 49'42	29.35450 AU
morning rise	11504 Feb 24 13:09	25° \approx 17'23	direct	11510 Nov 09 21:25	7° \mathbb{H} 26'05	
retrograde	11504 May 22 05:49	27° \approx 09'56	evening set	11511 Feb 07 22:20	9° \mathbb{H} 20'48	
opposition	11504 Aug 08 01:51	25° \approx 47'32 0°51'52				
min. Earth dist.	11504 Aug 08 12:27	25° \approx 46'48 29.32411 AU	conjunction	11511 Feb 23 21:26	9° \mathbb{H} 55'55	0°47'32
direct	11504 Oct 26 22:59	24° \approx 23'03	minimum elong	11511 Feb 23 21:26	9° \mathbb{H} 55'55	0°47'51
evening set	11505 Jan 25 00:46	26° \approx 17'47	max. Earth dist.	11511 Feb 23 05:29	9° \mathbb{H} 54'26	31.35529 AU
			morning rise	11511 Mar 11 18:18	10° \mathbb{H} 30'50	
conjunction	11505 Feb 10 01:40	26° \approx 53'03 0°48'34	retrograde	11511 Jun 07 04:23	12° \mathbb{H} 22'58	
minimum elong	11505 Feb 10 01:41	26° \approx 53'03 0°49'02	opposition	11511 Aug 24 01:11	11° \mathbb{H} 00'40	0°50'35
max. Earth dist.	11505 Feb 09 13:47	26° \approx 51'57 31.32805 AU	min. Earth dist.	11511 Aug 24 15:26	10° \mathbb{H} 59'41	29.35675 AU
morning rise	11505 Feb 26 00:19	27° \approx 28'08	direct	11511 Nov 12 06:33	9° \mathbb{H} 36'04	
retrograde	11505 May 24 15:11	29° \approx 20'37	evening set	11512 Feb 10 09:34	11° \mathbb{H} 30'46	
opposition	11505 Aug 10 12:07	27° \approx 58'17 0°51'54				
min. Earth dist.	11505 Aug 10 23:55	27° \approx 57'28 29.33231 AU	conjunction	11512 Feb 26 08:29	12° \mathbb{H} 05'51	0°47'08
direct	11505 Oct 29 10:15	26° \approx 33'49	minimum elong	11512 Feb 26 08:30	12° \mathbb{H} 05'51	0°47'24
evening set	11506 Jan 27 12:30	28° \approx 28'34	max. Earth dist.	11512 Feb 25 17:23	12° \mathbb{H} 04'28	31.35759 AU
			morning rise	11512 Mar 13 04:53	12° \mathbb{H} 40'45	
conjunction	11506 Feb 12 12:59	29° \approx 03'48 0°48'34	retrograde	11512 Jun 08 12:30	14° \mathbb{H} 32'50	
minimum elong	11506 Feb 12 12:59	29° \approx 03'48 0°49'00	opposition	11512 Aug 25 11:18	13° \mathbb{H} 10'32	0°50'06
max. Earth dist.	11506 Feb 11 23:35	29° \approx 02'33 31.33570 AU	min. Earth dist.	11512 Aug 26 01:36	13° \mathbb{H} 09'33	29.35924 AU
morning rise	11506 Feb 28 11:28	29° \approx 38'51	direct	11512 Nov 13 18:27	11° \mathbb{H} 45'57	
	11506 Mar 10 11:30	0° \mathbb{H}	evening set	11513 Feb 11 20:52	13° \mathbb{H} 40'38	
retrograde	11506 May 27 03:09	1° \mathbb{H} 31'18				
opposition	11506 Aug 12 22:18	0° \mathbb{H} 08'59 0°51'52	conjunction	11513 Feb 27 19:18	14° \mathbb{H} 15'42	0°46'39
min. Earth dist.	11506 Aug 13 09:47	0° \mathbb{H} 08'12 29.33931 AU	minimum elong	11513 Feb 27 19:18	14° \mathbb{H} 15'42	0°46'55
	11506 Aug 18 08:29	30° \mathbb{R}	max. Earth dist.	11513 Feb 27 03:06	14° \mathbb{H} 14'12	31.36053 AU
direct	11506 Oct 31 21:55	28° \approx 44'31	morning rise	11513 Mar 15 15:31	14° \mathbb{H} 50'34	
	11507 Jan 10 21:30	0° \mathbb{H}	retrograde	11513 Jun 10 23:18	16° \mathbb{H} 42'38	

opposition	11513 Aug 27 21:32	15° ✕ 20'21	0°49'34	max. Earth dist.	11520 Mar 14 05:13	29° ✕ 25'01	31.38770 AU
min. Earth dist.	11513 Aug 28 11:22	15° ✕ 19'24	29.36273 AU	morning rise	11520 Mar 30 16:25	0° ° 01'22	
direct	11513 Nov 16 04:15	13° ✕ 55'46			11520 Mar 30 01:20	0° °	
evening set	11514 Feb 14 07:46	15° ✕ 50'28		retrograde	11520 Jun 25 23:48	1° ° 53'29	
				opposition	11520 Sep 11 22:20	0° ° 31'29	0°43'50
conjunction	11514 Mar 02 06:04	16° ✕ 25'31	0°46'07	min. Earth dist.	11520 Sep 12 14:01	0° ° 30'25	29.38820 AU
minimum elong	11514 Mar 02 06:04	16° ✕ 25'31	0°46'21		11520 Oct 01 12:32	30° ° ✕	
max. Earth dist.	11514 Mar 01 15:04	16° ✕ 24'08	31.36446 AU	direct	11520 Dec 01 10:21	29° ✕ 07'10	
morning rise	11514 Mar 18 01:47	17° ✕ 00'22			11521 Jan 28 23:36	0° °	
retrograde	11514 Jun 13 08:12	18° ✕ 52'26		evening set	11521 Mar 01 13:11	1° ° 02'02	
opposition	11514 Aug 30 07:52	17° ✕ 30'11	0°48'57				
min. Earth dist.	11514 Aug 30 22:20	17° ✕ 29'11	29.36710 AU	conjunction	11521 Mar 17 09:16	1° ° 36'57	0°40'33
direct	11514 Nov 18 14:39	16° ✕ 05'39		minimum elong	11521 Mar 17 09:17	1° ° 36'57	0°40'36
evening set	11515 Feb 16 18:55	18° ✕ 00'23		max. Earth dist.	11521 Mar 16 16:38	1° ° 35'25	31.38768 AU
				morning rise	11521 Apr 02 02:43	2° ° 11'41	
conjunction	11515 Mar 04 16:46	18° ✕ 35'24	0°45'31	retrograde	11521 Jun 28 07:34	4° ° 03'48	
minimum elong	11515 Mar 04 16:47	18° ✕ 35'24	0°45'44	opposition	11521 Sep 14 09:03	2° ° 41'48	0°42'46
max. Earth dist.	11515 Mar 04 00:56	18° ✕ 33'57	31.36933 AU	min. Earth dist.	11521 Sep 15 01:04	2° ° 40'42	29.38742 AU
morning rise	11515 Mar 20 12:21	19° ✕ 10'15		direct	11521 Dec 03 22:34	1° ° 17'28	
retrograde	11515 Jun 15 20:02	21° ✕ 02'18		evening set	11522 Mar 04 00:01	3° ° 12'17	
opposition	11515 Sep 01 17:55	19° ✕ 40'07	0°48'16				
min. Earth dist.	11515 Sep 02 07:35	19° ✕ 39'11	29.37219 AU	conjunction	11522 Mar 19 19:38	3° ° 47'12	0°39'31
direct	11515 Nov 21 01:41	18° ✕ 15'38		minimum elong	11522 Mar 19 19:38	3° ° 47'12	0°39'32
evening set	11516 Feb 19 05:59	20° ✕ 10'25		max. Earth dist.	11522 Mar 19 01:42	3° ° 45'32	31.38635 AU
				morning rise	11522 Apr 04 12:58	4° ° 21'55	
conjunction	11516 Mar 06 03:39	20° ✕ 45'26	0°44'51	retrograde	11522 Jun 30 17:40	6° ° 14'01	
minimum elong	11516 Mar 06 03:39	20° ✕ 45'26	0°45'02	opposition	11522 Sep 16 19:39	4° ° 51'58	0°41'37
max. Earth dist.	11516 Mar 05 12:18	20° ✕ 44'01	31.37447 AU	min. Earth dist.	11522 Sep 17 11:25	4° ° 50'54	29.38558 AU
morning rise	11516 Mar 21 22:46	21° ✕ 20'15		direct	11522 Dec 06 08:19	3° ° 27'37	
retrograde	11516 Jun 17 06:46	23° ✕ 12'20		evening set	11523 Mar 06 10:44	5° ° 22'24	
opposition	11516 Sep 03 04:22	21° ✕ 50'12	0°47'31				
min. Earth dist.	11516 Sep 03 19:12	21° ✕ 49'11	29.37730 AU	conjunction	11523 Mar 22 06:13	5° ° 57'18	0°38'25
direct	11516 Nov 22 13:27	20° ✕ 25'46		minimum elong	11523 Mar 22 06:13	5° ° 57'18	0°38'25
evening set	11517 Feb 20 17:02	22° ✕ 20'36		max. Earth dist.	11523 Mar 21 13:12	5° ° 55'43	31.38403 AU
				morning rise	11523 Apr 06 23:05	6° ° 32'00	
conjunction	11517 Mar 08 14:18	22° ✕ 55'35	0°44'06	retrograde	11523 Jul 03 02:09	8° ° 24'05	
minimum elong	11517 Mar 08 14:18	22° ✕ 55'35	0°44'16	opposition	11523 Sep 19 06:15	7° ° 02'00	0°40'26
max. Earth dist.	11517 Mar 07 22:29	22° ✕ 54'08	31.37940 AU	min. Earth dist.	11523 Sep 19 22:57	7° ° 00'51	29.38292 AU
morning rise	11517 Mar 24 09:09	23° ✕ 30'23		direct	11523 Dec 08 18:43	5° ° 37'37	
retrograde	11517 Jun 19 18:14	25° ✕ 22'30		evening set	11524 Mar 07 21:32	7° ° 32'22	
opposition	11517 Sep 05 14:43	24° ✕ 00'25	0°46'42				
min. Earth dist.	11517 Sep 06 04:49	23° ✕ 59'27	29.38182 AU	conjunction	11524 Mar 23 16:33	8° ° 07'14	0°37'17
direct	11517 Nov 25 01:59	22° ✕ 36'02		minimum elong	11524 Mar 23 16:34	8° ° 07'14	0°37'15
evening set	11518 Feb 23 04:08	24° ✕ 30'54		max. Earth dist.	11524 Mar 22 22:50	8° ° 05'35	31.38131 AU
max. Earth dist.	11518 Mar 10 08:48	25° ✕ 04'22	31.38341 AU	morning rise	11524 Apr 08 09:16	8° ° 41'55	
				retrograde	11524 Jul 04 13:11	10° ° 33'59	
conjunction	11518 Mar 11 01:03	25° ✕ 05'52	0°43'19	opposition	11524 Sep 20 16:53	9° ° 11'52	0°39'11
minimum elong	11518 Mar 11 01:04	25° ✕ 05'53	0°43'26	min. Earth dist.	11524 Sep 21 08:30	9° ° 10'48	29.38022 AU
morning rise	11518 Mar 26 19:33	25° ✕ 40'39		direct	11524 Dec 10 06:26	7° ° 47'27	
retrograde	11518 Jun 22 03:40	27° ✕ 32'47		evening set	11525 Mar 10 08:01	9° ° 42'10	
opposition	11518 Sep 08 01:14	26° ✕ 10'45	0°45'48	max. Earth dist.	11525 Mar 25 09:51	10° ° 15'27	31.37869 AU
min. Earth dist.	11518 Sep 08 16:33	26° ✕ 09'42	29.38539 AU				
direct	11518 Nov 27 12:04	24° ✕ 46'24		conjunction	11525 Mar 26 02:47	10° ° 17'01	0°36'05
evening set	11519 Feb 25 15:07	26° ✕ 41'16		minimum elong	11525 Mar 26 02:47	10° ° 17'01	0°36'02
				morning rise	11525 Apr 10 19:04	10° ° 51'40	
conjunction	11519 Mar 13 11:49	27° ✕ 16'14	0°42'27	retrograde	11525 Jul 06 23:13	12° ° 43'46	
minimum elong	11519 Mar 13 11:50	27° ✕ 16'14	0°42'33	opposition	11525 Sep 23 03:45	11° ° 21'36	0°37'53
max. Earth dist.	11519 Mar 12 19:45	27° ✕ 14'45	31.38635 AU	min. Earth dist.	11525 Sep 23 20:02	11° ° 20'29	29.37798 AU
morning rise	11519 Mar 29 05:59	27° ✕ 51'00		direct	11525 Dec 12 17:57	9° ° 57'11	
retrograde	11519 Jun 24 13:28	29° ✕ 43'07		evening set	11526 Mar 12 18:35	11° ° 51'54	
opposition	11519 Sep 10 11:46	28° ✕ 21'07	0°44'51				
min. Earth dist.	11519 Sep 11 02:52	28° ✕ 20'05	29.38750 AU	conjunction	11526 Mar 28 13:00	12° ° 26'43	0°34'51
direct	11519 Nov 30 00:42	26° ✕ 56'48		minimum elong	11526 Mar 28 13:00	12° ° 26'43	0°34'46
evening set	11520 Feb 28 02:16	28° ✕ 51'40		max. Earth dist.	11526 Mar 27 20:12	12° ° 25'10	31.37693 AU
				morning rise	11526 Apr 13 05:02	13° ° 01'22	
conjunction	11520 Mar 14 22:31	29° ✕ 26'37	0°41'32	retrograde	11526 Jul 09 10:04	14° ° 53'28	
minimum elong	11520 Mar 14 22:31	29° ✕ 26'37	0°41'36	opposition	11526 Sep 25 14:22	13° ° 31'18	0°36'31

min. Earth dist.	11526 Sep 26 05:21	13° Υ 30'17	29.37658 AU	morning rise	11533 Apr 28 02:34	28° Υ 12'09	
direct	11526 Dec 15 06:13	12° Υ 06'54			11533 Jul 07 17:56	0° \mathcal{B}	
evening set	11527 Mar 15 05:06	14° Υ 01'38		retrograde	11533 Jul 24 09:03	0° \mathcal{B} 04'42	
					11533 Aug 10 05:39	30° $\mathcal{R}\Upsilon$	
conjunction	11527 Mar 30 23:12	14° Υ 36'26	0°33'33	opposition	11533 Oct 10 19:48	28° Υ 42'38	0°25'38
minimum elong	11527 Mar 30 23:12	14° Υ 36'26	0°33'26	min. Earth dist.	11533 Oct 11 10:39	28° Υ 41'37	29.35998 AU
max. Earth dist.	11527 Mar 30 06:25	14° Υ 34'53	31.37591 AU	direct	11533 Dec 30 10:20	27° Υ 18'31	
morning rise	11527 Apr 15 14:58	15° Υ 11'04		evening set	11534 Mar 30 06:43	29° Υ 13'19	
retrograde	11527 Jul 11 20:11	17° Υ 03'13					
opposition	11527 Sep 28 01:14	15° Υ 41'04	0°35'07	conjunction	11534 Apr 14 22:42	29° Υ 48'05	0°23'14
min. Earth dist.	11527 Sep 28 16:49	15° Υ 40'00	29.37591 AU	minimum elong	11534 Apr 14 22:42	29° Υ 48'05	0°22'56
direct	11527 Dec 17 16:32	14° Υ 16'43		max. Earth dist.	11534 Apr 14 06:27	29° Υ 46'34	31.35625 AU
evening set	11528 Mar 16 15:34	16° Υ 11'27			11534 Apr 20 06:29	0° \mathcal{B}	
				morning rise	11534 Apr 30 12:30	0° \mathcal{B} 22'40	
conjunction	11528 Apr 01 09:26	16° Υ 46'15	0°32'12	retrograde	11534 Jul 26 19:43	2° \mathcal{B} 15'17	
minimum elong	11528 Apr 01 09:26	16° Υ 46'15	0°32'03	opposition	11534 Oct 13 07:05	0° \mathcal{B} 53'10	0°23'55
max. Earth dist.	11528 Mar 31 17:32	16° Υ 44'47	31.37545 AU	min. Earth dist.	11534 Oct 13 22:59	0° \mathcal{B} 52'05	29.35264 AU
morning rise	11528 Apr 17 00:50	17° Υ 20'52			11534 Nov 17 11:15	30° $\mathcal{R}\Upsilon$	
retrograde	11528 Jul 13 06:11	19° Υ 13'04		direct	11535 Jan 01 21:35	29° Υ 29'03	
opposition	11528 Sep 29 12:04	17° Υ 50'57	0°33'39		11535 Feb 15 02:45	0° \mathcal{B}	
min. Earth dist.	11528 Sep 30 03:01	17° Υ 49'56	29.37537 AU	evening set	11535 Apr 01 17:08	1° \mathcal{B} 23'51	
direct	11528 Dec 19 05:19	16° Υ 26'40					
evening set	11529 Mar 19 02:10	18° Υ 21'25		conjunction	11535 Apr 17 08:51	1° \mathcal{B} 58'35	0°21'37
				minimum elong	11535 Apr 17 08:51	1° \mathcal{B} 58'35	0°21'17
conjunction	11529 Apr 03 19:34	18° Υ 56'13	0°30'49	max. Earth dist.	11535 Apr 16 16:35	1° \mathcal{B} 57'05	31.34837 AU
minimum elong	11529 Apr 03 19:35	18° Υ 56'13	0°30'38	morning rise	11535 May 02 22:28	2° \mathcal{B} 33'11	
max. Earth dist.	11529 Apr 03 02:58	18° Υ 54'41	31.37488 AU	retrograde	11535 Jul 29 06:43	4° \mathcal{B} 25'50	
morning rise	11529 Apr 19 10:48	19° Υ 30'50		opposition	11535 Oct 15 18:21	3° \mathcal{B} 03'40	0°22'10
retrograde	11529 Jul 15 17:12	21° Υ 23'06		min. Earth dist.	11535 Oct 16 09:11	3° \mathcal{B} 02'39	29.34414 AU
opposition	11529 Oct 01 23:04	20° Υ 01'01	0°32'08	direct	11536 Jan 04 10:05	1° \mathcal{B} 39'31	
min. Earth dist.	11529 Oct 02 14:06	19° Υ 59'59	29.37469 AU	evening set	11536 Apr 03 03:28	3° \mathcal{B} 34'17	
direct	11529 Dec 21 15:04	18° Υ 36'46					
evening set	11530 Mar 21 12:30	20° Υ 31'33		conjunction	11536 Apr 18 18:50	4° \mathcal{B} 09'01	0°19'58
				minimum elong	11536 Apr 18 18:50	4° \mathcal{B} 09'01	0°19'36
conjunction	11530 Apr 06 05:46	21° Υ 06'20	0°29'23	max. Earth dist.	11536 Apr 18 02:27	4° \mathcal{B} 07'30	31.33951 AU
minimum elong	11530 Apr 06 05:46	21° Υ 06'20	0°29'10	morning rise	11536 May 04 08:14	4° \mathcal{B} 43'37	
max. Earth dist.	11530 Apr 05 14:15	21° Υ 04'54	31.37380 AU	retrograde	11536 Jul 30 17:07	6° \mathcal{B} 36'18	
morning rise	11530 Apr 21 20:35	21° Υ 40'57		opposition	11536 Oct 17 05:46	5° \mathcal{B} 14'05	0°20'24
retrograde	11530 Jul 18 01:36	23° Υ 33'18		min. Earth dist.	11536 Oct 17 21:07	5° \mathcal{B} 13'02	29.33521 AU
opposition	11530 Oct 04 10:11	22° Υ 11'14	0°30'34	direct	11537 Jan 05 21:10	3° \mathcal{B} 49'54	
min. Earth dist.	11530 Oct 05 01:26	22° Υ 10'12	29.37304 AU	evening set	11537 Apr 05 13:37	5° \mathcal{B} 44'39	
direct	11530 Dec 24 02:58	20° Υ 47'03					
evening set	11531 Mar 23 23:11	22° Υ 41'51		conjunction	11537 Apr 21 04:48	6° \mathcal{B} 19'22	0°18'17
				minimum elong	11537 Apr 21 04:48	6° \mathcal{B} 19'22	0°17'55
conjunction	11531 Apr 08 15:58	23° Υ 16'38	0°27'54	max. Earth dist.	11537 Apr 20 13:39	6° \mathcal{B} 17'58	31.33064 AU
minimum elong	11531 Apr 08 15:58	23° Υ 16'38	0°27'40	morning rise	11537 May 06 17:53	6° \mathcal{B} 53'57	
max. Earth dist.	11531 Apr 07 23:15	23° Υ 15'05	31.37162 AU	retrograde	11537 Aug 02 03:35	8° \mathcal{B} 46'41	
morning rise	11531 Apr 24 06:40	23° Υ 51'14		opposition	11537 Oct 19 17:08	7° \mathcal{B} 24'24	0°18'35
retrograde	11531 Jul 20 12:23	25° Υ 43'39		min. Earth dist.	11537 Oct 20 07:31	7° \mathcal{B} 23'25	29.32648 AU
opposition	11531 Oct 06 21:10	24° Υ 21'36	0°28'58	direct	11538 Jan 08 10:59	6° \mathcal{B} 00'13	
min. Earth dist.	11531 Oct 07 12:03	24° Υ 20'35	29.37024 AU	evening set	11538 Apr 07 23:45	7° \mathcal{B} 54'56	
direct	11531 Dec 26 12:32	22° Υ 57'27					
evening set	11532 Mar 25 09:44	24° Υ 52'16		conjunction	11538 Apr 23 14:31	8° \mathcal{B} 29'39	0°16'36
max. Earth dist.	11532 Apr 09 10:32	25° Υ 25'34	31.36802 AU	minimum elong	11538 Apr 23 14:32	8° \mathcal{B} 29'39	0°16'11
				max. Earth dist.	11538 Apr 22 23:01	8° \mathcal{B} 28'13	31.32227 AU
conjunction	11532 Apr 10 02:21	25° Υ 27'03	0°26'23	morning rise	11538 May 09 03:33	9° \mathcal{B} 04'14	
minimum elong	11532 Apr 10 02:21	25° Υ 27'03	0°26'07	retrograde	11538 Aug 04 14:36	10° \mathcal{B} 57'02	
morning rise	11532 Apr 25 16:37	26° Υ 01'39		opposition	11538 Oct 22 04:34	9° \mathcal{B} 34'42	0°16'45
retrograde	11532 Jul 21 21:35	27° Υ 54'08		min. Earth dist.	11538 Oct 22 18:27	9° \mathcal{B} 33'45	29.31861 AU
opposition	11532 Oct 08 08:33	26° Υ 32'05	0°27'19	direct	11539 Jan 10 21:40	8° \mathcal{B} 10'31	
min. Earth dist.	11532 Oct 09 00:21	26° Υ 31'00	29.36586 AU	evening set	11539 Apr 10 09:50	10° \mathcal{B} 05'13	
direct	11532 Dec 27 22:38	25° Υ 07'58		max. Earth dist.	11539 Apr 25 10:34	10° \mathcal{B} 38'39	31.31480 AU
evening set	11533 Mar 27 20:14	27° Υ 02'47					
				conjunction	11539 Apr 26 00:31	10° \mathcal{B} 39'56	0°14'52
conjunction	11533 Apr 12 12:26	27° Υ 37'32	0°24'49	minimum elong	11539 Apr 26 00:31	10° \mathcal{B} 39'56	0°14'27
minimum elong	11533 Apr 12 12:26	27° Υ 37'32	0°24'33	behind sun begin	11539 Apr 25 21:33	10° \mathcal{B} 39'40	
max. Earth dist.	11533 Apr 11 19:52	27° Υ 36'00	31.36295 AU	behind sun end	11539 Apr 26 03:28	10° \mathcal{B} 40'12	

morning rise	11539 May 11 13:09	11°8'14"31		opposition	11544 Nov 04 02:34	22°8'38"37	0°05'19
retrograde	11539 Aug 06 22:39	13°8'07"23		min. Earth dist.	11544 Nov 04 13:46	22°8'37"51	29.27770 AU
opposition	11539 Oct 24 15:59	11°8'45"02	0°14'54	direct	11545 Jan 23 15:28	21°8'14"38	
min. Earth dist.	11539 Oct 25 05:32	11°8'44"07	29.31150 AU	evening set	11545 Apr 22 23:01	23°8'09"21	
direct	11540 Jan 13 09:51	10°8'20"53					
evening set	11540 Apr 11 20:04	12°8'15"35		conjunction	11545 May 08 12:01	23°8'44"03	0°04'10
				minimum elong	11545 May 08 12:01	23°8'44"03	0°03'37
conjunction	11540 Apr 27 10:19	12°8'50"18	0°13'07	behind sun begin	11545 May 08 05:38	23°8'43"29	
minimum elong	11540 Apr 27 10:19	12°8'50"18	0°12'41	behind sun end	11545 May 08 18:24	23°8'44"37	
behind sun begin	11540 Apr 27 06:11	12°8'49"56		max. Earth dist.	11545 May 07 23:30	23°8'42"53	31.27312 AU
behind sun end	11540 Apr 27 14:26	12°8'50"40		morning rise	11545 May 23 23:39	24°8'18"39	
max. Earth dist.	11540 Apr 26 19:53	12°8'48"57	31.30820 AU	retrograde	11545 Aug 19 15:55	26°8'12"09	
morning rise	11540 May 12 22:55	13°8'24"52		opposition	11545 Nov 06 14:36	24°8'49"40	0°03'22
	11540 Jul 06 17:47	15°8'		min. Earth dist.	11545 Nov 07 02:22	24°8'48"52	29.26846 AU
retrograde	11540 Aug 08 09:27	15°8'17"50		direct	11546 Jan 26 02:32	23°8'25"42	
	11540 Sep 10 20:33	15°8'8'		evening set	11546 Apr 25 09:11	25°8'20"25	
opposition	11540 Oct 26 03:31	13°8'55"28	0°13'01				
min. Earth dist.	11540 Oct 26 15:58	13°8'54"38	29.30520 AU	conjunction	11546 May 10 22:05	25°8'55"07	0°02'19
direct	11541 Jan 14 19:58	12°8'31"21		minimum elong	11546 May 10 22:06	25°8'55"07	0°01'44
evening set	11541 Apr 14 06:01	14°8'26"03		behind sun begin	11546 May 10 15:40	25°8'54"32	
				behind sun end	11546 May 11 04:32	25°8'55"41	
conjunction	11541 Apr 29 20:08	15°8'00"46	0°11'22	max. Earth dist.	11546 May 10 10:36	25°8'54"03	31.26320 AU
minimum elong	11541 Apr 29 20:09	15°8'00"46	0°10'54	morning rise	11546 May 26 09:31	26°8'29"43	
behind sun begin	11541 Apr 29 15:14	15°8'00"20		retrograde	11546 Aug 22 03:09	28°8'23"17	
behind sun end	11541 Apr 30 01:04	15°8'01"13		opposition	11546 Nov 09 02:37	27°8'00"46	0°01'24
max. Earth dist.	11541 Apr 29 07:13	14°8'59"34	31.30204 AU	min. Earth dist.	11546 Nov 09 13:45	27°8'00"01	29.25774 AU
	11541 Apr 29 11:43	15°8'		direct	11547 Jan 28 16:21	25°8'36"47	
morning rise	11541 May 15 08:24	15°8'35"21		evening set	11547 Apr 27 19:33	27°8'31"29	
retrograde	11541 Aug 10 18:56	17°8'28"26					
opposition	11541 Oct 28 15:16	16°8'06"03	0°11'07	conjunction	11547 May 13 08:06	28°8'06"11	0°00'25
min. Earth dist.	11541 Oct 29 04:10	16°8'05"10	29.29909 AU	minimum elong	11547 May 13 08:06	28°8'06"11	0°00'10
	11541 Dec 14 02:32	15°8'8'		behind sun begin	11547 May 13 01:44	28°8'05"37	
direct	11542 Jan 17 06:21	14°8'41"59		behind sun end	11547 May 13 14:28	28°8'06"45	
	11542 Feb 19 15:50	15°8'		max. Earth dist.	11547 May 12 19:49	28°8'05"02	31.25189 AU
evening set	11542 Apr 16 16:14	16°8'36"41		morning rise	11547 May 28 19:30	28°8'40"47	
					11547 Jul 09 17:42	0°8'11"	
conjunction	11542 May 02 06:01	17°8'11"24	0°09'35	desc. node	11547 Aug 06 23:07	0°8'29"14	
minimum elong	11542 May 02 06:00	17°8'11"23	0°09'05	retrograde	11547 Aug 24 14:50	0°8'34"27	
behind sun begin	11542 May 02 00:31	17°8'10"54			11547 Oct 11 03:20	30°8'8'	
behind sun end	11542 May 02 11:30	17°8'11"53		opposition	11547 Nov 11 14:36	29°8'11"51	-0°00'33
max. Earth dist.	11542 May 01 16:54	17°8'10"10	31.29596 AU	min. Earth dist.	11547 Nov 12 01:33	29°8'11"07	29.24595 AU
morning rise	11542 May 17 18:12	17°8'45"59		direct	11548 Jan 31 03:29	27°8'47"51	
retrograde	11542 Aug 13 06:00	19°8'39"09		evening set	11548 Apr 29 05:41	29°8'42"32	
opposition	11542 Oct 31 02:45	18°8'16"47	0°09'12		11548 May 07 02:40	0°8'11"	
min. Earth dist.	11542 Oct 31 14:23	18°8'15"59	29.29280 AU				
direct	11543 Jan 19 17:26	16°8'52"44		conjunction	11548 May 14 18:11	0°8'17"13	-0°01'28
evening set	11543 Apr 19 02:28	18°8'47"27		minimum elong	11548 May 14 18:12	0°8'17"13	0°02'04
				behind sun begin	11548 May 14 11:46	0°8'16"39	
conjunction	11543 May 04 16:02	19°8'22"10	0°07'47	behind sun end	11548 May 15 00:38	0°8'17"48	
minimum elong	11543 May 04 16:02	19°8'22"10	0°07'16	max. Earth dist.	11548 May 14 07:21	0°8'16"13	31.23969 AU
behind sun begin	11543 May 04 10:07	19°8'21"38		morning rise	11548 May 30 05:19	0°8'51"50	
behind sun end	11543 May 04 21:58	19°8'22"42		retrograde	11548 Aug 25 23:54	2°8'45"34	
max. Earth dist.	11543 May 04 03:28	19°8'21"00	31.28929 AU	opposition	11548 Nov 13 02:46	1°8'22"54	-0°02'31
morning rise	11543 May 20 03:59	19°8'56"45		min. Earth dist.	11548 Nov 13 13:30	1°8'22"11	29.23346 AU
retrograde	11543 Aug 15 16:48	21°8'50"02			11549 Jan 24 08:05	30°8'8'	
opposition	11543 Nov 02 14:41	20°8'27"38	0°07'16	direct	11549 Feb 01 16:30	29°8'58"53	
min. Earth dist.	11543 Nov 03 03:05	20°8'26"48	29.28579 AU		11549 Feb 09 21:00	0°8'11"	
direct	11544 Jan 22 03:36	19°8'03"38		evening set	11549 May 01 15:45	1°8'53"31	
evening set	11544 Apr 20 12:41	20°8'58"21					
				conjunction	11549 May 17 03:56	2°8'28"13	-0°03'18
conjunction	11544 May 06 02:00	21°8'33"03	0°05'59	minimum elong	11549 May 17 03:55	2°8'28"13	0°03'55
minimum elong	11544 May 06 01:59	21°8'33"03	0°05'27	behind sun begin	11549 May 16 21:33	2°8'27"39	
behind sun begin	11544 May 05 19:46	21°8'32"30		behind sun end	11549 May 17 10:16	2°8'28"47	
behind sun end	11544 May 06 08:12	21°8'33"37		max. Earth dist.	11549 May 16 16:41	2°8'27"10	31.22723 AU
max. Earth dist.	11544 May 05 13:45	21°8'31"55	31.28183 AU	morning rise	11549 Jun 01 15:06	3°8'02"50	
morning rise	11544 May 21 13:45	22°8'07"39		retrograde	11549 Aug 28 11:09	4°8'56"39	
retrograde	11544 Aug 17 04:10	24°8'01"02		opposition	11549 Nov 15 14:50	3°8'33"55	-0°04'28

min. Earth dist.	11549 Nov 16 00:19	3°II33'16	29.22117 AU	behind sun end	11555 May 30 18:12	15°II36'18	
direct	11550 Feb 04 03:37	2°II09'52		max. Earth dist.	11555 May 30 09:38	15°II35'31	31.16829 AU
evening set	11550 May 04 01:46	4°II04'29		morning rise	11555 Jun 15 02:01	16°II10'45	
				retrograde	11555 Sep 11 07:42	18°II05'21	
conjunction	11550 May 19 13:53	4°II39'11	-0°05'07	opposition	11555 Nov 29 16:24	16°II42'28	-0°16'00
minimum elong	11550 May 19 13:53	4°II39'11	0°05'45	min. Earth dist.	11555 Nov 29 22:01	16°II42'05	29.16396 AU
behind sun begin	11550 May 19 07:43	4°II38'38		direct	11556 Feb 17 22:29	15°II18'39	
behind sun end	11550 May 19 20:03	4°II39'44		evening set	11556 May 16 14:35	17°II13'22	
max. Earth dist.	11550 May 19 04:13	4°II38'18	31.21515 AU				
morning rise	11550 Jun 04 00:48	5°II13'49		conjunction	11556 Jun 01 01:35	17°II48'06	-0°15'50
retrograde	11550 Aug 30 20:43	7°II07'44		minimum elong	11556 Jun 01 01:35	17°II48'06	0°16'32
opposition	11550 Nov 18 02:54	5°II44'56	-0°06'25	max. Earth dist.	11556 May 31 19:12	17°II47'31	31.15949 AU
min. Earth dist.	11550 Nov 18 12:34	5°II44'16	29.20954 AU	morning rise	11556 Jun 16 12:12	18°II22'49	
direct	11551 Feb 06 14:41	4°II20'54		retrograde	11556 Sep 12 20:29	20°II17'34	
evening set	11551 May 06 11:56	6°II15'30		opposition	11556 Dec 01 05:03	18°II54'39	-0°17'51
				min. Earth dist.	11556 Dec 01 10:16	18°II54'18	29.15493 AU
conjunction	11551 May 21 23:46	6°II50'12	-0°06'56	direct	11557 Feb 19 09:03	17°II30'53	
minimum elong	11551 May 21 23:46	6°II50'12	0°07'34	evening set	11557 May 19 00:45	19°II25'36	
behind sun begin	11551 May 21 17:55	6°II49'40					
behind sun end	11551 May 22 05:37	6°II50'43		conjunction	11557 Jun 03 11:48	20°II00'21	-0°17'33
max. Earth dist.	11551 May 21 14:23	6°II49'20	31.20412 AU	minimum elong	11557 Jun 03 11:48	20°II00'21	0°18'16
morning rise	11551 Jun 06 10:41	7°II24'51		max. Earth dist.	11557 Jun 03 06:52	19°II59'53	31.14994 AU
retrograde	11551 Sep 02 07:48	9°II18'52		morning rise	11557 Jun 18 22:13	20°II35'04	
opposition	11551 Nov 20 14:59	7°II56'02	-0°08'21	retrograde	11557 Sep 15 07:11	22°II29'57	
min. Earth dist.	11551 Nov 20 22:49	7°II55'30	29.19904 AU	opposition	11557 Dec 03 17:47	21°II07'01	-0°19'42
direct	11552 Feb 09 01:52	6°II32'01		min. Earth dist.	11557 Dec 03 22:54	21°II06'40	29.14479 AU
evening set	11552 May 07 21:54	8°II26'38		direct	11558 Feb 21 22:25	19°II43'16	
				evening set	11558 May 21 11:17	21°II37'59	
conjunction	11552 May 23 09:34	9°II01'20	-0°08'44				
minimum elong	11552 May 23 09:34	9°II01'20	0°09'24	conjunction	11558 Jun 05 22:04	22°II12'44	-0°19'16
behind sun begin	11552 May 23 04:10	9°II00'51		minimum elong	11558 Jun 05 22:04	22°II12'44	0°19'59
behind sun end	11552 May 23 14:58	9°II01'49		max. Earth dist.	11558 Jun 05 16:25	22°II12'13	31.13927 AU
max. Earth dist.	11552 May 23 01:10	9°II00'34	31.19410 AU	morning rise	11558 Jun 21 08:38	22°II47'29	
morning rise	11552 Jun 07 20:20	9°II36'00		retrograde	11558 Sep 17 20:09	24°II42'28	
retrograde	11552 Sep 03 18:46	11°II30'10		opposition	11558 Dec 06 06:20	23°II19'29	-0°21'30
opposition	11552 Nov 22 03:21	10°II07'18	-0°10'17	min. Earth dist.	11558 Dec 06 10:35	23°II19'12	29.13350 AU
min. Earth dist.	11552 Nov 22 11:20	10°II06'46	29.18959 AU	direct	11559 Feb 24 10:42	21°II55'45	
direct	11553 Feb 10 11:28	8°II43'20		evening set	11559 May 23 21:44	23°II50'26	
evening set	11553 May 10 07:57	10°II37'57					
conjunction	11553 May 25 19:30	11°II12'40	-0°10'31	conjunction	11559 Jun 08 08:32	24°II25'13	-0°20'56
minimum elong	11553 May 25 19:30	11°II12'40	0°11'12	minimum elong	11559 Jun 08 08:32	24°II25'13	0°21'40
behind sun begin	11553 May 25 14:43	11°II12'14		max. Earth dist.	11559 Jun 08 03:56	24°II24'47	31.12723 AU
behind sun end	11553 May 26 00:18	11°II13'06		morning rise	11559 Jun 23 18:57	24°II59'58	
max. Earth dist.	11553 May 25 12:05	11°II11'59	31.18517 AU	retrograde	11559 Sep 20 06:37	26°II55'04	
morning rise	11553 Jun 10 06:12	11°II47'21		opposition	11559 Dec 08 19:15	25°II32'01	-0°23'17
retrograde	11553 Sep 06 06:30	13°II41'39		min. Earth dist.	11559 Dec 09 00:02	25°II31'41	29.12084 AU
opposition	11553 Nov 24 15:31	12°II18'47	-0°12'12	direct	11560 Feb 26 22:58	24°II08'15	
min. Earth dist.	11553 Nov 24 21:51	12°II18'21	29.18090 AU	evening set	11560 May 25 08:05	26°II02'54	
direct	11554 Feb 12 22:24	10°II54'52					
evening set	11554 May 12 18:04	12°II49'31		conjunction	11560 Jun 09 18:45	26°II37'40	-0°22'35
				minimum elong	11560 Jun 09 18:45	26°II37'40	0°23'19
conjunction	11554 May 28 05:25	13°II24'14	-0°12'18	max. Earth dist.	11560 Jun 09 14:13	26°II37'15	31.11415 AU
minimum elong	11554 May 28 05:25	13°II24'14	0°13'00	morning rise	11560 Jun 25 05:15	27°II12'27	
behind sun begin	11554 May 28 01:27	13°II23'53		retrograde	11560 Sep 21 17:30	29°II07'38	
behind sun end	11554 May 28 09:22	13°II24'36		opposition	11560 Dec 10 08:02	27°II44'30	-0°25'02
max. Earth dist.	11554 May 27 22:04	13°II23'34	31.17667 AU	min. Earth dist.	11560 Dec 10 11:19	27°II44'16	29.10729 AU
morning rise	11554 Jun 12 16:08	13°II58'56		direct	11561 Feb 28 11:05	26°II20'42	
retrograde	11554 Sep 08 19:11	15°II53'23		evening set	11561 May 27 18:28	28°II15'18	
opposition	11554 Nov 27 03:57	14°II30'31	-0°14'06				
min. Earth dist.	11554 Nov 27 10:28	14°II30'04	29.17257 AU	conjunction	11561 Jun 12 05:04	28°II50'05	-0°24'12
direct	11555 Feb 15 09:15	13°II06'39		minimum elong	11561 Jun 12 05:03	28°II50'05	0°24'56
evening set	11555 May 15 04:12	15°II01'19		max. Earth dist.	11561 Jun 12 01:09	28°II49'43	31.10030 AU
				morning rise	11561 Jun 27 15:35	29°II24'52	
conjunction	11555 May 30 15:30	15°II36'03	-0°14'05		11561 Jul 14 04:32	0°00'00	
minimum elong	11555 May 30 15:30	15°II36'03	0°14'47	retrograde	11561 Sep 24 04:09	1°00'20'09	
behind sun begin	11555 May 30 12:48	15°II35'48			11561 Dec 10 23:19	30°00'00	
				opposition	11561 Dec 12 20:49	29°II56'54	-0°26'44

min. Earth dist.	11561 Dec 13 00:32	29° Π 56'39	29.09348 AU	max. Earth dist.	11568 Jun 27 07:31	14° \mathfrak{D} 18'11	31.02187 AU
direct	11562 Mar 02 21:34	28° Π 33'04		morning rise	11568 Jul 12 16:33	14° \mathfrak{D} 52'56	
	11562 May 17 07:28	0° \mathfrak{D}		retrograde	11568 Oct 09 19:07	16° \mathfrak{D} 49'06	
evening set	11562 May 30 04:45	0° \mathfrak{D} 27'38		opposition	11568 Dec 28 15:16	15° \mathfrak{D} 25'33	-0°37'29
				min. Earth dist.	11568 Dec 28 13:42	15° \mathfrak{D} 25'39	29.01718 AU
conjunction	11562 Jun 14 15:21	1° \mathfrak{D} 02'25	-0°25'46	direct	11569 Mar 18 08:27	14° \mathfrak{D} 01'52	
minimum elong	11562 Jun 14 15:21	1° \mathfrak{D} 02'25	0°26'31	evening set	11569 Jun 14 05:58	15° \mathfrak{D} 56'28	
max. Earth dist.	11562 Jun 14 12:28	1° \mathfrak{D} 02'08	31.08664 AU				
morning rise	11562 Jun 30 01:52	1° \mathfrak{D} 37'13		conjunction	11569 Jun 29 16:22	16° \mathfrak{D} 31'20	-0°35'40
retrograde	11562 Sep 26 15:41	3° \mathfrak{D} 32'35		minimum elong	11569 Jun 29 16:22	16° \mathfrak{D} 31'20	0°36'24
opposition	11562 Dec 15 09:33	2° \mathfrak{D} 09'14	-0°28'25	max. Earth dist.	11569 Jun 29 18:23	16° \mathfrak{D} 31'32	31.01217 AU
min. Earth dist.	11562 Dec 15 11:30	2° \mathfrak{D} 09'06	29.08003 AU	morning rise	11569 Jul 15 03:26	17° \mathfrak{D} 06'18	
direct	11563 Mar 05 09:34	0° \mathfrak{D} 45'23		retrograde	11569 Oct 12 07:25	19° \mathfrak{D} 02'37	
evening set	11563 Jun 01 15:08	2° \mathfrak{D} 39'55		opposition	11569 Dec 31 04:13	17° \mathfrak{D} 39'02	-0°38'49
				min. Earth dist.	11569 Dec 31 01:18	17° \mathfrak{D} 39'14	29.00714 AU
conjunction	11563 Jun 17 01:32	3° \mathfrak{D} 14'42	-0°27'19	direct	11570 Mar 20 20:26	16° \mathfrak{D} 15'23	
minimum elong	11563 Jun 17 01:32	3° \mathfrak{D} 14'42	0°28'04	evening set	11570 Jun 16 16:48	18° \mathfrak{D} 10'01	
max. Earth dist.	11563 Jun 16 22:51	3° \mathfrak{D} 14'27	31.07354 AU				
morning rise	11563 Jul 02 12:09	3° \mathfrak{D} 49'31		conjunction	11570 Jul 02 03:14	18° \mathfrak{D} 44'54	-0°36'53
retrograde	11563 Sep 29 04:02	5° \mathfrak{D} 45'00		minimum elong	11570 Jul 02 03:14	18° \mathfrak{D} 44'54	0°37'36
opposition	11563 Dec 17 22:27	4° \mathfrak{D} 21'35	-0°30'02	max. Earth dist.	11570 Jul 02 05:32	18° \mathfrak{D} 45'07	31.00158 AU
min. Earth dist.	11563 Dec 18 00:16	4° \mathfrak{D} 21'27	29.06756 AU	morning rise	11570 Jul 17 14:25	19° \mathfrak{D} 19'53	
direct	11564 Mar 06 20:23	2° \mathfrak{D} 57'43		retrograde	11570 Oct 14 19:18	21° \mathfrak{D} 16'21	
evening set	11564 Jun 03 01:26	4° \mathfrak{D} 52'14		opposition	11571 Jan 02 17:33	19° \mathfrak{D} 52'44	-0°40'06
				min. Earth dist.	11571 Jan 02 15:18	19° \mathfrak{D} 52'53	28.99608 AU
conjunction	11564 Jun 18 11:56	5° \mathfrak{D} 27'01	-0°28'49	direct	11571 Mar 23 07:08	18° \mathfrak{D} 29'07	
minimum elong	11564 Jun 18 11:56	5° \mathfrak{D} 27'01	0°29'34	evening set	11571 Jun 19 03:36	20° \mathfrak{D} 23'44	
max. Earth dist.	11564 Jun 18 11:04	5° \mathfrak{D} 26'57	31.06163 AU				
morning rise	11564 Jul 03 22:27	6° \mathfrak{D} 01'51		conjunction	11571 Jul 04 14:07	20° \mathfrak{D} 58'38	-0°38'03
retrograde	11564 Sep 30 16:14	7° \mathfrak{D} 57'27		minimum elong	11571 Jul 04 14:07	20° \mathfrak{D} 58'38	0°38'46
opposition	11564 Dec 19 11:18	6° \mathfrak{D} 33'59	-0°31'37	max. Earth dist.	11571 Jul 04 17:06	20° \mathfrak{D} 58'55	30.98995 AU
min. Earth dist.	11564 Dec 19 11:47	6° \mathfrak{D} 33'57	29.05616 AU	morning rise	11571 Jul 20 01:21	21° \mathfrak{D} 33'38	
direct	11565 Mar 09 08:52	5° \mathfrak{D} 10'08		retrograde	11571 Oct 17 07:34	23° \mathfrak{D} 30'14	
evening set	11565 Jun 05 11:48	7° \mathfrak{D} 04'39		opposition	11572 Jan 05 06:47	22° \mathfrak{D} 06'34	-0°41'19
				min. Earth dist.	11572 Jan 05 03:10	22° \mathfrak{D} 06'49	28.98378 AU
conjunction	11565 Jun 20 22:08	7° \mathfrak{D} 39'28	-0°30'17	direct	11572 Mar 24 19:29	20° \mathfrak{D} 42'56	
minimum elong	11565 Jun 20 22:08	7° \mathfrak{D} 39'28	0°31'01	evening set	11572 Jun 20 14:33	22° \mathfrak{D} 37'33	
max. Earth dist.	11565 Jun 20 21:06	7° \mathfrak{D} 39'22	31.05080 AU				
morning rise	11565 Jul 06 08:55	8° \mathfrak{D} 14'19		conjunction	11572 Jul 06 01:02	23° \mathfrak{D} 12'28	-0°39'09
retrograde	11565 Oct 03 05:33	10° \mathfrak{D} 10'03		minimum elong	11572 Jul 06 01:02	23° \mathfrak{D} 12'28	0°39'52
opposition	11565 Dec 22 00:12	8° \mathfrak{D} 46'32	-0°33'10	max. Earth dist.	11572 Jul 06 03:39	23° \mathfrak{D} 12'43	30.97710 AU
min. Earth dist.	11565 Dec 21 23:58	8° \mathfrak{D} 46'33	29.04584 AU	morning rise	11572 Jul 21 12:33	23° \mathfrak{D} 47'30	
direct	11566 Mar 11 19:12	7° \mathfrak{D} 22'43		retrograde	11572 Oct 18 20:07	25° \mathfrak{D} 44'12	
evening set	11566 Jun 07 22:11	9° \mathfrak{D} 17'15		opposition	11573 Jan 06 20:09	24° \mathfrak{D} 20'27	-0°42'28
				min. Earth dist.	11573 Jan 06 16:55	24° \mathfrak{D} 20'40	28.97055 AU
conjunction	11566 Jun 23 08:40	9° \mathfrak{D} 52'05	-0°31'42	direct	11573 Mar 27 06:24	22° \mathfrak{D} 56'47	
minimum elong	11566 Jun 23 08:40	9° \mathfrak{D} 52'05	0°32'26	evening set	11573 Jun 23 01:16	24° \mathfrak{D} 51'22	
max. Earth dist.	11566 Jun 23 09:23	9° \mathfrak{D} 52'09	31.04078 AU				
morning rise	11566 Jul 08 19:20	10° \mathfrak{D} 26'57		conjunction	11573 Jul 08 12:01	25° \mathfrak{D} 26'18	-0°40'12
retrograde	11566 Oct 05 17:20	12° \mathfrak{D} 22'49		minimum elong	11573 Jul 08 12:00	25° \mathfrak{D} 26'18	0°40'55
opposition	11566 Dec 24 13:02	10° \mathfrak{D} 59'18	-0°34'39	max. Earth dist.	11573 Jul 08 16:05	25° \mathfrak{D} 26'41	30.96353 AU
min. Earth dist.	11566 Dec 24 12:21	10° \mathfrak{D} 59'21	29.03606 AU	morning rise	11573 Jul 23 23:34	26° \mathfrak{D} 01'21	
direct	11567 Mar 14 08:21	9° \mathfrak{D} 35'31		retrograde	11573 Oct 21 08:14	27° \mathfrak{D} 58'09	
evening set	11567 Jun 10 08:47	11° \mathfrak{D} 30'05		opposition	11574 Jan 09 09:19	26° \mathfrak{D} 34'18	-0°43'33
				min. Earth dist.	11574 Jan 09 05:07	26° \mathfrak{D} 34'35	28.95670 AU
conjunction	11567 Jun 25 19:06	12° \mathfrak{D} 04'55	-0°33'04	direct	11574 Mar 29 18:43	25° \mathfrak{D} 10'36	
minimum elong	11567 Jun 25 19:06	12° \mathfrak{D} 04'55	0°33'49	evening set	11574 Jun 25 12:11	27° \mathfrak{D} 05'09	
max. Earth dist.	11567 Jun 25 19:35	12° \mathfrak{D} 04'58	31.03131 AU				
morning rise	11567 Jul 11 06:00	12° \mathfrak{D} 39'49		conjunction	11574 Jul 10 22:50	27° \mathfrak{D} 40'05	-0°41'11
retrograde	11567 Oct 08 07:39	14° \mathfrak{D} 35'50		minimum elong	11574 Jul 10 22:50	27° \mathfrak{D} 40'05	0°41'52
opposition	11567 Dec 27 02:04	13° \mathfrak{D} 12'17	-0°36'06	max. Earth dist.	11574 Jul 11 02:30	27° \mathfrak{D} 40'26	30.94970 AU
min. Earth dist.	11567 Dec 27 00:08	13° \mathfrak{D} 12'25	29.02672 AU	morning rise	11574 Jul 26 10:43	28° \mathfrak{D} 15'09	
direct	11568 Mar 15 20:23	11° \mathfrak{D} 48'34			11574 Sep 26 22:20	0° Ω	
evening set	11568 Jun 11 19:15	13° \mathfrak{D} 43'09		retrograde	11574 Oct 23 21:36	0° Ω 12'02	
					11574 Nov 20 10:15	30° \mathfrak{R} \mathfrak{D}	
conjunction	11568 Jun 27 05:40	14° \mathfrak{D} 18'00	-0°34'23	opposition	11575 Jan 11 22:26	28° \mathfrak{D} 48'05	-0°44'35
minimum elong	11568 Jun 27 05:40	14° \mathfrak{D} 18'00	0°35'07	min. Earth dist.	11575 Jan 11 17:45	28° \mathfrak{D} 48'25	28.94317 AU

direct	11575 Apr 01 05:11	27° Ω 24'21		minimum elong	11581 Jul 26 04:17	13° Ω 17'33	0°46'56
evening set	11575 Jun 27 22:56	29° Ω 18'52		max. Earth dist.	11581 Jul 26 13:18	13° Ω 18'24	30.88124 AU
				morning rise	11581 Aug 10 17:41	13° Ω 52'48	
conjunction	11575 Jul 13 09:50	29° Ω 53'50 -0°42'07			11581 Sep 13 07:49	15° Ω	
minimum elong	11575 Jul 13 09:50	29° Ω 53'50 0°42'48		retrograde	11581 Nov 08 15:39	15° Ω 50'24	
max. Earth dist.	11575 Jul 13 15:19	29° Ω 54'21 30.93648 AU			11582 Jan 06 15:50	15° Ω	
	11575 Jul 16 02:45	0° Ω		opposition	11582 Jan 27 18:55	14° Ω 26'06 -0°49'50	
morning rise	11575 Jul 28 21:43	0° Ω 28'55		min. Earth dist.	11582 Jan 27 09:39	14° Ω 26'45 28.87791 AU	
retrograde	11575 Oct 26 10:08	2° Ω 25'53		direct	11582 Apr 16 18:44	13° Ω 02'26	
opposition	11576 Jan 14 11:41	1° Ω 01'51 -0°45'32		evening set	11582 Jul 13 03:53	14° Ω 56'55	
min. Earth dist.	11576 Jan 14 06:18	1° Ω 02'13 28.93045 AU			11582 Jul 14 13:05	15° Ω	
	11576 Feb 25 15:18	30° Ω					
direct	11576 Apr 02 18:57	29° Ω 38'05		conjunction	11582 Jul 28 15:50	15° Ω 32'01 -0°46'48	
	11576 May 08 23:02	0° Ω		minimum elong	11582 Jul 28 15:50	15° Ω 32'01 0°47'22	
evening set	11576 Jun 29 09:43	1° Ω 32'35		max. Earth dist.	11582 Jul 29 02:12	15° Ω 33'00 30.87392 AU	
				morning rise	11582 Aug 13 05:18	16° Ω 07'17	
conjunction	11576 Jul 14 20:36	2° Ω 07'33 -0°42'59		retrograde	11582 Nov 11 03:50	18° Ω 05'00	
minimum elong	11576 Jul 14 20:36	2° Ω 07'33 0°43'39		opposition	11583 Jan 30 08:08	16° Ω 40'41 -0°50'18	
max. Earth dist.	11576 Jul 15 02:02	2° Ω 08'04 30.92443 AU		min. Earth dist.	11583 Jan 29 22:04	16° Ω 41'23 28.87028 AU	
morning rise	11576 Jul 30 08:50	2° Ω 42'40		direct	11583 Apr 19 06:46	15° Ω 17'02	
retrograde	11576 Oct 28 00:56	4° Ω 39'44		evening set	11583 Jul 15 15:26	17° Ω 11'31	
opposition	11577 Jan 16 00:50	3° Ω 15'37 -0°46'26					
min. Earth dist.	11577 Jan 15 18:03	3° Ω 16'05 28.91910 AU		conjunction	11583 Jul 31 03:23	17° Ω 46'38 -0°47'12	
direct	11577 Apr 05 07:14	1° Ω 51'50		minimum elong	11583 Jul 31 03:24	17° Ω 46'38 0°47'45	
evening set	11577 Jul 01 20:34	3° Ω 46'19		max. Earth dist.	11583 Jul 31 12:58	17° Ω 47'32 30.86598 AU	
				morning rise	11583 Aug 15 17:17	18° Ω 21'55	
conjunction	11577 Jul 17 07:40	4° Ω 21'19 -0°43'47		retrograde	11583 Nov 13 18:04	20° Ω 19'44	
minimum elong	11577 Jul 17 07:40	4° Ω 21'19 0°44'27		opposition	11584 Feb 01 21:35	18° Ω 55'23 -0°50'40	
max. Earth dist.	11577 Jul 17 14:37	4° Ω 21'59 30.91365 AU		min. Earth dist.	11584 Feb 01 11:28	18° Ω 56'04 28.86201 AU	
morning rise	11577 Aug 01 20:00	4° Ω 56'27		direct	11584 Apr 20 17:20	17° Ω 31'43	
retrograde	11577 Oct 30 12:26	6° Ω 53'37		evening set	11584 Jul 17 02:44	19° Ω 26'12	
opposition	11578 Jan 18 13:56	5° Ω 29'27 -0°47'15					
min. Earth dist.	11578 Jan 18 07:12	5° Ω 29'54 28.90901 AU		conjunction	11584 Aug 01 15:05	20° Ω 01'20 -0°47'31	
direct	11578 Apr 07 19:12	4° Ω 05'40		minimum elong	11584 Aug 01 15:06	20° Ω 01'20 0°48'02	
evening set	11578 Jul 04 07:31	6° Ω 00'09		max. Earth dist.	11584 Aug 02 01:56	20° Ω 02'21 30.85718 AU	
				morning rise	11584 Aug 17 05:07	20° Ω 36'39	
conjunction	11578 Jul 19 18:43	6° Ω 35'10 -0°44'32		retrograde	11584 Nov 15 06:42	22° Ω 34'33	
minimum elong	11578 Jul 19 18:44	6° Ω 35'10 0°45'10		opposition	11585 Feb 03 10:57	21° Ω 10'07 -0°50'59	
max. Earth dist.	11578 Jul 20 02:08	6° Ω 35'52 30.90428 AU		min. Earth dist.	11585 Feb 03 00:41	21° Ω 10'50 28.85271 AU	
morning rise	11578 Aug 04 07:20	7° Ω 10'19		direct	11585 Apr 23 06:36	19° Ω 46'27	
retrograde	11578 Nov 02 01:56	9° Ω 07'35		evening set	11585 Jul 19 14:19	21° Ω 40'54	
opposition	11579 Jan 21 03:03	7° Ω 43'22 -0°48'01					
min. Earth dist.	11579 Jan 20 18:36	7° Ω 43'57 28.90019 AU		conjunction	11585 Aug 04 02:48	22° Ω 16'03 -0°47'46	
direct	11579 Apr 10 08:09	6° Ω 19'37		minimum elong	11585 Aug 04 02:48	22° Ω 16'03 0°48'17	
evening set	11579 Jul 06 18:25	8° Ω 14'06		max. Earth dist.	11585 Aug 04 12:55	22° Ω 17'00 30.84763 AU	
				morning rise	11585 Aug 19 17:17	22° Ω 51'23	
conjunction	11579 Jul 22 05:44	8° Ω 49'08 -0°45'12		retrograde	11585 Nov 17 21:30	24° Ω 49'20	
minimum elong	11579 Jul 22 05:44	8° Ω 49'08 0°45'50		opposition	11586 Feb 06 00:04	23° Ω 24'50 -0°51'13	
max. Earth dist.	11579 Jul 22 13:54	8° Ω 49'54 30.89589 AU		min. Earth dist.	11586 Feb 05 13:05	23° Ω 25'36 28.84294 AU	
morning rise	11579 Aug 06 18:34	9° Ω 24'19		direct	11586 Apr 25 18:30	22° Ω 01'07	
retrograde	11579 Nov 04 14:49	11° Ω 21'42		evening set	11586 Jul 22 01:46	23° Ω 55'33	
opposition	11580 Jan 23 16:25	9° Ω 57'27 -0°48'42					
min. Earth dist.	11580 Jan 23 08:17	9° Ω 58'01 28.89230 AU		conjunction	11586 Aug 06 14:34	24° Ω 30'44 -0°47'57	
direct	11580 Apr 11 19:47	8° Ω 33'44		minimum elong	11586 Aug 06 14:34	24° Ω 30'44 0°48'26	
evening set	11580 Jul 08 05:26	10° Ω 28'12		max. Earth dist.	11586 Aug 07 01:48	24° Ω 31'47 30.83771 AU	
				morning rise	11586 Aug 22 05:14	25° Ω 06'06	
conjunction	11580 Jul 23 17:00	11° Ω 03'15 -0°45'48		retrograde	11586 Nov 20 09:39	27° Ω 04'06	
minimum elong	11580 Jul 23 17:01	11° Ω 03'15 0°46'25		opposition	11587 Feb 08 13:22	25° Ω 39'31 -0°51'22	
max. Earth dist.	11580 Jul 24 02:13	11° Ω 04'08 30.88842 AU		min. Earth dist.	11587 Feb 08 02:42	25° Ω 40'15 28.83314 AU	
morning rise	11580 Aug 08 06:02	11° Ω 38'28		direct	11587 Apr 28 06:49	24° Ω 15'47	
retrograde	11580 Nov 06 03:11	13° Ω 35'57		evening set	11587 Jul 24 13:07	26° Ω 10'10	
opposition	11581 Jan 25 05:34	12° Ω 11'42 -0°49'18					
min. Earth dist.	11581 Jan 24 19:52	12° Ω 12'22 28.88504 AU		conjunction	11587 Aug 09 02:07	26° Ω 45'22 -0°48'03	
direct	11581 Apr 14 08:19	10° Ω 48'00		minimum elong	11587 Aug 09 02:08	26° Ω 45'22 0°48'32	
evening set	11581 Jul 10 16:39	12° Ω 42'28		max. Earth dist.	11587 Aug 09 13:41	26° Ω 46'27 30.82830 AU	
				morning rise	11587 Aug 24 17:09	27° Ω 20'45	
conjunction	11581 Jul 26 04:17	13° Ω 17'33 -0°46'20		retrograde	11587 Nov 23 00:11	29° Ω 18'49	

opposition	11588 Feb 11 02:33	27° Ω 54'09	-0°51'26	conjunction	11594 Aug 24 13:38	12° Υ 29'55	-0°46'45
min. Earth dist.	11588 Feb 10 14:22	27° Ω 55'00	28.82417 AU	minimum elong	11594 Aug 24 13:38	12° Υ 29'55	0°47'03
direct	11588 Apr 29 20:21	26° Ω 30'24		max. Earth dist.	11594 Aug 25 04:35	12° Υ 31'20	30.79591 AU
evening set	11588 Jul 26 00:37	28° Ω 24'46		morning rise	11594 Sep 09 07:03	13° Υ 05'30	
				retrograde	11594 Dec 08 19:55	15° Υ 04'04	
conjunction	11588 Aug 10 13:52	28° Ω 59'59	-0°48'05	opposition	11595 Feb 26 22:17	13° Υ 39'19	-0°49'46
minimum elong	11588 Aug 10 13:52	28° Ω 59'59	0°48'32	min. Earth dist.	11595 Feb 26 07:03	13° Υ 40'22	28.79522 AU
max. Earth dist.	11588 Aug 11 02:04	29° Ω 01'08	30.81978 AU	direct	11595 May 16 05:05	12° Υ 15'42	
morning rise	11588 Aug 26 05:13	29° Ω 35'24		evening set	11595 Aug 11 10:38	14° Υ 10'06	
	11588 Sep 06 13:27	0° Υ					
retrograde	11588 Nov 24 13:34	1° Υ 33'31		conjunction	11595 Aug 27 01:59	14° Υ 45'29	-0°46'17
opposition	11589 Feb 12 15:43	0° Υ 08'49	-0°51'26	minimum elong	11595 Aug 27 01:59	14° Υ 45'29	0°46'33
min. Earth dist.	11589 Feb 12 03:56	0° Υ 09'37	28.81641 AU	max. Earth dist.	11595 Aug 27 17:48	14° Υ 46'59	30.79369 AU
	11589 Feb 17 23:17	30° κ Ω		morning rise	11595 Sep 11 19:38	15° Υ 21'06	
direct	11589 May 02 08:27	28° Ω 45'03		retrograde	11595 Dec 11 08:47	17° Υ 19'43	
	11589 Jul 09 21:35	0° Υ		opposition	11596 Feb 29 11:34	15° Υ 54'57	-0°49'13
evening set	11589 Jul 28 12:03	0° Υ 39'24		min. Earth dist.	11596 Feb 28 21:00	15° Υ 55'58	28.79266 AU
				direct	11596 May 17 17:05	14° Υ 31'22	
conjunction	11589 Aug 13 01:40	1° Υ 14'38	-0°48'03	evening set	11596 Aug 12 22:52	16° Υ 25'45	
minimum elong	11589 Aug 13 01:40	1° Υ 14'38	0°48'29				
max. Earth dist.	11589 Aug 13 14:52	1° Υ 15'53	30.81276 AU	conjunction	11596 Aug 28 14:32	17° Υ 01'09	-0°45'44
morning rise	11589 Aug 28 17:18	1° Υ 50'05		minimum elong	11596 Aug 28 14:33	17° Υ 01'09	0°45'58
retrograde	11589 Nov 27 02:06	3° Υ 48'16		max. Earth dist.	11596 Aug 29 05:54	17° Υ 02'36	30.79080 AU
opposition	11590 Feb 15 04:44	2° Υ 23'31	-0°51'21	morning rise	11596 Sep 13 08:37	17° Υ 36'47	
min. Earth dist.	11590 Feb 14 15:16	2° Υ 24'27	28.81004 AU	retrograde	11596 Dec 13 00:21	19° Υ 35'26	
direct	11590 May 04 21:24	0° Υ 59'46		min. Earth dist.	11597 Mar 02 09:14	18° Υ 11'41	28.78927 AU
evening set	11590 Jul 30 23:39	2° Υ 54'07		opposition	11597 Mar 03 00:34	18° Υ 10'38	-0°48'35
				direct	11597 May 20 06:53	16° Υ 47'01	
conjunction	11590 Aug 15 13:23	3° Υ 29'22	-0°47'57	evening set	11597 Aug 15 11:08	18° Υ 41'23	
minimum elong	11590 Aug 15 13:23	3° Υ 29'22	0°48'20				
max. Earth dist.	11590 Aug 16 02:30	3° Υ 30'37	30.80707 AU	conjunction	11597 Aug 31 03:08	19° Υ 16'49	-0°45'06
morning rise	11590 Aug 31 05:25	4° Υ 04'51		minimum elong	11597 Aug 31 03:09	19° Υ 16'49	0°45'20
retrograde	11590 Nov 29 14:32	6° Υ 03'07		max. Earth dist.	11597 Aug 31 18:28	19° Υ 18'16	30.78685 AU
opposition	11591 Feb 17 17:54	4° Υ 38'21	-0°51'12	morning rise	11597 Sep 15 21:36	19° Υ 52'28	
min. Earth dist.	11591 Feb 17 04:39	4° Υ 39'16	28.80516 AU	retrograde	11597 Dec 15 13:38	21° Υ 51'07	
direct	11591 May 07 08:02	3° Υ 14'37		opposition	11598 Mar 05 13:45	20° Υ 26'15	-0°47'53
evening set	11591 Aug 02 11:10	5° Υ 08'57		min. Earth dist.	11598 Mar 04 23:28	20° Υ 27'15	28.78494 AU
				direct	11598 May 22 19:25	19° Υ 02'36	
conjunction	11591 Aug 18 01:21	5° Υ 44'15	-0°47'45	evening set	11598 Aug 17 23:14	20° Υ 56'56	
minimum elong	11591 Aug 18 01:21	5° Υ 44'15	0°48'08				
max. Earth dist.	11591 Aug 18 16:05	5° Υ 45'39	30.80292 AU	conjunction	11598 Sep 02 15:39	21° Υ 32'22	-0°44'25
morning rise	11591 Sep 02 17:34	6° Υ 19'45		minimum elong	11598 Sep 02 15:39	21° Υ 32'22	0°44'35
retrograde	11591 Dec 02 03:04	8° Υ 18'05		max. Earth dist.	11598 Sep 03 07:20	21° Υ 33'52	30.78233 AU
opposition	11592 Feb 20 06:58	6° Υ 53'19	-0°50'57	morning rise	11598 Sep 18 10:24	22° Υ 08'03	
min. Earth dist.	11592 Feb 19 16:34	6° Υ 54'19	28.80159 AU	retrograde	11598 Dec 18 03:09	24° Υ 06'41	
direct	11592 May 08 19:50	5° Υ 29'37		min. Earth dist.	11599 Mar 07 11:15	22° Υ 42'50	28.78022 AU
evening set	11592 Aug 03 22:51	7° Υ 23'58		opposition	11599 Mar 08 02:40	22° Υ 41'45	-0°47'06
				direct	11599 May 25 09:08	21° Υ 18'04	
conjunction	11592 Aug 19 13:12	7° Υ 59'17	-0°47'30	evening set	11599 Aug 20 11:29	23° Υ 12'20	
minimum elong	11592 Aug 19 13:12	7° Υ 59'17	0°47'50				
max. Earth dist.	11592 Aug 20 03:28	8° Υ 00'38	30.79996 AU	conjunction	11599 Sep 05 04:07	23° Υ 47'48	-0°43'39
morning rise	11592 Sep 04 05:58	8° Υ 34'49		minimum elong	11599 Sep 05 04:07	23° Υ 47'48	0°43'49
retrograde	11592 Dec 03 16:52	10° Υ 33'14		max. Earth dist.	11599 Sep 05 19:20	23° Υ 49'14	30.77765 AU
opposition	11593 Feb 21 20:08	9° Υ 08'28	-0°50'38	morning rise	11599 Sep 20 23:21	24° Υ 23'30	
min. Earth dist.	11593 Feb 21 05:39	9° Υ 09'28	28.79913 AU	retrograde	11599 Dec 20 16:36	26° Υ 22'06	
direct	11593 May 11 06:16	7° Υ 44'48		opposition	11600 Mar 09 15:39	24° Υ 57'07	-0°46'15
evening set	11593 Aug 06 10:38	9° Υ 39'10		min. Earth dist.	11600 Mar 09 00:56	24° Υ 58'08	28.77585 AU
				direct	11600 May 26 21:04	23° Υ 33'23	
conjunction	11593 Aug 22 01:26	10° Υ 14'30	-0°47'10	evening set	11600 Aug 21 23:34	25° Υ 27'36	
minimum elong	11593 Aug 22 01:26	10° Υ 14'30	0°47'29				
max. Earth dist.	11593 Aug 22 17:07	10° Υ 15'59	30.79777 AU	conjunction	11600 Sep 06 16:44	26° Υ 03'05	-0°42'50
morning rise	11593 Sep 06 18:22	10° Υ 50'04		minimum elong	11600 Sep 06 16:44	26° Υ 03'05	0°42'57
retrograde	11593 Dec 06 04:58	12° Υ 48'33		max. Earth dist.	11600 Sep 07 09:11	26° Υ 04'39	30.77362 AU
opposition	11594 Feb 24 09:07	11° Υ 23'48	-0°50'14	morning rise	11600 Sep 22 12:13	26° Υ 38'49	
min. Earth dist.	11594 Feb 23 18:27	11° Υ 24'49	28.79711 AU	retrograde	11600 Dec 22 05:20	28° Υ 37'23	
direct	11594 May 13 18:26	10° Υ 00'10		opposition	11601 Mar 12 04:25	27° Υ 12'21	-0°45'20
evening set	11594 Aug 08 22:40	11° Υ 54'33		min. Earth dist.	11601 Mar 11 12:45	27° Υ 13'26	28.77218 AU

direct	11601 May 29 10:25	25° <u>17</u> 48'34	
evening set	11601 Aug 24 11:53	27° <u>17</u> 42'46	
conjunction	11601 Sep 09 05:14	28° <u>17</u> 18'16	-0°41'57
minimum elong	11601 Sep 09 05:14	28° <u>17</u> 18'16	0°42'03
max. Earth dist.	11601 Sep 09 20:57	28° <u>17</u> 19'45	30.77049 AU
morning rise	11601 Sep 25 01:13	28° <u>17</u> 54'01	
	11601 Oct 27 23:10	0° <u>17</u>	
retrograde	11601 Dec 24 17:59	0° <u>17</u> 52'35	