

retrograde	11100 Feb 12 11:35	21° <del>M</del> 09'47	retrograde	11106 Feb 20 11:34	28° <del>M</del> 26'31
opposition	11100 May 05 10:50	20° <del>M</del> 05'37 -1°51'06	opposition	11106 May 13 02:38	27° <del>M</del> 20'49 0°18'04
min. Earth dist.	11100 May 06 23:29	20° <del>M</del> 03'44 41.70150 AU	min. Earth dist.	11106 May 14 20:53	27° <del>M</del> 18'34 40.35524 AU
direct	11100 Jul 25 16:45	19° <del>M</del> 01'37	direct	11106 Aug 02 05:48	26° <del>M</del> 15'07
evening set	11100 Oct 18 08:03	20° <del>M</del> 15'59	evening set	11106 Oct 26 04:56	27° <del>M</del> 32'22
max. Earth dist.	11100 Nov 01 10:53	20° <del>M</del> 37'22 43.59457 AU	max. Earth dist.	11106 Nov 09 05:09	27° <del>M</del> 54'19 42.24108 AU
conjunction	11100 Nov 03 03:46	20° <del>M</del> 39'58 -1°36'11	conjunction	11106 Nov 11 03:43	27° <del>M</del> 57'23 0°27'47
minimum elong	11100 Nov 03 03:49	20° <del>M</del> 39'59 1°35'42	minimum elong	11106 Nov 11 03:42	27° <del>M</del> 57'23 0°28'18
morning rise	11100 Nov 19 00:52	21° <del>M</del> 04'06	morning rise	11106 Nov 27 03:37	28° <del>M</del> 22'32
retrograde	11101 Feb 13 21:56	22° <del>M</del> 20'49	retrograde	11107 Feb 22 01:43	29° <del>M</del> 41'58
opposition	11101 May 06 20:54	21° <del>M</del> 16'25 -1°30'13	opposition	11107 May 14 14:16	28° <del>M</del> 36'01 0°40'29
min. Earth dist.	11101 May 08 11:01	21° <del>M</del> 14'27 41.48517 AU	min. Earth dist.	11107 May 16 08:26	28° <del>M</del> 33'46 40.12327 AU
direct	11101 Jul 27 02:35	20° <del>M</del> 12'09	direct	11107 Aug 03 15:11	27° <del>M</del> 30'01
evening set	11101 Oct 19 18:18	21° <del>M</del> 26'56	evening set	11107 Oct 27 18:13	28° <del>M</del> 47'52
max. Earth dist.	11101 Nov 02 21:13	21° <del>M</del> 48'26 43.37668 AU	max. Earth dist.	11107 Nov 10 16:58	29° <del>M</del> 09'52 42.00822 AU
conjunction	11101 Nov 04 15:02	21° <del>M</del> 51'07 -1°16'06	conjunction	11107 Nov 12 16:45	29° <del>M</del> 13'02 0°49'14
minimum elong	11101 Nov 04 15:04	21° <del>M</del> 51'07 1°15'38	minimum elong	11107 Nov 12 16:44	29° <del>M</del> 13'02 0°49'45
morning rise	11101 Nov 20 13:08	22° <del>M</del> 15'25	morning rise	11107 Nov 28 16:20	29° <del>M</del> 38'18
retrograde	11102 Feb 15 11:25	23° <del>M</del> 32'32		11107 Dec 13 03:50	0° <del>X</del>
opposition	11102 May 08 07:05	22° <del>M</del> 27'53 -1°09'04	retrograde	11108 Feb 23 17:03	0° <del>X</del> 58'20
min. Earth dist.	11102 May 09 21:30	22° <del>M</del> 25'54 41.26494 AU		11108 May 08 22:27	30° <del>R</del> <del>M</del>
direct	11102 Jul 28 10:37	21° <del>M</del> 23'21	opposition	11108 May 15 02:22	29° <del>M</del> 52'07 1°03'08
evening set	11102 Oct 21 05:11	22° <del>M</del> 38'34	min. Earth dist.	11108 May 16 21:57	29° <del>M</del> 49'47 39.88995 AU
max. Earth dist.	11102 Nov 04 06:46	23° <del>M</del> 00'07 43.15486 AU	direct	11108 Aug 04 00:27	28° <del>M</del> 45'50
conjunction	11102 Nov 06 02:38	23° <del>M</del> 02'56 -0°55'48		11108 Oct 25 12:59	0° <del>X</del>
minimum elong	11102 Nov 06 02:40	23° <del>M</del> 02'56 0°55'19	evening set	11108 Oct 28 08:04	0° <del>X</del> 04'19
morning rise	11102 Nov 22 01:31	23° <del>M</del> 27'25	max. Earth dist.	11108 Nov 11 06:49	0° <del>X</del> 26'27 41.77412 AU
retrograde	11103 Feb 17 02:04	24° <del>M</del> 44'56	conjunction	11108 Nov 13 06:18	0° <del>X</del> 29'37 1°10'54
opposition	11103 May 09 17:32	23° <del>M</del> 40'02 -0°47'40	minimum elong	11108 Nov 13 06:16	0° <del>X</del> 29'37 1°11'26
min. Earth dist.	11103 May 11 09:57	23° <del>M</del> 37'56 41.04123 AU	morning rise	11108 Nov 29 05:19	0° <del>X</del> 55'02
direct	11103 Jul 29 18:15	22° <del>M</del> 35'13	retrograde	11109 Feb 24 09:30	2° <del>X</del> 15'40
evening set	11103 Oct 22 16:20	23° <del>M</del> 50'54	opposition	11109 May 16 14:41	1° <del>X</del> 09'11 1°26'02
max. Earth dist.	11103 Nov 05 18:44	24° <del>M</del> 12'36 42.92985 AU	min. Earth dist.	11109 May 18 09:59	1° <del>X</del> 06'52 39.65531 AU
conjunction	11103 Nov 07 14:33	24° <del>M</del> 15'26 -0°35'16	direct	11109 Aug 05 11:39	0° <del>X</del> 02'37
minimum elong	11103 Nov 07 14:34	24° <del>M</del> 15'26 0°34'47	evening set	11109 Oct 29 22:40	1° <del>X</del> 21'48
morning rise	11103 Nov 23 13:52	24° <del>M</del> 40'05	max. Earth dist.	11109 Nov 12 18:42	1° <del>X</del> 43'54 41.53834 AU
retrograde	11104 Feb 18 12:59	25° <del>M</del> 58'02	conjunction	11109 Nov 14 20:06	1° <del>X</del> 47'14 1°32'47
opposition	11104 May 10 04:15	24° <del>M</del> 52'53 -0°26'00	minimum elong	11109 Nov 14 20:04	1° <del>X</del> 47'13 1°33'20
min. Earth dist.	11104 May 11 20:35	24° <del>M</del> 50'46 40.81465 AU	morning rise	11109 Nov 30 18:34	2° <del>X</del> 12'45
direct	11104 Jul 30 06:13	23° <del>M</del> 47'46	retrograde	11110 Feb 26 02:05	3° <del>X</del> 34'02
evening set	11104 Oct 23 03:58	25° <del>M</del> 03'57	opposition	11110 May 18 03:28	2° <del>X</del> 27'18 1°49'09
max. Earth dist.	11104 Nov 06 04:52	25° <del>M</del> 25'41 42.70222 AU	min. Earth dist.	11110 May 20 00:22	2° <del>X</del> 24'53 39.41882 AU
conjunction	11104 Nov 08 02:26	25° <del>M</del> 28'39 -0°14'30	direct	11110 Aug 06 22:59	1° <del>X</del> 20'26
minimum elong	11104 Nov 08 02:26	25° <del>M</del> 28'39 0°14'00	evening set	11110 Oct 31 13:57	2° <del>X</del> 40'20
behind sun begin	11104 Nov 07 23:18	25° <del>M</del> 28'28	max. Earth dist.	11110 Nov 14 09:02	3° <del>X</del> 02'31 41.30016 AU
behind sun end	11104 Nov 08 05:35	25° <del>M</del> 28'51	conjunction	11110 Nov 16 10:38	3° <del>X</del> 05'53 1°54'52
morning rise	11104 Nov 24 02:16	25° <del>M</del> 53'29	minimum elong	11110 Nov 16 10:34	3° <del>X</del> 05'52 1°55'25
retrograde	11105 Feb 19 00:48	27° <del>M</del> 11'53	morning rise	11110 Dec 02 07:56	3° <del>X</del> 31'31
opposition	11105 May 11 15:20	26° <del>M</del> 06'27 -0°04'05	retrograde	11111 Feb 27 14:35	4° <del>X</del> 53'28
min. Earth dist.	11105 May 13 08:48	26° <del>M</del> 04'16 40.58588 AU	opposition	11111 May 19 16:33	3° <del>X</del> 46'28 2°12'30
asc. node	11105 Jul 18 13:59	25° <del>M</del> 03'09	min. Earth dist.	11111 May 21 14:08	3° <del>X</del> 43'59 39.17967 AU
direct	11105 Jul 31 17:43	25° <del>M</del> 01'03	direct	11111 Aug 08 13:33	2° <del>X</del> 39'17
evening set	11105 Oct 24 16:08	26° <del>M</del> 17'45	evening set	11111 Nov 02 06:03	3° <del>X</del> 59'56
max. Earth dist.	11105 Nov 07 17:12	26° <del>M</del> 39'37 42.47243 AU	max. Earth dist.	11111 Nov 15 22:19	4° <del>X</del> 22'05 41.05913 AU
conjunction	11105 Nov 09 14:57	26° <del>M</del> 42'37 0°06'36	conjunction	11111 Nov 18 01:27	4° <del>X</del> 25'35 2°17'09
minimum elong	11105 Nov 09 14:57	26° <del>M</del> 42'37 0°07'05	minimum elong	11111 Nov 18 01:23	4° <del>X</del> 25'35 2°17'43
behind sun begin	11105 Nov 09 08:58	26° <del>M</del> 42'15	morning rise	11111 Dec 03 21:39	4° <del>X</del> 51'19
behind sun end	11105 Nov 09 20:56	26° <del>M</del> 42'59	retrograde	11112 Feb 29 05:13	6° <del>X</del> 13'58
morning rise	11105 Nov 25 14:48	27° <del>M</del> 07'36	opposition	11112 May 20 06:08	5° <del>X</del> 06'41 2°36'05

min. Earth dist.	11112 May 22 04:26	5°♂04'09	38.93757 AU	morning rise	11118 Dec 13 01:21	14°♂37'45	
direct	11112 Aug 09 02:46	3°♂59'10		retrograde	11119 Mar 11 06:04	16°♂06'14	
evening set	11112 Nov 02 22:35	5°♂20'34		opposition	11119 May 30 16:35	14°♂56'28	5°26'38
max. Earth dist.	11112 Nov 16 12:10	5°♂42'42	40.81475 AU	min. Earth dist.	11119 Jun 01 19:30	14°♂53'34	37.18028 AU
				direct	11119 Aug 19 06:50	13°♂46'12	
conjunction	11112 Nov 18 16:39	5°♂46'19	2°39'39	evening set	11119 Nov 14 15:39	15°♂14'03	
minimum elong	11112 Nov 18 16:34	5°♂46'18	2°40'12	max. Earth dist.	11119 Nov 27 05:52	15°♂35'44	39.04607 AU
morning rise	11112 Dec 04 11:18	6°♂12'08					
retrograde	11113 Mar 01 20:27	7°♂35'31		conjunction	11119 Nov 29 15:55	15°♂39'56	5°21'43
opposition	11113 May 21 20:15	6°♂27'54	2°59'52	minimum elong	11119 Nov 29 15:45	15°♂39'55	5°22'20
min. Earth dist.	11113 May 23 20:17	6°♂25'16	38.69221 AU	morning rise	11119 Dec 14 16:14	16°♂05'51	
direct	11113 Aug 10 14:34	5°♂20'02		retrograde	11120 Mar 12 01:56	17°♂35'23	
evening set	11113 Nov 04 15:59	6°♂42'14		opposition	11120 May 31 09:47	16°♂25'16	5°51'37
max. Earth dist.	11113 Nov 18 03:27	7°♂04'22	40.56731 AU	min. Earth dist.	11120 Jun 02 13:57	16°♂22'16	36.92707 AU
				direct	11120 Aug 19 20:06	15°♂14'36	
conjunction	11113 Nov 20 08:27	7°♂08'02	3°02'19	evening set	11120 Nov 15 14:16	16°♂43'36	
minimum elong	11113 Nov 20 08:21	7°♂08'02	3°02'53	max. Earth dist.	11120 Nov 28 01:25	17°♂05'14	38.79176 AU
morning rise	11113 Dec 06 01:22	7°♂33'55					
retrograde	11114 Mar 03 13:31	8°♂58'04		conjunction	11120 Nov 30 10:50	17°♂09'25	5°45'22
opposition	11114 May 23 10:27	7°♂50'07	3°23'52	minimum elong	11120 Nov 30 10:40	17°♂09'25	5°45'58
min. Earth dist.	11114 May 25 10:30	7°♂47'27	38.44400 AU	morning rise	11120 Dec 15 07:11	17°♂35'17	
direct	11114 Aug 12 03:37	6°♂41'51		retrograde	11121 Mar 13 22:47	19°♂05'54	
evening set	11114 Nov 06 10:10	8°♂04'53		opposition	11121 Jun 02 03:22	17°♂55'27	6°16'43
max. Earth dist.	11114 Nov 19 17:31	8°♂26'54	40.31703 AU	min. Earth dist.	11121 Jun 04 06:54	17°♂52'29	36.67437 AU
				direct	11121 Aug 21 13:39	16°♂44'25	
conjunction	11114 Nov 22 00:36	8°♂30'44	3°25'10	evening set	11121 Nov 17 14:09	18°♂14'38	
minimum elong	11114 Nov 22 00:29	8°♂30'44	3°25'45	max. Earth dist.	11121 Nov 29 19:24	18°♂36'02	38.53772 AU
morning rise	11114 Dec 07 15:35	8°♂56'40					
retrograde	11115 Mar 05 08:30	10°♂21'36		conjunction	11121 Dec 02 06:24	18°♂40'23	6°09'05
opposition	11115 May 25 01:18	9°♂13'17	3°48'05	minimum elong	11121 Dec 02 06:13	18°♂40'22	6°09'43
min. Earth dist.	11115 May 27 03:06	9°♂10'31	38.19341 AU	morning rise	11121 Dec 16 22:39	19°♂06'09	
direct	11115 Aug 13 16:38	8°♂04'38		retrograde	11122 Mar 15 22:14	20°♂37'55	
evening set	11115 Nov 08 04:48	9°♂28'31		opposition	11122 Jun 03 21:26	19°♂27'09	6°41'53
max. Earth dist.	11115 Nov 21 10:21	9°♂50'35	40.06458 AU	min. Earth dist.	11122 Jun 06 02:14	19°♂24'05	36.42191 AU
				direct	11122 Aug 23 06:19	18°♂15'44	
conjunction	11115 Nov 23 17:09	9°♂54'26	3°48'12	evening set	11122 Nov 19 14:55	19°♂47'14	
minimum elong	11115 Nov 23 17:02	9°♂54'25	3°48'48	max. Earth dist.	11122 Dec 01 16:05	20°♂08'31	38.28342 AU
morning rise	11115 Dec 09 05:39	10°♂20'23					
retrograde	11116 Mar 06 01:42	11°♂46'08		conjunction	11122 Dec 04 02:47	20°♂12'53	6°32'52
opposition	11116 May 25 16:29	10°♂37'27	4°12'28	minimum elong	11122 Dec 04 02:35	20°♂12'52	6°33'29
min. Earth dist.	11116 May 27 18:16	10°♂34'40	37.94104 AU	morning rise	11122 Dec 18 14:13	20°♂38'32	
direct	11116 Aug 14 09:07	9°♂28'24		retrograde	11123 Mar 17 19:09	22°♂11'32	
evening set	11116 Nov 09 00:22	10°♂53'12		opposition	11123 Jun 05 16:14	21°♂00'25	7°07'08
max. Earth dist.	11116 Nov 22 01:40	11°♂15'08	39.81070 AU	min. Earth dist.	11123 Jun 07 21:20	20°♂57'19	36.16897 AU
				direct	11123 Aug 25 01:30	19°♂48'37	
conjunction	11116 Nov 24 10:02	11°♂19'08	4°11'23	evening set	11123 Nov 21 16:45	21°♂21'27	
minimum elong	11116 Nov 24 09:54	11°♂19'07	4°11'58	max. Earth dist.	11123 Dec 03 11:33	21°♂42'28	38.02842 AU
morning rise	11116 Dec 09 20:07	11°♂45'06					
retrograde	11117 Mar 07 19:56	13°♂11'42		conjunction	11123 Dec 05 23:30	21°♂46'58	6°56'41
opposition	11117 May 27 08:02	12°♂02'40	4°37'02	minimum elong	11123 Dec 05 23:17	21°♂46'57	6°57'19
min. Earth dist.	11117 May 29 10:39	11°♂59'49	37.68777 AU	morning rise	11123 Dec 20 06:03	22°♂12'29	
direct	11117 Aug 15 23:42	10°♂53'11		retrograde	11124 Mar 18 17:03	23°♂46'44	
evening set	11117 Nov 10 20:33	12°♂18'58		opposition	11124 Jun 06 11:36	22°♂35'17	7°32'26
max. Earth dist.	11117 Nov 23 18:54	12°♂40'51	39.55591 AU	min. Earth dist.	11124 Jun 08 17:14	22°♂32'07	35.91526 AU
				direct	11124 Aug 25 19:43	21°♂23'04	
conjunction	11117 Nov 26 03:33	12°♂44'53	4°34'42	evening set	11124 Nov 22 19:35	22°♂57'17	
minimum elong	11117 Nov 26 03:24	12°♂44'53	4°35'19	max. Earth dist.	11124 Dec 04 08:14	23°♂18'01	37.77224 AU
morning rise	11117 Dec 11 10:36	13°♂10'52					
retrograde	11118 Mar 09 11:24	14°♂38'23		conjunction	11124 Dec 06 21:06	23°♂22'38	7°20'31
opposition	11118 May 29 00:10	13°♂28'59	5°01'46	minimum elong	11124 Dec 06 20:53	23°♂22'37	7°21'09
min. Earth dist.	11118 May 31 03:28	13°♂26'04	37.43394 AU	morning rise	11124 Dec 20 22:09	23°♂47'58	
direct	11118 Aug 17 16:15	12°♂19'06		retrograde	11125 Mar 20 13:29	25°♂23'32	
evening set	11118 Nov 12 17:43	13°♂45'53		opposition	11125 Jun 08 07:37	24°♂11'43	7°57'46
max. Earth dist.	11118 Nov 25 12:33	14°♂07'42	39.30093 AU	min. Earth dist.	11125 Jun 10 14:31	24°♂08'27	35.66046 AU
				direct	11125 Aug 27 13:58	22°♂59'05	
conjunction	11118 Nov 27 21:29	14°♂11'48	4°58'10	evening set	11125 Nov 24 23:31	24°♂34'43	
minimum elong	11118 Nov 27 21:20	14°♂11'47	4°58'45	max. Earth dist.	11125 Dec 06 06:08	24°♂55'11	37.51513 AU

conjunction	11125 Dec 08 19:18	24° $\mathring{A}$ 59'51	7°44'21	morning rise	11131 Dec 31 20:22	5° $\mathring{B}$ 39'02	
minimum elong	11125 Dec 08 19:04	24° $\mathring{A}$ 59'50	7°45'01	retrograde	11132 Apr 01 22:59	7° $\mathring{B}$ 25'18	
morning rise	11125 Dec 22 14:34	25° $\mathring{A}$ 24'59		opposition	11132 Jun 19 20:53	6° $\mathring{B}$ 10'33	10°53'19
retrograde	11126 Mar 22 12:38	27° $\mathring{A}$ 01'54		min. Earth dist.	11132 Jun 22 05:33	6° $\mathring{B}$ 07'01	33.88732 AU
opposition	11126 Jun 10 04:09	25° $\mathring{A}$ 49'42	8°23'07	direct	11132 Sep 07 19:18	4° $\mathring{B}$ 54'36	
min. Earth dist.	11126 Jun 12 10:45	25° $\mathring{A}$ 46'26	35.40486 AU	evening set	11132 Dec 09 10:07	6° $\mathring{B}$ 42'00	
direct	11126 Aug 29 07:55	24° $\mathring{A}$ 36'37		max. Earth dist.	11132 Dec 18 09:42	6° $\mathring{B}$ 59'25	35.73070 AU
evening set	11126 Nov 27 04:33	26° $\mathring{A}$ 13'43					
max. Earth dist.	11126 Dec 08 03:21	26° $\mathring{A}$ 33'47	37.25717 AU	conjunction	11132 Dec 21 00:31	7° $\mathring{B}$ 04'32	10°28'29
				minimum elong	11132 Dec 21 00:14	7° $\mathring{B}$ 04'31	10°29'08
conjunction	11126 Dec 10 18:06	26° $\mathring{A}$ 38'37	8°08'11	morning rise	11133 Jan 01 14:02	7° $\mathring{B}$ 27'02	
minimum elong	11126 Dec 10 17:51	26° $\mathring{A}$ 38'36	8°08'49	retrograde	11133 Apr 04 02:22	9° $\mathring{B}$ 15'08	
morning rise	11126 Dec 24 07:09	27° $\mathring{A}$ 03'30		opposition	11133 Jun 21 21:58	7° $\mathring{B}$ 59'59	11°17'36
retrograde	11127 Mar 24 12:39	28° $\mathring{A}$ 41'50		min. Earth dist.	11133 Jun 24 05:31	7° $\mathring{B}$ 56'30	33.64287 AU
opposition	11127 Jun 12 01:19	27° $\mathring{A}$ 29'13	8°48'27	direct	11133 Sep 09 18:51	6° $\mathring{B}$ 43'35	
min. Earth dist.	11127 Jun 14 09:29	27° $\mathring{A}$ 25'50	35.14889 AU	evening set	11133 Dec 11 23:28	8° $\mathring{B}$ 32'59	
direct	11127 Aug 31 02:26	26° $\mathring{A}$ 15'40		max. Earth dist.	11133 Dec 20 12:32	8° $\mathring{B}$ 49'44	35.48514 AU
evening set	11127 Nov 29 10:33	27° $\mathring{A}$ 54'19					
max. Earth dist.	11127 Dec 10 03:21	28° $\mathring{A}$ 14'06	36.99914 AU	conjunction	11133 Dec 23 04:11	8° $\mathring{B}$ 54'57	10°51'02
				minimum elong	11133 Dec 23 03:52	8° $\mathring{B}$ 54'56	10°51'41
conjunction	11127 Dec 12 17:34	28° $\mathring{A}$ 18'56	8°31'56	morning rise	11134 Jan 03 08:05	9° $\mathring{B}$ 16'53	
minimum elong	11127 Dec 12 17:18	28° $\mathring{A}$ 18'54	8°32'35	retrograde	11134 Apr 06 06:43	11° $\mathring{B}$ 06'53	
morning rise	11127 Dec 25 23:47	28° $\mathring{A}$ 43'32		opposition	11134 Jun 24 00:03	9° $\mathring{B}$ 51'22	11°41'34
	11128 Feb 13 15:32	0° $\mathring{B}$		min. Earth dist.	11134 Jun 26 08:33	9° $\mathring{B}$ 47'48	33.40146 AU
retrograde	11128 Mar 25 14:00	0° $\mathring{B}$ 23'19		direct	11134 Sep 11 17:47	8° $\mathring{B}$ 34'31	
	11128 May 06 04:29	30° $\mathring{R}$ $\mathring{A}$		evening set	11134 Dec 14 14:16	10° $\mathring{B}$ 26'01	
opposition	11128 Jun 12 23:04	29° $\mathring{A}$ 10'16	9°13'43	max. Earth dist.	11134 Dec 22 18:15	10° $\mathring{B}$ 42'11	35.24241 AU
min. Earth dist.	11128 Jun 15 06:46	29° $\mathring{A}$ 06'54	34.89322 AU				
direct	11128 Sep 01 00:37	27° $\mathring{A}$ 56'14		conjunction	11134 Dec 25 08:43	10° $\mathring{B}$ 47'22	11°13'13
evening set	11128 Nov 30 17:39	29° $\mathring{A}$ 36'29		minimum elong	11134 Dec 25 08:26	10° $\mathring{B}$ 47'20	11°13'52
max. Earth dist.	11128 Dec 11 01:48	29° $\mathring{A}$ 55'48	36.74168 AU	morning rise	11135 Jan 05 02:08	11° $\mathring{B}$ 08'39	
				retrograde	11135 Apr 08 12:25	13° $\mathring{B}$ 00'39	
conjunction	11128 Dec 13 17:26	0° $\mathring{B}$ 00'47	8°55'36	opposition	11135 Jun 26 02:46	11° $\mathring{B}$ 44'45	12°05'08
minimum elong	11128 Dec 13 17:10	0° $\mathring{B}$ 00'46	8°56'15	min. Earth dist.	11135 Jun 28 10:30	11° $\mathring{B}$ 41'13	33.16265 AU
	11128 Dec 13 07:26	0° $\mathring{B}$		direct	11135 Sep 13 19:34	10° $\mathring{B}$ 27'27	
morning rise	11128 Dec 26 16:41	0° $\mathring{B}$ 25'03		evening set	11135 Dec 17 06:33	12° $\mathring{B}$ 21'09	
retrograde	11129 Mar 27 17:15	2° $\mathring{B}$ 06'22		max. Earth dist.	11135 Dec 24 22:18	12° $\mathring{B}$ 36'28	35.00209 AU
opposition	11129 Jun 14 21:30	0° $\mathring{B}$ 52'53	9°38'52				
min. Earth dist.	11129 Jun 17 05:59	0° $\mathring{B}$ 49'27	34.63861 AU	conjunction	11135 Dec 27 13:59	12° $\mathring{B}$ 41'48	11°35'00
	11129 Jul 25 02:18	30° $\mathring{R}$ $\mathring{A}$		minimum elong	11135 Dec 27 13:39	12° $\mathring{B}$ 41'46	11°35'40
direct	11129 Sep 02 22:02	29° $\mathring{A}$ 38'21		morning rise	11136 Jan 06 20:35	13° $\mathring{B}$ 02'23	
	11129 Oct 12 04:28	0° $\mathring{B}$		retrograde	11136 Apr 09 20:20	14° $\mathring{B}$ 56'28	
evening set	11129 Dec 03 01:54	1° $\mathring{B}$ 20'17		opposition	11136 Jun 27 06:24	13° $\mathring{B}$ 40'10	12°28'17
max. Earth dist.	11129 Dec 13 03:12	1° $\mathring{B}$ 39'14	36.48538 AU	min. Earth dist.	11136 Jun 29 14:52	13° $\mathring{B}$ 36'34	32.92624 AU
				direct	11136 Sep 14 20:32	12° $\mathring{B}$ 22'26	
conjunction	11129 Dec 15 18:16	1° $\mathring{B}$ 44'13	9°19'08	evening set	11136 Dec 19 00:12	14° $\mathring{B}$ 18'23	
minimum elong	11129 Dec 15 17:59	1° $\mathring{B}$ 44'12	9°19'47	max. Earth dist.	11136 Dec 26 05:15	14° $\mathring{B}$ 32'57	34.76386 AU
morning rise	11129 Dec 28 09:44	2° $\mathring{B}$ 08'07					
retrograde	11130 Mar 29 17:39	3° $\mathring{B}$ 51'00		conjunction	11136 Dec 28 20:11	14° $\mathring{B}$ 38'16	11°56'22
opposition	11130 Jun 16 20:30	2° $\mathring{B}$ 37'05	10°03'54	minimum elong	11136 Dec 28 19:53	14° $\mathring{B}$ 38'15	11°57'00
min. Earth dist.	11130 Jun 19 04:59	2° $\mathring{B}$ 33'38	34.38559 AU	morning rise	11137 Jan 07 15:05	14° $\mathring{B}$ 58'06	
direct	11130 Sep 04 21:11	1° $\mathring{B}$ 22'05		retrograde	11137 Apr 12 03:54	16° $\mathring{B}$ 54'18	
evening set	11130 Dec 05 11:32	3° $\mathring{B}$ 05'45		opposition	11137 Jun 29 10:54	15° $\mathring{B}$ 37'37	12°50'59
max. Earth dist.	11130 Dec 15 04:11	3° $\mathring{B}$ 24'12	36.23111 AU	min. Earth dist.	11137 Jul 01 19:16	15° $\mathring{B}$ 34'00	32.69176 AU
				direct	11137 Sep 17 01:28	14° $\mathring{B}$ 19'26	
conjunction	11130 Dec 17 19:39	3° $\mathring{B}$ 29'16	9°42'30	evening set	11137 Dec 21 19:39	16° $\mathring{B}$ 17'44	
minimum elong	11130 Dec 17 19:22	3° $\mathring{B}$ 29'15	9°43'08	max. Earth dist.	11137 Dec 28 11:27	16° $\mathring{B}$ 31'20	34.52778 AU
morning rise	11130 Dec 30 03:04	3° $\mathring{B}$ 52'45					
retrograde	11131 Mar 31 20:42	5° $\mathring{B}$ 37'17		conjunction	11137 Dec 31 03:11	16° $\mathring{B}$ 36'46	12°17'14
opposition	11131 Jun 18 20:15	4° $\mathring{B}$ 22'57	10°28'44	minimum elong	11137 Dec 31 02:51	16° $\mathring{B}$ 36'45	12°17'52
min. Earth dist.	11131 Jun 21 04:22	4° $\mathring{B}$ 19'29	34.13504 AU	morning rise	11138 Jan 09 09:52	16° $\mathring{B}$ 55'44	
direct	11131 Sep 06 20:45	3° $\mathring{B}$ 07'28		retrograde	11138 Apr 14 14:01	18° $\mathring{B}$ 54'10	
evening set	11131 Dec 07 22:03	4° $\mathring{B}$ 52'57		opposition	11138 Jul 01 16:01	17° $\mathring{B}$ 37'05	13°13'08
max. Earth dist.	11131 Dec 17 06:10	5° $\mathring{B}$ 10'54	35.97931 AU	min. Earth dist.	11138 Jul 04 00:14	17° $\mathring{B}$ 33'27	32.45960 AU
				direct	11138 Sep 19 06:13	16° $\mathring{B}$ 18'25	
conjunction	11131 Dec 19 21:40	5° $\mathring{B}$ 16'01	10°05'37	evening set	11138 Dec 24 16:32	18° $\mathring{B}$ 19'10	
minimum elong	11131 Dec 19 21:21	5° $\mathring{B}$ 15'59	10°06'17	max. Earth dist.	11138 Dec 30 19:37	18° $\mathring{B}$ 31'48	34.29399 AU

conjunction	11139 Jan 02 11:06	18°33'16"	12°37'34"	opposition	11145 Jul 16 03:05	2°28'21"	15°27'22"
minimum elong	11139 Jan 02 10:48	18°33'14"	12°38'12"	min. Earth dist.	11145 Jul 18 07:41	2°24'48"	30.94811 AU
morning rise	11139 Jan 11 04:41	18°35'17"		direct	11145 Oct 03 06:52	1°06'28"	
retrograde	11139 Apr 16 21:37	20°35'02"		evening set	11146 Jan 14 03:52	3°28'03"	
opposition	11139 Jul 03 22:11	19°38'32"	13°34'43"	max. Earth dist.	11146 Jan 15 05:20	3°30'23"	32.78270 AU
min. Earth dist.	11139 Jul 06 06:56	19°34'50"	32.23000 AU				
direct	11139 Sep 21 10:59	18°31'23"		conjunction	11146 Jan 17 15:20	3°35'42"	14°38'47"
evening set	11139 Dec 27 15:00	20°32'40"		minimum elong	11146 Jan 17 15:05	3°35'41"	14°39'22"
max. Earth dist.	11140 Jan 02 04:27	20°34'14"	34.06328 AU	morning rise	11146 Jan 21 02:12	3°43'19"	
				retrograde	11146 May 02 06:59	6°03'53"	
conjunction	11140 Jan 04 19:31	20°39'44"	12°57'18"	opposition	11146 Jul 18 14:45	4°43'39"	15°42'32"
minimum elong	11140 Jan 04 19:11	20°39'42"	12°57'56"	min. Earth dist.	11146 Jul 20 18:30	4°40'08"	30.75663 AU
morning rise	11140 Jan 12 23:08	20°35'43"		direct	11146 Oct 05 18:41	3°21'24"	
retrograde	11140 Apr 18 07:03	22°35'51"		evening set	11147 Jan 18 03:35	5°47'29"	
opposition	11140 Jul 05 04:58	21°34'56"	13°55'38"	max. Earth dist.	11147 Jan 17 20:02	5°46'47"	32.59266 AU
min. Earth dist.	11140 Jul 07 12:40	21°38'17"	32.00376 AU				
direct	11140 Sep 22 17:07	20°32'19"		conjunction	11147 Jan 20 05:22	5°52'05"	14°52'09"
evening set	11140 Dec 29 15:11	22°32'14"		minimum elong	11147 Jan 20 05:09	5°52'04"	14°52'43"
max. Earth dist.	11141 Jan 03 13:33	22°38'35"	33.83611 AU	morning rise	11147 Jan 22 06:43	5°56'39"	
				retrograde	11147 May 05 00:03	8°21'33"	
conjunction	11141 Jan 06 04:54	22°34'09"	13°16'21"	opposition	11147 Jul 21 03:14	7°01'01"	15°56'28"
minimum elong	11141 Jan 06 04:37	22°34'08"	13°16'59"	min. Earth dist.	11147 Jul 23 05:29	6°57'36"	30.57225 AU
morning rise	11141 Jan 13 17:47	23°30'01"		direct	11147 Oct 08 07:14	5°38'25"	
retrograde	11141 Apr 20 16:30	25°30'53"		max. Earth dist.	11148 Jan 20 12:19	8°05'18"	32.40950 AU
opposition	11141 Jul 07 12:34	23°34'18"	14°15'48"				
min. Earth dist.	11141 Jul 09 20:57	23°34'35"	31.78149 AU	conjunction	11148 Jan 22 20:12	8°10'31"	15°04'20"
direct	11141 Sep 24 21:26	22°32'12"		minimum elong	11148 Jan 22 19:59	8°10'30"	15°04'53"
evening set	11142 Jan 01 17:24	24°35'52"		retrograde	11148 May 06 14:45	10°41'15"	
max. Earth dist.	11142 Jan 06 01:09	24°34'50"	33.61344 AU	opposition	11148 Jul 22 16:42	9°20'25"	16°09'07"
				min. Earth dist.	11148 Jul 24 18:51	9°16'58"	30.39445 AU
conjunction	11142 Jan 08 15:06	24°35'31"	13°34'39"	direct	11148 Oct 09 19:14	7°57'28"	
minimum elong	11142 Jan 08 14:47	24°35'30"	13°35'17"	max. Earth dist.	11149 Jan 22 05:16	10°25'47"	32.23317 AU
morning rise	11142 Jan 15 11:56	25°30'07"					
retrograde	11142 Apr 23 02:52	27°31'22"		conjunction	11149 Jan 24 11:53	10°30'55"	15°15'16"
opposition	11142 Jul 09 20:55	25°34'37"	14°35'09"	minimum elong	11149 Jan 24 11:44	10°30'54"	15°15'48"
min. Earth dist.	11142 Jul 12 03:45	25°35'58"	31.56397 AU	retrograde	11149 May 09 08:24	13°02'50"	
direct	11142 Sep 27 04:50	24°34'02"		opposition	11149 Jul 25 06:41	11°41'44"	16°20'23"
evening set	11143 Jan 04 21:26	26°34'53"		min. Earth dist.	11149 Jul 27 07:03	11°38'23"	30.22318 AU
max. Earth dist.	11143 Jan 08 11:42	26°35'17"	33.39592 AU	direct	11149 Oct 12 09:16	10°18'26"	
				max. Earth dist.	11150 Jan 24 22:23	12°48'04"	32.06338 AU
conjunction	11143 Jan 11 01:52	26°35'50"	13°52'08"				
minimum elong	11143 Jan 11 01:36	26°35'49"	13°52'45"	conjunction	11150 Jan 27 04:26	12°53'12"	15°24'53"
morning rise	11143 Jan 17 05:37	27°31'20"		minimum elong	11150 Jan 27 04:16	12°53'11"	15°25'25"
retrograde	11143 Apr 25 14:12	29°32'03"			11150 Apr 02 12:06	15°	
opposition	11143 Jul 12 06:11	28°30'53"	14°53'35"	retrograde	11150 May 12 01:30	15°26'15"	
min. Earth dist.	11143 Jul 14 13:04	28°30'12"	31.35209 AU		11150 Jun 21 09:50	15°	
direct	11143 Sep 29 12:01	26°34'25"		opposition	11150 Jul 27 21:44	14°04'50"	16°30'15"
evening set	11144 Jan 08 04:03	28°35'27"		min. Earth dist.	11150 Jul 29 22:08	14°01'29"	30.05841 AU
max. Earth dist.	11144 Jan 11 01:34	29°30'42"	33.18454 AU	direct	11150 Oct 14 21:52	12°41'13"	
					11151 Jan 22 09:05	15°	
conjunction	11144 Jan 13 13:36	29°30'07"	14°08'42"	max. Earth dist.	11151 Jan 27 17:26	15°12'13"	31.90055 AU
minimum elong	11144 Jan 13 13:18	29°30'06"	14°09'19"				
morning rise	11144 Jan 18 22:22	29°32'04"		conjunction	11151 Jan 29 21:30	15°17'11"	15°33'09"
	11144 Feb 06 12:30	0°		minimum elong	11151 Jan 29 21:24	15°17'11"	15°33'39"
retrograde	11144 Apr 27 02:13	1°34'39"		retrograde	11151 May 14 18:10	17°51'19"	
opposition	11144 Jul 13 16:13	0°15'06"	15°11'01"	opposition	11151 Jul 30 13:21	16°29'37"	16°38'36"
min. Earth dist.	11144 Jul 15 21:37	0°11'31"	31.14659 AU	min. Earth dist.	11151 Aug 01 11:36	16°26'24"	29.90044 AU
	11144 Jul 23 01:54	30°		direct	11151 Oct 17 13:41	15°05'39"	
direct	11144 Sep 30 22:05	28°35'38"		max. Earth dist.	11152 Jan 30 11:34	17°37'49"	31.74496 AU
	11144 Dec 06 14:55	0°					
evening set	11145 Jan 10 13:36	1°11'32"		conjunction	11152 Feb 01 15:12	17°42'47"	15°39'58"
max. Earth dist.	11145 Jan 12 13:58	1°15'56"	32.98005 AU	minimum elong	11152 Feb 01 15:06	17°42'46"	15°40'28"
				retrograde	11152 May 16 11:14	20°17'54"	
conjunction	11145 Jan 15 01:55	1°21'23"	14°24'17"	opposition	11152 Aug 01 05:40	18°55'55"	16°45'24"
minimum elong	11145 Jan 15 01:40	1°21'22"	14°24'52"	min. Earth dist.	11152 Aug 03 03:31	18°52'43"	29.74986 AU
morning rise	11145 Jan 19 13:41	1°31'12"		direct	11152 Oct 19 04:13	17°31'37"	
retrograde	11145 Apr 29 16:41	3°48'16"		max. Earth dist.	11153 Feb 01 08:36	20°05'06"	31.59728 AU

conjunction	11153 Feb 03 09:34	20° $\approx$ 09'50	15°45'17	conjunction	11161 Feb 24 02:10	10° $\times$ 26'07	15°26'43
minimum elong	11153 Feb 03 09:31	20° $\approx$ 09'50	15°45'44	minimum elong	11161 Feb 24 02:24	10° $\times$ 26'09	15°26'59
retrograde	11153 May 19 04:54	22° $\approx$ 45'52		retrograde	11161 Jun 08 20:37	13° $\times$ 06'51	
opposition	11153 Aug 03 22:35	21° $\approx$ 23'37	16°50'32	opposition	11161 Aug 24 07:44	11° $\times$ 43'28	16°25'01
min. Earth dist.	11153 Aug 05 18:29	21° $\approx$ 20'32	29.60707 AU	min. Earth dist.	11161 Aug 25 12:01	11° $\times$ 41'28	28.82564 AU
direct	11153 Oct 21 21:12	19° $\approx$ 59'00		direct	11161 Nov 11 07:00	10° $\times$ 17'43	
max. Earth dist.	11154 Feb 04 03:59	22° $\approx$ 33'30	31.45801 AU				
conjunction	11154 Feb 06 04:20	22° $\approx$ 38'12	15°49'01	conjunction	11162 Feb 26 23:28	13° $\times$ 01'51	15°16'19
minimum elong	11154 Feb 06 04:17	22° $\approx$ 38'12	15°49'28	minimum elong	11162 Feb 26 23:43	13° $\times$ 01'53	15°16'35
retrograde	11154 May 21 23:25	25° $\approx$ 15'06		max. Earth dist.	11162 Feb 25 19:05	12° $\times$ 59'01	30.72361 AU
opposition	11154 Aug 06 16:02	23° $\approx$ 52'34	16°53'58	retrograde	11162 Jun 11 17:46	15° $\times$ 42'46	
min. Earth dist.	11154 Aug 08 10:44	23° $\approx$ 49'34	29.47295 AU	opposition	11162 Aug 27 04:24	14° $\times$ 19'24	16°13'07
direct	11154 Oct 24 13:17	22° $\approx$ 27'39		min. Earth dist.	11162 Aug 28 05:45	14° $\times$ 17'35	28.77554 AU
max. Earth dist.	11155 Feb 07 02:28	25° $\approx$ 03'22	31.32801 AU	direct	11162 Nov 14 04:51	12° $\times$ 53'38	
conjunction	11155 Feb 08 23:39	25° $\approx$ 07'46	15°51'08	conjunction	11163 Mar 01 20:48	15° $\times$ 37'56	15°04'10
minimum elong	11155 Feb 08 23:41	25° $\approx$ 07'47	15°51'33	minimum elong	11163 Mar 01 21:05	15° $\times$ 37'58	15°04'23
retrograde	11155 May 24 17:08	27° $\approx$ 45'26		max. Earth dist.	11163 Feb 28 18:11	15° $\times$ 35'16	30.68050 AU
opposition	11155 Aug 09 10:10	26° $\approx$ 22'40	16°55'36	retrograde	11163 Jun 14 13:30	18° $\times$ 18'55	
min. Earth dist.	11155 Aug 11 02:58	26° $\approx$ 19'47	29.34816 AU	opposition	11163 Aug 30 01:22	16° $\times$ 55'33	15°59'18
direct	11155 Oct 27 08:25	24° $\approx$ 57'30		min. Earth dist.	11163 Aug 31 01:14	16° $\times$ 53'51	28.73558 AU
max. Earth dist.	11156 Feb 09 23:08	27° $\approx$ 34'08	31.20817 AU	direct	11163 Nov 17 01:14	15° $\times$ 29'49	
conjunction	11156 Feb 11 19:04	27° $\approx$ 38'27	15°51'33	evening set	11164 Mar 01 10:25	18° $\times$ 08'33	
minimum elong	11156 Feb 11 19:06	27° $\approx$ 38'27	15°51'57	conjunction	11164 Mar 03 18:06	18° $\times$ 14'08	14°50'15
retrograde	11156 Apr 25 15:43	0° $\times$		minimum elong	11164 Mar 03 18:25	18° $\times$ 14'10	14°50'27
opposition	11156 May 26 13:28	0° $\times$ 16'49		max. Earth dist.	11164 Mar 02 18:46	18° $\times$ 11'48	30.64780 AU
min. Earth dist.	11156 Jun 27 02:18	30° $\times$		morning rise	11164 Mar 06 02:23	18° $\times$ 19'46	
direct	11156 Aug 11 04:43	28° $\approx$ 53'50	16°55'22	retrograde	11164 Jun 16 09:51	20° $\times$ 55'03	
max. Earth dist.	11156 Aug 12 19:07	28° $\approx$ 51'07	29.23371 AU	opposition	11164 Aug 31 22:18	19° $\times$ 31'43	15°43'37
conjunction	11156 Oct 29 03:12	27° $\approx$ 28'26		min. Earth dist.	11164 Sep 01 19:36	19° $\times$ 30'12	28.70555 AU
minimum elong	11157 Feb 09 08:09	0° $\times$		direct	11164 Nov 18 23:23	18° $\times$ 06'01	
retrograde	11157 Feb 11 22:31	0° $\times$ 06'08	31.09916 AU	evening set	11165 Mar 02 21:08	20° $\times$ 41'12	
opposition	11157 Feb 13 15:12	0° $\times$ 10'09	15°50'12	conjunction	11165 Mar 06 15:20	20° $\times$ 50'14	14°34'38
min. Earth dist.	11157 Feb 13 15:17	0° $\times$ 10'09	15°50'34	minimum elong	11165 Mar 06 15:40	20° $\times$ 50'16	14°34'48
direct	11157 May 29 08:13	2° $\times$ 49'09		max. Earth dist.	11165 Mar 05 17:25	20° $\times$ 48'02	30.62534 AU
max. Earth dist.	11157 Aug 13 23:43	1° $\times$ 26'00	16°53'13	morning rise	11165 Mar 10 10:05	20° $\times$ 59'19	
conjunction	11157 Aug 15 12:34	1° $\times$ 23'23	29.13001 AU	retrograde	11165 Jun 19 05:42	23° $\times$ 31'00	
minimum elong	11157 Oct 31 21:54	0° $\times$ 00'27		opposition	11165 Sep 03 19:07	22° $\times$ 07'42	15°26'05
retrograde	11158 Feb 14 20:44	2° $\times$ 38'59	31.00164 AU	min. Earth dist.	11165 Sep 04 14:20	22° $\times$ 06'20	28.68581 AU
opposition	11158 Feb 16 11:32	2° $\times$ 42'50	15°47'03	direct	11165 Nov 21 19:31	20° $\times$ 42'01	
min. Earth dist.	11158 Feb 16 11:39	2° $\times$ 42'50	15°47'25	evening set	11166 Mar 04 16:01	23° $\times$ 14'22	
direct	11158 Jun 01 06:11	5° $\times$ 22'23		conjunction	11166 Mar 09 12:30	23° $\times$ 26'01	14°17'20
max. Earth dist.	11158 Aug 16 19:11	3° $\times$ 59'08	16°49'07	minimum elong	11166 Mar 09 12:52	23° $\times$ 26'03	14°17'29
conjunction	11158 Aug 18 05:00	3° $\times$ 56'44	29.03761 AU	max. Earth dist.	11166 Mar 08 18:11	23° $\times$ 24'11	30.61349 AU
minimum elong	11158 Nov 03 18:33	2° $\times$ 33'28		morning rise	11166 Mar 14 09:28	23° $\times$ 37'43	
retrograde	11159 Feb 17 20:23	5° $\times$ 12'54	30.91556 AU	retrograde	11166 Jun 21 23:27	26° $\times$ 06'31	
opposition	11159 Feb 19 08:08	5° $\times$ 16'27	15°42'06	opposition	11166 Sep 06 16:02	24° $\times$ 43'15	15°06'47
min. Earth dist.	11159 Feb 19 08:17	5° $\times$ 16'28	15°42'25	min. Earth dist.	11166 Sep 07 09:01	24° $\times$ 42'03	28.67646 AU
direct	11159 Jun 04 01:39	7° $\times$ 56'30		direct	11166 Nov 24 18:25	23° $\times$ 17'38	
max. Earth dist.	11159 Aug 19 15:08	6° $\times$ 33'10	16°43'02	evening set	11167 Mar 06 13:52	25° $\times$ 47'24	
conjunction	11159 Aug 20 23:40	6° $\times$ 30'51	28.95628 AU	conjunction	11167 Mar 12 09:02	26° $\times$ 01'18	13°58'24
minimum elong	11159 Nov 06 14:07	5° $\times$ 07'27		minimum elong	11167 Mar 12 09:25	26° $\times$ 01'20	13°58'30
retrograde	11160 Feb 20 19:37	7° $\times$ 47'36	30.84088 AU	max. Earth dist.	11167 Mar 11 16:20	25° $\times$ 59'37	30.61253 AU
opposition	11160 Feb 22 04:59	7° $\times$ 50'55	15°35'18	morning rise	11167 Mar 18 04:41	26° $\times$ 15'14	
min. Earth dist.	11160 Feb 22 05:11	7° $\times$ 50'56	15°35'38	retrograde	11167 Jun 24 19:06	28° $\times$ 41'26	
direct	11160 Jun 05 23:33	10° $\times$ 31'21		opposition	11167 Sep 09 12:41	27° $\times$ 18'12	14°45'42
max. Earth dist.	11160 Aug 21 11:09	9° $\times$ 08'00	16°35'00	min. Earth dist.	11167 Sep 10 02:41	27° $\times$ 17'13	28.67817 AU
conjunction	11160 Aug 22 16:35	9° $\times$ 05'55	28.88578 AU	direct	11167 Nov 27 15:50	25° $\times$ 52'39	
minimum elong	11160 Nov 08 11:21	7° $\times$ 42'15		evening set	11168 Mar 07 13:51	28° $\times$ 19'59	
retrograde	11161 Feb 22 19:02	10° $\times$ 23'01	30.77696 AU	conjunction	11168 Mar 14 05:31	28° $\times$ 35'53	13°37'52
opposition				minimum elong	11168 Mar 14 05:56	28° $\times$ 35'55	13°37'57
min. Earth dist.				max. Earth dist.	11168 Mar 13 16:46	28° $\times$ 34'36	30.62296 AU

morning rise	11168 Mar 20 21:31	28° $\text{H}$ 51'49		direct	11174 Dec 15 19:17	13° $\text{Y}$ 33'31	
	11168 Apr 20 04:13	0° $\text{Y}$		evening set	11175 Mar 21 11:36	15° $\text{Y}$ 45'30	
retrograde	11168 Jun 26 12:30	1° $\text{Y}$ 15'34					
	11168 Sep 06 21:06	30° $\text{R}$ $\text{H}$		conjunction	11175 Apr 01 16:05	16° $\text{Y}$ 11'29	10°35'07
opposition	11168 Sep 11 09:06	29° $\text{H}$ 52'24	14°22'55	minimum elong	11175 Apr 01 16:29	16° $\text{Y}$ 11'31	10°35'00
min. Earth dist.	11168 Sep 11 21:14	29° $\text{H}$ 51'33	28.69133 AU	max. Earth dist.	11175 Apr 01 22:51	16° $\text{Y}$ 12'09	31.02800 AU
direct	11168 Nov 29 12:40	28° $\text{H}$ 26'57		morning rise	11175 Apr 12 20:08	16° $\text{Y}$ 37'26	
	11169 Feb 14 21:43	0° $\text{Y}$		retrograde	11175 Jul 14 14:22	18° $\text{Y}$ 46'10	
evening set	11169 Mar 09 15:04	0° $\text{Y}$ 51'55		opposition	11175 Sep 29 23:17	17° $\text{Y}$ 24'25	11°02'32
				min. Earth dist.	11175 Sep 29 16:34	17° $\text{Y}$ 24'52	29.11098 AU
conjunction	11169 Mar 17 01:30	1° $\text{Y}$ 09'38	13°15'46	direct	11175 Dec 18 16:05	16° $\text{Y}$ 00'43	
minimum elong	11169 Mar 17 01:54	1° $\text{Y}$ 09'40	13°15'49	evening set	11176 Mar 22 16:27	18° $\text{Y}$ 10'42	
max. Earth dist.	11169 Mar 16 14:43	1° $\text{Y}$ 08'33	30.64538 AU				
morning rise	11169 Mar 24 12:17	1° $\text{Y}$ 27'23		conjunction	11176 Apr 03 08:39	18° $\text{Y}$ 37'40	10°04'35
retrograde	11169 Jun 29 07:33	3° $\text{Y}$ 48'47		minimum elong	11176 Apr 03 09:04	18° $\text{Y}$ 37'43	10°04'26
opposition	11169 Sep 14 05:16	2° $\text{Y}$ 25'43	13°58'30	max. Earth dist.	11176 Apr 03 17:00	18° $\text{Y}$ 38'29	31.12792 AU
min. Earth dist.	11169 Sep 14 13:42	2° $\text{Y}$ 25'08	28.71655 AU	morning rise	11176 Apr 15 00:33	19° $\text{Y}$ 04'36	
direct	11169 Dec 02 11:20	1° $\text{Y}$ 00'25		retrograde	11176 Jul 16 06:05	21° $\text{Y}$ 11'24	
evening set	11170 Mar 11 17:05	3° $\text{Y}$ 23'06		opposition	11176 Oct 01 16:34	19° $\text{Y}$ 49'55	10°29'20
				min. Earth dist.	11176 Oct 01 07:34	19° $\text{Y}$ 50'32	29.21203 AU
conjunction	11170 Mar 19 21:09	3° $\text{Y}$ 42'29	12°52'12	direct	11176 Dec 20 09:45	18° $\text{Y}$ 26'32	
minimum elong	11170 Mar 19 21:35	3° $\text{Y}$ 42'32	12°52'13	evening set	11177 Mar 24 21:27	20° $\text{Y}$ 34'33	
max. Earth dist.	11170 Mar 19 14:17	3° $\text{Y}$ 41'48	30.68002 AU				
morning rise	11170 Mar 28 01:20	4° $\text{Y}$ 01'55		conjunction	11177 Apr 06 00:46	21° $\text{Y}$ 02'25	9°33'13
retrograde	11170 Jul 02 00:31	6° $\text{Y}$ 21'03		minimum elong	11177 Apr 06 01:09	21° $\text{Y}$ 02'27	9°33'03
opposition	11170 Sep 17 01:19	4° $\text{Y}$ 58'07	13°32'30	max. Earth dist.	11177 Apr 06 12:11	21° $\text{Y}$ 03'31	31.23674 AU
min. Earth dist.	11170 Sep 17 07:51	4° $\text{Y}$ 57'40	28.75400 AU	morning rise	11177 Apr 18 03:22	21° $\text{Y}$ 30'14	
direct	11170 Dec 05 08:38	3° $\text{Y}$ 33'01		retrograde	11177 Jul 18 18:33	23° $\text{Y}$ 35'08	
evening set	11171 Mar 13 19:55	5° $\text{Y}$ 53'28		opposition	11177 Oct 04 09:29	22° $\text{Y}$ 13'56	9°55'20
				min. Earth dist.	11177 Oct 03 22:43	22° $\text{Y}$ 14'40	29.32169 AU
conjunction	11171 Mar 22 16:17	6° $\text{Y}$ 14'24	12°27'13	direct	11177 Dec 23 05:08	20° $\text{Y}$ 50'52	
minimum elong	11171 Mar 22 16:42	6° $\text{Y}$ 14'26	12°27'12	evening set	11178 Mar 27 02:36	22° $\text{Y}$ 56'57	
max. Earth dist.	11171 Mar 22 11:47	6° $\text{Y}$ 13'57	30.72716 AU				
morning rise	11171 Mar 31 12:47	6° $\text{Y}$ 35'22		conjunction	11178 Apr 08 15:56	23° $\text{Y}$ 25'36	9°01'09
retrograde	11171 Jul 04 19:24	8° $\text{Y}$ 52'18		minimum elong	11178 Apr 08 16:19	23° $\text{Y}$ 25'38	9°00'57
opposition	11171 Sep 19 20:48	7° $\text{Y}$ 29'34	13°05'01	max. Earth dist.	11178 Apr 09 04:31	23° $\text{Y}$ 26'48	31.35403 AU
min. Earth dist.	11171 Sep 19 23:27	7° $\text{Y}$ 29'23	28.80363 AU	morning rise	11178 Apr 21 04:46	23° $\text{Y}$ 54'12	
direct	11171 Dec 08 06:14	6° $\text{Y}$ 04'41		retrograde	11178 Jul 21 07:57	25° $\text{Y}$ 57'17	
evening set	11172 Mar 14 23:04	8° $\text{Y}$ 22'57		opposition	11178 Oct 07 01:43	24° $\text{Y}$ 36'20	9°20'36
				min. Earth dist.	11178 Oct 06 12:05	24° $\text{Y}$ 37'16	29.44000 AU
conjunction	11172 Mar 24 10:58	8° $\text{Y}$ 45'19	12°00'55	direct	11178 Dec 25 22:11	23° $\text{Y}$ 13'34	
minimum elong	11172 Mar 24 11:25	8° $\text{Y}$ 45'22	12°00'53	evening set	11179 Mar 29 07:42	25° $\text{Y}$ 17'47	
max. Earth dist.	11172 Mar 24 09:43	8° $\text{Y}$ 45'12	30.78618 AU				
morning rise	11172 Apr 02 22:50	9° $\text{Y}$ 07'42		conjunction	11179 Apr 11 06:35	25° $\text{Y}$ 47'08	8°28'28
retrograde	11172 Jul 06 12:46	11° $\text{Y}$ 22'31		minimum elong	11179 Apr 11 06:56	25° $\text{Y}$ 47'10	8°28'14
opposition	11172 Sep 21 16:06	10° $\text{Y}$ 00'00	12°36'10	max. Earth dist.	11179 Apr 11 22:30	25° $\text{Y}$ 48'39	31.47977 AU
min. Earth dist.	11172 Sep 21 17:06	9° $\text{Y}$ 59'56	28.86484 AU	morning rise	11179 Apr 24 04:35	26° $\text{Y}$ 16'26	
direct	11172 Dec 10 02:27	8° $\text{Y}$ 35'24		retrograde	11179 Jul 23 19:09	28° $\text{Y}$ 17'44	
evening set	11173 Mar 17 02:59	10° $\text{Y}$ 51'31		opposition	11179 Oct 09 17:19	26° $\text{Y}$ 57'03	8°45'17
				min. Earth dist.	11179 Oct 09 02:22	26° $\text{Y}$ 58'03	29.56687 AU
conjunction	11173 Mar 27 05:15	11° $\text{Y}$ 15'12	11°33'24	direct	11179 Dec 28 14:38	25° $\text{Y}$ 34'36	
minimum elong	11173 Mar 27 05:40	11° $\text{Y}$ 15'15	11°33'19	evening set	11180 Mar 30 12:53	27° $\text{Y}$ 36'58	
max. Earth dist.	11173 Mar 27 06:35	11° $\text{Y}$ 15'20	30.85652 AU				
morning rise	11173 Apr 06 07:22	11° $\text{Y}$ 38'53		conjunction	11180 Apr 12 20:17	28° $\text{Y}$ 06'56	7°55'14
retrograde	11173 Jul 09 06:42	13° $\text{Y}$ 51'37		minimum elong	11180 Apr 12 20:38	28° $\text{Y}$ 06'58	7°54'58
opposition	11173 Sep 24 10:48	12° $\text{Y}$ 29'21	12°06'04	max. Earth dist.	11180 Apr 13 13:33	28° $\text{Y}$ 08'34	31.61411 AU
min. Earth dist.	11173 Sep 24 08:33	12° $\text{Y}$ 29'30	28.93684 AU	morning rise	11180 Apr 26 02:59	28° $\text{Y}$ 36'50	
direct	11173 Dec 13 00:30	11° $\text{Y}$ 05'02			11180 Jun 08 07:09	0° $\text{B}$	
evening set	11174 Mar 19 07:10	13° $\text{Y}$ 19'05		retrograde	11180 Jul 25 07:41	0° $\text{B}$ 36'25	
					11180 Sep 12 10:17	30° $\text{R}$ $\text{Y}$	
conjunction	11174 Mar 29 22:59	13° $\text{Y}$ 43'58	11°04'46	opposition	11180 Oct 11 08:08	29° $\text{Y}$ 15'59	8°09'25
minimum elong	11174 Mar 29 23:25	13° $\text{Y}$ 44'00	11°04'40	min. Earth dist.	11180 Oct 10 13:50	29° $\text{Y}$ 17'13	29.70260 AU
max. Earth dist.	11174 Mar 30 02:44	13° $\text{Y}$ 44'20	30.93727 AU	direct	11180 Dec 30 07:09	27° $\text{Y}$ 53'50	
morning rise	11174 Apr 09 14:37	14° $\text{Y}$ 08'50		evening set	11181 Apr 01 17:57	29° $\text{Y}$ 54'26	
retrograde	11174 Jul 11 22:44	16° $\text{Y}$ 19'32			11181 Apr 04 06:14	0° $\text{B}$	
opposition	11174 Sep 27 05:19	14° $\text{Y}$ 57'31	11°34'48				
min. Earth dist.	11174 Sep 27 01:13	14° $\text{Y}$ 57'48	29.01916 AU	conjunction	11181 Apr 15 09:20	0° $\text{B}$ 24'56	7°21'33

minimum elong	11181 Apr 15 09:39	0°8'24"58	7°21'16"	opposition	11187 Oct 27 21:27	14°8'40"03	3°51'23"
max. Earth dist.	11181 Apr 16 05:52	0°8'26"52	31.75718 AU	direct	11188 Jan 16 10:30	13°8'20"37	
morning rise	11181 Apr 28 23:44	0°8'55"21			11188 Apr 10 00:24	15°8'	
retrograde	11181 Jul 27 18:14	2°8'53"17		evening set	11188 Apr 15 04:48	15°8'10"42	
opposition	11181 Oct 13 22:24	1°8'33"07	7°33'08"				
min. Earth dist.	11181 Oct 13 02:41	1°8'34"26	29.84750 AU	conjunction	11188 Apr 30 08:05	15°8'42"51	3°19'55"
direct	11182 Jan 01 23:28	0°8'11"19		minimum elong	11188 Apr 30 08:14	15°8'42"52	3°19'29"
evening set	11182 Apr 03 23:08	2°8'10"12		max. Earth dist.	11188 May 01 19:30	15°8'46"01	32.99716 AU
				morning rise	11188 May 15 10:02	16°8'14"54	
conjunction	11182 Apr 17 21:35	2°8'41"09	6°47'29"	retrograde	11188 Aug 11 07:00	18°8'03"09	
minimum elong	11182 Apr 17 21:53	2°8'41"10	6°47'11"	min. Earth dist.	11188 Oct 27 20:53	16°8'47"34	31.09977 AU
max. Earth dist.	11182 Apr 18 19:57	2°8'43"14	31.90955 AU	opposition	11188 Oct 29 07:04	16°8'45"22	3°14'35"
morning rise	11182 May 01 19:06	3°8'12"00		direct	11189 Jan 17 21:27	15°8'26"20	
retrograde	11182 Jul 30 05:45	5°8'08"21		evening set	11189 Apr 17 09:39	17°8'15"09	
opposition	11182 Oct 16 11:57	3°8'48"29	6°56'30"				
min. Earth dist.	11182 Oct 15 12:49	3°8'50"01	30.00187 AU	conjunction	11189 May 02 15:22	17°8'47"16	2°45'31"
direct	11183 Jan 04 15:21	2°8'27"02		minimum elong	11189 May 02 15:29	17°8'47"17	2°45'04"
evening set	11183 Apr 06 04:03	4°8'24"17		max. Earth dist.	11189 May 04 03:15	17°8'50"27	33.20046 AU
				morning rise	11189 May 17 20:00	18°8'19"19	
conjunction	11183 Apr 20 08:59	4°8'55"36	6°13'08"	retrograde	11189 Aug 13 12:54	20°8'06"25	
minimum elong	11183 Apr 20 09:15	4°8'55"37	6°12'49"	min. Earth dist.	11189 Oct 30 03:04	18°8'51"19	31.30430 AU
max. Earth dist.	11183 Apr 21 10:04	4°8'57"55	32.07110 AU	opposition	11189 Oct 31 15:52	18°8'48"58	2°38'00"
morning rise	11183 May 04 12:56	5°8'26"50		direct	11190 Jan 20 07:32	17°8'30"19	
retrograde	11183 Aug 01 15:56	7°8'21"40		evening set	11190 Apr 19 14:18	19°8'17"55	
min. Earth dist.	11183 Oct 17 24:00	6°8'03"45	30.16562 AU				
opposition	11183 Oct 19 00:53	6°8'02"07	6°19'37"	conjunction	11190 May 04 22:07	19°8'49"58	2°11'20"
direct	11184 Jan 07 04:59	4°8'41"03		minimum elong	11190 May 04 22:13	19°8'49"59	2°10'52"
evening set	11184 Apr 07 09:05	6°8'36"45		max. Earth dist.	11190 May 06 12:16	19°8'53"20	33.40823 AU
				morning rise	11190 May 20 04:42	20°8'21"56	
conjunction	11184 Apr 21 19:50	7°8'08"22	5°38'35"	retrograde	11190 Aug 15 17:35	22°8'07"58	
minimum elong	11184 Apr 21 20:06	7°8'08"23	5°38'14"	min. Earth dist.	11190 Nov 01 10:53	20°8'53"11	31.51341 AU
max. Earth dist.	11184 Apr 22 23:19	7°8'10"53	32.24166 AU	opposition	11190 Nov 03 00:14	20°8'50"50	2°01'43"
morning rise	11184 May 06 05:26	7°8'39"53		direct	11191 Jan 22 16:27	19°8'32"32	
retrograde	11184 Aug 03 02:15	9°8'33"16		evening set	11191 Apr 21 18:41	21°8'18"58	
min. Earth dist.	11184 Oct 19 09:26	8°8'15"52	30.33803 AU				
opposition	11184 Oct 20 12:52	8°8'14"04	5°42'34"	conjunction	11191 May 07 03:59	21°8'50"54	1°37'26"
direct	11185 Jan 08 21:05	6°8'53"25		minimum elong	11191 May 07 04:03	21°8'50"55	1°36'57"
evening set	11185 Apr 09 14:11	8°8'47"38		max. Earth dist.	11191 May 08 18:55	21°8'54"18	33.62028 AU
				morning rise	11191 May 22 12:07	22°8'22"45	
conjunction	11185 Apr 24 05:55	9°8'19"28	5°03'54"	retrograde	11191 Aug 17 22:44	24°8'07"43	
minimum elong	11185 Apr 24 06:08	9°8'19"29	5°03'32"	min. Earth dist.	11191 Nov 03 16:12	22°8'53"23	31.72675 AU
max. Earth dist.	11185 Apr 25 11:07	9°8'22"08	32.42028 AU	opposition	11191 Nov 05 07:40	22°8'50"54	1°25'47"
morning rise	11185 May 08 20:40	9°8'51"13		direct	11192 Jan 25 01:34	21°8'32"57	
retrograde	11185 Aug 05 12:12	11°8'43"14		evening set	11192 Apr 22 23:01	23°8'18"17	
min. Earth dist.	11185 Oct 21 18:48	10°8'26"19	30.51856 AU				
opposition	11185 Oct 23 00:26	10°8'24"23	5°05'28"	conjunction	11192 May 08 09:13	23°8'50"03	1°03'51"
direct	11186 Jan 11 09:53	9°8'04"08		minimum elong	11192 May 08 09:16	23°8'50"03	1°03'21"
evening set	11186 Apr 11 19:00	10°8'56"55		max. Earth dist.	11192 May 10 01:39	23°8'53"33	33.83630 AU
				morning rise	11192 May 23 18:21	24°8'21"44	
conjunction	11186 Apr 26 15:17	11°8'28"55	4°29'11"	retrograde	11192 Aug 19 02:59	26°8'05"42	
minimum elong	11186 Apr 26 15:29	11°8'28"56	4°28'47"	min. Earth dist.	11192 Nov 04 21:55	24°8'51"42	31.94458 AU
max. Earth dist.	11186 Apr 27 23:14	11°8'31"49	32.60634 AU	opposition	11192 Nov 06 14:25	24°8'49"11	0°50'14"
morning rise	11186 May 11 10:16	12°8'00"50		direct	11193 Jan 26 09:25	23°8'31"35	
retrograde	11186 Aug 07 18:21	13°8'51"32		evening set	11193 Apr 25 03:02	25°8'15"51	
min. Earth dist.	11186 Oct 24 04:15	12°8'35"04	30.70614 AU				
opposition	11186 Oct 25 11:21	12°8'33"03	4°28'23"	conjunction	11193 May 10 13:47	25°8'47"24	0°30'37"
direct	11187 Jan 13 23:23	11°8'13"13		minimum elong	11193 May 10 13:49	25°8'47"24	0°30'07"
evening set	11187 Apr 14 00:00	13°8'04"37		max. Earth dist.	11193 May 12 08:03	25°8'51"02	34.05680 AU
				morning rise	11193 May 25 23:16	26°8'18"53	
conjunction	11187 Apr 28 23:55	13°8'36"43	3°54'30"	retrograde	11193 Aug 21 06:04	28°8'01"54	
minimum elong	11187 Apr 29 00:05	13°8'36"44	3°54'06"	min. Earth dist.	11193 Nov 07 02:27	26°8'48"18	32.16710 AU
max. Earth dist.	11187 Apr 30 08:40	13°8'39"40	32.79886 AU	opposition	11193 Nov 08 20:34	26°8'45"41	0°15'07"
morning rise	11187 May 13 22:51	14°8'08"44		direct	11194 Jan 28 19:25	25°8'28"26	
	11187 Jun 09 04:57	15°8'		desc. node	11194 Apr 17 16:58	26°8'53"03	
retrograde	11187 Aug 10 01:44	15°8'58"11		evening set	11194 Apr 27 06:51	27°8'11"42	
	11187 Oct 14 20:26	15°8'					
min. Earth dist.	11187 Oct 26 11:53	14°8'42"13	30.90021 AU	conjunction	11194 May 12 17:22	27°8'43"01	-0°02'17"

minimum elong	11194 May 12 17:22	27° <b>8</b> 43'01	0°02'49	morning rise	11200 Jun 07 03:26	9° <b>II</b> 14'34	
behind sun begin	11194 May 12 10:59	27° <b>8</b> 42'30		retrograde	11200 Sep 02 14:10	10° <b>II</b> 52'41	
behind sun end	11194 May 12 23:46	27° <b>8</b> 43'32		min. Earth dist.	11200 Nov 19 18:18	9° <b>II</b> 41'59	33.85143 AU
max. Earth dist.	11194 May 14 12:39	27° <b>8</b> 46'42	34.28198 AU	opposition	11200 Nov 21 21:50	9° <b>II</b> 38'55	-3°35'32
morning rise	11194 May 28 02:58	28° <b>8</b> 14'15		direct	11201 Feb 11 02:45	8° <b>II</b> 24'28	
retrograde	11194 Aug 23 09:45	29° <b>8</b> 56'24		evening set	11201 May 10 04:37	10° <b>II</b> 02'23	
min. Earth dist.	11194 Nov 09 05:44	28° <b>8</b> 43'14	32.39490 AU				
opposition	11194 Nov 11 02:05	28° <b>8</b> 40'29	-0°19'32	conjunction	11201 May 25 02:49	10° <b>II</b> 31'09	-3°38'03
direct	11195 Jan 31 02:12	27° <b>8</b> 23'37		minimum elong	11201 May 25 02:41	10° <b>II</b> 31'09	3°38'40
evening set	11195 Apr 29 10:25	29° <b>8</b> 05'57		max. Earth dist.	11201 May 27 06:31	10° <b>II</b> 35'21	35.97449 AU
				morning rise	11201 Jun 09 00:22	10° <b>II</b> 59'53	
conjunction	11195 May 14 20:35	29° <b>8</b> 36'59	-0°34'37	retrograde	11201 Sep 04 13:56	12° <b>II</b> 37'27	
minimum elong	11195 May 14 20:34	29° <b>8</b> 36'59	0°35'09	min. Earth dist.	11201 Nov 21 18:33	11° <b>II</b> 27'09	34.10276 AU
max. Earth dist.	11195 May 16 18:22	29° <b>8</b> 40'51	34.51231 AU	opposition	11201 Nov 23 23:17	11° <b>II</b> 24'01	-4°06'01
	11195 May 26 05:40	0° <b>II</b>		direct	11202 Feb 13 04:11	10° <b>II</b> 09'57	
morning rise	11195 May 30 05:32	0° <b>II</b> 07'57		evening set	11202 May 12 06:54	11° <b>II</b> 47'16	
retrograde	11195 Aug 25 09:34	1° <b>II</b> 49'17					
min. Earth dist.	11195 Nov 11 09:41	0° <b>II</b> 36'29	32.62783 AU	conjunction	11202 May 27 02:01	12° <b>II</b> 15'35	-4°06'38
opposition	11195 Nov 13 06:48	0° <b>II</b> 33'43	-0°53'39	minimum elong	11202 May 27 01:52	12° <b>II</b> 15'35	4°07'14
	11195 Dec 06 22:01	30° <b>8</b>		max. Earth dist.	11202 May 29 07:14	12° <b>II</b> 19'52	36.22497 AU
direct	11196 Feb 02 09:24	29° <b>8</b> 17'14		morning rise	11202 Jun 10 20:12	12° <b>II</b> 43'52	
	11196 Mar 28 04:36	0° <b>II</b>		retrograde	11202 Sep 06 10:09	14° <b>II</b> 20'55	
evening set	11196 Apr 30 13:56	0° <b>II</b> 58'41		min. Earth dist.	11202 Nov 23 19:33	13° <b>II</b> 10'55	34.35465 AU
				opposition	11202 Nov 26 00:11	13° <b>II</b> 07'49	-4°35'50
conjunction	11196 May 15 23:01	1° <b>II</b> 29'25	-1°06'32	direct	11203 Feb 15 08:58	11° <b>II</b> 54'06	
minimum elong	11196 May 15 22:59	1° <b>II</b> 29'25	1°07'05	evening set	11203 May 14 09:15	13° <b>II</b> 30'50	
max. Earth dist.	11196 May 17 21:11	1° <b>II</b> 33'18	34.74751 AU				
morning rise	11196 May 31 07:13	2° <b>II</b> 00'05		conjunction	11203 May 29 00:39	13° <b>II</b> 58'41	-4°34'35
retrograde	11196 Aug 26 10:43	3° <b>II</b> 40'40		minimum elong	11203 May 29 00:30	13° <b>II</b> 58'40	4°35'13
min. Earth dist.	11196 Nov 12 11:15	2° <b>II</b> 28'22	32.86564 AU	max. Earth dist.	11203 May 31 05:19	14° <b>II</b> 02'53	36.47574 AU
opposition	11196 Nov 14 10:55	2° <b>II</b> 25'27	-1°27'14	morning rise	11203 Jun 12 15:30	14° <b>II</b> 26'29	
direct	11197 Feb 03 14:11	1° <b>II</b> 09'22		retrograde	11203 Sep 08 07:48	16° <b>II</b> 03'03	
evening set	11197 May 02 17:07	2° <b>II</b> 50'01		min. Earth dist.	11203 Nov 25 18:07	14° <b>II</b> 53'25	34.60691 AU
				opposition	11203 Nov 28 00:15	14° <b>II</b> 50'14	-5°04'59
conjunction	11197 May 18 00:54	3° <b>II</b> 20'25	-1°37'56	direct	11204 Feb 17 10:52	13° <b>II</b> 36'51	
minimum elong	11197 May 18 00:50	3° <b>II</b> 20'25	1°38'30	evening set	11204 May 15 11:12	15° <b>II</b> 13'02	
max. Earth dist.	11197 May 20 01:31	3° <b>II</b> 24'29	34.98706 AU				
morning rise	11197 Jun 02 07:36	3° <b>II</b> 50'45		conjunction	11204 May 29 22:52	15° <b>II</b> 40'23	-5°01'57
retrograde	11197 Aug 28 10:42	5° <b>II</b> 30'39		minimum elong	11204 May 29 22:42	15° <b>II</b> 40'22	5°02'34
min. Earth dist.	11197 Nov 14 14:32	4° <b>II</b> 18'43	33.10767 AU	max. Earth dist.	11204 Jun 01 05:00	15° <b>II</b> 44'40	36.72671 AU
opposition	11197 Nov 16 14:37	4° <b>II</b> 15'48	-2°00'14	morning rise	11204 Jun 13 09:47	16° <b>II</b> 07'41	
direct	11198 Feb 05 17:42	3° <b>II</b> 00'08		retrograde	11204 Sep 09 03:17	17° <b>II</b> 43'48	
evening set	11198 May 04 20:14	4° <b>II</b> 40'02		min. Earth dist.	11204 Nov 26 18:21	16° <b>II</b> 34'24	34.85952 AU
				opposition	11204 Nov 29 00:02	16° <b>II</b> 31'16	-5°33'27
conjunction	11198 May 20 02:11	5° <b>II</b> 10'03	-2°08'49	direct	11205 Feb 18 12:17	15° <b>II</b> 18'11	
minimum elong	11198 May 20 02:06	5° <b>II</b> 10'03	2°09'24	evening set	11205 May 17 12:52	16° <b>II</b> 53'50	
max. Earth dist.	11198 May 22 03:18	5° <b>II</b> 14'08	35.23038 AU				
morning rise	11198 Jun 04 07:12	5° <b>II</b> 40'01		conjunction	11205 May 31 20:19	17° <b>II</b> 20'40	-5°28'40
retrograde	11198 Aug 30 11:55	7° <b>II</b> 19'17		minimum elong	11205 May 31 20:08	17° <b>II</b> 20'39	5°29'19
min. Earth dist.	11198 Nov 16 15:21	6° <b>II</b> 07'50	33.35318 AU	max. Earth dist.	11205 Jun 03 02:26	17° <b>II</b> 24'56	36.97815 AU
opposition	11198 Nov 18 17:33	6° <b>II</b> 04'48	-2°32'38	morning rise	11205 Jun 15 03:09	17° <b>II</b> 47'27	
direct	11199 Feb 07 21:05	4° <b>II</b> 49'33		retrograde	11205 Sep 10 23:40	19° <b>II</b> 23'08	
evening set	11199 May 06 23:05	6° <b>II</b> 28'45		min. Earth dist.	11205 Nov 28 15:48	18° <b>II</b> 14'05	35.11286 AU
				opposition	11205 Nov 30 23:08	18° <b>II</b> 10'52	-6°01'15
conjunction	11199 May 22 02:50	6° <b>II</b> 58'23	-2°39'08	direct	11206 Feb 20 12:14	16° <b>II</b> 58'06	
minimum elong	11199 May 22 02:45	6° <b>II</b> 58'22	2°39'44	evening set	11206 May 19 14:17	18° <b>II</b> 33'15	
max. Earth dist.	11199 May 24 05:26	7° <b>II</b> 02'32	35.47652 AU				
morning rise	11199 Jun 06 05:45	7° <b>II</b> 27'58		conjunction	11206 Jun 02 17:15	18° <b>II</b> 59'33	-5°54'46
retrograde	11199 Sep 01 13:34	9° <b>II</b> 06'38		minimum elong	11206 Jun 02 17:04	18° <b>II</b> 59'32	5°55'24
min. Earth dist.	11199 Nov 18 17:24	7° <b>II</b> 55'32	33.60142 AU	max. Earth dist.	11206 Jun 05 00:32	19° <b>II</b> 03'53	37.23046 AU
opposition	11199 Nov 20 20:04	7° <b>II</b> 52'30	-3°04'24	morning rise	11206 Jun 16 19:44	19° <b>II</b> 25'49	
direct	11200 Feb 09 23:20	6° <b>II</b> 37'40		retrograde	11206 Sep 12 21:42	21° <b>II</b> 01'06	
evening set	11200 May 08 01:52	8° <b>II</b> 16'12		min. Earth dist.	11206 Nov 30 14:02	19° <b>II</b> 52'19	35.36762 AU
				opposition	11206 Dec 02 21:49	19° <b>II</b> 49'06	-6°28'20
conjunction	11200 May 23 03:08	8° <b>II</b> 45'25	-3°08'53	direct	11207 Feb 22 09:20	18° <b>II</b> 36'38	
minimum elong	11200 May 23 03:01	8° <b>II</b> 45'24	3°09'29	evening set	11207 May 21 15:20	20° <b>II</b> 11'20	
max. Earth dist.	11200 May 25 06:36	8° <b>II</b> 49'37	35.72486 AU				



conjunction	11207 Jun 04 13:42	20°II37'06 -6°20'13	retrograde	11213 Sep 23 09:26	1°☾54'33
minimum elong	11207 Jun 04 13:31	20°II37'05 6°20'52	min. Earth dist.	11213 Dec 11 11:20	0°☾47'58 37.17344 AU
max. Earth dist.	11207 Jun 06 21:58	20°II41'28 37.48429 AU	opposition	11213 Dec 13 22:56	0°☾44'39 -9°18'22
morning rise	11207 Jun 18 11:26	21°II02'49		11214 Jan 19 00:40	30°☿II
retrograde	11207 Sep 14 17:10	22°II37'45	direct	11214 Mar 05 14:13	29°II34'31
min. Earth dist.	11207 Dec 02 11:17	21°II29'17 35.62378 AU		11214 Apr 18 19:59	0°☾
opposition	11207 Dec 04 19:52	21°II26'02 -6°54'43	evening set	11214 Jun 02 17:46	1°☾07'05
direct	11208 Feb 24 08:34	20°II13'53			
evening set	11208 May 22 16:22	21°II48'11	conjunction	11214 Jun 15 00:45	1°☾28'51 -9°00'20
			minimum elong	11214 Jun 15 00:32	1°☾28'50 9°00'59
conjunction	11208 Jun 05 09:37	22°II13'23 -6°45'01	max. Earth dist.	11214 Jun 17 12:12	1°☾33'16 39.27653 AU
minimum elong	11208 Jun 05 09:25	22°II13'22 6°45'39	morning rise	11214 Jun 27 07:21	1°☾50'36
max. Earth dist.	11208 Jun 07 17:59	22°II17'44 37.73946 AU	retrograde	11214 Sep 25 01:58	3°☾23'58
morning rise	11208 Jun 19 02:34	22°II38'34	min. Earth dist.	11214 Dec 13 06:41	2°☾17'37 37.42807 AU
retrograde	11208 Sep 15 13:44	24°II13'10	opposition	11214 Dec 15 17:56	2°☾14'20 -9°39'56
min. Earth dist.	11208 Dec 03 07:29	23°II05'03 35.88147 AU	direct	11215 Mar 07 11:03	1°☾04'31
opposition	11208 Dec 05 17:25	23°II01'44 -7°20'24	evening set	11215 Jun 04 17:28	2°☾36'53
direct	11209 Feb 25 06:32	21°II49'56			
evening set	11209 May 24 17:00	23°II23'52	conjunction	11215 Jun 16 17:53	2°☾58'03 -9°20'42
			minimum elong	11215 Jun 16 17:40	2°☾58'02 9°21'23
conjunction	11209 Jun 07 05:14	23°II48'31 -7°09'10	max. Earth dist.	11215 Jun 19 04:18	3°☾02'21 39.52797 AU
minimum elong	11209 Jun 07 05:02	23°II48'30 7°09'50	morning rise	11215 Jun 28 18:16	3°☾19'12
max. Earth dist.	11209 Jun 09 15:20	23°II52'58 37.99595 AU	retrograde	11215 Sep 26 19:18	4°☾52'25
morning rise	11209 Jun 20 16:52	24°II13'09	min. Earth dist.	11215 Dec 15 00:40	3°☾46'21 37.68036 AU
retrograde	11209 Sep 17 07:08	25°II47'28	opposition	11215 Dec 17 12:34	3°☾43'03 -10°00'53
min. Earth dist.	11209 Dec 05 04:50	24°II39'38 36.14018 AU	direct	11216 Mar 08 06:17	2°☾33'31
opposition	11209 Dec 07 14:40	24°II36'20 -7°45'22	evening set	11216 Jun 05 16:49	4°☾05'42
direct	11210 Feb 27 06:32	23°II24'52			
evening set	11210 May 26 17:29	24°II58'28	conjunction	11216 Jun 17 10:46	4°☾26'15 -9°40'29
			minimum elong	11216 Jun 17 10:34	4°☾26'14 9°41'09
conjunction	11210 Jun 09 00:08	25°II22'33 -7°32'40	max. Earth dist.	11216 Jun 19 22:08	4°☾30'36 39.77697 AU
minimum elong	11210 Jun 08 23:56	25°II22'32 7°33'19	morning rise	11216 Jun 29 04:26	4°☾46'48
max. Earth dist.	11210 Jun 11 09:51	25°II26'57 38.25317 AU	retrograde	11216 Sep 27 09:44	6°☾19'53
morning rise	11210 Jun 22 06:32	25°II46'37	min. Earth dist.	11216 Dec 15 19:55	5°☾14'00 37.93023 AU
retrograde	11210 Sep 19 02:04	27°II20'42	opposition	11216 Dec 18 06:46	5°☾10'45 -10°21'10
min. Earth dist.	11210 Dec 06 23:53	26°II13'15 36.39942 AU	direct	11217 Mar 10 03:11	4°☾01'29
opposition	11210 Dec 09 11:19	26°II09'53 -8°09'39	evening set	11217 Jun 07 16:03	5°☾33'29
direct	11211 Mar 01 03:49	24°II58'45			
evening set	11211 May 28 17:46	26°II32'03	conjunction	11217 Jun 19 03:06	5°☾53'26 -9°59'40
			minimum elong	11217 Jun 19 02:53	5°☾53'25 10°00'21
conjunction	11211 Jun 10 18:53	26°II55'34 -7°55'32	max. Earth dist.	11217 Jun 21 13:37	5°☾57'42 40.02387 AU
minimum elong	11211 Jun 10 18:41	26°II55'33 7°56'12	morning rise	11217 Jun 30 14:02	6°☾13'21
max. Earth dist.	11211 Jun 13 05:55	27°II00'02 38.51047 AU	retrograde	11217 Sep 29 00:37	7°☾46'20
morning rise	11211 Jun 23 19:39	27°II19'04	min. Earth dist.	11217 Dec 17 12:29	6°☾40'44 38.17828 AU
retrograde	11211 Sep 20 19:03	28°II52'56	opposition	11217 Dec 20 00:32	6°☾37'26 -10°40'50
min. Earth dist.	11211 Dec 08 20:48	27°II45'44 36.65851 AU	direct	11218 Mar 11 22:15	5°☾28'25
opposition	11211 Dec 11 07:32	27°II42'25 -8°33'14	evening set	11218 Jun 09 14:47	7°☾00'15
direct	11212 Mar 02 01:07	26°II31'38			
evening set	11212 May 29 18:00	28°II04'40	conjunction	11218 Jun 20 18:55	7°☾19'34 -10°18'15
			minimum elong	11218 Jun 20 18:43	7°☾19'33 10°18'55
conjunction	11212 Jun 11 13:14	28°II27'36 -8°17'45	max. Earth dist.	11218 Jun 23 06:17	7°☾23'52 40.26916 AU
minimum elong	11212 Jun 11 13:02	28°II27'35 8°18'24	morning rise	11218 Jul 01 22:59	7°☾38'53
max. Earth dist.	11212 Jun 13 23:58	28°II32'02 38.76729 AU	retrograde	11218 Sep 30 16:11	9°☾11'47
morning rise	11212 Jun 24 08:08	28°II50'32	min. Earth dist.	11218 Dec 19 06:29	8°☾06'21 38.42516 AU
	11212 Aug 09 17:25	0°☾	opposition	11218 Dec 21 17:59	8°☾03'06 -10°59'51
retrograde	11212 Sep 21 13:30	0°☾24'12	direct	11219 Mar 13 16:18	6°☾54'21
	11212 Nov 04 21:39	30°☿II	evening set	11219 Jun 11 13:29	8°☾26'02
min. Earth dist.	11212 Dec 09 15:42	29°II17'21 36.91667 AU			
opposition	11212 Dec 12 03:20	29°II14'00 -8°56'08	conjunction	11219 Jun 22 10:32	8°☾44'44 -10°36'14
direct	11213 Mar 03 20:57	28°II03'33	minimum elong	11219 Jun 22 10:19	8°☾44'43 10°36'54
evening set	11213 May 31 17:56	29°II36'21	max. Earth dist.	11219 Jun 24 22:02	8°☾49'01 40.51359 AU
			morning rise	11219 Jul 03 07:21	9°☾03'26
conjunction	11213 Jun 13 07:03	29°II58'42 -8°39'21	retrograde	11219 Oct 02 08:35	10°☾36'15
minimum elong	11213 Jun 13 06:51	29°II58'41 8°40'02	min. Earth dist.	11219 Dec 20 22:40	9°☾31'04 38.67117 AU
	11213 Jun 14 00:29	0°☾	opposition	11219 Dec 23 10:43	9°☾27'48 -11°18'14
max. Earth dist.	11213 Jun 15 18:03	0°☾03'06 39.02275 AU	direct	11220 Mar 14 08:22	8°☾19'18
morning rise	11213 Jun 25 20:02	0°☾21'02	evening set	11220 Jun 12 12:02	9°☾50'53

conjunction	11220 Jun 23 01:41	10°08'58" -10°53'37"	direct	11227 Mar 24 23:08	17°51'32"
minimum elong	11220 Jun 23 01:29	10°08'57" 10°54'17"	evening set	11227 Jun 24 21:00	19°22'57"
max. Earth dist.	11220 Jun 25 13:02	10°13'12" 40.75730 AU			
morning rise	11220 Jul 03 15:23	10°27'03"	conjunction	11227 Jul 03 03:18	19°36'35" -12°39'20"
retrograde	11220 Oct 03 01:20	11°59'48"	minimum elong	11227 Jul 03 03:08	19°36'34" 12°39'58"
min. Earth dist.	11220 Dec 21 14:41	10°54'53" 38.91670 AU	max. Earth dist.	11227 Jul 05 13:54	19°40'37" 42.42319 AU
opposition	11220 Dec 24 03:19	10°51'36" -11°35'58"	morning rise	11227 Jul 11 09:39	19°50'12"
direct	11221 Mar 15 23:05	9°43'23"	retrograde	11227 Oct 13 01:59	21°23'12"
evening set	11221 Jun 14 10:07	11°14'52"	min. Earth dist.	11228 Jan 01 02:11	20°19'48" 40.58785 AU
			opposition	11228 Jan 03 14:00	20°16'40" -13°23'24"
conjunction	11221 Jun 24 16:28	11°32'20" -11°10'24"	direct	11228 Mar 25 12:39	19°10'15"
minimum elong	11221 Jun 24 16:16	11°32'19" 11°11'05"	evening set	11228 Jun 25 18:30	20°41'42"
max. Earth dist.	11221 Jun 27 05:00	11°36'38" 41.00048 AU			
morning rise	11221 Jul 04 22:36	11°49'47"	conjunction	11228 Jul 03 16:17	20°54'40" -12°52'20"
retrograde	11221 Oct 04 14:46	13°22'32"	minimum elong	11228 Jul 03 16:08	20°54'40" 12°52'59"
min. Earth dist.	11221 Dec 23 07:21	12°17'49" 39.16138 AU	max. Earth dist.	11228 Jul 06 03:29	20°58'44" 42.64956 AU
opposition	11221 Dec 25 19:35	12°14'34" -11°53'05"	morning rise	11228 Jul 11 14:01	21°07'39"
direct	11222 Mar 17 16:59	11°06'38"	retrograde	11228 Oct 13 12:14	22°40'42"
evening set	11222 Jun 16 08:19	12°38'03"	min. Earth dist.	11229 Jan 01 17:45	21°37'25" 40.81416 AU
			opposition	11229 Jan 04 04:08	21°34'21" -13°36'33"
conjunction	11222 Jun 26 06:56	12°54'53" -11°26'36"	direct	11229 Mar 27 05:07	20°28'10"
minimum elong	11222 Jun 26 06:45	12°54'53" 11°27'17"	evening set	11229 Jun 27 15:53	21°59'39"
max. Earth dist.	11222 Jun 28 18:35	12°59'07" 41.24278 AU			
morning rise	11222 Jul 06 05:35	13°11'43"	conjunction	11229 Jul 05 04:43	22°11'57" -13°04'50"
retrograde	11222 Oct 06 04:38	14°44'27"	minimum elong	11229 Jul 05 04:34	22°11'57" 13°05'28"
min. Earth dist.	11222 Dec 24 22:03	13°40'02" 39.40507 AU	max. Earth dist.	11229 Jul 07 14:43	22°15'55" 42.87250 AU
opposition	11222 Dec 27 11:20	13°36'45" -12°09'34"	morning rise	11229 Jul 12 17:33	22°24'15"
direct	11223 Mar 19 09:31	12°29'05"	retrograde	11229 Oct 14 23:04	23°57'25"
evening set	11223 Jun 18 06:08	14°00'29"	min. Earth dist.	11230 Jan 03 06:45	22°54'20" 41.03725 AU
			opposition	11230 Jan 05 17:49	22°51'14" -13°49'11"
conjunction	11223 Jun 27 21:09	14°16'41" -11°42'14"	direct	11230 Mar 28 20:18	21°45'15"
minimum elong	11223 Jun 27 20:58	14°16'40" 11°42'54"	evening set	11230 Jun 29 13:07	23°16'48"
max. Earth dist.	11223 Jun 30 09:47	14°20'57" 41.48374 AU			
morning rise	11223 Jul 07 12:06	14°32'52"	conjunction	11230 Jul 06 16:56	23°28'25" -13°16'50"
retrograde	11223 Oct 07 17:16	16°05'39"	minimum elong	11230 Jul 06 16:48	23°28'25" 13°17'30"
min. Earth dist.	11223 Dec 26 14:42	15°01'25" 39.64711 AU	max. Earth dist.	11230 Jul 09 03:10	23°32'22" 43.09248 AU
opposition	11223 Dec 29 02:56	14°58'11" -12°25'28"	morning rise	11230 Jul 13 20:48	23°40'03"
direct	11224 Mar 20 02:33	13°50'48"	retrograde	11230 Oct 16 11:19	25°13'20"
evening set	11224 Jun 19 04:01	15°22'11"	min. Earth dist.	11231 Jan 04 21:05	24°10'21" 41.25784 AU
			opposition	11231 Jan 07 07:11	24°07'20" -14°01'17"
conjunction	11224 Jun 28 11:03	15°37'44" -11°57'18"	direct	11231 Mar 30 10:31	23°01'32"
minimum elong	11224 Jun 28 10:53	15°37'44" 11°57'58"	evening set	11231 Jul 01 10:25	24°33'11"
max. Earth dist.	11224 Jun 30 23:09	15°41'57" 41.72286 AU			
morning rise	11224 Jul 07 18:01	15°53'17"	conjunction	11231 Jul 08 04:56	24°44'07" -13°28'21"
retrograde	11224 Oct 08 06:09	17°26'07"	minimum elong	11231 Jul 08 04:48	24°44'07" 13°28'59"
min. Earth dist.	11224 Dec 27 05:13	16°22'09" 39.88690 AU	max. Earth dist.	11231 Jul 10 15:19	24°48'04" 43.31036 AU
opposition	11224 Dec 29 18:05	16°18'54" -12°40'46"	morning rise	11231 Jul 14 23:21	24°55'04"
direct	11225 Mar 21 19:15	15°11'47"	retrograde	11231 Oct 17 23:12	26°28'29"
evening set	11225 Jun 21 01:43	16°43'10"	min. Earth dist.	11232 Jan 06 09:52	25°25'42" 41.47629 AU
			opposition	11232 Jan 08 20:11	25°22'41" -14°12'52"
conjunction	11225 Jun 30 00:41	16°58'05" -12°11'50"	direct	11232 Mar 31 00:01	24°17'05"
minimum elong	11225 Jun 30 00:30	16°58'04" 12°12'29"	evening set	11232 Jul 02 07:35	25°48'52"
max. Earth dist.	11225 Jul 02 12:31	17°02'15" 41.95945 AU			
morning rise	11225 Jul 08 23:43	17°13'00"	conjunction	11232 Jul 08 16:27	25°59'07" -13°39'22"
retrograde	11225 Oct 09 22:04	18°45'52"	minimum elong	11232 Jul 08 16:19	25°59'06" 13°40'00"
min. Earth dist.	11225 Dec 28 20:51	17°42'06" 40.12406 AU	max. Earth dist.	11232 Jul 11 02:03	26°02'59" 43.52631 AU
opposition	11225 Dec 31 09:09	17°38'54" -12°55'31"	morning rise	11232 Jul 15 01:21	26°09'22"
direct	11226 Mar 23 08:54	16°32'02"	retrograde	11232 Oct 18 13:24	27°42'58"
evening set	11226 Jun 22 23:19	18°03'25"	min. Earth dist.	11233 Jan 06 22:19	26°40'23" 41.69310 AU
			opposition	11233 Jan 09 08:59	26°37'21" -14°23'56"
conjunction	11226 Jul 01 14:08	18°17'42" -12°25'50"	direct	11233 Apr 01 09:51	25°32'00"
minimum elong	11226 Jul 01 13:58	18°17'41" 12°26'30"	evening set	11233 Jul 04 04:54	27°03'56"
max. Earth dist.	11226 Jul 04 02:11	18°21'52" 42.19312 AU			
morning rise	11226 Jul 10 04:49	18°31'59"	conjunction	11233 Jul 10 03:56	27°13'29" -13°49'52"
retrograde	11226 Oct 11 11:56	20°04'54"	minimum elong	11233 Jul 10 03:49	27°13'29" 13°50'29"
min. Earth dist.	11226 Dec 30 12:15	19°01'18" 40.35777 AU	max. Earth dist.	11233 Jul 12 14:29	27°17'24" 43.74071 AU
opposition	11227 Jan 01 23:48	18°58'10" -13°09'43"	morning rise	11233 Jul 16 02:54	27°23'02"

retrograde	11233 Oct 20 00:28	28° $\Omega$ 56'51		opposition	11240 Jan 18 19:33	5° $\Omega$ 05'53	-15°27'44
min. Earth dist.	11234 Jan 08 11:47	27° $\Omega$ 54'25	41.90812 AU	direct	11240 Apr 09 19:32	4° $\Omega$ 02'06	
opposition	11234 Jan 10 21:33	27° $\Omega$ 51'27	-14°34'28	evening set	11240 Jul 16 02:14	5° $\Omega$ 36'54	
direct	11234 Apr 02 22:36	26° $\Omega$ 46'19					
evening set	11234 Jul 06 02:17	28° $\Omega$ 18'28		conjunction	11240 Jul 18 06:04	5° $\Omega$ 40'15	-14°50'40
				minimum elong	11240 Jul 18 05:59	5° $\Omega$ 40'15	14°51'15
conjunction	11234 Jul 11 14:59	28° $\Omega$ 27'18	-13°59'54	morning rise	11240 Jul 20 09:48	5° $\Omega$ 43'36	
minimum elong	11234 Jul 11 14:52	28° $\Omega$ 27'17	14°00'31	max. Earth dist.	11240 Jul 20 13:00	5° $\Omega$ 43'49	45.16531 AU
max. Earth dist.	11234 Jul 14 00:30	28° $\Omega$ 31'08	43.95336 AU	retrograde	11240 Oct 28 01:55	7° $\Omega$ 20'31	
morning rise	11234 Jul 17 03:39	28° $\Omega$ 36'07		min. Earth dist.	11241 Jan 17 00:44	6° $\Omega$ 19'15	43.32956 AU
	11234 Sep 22 02:44	0° $\Omega$		opposition	11241 Jan 19 06:35	6° $\Omega$ 16'33	-15°35'07
retrograde	11234 Oct 21 09:55	0° $\Omega$ 10'11		direct	11241 Apr 11 08:12	5° $\Omega$ 12'56	
	11234 Nov 20 06:08	30° $\mathcal{R}\Omega$		evening set	11241 Jul 18 17:03	6° $\Omega$ 49'08	
min. Earth dist.	11235 Jan 09 23:07	29° $\Omega$ 08'01	42.12118 AU				
opposition	11235 Jan 12 09:45	29° $\Omega$ 05'01	-14°44'30	conjunction	11241 Jul 19 15:55	6° $\Omega$ 50'36	-14°57'43
direct	11235 Apr 04 11:35	28° $\Omega$ 00'07		minimum elong	11241 Jul 19 15:52	6° $\Omega$ 50'36	14°58'18
evening set	11235 Jul 07 23:56	29° $\Omega$ 32'32		morning rise	11241 Jul 20 14:45	6° $\Omega$ 52'05	
				max. Earth dist.	11241 Jul 21 21:55	6° $\Omega$ 54'06	45.35269 AU
conjunction	11235 Jul 13 01:58	29° $\Omega$ 40'37	-14°09'27	retrograde	11241 Oct 29 09:10	8° $\Omega$ 30'26	
minimum elong	11235 Jul 13 01:53	29° $\Omega$ 40'36	14°10'03	min. Earth dist.	11242 Jan 18 11:12	7° $\Omega$ 29'18	43.51590 AU
max. Earth dist.	11235 Jul 15 11:55	29° $\Omega$ 44'27	44.16377 AU	opposition	11242 Jan 20 17:12	7° $\Omega$ 26'35	-15°42'05
morning rise	11235 Jul 18 03:59	29° $\Omega$ 48'41		direct	11242 Apr 12 22:05	6° $\Omega$ 23'08	
	11235 Jul 25 08:28	0° $\Omega$					
retrograde	11235 Oct 22 19:42	1° $\Omega$ 23'03		conjunction	11242 Jul 21 01:22	8° $\Omega$ 00'20	-15°04'22
min. Earth dist.	11236 Jan 11 12:20	0° $\Omega$ 21'02	42.33179 AU	minimum elong	11242 Jul 21 01:19	8° $\Omega$ 00'19	15°04'55
opposition	11236 Jan 13 21:42	0° $\Omega$ 18'06	-14°54'03	max. Earth dist.	11242 Jul 23 06:33	8° $\Omega$ 03'45	45.53602 AU
	11236 Jan 28 19:56	30° $\mathcal{R}\Omega$		retrograde	11242 Oct 30 20:36	9° $\Omega$ 39'43	
direct	11236 Apr 05 01:38	29° $\Omega$ 13'27		min. Earth dist.	11243 Jan 19 22:33	8° $\Omega$ 38'40	43.69866 AU
	11236 Jun 07 21:28	0° $\Omega$		opposition	11243 Jan 22 03:42	8° $\Omega$ 36'00	-15°48'39
evening set	11236 Jul 08 22:06	0° $\Omega$ 46'10		direct	11243 Apr 14 08:46	7° $\Omega$ 32'42	
conjunction	11236 Jul 13 12:46	0° $\Omega$ 53'28	-14°18'32	conjunction	11243 Jul 22 10:48	9° $\Omega$ 09'25	-15°10'37
minimum elong	11236 Jul 13 12:40	0° $\Omega$ 53'27	14°19'09	minimum elong	11243 Jul 22 10:46	9° $\Omega$ 09'25	15°11'11
max. Earth dist.	11236 Jul 15 22:13	0° $\Omega$ 57'15	44.37165 AU	max. Earth dist.	11243 Jul 24 16:18	9° $\Omega$ 12'51	45.71613 AU
morning rise	11236 Jul 18 03:21	1° $\Omega$ 00'45		retrograde	11243 Nov 01 06:00	10° $\Omega$ 48'23	
retrograde	11236 Oct 23 06:48	2° $\Omega$ 35'28		min. Earth dist.	11244 Jan 21 09:20	9° $\Omega$ 47'25	43.87824 AU
min. Earth dist.	11237 Jan 11 24:00	1° $\Omega$ 33'40	42.53942 AU	opposition	11244 Jan 23 13:45	9° $\Omega$ 44'48	-15°54'48
opposition	11237 Jan 14 09:27	1° $\Omega$ 30'44	-15°03'08	direct	11244 Apr 14 19:13	8° $\Omega$ 41'39	
direct	11237 Apr 06 14:15	0° $\Omega$ 26'20					
evening set	11237 Jul 10 20:40	1° $\Omega$ 59'24		conjunction	11244 Jul 22 19:52	10° $\Omega$ 17'56	-15°16'28
				minimum elong	11244 Jul 22 19:50	10° $\Omega$ 17'55	15°17'01
conjunction	11237 Jul 14 23:12	2° $\Omega$ 05'52	-14°27'11	max. Earth dist.	11244 Jul 25 00:03	10° $\Omega$ 21'15	45.89347 AU
minimum elong	11237 Jul 14 23:08	2° $\Omega$ 05'51	14°27'47	retrograde	11244 Nov 01 16:29	11° $\Omega$ 56'28	
max. Earth dist.	11237 Jul 17 07:46	2° $\Omega$ 09'35	44.57624 AU	min. Earth dist.	11245 Jan 21 18:52	10° $\Omega$ 55'40	44.05531 AU
morning rise	11237 Jul 19 01:44	2° $\Omega$ 12'20		opposition	11245 Jan 23 23:46	10° $\Omega$ 53'02	-16°00'32
retrograde	11237 Oct 24 19:52	3° $\Omega$ 47'27		direct	11245 Apr 16 02:58	9° $\Omega$ 50'02	
min. Earth dist.	11238 Jan 13 12:18	2° $\Omega$ 45'49	42.74361 AU				
opposition	11238 Jan 15 21:09	2° $\Omega$ 42'56	-15°11'45	conjunction	11245 Jul 24 04:44	11° $\Omega$ 25'54	-15°21'55
direct	11238 Apr 07 23:59	1° $\Omega$ 38'45		minimum elong	11245 Jul 24 04:42	11° $\Omega$ 25'54	15°22'29
evening set	11238 Jul 12 20:26	3° $\Omega$ 12'15		max. Earth dist.	11245 Jul 26 09:37	11° $\Omega$ 29'15	46.06833 AU
				retrograde	11245 Nov 02 23:43	13° $\Omega$ 04'02	
conjunction	11238 Jul 16 09:45	3° $\Omega$ 17'49	-14°35'25	min. Earth dist.	11246 Jan 23 06:04	12° $\Omega$ 03'19	44.22982 AU
minimum elong	11238 Jul 16 09:40	3° $\Omega$ 17'49	14°36'01	opposition	11246 Jan 25 09:39	12° $\Omega$ 00'45	-16°05'51
morning rise	11238 Jul 19 22:58	3° $\Omega$ 23'23		direct	11246 Apr 17 13:19	10° $\Omega$ 57'55	
max. Earth dist.	11238 Jul 18 18:36	3° $\Omega$ 21'32	44.77709 AU				
retrograde	11238 Oct 26 07:00	4° $\Omega$ 58'58		conjunction	11246 Jul 25 13:31	12° $\Omega$ 33'23	-15°26'59
min. Earth dist.	11239 Jan 15 00:50	3° $\Omega$ 57'28	42.94355 AU	minimum elong	11246 Jul 25 13:31	12° $\Omega$ 33'23	15°27'31
opposition	11239 Jan 17 08:24	3° $\Omega$ 54'40	-15°19'57	max. Earth dist.	11246 Jul 27 17:27	12° $\Omega$ 36'40	46.24078 AU
direct	11239 Apr 09 10:11	2° $\Omega$ 50'42		retrograde	11246 Nov 04 06:35	14° $\Omega$ 11'08	
evening set	11239 Jul 14 21:50	4° $\Omega$ 24'45		min. Earth dist.	11247 Jan 24 14:55	13° $\Omega$ 10'36	44.40167 AU
				opposition	11247 Jan 26 19:02	13° $\Omega$ 08'01	-16°10'46
conjunction	11239 Jul 17 20:00	4° $\Omega$ 29'19	-14°43'14	direct	11247 Apr 18 23:25	12° $\Omega$ 05'21	
minimum elong	11239 Jul 17 19:57	4° $\Omega$ 29'18	14°43'50				
morning rise	11239 Jul 20 18:09	4° $\Omega$ 33'52		conjunction	11247 Jul 26 22:06	13° $\Omega$ 40'25	-15°31'39
max. Earth dist.	11239 Jul 20 02:58	4° $\Omega$ 32'53	44.97356 AU	minimum elong	11247 Jul 26 22:05	13° $\Omega$ 40'25	15°32'12
retrograde	11239 Oct 27 18:18	6° $\Omega$ 10'01		max. Earth dist.	11247 Jul 29 01:31	13° $\Omega$ 43'40	46.41039 AU
min. Earth dist.	11240 Jan 16 11:53	5° $\Omega$ 08'41	43.13893 AU		11247 Sep 26 15:34	15° $\Omega$	

retrograde	11247 Nov 05 15:58	15°♏17'50		max. Earth dist.	11255 Aug 06 11:58	22°♏26'41	47.62090 AU
	11247 Dec 16 16:12	15°♏♏		retrograde	11255 Nov 14 10:30	23°♏58'42	
min. Earth dist.	11248 Jan 26 01:35	14°♏17'24	44.57061 AU	min. Earth dist.	11256 Feb 04 05:27	22°♏58'59	45.76817 AU
opposition	11248 Jan 28 04:31	14°♏14'53	-16°15'17	opposition	11256 Feb 06 01:35	22°♏56'51	-16°39'00
direct	11248 Apr 19 09:48	13°♏12'24		direct	11256 Apr 28 05:22	21°♏55'33	
conjunction	11248 Jul 27 06:32	14°♏47'06	-15°35'57	conjunction	11256 Aug 04 21:12	23°♏27'31	-15°58'28
minimum elong	11248 Jul 27 06:33	14°♏47'06	15°36'28	minimum elong	11256 Aug 04 21:16	23°♏27'31	15°58'56
max. Earth dist.	11248 Jul 29 10:09	14°♏50'20	46.57696 AU	max. Earth dist.	11256 Aug 06 17:53	23°♏30'14	47.75367 AU
	11248 Aug 04 20:37	15°♏		retrograde	11256 Nov 14 16:28	25°♏02'01	
retrograde	11248 Nov 06 01:00	16°♏24'11		min. Earth dist.	11257 Feb 04 12:44	24°♏02'26	45.89979 AU
min. Earth dist.	11249 Jan 26 11:19	15°♏23'52	44.73603 AU	opposition	11257 Feb 06 09:24	24°♏00'16	-16°40'28
opposition	11249 Jan 28 13:44	15°♏21'23	-16°19'25	direct	11257 Apr 29 11:49	22°♏59'05	
	11249 Feb 16 00:43	15°♏♏					
direct	11249 Apr 20 19:36	14°♏19'06		conjunction	11257 Aug 06 04:17	24°♏30'45	-15°59'50
	11249 Jun 20 18:49	15°♏		minimum elong	11257 Aug 06 04:22	24°♏30'45	16°00'16
				max. Earth dist.	11257 Aug 08 00:43	24°♏33'27	47.88364 AU
conjunction	11249 Jul 28 14:48	15°♏53'26	-15°39'53	retrograde	11257 Nov 15 22:15	26°♏04'59	
minimum elong	11249 Jul 28 14:48	15°♏53'26	15°40'25	min. Earth dist.	11258 Feb 05 21:51	25°♏05'26	46.02876 AU
max. Earth dist.	11249 Jul 30 16:44	15°♏56'33	46.73990 AU	opposition	11258 Feb 07 17:09	25°♏03'21	-16°41'36
retrograde	11249 Nov 07 12:27	17°♏30'11		direct	11258 Apr 30 21:28	24°♏02'18	
min. Earth dist.	11250 Jan 27 20:39	16°♏30'01	44.89768 AU				
opposition	11250 Jan 29 22:49	16°♏27'34	-16°23'12	conjunction	11258 Aug 07 11:19	25°♏33'39	-16°00'52
direct	11250 Apr 22 01:17	15°♏25'27		minimum elong	11258 Aug 07 11:23	25°♏33'40	16°01'19
				max. Earth dist.	11258 Aug 09 07:46	25°♏36'22	48.01110 AU
conjunction	11250 Jul 29 23:05	16°♏59'27	-15°43'29	retrograde	11258 Nov 17 04:11	27°♏07'38	
minimum elong	11250 Jul 29 23:07	16°♏59'27	15°44'00	min. Earth dist.	11259 Feb 07 05:21	26°♏08'12	46.15490 AU
max. Earth dist.	11250 Aug 01 01:10	17°♏02'34	46.89865 AU	opposition	11259 Feb 09 00:38	26°♏06'07	-16°42'24
retrograde	11250 Nov 08 20:24	18°♏35'53		direct	11259 May 02 07:46	25°♏05'12	
min. Earth dist.	11251 Jan 29 07:32	17°♏35'47	45.05469 AU				
opposition	11251 Jan 31 07:46	17°♏33'25	-16°26'38	conjunction	11259 Aug 08 18:05	26°♏36'17	-16°01'35
direct	11251 Apr 23 10:10	16°♏31'29		minimum elong	11259 Aug 08 18:10	26°♏36'17	16°01'59
				max. Earth dist.	11259 Aug 10 13:02	26°♏38'53	48.13570 AU
conjunction	11251 Jul 31 07:14	18°♏05'08	-15°46'46	retrograde	11259 Nov 18 14:51	28°♏09'59	
minimum elong	11251 Jul 31 07:15	18°♏05'08	15°47'16	min. Earth dist.	11260 Feb 08 13:07	27°♏10'40	46.27817 AU
max. Earth dist.	11251 Aug 02 07:41	18°♏08'09	47.05266 AU	opposition	11260 Feb 10 07:59	27°♏08'36	-16°42'51
retrograde	11251 Nov 10 01:59	19°♏41'14		direct	11260 May 02 13:08	26°♏07'49	
min. Earth dist.	11252 Jan 30 16:07	18°♏41'17	45.20666 AU				
opposition	11252 Feb 01 16:22	18°♏38'56	-16°29'45	conjunction	11260 Aug 09 00:54	27°♏38'38	-16°01'58
direct	11252 Apr 23 20:09	17°♏37'08		minimum elong	11260 Aug 09 01:00	27°♏38'38	16°02'24
				max. Earth dist.	11260 Aug 10 20:19	27°♏41'15	48.25727 AU
conjunction	11252 Jul 31 15:14	19°♏10'27	-15°49'44	retrograde	11260 Nov 18 23:10	29°♏12'06	
minimum elong	11252 Jul 31 15:18	19°♏10'28	15°50'14	min. Earth dist.	11261 Feb 08 21:54	28°♏12'50	46.39806 AU
max. Earth dist.	11252 Aug 02 14:45	19°♏13'24	47.20151 AU	opposition	11261 Feb 10 15:22	28°♏10'50	-16°43'00
retrograde	11252 Nov 10 09:42	20°♏46'15		direct	11261 May 03 19:43	27°♏10'12	
min. Earth dist.	11253 Jan 31 02:32	19°♏46'20	45.35356 AU				
opposition	11253 Feb 02 01:06	19°♏44'03	-16°32'33	conjunction	11261 Aug 10 07:28	28°♏40'45	-16°02'04
direct	11253 Apr 25 06:32	18°♏42'24		minimum elong	11261 Aug 10 07:35	28°♏40'46	16°02'28
				max. Earth dist.	11261 Aug 12 01:28	28°♏43'17	48.37538 AU
conjunction	11253 Aug 01 23:01	20°♏15'22	-15°52'24		11261 Oct 15 00:15	0°♏	
minimum elong	11253 Aug 01 23:02	20°♏15'22	15°52'53	retrograde	11261 Nov 20 05:00	0°♏13'58	
max. Earth dist.	11253 Aug 03 22:07	20°♏18'17	47.34554 AU		11261 Dec 26 22:09	30°♏♏	
retrograde	11253 Nov 11 17:25	21°♏50'50		min. Earth dist.	11262 Feb 10 04:55	29°♏14'50	46.51417 AU
min. Earth dist.	11254 Feb 01 11:31	20°♏51'00	45.49560 AU	opposition	11262 Feb 11 22:32	29°♏12'50	-16°42'51
opposition	11254 Feb 03 09:28	20°♏48'46	-16°35'02	direct	11262 May 05 00:57	28°♏12'20	
direct	11254 Apr 26 16:23	19°♏47'14					
				conjunction	11262 Aug 11 14:09	29°♏42'39	-16°01'53
conjunction	11254 Aug 03 06:35	21°♏19'51	-15°54'45	minimum elong	11262 Aug 11 14:14	29°♏42'39	16°02'17
minimum elong	11254 Aug 03 06:38	21°♏19'51	15°55'14	max. Earth dist.	11262 Aug 13 07:27	29°♏45'07	48.48926 AU
max. Earth dist.	11254 Aug 05 04:05	21°♏22'38	47.48508 AU		11262 Aug 23 17:07	0°♏	
retrograde	11254 Nov 13 03:28	22°♏54'59		retrograde	11262 Nov 21 09:47	1°♏15'37	
min. Earth dist.	11255 Feb 02 20:07	21°♏55'13	45.63365 AU	min. Earth dist.	11263 Feb 11 13:58	0°♏16'30	46.62578 AU
opposition	11255 Feb 04 17:32	21°♏53'01	-16°37'11	opposition	11263 Feb 13 05:35	0°♏14'36	-16°42'24
direct	11255 Apr 27 22:33	20°♏51'36			11263 Feb 26 02:13	30°♏♏	
				direct	11263 May 06 09:01	29°♏14'13	
conjunction	11255 Aug 04 14:05	22°♏23'53	-15°56'46		11263 Jul 11 15:49	0°♏	
minimum elong	11255 Aug 04 14:08	22°♏23'53	15°57'14				

conjunction	11263 Aug 12 20:51	0° $\mathring{M}$ 44'17	-16°01'25	retrograde	11271 Nov 30 19:31	10° $\mathring{M}$ 17'12	
minimum elong	11263 Aug 12 20:59	0° $\mathring{M}$ 44'17	16°01'48	min. Earth dist.	11272 Feb 21 06:27	9° $\mathring{M}$ 18'31	47.43208 AU
max. Earth dist.	11263 Aug 14 13:25	0° $\mathring{M}$ 46'43	48.59849 AU	opposition	11272 Feb 22 15:47	9° $\mathring{M}$ 16'57	-16°26'13
retrograde	11263 Nov 22 14:43	2° $\mathring{M}$ 17'01		direct	11272 May 14 18:18	8° $\mathring{M}$ 17'24	
min. Earth dist.	11264 Feb 12 21:23	1° $\mathring{M}$ 17'58	46.73228 AU				
opposition	11264 Feb 14 12:32	1° $\mathring{M}$ 16'06	-16°41'42	conjunction	11272 Aug 21 02:46	9° $\mathring{M}$ 45'27	-15°45'20
direct	11264 May 06 18:13	0° $\mathring{M}$ 15'50		minimum elong	11272 Aug 21 02:57	9° $\mathring{M}$ 45'28	15°45'37
				max. Earth dist.	11272 Aug 22 12:10	9° $\mathring{M}$ 47'24	49.39021 AU
conjunction	11264 Aug 13 03:12	1° $\mathring{M}$ 45'37	-16°00'42	retrograde	11272 Nov 30 23:29	11° $\mathring{M}$ 16'19	
minimum elong	11264 Aug 13 03:18	1° $\mathring{M}$ 45'38	16°01'05	opposition	11273 Feb 22 21:54	10° $\mathring{M}$ 16'10	-16°23'01
max. Earth dist.	11264 Aug 14 17:50	1° $\mathring{M}$ 47'56	48.70248 AU	min. Earth dist.	11273 Feb 21 14:15	10° $\mathring{M}$ 17'40	47.50457 AU
retrograde	11264 Nov 22 23:07	3° $\mathring{M}$ 18'08		direct	11273 May 16 00:27	9° $\mathring{M}$ 16'44	
min. Earth dist.	11265 Feb 13 05:30	2° $\mathring{M}$ 19'07	46.83362 AU				
opposition	11265 Feb 14 19:32	2° $\mathring{M}$ 17'18	-16°40'44	conjunction	11273 Aug 22 08:28	10° $\mathring{M}$ 44'38	-15°42'11
direct	11265 May 08 00:58	1° $\mathring{M}$ 17'07		minimum elong	11273 Aug 22 08:38	10° $\mathring{M}$ 44'39	15°42'29
				max. Earth dist.	11273 Aug 23 17:20	10° $\mathring{M}$ 46'34	49.46137 AU
conjunction	11265 Aug 14 09:40	2° $\mathring{M}$ 46'39	-15°59'44	retrograde	11273 Dec 02 03:00	12° $\mathring{M}$ 15'22	
minimum elong	11265 Aug 14 09:49	2° $\mathring{M}$ 46'39	16°00'07	min. Earth dist.	11274 Feb 22 20:16	11° $\mathring{M}$ 16'48	47.57307 AU
max. Earth dist.	11265 Aug 16 00:20	2° $\mathring{M}$ 48'57	48.80139 AU	opposition	11274 Feb 24 03:41	11° $\mathring{M}$ 15'20	-16°19'33
retrograde	11265 Nov 24 06:19	4° $\mathring{M}$ 18'54		direct	11274 May 17 07:57	10° $\mathring{M}$ 15'59	
min. Earth dist.	11266 Feb 14 13:42	3° $\mathring{M}$ 19'53	46.92990 AU				
opposition	11266 Feb 16 02:15	3° $\mathring{M}$ 18'09	-16°39'30	conjunction	11274 Aug 23 14:02	11° $\mathring{M}$ 43'45	-15°38'48
direct	11266 May 09 07:31	2° $\mathring{M}$ 18'02		minimum elong	11274 Aug 23 14:13	11° $\mathring{M}$ 43'46	15°39'04
				max. Earth dist.	11274 Aug 24 21:07	11° $\mathring{M}$ 45'34	49.52817 AU
conjunction	11266 Aug 15 15:51	3° $\mathring{M}$ 47'18	-15°58'30	retrograde	11274 Dec 03 10:38	13° $\mathring{M}$ 14'22	
minimum elong	11266 Aug 15 15:58	3° $\mathring{M}$ 47'19	15°58'51	min. Earth dist.	11275 Feb 24 03:36	12° $\mathring{M}$ 15'50	47.63698 AU
max. Earth dist.	11266 Aug 17 04:43	3° $\mathring{M}$ 49'29	48.89570 AU	opposition	11275 Feb 25 09:35	12° $\mathring{M}$ 14'25	-16°15'51
retrograde	11266 Nov 25 13:19	5° $\mathring{M}$ 19'18		direct	11275 May 18 14:03	11° $\mathring{M}$ 15'11	
min. Earth dist.	11267 Feb 15 20:11	4° $\mathring{M}$ 20'21	47.02185 AU				
opposition	11267 Feb 17 08:46	4° $\mathring{M}$ 18'37	-16°38'00	conjunction	11275 Aug 24 19:43	12° $\mathring{M}$ 42'48	-15°35'11
direct	11267 May 10 11:41	3° $\mathring{M}$ 18'34		minimum elong	11275 Aug 24 19:53	12° $\mathring{M}$ 42'49	15°35'26
				max. Earth dist.	11275 Aug 26 02:35	12° $\mathring{M}$ 44'36	49.59000 AU
conjunction	11267 Aug 16 21:55	4° $\mathring{M}$ 47'37	-15°57'00	retrograde	11275 Dec 04 17:48	14° $\mathring{M}$ 13'17	
minimum elong	11267 Aug 16 22:03	4° $\mathring{M}$ 47'37	15°57'21	min. Earth dist.	11276 Feb 25 10:49	13° $\mathring{M}$ 14'45	47.69549 AU
max. Earth dist.	11267 Aug 18 10:24	4° $\mathring{M}$ 49'46	48.98584 AU	opposition	11276 Feb 26 15:22	13° $\mathring{M}$ 13'25	-16°11'55
retrograde	11267 Nov 26 17:47	6° $\mathring{M}$ 19'22		direct	11276 May 18 20:12	12° $\mathring{M}$ 14'16	
min. Earth dist.	11268 Feb 17 04:25	5° $\mathring{M}$ 20'24	47.11004 AU				
opposition	11268 Feb 18 15:12	5° $\mathring{M}$ 18'45	-16°36'13	conjunction	11276 Aug 25 01:17	13° $\mathring{M}$ 41'44	-15°31'20
direct	11268 May 10 18:37	4° $\mathring{M}$ 18'47		minimum elong	11276 Aug 25 01:29	13° $\mathring{M}$ 41'44	15°31'35
				max. Earth dist.	11276 Aug 26 06:02	13° $\mathring{M}$ 43'24	49.64649 AU
conjunction	11268 Aug 17 03:55	5° $\mathring{M}$ 47'35	-15°55'14	retrograde	11276 Dec 05 02:01	15° $\mathring{M}$ 12'02	
minimum elong	11268 Aug 17 04:03	5° $\mathring{M}$ 47'36	15°55'33	opposition	11277 Feb 26 21:07	14° $\mathring{M}$ 12'15	-16°07'46
max. Earth dist.	11268 Aug 18 16:07	5° $\mathring{M}$ 49'44	49.07272 AU	min. Earth dist.	11277 Feb 25 16:57	14° $\mathring{M}$ 13'34	47.74858 AU
retrograde	11268 Nov 26 21:17	7° $\mathring{M}$ 19'08		direct	11277 May 19 22:06	13° $\mathring{M}$ 13'09	
min. Earth dist.	11269 Feb 17 10:29	6° $\mathring{M}$ 20'15	47.19500 AU				
opposition	11269 Feb 18 21:29	6° $\mathring{M}$ 18'36	-16°34'09	conjunction	11277 Aug 26 06:44	14° $\mathring{M}$ 40'28	-15°27'17
direct	11269 May 12 03:40	5° $\mathring{M}$ 18'43		minimum elong	11277 Aug 26 06:54	14° $\mathring{M}$ 40'28	15°27'31
				max. Earth dist.	11277 Aug 27 10:41	14° $\mathring{M}$ 42'05	49.69747 AU
conjunction	11269 Aug 18 09:39	6° $\mathring{M}$ 47'18	-15°53'10	retrograde	11277 Dec 06 07:03	16° $\mathring{M}$ 10'37	
minimum elong	11269 Aug 18 09:48	6° $\mathring{M}$ 47'19	15°53'30	min. Earth dist.	11278 Feb 27 00:53	15° $\mathring{M}$ 12'04	47.79630 AU
max. Earth dist.	11269 Aug 19 20:25	6° $\mathring{M}$ 49'21	49.15653 AU	opposition	11278 Feb 28 02:52	15° $\mathring{M}$ 10'52	-16°03'24
retrograde	11269 Nov 28 05:39	8° $\mathring{M}$ 18'40		direct	11278 May 21 02:30	14° $\mathring{M}$ 11'48	
min. Earth dist.	11270 Feb 18 17:33	7° $\mathring{M}$ 19'50	47.27708 AU				
opposition	11270 Feb 20 03:46	7° $\mathring{M}$ 18'13	-16°31'47	conjunction	11278 Aug 27 12:13	15° $\mathring{M}$ 38'57	-15°23'01
direct	11270 May 13 09:38	6° $\mathring{M}$ 18'26		minimum elong	11278 Aug 27 12:25	15° $\mathring{M}$ 38'57	15°23'15
				max. Earth dist.	11278 Aug 28 15:24	15° $\mathring{M}$ 40'31	49.74349 AU
conjunction	11270 Aug 19 15:33	7° $\mathring{M}$ 46'49	-15°50'50	retrograde	11278 Dec 07 08:19	17° $\mathring{M}$ 08'56	
minimum elong	11270 Aug 19 15:42	7° $\mathring{M}$ 46'50	15°51'08	min. Earth dist.	11279 Feb 28 06:20	16° $\mathring{M}$ 10'25	47.83924 AU
max. Earth dist.	11270 Aug 21 02:45	7° $\mathring{M}$ 48'54	49.23748 AU	opposition	11279 Mar 01 08:10	16° $\mathring{M}$ 09'12	-15°58'48
retrograde	11270 Nov 29 12:59	9° $\mathring{M}$ 18'00		direct	11279 May 22 11:08	15° $\mathring{M}$ 10'11	
min. Earth dist.	11271 Feb 20 00:37	8° $\mathring{M}$ 19'13	47.35609 AU				
opposition	11271 Feb 21 09:46	8° $\mathring{M}$ 17'39	-16°29'08	conjunction	11279 Aug 28 17:26	16° $\mathring{M}$ 37'09	-15°18'30
direct	11271 May 14 15:14	7° $\mathring{M}$ 17'59		minimum elong	11279 Aug 28 17:37	16° $\mathring{M}$ 37'10	15°18'43
				max. Earth dist.	11279 Aug 29 18:51	16° $\mathring{M}$ 38'38	49.78503 AU
conjunction	11271 Aug 20 21:15	8° $\mathring{M}$ 46'11	-15°48'13	retrograde	11279 Dec 08 13:40	18° $\mathring{M}$ 07'00	
minimum elong	11271 Aug 20 21:24	8° $\mathring{M}$ 46'12	15°48'32	opposition	11280 Mar 01 13:41	17° $\mathring{M}$ 07'18	-15°53'57
max. Earth dist.	11271 Aug 22 06:59	8° $\mathring{M}$ 48'10	49.31550 AU	min. Earth dist.	11280 Feb 29 13:04	17° $\mathring{M}$ 08'27	47.87818 AU

direct	11280 May 22 18:23	16° $\mathring{M}$ 08'18	conjunction	11287 Sep 05 09:55	24° $\mathring{M}$ 16'48 -14°33'44
			minimum elong	11287 Sep 05 10:08	24° $\mathring{M}$ 16'49 14°33'52
conjunction	11280 Aug 28 22:35	17° $\mathring{M}$ 35'07 -15°13'46	max. Earth dist.	11287 Sep 06 05:18	24° $\mathring{M}$ 17'54 49.99483 AU
minimum elong	11280 Aug 28 22:47	17° $\mathring{M}$ 35'08 15°13'59	morning rise	11287 Sep 09 04:32	24° $\mathring{M}$ 21'59
max. Earth dist.	11280 Aug 30 00:24	17° $\mathring{M}$ 36'37 49.82286 AU	retrograde	11287 Dec 16 10:46	25° $\mathring{M}$ 45'53
retrograde	11280 Dec 08 19:53	19° $\mathring{M}$ 04'49	opposition	11288 Mar 09 06:55	24° $\mathring{M}$ 46'31 -15°06'14
opposition	11281 Mar 02 19:05	18° $\mathring{M}$ 05'08 -15°48'51	min. Earth dist.	11288 Mar 08 13:35	24° $\mathring{M}$ 47'20 48.06588 AU
min. Earth dist.	11281 Mar 01 19:23	18° $\mathring{M}$ 06'15 47.91350 AU	direct	11288 May 30 06:31	23° $\mathring{M}$ 47'54
direct	11281 May 24 00:54	17° $\mathring{M}$ 06'10	evening set	11288 Sep 01 10:21	25° $\mathring{M}$ 08'15
conjunction	11281 Aug 30 03:41	18° $\mathring{M}$ 32'51 -15°08'46	conjunction	11288 Sep 05 14:55	25° $\mathring{M}$ 14'00 -14°27'08
minimum elong	11281 Aug 30 03:53	18° $\mathring{M}$ 32'51 15°08'58	minimum elong	11288 Sep 05 15:08	25° $\mathring{M}$ 14'01 14°27'15
max. Earth dist.	11281 Aug 31 03:57	18° $\mathring{M}$ 34'15 49.85745 AU	max. Earth dist.	11288 Sep 06 09:20	25° $\mathring{M}$ 15'03 50.00241 AU
retrograde	11281 Dec 10 03:09	20° $\mathring{M}$ 02'25	morning rise	11288 Sep 09 20:05	25° $\mathring{M}$ 19'47
min. Earth dist.	11282 Mar 03 00:29	19° $\mathring{M}$ 03'52 47.94576 AU	retrograde	11288 Dec 16 13:00	26° $\mathring{M}$ 43'02
opposition	11282 Mar 04 00:16	19° $\mathring{M}$ 02'46 -15°43'30	opposition	11289 Mar 10 11:57	25° $\mathring{M}$ 43'42 -14°59'15
direct	11282 May 25 03:43	18° $\mathring{M}$ 03'50	min. Earth dist.	11289 Mar 09 18:48	25° $\mathring{M}$ 44'30 48.06966 AU
conjunction	11282 Aug 31 08:47	19° $\mathring{M}$ 30'23 -15°03'32	direct	11289 May 31 13:09	24° $\mathring{M}$ 45'06
minimum elong	11282 Aug 31 08:59	19° $\mathring{M}$ 30'24 15°03'44	evening set	11289 Sep 02 05:35	26° $\mathring{M}$ 04'50
max. Earth dist.	11282 Sep 01 08:38	19° $\mathring{M}$ 31'46 49.88890 AU	conjunction	11289 Sep 06 19:55	26° $\mathring{M}$ 11'08 -14°20'19
retrograde	11282 Dec 11 07:27	20° $\mathring{M}$ 59'50	minimum elong	11289 Sep 06 20:10	26° $\mathring{M}$ 11'09 14°20'27
min. Earth dist.	11283 Mar 04 07:24	20° $\mathring{M}$ 01'15 47.97489 AU	max. Earth dist.	11289 Sep 07 12:16	26° $\mathring{M}$ 12'04 50.00457 AU
opposition	11283 Mar 05 05:32	20° $\mathring{M}$ 00'13 -15°37'54	morning rise	11289 Sep 11 11:00	26° $\mathring{M}$ 17'29
direct	11283 May 26 07:48	19° $\mathring{M}$ 01'20	retrograde	11289 Dec 17 17:45	27° $\mathring{M}$ 40'06
evening set	11283 Aug 31 14:15	20° $\mathring{M}$ 26'26	opposition	11290 Mar 11 16:54	26° $\mathring{M}$ 40'47 -14°52'04
conjunction	11283 Sep 01 13:47	20° $\mathring{M}$ 27'47 -14°58'02	min. Earth dist.	11290 Mar 11 01:31	26° $\mathring{M}$ 41'30 48.06826 AU
minimum elong	11283 Sep 01 14:00	20° $\mathring{M}$ 27'48 14°58'12	direct	11290 Jun 01 19:48	25° $\mathring{M}$ 42'12
morning rise	11283 Sep 02 13:48	20° $\mathring{M}$ 29'10	evening set	11290 Sep 03 01:22	27° $\mathring{M}$ 01'21
max. Earth dist.	11283 Sep 02 13:17	20° $\mathring{M}$ 29'08 49.91741 AU	conjunction	11290 Sep 08 00:59	27° $\mathring{M}$ 08'10 -14°13'19
retrograde	11283 Dec 12 09:38	21° $\mathring{M}$ 57'07	minimum elong	11290 Sep 08 01:12	27° $\mathring{M}$ 08'11 14°13'24
opposition	11284 Mar 05 10:35	20° $\mathring{M}$ 57'33 -15°32'02	max. Earth dist.	11290 Sep 08 17:16	27° $\mathring{M}$ 09'06 50.00177 AU
min. Earth dist.	11284 Mar 04 12:15	20° $\mathring{M}$ 58'36 48.00085 AU	morning rise	11290 Sep 13 01:15	27° $\mathring{M}$ 15'03
direct	11284 May 26 13:26	19° $\mathring{M}$ 58'43	retrograde	11290 Dec 18 23:33	28° $\mathring{M}$ 37'05
evening set	11284 Aug 30 18:20	21° $\mathring{M}$ 22'18	opposition	11291 Mar 12 21:47	27° $\mathring{M}$ 37'46 -14°44'40
conjunction	11284 Sep 01 18:44	21° $\mathring{M}$ 25'05 -14°52'18	min. Earth dist.	11291 Mar 12 07:28	27° $\mathring{M}$ 38'26 48.06204 AU
minimum elong	11284 Sep 01 18:56	21° $\mathring{M}$ 25'05 14°52'29	direct	11291 Jun 03 02:05	26° $\mathring{M}$ 39'11
morning rise	11284 Sep 03 19:36	21° $\mathring{M}$ 27'53	evening set	11291 Sep 03 21:31	27° $\mathring{M}$ 57'47
max. Earth dist.	11284 Sep 02 16:41	21° $\mathring{M}$ 26'20 49.94267 AU	conjunction	11291 Sep 09 05:45	28° $\mathring{M}$ 05'06 -14°06'05
retrograde	11284 Dec 12 15:32	22° $\mathring{M}$ 54'21	minimum elong	11291 Sep 09 05:59	28° $\mathring{M}$ 05'07 14°06'10
opposition	11285 Mar 06 15:47	21° $\mathring{M}$ 54'50 -15°25'56	max. Earth dist.	11291 Sep 09 20:17	28° $\mathring{M}$ 05'56 49.99461 AU
min. Earth dist.	11285 Mar 05 18:44	21° $\mathring{M}$ 55'48 48.02357 AU	morning rise	11291 Sep 14 14:46	28° $\mathring{M}$ 12'28
direct	11285 May 27 19:02	20° $\mathring{M}$ 56'03	retrograde	11291 Dec 20 07:15	29° $\mathring{M}$ 33'57
evening set	11285 Aug 31 06:52	22° $\mathring{M}$ 18'36	opposition	11292 Mar 13 02:34	28° $\mathring{M}$ 34'38 -14°37'02
conjunction	11285 Sep 02 23:44	22° $\mathring{M}$ 22'19 -14°46'20	min. Earth dist.	11292 Mar 12 12:29	28° $\mathring{M}$ 35'18 48.05188 AU
minimum elong	11285 Sep 02 23:58	22° $\mathring{M}$ 22'20 14°46'29	direct	11292 Jun 03 04:32	27° $\mathring{M}$ 36'04
max. Earth dist.	11285 Sep 03 21:53	22° $\mathring{M}$ 23'36 49.96444 AU	evening set	11292 Sep 03 17:55	28° $\mathring{M}$ 54'08
morning rise	11285 Sep 05 17:09	22° $\mathring{M}$ 26'05	conjunction	11292 Sep 09 10:35	29° $\mathring{M}$ 01'55 -13°58'38
retrograde	11285 Dec 13 20:59	23° $\mathring{M}$ 51'32	minimum elong	11292 Sep 09 10:48	29° $\mathring{M}$ 01'56 13°58'42
opposition	11286 Mar 07 20:51	22° $\mathring{M}$ 52'04 -15°19'35	max. Earth dist.	11292 Sep 10 00:36	29° $\mathring{M}$ 02'43 49.98369 AU
min. Earth dist.	11286 Mar 07 00:48	22° $\mathring{M}$ 53'00 48.04232 AU	morning rise	11292 Sep 15 04:03	29° $\mathring{M}$ 09'45
direct	11286 May 29 01:31	21° $\mathring{M}$ 53'21		11292 Oct 25 15:46	0° $\mathring{A}$
evening set	11286 Aug 31 22:33	23° $\mathring{M}$ 15'05	retrograde	11292 Dec 20 11:27	0° $\mathring{A}$ 30'43
conjunction	11286 Sep 04 04:48	23° $\mathring{M}$ 19'34 -14°40'09		11293 Feb 15 12:20	30° $\mathring{R}$ $\mathring{M}$
minimum elong	11286 Sep 04 05:00	23° $\mathring{M}$ 19'34 14°40'17	opposition	11293 Mar 14 07:26	29° $\mathring{M}$ 31'25 -14°29'11
max. Earth dist.	11286 Sep 05 00:59	23° $\mathring{M}$ 20'43 49.98208 AU	min. Earth dist.	11293 Mar 13 18:59	29° $\mathring{M}$ 31'59 48.03826 AU
morning rise	11286 Sep 07 11:35	23° $\mathring{M}$ 24'05	direct	11293 Jun 04 07:50	28° $\mathring{M}$ 32'50
retrograde	11286 Dec 15 04:49	24° $\mathring{M}$ 48'42	evening set	11293 Sep 04 14:44	29° $\mathring{M}$ 50'25
min. Earth dist.	11287 Mar 08 06:15	23° $\mathring{M}$ 50'12 48.05668 AU	conjunction	11293 Sep 10 15:23	29° $\mathring{M}$ 58'40 -13°50'57
opposition	11287 Mar 09 01:44	23° $\mathring{M}$ 49'18 -15°13'01	minimum elong	11293 Sep 10 15:37	29° $\mathring{M}$ 58'40 13°51'01
direct	11287 May 30 03:25	22° $\mathring{M}$ 50'38	max. Earth dist.	11293 Sep 11 05:07	29° $\mathring{M}$ 59'27 49.96970 AU
evening set	11287 Sep 01 15:55	24° $\mathring{M}$ 11'39		11293 Sep 11 14:54	0° $\mathring{A}$
			morning rise	11293 Sep 16 16:51	0° $\mathring{A}$ 06'56

retrograde	11293 Dec 21 13:10	1° <u>♁</u> 27'25	conjunction	11300 Sep 18 01:30	6° <u>♁</u> 36'19 -12°50'45
opposition	11294 Mar 15 12:08	0° <u>♁</u> 28'07 -14°21'04	minimum elong	11300 Sep 18 01:44	6° <u>♁</u> 36'19 12°50'45
min. Earth dist.	11294 Mar 14 23:28	0° <u>♁</u> 28'42 48.02155 AU	max. Earth dist.	11300 Sep 18 08:52	6° <u>♁</u> 36'44 49.77920 AU
	11294 Apr 10 18:31	30° <u>♁</u> 17	morning rise	11300 Sep 26 05:23	6° <u>♁</u> 47'27
direct	11294 Jun 05 12:55	29° <u>♁</u> 29'33	retrograde	11300 Dec 29 01:04	8° <u>♁</u> 05'09
	11294 Jul 29 22:07	0° <u>♁</u>	opposition	11301 Mar 22 21:26	7° <u>♁</u> 05'54 -13°17'46
evening set	11294 Sep 05 11:45	0° <u>♁</u> 46'40	min. Earth dist.	11301 Mar 22 15:49	7° <u>♁</u> 06'10 47.80862 AU
			direct	11301 Jun 12 23:22	6° <u>♁</u> 07'23
conjunction	11294 Sep 11 20:09	0° <u>♁</u> 55'21 -13°43'02	evening set	11301 Sep 10 21:18	7° <u>♁</u> 21'51
minimum elong	11294 Sep 11 20:23	0° <u>♁</u> 55'22 13°43'05			
max. Earth dist.	11294 Sep 12 08:16	0° <u>♁</u> 56'03 49.95265 AU	conjunction	11301 Sep 19 06:30	7° <u>♁</u> 33'17 -12°41'19
morning rise	11294 Sep 18 05:31	1° <u>♁</u> 04'05	minimum elong	11301 Sep 19 06:44	7° <u>♁</u> 33'18 12°41'18
retrograde	11294 Dec 22 17:50	2° <u>♁</u> 24'06	max. Earth dist.	11301 Sep 19 11:40	7° <u>♁</u> 33'35 49.73394 AU
opposition	11295 Mar 16 16:49	1° <u>♁</u> 24'48 -14°12'43	morning rise	11301 Sep 27 16:55	7° <u>♁</u> 44'48
min. Earth dist.	11295 Mar 16 05:25	1° <u>♁</u> 25'20 48.00200 AU	retrograde	11301 Dec 30 08:53	9° <u>♁</u> 02'08
direct	11295 Jun 06 18:32	0° <u>♁</u> 26'15	opposition	11302 Mar 24 02:13	8° <u>♁</u> 02'52 -13°07'53
evening set	11295 Sep 06 09:01	1° <u>♁</u> 42'57	min. Earth dist.	11302 Mar 23 21:18	8° <u>♁</u> 03'05 47.75940 AU
			direct	11302 Jun 14 02:38	7° <u>♁</u> 04'18
conjunction	11295 Sep 13 01:02	1° <u>♁</u> 52'02 -13°34'53	evening set	11302 Sep 11 20:00	8° <u>♁</u> 18'25
minimum elong	11295 Sep 13 01:16	1° <u>♁</u> 52'03 13°34'56			
max. Earth dist.	11295 Sep 13 13:26	1° <u>♁</u> 52'44 49.93281 AU	conjunction	11302 Sep 20 11:36	8° <u>♁</u> 30'13 -12°31'42
morning rise	11295 Sep 19 17:54	2° <u>♁</u> 01'12	minimum elong	11302 Sep 20 11:50	8° <u>♁</u> 30'13 12°31'40
retrograde	11295 Dec 23 22:25	3° <u>♁</u> 20'47	max. Earth dist.	11302 Sep 20 15:49	8° <u>♁</u> 30'27 49.68340 AU
opposition	11296 Mar 16 21:34	2° <u>♁</u> 21'30 -14°04'08	morning rise	11302 Sep 29 04:26	8° <u>♁</u> 42'05
min. Earth dist.	11296 Mar 16 10:44	2° <u>♁</u> 22'01 47.97946 AU	retrograde	11302 Dec 31 14:26	9° <u>♁</u> 59'04
direct	11296 Jun 07 01:18	1° <u>♁</u> 22'58	opposition	11303 Mar 25 06:57	8° <u>♁</u> 59'45 -12°57'47
evening set	11296 Sep 06 06:25	2° <u>♁</u> 39'15	min. Earth dist.	11303 Mar 25 04:03	8° <u>♁</u> 59'54 47.70521 AU
			direct	11303 Jun 15 06:15	8° <u>♁</u> 01'09
conjunction	11296 Sep 13 05:39	2° <u>♁</u> 48'45 -13°26'29	evening set	11303 Sep 12 18:55	9° <u>♁</u> 14'56
minimum elong	11296 Sep 13 05:53	2° <u>♁</u> 48'46 13°26'31			
max. Earth dist.	11296 Sep 13 16:35	2° <u>♁</u> 49'22 49.91006 AU	conjunction	11303 Sep 21 16:40	9° <u>♁</u> 27'05 -12°21'51
morning rise	11296 Sep 20 05:54	2° <u>♁</u> 58'20	minimum elong	11303 Sep 21 16:53	9° <u>♁</u> 27'06 12°21'48
retrograde	11296 Dec 24 06:50	4° <u>♁</u> 17'30	max. Earth dist.	11303 Sep 21 20:17	9° <u>♁</u> 27'17 49.62843 AU
opposition	11297 Mar 18 02:21	3° <u>♁</u> 18'15 -13°55'18	morning rise	11303 Sep 30 15:35	9° <u>♁</u> 39'18
min. Earth dist.	11297 Mar 17 15:44	3° <u>♁</u> 18'45 47.95389 AU	retrograde	11304 Jan 01 17:38	10° <u>♁</u> 55'57
direct	11297 Jun 08 03:28	2° <u>♁</u> 19'44	opposition	11304 Mar 25 11:40	9° <u>♁</u> 56'36 -12°47'28
evening set	11297 Sep 07 04:03	3° <u>♁</u> 35'37	min. Earth dist.	11304 Mar 25 08:45	9° <u>♁</u> 56'44 47.64683 AU
			direct	11304 Jun 15 10:43	8° <u>♁</u> 57'56
conjunction	11297 Sep 14 10:32	3° <u>♁</u> 45'32 -13°17'52	evening set	11304 Sep 12 17:44	10° <u>♁</u> 11'25
minimum elong	11297 Sep 14 10:45	3° <u>♁</u> 45'33 13°17'54			
max. Earth dist.	11297 Sep 14 20:55	3° <u>♁</u> 46'08 49.88389 AU	conjunction	11304 Sep 21 21:28	10° <u>♁</u> 23'54 -12°11'48
morning rise	11297 Sep 21 18:02	3° <u>♁</u> 55'31	minimum elong	11304 Sep 21 21:43	10° <u>♁</u> 23'55 12°11'45
retrograde	11297 Dec 25 14:23	5° <u>♁</u> 14'18	max. Earth dist.	11304 Sep 21 23:21	10° <u>♁</u> 24'01 49.56944 AU
opposition	11298 Mar 19 07:04	4° <u>♁</u> 15'04 -13°46'14	morning rise	11304 Oct 01 02:38	10° <u>♁</u> 36'28
min. Earth dist.	11298 Mar 18 22:23	4° <u>♁</u> 15'28 47.92464 AU	retrograde	11305 Jan 01 21:55	11° <u>♁</u> 52'49
direct	11298 Jun 09 05:01	3° <u>♁</u> 16'34	opposition	11305 Mar 26 16:33	10° <u>♁</u> 53'25 -12°36'56
evening set	11298 Sep 08 02:07	4° <u>♁</u> 32'05	min. Earth dist.	11305 Mar 26 15:09	10° <u>♁</u> 53'29 47.58483 AU
			direct	11305 Jun 16 16:03	9° <u>♁</u> 54'42
conjunction	11298 Sep 15 15:31	4° <u>♁</u> 42'24 -13°09'02	evening set	11305 Sep 13 16:49	11° <u>♁</u> 07'54
minimum elong	11298 Sep 15 15:45	4° <u>♁</u> 42'25 13°09'03			
max. Earth dist.	11298 Sep 16 01:10	4° <u>♁</u> 42'57 49.85390 AU	conjunction	11305 Sep 23 02:37	11° <u>♁</u> 20'44 -12°01'32
morning rise	11298 Sep 23 05:55	4° <u>♁</u> 52'46	minimum elong	11305 Sep 23 02:51	11° <u>♁</u> 20'45 12°01'27
retrograde	11298 Dec 26 17:21	6° <u>♁</u> 11'11	max. Earth dist.	11305 Sep 23 04:41	11° <u>♁</u> 20'51 49.50704 AU
opposition	11299 Mar 20 11:45	5° <u>♁</u> 11'58 -13°36'57	morning rise	11305 Oct 02 13:40	11° <u>♁</u> 33'38
min. Earth dist.	11299 Mar 20 03:08	5° <u>♁</u> 12'22 47.89108 AU	retrograde	11306 Jan 03 01:46	12° <u>♁</u> 49'42
direct	11299 Jun 10 09:26	4° <u>♁</u> 13'28	opposition	11306 Mar 27 21:12	11° <u>♁</u> 50'15 -12°26'09
evening set	11299 Sep 09 00:12	5° <u>♁</u> 28'38	min. Earth dist.	11306 Mar 27 20:20	11° <u>♁</u> 50'18 47.51948 AU
			direct	11306 Jun 17 22:49	10° <u>♁</u> 51'31
conjunction	11299 Sep 16 20:21	5° <u>♁</u> 39'20 -13°00'00	evening set	11306 Sep 14 16:08	12° <u>♁</u> 04'27
minimum elong	11299 Sep 16 20:34	5° <u>♁</u> 39'21 12°59'59			
max. Earth dist.	11299 Sep 17 03:57	5° <u>♁</u> 39'46 49.81913 AU	conjunction	11306 Sep 24 07:39	12° <u>♁</u> 17'36 -11°51'02
morning rise	11299 Sep 24 17:40	5° <u>♁</u> 50'05	minimum elong	11306 Sep 24 07:53	12° <u>♁</u> 17'37 11°50'57
retrograde	11299 Dec 27 20:50	7° <u>♁</u> 08'09	max. Earth dist.	11306 Sep 24 08:08	12° <u>♁</u> 17'38 49.44157 AU
opposition	11300 Mar 21 16:37	6° <u>♁</u> 08'56 -13°27'27	morning rise	11306 Oct 04 00:36	12° <u>♁</u> 30'51
min. Earth dist.	11300 Mar 21 09:53	6° <u>♁</u> 09'14 47.85258 AU	retrograde	11307 Jan 04 09:32	13° <u>♁</u> 46'39
direct	11300 Jun 11 15:56	5° <u>♁</u> 10'26	opposition	11307 Mar 29 01:59	12° <u>♁</u> 47'10 -12°15'08
evening set	11300 Sep 09 22:39	6° <u>♁</u> 25'15	min. Earth dist.	11307 Mar 29 01:29	12° <u>♁</u> 47'12 47.45118 AU

direct	11307 Jun 19 01:49	11° <u>♁</u> 48'24	retrograde	11314 Jan 11 02:55	20° <u>♁</u> 30'39	
evening set	11307 Sep 15 15:18	13° <u>♁</u> 01'05	opposition	11314 Apr 04 12:59	19° <u>♁</u> 30'58	-10°51'38
			min. Earth dist.	11314 Apr 04 19:37	19° <u>♁</u> 30'40	46.86680 AU
conjunction	11307 Sep 25 12:38	13° <u>♁</u> 14'35 -11°40'18	direct	11314 Jun 25 07:41	18° <u>♁</u> 31'56	
minimum elong	11307 Sep 25 12:52	13° <u>♁</u> 14'36 11°40'12	evening set	11314 Sep 20 16:02	19° <u>♁</u> 43'20	
max. Earth dist.	11307 Sep 25 12:37	13° <u>♁</u> 14'35 49.37300 AU				
morning rise	11307 Oct 05 11:24	13° <u>♁</u> 28'10	conjunction	11314 Oct 02 02:34	19° <u>♁</u> 59'03	-10°19'04
retrograde	11308 Jan 05 16:50	14° <u>♁</u> 43'43	minimum elong	11314 Oct 02 02:47	19° <u>♁</u> 59'04	10°18'54
opposition	11308 Mar 29 06:55	13° <u>♁</u> 44'13 -12°03'53	max. Earth dist.	11314 Oct 01 17:58	19° <u>♁</u> 58'34	48.78270 AU
min. Earth dist.	11308 Mar 29 07:54	13° <u>♁</u> 44'11 47.37980 AU	morning rise	11314 Oct 13 14:54	20° <u>♁</u> 14'53	
direct	11308 Jun 19 04:05	12° <u>♁</u> 45'26	retrograde	11315 Jan 12 07:05	21° <u>♁</u> 29'05	
evening set	11308 Sep 15 14:50	13° <u>♁</u> 57'53	opposition	11315 Apr 05 18:14	20° <u>♁</u> 29'18	-10°38'51
			min. Earth dist.	11315 Apr 06 02:46	20° <u>♁</u> 28'54	46.76381 AU
conjunction	11308 Sep 25 17:48	14° <u>♁</u> 11'43 -11°29'20	direct	11315 Jun 26 13:13	19° <u>♁</u> 30'10	
minimum elong	11308 Sep 25 18:02	14° <u>♁</u> 11'44 11°29'14	evening set	11315 Sep 21 16:35	20° <u>♁</u> 41'24	
max. Earth dist.	11308 Sep 25 17:21	14° <u>♁</u> 11'42 49.30156 AU				
morning rise	11308 Oct 05 22:08	14° <u>♁</u> 25'38	conjunction	11315 Oct 03 08:10	20° <u>♁</u> 57'25	-10°06'39
retrograde	11309 Jan 05 21:16	15° <u>♁</u> 40'58	minimum elong	11315 Oct 03 08:24	20° <u>♁</u> 57'26	10°06'28
opposition	11309 Mar 30 11:43	14° <u>♁</u> 41'28 -11°52'23	max. Earth dist.	11315 Oct 02 23:36	20° <u>♁</u> 56'55	48.67881 AU
min. Earth dist.	11309 Mar 30 12:29	14° <u>♁</u> 41'25 47.30533 AU	morning rise	11315 Oct 15 01:17	21° <u>♁</u> 13'33	
direct	11309 Jun 20 07:23	13° <u>♁</u> 42'39	retrograde	11316 Jan 13 10:20	22° <u>♁</u> 27'35	
evening set	11309 Sep 16 14:30	14° <u>♁</u> 54'55	opposition	11316 Apr 05 23:27	21° <u>♁</u> 27'42	-10°25'51
			min. Earth dist.	11316 Apr 06 08:34	21° <u>♁</u> 27'16	46.65644 AU
conjunction	11309 Sep 26 22:56	15° <u>♁</u> 09'04 -11°18'09	direct	11316 Jun 26 21:10	20° <u>♁</u> 28'28	
minimum elong	11309 Sep 26 23:10	15° <u>♁</u> 09'05 11°18'01	evening set	11316 Sep 21 17:33	21° <u>♁</u> 39'32	
max. Earth dist.	11309 Sep 26 20:46	15° <u>♁</u> 08'57 49.22671 AU				
morning rise	11309 Oct 07 09:01	15° <u>♁</u> 23'19	conjunction	11316 Oct 03 13:48	21° <u>♁</u> 55'50	-9°54'00
retrograde	11310 Jan 07 01:44	16° <u>♁</u> 38'27	minimum elong	11316 Oct 03 14:01	21° <u>♁</u> 55'51	9°53'48
opposition	11310 Mar 31 16:44	15° <u>♁</u> 38'55 -11°40'40	max. Earth dist.	11316 Oct 03 03:32	21° <u>♁</u> 55'15	48.57101 AU
min. Earth dist.	11310 Mar 31 19:14	15° <u>♁</u> 38'48 47.22727 AU	morning rise	11316 Oct 15 11:51	22° <u>♁</u> 12'16	
direct	11310 Jun 21 13:31	14° <u>♁</u> 40'06	retrograde	11317 Jan 13 17:30	23° <u>♁</u> 26'08	
evening set	11310 Sep 17 14:22	15° <u>♁</u> 52'11	opposition	11317 Apr 07 04:38	22° <u>♁</u> 26'10	-10°12'37
			min. Earth dist.	11317 Apr 07 14:23	22° <u>♁</u> 25'42	46.54556 AU
conjunction	11310 Sep 28 04:22	16° <u>♁</u> 06'39 -11°06'44	direct	11317 Jun 28 02:16	21° <u>♁</u> 26'49	
minimum elong	11310 Sep 28 04:35	16° <u>♁</u> 06'40 11°06'36	evening set	11317 Sep 22 18:28	22° <u>♁</u> 37'44	
max. Earth dist.	11310 Sep 28 02:08	16° <u>♁</u> 06'32 49.14792 AU				
morning rise	11310 Oct 08 19:46	16° <u>♁</u> 21'14	conjunction	11317 Oct 04 19:33	22° <u>♁</u> 54'20	-9°41'08
retrograde	11311 Jan 08 05:50	17° <u>♁</u> 36'11	minimum elong	11317 Oct 04 19:46	22° <u>♁</u> 54'21	9°40'55
opposition	11311 Apr 01 21:37	16° <u>♁</u> 36'38 -11°28'43	max. Earth dist.	11317 Oct 04 08:37	22° <u>♁</u> 53'42	48.45971 AU
min. Earth dist.	11311 Apr 02 01:02	16° <u>♁</u> 36'29 47.14484 AU	morning rise	11317 Oct 16 22:22	23° <u>♁</u> 11'04	
direct	11311 Jun 22 21:08	15° <u>♁</u> 37'47	retrograde	11318 Jan 15 01:44	24° <u>♁</u> 24'47	
evening set	11311 Sep 18 14:37	16° <u>♁</u> 49'42	opposition	11318 Apr 08 09:59	23° <u>♁</u> 24'42	-9°59'08
			min. Earth dist.	11318 Apr 08 21:14	23° <u>♁</u> 24'10	46.43139 AU
conjunction	11311 Sep 29 09:46	17° <u>♁</u> 04'30 -10°55'07	direct	11318 Jun 29 05:55	22° <u>♁</u> 25'15	
minimum elong	11311 Sep 29 10:01	17° <u>♁</u> 04'30 10°54'58	evening set	11318 Sep 23 19:43	23° <u>♁</u> 36'03	
max. Earth dist.	11311 Sep 29 05:28	17° <u>♁</u> 04'15 49.06457 AU				
morning rise	11311 Oct 10 06:35	17° <u>♁</u> 19'23	conjunction	11318 Oct 06 01:24	23° <u>♁</u> 52'57	-9°28'01
retrograde	11312 Jan 09 14:47	18° <u>♁</u> 34'09	minimum elong	11318 Oct 06 01:37	23° <u>♁</u> 52'57	9°27'47
opposition	11312 Apr 02 02:42	17° <u>♁</u> 34'35 -11°16'34	max. Earth dist.	11318 Oct 05 14:03	23° <u>♁</u> 52'17	48.34548 AU
min. Earth dist.	11312 Apr 02 06:55	17° <u>♁</u> 34'23 47.05761 AU	morning rise	11318 Oct 18 08:46	24° <u>♁</u> 09'57	
direct	11312 Jun 23 00:07	16° <u>♁</u> 35'42	retrograde	11319 Jan 16 08:39	25° <u>♁</u> 23'32	
evening set	11312 Sep 18 14:46	17° <u>♁</u> 47'26	opposition	11319 Apr 09 15:12	24° <u>♁</u> 23'22	-9°45'24
			min. Earth dist.	11319 Apr 10 02:07	24° <u>♁</u> 22'51	46.31437 AU
conjunction	11312 Sep 29 15:15	18° <u>♁</u> 02'32 -10°43'18	direct	11319 Jun 30 08:34	23° <u>♁</u> 23'48	
minimum elong	11312 Sep 29 15:28	18° <u>♁</u> 02'33 10°43'09	evening set	11319 Sep 24 21:05	24° <u>♁</u> 34'31	
max. Earth dist.	11312 Sep 29 09:52	18° <u>♁</u> 02'14 48.97593 AU				
morning rise	11312 Oct 10 17:20	18° <u>♁</u> 17'46	conjunction	11319 Oct 07 07:14	24° <u>♁</u> 51'42	-9°14'41
retrograde	11313 Jan 09 22:13	19° <u>♁</u> 32'21	minimum elong	11319 Oct 07 07:26	24° <u>♁</u> 51'42	9°14'27
opposition	11313 Apr 03 07:59	18° <u>♁</u> 32'43 -11°04'12	max. Earth dist.	11319 Oct 06 18:16	24° <u>♁</u> 50'56	48.22843 AU
min. Earth dist.	11313 Apr 03 14:17	18° <u>♁</u> 32'26 46.96488 AU	morning rise	11319 Oct 19 19:18	25° <u>♁</u> 09'00	
direct	11313 Jun 24 03:29	17° <u>♁</u> 33'46	retrograde	11320 Jan 17 13:53	26° <u>♁</u> 22'28	
evening set	11313 Sep 19 15:22	18° <u>♁</u> 45'20	opposition	11320 Apr 09 20:46	25° <u>♁</u> 22'12	-9°31'26
			min. Earth dist.	11320 Apr 10 09:13	25° <u>♁</u> 21'37	46.19472 AU
conjunction	11313 Sep 30 20:58	19° <u>♁</u> 00'45 -10°31'17	direct	11320 Jun 30 14:13	24° <u>♁</u> 22'33	
minimum elong	11313 Sep 30 21:12	19° <u>♁</u> 00'46 10°31'08	evening set	11320 Sep 24 22:27	25° <u>♁</u> 33'10	
max. Earth dist.	11313 Sep 30 14:38	19° <u>♁</u> 00'23 48.88196 AU				
morning rise	11313 Oct 12 04:06	19° <u>♁</u> 16'17	conjunction	11320 Oct 07 13:12	25° <u>♁</u> 50'38	-9°01'06



minimum elong	11320 Oct 07 13:25	25° <u>♂</u> 50'39	9°00'51	morning rise	11326 Oct 27 21:23	2° <u>♂</u> 10'02
max. Earth dist.	11320 Oct 07 00:32	25° <u>♂</u> 49'54	48.10875 AU	retrograde	11327 Jan 24 11:21	3° <u>♂</u> 23'13
morning rise	11320 Oct 20 05:35	26° <u>♂</u> 08'14		opposition	11327 Apr 17 13:48	2° <u>♂</u> 22'19 -7°46'55
retrograde	11321 Jan 17 16:51	27° <u>♂</u> 21'37		min. Earth dist.	11327 Apr 18 09:04	2° <u>♂</u> 21'23 45.25230 AU
opposition	11321 Apr 11 02:20	26° <u>♂</u> 21'16	-9°17'13	direct	11327 Jul 08 07:21	1° <u>♂</u> 21'55
min. Earth dist.	11321 Apr 11 15:04	26° <u>♂</u> 20'40	46.07222 AU	evening set	11327 Oct 01 16:07	2° <u>♂</u> 32'25
direct	11321 Jul 01 22:33	25° <u>♂</u> 21'32				
evening set	11321 Sep 26 00:20	26° <u>♂</u> 32'05		conjunction	11327 Oct 15 11:08	2° <u>♂</u> 51'49 -7°19'43
				minimum elong	11327 Oct 15 11:18	2° <u>♂</u> 51'50 7°19'24
conjunction	11321 Oct 08 19:18	26° <u>♂</u> 49'51	-8°47'17	max. Earth dist.	11327 Oct 14 13:48	2° <u>♂</u> 50'34 47.16037 AU
minimum elong	11321 Oct 08 19:30	26° <u>♂</u> 49'52	8°47'02	morning rise	11327 Oct 29 08:00	3° <u>♂</u> 11'22
max. Earth dist.	11321 Oct 08 04:55	26° <u>♂</u> 49'01	47.98616 AU	retrograde	11328 Jan 25 20:01	4° <u>♂</u> 24'34
morning rise	11321 Oct 21 16:12	27° <u>♂</u> 07'44		opposition	11328 Apr 17 20:10	3° <u>♂</u> 23'30 -7°31'04
retrograde	11322 Jan 19 00:48	28° <u>♂</u> 21'03		min. Earth dist.	11328 Apr 18 16:55	3° <u>♂</u> 22'30 45.09970 AU
opposition	11322 Apr 12 07:50	27° <u>♂</u> 20'38	-9°02'44	direct	11328 Jul 08 12:32	2° <u>♂</u> 22'59
min. Earth dist.	11322 Apr 12 21:18	27° <u>♂</u> 19'59	45.94668 AU	evening set	11328 Oct 01 19:23	3° <u>♂</u> 33'29
direct	11322 Jul 03 03:12	26° <u>♂</u> 20'49				
evening set	11322 Sep 27 02:21	27° <u>♂</u> 31'20		conjunction	11328 Oct 15 18:03	3° <u>♂</u> 53'09 -7°04'21
max. Earth dist.	11322 Oct 09 10:35	27° <u>♂</u> 48'29	47.86004 AU	minimum elong	11328 Oct 15 18:14	3° <u>♂</u> 53'10 7°04'01
				max. Earth dist.	11328 Oct 14 20:09	3° <u>♂</u> 51'52 47.00728 AU
conjunction	11322 Oct 10 01:38	27° <u>♂</u> 49'22	-8°33'14	morning rise	11328 Oct 29 18:33	4° <u>♂</u> 12'58
minimum elong	11322 Oct 10 01:51	27° <u>♂</u> 49'23	8°32'58	retrograde	11329 Jan 26 05:44	5° <u>♂</u> 26'10
morning rise	11322 Oct 23 02:46	28° <u>♂</u> 07'32		opposition	11329 Apr 19 02:30	4° <u>♂</u> 24'59 -7°14'57
retrograde	11323 Jan 20 09:06	29° <u>♂</u> 20'49		min. Earth dist.	11329 Apr 19 23:08	4° <u>♂</u> 23'59 44.94369 AU
opposition	11323 Apr 13 13:39	28° <u>♂</u> 20'20	-8°48'02	direct	11329 Jul 09 15:40	3° <u>♂</u> 24'17
min. Earth dist.	11323 Apr 14 04:52	28° <u>♂</u> 19'36	45.81728 AU	evening set	11329 Oct 02 23:05	4° <u>♂</u> 34'51
direct	11323 Jul 04 07:43	27° <u>♂</u> 20'25		max. Earth dist.	11329 Oct 16 01:34	4° <u>♂</u> 53'23 46.85083 AU
evening set	11323 Sep 28 04:34	28° <u>♂</u> 30'55				
				conjunction	11329 Oct 17 01:10	4° <u>♂</u> 54'47 -6°48'44
conjunction	11323 Oct 11 07:59	28° <u>♂</u> 49'14	-8°18'58	minimum elong	11329 Oct 17 01:20	4° <u>♂</u> 54'48 6°48'23
minimum elong	11323 Oct 11 08:10	28° <u>♂</u> 49'15	8°18'42	morning rise	11329 Oct 31 05:19	5° <u>♂</u> 14'51
max. Earth dist.	11323 Oct 10 16:08	28° <u>♂</u> 48'19	47.72986 AU	retrograde	11330 Jan 27 13:02	6° <u>♂</u> 28'05
morning rise	11323 Oct 24 13:12	29° <u>♂</u> 07'41		opposition	11330 Apr 20 08:56	5° <u>♂</u> 26'45 -6°58'35
	11323 Dec 07 18:59	0° <u>♂</u>		min. Earth dist.	11330 Apr 21 07:22	5° <u>♂</u> 25'40 44.78469 AU
retrograde	11324 Jan 21 16:20	0° <u>♂</u> 20'56		direct	11330 Jul 10 21:20	4° <u>♂</u> 25'55
	11324 Mar 07 03:33	30° <u>♂</u> <u>♂</u>		evening set	11330 Oct 04 02:53	5° <u>♂</u> 36'33
opposition	11324 Apr 13 19:31	29° <u>♂</u> 20'22	-8°33'06	max. Earth dist.	11330 Oct 17 09:07	5° <u>♂</u> 55'20 46.69160 AU
min. Earth dist.	11324 Apr 14 10:55	29° <u>♂</u> 19'37	45.68346 AU			
direct	11324 Jul 04 11:51	28° <u>♂</u> 20'21		conjunction	11330 Oct 18 08:32	5° <u>♂</u> 56'44 -6°32'53
evening set	11324 Sep 28 07:12	29° <u>♂</u> 30'51		minimum elong	11330 Oct 18 08:42	5° <u>♂</u> 56'45 6°32'33
				morning rise	11330 Nov 01 15:55	6° <u>♂</u> 17'04
conjunction	11324 Oct 11 14:34	29° <u>♂</u> 49'27	-8°04'29	retrograde	11331 Jan 28 16:47	7° <u>♂</u> 30'20
minimum elong	11324 Oct 11 14:46	29° <u>♂</u> 49'27	8°04'12	opposition	11331 Apr 21 15:33	6° <u>♂</u> 28'52 -6°41'58
max. Earth dist.	11324 Oct 10 20:28	29° <u>♂</u> 48'23	47.59483 AU	min. Earth dist.	11331 Apr 22 13:59	6° <u>♂</u> 27'47 44.62301 AU
	11324 Oct 19 02:57	0° <u>♂</u>		direct	11331 Jul 12 06:56	5° <u>♂</u> 27'53
morning rise	11324 Oct 24 23:58	0° <u>♂</u> 08'10		evening set	11331 Oct 05 06:56	6° <u>♂</u> 38'36
retrograde	11325 Jan 21 23:11	1° <u>♂</u> 21'24				
opposition	11325 Apr 15 01:34	0° <u>♂</u> 20'43	-8°17'56	conjunction	11331 Oct 19 15:42	6° <u>♂</u> 59'03 -6°16'47
min. Earth dist.	11325 Apr 15 19:04	0° <u>♂</u> 19'53	45.54469 AU	minimum elong	11331 Oct 19 15:52	6° <u>♂</u> 59'03 6°16'25
	11325 May 03 09:53	30° <u>♂</u> <u>♂</u>		max. Earth dist.	11331 Oct 18 14:41	6° <u>♂</u> 57'33 46.52988 AU
direct	11325 Jul 05 17:07	29° <u>♂</u> 20'36		morning rise	11331 Nov 03 02:31	7° <u>♂</u> 19'38
	11325 Sep 05 08:03	0° <u>♂</u>		retrograde	11332 Jan 30 00:24	8° <u>♂</u> 32'59
evening set	11325 Sep 29 09:55	0° <u>♂</u> 31'05		opposition	11332 Apr 21 22:21	7° <u>♂</u> 31'23 -6°25'05
				min. Earth dist.	11332 Apr 22 21:25	7° <u>♂</u> 30'15 44.45902 AU
conjunction	11325 Oct 12 21:26	0° <u>♂</u> 49'58	-7°49'47	direct	11332 Jul 12 13:58	6° <u>♂</u> 30'15
minimum elong	11325 Oct 12 21:36	0° <u>♂</u> 49'59	7°49'29	evening set	11332 Oct 05 11:15	7° <u>♂</u> 41'04
max. Earth dist.	11325 Oct 12 03:01	0° <u>♂</u> 48'53	47.45478 AU			
morning rise	11325 Oct 26 10:39	1° <u>♂</u> 08'58		conjunction	11332 Oct 19 23:20	8° <u>♂</u> 01'46 -6°00'26
retrograde	11326 Jan 23 03:45	2° <u>♂</u> 22'10		minimum elong	11332 Oct 19 23:29	8° <u>♂</u> 01'47 6°00'05
opposition	11326 Apr 16 07:41	1° <u>♂</u> 21'23	-8°02'33	max. Earth dist.	11332 Oct 18 22:00	8° <u>♂</u> 00'15 46.36568 AU
min. Earth dist.	11326 Apr 17 01:50	1° <u>♂</u> 20'30	45.40078 AU	morning rise	11332 Nov 03 13:15	8° <u>♂</u> 22'37
direct	11326 Jul 07 01:31	0° <u>♂</u> 21'08		retrograde	11333 Jan 30 09:06	9° <u>♂</u> 36'04
evening set	11326 Sep 30 13:00	1° <u>♂</u> 31'37		opposition	11333 Apr 23 05:17	8° <u>♂</u> 34'20 -6°07'56
max. Earth dist.	11326 Oct 13 07:42	1° <u>♂</u> 49'33	47.30981 AU	min. Earth dist.	11333 Apr 24 05:35	8° <u>♂</u> 33'09 44.29250 AU
				direct	11333 Jul 13 20:22	7° <u>♂</u> 33'04
conjunction	11326 Oct 14 04:11	1° <u>♂</u> 50'45	-7°34'52	evening set	11333 Oct 06 15:59	8° <u>♂</u> 44'00
minimum elong	11326 Oct 14 04:22	1° <u>♂</u> 50'46	7°34'33	max. Earth dist.	11333 Oct 20 05:10	9° <u>♂</u> 03'24 46.19902 AU

conjunction	11333 Oct 21 07:09	9°M.04'57	-5°43'51	opposition	11340 Apr 30 11:01	16°M.08'35	-4°00'52
minimum elong	11333 Oct 21 07:18	9°M.04'58	5°43'28	min. Earth dist.	11340 May 01 18:58	16°M.06'59	43.02016 AU
morning rise	11333 Nov 05 00:09	9°M.26'03		direct	11340 Jul 20 18:30	15°M.06'01	
retrograde	11334 Jan 31 19:23	10°M.39'38		evening set	11340 Oct 13 10:39	16°M.18'14	
opposition	11334 Apr 24 12:19	9°M.37'47	-5°50'32	max. Earth dist.	11340 Oct 27 09:45	16°M.38'44	44.91855 AU
min. Earth dist.	11334 Apr 25 12:35	9°M.36'35	44.12327 AU				
direct	11334 Jul 15 00:35	8°M.36'22		conjunction	11340 Oct 28 19:51	16°M.40'51	-3°41'08
evening set	11334 Oct 07 21:05	9°M.47'27		minimum elong	11340 Oct 28 19:57	16°M.40'51	3°40'41
max. Earth dist.	11334 Oct 21 11:18	10°M.06'59	46.02912 AU	morning rise	11340 Nov 13 06:38	17°M.03'36	
				retrograde	11341 Feb 08 11:14	18°M.18'19	
conjunction	11334 Oct 22 15:05	10°M.08'39	-5°27'01	opposition	11341 May 01 19:16	17°M.15'13	-3°41'42
minimum elong	11334 Oct 22 15:13	10°M.08'40	5°26'37	min. Earth dist.	11341 May 03 03:16	17°M.13'36	42.82190 AU
morning rise	11334 Nov 06 11:06	10°M.30'00		direct	11341 Jul 22 04:23	16°M.12'25	
retrograde	11335 Feb 02 06:02	11°M.43'42		evening set	11341 Oct 14 18:11	17°M.24'53	
opposition	11335 Apr 25 19:37	10°M.41'43	-5°32'52	max. Earth dist.	11341 Oct 28 17:10	17°M.45'29	44.71955 AU
min. Earth dist.	11335 Apr 26 21:51	10°M.40'26	43.95059 AU				
direct	11335 Jul 16 05:18	9°M.40'10		conjunction	11341 Oct 30 05:16	17°M.47'43	-3°22'40
evening set	11335 Oct 09 02:28	10°M.51'25		minimum elong	11341 Oct 30 05:21	17°M.47'44	3°22'12
				morning rise	11341 Nov 14 18:12	18°M.10'42	
conjunction	11335 Oct 23 23:26	11°M.12'53	-5°09'57	retrograde	11342 Feb 09 20:26	19°M.25'38	
minimum elong	11335 Oct 23 23:34	11°M.12'53	5°09'32	opposition	11342 May 03 03:53	18°M.22'19	-3°22'17
max. Earth dist.	11335 Oct 22 19:36	11°M.11'11	45.85547 AU	min. Earth dist.	11342 May 04 13:05	18°M.20'38	42.62086 AU
morning rise	11335 Nov 07 22:06	11°M.34'28		direct	11342 Jul 23 13:18	17°M.19'16	
retrograde	11336 Feb 03 13:06	12°M.48'19		evening set	11342 Oct 16 01:53	18°M.32'01	
opposition	11336 Apr 26 03:06	11°M.46'11	-5°14'58	max. Earth dist.	11342 Oct 30 02:45	18°M.52'49	44.51778 AU
min. Earth dist.	11336 Apr 27 05:42	11°M.44'53	43.77378 AU				
direct	11336 Jul 16 13:59	10°M.44'28		conjunction	11342 Oct 31 14:57	18°M.55'05	-3°03'57
evening set	11336 Oct 09 08:18	11°M.55'54		minimum elong	11342 Oct 31 15:02	18°M.55'05	3°03'27
max. Earth dist.	11336 Oct 23 01:42	12°M.15'46	45.67737 AU	morning rise	11342 Nov 16 05:33	19°M.18'16	
				retrograde	11343 Feb 11 04:48	20°M.33'28	
conjunction	11336 Oct 24 07:49	12°M.17'36	-4°52'39	opposition	11343 May 04 12:41	19°M.29'56	-3°02'36
minimum elong	11336 Oct 24 07:57	12°M.17'36	4°52'14	min. Earth dist.	11343 May 05 22:39	19°M.28'13	42.41728 AU
morning rise	11336 Nov 08 09:21	12°M.39'26		direct	11343 Jul 24 23:01	18°M.26'40	
retrograde	11337 Feb 03 21:30	13°M.53'26		evening set	11343 Oct 17 10:04	19°M.39'43	
opposition	11337 Apr 27 10:51	12°M.51'09	-4°56'49	max. Earth dist.	11343 Oct 31 11:43	20°M.00'39	44.31388 AU
min. Earth dist.	11337 Apr 28 14:59	12°M.49'45	43.59233 AU				
direct	11337 Jul 17 21:38	11°M.49'15		conjunction	11343 Nov 02 00:47	20°M.02'59	-2°44'59
evening set	11337 Oct 10 14:28	13°M.00'51		minimum elong	11343 Nov 02 00:52	20°M.02'59	2°44'30
max. Earth dist.	11337 Oct 24 09:36	13°M.20'53	45.49429 AU	morning rise	11343 Nov 17 17:10	20°M.26'23	
				retrograde	11344 Feb 12 16:24	21°M.41'53	
conjunction	11337 Oct 25 16:42	13°M.22'47	-4°35'08	opposition	11344 May 04 21:41	20°M.38'09	-2°42'39
minimum elong	11337 Oct 25 16:49	13°M.22'48	4°34'42	min. Earth dist.	11344 May 06 07:38	20°M.36'25	42.21180 AU
morning rise	11337 Nov 09 20:39	13°M.44'52		direct	11344 Jul 25 06:01	19°M.34'39	
retrograde	11338 Feb 05 04:57	14°M.59'02		evening set	11344 Oct 17 18:35	20°M.48'02	
opposition	11338 Apr 28 18:41	13°M.56'33	-4°38'25	max. Earth dist.	11344 Oct 31 20:30	21°M.09'06	44.10788 AU
min. Earth dist.	11338 Apr 30 00:19	13°M.55'05	43.40590 AU				
direct	11338 Jul 19 06:56	12°M.54'26		conjunction	11344 Nov 02 10:52	21°M.11'31	-2°25'46
evening set	11338 Oct 11 20:58	14°M.06'14		minimum elong	11344 Nov 02 10:56	21°M.11'31	2°25'15
max. Earth dist.	11338 Oct 25 17:19	14°M.26'25	45.30655 AU	morning rise	11344 Nov 18 04:48	21°M.35'08	
				retrograde	11345 Feb 13 05:27	22°M.50'57	
conjunction	11338 Oct 27 01:37	14°M.28'24	-4°17'22	opposition	11345 May 06 07:05	21°M.47'02	-2°22'26
minimum elong	11338 Oct 27 01:43	14°M.28'24	4°16'56	min. Earth dist.	11345 May 07 18:34	21°M.45'13	42.00425 AU
morning rise	11338 Nov 11 08:02	14°M.50'42		direct	11345 Jul 26 12:27	20°M.43'19	
	11338 Nov 17 21:27	15°M.		evening set	11345 Oct 19 03:36	21°M.57'05	
retrograde	11339 Feb 06 16:13	16°M.05'02		max. Earth dist.	11345 Nov 02 07:13	22°M.18'21	43.89982 AU
opposition	11339 Apr 30 02:41	15°M.02'22	-4°19'46				
min. Earth dist.	11339 May 01 08:38	15°M.00'52	43.21504 AU	conjunction	11345 Nov 03 21:25	22°M.20'46	-2°06'19
	11339 May 02 02:01	15°K.M.		minimum elong	11345 Nov 03 21:28	22°M.20'46	2°05'49
direct	11339 Jul 20 12:38	14°M.00'02		morning rise	11345 Nov 19 16:37	22°M.44'35	
	11339 Oct 04 14:48	15°M.		retrograde	11346 Feb 14 17:27	24°M.00'45	
evening set	11339 Oct 13 03:38	15°M.12'02		opposition	11346 May 07 16:27	22°M.56'38	-2°01'57
max. Earth dist.	11339 Oct 27 00:27	15°M.32'19	45.11438 AU	min. Earth dist.	11346 May 09 03:46	22°M.54'50	41.79450 AU
				direct	11346 Jul 27 21:01	21°M.52'43	
conjunction	11339 Oct 28 10:31	15°M.34'25	-3°59'23	evening set	11346 Oct 20 13:12	23°M.06'53	
minimum elong	11339 Oct 28 10:38	15°M.34'26	3°58'56	max. Earth dist.	11346 Nov 03 15:56	23°M.28'14	43.68927 AU
morning rise	11339 Nov 12 19:16	15°M.56'57					
retrograde	11340 Feb 08 03:06	17°M.11'28		conjunction	11346 Nov 05 08:05	23°M.30'47	-1°46'37

minimum elong	11346 Nov 05 08:08	23° $\mathcal{M}$ 30'47	1°46'05	conjunction	11352 Nov 12 07:30	0° $\mathcal{A}$ 47'23	0°16'30
morning rise	11346 Nov 21 04:38	23° $\mathcal{M}$ 54'48		minimum elong	11352 Nov 12 07:29	0° $\mathcal{A}$ 47'23	0°17'05
retrograde	11347 Feb 16 05:15	25° $\mathcal{M}$ 11'21		morning rise	11352 Nov 28 07:10	1° $\mathcal{A}$ 12'27	
opposition	11347 May 09 02:18	24° $\mathcal{M}$ 07'03	-1°41'12	retrograde	11353 Feb 23 08:05	2° $\mathcal{A}$ 31'41	
min. Earth dist.	11347 May 10 15:14	24° $\mathcal{M}$ 05'09	41.58214 AU	opposition	11353 May 15 19:16	1° $\mathcal{A}$ 25'51	0°28'34
direct	11347 Jul 29 05:49	23° $\mathcal{M}$ 02'55		min. Earth dist.	11353 May 17 13:50	1° $\mathcal{A}$ 23'36	40.23077 AU
evening set	11347 Oct 21 23:01	24° $\mathcal{M}$ 17'31		direct	11353 Aug 04 20:34	0° $\mathcal{A}$ 20'01	
max. Earth dist.	11347 Nov 05 02:43	24° $\mathcal{M}$ 39'02	43.47559 AU	evening set	11353 Oct 28 21:57	1° $\mathcal{A}$ 37'36	
				max. Earth dist.	11353 Nov 11 20:44	1° $\mathcal{A}$ 59'32	42.11492 AU
conjunction	11347 Nov 06 19:07	24° $\mathcal{M}$ 41'37	-1°26'41				
minimum elong	11347 Nov 06 19:09	24° $\mathcal{M}$ 41'37	1°26'09	conjunction	11353 Nov 13 20:26	2° $\mathcal{A}$ 02'42	0°37'48
morning rise	11347 Nov 22 16:30	25° $\mathcal{M}$ 05'50		minimum elong	11353 Nov 13 20:25	2° $\mathcal{A}$ 02'41	0°38'24
retrograde	11348 Feb 17 13:46	26° $\mathcal{M}$ 22'48		morning rise	11353 Nov 29 20:06	2° $\mathcal{A}$ 27'54	
opposition	11348 May 09 12:28	25° $\mathcal{M}$ 18'18	-1°20'13	retrograde	11354 Feb 24 20:12	3° $\mathcal{A}$ 47'39	
min. Earth dist.	11348 May 11 02:14	25° $\mathcal{M}$ 16'20	41.36629 AU	opposition	11354 May 17 06:57	2° $\mathcal{A}$ 41'32	0°51'04
direct	11348 Jul 29 18:09	24° $\mathcal{M}$ 13'56		min. Earth dist.	11354 May 19 02:15	2° $\mathcal{A}$ 39'13	39.99530 AU
evening set	11348 Oct 22 09:41	25° $\mathcal{M}$ 28'59		direct	11354 Aug 06 08:16	1° $\mathcal{A}$ 35'21	
max. Earth dist.	11348 Nov 05 12:35	25° $\mathcal{M}$ 50'34	43.25823 AU	evening set	11354 Oct 30 11:31	2° $\mathcal{A}$ 53'31	
				max. Earth dist.	11354 Nov 13 09:21	3° $\mathcal{A}$ 15'31	41.87835 AU
conjunction	11348 Nov 07 06:34	25° $\mathcal{M}$ 53'16	-1°06'31				
minimum elong	11348 Nov 07 06:36	25° $\mathcal{M}$ 53'16	1°05'58	conjunction	11354 Nov 15 09:46	3° $\mathcal{A}$ 18'45	0°59'20
morning rise	11348 Nov 23 04:55	26° $\mathcal{M}$ 17'40		minimum elong	11354 Nov 15 09:44	3° $\mathcal{A}$ 18'45	0°59'56
retrograde	11349 Feb 18 02:18	27° $\mathcal{M}$ 35'04		morning rise	11354 Dec 01 08:56	3° $\mathcal{A}$ 44'06	
opposition	11349 May 10 22:45	26° $\mathcal{M}$ 30'20	-0°58'58	retrograde	11355 Feb 26 08:21	5° $\mathcal{A}$ 04'24	
min. Earth dist.	11349 May 12 13:16	26° $\mathcal{M}$ 28'20	41.14663 AU	opposition	11355 May 18 19:13	3° $\mathcal{A}$ 57'59	1°13'49
direct	11349 Jul 31 02:59	25° $\mathcal{M}$ 25'43		min. Earth dist.	11355 May 20 15:34	3° $\mathcal{A}$ 55'36	39.75829 AU
evening set	11349 Oct 23 20:48	26° $\mathcal{M}$ 41'14		direct	11355 Aug 07 20:01	2° $\mathcal{A}$ 51'29	
max. Earth dist.	11349 Nov 06 22:50	27° $\mathcal{M}$ 02'53	43.03663 AU	evening set	11355 Nov 01 01:31	4° $\mathcal{A}$ 10'15	
				max. Earth dist.	11355 Nov 14 22:49	4° $\mathcal{A}$ 32'22	41.64060 AU
conjunction	11349 Nov 08 18:25	27° $\mathcal{M}$ 05'42	-0°46'07				
minimum elong	11349 Nov 08 18:27	27° $\mathcal{M}$ 05'42	0°45'34	conjunction	11355 Nov 16 23:15	4° $\mathcal{A}$ 35'37	1°21'05
morning rise	11349 Nov 24 17:23	27° $\mathcal{M}$ 30'17		minimum elong	11355 Nov 16 23:12	4° $\mathcal{A}$ 35'37	1°21'42
retrograde	11350 Feb 19 15:38	28° $\mathcal{M}$ 48'08		morning rise	11355 Dec 02 21:51	5° $\mathcal{A}$ 01'04	
opposition	11350 May 12 09:33	27° $\mathcal{M}$ 43'09	-0°37'28	retrograde	11356 Feb 27 23:46	6° $\mathcal{A}$ 21'59	
min. Earth dist.	11350 May 14 02:01	27° $\mathcal{M}$ 41'02	40.92277 AU	opposition	11356 May 19 07:43	5° $\mathcal{A}$ 15'16	1°36'48
direct	11350 Aug 01 10:53	26° $\mathcal{M}$ 38'15		min. Earth dist.	11356 May 21 03:34	5° $\mathcal{A}$ 12'54	39.52032 AU
evening set	11350 Oct 25 08:17	27° $\mathcal{M}$ 54'15		direct	11356 Aug 08 05:49	4° $\mathcal{A}$ 08'25	
max. Earth dist.	11350 Nov 08 10:25	28° $\mathcal{M}$ 16'01	42.81104 AU	evening set	11356 Nov 01 16:23	5° $\mathcal{A}$ 27'52	
				max. Earth dist.	11356 Nov 15 11:18	5° $\mathcal{A}$ 49'58	41.40182 AU
conjunction	11350 Nov 10 06:30	28° $\mathcal{M}$ 18'53	-0°25'29				
minimum elong	11350 Nov 10 06:30	28° $\mathcal{M}$ 18'53	0°24'56	conjunction	11356 Nov 17 13:16	5° $\mathcal{A}$ 53'21	1°43'03
morning rise	11350 Nov 26 05:51	28° $\mathcal{M}$ 43'38		minimum elong	11356 Nov 17 13:13	5° $\mathcal{A}$ 53'20	1°43'39
	11351 Feb 08 13:36	0° $\mathcal{A}$		morning rise	11356 Dec 03 11:07	6° $\mathcal{A}$ 18'55	
retrograde	11351 Feb 21 05:21	0° $\mathcal{A}$ 01'55		retrograde	11357 Feb 28 16:03	7° $\mathcal{A}$ 40'28	
	11351 Mar 05 21:06	30° $\mathcal{R}\mathcal{M}$		opposition	11357 May 20 20:36	6° $\mathcal{A}$ 33'27	2°00'00
opposition	11351 May 13 20:26	28° $\mathcal{M}$ 56'41	-0°15'42	min. Earth dist.	11357 May 22 17:59	6° $\mathcal{A}$ 31'00	39.28156 AU
min. Earth dist.	11351 May 15 12:58	28° $\mathcal{M}$ 54'33	40.69512 AU	direct	11357 Aug 09 16:08	5° $\mathcal{A}$ 26'18	
direct	11351 Aug 02 21:15	27° $\mathcal{M}$ 51'29		evening set	11357 Nov 03 07:47	6° $\mathcal{A}$ 46'27	
evening set	11351 Oct 26 20:23	29° $\mathcal{M}$ 07'59		max. Earth dist.	11357 Nov 17 02:16	7° $\mathcal{A}$ 08'40	41.16220 AU
max. Earth dist.	11351 Nov 09 20:31	29° $\mathcal{M}$ 29'45	42.58181 AU				
				conjunction	11357 Nov 19 03:50	7° $\mathcal{A}$ 12'02	2°05'13
conjunction	11351 Nov 11 18:46	29° $\mathcal{M}$ 32'47	-0°04'41	minimum elong	11357 Nov 19 03:46	7° $\mathcal{A}$ 12'02	2°05'50
minimum elong	11351 Nov 11 18:47	29° $\mathcal{M}$ 32'47	0°04'07	morning rise	11357 Dec 05 00:28	7° $\mathcal{A}$ 37'43	
behind sun begin	11351 Nov 11 12:23	29° $\mathcal{M}$ 32'23		retrograde	11358 Mar 02 07:35	8° $\mathcal{A}$ 59'56	
behind sun end	11351 Nov 12 01:11	29° $\mathcal{M}$ 33'10		opposition	11358 May 22 09:52	7° $\mathcal{A}$ 52'39	2°23'26
morning rise	11351 Nov 27 18:32	29° $\mathcal{M}$ 57'41		min. Earth dist.	11358 May 24 07:03	7° $\mathcal{A}$ 50'11	39.04186 AU
	11351 Nov 29 06:55	0° $\mathcal{A}$		direct	11358 Aug 11 06:15	6° $\mathcal{A}$ 45'10	
asc. node	11352 Jan 31 05:39	1° $\mathcal{A}$ 10'21		evening set	11358 Nov 04 23:57	8° $\mathcal{A}$ 06'06	
retrograde	11352 Feb 22 20:27	1° $\mathcal{A}$ 16'26		max. Earth dist.	11358 Nov 18 15:23	8° $\mathcal{A}$ 28'17	40.92145 AU
opposition	11352 May 14 07:43	0° $\mathcal{A}$ 10'55	0°06'18				
min. Earth dist.	11352 May 16 01:59	0° $\mathcal{A}$ 08'41	40.46431 AU	conjunction	11358 Nov 20 18:33	8° $\mathcal{A}$ 31'47	2°27'34
	11352 May 22 23:13	30° $\mathcal{R}\mathcal{M}$		minimum elong	11358 Nov 20 18:28	8° $\mathcal{A}$ 31'47	2°28'11
direct	11352 Aug 03 07:15	29° $\mathcal{M}$ 05'24		morning rise	11358 Dec 06 14:00	8° $\mathcal{A}$ 57'33	
	11352 Oct 12 03:42	0° $\mathcal{A}$		retrograde	11359 Mar 04 00:26	10° $\mathcal{A}$ 20'30	
evening set	11352 Oct 27 08:46	0° $\mathcal{A}$ 22'25		opposition	11359 May 23 23:34	9° $\mathcal{A}$ 12'56	2°47'05
max. Earth dist.	11352 Nov 10 09:18	0° $\mathcal{A}$ 44'21	42.34956 AU	min. Earth dist.	11359 May 25 21:44	9° $\mathcal{A}$ 10'24	38.80097 AU
				direct	11359 Aug 12 19:20	8° $\mathcal{A}$ 05'08	

evening set	11359 Nov 06 16:47	9° <del>♂</del> 26'52		opposition	11366 Jun 02 11:54	19° <del>♂</del> 07'24	5°38'00
max. Earth dist.	11359 Nov 20 06:31	9° <del>♂</del> 49'06	40.67897 AU	min. Earth dist.	11366 Jun 04 15:27	19° <del>♂</del> 04'27	37.05254 AU
				direct	11366 Aug 22 01:55	17° <del>♂</del> 57'00	
conjunction	11359 Nov 22 10:00	9° <del>♂</del> 52'39	2°50'07	evening set	11366 Nov 17 12:41	19° <del>♂</del> 25'27	
minimum elong	11359 Nov 22 09:55	9° <del>♂</del> 52'38	2°50'45	max. Earth dist.	11366 Nov 30 01:02	19° <del>♂</del> 47'06	38.91684 AU
morning rise	11359 Dec 08 03:42	10° <del>♂</del> 18'30					
retrograde	11360 Mar 04 15:02	11° <del>♂</del> 42'13		conjunction	11366 Dec 02 11:09	19° <del>♂</del> 51'20	5°32'28
opposition	11360 May 24 13:43	10° <del>♂</del> 34'22	3°10'57	minimum elong	11366 Dec 02 10:59	19° <del>♂</del> 51'19	5°33'08
min. Earth dist.	11360 May 26 12:55	10° <del>♂</del> 31'46	38.55810 AU	morning rise	11366 Dec 17 09:34	20° <del>♂</del> 17'14	
direct	11360 Aug 13 09:27	9° <del>♂</del> 26'15		retrograde	11367 Mar 15 21:56	21° <del>♂</del> 47'22	
evening set	11360 Nov 07 10:29	10° <del>♂</del> 48'50		opposition	11367 Jun 04 05:21	20° <del>♂</del> 37'07	6°03'02
max. Earth dist.	11360 Nov 20 21:24	11° <del>♂</del> 11'01	40.43428 AU	min. Earth dist.	11367 Jun 06 09:50	20° <del>♂</del> 34'05	36.79743 AU
				direct	11367 Aug 23 17:52	19° <del>♂</del> 26'18	
conjunction	11360 Nov 23 01:53	11° <del>♂</del> 14'40	3°12'50	evening set	11367 Nov 19 11:57	20° <del>♂</del> 55'54	
minimum elong	11360 Nov 23 01:47	11° <del>♂</del> 14'40	3°13'28	max. Earth dist.	11367 Dec 01 20:30	21° <del>♂</del> 17'27	38.66047 AU
morning rise	11360 Dec 08 17:49	11° <del>♂</del> 40'35					
retrograde	11361 Mar 06 07:34	13° <del>♂</del> 05'07		conjunction	11367 Dec 04 06:27	21° <del>♂</del> 21'42	5°56'08
opposition	11361 May 26 04:18	11° <del>♂</del> 56'58	3°35'00	minimum elong	11367 Dec 04 06:15	21° <del>♂</del> 21'41	5°56'49
min. Earth dist.	11361 May 28 03:50	11° <del>♂</del> 54'20	38.31280 AU	morning rise	11367 Dec 19 00:49	21° <del>♂</del> 47'32	
direct	11361 Aug 14 22:25	10° <del>♂</del> 48'31		retrograde	11368 Mar 16 18:12	23° <del>♂</del> 18'45	
evening set	11361 Nov 09 05:01	12° <del>♂</del> 11'58		opposition	11368 Jun 04 23:07	22° <del>♂</del> 08'08	6°28'09
max. Earth dist.	11361 Nov 22 11:59	12° <del>♂</del> 34'04	40.18667 AU	min. Earth dist.	11368 Jun 07 03:02	22° <del>♂</del> 05'08	36.54280 AU
				direct	11368 Aug 24 09:36	20° <del>♂</del> 56'54	
conjunction	11361 Nov 24 18:19	12° <del>♂</del> 37'52	3°35'44	evening set	11368 Nov 20 12:10	22° <del>♂</del> 27'43	
minimum elong	11361 Nov 24 18:12	12° <del>♂</del> 37'51	3°36'23	max. Earth dist.	11368 Dec 02 14:56	22° <del>♂</del> 49'02	38.40455 AU
morning rise	11361 Dec 10 08:05	13° <del>♂</del> 03'50					
retrograde	11362 Mar 08 01:43	14° <del>♂</del> 29'12		conjunction	11368 Dec 05 02:17	22° <del>♂</del> 53'26	6°19'52
opposition	11362 May 27 19:21	13° <del>♂</del> 20'44	3°59'16	minimum elong	11368 Dec 05 02:05	22° <del>♂</del> 53'25	6°20'34
min. Earth dist.	11362 May 29 20:46	13° <del>♂</del> 17'58	38.06469 AU	morning rise	11368 Dec 19 16:20	23° <del>♂</del> 19'09	
direct	11362 Aug 16 10:16	12° <del>♂</del> 11'55		retrograde	11369 Mar 18 16:53	24° <del>♂</del> 51'33	
evening set	11362 Nov 11 00:11	13° <del>♂</del> 36'17		opposition	11369 Jun 06 17:39	23° <del>♂</del> 40'34	6°53'21
max. Earth dist.	11362 Nov 24 04:50	13° <del>♂</del> 58'23	39.93639 AU	min. Earth dist.	11369 Jun 08 22:49	23° <del>♂</del> 37'28	36.28891 AU
				direct	11369 Aug 25 23:54	22° <del>♂</del> 28'55	
conjunction	11362 Nov 26 11:14	14° <del>♂</del> 02'13	3°58'48	evening set	11369 Nov 22 13:18	24° <del>♂</del> 01'02	
minimum elong	11362 Nov 26 11:06	14° <del>♂</del> 02'12	3°59'27	max. Earth dist.	11369 Dec 04 12:11	24° <del>♂</del> 22'14	38.14939 AU
morning rise	11362 Dec 11 22:28	14° <del>♂</del> 28'12					
retrograde	11363 Mar 09 20:06	15° <del>♂</del> 54'27		conjunction	11369 Dec 06 22:50	24° <del>♂</del> 26'37	6°43'39
opposition	11363 May 29 10:51	14° <del>♂</del> 45'39	4°23'42	minimum elong	11369 Dec 06 22:37	24° <del>♂</del> 26'36	6°44'21
min. Earth dist.	11363 May 31 12:04	14° <del>♂</del> 42'53	37.81409 AU	morning rise	11369 Dec 21 07:56	24° <del>♂</del> 52'13	
direct	11363 Aug 18 00:42	13° <del>♂</del> 36'27		retrograde	11370 Mar 20 14:24	26° <del>♂</del> 25'49	
evening set	11363 Nov 12 20:04	15° <del>♂</del> 01'47		opposition	11370 Jun 08 12:35	25° <del>♂</del> 14'29	7°18'36
max. Earth dist.	11363 Nov 25 19:57	15° <del>♂</del> 23'43	39.68371 AU	min. Earth dist.	11370 Jun 10 17:11	25° <del>♂</del> 11'24	36.03583 AU
				direct	11370 Aug 27 18:41	24° <del>♂</del> 02'27	
conjunction	11363 Nov 28 04:19	15° <del>♂</del> 27'43	4°22'01	evening set	11370 Nov 24 15:34	25° <del>♂</del> 35'54	
minimum elong	11363 Nov 28 04:11	15° <del>♂</del> 27'43	4°22'41	max. Earth dist.	11370 Dec 06 07:53	25° <del>♂</del> 56'49	37.89497 AU
morning rise	11363 Dec 13 13:00	15° <del>♂</del> 53'43					
retrograde	11364 Mar 10 15:38	17° <del>♂</del> 20'52		conjunction	11370 Dec 08 19:50	26° <del>♂</del> 01'20	7°07'27
opposition	11364 May 30 02:49	16° <del>♂</del> 11'42	4°48'19	minimum elong	11370 Dec 08 19:37	26° <del>♂</del> 01'19	7°08'08
min. Earth dist.	11364 Jun 01 05:37	16° <del>♂</del> 08'51	37.56150 AU	morning rise	11370 Dec 22 23:55	26° <del>♂</del> 26'47	
direct	11364 Aug 18 15:31	15° <del>♂</del> 02'07		retrograde	11371 Mar 22 15:10	28° <del>♂</del> 01'39	
evening set	11364 Nov 13 16:44	16° <del>♂</del> 28'27		opposition	11371 Jun 10 08:13	26° <del>♂</del> 49'59	7°43'52
max. Earth dist.	11364 Nov 26 13:53	16° <del>♂</del> 50'21	39.42911 AU	min. Earth dist.	11371 Jun 12 13:38	26° <del>♂</del> 46'50	35.78351 AU
				direct	11371 Aug 29 13:37	25° <del>♂</del> 37'33	
conjunction	11364 Nov 28 22:13	16° <del>♂</del> 54'23	4°45'23	evening set	11371 Nov 26 18:37	27° <del>♂</del> 12'24	
minimum elong	11364 Nov 28 22:04	16° <del>♂</del> 54'23	4°46'02	max. Earth dist.	11371 Dec 08 05:47	27° <del>♂</del> 33'07	37.64080 AU
morning rise	11364 Dec 14 03:41	17° <del>♂</del> 20'23					
retrograde	11365 Mar 12 08:56	18° <del>♂</del> 48'27		conjunction	11371 Dec 10 17:34	27° <del>♂</del> 37'40	7°31'14
opposition	11365 May 31 19:06	17° <del>♂</del> 38'57	5°13'05	minimum elong	11371 Dec 10 17:19	27° <del>♂</del> 37'39	7°31'56
min. Earth dist.	11365 Jun 02 22:17	17° <del>♂</del> 36'02	37.30737 AU	morning rise	11371 Dec 24 15:57	28° <del>♂</del> 02'55	
direct	11365 Aug 20 09:49	16° <del>♂</del> 28'57		retrograde	11372 Mar 23 13:48	29° <del>♂</del> 39'09	
evening set	11365 Nov 15 14:25	17° <del>♂</del> 56'20		opposition	11372 Jun 11 04:32	28° <del>♂</del> 27'07	8°09'09
max. Earth dist.	11365 Nov 28 06:53	18° <del>♂</del> 18'05	39.17334 AU	min. Earth dist.	11372 Jun 13 10:35	28° <del>♂</del> 23'54	35.53119 AU
				direct	11372 Aug 30 10:32	27° <del>♂</del> 14'16	
conjunction	11365 Nov 30 16:28	18° <del>♂</del> 22'15	5°08'52	evening set	11372 Nov 27 23:09	28° <del>♂</del> 50'36	
minimum elong	11365 Nov 30 16:18	18° <del>♂</del> 22'14	5°09'33	max. Earth dist.	11372 Dec 09 03:20	29° <del>♂</del> 10'59	37.38643 AU
morning rise	11365 Dec 15 18:43	18° <del>♂</del> 48'12					
retrograde	11366 Mar 14 04:51	20° <del>♂</del> 17'16		conjunction	11372 Dec 11 16:03	29° <del>♂</del> 15'39	7°55'00

minimum elong	11372 Dec 11 15:49	29° $\overline{15}$ '37	7°55'42	min. Earth dist.	11379 Jun 26 05:34	10° $\overline{29}$ '01	33.76275 AU
morning rise	11372 Dec 25 08:32	29° $\overline{14}$ '40/41		direct	11379 Sep 11 18:21	9° $\overline{31}$ '6/23	
	11373 Jan 05 06:56	0° $\overline{3}$		evening set	11379 Dec 13 14:14	11° $\overline{30}$ '4/42	
retrograde	11373 Mar 25 13:37	1° $\overline{31}$ '18/17		max. Earth dist.	11379 Dec 22 08:40	11° $\overline{32}$ '1/47	35.60383 AU
opposition	11373 Jun 13 01:17	0° $\overline{30}$ '5/54	8°34'25				
min. Earth dist.	11373 Jun 15 07:31	0° $\overline{30}$ '2/39	35.27856 AU	conjunction	11379 Dec 25 00:20	11° $\overline{32}$ '7/00	10°38'24
	11373 Jun 17 03:59	30° $\overline{R}$ $\overline{1}$		minimum elong	11379 Dec 25 00:02	11° $\overline{32}$ '6/59	10°39'06
direct	11373 Sep 01 06:21	28° $\overline{15}$ '52/37		morning rise	11380 Jan 05 09:39	11° $\overline{32}$ '4/16	
	11373 Nov 12 18:26	0° $\overline{3}$		retrograde	11380 Apr 07 04:35	13° $\overline{33}$ '8/15	
evening set	11373 Nov 30 04:43	0° $\overline{33}$ '0/29		opposition	11380 Jun 24 22:13	12° $\overline{32}$ '2/52	11°28'11
max. Earth dist.	11373 Dec 11 01:26	0° $\overline{35}$ '0/28	37.13126 AU	min. Earth dist.	11380 Jun 27 06:30	12° $\overline{31}$ '9/19	33.51587 AU
				direct	11380 Sep 12 19:10	11° $\overline{30}$ '6/11	
conjunction	11373 Dec 13 15:19	0° $\overline{35}$ '5/16	8°18'44	evening set	11380 Dec 15 04:10	12° $\overline{32}$ '5/31	
minimum elong	11373 Dec 13 15:04	0° $\overline{35}$ '5/15	8°19'26	max. Earth dist.	11380 Dec 23 12:33	13° $\overline{32}$ '1/57	35.35581 AU
morning rise	11373 Dec 27 01:20	1° $\overline{32}$ '0/02					
retrograde	11374 Mar 27 11:33	2° $\overline{35}$ '9/06		conjunction	11380 Dec 26 04:25	13° $\overline{31}$ '8/14	11°00'49
opposition	11374 Jun 14 23:00	1° $\overline{34}$ '6/19	8°59'39	minimum elong	11380 Dec 26 04:07	13° $\overline{31}$ '8/12	11°01'31
min. Earth dist.	11374 Jun 17 06:39	1° $\overline{34}$ '2/57	35.02520 AU	morning rise	11381 Jan 06 03:45	13° $\overline{33}$ '9/53	
direct	11374 Sep 03 01:44	0° $\overline{33}$ '2/36		retrograde	11381 Apr 09 08:25	15° $\overline{33}$ '0/48	
evening set	11374 Dec 02 11:19	2° $\overline{31}$ '2/01		opposition	11381 Jun 27 00:35	14° $\overline{31}$ '4/59	11°52'00
max. Earth dist.	11374 Dec 13 01:21	2° $\overline{33}$ '1/41	36.87550 AU	min. Earth dist.	11381 Jun 29 09:27	14° $\overline{31}$ '1/23	33.27237 AU
				direct	11381 Sep 14 18:58	12° $\overline{32}$ '5/51	
conjunction	11374 Dec 15 15:05	2° $\overline{33}$ '6/30	8°42'24	evening set	11381 Dec 17 19:36	14° $\overline{32}$ '5/18	
minimum elong	11374 Dec 15 14:49	2° $\overline{33}$ '6/29	8°43'06	max. Earth dist.	11381 Dec 25 18:21	15° $\overline{32}$ '0/06	35.11158 AU
morning rise	11374 Dec 28 18:09	3° $\overline{33}$ '0/0/58					
retrograde	11375 Mar 29 11:57	4° $\overline{34}$ '1/32		conjunction	11381 Dec 28 09:13	15° $\overline{31}$ '1/21	11°22'50
opposition	11375 Jun 16 21:13	3° $\overline{32}$ '8/20	9°24'49	minimum elong	11381 Dec 28 08:54	15° $\overline{31}$ '1/19	11°23'32
min. Earth dist.	11375 Jun 19 04:23	3° $\overline{32}$ '4/59	34.77139 AU	morning rise	11382 Jan 07 21:53	15° $\overline{33}$ '2/20	
direct	11375 Sep 04 22:06	2° $\overline{31}$ '4/08		retrograde	11382 Apr 11 14:15	17° $\overline{32}$ '5/16	
evening set	11375 Dec 04 19:10	3° $\overline{35}$ '5/11		opposition	11382 Jun 29 03:41	16° $\overline{30}$ '9/04	12°15'24
max. Earth dist.	11375 Dec 15 00:09	4° $\overline{33}$ '1/4/21	36.61934 AU	min. Earth dist.	11382 Jul 01 11:11	16° $\overline{30}$ '5/32	33.03279 AU
				direct	11382 Sep 16 19:57	14° $\overline{32}$ '5/1/29	
conjunction	11375 Dec 17 15:34	4° $\overline{31}$ '9/21	9°05'58	evening set	11382 Dec 20 12:12	16° $\overline{32}$ '4/6/09	
minimum elong	11375 Dec 17 15:18	4° $\overline{31}$ '9/19	9°06'40	max. Earth dist.	11382 Dec 27 23:11	17° $\overline{30}$ '1/0/8	34.87121 AU
morning rise	11375 Dec 30 11:26	4° $\overline{34}$ '3/28					
retrograde	11376 Mar 30 14:06	6° $\overline{32}$ '5/35		conjunction	11382 Dec 30 14:37	17° $\overline{30}$ '6/28	11°44'25
opposition	11376 Jun 17 20:04	5° $\overline{31}$ '1/57	9°49'53	minimum elong	11382 Dec 30 14:19	17° $\overline{30}$ '6/27	11°45'07
min. Earth dist.	11376 Jun 20 04:45	5° $\overline{30}$ '8/30	34.51763 AU	morning rise	11383 Jan 09 16:13	17° $\overline{32}$ '6/44	
direct	11376 Sep 05 17:48	3° $\overline{35}$ '7/16		retrograde	11383 Apr 13 20:51	19° $\overline{32}$ '1/48	
evening set	11376 Dec 06 04:06	5° $\overline{34}$ '0/01		opposition	11383 Jul 01 07:42	18° $\overline{30}$ '5/13	12°38'18
max. Earth dist.	11376 Dec 16 02:00	5° $\overline{35}$ '8/47	36.36341 AU	min. Earth dist.	11383 Jul 03 15:55	18° $\overline{30}$ '1/37	32.79715 AU
				direct	11383 Sep 18 20:59	16° $\overline{32}$ '4/7/11	
conjunction	11376 Dec 18 16:53	6° $\overline{30}$ '3/47	9°29'23	evening set	11383 Dec 23 06:31	18° $\overline{32}$ '4/4/10	
minimum elong	11376 Dec 18 16:37	6° $\overline{30}$ '3/46	9°30'06	max. Earth dist.	11383 Dec 30 07:05	18° $\overline{32}$ '5/8/26	34.63468 AU
morning rise	11376 Dec 31 04:45	6° $\overline{32}$ '7/31					
retrograde	11377 Apr 01 16:27	8° $\overline{31}$ '1/15		conjunction	11384 Jan 01 21:07	19° $\overline{30}$ '3/42	12°05'31
opposition	11377 Jun 19 19:35	6° $\overline{35}$ '7/11	10°14'48	minimum elong	11384 Jan 01 20:48	19° $\overline{30}$ '3/40	12°06'12
min. Earth dist.	11377 Jun 22 03:54	6° $\overline{35}$ '3/43	34.26439 AU	morning rise	11384 Jan 11 10:42	19° $\overline{32}$ '3/10	
direct	11377 Sep 07 18:03	5° $\overline{34}$ '2/00		retrograde	11384 Apr 15 04:44	21° $\overline{32}$ '0/25	
evening set	11377 Dec 08 14:22	7° $\overline{32}$ '6/31		opposition	11384 Jul 02 12:19	20° $\overline{30}$ '3/29	13°00'42
max. Earth dist.	11377 Dec 18 02:31	7° $\overline{34}$ '4/42	36.10833 AU	min. Earth dist.	11384 Jul 04 19:41	19° $\overline{35}$ '9/54	32.56512 AU
				direct	11384 Sep 20 01:10	18° $\overline{32}$ '4/5/01	
conjunction	11377 Dec 20 18:40	7° $\overline{34}$ '9/51	9°52'38	evening set	11384 Dec 25 02:28	20° $\overline{32}$ '4/4/26	
minimum elong	11377 Dec 20 18:22	7° $\overline{34}$ '9/50	9°53'20	max. Earth dist.	11384 Dec 31 13:22	20° $\overline{32}$ '5/7/40	34.40156 AU
morning rise	11378 Jan 01 22:20	8° $\overline{31}$ '3/09					
retrograde	11378 Apr 03 21:31	9° $\overline{35}$ '8/33		conjunction	11385 Jan 03 04:25	21° $\overline{30}$ '3/04	12°26'04
opposition	11378 Jun 21 19:43	8° $\overline{34}$ '4/02	10°39'32	minimum elong	11385 Jan 03 04:07	21° $\overline{30}$ '3/03	12°26'46
min. Earth dist.	11378 Jun 24 04:32	8° $\overline{34}$ '0/31	34.01256 AU	morning rise	11385 Jan 12 05:34	21° $\overline{32}$ '1/40	
direct	11378 Sep 09 17:39	7° $\overline{32}$ '8/20		retrograde	11385 Apr 17 14:39	23° $\overline{32}$ '1/13	
evening set	11378 Dec 11 01:38	9° $\overline{31}$ '4/43		opposition	11385 Jul 04 17:54	22° $\overline{30}$ '3/53	13°22'30
max. Earth dist.	11378 Dec 20 05:40	9° $\overline{33}$ '2/25	35.85481 AU	min. Earth dist.	11385 Jul 07 01:42	22° $\overline{30}$ '0/16	32.33639 AU
				direct	11385 Sep 22 04:36	20° $\overline{32}$ '4/4/59	
conjunction	11378 Dec 22 21:16	9° $\overline{33}$ '7/34	10°15'39	evening set	11385 Dec 27 23:58	22° $\overline{32}$ '4/6/55	
minimum elong	11378 Dec 22 20:59	9° $\overline{33}$ '7/33	10°16'22	max. Earth dist.	11386 Jan 02 22:33	22° $\overline{32}$ '5/9/13	34.17145 AU
morning rise	11379 Jan 03 15:56	10° $\overline{30}$ '0/23					
retrograde	11379 Apr 05 23:59	11° $\overline{34}$ '7/32		conjunction	11386 Jan 05 12:39	23° $\overline{30}$ '4/35	12°46'03
opposition	11379 Jun 23 20:39	10° $\overline{33}$ '2/34	11°04'00	minimum elong	11386 Jan 05 12:20	23° $\overline{30}$ '4/34	12°46'43

morning rise	11386 Jan 14 00:19	23° $\overline{3}$ 22'13		direct	11392 Oct 06 10:53	5° $\approx$ 41'04	
retrograde	11386 Apr 19 23:56	25° $\overline{3}$ 24'08		evening set	11393 Jan 17 20:22	8° $\approx$ 04'19	
opposition	11386 Jul 07 00:23	24° $\overline{3}$ 06'25	13°43'41	max. Earth dist.	11393 Jan 18 10:40	8° $\approx$ 05'38	32.67629 AU
min. Earth dist.	11386 Jul 09 07:58	24° $\overline{3}$ 02'48	32.11057 AU				
direct	11386 Sep 24 10:46	22° $\overline{3}$ 47'05		conjunction	11393 Jan 20 20:03	8° $\approx$ 10'55	14°44'12
evening set	11386 Dec 30 23:17	24° $\overline{3}$ 51'35		minimum elong	11393 Jan 20 19:50	8° $\approx$ 10'54	14°44'49
max. Earth dist.	11387 Jan 05 07:06	25° $\overline{3}$ 02'45	33.94455 AU	morning rise	11393 Jan 23 19:15	8° $\approx$ 17'29	
				retrograde	11393 May 05 11:15	10° $\approx$ 39'42	
conjunction	11387 Jan 07 21:35	25° $\overline{3}$ 08'12	13°05'23	opposition	11393 Jul 21 19:53	9° $\approx$ 19'12	15°48'14
minimum elong	11387 Jan 07 21:17	25° $\overline{3}$ 08'11	13°06'04	min. Earth dist.	11393 Jul 23 23:02	9° $\approx$ 15'43	30.65161 AU
morning rise	11387 Jan 15 19:06	25° $\overline{3}$ 24'45		direct	11393 Oct 08 22:57	7° $\approx$ 56'39	
retrograde	11387 Apr 22 12:26	27° $\overline{3}$ 29'07		max. Earth dist.	11394 Jan 21 01:12	10° $\approx$ 22'36	32.48752 AU
opposition	11387 Jul 09 07:35	26° $\overline{3}$ 11'01	14°04'11	evening set	11394 Jan 22 05:44	10° $\approx$ 25'15	
min. Earth dist.	11387 Jul 11 14:39	26° $\overline{3}$ 07'24	31.88809 AU				
direct	11387 Sep 26 18:04	24° $\overline{3}$ 51'13		conjunction	11394 Jan 23 10:15	10° $\approx$ 27'54	14°57'03
evening set	11388 Jan 03 00:11	26° $\overline{3}$ 58'25		minimum elong	11394 Jan 23 10:02	10° $\approx$ 27'52	14°57'38
max. Earth dist.	11388 Jan 07 17:20	27° $\overline{3}$ 08'23	33.72097 AU	morning rise	11394 Jan 24 14:21	10° $\approx$ 30'30	
				retrograde	11394 May 08 03:14	12° $\approx$ 57'56	
conjunction	11388 Jan 10 07:24	27° $\overline{3}$ 13'52	13°24'02	opposition	11394 Jul 24 08:43	11° $\approx$ 37'05	16°01'35
minimum elong	11388 Jan 10 07:06	27° $\overline{3}$ 13'50	13°24'41	min. Earth dist.	11394 Jul 26 10:43	11° $\approx$ 33'39	30.46906 AU
morning rise	11388 Jan 17 13:45	27° $\overline{3}$ 29'13		direct	11394 Oct 11 09:59	10° $\approx$ 14'09	
retrograde	11388 Apr 23 22:25	29° $\overline{3}$ 36'09		max. Earth dist.	11395 Jan 23 18:49	12° $\approx$ 41'39	32.30705 AU
opposition	11388 Jul 10 15:45	28° $\overline{3}$ 17'38	14°23'55				
min. Earth dist.	11388 Jul 12 23:17	28° $\overline{3}$ 13'58	31.66906 AU	conjunction	11395 Jan 26 01:27	12° $\approx$ 46'45	15°08'39
direct	11388 Sep 28 01:00	26° $\overline{3}$ 57'23		minimum elong	11395 Jan 26 01:17	12° $\approx$ 46'44	15°09'13
evening set	11389 Jan 05 03:20	29° $\overline{3}$ 07'22			11395 Apr 08 02:19	15° $\approx$	
max. Earth dist.	11389 Jan 09 04:34	29° $\overline{3}$ 16'01	33.50136 AU	retrograde	11395 May 10 18:30	15° $\approx$ 18'00	
					11395 Jun 13 02:40	15° $\approx$ R	
conjunction	11389 Jan 11 18:03	29° $\overline{3}$ 21'29	13°41'55	opposition	11395 Jul 26 22:23	13° $\approx$ 56'51	16°13'33
minimum elong	11389 Jan 11 17:46	29° $\overline{3}$ 21'28	13°42'34	min. Earth dist.	11395 Jul 28 23:11	13° $\approx$ 53'29	30.29466 AU
morning rise	11389 Jan 18 08:01	29° $\overline{3}$ 35'33		direct	11395 Oct 13 23:08	12° $\approx$ 33'35	
	11389 Jan 29 23:15	0° $\approx$			11396 Jan 25 09:25	15° $\approx$	
retrograde	11389 Apr 26 09:44	1° $\approx$ 45'07		max. Earth dist.	11396 Jan 26 11:25	15° $\approx$ 02'27	32.13508 AU
opposition	11389 Jul 13 00:26	0° $\approx$ 26'12	14°42'48				
min. Earth dist.	11389 Jul 15 06:44	0° $\approx$ 22'35	31.45423 AU	conjunction	11396 Jan 28 17:12	15° $\approx$ 07'32	15°18'55
	11389 Jul 29 16:47	30° $\approx$ R $\overline{3}$		minimum elong	11396 Jan 28 17:02	15° $\approx$ 07'31	15°19'28
direct	11389 Sep 30 09:30	29° $\overline{3}$ 05'28		retrograde	11396 May 12 13:02	17° $\approx$ 39'57	
	11389 Nov 29 14:52	0° $\approx$		opposition	11396 Jul 28 12:43	16° $\approx$ 18'32	16°24'05
evening set	11390 Jan 08 08:26	1° $\approx$ 18'23		min. Earth dist.	11396 Jul 30 11:48	16° $\approx$ 15'17	30.12842 AU
max. Earth dist.	11390 Jan 11 15:54	1° $\approx$ 25'31	33.28619 AU		11396 Sep 28 00:37	15° $\approx$ R	
				direct	11396 Oct 15 13:44	14° $\approx$ 54'58	
conjunction	11390 Jan 14 05:27	1° $\approx$ 31'03	13°58'57		11396 Nov 01 22:31	15° $\approx$	
minimum elong	11390 Jan 14 05:10	1° $\approx$ 31'02	13°59'35	max. Earth dist.	11397 Jan 28 06:04	17° $\approx$ 25'17	31.97109 AU
morning rise	11390 Jan 20 01:44	1° $\approx$ 43'39					
retrograde	11390 Apr 28 21:10	3° $\approx$ 56'00		conjunction	11397 Jan 30 09:56	17° $\approx$ 30'12	15°27'49
opposition	11390 Jul 15 10:13	2° $\approx$ 36'41	15°00'47	minimum elong	11397 Jan 30 09:49	17° $\approx$ 30'12	15°28'20
min. Earth dist.	11390 Jul 17 16:53	2° $\approx$ 33'01	31.24426 AU	retrograde	11397 May 15 05:20	20° $\approx$ 03'46	
direct	11390 Oct 02 16:25	1° $\approx$ 15'28		opposition	11397 Jul 31 03:55	18° $\approx$ 42'06	16°33'08
evening set	11391 Jan 11 16:11	3° $\approx$ 31'30		min. Earth dist.	11397 Aug 02 02:39	18° $\approx$ 38'52	29.96984 AU
max. Earth dist.	11391 Jan 14 05:43	3° $\approx$ 37'05	33.07646 AU	direct	11397 Oct 18 03:55	17° $\approx$ 18'15	
				max. Earth dist.	11398 Jan 31 00:45	19° $\approx$ 49'53	31.81507 AU
conjunction	11391 Jan 16 17:27	3° $\approx$ 42'30	14°15'04				
minimum elong	11391 Jan 16 17:13	3° $\approx$ 42'28	14°15'42	conjunction	11398 Feb 02 03:16	19° $\approx$ 54'43	15°35'17
morning rise	11391 Jan 21 18:06	3° $\approx$ 53'26		minimum elong	11398 Feb 02 03:09	19° $\approx$ 54'43	15°35'47
retrograde	11391 May 01 09:32	6° $\approx$ 08'45		retrograde	11398 May 18 00:49	22° $\approx$ 29'22	
opposition	11391 Jul 17 20:38	4° $\approx$ 49'01	15°17'44	opposition	11398 Aug 02 19:51	21° $\approx$ 07'28	16°40'37
min. Earth dist.	11391 Jul 20 01:32	4° $\approx$ 45'26	31.03994 AU	min. Earth dist.	11398 Aug 04 16:25	21° $\approx$ 04'21	29.81888 AU
direct	11391 Oct 05 01:43	3° $\approx$ 27'20		direct	11398 Oct 20 19:57	19° $\approx$ 43'20	
evening set	11392 Jan 15 03:18	5° $\approx$ 46'44		max. Earth dist.	11399 Feb 02 19:55	22° $\approx$ 16'14	31.66668 AU
max. Earth dist.	11392 Jan 16 18:32	5° $\approx$ 50'19	32.87285 AU				
				conjunction	11399 Feb 04 21:12	22° $\approx$ 20'58	15°41'16
conjunction	11392 Jan 19 06:17	5° $\approx$ 55'47	14°30'11	minimum elong	11399 Feb 04 21:09	22° $\approx$ 20'58	15°41'45
minimum elong	11392 Jan 19 06:02	5° $\approx$ 55'46	14°30'47	retrograde	11399 May 20 19:17	24° $\approx$ 56'38	
morning rise	11392 Jan 23 08:43	6° $\approx$ 04'47		opposition	11399 Aug 05 12:37	23° $\approx$ 34'30	16°46'30
retrograde	11392 May 02 22:02	8° $\approx$ 23'19		min. Earth dist.	11399 Aug 07 08:56	23° $\approx$ 31'24	29.67537 AU
opposition	11392 Jul 19 07:48	7° $\approx$ 03'11	15°33'35	direct	11399 Oct 23 10:51	22° $\approx$ 10'06	
min. Earth dist.	11392 Jul 21 12:37	6° $\approx$ 59'36	30.84218 AU	max. Earth dist.	11400 Feb 05 16:35	24° $\approx$ 44'14	31.52619 AU

conjunction	11400 Feb 07 15:54	24° <del>48</del> '49	15°45'44	conjunction	11408 Feb 29 10:38	15° <del>10</del> '58	15°20'31
minimum elong	11400 Feb 07 15:51	24° <del>48</del> '49	15°46'11	minimum elong	11408 Feb 29 10:53	15° <del>10</del> '59	15°20'46
retrograde	11400 May 23 14:18	27° <del>25</del> '24		retrograde	11408 Jun 13 02:20	17° <del>51</del> '48	
opposition	11400 Aug 08 05:46	26° <del>03</del> '03	16°50'43	opposition	11408 Aug 28 16:51	16° <del>28</del> '21	16°18'01
min. Earth dist.	11400 Aug 09 23:47	26° <del>00</del> '06	29.53950 AU	min. Earth dist.	11408 Aug 29 19:48	16° <del>26</del> '26	28.79113 AU
direct	11400 Oct 26 04:12	24° <del>38</del> '24		direct	11408 Nov 15 15:00	15° <del>02</del> '32	
max. Earth dist.	11401 Feb 08 12:39	27° <del>13</del> '36	31.39368 AU	max. Earth dist.	11409 Mar 02 04:48	17° <del>44</del> '00	30.69319 AU
conjunction	11401 Feb 10 11:07	27° <del>18</del> '07	15°48'37	conjunction	11409 Mar 03 07:53	17° <del>46</del> '42	15°09'15
minimum elong	11401 Feb 10 11:08	27° <del>18</del> '08	15°49'03	minimum elong	11409 Mar 03 08:10	17° <del>46</del> '44	15°09'28
retrograde	11401 May 26 08:35	29° <del>55</del> '33		retrograde	11409 Jun 16 00:23	20° <del>27</del> '40	
opposition	11401 Aug 10 23:45	28° <del>32</del> '59	16°53'12	opposition	11409 Aug 31 13:32	19° <del>04</del> '14	16°05'10
min. Earth dist.	11401 Aug 12 17:13	28° <del>30</del> '04	29.41166 AU	min. Earth dist.	11409 Sep 01 13:08	19° <del>02</del> '34	28.74706 AU
direct	11401 Oct 28 20:40	27° <del>08</del> '06		direct	11409 Nov 18 13:04	17° <del>38</del> '27	
max. Earth dist.	11402 Feb 11 11:03	29° <del>44</del> '26	31.26975 AU	evening set	11410 Mar 04 18:54	20° <del>19</del> '19	
conjunction	11402 Feb 13 06:43	29° <del>48</del> '43	15°49'52	max. Earth dist.	11410 Mar 05 04:46	20° <del>20</del> '18	30.65660 AU
minimum elong	11402 Feb 13 06:45	29° <del>48</del> '43	15°50'17	conjunction	11410 Mar 06 05:06	20° <del>22</del> '44	14°56'12
	11402 Feb 18 01:55	0° <del>00</del> '		minimum elong	11410 Mar 06 05:24	20° <del>22</del> '45	14°56'24
retrograde	11402 May 29 03:47	2° <del>26</del> '54		morning rise	11410 Mar 07 15:54	20° <del>26</del> '12	
opposition	11402 Aug 13 18:11	1° <del>04</del> '08	16°53'55	retrograde	11410 Jun 18 21:00	23° <del>03</del> '44	
min. Earth dist.	11402 Aug 15 09:23	1° <del>01</del> '22	29.29225 AU	opposition	11410 Sep 03 10:32	21° <del>40</del> '19	15°50'23
	11402 Sep 25 14:52	30° <del>00</del> '		min. Earth dist.	11410 Sep 04 08:53	21° <del>38</del> '44	28.71377 AU
direct	11402 Oct 31 15:12	29° <del>39</del> '01		direct	11410 Nov 21 10:02	20° <del>14</del> '35	
	11402 Dec 05 23:16	0° <del>00</del> '		evening set	11411 Mar 05 21:05	22° <del>51</del> '07	
max. Earth dist.	11403 Feb 14 07:57	2° <del>16</del> '14	31.15488 AU	max. Earth dist.	11411 Mar 08 04:38	22° <del>56</del> '40	30.63096 AU
conjunction	11403 Feb 16 02:41	2° <del>20</del> '26	15°49'26	conjunction	11411 Mar 09 02:22	22° <del>58</del> '51	14°41'25
minimum elong	11403 Feb 16 02:46	2° <del>20</del> '27	15°49'49	minimum elong	11411 Mar 09 02:42	22° <del>58</del> '53	14°41'34
retrograde	11403 May 31 23:12	4° <del>59</del> '18		morning rise	11411 Mar 12 08:14	23° <del>06</del> '38	
opposition	11403 Aug 16 12:59	3° <del>36</del> '20	16°52'47	retrograde	11411 Jun 21 18:14	25° <del>39</del> '46	
min. Earth dist.	11403 Aug 18 02:52	3° <del>33</del> '39	29.18209 AU	opposition	11411 Sep 06 07:18	24° <del>16</del> '24	15°33'45
direct	11403 Nov 03 08:14	2° <del>11</del> '00		min. Earth dist.	11411 Sep 07 02:31	24° <del>15</del> '03	28.69086 AU
max. Earth dist.	11404 Feb 17 07:37	4° <del>49</del> '13	31.04982 AU	direct	11411 Nov 24 09:14	22° <del>50</del> '44	
conjunction	11404 Feb 18 23:07	4° <del>53</del> '08	15°47'15	evening set	11412 Mar 06 13:39	25° <del>24</del> '16	
minimum elong	11404 Feb 18 23:12	4° <del>53</del> '08	15°47'37	conjunction	11412 Mar 10 23:36	25° <del>34</del> '52	14°24'56
retrograde	11404 Jun 02 17:28	7° <del>32</del> '33		minimum elong	11412 Mar 10 23:57	25° <del>34</del> '54	14°25'04
opposition	11404 Aug 18 08:18	6° <del>09</del> '26	16°49'46	max. Earth dist.	11412 Mar 10 03:55	25° <del>32</del> '54	30.61571 AU
min. Earth dist.	11404 Aug 19 20:07	6° <del>06</del> '53	29.08163 AU	morning rise	11412 Mar 15 10:05	25° <del>45</del> '30	
direct	11404 Nov 05 04:44	4° <del>43</del> '55		retrograde	11412 Jun 23 13:49	28° <del>15</del> '36	
max. Earth dist.	11405 Feb 19 05:26	7° <del>22</del> '51	30.95522 AU	opposition	11412 Sep 08 04:20	26° <del>52</del> '18	15°15'18
conjunction	11405 Feb 20 19:38	7° <del>26</del> '38	15°43'19	min. Earth dist.	11412 Sep 08 22:12	26° <del>51</del> '02	28.67815 AU
minimum elong	11405 Feb 20 19:47	7° <del>26</del> '39	15°43'38	direct	11412 Nov 26 05:56	25° <del>26</del> '42	
retrograde	11405 Jun 05 14:10	10° <del>06</del> '32		evening set	11413 Mar 08 10:53	27° <del>57</del> '36	
opposition	11405 Aug 21 03:56	8° <del>43</del> '16	16°44'48	conjunction	11413 Mar 13 20:39	28° <del>10</del> '34	14°06'47
min. Earth dist.	11405 Aug 22 13:19	8° <del>40</del> '54	28.99186 AU	minimum elong	11413 Mar 13 21:02	28° <del>10</del> '37	14°06'52
direct	11405 Nov 08 00:34	7° <del>17</del> '36		max. Earth dist.	11413 Mar 13 04:03	28° <del>08</del> '55	30.61085 AU
max. Earth dist.	11406 Feb 22 05:56	9° <del>57</del> '24	30.87187 AU	morning rise	11413 Mar 19 06:52	28° <del>23</del> '35	
conjunction	11406 Feb 23 16:32	10° <del>00</del> '50	15°37'33		11413 May 02 21:17	0° <del>00</del> '	
minimum elong	11406 Feb 23 16:42	10° <del>00</del> '51	15°37'51	retrograde	11413 Jun 26 10:09	0° <del>51</del> '00	
retrograde	11406 Jun 08 09:14	12° <del>41</del> '08			11413 Aug 22 13:24	30° <del>00</del> '	
opposition	11406 Aug 24 00:04	11° <del>17</del> '46	16°37'52	opposition	11413 Sep 11 01:11	29° <del>27</del> '47	14°55'05
min. Earth dist.	11406 Aug 25 07:34	11° <del>15</del> '32	28.91330 AU	min. Earth dist.	11413 Sep 11 16:11	29° <del>26</del> '43	28.67541 AU
direct	11406 Nov 10 20:03	9° <del>52</del> '00		direct	11413 Nov 29 05:03	28° <del>02</del> '16	
max. Earth dist.	11407 Feb 25 04:41	12° <del>32</del> '23	30.80045 AU	evening set	11414 Feb 25 08:34	0° <del>00</del> '	
conjunction	11407 Feb 26 13:21	12° <del>35</del> '38	15°29'57		11414 Mar 10 10:23	0° <del>30</del> '43	
minimum elong	11407 Feb 26 13:35	12° <del>35</del> '39	15°30'13	conjunction	11414 Mar 16 17:23	0° <del>45</del> '47	13°47'04
retrograde	11407 Jun 11 06:56	15° <del>16</del> '15		minimum elong	11414 Mar 16 17:47	0° <del>45</del> '49	13°47'08
opposition	11407 Aug 26 20:20	13° <del>52</del> '49	16°28'56	max. Earth dist.	11414 Mar 16 02:27	0° <del>44</del> '17	30.61618 AU
min. Earth dist.	11407 Aug 28 00:41	13° <del>50</del> '48	28.84646 AU	morning rise	11414 Mar 23 00:50	1° <del>00</del> '52	
direct	11407 Nov 13 18:00	12° <del>27</del> '00		retrograde	11414 Jun 29 05:28	3° <del>25</del> '49	
max. Earth dist.	11408 Feb 28 05:18	15° <del>08</del> '02	30.74092 AU	opposition	11414 Sep 13 21:54	2° <del>02</del> '40	14°33'11
				min. Earth dist.	11414 Sep 14 10:54	2° <del>01</del> '44	28.68295 AU
				direct	11414 Dec 02 01:30	0° <del>37</del> '15	

evening set	11415 Mar 12 11:26	3° $\Upsilon$ 03'20		opposition	11421 Oct 01 13:16	19° $\Upsilon$ 38'30	11°18'14
				min. Earth dist.	11421 Oct 01 08:07	19° $\Upsilon$ 38'51	29.04428 AU
conjunction	11415 Mar 19 13:51	3° $\Upsilon$ 20'17	13°25'47	direct	11421 Dec 20 02:37	18° $\Upsilon$ 14'33	
minimum elong	11415 Mar 19 14:15	3° $\Upsilon$ 20'19	13°25'48	evening set	11422 Mar 25 12:09	20° $\Upsilon$ 25'30	
max. Earth dist.	11415 Mar 19 02:23	3° $\Upsilon$ 19'08	30.63199 AU				
morning rise	11415 Mar 26 16:31	3° $\Upsilon$ 37'15		conjunction	11422 Apr 05 22:56	20° $\Upsilon$ 52'01	10°19'26
retrograde	11415 Jul 01 22:47	5° $\Upsilon$ 59'49		minimum elong	11422 Apr 05 23:22	20° $\Upsilon$ 52'04	10°19'15
opposition	11415 Sep 16 18:21	4° $\Upsilon$ 36'46	14°09'39	max. Earth dist.	11422 Apr 06 06:39	20° $\Upsilon$ 52'46	31.05744 AU
min. Earth dist.	11415 Sep 17 04:58	4° $\Upsilon$ 36'01	28.70064 AU	morning rise	11422 Apr 17 09:22	21° $\Upsilon$ 18'31	
direct	11415 Dec 05 00:21	3° $\Upsilon$ 11'28		retrograde	11422 Jul 18 20:29	23° $\Upsilon$ 26'17	
evening set	11416 Mar 13 13:31	5° $\Upsilon$ 35'14		opposition	11422 Oct 04 06:42	22° $\Upsilon$ 04'34	10°45'31
				min. Earth dist.	11422 Oct 03 22:16	22° $\Upsilon$ 05'09	29.14131 AU
conjunction	11416 Mar 21 09:50	5° $\Upsilon$ 53'55	13°03'03	direct	11422 Dec 22 23:32	20° $\Upsilon$ 40'56	
minimum elong	11416 Mar 21 10:16	5° $\Upsilon$ 53'57	13°03'03	evening set	11423 Mar 27 16:53	22° $\Upsilon$ 49'56	
max. Earth dist.	11416 Mar 20 23:52	5° $\Upsilon$ 52'55	30.65828 AU				
morning rise	11416 Mar 29 06:30	6° $\Upsilon$ 12'36		conjunction	11423 Apr 08 15:07	23° $\Upsilon$ 17'24	9°48'29
retrograde	11416 Jul 03 17:13	8° $\Upsilon$ 32'52		minimum elong	11423 Apr 08 15:31	23° $\Upsilon$ 17'27	9°48'15
opposition	11416 Sep 18 14:23	7° $\Upsilon$ 09'55	13°44'33	max. Earth dist.	11423 Apr 09 01:21	23° $\Upsilon$ 18'24	31.16295 AU
min. Earth dist.	11416 Sep 18 22:18	7° $\Upsilon$ 09'21	28.72907 AU	morning rise	11423 Apr 20 12:54	23° $\Upsilon$ 44'51	
direct	11416 Dec 06 20:56	5° $\Upsilon$ 44'44		retrograde	11423 Jul 21 11:04	25° $\Upsilon$ 50'44	
evening set	11417 Mar 15 16:18	8° $\Upsilon$ 06'16		opposition	11423 Oct 06 23:48	24° $\Upsilon$ 29'18	10°11'54
				min. Earth dist.	11423 Oct 06 13:38	24° $\Upsilon$ 29'59	29.24833 AU
conjunction	11417 Mar 24 05:30	8° $\Upsilon$ 26'31	12°38'53	direct	11423 Dec 25 17:19	23° $\Upsilon$ 06'01	
minimum elong	11417 Mar 24 05:56	8° $\Upsilon$ 26'34	12°38'50	evening set	11424 Mar 28 21:58	25° $\Upsilon$ 13'06	
max. Earth dist.	11417 Mar 23 23:25	8° $\Upsilon$ 25'55	30.69558 AU				
morning rise	11417 Apr 01 18:44	8° $\Upsilon$ 46'48		conjunction	11424 Apr 10 06:46	25° $\Upsilon$ 41'25	9°16'45
retrograde	11417 Jul 06 09:38	11° $\Upsilon$ 04'50		minimum elong	11424 Apr 10 07:10	25° $\Upsilon$ 41'27	9°16'30
opposition	11417 Sep 21 10:19	9° $\Upsilon$ 41'59	13°17'57	max. Earth dist.	11424 Apr 10 19:42	25° $\Upsilon$ 42'39	31.27800 AU
min. Earth dist.	11417 Sep 21 16:10	9° $\Upsilon$ 41'35	28.76855 AU	morning rise	11424 Apr 22 14:53	26° $\Upsilon$ 09'41	
direct	11417 Dec 09 17:45	8° $\Upsilon$ 16'59		retrograde	11424 Jul 23 01:17	28° $\Upsilon$ 13'43	
evening set	11418 Mar 17 19:28	10° $\Upsilon$ 36'16		opposition	11424 Oct 08 16:13	26° $\Upsilon$ 52'36	9°37'31
				min. Earth dist.	11424 Oct 08 03:28	26° $\Upsilon$ 53'28	29.36446 AU
conjunction	11418 Mar 27 00:18	10° $\Upsilon$ 58'00	12°13'22	direct	11424 Dec 27 12:52	25° $\Upsilon$ 29'40	
minimum elong	11418 Mar 27 00:44	10° $\Upsilon$ 58'03	12°13'18	evening set	11425 Mar 31 03:14	27° $\Upsilon$ 34'53	
max. Earth dist.	11418 Mar 26 20:10	10° $\Upsilon$ 57'36	30.74437 AU				
morning rise	11418 Apr 05 05:17	11° $\Upsilon$ 19'45		conjunction	11425 Apr 12 21:43	28° $\Upsilon$ 03'56	8°44'22
retrograde	11418 Jul 09 03:10	13° $\Upsilon$ 35'36		minimum elong	11425 Apr 12 22:05	28° $\Upsilon$ 03'58	8°44'05
opposition	11418 Sep 24 05:42	12° $\Upsilon$ 12'54	12°49'56	max. Earth dist.	11425 Apr 13 12:14	28° $\Upsilon$ 05'19	31.40178 AU
min. Earth dist.	11418 Sep 24 07:57	12° $\Upsilon$ 12'45	28.81978 AU	morning rise	11425 Apr 25 15:37	28° $\Upsilon$ 32'56	
direct	11418 Dec 12 14:46	10° $\Upsilon$ 48'06			11425 Jun 09 13:34	0° $\mathcal{B}$	
evening set	11419 Mar 19 23:06	13° $\Upsilon$ 05'13		retrograde	11425 Jul 25 16:02	0° $\mathcal{B}$ 35'12	
					11425 Sep 11 11:35	30° $\mathcal{R}\Upsilon$	
conjunction	11419 Mar 29 18:52	13° $\Upsilon$ 28'19	11°46'34	opposition	11425 Oct 11 08:12	29° $\Upsilon$ 14'22	9°02'28
minimum elong	11419 Mar 29 19:18	13° $\Upsilon$ 28'21	11°46'28	min. Earth dist.	11425 Oct 10 17:12	29° $\Upsilon$ 15'23	29.48942 AU
max. Earth dist.	11419 Mar 29 18:41	13° $\Upsilon$ 28'18	30.80504 AU	direct	11425 Dec 30 05:53	27° $\Upsilon$ 51'47	
morning rise	11419 Apr 08 14:28	13° $\Upsilon$ 51'24		evening set	11426 Apr 02 08:20	29° $\Upsilon$ 55'10	
retrograde	11419 Jul 11 18:36	16° $\Upsilon$ 05'09			11426 Apr 04 12:18	0° $\mathcal{B}$	
opposition	11419 Sep 27 00:39	14° $\Upsilon$ 42'38	12°20'34				
min. Earth dist.	11419 Sep 27 01:00	14° $\Upsilon$ 42'37	28.88292 AU	conjunction	11426 Apr 15 11:56	0° $\mathcal{B}$ 24'52	8°11'23
direct	11419 Dec 15 11:15	13° $\Upsilon$ 18'04		minimum elong	11426 Apr 15 12:18	0° $\mathcal{B}$ 24'55	8°11'05
evening set	11420 Mar 21 03:17	15° $\Upsilon$ 33'06		max. Earth dist.	11426 Apr 16 05:27	0° $\mathcal{B}$ 26'32	31.53397 AU
				morning rise	11426 Apr 28 14:37	0° $\mathcal{B}$ 54'32	
conjunction	11420 Mar 31 12:49	15° $\Upsilon$ 57'25	11°18'35	retrograde	11426 Jul 28 02:47	2° $\mathcal{B}$ 55'03	
minimum elong	11420 Mar 31 13:15	15° $\Upsilon$ 57'28	11°18'28	opposition	11426 Oct 13 23:31	1° $\mathcal{B}$ 34'31	8°26'52
max. Earth dist.	11420 Mar 31 14:42	15° $\Upsilon$ 57'37	30.87778 AU	min. Earth dist.	11426 Oct 13 06:50	1° $\mathcal{B}$ 35'38	29.62248 AU
morning rise	11420 Apr 10 22:15	16° $\Upsilon$ 21'45		direct	11427 Jan 01 23:58	0° $\mathcal{B}$ 12'16	
retrograde	11420 Jul 13 11:58	18° $\Upsilon$ 33'27		evening set	11427 Apr 04 13:46	2° $\mathcal{B}$ 13'51	
opposition	11420 Sep 28 19:06	17° $\Upsilon$ 11'10	11°49'58				
min. Earth dist.	11420 Sep 28 15:39	17° $\Upsilon$ 11'25	28.95791 AU	conjunction	11427 Apr 18 01:28	2° $\mathcal{B}$ 44'08	7°37'56
direct	11420 Dec 17 07:27	15° $\Upsilon$ 46'53		minimum elong	11427 Apr 18 01:48	2° $\mathcal{B}$ 44'10	7°37'36
evening set	11421 Mar 23 07:29	17° $\Upsilon$ 59'52		max. Earth dist.	11427 Apr 18 19:59	2° $\mathcal{B}$ 45'52	31.67401 AU
				morning rise	11427 May 01 12:29	3° $\mathcal{B}$ 14'21	
conjunction	11421 Apr 03 06:10	18° $\Upsilon$ 25'20	10°49'30	retrograde	11427 Jul 30 14:13	5° $\mathcal{B}$ 13'11	
minimum elong	11421 Apr 03 06:35	18° $\Upsilon$ 25'23	10°49'20	opposition	11427 Oct 16 14:00	3° $\mathcal{B}$ 52'56	7°50'48
max. Earth dist.	11421 Apr 03 11:27	18° $\Upsilon$ 25'51	30.96205 AU	min. Earth dist.	11427 Oct 15 18:37	3° $\mathcal{B}$ 54'13	29.76356 AU
morning rise	11421 Apr 14 04:31	18° $\Upsilon$ 50'48		direct	11428 Jan 04 15:32	2° $\mathcal{B}$ 31'00	
retrograde	11421 Jul 16 03:39	21° $\Upsilon$ 00'31		evening set	11428 Apr 05 19:03	4° $\mathcal{B}$ 30'50	



























































































































conjunction	11428 Apr 19 14:26	5°8'01"37	7°04'05	retrograde	11434 Aug 14 04:37	20°8'28"25	
minimum elong	11428 Apr 19 14:45	5°8'01"39	7°03'44	min. Earth dist.	11434 Oct 30 14:30	19°8'12"32	30.97954 AU
max. Earth dist.	11428 Apr 20 12:06	5°8'03"38	31.82173 AU	opposition	11434 Nov 01 01:00	19°8'10"19	3°32'46
morning rise	11428 May 03 08:42	5°8'32"18		direct	11435 Jan 20 14:23	17°8'50"56	
retrograde	11428 Jul 31 23:24	7°8'29"30		evening set	11435 Apr 20 05:45	19°8'40"22	
min. Earth dist.	11428 Oct 17 07:28	6°8'10"53	29.91239 AU				
opposition	11428 Oct 18 04:01	6°8'09"31	7°14'22	conjunction	11435 May 05 10:38	20°8'12"32	3°02'31
direct	11429 Jan 06 06:52	4°8'47"55		minimum elong	11435 May 05 10:46	20°8'12"32	3°02'01
evening set	11429 Apr 08 00:17	6°8'46"03		max. Earth dist.	11435 May 06 23:10	20°8'15"47	33.07949 AU
				morning rise	11435 May 20 14:09	20°8'44"35	
conjunction	11429 Apr 22 02:17	7°8'17"13	6°29'55	retrograde	11435 Aug 16 09:25	22°8'32"14	
minimum elong	11429 Apr 22 02:34	7°8'17"15	6°29'32	min. Earth dist.	11435 Nov 01 22:22	21°8'16"48	31.18389 AU
max. Earth dist.	11429 Apr 23 01:07	7°8'19"21	31.97718 AU	opposition	11435 Nov 03 10:02	21°8'14"31	2°56'05
morning rise	11429 May 06 03:25	7°8'48"19		direct	11436 Jan 23 02:07	19°8'55"35	
retrograde	11429 Aug 03 09:58	9°8'43"56		evening set	11436 Apr 21 10:34	21°8'43"48	
opposition	11429 Oct 20 17:14	8°8'24"13	6°37'40				
min. Earth dist.	11429 Oct 19 17:24	8°8'25"48	30.06929 AU	conjunction	11436 May 06 17:34	22°8'15"55	2°28'14
direct	11430 Jan 08 21:23	7°8'02"56		minimum elong	11436 May 06 17:40	22°8'15"55	2°27'43
evening set	11430 Apr 10 05:21	8°8'59"26		max. Earth dist.	11436 May 08 06:44	22°8'19"12	33.28785 AU
				morning rise	11436 May 21 23:32	22°8'47"56	
conjunction	11430 Apr 24 13:33	9°8'30"56	5°55'31	retrograde	11436 Aug 17 15:16	24°8'34"30	
minimum elong	11430 Apr 24 13:50	9°8'30"58	5°55'07	min. Earth dist.	11436 Nov 03 04:28	23°8'19"35	31.39395 AU
max. Earth dist.	11430 Apr 25 15:32	9°8'33"20	32.14058 AU	opposition	11436 Nov 04 18:33	23°8'17"10	2°19'39
morning rise	11430 May 08 20:38	10°8'02"21		direct	11437 Jan 24 11:27	21°8'58"38	
retrograde	11430 Aug 05 18:01	11°8'56"28		evening set	11437 Apr 23 15:01	23°8'45"43	
min. Earth dist.	11430 Oct 22 04:44	10°8'38"40	30.23461 AU				
opposition	11430 Oct 23 05:46	10°8'37"01	6°00'46	conjunction	11437 May 08 23:53	24°8'17"44	1°54'11
direct	11431 Jan 11 11:37	9°8'16"04		minimum elong	11437 May 08 23:58	24°8'17"45	1°53'39
evening set	11431 Apr 12 10:25	11°8'11"00		max. Earth dist.	11437 May 10 15:40	24°8'21"14	33.50121 AU
				morning rise	11437 May 24 07:25	24°8'49"40	
conjunction	11431 Apr 26 23:59	11°8'42"45	5°20'57	retrograde	11437 Aug 19 18:45	26°8'35"12	
minimum elong	11431 Apr 27 00:13	11°8'42"47	5°20'31	min. Earth dist.	11437 Nov 05 11:58	25°8'20"41	31.60879 AU
max. Earth dist.	11431 Apr 28 03:32	11°8'45"17	32.31240 AU	opposition	11437 Nov 07 02:34	25°8'18"14	1°43'32
morning rise	11431 May 11 12:29	12°8'14"25		direct	11438 Jan 26 20:29	24°8'00"09	
retrograde	11431 Aug 08 03:32	14°8'07"05		evening set	11438 Apr 25 19:35	25°8'46"07	
opposition	11431 Oct 25 17:32	12°8'47"57	5°23'44				
min. Earth dist.	11431 Oct 24 13:19	12°8'49"48	30.40849 AU	conjunction	11438 May 11 05:32	26°8'18"00	1°20'27
direct	11432 Jan 14 01:31	11°8'27"21		minimum elong	11438 May 11 05:36	26°8'18"00	1°19'54
evening set	11432 Apr 13 15:25	13°8'20"48		max. Earth dist.	11438 May 12 21:39	26°8'21"29	33.71885 AU
				morning rise	11438 May 26 14:25	26°8'49"48	
conjunction	11432 Apr 28 09:42	13°8'52"44	4°46'17	retrograde	11438 Aug 21 23:41	28°8'34"21	
minimum elong	11432 Apr 28 09:55	13°8'52"46	4°45'51	min. Earth dist.	11438 Nov 07 16:39	27°8'20"19	31.82778 AU
max. Earth dist.	11432 Apr 29 15:50	13°8'55"29	32.49253 AU	opposition	11438 Nov 09 09:37	27°8'17"45	1°07'48
morning rise	11432 May 13 02:53	14°8'24"36		direct	11439 Jan 29 04:14	26°8'00"03	
	11432 May 30 11:03	15°8'		evening set	11439 Apr 27 23:57	27°8'44"58	
retrograde	11432 Aug 09 11:54	16°8'15"54					
	11432 Oct 25 07:57	15°8'8'		conjunction	11439 May 13 10:40	28°8'16"41	0°47'04
min. Earth dist.	11432 Oct 25 22:51	14°8'59"02	30.59099 AU	minimum elong	11439 May 13 10:42	28°8'16"41	0°46'29
opposition	11432 Oct 27 04:44	14°8'57"05	4°46'40	max. Earth dist.	11439 May 15 04:40	28°8'20"18	33.94004 AU
direct	11433 Jan 15 13:12	13°8'36"53		morning rise	11439 May 28 20:10	28°8'48"18	
	11433 Apr 01 16:35	15°8'			11439 Jul 09 03:28	0°8'11"56	
evening set	11433 Apr 15 20:18	15°8'28"55		retrograde	11439 Aug 24 03:18	0°8'31"56	
					11439 Oct 11 02:26	30°8'8'	
conjunction	11433 Apr 30 18:46	16°8'00"59	4°11'37	min. Earth dist.	11439 Nov 09 23:02	29°8'18"14	32.05034 AU
minimum elong	11433 Apr 30 18:56	16°8'01"00	4°11'09	opposition	11439 Nov 11 16:19	29°8'15"40	0°32'30
max. Earth dist.	11433 May 02 03:09	16°8'03"54	32.68098 AU	direct	11440 Jan 31 11:37	27°8'58"21	
morning rise	11433 May 15 15:58	16°8'32"58		evening set	11440 Apr 29 04:09	29°8'42"16	
retrograde	11433 Aug 11 20:03	18°8'22"59			11440 May 07 22:11	0°8'11"56	
min. Earth dist.	11433 Oct 28 06:48	17°8'06"37	30.78154 AU				
opposition	11433 Oct 29 15:11	17°8'04"31	4°09'40	conjunction	11440 May 14 15:02	0°8'13"45	0°14'05
direct	11434 Jan 18 03:17	15°8'44"43		minimum elong	11440 May 14 15:03	0°8'13"45	0°13'30
evening set	11434 Apr 18 01:03	17°8'35"25		behind sun begin	11440 May 14 11:24	0°8'13"27	
				behind sun end	11440 May 14 18:42	0°8'14"03	
conjunction	11434 May 03 02:54	18°8'07"34	3°37'00	max. Earth dist.	11440 May 16 09:40	0°8'17"24	34.16447 AU
minimum elong	11434 May 03 03:04	18°8'07"35	3°36'31	morning rise	11440 May 30 00:44	0°8'45"09	
max. Earth dist.	11434 May 04 12:56	18°8'10"36	32.87686 AU	retrograde	11440 Aug 25 07:35	2°8'27"53	
morning rise	11434 May 18 03:42	18°8'39"37		desc. node	11440 Oct 18 23:37	1°8'47"38	

min. Earth dist.	11440 Nov 11 03:06	1°II14'37	32.27607 AU	conjunction	11447 May 28 02:57	13°II08'28	-3°23'28
opposition	11440 Nov 12 22:10	1°II11'57	-0°02'22	minimum elong	11447 May 28 02:50	13°II08'28	3°24'08
	11441 Jan 14 06:48	30°R8		max. Earth dist.	11447 May 30 06:19	13°II12'39	35.83213 AU
direct	11441 Feb 01 19:03	29°855'00		morning rise	11447 Jun 12 02:04	13°II37'26	
	11441 Feb 20 03:18	0°II		retrograde	11447 Sep 07 10:09	15°II15'14	
evening set	11441 May 01 08:10	1°II37'58		min. Earth dist.	11447 Nov 24 17:22	14°II04'41	33.95970 AU
				opposition	11447 Nov 26 21:37	14°II01'34	-3°50'46
conjunction	11441 May 16 18:42	2°II09'11	-0°18'34	direct	11448 Feb 16 04:05	12°II47'13	
minimum elong	11441 May 16 18:41	2°II09'11	0°19'10	evening set	11448 May 14 05:25	14°II24'50	
max. Earth dist.	11441 May 18 14:33	2°II12'54	34.39186 AU				
morning rise	11441 Jun 01 04:13	2°II40'20		conjunction	11448 May 29 02:15	14°II53'24	-3°52'18
retrograde	11441 Aug 27 10:42	4°II22'12		minimum elong	11448 May 29 02:07	14°II53'23	3°52'58
min. Earth dist.	11441 Nov 13 07:21	3°II09'17	32.50527 AU	max. Earth dist.	11448 May 31 06:40	14°II57'38	36.08289 AU
opposition	11441 Nov 15 03:29	3°II06'35	-0°36'43	morning rise	11448 Jun 12 22:22	15°II21'55	
direct	11442 Feb 04 00:31	1°II49'59		retrograde	11448 Sep 08 10:16	16°II59'13	
evening set	11442 May 03 11:42	3°II32'02		min. Earth dist.	11448 Nov 25 17:58	15°II49'01	34.21257 AU
				opposition	11448 Nov 27 22:47	15°II45'53	-4°20'53
conjunction	11442 May 18 21:40	4°II02'57	-0°50'40	direct	11449 Feb 17 05:10	14°II31'55	
minimum elong	11442 May 18 21:37	4°II02'57	0°51'17	evening set	11449 May 16 07:41	16°II08'57	
max. Earth dist.	11442 May 20 19:15	4°II06'47	34.62265 AU				
morning rise	11442 Jun 03 06:23	4°II33'48		conjunction	11449 May 31 01:13	16°II37'03	-4°20'32
retrograde	11442 Aug 29 11:57	6°II14'51		minimum elong	11449 May 31 01:05	16°II37'02	4°21'14
min. Earth dist.	11442 Nov 15 10:46	5°II02'19	32.73797 AU	max. Earth dist.	11449 Jun 02 06:44	16°II41'21	36.33520 AU
opposition	11442 Nov 17 08:03	4°II59'32	-1°10'33	morning rise	11449 Jun 14 17:52	17°II05'06	
direct	11443 Feb 06 09:04	3°II43'18		retrograde	11449 Sep 10 09:15	18°II41'55	
evening set	11443 May 05 15:16	5°II24'28		min. Earth dist.	11449 Nov 27 17:58	17°II32'04	34.46656 AU
				opposition	11449 Nov 29 23:18	17°II28'55	-4°50'19
conjunction	11443 May 20 23:52	5°II55'04	-1°22'18	direct	11450 Feb 19 07:28	16°II15'19	
minimum elong	11443 May 20 23:49	5°II55'04	1°22'56	evening set	11450 May 18 09:51	17°II51'49	
max. Earth dist.	11443 May 22 21:59	5°II58'55	34.85695 AU				
morning rise	11443 Jun 05 07:36	6°II25'35		conjunction	11450 Jun 01 23:31	18°II19'26	-4°48'09
retrograde	11443 Aug 31 14:03	8°II05'53		minimum elong	11450 Jun 01 23:22	18°II19'25	4°48'50
min. Earth dist.	11443 Nov 17 12:32	6°II53'45	32.97476 AU	max. Earth dist.	11450 Jun 04 04:54	18°II23'40	36.58813 AU
opposition	11443 Nov 19 11:51	6°II50'52	-1°43'49	morning rise	11450 Jun 16 12:39	18°II47'00	
direct	11444 Feb 08 14:55	5°II34'59		retrograde	11450 Sep 12 08:24	20°II23'21	
evening set	11444 May 06 18:29	7°II15'21		min. Earth dist.	11450 Nov 29 16:45	19°II13'52	34.72111 AU
				opposition	11450 Dec 01 23:20	19°II10'40	-5°19'05
conjunction	11444 May 22 01:37	7°II45'36	-1°53'26	direct	11451 Feb 21 07:40	17°II57'25	
minimum elong	11444 May 22 01:33	7°II45'35	1°54'03	evening set	11451 May 20 11:46	19°II33'25	
max. Earth dist.	11444 May 24 02:05	7°II49'37	35.09528 AU				
morning rise	11444 Jun 06 07:36	8°II15'46		conjunction	11451 Jun 03 21:34	20°II00'31	-5°15'09
retrograde	11444 Sep 01 12:57	9°II55'21		minimum elong	11451 Jun 03 21:24	20°II00'30	5°15'51
min. Earth dist.	11444 Nov 18 15:27	8°II43'34	33.21567 AU	max. Earth dist.	11451 Jun 06 04:18	20°II04'51	36.84114 AU
opposition	11444 Nov 20 15:18	8°II40'40	-2°16'30	morning rise	11451 Jun 18 06:33	20°II27'35	
direct	11445 Feb 09 20:39	7°II25'10		retrograde	11451 Sep 14 03:08	22°II03'31	
evening set	11445 May 08 21:29	9°II04'46		min. Earth dist.	11451 Dec 01 16:46	20°II54'18	34.97544 AU
				opposition	11451 Dec 03 22:49	20°II51'08	-5°47'11
conjunction	11445 May 24 02:29	9°II34'37	-2°24'01	direct	11452 Feb 23 10:16	19°II38'13	
minimum elong	11445 May 24 02:24	9°II34'36	2°24'40	evening set	11452 May 21 13:38	21°II13'44	
max. Earth dist.	11445 May 26 03:17	9°II38'39	35.33757 AU				
morning rise	11445 Jun 08 06:40	10°II04'25		conjunction	11452 Jun 04 18:59	21°II40'19	-5°41'32
retrograde	11445 Sep 03 11:56	11°II43'21		minimum elong	11452 Jun 04 18:49	21°II40'18	5°42'13
min. Earth dist.	11445 Nov 20 15:41	10°II32'02	33.46055 AU	max. Earth dist.	11452 Jun 07 00:59	21°II44'33	37.09379 AU
opposition	11445 Nov 22 17:59	10°II29'00	-2°48'34	morning rise	11452 Jun 18 23:50	22°II06'52	
direct	11446 Feb 12 00:22	9°II13'53		retrograde	11452 Sep 14 23:07	23°II42'23	
evening set	11446 May 11 00:16	10°II52'46		min. Earth dist.	11452 Dec 02 14:17	22°II33'32	35.22943 AU
				opposition	11452 Dec 04 21:49	22°II30'18	-6°14'35
conjunction	11446 May 26 03:01	11°II22'13	-2°54'02	direct	11453 Feb 24 10:59	21°II17'42	
minimum elong	11446 May 26 02:54	11°II22'13	2°54'41	evening set	11453 May 23 14:58	22°II52'44	
max. Earth dist.	11446 May 28 05:59	11°II26'24	35.58337 AU				
morning rise	11446 Jun 10 04:47	11°II51'37		conjunction	11453 Jun 06 15:51	23°II18'48	-6°07'17
retrograde	11446 Sep 05 10:36	13°II29'58		minimum elong	11453 Jun 06 15:40	23°II18'47	6°08'00
min. Earth dist.	11446 Nov 22 17:33	12°II18'59	33.70884 AU	max. Earth dist.	11453 Jun 08 23:11	23°II23'06	37.34588 AU
opposition	11446 Nov 24 20:05	12°II15'57	-3°19'59	morning rise	11453 Jun 20 16:08	23°II44'49	
direct	11447 Feb 14 02:26	11°II01'13		retrograde	11453 Sep 16 18:22	25°II19'58	
evening set	11447 May 13 02:57	12°II39'27		min. Earth dist.	11453 Dec 04 13:20	24°II11'19	35.48305 AU
				opposition	11453 Dec 06 20:23	24°II08'09	-6°41'19

direct	11454 Feb 26 10:20	22° $\Pi$ 55'51	conjunction	11460 Jun 17 04:15	4° $\mathfrak{D}$ 14'08 -8°49'37
evening set	11454 May 25 16:12	24° $\Pi$ 30'26	minimum elong	11460 Jun 17 04:03	4° $\mathfrak{D}$ 14'07 8°50'20
			max. Earth dist.	11460 Jun 19 15:31	4° $\mathfrak{D}$ 18'33 39.12136 AU
conjunction	11454 Jun 08 12:15	24° $\Pi$ 55'56 -6°32'24	morning rise	11460 Jun 29 14:16	4° $\mathfrak{D}$ 36'11
minimum elong	11454 Jun 08 12:03	24° $\Pi$ 55'55 6°33'06	retrograde	11460 Sep 27 02:43	6° $\mathfrak{D}$ 09'37
max. Earth dist.	11454 Jun 10 19:34	25° $\Pi$ 00'13 37.59776 AU	min. Earth dist.	11460 Dec 15 08:16	5° $\mathfrak{D}$ 03'06 37.27318 AU
morning rise	11454 Jun 22 07:44	25° $\Pi$ 21'25	opposition	11460 Dec 17 19:36	4° $\mathfrak{D}$ 59'47 -9°28'55
retrograde	11454 Sep 18 13:51	26° $\Pi$ 56'13	direct	11461 Mar 09 15:00	3° $\mathfrak{D}$ 49'44
min. Earth dist.	11454 Dec 06 09:52	25° $\Pi$ 47'53 35.73663 AU	evening set	11461 Jun 06 17:30	5° $\mathfrak{D}$ 22'15
opposition	11454 Dec 08 18:05	25° $\Pi$ 44'39 -7°07'21			
direct	11455 Feb 28 09:13	24° $\Pi$ 32'38	conjunction	11461 Jun 18 21:28	5° $\mathfrak{D}$ 43'43 -9°10'15
evening set	11455 May 27 17:10	26° $\Pi$ 06'49	minimum elong	11461 Jun 18 21:15	5° $\mathfrak{D}$ 43'43 9°10'58
			max. Earth dist.	11461 Jun 21 08:53	5° $\mathfrak{D}$ 48'08 39.37586 AU
conjunction	11455 Jun 10 08:03	26° $\Pi$ 31'47 -6°56'53	morning rise	11461 Jul 01 01:05	6° $\mathfrak{D}$ 05'12
minimum elong	11455 Jun 10 07:52	26° $\Pi$ 31'46 6°57'37	retrograde	11461 Sep 28 20:28	7° $\mathfrak{D}$ 38'30
max. Earth dist.	11455 Jun 12 15:58	26° $\Pi$ 36'05 37.84974 AU	min. Earth dist.	11461 Dec 17 02:26	6° $\mathfrak{D}$ 32'17 37.52901 AU
morning rise	11455 Jun 23 22:36	26° $\Pi$ 56'43	opposition	11461 Dec 19 14:20	6° $\mathfrak{D}$ 28'58 -9°50'07
retrograde	11455 Sep 20 11:00	28° $\Pi$ 31'11	direct	11462 Mar 11 09:42	5° $\mathfrak{D}$ 19'14
min. Earth dist.	11455 Dec 08 06:51	27° $\Pi$ 23'07 35.99087 AU	evening set	11462 Jun 08 17:01	6° $\mathfrak{D}$ 51'34
opposition	11455 Dec 10 15:33	27° $\Pi$ 19'53 -7°32'42			
direct	11456 Mar 01 05:38	26° $\Pi$ 08'10	conjunction	11462 Jun 20 14:22	7° $\mathfrak{D}$ 12'27 -9°30'16
evening set	11456 May 28 17:41	27° $\Pi$ 41'59	minimum elong	11462 Jun 20 14:10	7° $\mathfrak{D}$ 12'26 9°30'59
			max. Earth dist.	11462 Jun 23 01:30	7° $\mathfrak{D}$ 16'48 39.62891 AU
conjunction	11456 Jun 11 03:22	28° $\Pi$ 06'23 -7°20'44	morning rise	11462 Jul 02 11:41	7° $\mathfrak{D}$ 33'20
minimum elong	11456 Jun 11 03:10	28° $\Pi$ 06'22 7°21'26	retrograde	11462 Sep 30 16:24	9° $\mathfrak{D}$ 06'31
max. Earth dist.	11456 Jun 13 12:29	28° $\Pi$ 10'44 38.10258 AU	min. Earth dist.	11462 Dec 18 20:34	8° $\mathfrak{D}$ 00'34 37.78331 AU
morning rise	11456 Jun 24 12:28	28° $\Pi$ 30'45	opposition	11462 Dec 21 08:37	7° $\mathfrak{D}$ 57'16 -10°10'40
	11456 Sep 02 04:24	0° $\mathfrak{D}$	direct	11463 Mar 13 01:19	6° $\mathfrak{D}$ 47'50
retrograde	11456 Sep 21 05:41	0° $\mathfrak{D}$ 04'56	evening set	11463 Jun 10 16:18	8° $\mathfrak{D}$ 20'01
	11456 Oct 10 11:10	30° $\mathfrak{R}$ $\Pi$			
min. Earth dist.	11456 Dec 09 03:21	28° $\Pi$ 57'09 36.24597 AU	conjunction	11463 Jun 22 07:07	8° $\mathfrak{D}$ 40'17 -9°49'41
opposition	11456 Dec 11 12:30	28° $\Pi$ 53'55 -7°57'20	minimum elong	11463 Jun 22 06:54	8° $\mathfrak{D}$ 40'17 9°50'24
direct	11457 Mar 03 03:51	27° $\Pi$ 42'31	max. Earth dist.	11463 Jun 24 18:54	8° $\mathfrak{D}$ 44'40 39.88010 AU
evening set	11457 May 30 18:12	29° $\Pi$ 16'00	morning rise	11463 Jul 03 21:35	9° $\mathfrak{D}$ 00'34
			retrograde	11463 Oct 02 08:07	10° $\mathfrak{D}$ 33'39
conjunction	11457 Jun 12 22:12	29° $\Pi$ 39'50 -7°43'55	min. Earth dist.	11463 Dec 20 15:25	9° $\mathfrak{D}$ 27'55 38.03529 AU
minimum elong	11457 Jun 12 21:59	29° $\Pi$ 39'49 7°44'39	opposition	11463 Dec 23 02:41	9° $\mathfrak{D}$ 24'40 -10°30'34
max. Earth dist.	11457 Jun 15 07:11	29° $\Pi$ 44'09 38.35637 AU	direct	11464 Mar 13 20:34	8° $\mathfrak{D}$ 15'31
	11457 Jun 24 01:14	0° $\mathfrak{D}$	evening set	11464 Jun 11 15:27	9° $\mathfrak{D}$ 47'33
morning rise	11457 Jun 26 01:58	0° $\mathfrak{D}$ 03'38			
retrograde	11457 Sep 23 00:45	1° $\mathfrak{D}$ 37'35	conjunction	11464 Jun 22 23:14	10° $\mathfrak{D}$ 07'13 -10°08'30
min. Earth dist.	11457 Dec 10 22:11	0° $\mathfrak{D}$ 30'09 36.50224 AU	minimum elong	11464 Jun 22 23:02	10° $\mathfrak{D}$ 07'12 10°09'14
opposition	11457 Dec 13 08:53	0° $\mathfrak{D}$ 26'50 -8°21'16	max. Earth dist.	11464 Jun 25 09:54	10° $\mathfrak{D}$ 11'28 40.12880 AU
	11458 Jan 02 14:50	30° $\mathfrak{R}$ $\Pi$	morning rise	11464 Jul 04 06:59	10° $\mathfrak{D}$ 26'52
direct	11458 Mar 05 00:10	29° $\Pi$ 15'46	retrograde	11464 Oct 02 23:13	11° $\mathfrak{D}$ 59'51
	11458 May 02 14:45	0° $\mathfrak{D}$	min. Earth dist.	11464 Dec 21 08:12	10° $\mathfrak{D}$ 54'24 38.28476 AU
evening set	11458 Jun 01 18:14	0° $\mathfrak{D}$ 48'59	opposition	11464 Dec 23 20:22	10° $\mathfrak{D}$ 51'07 -10°49'51
			direct	11465 Mar 15 15:39	9° $\mathfrak{D}$ 42'15
conjunction	11458 Jun 14 16:39	1° $\mathfrak{D}$ 12'14 -8°06'28	evening set	11465 Jun 13 14:18	11° $\mathfrak{D}$ 14'07
minimum elong	11458 Jun 14 16:27	1° $\mathfrak{D}$ 12'13 8°07'11			
max. Earth dist.	11458 Jun 17 03:20	1° $\mathfrak{D}$ 16'39 38.61110 AU	conjunction	11465 Jun 24 15:13	11° $\mathfrak{D}$ 33'10 -10°26'45
morning rise	11458 Jun 27 14:36	1° $\mathfrak{D}$ 35'27	minimum elong	11465 Jun 24 15:00	11° $\mathfrak{D}$ 33'09 10°27'28
retrograde	11458 Sep 24 16:01	3° $\mathfrak{D}$ 09'12	max. Earth dist.	11465 Jun 27 02:45	11° $\mathfrak{D}$ 37'28 40.37488 AU
min. Earth dist.	11458 Dec 12 18:34	2° $\mathfrak{D}$ 02'02 36.75915 AU	morning rise	11465 Jul 05 15:56	11° $\mathfrak{D}$ 52'13
opposition	11458 Dec 15 04:53	1° $\mathfrak{D}$ 58'45 -8°44'31	retrograde	11465 Oct 04 12:15	13° $\mathfrak{D}$ 25'06
direct	11459 Mar 06 23:24	0° $\mathfrak{D}$ 48'01	min. Earth dist.	11465 Dec 23 02:35	12° $\mathfrak{D}$ 19'48 38.53163 AU
evening set	11459 Jun 03 18:15	2° $\mathfrak{D}$ 20'59	opposition	11465 Dec 25 13:38	12° $\mathfrak{D}$ 16'35 -11°08'31
			direct	11466 Mar 17 11:58	11° $\mathfrak{D}$ 07'58
conjunction	11459 Jun 16 10:37	2° $\mathfrak{D}$ 43'39 -8°28'21	evening set	11466 Jun 15 13:01	12° $\mathfrak{D}$ 39'42
minimum elong	11459 Jun 16 10:24	2° $\mathfrak{D}$ 43'38 8°29'05			
max. Earth dist.	11459 Jun 18 20:47	2° $\mathfrak{D}$ 48'00 38.86629 AU	conjunction	11466 Jun 26 06:41	12° $\mathfrak{D}$ 58'07 -10°44'25
morning rise	11459 Jun 29 02:42	3° $\mathfrak{D}$ 06'17	minimum elong	11466 Jun 26 06:30	12° $\mathfrak{D}$ 58'06 10°45'08
retrograde	11459 Sep 26 09:05	4° $\mathfrak{D}$ 39'51	max. Earth dist.	11466 Jun 27 17:27	13° $\mathfrak{D}$ 02'21 40.61861 AU
min. Earth dist.	11459 Dec 14 12:33	3° $\mathfrak{D}$ 33'04 37.01629 AU	morning rise	11466 Jul 08 00:13	13° $\mathfrak{D}$ 16'32
opposition	11459 Dec 17 00:18	3° $\mathfrak{D}$ 29'43 -9°07'03	retrograde	11466 Oct 06 02:15	14° $\mathfrak{D}$ 49'21
direct	11460 Mar 07 19:57	2° $\mathfrak{D}$ 19'19	min. Earth dist.	11466 Dec 24 18:32	13° $\mathfrak{D}$ 44'18 38.77622 AU
evening set	11460 Jun 04 18:00	3° $\mathfrak{D}$ 52'03	opposition	11466 Dec 27 06:22	13° $\mathfrak{D}$ 41'02 -11°26'35

direct	11467 Mar 19 06:24	12°☾32'39	retrograde	11473 Oct 15 03:53	24°☾14'14
evening set	11467 Jun 17 11:23	14°☾04'15	min. Earth dist.	11474 Jan 03 05:59	23°☾10'44 40.45301 AU
			opposition	11474 Jan 05 18:04	23°☾07'34 -13°15'53
conjunction	11467 Jun 27 21:41	14°☾22'02 -11°01'30	direct	11474 Mar 28 20:12	22°☾00'59
minimum elong	11467 Jun 27 21:29	14°☾22'02 11°02'13	evening set	11474 Jun 28 19:36	23°☾32'27
max. Earth dist.	11467 Jun 30 08:41	14°☾26'15 40.86027 AU			
morning rise	11467 Jul 08 07:59	14°☾39'50	conjunction	11474 Jul 06 22:08	23°☾45'47 -12°45'08
retrograde	11467 Oct 07 17:48	16°☾12'35	minimum elong	11474 Jul 06 21:59	23°☾45'46 12°45'50
min. Earth dist.	11467 Dec 26 11:19	15°☾07'42 39.01928 AU	max. Earth dist.	11474 Jul 09 09:11	23°☾49'50 42.51845 AU
opposition	11467 Dec 28 22:50	15°☾04'29 -11°44'01	morning rise	11474 Jul 15 00:45	23°☾59'08
direct	11468 Mar 19 22:39	13°☾56'20	retrograde	11474 Oct 16 19:29	25°☾32'09
evening set	11468 Jun 18 09:37	15°☾27'49	min. Earth dist.	11475 Jan 04 20:32	24°☾28'51 40.68473 AU
			opposition	11475 Jan 07 08:18	24°☾25'43 -13°29'12
conjunction	11468 Jun 28 12:28	15°☾44'59 -11°18'00	direct	11475 Mar 30 08:13	23°☾19'25
minimum elong	11468 Jun 28 12:17	15°☾44'58 11°18'43	evening set	11475 Jun 30 16:59	24°☾50'57
max. Earth dist.	11468 Jul 01 00:07	15°☾49'13 41.10078 AU			
morning rise	11468 Jul 08 15:08	16°☾02'09	conjunction	11475 Jul 08 10:57	25°☾03'38 -12°57'48
retrograde	11468 Oct 08 08:55	17°☾34'51	minimum elong	11475 Jul 08 10:48	25°☾03'38 12°58'28
min. Earth dist.	11468 Dec 27 03:13	16°☾30'11 39.26121 AU	max. Earth dist.	11475 Jul 10 22:29	25°☾07'42 42.74659 AU
opposition	11468 Dec 29 14:55	16°☾26'58 -12°00'49	morning rise	11475 Jul 16 04:49	25°☾16'20
direct	11469 Mar 21 14:33	15°☾19'03	retrograde	11475 Oct 18 08:07	26°☾49'28
evening set	11469 Jun 20 07:36	16°☾50'28	min. Earth dist.	11476 Jan 06 11:35	25°☾46'20 40.91270 AU
			opposition	11476 Jan 08 22:13	25°☾43'16 -13°42'01
conjunction	11469 Jun 30 02:40	17°☾07'00 -11°33'56	direct	11476 Mar 30 22:03	24°☾37'13
minimum elong	11469 Jun 30 02:29	17°☾06'59 11°34'38	evening set	11476 Jul 01 14:27	26°☾08'51
max. Earth dist.	11469 Jul 02 13:46	17°☾11'10 41.34035 AU			
morning rise	11469 Jul 09 21:49	17°☾23'32	conjunction	11476 Jul 08 23:27	26°☾20'53 -13°09'58
retrograde	11469 Oct 10 01:16	18°☾56'13	minimum elong	11476 Jul 08 23:18	26°☾20'52 13°10'40
min. Earth dist.	11469 Dec 28 18:01	17°☾51'48 39.50238 AU	max. Earth dist.	11476 Jul 11 09:23	26°☾24'49 42.97093 AU
opposition	11469 Dec 31 06:37	17°☾48'34 -12°17'01	morning rise	11476 Jul 16 08:28	26°☾32'54
direct	11470 Mar 23 04:17	16°☾40'54	retrograde	11476 Oct 18 21:15	28°☾06'10
evening set	11470 Jun 22 05:24	18°☾12'16	min. Earth dist.	11477 Jan 07 00:47	27°☾03'16 41.13675 AU
			opposition	11477 Jan 09 11:53	27°☾00'12 -13°54'19
conjunction	11470 Jul 01 16:50	18°☾28'10 -11°49'16	direct	11477 Apr 01 10:50	25°☾54'23
minimum elong	11470 Jul 01 16:39	18°☾28'10 11°49'59	evening set	11477 Jul 03 11:43	27°☾26'06
max. Earth dist.	11470 Jul 04 05:04	18°☾32'24 41.57909 AU			
morning rise	11470 Jul 11 04:07	18°☾44'04	conjunction	11477 Jul 10 11:43	27°☾37'28 -13°21'41
retrograde	11470 Oct 11 13:19	20°☾16'47	minimum elong	11477 Jul 10 11:35	27°☾37'27 13°22'21
min. Earth dist.	11470 Dec 30 10:11	19°☾12'32 39.74249 AU	max. Earth dist.	11477 Jul 12 21:55	27°☾41'24 43.19117 AU
opposition	11471 Jan 01 21:53	19°☾09'21 -12°32'37	morning rise	11477 Jul 17 11:43	27°☾48'49
direct	11471 Mar 24 21:19	18°☾01'57	retrograde	11477 Oct 20 06:34	29°☾22'14
evening set	11471 Jun 24 03:13	19°☾33'19	min. Earth dist.	11478 Jan 08 15:52	28°☾19'26 41.35664 AU
			opposition	11478 Jan 11 01:20	28°☾16'27 -14°06'07
conjunction	11471 Jul 03 06:34	19°☾48'35 -12°04'03	direct	11478 Apr 03 03:20	27°☾10'51
minimum elong	11471 Jul 03 06:23	19°☾48'34 12°04'45	evening set	11478 Jul 05 09:10	28°☾42'41
max. Earth dist.	11471 Jul 05 17:56	19°☾52'43 41.81678 AU			
morning rise	11471 Jul 12 09:53	20°☾03'51	conjunction	11478 Jul 11 23:44	28°☾53'21 -13°32'55
retrograde	11471 Oct 13 01:29	21°☾36'35	minimum elong	11478 Jul 11 23:36	28°☾53'20 13°33'35
min. Earth dist.	11472 Jan 01 00:05	20°☾32'39 39.98131 AU	max. Earth dist.	11478 Jul 14 08:58	28°☾57'13 43.40752 AU
opposition	11472 Jan 03 12:53	20°☾29'24 -12°47'37	morning rise	11478 Jul 18 14:16	29°☾04'01
direct	11472 Mar 25 13:52	19°☾22'17		11478 Aug 25 17:36	0°♂
evening set	11472 Jun 25 00:37	20°☾53'39	retrograde	11478 Oct 21 17:07	0°♂37'35
				11478 Dec 20 06:38	30°♂☾
conjunction	11472 Jul 03 19:56	21°☾08'17 -12°18'17	min. Earth dist.	11479 Jan 10 04:29	29°☾34'59 41.57269 AU
minimum elong	11472 Jul 03 19:46	21°☾08'16 12°18'59	opposition	11479 Jan 12 14:10	29°☾31'59 -14°17'26
max. Earth dist.	11472 Jul 06 08:02	21°☾12'27 42.05287 AU	direct	11479 Apr 04 18:28	28°☾26'35
morning rise	11472 Jul 12 15:15	21°☾22'54	evening set	11479 Jul 07 06:28	29°☾58'33
retrograde	11472 Oct 13 14:47	22°☾55'44		11479 Jul 08 04:15	0°♂
min. Earth dist.	11473 Jan 01 15:49	21°☾51'58 40.21838 AU			
opposition	11473 Jan 04 03:46	21°☾48'48 -13°02'02	conjunction	11479 Jul 13 11:22	0°♂08'31 -13°43'42
direct	11473 Mar 27 05:28	20°☾41'57	minimum elong	11479 Jul 13 11:15	0°♂08'30 13°44'21
evening set	11473 Jun 26 22:11	22°☾13'21	max. Earth dist.	11479 Jul 15 20:10	0°♂12'19 43.62035 AU
			morning rise	11479 Jul 19 16:18	0°♂18'29
conjunction	11473 Jul 05 09:12	22°☾27'20 -12°31'58	retrograde	11479 Oct 23 06:55	1°♂52'13
minimum elong	11473 Jul 05 09:02	22°☾27'20 12°32'39	min. Earth dist.	11480 Jan 11 17:53	0°♂49'45 41.78573 AU
max. Earth dist.	11473 Jul 07 21:05	22°☾31'29 42.28704 AU	opposition	11480 Jan 14 03:00	0°♂46'48 -14°28'16
morning rise	11473 Jul 13 20:07	22°☾41'20		11480 Feb 25 03:55	30°♂☾

direct	11480 Apr 05 06:07	29°  41'35	max. Earth dist.	11486 Jul 23 20:37	8°  40'29	45.04419 AU
	11480 May 14 06:03	0° 	retrograde	11486 Oct 31 11:02	10°  17'24	
evening set	11480 Jul 08 03:47	1°  13'42	min. Earth dist.	11487 Jan 20 05:26	9°  16'04	43.20984 AU
			opposition	11487 Jan 22 12:44	9°  13'17	-15°30'29
conjunction	11480 Jul 13 22:41	1°  22'57	direct	11487 Apr 14 15:18	8°  09'31	
minimum elong	11480 Jul 13 22:34	1°  22'57	evening set	11487 Jul 21 04:26	9°  44'39	
max. Earth dist.	11480 Jul 16 08:00	1°  26'47				
morning rise	11480 Jul 19 17:30	1°  32'13	conjunction	11487 Jul 22 23:55	9°  47'28	-14°53'14
retrograde	11480 Oct 23 17:59	3°  06'10	minimum elong	11487 Jul 22 23:52	9°  47'27	14°53'51
min. Earth dist.	11481 Jan 12 06:48	2°  03'49	morning rise	11487 Jul 24 19:21	9°  50'16	
opposition	11481 Jan 14 15:29	2°  00'55	max. Earth dist.	11487 Jul 25 06:59	9°  51'01	45.23584 AU
direct	11481 Apr 06 19:04	0°  55'54	retrograde	11487 Nov 01 20:01	11°  27'30	
evening set	11481 Jul 10 01:22	2°  28'12	min. Earth dist.	11488 Jan 21 18:00	10°  26'16	43.40046 AU
			opposition	11488 Jan 23 23:38	10°  23'34	-15°37'35
conjunction	11481 Jul 15 09:45	2°  36'43	direct	11488 Apr 15 02:28	9°  20'00	
minimum elong	11481 Jul 15 09:40	2°  36'43				
max. Earth dist.	11481 Jul 17 17:55	2°  40'27	conjunction	11488 Jul 23 09:35	10°  57'30	-15°00'01
morning rise	11481 Jul 20 18:09	2°  45'14	minimum elong	11488 Jul 23 09:32	10°  57'29	15°00'36
retrograde	11481 Oct 25 06:23	4°  19'25	max. Earth dist.	11488 Jul 25 15:00	11°  00'56	45.42315 AU
min. Earth dist.	11482 Jan 13 18:18	3°  17'17	retrograde	11488 Nov 02 04:13	12°  37'07	
opposition	11482 Jan 16 03:33	3°  14'21	min. Earth dist.	11489 Jan 22 04:25	11°  36'02	43.58649 AU
direct	11482 Apr 08 04:44	2°  09'32	opposition	11489 Jan 24 10:15	11°  33'20	-15°44'18
evening set	11482 Jul 11 23:09	3°  42'05	direct	11489 Apr 16 13:34	10°  29'56	
conjunction	11482 Jul 16 20:41	3°  49'51	conjunction	11489 Jul 24 19:15	12°  06'59	-15°06'26
minimum elong	11482 Jul 16 20:35	3°  49'51	minimum elong	11489 Jul 24 19:12	12°  06'59	15°07'02
max. Earth dist.	11482 Jul 19 05:41	3°  53'37	max. Earth dist.	11489 Jul 27 00:13	12°  10'23	45.60569 AU
morning rise	11482 Jul 21 18:09	3°  57'36	retrograde	11489 Nov 03 12:53	13°  46'12	
retrograde	11482 Oct 26 16:03	5°  32'04	min. Earth dist.	11490 Jan 23 16:31	12°  45'10	43.76779 AU
min. Earth dist.	11483 Jan 15 07:25	4°  30'03	opposition	11490 Jan 25 20:37	12°  42'34	-15°50'38
opposition	11483 Jan 17 15:31	4°  27'11	direct	11490 Apr 18 01:17	11°  39'19	
direct	11483 Apr 09 17:16	3°  22'35				
evening set	11483 Jul 13 21:23	4°  55'26	conjunction	11490 Jul 26 04:41	13°  15'55	-15°12'28
			minimum elong	11490 Jul 26 04:40	13°  15'55	15°13'03
conjunction	11483 Jul 18 07:14	5°  02'24	max. Earth dist.	11490 Jul 28 09:05	13°  19'16	45.78375 AU
minimum elong	11483 Jul 18 07:10	5°  02'24	retrograde	11490 Nov 04 21:08	14°  54'42	
max. Earth dist.	11483 Jul 20 15:25	5°  06'06	min. Earth dist.	11491 Jan 25 02:52	13°  53'47	43.94455 AU
morning rise	11483 Jul 22 17:04	5°  09'22	opposition	11491 Jan 27 06:40	13°  51'12	-15°56'34
retrograde	11483 Oct 28 00:32	6°  44'10	direct	11491 Apr 19 13:19	12°  48'06	
min. Earth dist.	11484 Jan 16 18:14	5°  42'22				
opposition	11484 Jan 19 03:07	5°  39'28	conjunction	11491 Jul 27 13:37	14°  24'15	-15°18'08
direct	11484 Apr 10 06:16	4°  35'05	minimum elong	11491 Jul 27 13:36	14°  24'15	15°18'43
evening set	11484 Jul 14 20:11	6°  08'17	max. Earth dist.	11491 Jul 29 16:40	14°  27'30	45.95761 AU
				11491 Aug 20 12:47	15°  00	
conjunction	11484 Jul 18 17:38	6°  14'25	retrograde	11491 Nov 06 08:40	16°  02'37	
minimum elong	11484 Jul 18 17:32	6°  14'24	min. Earth dist.	11492 Jan 26 13:15	15°  01'49	44.11764 AU
max. Earth dist.	11484 Jul 21 01:38	6°  18'05	opposition	11492 Jan 28 16:38	14°  59'15	-16°02'08
morning rise	11484 Jul 22 15:02	6°  20'32		11492 Jan 28 01:42	15°  R 	
retrograde	11484 Oct 28 11:03	7°  55'44	direct	11492 Apr 19 21:39	13°  56'18	
min. Earth dist.	11485 Jan 17 06:45	6°  54'05		11492 Jul 06 11:25	15°  00	
opposition	11485 Jan 19 14:40	6°  51'14				
direct	11485 Apr 11 19:21	5°  47'04	conjunction	11492 Jul 27 22:35	15°  32'01	-15°23'26
evening set	11485 Jul 16 20:13	7°  20'43	minimum elong	11492 Jul 27 22:35	15°  32'01	15°23'59
			max. Earth dist.	11492 Jul 30 02:18	15°  35'17	46.12819 AU
conjunction	11485 Jul 20 03:53	7°  25'55	retrograde	11492 Nov 06 17:52	17°  09'59	
minimum elong	11485 Jul 20 03:49	7°  25'54	min. Earth dist.	11493 Jan 27 00:04	16°  09'15	44.28761 AU
morning rise	11485 Jul 23 11:30	7°  31'07	opposition	11493 Jan 29 02:21	16°  06'45	-16°07'17
max. Earth dist.	11485 Jul 22 12:02	7°  29'35	direct	11493 Apr 21 06:33	15°  03'57	
retrograde	11485 Oct 29 22:19	9°  06'48				
min. Earth dist.	11486 Jan 18 18:24	8°  05'19	conjunction	11493 Jul 29 07:09	16°  39'16	-15°28'20
opposition	11486 Jan 21 01:50	8°  02'30	minimum elong	11493 Jul 29 07:09	16°  39'15	15°28'53
direct	11486 Apr 13 06:47	6°  58'32	max. Earth dist.	11493 Jul 31 09:37	16°  42'26	46.29606 AU
evening set	11486 Jul 18 22:05	8°  32'47	retrograde	11493 Nov 08 02:07	18°  16'51	
			min. Earth dist.	11494 Jan 28 08:47	17°  16'17	44.45500 AU
conjunction	11486 Jul 21 13:54	8°  36'55	opposition	11494 Jan 30 11:46	17°  13'46	-16°12'03
minimum elong	11486 Jul 21 13:50	8°  36'55	direct	11494 Apr 22 14:51	16°  11'06	
morning rise	11486 Jul 24 05:40	8°  41'04				

conjunction	11494 Jul 30 15:40	17° $\Omega$ 46'02	-15°32'51	retrograde	11502 Nov 19 02:38	28° $\Omega$ 03'11	
minimum elong	11494 Jul 30 15:41	17° $\Omega$ 46'02	15°33'23	min. Earth dist.	11503 Feb 08 21:47	27° $\Omega$ 03'32	45.81542 AU
max. Earth dist.	11494 Aug 01 18:16	17° $\Omega$ 49'13	46.46139 AU	opposition	11503 Feb 10 17:27	27° $\Omega$ 01'26	-16°38'18
retrograde	11494 Nov 09 08:18	19° $\Omega$ 23'17		direct	11503 May 03 23:30	26° $\Omega$ 00'13	
min. Earth dist.	11495 Jan 29 19:23	18° $\Omega$ 22'47	44.61993 AU				
opposition	11495 Jan 31 21:01	18° $\Omega$ 20'20	-16°16'24	conjunction	11503 Aug 10 14:04	27° $\Omega$ 32'07	-15°57'45
direct	11495 Apr 24 02:35	17° $\Omega$ 17'51		minimum elong	11503 Aug 10 14:08	27° $\Omega$ 32'07	15°58'11
				max. Earth dist.	11503 Aug 12 09:44	27° $\Omega$ 34'47	47.80006 AU
conjunction	11495 Aug 01 00:02	18° $\Omega$ 52'25	-15°36'59	retrograde	11503 Nov 20 12:03	29° $\Omega$ 06'33	
minimum elong	11495 Aug 01 00:02	18° $\Omega$ 52'25	15°37'31	min. Earth dist.	11504 Feb 10 05:31	28° $\Omega$ 07'00	45.94475 AU
max. Earth dist.	11495 Aug 03 02:22	18° $\Omega$ 55'35	46.62447 AU	opposition	11504 Feb 12 01:19	28° $\Omega$ 04'53	-16°39'36
retrograde	11495 Nov 10 15:54	20° $\Omega$ 29'20		direct	11504 May 04 05:04	27° $\Omega$ 03'46	
min. Earth dist.	11496 Jan 31 04:11	19° $\Omega$ 29'00	44.78233 AU				
opposition	11496 Feb 02 06:05	19° $\Omega$ 26'33	-16°20'22	conjunction	11504 Aug 10 21:06	28° $\Omega$ 35'21	-15°58'57
direct	11496 Apr 24 13:34	18° $\Omega$ 24'15		minimum elong	11504 Aug 10 21:11	28° $\Omega$ 35'21	15°59'24
				max. Earth dist.	11504 Aug 12 16:53	28° $\Omega$ 38'00	47.92723 AU
conjunction	11496 Aug 01 08:02	19° $\Omega$ 58'27	-15°40'44		11504 Oct 22 04:13	0° $\Upsilon$	
minimum elong	11496 Aug 01 08:04	19° $\Omega$ 58'28	15°41'16	retrograde	11504 Nov 20 16:47	0° $\Upsilon$ 09'28	
max. Earth dist.	11496 Aug 03 09:26	20° $\Omega$ 01'33	46.78494 AU		11504 Dec 20 13:33	30° $\Upsilon$ $\Omega$	
retrograde	11496 Nov 11 02:58	21° $\Omega$ 35'03		min. Earth dist.	11505 Feb 10 14:57	29° $\Omega$ 09'55	46.07045 AU
min. Earth dist.	11497 Jan 31 13:43	20° $\Omega$ 34'52	44.94209 AU	opposition	11505 Feb 12 09:04	29° $\Omega$ 07'53	-16°40'34
opposition	11497 Feb 02 15:07	20° $\Omega$ 32'27	-16°23'56	direct	11505 May 05 13:11	28° $\Omega$ 06'52	
direct	11497 Apr 25 21:02	19° $\Omega$ 30'20					
				conjunction	11505 Aug 12 04:08	29° $\Omega$ 38'08	-15°59'51
conjunction	11497 Aug 02 16:11	21° $\Omega$ 04'12	-15°44'08	minimum elong	11505 Aug 12 04:14	29° $\Omega$ 38'08	16°00'16
minimum elong	11497 Aug 02 16:12	21° $\Omega$ 04'12	15°44'39	max. Earth dist.	11505 Aug 13 23:12	29° $\Omega$ 40'45	48.05121 AU
max. Earth dist.	11497 Aug 04 18:01	21° $\Omega$ 07'18	46.94257 AU		11505 Aug 27 08:13	0° $\Upsilon$	
retrograde	11497 Nov 12 11:50	22° $\Omega$ 40'29		retrograde	11505 Nov 21 20:36	1° $\Upsilon$ 11'57	
min. Earth dist.	11498 Feb 01 23:30	21° $\Omega$ 40'24	45.09858 AU	min. Earth dist.	11506 Feb 11 21:57	0° $\Upsilon$ 12'30	46.19300 AU
opposition	11498 Feb 03 23:45	21° $\Omega$ 38'03	-16°27'09	opposition	11506 Feb 13 16:21	0° $\Upsilon$ 10'28	-16°41'13
direct	11498 Apr 27 05:09	20° $\Omega$ 36'07			11506 Feb 22 18:52	30° $\Upsilon$ $\Omega$	
				direct	11506 May 06 22:06	29° $\Omega$ 09'33	
conjunction	11498 Aug 04 00:05	22° $\Omega$ 09'40	-15°47'11		11506 Jul 15 12:19	0° $\Upsilon$	
minimum elong	11498 Aug 04 00:08	22° $\Omega$ 09'40	15°47'42				
max. Earth dist.	11498 Aug 06 00:16	22° $\Omega$ 12'39	47.09682 AU	conjunction	11506 Aug 13 10:57	0° $\Upsilon$ 40'31	-16°00'25
retrograde	11498 Nov 13 20:37	23° $\Omega$ 45'38		minimum elong	11506 Aug 13 11:02	0° $\Upsilon$ 40'31	16°00'51
min. Earth dist.	11499 Feb 03 08:01	22° $\Omega$ 45'43	45.25140 AU	max. Earth dist.	11506 Aug 15 05:02	0° $\Upsilon$ 43'04	48.17217 AU
opposition	11499 Feb 05 08:20	22° $\Omega$ 43'22	-16°30'01	retrograde	11506 Nov 23 04:13	2° $\Upsilon$ 14'03	
direct	11499 Apr 28 10:48	21° $\Omega$ 41'37		min. Earth dist.	11507 Feb 13 06:22	1° $\Upsilon$ 14'40	46.31274 AU
				opposition	11507 Feb 14 23:47	1° $\Upsilon$ 12'40	-16°41'33
conjunction	11499 Aug 05 07:51	23° $\Omega$ 14'51	-15°49'55	direct	11507 May 08 06:17	0° $\Upsilon$ 11'53	
minimum elong	11499 Aug 05 07:54	23° $\Omega$ 14'51	15°50'24				
max. Earth dist.	11499 Aug 07 07:57	23° $\Omega$ 17'49	47.24698 AU	conjunction	11507 Aug 14 17:37	1° $\Upsilon$ 42'33	-16°00'40
retrograde	11499 Nov 15 03:16	24° $\Omega$ 50'31		minimum elong	11507 Aug 14 17:44	1° $\Upsilon$ 42'34	16°01'05
min. Earth dist.	11500 Feb 04 18:30	23° $\Omega$ 50'40	45.39986 AU	max. Earth dist.	11507 Aug 16 12:07	1° $\Upsilon$ 45'07	48.29040 AU
opposition	11500 Feb 06 16:58	23° $\Omega$ 48'25	-16°32'33	retrograde	11507 Nov 24 10:56	3° $\Upsilon$ 15'51	
direct	11500 Apr 29 19:10	22° $\Omega$ 46'49		min. Earth dist.	11508 Feb 14 14:10	2° $\Upsilon$ 16'32	46.42949 AU
				opposition	11508 Feb 16 07:02	2° $\Upsilon$ 14'34	-16°41'33
conjunction	11500 Aug 06 15:41	24° $\Omega$ 19'44	-15°52'19	direct	11508 May 08 14:42	1° $\Upsilon$ 13'54	
minimum elong	11500 Aug 06 15:44	24° $\Omega$ 19'44	15°52'49				
max. Earth dist.	11500 Aug 08 14:46	24° $\Omega$ 22'38	47.39269 AU	conjunction	11508 Aug 15 00:10	2° $\Upsilon$ 44'19	-16°00'37
retrograde	11500 Nov 16 08:50	25° $\Omega$ 55'07		minimum elong	11508 Aug 15 00:16	2° $\Upsilon$ 44'19	16°01'01
min. Earth dist.	11501 Feb 06 02:57	24° $\Omega$ 55'24	45.54343 AU	max. Earth dist.	11508 Aug 16 17:04	2° $\Upsilon$ 46'46	48.40575 AU
opposition	11501 Feb 08 01:15	24° $\Omega$ 53'09	-16°34'46	retrograde	11508 Nov 24 20:12	4° $\Upsilon$ 17'21	
direct	11501 May 01 06:07	23° $\Omega$ 51'42		min. Earth dist.	11509 Feb 14 21:16	3° $\Upsilon$ 18'10	46.54331 AU
				opposition	11509 Feb 16 14:07	3° $\Upsilon$ 16'12	-16°41'14
conjunction	11501 Aug 07 23:16	25° $\Omega$ 24'17	-15°54'25	direct	11509 May 09 18:46	2° $\Upsilon$ 15'40	
minimum elong	11501 Aug 07 23:19	25° $\Omega$ 24'17	15°54'53				
max. Earth dist.	11501 Aug 09 20:43	25° $\Omega$ 27'04	47.53332 AU	conjunction	11509 Aug 16 06:43	3° $\Upsilon$ 45'50	-16°00'16
retrograde	11501 Nov 17 17:50	26° $\Omega$ 59'21		minimum elong	11509 Aug 16 06:51	3° $\Upsilon$ 45'51	16°00'39
min. Earth dist.	11502 Feb 07 12:34	25° $\Omega$ 59'41	45.68194 AU	max. Earth dist.	11509 Aug 17 23:50	3° $\Upsilon$ 48'18	48.51789 AU
opposition	11502 Feb 09 09:32	25° $\Omega$ 57'30	-16°36'41	retrograde	11509 Nov 26 03:06	5° $\Upsilon$ 18'39	
direct	11502 May 02 15:32	24° $\Omega$ 56'11		min. Earth dist.	11510 Feb 16 06:04	4° $\Upsilon$ 19'30	46.65360 AU
				opposition	11510 Feb 17 21:12	4° $\Upsilon$ 17'38	-16°40'36
conjunction	11502 Aug 09 06:50	26° $\Omega$ 28'25	-15°56'14	direct	11510 May 11 00:31	3° $\Upsilon$ 17'14	
minimum elong	11502 Aug 09 06:54	26° $\Omega$ 28'26	15°56'42				
max. Earth dist.	11502 Aug 11 04:18	26° $\Omega$ 31'12	47.66897 AU	conjunction	11510 Aug 17 13:10	4° $\Upsilon$ 47'10	-15°59'37

minimum elong	11510 Aug 17 13:17	4° $\mathring{M}$ 47'10	15°59'59	min. Earth dist.	11519 Feb 25 23:42	13° $\mathring{M}$ 22'25	47.43786 AU
max. Earth dist.	11510 Aug 19 05:11	4° $\mathring{M}$ 49'34	48.62641 AU	opposition	11519 Feb 27 07:27	13° $\mathring{M}$ 20'55	-16°23'04
retrograde	11510 Nov 27 07:32	6° $\mathring{M}$ 19'46		direct	11519 May 20 12:56	12° $\mathring{M}$ 21'21	
min. Earth dist.	11511 Feb 17 12:44	5° $\mathring{M}$ 20'45	46.75988 AU				
opposition	11511 Feb 19 03:59	5° $\mathring{M}$ 18'53	-16°39'42	conjunction	11519 Aug 26 19:27	13° $\mathring{M}$ 49'22	-15°42'16
direct	11511 May 12 07:49	4° $\mathring{M}$ 18'37		minimum elong	11519 Aug 26 19:36	13° $\mathring{M}$ 49'23	15°42'33
				max. Earth dist.	11519 Aug 28 03:47	13° $\mathring{M}$ 51'16	49.39398 AU
conjunction	11511 Aug 18 19:32	5° $\mathring{M}$ 48'20	-15°58'42	retrograde	11519 Dec 06 17:53	15° $\mathring{M}$ 20'10	
minimum elong	11511 Aug 18 19:40	5° $\mathring{M}$ 48'20	15°59'04	min. Earth dist.	11520 Feb 27 07:07	14° $\mathring{M}$ 21'27	47.50554 AU
max. Earth dist.	11511 Aug 20 10:15	5° $\mathring{M}$ 50'39	48.73062 AU	opposition	11520 Feb 28 13:27	14° $\mathring{M}$ 20'01	-16°19'46
retrograde	11511 Nov 28 14:11	7° $\mathring{M}$ 20'44		direct	11520 May 20 16:31	13° $\mathring{M}$ 20'33	
min. Earth dist.	11512 Feb 18 21:22	6° $\mathring{M}$ 21'45	46.86168 AU				
opposition	11512 Feb 20 10:56	6° $\mathring{M}$ 19'58	-16°38'31	conjunction	11520 Aug 27 00:54	14° $\mathring{M}$ 48'23	-15°39'01
direct	11512 May 12 16:14	5° $\mathring{M}$ 19'50		minimum elong	11520 Aug 27 01:06	14° $\mathring{M}$ 48'24	15°39'17
				max. Earth dist.	11520 Aug 28 08:19	14° $\mathring{M}$ 50'13	49.46080 AU
conjunction	11512 Aug 19 01:56	6° $\mathring{M}$ 49'20	-15°57'31	retrograde	11520 Dec 06 22:12	16° $\mathring{M}$ 19'01	
minimum elong	11512 Aug 19 02:04	6° $\mathring{M}$ 49'21	15°57'52	opposition	11521 Feb 28 19:14	15° $\mathring{M}$ 18'57	-16°16'12
max. Earth dist.	11512 Aug 20 16:29	6° $\mathring{M}$ 51'38	48.83005 AU	min. Earth dist.	11521 Feb 27 12:29	15° $\mathring{M}$ 20'23	47.57019 AU
retrograde	11512 Nov 28 21:34	8° $\mathring{M}$ 21'33		direct	11521 May 21 20:34	14° $\mathring{M}$ 19'33	
min. Earth dist.	11513 Feb 19 05:12	7° $\mathring{M}$ 22'38	46.95820 AU				
opposition	11513 Feb 20 17:42	7° $\mathring{M}$ 20'54	-16°37'04	conjunction	11521 Aug 28 06:24	15° $\mathring{M}$ 47'14	-15°35'31
direct	11513 May 14 00:02	6° $\mathring{M}$ 20'53		minimum elong	11521 Aug 28 06:34	15° $\mathring{M}$ 47'15	15°35'46
				max. Earth dist.	11521 Aug 29 12:43	15° $\mathring{M}$ 49'00	49.52435 AU
conjunction	11513 Aug 20 08:15	7° $\mathring{M}$ 50'10	-15°56'06	retrograde	11521 Dec 08 01:54	17° $\mathring{M}$ 17'44	
minimum elong	11513 Aug 20 08:24	7° $\mathring{M}$ 50'10	15°56'27	min. Earth dist.	11522 Feb 28 19:50	16° $\mathring{M}$ 19'06	47.63152 AU
max. Earth dist.	11513 Aug 21 20:33	7° $\mathring{M}$ 52'19	48.92413 AU	opposition	11522 Mar 02 00:55	16° $\mathring{M}$ 17'44	-16°12'22
retrograde	11513 Nov 30 07:04	9° $\mathring{M}$ 22'10		direct	11522 May 23 04:26	15° $\mathring{M}$ 18'26	
min. Earth dist.	11514 Feb 20 12:22	8° $\mathring{M}$ 23'18	47.04934 AU				
opposition	11514 Feb 22 00:13	8° $\mathring{M}$ 21'36	-16°35'23	conjunction	11522 Aug 29 11:56	16° $\mathring{M}$ 45'57	-15°31'45
direct	11514 May 15 04:02	7° $\mathring{M}$ 21'41		minimum elong	11522 Aug 29 12:08	16° $\mathring{M}$ 45'58	15°32'00
				max. Earth dist.	11522 Aug 30 18:22	16° $\mathring{M}$ 47'44	49.58448 AU
conjunction	11514 Aug 21 14:32	8° $\mathring{M}$ 50'45	-15°54'26	retrograde	11522 Dec 09 06:15	18° $\mathring{M}$ 16'19	
minimum elong	11514 Aug 21 14:41	8° $\mathring{M}$ 50'45	15°54'46	min. Earth dist.	11523 Mar 02 02:06	17° $\mathring{M}$ 17'44	47.68896 AU
max. Earth dist.	11514 Aug 23 02:25	8° $\mathring{M}$ 52'52	49.01277 AU	opposition	11523 Mar 03 06:35	17° $\mathring{M}$ 16'23	-16°08'17
retrograde	11514 Dec 01 12:17	10° $\mathring{M}$ 22'31		direct	11523 May 24 12:53	16° $\mathring{M}$ 17'10	
min. Earth dist.	11515 Feb 21 20:56	9° $\mathring{M}$ 23'39	47.13511 AU				
opposition	11515 Feb 23 06:49	9° $\mathring{M}$ 22'03	-16°33'27	conjunction	11523 Aug 30 17:11	17° $\mathring{M}$ 44'33	-15°27'45
direct	11515 May 16 09:57	8° $\mathring{M}$ 22'12		minimum elong	11523 Aug 30 17:22	17° $\mathring{M}$ 44'34	15°27'58
				max. Earth dist.	11523 Aug 31 21:38	17° $\mathring{M}$ 46'13	49.64050 AU
conjunction	11515 Aug 22 20:28	9° $\mathring{M}$ 51'02	-15°52'32	retrograde	11523 Dec 10 15:01	19° $\mathring{M}$ 14'47	
minimum elong	11515 Aug 22 20:37	9° $\mathring{M}$ 51'03	15°52'51	min. Earth dist.	11524 Mar 02 08:28	18° $\mathring{M}$ 16'15	47.74212 AU
max. Earth dist.	11515 Aug 24 07:12	9° $\mathring{M}$ 53'05	49.09654 AU	opposition	11524 Mar 03 12:17	18° $\mathring{M}$ 14'56	-16°03'57
retrograde	11515 Dec 02 15:17	11° $\mathring{M}$ 22'36		direct	11524 May 24 17:01	17° $\mathring{M}$ 15'48	
min. Earth dist.	11516 Feb 23 03:15	10° $\mathring{M}$ 23'47	47.21624 AU				
opposition	11516 Feb 24 13:09	10° $\mathring{M}$ 22'11	-16°31'16	conjunction	11524 Aug 30 22:43	18° $\mathring{M}$ 43'02	-15°23'31
direct	11516 May 16 16:52	9° $\mathring{M}$ 22'24		minimum elong	11524 Aug 30 22:56	18° $\mathring{M}$ 43'03	15°23'45
				max. Earth dist.	11524 Sep 01 02:53	18° $\mathring{M}$ 44'40	49.69180 AU
conjunction	11516 Aug 23 02:20	10° $\mathring{M}$ 51'02	-15°50'22	retrograde	11524 Dec 10 21:28	20° $\mathring{M}$ 13'08	
minimum elong	11516 Aug 23 02:30	10° $\mathring{M}$ 51'02	15°50'40	opposition	11525 Mar 04 17:53	19° $\mathring{M}$ 13'21	-15°59'23
max. Earth dist.	11516 Aug 24 11:58	10° $\mathring{M}$ 53'01	49.17592 AU	min. Earth dist.	11525 Mar 03 16:05	19° $\mathring{M}$ 14'34	47.79019 AU
retrograde	11516 Dec 02 20:33	12° $\mathring{M}$ 22'23		direct	11525 May 25 21:58	18° $\mathring{M}$ 14'17	
min. Earth dist.	11517 Feb 23 10:59	11° $\mathring{M}$ 23'33	47.29348 AU				
opposition	11517 Feb 24 19:25	11° $\mathring{M}$ 22'01	-16°28'48	conjunction	11525 Sep 01 04:12	19° $\mathring{M}$ 41'22	-15°19'04
direct	11517 May 18 00:28	10° $\mathring{M}$ 22'19		minimum elong	11525 Sep 01 04:24	19° $\mathring{M}$ 41'23	15°19'16
				max. Earth dist.	11525 Sep 02 06:48	19° $\mathring{M}$ 42'55	49.73801 AU
conjunction	11517 Aug 24 08:13	11° $\mathring{M}$ 50'44	-15°47'56	retrograde	11525 Dec 12 01:44	21° $\mathring{M}$ 11'19	
minimum elong	11517 Aug 24 08:22	11° $\mathring{M}$ 50'44	15°48'14	opposition	11526 Mar 05 23:22	20° $\mathring{M}$ 11'35	-15°54'37
max. Earth dist.	11517 Aug 25 17:56	11° $\mathring{M}$ 52'43	49.25177 AU	min. Earth dist.	11526 Mar 04 21:46	20° $\mathring{M}$ 12'47	47.83290 AU
retrograde	11517 Dec 04 01:38	13° $\mathring{M}$ 21'54		direct	11526 May 27 02:03	19° $\mathring{M}$ 12'33	
min. Earth dist.	11518 Feb 24 17:31	12° $\mathring{M}$ 23'06	47.36718 AU				
opposition	11518 Feb 26 01:29	12° $\mathring{M}$ 21'36	-16°26'05	conjunction	11526 Sep 02 09:29	20° $\mathring{M}$ 39'31	-15°14'25
direct	11518 May 19 08:52	11° $\mathring{M}$ 21'58		minimum elong	11526 Sep 02 09:41	20° $\mathring{M}$ 39'31	15°14'36
				max. Earth dist.	11526 Sep 03 10:33	20° $\mathring{M}$ 40'58	49.77874 AU
conjunction	11518 Aug 25 13:48	12° $\mathring{M}$ 50'09	-15°45'14	retrograde	11526 Dec 13 05:40	22° $\mathring{M}$ 09'18	
minimum elong	11518 Aug 25 13:59	12° $\mathring{M}$ 50'10	15°45'31	min. Earth dist.	11527 Mar 06 05:14	21° $\mathring{M}$ 10'43	47.87039 AU
max. Earth dist.	11518 Aug 26 21:53	12° $\mathring{M}$ 52'02	49.32436 AU	opposition	11527 Mar 07 04:54	21° $\mathring{M}$ 09'36	-15°49'37
retrograde	11518 Dec 05 10:36	14° $\mathring{M}$ 21'08		direct	11527 May 28 07:59	20° $\mathring{M}$ 10'36	

conjunction	11527 Sep 03 14:48	21° <u>17</u> 37'25	-15°09'32	conjunction	11534 Sep 10 01:36	28° <u>18</u> 18'32	-14°28'41
minimum elong	11527 Sep 03 15:00	21° <u>17</u> 37'26	15°09'42	minimum elong	11534 Sep 10 01:49	28° <u>18</u> 18'33	14°28'46
max. Earth dist.	11527 Sep 04 15:40	21° <u>17</u> 38'51	49.81465 AU	max. Earth dist.	11534 Sep 10 21:09	28° <u>18</u> 19'40	49.96787 AU
retrograde	11527 Dec 14 09:10	23° <u>17</u> 07'05		morning rise	11534 Sep 14 04:27	28° <u>18</u> 24'12	
min. Earth dist.	11528 Mar 06 11:04	22° <u>17</u> 08'29	47.90317 AU	retrograde	11534 Dec 21 02:03	29° <u>17</u> 47'38	
opposition	11528 Mar 07 10:14	22° <u>17</u> 07'24	-15°44'24	opposition	11535 Mar 14 21:55	28° <u>17</u> 48'17	-15°00'55
direct	11528 May 28 15:57	21° <u>17</u> 08'25		min. Earth dist.	11535 Mar 14 04:26	28° <u>17</u> 49'05	48.03843 AU
				direct	11535 Jun 05 00:59	27° <u>17</u> 49'39	
conjunction	11528 Sep 03 19:49	22° <u>17</u> 35'05	-15°04'25	evening set	11535 Sep 06 18:26	29° <u>17</u> 09'36	
minimum elong	11528 Sep 03 20:01	22° <u>17</u> 35'06	15°04'35				
max. Earth dist.	11528 Sep 04 18:51	22° <u>17</u> 36'25	49.84623 AU	conjunction	11535 Sep 11 06:34	29° <u>17</u> 15'47	-14°21'54
retrograde	11528 Dec 14 16:33	24° <u>17</u> 04'37		minimum elong	11535 Sep 11 06:48	29° <u>17</u> 15'48	14°21'59
opposition	11529 Mar 08 15:32	23° <u>17</u> 04'58	-15°38'56	max. Earth dist.	11535 Sep 12 00:55	29° <u>17</u> 16'50	49.97642 AU
min. Earth dist.	11529 Mar 07 17:05	23° <u>17</u> 06'01	47.93207 AU	morning rise	11535 Sep 15 19:23	29° <u>17</u> 22'00	
direct	11529 May 29 20:42	22° <u>17</u> 06'01			11535 Oct 14 22:28	0° <u>17</u>	
evening set	11529 Sep 04 09:33	23° <u>17</u> 31'40		retrograde	11535 Dec 22 06:43	0° <u>17</u> 44'50	
					11536 Mar 02 00:05	30° <u>17</u>	
conjunction	11529 Sep 05 00:59	23° <u>17</u> 32'33	-14°59'05	min. Earth dist.	11536 Mar 14 09:29	29° <u>17</u> 46'20	48.04367 AU
minimum elong	11529 Sep 05 01:12	23° <u>17</u> 32'34	14°59'13	opposition	11536 Mar 15 02:51	29° <u>17</u> 45'32	-14°53'44
evening rise	11529 Sep 05 16:53	23° <u>17</u> 33'28		direct	11536 Jun 05 03:09	28° <u>17</u> 46'58	
max. Earth dist.	11529 Sep 06 00:06	23° <u>17</u> 33'53	49.87408 AU		11536 Sep 01 22:25	0° <u>17</u>	
retrograde	11529 Dec 15 22:52	25° <u>17</u> 01'58		evening set	11536 Sep 06 13:58	0° <u>17</u> 06'20	
opposition	11530 Mar 09 20:38	24° <u>17</u> 02'21	-15°33'14				
min. Earth dist.	11530 Mar 08 23:37	24° <u>17</u> 03'19	47.95742 AU	conjunction	11536 Sep 11 11:30	0° <u>17</u> 13'04	-14°14'54
direct	11530 May 31 00:33	23° <u>17</u> 03'26		minimum elong	11536 Sep 11 11:44	0° <u>17</u> 13'05	14°14'58
evening set	11530 Sep 04 09:30	24° <u>17</u> 27'18		max. Earth dist.	11536 Sep 12 04:16	0° <u>17</u> 14'02	49.98021 AU
				morning rise	11536 Sep 16 09:48	0° <u>17</u> 19'49	
conjunction	11530 Sep 06 06:00	24° <u>17</u> 29'52	-14°53'29	retrograde	11536 Dec 22 10:23	1° <u>17</u> 42'05	
minimum elong	11530 Sep 06 06:12	24° <u>17</u> 29'53	14°53'38	opposition	11537 Mar 16 07:55	0° <u>17</u> 42'49	-14°46'21
max. Earth dist.	11530 Sep 07 04:03	24° <u>17</u> 31'08	49.89883 AU	min. Earth dist.	11537 Mar 15 16:39	0° <u>17</u> 43'32	48.04387 AU
morning rise	11530 Sep 08 02:57	24° <u>17</u> 32'27			11537 Apr 28 08:23	30° <u>17</u>	
retrograde	11530 Dec 17 03:44	25° <u>17</u> 59'10		direct	11537 Jun 06 07:52	29° <u>17</u> 44'18	
min. Earth dist.	11531 Mar 10 04:18	25° <u>17</u> 00'35	47.97975 AU		11537 Jul 14 18:39	0° <u>17</u>	
opposition	11531 Mar 11 01:43	24° <u>17</u> 59'35	-15°27'16	evening set	11537 Sep 07 10:19	1° <u>17</u> 03'08	
direct	11531 Jun 01 03:07	24° <u>17</u> 00'43					
evening set	11531 Sep 04 21:09	25° <u>17</u> 23'32		conjunction	11537 Sep 12 16:41	1° <u>17</u> 10'21	-14°07'43
				minimum elong	11537 Sep 12 16:55	1° <u>17</u> 10'22	14°07'46
conjunction	11531 Sep 07 10:48	25° <u>17</u> 27'04	-14°47'39	max. Earth dist.	11537 Sep 13 08:58	1° <u>17</u> 11'17	49.97877 AU
minimum elong	11531 Sep 07 11:01	25° <u>17</u> 27'05	14°47'47	morning rise	11537 Sep 17 23:46	1° <u>17</u> 17'37	
max. Earth dist.	11531 Sep 08 07:58	25° <u>17</u> 28'17	49.92056 AU	retrograde	11537 Dec 23 13:07	2° <u>17</u> 39'20	
morning rise	11531 Sep 10 00:59	25° <u>17</u> 30'38		opposition	11538 Mar 17 12:43	1° <u>17</u> 40'06	-14°38'46
retrograde	11531 Dec 18 07:22	26° <u>17</u> 56'18		min. Earth dist.	11538 Mar 16 22:12	1° <u>17</u> 40'46	48.03850 AU
min. Earth dist.	11532 Mar 10 11:03	25° <u>17</u> 57'41	47.99921 AU	direct	11538 Jun 07 15:31	0° <u>17</u> 41'35	
opposition	11532 Mar 11 06:57	25° <u>17</u> 56'46	-15°21'03	evening set	11538 Sep 08 06:58	1° <u>17</u> 59'54	
direct	11532 Jun 01 09:32	24° <u>17</u> 57'57					
evening set	11532 Sep 04 12:26	26° <u>17</u> 19'53		conjunction	11538 Sep 13 21:41	2° <u>17</u> 07'35	-14°00'19
				minimum elong	11538 Sep 13 21:55	2° <u>17</u> 07'36	14°00'21
conjunction	11532 Sep 07 15:50	26° <u>17</u> 24'13	-14°41'34	max. Earth dist.	11538 Sep 14 11:40	2° <u>17</u> 08'23	49.97184 AU
minimum elong	11532 Sep 07 16:02	26° <u>17</u> 24'14	14°41'42	morning rise	11538 Sep 19 13:15	2° <u>17</u> 15'20	
max. Earth dist.	11532 Sep 08 13:12	26° <u>17</u> 25'27	49.93953 AU	retrograde	11538 Dec 24 19:51	3° <u>17</u> 36'32	
morning rise	11532 Sep 10 19:45	26° <u>17</u> 28'35		opposition	11539 Mar 18 17:43	2° <u>17</u> 37'17	-14°30'59
retrograde	11532 Dec 18 10:33	27° <u>17</u> 53'24		min. Earth dist.	11539 Mar 18 04:21	2° <u>17</u> 37'55	48.02783 AU
opposition	11533 Mar 12 11:52	26° <u>17</u> 53'54	-15°14'35	direct	11539 Jun 08 20:51	1° <u>17</u> 38'46	
min. Earth dist.	11533 Mar 11 16:11	26° <u>17</u> 54'49	48.01565 AU	evening set	11539 Sep 09 03:42	2° <u>17</u> 56'35	
direct	11533 Jun 02 17:20	25° <u>17</u> 55'09					
evening set	11533 Sep 05 05:22	27° <u>17</u> 16'21		conjunction	11539 Sep 15 02:34	3° <u>17</u> 04'43	-13°52'44
				minimum elong	11539 Sep 15 02:48	3° <u>17</u> 04'44	13°52'46
conjunction	11533 Sep 08 20:42	27° <u>17</u> 21'22	-14°35'15	max. Earth dist.	11539 Sep 15 16:14	3° <u>17</u> 05'30	49.95968 AU
minimum elong	11533 Sep 08 20:56	27° <u>17</u> 21'22	14°35'22	morning rise	11539 Sep 21 02:14	3° <u>17</u> 12'55	
max. Earth dist.	11533 Sep 09 16:15	27° <u>17</u> 22'29	49.95544 AU	retrograde	11539 Dec 26 02:44	4° <u>17</u> 33'36	
morning rise	11533 Sep 12 12:40	27° <u>17</u> 26'25		opposition	11540 Mar 18 22:41	3° <u>17</u> 34'21	-14°22'59
retrograde	11533 Dec 19 19:04	28° <u>17</u> 50'29		min. Earth dist.	11540 Mar 18 10:57	3° <u>17</u> 34'54	48.01213 AU
opposition	11534 Mar 13 16:54	27° <u>17</u> 51'04	-15°07'52	direct	11540 Jun 09 01:22	2° <u>17</u> 35'49	
min. Earth dist.	11534 Mar 12 21:49	27° <u>17</u> 51'57	48.02895 AU	evening set	11540 Sep 09 00:58	3° <u>17</u> 53'08	
direct	11534 Jun 03 20:55	26° <u>17</u> 52'23					
evening set	11534 Sep 05 23:21	28° <u>17</u> 12'56		conjunction	11540 Sep 15 07:30	4° <u>17</u> 01'43	-13°44'56
				minimum elong	11540 Sep 15 07:45	4° <u>17</u> 01'43	13°44'57



max. Earth dist.	11540 Sep 15 19:53	4° <u>02</u> '25	49.94301 AU	conjunction	11547 Sep 22 17:30	10° <u>03</u> '41	-12°44'01
morning rise	11540 Sep 21 14:56	4° <u>01</u> '21		minimum elong	11547 Sep 22 17:44	10° <u>03</u> '42	12°43'57
retrograde	11540 Dec 26 09:23	5° <u>03</u> '32		max. Earth dist.	11547 Sep 23 00:36	10° <u>03</u> '05	49.72894 AU
opposition	11541 Mar 20 03:20	4° <u>03</u> '16	-14°14'46	morning rise	11547 Oct 01 01:59	10° <u>05</u> '05	
min. Earth dist.	11541 Mar 19 15:36	4° <u>03</u> '48	47.99220 AU	retrograde	11548 Jan 02 15:55	12° <u>07</u> '32	
direct	11541 Jun 10 02:51	3° <u>03</u> '24		opposition	11548 Mar 26 12:49	11° <u>08</u> '14	-13°10'43
evening set	11541 Sep 09 22:16	4° <u>04</u> '33		min. Earth dist.	11548 Mar 26 07:06	11° <u>08</u> '30	47.75723 AU
				direct	11548 Jun 16 13:57	10° <u>09</u> '41	
conjunction	11541 Sep 16 12:22	4° <u>05</u> '34	-13°36'55	evening set	11548 Sep 14 08:53	11° <u>09</u> '56	
minimum elong	11541 Sep 16 12:36	4° <u>05</u> '35	13°36'55				
max. Earth dist.	11541 Sep 16 23:30	4° <u>05</u> '12	49.92223 AU	conjunction	11548 Sep 22 22:32	11° <u>03</u> '38	-12°34'26
morning rise	11541 Sep 23 03:26	5° <u>07</u> '37		minimum elong	11548 Sep 22 22:47	11° <u>03</u> '39	12°34'22
retrograde	11541 Dec 27 12:54	6° <u>02</u> '20		max. Earth dist.	11548 Sep 23 03:26	11° <u>03</u> '54	49.68340 AU
opposition	11542 Mar 21 08:12	5° <u>02</u> '03	-14°06'19	morning rise	11548 Oct 01 13:30	11° <u>04</u> '24	
min. Earth dist.	11542 Mar 20 22:18	5° <u>02</u> '30	47.96852 AU	retrograde	11549 Jan 02 22:35	13° <u>04</u> '32	
direct	11542 Jun 11 07:40	4° <u>02</u> '28		opposition	11549 Mar 27 17:36	12° <u>05</u> '15	-13°00'40
evening set	11542 Sep 10 19:48	5° <u>04</u> '52		min. Earth dist.	11549 Mar 27 13:19	12° <u>05</u> '27	47.70790 AU
				direct	11549 Jun 17 18:28	11° <u>06</u> '41	
conjunction	11542 Sep 17 17:12	5° <u>05</u> '17	-13°28'40	evening set	11549 Sep 15 07:47	12° <u>06</u> '39	
minimum elong	11542 Sep 17 17:27	5° <u>05</u> '18	13°28'39				
max. Earth dist.	11542 Sep 18 04:27	5° <u>05</u> '56	49.89801 AU	conjunction	11549 Sep 24 03:47	12° <u>03</u> '42	-12°24'39
morning rise	11542 Sep 24 15:31	6° <u>04</u> '45		minimum elong	11549 Sep 24 04:01	12° <u>03</u> '42	12°24'34
retrograde	11542 Dec 28 13:52	7° <u>04</u> '02		max. Earth dist.	11549 Sep 24 08:01	12° <u>03</u> '56	49.63258 AU
opposition	11543 Mar 22 12:55	6° <u>04</u> '43	-13°57'39	morning rise	11549 Oct 03 00:57	12° <u>04</u> '50	
min. Earth dist.	11543 Mar 22 03:04	6° <u>05</u> '11	47.94144 AU	retrograde	11550 Jan 04 05:19	14° <u>01</u> '40	
direct	11543 Jun 12 15:36	5° <u>05</u> '08		opposition	11550 Mar 28 22:32	13° <u>02</u> '22	-12°50'25
evening set	11543 Sep 11 17:31	6° <u>04</u> '07		min. Earth dist.	11550 Mar 28 19:55	13° <u>02</u> '29	47.65299 AU
				direct	11550 Jun 18 23:15	12° <u>03</u> '47	
conjunction	11543 Sep 18 21:58	6° <u>05</u> '56	-13°20'12	evening set	11550 Sep 16 06:52	13° <u>04</u> '26	
minimum elong	11543 Sep 18 22:11	6° <u>05</u> '57	13°20'11				
max. Earth dist.	11543 Sep 19 07:22	6° <u>05</u> '28	49.87065 AU	conjunction	11550 Sep 25 08:50	13° <u>02</u> '51	-12°14'41
morning rise	11543 Sep 26 03:28	7° <u>01</u> '48		minimum elong	11550 Sep 25 09:04	13° <u>02</u> '51	12°14'35
retrograde	11543 Dec 29 20:14	8° <u>02</u> '40		max. Earth dist.	11550 Sep 25 11:31	13° <u>03</u> '00	49.57634 AU
opposition	11544 Mar 22 17:42	7° <u>02</u> '21	-13°48'43	morning rise	11550 Oct 04 12:04	13° <u>04</u> '20	
min. Earth dist.	11544 Mar 22 08:32	7° <u>02</u> '46	47.91143 AU	retrograde	11551 Jan 05 12:30	14° <u>05</u> '51	
direct	11544 Jun 12 20:36	6° <u>02</u> '45		opposition	11551 Mar 30 03:22	13° <u>05</u> '32	-12°39'58
evening set	11544 Sep 11 15:20	7° <u>03</u> '21		min. Earth dist.	11551 Mar 30 01:04	13° <u>05</u> '38	47.59271 AU
				direct	11551 Jun 20 00:51	13° <u>06</u> '55	
conjunction	11544 Sep 19 02:50	7° <u>04</u> '32	-13°11'29	evening set	11551 Sep 17 05:59	14° <u>07</u> '17	
minimum elong	11544 Sep 19 03:05	7° <u>04</u> '33	13°11'27				
max. Earth dist.	11544 Sep 19 12:22	7° <u>04</u> '05	49.84025 AU	conjunction	11551 Sep 26 13:55	14° <u>07</u> '02	-12°04'31
morning rise	11544 Sep 26 15:22	7° <u>05</u> '49		minimum elong	11551 Sep 26 14:10	14° <u>07</u> '03	12°04'24
retrograde	11544 Dec 30 02:48	9° <u>01</u> '17		max. Earth dist.	11551 Sep 26 15:02	14° <u>07</u> '06	49.51480 AU
opposition	11545 Mar 23 22:31	8° <u>01</u> '58	-13°39'34	morning rise	11551 Oct 05 23:16	14° <u>08</u> '51	
min. Earth dist.	11545 Mar 23 14:38	8° <u>01</u> '20	47.87821 AU	retrograde	11552 Jan 06 17:21	15° <u>05</u> '05	
direct	11545 Jun 14 01:27	7° <u>01</u> '22		opposition	11552 Mar 30 08:17	14° <u>05</u> '43	-12°29'19
evening set	11545 Sep 12 13:31	8° <u>03</u> '35		min. Earth dist.	11552 Mar 30 08:05	14° <u>05</u> '44	47.52750 AU
				direct	11552 Jun 20 04:32	13° <u>05</u> '03	
conjunction	11545 Sep 20 07:43	8° <u>04</u> '51	-13°02'33	evening set	11552 Sep 17 05:13	15° <u>06</u> '09	
minimum elong	11545 Sep 20 07:57	8° <u>04</u> '51	13°02'30				
max. Earth dist.	11545 Sep 20 16:10	8° <u>04</u> '39	49.80678 AU	conjunction	11552 Sep 26 19:05	15° <u>04</u> '13	-11°54'09
morning rise	11545 Sep 28 02:59	8° <u>05</u> '49		minimum elong	11552 Sep 26 19:19	15° <u>04</u> '14	11°54'01
retrograde	11545 Dec 31 08:25	10° <u>01</u> '35		max. Earth dist.	11552 Sep 26 20:00	15° <u>04</u> '16	49.44871 AU
opposition	11546 Mar 25 03:07	9° <u>01</u> '43	-13°30'10	morning rise	11552 Oct 06 10:11	15° <u>05</u> '23	
min. Earth dist.	11546 Mar 24 19:08	9° <u>01</u> '59	47.84178 AU	retrograde	11553 Jan 06 18:39	16° <u>05</u> '20	
direct	11546 Jun 15 03:28	8° <u>01</u> '60		opposition	11553 Mar 31 13:04	15° <u>05</u> '55	-12°18'27
evening set	11546 Sep 13 11:43	9° <u>03</u> '04		min. Earth dist.	11553 Mar 31 13:06	15° <u>05</u> '55	47.45791 AU
				direct	11553 Jun 21 12:48	14° <u>05</u> '51	
conjunction	11546 Sep 21 12:35	9° <u>04</u> '52	-12°53'24	evening set	11553 Sep 18 04:43	16° <u>06</u> '02	
minimum elong	11546 Sep 21 12:50	9° <u>04</u> '53	12°53'21				
max. Earth dist.	11546 Sep 21 19:44	9° <u>04</u> '17	49.76979 AU	conjunction	11553 Sep 28 00:09	16° <u>02</u> '25	-11°43'33
morning rise	11546 Sep 29 14:40	9° <u>05</u> '54		minimum elong	11553 Sep 28 00:24	16° <u>02</u> '26	11°43'24
retrograde	11547 Jan 01 13:08	11° <u>01</u> '04		max. Earth dist.	11553 Sep 27 23:04	16° <u>02</u> '22	49.37856 AU
opposition	11547 Mar 26 08:01	10° <u>01</u> '12	-13°20'33	morning rise	11553 Oct 07 21:06	16° <u>03</u> '45	
min. Earth dist.	11547 Mar 26 01:52	10° <u>01</u> '39	47.80167 AU	retrograde	11554 Jan 08 00:19	17° <u>05</u> '36	
direct	11547 Jun 16 07:14	9° <u>01</u> '24		opposition	11554 Apr 01 17:48	16° <u>05</u> '08	-12°07'21
evening set	11547 Sep 14 10:05	10° <u>02</u> '27		min. Earth dist.	11554 Apr 01 18:50	16° <u>05</u> '05	47.38470 AU

direct	11554 Jun 22 18:42	15° <u>♂</u> 52'21	retrograde	11561 Jan 14 18:39	24° <u>♂</u> 34'30
evening set	11554 Sep 19 04:07	17° <u>♂</u> 04'56	opposition	11561 Apr 08 04:43	23° <u>♂</u> 34'43 -10°43'01
			min. Earth dist.	11561 Apr 08 11:10	23° <u>♂</u> 34'25 46.78444 AU
conjunction	11554 Sep 29 05:19	17° <u>♂</u> 18'39 -11°32'45	direct	11561 Jun 29 01:01	22° <u>♂</u> 35'36
minimum elong	11554 Sep 29 05:33	17° <u>♂</u> 18'40 11°32'36	evening set	11561 Sep 24 05:04	23° <u>♂</u> 46'53
max. Earth dist.	11554 Sep 29 04:15	17° <u>♂</u> 18'36 49.30494 AU			
morning rise	11554 Oct 09 07:52	17° <u>♂</u> 32'29	conjunction	11561 Oct 05 18:50	24° <u>♂</u> 02'48 -10°10'41
retrograde	11555 Jan 09 07:19	18° <u>♂</u> 47'55	minimum elong	11561 Oct 05 19:03	24° <u>♂</u> 02'49 10°10'27
opposition	11555 Apr 02 22:42	17° <u>♂</u> 48'23 -11°56'01	max. Earth dist.	11561 Oct 05 10:36	24° <u>♂</u> 02'20 48.70177 AU
min. Earth dist.	11555 Apr 03 00:54	17° <u>♂</u> 48'17 47.30820 AU	morning rise	11561 Oct 17 10:22	24° <u>♂</u> 18'51
direct	11555 Jun 23 23:44	16° <u>♂</u> 49'33	retrograde	11562 Jan 16 02:10	25° <u>♂</u> 32'56
evening set	11555 Sep 20 03:43	18° <u>♂</u> 01'54	opposition	11562 Apr 09 10:01	24° <u>♂</u> 33'05 -10°30'04
			min. Earth dist.	11562 Apr 09 18:45	24° <u>♂</u> 32'41 46.68248 AU
conjunction	11555 Sep 30 10:20	18° <u>♂</u> 15'57 -11°21'42	direct	11562 Jun 30 03:31	23° <u>♂</u> 33'53
minimum elong	11555 Sep 30 10:35	18° <u>♂</u> 15'58 11°21'32	evening set	11562 Sep 25 06:00	24° <u>♂</u> 45'02
max. Earth dist.	11555 Sep 30 08:21	18° <u>♂</u> 15'50 49.22843 AU			
morning rise	11555 Oct 10 18:26	18° <u>♂</u> 30'06	conjunction	11562 Oct 07 00:42	25° <u>♂</u> 01'15 -9°58'06
retrograde	11556 Jan 10 14:11	19° <u>♂</u> 45'18	minimum elong	11562 Oct 07 00:55	25° <u>♂</u> 01'16 9°57'50
opposition	11556 Apr 03 03:34	18° <u>♂</u> 45'43 -11°44'27	max. Earth dist.	11562 Oct 06 16:00	25° <u>♂</u> 00'45 48.59862 AU
min. Earth dist.	11556 Apr 03 05:32	18° <u>♂</u> 45'38 47.22889 AU	morning rise	11562 Oct 18 20:57	25° <u>♂</u> 17'35
direct	11556 Jun 24 01:41	17° <u>♂</u> 46'50	retrograde	11563 Jan 17 04:56	26° <u>♂</u> 31'31
evening set	11556 Sep 20 03:28	18° <u>♂</u> 58'57	opposition	11563 Apr 10 15:20	25° <u>♂</u> 31'35 -10°16'54
			min. Earth dist.	11563 Apr 11 00:21	25° <u>♂</u> 31'10 46.57530 AU
conjunction	11556 Sep 30 15:32	19° <u>♂</u> 13'20 -11°10'26	direct	11563 Jul 01 11:04	24° <u>♂</u> 32'17
minimum elong	11556 Sep 30 15:46	19° <u>♂</u> 13'21 11°10'16	evening set	11563 Sep 26 07:01	25° <u>♂</u> 43'17
max. Earth dist.	11556 Sep 30 12:19	19° <u>♂</u> 13'09 49.14899 AU			
morning rise	11556 Oct 11 05:13	19° <u>♂</u> 27'49	conjunction	11563 Oct 08 06:21	25° <u>♂</u> 59'48 -9°45'18
retrograde	11557 Jan 10 19:28	20° <u>♂</u> 42'47	minimum elong	11563 Oct 08 06:33	25° <u>♂</u> 59'49 9°45'03
opposition	11557 Apr 04 08:28	19° <u>♂</u> 43'09 -11°32'38	max. Earth dist.	11563 Oct 07 19:25	25° <u>♂</u> 59'10 48.49040 AU
min. Earth dist.	11557 Apr 04 12:05	19° <u>♂</u> 42'59 47.14677 AU	morning rise	11563 Oct 20 07:33	26° <u>♂</u> 16'26
direct	11557 Jun 25 04:55	18° <u>♂</u> 44'13	retrograde	11564 Jan 18 09:52	27° <u>♂</u> 30'13
evening set	11557 Sep 21 03:24	19° <u>♂</u> 56'09	opposition	11564 Apr 10 20:46	26° <u>♂</u> 30'11 -10°03'31
			min. Earth dist.	11564 Apr 11 07:14	26° <u>♂</u> 29'41 46.46338 AU
conjunction	11557 Oct 01 20:54	20° <u>♂</u> 10'51 -10°58'56	direct	11564 Jul 01 17:34	25° <u>♂</u> 30'47
minimum elong	11557 Oct 01 21:08	20° <u>♂</u> 10'52 10°58'45	evening set	11564 Sep 26 08:12	26° <u>♂</u> 41'39
max. Earth dist.	11557 Oct 01 17:52	20° <u>♂</u> 10'41 49.06683 AU			
morning rise	11557 Oct 12 15:48	20° <u>♂</u> 25'38	conjunction	11564 Oct 08 12:19	26° <u>♂</u> 58'27 -9°32'18
retrograde	11558 Jan 11 21:37	21° <u>♂</u> 40'24	minimum elong	11564 Oct 08 12:33	26° <u>♂</u> 58'28 9°32'02
opposition	11558 Apr 05 13:24	20° <u>♂</u> 40'45 -11°20'35	max. Earth dist.	11564 Oct 08 01:07	26° <u>♂</u> 57'48 48.37754 AU
min. Earth dist.	11558 Apr 05 17:01	20° <u>♂</u> 40'35 47.06167 AU	morning rise	11564 Oct 20 18:07	27° <u>♂</u> 15'22
direct	11558 Jun 26 11:18	19° <u>♂</u> 41'46	retrograde	11565 Jan 18 15:52	28° <u>♂</u> 29'01
evening set	11558 Sep 22 03:27	20° <u>♂</u> 53'32	opposition	11565 Apr 12 02:06	27° <u>♂</u> 28'53 -9°49'55
			min. Earth dist.	11565 Apr 12 13:52	27° <u>♂</u> 28'19 46.34709 AU
conjunction	11558 Oct 03 02:02	21° <u>♂</u> 08'32 -10°47'12	direct	11565 Jul 03 00:05	26° <u>♂</u> 29'22
minimum elong	11558 Oct 03 02:15	21° <u>♂</u> 08'33 10°46'59	evening set	11565 Sep 27 09:39	27° <u>♂</u> 40'07
max. Earth dist.	11558 Oct 02 21:10	21° <u>♂</u> 08'15 48.98158 AU			
morning rise	11558 Oct 14 02:19	21° <u>♂</u> 23'38	conjunction	11565 Oct 09 18:14	27° <u>♂</u> 57'12 -9°19'05
retrograde	11559 Jan 13 03:39	22° <u>♂</u> 38'14	minimum elong	11565 Oct 09 18:26	27° <u>♂</u> 57'13 9°18'48
opposition	11559 Apr 06 18:29	21° <u>♂</u> 38'32 -11°08'17	max. Earth dist.	11565 Oct 09 05:46	27° <u>♂</u> 56'29 48.26079 AU
min. Earth dist.	11559 Apr 06 23:12	21° <u>♂</u> 38'18 46.97340 AU	morning rise	11565 Oct 22 04:36	28° <u>♂</u> 14'25
direct	11559 Jun 27 16:24	20° <u>♂</u> 39'31	retrograde	11566 Jan 19 23:48	29° <u>♂</u> 27'57
evening set	11559 Sep 23 03:40	21° <u>♂</u> 51'06	opposition	11566 Apr 13 07:30	28° <u>♂</u> 27'42 -9°36'04
			min. Earth dist.	11566 Apr 13 19:21	28° <u>♂</u> 27'09 46.22723 AU
conjunction	11559 Oct 04 07:32	22° <u>♂</u> 06'25 -10°35'14	direct	11566 Jul 04 03:25	27° <u>♂</u> 28'05
minimum elong	11559 Oct 04 07:46	22° <u>♂</u> 06'26 10°35'02	evening set	11566 Sep 28 11:01	28° <u>♂</u> 38'44
max. Earth dist.	11559 Oct 04 02:28	22° <u>♂</u> 06'07 48.89277 AU	max. Earth dist.	11566 Oct 10 10:21	28° <u>♂</u> 55'19 48.14050 AU
morning rise	11559 Oct 15 12:57	22° <u>♂</u> 21'50			
retrograde	11560 Jan 14 09:49	23° <u>♂</u> 36'16	conjunction	11566 Oct 11 00:02	28° <u>♂</u> 56'06 -9°05'38
opposition	11560 Apr 06 23:35	22° <u>♂</u> 36'32 -10°55'46	minimum elong	11566 Oct 11 00:15	28° <u>♂</u> 56'07 9°05'20
min. Earth dist.	11560 Apr 07 05:39	22° <u>♂</u> 36'14 46.88119 AU	morning rise	11566 Oct 23 14:58	29° <u>♂</u> 13'36
direct	11560 Jun 27 22:49	21° <u>♂</u> 37'28		11566 Nov 30 17:27	0° <u>♂</u>
evening set	11560 Sep 23 04:17	22° <u>♂</u> 48'53	retrograde	11567 Jan 21 06:30	0° <u>♂</u> 27'02
				11567 Mar 14 14:41	30° <u>♂</u> <u>♂</u>
conjunction	11560 Oct 04 13:07	23° <u>♂</u> 04'31 -10°23'04	opposition	11567 Apr 14 13:08	29° <u>♂</u> 26'42 -9°21'59
minimum elong	11560 Oct 04 13:20	23° <u>♂</u> 04'31 10°22'49	min. Earth dist.	11567 Apr 15 02:37	29° <u>♂</u> 26'03 46.10413 AU
max. Earth dist.	11560 Oct 04 06:41	23° <u>♂</u> 04'08 48.79981 AU	direct	11567 Jul 05 07:26	28° <u>♂</u> 26'58
morning rise	11560 Oct 15 23:35	23° <u>♂</u> 20'15	evening set	11567 Sep 29 12:40	29° <u>♂</u> 37'33

conjunction	11567 Oct 12 06:10	29° <u>♄</u> 55'12	-8°51'57	retrograde	11574 Jan 28 05:52	7° <u>♊</u> 29'27
minimum elong	11567 Oct 12 06:22	29° <u>♄</u> 55'13	8°51'38	opposition	11574 Apr 21 06:37	6° <u>♊</u> 28'32 -7°36'28
max. Earth dist.	11567 Oct 11 16:38	29° <u>♄</u> 54'25	48.01732 AU	min. Earth dist.	11574 Apr 22 02:12	6° <u>♊</u> 27'36 45.15526 AU
	11567 Oct 15 16:35	0° <u>♊</u>		direct	11574 Jul 11 21:58	5° <u>♊</u> 28'09
morning rise	11567 Oct 25 01:19	0° <u>♊</u> 12'59		evening set	11574 Oct 05 07:07	6° <u>♊</u> 38'45
retrograde	11568 Jan 22 10:20	1° <u>♊</u> 26'20		max. Earth dist.	11574 Oct 18 07:19	6° <u>♊</u> 57'05 47.06409 AU
opposition	11568 Apr 14 18:39	0° <u>♊</u> 25'54	-9°07'39			
min. Earth dist.	11568 Apr 15 08:00	0° <u>♊</u> 25'16	45.97821 AU	conjunction	11574 Oct 19 04:24	6° <u>♊</u> 58'20 -7°09'36
	11568 May 08 03:36	30° <u>♋</u> <u>♄</u>		minimum elong	11574 Oct 19 04:34	6° <u>♊</u> 58'21 7°09'13
direct	11568 Jul 05 13:52	29° <u>♄</u> 26'04		morning rise	11574 Nov 02 03:28	7° <u>♊</u> 18'04
	11568 Aug 31 13:42	0° <u>♊</u>		retrograde	11575 Jan 29 11:38	8° <u>♊</u> 31'21
evening set	11568 Sep 29 14:38	0° <u>♊</u> 36'36		opposition	11575 Apr 22 13:11	7° <u>♊</u> 30'18 -7°20'28
				min. Earth dist.	11575 Apr 23 10:00	7° <u>♊</u> 29'18 45.00230 AU
conjunction	11568 Oct 12 12:15	0° <u>♊</u> 54'33	-8°38'01	direct	11575 Jul 13 06:41	6° <u>♊</u> 29'46
minimum elong	11568 Oct 12 12:28	0° <u>♊</u> 54'34	8°37'42	evening set	11575 Oct 06 10:51	7° <u>♊</u> 40'24
max. Earth dist.	11568 Oct 11 20:52	0° <u>♊</u> 53'39	47.89137 AU			
morning rise	11568 Oct 25 11:53	1° <u>♊</u> 12'37		conjunction	11575 Oct 20 11:37	8° <u>♊</u> 00'15 -6°54'05
retrograde	11569 Jan 22 17:00	2° <u>♊</u> 25'54		minimum elong	11575 Oct 20 11:47	8° <u>♊</u> 00'15 6°53'41
opposition	11569 Apr 16 00:22	1° <u>♊</u> 25'23	-8°53'04	max. Earth dist.	11575 Oct 19 12:51	7° <u>♊</u> 58'53 46.90998 AU
min. Earth dist.	11569 Apr 16 14:50	1° <u>♊</u> 24'42	45.84964 AU	morning rise	11575 Nov 03 14:19	8° <u>♊</u> 20'14
direct	11569 Jul 06 19:27	0° <u>♊</u> 25'28		retrograde	11576 Jan 30 20:57	9° <u>♊</u> 33'32
evening set	11569 Sep 30 16:39	1° <u>♊</u> 35'58		opposition	11576 Apr 22 19:38	8° <u>♊</u> 32'21 -7°04'13
				min. Earth dist.	11576 Apr 23 17:01	8° <u>♊</u> 31'19 44.84461 AU
conjunction	11569 Oct 13 18:35	1° <u>♊</u> 54'11	-8°23'51	direct	11576 Jul 13 11:41	7° <u>♊</u> 31'39
minimum elong	11569 Oct 13 18:46	1° <u>♊</u> 54'12	8°23'31	evening set	11576 Oct 06 14:44	8° <u>♊</u> 42'19
max. Earth dist.	11569 Oct 13 03:09	1° <u>♊</u> 53'17	47.76264 AU			
morning rise	11569 Oct 26 22:15	2° <u>♊</u> 12'32		conjunction	11576 Oct 20 18:58	9° <u>♊</u> 02'25 -6°38'21
retrograde	11570 Jan 23 22:58	3° <u>♊</u> 25'48		minimum elong	11576 Oct 20 19:08	9° <u>♊</u> 02'26 6°37'57
opposition	11570 Apr 17 06:07	2° <u>♊</u> 25'13	-8°38'14	max. Earth dist.	11576 Oct 19 18:40	9° <u>♊</u> 00'58 46.75113 AU
min. Earth dist.	11570 Apr 17 21:26	2° <u>♊</u> 24'29	45.71817 AU	morning rise	11576 Nov 04 01:10	9° <u>♊</u> 22'40
direct	11570 Jul 08 02:31	1° <u>♊</u> 25'13		retrograde	11577 Jan 31 06:11	10° <u>♊</u> 36'00
evening set	11570 Oct 01 19:03	2° <u>♊</u> 35'42		opposition	11577 Apr 24 02:24	9° <u>♊</u> 34'39 -6°47'43
max. Earth dist.	11570 Oct 14 08:31	2° <u>♊</u> 53'14	47.63113 AU	min. Earth dist.	11577 Apr 25 01:43	9° <u>♊</u> 33'30 44.68252 AU
				direct	11577 Jul 14 16:17	8° <u>♊</u> 33'46
conjunction	11570 Oct 15 00:59	2° <u>♊</u> 54'12	-8°09'27	evening set	11577 Oct 07 18:49	9° <u>♊</u> 44'29
minimum elong	11570 Oct 15 01:11	2° <u>♊</u> 54'13	8°09'07	max. Earth dist.	11577 Oct 21 02:00	10° <u>♊</u> 03'23 46.58827 AU
morning rise	11570 Oct 28 08:47	3° <u>♊</u> 12'50				
retrograde	11571 Jan 25 08:48	4° <u>♊</u> 26'05		conjunction	11577 Oct 22 02:27	10° <u>♊</u> 04'50 -6°22'23
opposition	11571 Apr 18 12:01	3° <u>♊</u> 25'25	-8°23'09	minimum elong	11577 Oct 22 02:37	10° <u>♊</u> 04'51 6°21'57
min. Earth dist.	11571 Apr 19 03:30	3° <u>♊</u> 24'41	45.58375 AU	morning rise	11577 Nov 05 11:50	10° <u>♊</u> 25'20
direct	11571 Jul 09 05:16	2° <u>♊</u> 25'21		retrograde	11578 Feb 01 13:39	11° <u>♊</u> 38'42
evening set	11571 Oct 02 21:33	3° <u>♊</u> 35'51		opposition	11578 Apr 25 09:03	10° <u>♊</u> 37'11 -6°30'59
				min. Earth dist.	11578 Apr 26 08:21	10° <u>♊</u> 36'02 44.51670 AU
conjunction	11571 Oct 16 07:27	3° <u>♊</u> 54'38	-7°54'50	direct	11578 Jul 15 22:23	9° <u>♊</u> 36'07
minimum elong	11571 Oct 16 07:38	3° <u>♊</u> 54'38	7°54'28	evening set	11578 Oct 08 23:14	10° <u>♊</u> 46'54
max. Earth dist.	11571 Oct 15 13:39	3° <u>♊</u> 53'35	47.49614 AU	max. Earth dist.	11578 Oct 22 07:28	11° <u>♊</u> 05'56 46.42194 AU
morning rise	11571 Oct 29 19:19	4° <u>♊</u> 13'32				
retrograde	11572 Jan 26 19:02	5° <u>♊</u> 26'47		conjunction	11578 Oct 23 09:55	11° <u>♊</u> 07'31 -6°06'11
opposition	11572 Apr 18 18:11	4° <u>♊</u> 26'03	-8°07'49	minimum elong	11578 Oct 23 10:04	11° <u>♊</u> 07'32 6°05'45
min. Earth dist.	11572 Apr 19 11:42	4° <u>♊</u> 25'13	45.44558 AU	morning rise	11578 Nov 06 22:41	11° <u>♊</u> 28'16
direct	11572 Jul 09 07:20	3° <u>♊</u> 25'54		retrograde	11579 Feb 02 21:23	12° <u>♊</u> 41'41
evening set	11572 Oct 03 00:29	4° <u>♊</u> 36'25		opposition	11579 Apr 26 16:01	11° <u>♊</u> 39'59 -6°13'59
				min. Earth dist.	11579 Apr 27 16:44	11° <u>♊</u> 38'47 44.34784 AU
conjunction	11572 Oct 16 14:22	4° <u>♊</u> 55'29	-7°39'58	direct	11579 Jul 17 05:03	10° <u>♊</u> 38'45
minimum elong	11572 Oct 16 14:34	4° <u>♊</u> 55'29	7°39'37	evening set	11579 Oct 10 03:40	11° <u>♊</u> 49'37
max. Earth dist.	11572 Oct 15 20:12	4° <u>♊</u> 54'24	47.35711 AU			
morning rise	11572 Oct 30 06:00	5° <u>♊</u> 14'40		conjunction	11579 Oct 24 17:38	12° <u>♊</u> 10'29 -5°49'45
retrograde	11573 Jan 27 00:12	6° <u>♊</u> 27'55		minimum elong	11579 Oct 24 17:47	12° <u>♊</u> 10'29 5°49'18
opposition	11573 Apr 20 00:12	5° <u>♊</u> 27'06	-7°52'16	max. Earth dist.	11579 Oct 23 15:16	12° <u>♊</u> 08'54 46.25265 AU
min. Earth dist.	11573 Apr 20 18:00	5° <u>♊</u> 26'15	45.30292 AU	morning rise	11579 Nov 08 09:21	12° <u>♊</u> 31'29
direct	11573 Jul 10 14:27	4° <u>♊</u> 26'50		retrograde	11580 Feb 04 02:24	13° <u>♊</u> 44'58
evening set	11573 Oct 04 03:51	5° <u>♊</u> 37'25		opposition	11580 Apr 26 23:06	12° <u>♊</u> 43'06 -5°56'44
				min. Earth dist.	11580 Apr 28 00:20	12° <u>♊</u> 41'52 44.17612 AU
conjunction	11573 Oct 17 21:19	5° <u>♊</u> 56'44	-7°24'54	direct	11580 Jul 17 14:23	11° <u>♊</u> 41'41
minimum elong	11573 Oct 17 21:30	5° <u>♊</u> 56'44	7°24'31	evening set	11580 Oct 10 08:40	12° <u>♊</u> 52'40
max. Earth dist.	11573 Oct 17 00:44	5° <u>♊</u> 55'31	47.21322 AU	max. Earth dist.	11580 Oct 23 21:58	13° <u>♊</u> 12'06 46.08080 AU
morning rise	11573 Oct 31 16:52	6° <u>♊</u> 16'12				

conjunction	11580 Oct 25 01:31	13° <del>ℳ</del> 13'46	-5°33'03	morning rise	11586 Nov 16 15:09	20° <del>ℳ</del> 06'25	
minimum elong	11580 Oct 25 01:39	13° <del>ℳ</del> 13'47	5°32'36	retrograde	11587 Feb 11 20:03	21° <del>ℳ</del> 21'08	
morning rise	11580 Nov 08 20:19	13° <del>ℳ</del> 35'01		opposition	11587 May 05 05:32	20° <del>ℳ</del> 18'09	-3°48'45
retrograde	11581 Feb 04 11:19	14° <del>ℳ</del> 48'37		min. Earth dist.	11587 May 06 13:37	20° <del>ℳ</del> 16'32	42.89174 AU
opposition	11581 Apr 28 06:10	13° <del>ℳ</del> 46'35	-5°39'14	direct	11587 Jul 25 14:58	19° <del>ℳ</del> 15'29	
min. Earth dist.	11581 Apr 29 07:40	13° <del>ℳ</del> 45'20	44.00204 AU	evening set	11587 Oct 18 04:27	20° <del>ℳ</del> 27'55	
direct	11581 Jul 18 20:52	12° <del>ℳ</del> 44'59		max. Earth dist.	11587 Nov 01 04:10	20° <del>ℳ</del> 48'32	44.79004 AU
evening set	11581 Oct 11 13:52	13° <del>ℳ</del> 56'06					
max. Earth dist.	11581 Oct 25 05:00	14° <del>ℳ</del> 15'43	45.90640 AU	conjunction	11587 Nov 02 14:45	20° <del>ℳ</del> 50'41	-3°29'28
				minimum elong	11587 Nov 02 14:50	20° <del>ℳ</del> 50'41	3°28'56
conjunction	11581 Oct 26 09:36	14° <del>ℳ</del> 17'27	-5°16'07	morning rise	11587 Nov 18 02:39	21° <del>ℳ</del> 13'35	
minimum elong	11581 Oct 26 09:44	14° <del>ℳ</del> 17'28	5°15'39	retrograde	11588 Feb 13 07:37	22° <del>ℳ</del> 28'31	
morning rise	11581 Nov 10 07:13	14° <del>ℳ</del> 38'57		opposition	11588 May 05 14:04	21° <del>ℳ</del> 25'20	-3°29'27
	11581 Nov 25 16:41	15° <del>ℳ</del>		min. Earth dist.	11588 May 06 22:20	21° <del>ℳ</del> 23'43	42.69211 AU
retrograde	11582 Feb 05 22:19	15° <del>ℳ</del> 52'40		direct	11588 Jul 25 21:50	20° <del>ℳ</del> 22'27	
	11582 Apr 21 12:22	15° <del>ℳ</del>		evening set	11588 Oct 18 12:19	21° <del>ℳ</del> 35'09	
opposition	11582 Apr 29 13:40	14° <del>ℳ</del> 50'29	-5°21'27	max. Earth dist.	11588 Nov 01 11:34	21° <del>ℳ</del> 55'51	44.58911 AU
min. Earth dist.	11582 Apr 30 16:42	14° <del>ℳ</del> 49'09	43.82545 AU				
direct	11582 Jul 20 01:29	13° <del>ℳ</del> 48'43		conjunction	11588 Nov 03 00:24	21° <del>ℳ</del> 58'08	-3°10'52
evening set	11582 Oct 12 19:11	15° <del>ℳ</del> 00'00		minimum elong	11588 Nov 03 00:30	21° <del>ℳ</del> 58'09	3°10'19
	11582 Oct 12 19:06	15° <del>ℳ</del>		morning rise	11588 Nov 18 14:20	22° <del>ℳ</del> 21'15	
				retrograde	11589 Feb 13 19:09	23° <del>ℳ</del> 36'26	
conjunction	11582 Oct 27 17:44	15° <del>ℳ</del> 21'36	-4°58'56	opposition	11589 May 06 22:46	22° <del>ℳ</del> 33'02	-3°09'53
minimum elong	11582 Oct 27 17:52	15° <del>ℳ</del> 21'36	4°58'28	min. Earth dist.	11589 May 08 08:58	22° <del>ℳ</del> 31'19	42.48869 AU
max. Earth dist.	11582 Oct 26 13:08	15° <del>ℳ</del> 19'52	45.72960 AU	direct	11589 Jul 27 05:06	21° <del>ℳ</del> 29'55	
morning rise	11582 Nov 11 18:01	15° <del>ℳ</del> 43'20		evening set	11589 Oct 19 20:20	22° <del>ℳ</del> 42'55	
retrograde	11583 Feb 07 07:13	16° <del>ℳ</del> 57'13		max. Earth dist.	11589 Nov 02 21:32	23° <del>ℳ</del> 03'48	44.38462 AU
opposition	11583 Apr 30 21:13	15° <del>ℳ</del> 54'53	-5°03'25				
min. Earth dist.	11583 May 01 23:58	15° <del>ℳ</del> 53'33	43.64626 AU	conjunction	11589 Nov 04 10:22	23° <del>ℳ</del> 06'07	-2°52'01
	11583 Jun 26 10:38	15° <del>ℳ</del>		minimum elong	11589 Nov 04 10:27	23° <del>ℳ</del> 06'07	2°51'29
direct	11583 Jul 21 07:50	14° <del>ℳ</del> 52'57		morning rise	11589 Nov 20 01:52	23° <del>ℳ</del> 29'27	
	11583 Aug 15 03:33	15° <del>ℳ</del>		retrograde	11590 Feb 15 02:39	24° <del>ℳ</del> 44'53	
evening set	11583 Oct 14 01:08	16° <del>ℳ</del> 04'26		opposition	11590 May 08 07:44	23° <del>ℳ</del> 41'16	-2°50'04
max. Earth dist.	11583 Oct 27 19:39	16° <del>ℳ</del> 24'24	45.54985 AU	min. Earth dist.	11590 May 09 18:11	23° <del>ℳ</del> 39'31	42.28202 AU
				direct	11590 Jul 28 16:00	22° <del>ℳ</del> 37'54	
conjunction	11583 Oct 29 02:09	16° <del>ℳ</del> 26'16	-4°41'31	evening set	11590 Oct 21 04:42	23° <del>ℳ</del> 51'12	
minimum elong	11583 Oct 29 02:17	16° <del>ℳ</del> 26'17	4°41'02	max. Earth dist.	11590 Nov 04 05:56	24° <del>ℳ</del> 12'12	44.17724 AU
morning rise	11583 Nov 13 05:11	16° <del>ℳ</del> 48'15					
retrograde	11584 Feb 08 16:23	18° <del>ℳ</del> 02'18		conjunction	11590 Nov 05 20:12	24° <del>ℳ</del> 14'37	-2°32'56
opposition	11584 May 01 04:56	16° <del>ℳ</del> 59'50	-4°45'08	minimum elong	11590 Nov 05 20:17	24° <del>ℳ</del> 14'37	2°32'22
min. Earth dist.	11584 May 02 09:27	16° <del>ℳ</del> 58'25	43.46398 AU	morning rise	11590 Nov 21 13:27	24° <del>ℳ</del> 38'10	
direct	11584 Jul 21 15:03	15° <del>ℳ</del> 57'44		retrograde	11591 Feb 16 11:49	25° <del>ℳ</del> 53'54	
evening set	11584 Oct 14 07:21	17° <del>ℳ</del> 09'26		opposition	11591 May 09 16:55	24° <del>ℳ</del> 50'03	-2°30'00
max. Earth dist.	11584 Oct 28 04:20	17° <del>ℳ</del> 29'38	45.36653 AU	min. Earth dist.	11591 May 11 04:02	24° <del>ℳ</del> 48'15	42.07287 AU
				direct	11591 Jul 30 01:45	23° <del>ℳ</del> 46'26	
conjunction	11584 Oct 29 11:02	17° <del>ℳ</del> 31'31	-4°23'51	evening set	11591 Oct 22 13:31	25° <del>ℳ</del> 00'04	
minimum elong	11584 Oct 29 11:09	17° <del>ℳ</del> 31'31	4°23'21	max. Earth dist.	11591 Nov 05 15:36	25° <del>ℳ</del> 21'13	43.96737 AU
morning rise	11584 Nov 13 16:22	17° <del>ℳ</del> 53'44					
retrograde	11585 Feb 08 23:10	19° <del>ℳ</del> 07'59		conjunction	11591 Nov 07 06:34	25° <del>ℳ</del> 23'41	-2°13'37
opposition	11585 May 02 12:54	18° <del>ℳ</del> 05'22	-4°26'35	minimum elong	11591 Nov 07 06:37	25° <del>ℳ</del> 23'41	2°13'03
min. Earth dist.	11585 May 03 18:17	18° <del>ℳ</del> 03'54	43.27771 AU	morning rise	11591 Nov 23 01:09	25° <del>ℳ</del> 47'26	
direct	11585 Jul 23 01:07	17° <del>ℳ</del> 03'06		retrograde	11592 Feb 17 22:45	27° <del>ℳ</del> 03'29	
evening set	11585 Oct 15 14:07	18° <del>ℳ</del> 15'02		opposition	11592 May 10 02:19	25° <del>ℳ</del> 59'25	-2°09'39
max. Earth dist.	11585 Oct 29 11:24	18° <del>ℳ</del> 35'20	45.17898 AU	min. Earth dist.	11592 May 11 14:41	25° <del>ℳ</del> 57'33	41.86152 AU
				direct	11592 Jul 30 09:59	24° <del>ℳ</del> 55'33	
conjunction	11585 Oct 30 19:59	18° <del>ℳ</del> 37'21	-4°05'57	evening set	11592 Oct 22 22:46	26° <del>ℳ</del> 09'33	
minimum elong	11585 Oct 30 20:06	18° <del>ℳ</del> 37'21	4°05'27	max. Earth dist.	11592 Nov 06 01:54	26° <del>ℳ</del> 30'52	43.75563 AU
morning rise	11585 Nov 15 03:44	18° <del>ℳ</del> 59'48					
retrograde	11586 Feb 10 09:21	20° <del>ℳ</del> 14'16		conjunction	11592 Nov 07 17:10	26° <del>ℳ</del> 33'22	-1°54'03
opposition	11586 May 03 21:02	19° <del>ℳ</del> 11'29	-4°07'47	minimum elong	11592 Nov 07 17:13	26° <del>ℳ</del> 33'22	1°53'27
min. Earth dist.	11586 May 05 03:17	19° <del>ℳ</del> 09'58	43.08706 AU	morning rise	11592 Nov 23 13:01	26° <del>ℳ</del> 57'18	
direct	11586 Jul 24 08:08	18° <del>ℳ</del> 09'01		retrograde	11593 Feb 18 11:30	28° <del>ℳ</del> 13'43	
evening set	11586 Oct 16 21:10	19° <del>ℳ</del> 21'12		opposition	11593 May 11 11:55	27° <del>ℳ</del> 09'25	-1°49'03
max. Earth dist.	11586 Oct 30 19:17	19° <del>ℳ</del> 41'38	44.98672 AU	min. Earth dist.	11593 May 12 23:53	27° <del>ℳ</del> 07'34	41.64845 AU
				direct	11593 Jul 31 16:45	26° <del>ℳ</del> 05'18	
conjunction	11586 Nov 01 05:17	19° <del>ℳ</del> 43'44	-3°47'50	evening set	11593 Oct 24 08:29	27° <del>ℳ</del> 19'42	
minimum elong	11586 Nov 01 05:23	19° <del>ℳ</del> 43'45	3°47'18	max. Earth dist.	11593 Nov 07 11:04	27° <del>ℳ</del> 41'06	43.54205 AU

conjunction	11593 Nov 09 03:53	27° $\mathbb{M}$ 43'42	-1°34'14	evening set	11599 Nov 01 05:42	4° $\mathbb{A}$ 37'20	
minimum elong	11593 Nov 09 03:55	27° $\mathbb{M}$ 43'42	1°33'38	max. Earth dist.	11599 Nov 15 06:16	4° $\mathbb{A}$ 59'21	42.20871 AU
morning rise	11593 Nov 25 00:52	28° $\mathbb{M}$ 07'50					
retrograde	11594 Feb 20 00:45	29° $\mathbb{M}$ 24'37		conjunction	11599 Nov 17 04:12	5° $\mathbb{A}$ 02'23	0°29'35
opposition	11594 May 12 21:55	28° $\mathbb{M}$ 20'06	-1°28'11	minimum elong	11599 Nov 17 04:11	5° $\mathbb{A}$ 02'23	0°30'14
min. Earth dist.	11594 May 14 11:23	28° $\mathbb{M}$ 18'10	41.43373 AU	morning rise	11599 Dec 03 03:39	5° $\mathbb{A}$ 27'32	
direct	11594 Aug 02 00:53	27° $\mathbb{M}$ 15'45		retrograde	11600 Feb 28 05:04	6° $\mathbb{A}$ 47'08	
evening set	11594 Oct 25 18:34	28° $\mathbb{M}$ 30'35		opposition	11600 May 19 15:57	5° $\mathbb{A}$ 41'10	0°42'22
max. Earth dist.	11594 Nov 08 22:40	28° $\mathbb{M}$ 52'11	43.32685 AU	min. Earth dist.	11600 May 21 10:13	5° $\mathbb{A}$ 38'55	40.09031 AU
				direct	11600 Aug 08 14:57	4° $\mathbb{A}$ 35'10	
conjunction	11594 Nov 10 15:05	28° $\mathbb{M}$ 54'47	-1°14'11	evening set	11600 Nov 01 19:20	5° $\mathbb{A}$ 53'08	
minimum elong	11594 Nov 10 15:07	28° $\mathbb{M}$ 54'47	1°13'35	max. Earth dist.	11600 Nov 15 17:22	6° $\mathbb{A}$ 15'07	41.97436 AU
morning rise	11594 Nov 26 12:51	29° $\mathbb{M}$ 19'06					
	11594 Dec 26 10:39	0° $\mathbb{A}$		conjunction	11600 Nov 17 17:27	6° $\mathbb{A}$ 18'18	0°51'00
retrograde	11595 Feb 21 11:50	0° $\mathbb{A}$ 36'17		minimum elong	11600 Nov 17 17:26	6° $\mathbb{A}$ 18'18	0°51'39
	11595 Apr 20 17:03	30° $\mathbb{R}$ $\mathbb{M}$		morning rise	11600 Dec 03 16:47	6° $\mathbb{A}$ 43'36	
opposition	11595 May 14 08:07	29° $\mathbb{M}$ 31'33	-1°07'03	retrograde	11601 Feb 28 19:43	8° $\mathbb{A}$ 03'44	
min. Earth dist.	11595 May 15 21:32	29° $\mathbb{M}$ 29'36	41.21728 AU	opposition	11601 May 21 04:06	6° $\mathbb{A}$ 57'28	1°05'00
direct	11595 Aug 03 12:10	28° $\mathbb{M}$ 26'57		min. Earth dist.	11601 May 22 23:52	6° $\mathbb{A}$ 55'08	39.85459 AU
evening set	11595 Oct 27 05:17	29° $\mathbb{M}$ 42'15		direct	11601 Aug 10 02:53	5° $\mathbb{A}$ 51'08	
	11595 Nov 07 19:48	0° $\mathbb{A}$		evening set	11601 Nov 03 09:14	7° $\mathbb{A}$ 09'42	
max. Earth dist.	11595 Nov 10 08:18	0° $\mathbb{A}$ 03'55	43.10970 AU	max. Earth dist.	11601 Nov 17 06:43	7° $\mathbb{A}$ 31'47	41.73696 AU
conjunction	11595 Nov 12 02:27	0° $\mathbb{A}$ 06'38	-0°53'53	conjunction	11601 Nov 19 07:03	7° $\mathbb{A}$ 35'01	1°12'38
minimum elong	11595 Nov 12 02:28	0° $\mathbb{A}$ 06'38	0°53'17	minimum elong	11601 Nov 19 07:00	7° $\mathbb{A}$ 35'01	1°13'19
morning rise	11595 Nov 28 01:08	0° $\mathbb{A}$ 31'09		morning rise	11601 Dec 05 05:41	8° $\mathbb{A}$ 00'26	
retrograde	11596 Feb 23 00:46	1° $\mathbb{A}$ 48'46					
opposition	11596 May 14 18:38	0° $\mathbb{A}$ 43'49	-0°45'40				
min. Earth dist.	11596 May 16 09:08	0° $\mathbb{A}$ 41'49	40.99868 AU				
	11596 Jun 22 03:08	30° $\mathbb{R}$ $\mathbb{M}$					
direct	11596 Aug 03 22:02	29° $\mathbb{M}$ 38'58					
	11596 Sep 15 01:04	0° $\mathbb{A}$					
evening set	11596 Oct 27 16:35	0° $\mathbb{A}$ 54'46					
max. Earth dist.	11596 Nov 10 19:39	1° $\mathbb{A}$ 16'33	42.88977 AU				
conjunction	11596 Nov 12 14:26	1° $\mathbb{A}$ 19'20	-0°33'22				
minimum elong	11596 Nov 12 14:27	1° $\mathbb{A}$ 19'20	0°32'45				
morning rise	11596 Nov 28 13:30	1° $\mathbb{A}$ 44'01					
retrograde	11597 Feb 23 10:36	3° $\mathbb{A}$ 02'06					
opposition	11597 May 16 05:26	1° $\mathbb{A}$ 56'56	-0°24'02				
min. Earth dist.	11597 May 17 21:14	1° $\mathbb{A}$ 54'51	40.77701 AU				
direct	11597 Aug 05 09:34	0° $\mathbb{A}$ 51'50					
evening set	11597 Oct 29 04:29	2° $\mathbb{A}$ 08'08					
max. Earth dist.	11597 Nov 12 06:59	2° $\mathbb{A}$ 30'00	42.66660 AU				
conjunction	11597 Nov 14 02:42	2° $\mathbb{A}$ 32'52	-0°12'39				
minimum elong	11597 Nov 14 02:42	2° $\mathbb{A}$ 32'52	0°12'01				
behind sun begin	11597 Nov 13 22:19	2° $\mathbb{A}$ 32'36					
behind sun end	11597 Nov 14 07:04	2° $\mathbb{A}$ 33'08					
morning rise	11597 Nov 30 02:08	2° $\mathbb{A}$ 57'43					
retrograde	11598 Feb 25 00:16	4° $\mathbb{A}$ 16'17					
opposition	11598 May 17 16:36	3° $\mathbb{A}$ 10'53	-0°02'08				
min. Earth dist.	11598 May 19 08:42	3° $\mathbb{A}$ 08'46	40.55189 AU				
asc. node	11598 Jun 22 06:44	2° $\mathbb{A}$ 29'18					
direct	11598 Aug 06 18:50	2° $\mathbb{A}$ 05'30					
evening set	11598 Oct 30 16:48	3° $\mathbb{A}$ 22'20					
max. Earth dist.	11598 Nov 13 17:25	3° $\mathbb{A}$ 44'13	42.43954 AU				
conjunction	11598 Nov 15 15:09	3° $\mathbb{A}$ 47'13	0°08'25				
minimum elong	11598 Nov 15 15:08	3° $\mathbb{A}$ 47'13	0°09'03				
behind sun begin	11598 Nov 15 09:38	3° $\mathbb{A}$ 46'53					
behind sun end	11598 Nov 15 20:39	3° $\mathbb{A}$ 47'34					
morning rise	11598 Dec 01 14:46	4° $\mathbb{A}$ 12'14					
retrograde	11599 Feb 26 15:54	5° $\mathbb{A}$ 31'19					
opposition	11599 May 19 04:15	4° $\mathbb{A}$ 25'38	0°20'00				
min. Earth dist.	11599 May 20 22:25	4° $\mathbb{A}$ 23'24	40.32292 AU				
direct	11599 Aug 08 02:38	3° $\mathbb{A}$ 19'58					