

opposition	16100 Jan 13 22:36	9°♏42'06	-2°02'06	opposition	16106 Apr 03 12:27	26°♊26'39	-0°53'45
min. Earth dist.	16100 Jan 14 02:55	9°♏41'16	8.43848 AU	min. Earth dist.	16106 Apr 03 01:09	26°♊28'50	8.56554 AU
direct	16100 Mar 24 06:21	6°♏17'32		direct	16106 Jun 11 09:15	23°♊04'50	
evening set	16100 Jul 06 10:24	14°♏04'44			16106 Sep 16 11:03	0°♏	
	16100 Jul 13 20:18	15°♏		evening set	16106 Sep 21 04:43	0°♏34'12	
conjunction	16100 Jul 23 12:21	16°♏12'55	-1°40'25	conjunction	16106 Oct 08 06:30	2°♏40'12	-0°33'29
minimum elong	16100 Jul 23 12:21	16°♏12'55	1°40'59	minimum elong	16106 Oct 08 06:31	2°♏40'12	0°33'09
max. Earth dist.	16100 Jul 23 08:22	16°♏11'40	10.44542 AU	max. Earth dist.	16106 Oct 08 20:22	2°♏44'29	10.57683 AU
morning rise	16100 Aug 09 12:46	18°♏20'40		morning rise	16106 Oct 25 09:55	4°♏46'39	
retrograde	16100 Nov 19 23:31	26°♏01'04		retrograde	16107 Feb 06 00:30	12°♏22'54	
opposition	16101 Jan 27 11:58	22°♏38'55	-2°04'55	opposition	16107 Apr 16 15:49	8°♏59'16	-0°28'00
min. Earth dist.	16101 Jan 27 14:02	22°♏38'31	8.45540 AU	min. Earth dist.	16107 Apr 16 03:29	9°♏01'38	8.58806 AU
direct	16101 Apr 06 18:35	19°♏14'51		direct	16107 Jun 24 10:33	5°♏37'39	
evening set	16101 Jul 19 15:02	26°♏59'41		evening set	16107 Oct 03 22:03	13°♏04'17	
					16107 Oct 19 16:00	15°♏	
conjunction	16101 Aug 05 15:38	29°♏07'16	-1°40'10	conjunction	16107 Oct 21 00:55	15°♏10'09	-0°12'04
minimum elong	16101 Aug 05 15:39	29°♏07'17	1°40'37	minimum elong	16107 Oct 21 00:55	15°♏10'09	0°11'36
max. Earth dist.	16101 Aug 05 14:21	29°♏06'52	10.46387 AU	behind sun begin	16107 Oct 20 19:49	15°♏08'36	
	16101 Aug 12 15:32	0°♏		behind sun end	16107 Oct 21 06:01	15°♏11'42	
morning rise	16101 Aug 22 15:22	1°♏14'35		max. Earth dist.	16107 Oct 21 16:16	15°♏14'53	10.59852 AU
retrograde	16101 Dec 03 06:26	8°♏54'41		morning rise	16107 Nov 07 05:48	17°♏16'34	
opposition	16102 Feb 10 00:45	5°♏32'25	-2°01'24	retrograde	16108 Feb 18 23:47	24°♏51'53	
min. Earth dist.	16102 Feb 10 00:24	5°♏32'29	8.47496 AU	opposition	16108 Apr 28 16:53	21°♏27'58	-0°01'03
direct	16102 Apr 20 06:10	2°♏08'52		min. Earth dist.	16108 Apr 28 03:19	21°♏30'35	8.60851 AU
evening set	16102 Aug 01 17:02	9°♏50'57		asc. node	16108 May 13 07:00	20°♏21'42	
				direct	16108 Jul 06 09:04	18°♏06'30	
conjunction	16102 Aug 18 16:58	11°♏58'03	-1°34'54	evening set	16108 Oct 15 14:38	25°♏30'53	
minimum elong	16102 Aug 18 17:00	11°♏58'04	1°35'11				
max. Earth dist.	16102 Aug 18 18:47	11°♏58'38	10.48442 AU	conjunction	16108 Nov 01 18:43	27°♏36'40	0°09'56
morning rise	16102 Sep 04 16:37	14°♏05'03		minimum elong	16108 Nov 01 18:43	27°♏36'40	0°10'31
retrograde	16102 Dec 16 11:52	21°♏44'45		behind sun begin	16108 Nov 01 13:10	27°♏34'59	
opposition	16103 Feb 23 12:19	18°♏22'17	-1°51'49	behind sun end	16108 Nov 02 00:17	27°♏38'21	
min. Earth dist.	16103 Feb 23 08:51	18°♏22'57	8.49615 AU	max. Earth dist.	16108 Nov 02 11:36	27°♏41'51	10.61751 AU
direct	16103 May 03 17:04	14°♏59'17		morning rise	16108 Nov 19 00:57	29°♏43'04	
evening set	16103 Aug 14 16:50	22°♏38'19			16108 Nov 21 09:29	0°♏	
conjunction	16103 Aug 31 16:44	24°♏45'03	-1°24'57	retrograde	16109 Mar 02 21:35	7°♏17'37	
minimum elong	16103 Aug 31 16:46	24°♏45'04	1°25'04	opposition	16109 May 11 15:37	3°♏53'28	0°25'48
max. Earth dist.	16103 Aug 31 22:32	24°♏46'52	10.50650 AU	min. Earth dist.	16109 May 11 01:09	3°♏56'15	8.62582 AU
morning rise	16103 Sep 17 16:41	26°♏51'48		direct	16109 Jul 19 06:09	0°♏32'03	
	16103 Oct 14 19:03	0°♏		evening set	16109 Oct 28 07:21	7°♏54'49	
retrograde	16103 Dec 29 17:23	4°♏30'53					
opposition	16104 Mar 07 22:16	1°♏08'10	-1°36'46	conjunction	16109 Nov 14 12:39	10°♏00'34	0°31'17
min. Earth dist.	16104 Mar 07 15:26	1°♏09'29	8.51866 AU	minimum elong	16109 Nov 14 12:38	10°♏00'34	0°31'57
	16104 Mar 22 23:02	30°♏		max. Earth dist.	16109 Nov 15 06:11	10°♏05'56	10.63275 AU
direct	16104 May 16 01:31	27°♏45'39		morning rise	16109 Dec 01 20:07	12°♏06'58	
	16104 Jul 06 23:48	0°♏		retrograde	16110 Mar 15 19:49	19°♏40'52	
evening set	16104 Aug 26 14:33	5°♏21'25		opposition	16110 May 24 12:09	16°♏16'34	0°51'21
				min. Earth dist.	16110 May 23 21:50	16°♏19'20	8.63903 AU
conjunction	16104 Sep 12 14:50	7°♏27'52	-1°10'52	direct	16110 Aug 01 00:03	12°♏55'06	
minimum elong	16104 Sep 12 14:52	7°♏27'52	1°10'50	evening set	16110 Nov 10 00:31	20°♏16'56	
max. Earth dist.	16104 Sep 13 00:25	7°♏30'51	10.52978 AU				
morning rise	16104 Sep 29 15:33	9°♏34'27		conjunction	16110 Nov 27 06:52	22°♏22'43	0°51'09
retrograde	16105 Jan 10 22:34	17°♏12'42		minimum elong	16110 Nov 27 06:51	22°♏22'42	0°51'53
opposition	16105 Mar 21 06:29	13°♏49'41	-1°17'04	max. Earth dist.	16110 Nov 27 23:12	22°♏27'42	10.64348 AU
min. Earth dist.	16105 Mar 20 20:53	13°♏51'32	8.54206 AU	morning rise	16110 Dec 14 15:35	24°♏29'10	
direct	16105 May 29 05:53	10°♏27'34			16111 Feb 06 10:22	0°♏	
evening set	16105 Sep 08 10:18	18°♏00'01		retrograde	16111 Mar 28 17:30	2°♏02'37	
					16111 May 19 04:54	30°♏	
conjunction	16105 Sep 25 11:13	20°♏06'13	-0°53'25	opposition	16111 Jun 06 07:07	28°♏38'13	1°14'27
minimum elong	16105 Sep 25 11:15	20°♏06'13	0°53'13	min. Earth dist.	16111 Jun 05 18:21	28°♏40'42	8.64748 AU
max. Earth dist.	16105 Sep 25 23:37	20°♏10'04	10.55355 AU	direct	16111 Aug 13 15:52	25°♏16'36	
morning rise	16105 Oct 12 13:10	22°♏12'43			16111 Oct 30 15:41	0°♏	
retrograde	16106 Jan 24 00:16	29°♏50'00		evening set	16111 Nov 22 18:21	2°♏38'12	

conjunction	16111 Dec 10 01:44	4° \mathfrak{Z} 44'03	1°08'37	conjunction	16118 Feb 24 04:53	19° \mathfrak{X} 25'07	1°29'38
minimum elong	16111 Dec 10 01:42	4° \mathfrak{Z} 44'03	1°09'22	minimum elong	16118 Feb 24 04:55	19° \mathfrak{X} 25'08	1°29'50
max. Earth dist.	16111 Dec 10 15:55	4° \mathfrak{Z} 48'23	10.64920 AU	max. Earth dist.	16118 Feb 24 00:03	19° \mathfrak{X} 23'39	10.58406 AU
morning rise	16111 Dec 27 11:38	6° \mathfrak{Z} 50'36		morning rise	16118 Mar 13 19:55	21° \mathfrak{X} 33'42	
retrograde	16112 Apr 09 12:31	14° \mathfrak{Z} 23'49		retrograde	16118 Jun 24 23:01	29° \mathfrak{X} 07'44	
opposition	16112 Jun 18 00:49	10° \mathfrak{Z} 59'24	1°34'04	opposition	16118 Sep 01 07:10	25° \mathfrak{X} 44'12	1°43'37
min. Earth dist.	16112 Jun 17 13:59	11° \mathfrak{Z} 01'30	8.65083 AU	min. Earth dist.	16118 Sep 01 12:02	25° \mathfrak{X} 43'14	8.57364 AU
direct	16112 Aug 25 09:00	7° \mathfrak{Z} 37'32		direct	16118 Nov 08 18:41	22° \mathfrak{X} 20'00	
evening set	16112 Dec 04 13:22	14° \mathfrak{Z} 59'33		evening set	16119 Feb 19 20:07	29° \mathfrak{X} 54'02	
					16119 Feb 20 15:58	0° \mathfrak{Y}	
conjunction	16112 Dec 21 21:57	17° \mathfrak{Z} 05'36	1°22'54	conjunction	16119 Mar 09 11:43	2° \mathfrak{Y} 03'05	1°17'20
minimum elong	16112 Dec 21 21:55	17° \mathfrak{Z} 05'36	1°23'38	minimum elong	16119 Mar 09 11:45	2° \mathfrak{Y} 03'06	1°17'23
max. Earth dist.	16112 Dec 22 09:54	17° \mathfrak{Z} 09'15	10.64976 AU	max. Earth dist.	16119 Mar 09 03:52	2° \mathfrak{Y} 00'41	10.56121 AU
morning rise	16113 Jan 08 08:53	19° \mathfrak{Z} 12'18		morning rise	16119 Mar 27 03:02	4° \mathfrak{Y} 12'07	
retrograde	16113 Apr 22 08:56	26° \mathfrak{Z} 45'27		retrograde	16119 Jul 08 00:17	11° \mathfrak{Y} 46'27	
opposition	16113 Jun 30 17:25	23° \mathfrak{Z} 21'03	1°49'20	opposition	16119 Sep 14 03:33	8° \mathfrak{Y} 23'05	1°26'01
min. Earth dist.	16113 Jun 30 08:29	23° \mathfrak{Z} 22'47	8.64899 AU	min. Earth dist.	16119 Sep 14 10:41	8° \mathfrak{Y} 21'40	8.54958 AU
direct	16113 Sep 07 01:12	19° \mathfrak{Z} 58'53		direct	16119 Nov 21 17:00	4° \mathfrak{Y} 58'25	
evening set	16113 Dec 17 09:51	27° \mathfrak{Z} 21'55		evening set	16120 Mar 04 03:35	12° \mathfrak{Y} 35'06	
conjunction	16114 Jan 03 19:44	29° \mathfrak{Z} 28'16	1°33'20	conjunction	16120 Mar 21 19:51	14° \mathfrak{Y} 44'46	1°01'13
minimum elong	16114 Jan 03 19:43	29° \mathfrak{Z} 28'16	1°34'01	minimum elong	16120 Mar 21 19:53	14° \mathfrak{Y} 44'46	1°01'05
max. Earth dist.	16114 Jan 04 05:44	29° \mathfrak{Z} 31'19	10.64516 AU	max. Earth dist.	16120 Mar 21 08:55	14° \mathfrak{Y} 41'24	10.53640 AU
	16114 Jan 08 03:55	0° \mathfrak{Z}		morning rise	16120 Apr 08 11:10	16° \mathfrak{Y} 54'14	
morning rise	16114 Jan 21 07:33	1° \mathfrak{Z} 35'12		retrograde	16120 Jul 20 03:03	24° \mathfrak{Y} 28'57	
retrograde	16114 May 05 06:18	9° \mathfrak{Z} 08'24		opposition	16120 Sep 26 01:47	21° \mathfrak{Y} 05'46	1°04'08
opposition	16114 Jul 13 09:38	5° \mathfrak{Z} 44'04	1°59'34	min. Earth dist.	16120 Sep 26 11:30	21° \mathfrak{Y} 03'51	8.52366 AU
min. Earth dist.	16114 Jul 13 02:26	5° \mathfrak{Z} 45'28	8.64200 AU	direct	16120 Dec 03 16:59	17° \mathfrak{Y} 40'40	
direct	16114 Sep 19 16:24	2° \mathfrak{Z} 21'35		evening set	16121 Mar 17 12:54	25° \mathfrak{Y} 20'09	
evening set	16114 Dec 30 08:03	9° \mathfrak{Z} 46'09					
conjunction	16115 Jan 16 19:09	11° \mathfrak{Z} 52'54	1°39'26	conjunction	16121 Apr 04 05:15	27° \mathfrak{Y} 30'20	0°42'00
minimum elong	16115 Jan 16 19:09	11° \mathfrak{Z} 52'54	1°40'02	minimum elong	16121 Apr 04 05:17	27° \mathfrak{Y} 30'20	0°41'44
max. Earth dist.	16115 Jan 17 02:21	11° \mathfrak{Z} 55'05	10.63565 AU	max. Earth dist.	16121 Apr 03 14:43	27° \mathfrak{Y} 25'50	10.50994 AU
morning rise	16115 Feb 03 07:46	14° \mathfrak{Z} 00'08		morning rise	16121 Apr 21 20:13	29° \mathfrak{Y} 40'11	
	16115 Feb 11 19:22	15° \mathfrak{Z}			16121 Apr 24 13:58	0° \mathfrak{Z}	
retrograde	16115 May 18 03:29	21° \mathfrak{Z} 33'31		retrograde	16121 Aug 02 05:55	7° \mathfrak{Z} 15'31	
opposition	16115 Jul 26 01:54	18° \mathfrak{Z} 09'20	2°04'14	opposition	16121 Oct 09 02:09	3° \mathfrak{Z} 52'34	0°38'56
min. Earth dist.	16115 Jul 25 21:22	18° \mathfrak{Z} 10'13	8.63032 AU	min. Earth dist.	16121 Oct 09 14:39	3° \mathfrak{Z} 50'06	8.49666 AU
	16115 Sep 16 06:39	15° \mathfrak{R}		direct	16121 Dec 16 20:19	0° \mathfrak{Z} 27'06	
direct	16115 Oct 02 08:43	14° \mathfrak{Z} 46'28		evening set	16122 Mar 30 23:44	8° \mathfrak{Z} 09'28	
	16115 Oct 18 09:41	15° \mathfrak{Z}					
evening set	16116 Jan 12 08:11	22° \mathfrak{Z} 13'01		conjunction	16122 Apr 17 15:37	10° \mathfrak{Z} 20'02	0°20'37
conjunction	16116 Jan 29 20:26	24° \mathfrak{Z} 20'16	1°40'54	minimum elong	16122 Apr 17 15:37	10° \mathfrak{Z} 20'02	0°20'12
minimum elong	16116 Jan 29 20:27	24° \mathfrak{Z} 20'16	1°41'23	max. Earth dist.	16122 Apr 16 22:09	10° \mathfrak{Z} 14'38	10.48325 AU
max. Earth dist.	16116 Jan 29 23:44	24° \mathfrak{Z} 21'16	10.62189 AU	morning rise	16122 May 05 05:49	12° \mathfrak{Z} 30'11	
morning rise	16116 Feb 16 09:58	26° \mathfrak{Z} 27'53			16122 May 26 14:56	15° \mathfrak{Z}	
	16116 Mar 19 02:59	0° \mathfrak{X}		retrograde	16122 Aug 15 10:16	20° \mathfrak{Z} 06'24	
retrograde	16116 May 30 02:07	4° \mathfrak{X} 01'29		opposition	16122 Oct 22 05:07	16° \mathfrak{Z} 43'39	0°11'38
opposition	16116 Aug 06 18:41	0° \mathfrak{X} 37'30	2°03'06	min. Earth dist.	16122 Oct 22 19:15	16° \mathfrak{Z} 40'52	8.47066 AU
min. Earth dist.	16116 Aug 06 17:34	0° \mathfrak{X} 37'44	8.61464 AU	direct	16122 Nov 14 04:24	15° \mathfrak{R}	
	16116 Aug 14 18:44	30° \mathfrak{R}			16122 Dec 30 02:27	13° \mathfrak{Z} 17'54	
direct	16116 Oct 14 01:27	27° \mathfrak{Z} 14'13		desc. node	16123 Feb 13 04:57	15° \mathfrak{Z}	
	16116 Dec 11 05:49	0° \mathfrak{X}		evening set	16123 Mar 29 06:22	19° \mathfrak{Z} 14'31	
evening set	16117 Jan 24 10:15	4° \mathfrak{X} 43'05		max. Earth dist.	16123 Apr 13 11:40	21° \mathfrak{Z} 02'55	
					16123 Apr 30 08:00	23° \mathfrak{Z} 07'57	10.45863 AU
conjunction	16117 Feb 10 23:42	6° \mathfrak{X} 50'54	1°37'36	conjunction	16123 May 01 02:38	23° \mathfrak{Z} 13'44	-0°02'00
minimum elong	16117 Feb 10 23:44	6° \mathfrak{X} 50'54	1°37'57	minimum elong	16123 May 01 02:36	23° \mathfrak{Z} 13'44	0°02'32
max. Earth dist.	16117 Feb 10 22:33	6° \mathfrak{X} 50'32	10.60452 AU	behind sun begin	16123 Apr 30 19:24	23° \mathfrak{Z} 11'31	
morning rise	16117 Feb 28 14:08	8° \mathfrak{X} 58'59		behind sun end	16123 May 01 09:48	23° \mathfrak{Z} 15'57	
retrograde	16117 Jun 12 00:35	16° \mathfrak{X} 32'47		morning rise	16123 May 18 15:34	25° \mathfrak{Z} 24'01	
opposition	16117 Aug 19 12:23	13° \mathfrak{X} 09'02	1°56'09		16123 Jun 29 10:16	0° \mathfrak{Z}	
min. Earth dist.	16117 Aug 19 14:40	13° \mathfrak{X} 08'35	8.59554 AU	retrograde	16123 Aug 28 16:28	3° \mathfrak{Z} 10'13	
direct	16117 Oct 26 20:36	9° \mathfrak{X} 45'18			16123 Oct 30 21:41	30° \mathfrak{R}	
evening set	16118 Feb 06 14:17	17° \mathfrak{X} 16'42		opposition	16123 Nov 04 10:31	29° \mathfrak{Z} 38'36	-0°16'26
				min. Earth dist.	16123 Nov 05 00:57	29° \mathfrak{Z} 35'46	8.44783 AU

direct	16124 Jan 12 10:39	26° J 12'40	evening set	16130 Jul 14 13:46	21° Q 57'15
	16124 Mar 21 14:19	0° II			
evening set	16124 Apr 26 00:38	3° II 59'55	conjunction	16130 Jul 31 15:02	24° Q 05'11 -1°40'58
			minimum elong	16130 Jul 31 15:03	24° Q 05'12 1°41'27
conjunction	16124 May 13 14:09	6° II 10'47 -0°24'30	max. Earth dist.	16130 Jul 31 13:23	24° Q 04'40 10.44417 AU
minimum elong	16124 May 13 14:08	6° II 10'47 0°25'08	morning rise	16130 Aug 17 15:02	26° Q 12'46
max. Earth dist.	16124 May 12 19:59	6° II 05'07 10.43796 AU		16130 Sep 19 17:35	0° np
morning rise	16124 May 31 01:19	8° II 21'02	retrograde	16130 Nov 28 03:03	3° np 53'08
retrograde	16124 Sep 09 23:31	15° II 59'10	opposition	16131 Feb 04 19:41	0° np 30'21 -2°03'42
opposition	16124 Nov 16 18:08	12° II 36'40 -0°43'47	min. Earth dist.	16131 Feb 04 19:02	0° np 30'28 8.45576 AU
min. Earth dist.	16124 Nov 17 07:44	12° II 33'59 8.42979 AU		16131 Feb 11 08:40	30° RQ
direct	16125 Jan 24 21:21	9° II 10'38	direct	16131 Apr 15 02:49	27° Q 06'03
evening set	16125 May 09 13:54	16° II 59'35		16131 Jun 13 18:41	0° np
max. Earth dist.	16125 May 26 08:53	19° II 05'03 10.42262 AU	evening set	16131 Jul 27 16:38	4° np 49'23
conjunction	16125 May 27 01:31	19° II 10'16 -0°45'51	conjunction	16131 Aug 13 17:01	6° np 56'46 -1°37'43
minimum elong	16125 May 27 01:30	19° II 10'16 0°46'33	minimum elong	16131 Aug 13 17:02	6° np 56'46 1°38'04
morning rise	16125 Jun 13 10:29	21° II 20'17	max. Earth dist.	16131 Aug 13 19:29	6° np 57'32 10.46635 AU
retrograde	16125 Sep 23 08:17	28° II 59'19	morning rise	16131 Aug 30 16:33	9° np 03'56
opposition	16125 Nov 30 04:04	25° II 36'51 -1°09'00	retrograde	16131 Dec 11 09:22	16° np 43'44
min. Earth dist.	16125 Nov 30 16:34	25° II 34'24 8.41766 AU	opposition	16132 Feb 18 07:28	13° np 20'51 -1°56'32
direct	16126 Feb 07 09:08	22° II 10'50	min. Earth dist.	16132 Feb 18 03:46	13° np 21'34 8.47985 AU
evening set	16126 May 23 02:37	0° Q 00'45	direct	16132 Apr 27 13:14	9° np 57'11
	16126 May 23 00:10	0° Q	evening set	16132 Aug 08 16:58	17° np 37'22
conjunction	16126 Jun 09 11:56	2° Q 11'04 -1°04'54	conjunction	16132 Aug 25 16:50	19° np 44'15 -1°29'37
minimum elong	16126 Jun 09 11:54	2° Q 11'04 1°05'39	minimum elong	16132 Aug 25 16:52	19° np 44'15 1°29'48
max. Earth dist.	16126 Jun 08 21:00	2° Q 06'23 10.41354 AU	max. Earth dist.	16132 Aug 25 22:34	19° np 46'02 10.49229 AU
morning rise	16126 Jun 26 18:37	4° Q 20'42	morning rise	16132 Sep 11 16:33	21° np 51'04
retrograde	16126 Oct 06 18:09	12° Q 00'29	retrograde	16132 Dec 23 14:46	29° np 30'06
opposition	16126 Dec 13 15:41	8° Q 38'02 -1°30'43	opposition	16133 Mar 02 17:46	26° np 07'08 -1°43'38
min. Earth dist.	16126 Dec 14 02:54	8° Q 35'50 8.41216 AU	min. Earth dist.	16133 Mar 02 11:36	26° np 08'19 8.50705 AU
direct	16127 Feb 20 21:16	5° Q 12'06	direct	16133 May 10 21:20	22° np 44'06
evening set	16127 Jun 05 14:25	13° Q 02'15		16133 Aug 18 18:24	0° Q
			evening set	16133 Aug 21 14:55	0° Q 20'51
conjunction	16127 Jun 22 21:16	15° Q 12'03 -1°20'39	conjunction	16133 Sep 07 14:50	2° Q 27'19 -1°17'09
minimum elong	16127 Jun 22 21:15	15° Q 12'02 1°21'23	minimum elong	16133 Sep 07 14:52	2° Q 27'20 1°17'11
max. Earth dist.	16127 Jun 22 08:21	15° Q 07'58 10.41124 AU	max. Earth dist.	16133 Sep 07 23:27	2° Q 30'01 10.52082 AU
morning rise	16127 Jul 10 01:51	17° Q 21'12	morning rise	16133 Sep 24 15:17	4° Q 33'55
retrograde	16127 Oct 20 02:15	25° Q 01'29	retrograde	16134 Jan 05 18:21	12° Q 11'56
opposition	16127 Dec 27 04:18	21° Q 39'00 -1°47'47	opposition	16134 Mar 16 02:03	8° Q 48'51 -1°25'43
min. Earth dist.	16127 Dec 27 13:47	21° Q 37'09 8.41353 AU	min. Earth dist.	16134 Mar 15 17:13	8° Q 50'34 8.53614 AU
direct	16128 Mar 05 11:45	18° Q 13'16	direct	16134 May 24 02:47	5° Q 26'26
evening set	16128 Jun 18 00:32	26° Q 02'52	evening set	16134 Sep 03 10:41	12° Q 59'42
conjunction	16128 Jul 05 05:06	28° Q 12'03 -1°32'15	conjunction	16134 Sep 20 11:12	15° Q 05'51 -1°01'00
minimum elong	16128 Jul 05 05:05	28° Q 12'02 1°32'57	minimum elong	16134 Sep 20 11:14	15° Q 05'52 1°00'53
max. Earth dist.	16128 Jul 04 18:51	28° Q 08'49 10.41581 AU	max. Earth dist.	16134 Sep 20 23:05	15° Q 09'33 10.55054 AU
	16128 Jul 19 13:05	0° Q	morning rise	16134 Oct 07 12:42	17° Q 12'16
morning rise	16128 Jul 22 07:48	0° Q 20'40	retrograde	16135 Jan 18 19:21	24° Q 49'12
retrograde	16128 Nov 01 10:12	8° Q 01'15	opposition	16135 Mar 29 08:05	21° Q 26'01 -1°03'47
opposition	16129 Jan 08 17:39	4° Q 38'41 -1°59'17	min. Earth dist.	16135 Mar 28 20:30	21° Q 28'15 8.56570 AU
min. Earth dist.	16129 Jan 09 00:19	4° Q 37'23 8.42163 AU	direct	16135 Jun 06 07:38	18° Q 04'10
direct	16129 Mar 19 02:37	1° Q 13'19	evening set	16135 Sep 16 04:50	25° Q 34'05
evening set	16129 Jul 01 08:22	9° Q 01'31			
conjunction	16129 Jul 18 11:01	11° Q 10'03 -1°39'08	conjunction	16135 Oct 03 06:14	27° Q 39'58 -0°42'01
minimum elong	16129 Jul 18 11:00	11° Q 10'03 1°39'44	minimum elong	16135 Oct 03 06:15	27° Q 39'59 0°41'45
max. Earth dist.	16129 Jul 18 04:49	11° Q 08'06 10.42699 AU	max. Earth dist.	16135 Oct 03 21:20	27° Q 44'39 10.58001 AU
morning rise	16129 Aug 04 12:07	13° Q 18'07	morning rise	16135 Oct 20 08:51	29° Q 46'13
	16129 Aug 18 14:11	15° Q		16135 Oct 22 06:30	0° ml
retrograde	16129 Nov 14 18:54	20° Q 58'46	retrograde	16136 Jan 31 20:56	7° ml 22'03
opposition	16130 Jan 22 07:01	17° Q 36'05 -2°04'40	opposition	16136 Apr 10 11:44	3° ml 58'46 -0°38'58
min. Earth dist.	16130 Jan 22 09:57	17° Q 35'30 8.43597 AU	min. Earth dist.	16136 Apr 09 21:49	4° ml 01'27 8.59442 AU
	16130 Mar 01 09:20	15° RQ	direct	16136 Jun 18 08:37	0° ml 37'25
direct	16130 Apr 01 15:53	14° Q 11'13	evening set	16136 Sep 27 21:50	8° ml 04'17
	16130 May 02 11:10	15° Q			

conjunction	16136 Oct 15 00:13	10° \mathbb{M} 09'58	-0°21'09	direct	16142 Sep 01 20:35	14° \mathfrak{Z} 52'15	
minimum elong	16136 Oct 15 00:14	10° \mathbb{M} 09'58	0°20'45	evening set	16142 Dec 12 03:35	22° \mathfrak{Z} 13'27	
max. Earth dist.	16136 Oct 15 17:28	10° \mathbb{M} 15'16	10.60801 AU				
morning rise	16136 Nov 01 04:11	12° \mathbb{M} 16'07		conjunction	16142 Dec 29 12:37	24° \mathfrak{Z} 19'17	1°29'12
	16136 Nov 24 21:52	15° \mathbb{M}		minimum elong	16142 Dec 29 12:36	24° \mathfrak{Z} 19'16	1°29'54
retrograde	16137 Feb 12 21:33	19° \mathbb{M} 50'51		max. Earth dist.	16142 Dec 29 22:20	24° \mathfrak{Z} 22'14	10.67555 AU
opposition	16137 Apr 23 13:06	16° \mathbb{M} 27'30	-0°12'27	morning rise	16143 Jan 15 23:49	26° \mathfrak{Z} 25'43	
min. Earth dist.	16137 Apr 22 22:12	16° \mathbb{M} 30'22	8.62118 AU		16143 Feb 17 05:26	0° \approx	
	16137 May 13 04:12	15° \mathbb{R} \mathbb{M}		retrograde	16143 Apr 29 23:29	3° \approx 57'34	
direct	16137 Jul 01 05:45	13° \mathbb{M} 06'31		opposition	16143 Jul 08 04:38	0° \approx 33'48	1°55'34
	16137 Aug 17 19:41	15° \mathbb{M}		min. Earth dist.	16143 Jul 07 22:01	0° \approx 35'06	8.67133 AU
evening set	16137 Oct 10 14:03	20° \mathbb{M} 30'47			16143 Jul 15 11:04	30° \mathbb{R} \mathfrak{Z}	
asc. node	16137 Oct 16 13:01	21° \mathbb{M} 14'04		direct	16143 Sep 14 11:16	27° \mathfrak{Z} 11'59	
					16143 Nov 12 01:56	0° \approx	
conjunction	16137 Oct 27 17:26	22° \mathbb{M} 36'18	0°00'41	evening set	16143 Dec 25 00:02	4° \approx 34'35	
minimum elong	16137 Oct 27 17:27	22° \mathbb{M} 36'18	0°01'13				
behind sun begin	16137 Oct 27 10:20	22° \mathbb{M} 34'08		conjunction	16144 Jan 11 10:16	6° \approx 40'47	1°37'14
behind sun end	16137 Oct 28 00:33	22° \mathbb{M} 38'27		minimum elong	16144 Jan 11 10:15	6° \approx 40'47	1°37'52
max. Earth dist.	16137 Oct 28 11:09	22° \mathbb{M} 41'43	10.63334 AU	max. Earth dist.	16144 Jan 11 16:26	6° \approx 42'40	10.66383 AU
morning rise	16137 Nov 13 22:55	24° \mathbb{M} 42'24		morning rise	16144 Jan 28 22:30	8° \approx 47'33	
	16138 Jan 03 17:18	0° \mathfrak{Z}			16144 Apr 01 18:58	15° \approx	
retrograde	16138 Feb 25 18:48	2° \mathfrak{Z} 16'07		retrograde	16144 May 11 18:22	16° \approx 19'39	
	16138 Apr 21 15:26	30° \mathbb{R} \mathbb{M}			16144 Jun 21 06:25	15° \mathbb{R} \approx	
opposition	16138 May 06 12:06	28° \mathbb{M} 52'42	0°14'29	opposition	16144 Jul 19 20:07	12° \approx 55'49	2°02'45
min. Earth dist.	16138 May 05 21:20	28° \mathbb{M} 55'33	8.64471 AU	min. Earth dist.	16144 Jul 19 16:14	12° \approx 56'34	8.65696 AU
direct	16138 Jul 14 02:14	25° \mathbb{M} 31'57		direct	16144 Sep 26 03:49	9° \approx 33'25	
	16138 Sep 27 16:58	0° \mathfrak{Z}			16144 Dec 19 22:03	15° \approx	
evening set	16138 Oct 23 06:06	2° \mathfrak{Z} 54'14		evening set	16145 Jan 05 22:21	16° \approx 57'54	
conjunction	16138 Nov 09 10:33	4° \mathfrak{Z} 59'37	0°22'19	conjunction	16145 Jan 23 09:57	19° \approx 04'37	1°40'47
minimum elong	16138 Nov 09 10:32	4° \mathfrak{Z} 59'37	0°22'56	minimum elong	16145 Jan 23 09:57	19° \approx 04'37	1°41'19
max. Earth dist.	16138 Nov 10 03:50	5° \mathfrak{Z} 04'54	10.65466 AU	max. Earth dist.	16145 Jan 23 13:09	19° \approx 05'35	10.64684 AU
morning rise	16138 Nov 26 17:25	7° \mathfrak{Z} 05'39		morning rise	16145 Feb 09 23:04	21° \approx 11'46	
retrograde	16139 Mar 10 15:16	14° \mathfrak{Z} 38'31		retrograde	16145 May 24 15:05	28° \approx 44'11	
opposition	16139 May 19 08:47	11° \mathfrak{Z} 15'03	0°40'37	opposition	16145 Aug 01 11:36	25° \approx 20'17	2°04'15
min. Earth dist.	16139 May 18 18:38	11° \mathfrak{Z} 17'47	8.66364 AU	min. Earth dist.	16145 Aug 01 10:09	25° \approx 20'34	8.63764 AU
direct	16139 Jul 26 21:42	7° \mathfrak{Z} 54'22		direct	16145 Oct 08 20:06	21° \approx 57'17	
evening set	16139 Nov 04 22:14	15° \mathfrak{Z} 15'17		evening set	16146 Jan 18 22:35	29° \approx 24'02	
					16146 Jan 23 22:35	0° \mathfrak{H}	
conjunction	16139 Nov 22 03:51	17° \mathfrak{Z} 20'37	0°42'51				
minimum elong	16139 Nov 22 03:50	17° \mathfrak{Z} 20'37	0°43'33	conjunction	16146 Feb 05 11:33	1° \mathfrak{H} 31'21	1°39'38
max. Earth dist.	16139 Nov 22 20:37	17° \mathfrak{Z} 25'44	10.67063 AU	minimum elong	16146 Feb 05 11:34	1° \mathfrak{H} 31'22	1°40'02
morning rise	16139 Dec 09 11:54	19° \mathfrak{Z} 26'38		max. Earth dist.	16146 Feb 05 11:39	1° \mathfrak{H} 31'23	10.62536 AU
retrograde	16140 Mar 22 11:38	26° \mathfrak{Z} 58'51		morning rise	16146 Feb 23 01:24	3° \mathfrak{H} 38'59	
opposition	16140 May 31 03:37	23° \mathfrak{Z} 35'17	1°04'47	retrograde	16146 Jun 06 13:06	11° \mathfrak{H} 11'46	
min. Earth dist.	16140 May 30 14:02	23° \mathfrak{Z} 37'55	8.67656 AU	opposition	16146 Aug 14 03:56	7° \mathfrak{H} 47'51	1°59'56
direct	16140 Aug 07 14:32	20° \mathfrak{Z} 14'32		min. Earth dist.	16146 Aug 14 05:02	7° \mathfrak{H} 47'38	8.61417 AU
evening set	16140 Nov 16 14:46	27° \mathfrak{Z} 34'45		direct	16146 Oct 21 12:59	4° \mathfrak{H} 24'13	
				evening set	16147 Feb 01 00:40	11° \mathfrak{H} 53'33	
conjunction	16140 Dec 03 21:37	29° \mathfrak{Z} 40'08	1°01'22				
minimum elong	16140 Dec 03 21:35	29° \mathfrak{Z} 40'08	1°02'07	conjunction	16147 Feb 18 14:47	14° \mathfrak{H} 01'31	1°33'46
max. Earth dist.	16140 Dec 04 13:26	29° \mathfrak{Z} 44'57	10.67976 AU	minimum elong	16147 Feb 18 14:49	14° \mathfrak{H} 01'31	1°34'02
	16140 Dec 06 14:50	0° \mathfrak{Z}		max. Earth dist.	16147 Feb 18 11:11	14° \mathfrak{H} 00'24	10.60031 AU
morning rise	16140 Dec 21 06:42	1° \mathfrak{Z} 46'12		morning rise	16147 Mar 08 05:20	16° \mathfrak{H} 09'40	
retrograde	16141 Apr 04 07:19	9° \mathfrak{Z} 18'04		retrograde	16147 Jun 19 11:21	23° \mathfrak{H} 42'53	
opposition	16141 Jun 12 20:53	5° \mathfrak{Z} 54'25	1°25'55	opposition	16147 Aug 26 21:27	20° \mathfrak{H} 19'00	1°49'55
min. Earth dist.	16141 Jun 12 08:40	5° \mathfrak{Z} 56'47	8.68205 AU	min. Earth dist.	16147 Aug 27 01:46	20° \mathfrak{H} 18'09	8.58762 AU
direct	16141 Aug 20 06:15	2° \mathfrak{Z} 33'26		direct	16147 Nov 03 08:04	16° \mathfrak{H} 54'45	
evening set	16141 Nov 29 08:31	9° \mathfrak{Z} 53'47		evening set	16148 Feb 14 04:49	24° \mathfrak{H} 26'51	
conjunction	16141 Dec 16 16:29	11° \mathfrak{Z} 59'21	1°17'03	conjunction	16148 Mar 02 19:55	26° \mathfrak{H} 35'31	1°23'24
minimum elong	16141 Dec 16 16:27	11° \mathfrak{Z} 59'20	1°17'47	minimum elong	16148 Mar 02 19:57	26° \mathfrak{H} 35'32	1°23'31
max. Earth dist.	16141 Dec 17 05:47	12° \mathfrak{Z} 03'23	10.68120 AU	max. Earth dist.	16148 Mar 02 11:56	26° \mathfrak{H} 33'04	10.57285 AU
morning rise	16142 Jan 03 02:36	14° \mathfrak{Z} 05'32		morning rise	16148 Mar 20 11:06	28° \mathfrak{H} 44'14	
retrograde	16142 Apr 17 03:52	21° \mathfrak{Z} 37'18			16148 Mar 31 04:09	0° \mathfrak{Y}	
opposition	16142 Jun 25 12:58	18° \mathfrak{Z} 13'36	1°43'06	retrograde	16148 Jul 01 11:01	6° \mathfrak{Y} 17'55	
min. Earth dist.	16142 Jun 25 03:13	18° \mathfrak{Z} 15'29	8.68000 AU	opposition	16148 Sep 07 16:21	2° \mathfrak{Y} 54'07	1°34'35

min. Earth dist.	16148 Sep 07 23:57	2° Υ 52'37	8.55918 AU	conjunction	16154 May 21 04:36	13° Π 25'17	-0°36'13
	16148 Oct 21 19:27	30° κ 8		minimum elong	16154 May 21 04:35	13° Π 25'17	0°36'53
direct	16148 Nov 15 04:43	29° κ 29'14		morning rise	16154 Jun 07 14:43	15° Π 35'25	
	16148 Dec 09 12:53	0° Υ		retrograde	16154 Sep 17 12:03	23° Π 13'54	
evening set	16149 Feb 26 10:54	7° Υ 04'17		opposition	16154 Nov 24 07:52	19° Π 51'20	-0°57'42
				min. Earth dist.	16154 Nov 24 21:10	19° Π 48'43	8.42303 AU
conjunction	16149 Mar 16 02:47	9° Υ 13'38	1°08'58	direct	16155 Feb 01 12:03	16° Π 25'14	
minimum elong	16149 Mar 16 02:49	9° Υ 13'38	1°08'55	evening set	16155 May 17 04:53	24° Π 14'40	
max. Earth dist.	16149 Mar 15 15:10	9° Υ 10'04	10.54412 AU				
morning rise	16149 Apr 02 18:19	11° Υ 22'54		conjunction	16155 Jun 03 15:12	26° Π 25'09	-0°56'25
retrograde	16149 Jul 14 10:56	18° Υ 57'07		minimum elong	16155 Jun 03 15:11	26° Π 25'08	0°57'09
opposition	16149 Sep 20 13:08	15° Υ 33'26	1°14'34	max. Earth dist.	16155 Jun 02 23:17	26° Π 20'09	10.41891 AU
min. Earth dist.	16149 Sep 20 23:09	15° Υ 31'27	8.53007 AU	morning rise	16155 Jun 20 23:10	28° Π 34'57	
direct	16149 Nov 28 04:41	12° Υ 08'02			16155 Jul 02 16:50	0° Θ	
evening set	16150 Mar 11 18:42	19° Υ 46'03		retrograde	16155 Sep 30 21:15	6° Θ 14'19	
				opposition	16155 Dec 07 18:27	2° Θ 51'57	-1°21'07
conjunction	16150 Mar 29 11:01	21° Υ 55'59	0°51'05	min. Earth dist.	16155 Dec 08 05:54	2° Θ 49'42	8.41727 AU
minimum elong	16150 Mar 29 11:03	21° Υ 55'59	0°50'53		16156 Jan 20 04:08	30° κ 11	
max. Earth dist.	16150 Mar 28 21:04	21° Υ 51'41	10.51536 AU	direct	16156 Feb 15 00:02	29° Π 26'07	
morning rise	16150 Apr 16 02:21	24° Υ 05'42			16156 Mar 11 14:53	0° Θ	
	16150 Jun 13 05:01	0° \mathcal{B}		evening set	16156 May 29 17:10	7° Θ 16'11	
retrograde	16150 Jul 27 12:22	1° \mathcal{B} 40'37					
	16150 Sep 10 17:26	30° κ 9		conjunction	16156 Jun 16 01:13	9° Θ 26'13	-1°13'46
opposition	16150 Oct 03 12:01	28° Υ 17'04	0°50'46	minimum elong	16156 Jun 16 01:11	9° Θ 26'13	1°14'30
min. Earth dist.	16150 Oct 03 23:18	28° Υ 14'50	8.50169 AU	max. Earth dist.	16156 Jun 15 12:06	9° Θ 22'05	10.41621 AU
direct	16150 Dec 11 07:05	24° Υ 51'16		morning rise	16156 Jul 03 06:49	11° Θ 35'35	
	16151 Mar 03 08:36	0° \mathcal{B}		retrograde	16156 Oct 13 06:23	19° Θ 15'37	
evening set	16151 Mar 25 04:13	2° \mathcal{B} 32'10		opposition	16156 Dec 20 06:34	15° Θ 53'24	-1°40'24
				min. Earth dist.	16156 Dec 20 15:39	15° Θ 51'38	8.41812 AU
conjunction	16151 Apr 11 20:30	4° \mathcal{B} 42'35	0°30'35	direct	16157 Feb 27 13:32	12° Θ 27'56	
minimum elong	16151 Apr 11 20:31	4° \mathcal{B} 42'36	0°30'14	evening set	16157 Jun 12 04:15	20° Θ 17'51	
max. Earth dist.	16151 Apr 11 05:16	4° \mathcal{B} 37'52	10.48805 AU				
morning rise	16151 Apr 29 11:08	6° \mathcal{B} 52'38		conjunction	16157 Jun 29 09:59	22° Θ 27'17	-1°27'20
retrograde	16151 Aug 09 16:57	14° \mathcal{B} 28'22		minimum elong	16157 Jun 29 09:58	22° Θ 27'17	1°28'03
opposition	16151 Oct 16 13:14	11° \mathcal{B} 05'00	0°24'17	max. Earth dist.	16157 Jun 29 00:08	22° Θ 24'11	10.42022 AU
min. Earth dist.	16151 Oct 17 01:31	11° \mathcal{B} 02'34	8.47553 AU	morning rise	16157 Jul 16 13:23	24° Θ 36'06	
direct	16151 Dec 24 10:05	7° \mathcal{B} 38'55			16157 Sep 04 20:51	0° \mathcal{O}	
	16152 Apr 03 12:50	15° \mathcal{B}		retrograde	16157 Oct 26 16:06	2° \mathcal{O} 16'35	
evening set	16152 Apr 06 15:12	15° \mathcal{B} 22'31			16157 Dec 19 13:33	30° κ 8	
				opposition	16158 Jan 02 19:53	28° Θ 54'28	-1°54'31
conjunction	16152 Apr 24 06:51	17° \mathcal{B} 33'17	0°08'30	min. Earth dist.	16158 Jan 03 02:29	28° Θ 53'11	8.42564 AU
minimum elong	16152 Apr 24 06:51	17° \mathcal{B} 33'17	0°08'01	direct	16158 Mar 13 03:19	25° Θ 29'26	
behind sun begin	16152 Apr 24 00:25	17° \mathcal{B} 31'19			16158 May 28 02:57	0° \mathcal{O}	
behind sun end	16152 Apr 24 13:17	17° \mathcal{B} 35'16		evening set	16158 Jun 25 13:23	3° \mathcal{O} 18'17	
max. Earth dist.	16152 Apr 23 14:16	17° \mathcal{B} 28'08	10.46360 AU				
morning rise	16152 May 11 20:22	19° \mathcal{B} 43'32		conjunction	16158 Jul 12 16:58	5° \mathcal{O} 27'05	-1°36'26
retrograde	16152 Aug 21 23:12	27° \mathcal{B} 20'07		minimum elong	16158 Jul 12 16:57	5° \mathcal{O} 27'05	1°37'04
desc. node	16152 Sep 11 13:15	26° \mathcal{B} 57'36		max. Earth dist.	16158 Jul 12 10:11	5° \mathcal{O} 24'57	10.43074 AU
opposition	16152 Oct 28 17:01	23° \mathcal{B} 57'01	-0°03'34	morning rise	16158 Jul 29 18:38	7° \mathcal{O} 35'20	
min. Earth dist.	16152 Oct 29 06:20	23° \mathcal{B} 54'23	8.45293 AU		16158 Oct 22 17:08	15° \mathcal{O}	
direct	16153 Jan 05 15:13	20° \mathcal{B} 30'47		retrograde	16158 Nov 09 01:38	15° \mathcal{O} 15'56	
evening set	16153 Apr 20 03:25	28° \mathcal{B} 16'51			16158 Nov 26 11:47	15° κ 11	
	16153 May 04 00:53	0° Π		opposition	16159 Jan 16 09:33	11° \mathcal{O} 53'50	-2°02'45
				min. Earth dist.	16159 Jan 16 13:59	11° \mathcal{O} 52'58	8.43927 AU
conjunction	16153 May 07 17:40	0° Π 27'43	-0°14'14	direct	16159 Mar 26 16:25	8° \mathcal{O} 29'17	
minimum elong	16153 May 07 17:40	0° Π 27'43	0°14'49		16159 Jun 28 08:29	15° \mathcal{O}	
behind sun begin	16153 May 07 14:55	0° Π 26'52		evening set	16159 Jul 08 20:26	16° \mathcal{O} 16'18	
behind sun end	16153 May 07 20:25	0° Π 28'34					
max. Earth dist.	16153 May 07 00:08	0° Π 22'15	10.44322 AU	conjunction	16159 Jul 25 22:12	18° \mathcal{O} 24'26	-1°40'35
morning rise	16153 May 25 05:39	2° Π 38'00		minimum elong	16159 Jul 25 22:12	18° \mathcal{O} 24'26	1°41'08
retrograde	16153 Sep 04 04:37	10° Π 15'30		max. Earth dist.	16159 Jul 25 18:09	18° \mathcal{O} 23'09	10.44693 AU
opposition	16153 Nov 10 23:17	6° Π 52'42	-0°31'22	morning rise	16159 Aug 11 22:40	20° \mathcal{O} 32'10	
min. Earth dist.	16153 Nov 11 13:10	6° Π 49'57	8.43510 AU	retrograde	16159 Nov 22 09:15	28° \mathcal{O} 12'30	
direct	16154 Jan 19 00:57	3° Π 26'27		opposition	16160 Jan 29 22:47	24° \mathcal{O} 50'21	-2°04'42
evening set	16154 May 03 16:11	11° Π 14'32		min. Earth dist.	16160 Jan 30 00:37	24° \mathcal{O} 50'00	8.45777 AU
max. Earth dist.	16154 May 20 11:02	13° Π 19'47	10.42806 AU	direct	16160 Apr 08 05:10	21° \mathcal{O} 26'19	
				evening set	16160 Jul 21 00:50	29° \mathcal{O} 10'50	

	16160 Jul 27 15:31	0°♎		evening set	16166 Oct 05 05:47	15°♎09'53	
conjunction	16160 Aug 07 01:23	1°♎18'21 -1°39'40		conjunction	16166 Oct 22 08:52	17°♎15'41 -0°09'10	
minimum elong	16160 Aug 07 01:23	1°♎18'22 1°40'04		minimum elong	16166 Oct 22 08:52	17°♎15'41 0°08'42	
max. Earth dist.	16160 Aug 07 00:41	1°♎18'08 10.46724 AU		behind sun begin	16166 Oct 22 02:42	17°♎13'48	
morning rise	16160 Aug 24 01:09	3°♎25'38		behind sun end	16166 Oct 22 15:02	17°♎17'33	
retrograde	16160 Dec 04 15:11	11°♎05'32		max. Earth dist.	16166 Oct 23 00:46	17°♎20'34 10.60523 AU	
opposition	16161 Feb 11 11:18	7°♎43'13 -2°00'21		morning rise	16166 Nov 08 13:47	19°♎22'01	
min. Earth dist.	16161 Feb 11 10:03	7°♎43'28 8.47930 AU		retrograde	16167 Feb 20 07:11	26°♎57'00	
direct	16161 Apr 21 18:08	4°♎19'45		asc. node	16167 Mar 27 12:14	25°♎56'47	
evening set	16161 Aug 03 02:27	12°♎01'19		min. Earth dist.	16167 Apr 30 10:49	23°♎35'52 8.61484 AU	
				opposition	16167 May 01 00:51	23°♎33'09 0°02'31	
conjunction	16161 Aug 20 02:27	14°♎08'20 -1°33'45		direct	16167 Jul 08 17:46	20°♎11'47	
minimum elong	16161 Aug 20 02:29	14°♎08'21 1°34'00		evening set	16167 Oct 17 22:17	27°♎35'49	
max. Earth dist.	16161 Aug 20 05:35	14°♎09'19 10.48969 AU					
morning rise	16161 Sep 06 02:03	16°♎15'14		conjunction	16167 Nov 04 02:30	29°♎41'32 0°12'47	
retrograde	16161 Dec 17 22:03	23°♎54'37		minimum elong	16167 Nov 04 02:29	29°♎41'32 0°13'22	
opposition	16162 Feb 24 22:32	20°♎32'08 -1°50'00		behind sun begin	16167 Nov 03 22:24	29°♎40'18	
min. Earth dist.	16162 Feb 24 17:56	20°♎33'01 8.50213 AU		behind sun end	16167 Nov 04 06:34	29°♎42'47	
direct	16162 May 05 03:31	17°♎09'13		max. Earth dist.	16167 Nov 04 19:43	29°♎46'49 10.62339 AU	
evening set	16162 Aug 16 01:51	24°♎47'37			16167 Nov 06 14:36	0°♎	
				morning rise	16167 Nov 21 08:42	1°♎47'51	
conjunction	16162 Sep 02 01:50	26°♎54'16 -1°23'13		retrograde	16168 Mar 04 06:37	9°♎22'06	
minimum elong	16162 Sep 02 01:52	26°♎54'17 1°23'19		opposition	16168 May 12 23:13	5°♎58'02 0°29'14	
max. Earth dist.	16162 Sep 02 08:47	26°♎56'27 10.51307 AU		min. Earth dist.	16168 May 12 08:44	6°♎00'49 8.63125 AU	
morning rise	16162 Sep 19 01:47	29°♎00'57		direct	16168 Jul 20 13:07	2°♎36'42	
	16162 Sep 27 05:23	0°♎		evening set	16168 Oct 29 14:52	9°♎59'10	
retrograde	16162 Dec 31 03:43	6°♎39'36					
opposition	16163 Mar 10 08:01	3°♎16'55 -1°34'18		conjunction	16168 Nov 15 20:08	12°♎04'52 0°33'58	
min. Earth dist.	16163 Mar 10 00:43	3°♎18'19 8.52560 AU		minimum elong	16168 Nov 15 20:07	12°♎04'52 0°34'38	
	16163 May 08 02:31	30°♎		max. Earth dist.	16168 Nov 16 13:05	12°♎10'03 10.63770 AU	
direct	16163 May 18 09:55	29°♎54'30		morning rise	16168 Dec 03 03:41	14°♎11'13	
	16163 May 28 17:04	0°♎		retrograde	16169 Mar 17 03:49	21°♎44'50	
evening set	16163 Aug 28 23:15	7°♎29'40		opposition	16169 May 25 19:32	18°♎20'37 0°54'30	
				min. Earth dist.	16169 May 25 05:58	18°♎23'15 8.64350 AU	
conjunction	16163 Sep 14 23:33	9°♎36'01 -1°08'39		direct	16169 Aug 02 06:15	14°♎59'11	
minimum elong	16163 Sep 14 23:35	9°♎36'01 1°08'36		evening set	16169 Nov 11 07:50	22°♎20'51	
max. Earth dist.	16163 Sep 15 09:14	9°♎39'02 10.53700 AU					
morning rise	16163 Oct 02 00:24	11°♎42'32		conjunction	16169 Nov 28 14:11	24°♎26'33 0°53'33	
retrograde	16164 Jan 13 06:57	19°♎20'20		minimum elong	16169 Nov 28 14:09	24°♎26'33 0°54'16	
opposition	16164 Mar 22 15:49	15°♎57'23 -1°14'04		max. Earth dist.	16169 Nov 29 05:25	24°♎31'12 10.64741 AU	
min. Earth dist.	16164 Mar 22 06:32	15°♎59'11 8.54939 AU		morning rise	16169 Dec 15 23:03	26°♎32'58	
direct	16164 May 30 15:07	12°♎35'23			16170 Jan 15 19:59	0°♎	
evening set	16164 Sep 09 18:43	20°♎07'17		retrograde	16170 Mar 29 23:18	4°♎06'12	
				opposition	16170 Jun 07 14:12	0°♎41'52 1°17'10	
conjunction	16164 Sep 26 19:37	22°♎13'24 -0°50'50		min. Earth dist.	16170 Jun 07 02:13	0°♎44'11 8.65087 AU	
minimum elong	16164 Sep 26 19:39	22°♎13'24 0°50'38			16170 Jun 16 15:34	30°♎	
max. Earth dist.	16164 Sep 27 07:26	22°♎17'03 10.56093 AU		direct	16170 Aug 14 23:53	27°♎20'14	
morning rise	16164 Oct 13 21:46	24°♎19'49			16170 Oct 10 21:52	0°♎	
	16164 Dec 07 17:45	0°♎		evening set	16170 Nov 24 01:37	4°♎41'45	
retrograde	16165 Jan 25 08:42	1°♎56'41					
	16165 Mar 16 12:29	30°♎		conjunction	16170 Dec 11 09:05	6°♎37'35 1°10'37	
opposition	16165 Apr 04 21:22	28°♎33'26 -0°50'24		minimum elong	16170 Dec 11 09:03	6°♎37'34 1°11'22	
min. Earth dist.	16165 Apr 04 10:29	28°♎35'32 8.57285 AU		max. Earth dist.	16170 Dec 11 22:47	6°♎51'45 10.65193 AU	
direct	16165 Jun 12 18:23	25°♎11'44		morning rise	16170 Dec 28 19:01	8°♎54'05	
	16165 Aug 30 09:21	0°♎		retrograde	16171 Apr 11 19:35	16°♎27'08	
evening set	16165 Sep 22 12:46	2°♎40'34		opposition	16171 Jun 20 07:30	13°♎02'44 1°36'15	
				min. Earth dist.	16171 Jun 19 20:52	13°♎04'48 8.65291 AU	
conjunction	16165 Oct 09 14:38	4°♎46'30 -0°30'40		direct	16171 Aug 27 16:21	9°♎40'52	
minimum elong	16165 Oct 09 14:39	4°♎46'30 0°30'20		evening set	16171 Dec 06 20:34	17°♎02'51	
max. Earth dist.	16165 Oct 10 04:23	4°♎50'45 10.58404 AU					
morning rise	16165 Oct 26 18:13	6°♎52'53		conjunction	16171 Dec 24 05:16	19°♎08'53 1°24'25	
retrograde	16166 Feb 07 08:33	14°♎28'45		minimum elong	16171 Dec 24 05:15	19°♎08'53 1°25'08	
min. Earth dist.	16166 Apr 17 11:47	11°♎07'36 8.59505 AU		max. Earth dist.	16171 Dec 24 17:25	19°♎12'36 10.65110 AU	
opposition	16166 Apr 18 00:18	11°♎05'12 -0°24'27		morning rise	16172 Jan 10 16:07	21°♎15'34	
direct	16166 Jun 25 19:03	7°♎43'41		retrograde	16172 Apr 23 16:17	28°♎48'36	
	16166 Oct 03 20:57	15°♎		opposition	16172 Jul 01 23:59	25°♎24'11 1°50'53	

min. Earth dist.	16172 Jul 01 14:50	25° Z 25'58	8.64963 AU	opposition	16178 Sep 15 10:53	10° Y 28'04	1°23'22
direct	16172 Sep 08 07:27	22° Z 02'00		min. Earth dist.	16178 Sep 15 18:10	10° Y 26'37	8.54377 AU
evening set	16172 Dec 18 17:00	29° Z 25'04		direct	16178 Nov 22 23:12	7° Y 03'20	
	16172 Dec 23 13:37	0° \approx		evening set	16179 Mar 06 11:49	14° Y 40'28	
conjunction	16173 Jan 05 02:57	1° \approx 31'25	1°34'19	conjunction	16179 Mar 24 04:03	16° Y 50'12	0°58'51
minimum elong	16173 Jan 05 02:56	1° \approx 31'25	1°34'58	minimum elong	16179 Mar 24 04:05	16° Y 50'13	0°58'42
max. Earth dist.	16173 Jan 05 12:49	1° \approx 34'25	10.64504 AU	max. Earth dist.	16179 Mar 23 16:38	16° Y 46'41	10.53082 AU
morning rise	16173 Jan 22 14:43	3° \approx 38'20		morning rise	16179 Apr 10 19:24	18° Y 59'47	
retrograde	16173 May 06 13:00	11° \approx 11'31		retrograde	16179 Jul 22 10:31	26° Y 34'44	
opposition	16173 Jul 14 16:09	7° \approx 47'09	2°00'24	opposition	16179 Sep 28 09:36	23° Y 11'33	1°01'00
min. Earth dist.	16173 Jul 14 09:20	7° \approx 48'29	8.64117 AU	min. Earth dist.	16179 Sep 28 19:51	23° Y 09'31	8.51844 AU
direct	16173 Sep 20 23:13	4° \approx 24'35		direct	16179 Dec 06 01:16	19° Y 46'22	
evening set	16173 Dec 31 15:21	11° \approx 49'17		evening set	16180 Mar 18 21:24	27° Y 26'14	
conjunction	16174 Jan 18 02:27	13° \approx 56'03	1°39'50	conjunction	16180 Apr 05 13:40	29° Y 36'28	0°39'19
minimum elong	16174 Jan 18 02:26	13° \approx 56'03	1°40'24	minimum elong	16180 Apr 05 13:41	29° Y 36'29	0°39'02
max. Earth dist.	16174 Jan 18 08:30	13° \approx 57'54	10.63408 AU	max. Earth dist.	16180 Apr 04 22:31	29° Y 31'47	10.50528 AU
	16174 Jan 26 20:43	15° \approx			16180 Apr 08 17:47	0° Z	
morning rise	16174 Feb 04 15:09	16° \approx 03'19		morning rise	16180 Apr 23 04:43	1° Z 46'24	
retrograde	16174 May 19 10:58	23° \approx 36'40		retrograde	16180 Aug 03 13:41	9° Z 21'55	
opposition	16174 Jul 27 08:22	20° \approx 12'28	2°04'20	opposition	16180 Oct 10 10:16	5° Z 58'56	0°35'28
min. Earth dist.	16174 Jul 27 04:52	20° \approx 13'09	8.62805 AU	min. Earth dist.	16180 Oct 10 23:06	5° Z 56'25	8.49248 AU
direct	16174 Oct 03 14:45	16° \approx 49'29		direct	16180 Dec 18 05:00	2° Z 33'24	
evening set	16175 Jan 13 15:31	24° \approx 16'14		evening set	16181 Apr 01 08:27	10° Z 16'03	
				max. Earth dist.	16181 Apr 18 06:48	12° Z 21'15	10.47945 AU
conjunction	16175 Jan 31 03:48	26° \approx 23'32	1°40'41	conjunction	16181 Apr 19 00:17	12° Z 26'40	0°17'44
minimum elong	16175 Jan 31 03:49	26° \approx 23'32	1°41'08	minimum elong	16181 Apr 19 00:18	12° Z 26'41	0°17'19
max. Earth dist.	16175 Jan 31 05:47	26° \approx 24'08	10.61894 AU	morning rise	16181 May 06 14:29	14° Z 36'52	
morning rise	16175 Feb 17 17:29	28° \approx 31'13			16181 May 09 18:55	15° Z	
	16175 Mar 02 09:14	0° X		retrograde	16181 Aug 16 18:38	22° Z 13'15	
retrograde	16175 Jun 01 08:41	6° X 04'49		opposition	16181 Oct 23 13:29	18° Z 50'28	0°08'01
opposition	16175 Aug 09 01:16	2° X 40'49	2°02'27	min. Earth dist.	16181 Oct 24 03:22	18° Z 47'44	8.46706 AU
min. Earth dist.	16175 Aug 09 00:57	2° X 40'52	8.61103 AU	direct	16181 Dec 31 11:07	15° Z 24'41	
	16175 Sep 17 12:32	30° R \approx		desc. node	16182 Feb 08 19:49	16° Z 43'17	
direct	16175 Oct 16 08:19	29° \approx 17'24		evening set	16182 Apr 14 20:35	23° Z 09'59	
	16175 Nov 14 00:20	0° X					
evening set	16176 Jan 26 17:33	6° X 46'32		conjunction	16182 May 02 11:29	25° Z 20'50	-0°04'56
conjunction	16176 Feb 13 07:08	8° X 54'25	1°36'46	minimum elong	16182 May 02 11:29	25° Z 20'50	0°05'29
minimum elong	16176 Feb 13 07:09	8° X 54'26	1°37'05	behind sun begin	16182 May 02 04:32	25° Z 18'42	
max. Earth dist.	16176 Feb 13 05:32	8° X 53'56	10.60033 AU	behind sun end	16182 May 02 18:25	25° Z 22'58	
morning rise	16176 Mar 01 21:38	11° X 02'35		max. Earth dist.	16182 May 01 17:30	25° Z 15'14	10.45513 AU
retrograde	16176 Jun 13 06:22	18° X 36'32		morning rise	16182 May 20 00:15	27° Z 31'09	
opposition	16176 Aug 20 19:05	15° X 12'43	1°54'46		16182 Jun 10 03:21	0° II	
min. Earth dist.	16176 Aug 20 21:24	15° X 12'15	8.59080 AU	retrograde	16182 Aug 30 00:48	5° II 08'35	
direct	16176 Oct 28 04:49	11° X 48'52		opposition	16182 Nov 05 19:13	1° II 45'58	-0°20'01
evening set	16177 Feb 07 21:46	19° X 20'36		min. Earth dist.	16182 Nov 06 09:05	1° II 43'14	8.44440 AU
					16182 Nov 29 08:40	30° R Z	
conjunction	16177 Feb 25 12:36	21° X 29'08	1°28'14	direct	16183 Jan 13 20:02	28° Z 20'02	
minimum elong	16177 Feb 25 12:38	21° X 29'09	1°28'24		16183 Feb 27 10:03	0° II	
max. Earth dist.	16177 Feb 25 08:06	21° X 27'45	10.57891 AU	evening set	16183 Apr 28 09:44	6° II 07'35	
morning rise	16177 Mar 15 03:38	23° X 37'47					
	16177 May 19 18:06	0° Y		conjunction	16183 May 15 23:09	8° II 18'29	-0°27'19
retrograde	16177 Jun 26 06:56	1° Y 12'02		minimum elong	16183 May 15 23:08	8° II 18'29	0°27'57
	16177 Aug 03 05:55	30° R X		max. Earth dist.	16183 May 15 05:39	8° II 13'01	10.43456 AU
opposition	16177 Sep 02 14:03	27° X 48'26	1°41'33	morning rise	16183 Jun 02 10:02	10° II 28'44	
min. Earth dist.	16177 Sep 02 18:39	27° X 47'32	8.56810 AU	retrograde	16183 Sep 12 09:30	18° II 07'12	
direct	16177 Nov 10 01:20	24° X 24'10		opposition	16183 Nov 19 03:18	14° II 44'43	-0°47'10
	16178 Feb 04 05:11	0° Y		min. Earth dist.	16183 Nov 19 16:42	14° II 42'04	8.42648 AU
evening set	16178 Feb 21 03:58	1° Y 58'35		direct	16184 Jan 27 05:41	11° II 18'43	
				evening set	16184 May 10 23:15	19° II 07'59	
conjunction	16178 Mar 10 19:43	4° Y 07'45	1°15'24	conjunction	16184 May 28 10:40	21° II 18'42	-0°48'26
minimum elong	16178 Mar 10 19:46	4° Y 07'46	1°15'25	minimum elong	16184 May 28 10:38	21° II 18'42	0°49'08
max. Earth dist.	16178 Mar 10 11:59	4° Y 05'22	10.55549 AU	max. Earth dist.	16184 May 27 18:00	21° II 13'28	10.41937 AU
morning rise	16178 Mar 28 11:02	6° Y 16'53		morning rise	16184 Jun 14 19:26	23° II 28'43	
retrograde	16178 Jul 09 09:06	13° Y 51'27					




























































































































	16184 Aug 19 18:43	0°♊	morning rise	16190 Sep 01 02:31	11°♏15'40	
retrograde	16184 Sep 24 18:49	1°♊08'06	retrograde	16190 Dec 12 20:27	18°♏55'30	
	16184 Oct 31 08:41	30°♏II	opposition	16191 Feb 19 18:28	15°♏32'36	-1°55'01
opposition	16184 Dec 01 13:39	27°♏II45'42 -1°11'59	min. Earth dist.	16191 Feb 19 14:56	15°♏33'17	8.48116 AU
min. Earth dist.	16184 Dec 02 02:32	27°♏II43'10 8.41458 AU	direct	16191 Apr 29 23:26	12°♏08'57	
direct	16185 Feb 08 17:22	24°♏II19'43	evening set	16191 Aug 11 02:47	19°♏48'52	
	16185 May 06 07:54	0°♊				
evening set	16185 May 24 12:19	2°♊09'59	conjunction	16191 Aug 28 02:38	21°♏55'44	-1°28'05
			minimum elong	16191 Aug 28 02:40	21°♏55'44	1°28'15
conjunction	16185 Jun 10 21:19	4°♊20'19 -1°07'06	max. Earth dist.	16191 Aug 28 08:13	21°♏57'28	10.49411 AU
minimum elong	16185 Jun 10 21:18	4°♊20'18 1°07'50	morning rise	16191 Sep 14 02:33	24°♏02'34	
max. Earth dist.	16185 Jun 10 05:51	4°♊15'27 10.41058 AU		16191 Nov 11 03:53	0°♊	
morning rise	16185 Jun 28 03:54	6°♊29'58	retrograde	16191 Dec 26 00:29	1°♊41'28	
retrograde	16185 Oct 08 03:15	14°♊10'07		16192 Feb 10 05:22	30°♏R♏	
opposition	16185 Dec 15 01:42	10°♊47'44 -1°33'10	opposition	16192 Mar 04 04:25	28°♏18'27	-1°41'23
min. Earth dist.	16185 Dec 15 13:13	10°♊45'28 8.40947 AU	min. Earth dist.	16192 Mar 03 22:02	28°♏19'41	8.50928 AU
direct	16186 Feb 22 07:34	7°♊21'52	direct	16192 May 12 07:47	24°♏55'26	
evening set	16186 Jun 07 00:15	15°♊12'20		16192 Aug 01 10:03	0°♊	
			evening set	16192 Aug 23 00:27	2°♊31'51	
conjunction	16186 Jun 24 06:52	17°♊22'07 -1°22'21				
minimum elong	16186 Jun 24 06:50	17°♊22'07 1°23'04	conjunction	16192 Sep 09 00:30	4°♊38'17	-1°15'05
max. Earth dist.	16186 Jun 23 17:48	17°♊18'00 10.40879 AU	minimum elong	16192 Sep 09 00:32	4°♊38'18	1°15'06
morning rise	16186 Jul 11 11:22	19°♊31'18	max. Earth dist.	16192 Sep 09 09:43	4°♊41'10	10.52348 AU
retrograde	16186 Oct 21 11:50	27°♊11'59	morning rise	16192 Sep 26 01:03	6°♊44'52	
opposition	16186 Dec 28 14:43	23°♊49'32 -1°49'32	retrograde	16193 Jan 07 03:01	14°♊22'43	
min. Earth dist.	16186 Dec 28 23:49	23°♊47'45 8.41144 AU	opposition	16193 Mar 17 12:25	10°♊59'34	-1°22'53
direct	16187 Mar 07 22:49	20°♊23'54	min. Earth dist.	16193 Mar 17 02:44	11°♊01'26	8.53910 AU
evening set	16187 Jun 20 10:24	28°♊13'41	direct	16193 May 25 14:26	7°♊37'10	
	16187 Jul 04 14:22	0°♏	evening set	16193 Sep 04 19:54	15°♊10'01	
conjunction	16187 Jul 07 14:53	0°♏22'53 -1°33'21	conjunction	16193 Sep 21 20:37	17°♊16'08	-0°58'31
minimum elong	16187 Jul 07 14:52	0°♏22'53 1°34'02	minimum elong	16193 Sep 21 20:39	17°♊16'08	0°58'22
max. Earth dist.	16187 Jul 07 05:23	0°♏19'53 10.41405 AU	max. Earth dist.	16193 Sep 22 09:34	17°♊20'09	10.55382 AU
morning rise	16187 Jul 24 17:28	2°♏31'31	morning rise	16193 Oct 08 22:08	19°♊22'29	
retrograde	16187 Nov 03 21:21	10°♏12'27	retrograde	16194 Jan 20 06:07	26°♊59'12	
opposition	16188 Jan 11 04:18	6°♏49'53 -2°00'15	opposition	16194 Mar 30 18:04	23°♊35'56	-1°00'31
min. Earth dist.	16188 Jan 11 10:00	6°♏48'47 8.42023 AU	min. Earth dist.	16194 Mar 30 05:43	23°♊38'19	8.56918 AU
direct	16188 Mar 20 12:41	3°♏24'38	direct	16194 Jun 07 17:35	20°♊14'06	
evening set	16188 Jul 02 18:22	11°♏12'54	evening set	16194 Sep 17 13:52	27°♊43'32	
conjunction	16188 Jul 19 21:01	13°♏21'27 -1°39'34	conjunction	16194 Oct 04 15:23	29°♊49'24	-0°39'15
minimum elong	16188 Jul 19 21:01	13°♏21'27 1°40'09	minimum elong	16194 Oct 04 15:24	29°♊49'24	0°38'57
max. Earth dist.	16188 Jul 19 16:00	13°♏19'52 10.42598 AU	max. Earth dist.	16194 Oct 05 06:59	29°♊54'13	10.58370 AU
	16188 Aug 01 22:42	15°♏		16194 Oct 06 01:40	0°♏	
morning rise	16188 Aug 05 21:58	15°♏29'32	morning rise	16194 Oct 21 18:07	1°♏55'37	
retrograde	16188 Nov 16 06:03	23°♏10'25	retrograde	16195 Feb 02 07:02	9°♏31'06	
opposition	16189 Jan 23 17:50	19°♏47'44 -2°04'48	opposition	16195 Apr 12 21:13	6°♏07'46	-0°35'25
min. Earth dist.	16189 Jan 23 20:02	19°♏47'18 8.43535 AU	min. Earth dist.	16195 Apr 12 07:18	6°♏10'27	8.59821 AU
direct	16189 Apr 03 01:39	16°♏22'57	direct	16195 Jun 20 16:40	2°♏46'23	
evening set	16189 Jul 15 23:51	24°♏08'58	evening set	16195 Sep 30 06:39	10°♏12'50	
conjunction	16189 Aug 02 01:04	26°♏16'54 -1°40'43	conjunction	16195 Oct 17 09:04	12°♏18'26	-0°18'13
minimum elong	16189 Aug 02 01:05	26°♏16'54 1°41'11	minimum elong	16195 Oct 17 09:04	12°♏18'27	0°17'48
max. Earth dist.	16189 Aug 02 00:07	26°♏16'36 10.44400 AU	max. Earth dist.	16195 Oct 18 01:49	12°♏23'36	10.61187 AU
morning rise	16189 Aug 19 01:00	28°♏24'29	morning rise	16195 Nov 03 13:14	14°♏24'33	
	16189 Sep 01 05:57	0°♏		16195 Nov 08 11:41	15°♏	
retrograde	16189 Nov 29 13:37	6°♏05'00	retrograde	16196 Feb 15 05:19	21°♏58'55	
opposition	16190 Feb 06 06:46	2°♏42'12 -2°02'59	opposition	16196 Apr 24 22:13	18°♏35'31	-0°08'48
min. Earth dist.	16190 Feb 06 05:57	2°♏42'21 8.45607 AU	min. Earth dist.	16196 Apr 24 07:51	18°♏38'17	8.62504 AU
	16190 Mar 18 15:17	30°♏R♏	direct	16196 Jul 02 15:09	15°♏14'30	
direct	16190 Apr 16 13:42	29°♏17'58	asc. node	16196 Aug 26 22:18	17°♏45'26	
	16190 May 15 03:26	0°♏	evening set	16196 Oct 11 22:33	22°♏38'24	
evening set	16190 Jul 29 02:35	7°♏01'08				
			conjunction	16196 Oct 29 02:00	24°♏43'50	0°03'39
conjunction	16190 Aug 15 02:52	9°♏08'30 -1°36'48	minimum elong	16196 Oct 29 01:59	24°♏43'50	0°04'11
minimum elong	16190 Aug 15 02:53	9°♏08'30 1°37'07	behind sun begin	16196 Oct 28 18:58	24°♏41'43	
max. Earth dist.	16190 Aug 15 05:19	9°♏09'16 10.46717 AU	behind sun end	16196 Oct 29 08:59	24°♏45'58	

max. Earth dist.	16196 Oct 29 19:10	24° \mathbb{M} 49'06	10.63719 AU	max. Earth dist.	16203 Jan 14 00:15	8° \approx 46'32	10.66592 AU
morning rise	16196 Nov 15 07:38	26° \mathbb{M} 49'52		morning rise	16203 Jan 31 06:18	10° \approx 51'23	
	16196 Dec 13 07:30	0° \mathbb{A}			16203 Mar 10 08:48	15° \approx	
retrograde	16197 Feb 27 02:48	4° \mathbb{A} 23'16		retrograde	16203 May 15 01:58	18° \approx 23'22	
opposition	16197 May 07 20:48	0° \mathbb{A} 59'49	0°18'04	opposition	16203 Jul 23 03:02	14° \approx 59'36	2°03'08
min. Earth dist.	16197 May 07 06:13	1° \mathbb{A} 02'37	8.64850 AU	min. Earth dist.	16203 Jul 22 23:03	15° \approx 00'23	8.65844 AU
	16197 May 21 00:22	30° \mathbb{R} \mathbb{M}			16203 Jul 23 00:59	15° \mathbb{R} \approx	
direct	16197 Jul 15 11:56	27° \mathbb{M} 39'01		direct	16203 Sep 29 11:04	11° \approx 37'14	
	16197 Sep 06 19:19	0° \mathbb{A}			16203 Dec 03 08:09	15° \approx	
evening set	16197 Oct 24 14:19	5° \mathbb{A} 00'56		evening set	16204 Jan 09 06:08	19° \approx 01'48	
conjunction	16197 Nov 10 18:56	7° \mathbb{A} 06'17	0°25'08	conjunction	16204 Jan 26 17:51	21° \approx 08'31	1°40'49
minimum elong	16197 Nov 10 18:55	7° \mathbb{A} 06'16	0°25'46	minimum elong	16204 Jan 26 17:51	21° \approx 08'32	1°41'19
max. Earth dist.	16197 Nov 11 12:31	7° \mathbb{A} 11'39	10.65839 AU	max. Earth dist.	16204 Jan 26 21:09	21° \approx 09'32	10.64764 AU
morning rise	16197 Nov 28 01:52	9° \mathbb{A} 12'16		morning rise	16204 Feb 13 06:52	23° \approx 15'41	
retrograde	16198 Mar 11 23:27	16° \mathbb{A} 44'48			16204 Apr 26 05:00	0° \mathbb{H}	
opposition	16198 May 20 16:59	13° \mathbb{A} 21'18	0°43'57	retrograde	16204 May 26 23:21	0° \mathbb{H} 48'04	
min. Earth dist.	16198 May 20 02:24	13° \mathbb{A} 24'07	8.66730 AU		16204 Jun 26 21:42	30° \mathbb{R} \approx	
direct	16198 Jul 28 05:51	10° \mathbb{A} 00'35		opposition	16204 Aug 03 18:39	27° \approx 24'15	2°03'53
evening set	16198 Nov 06 06:19	17° \mathbb{A} 21'14		min. Earth dist.	16204 Aug 03 17:15	27° \approx 24'31	8.63780 AU
				direct	16204 Oct 11 02:25	24° \approx 01'17	
conjunction	16198 Nov 23 12:07	19° \mathbb{A} 26'31	0°45'25		16205 Jan 08 16:18	0° \mathbb{H}	
minimum elong	16198 Nov 23 12:05	19° \mathbb{A} 26'31	0°46'07	evening set	16205 Jan 21 06:30	1° \mathbb{H} 28'13	
max. Earth dist.	16198 Nov 24 05:36	19° \mathbb{A} 31'51	10.67421 AU				
morning rise	16198 Dec 10 20:07	21° \mathbb{A} 32'28		conjunction	16205 Feb 07 19:31	3° \mathbb{H} 35'34	1°39'02
retrograde	16199 Mar 24 19:23	29° \mathbb{A} 04'24		minimum elong	16205 Feb 07 19:32	3° \mathbb{H} 35'35	1°39'25
opposition	16199 Jun 02 11:26	25° \mathbb{A} 40'49	1°07'44	max. Earth dist.	16205 Feb 07 18:58	3° \mathbb{H} 35'24	10.62489 AU
min. Earth dist.	16199 Jun 01 21:26	25° \mathbb{A} 43'32	8.68016 AU	morning rise	16205 Feb 25 09:24	5° \mathbb{H} 43'14	
direct	16199 Aug 09 22:46	22° \mathbb{A} 20'04		retrograde	16205 Jun 08 20:51	13° \mathbb{H} 16'03	
evening set	16199 Nov 18 22:48	29° \mathbb{A} 40'03		opposition	16205 Aug 16 11:09	9° \mathbb{H} 52'15	1°58'49
	16199 Nov 21 17:33	0° \mathbb{B}		min. Earth dist.	16205 Aug 16 13:00	9° \mathbb{H} 51'53	8.61308 AU
				direct	16205 Oct 23 20:07	6° \mathbb{H} 28'38	
conjunction	16199 Dec 06 05:39	1° \mathbb{B} 45'23	1°03'35	evening set	16206 Feb 03 08:54	13° \mathbb{H} 58'15	
minimum elong	16199 Dec 06 05:37	1° \mathbb{B} 45'23	1°04'19				
max. Earth dist.	16199 Dec 06 21:29	1° \mathbb{B} 50'12	10.68338 AU	conjunction	16206 Feb 20 23:01	16° \mathbb{H} 06'17	1°32'35
morning rise	16199 Dec 23 14:44	3° \mathbb{B} 51'23		minimum elong	16206 Feb 20 23:02	16° \mathbb{H} 06'17	1°32'49
retrograde	16200 Apr 06 15:49	11° \mathbb{B} 22'57		max. Earth dist.	16206 Feb 20 18:00	16° \mathbb{H} 04'45	10.59867 AU
opposition	16200 Jun 15 04:28	7° \mathbb{B} 59'18	1°28'22	morning rise	16206 Mar 10 13:41	18° \mathbb{H} 14'30	
min. Earth dist.	16200 Jun 14 16:34	8° \mathbb{B} 01'37	8.68577 AU	retrograde	16206 Jun 21 19:31	25° \mathbb{H} 47'48	
direct	16200 Aug 22 13:28	4° \mathbb{B} 38'19		opposition	16206 Aug 29 04:50	22° \mathbb{H} 24'02	1°48'06
evening set	16200 Dec 01 16:25	11° \mathbb{B} 58'27		min. Earth dist.	16206 Aug 29 10:11	22° \mathbb{H} 22'59	8.58542 AU
				direct	16206 Nov 05 15:06	18° \mathbb{H} 59'47	
conjunction	16200 Dec 19 00:18	14° \mathbb{B} 03'57	1°18'49	evening set	16207 Feb 16 13:13	26° \mathbb{H} 32'15	
minimum elong	16200 Dec 19 00:16	14° \mathbb{B} 03'56	1°19'32				
max. Earth dist.	16200 Dec 19 12:47	14° \mathbb{B} 07'44	10.68487 AU	conjunction	16207 Mar 06 04:22	28° \mathbb{H} 40'59	1°21'40
morning rise	16201 Jan 05 10:31	16° \mathbb{B} 10'06		minimum elong	16207 Mar 06 04:24	28° \mathbb{H} 41'00	1°21'45
retrograde	16201 Apr 19 11:20	23° \mathbb{B} 41'33		max. Earth dist.	16207 Mar 05 19:30	28° \mathbb{H} 38'16	10.57022 AU
opposition	16201 Jun 27 20:20	20° \mathbb{B} 17'53	1°44'56		16207 Mar 16 22:53	0° \mathbb{Y}	
min. Earth dist.	16201 Jun 27 11:25	20° \mathbb{B} 19'37	8.68352 AU	morning rise	16207 Mar 23 19:39	0° \mathbb{Y} 49'47	
direct	16201 Sep 04 03:37	16° \mathbb{B} 56'31		retrograde	16207 Jul 04 18:31	8° \mathbb{Y} 23'38	
evening set	16201 Dec 14 11:21	24° \mathbb{B} 17'37		opposition	16207 Sep 11 00:02	4° \mathbb{Y} 59'54	1°32'07
				min. Earth dist.	16207 Sep 11 07:57	4° \mathbb{Y} 58'21	8.55610 AU
conjunction	16201 Dec 31 20:24	26° \mathbb{B} 23'23	1°30'25	direct	16207 Nov 18 12:59	1° \mathbb{Y} 35'03	
minimum elong	16201 Dec 31 20:23	26° \mathbb{B} 23'23	1°31'06	evening set	16208 Feb 29 19:24	9° \mathbb{Y} 10'30	
max. Earth dist.	16202 Jan 01 05:19	26° \mathbb{B} 26'06	10.67872 AU				
morning rise	16202 Jan 18 07:42	28° \mathbb{B} 29'47		conjunction	16208 Mar 18 11:26	11° \mathbb{Y} 19'55	1°06'44
	16202 Jan 31 05:59	0° \approx		minimum elong	16208 Mar 18 11:28	11° \mathbb{Y} 19'56	1°06'40
retrograde	16202 May 02 05:37	6° \approx 01'24		max. Earth dist.	16208 Mar 17 23:55	11° \mathbb{Y} 16'23	10.54069 AU
opposition	16202 Jul 10 11:44	2° \approx 37'42	1°56'42	morning rise	16208 Apr 05 02:58	13° \mathbb{Y} 29'16	
min. Earth dist.	16202 Jul 10 05:36	2° \approx 38'54	8.67404 AU	retrograde	16208 Jul 16 18:42	21° \mathbb{Y} 03'44	
	16202 Aug 18 08:20	30° \mathbb{R} \mathbb{B}		opposition	16208 Sep 22 21:07	17° \mathbb{Y} 40'05	1°11'35
direct	16202 Sep 16 19:44	29° \mathbb{B} 15'52		min. Earth dist.	16208 Sep 23 06:50	17° \mathbb{Y} 38'10	8.52628 AU
	16202 Oct 15 23:47	0° \approx		direct	16208 Nov 30 13:36	14° \mathbb{Y} 14'43	
evening set	16202 Dec 27 07:46	6° \approx 38'28		evening set	16209 Mar 14 03:34	21° \mathbb{Y} 53'06	
conjunction	16203 Jan 13 18:07	8° \approx 44'40	1°37'53	conjunction	16209 Mar 31 20:01	24° \mathbb{Y} 03'09	0°48'29
minimum elong	16203 Jan 13 18:07	8° \approx 44'40	1°38'29	minimum elong	16209 Mar 31 20:03	24° \mathbb{Y} 03'10	0°48'15

max. Earth dist.	16209 Mar 31 06:26	23° Υ 58'58	10.51132 AU	evening set	16215 Jun 02 02:53	9° Ω 26'26	
morning rise	16209 Apr 18 11:15	26° Υ 12'56					
	16209 May 22 04:37	0° \mathcal{B}		conjunction	16215 Jun 19 10:47	11° Ω 36'26	-1°15'44
retrograde	16209 Jul 29 22:22	3° \mathcal{B} 48'07		minimum elong	16215 Jun 19 10:46	11° Ω 36'26	1°16'27
opposition	16209 Oct 05 20:17	0° \mathcal{B} 24'35	0°47'23	max. Earth dist.	16215 Jun 18 22:25	11° Ω 32'32	10.41355 AU
min. Earth dist.	16209 Oct 06 07:29	0° \mathcal{B} 22'22	8.49738 AU	morning rise	16215 Jul 06 16:09	13° Ω 45'46	
	16209 Oct 11 00:55	30° $\mathcal{R}\Upsilon$		retrograde	16215 Oct 16 16:38	21° Ω 26'00	
direct	16209 Dec 13 14:16	26° Υ 58'47		opposition	16215 Dec 23 16:42	18° Ω 03'43	-1°42'31
	16210 Feb 12 17:29	0° \mathcal{B}		min. Earth dist.	16215 Dec 24 01:38	18° Ω 01'58	8.41593 AU
evening set	16210 Mar 27 13:25	4° \mathcal{B} 40'04		direct	16216 Mar 01 23:18	14° Ω 38'12	
				evening set	16216 Jun 14 14:00	22° Ω 28'08	
conjunction	16210 Apr 14 05:41	6° \mathcal{B} 50'35	0°27'44				
minimum elong	16210 Apr 14 05:42	6° \mathcal{B} 50'36	0°27'22	conjunction	16216 Jul 01 19:30	24° Ω 37'33	-1°28'44
max. Earth dist.	16210 Apr 13 14:13	6° \mathcal{B} 45'48	10.48360 AU	minimum elong	16216 Jul 01 19:29	24° Ω 37'33	1°29'25
morning rise	16210 May 01 20:12	9° \mathcal{B} 00'42		max. Earth dist.	16216 Jul 01 09:40	24° Ω 34'27	10.41850 AU
	16210 Jun 29 18:40	15° \mathcal{B}		morning rise	16216 Jul 18 22:48	26° Ω 46'21	
retrograde	16210 Aug 12 02:42	16° \mathcal{B} 36'40			16216 Aug 15 15:22	0° \mathcal{Q}	
	16210 Sep 25 05:07	15° $\mathcal{R}\mathcal{B}$		retrograde	16216 Oct 29 02:39	4° \mathcal{Q} 26'57	
opposition	16210 Oct 18 22:01	13° \mathcal{B} 13'19	0°20'40	opposition	16217 Jan 05 06:10	1° \mathcal{Q} 04'47	-1°55'52
min. Earth dist.	16210 Oct 19 10:46	13° \mathcal{B} 10'48	8.47097 AU	min. Earth dist.	16217 Jan 05 13:02	1° \mathcal{Q} 03'26	8.42446 AU
direct	16210 Dec 26 18:01	9° \mathcal{B} 47'12			16217 Jan 19 08:07	30° $\mathcal{R}\mathcal{B}$	
	16211 Mar 19 10:58	15° \mathcal{B}		direct	16217 Mar 15 12:32	27° Ω 39'43	
evening set	16211 Apr 10 00:35	17° \mathcal{B} 31'11			16217 May 07 19:51	0° \mathcal{Q}	
				evening set	16217 Jun 27 23:05	5° \mathcal{Q} 28'32	
conjunction	16211 Apr 27 16:02	19° \mathcal{B} 41'59	0°05'32				
minimum elong	16211 Apr 27 16:03	19° \mathcal{B} 41'59	0°05'03	conjunction	16217 Jul 15 02:25	7° \mathcal{Q} 37'17	-1°37'11
behind sun begin	16211 Apr 27 09:02	19° \mathcal{B} 39'50		minimum elong	16217 Jul 15 02:24	7° \mathcal{Q} 37'17	1°37'48
behind sun end	16211 Apr 27 23:03	19° \mathcal{B} 44'09		max. Earth dist.	16217 Jul 14 19:25	7° \mathcal{Q} 35'04	10.43014 AU
max. Earth dist.	16211 Apr 26 22:44	19° \mathcal{B} 36'37	10.45904 AU	morning rise	16217 Aug 01 04:04	9° \mathcal{Q} 45'32	
morning rise	16211 May 15 05:31	21° \mathcal{B} 52'18			16217 Sep 18 15:25	15° \mathcal{Q}	
desc. node	16211 Jul 28 01:26	28° \mathcal{B} 46'51		retrograde	16217 Nov 11 10:38	17° \mathcal{Q} 26'11	
retrograde	16211 Aug 25 07:15	29° \mathcal{B} 29'09			16218 Jan 06 16:04	15° $\mathcal{R}\mathcal{Q}$	
opposition	16211 Nov 01 02:12	26° \mathcal{B} 06'02	-0°07'15	opposition	16218 Jan 18 19:55	14° \mathcal{Q} 04'02	-2°03'16
min. Earth dist.	16211 Nov 01 16:05	26° \mathcal{B} 03'17	8.44845 AU	min. Earth dist.	16218 Jan 19 00:10	14° \mathcal{Q} 03'13	8.43934 AU
direct	16212 Jan 09 01:31	22° \mathcal{B} 39'44		direct	16218 Mar 29 03:05	10° \mathcal{Q} 39'30	
	16212 Apr 18 22:59	0° \mathcal{I}			16218 Jun 11 12:03	15° \mathcal{Q}	
evening set	16212 Apr 22 12:58	0° \mathcal{I} 26'07		evening set	16218 Jul 11 05:54	18° \mathcal{Q} 26'23	
max. Earth dist.	16212 May 09 09:00	2° \mathcal{I} 31'23	10.43885 AU				
				conjunction	16218 Jul 28 07:34	20° \mathcal{Q} 34'28	-1°40'40
conjunction	16212 May 10 03:03	2° \mathcal{I} 37'01	-0°17'10	minimum elong	16218 Jul 28 07:34	20° \mathcal{Q} 34'28	1°41'11
minimum elong	16212 May 10 03:03	2° \mathcal{I} 37'01	0°17'46	max. Earth dist.	16218 Jul 28 04:07	20° \mathcal{Q} 33'22	10.44777 AU
morning rise	16212 May 27 15:00	4° \mathcal{I} 47'20		morning rise	16218 Aug 14 08:03	22° \mathcal{Q} 42'10	
retrograde	16212 Sep 06 13:51	12° \mathcal{I} 25'07			16218 Nov 04 02:40	0° \mathcal{P}	
opposition	16212 Nov 13 08:41	9° \mathcal{I} 02'14	-0°34'56	retrograde	16218 Nov 24 17:57	0° \mathcal{P} 22'32	
min. Earth dist.	16212 Nov 13 22:35	8° \mathcal{I} 59'30	8.43092 AU		16218 Dec 15 16:04	30° $\mathcal{R}\mathcal{Q}$	
direct	16213 Jan 21 10:42	5° \mathcal{I} 35'56		opposition	16219 Feb 01 09:05	27° \mathcal{Q} 00'20	-2°04'22
evening set	16213 May 06 01:53	13° \mathcal{I} 24'15		min. Earth dist.	16219 Feb 01 09:57	27° \mathcal{Q} 00'10	8.45947 AU
				direct	16219 Apr 11 16:49	23° \mathcal{Q} 36'21	
conjunction	16213 May 23 14:10	15° \mathcal{I} 35'03	-0°38'58		16219 Jul 13 07:11	0° \mathcal{P}	
minimum elong	16213 May 23 14:09	15° \mathcal{I} 35'02	0°39'39	evening set	16219 Jul 24 10:05	1° \mathcal{P} 20'36	
max. Earth dist.	16213 May 22 20:56	15° \mathcal{I} 29'39	10.42407 AU				
morning rise	16213 Jun 10 00:08	17° \mathcal{I} 45'11		conjunction	16219 Aug 10 10:42	3° \mathcal{P} 28'05	-1°39'04
retrograde	16213 Sep 19 21:50	25° \mathcal{I} 23'54		minimum elong	16219 Aug 10 10:43	3° \mathcal{P} 28'05	1°39'27
opposition	16213 Nov 26 17:34	22° \mathcal{I} 01'15	-1°00'56	max. Earth dist.	16219 Aug 10 11:25	3° \mathcal{P} 28'18	10.46996 AU
min. Earth dist.	16213 Nov 27 06:09	21° \mathcal{I} 58'47	8.41931 AU	morning rise	16219 Aug 27 10:27	5° \mathcal{P} 35'18	
direct	16214 Feb 03 21:42	18° \mathcal{I} 35'06		retrograde	16219 Dec 08 01:53	13° \mathcal{P} 15'05	
evening set	16214 May 19 14:35	26° \mathcal{I} 24'43		opposition	16220 Feb 14 21:25	9° \mathcal{P} 52'45	-1°59'12
max. Earth dist.	16214 Jun 05 09:55	28° \mathcal{I} 30'31	10.41548 AU	min. Earth dist.	16220 Feb 14 18:54	9° \mathcal{P} 53'14	8.48309 AU
				direct	16220 Apr 24 03:47	6° \mathcal{P} 29'21	
conjunction	16214 Jun 06 00:48	28° \mathcal{I} 35'11	-0°58'51	evening set	16220 Aug 05 11:30	14° \mathcal{P} 10'27	
minimum elong	16214 Jun 06 00:46	28° \mathcal{I} 35'11	0°59'34				
	16214 Jun 17 07:14	0° Ω		conjunction	16220 Aug 22 11:34	16° \mathcal{P} 17'25	-1°32'32
morning rise	16214 Jun 23 08:28	0° Ω 45'00		minimum elong	16220 Aug 22 11:35	16° \mathcal{P} 17'25	1°32'45
retrograde	16214 Oct 03 06:42	8° Ω 24'35		max. Earth dist.	16220 Aug 22 16:07	16° \mathcal{P} 18'50	10.49465 AU
opposition	16214 Dec 10 04:25	5° Ω 02'08	-1°23'52	morning rise	16220 Sep 08 11:07	18° \mathcal{P} 24'15	
min. Earth dist.	16214 Dec 10 15:07	5° Ω 00'01	8.41421 AU	retrograde	16220 Dec 20 07:55	26° \mathcal{P} 03'18	
direct	16215 Feb 17 10:17	1° Ω 36'15		opposition	16221 Feb 27 08:23	22° \mathcal{P} 40'49	-1°48'07

min. Earth dist.	16221 Feb 27 03:03	22° \mathring{M} 41'51	8.50812 AU	max. Earth dist.	16226 Nov 07 02:03	1° \mathring{A} 49'39	10.63128 AU
direct	16221 May 07 12:22	19° \mathring{M} 18'00		morning rise	16226 Nov 23 15:37	3° \mathring{A} 50'46	
evening set	16221 Aug 18 10:33	26° \mathring{M} 55'48		retrograde	16227 Mar 07 13:36	11° \mathring{A} 24'32	
				opposition	16227 May 16 05:55	8° \mathring{A} 00'36	0°32'32
conjunction	16221 Sep 04 10:31	29° \mathring{M} 02'21	-1°21'26	min. Earth dist.	16227 May 15 16:07	8° \mathring{A} 03'15	8.63874 AU
minimum elong	16221 Sep 04 10:33	29° \mathring{M} 02'21	1°21'31	direct	16227 Jul 23 18:36	4° \mathring{A} 39'21	
max. Earth dist.	16221 Sep 04 17:56	29° \mathring{M} 04'40	10.52000 AU	evening set	16227 Nov 01 21:26	12° \mathring{A} 01'27	
	16221 Sep 12 03:16	0° \mathring{A}					
morning rise	16221 Sep 21 10:33	1° \mathring{A} 08'56		conjunction	16227 Nov 19 02:39	14° \mathring{A} 07'02	0°36'33
retrograde	16222 Jan 02 12:15	8° \mathring{A} 47'10		minimum elong	16227 Nov 19 02:38	14° \mathring{A} 07'02	0°37'13
opposition	16222 Mar 12 17:33	5° \mathring{A} 24'31	-1°31'47	max. Earth dist.	16227 Nov 19 18:35	14° \mathring{A} 11'54	10.64472 AU
min. Earth dist.	16222 Mar 12 10:16	5° \mathring{A} 25'55	8.53326 AU	morning rise	16227 Dec 06 10:20	16° \mathring{A} 13'17	
direct	16222 May 20 19:22	2° \mathring{A} 02'13		retrograde	16228 Mar 19 08:56	23° \mathring{A} 46'31	
evening set	16222 Aug 31 07:28	9° \mathring{A} 36'44		opposition	16228 May 28 01:53	20° \mathring{A} 22'24	0°57'28
				min. Earth dist.	16228 May 27 13:02	20° \mathring{A} 24'53	8.65002 AU
conjunction	16222 Sep 17 07:44	11° \mathring{A} 42'58	-1°06'25	direct	16228 Aug 04 13:43	17° \mathring{A} 01'01	
minimum elong	16222 Sep 17 07:46	11° \mathring{A} 42'59	1°06'21	evening set	16228 Nov 13 14:03	24° \mathring{A} 22'21	
max. Earth dist.	16222 Sep 17 17:10	11° \mathring{A} 45'54	10.54523 AU				
morning rise	16222 Oct 04 08:49	13° \mathring{A} 49'24		conjunction	16228 Nov 30 20:26	26° \mathring{A} 27'59	0°55'49
retrograde	16223 Jan 15 15:26	21° \mathring{A} 26'44		minimum elong	16228 Nov 30 20:25	26° \mathring{A} 27'59	0°56'32
opposition	16223 Mar 26 00:45	18° \mathring{A} 03'52	-1°11'04	max. Earth dist.	16228 Dec 01 11:19	26° \mathring{A} 32'32	10.65337 AU
min. Earth dist.	16223 Mar 25 15:38	18° \mathring{A} 05'38	8.55800 AU	morning rise	16228 Dec 18 05:20	28° \mathring{A} 34'18	
direct	16223 Jun 03 00:07	14° \mathring{A} 41'59			16228 Dec 30 10:13	0° \mathring{B}	
evening set	16223 Sep 13 02:32	22° \mathring{A} 13'16		retrograde	16229 Apr 01 05:17	6° \mathring{B} 07'12	
				opposition	16229 Jun 09 20:06	2° \mathring{B} 42'56	1°19'43
conjunction	16223 Sep 30 03:31	24° \mathring{A} 19'16	-0°48'16	min. Earth dist.	16229 Jun 09 08:13	2° \mathring{B} 45'14	8.65623 AU
minimum elong	16223 Sep 30 03:32	24° \mathring{A} 19'16	0°48'03		16229 Jul 20 17:09	30° \mathring{R} \mathring{A}	
max. Earth dist.	16223 Sep 30 15:21	24° \mathring{A} 22'56	10.56977 AU	direct	16229 Aug 17 06:31	29° \mathring{A} 21'21	
morning rise	16223 Oct 17 05:48	26° \mathring{A} 25'36			16229 Sep 13 12:18	0° \mathring{B}	
	16223 Nov 17 19:39	0° \mathring{M}		evening set	16229 Nov 26 07:40	6° \mathring{B} 42'36	
retrograde	16224 Jan 28 15:57	4° \mathring{M} 01'58					
opposition	16224 Apr 07 05:39	0° \mathring{M} 38'50	-0°47'04	conjunction	16229 Dec 13 15:17	8° \mathring{B} 48'21	1°12'30
min. Earth dist.	16224 Apr 06 18:25	0° \mathring{M} 40'59	8.58176 AU	minimum elong	16229 Dec 13 15:16	8° \mathring{B} 48'21	1°13'13
	16224 Apr 15 16:43	30° \mathring{R} \mathring{A}		max. Earth dist.	16229 Dec 14 05:14	8° \mathring{B} 52'36	10.65662 AU
direct	16224 Jun 15 02:43	27° \mathring{A} 17'16		morning rise	16229 Dec 31 01:09	10° \mathring{B} 54'47	
	16224 Aug 11 15:23	0° \mathring{M}		retrograde	16230 Apr 14 01:40	18° \mathring{B} 27'32	
evening set	16224 Sep 24 20:08	4° \mathring{M} 45'31		opposition	16230 Jun 22 12:56	15° \mathring{B} 03'10	1°38'15
				min. Earth dist.	16230 Jun 22 02:09	15° \mathring{B} 05'16	8.65692 AU
conjunction	16224 Oct 11 22:10	6° \mathring{M} 51'21	-0°27'55	direct	16230 Aug 29 21:36	11° \mathring{B} 41'18	
minimum elong	16224 Oct 11 22:11	6° \mathring{M} 51'21	0°27'33	evening set	16230 Dec 09 02:33	19° \mathring{B} 03'08	
max. Earth dist.	16224 Oct 12 12:38	6° \mathring{M} 55'48	10.59293 AU				
morning rise	16224 Oct 29 01:45	8° \mathring{M} 57'37		conjunction	16230 Dec 26 11:18	21° \mathring{B} 09'07	1°25'49
	16224 Dec 28 08:34	15° \mathring{M}		minimum elong	16230 Dec 26 11:17	21° \mathring{B} 09'06	1°26'31
retrograde	16225 Feb 09 15:42	16° \mathring{M} 33'03		max. Earth dist.	16230 Dec 26 23:19	21° \mathring{B} 12'46	10.65433 AU
	16225 Mar 26 01:01	15° \mathring{R} \mathring{M}		morning rise	16231 Jan 12 22:05	23° \mathring{B} 15'43	
opposition	16225 Apr 20 08:04	13° \mathring{M} 09'35	-0°20'58		16231 Mar 26 20:52	0° \mathring{A}	
min. Earth dist.	16225 Apr 19 18:50	13° \mathring{M} 12'08	8.60380 AU	retrograde	16231 Apr 26 21:47	0° \mathring{A} 48'30	
direct	16225 Jun 28 03:38	9° \mathring{M} 48'15			16231 May 28 04:03	30° \mathring{R} \mathring{B}	
	16225 Sep 18 08:15	15° \mathring{M}		opposition	16231 Jul 05 05:12	27° \mathring{B} 24'07	1°52'16
evening set	16225 Oct 07 12:48	17° \mathring{M} 13'52		min. Earth dist.	16231 Jul 04 20:25	27° \mathring{B} 25'50	8.65211 AU
				direct	16231 Sep 11 13:05	24° \mathring{B} 01'53	
conjunction	16225 Oct 24 15:59	19° \mathring{M} 19'34	-0°06'22		16231 Dec 09 20:07	0° \mathring{A}	
minimum elong	16225 Oct 24 16:00	19° \mathring{M} 19'34	0°05'52	evening set	16231 Dec 21 22:50	1° \mathring{A} 24'51	
behind sun begin	16225 Oct 24 09:12	19° \mathring{M} 17'30					
behind sun end	16225 Oct 24 22:47	19° \mathring{M} 21'38		conjunction	16232 Jan 08 08:43	3° \mathring{A} 31'11	1°35'11
max. Earth dist.	16225 Oct 25 08:29	19° \mathring{M} 24'38	10.61377 AU	minimum elong	16232 Jan 08 08:42	3° \mathring{A} 31'11	1°35'48
morning rise	16225 Nov 10 20:55	21° \mathring{M} 25'48		max. Earth dist.	16232 Jan 08 17:31	3° \mathring{A} 33'52	10.64673 AU
asc. node	16226 Feb 10 01:40	28° \mathring{M} 52'16		morning rise	16232 Jan 25 20:32	5° \mathring{A} 38'04	
retrograde	16226 Feb 22 15:35	29° \mathring{M} 00'21		retrograde	16232 May 08 19:03	13° \mathring{A} 11'01	
opposition	16226 May 03 08:07	25° \mathring{M} 36'37	0°05'59	opposition	16232 Jul 16 21:15	9° \mathring{A} 46'41	2°01'06
min. Earth dist.	16226 May 02 17:57	25° \mathring{M} 39'21	8.62309 AU	min. Earth dist.	16232 Jul 16 15:29	9° \mathring{A} 47'48	8.64210 AU
direct	16226 Jul 11 00:29	22° \mathring{M} 15'23		direct	16232 Sep 23 03:46	6° \mathring{A} 24'02	
evening set	16226 Oct 20 05:07	29° \mathring{M} 38'54		evening set	16233 Jan 02 21:03	13° \mathring{A} 48'42	
	16226 Oct 23 03:06	0° \mathring{A}			16233 Jan 12 17:50	15° \mathring{A}	
conjunction	16226 Nov 06 09:19	1° \mathring{A} 44'32	0°15'32	conjunction	16233 Jan 20 08:09	15° \mathring{A} 55'28	1°40'07
minimum elong	16226 Nov 06 09:18	1° \mathring{A} 44'31	0°16'08	minimum elong	16233 Jan 20 08:09	15° \mathring{A} 55'28	1°40'39

max. Earth dist.	16233 Jan 20 12:53	15° \approx 56'55	10.63427 AU	retrograde	16239 Aug 06 19:46	11° \mathcal{B} 23'40	
morning rise	16233 Feb 06 21:00	18° \approx 02'44		opposition	16239 Oct 13 16:36	8° \mathcal{B} 00'40	0°32'09
retrograde	16233 May 21 15:37	25° \approx 35'55		min. Earth dist.	16239 Oct 14 05:00	7° \mathcal{B} 58'13	8.48804 AU
opposition	16233 Jul 29 13:20	22° \approx 11'41	2°04'20	direct	16239 Dec 21 11:55	4° \mathcal{B} 35'05	
min. Earth dist.	16233 Jul 29 10:43	22° \approx 12'12	8.62745 AU	evening set	16240 Apr 03 15:20	12° \mathcal{B} 18'04	
direct	16233 Oct 05 20:08	18° \approx 48'36					
evening set	16234 Jan 15 21:11	26° \approx 15'27		conjunction	16240 Apr 21 07:14	14° \mathcal{B} 28'45	0°14'59
				minimum elong	16240 Apr 21 07:14	14° \mathcal{B} 28'45	0°14'33
conjunction	16234 Feb 02 09:36	28° \approx 22'45	1°40'23	behind sun begin	16240 Apr 21 04:13	14° \mathcal{B} 27'50	
minimum elong	16234 Feb 02 09:37	28° \approx 22'45	1°40'48	behind sun end	16240 Apr 21 10:15	14° \mathcal{B} 29'41	
max. Earth dist.	16234 Feb 02 11:01	28° \approx 23'11	10.61757 AU	max. Earth dist.	16240 Apr 20 14:35	14° \mathcal{B} 23'35	10.47549 AU
	16234 Feb 15 17:46	0° \mathcal{H}			16240 Apr 25 11:46	15° \mathcal{B}	
morning rise	16234 Feb 19 23:20	0° \mathcal{H} 30'27		morning rise	16240 May 08 21:17	16° \mathcal{B} 39'00	
retrograde	16234 Jun 03 12:28	8° \mathcal{H} 04'00		retrograde	16240 Aug 19 00:56	24° \mathcal{B} 15'36	
opposition	16234 Aug 11 06:08	4° \mathcal{H} 39'55	2°01'44	opposition	16240 Oct 25 20:05	20° \mathcal{B} 52'48	0°04'34
min. Earth dist.	16234 Aug 11 06:01	4° \mathcal{H} 39'57	8.60886 AU	min. Earth dist.	16240 Oct 26 09:19	20° \mathcal{B} 50'11	8.46346 AU
direct	16234 Oct 18 15:01	1° \mathcal{H} 16'24		desc. node	16240 Dec 26 04:15	17° \mathcal{B} 29'59	
evening set	16235 Jan 28 23:12	8° \mathcal{H} 45'41		direct	16241 Jan 02 18:28	17° \mathcal{B} 27'00	
				evening set	16241 Apr 17 03:46	25° \mathcal{B} 12'34	
conjunction	16235 Feb 15 12:58	10° \mathcal{H} 53'38	1°35'54				
minimum elong	16235 Feb 15 13:00	10° \mathcal{H} 53'39	1°36'12	conjunction	16241 May 04 18:37	27° \mathcal{B} 23'28	-0°07'42
max. Earth dist.	16235 Feb 15 11:32	10° \mathcal{H} 53'12	10.59743 AU	minimum elong	16241 May 04 18:37	27° \mathcal{B} 23'28	0°08'15
morning rise	16235 Mar 05 03:25	13° \mathcal{H} 01'49		behind sun begin	16241 May 04 12:15	27° \mathcal{B} 21'31	
retrograde	16235 Jun 16 12:35	20° \mathcal{H} 35'49		behind sun end	16241 May 05 00:58	27° \mathcal{B} 25'26	
opposition	16235 Aug 24 00:03	17° \mathcal{H} 11'55	1°53'22	max. Earth dist.	16241 May 04 01:11	27° \mathcal{B} 18'03	10.45174 AU
min. Earth dist.	16235 Aug 24 02:12	17° \mathcal{H} 11'30	8.58720 AU	morning rise	16241 May 22 07:09	29° \mathcal{B} 33'48	
direct	16235 Oct 31 09:20	13° \mathcal{H} 47'59			16241 May 25 21:23	0° \mathcal{I}	
evening set	16236 Feb 11 03:35	21° \mathcal{H} 19'56		retrograde	16241 Sep 01 09:01	7° \mathcal{I} 11'29	
				opposition	16241 Nov 08 02:07	3° \mathcal{I} 48'52	-0°23'24
conjunction	16236 Feb 28 18:31	23° \mathcal{H} 28'33	1°26'49	min. Earth dist.	16241 Nov 08 15:55	3° \mathcal{I} 46'09	8.44115 AU
minimum elong	16236 Feb 28 18:33	23° \mathcal{H} 28'33	1°26'58	direct	16242 Jan 16 01:38	0° \mathcal{I} 22'57	
max. Earth dist.	16236 Feb 28 13:55	23° \mathcal{H} 27'08	10.57475 AU	evening set	16242 Apr 30 17:06	8° \mathcal{I} 10'48	
morning rise	16236 Mar 17 09:31	25° \mathcal{H} 37'16					
	16236 Apr 26 14:05	0° \mathcal{Y}		conjunction	16242 May 18 06:19	10° \mathcal{I} 21'44	-0°29'59
retrograde	16236 Jun 28 13:16	3° \mathcal{Y} 11'38		minimum elong	16242 May 18 06:18	10° \mathcal{I} 21'43	0°30'37
	16236 Sep 02 06:18	30° \mathcal{R} \mathcal{H}		max. Earth dist.	16242 May 17 12:36	10° \mathcal{I} 16'11	10.43136 AU
opposition	16236 Sep 04 19:18	29° \mathcal{H} 47'58	1°39'31	morning rise	16242 Jun 04 17:01	12° \mathcal{I} 32'00	
min. Earth dist.	16236 Sep 05 00:16	29° \mathcal{H} 47'00	8.56341 AU	retrograde	16242 Sep 14 17:24	20° \mathcal{I} 10'45	
direct	16236 Nov 12 05:50	26° \mathcal{H} 23'36		opposition	16242 Nov 21 10:40	16° \mathcal{I} 48'19	-0°50'19
	16237 Jan 18 13:11	0° \mathcal{Y}		min. Earth dist.	16242 Nov 22 00:34	16° \mathcal{I} 45'34	8.42337 AU
evening set	16237 Feb 23 10:05	3° \mathcal{Y} 58'22		direct	16243 Jan 29 12:06	13° \mathcal{I} 22'20	
				evening set	16243 May 14 06:44	21° \mathcal{I} 11'56	
conjunction	16237 Mar 13 01:51	6° \mathcal{Y} 07'38	1°13'31				
minimum elong	16237 Mar 13 01:53	6° \mathcal{Y} 07'38	1°13'31	conjunction	16243 May 31 17:52	23° \mathcal{I} 22'40	-0°50'50
max. Earth dist.	16237 Mar 12 17:13	6° \mathcal{Y} 04'59	10.55045 AU	minimum elong	16243 May 31 17:51	23° \mathcal{I} 22'40	0°51'32
morning rise	16237 Mar 30 17:14	8° \mathcal{Y} 16'51		max. Earth dist.	16243 May 31 00:31	23° \mathcal{I} 17'13	10.41628 AU
retrograde	16237 Jul 11 14:23	15° \mathcal{Y} 51'38		morning rise	16243 Jun 18 02:35	25° \mathcal{I} 32'44	
opposition	16237 Sep 17 16:28	12° \mathcal{Y} 28'13	1°20'47		16243 Jul 27 23:30	0° \mathcal{E}	
min. Earth dist.	16237 Sep 18 00:35	12° \mathcal{Y} 26'37	8.53845 AU	retrograde	16243 Sep 28 01:28	3° \mathcal{E} 12'28	
direct	16237 Nov 25 05:26	9° \mathcal{Y} 03'24			16243 Dec 02 19:04	30° \mathcal{R} \mathcal{I}	
evening set	16238 Mar 08 18:18	16° \mathcal{Y} 40'58		opposition	16243 Dec 04 21:23	29° \mathcal{I} 50'07	-1°14'45
				min. Earth dist.	16243 Dec 05 10:39	29° \mathcal{I} 47'31	8.41159 AU
conjunction	16238 Mar 26 10:29	18° \mathcal{Y} 50'48	0°56'33	direct	16244 Feb 12 01:47	26° \mathcal{I} 24'11	
minimum elong	16238 Mar 26 10:31	18° \mathcal{Y} 50'49	0°56'24		16244 Apr 19 04:42	0° \mathcal{E}	
max. Earth dist.	16238 Mar 25 22:10	18° \mathcal{Y} 47'00	10.52544 AU	evening set	16244 May 26 20:03	4° \mathcal{E} 14'48	
morning rise	16238 Apr 13 01:56	21° \mathcal{Y} 00'28					
retrograde	16238 Jul 24 16:50	28° \mathcal{Y} 35'42		conjunction	16244 Jun 13 04:51	6° \mathcal{E} 25'09	-1°09'08
opposition	16238 Sep 30 15:34	25° \mathcal{Y} 12'30	0°57'58	minimum elong	16244 Jun 13 04:49	6° \mathcal{E} 25'08	1°09'51
min. Earth dist.	16238 Oct 01 02:14	25° \mathcal{Y} 10'23	8.51318 AU	max. Earth dist.	16244 Jun 12 13:06	6° \mathcal{E} 20'11	10.40762 AU
direct	16238 Dec 08 07:12	21° \mathcal{Y} 47'16		morning rise	16244 Jun 30 11:22	8° \mathcal{E} 34'50	
evening set	16239 Mar 22 04:07	29° \mathcal{Y} 27'33		retrograde	16244 Oct 10 10:39	16° \mathcal{E} 15'23	
	16239 Mar 26 14:51	0° \mathcal{B}		opposition	16244 Dec 17 09:43	12° \mathcal{E} 53'02	-1°35'23
conjunction	16239 Apr 08 20:23	1° \mathcal{B} 37'53	0°36'44	min. Earth dist.	16244 Dec 17 20:57	12° \mathcal{E} 50'50	8.40661 AU
minimum elong	16239 Apr 08 20:24	1° \mathcal{B} 37'53	0°36'26	direct	16245 Feb 24 16:19	9° \mathcal{E} 27'15	
max. Earth dist.	16239 Apr 08 05:17	1° \mathcal{B} 33'13	10.50037 AU	evening set	16245 Jun 09 08:11	17° \mathcal{E} 18'01	
morning rise	16239 Apr 26 11:26	3° \mathcal{B} 47'53		conjunction	16245 Jun 26 14:42	19° \mathcal{E} 27'51	-1°23'53

minimum elong	16245 Jun 26 14:41	19°  27'51	1°24'35	max. Earth dist.	16251 Sep 12 19:16	6°  49'11	10.52438 AU
max. Earth dist.	16245 Jun 26 02:14	19°  23'55	10.40602 AU	morning rise	16251 Sep 29 09:30	8°  52'31	
morning rise	16245 Jul 13 19:02	21°  37'03		retrograde	16252 Jan 10 12:46	16°  30'18	
retrograde	16245 Oct 23 21:09	29°  18'09		opposition	16252 Mar 19 21:26	13°  07'04	-1°20'04
opposition	16245 Dec 30 23:12	25°  55'44	-1°51'05	min. Earth dist.	16252 Mar 19 10:57	13°  09'05	8.54029 AU
min. Earth dist.	16245 Dec 31 07:28	25°  54'07	8.40882 AU	direct	16252 May 27 23:19	9°  44'40	
direct	16246 Mar 10 06:16	22°  30'13		evening set	16252 Sep 07 04:01	17°  17'11	
	16246 Jun 20 00:43	0°  00					
evening set	16246 Jun 22 18:25	0°  20'12		conjunction	16252 Sep 24 04:49	19°  23'17	-0°56'04
				minimum elong	16252 Sep 24 04:51	19°  23'18	0°55'54
conjunction	16246 Jul 09 22:52	2°  29'26	-1°34'18	max. Earth dist.	16252 Sep 24 18:26	19°  27'31	10.55536 AU
minimum elong	16246 Jul 09 22:51	2°  29'26	1°34'57	morning rise	16252 Oct 11 06:26	21°  29'39	
max. Earth dist.	16246 Jul 09 14:24	2°  26'46	10.41160 AU	retrograde	16253 Jan 22 15:20	29°  06'12	
morning rise	16246 Jul 27 01:15	4°  38'06		opposition	16253 Apr 02 02:58	25°  42'51	-0°57'17
retrograde	16246 Nov 06 06:16	12°  19'25		min. Earth dist.	16253 Apr 01 14:29	25°  45'15	8.57100 AU
opposition	16247 Jan 13 13:09	8°  56'53	-2°01'03	direct	16253 Jun 10 00:50	22°  20'59	
min. Earth dist.	16247 Jan 13 18:14	8°  55'53	8.41799 AU	evening set	16253 Sep 19 21:52	29°  50'06	
direct	16247 Mar 23 20:52	5°  31'42			16253 Sep 21 06:31	0°  00	
evening set	16247 Jul 06 02:36	13°  20'07					
	16247 Jul 19 10:09	15°  00		conjunction	16253 Oct 06 23:24	1°  55'55	-0°36'31
conjunction	16247 Jul 23 05:12	15°  28'42	-1°39'54	minimum elong	16253 Oct 06 23:26	1°  55'55	0°36'13
minimum elong	16247 Jul 23 05:12	15°  28'42	1°40'26	max. Earth dist.	16253 Oct 07 14:48	2°  00'40	10.58584 AU
max. Earth dist.	16247 Jul 23 00:41	15°  27'17	10.42399 AU	morning rise	16253 Oct 24 02:22	4°  02'08	
morning rise	16247 Aug 09 06:05	17°  36'49		retrograde	16254 Feb 04 14:28	11°  37'23	
retrograde	16247 Nov 19 15:05	25°  18'00		opposition	16254 Apr 15 05:52	8°  13'59	-0°31'56
opposition	16248 Jan 27 02:55	21°  55'20	-2°04'47	min. Earth dist.	16254 Apr 14 16:20	8°  16'35	8.60060 AU
min. Earth dist.	16248 Jan 27 05:09	21°  54'54	8.43364 AU	direct	16254 Jun 23 01:41	4°  52'33	
direct	16248 Apr 05 10:25	18°  30'36		evening set	16254 Oct 02 14:28	12°  18'40	
evening set	16248 Jul 18 08:14	26°  16'41					
conjunction	16248 Aug 04 09:20	28°  24'38	-1°40'23	conjunction	16254 Oct 19 16:56	14°  24'15	-0°15'22
minimum elong	16248 Aug 04 09:21	28°  24'39	1°40'49	minimum elong	16254 Oct 19 16:57	14°  24'15	0°14'56
max. Earth dist.	16248 Aug 04 08:11	28°  24'16	10.44262 AU	behind sun begin	16254 Oct 19 14:13	14°  23'25	
	16248 Aug 17 01:14	0°  00		behind sun end	16254 Oct 19 19:41	14°  25'05	
morning rise	16248 Aug 21 09:22	0°  32'16		max. Earth dist.	16254 Oct 20 09:17	14°  29'16	10.61449 AU
retrograde	16248 Dec 01 23:18	8°  12'58			16254 Oct 24 13:06	15°  00	
opposition	16249 Feb 08 16:05	4°  50'10	-2°02'10	morning rise	16254 Nov 05 21:21	16°  30'20	
min. Earth dist.	16249 Feb 08 15:30	4°  50'16	8.45501 AU	retrograde	16255 Feb 17 12:58	24°  04'26	
direct	16249 Apr 18 22:07	1°  25'57		opposition	16255 Apr 28 06:24	20°  40'58	-0°05'15
evening set	16249 Jul 31 10:55	9°  09'04		min. Earth dist.	16255 Apr 27 16:09	20°  43'43	8.62781 AU
				direct	16255 Jul 05 24:00	17°  19'53	
conjunction	16249 Aug 17 11:08	11°  16'27	-1°35'50	asc. node	16255 Jul 10 20:30	17°  21'07	
minimum elong	16249 Aug 17 11:10	11°  16'27	1°36'07	evening set	16255 Oct 15 06:10	24°  43'28	
max. Earth dist.	16249 Aug 17 13:29	11°  17'11	10.46651 AU				
morning rise	16249 Sep 03 10:57	13°  17'40		conjunction	16255 Nov 01 09:45	26°  48'52	0°06'30
retrograde	16249 Dec 15 04:31	21°  03'36		minimum elong	16255 Nov 01 09:45	26°  48'52	0°07'02
opposition	16250 Feb 22 03:50	17°  40'39	-1°53'26	behind sun begin	16255 Nov 01 03:10	26°  46'52	
min. Earth dist.	16250 Feb 22 00:03	17°  41'23	8.48088 AU	behind sun end	16255 Nov 01 16:19	26°  46'52	
direct	16250 May 02 08:36	14°  17'01		max. Earth dist.	16255 Nov 02 03:18	26°  54'15	10.64005 AU
evening set	16250 Aug 13 11:00	21°  17'56		morning rise	16255 Nov 18 15:28	28°  54'52	
					16255 Nov 27 19:47	0°  00	
conjunction	16250 Aug 30 11:00	24°  03'38	-1°26'32	retrograde	16256 Mar 01 10:16	6°  27'59	
minimum elong	16250 Aug 30 11:02	24°  03'39	1°26'40	opposition	16256 May 10 04:34	3°  04'28	0°21'31
max. Earth dist.	16250 Aug 30 17:12	24°  05'35	10.49427 AU	min. Earth dist.	16256 May 09 13:25	3°  07'22	8.65145 AU
morning rise	16250 Sep 16 11:02	26°  10'30			16256 Jun 29 23:38	30°  00	
	16250 Oct 20 03:53	0°  00		direct	16256 Jul 17 19:48	29°  43'38	
retrograde	16250 Dec 28 08:30	3°  49'26		evening set	16256 Aug 04 12:15	0°  00	
opposition	16251 Mar 07 13:36	0°  26'20	-1°39'08		16256 Oct 26 21:43	7°  05'16	
min. Earth dist.	16251 Mar 07 06:20	0°  27'44	8.50980 AU	conjunction	16256 Nov 13 02:29	9°  10'34	0°27'51
	16251 Mar 13 06:23	30°  00		minimum elong	16256 Nov 13 02:28	9°  10'34	0°28'29
direct	16251 May 15 18:04	27°  03'19		max. Earth dist.	16256 Nov 13 20:52	9°  16'11	10.66140 AU
	16251 Jul 14 20:00	0°  00		morning rise	16256 Nov 30 09:23	11°  16'29	
evening set	16251 Aug 26 08:38	4°  39'29		retrograde	16257 Mar 14 06:47	18°  14'48	
				min. Earth dist.	16257 May 22 09:17	15°  28'09	8.67042 AU
conjunction	16251 Sep 12 08:53	6°  45'57	-1°13'02	opposition	16257 May 23 00:25	15°  25'14	0°47'10
minimum elong	16251 Sep 12 08:55	6°  45'57	1°13'01	direct	16257 Jul 30 13:49	12°  27'04	
				evening set	16257 Nov 08 13:37	19°  24'54	

conjunction	16257 Nov 25 19:27	21° \mathbb{A} 30'09	0°47'53			16263 Dec 23 05:00	0° \mathbb{H}	
minimum elong	16257 Nov 25 19:25	21° \mathbb{A} 30'09	0°48'35	evening set		16264 Jan 23 13:02	3° \mathbb{H} 29'24	
max. Earth dist.	16257 Nov 26 13:07	21° \mathbb{A} 35'32	10.67743 AU					
morning rise	16257 Dec 13 03:30	23° \mathbb{A} 36'03		conjunction		16264 Feb 10 01:59	5° \mathbb{H} 36'44	1°38'23
	16258 Feb 18 03:36	0° \mathbb{B}		minimum elong		16264 Feb 10 02:00	5° \mathbb{H} 36'45	1°38'43
retrograde	16258 Mar 27 03:42	1° \mathbb{B} 07'43		max. Earth dist.		16264 Feb 10 00:12	5° \mathbb{H} 36'12	10.62718 AU
	16258 May 03 13:54	30° \mathbb{R} \mathbb{A}		morning rise		16264 Feb 27 15:58	7° \mathbb{H} 44'24	
opposition	16258 Jun 04 18:33	27° \mathbb{A} 44'09	1°10'33	retrograde		16264 Jun 10 03:35	15° \mathbb{H} 17'04	
min. Earth dist.	16258 Jun 04 04:43	27° \mathbb{A} 46'50	8.68357 AU	opposition		16264 Aug 17 16:56	11° \mathbb{H} 53'22	1°57'39
direct	16258 Aug 12 04:57	24° \mathbb{A} 23'23		min. Earth dist.		16264 Aug 17 19:44	11° \mathbb{H} 52'49	8.61485 AU
	16258 Nov 06 10:07	0° \mathbb{B}		direct		16264 Oct 25 01:19	8° \mathbb{H} 29'48	
evening set	16258 Nov 21 06:04	1° \mathbb{B} 43'12		evening set		16265 Feb 04 15:25	15° \mathbb{H} 59'28	
conjunction	16258 Dec 08 12:50	3° \mathbb{B} 48'28	1°05'41	conjunction		16265 Feb 22 05:34	18° \mathbb{H} 07'31	1°31'22
minimum elong	16258 Dec 08 12:49	3° \mathbb{B} 48'27	1°06'24	minimum elong		16265 Feb 22 05:36	18° \mathbb{H} 07'31	1°31'33
max. Earth dist.	16258 Dec 09 04:01	3° \mathbb{B} 53'04	10.68702 AU	max. Earth dist.		16265 Feb 21 23:41	18° \mathbb{H} 05'43	10.59997 AU
morning rise	16258 Dec 25 22:02	5° \mathbb{B} 54'25		morning rise		16265 Mar 11 20:21	20° \mathbb{H} 15'45	
retrograde	16259 Apr 08 22:30	13° \mathbb{B} 25'40		retrograde		16265 Jun 23 00:34	27° \mathbb{H} 48'57	
opposition	16259 Jun 17 11:15	10° \mathbb{B} 02'05	1°30'40	opposition		16265 Aug 30 10:31	24° \mathbb{H} 25'17	1°46'16
min. Earth dist.	16259 Jun 16 23:58	10° \mathbb{B} 04'16	8.68975 AU	min. Earth dist.		16265 Aug 30 16:17	24° \mathbb{H} 24'09	8.58615 AU
direct	16259 Aug 24 19:56	6° \mathbb{B} 41'05		direct		16265 Nov 06 21:54	21° \mathbb{H} 01'04	
evening set	16259 Dec 03 23:29	14° \mathbb{B} 01'05		evening set		16266 Feb 17 19:46	28° \mathbb{H} 33'41	
						16266 Mar 01 16:31	0° \mathbb{Y}	
conjunction	16259 Dec 21 07:21	16° \mathbb{B} 06'29	1°20'27	conjunction		16266 Mar 07 11:03	0° \mathbb{Y} 42'26	1°19'56
minimum elong	16259 Dec 21 07:19	16° \mathbb{B} 06'29	1°21'09	minimum elong		16266 Mar 07 11:06	0° \mathbb{Y} 42'27	1°19'59
max. Earth dist.	16259 Dec 21 19:24	16° \mathbb{B} 10'09	10.68914 AU	max. Earth dist.		16266 Mar 07 02:12	0° \mathbb{Y} 39'44	10.57044 AU
morning rise	16260 Jan 07 17:38	18° \mathbb{B} 12'33		morning rise		16266 Mar 25 02:19	2° \mathbb{Y} 51'15	
retrograde	16260 Apr 20 16:31	25° \mathbb{B} 43'43		retrograde		16266 Jul 05 23:56	10° \mathbb{Y} 25'05	
opposition	16260 Jun 29 02:51	22° \mathbb{B} 20'06	1°46'37	opposition		16266 Sep 12 05:49	7° \mathbb{Y} 01'26	1°29'43
min. Earth dist.	16260 Jun 28 18:06	22° \mathbb{B} 21'48	8.68803 AU	min. Earth dist.		16266 Sep 12 13:32	6° \mathbb{Y} 59'55	8.55575 AU
direct	16260 Sep 05 11:41	18° \mathbb{B} 58'45		direct		16266 Nov 19 19:59	3° \mathbb{Y} 36'38	
evening set	16260 Dec 15 18:08	26° \mathbb{B} 19'38		evening set		16267 Mar 03 01:59	11° \mathbb{Y} 12'13	
conjunction	16261 Jan 02 03:17	28° \mathbb{B} 25'22	1°31'32	conjunction		16267 Mar 20 18:08	13° \mathbb{Y} 21'41	1°04'35
minimum elong	16261 Jan 02 03:16	28° \mathbb{B} 25'22	1°32'11	minimum elong		16267 Mar 20 18:10	13° \mathbb{Y} 21'42	1°04'29
max. Earth dist.	16261 Jan 02 12:32	28° \mathbb{B} 28'10	10.68322 AU	max. Earth dist.		16267 Mar 20 06:51	13° \mathbb{Y} 18'13	10.53988 AU
	16261 Jan 15 04:19	0° \mathbb{A}		morning rise		16267 Apr 07 09:32	15° \mathbb{Y} 31'02	
morning rise	16261 Jan 19 14:32	0° \mathbb{A} 31'41		retrograde		16267 Jul 19 02:36	23° \mathbb{Y} 05'34	
retrograde	16261 May 03 12:35	8° \mathbb{A} 03'02		opposition		16267 Sep 25 03:07	19° \mathbb{Y} 41'58	1°08'41
opposition	16261 Jul 11 17:54	4° \mathbb{A} 39'23	1°57'42	min. Earth dist.		16267 Sep 25 12:50	19° \mathbb{Y} 40'03	8.52496 AU
min. Earth dist.	16261 Jul 11 11:25	4° \mathbb{A} 40'39	8.67843 AU	direct		16267 Dec 02 18:14	16° \mathbb{Y} 16'38	
direct	16261 Sep 18 01:49	1° \mathbb{A} 17'36		evening set		16268 Mar 15 10:22	23° \mathbb{Y} 55'12	
evening set	16261 Dec 28 14:31	8° \mathbb{A} 40'03						
conjunction	16262 Jan 15 00:59	10° \mathbb{A} 46'12	1°38'25	conjunction		16268 Apr 02 02:49	26° \mathbb{Y} 05'18	0°45'59
minimum elong	16262 Jan 15 00:59	10° \mathbb{A} 46'12	1°38'59	minimum elong		16268 Apr 02 02:51	26° \mathbb{Y} 05'18	0°45'45
max. Earth dist.	16262 Jan 15 07:25	10° \mathbb{A} 48'09	10.66999 AU	max. Earth dist.		16268 Apr 01 12:49	26° \mathbb{Y} 00'58	10.50961 AU
morning rise	16262 Feb 01 13:03	12° \mathbb{A} 52'52		morning rise		16268 Apr 19 18:00	28° \mathbb{Y} 15'07	
	16262 Feb 19 23:24	15° \mathbb{A}				16268 May 04 13:45	0° \mathbb{B}	
retrograde	16262 May 16 08:33	20° \mathbb{A} 24'35		retrograde		16268 Jul 31 05:05	5° \mathbb{B} 50'21	
opposition	16262 Jul 24 08:53	17° \mathbb{A} 00'54	2°03'25	opposition		16268 Oct 07 02:33	2° \mathbb{B} 26'53	0°44'09
min. Earth dist.	16262 Jul 24 04:51	17° \mathbb{A} 01'41	8.66214 AU	min. Earth dist.		16268 Oct 07 14:25	2° \mathbb{B} 24'32	8.49524 AU
	16262 Aug 21 01:45	15° \mathbb{R} \mathbb{A}				16268 Nov 10 16:09	30° \mathbb{R} \mathbb{Y}	
direct	16262 Sep 30 16:39	13° \mathbb{A} 38'36		direct		16268 Dec 14 20:17	29° \mathbb{Y} 01'03	
	16262 Nov 09 16:41	15° \mathbb{A}				16269 Jan 17 18:45	0° \mathbb{B}	
evening set	16263 Jan 10 12:49	21° \mathbb{A} 03'06		evening set		16269 Mar 28 20:28	6° \mathbb{B} 42'36	
conjunction	16263 Jan 28 00:31	23° \mathbb{A} 09'48	1°40'45	conjunction		16269 Apr 15 12:36	8° \mathbb{B} 53'08	0°25'01
minimum elong	16263 Jan 28 00:32	23° \mathbb{A} 09'48	1°41'13	minimum elong		16269 Apr 15 12:37	8° \mathbb{B} 53'08	0°24'39
max. Earth dist.	16263 Jan 28 03:12	23° \mathbb{A} 10'36	10.65088 AU	max. Earth dist.		16269 Apr 14 20:01	8° \mathbb{B} 48'00	10.48112 AU
morning rise	16263 Feb 14 13:31	25° \mathbb{A} 16'54		morning rise		16269 May 03 03:09	11° \mathbb{B} 03'18	
	16263 Mar 30 21:35	0° \mathbb{H}				16269 Jun 07 07:10	15° \mathbb{B}	
retrograde	16263 May 29 05:22	2° \mathbb{H} 49'05		retrograde		16269 Aug 13 08:23	18° \mathbb{B} 39'22	
	16263 Jul 29 14:49	30° \mathbb{R} \mathbb{A}		opposition		16269 Oct 20 04:34	15° \mathbb{B} 16'03	0°17'15
opposition	16263 Aug 06 00:28	29° \mathbb{A} 25'23	2°03'25	min. Earth dist.		16269 Oct 20 18:12	15° \mathbb{B} 13'21	8.46812 AU
min. Earth dist.	16263 Aug 05 23:46	29° \mathbb{A} 25'31	8.64056 AU			16269 Oct 23 13:43	15° \mathbb{R} \mathbb{B}	
direct	16263 Oct 13 08:32	26° \mathbb{A} 02'28		direct		16269 Dec 28 01:39	11° \mathbb{B} 49'52	

	16270 Feb 28 18:54	15°♄	min. Earth dist.	16276 Jan 07 21:11	3°♄08'18	8.42115 AU
evening set	16270 Apr 11 07:45	19°♄34'07		16276 Feb 28 13:27	30°♄♄	
			direct	16276 Mar 16 21:30	29°♄44'32	
conjunction	16270 Apr 28 23:01	21°♄44'56 0°02'44		16276 Apr 03 03:05	0°♄	
minimum elong	16270 Apr 28 23:02	21°♄44'57 0°02'15	evening set	16276 Jun 29 06:44	7°♄33'31	
behind sun begin	16270 Apr 28 15:50	21°♄42'44				
behind sun end	16270 Apr 29 06:15	21°♄47'10	conjunction	16276 Jul 16 09:58	9°♄42'16 -1°37'49	
max. Earth dist.	16270 Apr 28 04:59	21°♄39'20 10.45588 AU	minimum elong	16276 Jul 16 09:57	9°♄42'16 1°38'24	
morning rise	16270 May 16 12:29	23°♄55'17	max. Earth dist.	16276 Jul 16 03:14	9°♄40'09 10.42713 AU	
desc. node	16270 Jun 13 00:44	27°♄05'35	morning rise	16276 Aug 02 11:36	11°♄50'33	
	16270 Jul 15 09:47	0°♄		16276 Aug 29 12:35	15°♄	
retrograde	16270 Aug 26 13:50	1°♄32'18	retrograde	16276 Nov 12 18:14	19°♄31'29	
	16270 Oct 08 14:35	30°♄♄	opposition	16277 Jan 20 04:14	16°♄09'17 -2°03'39	
opposition	16270 Nov 02 09:00	28°♄09'09 -0°10'41	min. Earth dist.	16277 Jan 20 07:43	16°♄08'36 8.43672 AU	
min. Earth dist.	16270 Nov 02 23:04	28°♄06'22 8.44503 AU		16277 Feb 04 07:45	15°♄♄	
direct	16271 Jan 10 08:46	24°♄42'47	direct	16277 Mar 30 12:06	12°♄44'45	
	16271 Apr 03 15:20	0°♄		16277 May 21 16:44	15°♄	
evening set	16271 Apr 24 20:09	2°♄29'24	evening set	16277 Jul 12 13:33	20°♄31'41	
conjunction	16271 May 12 10:09	4°♄40'20 -0°19'54	conjunction	16277 Jul 29 15:16	22°♄39'49 -1°40'39	
minimum elong	16271 May 12 10:09	4°♄40'20 0°20'30	minimum elong	16277 Jul 29 15:16	22°♄39'49 1°41'08	
max. Earth dist.	16271 May 11 16:19	4°♄34'46 10.43520 AU	max. Earth dist.	16277 Jul 29 12:59	22°♄39'05 10.44567 AU	
morning rise	16271 May 29 21:58	6°♄50'40	morning rise	16277 Aug 15 15:38	24°♄47'32	
retrograde	16271 Sep 08 20:47	14°♄28'39		16277 Oct 02 19:15	0°♄	
opposition	16271 Nov 15 15:41	11°♄05'42 -0°38'13	retrograde	16277 Nov 26 03:13	2°♄28'09	
min. Earth dist.	16271 Nov 16 05:08	11°♄03'03 8.42711 AU		16278 Jan 21 23:10	30°♄♄	
direct	16272 Jan 23 18:01	7°♄39'20	opposition	16278 Feb 02 17:39	29°♄05'54 -2°03'56	
evening set	16272 May 07 09:10	15°♄27'53	min. Earth dist.	16278 Feb 02 17:24	29°♄05'57 8.45798 AU	
			direct	16278 Apr 13 00:29	25°♄41'59	
conjunction	16272 May 24 21:25	17°♄38'41 -0°41'31		16278 Jun 25 22:58	0°♄	
minimum elong	16272 May 24 21:23	17°♄38'41 0°42'11	evening set	16278 Jul 25 17:42	3°♄26'11	
max. Earth dist.	16272 May 24 04:53	17°♄33'30 10.42009 AU				
morning rise	16272 Jun 11 07:08	19°♄48'51	conjunction	16278 Aug 11 18:24	5°♄33'41 -1°38'24	
retrograde	16272 Sep 21 04:54	27°♄27'48	minimum elong	16278 Aug 11 18:25	5°♄33'42 1°38'45	
opposition	16272 Nov 28 00:51	24°♄05'04 -1°03'54	max. Earth dist.	16278 Aug 11 20:23	5°♄34'19 10.46927 AU	
min. Earth dist.	16272 Nov 28 13:03	24°♄02'40 8.41525 AU	morning rise	16278 Aug 28 18:06	7°♄40'57	
direct	16273 Feb 05 05:23	20°♄38'50	retrograde	16278 Dec 09 10:34	15°♄20'52	
evening set	16273 May 20 22:04	28°♄28'40	opposition	16279 Feb 16 06:04	11°♄58'32 -1°57'59	
	16273 Jun 02 03:31	0°♄	min. Earth dist.	16279 Feb 16 02:50	11°♄59'09 8.48334 AU	
conjunction	16273 Jun 07 08:07	0°♄39'10 -1°01'04	direct	16279 Apr 26 11:13	8°♄35'13	
minimum elong	16273 Jun 07 08:05	0°♄39'09 1°01'46	evening set	16279 Aug 07 19:13	16°♄16'11	
max. Earth dist.	16273 Jun 06 17:34	0°♄34'35 10.41134 AU	conjunction	16279 Aug 24 19:16	18°♄23'08 -1°31'15	
morning rise	16273 Jun 24 15:32	2°♄48'58	minimum elong	16279 Aug 24 19:18	18°♄23'08 1°31'27	
retrograde	16273 Oct 04 14:50	10°♄28'49	max. Earth dist.	16279 Aug 25 00:25	18°♄24'45 10.49604 AU	
opposition	16273 Dec 11 12:03	7°♄06'17 -1°26'22	morning rise	16279 Sep 10 18:55	20°♄29'59	
min. Earth dist.	16273 Dec 11 22:53	7°♄04'10 8.41013 AU	retrograde	16279 Dec 22 16:07	28°♄08'59	
direct	16274 Feb 18 17:18	3°♄40'20	opposition	16280 Feb 29 16:56	24°♄46'32 -1°46'12	
evening set	16274 Jun 03 10:26	11°♄30'42	min. Earth dist.	16280 Feb 29 11:27	24°♄47'35 8.51072 AU	
			direct	16280 May 08 20:41	21°♄23'47	
conjunction	16274 Jun 20 18:04	13°♄40'44 -1°17'30	evening set	16280 Aug 19 18:07	29°♄01'17	
minimum elong	16274 Jun 20 18:02	13°♄40'43 1°18'12		16280 Aug 27 16:35	0°♄	
max. Earth dist.	16274 Jun 20 05:25	13°♄36'44 10.40954 AU				
morning rise	16274 Jul 07 23:18	15°♄50'05	conjunction	16280 Sep 05 18:02	1°♄07'47 -1°19'38	
retrograde	16274 Oct 18 00:54	23°♄30'35	minimum elong	16280 Sep 05 18:04	1°♄07'48 1°19'41	
opposition	16274 Dec 25 00:40	20°♄08'13 -1°44'24	max. Earth dist.	16280 Sep 06 01:29	1°♄10'07 10.52383 AU	
min. Earth dist.	16274 Dec 25 09:59	20°♄06'24 8.41213 AU	morning rise	16280 Sep 22 18:16	3°♄14'21	
direct	16275 Mar 04 06:17	16°♄42'39	retrograde	16281 Jan 03 20:16	10°♄52'22	
evening set	16275 Jun 16 21:34	24°♄32'45	opposition	16281 Mar 14 01:55	7°♄29'46 -1°29'15	
			min. Earth dist.	16281 Mar 13 18:30	7°♄31'12 8.53815 AU	
conjunction	16275 Jul 04 02:51	26°♄42'11 -1°29'58	direct	16281 May 22 03:18	4°♄07'33	
minimum elong	16275 Jul 04 02:50	26°♄42'10 1°30'38	evening set	16281 Sep 01 14:37	11°♄41'37	
max. Earth dist.	16275 Jul 03 16:36	26°♄38'57 10.41489 AU				
morning rise	16275 Jul 21 06:09	28°♄51'01	conjunction	16281 Sep 18 14:58	13°♄47'47 -1°04'11	
	16275 Jul 30 16:52	0°♄	minimum elong	16281 Sep 18 15:00	13°♄47'48 1°04'05	
retrograde	16275 Oct 31 09:13	6°♄31'53	max. Earth dist.	16281 Sep 19 00:52	13°♄50'52 10.55105 AU	
opposition	16276 Jan 07 14:19	3°♄09'39 -1°57'02	morning rise	16281 Oct 05 16:12	15°♄54'11	

retrograde	16282 Jan 16 22:10	23° $\mathbf{\text{♁}}$ 31'12	conjunction	16287 Dec 03 01:51	28° $\mathbf{\text{♁}}$ 27'09	0°57'58
opposition	16282 Mar 27 08:41	20° $\mathbf{\text{♁}}$ 08'23 -1°08'05	minimum elong	16287 Dec 03 01:49	28° $\mathbf{\text{♁}}$ 27'08	0°58'40
min. Earth dist.	16282 Mar 26 22:52	20° $\mathbf{\text{♁}}$ 10'17 8.56456 AU	max. Earth dist.	16287 Dec 03 17:15	28° $\mathbf{\text{♁}}$ 31'51	10.66136 AU
direct	16282 Jun 04 08:09	16° $\mathbf{\text{♁}}$ 46'38		16287 Dec 15 19:28	0° $\mathbf{\text{♁}}$	
evening set	16282 Sep 14 09:24	24° $\mathbf{\text{♁}}$ 17'25	morning rise	16287 Dec 20 10:38	0° $\mathbf{\text{♁}}$ 33'20	
			retrograde	16288 Apr 02 10:08	8° $\mathbf{\text{♁}}$ 05'42	
conjunction	16282 Oct 01 10:36	26° $\mathbf{\text{♁}}$ 23'21 -0°45'44	opposition	16288 Jun 11 00:58	4° $\mathbf{\text{♁}}$ 41'30	1°22'06
minimum elong	16282 Oct 01 10:37	26° $\mathbf{\text{♁}}$ 23'21 0°45'29	min. Earth dist.	16288 Jun 10 12:39	4° $\mathbf{\text{♁}}$ 43'53	8.66389 AU
max. Earth dist.	16282 Oct 01 23:26	26° $\mathbf{\text{♁}}$ 27'19 10.57695 AU	direct	16288 Aug 18 11:32	1° $\mathbf{\text{♁}}$ 19'58	
morning rise	16282 Oct 18 12:56	28° $\mathbf{\text{♁}}$ 29'36	evening set	16288 Nov 27 12:38	8° $\mathbf{\text{♁}}$ 40'45	
	16282 Oct 31 05:33	0° $\mathbf{\text{♁}}$				
retrograde	16283 Jan 29 22:50	6° $\mathbf{\text{♁}}$ 05'36	conjunction	16288 Dec 14 20:16	10° $\mathbf{\text{♁}}$ 46'24	1°14'14
opposition	16283 Apr 09 13:00	2° $\mathbf{\text{♁}}$ 42'32 -0°43'48	minimum elong	16288 Dec 14 20:15	10° $\mathbf{\text{♁}}$ 46'24	1°14'56
min. Earth dist.	16283 Apr 09 00:53	2° $\mathbf{\text{♁}}$ 44'52 8.58940 AU	max. Earth dist.	16288 Dec 15 10:22	10° $\mathbf{\text{♁}}$ 50'42	10.66382 AU
	16283 May 20 15:12	30° $\mathbf{\text{♁}}$	morning rise	16289 Jan 01 06:04	12° $\mathbf{\text{♁}}$ 52'42	
direct	16283 Jun 17 11:08	29° $\mathbf{\text{♁}}$ 21'08	retrograde	16289 Apr 15 05:55	20° $\mathbf{\text{♁}}$ 32'45	
	16283 Jul 14 20:21	0° $\mathbf{\text{♁}}$	opposition	16289 Jun 23 17:19	17° $\mathbf{\text{♁}}$ 00'37	1°40'06
evening set	16283 Sep 27 02:48	6° $\mathbf{\text{♁}}$ 48'51	min. Earth dist.	16289 Jun 23 06:46	17° $\mathbf{\text{♁}}$ 02'41	8.66364 AU
			direct	16289 Aug 31 02:35	13° $\mathbf{\text{♁}}$ 38'46	
conjunction	16283 Oct 14 04:59	8° $\mathbf{\text{♁}}$ 54'36 -0°25'12	evening set	16289 Dec 10 07:15	21° $\mathbf{\text{♁}}$ 00'12	
minimum elong	16283 Oct 14 04:59	8° $\mathbf{\text{♁}}$ 54'36 0°24'49				
max. Earth dist.	16283 Oct 14 20:16	8° $\mathbf{\text{♁}}$ 59'19 10.60095 AU	conjunction	16289 Dec 27 15:57	23° $\mathbf{\text{♁}}$ 06'05	1°27'05
morning rise	16283 Oct 31 08:34	11° $\mathbf{\text{♁}}$ 00'47	minimum elong	16289 Dec 27 15:55	23° $\mathbf{\text{♁}}$ 06'05	1°27'45
	16283 Dec 06 06:22	15° $\mathbf{\text{♁}}$	max. Earth dist.	16289 Dec 28 03:01	23° $\mathbf{\text{♁}}$ 09'27	10.66046 AU
retrograde	16284 Feb 12 00:05	18° $\mathbf{\text{♁}}$ 35'46	morning rise	16290 Jan 14 02:46	25° $\mathbf{\text{♁}}$ 12'35	
opposition	16284 Apr 21 15:04	15° $\mathbf{\text{♁}}$ 12'25 -0°17'34		16290 Feb 28 07:31	0° $\mathbf{\text{♁}}$	
min. Earth dist.	16284 Apr 21 01:25	15° $\mathbf{\text{♁}}$ 15'03 8.61206 AU	retrograde	16290 Apr 28 02:43	2° $\mathbf{\text{♁}}$ 44'52	
	16284 Apr 24 07:39	15° $\mathbf{\text{♁}}$		16290 Jun 27 21:23	30° $\mathbf{\text{♁}}$	
direct	16284 Jun 29 09:30	11° $\mathbf{\text{♁}}$ 51'14	opposition	16290 Jul 06 09:10	29° $\mathbf{\text{♁}}$ 20'31	1°53'29
	16284 Aug 30 17:12	15° $\mathbf{\text{♁}}$	min. Earth dist.	16290 Jul 06 01:22	29° $\mathbf{\text{♁}}$ 22'03	8.65760 AU
evening set	16284 Oct 08 19:10	19° $\mathbf{\text{♁}}$ 16'17	direct	16290 Sep 12 16:20	25° $\mathbf{\text{♁}}$ 58'16	
				16290 Nov 23 03:08	0° $\mathbf{\text{♁}}$	
conjunction	16284 Oct 25 22:19	21° $\mathbf{\text{♁}}$ 21'53 -0°03'36	evening set	16290 Dec 23 03:13	3° $\mathbf{\text{♁}}$ 20'56	
minimum elong	16284 Oct 25 22:20	21° $\mathbf{\text{♁}}$ 21'53 0°03'06				
behind sun begin	16284 Oct 25 15:15	21° $\mathbf{\text{♁}}$ 19'44	conjunction	16291 Jan 09 13:02	5° $\mathbf{\text{♁}}$ 27'09	1°35'56
behind sun end	16284 Oct 26 05:25	21° $\mathbf{\text{♁}}$ 24'03	minimum elong	16291 Jan 09 13:01	5° $\mathbf{\text{♁}}$ 27'09	1°36'31
max. Earth dist.	16284 Oct 26 14:44	21° $\mathbf{\text{♁}}$ 26'55 10.62225 AU	max. Earth dist.	16291 Jan 09 20:34	5° $\mathbf{\text{♁}}$ 29'27	10.65149 AU
morning rise	16284 Nov 12 03:23	23° $\mathbf{\text{♁}}$ 28'02	morning rise	16291 Jan 27 00:54	7° $\mathbf{\text{♁}}$ 33'58	
asc. node	16284 Dec 26 06:06	28° $\mathbf{\text{♁}}$ 12'10		16291 Apr 29 16:14	15° $\mathbf{\text{♁}}$	
	16285 Jan 19 15:21	0° $\mathbf{\text{♁}}$	retrograde	16291 May 10 21:39	15° $\mathbf{\text{♁}}$ 06'29	
retrograde	16285 Feb 23 22:07	1° $\mathbf{\text{♁}}$ 02'05		16291 May 22 03:42	15° $\mathbf{\text{♁}}$	
	16285 Mar 31 16:18	30° $\mathbf{\text{♁}}$	opposition	16291 Jul 19 00:50	11° $\mathbf{\text{♁}}$ 42'09	2°01'40
opposition	16285 May 04 14:43	27° $\mathbf{\text{♁}}$ 38'28 0°09'21	min. Earth dist.	16291 Jul 18 19:57	11° $\mathbf{\text{♁}}$ 43'06	8.64610 AU
min. Earth dist.	16285 May 04 00:56	27° $\mathbf{\text{♁}}$ 41'08 8.63169 AU	direct	16291 Sep 25 08:20	8° $\mathbf{\text{♁}}$ 19'26	
direct	16285 Jul 12 06:02	24° $\mathbf{\text{♁}}$ 17'21		16291 Dec 29 20:18	15° $\mathbf{\text{♁}}$	
	16285 Oct 07 04:07	0° $\mathbf{\text{♁}}$	evening set	16292 Jan 05 01:04	15° $\mathbf{\text{♁}}$ 43'54	
evening set	16285 Oct 21 11:12	1° $\mathbf{\text{♁}}$ 40'22				
			conjunction	16292 Jan 22 12:13	17° $\mathbf{\text{♁}}$ 50'36	1°40'19
conjunction	16285 Nov 07 15:22	3° $\mathbf{\text{♁}}$ 45'51 0°18'13	minimum elong	16292 Jan 22 12:13	17° $\mathbf{\text{♁}}$ 50'36	1°40'50
minimum elong	16285 Nov 07 15:22	3° $\mathbf{\text{♁}}$ 45'51 0°18'48	max. Earth dist.	16292 Jan 22 16:30	17° $\mathbf{\text{♁}}$ 51'54	10.63744 AU
max. Earth dist.	16285 Nov 08 07:24	3° $\mathbf{\text{♁}}$ 50'46 10.63996 AU	morning rise	16292 Feb 09 01:03	19° $\mathbf{\text{♁}}$ 57'47	
morning rise	16285 Nov 24 21:51	5° $\mathbf{\text{♁}}$ 51'59	retrograde	16292 May 22 17:51	27° $\mathbf{\text{♁}}$ 30'40	
retrograde	16286 Mar 08 18:01	13° $\mathbf{\text{♁}}$ 25'14	opposition	16292 Jul 30 16:36	24° $\mathbf{\text{♁}}$ 06'24	2°04'13
opposition	16286 May 17 11:56	10° $\mathbf{\text{♁}}$ 01'24 0°35'42	min. Earth dist.	16292 Jul 30 14:10	24° $\mathbf{\text{♁}}$ 06'53	8.62976 AU
min. Earth dist.	16286 May 16 22:39	10° $\mathbf{\text{♁}}$ 03'58 8.64739 AU	direct	16292 Oct 07 01:10	20° $\mathbf{\text{♁}}$ 43'14	
direct	16286 Jul 25 01:53	6° $\mathbf{\text{♁}}$ 40'14	evening set	16293 Jan 17 00:58	28° $\mathbf{\text{♁}}$ 09'55	
evening set	16286 Nov 03 03:08	14° $\mathbf{\text{♁}}$ 01'50		16293 Feb 01 05:05	0° $\mathbf{\text{♁}}$	
conjunction	16286 Nov 20 08:26	16° $\mathbf{\text{♁}}$ 07'18 0°39'01	conjunction	16293 Feb 03 13:32	0° $\mathbf{\text{♁}}$ 17'13	1°40'02
minimum elong	16286 Nov 20 08:24	16° $\mathbf{\text{♁}}$ 07'18 0°39'40	minimum elong	16293 Feb 03 13:33	0° $\mathbf{\text{♁}}$ 17'13	1°40'26
max. Earth dist.	16286 Nov 21 00:09	16° $\mathbf{\text{♁}}$ 12'07 10.65325 AU	max. Earth dist.	16293 Feb 03 15:03	0° $\mathbf{\text{♁}}$ 17'41	10.61895 AU
morning rise	16286 Dec 07 16:10	18° $\mathbf{\text{♁}}$ 13'26	morning rise	16293 Feb 21 03:12	2° $\mathbf{\text{♁}}$ 24'52	
retrograde	16287 Mar 31 14:37	25° $\mathbf{\text{♁}}$ 46'08	retrograde	16293 Jun 04 16:45	9° $\mathbf{\text{♁}}$ 58'13	
opposition	16287 May 20 07:17	22° $\mathbf{\text{♁}}$ 22'06 1°00'19	opposition	16293 Aug 12 09:11	6° $\mathbf{\text{♁}}$ 34'05	2°00'58
min. Earth dist.	16287 May 29 18:24	22° $\mathbf{\text{♁}}$ 24'35 8.65834 AU	min. Earth dist.	16293 Aug 12 09:02	6° $\mathbf{\text{♁}}$ 34'06	8.60929 AU
direct	16287 Aug 06 19:26	19° $\mathbf{\text{♁}}$ 00'48	direct	16293 Oct 19 17:40	3° $\mathbf{\text{♁}}$ 10'29	
evening set	16287 Nov 15 19:22	26° $\mathbf{\text{♁}}$ 21'38	evening set	16294 Jan 30 03:00	10° $\mathbf{\text{♁}}$ 39'43	

conjunction	16294 Feb 16 16:50	12° K 47'41	1°35'01	direct	16300 Jan 04 21:34	19° C 24'11	
minimum elong	16294 Feb 16 16:51	12° K 47'41	1°35'17	evening set	16300 Apr 19 08:46	27° C 10'07	
max. Earth dist.	16294 Feb 16 15:01	12° K 47'08	10.59691 AU				
morning rise	16294 Mar 06 07:12	14° K 55'52		conjunction	16300 May 06 23:29	29° C 21'05	-0°10'18
retrograde	16294 Jun 17 16:03	22° K 29'43		minimum elong	16300 May 06 23:29	29° C 21'05	0°10'51
opposition	16294 Aug 25 03:02	19° K 05'48	1°51'57	behind sun begin	16300 May 06 18:01	29° C 19'24	
min. Earth dist.	16294 Aug 25 05:43	19° K 05'16	8.58575 AU	behind sun end	16300 May 07 04:56	29° C 22'46	
direct	16294 Nov 01 12:14	15° K 41'47		max. Earth dist.	16300 May 06 05:45	29° C 15'33	10.44738 AU
evening set	16295 Feb 12 07:20	23° K 13'50			16300 May 12 04:11	0° II	
				morning rise	16300 May 24 11:55	1° II 31'28	
conjunction	16295 Mar 01 22:13	25° K 22'29	1°25'26	retrograde	16300 Sep 03 14:15	9° II 09'26	
minimum elong	16295 Mar 01 22:15	25° K 22'30	1°25'34	opposition	16300 Nov 10 06:59	5° II 46'51	-0°26'34
max. Earth dist.	16295 Mar 01 16:25	25° K 20'43	10.57247 AU	min. Earth dist.	16300 Nov 10 21:20	5° II 44'01	8.43696 AU
morning rise	16295 Mar 19 13:17	27° K 31'14		direct	16301 Jan 18 06:06	2° II 20'54	
	16295 Apr 10 01:34	0° Y		evening set	16301 May 02 22:25	10° II 09'10	
retrograde	16295 Jun 30 16:19	5° Y 05'38					
opposition	16295 Sep 06 22:28	1° Y 41'58	1°37'32	conjunction	16301 May 20 11:23	12° II 20'07	-0°32'28
min. Earth dist.	16295 Sep 07 04:28	1° Y 40'47	8.56033 AU	minimum elong	16301 May 20 11:22	12° II 20'07	0°33'06
	16295 Sep 29 12:30	30° R K		max. Earth dist.	16301 May 19 16:54	12° II 14'20	10.42722 AU
direct	16295 Nov 14 09:16	28° K 17'30		morning rise	16301 Jun 06 22:02	14° II 30'27	
	16295 Dec 29 12:19	0° Y		retrograde	16301 Sep 16 21:35	22° II 09'33	
evening set	16296 Feb 25 13:49	5° Y 52'30		opposition	16301 Nov 23 15:59	18° II 47'09	-0°53'15
				min. Earth dist.	16301 Nov 24 06:18	18° II 44'19	8.41926 AU
conjunction	16296 Mar 14 05:34	8° Y 01'50	1°11'41	direct	16302 Jan 31 18:22	15° II 21'10	
minimum elong	16296 Mar 14 05:36	8° Y 01'51	1°11'40	evening set	16302 May 16 12:10	23° II 11'10	
max. Earth dist.	16296 Mar 13 19:41	7° Y 58'48	10.54672 AU				
morning rise	16296 Mar 31 21:06	10° Y 11'08		conjunction	16302 Jun 02 23:06	25° II 21'56	-0°53'04
retrograde	16296 Jul 12 17:54	17° Y 46'04		minimum elong	16302 Jun 02 23:04	25° II 21'56	0°53'44
opposition	16296 Sep 18 19:48	14° Y 22'39	1°18'18	max. Earth dist.	16302 Jun 02 05:31	25° II 16'25	10.41213 AU
min. Earth dist.	16296 Sep 19 04:35	14° Y 20'55	8.53407 AU	morning rise	16302 Jun 20 07:43	27° II 32'03	
direct	16296 Nov 26 08:43	10° Y 57'46			16302 Jul 11 03:14	0° C	
evening set	16297 Mar 09 22:18	18° Y 35'43		retrograde	16302 Sep 30 07:13	5° C 12'14	
				opposition	16302 Dec 07 03:04	1° C 49'54	-1°17'18
conjunction	16297 Mar 27 14:33	20° Y 45'39	0°54'22	min. Earth dist.	16302 Dec 07 16:04	1° C 47'21	8.40747 AU
minimum elong	16297 Mar 27 14:35	20° Y 45'40	0°54'12		16302 Dec 31 17:54	30° R II	
max. Earth dist.	16297 Mar 27 01:54	20° Y 41'45	10.52059 AU	direct	16303 Feb 14 07:26	28° II 24'00	
morning rise	16297 Apr 14 06:03	22° Y 55'25			16303 Mar 29 22:44	0° C	
	16297 Jul 01 15:31	0° C		evening set	16303 May 30 01:42	6° C 15'00	
retrograde	16297 Jul 25 19:53	0° C 30'56					
	16297 Aug 19 04:52	30° R Y		conjunction	16303 Jun 16 10:26	8° C 25'24	-1°10'59
opposition	16297 Oct 01 19:07	27° Y 07'44	0°55'06	minimum elong	16303 Jun 16 10:24	8° C 25'24	1°11'40
min. Earth dist.	16297 Oct 02 05:40	27° Y 05'39	8.50796 AU	max. Earth dist.	16303 Jun 15 19:19	8° C 20'38	10.40350 AU
direct	16297 Dec 09 11:46	23° Y 42'29		morning rise	16303 Jul 03 16:47	10° C 35'08	
	16298 Mar 11 16:14	0° C		retrograde	16303 Oct 13 17:24	18° C 16'08	
evening set	16298 Mar 23 08:26	1° C 23'15		opposition	16303 Dec 20 15:44	14° C 53'48	-1°37'23
max. Earth dist.	16298 Apr 09 10:17	3° C 29'11	10.49503 AU	min. Earth dist.	16303 Dec 21 02:13	14° C 51'45	8.40256 AU
				direct	16304 Feb 27 21:32	11° C 28'05	
conjunction	16298 Apr 10 00:48	3° C 33'40	0°34'17	evening set	16304 Jun 11 14:10	19° C 19'13	
minimum elong	16298 Apr 10 00:49	3° C 33'41	0°33'58				
morning rise	16298 Apr 27 15:44	5° C 43'46		conjunction	16304 Jun 28 20:39	21° C 29'06	-1°25'15
retrograde	16298 Aug 08 00:11	13° C 19'56		minimum elong	16304 Jun 28 20:38	21° C 29'06	1°25'55
opposition	16298 Oct 14 20:39	9° C 56'55	0°29'01	max. Earth dist.	16304 Jun 28 09:04	21° C 25'27	10.40204 AU
min. Earth dist.	16298 Oct 15 08:26	9° C 54'36	8.48278 AU	morning rise	16304 Jul 16 00:46	23° C 38'22	
direct	16298 Dec 22 16:01	6° C 31'22			16304 Sep 17 01:13	0° O	
evening set	16299 Apr 05 19:56	14° C 14'45		retrograde	16304 Oct 26 03:34	1° O 19'55	
	16299 Apr 11 23:48	15° C			16304 Dec 05 03:52	30° R C	
				opposition	16305 Jan 02 05:46	27° C 57'31	-1°52'27
conjunction	16299 Apr 23 11:50	16° C 25'32	0°12'24	min. Earth dist.	16305 Jan 02 13:34	27° C 55'59	8.40498 AU
minimum elong	16299 Apr 23 11:50	16° C 25'32	0°11'57	direct	16305 Mar 12 12:31	24° C 32'04	
behind sun begin	16299 Apr 23 06:55	16° C 24'02			16305 Jun 05 02:34	0° O	
behind sun end	16299 Apr 23 16:46	16° C 27'03		evening set	16305 Jun 25 00:43	2° O 22'23	
max. Earth dist.	16299 Apr 22 19:48	16° C 20'34	10.47051 AU				
morning rise	16299 May 11 01:44	18° C 35'50		conjunction	16305 Jul 12 05:03	4° O 31'39	-1°35'07
retrograde	16299 Aug 21 06:54	26° C 12'48		minimum elong	16305 Jul 12 05:02	4° O 31'38	1°35'44
opposition	16299 Oct 28 00:35	22° C 49'59	0°01'20	max. Earth dist.	16305 Jul 11 20:59	4° O 29'06	10.40797 AU
min. Earth dist.	16299 Oct 28 13:43	22° C 47'24	8.45881 AU	morning rise	16305 Jul 29 07:18	6° O 40'22	
desc. node	16299 Nov 14 21:28	21° C 27'48		retrograde	16305 Nov 08 13:55	14° O 22'06	

opposition	16306 Jan 15 20:13	10°♏59'35	-2°01'42	opposition	16312 Apr 04 10:17	27°♊45'47	-0°54'09
min. Earth dist.	16306 Jan 16 01:23	10°♏58'34	8.41465 AU	min. Earth dist.	16312 Apr 03 22:07	27°♊48'08	8.57312 AU
direct	16306 Mar 26 02:59	7°♏34'28		direct	16312 Jun 12 08:37	24°♊23'53	
	16306 Jul 05 06:00	15°♏			16312 Sep 06 05:09	0°♌	
evening set	16306 Jul 08 09:08	15°♏23'06		evening set	16312 Sep 22 04:23	1°♌52'41	
conjunction	16306 Jul 25 11:35	17°♏31'44	-1°40'06	conjunction	16312 Oct 09 05:59	3°♌58'28	-0°33'52
minimum elong	16306 Jul 25 11:35	17°♏31'44	1°40'37	minimum elong	16312 Oct 09 06:00	3°♌58'28	0°33'34
max. Earth dist.	16306 Jul 25 06:49	17°♏30'13	10.42100 AU	max. Earth dist.	16312 Oct 09 21:05	4°♌03'08	10.58838 AU
morning rise	16306 Aug 11 12:32	19°♏39'54		morning rise	16312 Oct 26 09:09	6°♌04'40	
retrograde	16306 Nov 21 22:47	27°♏21'24		retrograde	16313 Feb 06 21:11	13°♌39'41	
opposition	16307 Jan 29 10:18	23°♏58'45	-2°04'40	opposition	16313 Apr 17 12:55	10°♌16'13	-0°28'35
min. Earth dist.	16307 Jan 29 12:49	23°♏58'15	8.43104 AU	min. Earth dist.	16313 Apr 16 23:21	10°♌18'50	8.60350 AU
direct	16307 Apr 08 16:36	20°♏34'02		direct	16313 Jun 25 08:50	6°♌54'45	
evening set	16307 Jul 21 14:56	28°♏20'15		evening set	16313 Oct 04 20:39	14°♌20'30	
	16307 Aug 03 22:23	0°♐			16313 Oct 10 07:00	15°♌	
conjunction	16307 Aug 07 15:59	0°♐28'14	-1°39'58	conjunction	16313 Oct 21 23:19	16°♌26'03	-0°12'37
minimum elong	16307 Aug 07 16:00	0°♐28'14	1°40'22	minimum elong	16313 Oct 21 23:20	16°♌26'03	0°12'11
max. Earth dist.	16307 Aug 07 14:39	0°♐27'49	10.44045 AU	behind sun begin	16313 Oct 21 18:32	16°♌24'35	
morning rise	16307 Aug 24 16:09	2°♐35'55		behind sun end	16313 Oct 22 04:08	16°♌27'31	
retrograde	16307 Dec 05 05:32	10°♐16'51		max. Earth dist.	16313 Oct 22 16:09	16°♌31'13	10.61768 AU
opposition	16308 Feb 11 23:38	6°♐54'00	-2°01'16	morning rise	16313 Nov 08 03:51	18°♌32'07	
min. Earth dist.	16308 Feb 11 22:47	6°♐54'10	8.45326 AU	retrograde	16314 Feb 19 18:50	26°♌05'57	
direct	16308 Apr 21 05:51	3°♐29'48		opposition	16314 Apr 30 12:59	22°♌42'25	-0°01'51
evening set	16308 Aug 02 17:42	11°♐12'57		min. Earth dist.	16314 Apr 29 22:04	22°♌45'17	8.63122 AU
				asc. node	16314 May 26 09:38	20°♌49'59	
conjunction	16308 Aug 19 18:00	13°♐20'20	-1°34'49	direct	16314 Jul 08 06:55	19°♌21'18	
minimum elong	16308 Aug 19 18:01	13°♐20'21	1°35'04	evening set	16314 Oct 17 12:14	26°♌44'33	
max. Earth dist.	16308 Aug 19 21:02	13°♐21'18	10.46524 AU				
morning rise	16308 Sep 05 17:52	15°♐27'35		conjunction	16314 Nov 03 16:00	28°♌49'54	0°09'13
retrograde	16308 Dec 17 11:13	23°♐07'41		minimum elong	16314 Nov 03 16:00	28°♌49'54	0°09'46
opposition	16309 Feb 24 11:30	19°♐44'39	-1°51'49	behind sun begin	16314 Nov 03 10:10	28°♌48'08	
min. Earth dist.	16309 Feb 24 06:47	19°♐45'34	8.48007 AU	behind sun end	16314 Nov 03 21:49	28°♌51'40	
direct	16309 May 04 17:34	16°♐21'02		max. Earth dist.	16314 Nov 04 10:26	28°♌55'33	10.64359 AU
evening set	16309 Aug 15 17:47	24°♐00'40			16314 Nov 13 04:59	0°♊	
				morning rise	16314 Nov 20 21:42	0°♊55'50	
conjunction	16309 Sep 01 17:56	26°♐07'34	-1°24'57	retrograde	16315 Mar 04 16:16	8°♊28'41	
minimum elong	16309 Sep 01 17:58	26°♐07'34	1°25'04	opposition	16315 May 13 10:39	5°♊05'07	0°24'48
max. Earth dist.	16309 Sep 02 01:24	26°♐09'54	10.49399 AU	min. Earth dist.	16315 May 12 18:57	5°♊08'08	8.65511 AU
morning rise	16309 Sep 18 17:59	28°♐14'26		direct	16315 Jul 21 02:29	1°♊44'16	
	16309 Oct 03 11:29	0°♋		evening set	16315 Oct 30 03:38	9°♊05'36	
retrograde	16309 Dec 30 17:17	5°♋53'24					
opposition	16310 Mar 09 21:17	2°♋30'13	-1°36'52	conjunction	16315 Nov 16 08:26	11°♊10'50	0°30'26
min. Earth dist.	16310 Mar 09 13:08	2°♋31'48	8.51001 AU	minimum elong	16315 Nov 16 08:25	11°♊10'50	0°31'03
	16310 Apr 15 10:35	30°♌		max. Earth dist.	16315 Nov 17 02:59	11°♊16'30	10.66512 AU
direct	16310 May 18 00:47	29°♌07'12		morning rise	16315 Dec 03 15:22	13°♊16'42	
	16310 Jun 19 02:07	0°♋		retrograde	16316 Mar 16 13:54	20°♊48'43	
evening set	16310 Aug 28 15:23	6°♋43'08		opposition	16316 May 25 06:17	17°♊25'09	0°50'10
				min. Earth dist.	16316 May 24 15:17	17°♊28'03	8.67424 AU
conjunction	16310 Sep 14 15:46	8°♋49'36	-1°10'59	direct	16316 Aug 01 18:26	14°♊04'26	
minimum elong	16310 Sep 14 15:48	8°♋49'37	1°10'57	evening set	16316 Nov 10 19:16	21°♊24'32	
max. Earth dist.	16310 Sep 15 02:53	8°♋53'04	10.52512 AU				
morning rise	16310 Oct 01 16:29	10°♋56'11		conjunction	16316 Nov 28 01:03	23°♊29'43	0°50'12
retrograde	16311 Jan 12 20:29	18°♋33'52		minimum elong	16316 Nov 28 01:01	23°♊29'42	0°50'53
opposition	16311 Mar 23 04:58	15°♋10'34	-1°17'18	max. Earth dist.	16316 Nov 28 18:05	23°♊34'54	10.68133 AU
min. Earth dist.	16311 Mar 22 18:21	15°♋12'37	8.54151 AU	morning rise	16316 Dec 15 09:15	25°♊35'34	
direct	16311 May 31 05:36	11°♋48'08			16317 Jan 25 07:16	0°♋	
evening set	16311 Sep 10 10:45	19°♋20'23		retrograde	16317 Mar 29 08:33	3°♋06'56	
					16317 Jun 03 10:05	30°♌	
conjunction	16311 Sep 27 11:35	21°♋26'28	-0°53'40	min. Earth dist.	16317 Jun 06 10:51	29°♊45'58	8.68759 AU
minimum elong	16311 Sep 27 11:36	21°♋26'29	0°53'29	opposition	16317 Jun 07 00:06	29°♊43'25	1°13'10
max. Earth dist.	16311 Sep 28 01:00	21°♋30'38	10.55705 AU	direct	16317 Aug 14 10:25	26°♊22'38	
morning rise	16311 Oct 14 13:24	23°♋32'50			16317 Oct 20 20:29	0°♋	
	16311 Dec 19 19:46	0°♌		evening set	16317 Nov 23 11:35	3°♋42'15	
retrograde	16312 Jan 25 21:25	1°♌09'11					
	16312 Mar 03 15:58	30°♌		conjunction	16317 Dec 10 18:22	5°♋47'27	1°07'37

minimum elong	16317 Dec 10 18:21	5° \mathfrak{Z} 47'27	1°08'19	morning rise	16324 Mar 14 00:49	22° \mathfrak{H} 12'08	
max. Earth dist.	16317 Dec 11 09:04	5° \mathfrak{Z} 51'55	10.69119 AU	retrograde	16324 Jun 25 04:25	29° \mathfrak{H} 45'13	
morning rise	16317 Dec 28 03:40	7° \mathfrak{Z} 53'20		opposition	16324 Sep 01 14:13	26° \mathfrak{H} 21'37	1°44'26
retrograde	16318 Apr 11 02:35	15° \mathfrak{Z} 24'19		min. Earth dist.	16324 Sep 01 19:46	26° \mathfrak{H} 20'31	8.58750 AU
opposition	16318 Jun 19 16:18	12° \mathfrak{Z} 00'47	1°32'45	direct	16324 Nov 09 02:15	22° \mathfrak{H} 57'27	
min. Earth dist.	16318 Jun 19 05:09	12° \mathfrak{Z} 02'56	8.69414 AU		16325 Feb 15 19:15	0° \mathfrak{Y}	
direct	16318 Aug 27 02:21	8° \mathfrak{Z} 39'48		evening set	16325 Feb 20 00:10	0° \mathfrak{Y} 30'04	
evening set	16318 Dec 06 04:46	15° \mathfrak{Z} 59'35					
conjunction	16318 Dec 23 12:44	18° \mathfrak{Z} 04'57	1°21'56	conjunction	16325 Mar 09 15:36	2° \mathfrak{Y} 38'52	1°18'14
minimum elong	16318 Dec 23 12:43	18° \mathfrak{Z} 04'56	1°22'37	minimum elong	16325 Mar 09 15:38	2° \mathfrak{Y} 38'52	1°18'16
max. Earth dist.	16318 Dec 24 01:15	18° \mathfrak{Z} 08'45	10.69374 AU	max. Earth dist.	16325 Mar 09 06:57	2° \mathfrak{Y} 36'13	10.57123 AU
morning rise	16319 Jan 09 22:58	20° \mathfrak{Z} 10'57		morning rise	16325 Mar 27 06:47	4° \mathfrak{Y} 47'40	
retrograde	16319 Apr 23 21:59	27° \mathfrak{Z} 41'47		retrograde	16325 Jul 08 05:23	12° \mathfrak{Y} 21'26	
opposition	16319 Jul 02 07:32	24° \mathfrak{Z} 18'13	1°48'07	opposition	16325 Sep 14 09:37	8° \mathfrak{Y} 57'51	1°27'21
min. Earth dist.	16319 Jul 01 22:17	24° \mathfrak{Z} 20'01	8.69287 AU	min. Earth dist.	16325 Sep 14 17:25	8° \mathfrak{Y} 56'18	8.55592 AU
direct	16319 Sep 08 16:22	20° \mathfrak{Z} 56'56		direct	16325 Nov 21 22:40	5° \mathfrak{Y} 33'05	
evening set	16319 Dec 18 23:08	28° \mathfrak{Z} 17'34		evening set	16326 Mar 05 06:33	13° \mathfrak{Y} 08'44	
	16320 Jan 02 03:48	0° \approx		conjunction	16326 Mar 22 22:40	15° \mathfrak{Y} 18'14	1°02'29
conjunction	16320 Jan 05 08:22	0° \approx 23'13	1°32'30	minimum elong	16326 Mar 22 22:42	15° \mathfrak{Y} 18'15	1°02'23
minimum elong	16320 Jan 05 08:21	0° \approx 23'13	1°33'08	max. Earth dist.	16326 Mar 22 10:48	15° \mathfrak{Y} 14'35	10.53954 AU
max. Earth dist.	16320 Jan 05 18:12	0° \approx 26'12	10.68814 AU	morning rise	16326 Apr 09 14:01	17° \mathfrak{Y} 27'37	
morning rise	16320 Jan 22 19:30	2° \approx 29'28		retrograde	16326 Jul 21 06:48	25° \mathfrak{Y} 02'07	
retrograde	16320 May 05 17:08	10° \approx 00'28		opposition	16326 Sep 27 07:09	21° \mathfrak{Y} 38'35	1°05'55
opposition	16320 Jul 13 22:15	6° \approx 36'53	1°58'33	min. Earth dist.	16326 Sep 27 17:35	21° \mathfrak{Y} 36'31	8.52409 AU
min. Earth dist.	16320 Jul 13 15:32	6° \approx 38'12	8.68333 AU	direct	16326 Dec 04 22:19	18° \mathfrak{Y} 13'15	
direct	16320 Sep 20 06:13	3° \approx 15'10		evening set	16327 Mar 18 15:01	25° \mathfrak{Y} 51'59	
evening set	16320 Dec 30 19:22	10° \approx 37'24		conjunction	16327 Apr 05 07:20	28° \mathfrak{Y} 02'05	0°43'36
conjunction	16321 Jan 17 05:49	12° \approx 43'29	1°38'50	minimum elong	16327 Apr 05 07:21	28° \mathfrak{Y} 02'06	0°43'21
minimum elong	16321 Jan 17 05:49	12° \approx 43'29	1°39'22	max. Earth dist.	16327 Apr 04 16:15	27° \mathfrak{Y} 57'26	10.50833 AU
max. Earth dist.	16321 Jan 17 11:52	12° \approx 45'19	10.67471 AU		16327 Apr 21 07:10	0° \mathfrak{Z}	
morning rise	16321 Feb 03 17:53	14° \approx 50'04		morning rise	16327 Apr 22 22:33	0° \mathfrak{Z} 11'56	
	16321 Feb 05 03:23	15° \approx		retrograde	16327 Aug 03 08:46	7° \mathfrak{Z} 47'14	
retrograde	16321 May 18 13:10	22° \approx 21'27		opposition	16327 Oct 10 06:48	4° \mathfrak{Z} 23'48	0°41'04
opposition	16321 Jul 26 12:56	18° \approx 57'53	2°03'34	min. Earth dist.	16327 Oct 10 19:30	4° \mathfrak{Z} 21'17	8.49352 AU
min. Earth dist.	16321 Jul 26 09:33	18° \approx 58'33	8.66655 AU	direct	16327 Dec 18 01:15	0° \mathfrak{Z} 57'57	
direct	16321 Oct 02 20:41	15° \approx 35'37		evening set	16328 Mar 31 01:12	8° \mathfrak{Z} 39'41	
evening set	16322 Jan 12 17:32	22° \approx 59'58		conjunction	16328 Apr 17 17:15	10° \mathfrak{Z} 50'16	0°22'27
conjunction	16322 Jan 30 05:10	25° \approx 06'38	1°40'36	minimum elong	16328 Apr 17 17:16	10° \mathfrak{Z} 50'16	0°22'04
minimum elong	16322 Jan 30 05:11	25° \approx 06'38	1°41'02	max. Earth dist.	16328 Apr 16 23:56	10° \mathfrak{Z} 44'54	10.47902 AU
max. Earth dist.	16322 Jan 30 06:35	25° \approx 07'03	10.65490 AU	morning rise	16328 May 05 07:50	13° \mathfrak{Z} 00'27	
morning rise	16322 Feb 16 18:16	27° \approx 13'42			16328 May 22 05:14	15° \mathfrak{Z}	
	16322 Mar 13 04:48	0° \mathfrak{H}		retrograde	16328 Aug 15 12:55	20° \mathfrak{Z} 36'38	
retrograde	16322 May 31 09:56	4° \mathfrak{H} 45'34		opposition	16328 Oct 22 08:59	17° \mathfrak{Z} 13'19	0°14'00
opposition	16322 Aug 08 04:22	1° \mathfrak{H} 21'59	2°02'52	min. Earth dist.	16328 Oct 22 22:51	17° \mathfrak{Z} 10'34	8.46562 AU
min. Earth dist.	16322 Aug 08 04:37	1° \mathfrak{H} 21'56	8.64409 AU	direct	16328 Nov 21 23:51	15° \mathfrak{R} \mathfrak{Z}	
	16322 Aug 26 03:47	30° \mathfrak{R} \approx			16328 Dec 30 06:17	13° \mathfrak{Z} 47'06	
direct	16322 Oct 15 11:58	27° \approx 59'06		evening set	16329 Feb 06 02:22	15° \mathfrak{Z}	
	16322 Dec 03 17:47	0° \mathfrak{H}		max. Earth dist.	16329 Apr 13 12:41	21° \mathfrak{Z} 31'34	
evening set	16323 Jan 25 17:30	5° \mathfrak{H} 25'58			16329 Apr 30 10:02	23° \mathfrak{Z} 36'52	10.45300 AU
conjunction	16323 Feb 12 06:27	7° \mathfrak{H} 33'16	1°37'41	conjunction	16329 May 01 03:57	23° \mathfrak{Z} 42'26	0°00'01
minimum elong	16323 Feb 12 06:28	7° \mathfrak{H} 33'16	1°37'59	minimum elong	16329 May 01 03:56	23° \mathfrak{Z} 42'26	0°00'29
max. Earth dist.	16323 Feb 12 03:54	7° \mathfrak{H} 32'29	10.63022 AU	behind sun begin	16329 Apr 30 20:44	23° \mathfrak{Z} 40'13	
morning rise	16323 Mar 01 20:30	9° \mathfrak{H} 40'54		behind sun end	16329 May 01 11:07	23° \mathfrak{Z} 44'39	
retrograde	16323 Jun 13 06:05	17° \mathfrak{H} 13'21		desc. node	16329 May 01 21:00	23° \mathfrak{Z} 47'45	
opposition	16323 Aug 20 20:42	13° \mathfrak{H} 49'45	1°56'26	morning rise	16329 May 18 17:15	25° \mathfrak{Z} 52'47	
min. Earth dist.	16323 Aug 20 23:52	13° \mathfrak{H} 49'08	8.61733 AU		16329 Jun 24 11:38	0° \mathfrak{I}	
direct	16323 Oct 28 06:32	10° \mathfrak{H} 26'14		retrograde	16329 Aug 28 18:15	3° \mathfrak{I} 29'59	
evening set	16324 Feb 07 19:44	17° \mathfrak{H} 55'53		opposition	16329 Nov 04 13:38	0° \mathfrak{I} 06'47	-0°13'56
conjunction	16324 Feb 25 10:03	20° \mathfrak{H} 03'55	1°30'08	min. Earth dist.	16329 Nov 05 03:18	0° \mathfrak{I} 04'05	8.44181 AU
minimum elong	16324 Feb 25 10:05	20° \mathfrak{H} 03'55	1°30'18		16329 Nov 06 00:00	30° \mathfrak{R} \mathfrak{Z}	
max. Earth dist.	16324 Feb 25 04:16	20° \mathfrak{H} 02'09	10.60192 AU	direct	16330 Jan 12 14:00	26° \mathfrak{Z} 40'24	
					16330 Mar 17 22:39	0° \mathfrak{I}	
				evening set	16330 Apr 27 01:13	4° \mathfrak{I} 27'15	

conjunction	16330 May 14 15:10	6° Π 38'12	-0°22'28	max. Earth dist.	16336 Jul 31 19:32	24° Ω 39'50	10.44284 AU
minimum elong	16330 May 14 15:09	6° Π 38'11	0°23'03	morning rise	16336 Aug 17 21:13	26° Ω 48'03	
max. Earth dist.	16330 May 13 21:56	6° Π 32'49	10.43168 AU		16336 Sep 14 08:19	0° Π	
morning rise	16330 Jun 01 02:43	8° Π 48'33		retrograde	16336 Nov 28 09:36	4° Π 28'57	
retrograde	16330 Sep 11 01:39	16° Π 26'46		opposition	16337 Feb 05 00:07	1° Π 06'39	-2°03'25
opposition	16330 Nov 17 20:41	13° Π 03'45	-0°41'18	min. Earth dist.	16337 Feb 04 23:29	1° Π 06'47	8.45554 AU
min. Earth dist.	16330 Nov 18 09:49	13° Π 01'10	8.42339 AU		16337 Feb 19 14:35	30° \mathbb{R} Ω	
direct	16331 Jan 25 23:19	9° Π 37'20		direct	16337 Apr 15 06:14	27° Ω 42'47	
evening set	16331 May 10 14:21	17° Π 26'06			16337 Jun 06 20:49	0° Π	
max. Earth dist.	16331 May 27 10:07	19° Π 31'48	10.41618 AU	evening set	16337 Jul 27 23:21	5° Π 27'03	
conjunction	16331 May 28 02:28	19° Π 36'56	-0°43'53	conjunction	16337 Aug 14 00:00	7° Π 34'35	-1°37'41
minimum elong	16331 May 28 02:27	19° Π 36'55	0°44'32	minimum elong	16337 Aug 14 00:01	7° Π 34'36	1°38'00
morning rise	16331 Jun 14 11:58	21° Π 47'06		max. Earth dist.	16337 Aug 14 02:16	7° Π 35'18	10.46739 AU
retrograde	16331 Sep 24 11:19	29° Π 26'19		morning rise	16337 Aug 30 23:47	9° Π 41'53	
opposition	16331 Dec 01 06:10	26° Π 03'31	-1°06'39	retrograde	16337 Dec 11 17:02	17° Π 22'03	
min. Earth dist.	16331 Dec 01 18:37	26° Π 01'04	8.41126 AU	opposition	16338 Feb 18 12:43	13° Π 59'42	-1°56'44
direct	16332 Feb 08 09:22	22° Π 37'13		min. Earth dist.	16338 Feb 18 09:31	14° Π 00'19	8.48213 AU
	16332 May 19 10:21	0° \mathfrak{C}		direct	16338 Apr 28 17:33	10° Π 36'26	
evening set	16332 May 23 03:32	0° \mathfrak{C} 27'17		evening set	16338 Aug 10 00:55	18° Π 17'23	
conjunction	16332 Jun 09 13:20	2° \mathfrak{C} 37'48	-1°03'06	conjunction	16338 Aug 27 00:57	20° Π 24'22	-1°29'58
minimum elong	16332 Jun 09 13:18	2° \mathfrak{C} 37'48	1°03'48	minimum elong	16338 Aug 27 00:59	20° Π 24'23	1°30'08
max. Earth dist.	16332 Jun 08 22:12	2° \mathfrak{C} 33'03	10.40726 AU	max. Earth dist.	16338 Aug 27 06:04	20° Π 25'58	10.49572 AU
morning rise	16332 Jun 26 20:38	4° \mathfrak{C} 47'38		morning rise	16338 Sep 13 00:50	22° Π 31'16	
retrograde	16332 Oct 06 20:12	12° \mathfrak{C} 27'44			16338 Dec 10 19:50	0° \mathfrak{A}	
opposition	16332 Dec 13 17:38	9° \mathfrak{C} 05'09	-1°28'39	retrograde	16338 Dec 24 22:48	0° \mathfrak{A} 10'21	
min. Earth dist.	16332 Dec 14 05:03	9° \mathfrak{C} 02'55	8.40609 AU		16339 Jan 08 02:31	30° \mathbb{R} Π	
direct	16333 Feb 20 22:33	5° \mathfrak{C} 39'07		opposition	16339 Mar 03 23:30	26° Π 47'54	-1°44'16
evening set	16333 Jun 05 15:59	13° \mathfrak{C} 29'46		min. Earth dist.	16339 Mar 03 17:51	26° Π 49'00	8.51138 AU
				direct	16339 May 12 02:18	23° Π 25'13	
conjunction	16333 Jun 22 23:22	15° \mathfrak{C} 39'47	-1°19'07		16339 Aug 14 08:05	0° \mathfrak{A}	
minimum elong	16333 Jun 22 23:21	15° \mathfrak{C} 39'46	1°19'48	evening set	16339 Aug 22 23:47	1° \mathfrak{A} 02'34	
max. Earth dist.	16333 Jun 22 10:06	15° \mathfrak{C} 35'36	10.40551 AU				
morning rise	16333 Jul 10 04:34	17° \mathfrak{C} 49'11		conjunction	16339 Sep 08 23:47	3° \mathfrak{A} 09'04	-1°17'51
retrograde	16333 Oct 20 05:08	25° \mathfrak{C} 29'59		minimum elong	16339 Sep 08 23:49	3° \mathfrak{A} 09'05	1°17'52
opposition	16333 Dec 27 06:34	22° \mathfrak{C} 07'33	-1°46'05	max. Earth dist.	16339 Sep 09 07:46	3° \mathfrak{A} 11'34	10.52563 AU
min. Earth dist.	16333 Dec 27 15:53	22° \mathfrak{C} 05'44	8.40824 AU	morning rise	16339 Sep 26 00:12	5° \mathfrak{A} 15'39	
direct	16334 Mar 06 13:20	18° \mathfrak{C} 41'55		retrograde	16340 Jan 07 01:13	12° \mathfrak{A} 53'35	
evening set	16334 Jun 19 03:02	26° \mathfrak{C} 32'15		opposition	16340 Mar 16 08:20	9° \mathfrak{A} 30'59	-1°26'46
				min. Earth dist.	16340 Mar 16 00:05	9° \mathfrak{A} 32'34	8.54097 AU
conjunction	16334 Jul 06 08:13	28° \mathfrak{C} 41'42	-1°31'03	direct	16340 May 24 10:16	6° \mathfrak{A} 08'50	
minimum elong	16334 Jul 06 08:11	28° \mathfrak{C} 41'41	1°31'41	evening set	16340 Sep 03 20:06	13° \mathfrak{A} 42'36	
max. Earth dist.	16334 Jul 05 22:15	28° \mathfrak{C} 38'33	10.41111 AU				
	16334 Jul 16 16:56	0° Ω		conjunction	16340 Sep 20 20:37	15° \mathfrak{A} 48'45	-1°02'00
morning rise	16334 Jul 23 11:27	0° Ω 50'34		minimum elong	16340 Sep 20 20:39	15° \mathfrak{A} 48'45	1°01'53
retrograde	16334 Nov 02 15:07	8° Ω 31'47		max. Earth dist.	16340 Sep 21 07:48	15° \mathfrak{A} 52'13	10.55486 AU
opposition	16335 Jan 09 20:22	5° Ω 09'27	-1°58'02	morning rise	16340 Oct 07 21:53	17° \mathfrak{A} 55'06	
min. Earth dist.	16335 Jan 10 02:33	5° Ω 08'15	8.41755 AU	retrograde	16341 Jan 19 03:51	25° \mathfrak{A} 31'56	
direct	16335 Mar 20 03:50	1° Ω 44'20		opposition	16341 Mar 29 14:51	22° \mathfrak{A} 09'08	-1°05'11
evening set	16335 Jul 02 12:16	9° Ω 33'27		min. Earth dist.	16341 Mar 29 03:55	22° \mathfrak{A} 11'14	8.56915 AU
				direct	16341 Jun 06 15:11	18° \mathfrak{A} 47'29	
conjunction	16335 Jul 19 15:32	11° Ω 42'16	-1°38'18	evening set	16341 Sep 16 14:44	26° \mathfrak{A} 17'51	
minimum elong	16335 Jul 19 15:32	11° Ω 42'16	1°38'52				
max. Earth dist.	16335 Jul 19 09:45	11° Ω 40'27	10.42373 AU	conjunction	16341 Oct 03 16:05	28° \mathfrak{A} 23'44	-0°43'16
morning rise	16335 Aug 05 17:03	13° Ω 50'35		minimum elong	16341 Oct 03 16:06	28° \mathfrak{A} 23'45	0°43'01
	16335 Aug 15 05:13	15° Ω		max. Earth dist.	16341 Oct 04 06:00	28° \mathfrak{A} 28'03	10.58225 AU
retrograde	16335 Nov 16 01:06	21° Ω 31'49			16341 Oct 16 16:03	0° \mathbb{M}	
opposition	16336 Jan 23 10:22	18° Ω 09'33	-2°03'53	morning rise	16341 Oct 20 18:28	0° \mathbb{M} 29'57	
min. Earth dist.	16336 Jan 23 13:02	18° Ω 09'02	8.43356 AU	retrograde	16342 Feb 01 06:11	8° \mathbb{M} 05'39	
	16336 Mar 15 15:14	15° \mathbb{R} Ω		opposition	16342 Apr 11 18:49	4° \mathbb{M} 42'38	-0°40'37
direct	16336 Apr 01 17:13	14° Ω 45'02		min. Earth dist.	16342 Apr 11 06:13	4° \mathbb{M} 45'03	8.59525 AU
	16336 Apr 18 16:28	15° Ω		direct	16342 Jun 19 15:37	1° \mathbb{M} 21'20	
evening set	16336 Jul 14 19:11	22° Ω 32'06		evening set	16342 Sep 29 08:02	8° \mathbb{M} 48'38	
conjunction	16336 Jul 31 20:56	24° Ω 40'16	-1°40'32	conjunction	16342 Oct 16 10:14	10° \mathbb{M} 54'18	-0°22'34
minimum elong	16336 Jul 31 20:56	24° Ω 40'16	1°40'59	minimum elong	16342 Oct 16 10:15	10° \mathbb{M} 54'19	0°22'11

max. Earth dist.	16342 Oct 17 01:33	10° \mathbb{M} 59'01	10.60727 AU	conjunction	16348 Dec 29 19:28	25° \mathcal{Z} 00'03	1°28'14
morning rise	16342 Nov 02 13:58	13° \mathbb{M} 00'26		minimum elong	16348 Dec 29 19:26	25° \mathcal{Z} 00'02	1°28'53
	16342 Nov 19 14:42	15° \mathbb{M}		max. Earth dist.	16348 Dec 30 05:34	25° \mathcal{Z} 03'07	10.66723 AU
retrograde	16343 Feb 14 05:04	20° \mathbb{M} 35'01		morning rise	16349 Jan 16 06:24	27° \mathcal{Z} 06'27	
opposition	16343 Apr 24 20:32	17° \mathbb{M} 11'46	-0°14'17		16349 Feb 10 20:52	0° \approx	
min. Earth dist.	16343 Apr 24 07:13	17° \mathbb{M} 14'20	8.61876 AU	retrograde	16349 Apr 30 04:21	4° \approx 38'13	
	16343 May 26 00:56	15° \mathbb{R} \mathbb{M}		opposition	16349 Jul 08 12:08	1° \approx 13'56	1°54'34
direct	16343 Jul 02 14:09	13° \mathbb{M} 50'40		min. Earth dist.	16349 Jul 08 05:00	1° \approx 15'19	8.66404 AU
	16343 Aug 08 11:11	15° \mathbb{M}			16349 Jul 24 16:29	30° \mathbb{R} \mathcal{Z}	
evening set	16343 Oct 12 00:11	21° \mathbb{M} 15'20		direct	16349 Sep 14 20:20	27° \mathcal{Z} 51'39	
					16349 Nov 04 13:44	0° \approx	
conjunction	16343 Oct 29 03:21	23° \mathbb{M} 20'50	-0°00'54	evening set	16349 Dec 25 06:29	5° \approx 13'59	
minimum elong	16343 Oct 29 03:20	23° \mathbb{M} 20'50	0°00'24				
behind sun begin	16343 Oct 28 20:15	23° \mathbb{M} 18'41		conjunction	16350 Jan 11 16:21	7° \approx 20'06	1°36'34
behind sun end	16343 Oct 29 10:25	23° \mathbb{M} 22'59		minimum elong	16350 Jan 11 16:21	7° \approx 20'06	1°37'08
max. Earth dist.	16343 Oct 29 19:08	23° \mathbb{M} 25'40	10.62926 AU	max. Earth dist.	16350 Jan 11 23:36	7° \approx 22'18	10.65749 AU
asc. node	16343 Nov 13 12:01	25° \mathbb{M} 13'28		morning rise	16350 Jan 29 04:13	9° \approx 26'48	
morning rise	16343 Nov 15 08:32	25° \mathbb{M} 26'53			16350 Mar 24 17:10	15° \approx	
	16343 Dec 27 11:07	0° \mathcal{Z}		retrograde	16350 May 12 23:34	16° \approx 58'51	
retrograde	16344 Feb 27 02:04	3° \mathcal{Z} 00'31			16350 Jul 02 07:39	15° \mathbb{R} \approx	
	16344 May 01 20:09	30° \mathbb{R} \mathbb{M}		opposition	16350 Jul 21 03:14	13° \approx 34'33	2°02'07
opposition	16344 May 06 19:50	29° \mathbb{M} 37'01	0°12'35	min. Earth dist.	16350 Jul 20 22:23	13° \approx 35'29	8.65162 AU
min. Earth dist.	16344 May 06 06:25	29° \mathbb{M} 39'35	8.63896 AU	direct	16350 Sep 27 12:05	10° \approx 11'50	
direct	16344 Jul 14 12:09	26° \mathbb{M} 15'58			16350 Dec 15 08:20	15° \approx	
	16344 Sep 20 22:15	0° \mathcal{Z}		evening set	16351 Jan 07 03:57	17° \approx 35'57	
evening set	16344 Oct 23 15:54	3° \mathcal{Z} 38'32					
				conjunction	16351 Jan 24 15:12	19° \approx 42'35	1°40'26
conjunction	16344 Nov 09 20:09	5° \mathcal{Z} 43'56	0°20'46	minimum elong	16351 Jan 24 15:12	19° \approx 42'35	1°40'55
minimum elong	16344 Nov 09 20:08	5° \mathcal{Z} 43'56	0°21'21	max. Earth dist.	16351 Jan 24 19:48	19° \approx 43'59	10.64237 AU
max. Earth dist.	16344 Nov 10 12:14	5° \mathcal{Z} 48'52	10.64742 AU	morning rise	16351 Feb 11 03:54	21° \approx 49'40	
morning rise	16344 Nov 27 02:43	7° \mathcal{Z} 49'58		retrograde	16351 May 25 20:48	29° \approx 22'08	
retrograde	16345 Mar 10 22:47	15° \mathcal{Z} 22'46		opposition	16351 Aug 02 18:41	25° \approx 57'53	2°04'01
opposition	16345 May 19 16:35	11° \mathcal{Z} 59'01	0°38'44	min. Earth dist.	16351 Aug 02 16:00	25° \approx 58'24	8.63409 AU
min. Earth dist.	16345 May 19 03:02	12° \mathcal{Z} 01'37	8.65499 AU	direct	16351 Oct 10 02:59	22° \approx 34'43	
direct	16345 Jul 27 06:59	8° \mathcal{Z} 37'55			16352 Jan 19 23:45	0° \mathcal{H}	
evening set	16345 Nov 05 07:34	15° \mathcal{Z} 59'04		evening set	16352 Jan 20 03:28	0° \mathcal{H} 01'06	
conjunction	16345 Nov 22 13:01	18° \mathcal{Z} 04'26	0°41'21	conjunction	16352 Feb 06 16:05	2° \mathcal{H} 08'21	1°39'37
minimum elong	16345 Nov 22 12:59	18° \mathcal{Z} 04'25	0°42'00	minimum elong	16352 Feb 06 16:06	2° \mathcal{H} 08'21	1°39'59
max. Earth dist.	16345 Nov 23 05:24	18° \mathcal{Z} 09'26	10.66087 AU	max. Earth dist.	16352 Feb 06 17:22	2° \mathcal{H} 08'44	10.62262 AU
morning rise	16345 Dec 09 20:42	20° \mathcal{Z} 10'27		morning rise	16352 Feb 24 05:40	4° \mathcal{H} 15'56	
retrograde	16346 Mar 23 18:30	27° \mathcal{Z} 42'40		retrograde	16352 Jun 06 18:38	11° \mathcal{H} 48'55	
opposition	16346 Jun 01 11:24	24° \mathcal{Z} 18'41	1°03'00	opposition	16352 Aug 14 10:59	8° \mathcal{H} 24'47	2°00'07
min. Earth dist.	16346 May 31 22:00	24° \mathcal{Z} 21'16	8.66596 AU	min. Earth dist.	16352 Aug 14 11:17	8° \mathcal{H} 24'44	8.61227 AU
direct	16346 Aug 08 23:53	20° \mathcal{Z} 57'27		direct	16352 Oct 21 19:36	5° \mathcal{H} 01'10	
evening set	16346 Nov 17 23:36	28° \mathcal{Z} 17'51		evening set	16353 Feb 01 05:20	12° \mathcal{H} 30'13	
	16346 Dec 02 01:47	0° \mathcal{Z}					
				conjunction	16353 Feb 18 19:06	14° \mathcal{H} 38'08	1°34'06
conjunction	16346 Dec 05 06:07	0° \mathcal{Z} 23'15	1°00'00	minimum elong	16353 Feb 18 19:08	14° \mathcal{H} 38'09	1°34'20
minimum elong	16346 Dec 05 06:06	0° \mathcal{Z} 23'15	1°00'41	max. Earth dist.	16353 Feb 18 16:06	14° \mathcal{H} 37'13	10.59921 AU
max. Earth dist.	16346 Dec 05 21:51	0° \mathcal{Z} 28'02	10.66885 AU	morning rise	16353 Mar 08 09:33	16° \mathcal{H} 46'17	
morning rise	16346 Dec 22 14:50	2° \mathcal{Z} 29'18		retrograde	16353 Jun 19 17:41	24° \mathcal{H} 19'51	
retrograde	16347 Apr 05 14:21	10° \mathcal{Z} 01'11		opposition	16353 Aug 27 04:33	20° \mathcal{H} 55'57	1°50'31
opposition	16347 Jun 14 04:41	6° \mathcal{Z} 37'02	1°24'20	min. Earth dist.	16353 Aug 27 08:16	20° \mathcal{H} 55'13	8.58730 AU
min. Earth dist.	16347 Jun 13 16:24	6° \mathcal{Z} 39'25	8.67127 AU	direct	16353 Nov 03 13:53	17° \mathcal{H} 31'51	
direct	16347 Aug 21 15:28	3° \mathcal{Z} 15'33		evening set	16354 Feb 14 09:25	25° \mathcal{H} 03'51	
evening set	16347 Nov 30 16:37	10° \mathcal{Z} 35'55					
				conjunction	16354 Mar 04 00:16	27° \mathcal{H} 12'29	1°24'04
conjunction	16347 Dec 18 00:09	12° \mathcal{Z} 41'27	1°15'52	minimum elong	16354 Mar 04 00:18	27° \mathcal{H} 12'30	1°24'10
minimum elong	16347 Dec 18 00:07	12° \mathcal{Z} 41'26	1°16'32	max. Earth dist.	16354 Mar 03 17:11	27° \mathcal{H} 10'19	10.57334 AU
max. Earth dist.	16347 Dec 18 13:34	12° \mathcal{Z} 45'31	10.67103 AU	morning rise	16354 Mar 21 15:25	29° \mathcal{H} 21'14	
morning rise	16348 Jan 04 09:58	14° \mathcal{Z} 47'38			16354 Mar 27 01:44	0° \mathcal{Y}	
retrograde	16348 Apr 17 10:03	22° \mathcal{Z} 19'20		retrograde	16354 Jul 02 17:37	6° \mathcal{Y} 55'26	
opposition	16348 Jun 25 20:44	18° \mathcal{Z} 55'06	1°41'47	opposition	16354 Sep 08 23:52	3° \mathcal{Y} 31'47	1°35'34
min. Earth dist.	16348 Jun 25 10:56	18° \mathcal{Z} 57'00	8.67067 AU	min. Earth dist.	16354 Sep 09 06:34	3° \mathcal{Y} 30'28	8.56046 AU
direct	16348 Sep 02 05:19	15° \mathcal{Z} 33'15		direct	16354 Nov 16 11:01	0° \mathcal{Y} 07'16	
evening set	16348 Dec 12 10:50	22° \mathcal{Z} 54'17		evening set	16355 Feb 27 15:35	7° \mathcal{Y} 42'18	

conjunction	16355 Mar 17 07:23	9° Υ 51'38	1°09'55	opposition	16360 Nov 24 18:21	20° Π 39'13	-0°55'54
minimum elong	16355 Mar 17 07:25	9° Υ 51'39	1°09'52	min. Earth dist.	16360 Nov 25 08:29	20° Π 36'26	8.41674 AU
max. Earth dist.	16355 Mar 16 21:12	9° Υ 48'30	10.54619 AU	direct	16361 Feb 01 20:31	17° Π 13'15	
morning rise	16355 Apr 03 22:57	12° Υ 00'57		evening set	16361 May 17 14:37	25° Π 03'27	
retrograde	16355 Jul 15 18:18	19° Υ 35'52		max. Earth dist.	16361 Jun 03 08:25	27° Π 08'53	10.40931 AU
opposition	16355 Sep 21 21:07	16° Υ 12'27	1°15'54				
min. Earth dist.	16355 Sep 22 05:50	16° Υ 10'43	8.53286 AU	conjunction	16361 Jun 04 01:28	27° Π 14'15	-0°55'03
direct	16355 Nov 29 11:26	12° Υ 47'34		minimum elong	16361 Jun 04 01:26	27° Π 14'14	0°55'43
evening set	16356 Mar 12 00:05	20° Υ 25'38		morning rise	16361 Jun 21 09:53	29° Π 24'22	
					16361 Jun 26 06:24	0° Θ	
conjunction	16356 Mar 29 16:28	22° Υ 35'37	0°52'17	retrograde	16361 Oct 01 09:59	7° Θ 04'51	
minimum elong	16356 Mar 29 16:30	22° Υ 35'37	0°52'05	opposition	16361 Dec 08 05:46	3° Θ 42'30	-1°19'34
max. Earth dist.	16356 Mar 29 04:09	22° Υ 31'49	10.51882 AU	min. Earth dist.	16361 Dec 08 18:10	3° Θ 40'04	8.40436 AU
morning rise	16356 Apr 16 07:53	24° Υ 45'23		direct	16362 Feb 15 09:59	0° Θ 16'38	
	16356 Jun 04 21:45	0° \mathcal{B}		evening set	16362 May 31 04:19	8° Θ 07'53	
retrograde	16356 Jul 27 21:43	2° \mathcal{B} 21'01					
	16356 Sep 20 12:21	30° $\mathcal{R}\Upsilon$		conjunction	16362 Jun 17 12:59	10° Θ 18'19	-1°12'36
opposition	16356 Oct 03 20:29	28° Υ 57'49	0°52'22	minimum elong	16362 Jun 17 12:57	10° Θ 18'19	1°13'17
min. Earth dist.	16356 Oct 04 06:47	28° Υ 55'48	8.50563 AU	max. Earth dist.	16362 Jun 16 22:34	10° Θ 13'46	10.40004 AU
direct	16356 Dec 11 13:09	25° Υ 32'36		morning rise	16362 Jul 04 19:06	12° Θ 28'05	
	16357 Feb 25 05:00	0° \mathcal{B}		retrograde	16362 Oct 14 20:31	20° Θ 09'29	
evening set	16357 Mar 25 10:26	3° \mathcal{B} 13'34		opposition	16362 Dec 21 18:51	16° Θ 47'09	-1°39'09
				min. Earth dist.	16362 Dec 22 05:10	16° Θ 45'07	8.39883 AU
conjunction	16357 Apr 12 02:49	5° \mathcal{B} 24'04	0°31'59	direct	16363 Mar 01 00:29	13° Θ 21'27	
minimum elong	16357 Apr 12 02:50	5° \mathcal{B} 24'04	0°31'39	evening set	16363 Jun 13 17:07	21° Θ 12'54	
max. Earth dist.	16357 Apr 11 12:27	5° \mathcal{B} 19'37	10.49234 AU				
morning rise	16357 Apr 29 17:38	7° \mathcal{B} 34'12		conjunction	16363 Jun 30 23:28	23° Θ 22'50	-1°26'25
	16357 Jul 27 01:55	15° \mathcal{B}		minimum elong	16363 Jun 30 23:27	23° Θ 22'49	1°27'04
retrograde	16357 Aug 10 03:40	15° \mathcal{B} 10'33		max. Earth dist.	16363 Jun 30 11:51	23° Θ 19'10	10.39802 AU
	16357 Aug 24 04:19	15° $\mathcal{R}\mathcal{B}$		morning rise	16363 Jul 18 03:28	25° Θ 32'07	
opposition	16357 Oct 16 22:23	11° \mathcal{B} 47'34	0°26'05		16363 Aug 26 21:44	0° \mathcal{Q}	
min. Earth dist.	16357 Oct 17 10:18	11° \mathcal{B} 45'13	8.47985 AU	retrograde	16363 Oct 28 07:51	3° \mathcal{Q} 14'07	
direct	16357 Dec 24 16:07	8° \mathcal{B} 22'01			16364 Jan 02 15:02	30° $\mathcal{R}\mathcal{B}$	
	16358 Mar 29 18:54	15° \mathcal{B}		opposition	16364 Jan 04 09:20	29° Θ 51'44	-1°53'36
evening set	16358 Apr 07 22:06	16° \mathcal{B} 05'42		min. Earth dist.	16364 Jan 04 17:34	29° Θ 50'07	8.40075 AU
				direct	16364 Mar 13 15:09	26° Θ 26'18	
conjunction	16358 Apr 25 13:51	18° \mathcal{B} 16'31	0°10'00		16364 May 19 07:23	0° \mathcal{Q}	
minimum elong	16358 Apr 25 13:51	18° \mathcal{B} 16'31	0°09'33	evening set	16364 Jun 26 04:07	4° \mathcal{Q} 16'57	
behind sun begin	16358 Apr 25 07:53	18° \mathcal{B} 14'41					
behind sun end	16358 Apr 25 19:49	18° \mathcal{B} 18'21		conjunction	16364 Jul 13 08:15	6° \mathcal{Q} 26'17	-1°35'47
max. Earth dist.	16358 Apr 24 21:24	18° \mathcal{B} 11'24	10.46760 AU	minimum elong	16364 Jul 13 08:14	6° \mathcal{Q} 26'17	1°36'22
morning rise	16358 May 13 03:41	20° \mathcal{B} 26'52		max. Earth dist.	16364 Jul 12 23:33	6° \mathcal{Q} 23'32	10.40355 AU
retrograde	16358 Aug 23 08:40	28° \mathcal{B} 04'01		morning rise	16364 Jul 30 10:31	8° \mathcal{Q} 35'04	
desc. node	16358 Oct 08 01:35	26° \mathcal{B} 20'57			16364 Oct 02 05:19	15° \mathcal{Q}	
opposition	16358 Oct 30 02:40	24° \mathcal{B} 41'14	-0°01'39	retrograde	16364 Nov 09 18:16	16° \mathcal{Q} 17'15	
min. Earth dist.	16358 Oct 30 16:21	24° \mathcal{B} 38'32	8.45608 AU		16364 Dec 19 02:57	15° $\mathcal{R}\mathcal{Q}$	
direct	16359 Jan 06 23:47	21° \mathcal{B} 15'25		opposition	16365 Jan 17 00:18	12° \mathcal{Q} 54'45	-2°02'10
evening set	16359 Apr 21 11:03	29° \mathcal{B} 01'36		min. Earth dist.	16365 Jan 17 05:55	12° \mathcal{Q} 53'39	8.41015 AU
	16359 Apr 29 08:42	0° Π		direct	16365 Mar 27 06:00	9° \mathcal{Q} 29'38	
max. Earth dist.	16359 May 08 07:09	1° Π 06'50	10.44489 AU		16365 Jun 20 03:51	15° \mathcal{Q}	
				evening set	16365 Jul 09 12:49	17° \mathcal{Q} 18'37	
conjunction	16359 May 09 01:35	1° Π 12'34	-0°12'41				
minimum elong	16359 May 09 01:34	1° Π 12'34	0°13'14	conjunction	16365 Jul 26 15:10	19° \mathcal{Q} 27'18	-1°40'11
behind sun begin	16359 May 08 21:24	1° Π 11'17		minimum elong	16365 Jul 26 15:10	19° \mathcal{Q} 27'18	1°40'41
behind sun end	16359 May 09 05:43	1° Π 13'51		max. Earth dist.	16365 Jul 26 10:03	19° \mathcal{Q} 25'42	10.41648 AU
morning rise	16359 May 26 14:01	3° Π 22'59		morning rise	16365 Aug 12 16:11	21° \mathcal{Q} 35'35	
retrograde	16359 Sep 05 15:10	11° Π 01'08		retrograde	16365 Nov 23 01:59	29° \mathcal{Q} 17'32	
opposition	16359 Nov 12 09:12	7° Π 38'32	-0°29'28	opposition	16366 Jan 30 14:50	25° \mathcal{Q} 54'51	-2°04'25
min. Earth dist.	16359 Nov 12 23:55	7° Π 35'38	8.43463 AU	min. Earth dist.	16366 Jan 30 17:10	25° \mathcal{Q} 54'24	8.42658 AU
direct	16360 Jan 20 09:33	4° Π 12'34		direct	16366 Apr 09 21:46	22° \mathcal{Q} 30'09	
evening set	16360 May 04 00:46	12° Π 01'02			16366 Jul 20 12:38	0° \mathcal{P}	
				evening set	16366 Jul 22 18:50	0° \mathcal{P} 16'39	
conjunction	16360 May 21 13:36	14° Π 11'59	-0°34'43				
minimum elong	16360 May 21 13:35	14° Π 11'59	0°35'20	conjunction	16366 Aug 08 19:58	2° \mathcal{P} 24'43	-1°39'29
max. Earth dist.	16360 May 20 18:56	14° Π 06'09	10.42486 AU	minimum elong	16366 Aug 08 19:59	2° \mathcal{P} 24'43	1°39'51
morning rise	16360 Jun 08 00:13	16° Π 22'20		max. Earth dist.	16366 Aug 08 19:12	2° \mathcal{P} 24'28	10.43611 AU
retrograde	16360 Sep 18 00:14	24° Π 01'39		morning rise	16366 Aug 25 20:12	4° \mathcal{P} 32'29	

retrograde	16366 Dec 06 10:07	12° <u>♏</u> 13'51		max. Earth dist.	16372 Oct 23 22:11	18° <u>♏</u> 29'49	10.61853 AU
opposition	16367 Feb 13 04:28	8° <u>♏</u> 50'57	-2°00'19	morning rise	16372 Nov 09 08:48	20° <u>♏</u> 30'21	
min. Earth dist.	16367 Feb 13 02:46	8° <u>♏</u> 51'17	8.44905 AU	retrograde	16373 Feb 21 00:29	28° <u>♏</u> 04'07	
direct	16367 Apr 23 11:15	5° <u>♏</u> 26'47		asc. node	16373 Apr 12 02:42	26° <u>♏</u> 08'15	
evening set	16367 Aug 04 21:57	13° <u>♏</u> 10'07		opposition	16373 May 01 18:06	24° <u>♏</u> 40'32	0°01'25
				min. Earth dist.	16373 May 01 02:24	24° <u>♏</u> 43'33	8.63256 AU
conjunction	16367 Aug 21 22:25	15° <u>♏</u> 17'36	-1°33'46	direct	16373 Jul 09 12:17	21° <u>♏</u> 19'25	
minimum elong	16367 Aug 21 22:26	15° <u>♏</u> 17'37	1°33'59	evening set	16373 Oct 18 17:01	28° <u>♏</u> 42'28	
max. Earth dist.	16367 Aug 22 02:32	15° <u>♏</u> 18'54	10.46126 AU		16373 Oct 29 08:43	0° <u>♏</u>	
morning rise	16367 Sep 07 22:16	17° <u>♏</u> 24'56					
retrograde	16367 Dec 19 17:43	25° <u>♏</u> 05'22		conjunction	16373 Nov 04 20:52	0° <u>♏</u> 47'50	0°11'50
opposition	16368 Feb 26 16:36	21° <u>♏</u> 42'17	-1°50'11	minimum elong	16373 Nov 04 20:52	0° <u>♏</u> 47'50	0°12'22
min. Earth dist.	16368 Feb 26 11:09	21° <u>♏</u> 43'20	8.47635 AU	behind sun begin	16373 Nov 04 16:10	0° <u>♏</u> 46'24	
direct	16368 May 05 21:22	18° <u>♏</u> 18'41		behind sun end	16373 Nov 05 01:34	0° <u>♏</u> 49'15	
evening set	16368 Aug 16 22:19	25° <u>♏</u> 58'25		max. Earth dist.	16373 Nov 05 15:43	0° <u>♏</u> 53'36	10.64539 AU
				morning rise	16373 Nov 22 02:39	2° <u>♏</u> 53'45	
conjunction	16368 Sep 02 22:34	28° <u>♏</u> 05'24	-1°23'23	retrograde	16374 Mar 05 22:17	10° <u>♏</u> 26'23	
minimum elong	16368 Sep 02 22:36	28° <u>♏</u> 05'25	1°23'28	opposition	16374 May 14 15:26	7° <u>♏</u> 02'49	0°27'56
max. Earth dist.	16368 Sep 03 06:41	28° <u>♏</u> 07'57	10.49067 AU	min. Earth dist.	16374 May 13 23:46	7° <u>♏</u> 05'50	8.65735 AU
	16368 Sep 18 06:26	0° <u>♏</u>		direct	16374 Jul 22 06:00	3° <u>♏</u> 41'56	
morning rise	16368 Sep 19 22:41	0° <u>♏</u> 12'22		evening set	16374 Oct 31 08:21	11° <u>♏</u> 03'05	
retrograde	16368 Dec 31 22:40	7° <u>♏</u> 51'35					
opposition	16369 Mar 11 02:45	4° <u>♏</u> 28'20	-1°34'39	conjunction	16374 Nov 17 13:07	13° <u>♏</u> 08'17	0°32'53
min. Earth dist.	16369 Mar 10 18:28	4° <u>♏</u> 29'57	8.50711 AU	minimum elong	16374 Nov 17 13:06	13° <u>♏</u> 08'16	0°33'31
direct	16369 May 19 05:04	1° <u>♏</u> 05'19		max. Earth dist.	16374 Nov 18 07:08	13° <u>♏</u> 13'46	10.66776 AU
evening set	16369 Aug 29 20:03	8° <u>♏</u> 41'18		morning rise	16374 Dec 04 20:12	15° <u>♏</u> 14'07	
				retrograde	16375 Mar 18 17:34	22° <u>♏</u> 45'52	
conjunction	16369 Sep 15 20:28	10° <u>♏</u> 47'49	-1°08'59	opposition	16375 May 27 10:48	19° <u>♏</u> 22'18	0°53'02
minimum elong	16369 Sep 15 20:30	10° <u>♏</u> 47'50	1°08'55	min. Earth dist.	16375 May 26 20:16	19° <u>♏</u> 25'07	8.67728 AU
max. Earth dist.	16369 Sep 16 07:29	10° <u>♏</u> 51'15	10.52275 AU	direct	16375 Aug 03 22:55	16° <u>♏</u> 01'33	
morning rise	16369 Oct 02 21:25	12° <u>♏</u> 54'29		evening set	16375 Nov 12 23:41	23° <u>♏</u> 21'28	
retrograde	16370 Jan 14 01:34	20° <u>♏</u> 32'20					
opposition	16370 Mar 24 10:32	17° <u>♏</u> 08'59	-1°14'36	conjunction	16375 Nov 30 05:27	25° <u>♏</u> 26'35	0°52'23
min. Earth dist.	16370 Mar 24 00:11	17° <u>♏</u> 10'59	8.53966 AU	minimum elong	16375 Nov 30 05:26	25° <u>♏</u> 26'35	0°53'03
direct	16370 Jun 01 11:04	13° <u>♏</u> 46'31		max. Earth dist.	16375 Nov 30 22:10	25° <u>♏</u> 31'40	10.68475 AU
evening set	16370 Sep 11 15:34	21° <u>♏</u> 18'46		morning rise	16375 Dec 17 13:45	27° <u>♏</u> 32'23	
					16376 Jan 08 02:25	0° <u>♏</u>	
conjunction	16370 Sep 28 16:28	23° <u>♏</u> 24'54	-0°51'19	retrograde	16376 Mar 30 11:58	5° <u>♏</u> 03'29	
minimum elong	16370 Sep 28 16:30	23° <u>♏</u> 24'54	0°51'07	opposition	16376 Jun 08 04:15	1° <u>♏</u> 39'58	1°15'37
max. Earth dist.	16370 Sep 29 05:40	23° <u>♏</u> 29'00	10.55578 AU	min. Earth dist.	16376 Jun 07 15:02	1° <u>♏</u> 42'31	8.69141 AU
morning rise	16370 Oct 15 18:33	25° <u>♏</u> 31'19			16376 Jun 30 18:53	30° <u>♏</u>	
	16370 Nov 25 13:55	0° <u>♏</u>		direct	16376 Aug 15 15:48	28° <u>♏</u> 19'11	
retrograde	16371 Jan 27 02:37	3° <u>♏</u> 07'43			16376 Sep 29 08:41	0° <u>♏</u>	
	16371 Apr 03 05:58	30° <u>♏</u>		evening set	16376 Nov 24 15:44	5° <u>♏</u> 38'33	
opposition	16371 Apr 06 15:42	29° <u>♏</u> 44'17	-0°51'06				
min. Earth dist.	16371 Apr 06 03:23	29° <u>♏</u> 46'39	8.57239 AU	conjunction	16376 Dec 11 22:39	7° <u>♏</u> 43'43	1°09'26
direct	16371 Jun 14 13:58	26° <u>♏</u> 22'20		minimum elong	16376 Dec 11 22:38	7° <u>♏</u> 43'42	1°10'06
	16371 Aug 20 21:34	0° <u>♏</u>		max. Earth dist.	16376 Dec 12 13:55	7° <u>♏</u> 48'21	10.69538 AU
evening set	16371 Sep 24 09:12	3° <u>♏</u> 51'05		morning rise	16376 Dec 29 07:56	9° <u>♏</u> 49'31	
				retrograde	16377 Apr 12 06:52	17° <u>♏</u> 20'10	
conjunction	16371 Oct 11 10:59	5° <u>♏</u> 56'53	-0°31'19	opposition	16377 Jun 20 19:58	13° <u>♏</u> 56'40	1°34'42
minimum elong	16371 Oct 11 11:00	5° <u>♏</u> 56'54	0°30'59	min. Earth dist.	16377 Jun 20 08:11	13° <u>♏</u> 58'57	8.69875 AU
max. Earth dist.	16371 Oct 12 02:42	6° <u>♏</u> 01'45	10.58821 AU	direct	16377 Aug 28 05:54	10° <u>♏</u> 35'42	
morning rise	16371 Oct 28 14:17	8° <u>♏</u> 03'07		evening set	16377 Dec 07 08:44	17° <u>♏</u> 55'15	
	16372 Jan 12 16:03	15° <u>♏</u>					
retrograde	16372 Feb 09 01:38	15° <u>♏</u> 38'08		conjunction	16377 Dec 24 16:49	20° <u>♏</u> 00'32	1°23'18
	16372 Mar 07 19:54	15° <u>♏</u>		minimum elong	16377 Dec 24 16:48	20° <u>♏</u> 00'31	1°23'57
opposition	16372 Apr 18 18:14	12° <u>♏</u> 14'36	-0°25'20	max. Earth dist.	16377 Dec 25 06:11	20° <u>♏</u> 04'35	10.69874 AU
min. Earth dist.	16372 Apr 18 03:51	12° <u>♏</u> 17'22	8.60384 AU	morning rise	16378 Jan 11 02:57	22° <u>♏</u> 06'26	
direct	16372 Jun 26 14:32	8° <u>♏</u> 53'07		retrograde	16378 Apr 25 01:15	29° <u>♏</u> 36'53	
	16372 Sep 24 23:11	15° <u>♏</u>		opposition	16378 Jul 03 10:48	26° <u>♏</u> 13'22	1°49'28
evening set	16372 Oct 06 01:24	16° <u>♏</u> 18'44		min. Earth dist.	16378 Jul 03 01:06	26° <u>♏</u> 15'15	8.69834 AU
				direct	16378 Sep 09 19:50	22° <u>♏</u> 52'06	
conjunction	16372 Oct 23 04:16	18° <u>♏</u> 24'18	-0°09'58		16378 Dec 18 08:50	0° <u>♏</u>	
minimum elong	16372 Oct 23 04:16	18° <u>♏</u> 24'18	0°09'31	evening set	16378 Dec 20 02:53	0° <u>♏</u> 12'27	
behind sun begin	16372 Oct 22 22:21	18° <u>♏</u> 22'30					
behind sun end	16372 Oct 23 10:11	18° <u>♏</u> 26'06		conjunction	16379 Jan 06 12:04	2° <u>♏</u> 18'00	1°33'22

minimum elong	16379 Jan 06 12:03	2° \approx 18'00	1°33'57	conjunction	16385 Mar 24 00:55	17° Υ 09'01	1°00'29
max. Earth dist.	16379 Jan 06 21:50	2° \approx 20'58	10.69403 AU	minimum elong	16385 Mar 24 00:57	17° Υ 09'01	1°00'22
morning rise	16379 Jan 23 23:09	4° \approx 24'07		morning rise	16385 Apr 10 16:20	19° Υ 18'22	
retrograde	16379 May 07 20:32	11° \approx 54'40		retrograde	16385 Jul 22 08:01	26° Υ 52'46	
opposition	16379 Jul 16 01:13	8° \approx 31'09	1°59'15	opposition	16385 Sep 28 08:54	23° Υ 29'19	1°03'15
min. Earth dist.	16379 Jul 15 18:53	8° \approx 32'23	8.68956 AU	min. Earth dist.	16385 Sep 28 20:19	23° Υ 27'04	8.52459 AU
direct	16379 Sep 22 09:17	5° \approx 09'26		direct	16385 Dec 06 00:47	20° Υ 03'59	
evening set	16380 Jan 01 22:45	12° \approx 31'18		evening set	16386 Mar 19 17:19	27° Υ 42'47	
conjunction	16380 Jan 19 09:07	14° \approx 37'17	1°39'10	conjunction	16386 Apr 06 09:35	29° Υ 52'54	0°41'20
minimum elong	16380 Jan 19 09:06	14° \approx 37'17	1°39'40	minimum elong	16386 Apr 06 09:36	29° Υ 52'54	0°41'05
max. Earth dist.	16380 Jan 19 14:16	14° \approx 38'51	10.68108 AU	max. Earth dist.	16386 Apr 05 17:39	29° Υ 47'59	10.50815 AU
	16380 Jan 22 12:01	15° \approx			16386 Apr 07 08:34	0° \mathcal{B}	
morning rise	16380 Feb 05 21:16	16° \approx 43'47		morning rise	16386 Apr 24 00:49	2° \mathcal{B} 02'45	
retrograde	16380 May 19 16:03	24° \approx 14'39		retrograde	16386 Aug 04 10:44	9° \mathcal{B} 38'04	
opposition	16380 Jul 27 15:33	20° \approx 51'09	2°03'36	opposition	16386 Oct 11 08:43	6° \mathcal{B} 14'41	0°38'09
min. Earth dist.	16380 Jul 27 12:58	20° \approx 51'39	8.67289 AU	min. Earth dist.	16386 Oct 11 21:42	6° \mathcal{B} 12'07	8.49266 AU
direct	16380 Oct 03 23:03	17° \approx 28'53		direct	16386 Dec 19 03:18	2° \mathcal{B} 48'51	
evening set	16381 Jan 13 20:31	24° \approx 52'55		evening set	16387 Apr 02 03:28	10° \mathcal{B} 30'43	
conjunction	16381 Jan 31 08:11	26° \approx 59'29	1°40'23	conjunction	16387 Apr 19 19:33	12° \mathcal{B} 41'19	0°20'02
minimum elong	16381 Jan 31 08:12	26° \approx 59'29	1°40'47	minimum elong	16387 Apr 19 19:34	12° \mathcal{B} 41'19	0°19'39
max. Earth dist.	16381 Jan 31 08:58	26° \approx 59'43	10.66102 AU	max. Earth dist.	16387 Apr 19 02:20	12° \mathcal{B} 35'59	10.47751 AU
morning rise	16381 Feb 17 21:21	29° \approx 06'28		morning rise	16387 May 07 10:04	14° \mathcal{B} 51'32	
	16381 Feb 25 11:35	0° \mathcal{H}			16387 May 08 13:59	15° \mathcal{B}	
retrograde	16381 Jun 01 10:44	6° \mathcal{H} 37'51		retrograde	16387 Aug 17 14:33	22° \mathcal{B} 27'52	
opposition	16381 Aug 09 06:33	3° \mathcal{H} 14'21	2°02'15	opposition	16387 Oct 24 11:03	19° \mathcal{B} 04'32	0°10'58
min. Earth dist.	16381 Aug 09 07:08	3° \mathcal{H} 14'14	8.64983 AU	min. Earth dist.	16387 Oct 25 00:37	19° \mathcal{B} 01'52	8.46346 AU
	16381 Oct 03 21:50	30° \mathcal{R}		direct	16388 Jan 01 09:13	15° \mathcal{B} 38'21	
direct	16381 Oct 16 15:51	29° \approx 51'30		desc. node	16388 Mar 22 06:39	20° \mathcal{B} 39'49	
	16381 Oct 29 08:16	0° \mathcal{H}		evening set	16388 Apr 14 15:13	23° \mathcal{B} 23'02	
evening set	16382 Jan 26 20:11	7° \mathcal{H} 18'04		conjunction	16388 May 02 06:30	25° \mathcal{B} 33'56	-0°02'29
conjunction	16382 Feb 13 09:15	9° \mathcal{H} 25'19	1°36'56	minimum elong	16388 May 02 06:29	25° \mathcal{B} 33'56	0°02'59
minimum elong	16382 Feb 13 09:16	9° \mathcal{H} 25'19	1°37'13	behind sun begin	16388 May 01 23:18	25° \mathcal{B} 31'43	
max. Earth dist.	16382 Feb 13 06:49	9° \mathcal{H} 24'34	10.63544 AU	behind sun end	16388 May 02 13:40	25° \mathcal{B} 36'09	
morning rise	16382 Mar 02 23:13	11° \mathcal{H} 32'51		max. Earth dist.	16388 May 01 13:00	25° \mathcal{B} 28'30	10.45022 AU
retrograde	16382 Jun 14 07:51	19° \mathcal{H} 04'56		morning rise	16388 May 19 19:37	27° \mathcal{B} 44'19	
opposition	16382 Aug 21 22:34	15° \mathcal{H} 41'23	1°55'12		16388 Jun 07 23:53	0° \mathcal{I}	
min. Earth dist.	16382 Aug 22 01:32	15° \mathcal{H} 40'48	8.62195 AU	retrograde	16388 Aug 29 21:12	5° \mathcal{I} 21'45	
direct	16382 Oct 29 09:22	12° \mathcal{H} 17'55		opposition	16388 Nov 05 15:58	1° \mathcal{I} 58'33	-0°16'56
evening set	16383 Feb 08 22:10	19° \mathcal{H} 47'19		min. Earth dist.	16388 Nov 06 05:35	1° \mathcal{I} 55'51	8.43845 AU
conjunction	16383 Feb 26 12:33	21° \mathcal{H} 55'19	1°28'54		16388 Dec 02 08:06	30° \mathcal{R}	
minimum elong	16383 Feb 26 12:35	21° \mathcal{H} 55'20	1°29'04	direct	16389 Jan 13 16:05	28° \mathcal{B} 32'09	
max. Earth dist.	16383 Feb 26 06:55	21° \mathcal{H} 53'36	10.60591 AU	evening set	16389 Feb 24 08:27	0° \mathcal{I}	
morning rise	16383 Mar 16 03:12	24° \mathcal{H} 03'28			16389 Apr 28 04:01	6° \mathcal{I} 19'17	
	16383 May 14 13:29	0° Υ		conjunction	16389 May 15 17:51	8° \mathcal{I} 30'17	-0°24'50
retrograde	16383 Jun 27 07:43	1° Υ 36'15		minimum elong	16389 May 15 17:50	8° \mathcal{I} 30'16	0°25'26
	16383 Aug 10 16:32	30° \mathcal{R}		max. Earth dist.	16389 May 15 00:26	8° \mathcal{I} 24'50	10.42779 AU
opposition	16383 Sep 03 16:00	28° \mathcal{H} 12'43	1°42'38	morning rise	16389 Jun 02 05:13	10° \mathcal{I} 40'39	
min. Earth dist.	16383 Sep 03 21:37	28° \mathcal{H} 11'36	8.59081 AU	retrograde	16389 Sep 12 05:41	18° \mathcal{I} 19'11	
direct	16383 Nov 11 02:59	24° \mathcal{H} 48'36		opposition	16389 Nov 18 23:32	14° \mathcal{I} 56'09	-0°44'08
	16384 Feb 01 17:26	0° Υ		min. Earth dist.	16389 Nov 19 13:09	14° \mathcal{I} 53'28	8.41908 AU
evening set	16384 Feb 22 02:28	2° Υ 21'03		direct	16390 Jan 27 00:40	11° \mathcal{I} 29'42	
				evening set	16390 May 11 17:17	19° \mathcal{I} 18'47	
conjunction	16384 Mar 10 17:53	4° Υ 29'49	1°16'35	conjunction	16390 May 29 05:10	21° \mathcal{I} 29'40	-0°46'03
minimum elong	16384 Mar 10 17:56	4° Υ 29'50	1°16'36	minimum elong	16390 May 29 05:08	21° \mathcal{I} 29'39	0°46'42
max. Earth dist.	16384 Mar 10 08:33	4° Υ 26'58	10.57387 AU	max. Earth dist.	16390 May 28 12:04	21° \mathcal{I} 24'18	10.41148 AU
morning rise	16384 Mar 28 09:04	6° Υ 38'36		morning rise	16390 Jun 15 14:36	23° \mathcal{I} 39'53	
retrograde	16384 Jul 09 07:03	14° Υ 12'09			16390 Aug 17 15:05	0° \mathcal{S}	
opposition	16384 Sep 15 11:23	10° Υ 48'38	1°25'05	retrograde	16390 Sep 25 13:54	1° \mathcal{S} 19'28	
min. Earth dist.	16384 Sep 15 20:01	10° Υ 46'56	8.55783 AU		16390 Nov 04 06:48	30° \mathcal{R}	
direct	16384 Nov 23 00:41	7° Υ 23'53		opposition	16390 Dec 02 09:23	27° \mathcal{I} 56'38	-1°09'11
evening set	16385 Mar 06 08:54	14° Υ 59'32		min. Earth dist.	16390 Dec 02 22:27	27° \mathcal{I} 54'04	8.40632 AU
max. Earth dist.	16385 Mar 23 11:40	17° Υ 04'56	10.54075 AU	direct	16391 Feb 09 12:49	24° \mathcal{I} 30'17	

	16391 May 05 12:40	0°♄	conjunction	16397 Aug 28 05:14	22°♄22'05	-1°28'39
evening set	16391 May 25 06:41	2°♄20'44	minimum elong	16397 Aug 28 05:16	22°♄22'06	1°28'47
			max. Earth dist.	16397 Aug 28 10:53	22°♄23'52	10.49361 AU
conjunction	16391 Jun 11 16:17	4°♄31'17 -1°04'58	morning rise	16397 Sep 14 05:16	24°♄29'04	
minimum elong	16391 Jun 11 16:15	4°♄31'16 1°05'38		16397 Nov 05 10:27	0°♄	
max. Earth dist.	16391 Jun 11 00:29	4°♄26'18 10.40207 AU	retrograde	16397 Dec 26 02:16	2°♄08'21	
morning rise	16391 Jun 28 23:35	6°♄41'10		16398 Feb 16 18:55	30°♄♄	
retrograde	16391 Oct 08 22:40	14°♄21'42	opposition	16398 Mar 05 04:36	28°♄45'52	-1°42'20
opposition	16391 Dec 15 21:05	10°♄59'04 -1°30'43	min. Earth dist.	16398 Mar 04 22:03	28°♄47'07	8.51019 AU
min. Earth dist.	16391 Dec 16 08:37	10°♄56'48 8.40078 AU	direct	16398 May 13 08:12	25°♄23'12	
direct	16392 Feb 23 02:56	7°♄32'58		16398 Jul 29 04:47	0°♄	
evening set	16392 Jun 06 19:20	15°♄23'59	evening set	16398 Aug 24 04:03	3°♄00'31	
conjunction	16392 Jun 24 02:38	17°♄34'04 -1°20'33	conjunction	16398 Sep 10 04:16	5°♄07'04	-1°16'04
minimum elong	16392 Jun 24 02:36	17°♄34'03 1°21'13	minimum elong	16398 Sep 10 04:18	5°♄07'04	1°16'04
max. Earth dist.	16392 Jun 23 13:33	17°♄29'56 10.40009 AU	max. Earth dist.	16398 Sep 10 13:38	5°♄09'59	10.52557 AU
morning rise	16392 Jul 11 07:44	19°♄43'30	morning rise	16398 Sep 27 04:44	7°♄13'40	
retrograde	16392 Oct 21 09:12	27°♄24'46	retrograde	16399 Jan 08 06:37	14°♄51'38	
opposition	16392 Dec 28 10:23	24°♄02'16 -1°47'34	opposition	16399 Mar 18 13:21	11°♄28'59	-1°24'19
min. Earth dist.	16392 Dec 28 19:03	24°♄00'34 8.40277 AU	min. Earth dist.	16399 Mar 18 03:51	11°♄30'49	8.54207 AU
direct	16393 Mar 07 17:00	20°♄36'37	direct	16399 May 26 15:41	8°♄06'54	
evening set	16393 Jun 20 06:29	28°♄27'15	evening set	16399 Sep 06 00:24	15°♄40'25	
	16393 Jul 02 15:12	0°♄				
			conjunction	16399 Sep 23 01:04	17°♄46'34	-0°59'51
conjunction	16393 Jul 07 11:39	0°♄36'46 -1°32'00	minimum elong	16399 Sep 23 01:06	17°♄46'34	0°59'42
minimum elong	16393 Jul 07 11:38	0°♄36'46 1°32'36	max. Earth dist.	16399 Sep 23 13:34	17°♄50'27	10.55717 AU
max. Earth dist.	16393 Jul 07 02:39	0°♄33'56 10.40567 AU	morning rise	16399 Oct 10 02:21	19°♄52'54	
morning rise	16393 Jul 24 14:43	2°♄45'42	retrograde	16400 Jan 21 09:50	27°♄29'33	
retrograde	16393 Nov 03 19:53	10°♄27'23	opposition	16400 Mar 30 19:43	24°♄06'45	-1°02'20
opposition	16394 Jan 11 00:34	7°♄04'58 -1°58'52	min. Earth dist.	16400 Mar 30 08:06	24°♄08'59	8.57254 AU
min. Earth dist.	16394 Jan 11 05:59	7°♄03'55 8.41221 AU	direct	16400 Jun 07 18:38	20°♄45'09	
direct	16394 Mar 21 07:01	3°♄39'51	evening set	16400 Sep 17 18:56	28°♄15'09	
evening set	16394 Jul 03 15:57	11°♄29'15		16400 Oct 02 00:28	0°♄	
conjunction	16394 Jul 20 19:13	13°♄38'08 -1°38'42	conjunction	16400 Oct 04 20:17	0°♄20'59	-0°40'51
minimum elong	16394 Jul 20 19:13	13°♄38'08 1°39'13	minimum elong	16400 Oct 04 20:18	0°♄21'00	0°40'35
max. Earth dist.	16394 Jul 20 14:13	13°♄36'33 10.41859 AU	max. Earth dist.	16400 Oct 05 10:33	0°♄25'24	10.58663 AU
	16394 Jul 31 15:08	15°♄	morning rise	16400 Oct 21 22:47	2°♄27'10	
morning rise	16394 Aug 06 20:38	15°♄46'31	retrograde	16401 Feb 02 10:09	10°♄02'33	
retrograde	16394 Nov 17 05:29	23°♄28'12	opposition	16401 Apr 12 23:30	6°♄39'34	-0°37'32
opposition	16395 Jan 24 14:52	20°♄05'51 -2°04'01	min. Earth dist.	16401 Apr 12 10:59	6°♄41'59	8.60050 AU
min. Earth dist.	16395 Jan 24 17:19	20°♄05'23 8.42867 AU	direct	16401 Jun 20 19:37	3°♄18'20	
direct	16395 Apr 03 21:22	16°♄41'19	evening set	16401 Sep 30 12:01	10°♄45'13	
evening set	16395 Jul 16 23:09	24°♄28'39				
			conjunction	16401 Oct 17 14:12	12°♄50'49	-0°20'01
conjunction	16395 Aug 03 00:49	26°♄36'53 -1°40'20	minimum elong	16401 Oct 17 14:13	12°♄50'49	0°19'38
minimum elong	16395 Aug 03 00:49	26°♄36'53 1°40'45	max. Earth dist.	16401 Oct 18 05:14	12°♄55'26	10.61325 AU
max. Earth dist.	16395 Aug 02 23:28	26°♄36'27 10.43829 AU	morning rise	16401 Nov 03 18:09	14°♄56'53	
morning rise	16395 Aug 20 01:10	28°♄44'44		16401 Nov 04 04:31	15°♄	
	16395 Aug 30 09:14	0°♄	retrograde	16402 Feb 15 08:25	22°♄31'05	
retrograde	16395 Nov 30 14:49	6°♄25'59	min. Earth dist.	16402 Apr 25 11:40	19°♄10'25	8.62536 AU
opposition	16396 Feb 07 04:56	3°♄03'40 -2°02'49	opposition	16402 Apr 26 00:48	19°♄07'54	-0°11'07
min. Earth dist.	16396 Feb 07 04:35	3°♄03'44 8.45140 AU	direct	16402 Jul 03 19:22	15°♄46'51	
	16396 Mar 27 13:08	30°♄♄	asc. node	16402 Sep 30 15:51	21°♄42'47	
direct	16396 Apr 16 10:09	29°♄39'46	evening set	16402 Oct 13 03:57	23°♄11'04	
	16396 May 06 04:41	0°♄				
evening set	16396 Jul 29 03:30	7°♄24'14	conjunction	16402 Oct 30 07:11	25°♄16'29	0°01'45
			minimum elong	16402 Oct 30 07:10	25°♄16'29	0°02'14
conjunction	16396 Aug 15 04:04	9°♄31'50 -1°36'54	behind sun begin	16402 Oct 30 00:04	25°♄14'19	
minimum elong	16396 Aug 15 04:06	9°♄31'50 1°37'11	behind sun end	16402 Oct 30 14:16	25°♄18'38	
max. Earth dist.	16396 Aug 15 06:03	9°♄32'27 10.46380 AU	max. Earth dist.	16402 Oct 30 23:05	25°♄21'22	10.63635 AU
morning rise	16396 Sep 01 04:01	11°♄39'13	morning rise	16402 Nov 16 12:27	27°♄22'27	
retrograde	16396 Dec 12 21:52	19°♄19'39		16402 Dec 09 09:13	0°♄	
opposition	16397 Feb 19 17:47	15°♄57'17 -1°55'26	retrograde	16403 Feb 28 05:43	4°♄55'38	
min. Earth dist.	16397 Feb 19 14:29	15°♄57'55 8.47918 AU	opposition	16403 May 08 23:35	1°♄32'11	0°15'40
direct	16397 Apr 29 21:46	12°♄34'01	min. Earth dist.	16403 May 08 09:47	1°♄34'51	8.64646 AU
evening set	16397 Aug 11 05:08	20°♄15'04		16403 May 29 17:33	30°♄♄	

direct	16403 Jul 16 16:01	28° \mathbb{M} 11'14		direct	16409 Sep 28 12:36	12° \approx 00'33	
	16403 Sep 01 04:26	0° \mathbb{A}			16409 Nov 28 05:57	15° \approx	
evening set	16403 Oct 25 19:23	5° \mathbb{A} 33'20		evening set	16410 Jan 08 05:23	19° \approx 24'18	
conjunction	16403 Nov 11 23:45	7° \mathbb{A} 38'37	0°23'13	conjunction	16410 Jan 25 16:38	21° \approx 30'50	1°40'27
minimum elong	16403 Nov 11 23:45	7° \mathbb{A} 38'37	0°23'47	minimum elong	16410 Jan 25 16:38	21° \approx 30'50	1°40'54
max. Earth dist.	16403 Nov 12 16:42	7° \mathbb{A} 43'48	10.65522 AU	max. Earth dist.	16410 Jan 25 21:01	21° \approx 32'10	10.64860 AU
morning rise	16403 Nov 29 06:14	9° \mathbb{A} 44'32		morning rise	16410 Feb 12 05:16	23° \approx 37'49	
retrograde	16404 Mar 12 01:44	17° \mathbb{A} 16'52			16410 Apr 19 14:54	0° \mathbb{H}	
opposition	16404 May 20 19:57	13° \mathbb{A} 53'10	0°41'36	retrograde	16410 May 26 21:20	1° \mathbb{H} 09'48	
min. Earth dist.	16404 May 20 05:38	13° \mathbb{A} 55'55	8.66305 AU		16410 Jul 03 12:17	30° \mathbb{R} \approx	
direct	16404 Jul 28 10:43	10° \mathbb{A} 32'10		opposition	16410 Aug 03 19:08	27° \approx 45'37	2°03'42
evening set	16404 Nov 06 10:45	17° \mathbb{A} 52'49		min. Earth dist.	16410 Aug 03 16:54	27° \approx 46'03	8.63972 AU
				direct	16410 Oct 11 03:50	24° \approx 22'28	
conjunction	16404 Nov 23 16:14	19° \mathbb{A} 58'04	0°43'34		16411 Jan 05 14:03	0° \mathbb{H}	
minimum elong	16404 Nov 23 16:13	19° \mathbb{A} 58'03	0°44'13	evening set	16411 Jan 21 04:27	1° \mathbb{H} 48'33	
max. Earth dist.	16404 Nov 24 09:09	20° \mathbb{A} 03'13	10.66908 AU				
morning rise	16404 Dec 10 23:52	22° \mathbb{A} 03'57		conjunction	16411 Feb 07 16:58	3° \mathbb{H} 55'42	1°39'08
retrograde	16405 Mar 24 21:56	29° \mathbb{A} 35'39		minimum elong	16411 Feb 07 16:59	3° \mathbb{H} 55'42	1°39'28
opposition	16405 Jun 02 14:19	26° \mathbb{A} 11'45	1°05'32	max. Earth dist.	16411 Feb 07 17:05	3° \mathbb{H} 55'44	10.62764 AU
min. Earth dist.	16405 Jun 02 00:48	26° \mathbb{A} 14'22	8.67429 AU	morning rise	16411 Feb 25 06:36	6° \mathbb{H} 03'12	
direct	16405 Aug 10 02:57	22° \mathbb{A} 50'36		retrograde	16411 Jun 08 19:00	13° \mathbb{H} 35'46	
	16405 Nov 17 15:15	0° \mathbb{B}		opposition	16411 Aug 16 11:10	10° \mathbb{H} 11'42	1°59'13
evening set	16405 Nov 19 02:37	0° \mathbb{B} 10'31		min. Earth dist.	16411 Aug 16 12:30	10° \mathbb{H} 11'26	8.61662 AU
				direct	16411 Oct 23 19:52	6° \mathbb{H} 48'03	
conjunction	16405 Dec 06 09:03	2° \mathbb{B} 15'47	1°01'53	evening set	16412 Feb 03 05:54	14° \mathbb{H} 16'52	
minimum elong	16405 Dec 06 09:01	2° \mathbb{B} 15'47	1°02'33				
max. Earth dist.	16405 Dec 07 00:12	2° \mathbb{B} 20'24	10.67722 AU	conjunction	16412 Feb 20 19:40	16° \mathbb{H} 24'43	1°33'09
morning rise	16405 Dec 23 17:48	4° \mathbb{B} 21'43		minimum elong	16412 Feb 20 19:42	16° \mathbb{H} 24'44	1°33'21
retrograde	16406 Apr 06 17:16	11° \mathbb{B} 53'00		max. Earth dist.	16412 Feb 20 15:28	16° \mathbb{H} 23'26	10.60290 AU
opposition	16406 Jun 15 07:03	8° \mathbb{B} 28'58	1°26'24	morning rise	16412 Mar 09 10:13	18° \mathbb{H} 32'50	
min. Earth dist.	16406 Jun 14 19:28	8° \mathbb{B} 31'13	8.67964 AU	retrograde	16412 Jun 20 17:13	26° \mathbb{H} 06'01	
direct	16406 Aug 22 17:00	5° \mathbb{B} 07'32		opposition	16412 Aug 28 04:21	22° \mathbb{H} 42'09	1°49'04
evening set	16406 Dec 01 19:15	12° \mathbb{B} 27'28		min. Earth dist.	16412 Aug 28 08:48	22° \mathbb{H} 41'17	8.59023 AU
				direct	16412 Nov 04 14:09	19° \mathbb{H} 18'02	
conjunction	16406 Dec 19 02:41	14° \mathbb{B} 32'51	1°17'21	evening set	16413 Feb 15 09:39	26° \mathbb{H} 49'52	
minimum elong	16406 Dec 19 02:40	14° \mathbb{B} 32'50	1°18'01				
max. Earth dist.	16406 Dec 19 15:10	14° \mathbb{B} 36'39	10.67931 AU	conjunction	16413 Mar 05 00:36	28° \mathbb{H} 58'28	1°22'41
morning rise	16407 Jan 05 12:34	16° \mathbb{B} 38'54		minimum elong	16413 Mar 05 00:38	28° \mathbb{H} 58'29	1°22'46
retrograde	16407 Apr 19 10:38	24° \mathbb{B} 10'03		max. Earth dist.	16413 Mar 04 17:08	28° \mathbb{H} 56'11	10.57553 AU
opposition	16407 Jun 27 22:40	20° \mathbb{B} 45'54	1°43'19		16413 Mar 13 09:43	0° \mathbb{Y}	
min. Earth dist.	16407 Jun 27 13:27	20° \mathbb{B} 47'42	8.67883 AU	morning rise	16413 Mar 22 15:47	1° \mathbb{Y} 07'11	
direct	16407 Sep 04 08:25	17° \mathbb{B} 24'07		retrograde	16413 Jul 03 15:59	8° \mathbb{Y} 41'09	
evening set	16407 Dec 14 12:55	24° \mathbb{B} 44'43		opposition	16413 Sep 09 23:26	5° \mathbb{Y} 17'30	1°33'39
				min. Earth dist.	16413 Sep 10 06:08	5° \mathbb{Y} 16'10	8.56182 AU
conjunction	16407 Dec 31 21:35	26° \mathbb{B} 50'21	1°29'16	direct	16413 Nov 17 12:17	1° \mathbb{Y} 52'58	
minimum elong	16407 Dec 31 21:34	26° \mathbb{B} 50'21	1°29'53	evening set	16414 Feb 28 15:33	9° \mathbb{Y} 27'54	
max. Earth dist.	16408 Jan 01 07:37	26° \mathbb{B} 53'24	10.67515 AU				
morning rise	16408 Jan 18 08:29	28° \mathbb{B} 56'37		conjunction	16414 Mar 18 07:28	11° \mathbb{Y} 37'15	1°08'11
	16408 Jan 27 08:53	0° \approx		minimum elong	16414 Mar 18 07:30	11° \mathbb{Y} 37'16	1°08'08
retrograde	16408 May 01 05:16	6° \approx 27'51		max. Earth dist.	16414 Mar 17 21:35	11° \mathbb{Y} 34'13	10.54679 AU
opposition	16408 Jul 09 13:30	3° \approx 03'39	1°55'30	morning rise	16414 Apr 04 22:54	13° \mathbb{Y} 46'32	
min. Earth dist.	16408 Jul 09 06:16	3° \approx 05'03	8.67168 AU	retrograde	16414 Jul 16 18:32	21° \mathbb{Y} 21'21	
	16408 Aug 28 00:26	30° \mathbb{R} \mathbb{B}		opposition	16414 Sep 22 20:36	17° \mathbb{Y} 57'55	1°13'35
direct	16408 Sep 15 23:06	29° \mathbb{B} 41'26		min. Earth dist.	16414 Sep 23 05:07	17° \mathbb{Y} 56'15	8.53268 AU
	16408 Oct 04 18:03	0° \approx		direct	16414 Nov 30 10:37	14° \mathbb{Y} 33'02	
evening set	16408 Dec 26 08:14	7° \approx 03'19		evening set	16415 Mar 13 23:55	22° \mathbb{Y} 11'05	
conjunction	16409 Jan 12 18:13	9° \approx 09'21	1°37'06	conjunction	16415 Mar 31 16:20	24° \mathbb{Y} 21'06	0°50'17
minimum elong	16409 Jan 12 18:13	9° \approx 09'21	1°37'38	minimum elong	16415 Mar 31 16:22	24° \mathbb{Y} 21'07	0°50'05
max. Earth dist.	16409 Jan 13 01:49	9° \approx 11'40	10.66473 AU	max. Earth dist.	16415 Mar 31 03:56	24° \mathbb{Y} 17'16	10.51798 AU
morning rise	16409 Jan 30 05:58	11° \approx 15'56		morning rise	16415 Apr 18 07:40	26° \mathbb{Y} 30'54	
	16409 Mar 05 03:16	15° \approx			16415 May 19 02:26	0° \mathbb{B}	
retrograde	16409 May 14 01:19	18° \approx 47'26		retrograde	16415 Jul 29 22:39	4° \mathbb{B} 06'31	
opposition	16409 Jul 22 04:02	15° \approx 23'13	2°02'25	opposition	16415 Oct 05 20:03	0° \mathbb{B} 43'20	0°49'46
min. Earth dist.	16409 Jul 21 22:59	15° \approx 24'12	8.65840 AU	min. Earth dist.	16415 Oct 06 06:46	0° \mathbb{B} 41'13	8.50414 AU
	16409 Jul 27 03:09	15° \mathbb{R} \approx			16415 Oct 15 01:14	30° \mathbb{R} \mathbb{Y}	

direct	16415 Dec 13 11:20	27° Υ 18'05		morning rise	16421 Jul 05 19:22	14° \mathfrak{D} 15'30	
	16416 Feb 09 00:36	0° \mathfrak{B}		retrograde	16421 Oct 15 22:24	21° \mathfrak{D} 57'12	
evening set	16416 Mar 26 10:22	4° \mathfrak{B} 59'12		opposition	16421 Dec 22 19:53	18° \mathfrak{D} 34'51	-1°40'43
max. Earth dist.	16416 Apr 12 11:27	7° \mathfrak{B} 05'00	10.49035 AU	min. Earth dist.	16421 Dec 23 06:44	18° \mathfrak{D} 32'44	8.39580 AU
				direct	16422 Mar 02 00:05	15° \mathfrak{D} 09'09	
conjunction	16416 Apr 13 02:40	7° \mathfrak{B} 09'43	0°29'47	evening set	16422 Jun 14 17:50	23° \mathfrak{D} 00'50	
minimum elong	16416 Apr 13 02:41	7° \mathfrak{B} 09'43	0°29'27				
morning rise	16416 Apr 30 17:30	9° \mathfrak{B} 19'54		conjunction	16422 Jul 01 24:00	25° \mathfrak{D} 10'48	-1°27'28
	16416 Jun 24 08:17	15° \mathfrak{B}		minimum elong	16422 Jul 01 23:58	25° \mathfrak{D} 10'47	1°28'05
retrograde	16416 Aug 11 02:40	16° \mathfrak{B} 56'21		max. Earth dist.	16422 Jul 01 11:35	25° \mathfrak{D} 06'53	10.39468 AU
	16416 Sep 29 00:20	15° \mathfrak{R} \mathfrak{B}		morning rise	16422 Jul 19 04:01	27° \mathfrak{D} 20'09	
opposition	16416 Oct 17 22:07	13° \mathfrak{B} 33'24	0°23'19		16422 Aug 10 15:24	0° \mathfrak{Q}	
min. Earth dist.	16416 Oct 18 10:52	13° \mathfrak{B} 30'53	8.47744 AU	retrograde	16422 Oct 29 08:54	5° \mathfrak{Q} 02'29	
direct	16416 Dec 25 16:41	10° \mathfrak{B} 07'49		opposition	16423 Jan 05 10:42	1° \mathfrak{Q} 40'06	-1°54'36
	16417 Mar 15 05:28	15° \mathfrak{B}		min. Earth dist.	16423 Jan 05 19:26	1° \mathfrak{Q} 38'24	8.39720 AU
evening set	16417 Apr 08 22:13	17° \mathfrak{B} 51'45			16423 Jan 27 17:51	30° \mathfrak{R} \mathfrak{D}	
				direct	16423 Mar 15 16:01	28° \mathfrak{D} 14'40	
conjunction	16417 Apr 26 13:48	20° \mathfrak{B} 02'35	0°07'44		16423 Apr 30 10:52	0° \mathfrak{Q}	
minimum elong	16417 Apr 26 13:49	20° \mathfrak{B} 02'35	0°07'17	evening set	16423 Jun 28 05:09	6° \mathfrak{Q} 05'39	
behind sun begin	16417 Apr 26 07:12	20° \mathfrak{B} 00'33					
behind sun end	16417 Apr 26 20:25	20° \mathfrak{B} 04'37		conjunction	16423 Jul 15 09:11	8° \mathfrak{Q} 15'01	-1°36'19
max. Earth dist.	16417 Apr 25 20:29	19° \mathfrak{B} 57'13	10.46496 AU	minimum elong	16423 Jul 15 09:10	8° \mathfrak{Q} 15'01	1°36'52
morning rise	16417 May 14 03:40	22° \mathfrak{B} 12'58		max. Earth dist.	16423 Jul 15 00:03	8° \mathfrak{Q} 12'07	10.39974 AU
retrograde	16417 Aug 24 08:12	29° \mathfrak{B} 50'19		morning rise	16423 Aug 01 11:30	10° \mathfrak{Q} 23'53	
desc. node	16417 Sep 01 16:07	29° \mathfrak{B} 46'37			16423 Sep 11 15:34	15° \mathfrak{Q}	
opposition	16417 Oct 31 02:38	26° \mathfrak{B} 27'34	-0°04'28	retrograde	16423 Nov 11 18:27	18° \mathfrak{Q} 06'29	
min. Earth dist.	16417 Oct 31 16:40	26° \mathfrak{B} 24'48	8.45342 AU		16424 Jan 15 15:39	15° \mathfrak{R} \mathfrak{Q}	
direct	16418 Jan 08 00:17	23° \mathfrak{B} 01'43		opposition	16424 Jan 19 01:58	14° \mathfrak{Q} 43'58	-2°02'31
	16418 Apr 15 20:01	0° \mathfrak{I}		min. Earth dist.	16424 Jan 19 07:26	14° \mathfrak{Q} 42'54	8.40615 AU
evening set	16418 Apr 22 11:15	0° \mathfrak{I} 48'07		direct	16424 Mar 28 08:49	11° \mathfrak{Q} 18'53	
max. Earth dist.	16418 May 09 07:20	2° \mathfrak{I} 53'24	10.44237 AU		16424 Jun 04 04:38	15° \mathfrak{Q}	
				evening set	16424 Jul 10 14:08	19° \mathfrak{Q} 08'11	
conjunction	16418 May 10 01:39	2° \mathfrak{I} 59'07	-0°14'56				
minimum elong	16418 May 10 01:39	2° \mathfrak{I} 59'07	0°15'28	conjunction	16424 Jul 27 16:32	21° \mathfrak{Q} 16'57	-1°40'12
behind sun begin	16418 May 09 23:51	2° \mathfrak{I} 58'33		minimum elong	16424 Jul 27 16:32	21° \mathfrak{Q} 16'57	1°40'39
behind sun end	16418 May 10 03:27	2° \mathfrak{I} 59'40		max. Earth dist.	16424 Jul 27 11:52	21° \mathfrak{Q} 15'28	10.41232 AU
morning rise	16418 May 27 14:03	5° \mathfrak{I} 09'33		morning rise	16424 Aug 13 17:32	23° \mathfrak{Q} 25'17	
retrograde	16418 Sep 06 15:30	12° \mathfrak{I} 47'52			16424 Oct 19 03:30	0° \mathfrak{R}	
opposition	16418 Nov 13 09:23	9° \mathfrak{I} 25'15	-0°32'11	retrograde	16424 Nov 24 04:45	1° \mathfrak{R} 07'44	
min. Earth dist.	16418 Nov 13 23:37	9° \mathfrak{I} 22'26	8.43236 AU		16424 Dec 31 00:32	30° \mathfrak{R} \mathfrak{Q}	
direct	16419 Jan 21 09:41	5° \mathfrak{I} 59'16		opposition	16425 Jan 31 17:01	27° \mathfrak{Q} 45'00	-2°04'06
evening set	16419 May 06 00:59	13° \mathfrak{I} 47'50		min. Earth dist.	16425 Jan 31 18:34	27° \mathfrak{Q} 44'42	8.42228 AU
				direct	16425 Apr 10 23:35	24° \mathfrak{Q} 20'22	
conjunction	16419 May 23 13:49	15° \mathfrak{I} 58'49	-0°36'49		16425 Jul 06 03:10	0° \mathfrak{R}	
minimum elong	16419 May 23 13:48	15° \mathfrak{I} 58'48	0°37'26	evening set	16425 Jul 23 20:21	2° \mathfrak{R} 07'07	
max. Earth dist.	16419 May 22 19:57	15° \mathfrak{I} 53'13	10.42273 AU				
morning rise	16419 Jun 10 00:15	18° \mathfrak{I} 09'10		conjunction	16425 Aug 09 21:38	4° \mathfrak{R} 15'17	-1°38'57
retrograde	16419 Sep 20 00:17	25° \mathfrak{I} 48'38		minimum elong	16425 Aug 09 21:39	4° \mathfrak{R} 15'17	1°39'16
opposition	16419 Nov 26 18:41	22° \mathfrak{I} 26'09	-0°58'22	max. Earth dist.	16425 Aug 09 21:51	4° \mathfrak{R} 15'21	10.43177 AU
min. Earth dist.	16419 Nov 27 08:12	22° \mathfrak{I} 23'29	8.41463 AU	morning rise	16425 Aug 26 21:49	6° \mathfrak{R} 23'09	
direct	16420 Feb 03 21:16	19° \mathfrak{I} 00'10		retrograde	16425 Dec 07 13:47	14° \mathfrak{R} 04'58	
evening set	16420 May 18 15:02	26° \mathfrak{I} 50'31		opposition	16426 Feb 14 07:04	10° \mathfrak{R} 42'03	-1°59'20
max. Earth dist.	16420 Jun 04 09:19	28° \mathfrak{I} 56'06	10.40703 AU	min. Earth dist.	16426 Feb 14 04:46	10° \mathfrak{R} 42'29	8.44468 AU
				direct	16426 Apr 24 12:19	7° \mathfrak{R} 17'55	
conjunction	16420 Jun 05 01:49	29° \mathfrak{I} 01'18	-0°56'54	evening set	16426 Aug 05 23:55	15° \mathfrak{R} 01'30	
minimum elong	16420 Jun 05 01:48	29° \mathfrak{I} 01'17	0°57'33				
	16420 Jun 12 20:29	0° \mathfrak{D}		conjunction	16426 Aug 23 00:28	17° \mathfrak{R} 09'05	-1°32'42
morning rise	16420 Jun 22 10:00	1° \mathfrak{D} 11'25		minimum elong	16426 Aug 23 00:30	17° \mathfrak{R} 09'05	1°32'53
retrograde	16420 Oct 02 10:52	8° \mathfrak{D} 52'06		max. Earth dist.	16426 Aug 23 05:01	17° \mathfrak{R} 10'30	10.45699 AU
opposition	16420 Dec 09 06:21	5° \mathfrak{D} 29'43	-1°21'38	morning rise	16426 Sep 09 00:24	19° \mathfrak{R} 16'31	
min. Earth dist.	16420 Dec 09 18:42	5° \mathfrak{D} 27'18	8.40186 AU	retrograde	16426 Dec 20 20:38	26° \mathfrak{R} 57'20	
direct	16421 Feb 16 10:16	2° \mathfrak{D} 03'51		opposition	16427 Feb 27 19:31	23° \mathfrak{R} 34'14	-1°48'34
evening set	16421 Jun 01 04:55	9° \mathfrak{D} 55'17		min. Earth dist.	16427 Feb 27 14:11	23° \mathfrak{R} 35'16	8.47216 AU
				direct	16427 May 07 23:22	20° \mathfrak{R} 10'39	
conjunction	16421 Jun 18 13:23	12° \mathfrak{D} 05'44	-1°14'05	evening set	16427 Aug 19 00:39	27° \mathfrak{R} 50'38	
minimum elong	16421 Jun 18 13:22	12° \mathfrak{D} 05'43	1°14'44				
max. Earth dist.	16421 Jun 17 22:47	12° \mathfrak{D} 01'07	10.39724 AU	conjunction	16427 Sep 05 00:54	29° \mathfrak{R} 57'41	-1°21'51

minimum elong	16427 Sep 05 00:56	29° \overline{m} 57'42	1°21'54	opposition	16433 May 15 18:40	8° \overline{x} 56'48	0°30'55
max. Earth dist.	16427 Sep 05 08:42	0° \underline{a} 00'08	10.48670 AU	min. Earth dist.	16433 May 15 03:29	8° \overline{x} 59'43	8.65745 AU
	16427 Sep 05 08:17	0° \underline{a}		direct	16433 Jul 23 09:20	5° \overline{x} 35'52	
morning rise	16427 Sep 22 01:14	2° \underline{a} 04'45		evening set	16433 Nov 01 11:26	12° \overline{x} 56'59	
retrograde	16428 Jan 03 02:00	9° \underline{a} 44'19					
opposition	16428 Mar 12 06:02	6° \underline{a} 21'04	-1°32'29	conjunction	16433 Nov 18 16:15	15° \overline{x} 02'10	0°35'13
min. Earth dist.	16428 Mar 11 22:04	6° \underline{a} 22'36	8.50336 AU	minimum elong	16433 Nov 18 16:14	15° \overline{x} 02'10	0°35'49
direct	16428 May 20 08:04	2° \underline{a} 58'02		max. Earth dist.	16433 Nov 19 09:55	15° \overline{x} 07'34	10.66825 AU
evening set	16428 Aug 30 22:35	10° \underline{a} 34'11		morning rise	16433 Dec 05 23:29	17° \overline{x} 08'00	
				retrograde	16434 Mar 19 19:46	24° \overline{x} 39'38	
conjunction	16428 Sep 16 23:02	12° \underline{a} 40'48	-1°07'02	opposition	16434 May 28 13:45	21° \overline{x} 16'03	0°55'44
minimum elong	16428 Sep 16 23:04	12° \underline{a} 40'48	1°06'57	min. Earth dist.	16434 May 27 23:15	21° \overline{x} 18'51	8.67815 AU
max. Earth dist.	16428 Sep 17 09:49	12° \underline{a} 44'10	10.51934 AU	direct	16434 Aug 05 03:10	17° \overline{x} 55'14	
morning rise	16428 Oct 04 00:13	14° \underline{a} 47'34		evening set	16434 Nov 14 02:39	25° \overline{x} 15'04	
retrograde	16429 Jan 15 04:43	22° \underline{a} 25'41					
opposition	16429 Mar 25 13:59	19° \underline{a} 02'18	-1°11'59	conjunction	16434 Dec 01 08:34	27° \overline{x} 20'10	0°54'26
min. Earth dist.	16429 Mar 25 03:29	19° \underline{a} 04'19	8.53658 AU	minimum elong	16434 Dec 01 08:32	27° \overline{x} 20'10	0°55'05
direct	16429 Jun 02 13:53	15° \underline{a} 39'49		max. Earth dist.	16434 Dec 02 01:49	27° \overline{x} 25'26	10.68595 AU
evening set	16429 Sep 12 18:16	23° \underline{a} 12'12		morning rise	16434 Dec 18 16:50	29° \overline{x} 25'57	
					16434 Dec 23 12:07	0° \overline{z}	
conjunction	16429 Sep 29 19:22	25° \underline{a} 18'24	-0°49'04	retrograde	16435 Apr 01 15:15	6° \overline{z} 56'53	
minimum elong	16429 Sep 29 19:24	25° \underline{a} 18'24	0°48'51	opposition	16435 Jun 10 06:55	3° \overline{z} 33'19	1°17'55
max. Earth dist.	16429 Sep 30 09:08	25° \underline{a} 22'40	10.55310 AU	min. Earth dist.	16435 Jun 09 17:04	3° \overline{z} 36'00	8.69299 AU
morning rise	16429 Oct 16 21:35	27° \underline{a} 24'54		direct	16435 Aug 17 18:10	0° \overline{z} 12'30	
	16429 Nov 08 02:38	0° \overline{m}		evening set	16435 Nov 26 18:36	7° \overline{z} 31'46	
retrograde	16430 Jan 28 05:12	5° \overline{m} 01'31					
opposition	16430 Apr 07 19:04	1° \overline{m} 38'01	-0°48'10	conjunction	16435 Dec 14 01:37	9° \overline{z} 36'53	1°11'07
min. Earth dist.	16430 Apr 07 05:57	1° \overline{m} 40'32	8.57007 AU	minimum elong	16435 Dec 14 01:36	9° \overline{z} 36'52	1°11'46
	16430 Apr 29 22:31	30° \overline{r} \underline{a}		max. Earth dist.	16435 Dec 14 17:45	9° \overline{z} 41'47	10.69732 AU
direct	16430 Jun 15 17:51	28° \underline{a} 16'04		morning rise	16435 Dec 31 10:49	11° \overline{z} 42'39	
	16430 Jul 31 03:03	0° \overline{m}		retrograde	16436 Apr 13 09:17	19° \overline{z} 13'06	
evening set	16430 Sep 25 12:07	5° \overline{m} 44'53		opposition	16436 Jun 21 22:27	15° \overline{z} 49'34	1°36'30
				min. Earth dist.	16436 Jun 21 10:08	15° \overline{z} 51'57	8.70114 AU
conjunction	16430 Oct 12 14:07	7° \overline{m} 50'46	-0°28'52	direct	16436 Aug 29 08:44	12° \overline{z} 28'36	
minimum elong	16430 Oct 12 14:08	7° \overline{m} 50'46	0°28'31	evening set	16436 Dec 08 11:32	19° \overline{z} 47'59	
max. Earth dist.	16430 Oct 13 06:53	7° \overline{m} 55'57	10.58627 AU				
morning rise	16430 Oct 29 17:27	9° \overline{m} 57'02		conjunction	16436 Dec 25 19:36	21° \overline{z} 53'13	1°24'33
	16430 Dec 16 04:19	15° \overline{m}		minimum elong	16436 Dec 25 19:35	21° \overline{z} 53'13	1°25'11
retrograde	16431 Feb 10 05:42	17° \overline{m} 32'12		max. Earth dist.	16436 Dec 26 09:03	21° \overline{z} 57'18	10.70161 AU
	16431 Apr 09 15:50	15° \overline{r} \overline{m}		morning rise	16437 Jan 12 05:46	23° \overline{z} 59'04	
opposition	16431 Apr 20 21:35	14° \overline{m} 08'36	-0°22'15		16437 Mar 14 13:03	0° \approx	
min. Earth dist.	16431 Apr 20 06:29	14° \overline{m} 11'31	8.60226 AU	retrograde	16437 Apr 26 04:15	1° \approx 29'14	
direct	16431 Jun 28 18:07	10° \overline{m} 47'07			16437 Jun 08 09:57	30° \overline{r} \overline{z}	
	16431 Sep 09 20:29	15° \overline{m}		opposition	16437 Jul 04 13:04	28° \overline{z} 05'45	1°50'41
evening set	16431 Oct 08 04:27	18° \overline{m} 12'45		min. Earth dist.	16437 Jul 04 03:36	28° \overline{z} 07'35	8.70179 AU
				direct	16437 Sep 10 21:56	24° \overline{z} 44'27	
conjunction	16431 Oct 25 07:23	20° \overline{m} 18'21	-0°07'27		16437 Dec 03 03:06	0° \approx	
minimum elong	16431 Oct 25 07:23	20° \overline{m} 18'21	0°07'00	evening set	16437 Dec 21 05:37	2° \approx 04'36	
behind sun begin	16431 Oct 25 00:48	20° \overline{m} 16'21					
behind sun end	16431 Oct 25 13:58	20° \overline{m} 20'21		conjunction	16438 Jan 07 14:42	4° \approx 10'05	1°34'07
max. Earth dist.	16431 Oct 26 01:46	20° \overline{m} 24'00	10.61735 AU	minimum elong	16438 Jan 07 14:41	4° \approx 10'05	1°34'41
morning rise	16431 Nov 11 11:59	22° \overline{m} 24'26		max. Earth dist.	16438 Jan 07 23:51	4° \approx 12'51	10.69808 AU
retrograde	16432 Feb 23 05:05	29° \overline{m} 58'15		morning rise	16438 Jan 25 01:52	6° \approx 16'09	
asc. node	16432 Mar 01 03:35	29° \overline{m} 55'46		retrograde	16438 May 08 22:44	13° \approx 46'17	
opposition	16432 May 02 21:27	26° \overline{m} 34'37	0°04'31	opposition	16438 Jul 17 03:11	10° \approx 22'48	1°59'51
min. Earth dist.	16432 May 02 05:45	26° \overline{m} 37'39	8.63179 AU	min. Earth dist.	16438 Jul 16 21:21	10° \approx 23'56	8.69425 AU
direct	16432 Jul 10 13:39	23° \overline{m} 13'29		direct	16438 Sep 23 10:58	7° \approx 01'04	
	16432 Oct 14 17:27	0° \overline{x}		evening set	16439 Jan 03 01:09	14° \approx 22'40	
evening set	16432 Oct 19 20:08	0° \overline{x} 36'30			16439 Jan 08 06:22	15° \approx	
conjunction	16432 Nov 05 23:58	2° \overline{x} 41'52	0°14'19	conjunction	16439 Jan 20 11:30	16° \approx 28'33	1°39'24
minimum elong	16432 Nov 05 23:58	2° \overline{x} 41'52	0°14'51	minimum elong	16439 Jan 20 11:30	16° \approx 28'33	1°39'53
behind sun begin	16432 Nov 05 21:09	2° \overline{x} 41'01		max. Earth dist.	16439 Jan 20 16:25	16° \approx 30'03	10.68628 AU
behind sun end	16432 Nov 06 02:47	2° \overline{x} 42'43		morning rise	16439 Feb 06 23:41	18° \approx 34'58	
max. Earth dist.	16432 Nov 06 18:24	2° \overline{x} 47'30	10.64506 AU	retrograde	16439 May 21 15:56	26° \approx 05'22	
morning rise	16432 Nov 23 05:57	4° \overline{x} 47'49		opposition	16439 Jul 29 17:12	22° \approx 41'54	2°03'32
retrograde	16433 Mar 07 00:32	12° \overline{x} 20'24		min. Earth dist.	16439 Jul 29 14:37	22° \approx 42'24	8.67844 AU

direct	16439 Oct 06 02:35	19° \approx 19'39		conjunction	16446 Apr 20 20:24	14° \approx 28'37	0°17'43
evening set	16440 Jan 15 22:30	26° \approx 43'20		minimum elong	16446 Apr 20 20:24	14° \approx 28'37	0°17'19
				max. Earth dist.	16446 Apr 20 03:31	14° \approx 23'23	10.47872 AU
conjunction	16440 Feb 02 10:18	28° \approx 49'49	1°40'06		16446 Apr 25 01:33	15° \approx	
minimum elong	16440 Feb 02 10:18	28° \approx 49'49	1°40'28	morning rise	16446 May 08 10:43	16° \approx 38'47	
max. Earth dist.	16440 Feb 02 11:35	28° \approx 50'13	10.66672 AU	retrograde	16446 Aug 18 16:23	24° \approx 15'06	
	16440 Feb 12 01:59	0° \approx		opposition	16446 Oct 25 11:37	20° \approx 51'51	0°08'05
morning rise	16440 Feb 19 23:23	0° \approx 56'41		min. Earth dist.	16446 Oct 26 01:09	20° \approx 49'11	8.46409 AU
retrograde	16440 Jun 02 12:17	8° \approx 27'38		direct	16447 Jan 02 08:43	17° \approx 25'44	
opposition	16440 Aug 10 07:47	5° \approx 04'10	2°01'33	desc. node	16447 Feb 12 10:28	18° \approx 51'02	
min. Earth dist.	16440 Aug 10 07:54	5° \approx 04'09	8.65550 AU	evening set	16447 Apr 16 16:03	25° \approx 10'26	
direct	16440 Oct 17 17:40	1° \approx 41'21					
evening set	16441 Jan 27 22:01	9° \approx 07'35		conjunction	16447 May 04 07:15	27° \approx 21'21	-0°04'49
				minimum elong	16447 May 04 07:14	27° \approx 21'21	0°05'19
conjunction	16441 Feb 14 11:11	11° \approx 14'45	1°36'08	behind sun begin	16447 May 04 00:16	27° \approx 19'12	
minimum elong	16441 Feb 14 11:12	11° \approx 14'46	1°36'24	behind sun end	16447 May 04 14:12	27° \approx 23'30	
max. Earth dist.	16441 Feb 14 09:04	11° \approx 14'06	10.64096 AU	max. Earth dist.	16447 May 03 13:24	27° \approx 15'48	10.45031 AU
morning rise	16441 Mar 04 01:02	13° \approx 22'12		morning rise	16447 May 21 20:15	29° \approx 31'43	
retrograde	16441 Jun 15 09:55	20° \approx 53'48			16447 May 25 17:29	0° \approx	
opposition	16441 Aug 22 23:29	17° \approx 30'21	1°53'54	retrograde	16447 Aug 31 22:44	7° \approx 09'10	
min. Earth dist.	16441 Aug 23 02:27	17° \approx 29'46	8.62721 AU	opposition	16447 Nov 07 16:38	3° \approx 46'02	-0°19'46
direct	16441 Oct 30 09:34	14° \approx 06'55		min. Earth dist.	16447 Nov 08 06:56	3° \approx 43'13	8.43799 AU
evening set	16442 Feb 09 23:47	21° \approx 36'02		direct	16448 Jan 15 15:47	0° \approx 19'39	
				evening set	16448 Apr 29 04:57	8° \approx 06'56	
conjunction	16442 Feb 27 14:07	23° \approx 43'58	1°27'38				
minimum elong	16442 Feb 27 14:09	23° \approx 43'58	1°27'47	conjunction	16448 May 16 18:34	10° \approx 17'55	-0°27'04
max. Earth dist.	16442 Feb 27 07:50	23° \approx 42'02	10.61088 AU	minimum elong	16448 May 16 18:34	10° \approx 17'54	0°27'39
morning rise	16442 Mar 17 04:44	25° \approx 52'02		max. Earth dist.	16448 May 16 00:05	10° \approx 12'08	10.42677 AU
	16442 Apr 23 23:06	0° \approx		morning rise	16448 Jun 03 05:55	12° \approx 28'18	
retrograde	16442 Jun 28 08:02	3° \approx 24'25		retrograde	16448 Sep 13 05:33	20° \approx 06'56	
opposition	16442 Sep 04 16:49	0° \approx 00'59	1°40'49	opposition	16448 Nov 20 00:22	16° \approx 43'57	-0°46'46
	16442 Sep 04 21:46	30° \approx		min. Earth dist.	16448 Nov 20 14:50	16° \approx 41'06	8.41754 AU
min. Earth dist.	16442 Sep 04 23:08	29° \approx 59'44	8.59541 AU	direct	16449 Jan 28 02:20	13° \approx 17'29	
direct	16442 Nov 12 04:25	26° \approx 36'54		evening set	16449 May 12 18:11	21° \approx 06'46	
	16443 Jan 16 06:15	0° \approx					
evening set	16443 Feb 23 03:45	4° \approx 09'08		conjunction	16449 May 30 05:51	23° \approx 17'37	-0°48'04
				minimum elong	16449 May 30 05:49	23° \approx 17'37	0°48'42
conjunction	16443 Mar 12 19:05	6° \approx 17'51	1°14'55	max. Earth dist.	16449 May 29 12:01	23° \approx 12'01	10.40940 AU
minimum elong	16443 Mar 12 19:07	6° \approx 17'51	1°14'55	morning rise	16449 Jun 16 15:14	25° \approx 27'51	
max. Earth dist.	16443 Mar 12 08:34	6° \approx 14'37	10.57812 AU		16449 Jul 27 08:51	0° \approx	
morning rise	16443 Mar 30 10:20	8° \approx 26'34		retrograde	16449 Sep 26 14:01	3° \approx 07'40	
retrograde	16443 Jul 11 07:42	15° \approx 59'47			16449 Nov 30 05:10	30° \approx	
opposition	16443 Sep 17 12:03	12° \approx 36'23	1°22'49	opposition	16449 Dec 03 10:23	29° \approx 44'49	-1°11'29
min. Earth dist.	16443 Sep 17 21:31	12° \approx 34'31	8.56164 AU	min. Earth dist.	16449 Dec 03 23:38	29° \approx 42'13	8.40379 AU
direct	16443 Nov 25 01:36	9° \approx 11'40		direct	16450 Feb 10 14:42	26° \approx 18'27	
evening set	16444 Mar 07 10:02	16° \approx 47'10			16450 Apr 19 15:30	0° \approx	
				evening set	16450 May 26 07:32	4° \approx 09'04	
conjunction	16444 Mar 25 02:02	18° \approx 56'36	0°58'30				
minimum elong	16444 Mar 25 02:04	18° \approx 56'37	0°58'22	conjunction	16450 Jun 12 17:03	6° \approx 19'39	-1°06'39
max. Earth dist.	16444 Mar 24 12:05	18° \approx 52'19	10.54414 AU	minimum elong	16450 Jun 12 17:01	6° \approx 19'38	1°07'18
morning rise	16444 Apr 11 17:30	21° \approx 05'55		max. Earth dist.	16450 Jun 12 01:24	6° \approx 14'43	10.39907 AU
retrograde	16444 Jul 23 08:11	28° \approx 40'04		morning rise	16450 Jun 30 00:15	8° \approx 29'34	
opposition	16444 Sep 29 09:21	25° \approx 16'42	1°00'39	retrograde	16450 Oct 10 00:19	16° \approx 10'22	
min. Earth dist.	16444 Sep 29 20:59	25° \approx 14'25	8.52744 AU	opposition	16450 Dec 16 22:12	12° \approx 47'40	-1°32'34
direct	16444 Dec 07 01:56	21° \approx 51'26		min. Earth dist.	16450 Dec 17 09:15	12° \approx 45'30	8.39737 AU
evening set	16445 Mar 20 18:18	29° \approx 30'10		direct	16451 Feb 24 03:31	9° \approx 21'34	
	16445 Mar 24 20:41	0° \approx		evening set	16451 Jun 08 20:15	17° \approx 12'46	
conjunction	16445 Apr 07 10:38	1° \approx 40'15	0°39'08	conjunction	16451 Jun 26 03:34	19° \approx 22'54	-1°21'50
minimum elong	16445 Apr 07 10:39	1° \approx 40'15	0°38'51	minimum elong	16451 Jun 26 03:32	19° \approx 22'53	1°22'28
max. Earth dist.	16445 Apr 06 18:51	1° \approx 35'23	10.51049 AU	max. Earth dist.	16451 Jun 25 15:12	19° \approx 19'00	10.39626 AU
morning rise	16445 Apr 25 01:46	3° \approx 50'04		morning rise	16451 Jul 13 08:30	21° \approx 32'23	
retrograde	16445 Aug 05 10:34	11° \approx 25'16		retrograde	16451 Oct 23 10:37	29° \approx 13'58	
opposition	16445 Oct 12 09:12	8° \approx 01'56	0°35'20	opposition	16451 Dec 30 11:44	25° \approx 51'23	-1°48'53
min. Earth dist.	16445 Oct 12 21:51	7° \approx 59'26	8.49441 AU	min. Earth dist.	16451 Dec 30 19:58	25° \approx 49'47	8.39859 AU
direct	16445 Dec 20 04:57	4° \approx 36'12		direct	16452 Mar 08 18:03	22° \approx 25'42	
evening set	16446 Apr 03 04:17	12° \approx 18'01			16452 Jun 19 01:45	0° \approx	

evening set	16452 Jun 21 07:36	0°♎16'35		conjunction	16458 Sep 24 03:33	19°♎39'22	-0°57'44
				minimum elong	16458 Sep 24 03:35	19°♎39'22	0°57'35
conjunction	16452 Jul 08 12:43	2°♎26'09	-1°32'48	max. Earth dist.	16458 Sep 24 16:29	19°♎43'23	10.55585 AU
minimum elong	16452 Jul 08 12:42	2°♎26'08	1°33'22	morning rise	16458 Oct 11 05:01	21°♎45'46	
max. Earth dist.	16452 Jul 08 04:05	2°♎23'25	10.40115 AU	retrograde	16459 Jan 22 12:17	29°♎22'28	
morning rise	16452 Jul 25 15:38	4°♎35'07		opposition	16459 Apr 01 22:51	25°♎59'38	-0°59'34
retrograde	16452 Nov 04 21:25	12°♎17'11		min. Earth dist.	16459 Apr 01 11:16	26°♎01'52	8.57228 AU
opposition	16453 Jan 12 02:17	8°♎54'42	-1°59'33	direct	16459 Jun 09 21:22	22°♎38'02	
min. Earth dist.	16453 Jan 12 07:51	8°♎53'36	8.40745 AU		16459 Sep 18 19:11	0°♎	
direct	16453 Mar 22 08:37	5°♎29'31		evening set	16459 Sep 19 21:28	0°♎07'57	
evening set	16453 Jul 04 17:14	13°♎19'10					
	16453 Jul 18 03:21	15°♎		conjunction	16459 Oct 06 22:49	2°♎13'47	-0°38'30
				minimum elong	16459 Oct 06 22:50	2°♎13'47	0°38'13
conjunction	16453 Jul 21 20:22	15°♎28'07	-1°38'58	max. Earth dist.	16459 Oct 07 12:55	2°♎18'08	10.58743 AU
minimum elong	16453 Jul 21 20:22	15°♎28'06	1°39'28	morning rise	16459 Oct 24 01:33	4°♎19'59	
max. Earth dist.	16453 Jul 21 15:03	15°♎26'26	10.41365 AU	retrograde	16460 Feb 04 12:29	11°♎55'18	
morning rise	16453 Aug 07 21:49	17°♎36'34		opposition	16460 Apr 14 02:40	8°♎32'19	-0°34'32
retrograde	16453 Nov 18 08:17	25°♎18'38		min. Earth dist.	16460 Apr 13 14:07	8°♎34'44	8.60223 AU
opposition	16454 Jan 25 16:55	21°♎56'12	-2°04'02	direct	16460 Jun 21 23:14	5°♎11'06	
min. Earth dist.	16454 Jan 25 19:51	21°♎55'38	8.42365 AU	evening set	16460 Oct 01 14:27	12°♎37'48	
direct	16454 Apr 04 22:08	18°♎31'36					
evening set	16454 Jul 18 00:35	26°♎19'11		conjunction	16460 Oct 18 16:45	14°♎43'22	-0°17'33
				minimum elong	16460 Oct 18 16:46	14°♎43'23	0°17'09
conjunction	16454 Aug 04 02:11	28°♎27'29	-1°40'04	max. Earth dist.	16460 Oct 19 08:14	14°♎48'08	10.61581 AU
minimum elong	16454 Aug 04 02:11	28°♎27'29	1°40'27		16460 Oct 20 22:41	15°♎	
max. Earth dist.	16454 Aug 04 00:17	28°♎26'53	10.43322 AU	morning rise	16460 Nov 04 20:50	16°♎49'26	
	16454 Aug 16 08:34	0°♎		retrograde	16461 Feb 16 11:10	24°♎23'30	
morning rise	16454 Aug 21 02:42	0°♎35'27		opposition	16461 Apr 27 03:44	21°♎00'19	-0°08'02
retrograde	16454 Dec 01 16:24	8°♎17'04		min. Earth dist.	16461 Apr 26 13:56	21°♎02'59	8.62867 AU
opposition	16455 Feb 08 07:12	4°♎54'40	-2°02'10	direct	16461 Jul 04 22:08	17°♎39'21	
min. Earth dist.	16455 Feb 08 07:01	4°♎54'42	8.44635 AU	asc. node	16461 Aug 18 20:58	19°♎21'09	
direct	16455 Apr 18 12:02	1°♎30'42		evening set	16461 Oct 14 06:25	25°♎03'20	
evening set	16455 Jul 31 05:10	9°♎15'25					
				conjunction	16461 Oct 31 09:49	27°♎08'43	0°04'14
conjunction	16455 Aug 17 05:48	11°♎23'06	-1°36'06	minimum elong	16461 Oct 31 09:49	27°♎08'42	0°04'44
minimum elong	16455 Aug 17 05:49	11°♎23'06	1°36'21	behind sun begin	16461 Oct 31 02:52	27°♎06'36	
max. Earth dist.	16455 Aug 17 07:55	11°♎23'46	10.45886 AU	behind sun end	16461 Oct 31 16:45	27°♎10'49	
morning rise	16455 Sep 03 05:52	13°♎30'35		max. Earth dist.	16461 Nov 01 02:46	27°♎13'54	10.64029 AU
retrograde	16455 Dec 14 23:05	21°♎11'24		morning rise	16461 Nov 17 15:05	29°♎14'38	
opposition	16456 Feb 21 20:18	17°♎48'56	-1°54'07		16461 Nov 23 23:44	0°♎	
min. Earth dist.	16456 Feb 21 16:21	17°♎49'42	8.47441 AU	retrograde	16462 Mar 01 07:59	6°♎47'36	
direct	16456 May 01 01:16	14°♎25'39		min. Earth dist.	16462 May 09 11:28	3°♎27'02	8.65099 AU
evening set	16456 Aug 12 07:00	22°♎06'54		opposition	16462 May 10 02:09	3°♎24'12	0°18'40
				direct	16462 Jul 17 19:10	0°♎03'20	
conjunction	16456 Aug 29 07:18	24°♎14'01	-1°27'20	evening set	16462 Oct 26 21:52	7°♎25'11	
minimum elong	16456 Aug 29 07:19	24°♎14'01	1°27'27				
max. Earth dist.	16456 Aug 29 14:01	24°♎16'07	10.48921 AU	conjunction	16462 Nov 13 02:19	9°♎30'26	0°25'34
morning rise	16456 Sep 15 07:22	26°♎21'04		minimum elong	16462 Nov 13 02:18	9°♎30'25	0°26'09
	16456 Oct 17 05:31	0°♎		max. Earth dist.	16462 Nov 13 19:58	9°♎35'49	10.66026 AU
retrograde	16456 Dec 27 05:42	4°♎00'43		morning rise	16462 Nov 30 08:45	11°♎36'15	
opposition	16457 Mar 06 07:28	0°♎38'08	-1°40'26	retrograde	16463 Mar 14 05:09	19°♎08'18	
min. Earth dist.	16457 Mar 05 23:52	0°♎39'36	8.50625 AU	opposition	16463 May 22 22:21	15°♎44'42	0°44'23
	16457 Mar 14 14:25	30°♎		min. Earth dist.	16463 May 22 07:44	15°♎47'31	8.66859 AU
direct	16457 May 14 11:04	27°♎15'30		direct	16463 Jul 30 12:37	12°♎23'48	
	16457 Jul 11 07:31	0°♎		evening set	16463 Nov 08 13:05	19°♎44'08	
evening set	16457 Aug 25 06:07	4°♎52'54					
				conjunction	16463 Nov 25 18:30	21°♎49'18	0°45'42
conjunction	16457 Sep 11 06:31	6°♎59'32	-1°14'18	minimum elong	16463 Nov 25 18:29	21°♎49'18	0°46'20
minimum elong	16457 Sep 11 06:33	6°♎59'33	1°14'17	max. Earth dist.	16463 Nov 26 11:09	21°♎54'23	10.67507 AU
max. Earth dist.	16457 Sep 11 17:05	7°♎02'50	10.52235 AU	morning rise	16463 Dec 13 02:12	23°♎55'07	
morning rise	16457 Sep 28 07:05	9°♎06'14			16464 Feb 13 01:12	0°♎	
retrograde	16458 Jan 09 10:54	16°♎44'26		retrograde	16464 Mar 26 00:35	1°♎26'27	
opposition	16458 Mar 19 16:25	13°♎21'44	-1°21'55		16464 May 07 15:42	30°♎	
min. Earth dist.	16458 Mar 19 06:16	13°♎23'41	8.53970 AU	opposition	16464 Jun 03 16:28	28°♎02'40	1°07'57
direct	16458 May 27 16:44	9°♎59'39		min. Earth dist.	16464 Jun 03 03:23	28°♎05'12	8.68074 AU
evening set	16458 Sep 07 02:50	17°♎33'11		direct	16464 Aug 11 04:03	24°♎41'36	
					16464 Nov 02 16:15	0°♎	

evening set	16464 Nov 20 04:47	2°♄01'12		evening set	16471 Feb 04 05:30	16°♄01'36	
conjunction	16464 Dec 07 11:10	4°♄06'22	1°03'42	conjunction	16471 Feb 21 19:18	18°♄09'21	1°32'10
minimum elong	16464 Dec 07 11:08	4°♄06'22	1°04'21	minimum elong	16471 Feb 21 19:20	18°♄09'21	1°32'21
max. Earth dist.	16464 Dec 08 01:43	4°♄10'48	10.68406 AU	max. Earth dist.	16471 Feb 21 15:00	18°♄08'02	10.60865 AU
morning rise	16464 Dec 24 20:02	6°♄12'13		morning rise	16471 Mar 11 09:49	20°♄17'21	
retrograde	16465 Apr 07 17:32	13°♄43'04		retrograde	16471 Jun 22 14:32	27°♄50'04	
opposition	16465 Jun 16 08:43	10°♄19'09	1°28'22	opposition	16471 Aug 30 03:09	24°♄26'12	1°47'35
min. Earth dist.	16465 Jun 15 21:31	10°♄21'19	8.68682 AU	min. Earth dist.	16471 Aug 30 07:31	24°♄25'20	8.59535 AU
direct	16465 Aug 23 19:57	6°♄57'47		direct	16471 Nov 06 15:06	21°♄02'04	
evening set	16465 Dec 02 21:06	14°♄17'23		evening set	16472 Feb 17 08:47	28°♄33'31	
					16472 Feb 29 06:24	0°♄	
conjunction	16465 Dec 20 04:36	16°♄22'40	1°18'45	conjunction	16472 Mar 05 23:51	0°♄42'04	1°21'19
minimum elong	16465 Dec 20 04:35	16°♄22'40	1°19'23	minimum elong	16472 Mar 05 23:53	0°♄42'04	1°21'23
max. Earth dist.	16465 Dec 20 17:11	16°♄26'29	10.68673 AU	max. Earth dist.	16472 Mar 05 16:37	0°♄39'51	10.57995 AU
morning rise	16466 Jan 06 14:27	18°♄28'36		morning rise	16472 Mar 23 14:55	2°♄50'40	
retrograde	16466 Apr 20 11:59	25°♄59'16		retrograde	16472 Jul 04 15:42	10°♄24'14	
opposition	16466 Jun 28 23:51	22°♄35'15	1°44'44	opposition	16472 Sep 10 21:50	7°♄00'34	1°31'44
min. Earth dist.	16466 Jun 28 14:19	22°♄37'06	8.68643 AU	min. Earth dist.	16472 Sep 11 04:28	6°♄59'15	8.56544 AU
direct	16466 Sep 05 10:16	19°♄13'32		direct	16472 Nov 18 10:05	3°♄36'01	
evening set	16466 Dec 15 14:22	26°♄33'44		evening set	16473 Mar 01 14:27	11°♄10'39	
conjunction	16467 Jan 01 23:07	28°♄39'16	1°30'13	conjunction	16473 Mar 19 06:22	13°♄19'57	1°06'29
minimum elong	16467 Jan 01 23:06	28°♄39'16	1°30'48	minimum elong	16473 Mar 19 06:24	13°♄19'58	1°06'25
max. Earth dist.	16467 Jan 02 09:52	28°♄42'32	10.68284 AU	max. Earth dist.	16473 Mar 18 20:07	13°♄16'48	10.54962 AU
	16467 Jan 13 01:53	0°♄		morning rise	16473 Apr 05 21:41	15°♄29'10	
morning rise	16467 Jan 19 09:51	0°♄45'24		retrograde	16473 Jul 17 17:17	23°♄03'38	
retrograde	16467 May 03 06:33	8°♄16'09		opposition	16473 Sep 23 18:48	19°♄40'13	1°11'19
opposition	16467 Jul 11 14:13	4°♄52'01	1°56'21	min. Earth dist.	16473 Sep 24 03:54	19°♄38'25	8.53467 AU
min. Earth dist.	16467 Jul 11 06:29	4°♄53'31	8.67941 AU	direct	16473 Dec 01 08:29	16°♄15'16	
direct	16467 Sep 17 23:35	1°♄29'54		evening set	16474 Mar 14 22:33	23°♄53'11	
evening set	16467 Dec 28 09:19	8°♄51'22					
conjunction	16468 Jan 14 19:18	10°♄57'17	1°37'33	conjunction	16474 Apr 01 14:50	26°♄03'09	0°48'20
minimum elong	16468 Jan 14 19:17	10°♄57'17	1°38'03	minimum elong	16474 Apr 01 14:52	26°♄03'09	0°48'08
max. Earth dist.	16468 Jan 15 02:58	10°♄59'37	10.67244 AU	max. Earth dist.	16474 Apr 01 01:14	25°♄58'57	10.51919 AU
morning rise	16468 Feb 01 06:58	13°♄03'44		morning rise	16474 Apr 19 06:10	28°♄12'54	
	16468 Feb 18 02:29	15°♄			16474 May 04 09:55	0°♄	
retrograde	16468 May 15 01:23	20°♄34'42		retrograde	16474 Jul 30 19:46	5°♄48'20	
opposition	16468 Jul 23 04:17	17°♄10'34	2°02'39	opposition	16474 Oct 06 18:12	2°♄25'10	0°47'15
min. Earth dist.	16468 Jul 22 23:31	17°♄11'29	8.66601 AU	min. Earth dist.	16474 Oct 07 05:56	2°♄22'51	8.50458 AU
	16468 Aug 22 11:55	15°♄			16474 Nov 09 21:06	30°♄	
direct	16468 Sep 29 13:25	13°♄47'57		direct	16474 Dec 14 10:34	28°♄59'51	
	16468 Nov 06 02:36	15°♄			16475 Jan 17 16:55	0°♄	
evening set	16469 Jan 09 06:05	21°♄11'17		evening set	16475 Mar 28 08:46	6°♄40'57	
				max. Earth dist.	16475 Apr 14 08:36	8°♄46'23	10.49007 AU
conjunction	16469 Jan 26 17:14	23°♄17'42	1°40'25	conjunction	16475 Apr 15 00:58	8°♄51'27	0°27'41
minimum elong	16469 Jan 26 17:15	23°♄17'43	1°40'49	minimum elong	16475 Apr 15 00:59	8°♄51'27	0°27'21
max. Earth dist.	16469 Jan 26 20:40	23°♄18'45	10.65602 AU	morning rise	16475 May 02 15:51	11°♄01'37	
morning rise	16469 Feb 13 05:55	25°♄24'34			16475 Jun 07 03:03	15°♄	
	16469 Mar 28 05:11	0°♄		retrograde	16475 Aug 13 00:26	18°♄38'02	
retrograde	16469 May 27 21:45	2°♄55'57		opposition	16475 Oct 19 20:14	15°♄15'05	0°20'40
	16469 Jul 29 18:48	30°♄		min. Earth dist.	16475 Oct 20 09:33	15°♄12'27	8.47646 AU
opposition	16469 Aug 04 18:54	29°♄31'52	2°03'19		16475 Oct 23 00:41	15°♄	
min. Earth dist.	16469 Aug 04 17:37	29°♄32'07	8.64684 AU	direct	16475 Dec 27 15:10	11°♄49'28	
direct	16469 Oct 12 03:15	26°♄08'44			16476 Feb 28 10:11	15°♄	
	16469 Dec 20 23:25	0°♄		evening set	16476 Apr 09 20:40	19°♄33'29	
evening set	16470 Jan 22 04:38	3°♄34'24					
conjunction	16470 Feb 08 17:04	5°♄41'27	1°38'36	conjunction	16476 Apr 27 12:14	21°♄44'20	0°05'35
minimum elong	16470 Feb 08 17:05	5°♄41'27	1°38'55	minimum elong	16476 Apr 27 12:14	21°♄44'20	0°05'08
max. Earth dist.	16470 Feb 08 16:10	5°♄41'10	10.63440 AU	behind sun begin	16476 Apr 27 05:14	21°♄42'11	
morning rise	16470 Feb 26 06:45	7°♄48'51		behind sun end	16476 Apr 27 19:14	21°♄46'30	
retrograde	16470 Jun 09 17:22	15°♄20'50		max. Earth dist.	16476 Apr 26 18:39	21°♄38'53	10.46338 AU
opposition	16470 Aug 17 10:26	11°♄56'50	1°58'15	morning rise	16476 May 15 02:03	23°♄54'45	
min. Earth dist.	16470 Aug 17 12:23	11°♄56'27	8.62290 AU		16476 Jul 14 02:28	0°♄	
direct	16470 Oct 24 20:10	8°♄33'10		desc. node	16476 Jul 29 02:21	0°♄52'59	

retrograde	16476 Aug 25 06:20	1°♊32'11		retrograde	16482 Nov 12 19:22	19°♏51'35	
	16476 Oct 07 06:58	30°♎♎		opposition	16483 Jan 20 01:57	16°♏29'04	-2°02'45
opposition	16476 Nov 01 00:48	28°♎09'24	-0°07'07	min. Earth dist.	16483 Jan 20 06:46	16°♏28'07	8.40135 AU
min. Earth dist.	16476 Nov 01 14:35	28°♎06'41	8.45139 AU		16483 Feb 08 18:27	15°♎♏	
direct	16477 Jan 08 22:47	24°♎43'33		direct	16483 Mar 30 08:04	13°♏04'03	
	16477 Apr 02 02:17	0°♊			16483 May 17 09:47	15°♏	
evening set	16477 Apr 23 09:46	2°♊30'08		evening set	16483 Jul 12 13:50	20°♏53'44	
max. Earth dist.	16477 May 10 06:34	4°♊35'38	10.44006 AU				
				conjunction	16483 Jul 29 16:20	23°♏02'36	-1°40'07
conjunction	16477 May 11 00:12	4°♊41'09	-0°17'02	minimum elong	16483 Jul 29 16:20	23°♏02'36	1°40'32
minimum elong	16477 May 11 00:11	4°♊41'08	0°17'34	max. Earth dist.	16483 Jul 29 12:24	23°♏01'21	10.40725 AU
morning rise	16477 May 28 12:25	6°♊51'36		morning rise	16483 Aug 15 17:16	25°♏11'03	
retrograde	16477 Sep 07 13:45	14°♊30'06			16483 Sep 28 04:53	0°♎♎	
opposition	16477 Nov 14 07:54	11°♊07'26	-0°34'42	retrograde	16483 Nov 26 06:07	2°♎54'01	
min. Earth dist.	16477 Nov 14 21:30	11°♊04'45	8.42999 AU		16484 Jan 27 13:46	30°♎♏	
direct	16478 Jan 22 08:38	7°♊41'27		opposition	16484 Feb 02 17:33	29°♏31'19	-2°03'41
evening set	16478 May 06 23:34	15°♊30'10		min. Earth dist.	16484 Feb 02 18:42	29°♏31'05	8.41698 AU
				direct	16484 Apr 11 22:41	26°♏06'45	
conjunction	16478 May 24 12:21	17°♊41'09	-0°38'46		16484 Jun 20 18:32	0°♎♎	
minimum elong	16478 May 24 12:20	17°♊41'09	0°39'23	evening set	16484 Jul 24 20:29	3°♎53'54	
max. Earth dist.	16478 May 23 19:05	17°♊35'44	10.42038 AU				
morning rise	16478 Jun 10 22:36	19°♊51'30		conjunction	16484 Aug 10 21:48	6°♎02'11	-1°38'21
retrograde	16478 Sep 20 23:31	27°♊31'09		minimum elong	16484 Aug 10 21:49	6°♎02'11	1°38'39
opposition	16478 Nov 27 17:26	24°♊08'37	-1°00'38	max. Earth dist.	16484 Aug 10 22:16	6°♎02'20	10.42637 AU
min. Earth dist.	16478 Nov 28 06:58	24°♊05'57	8.41232 AU	morning rise	16484 Aug 27 22:01	8°♎10'10	
direct	16479 Feb 04 19:28	20°♊42'36		retrograde	16484 Dec 08 15:08	15°♎52'33	
evening set	16479 May 20 13:49	28°♊33'05		opposition	16485 Feb 15 08:11	12°♎29'38	-1°58'17
	16479 Jun 01 04:57	0°♎		min. Earth dist.	16485 Feb 15 06:06	12°♎30'02	8.43924 AU
max. Earth dist.	16479 Jun 06 07:33	0°♎38'34	10.40459 AU	direct	16485 Apr 25 12:40	9°♎05'32	
				evening set	16485 Aug 07 00:28	16°♎49'31	
conjunction	16479 Jun 07 00:27	0°♎43'53	-0°58'35				
minimum elong	16479 Jun 07 00:25	0°♎43'52	0°59'14	conjunction	16485 Aug 24 01:02	18°♎57'13	-1°31'36
morning rise	16479 Jun 24 08:32	2°♎54'00		minimum elong	16485 Aug 24 01:04	18°♎57'14	1°31'46
retrograde	16479 Oct 04 10:37	10°♎34'52		max. Earth dist.	16485 Aug 24 05:07	18°♎58'30	10.45164 AU
opposition	16479 Dec 11 05:18	7°♎12'28	-1°23'32	morning rise	16485 Sep 10 01:12	21°♎04'47	
min. Earth dist.	16479 Dec 11 18:19	7°♎09'55	8.39922 AU	retrograde	16485 Dec 21 22:32	28°♎46'07	
direct	16480 Feb 18 08:00	3°♎46'34		opposition	16486 Feb 28 21:01	25°♎23'01	-1°46'56
evening set	16480 Jun 02 03:52	11°♎38'13		min. Earth dist.	16486 Feb 28 16:09	25°♎23'58	8.46693 AU
				direct	16486 May 09 00:02	21°♎59'26	
conjunction	16480 Jun 19 12:07	13°♎48'40	-1°15'26	evening set	16486 Aug 20 01:36	29°♎39'47	
minimum elong	16480 Jun 19 12:06	13°♎48'40	1°16'04		16486 Aug 22 19:16	0°♎	
max. Earth dist.	16480 Jun 18 20:37	13°♎43'47	10.39424 AU				
morning rise	16480 Jul 06 18:06	15°♎58'29		conjunction	16486 Sep 06 01:56	1°♎46'58	-1°20'18
retrograde	16480 Oct 16 20:40	23°♎40'28		minimum elong	16486 Sep 06 01:58	1°♎46'58	1°20'20
opposition	16480 Dec 23 19:12	20°♎18'07	-1°42'08	max. Earth dist.	16486 Sep 06 09:26	1°♎49'19	10.48170 AU
min. Earth dist.	16480 Dec 24 06:35	20°♎15'53	8.39246 AU	morning rise	16486 Sep 23 02:31	3°♎54'10	
direct	16481 Mar 02 23:56	16°♎52'25		retrograde	16487 Jan 04 03:30	11°♎34'10	
evening set	16481 Jun 15 16:51	24°♎44'23		opposition	16487 Mar 14 07:51	8°♎10'53	-1°30'19
				min. Earth dist.	16487 Mar 13 23:44	8°♎12'27	8.49858 AU
conjunction	16481 Jul 02 22:53	26°♎54'23	-1°28'23	direct	16487 May 22 09:11	4°♎47'52	
minimum elong	16481 Jul 02 22:51	26°♎54'22	1°28'59	evening set	16487 Sep 01 23:50	12°♎24'19	
max. Earth dist.	16481 Jul 02 10:06	26°♎50'20	10.39091 AU				
morning rise	16481 Jul 20 02:55	29°♎03'47		conjunction	16487 Sep 19 00:29	14°♎31'01	-1°05'06
	16481 Jul 27 18:31	0°♏		minimum elong	16487 Sep 19 00:31	14°♎31'02	1°05'00
retrograde	16481 Oct 30 07:41	6°♏46'34		max. Earth dist.	16487 Sep 19 11:52	14°♎34'34	10.51490 AU
opposition	16482 Jan 06 10:21	3°♏24'10	-1°55'27	morning rise	16487 Oct 06 01:48	16°♎37'54	
min. Earth dist.	16482 Jan 06 18:53	3°♏22'30	8.39308 AU	retrograde	16488 Jan 17 06:02	24°♎16'25	
	16482 Mar 11 19:37	30°♎♎		opposition	16488 Mar 26 16:05	20°♎52'57	-1°09'24
direct	16482 Mar 16 16:26	29°♎58'46		min. Earth dist.	16488 Mar 26 04:44	20°♎55'09	8.53247 AU
	16482 Mar 21 12:41	0°♏		direct	16488 Jun 03 16:52	17°♎30'30	
evening set	16482 Jun 29 04:26	7°♏50'05		evening set	16488 Sep 13 19:48	25°♎03'03	
conjunction	16482 Jul 16 08:31	9°♏59'32	-1°36'45	conjunction	16488 Sep 30 21:08	27°♎09'22	-0°46'51
minimum elong	16482 Jul 16 08:30	9°♏59'32	1°37'16	minimum elong	16488 Sep 30 21:10	27°♎09'23	0°46'37
max. Earth dist.	16482 Jul 15 23:51	9°♏56'48	10.39526 AU	max. Earth dist.	16488 Oct 01 12:06	27°♎14'01	10.54944 AU
morning rise	16482 Aug 02 10:47	12°♏08'28		morning rise	16488 Oct 17 23:25	29°♎15'57	
	16482 Aug 26 15:35	15°♏			16488 Oct 24 01:43	0°♎♎	

retrograde	16489 Jan 29 08:46	6°♄52'52		minimum elong	16494 Dec 15 03:30	11°♄27'19	1°13'20
opposition	16489 Apr 08 21:21	3°♄29'17 -0°45'18		max. Earth dist.	16494 Dec 15 19:42	11°♄32'14	10.69920 AU
min. Earth dist.	16489 Apr 08 07:27	3°♄31'58 8.56685 AU		morning rise	16495 Jan 01 12:43	13°♄33'03	
direct	16489 Jun 16 19:34	0°♄07'20		retrograde	16495 Apr 15 11:52	21°♄03'15	
evening set	16489 Sep 26 13:55	7°♄36'15		min. Earth dist.	16495 Jun 23 11:54	17°♄42'01	8.70347 AU
				opposition	16495 Jun 24 00:00	17°♄39'41	1°38'11
conjunction	16489 Oct 13 16:03	9°♄42'12 -0°26'28		direct	16495 Aug 31 09:33	14°♄18'39	
minimum elong	16489 Oct 13 16:04	9°♄42'13 0°26'07		evening set	16495 Dec 10 13:16	21°♄37'50	
max. Earth dist.	16489 Oct 14 09:21	9°♄47'33 10.58355 AU					
morning rise	16489 Oct 30 19:31	11°♄48'33		conjunction	16495 Dec 27 21:15	23°♄43'01	1°25'42
	16489 Nov 27 19:05	15°♄		minimum elong	16495 Dec 27 21:14	23°♄43'01	1°26'18
retrograde	16490 Feb 11 09:12	19°♄23'52		max. Earth dist.	16495 Dec 28 10:04	23°♄46'54	10.70440 AU
opposition	16490 Apr 21 23:57	16°♄00'13 -0°19'14		morning rise	16496 Jan 14 07:31	25°♄48'50	
min. Earth dist.	16490 Apr 21 08:52	16°♄03'08 8.60004 AU			16496 Feb 22 00:59	0°♄	
	16490 May 05 05:35	15°♄		retrograde	16496 Apr 27 05:14	3°♄18'40	
direct	16490 Jun 29 18:39	12°♄38'42			16496 Jul 04 13:31	30°♄	
	16490 Aug 22 04:11	15°♄		opposition	16496 Jul 05 14:22	29°♄55'11	1°51'47
evening set	16490 Oct 09 06:31	20°♄04'23		min. Earth dist.	16496 Jul 05 05:24	29°♄56'55	8.70511 AU
				direct	16496 Sep 11 23:07	26°♄33'51	
conjunction	16490 Oct 26 09:26	22°♄10'01 -0°05'00			16496 Nov 16 13:24	0°♄	
minimum elong	16490 Oct 26 09:26	22°♄10'01 0°04'33		evening set	16496 Dec 22 07:12	3°♄53'48	
behind sun begin	16490 Oct 26 02:28	22°♄07'54					
behind sun end	16490 Oct 26 16:24	22°♄12'08		conjunction	16497 Jan 08 16:19	5°♄59'13	1°34'47
max. Earth dist.	16490 Oct 27 03:29	22°♄15'33 10.61563 AU		minimum elong	16497 Jan 08 16:18	5°♄59'13	1°35'19
morning rise	16490 Nov 12 14:14	24°♄16'10		max. Earth dist.	16497 Jan 09 01:20	6°♄01'57	10.70195 AU
	16491 Jan 07 21:07	0°♄		morning rise	16497 Jan 26 03:32	8°♄05'12	
asc. node	16491 Jan 20 02:54	0°♄48'17			16497 Apr 13 15:38	15°♄	
retrograde	16491 Feb 24 06:11	1°♄50'01		retrograde	16497 May 09 21:59	15°♄34'57	
	16491 Apr 13 21:59	30°♄			16497 Jun 05 09:06	15°♄	
opposition	16491 May 04 23:50	28°♄26'20 0°07'32		opposition	16497 Jul 18 04:02	12°♄11'30	2°00'19
min. Earth dist.	16491 May 04 08:29	28°♄29'18 8.63060 AU		min. Earth dist.	16497 Jul 17 22:03	12°♄12'39	8.69872 AU
direct	16491 Jul 12 16:28	25°♄05'07		direct	16497 Sep 24 13:44	8°♄49'45	
	16491 Sep 30 11:10	0°♄			16497 Dec 24 22:41	15°♄	
evening set	16491 Oct 21 22:12	2°♄28'10		evening set	16498 Jan 04 02:28	16°♄11'04	
conjunction	16491 Nov 08 02:04	4°♄33'32 0°16'43		conjunction	16498 Jan 21 12:55	18°♄16'53	1°39'33
minimum elong	16491 Nov 08 02:03	4°♄33'32 0°17'14		minimum elong	16498 Jan 21 12:55	18°♄16'53	1°40'00
max. Earth dist.	16491 Nov 08 20:17	4°♄39'06 10.64437 AU		max. Earth dist.	16498 Jan 21 18:33	18°♄18'36	10.69129 AU
morning rise	16491 Nov 25 08:12	6°♄39'30		morning rise	16498 Feb 08 01:00	20°♄23'12	
retrograde	16492 Mar 08 02:39	14°♄12'05		retrograde	16498 May 22 17:05	27°♄53'09	
opposition	16492 May 16 20:58	10°♄48'23 0°33'47		opposition	16498 Jul 30 17:42	24°♄29'42	2°03'23
min. Earth dist.	16492 May 16 05:40	10°♄51'20 8.65729 AU		min. Earth dist.	16498 Jul 30 14:31	24°♄30'20	8.68389 AU
direct	16492 Jul 24 12:15	7°♄27'23		direct	16498 Oct 07 03:21	21°♄07'29	
evening set	16492 Nov 02 13:24	14°♄48'24		evening set	16499 Jan 16 23:26	28°♄30'47	
					16499 Jan 29 08:37	0°♄	
conjunction	16492 Nov 19 18:23	16°♄53'36 0°37'26					
minimum elong	16492 Nov 19 18:22	16°♄53'36 0°38'02		conjunction	16499 Feb 03 11:17	0°♄37'11	1°39'44
max. Earth dist.	16492 Nov 20 12:42	16°♄59'12 10.66853 AU		minimum elong	16499 Feb 03 11:18	0°♄37'11	1°40'05
morning rise	16492 Dec 07 01:38	18°♄59'26		max. Earth dist.	16499 Feb 03 13:08	0°♄37'45	10.67242 AU
retrograde	16493 Mar 20 22:00	26°♄30'57		morning rise	16499 Feb 21 00:15	2°♄43'57	
opposition	16493 May 29 15:45	23°♄07'17 0°58'19		retrograde	16499 Jun 04 13:01	10°♄14'25	
min. Earth dist.	16493 May 29 00:29	23°♄10'13 8.67889 AU		opposition	16499 Aug 12 07:59	6°♄51'00	2°00'48
direct	16493 Aug 06 05:02	19°♄46'24		min. Earth dist.	16499 Aug 12 07:56	6°♄51'01	8.66128 AU
evening set	16493 Nov 15 04:39	27°♄06'06		direct	16499 Oct 19 17:34	3°♄28'14	
				evening set	16500 Jan 29 22:42	10°♄54'07	
conjunction	16493 Dec 02 10:41	29°♄11'11 0°56'23					
minimum elong	16493 Dec 02 10:39	29°♄11'10 0°57'01		conjunction	16500 Feb 16 11:49	13°♄01'12	1°35'18
max. Earth dist.	16493 Dec 03 04:48	29°♄16'42 10.68703 AU		minimum elong	16500 Feb 16 11:51	13°♄01'12	1°35'32
	16493 Dec 09 03:11	0°♄		max. Earth dist.	16500 Feb 16 09:09	13°♄00'23	10.64670 AU
morning rise	16493 Dec 19 18:52	1°♄16'55		morning rise	16500 Mar 06 01:41	15°♄08'33	
retrograde	16494 Apr 02 16:33	8°♄47'40		retrograde	16500 Jun 17 09:34	22°♄39'42	
opposition	16494 Jun 11 08:36	5°♄24'02 1°20'06		opposition	16500 Aug 24 23:21	19°♄16'20	1°52'34
min. Earth dist.	16494 Jun 10 18:14	5°♄26'48 8.69449 AU		min. Earth dist.	16500 Aug 25 03:03	19°♄15'37	8.63274 AU
direct	16494 Aug 18 20:23	2°♄03'09		direct	16500 Nov 01 09:55	15°♄52'57	
evening set	16494 Nov 27 20:33	9°♄22'15		evening set	16501 Feb 12 00:11	23°♄21'48	
conjunction	16494 Dec 15 03:32	11°♄27'20 1°12'42		conjunction	16501 Mar 01 14:27	25°♄29'39	1°26'22

minimum elong	16501 Mar 01 14:29	25° K 29'40	1°26'28	opposition	16506 Nov 09 16:12	5° II 31'04	-0°22'30
max. Earth dist.	16501 Mar 01 06:58	25° K 27'22	10.61614 AU	min. Earth dist.	16506 Nov 10 07:18	5° II 28'04	8.43759 AU
morning rise	16501 Mar 19 05:08	27° K 37'39		direct	16507 Jan 17 16:21	2° II 04'41	
	16501 Apr 08 20:31	0° Y		evening set	16507 May 02 04:42	9° II 52'07	
retrograde	16501 Jun 30 07:48	5° Y 09'38					
opposition	16501 Sep 06 16:28	1° Y 46'19	1°38'59	conjunction	16507 May 19 18:10	12° II 03'05	-0°29'12
min. Earth dist.	16501 Sep 06 23:35	1° Y 44'55	8.60027 AU	minimum elong	16507 May 19 18:09	12° II 03'05	0°29'47
	16501 Sep 30 10:04	30° K		max. Earth dist.	16507 May 18 22:58	11° II 57'05	10.42583 AU
direct	16501 Nov 14 04:06	28° K 22'17		morning rise	16507 Jun 06 05:30	14° II 13'28	
	16501 Dec 28 06:07	0° Y		retrograde	16507 Sep 16 04:59	21° II 52'16	
evening set	16502 Feb 25 03:46	5° Y 54'19		opposition	16507 Nov 22 24:00	18° II 29'18	-0°49'18
				min. Earth dist.	16507 Nov 23 14:38	18° II 26'24	8.41608 AU
conjunction	16502 Mar 14 19:04	8° Y 02'57	1°13'16	direct	16508 Jan 31 02:27	15° II 02'49	
minimum elong	16502 Mar 14 19:06	8° Y 02'58	1°13'14	evening set	16508 May 14 18:01	22° II 52'16	
max. Earth dist.	16502 Mar 14 08:00	7° Y 59'34	10.58259 AU	max. Earth dist.	16508 May 31 11:56	24° II 57'36	10.40738 AU
morning rise	16502 Apr 01 10:21	10° Y 11'38					
retrograde	16502 Jul 13 06:12	17° Y 44'33		conjunction	16508 Jun 01 05:35	25° II 03'09	-0°49'59
opposition	16502 Sep 19 11:30	14° Y 21'16	1°20'34	minimum elong	16508 Jun 01 05:34	25° II 03'08	0°50'36
min. Earth dist.	16502 Sep 19 21:06	14° Y 19'22	8.56560 AU	morning rise	16508 Jun 18 14:50	27° II 13'22	
direct	16502 Nov 27 02:12	10° Y 56'38			16508 Jul 12 05:43	0° S	
evening set	16503 Mar 10 09:48	18° Y 31'58		retrograde	16508 Sep 28 14:15	4° S 53'23	
				opposition	16508 Dec 05 10:09	1° S 30'30	-1°13'40
conjunction	16503 Mar 28 01:54	20° Y 41'23	0°56'33	min. Earth dist.	16508 Dec 05 22:58	1° S 27'59	8.40130 AU
minimum elong	16503 Mar 28 01:56	20° Y 41'23	0°56'24		16508 Dec 25 06:14	30° K II	
max. Earth dist.	16503 Mar 27 12:16	20° Y 37'11	10.54763 AU	direct	16509 Feb 12 14:11	28° II 04'08	
morning rise	16503 Apr 14 17:17	22° Y 50'39			16509 Apr 01 17:11	0° S	
	16503 Jul 04 17:37	0° S		evening set	16509 May 28 07:22	5° S 54'56	
retrograde	16503 Jul 26 07:14	0° S 24'37					
	16503 Aug 17 00:43	30° K Y		conjunction	16509 Jun 14 16:50	8° S 05'31	-1°08'15
opposition	16503 Oct 02 08:39	27° Y 01'21	0°58'06	minimum elong	16509 Jun 14 16:49	8° S 05'31	1°08'53
min. Earth dist.	16503 Oct 02 19:55	26° Y 59'08	8.53035 AU	max. Earth dist.	16509 Jun 14 01:49	8° S 00'47	10.39610 AU
direct	16503 Dec 10 02:02	23° Y 36'10		morning rise	16509 Jul 01 23:48	10° S 15'27	
	16504 Mar 12 06:02	0° S		retrograde	16509 Oct 12 00:05	17° S 56'32	
evening set	16504 Mar 22 18:03	1° S 14'50		opposition	16509 Dec 18 22:16	14° S 33'45	-1°34'19
				min. Earth dist.	16509 Dec 19 08:59	14° S 31'39	8.39404 AU
conjunction	16504 Apr 09 10:26	3° S 24'54	0°36'58	direct	16510 Feb 26 03:48	11° S 07'37	
minimum elong	16504 Apr 09 10:27	3° S 24'54	0°36'42	evening set	16510 Jun 10 20:09	18° S 59'00	
max. Earth dist.	16504 Apr 08 18:54	3° S 20'07	10.51285 AU				
morning rise	16504 Apr 27 01:25	5° S 34'40		conjunction	16510 Jun 28 03:23	21° S 09'09	-1°23'02
retrograde	16504 Aug 07 11:17	13° S 09'46		minimum elong	16510 Jun 28 03:22	21° S 09'09	1°23'38
opposition	16504 Oct 14 08:31	9° S 46'33	0°32'36	max. Earth dist.	16510 Jun 27 15:13	21° S 05'19	10.39254 AU
min. Earth dist.	16504 Oct 14 21:18	9° S 44'02	8.49616 AU	morning rise	16510 Jul 15 08:11	23° S 18'40	
direct	16504 Dec 22 03:06	6° S 20'54			16510 Sep 21 13:57	0° Q	
evening set	16505 Apr 05 04:04	14° S 02'43		retrograde	16510 Oct 25 11:31	1° Q 00'33	
	16505 Apr 12 23:15	15° S			16510 Nov 28 22:38	30° K S	
				opposition	16511 Jan 01 12:03	27° S 37'54	-1°50'05
conjunction	16505 Apr 22 20:03	16° S 13'18	0°15'27	min. Earth dist.	16511 Jan 01 20:36	27° S 36'13	8.39459 AU
minimum elong	16505 Apr 22 20:04	16° S 13'18	0°15'03	direct	16511 Mar 11 17:40	24° S 12'08	
behind sun begin	16505 Apr 22 17:39	16° S 12'34			16511 Jun 07 04:52	0° Q	
behind sun end	16505 Apr 22 22:28	16° S 14'02		evening set	16511 Jun 24 07:44	2° Q 03'13	
max. Earth dist.	16505 Apr 22 02:37	16° S 07'54	10.47991 AU				
morning rise	16505 May 10 10:15	18° S 23'28		conjunction	16511 Jul 11 12:41	4° Q 12'49	-1°33'31
retrograde	16505 Aug 20 16:18	25° S 59'45		minimum elong	16511 Jul 11 12:40	4° Q 12'49	1°34'04
opposition	16505 Oct 27 11:05	22° S 36'36	0°05'16	max. Earth dist.	16511 Jul 11 03:26	4° Q 09'54	10.39685 AU
min. Earth dist.	16505 Oct 28 01:21	22° S 33'47	8.46472 AU	morning rise	16511 Jul 28 15:36	6° Q 21'51	
direct	16506 Jan 04 07:44	19° S 10'32		retrograde	16511 Nov 07 22:27	14° Q 04'11	
desc. node	16506 Jan 06 23:34	19° S 10'54		opposition	16512 Jan 15 02:51	10° Q 41'37	-2°00'08
evening set	16506 Apr 18 15:49	26° S 55'21		min. Earth dist.	16512 Jan 15 09:04	10° Q 40'24	8.40297 AU
max. Earth dist.	16506 May 05 11:54	29° S 00'20	10.45042 AU	direct	16512 Mar 24 08:09	7° Q 16'22	
					16512 Jul 05 21:17	15° Q	
conjunction	16506 May 06 06:48	29° S 06'13	-0°07'03	evening set	16512 Jul 06 17:28	15° Q 06'14	
minimum elong	16506 May 06 06:47	29° S 06'13	0°07'33				
behind sun begin	16506 May 06 00:14	29° S 04'12		conjunction	16512 Jul 23 20:29	17° Q 15'13	-1°39'10
behind sun end	16506 May 06 13:20	29° S 08'14		minimum elong	16512 Jul 23 20:29	17° Q 15'13	1°39'38
	16506 May 13 11:27	0° II		max. Earth dist.	16512 Jul 23 14:29	17° Q 13'19	10.40898 AU
morning rise	16506 May 23 19:47	1° II 16'36		morning rise	16512 Aug 09 22:02	19° Q 23'45	
retrograde	16506 Sep 02 21:17	8° II 54'07		retrograde	16512 Nov 20 07:51	27° Q 06'08	

opposition	16513 Jan 27 17:49	23° Ω 43'36	-2°03'58	opposition	16519 Apr 17 04:32	10° \mathbb{M} 22'08	-0°31'36
min. Earth dist.	16513 Jan 27 20:50	23° Ω 43'00	8.41889 AU	min. Earth dist.	16519 Apr 16 15:14	10° \mathbb{M} 24'41	8.60269 AU
direct	16513 Apr 06 23:15	20° Ω 18'55		direct	16519 Jun 25 01:06	7° \mathbb{M} 00'56	
evening set	16513 Jul 20 00:48	28° Ω 06'42		evening set	16519 Oct 04 15:49	14° \mathbb{M} 27'33	
	16513 Aug 04 02:45	0° \mathbb{M}			16519 Oct 09 02:55	15° \mathbb{M}	
conjunction	16513 Aug 06 02:28	0° \mathbb{M} 15'03	-1°39'45	conjunction	16519 Oct 21 18:18	16° \mathbb{M} 33'08	-0°15'08
minimum elong	16513 Aug 06 02:28	0° \mathbb{M} 15'04	1°40'06	minimum elong	16519 Oct 21 18:19	16° \mathbb{M} 33'09	0°14'44
max. Earth dist.	16513 Aug 06 00:44	0° \mathbb{M} 14'31	10.42839 AU	behind sun begin	16519 Oct 21 15:21	16° \mathbb{M} 32'14	
morning rise	16513 Aug 23 03:04	2° \mathbb{M} 23'06		behind sun end	16519 Oct 21 21:17	16° \mathbb{M} 34'03	
retrograde	16513 Dec 03 16:27	10° \mathbb{M} 05'05		max. Earth dist.	16519 Oct 22 10:58	16° \mathbb{M} 38'16	10.61705 AU
opposition	16514 Feb 10 08:16	6° \mathbb{M} 42'32	-2°01'26	morning rise	16519 Nov 07 22:23	18° \mathbb{M} 39'12	
min. Earth dist.	16514 Feb 10 07:28	6° \mathbb{M} 42'42	8.44149 AU	retrograde	16520 Feb 19 12:36	26° \mathbb{M} 13'15	
direct	16514 Apr 20 14:18	3° \mathbb{M} 18'31		opposition	16520 Apr 29 05:33	22° \mathbb{M} 50'05	-0°05'03
evening set	16514 Aug 02 05:37	11° \mathbb{M} 03'25		min. Earth dist.	16520 Apr 28 14:47	22° \mathbb{M} 52'55	8.63058 AU
conjunction	16514 Aug 19 06:26	13° \mathbb{M} 11'11	-1°35'15	direct	16520 Jul 07 00:28	19° \mathbb{M} 29'11	
minimum elong	16514 Aug 19 06:27	13° \mathbb{M} 11'12	1°35'28	asc. node	16520 Jul 09 10:37	19° \mathbb{M} 29'29	
max. Earth dist.	16514 Aug 19 09:27	13° \mathbb{M} 12'08	10.45403 AU	evening set	16520 Oct 16 07:55	26° \mathbb{M} 53'02	
morning rise	16514 Sep 05 06:31	15° \mathbb{M} 18'44		conjunction	16520 Nov 02 11:26	28° \mathbb{M} 58'25	0°06'37
retrograde	16514 Dec 17 01:21	22° \mathbb{M} 59'55		minimum elong	16520 Nov 02 11:26	28° \mathbb{M} 58'25	0°07'07
opposition	16515 Feb 23 21:32	19° \mathbb{M} 37'19	-1°52'46	behind sun begin	16520 Nov 02 04:52	28° \mathbb{M} 56'26	
min. Earth dist.	16515 Feb 23 16:46	19° \mathbb{M} 38'14	8.46965 AU	behind sun end	16520 Nov 02 18:00	29° \mathbb{M} 00'24	
direct	16515 May 04 01:47	16° \mathbb{M} 13'59		max. Earth dist.	16520 Nov 03 05:12	29° \mathbb{M} 03'51	10.64279 AU
evening set	16515 Aug 15 07:43	23° \mathbb{M} 55'23			16520 Nov 10 20:25	0° \mathbb{M}	
conjunction	16515 Sep 01 08:10	26° \mathbb{M} 02'37	-1°26'00	morning rise	16520 Nov 19 16:44	1° \mathbb{M} 04'20	
minimum elong	16515 Sep 01 08:12	26° \mathbb{M} 02'37	1°26'06	retrograde	16521 Mar 03 11:21	8° \mathbb{M} 37'12	
max. Earth dist.	16515 Sep 01 15:42	26° \mathbb{M} 04'58	10.48466 AU	opposition	16521 May 12 03:49	5° \mathbb{M} 13'52	0°21'34
morning rise	16515 Sep 18 08:17	28° \mathbb{M} 09'45		min. Earth dist.	16521 May 11 12:50	5° \mathbb{M} 16'45	8.65402 AU
	16515 Oct 03 17:18	0° \mathbb{M}		direct	16521 Jul 19 19:38	1° \mathbb{M} 53'05	
retrograde	16515 Dec 30 08:07	5° \mathbb{M} 49'43		evening set	16521 Oct 28 23:28	9° \mathbb{M} 14'47	
opposition	16516 Mar 08 09:06	2° \mathbb{M} 27'02	-1°38'31	conjunction	16521 Nov 15 03:53	11° \mathbb{M} 20'00	0°27'51
min. Earth dist.	16516 Mar 08 01:11	2° \mathbb{M} 28'34	8.50198 AU	minimum elong	16521 Nov 15 03:52	11° \mathbb{M} 20'00	0°28'25
	16516 Apr 12 23:25	30° \mathbb{R} \mathbb{M}		max. Earth dist.	16521 Nov 15 21:18	11° \mathbb{M} 25'19	10.66375 AU
direct	16516 May 16 10:59	29° \mathbb{M} 04'22		morning rise	16521 Dec 02 10:27	13° \mathbb{M} 25'49	
	16516 Jun 18 09:47	0° \mathbb{M}		retrograde	16522 Mar 16 06:49	20° \mathbb{M} 57'41	
evening set	16516 Aug 27 07:03	6° \mathbb{M} 41'56		opposition	16522 May 24 23:54	17° \mathbb{M} 34'12	0°47'03
conjunction	16516 Sep 13 07:30	8° \mathbb{M} 48'38	-1°12'33	min. Earth dist.	16522 May 24 09:45	17° \mathbb{M} 36'55	8.67251 AU
minimum elong	16516 Sep 13 07:32	8° \mathbb{M} 48'38	1°12'31	direct	16522 Aug 01 13:11	14° \mathbb{M} 13'22	
max. Earth dist.	16516 Sep 13 18:11	8° \mathbb{M} 51'58	10.51858 AU	evening set	16522 Nov 10 14:37	21° \mathbb{M} 33'36	
morning rise	16516 Sep 30 08:15	10° \mathbb{M} 55'25		conjunction	16522 Nov 27 19:58	23° \mathbb{M} 38'42	0°47'45
retrograde	16517 Jan 11 12:04	18° \mathbb{M} 33'53		minimum elong	16522 Nov 27 19:57	23° \mathbb{M} 38'41	0°48'22
opposition	16517 Mar 21 18:19	15° \mathbb{M} 11'08	-1°19'32	max. Earth dist.	16522 Nov 28 12:02	23° \mathbb{M} 43'35	10.67939 AU
min. Earth dist.	16517 Mar 21 08:17	15° \mathbb{M} 13'04	8.53655 AU	morning rise	16522 Dec 15 03:47	25° \mathbb{M} 44'28	
direct	16517 May 29 18:27	11° \mathbb{M} 49'02			16523 Jan 23 10:59	0° \mathbb{M}	
evening set	16517 Sep 09 04:02	19° \mathbb{M} 22'40		retrograde	16523 Mar 29 00:40	3° \mathbb{M} 15'35	
conjunction	16517 Sep 26 04:49	21° \mathbb{M} 28'55	-0°55'39		16523 Jun 04 23:59	30° \mathbb{R} \mathbb{M}	
minimum elong	16517 Sep 26 04:51	21° \mathbb{M} 28'56	0°55'29	opposition	16523 Jun 06 17:50	29° \mathbb{M} 51'55	1°10'16
max. Earth dist.	16517 Sep 26 17:35	21° \mathbb{M} 32'53	10.55355 AU	min. Earth dist.	16523 Jun 06 05:01	29° \mathbb{M} 54'24	8.68545 AU
morning rise	16517 Oct 13 06:33	23° \mathbb{M} 35'24		direct	16523 Aug 14 06:28	26° \mathbb{M} 30'55	
	16517 Dec 17 16:53	0° \mathbb{M}			16523 Oct 19 05:37	0° \mathbb{M}	
retrograde	16518 Jan 24 14:09	1° \mathbb{M} 12'15		evening set	16523 Nov 23 06:06	3° \mathbb{M} 50'21	
	16518 Mar 04 05:35	30° \mathbb{R} \mathbb{M}		conjunction	16523 Dec 10 12:34	5° \mathbb{M} 55'28	1°05'25
opposition	16518 Apr 04 00:45	27° \mathbb{M} 49'23	-0°56'50	minimum elong	16523 Dec 10 12:32	5° \mathbb{M} 55'28	1°06'02
min. Earth dist.	16518 Apr 03 13:06	27° \mathbb{M} 51'37	8.57090 AU	max. Earth dist.	16523 Dec 11 03:25	5° \mathbb{M} 59'59	10.68909 AU
direct	16518 Jun 11 23:06	24° \mathbb{M} 27'46		morning rise	16523 Dec 27 21:26	8° \mathbb{M} 01'14	
	16518 Sep 05 06:25	0° \mathbb{M}		retrograde	16524 Apr 09 19:08	15° \mathbb{M} 31'51	
evening set	16518 Sep 21 22:49	1° \mathbb{M} 57'41		opposition	16524 Jun 18 09:46	12° \mathbb{M} 08'02	1°30'14
conjunction	16518 Oct 09 00:18	4° \mathbb{M} 03'33	-0°36'11	min. Earth dist.	16524 Jun 17 22:09	12° \mathbb{M} 10'17	8.69217 AU
minimum elong	16518 Oct 09 00:19	4° \mathbb{M} 03'34	0°35'54	direct	16524 Aug 25 21:16	8° \mathbb{M} 46'46	
max. Earth dist.	16518 Oct 09 14:52	4° \mathbb{M} 08'04	10.58704 AU	evening set	16524 Dec 04 22:17	16° \mathbb{M} 06'07	
morning rise	16518 Oct 26 03:12	6° \mathbb{M} 09'47		conjunction	16524 Dec 22 05:54	18° \mathbb{M} 11'20	1°20'05
retrograde	16519 Feb 06 13:53	13° \mathbb{M} 45'08		minimum elong	16524 Dec 22 05:53	18° \mathbb{M} 11'20	1°20'41

max. Earth dist.	16524 Dec 22 19:17	18° S 15'24	10.69229 AU	morning rise	16531 Mar 26 13:55	4° Y 33'58	
morning rise	16525 Jan 08 15:40	20° S 17'12		retrograde	16531 Jul 07 14:05	12° Y 07'02	
retrograde	16525 Apr 22 12:58	27° S 47'32		opposition	16531 Sep 13 20:18	8° Y 43'21	1°29'45
opposition	16525 Jul 01 00:30	24° S 23'36	1°46'04	min. Earth dist.	16531 Sep 14 03:25	8° Y 41'57	8.56957 AU
min. Earth dist.	16525 Jun 30 14:26	24° S 25'33	8.69221 AU	direct	16531 Nov 21 08:40	5° Y 18'45	
direct	16525 Sep 07 10:49	21° S 01'59		evening set	16532 Mar 03 13:16	12° Y 53'04	
evening set	16525 Dec 17 15:24	28° S 21'55					
	16525 Dec 31 05:49	0° \approx		conjunction	16532 Mar 21 05:04	15° Y 02'16	1°04'45
				minimum elong	16532 Mar 21 05:06	15° Y 02'17	1°04'39
conjunction	16526 Jan 04 00:08	0° \approx 27'22	1°31'05	max. Earth dist.	16532 Mar 20 17:40	14° Y 58'46	10.55329 AU
minimum elong	16526 Jan 04 00:07	0° \approx 27'22	1°31'38	morning rise	16532 Apr 07 20:26	17° Y 11'25	
max. Earth dist.	16526 Jan 04 11:04	0° \approx 30'41	10.68874 AU	retrograde	16532 Jul 19 14:30	24° Y 45'27	
morning rise	16526 Jan 21 10:47	2° \approx 33'24		opposition	16532 Sep 25 16:54	21° Y 22'02	1°09'00
retrograde	16526 May 05 07:06	10° \approx 03'45		min. Earth dist.	16532 Sep 26 02:58	21° Y 20'03	8.53780 AU
opposition	16526 Jul 13 14:34	6° \approx 39'44	1°57'05	direct	16532 Dec 03 07:36	17° Y 57'01	
min. Earth dist.	16526 Jul 13 07:00	6° \approx 41'13	8.68546 AU	evening set	16533 Mar 16 20:59	25° Y 34'40	
direct	16526 Sep 20 00:17	3° \approx 17'41					
evening set	16526 Dec 30 10:05	10° \approx 38'51		conjunction	16533 Apr 03 13:10	27° Y 44'34	0°46'22
				minimum elong	16533 Apr 03 13:11	27° Y 44'34	0°46'08
conjunction	16527 Jan 16 19:56	12° \approx 44'40	1°37'56	max. Earth dist.	16533 Apr 02 22:31	27° Y 40'03	10.52181 AU
minimum elong	16527 Jan 16 19:56	12° \approx 44'40	1°38'25	morning rise	16533 Apr 21 04:32	29° Y 54'16	
max. Earth dist.	16527 Jan 17 02:51	12° \approx 46'46	10.67859 AU		16533 Apr 21 23:34	0° S	
morning rise	16527 Feb 03 07:38	14° \approx 51'01		retrograde	16533 Aug 01 17:17	7° S 29'22	
	16527 Feb 04 14:00	15° \approx		opposition	16533 Oct 08 16:06	4° S 06'11	0°44'43
retrograde	16527 May 18 02:13	22° \approx 21'32		min. Earth dist.	16533 Oct 09 04:16	4° S 03'47	8.50662 AU
opposition	16527 Jul 26 04:22	18° \approx 57'29	2°02'47	direct	16533 Dec 16 09:01	0° S 40'49	
min. Earth dist.	16527 Jul 26 00:19	18° \approx 58'17	8.67222 AU	evening set	16534 Mar 30 06:46	8° S 21'43	
direct	16527 Oct 02 12:59	15° \approx 34'55					
evening set	16528 Jan 12 06:25	22° \approx 57'54		conjunction	16534 Apr 16 22:57	10° S 32'10	0°25'35
				minimum elong	16534 Apr 16 22:58	10° S 32'10	0°25'14
conjunction	16528 Jan 29 17:33	25° \approx 04'13	1°40'17	max. Earth dist.	16534 Apr 16 06:33	10° S 27'06	10.49157 AU
minimum elong	16528 Jan 29 17:33	25° \approx 04'13	1°40'41	morning rise	16534 May 04 13:47	12° S 42'18	
max. Earth dist.	16528 Jan 29 20:15	25° \approx 05'02	10.66225 AU		16534 May 24 04:05	15° S	
morning rise	16528 Feb 16 06:19	27° \approx 11'00		retrograde	16534 Aug 14 21:34	20° S 18'33	
	16528 Mar 12 04:02	0° H		opposition	16534 Oct 21 17:58	16° S 55'34	0°18'02
retrograde	16528 May 29 20:01	4° H 41'53		min. Earth dist.	16534 Oct 22 07:00	16° S 52'59	8.47741 AU
opposition	16528 Aug 06 18:32	1° H 17'52	2°02'51		16534 Nov 16 16:35	15° R 8	
min. Earth dist.	16528 Aug 06 17:41	1° H 18'02	8.65297 AU	direct	16534 Dec 29 13:47	13° S 29'56	
	16528 Aug 23 18:46	30° R \approx			16535 Feb 09 18:47	15° S	
direct	16528 Oct 14 04:08	27° \approx 54'44		evening set	16535 Apr 12 18:34	21° S 13'51	
	16528 Dec 03 07:44	0° H					
evening set	16529 Jan 24 04:38	5° H 20'03		conjunction	16535 Apr 30 10:11	23° S 24'41	0°03'27
				minimum elong	16535 Apr 30 10:11	23° S 24'41	0°03'00
conjunction	16529 Feb 10 17:08	7° H 27'00	1°38'00	behind sun begin	16535 Apr 30 03:00	23° S 22'29	
minimum elong	16529 Feb 10 17:09	7° H 27'00	1°38'17	behind sun end	16535 Apr 30 17:22	23° S 26'54	
max. Earth dist.	16529 Feb 10 16:18	7° H 26'45	10.64035 AU	max. Earth dist.	16535 Apr 29 17:05	23° S 19'23	10.46384 AU
morning rise	16529 Feb 28 06:46	9° H 34'17		morning rise	16535 May 17 23:51	25° S 35'03	
retrograde	16529 Jun 11 15:39	17° H 05'46		desc. node	16535 Jun 26 12:32	29° S 58'05	
opposition	16529 Aug 19 09:32	13° H 41'48	1°57'13		16535 Jun 26 20:38	0° II	
min. Earth dist.	16529 Aug 19 11:14	13° H 41'28	8.62860 AU	retrograde	16535 Aug 28 03:51	3° II 12'27	
direct	16529 Oct 26 20:55	10° H 18'09			16535 Nov 01 18:02	30° R 8	
evening set	16530 Feb 06 05:03	17° H 46'10		opposition	16535 Nov 03 22:29	29° S 49'39	-0°09'44
				min. Earth dist.	16535 Nov 04 11:56	29° S 47'00	8.45140 AU
conjunction	16530 Feb 23 18:57	19° H 53'51	1°31'07	direct	16536 Jan 11 20:54	26° S 23'49	
minimum elong	16530 Feb 23 18:59	19° H 53'51	1°31'18		16536 Mar 19 02:21	0° II	
max. Earth dist.	16530 Feb 23 15:07	19° H 52'41	10.61402 AU	evening set	16536 Apr 25 07:45	4° II 10'24	
morning rise	16530 Mar 13 09:18	22° H 01'43					
retrograde	16530 Jun 24 14:22	29° H 33'57		conjunction	16536 May 12 22:07	6° II 21'25	-0°19'06
opposition	16530 Sep 01 01:56	26° H 10'05	1°46'02	minimum elong	16536 May 12 22:07	6° II 21'24	0°19'38
min. Earth dist.	16530 Sep 01 06:02	26° H 09'16	8.60035 AU	max. Earth dist.	16536 May 12 04:44	6° II 15'59	10.43978 AU
direct	16530 Nov 08 13:23	22° H 45'57		morning rise	16536 May 30 10:08	8° II 31'50	
	16531 Feb 16 22:56	0° Y		retrograde	16536 Sep 09 12:48	16° II 10'22	
evening set	16531 Feb 19 07:52	0° Y 16'58		opposition	16536 Nov 16 05:48	12° II 47'44	-0°37'11
				min. Earth dist.	16536 Nov 16 19:31	12° II 45'02	8.42957 AU
conjunction	16531 Mar 08 22:56	2° Y 25'26	1°19'53	direct	16537 Jan 24 05:19	9° II 21'46	
minimum elong	16531 Mar 08 22:58	2° Y 25'27	1°19'56	evening set	16537 May 08 21:33	17° II 10'31	
max. Earth dist.	16531 Mar 08 15:27	2° Y 23'09	10.58454 AU				

conjunction	16537 May 26 10:08	19°II21'29	-0°40'40	conjunction	16543 Aug 13 20:13	7°II45'06	-1°37'43
minimum elong	16537 May 26 10:06	19°II21'28	0°41'16	minimum elong	16543 Aug 13 20:15	7°II45'06	1°38'00
max. Earth dist.	16537 May 25 16:29	19°II15'57	10.42001 AU	max. Earth dist.	16543 Aug 13 19:53	7°II44'59	10.42211 AU
morning rise	16537 Jun 12 20:16	21°II31'49		morning rise	16543 Aug 30 20:36	9°II53'11	
retrograde	16537 Sep 22 21:41	29°II11'30		retrograde	16543 Dec 11 15:07	17°II36'02	
opposition	16537 Nov 29 15:31	25°II48'59	-1°02'50	opposition	16544 Feb 18 07:26	14°II13'09	-1°57'13
min. Earth dist.	16537 Nov 30 05:35	25°II46'13	8.41213 AU	min. Earth dist.	16544 Feb 18 05:59	14°II13'26	8.43457 AU
direct	16538 Feb 06 17:02	22°II22'58		direct	16544 Apr 27 10:35	10°II49'06	
	16538 May 20 15:56	0°II		evening set	16544 Aug 08 23:17	18°II33'27	
evening set	16538 May 22 11:45	0°II13'27					
conjunction	16538 Jun 08 22:09	2°II24'12	-1°00'13	conjunction	16544 Aug 25 23:53	20°II41'16	-1°30'30
minimum elong	16538 Jun 08 22:08	2°II24'11	1°00'50	minimum elong	16544 Aug 25 23:54	20°II41'16	1°30'39
max. Earth dist.	16538 Jun 08 04:34	2°II18'40	10.40454 AU	max. Earth dist.	16544 Aug 26 03:27	20°II42'23	10.44667 AU
morning rise	16538 Jun 26 06:14	4°II34'19		morning rise	16544 Sep 12 00:14	22°II48'58	
retrograde	16538 Oct 06 06:59	12°II15'12			16544 Nov 29 15:05	0°II	
opposition	16538 Dec 13 03:18	8°II52'49	-1°25'20	retrograde	16544 Dec 23 21:30	0°II30'47	
min. Earth dist.	16538 Dec 13 16:41	8°II50'11	8.39917 AU		16545 Jan 17 11:47	30°R II	
direct	16539 Feb 20 07:19	5°II26'53		opposition	16545 Mar 02 20:41	27°II07'41	-1°45'18
evening set	16539 Jun 05 01:42	13°II18'35		min. Earth dist.	16545 Mar 02 15:46	27°II08'38	8.46169 AU
				direct	16545 May 10 23:32	23°II44'07	
conjunction	16539 Jun 22 09:50	15°II29'00	-1°16'42		16545 Aug 10 07:03	0°II	
minimum elong	16539 Jun 22 09:49	15°II29'00	1°17'18	evening set	16545 Aug 22 00:43	1°II24'50	
max. Earth dist.	16539 Jun 21 18:05	15°II24'02	10.39396 AU				
morning rise	16539 Jul 09 15:47	17°II38'48		conjunction	16545 Sep 08 01:16	3°II32'08	-1°18'46
retrograde	16539 Oct 19 18:26	25°II20'53		minimum elong	16545 Sep 08 01:18	3°II32'09	1°18'47
opposition	16539 Dec 26 17:12	21°II58'33	-1°43'27	max. Earth dist.	16545 Sep 08 09:11	3°II34'38	10.47627 AU
min. Earth dist.	16539 Dec 27 04:24	21°II56'21	8.39181 AU	morning rise	16545 Sep 25 01:59	5°II39'29	
direct	16540 Mar 04 22:17	18°II32'53		retrograde	16546 Jan 06 02:54	13°II19'59	
evening set	16540 Jun 17 14:37	26°II24'55		opposition	16546 Mar 16 07:49	9°II56'39	-1°28'12
				min. Earth dist.	16546 Mar 15 23:03	9°II58'20	8.49298 AU
conjunction	16540 Jul 04 20:37	28°II34'56	-1°29'13	direct	16546 May 24 10:02	6°II33'38	
minimum elong	16540 Jul 04 20:36	28°II34'55	1°29'47	evening set	16546 Sep 03 23:26	14°II10'26	
max. Earth dist.	16540 Jul 04 08:20	28°II31'03	10.38977 AU				
	16540 Jul 16 02:16	0°II		conjunction	16546 Sep 21 00:19	16°II17'17	-1°03'13
morning rise	16540 Jul 22 00:31	0°II44'20		minimum elong	16546 Sep 21 00:21	16°II17'17	1°03'06
retrograde	16540 Nov 01 06:32	8°II27'21		max. Earth dist.	16546 Sep 21 12:34	16°II21'06	10.50924 AU
opposition	16541 Jan 08 08:30	5°II04'58	-1°56'12	morning rise	16546 Oct 08 01:42	18°II24'17	
min. Earth dist.	16541 Jan 08 16:28	5°II03'25	8.39141 AU	retrograde	16547 Jan 19 08:20	26°II03'15	
direct	16541 Mar 18 13:48	1°II39'38		opposition	16547 Mar 29 16:24	22°II39'44	-1°06'54
evening set	16541 Jul 01 02:15	9°II31'07		min. Earth dist.	16547 Mar 29 04:32	22°II42'02	8.52680 AU
				direct	16547 Jun 06 16:06	19°II17'16	
conjunction	16541 Jul 18 06:22	11°II40'36	-1°37'07	evening set	16547 Sep 16 19:52	26°II50'07	
minimum elong	16541 Jul 18 06:21	11°II40'36	1°37'36				
max. Earth dist.	16541 Jul 17 22:20	11°II38'04	10.39303 AU	conjunction	16547 Oct 03 21:20	28°II56'33	-0°44'41
morning rise	16541 Aug 04 08:31	13°II49'35		minimum elong	16547 Oct 03 21:21	28°II56'34	0°44'27
	16541 Aug 13 23:15	15°II		max. Earth dist.	16547 Oct 04 12:37	29°II01'19	10.54389 AU
retrograde	16541 Nov 14 18:07	21°II33'03			16547 Oct 12 09:41	0°II	
opposition	16542 Jan 22 00:23	18°II10'33	-2°02'54	morning rise	16547 Oct 20 23:44	1°II03'16	
min. Earth dist.	16542 Jan 22 05:08	18°II09'37	8.39858 AU	retrograde	16548 Feb 01 10:14	8°II40'34	
	16542 Mar 15 12:19	15°R II		opposition	16548 Apr 10 22:08	5°II16'55	-0°42'31
direct	16542 Apr 01 05:40	14°II45'36		min. Earth dist.	16548 Apr 10 08:21	5°II19'35	8.56149 AU
	16542 Apr 17 20:43	15°II		direct	16548 Jun 18 18:28	1°II54'55	
evening set	16542 Jul 14 11:57	22°II35'33		evening set	16548 Sep 28 14:19	9°II24'07	
conjunction	16542 Jul 31 14:26	24°II44'29	-1°39'59	conjunction	16548 Oct 15 16:30	11°II30'10	-0°24'08
minimum elong	16542 Jul 31 14:26	24°II44'29	1°40'23	minimum elong	16548 Oct 15 16:31	11°II30'10	0°23'47
max. Earth dist.	16542 Jul 31 10:18	24°II43'11	10.40395 AU	max. Earth dist.	16548 Oct 16 09:21	11°II35'22	10.57847 AU
morning rise	16542 Aug 17 15:22	26°II53'01		morning rise	16548 Nov 01 20:13	13°II36'38	
	16542 Sep 13 04:53	0°II			16548 Nov 13 13:11	15°II	
retrograde	16542 Nov 28 05:13	4°II36'25		retrograde	16549 Feb 13 09:18	21°II12'16	
opposition	16543 Feb 04 16:20	1°II13'45	-2°03'13	min. Earth dist.	16549 Apr 23 10:21	17°II51'21	8.59529 AU
min. Earth dist.	16543 Feb 04 18:05	1°II13'24	8.41318 AU	opposition	16549 Apr 24 00:59	17°II48'32	-0°16'18
	16543 Feb 20 20:07	30°R II			16549 Jun 06 07:12	15°R II	
direct	16543 Apr 14 20:59	27°II49'13		direct	16549 Jul 01 19:52	14°II26'55	
	16543 Jun 05 01:44	0°II			16549 Jul 27 02:06	15°II	
evening set	16543 Jul 27 18:59	5°II36'44		evening set	16549 Oct 11 07:17	21°II52'52	

conjunction	16549 Oct 28 10:19	23° \mathbb{M} 58'34	-0°02'36			16555 Oct 29 01:31	0° \approx	
minimum elong	16549 Oct 28 10:19	23° \mathbb{M} 58'34	0°02'09	evening set		16555 Dec 25 08:27	5° \approx 42'12	
behind sun begin	16549 Oct 28 03:12	23° \mathbb{M} 56'25						
behind sun end	16549 Oct 28 17:25	24° \mathbb{M} 00'44		conjunction		16556 Jan 11 17:43	7° \approx 47'36	1°35'23
max. Earth dist.	16549 Oct 29 04:04	24° \mathbb{M} 04'02	10.61124 AU	minimum elong		16556 Jan 11 17:42	7° \approx 47'36	1°35'53
morning rise	16549 Nov 14 15:19	26° \mathbb{M} 04'48		max. Earth dist.		16556 Jan 12 03:39	7° \approx 50'37	10.70382 AU
asc. node	16549 Dec 11 21:31	29° \mathbb{M} 10'53		morning rise		16556 Jan 29 04:53	9° \approx 53'33	
	16549 Dec 19 23:12	0° \mathbb{A}				16556 Mar 18 10:34	15° \approx	
retrograde	16550 Feb 26 07:17	3° \mathbb{A} 38'54		retrograde		16556 May 11 23:27	17° \approx 23'05	
min. Earth dist.	16550 May 06 09:29	0° \mathbb{A} 18'06	8.62662 AU			16556 Jul 07 01:16	15° \mathbb{R} \approx	
opposition	16550 May 07 00:55	0° \mathbb{A} 15'07	0°10'28	opposition		16556 Jul 20 04:45	13° \approx 59'38	2°00'44
	16550 May 10 07:27	30° \mathbb{R} \mathbb{M}		min. Earth dist.		16556 Jul 19 21:56	14° \approx 00'57	8.70134 AU
direct	16550 Jul 14 18:08	26° \mathbb{M} 53'49		direct		16556 Sep 26 14:29	10° \approx 37'54	
	16550 Sep 14 14:28	0° \mathbb{A}				16556 Dec 10 13:12	15° \approx	
evening set	16550 Oct 23 23:12	4° \mathbb{A} 17'02		evening set		16557 Jan 06 03:40	17° \approx 59'03	
conjunction	16550 Nov 10 03:16	6° \mathbb{A} 22'28	0°19'02	conjunction		16557 Jan 23 14:12	20° \approx 04'50	1°39'39
minimum elong	16550 Nov 10 03:15	6° \mathbb{A} 22'28	0°19'34	minimum elong		16557 Jan 23 14:12	20° \approx 04'50	1°40'04
max. Earth dist.	16550 Nov 10 22:06	6° \mathbb{A} 28'14	10.64079 AU	max. Earth dist.		16557 Jan 23 20:41	20° \approx 06'47	10.69469 AU
morning rise	16550 Nov 27 09:26	8° \mathbb{A} 28'30		morning rise		16557 Feb 10 02:12	22° \approx 11'05	
retrograde	16551 Mar 11 03:51	16° \mathbb{A} 01'15		retrograde		16557 May 24 17:57	29° \approx 40'42	
opposition	16551 May 19 22:11	12° \mathbb{A} 37'26	0°36'34	opposition		16557 Aug 01 18:10	26° \approx 17'17	2°03'11
min. Earth dist.	16551 May 19 06:06	12° \mathbb{A} 40'32	8.65416 AU	min. Earth dist.		16557 Aug 01 14:35	26° \approx 17'59	8.68809 AU
direct	16551 Jul 27 13:14	9° \mathbb{A} 16'21		direct		16557 Oct 09 03:34	22° \approx 55'05	
evening set	16551 Nov 05 14:34	16° \mathbb{A} 37'29				16558 Jan 16 11:01	0° \mathbb{H}	
				evening set		16558 Jan 19 00:22	0° \mathbb{H} 18'08	
conjunction	16551 Nov 22 19:42	18° \mathbb{A} 42'43	0°39'36	conjunction		16558 Feb 05 12:09	2° \mathbb{H} 24'27	1°39'20
minimum elong	16551 Nov 22 19:41	18° \mathbb{A} 42'43	0°40'12	minimum elong		16558 Feb 05 12:10	2° \mathbb{H} 24'27	1°39'39
max. Earth dist.	16551 Nov 23 15:02	18° \mathbb{A} 48'37	10.66583 AU	max. Earth dist.		16558 Feb 05 13:51	2° \mathbb{H} 24'58	10.67731 AU
morning rise	16551 Dec 10 02:56	20° \mathbb{A} 48'34		morning rise		16558 Feb 23 01:06	4° \mathbb{H} 31'08	
retrograde	16552 Mar 22 23:27	28° \mathbb{A} 20'13		retrograde		16558 Jun 06 13:17	12° \mathbb{H} 01'10	
opposition	16552 May 31 17:02	24° \mathbb{A} 56'25	1°00'50	opposition		16558 Aug 14 08:12	8° \mathbb{H} 37'50	1°59'58
min. Earth dist.	16552 May 31 01:10	24° \mathbb{A} 59'29	8.67668 AU	min. Earth dist.		16558 Aug 14 08:34	8° \mathbb{H} 37'45	8.66670 AU
direct	16552 Aug 08 06:33	21° \mathbb{A} 35'27		direct		16558 Oct 21 17:53	5° \mathbb{H} 15'05	
evening set	16552 Nov 17 06:07	28° \mathbb{A} 55'13		evening set		16559 Jan 31 23:16	12° \mathbb{H} 40'39	
	16552 Nov 26 05:38	0° \mathbb{B}						
conjunction	16552 Dec 04 12:10	1° \mathbb{B} 00'19	0°58'16	conjunction		16559 Feb 18 12:17	14° \mathbb{H} 47'39	1°34'24
minimum elong	16552 Dec 04 12:09	1° \mathbb{B} 00'19	0°58'53	minimum elong		16559 Feb 18 12:19	14° \mathbb{H} 47'40	1°34'37
max. Earth dist.	16552 Dec 05 06:23	1° \mathbb{B} 05'52	10.68530 AU	max. Earth dist.		16559 Feb 18 08:48	14° \mathbb{H} 46'36	10.65250 AU
morning rise	16552 Dec 21 20:25	3° \mathbb{B} 06'04		morning rise		16559 Mar 08 02:15	16° \mathbb{H} 54'56	
retrograde	16553 Apr 04 18:54	10° \mathbb{B} 36'47		retrograde		16559 Jun 19 09:25	24° \mathbb{H} 25'36	
opposition	16553 Jun 13 09:49	7° \mathbb{B} 13'05	1°22'12	opposition		16559 Aug 26 23:12	21° \mathbb{H} 02'20	1°51'10
min. Earth dist.	16553 Jun 12 19:40	7° \mathbb{B} 15'49	8.69329 AU	min. Earth dist.		16559 Aug 27 03:31	21° \mathbb{H} 01'30	8.63871 AU
direct	16553 Aug 20 20:53	3° \mathbb{B} 52'06		direct		16559 Nov 03 09:52	17° \mathbb{H} 38'59	
evening set	16553 Nov 29 22:04	11° \mathbb{B} 11'14		evening set		16560 Feb 14 00:21	25° \mathbb{H} 07'32	
conjunction	16553 Dec 17 05:00	13° \mathbb{B} 16'18	1°14'14	conjunction		16560 Mar 02 14:38	27° \mathbb{H} 15'18	1°25'02
minimum elong	16553 Dec 17 04:59	13° \mathbb{B} 16'18	1°14'50	minimum elong		16560 Mar 02 14:40	27° \mathbb{H} 15'18	1°25'08
max. Earth dist.	16553 Dec 17 20:35	13° \mathbb{B} 21'02	10.69853 AU	max. Earth dist.		16560 Mar 02 06:54	27° \mathbb{H} 12'56	10.62215 AU
morning rise	16554 Jan 03 14:20	15° \mathbb{B} 22'02		morning rise		16560 Mar 20 05:22	29° \mathbb{H} 23'14	
retrograde	16554 Apr 17 12:34	22° \mathbb{B} 52'06				16560 Mar 25 09:34	0° \mathbb{Y}	
opposition	16554 Jun 26 01:12	19° \mathbb{B} 28'30	1°39'47	retrograde		16560 Jul 01 06:03	6° \mathbb{Y} 54'45	
min. Earth dist.	16554 Jun 25 13:29	19° \mathbb{B} 30'46	8.70337 AU	opposition		16560 Sep 07 15:54	3° \mathbb{Y} 31'32	1°37'05
direct	16554 Sep 02 10:39	16° \mathbb{B} 07'23		min. Earth dist.		16560 Sep 07 23:03	3° \mathbb{Y} 30'08	8.60612 AU
evening set	16554 Dec 12 14:38	23° \mathbb{B} 26'34		direct		16560 Nov 15 05:07	0° \mathbb{Y} 07'36	
				evening set		16561 Feb 26 03:36	7° \mathbb{Y} 39'20	
conjunction	16554 Dec 29 22:38	25° \mathbb{B} 31'44	1°26'47	conjunction		16561 Mar 15 18:58	9° \mathbb{Y} 47'54	1°11'34
minimum elong	16554 Dec 29 22:37	25° \mathbb{B} 31'43	1°27'21	minimum elong		16561 Mar 15 19:01	9° \mathbb{Y} 47'55	1°11'32
max. Earth dist.	16554 Dec 30 11:23	25° \mathbb{B} 35'35	10.70491 AU	max. Earth dist.		16561 Mar 15 08:18	9° \mathbb{Y} 44'38	10.58819 AU
morning rise	16555 Jan 16 08:59	27° \mathbb{B} 37'31		morning rise		16561 Apr 02 10:07	11° \mathbb{Y} 56'29	
	16555 Feb 06 05:06	0° \approx		retrograde		16561 Jul 14 05:20	19° \mathbb{Y} 29'03	
retrograde	16555 Apr 30 05:13	5° \approx 07'14		opposition		16561 Sep 20 10:39	16° \mathbb{Y} 05'51	1°18'17
opposition	16555 Jul 08 15:23	1° \approx 43'42	1°52'49	min. Earth dist.		16561 Sep 20 19:54	16° \mathbb{Y} 04'02	8.57085 AU
min. Earth dist.	16555 Jul 08 06:11	1° \approx 45'29	8.70627 AU	direct		16561 Nov 28 01:58	12° \mathbb{Y} 41'20	
	16555 Aug 01 01:46	30° \mathbb{R} \mathbb{B}		evening set		16562 Mar 11 09:19	20° \mathbb{Y} 16'23	
direct	16555 Sep 15 01:30	28° \mathbb{B} 22'20						

conjunction	16562 Mar 29 01:25	22° Υ 25'44	0°54'35	min. Earth dist.	16567 Dec 07 21:59	3° ♄ 11'45	8.39929 AU
minimum elong	16562 Mar 29 01:27	22° Υ 25'45	0°54'25		16568 Jan 30 05:45	30° ♄ II	
max. Earth dist.	16562 Mar 28 12:03	22° Υ 21'38	10.55248 AU	direct	16568 Feb 14 13:36	29° ♄ II47'52	
morning rise	16562 Apr 15 16:38	24° Υ 34'55			16568 Feb 29 19:28	0° ♄	
	16562 Jun 06 16:31	0° ♄		evening set	16568 May 29 06:30	7° ♄ 38'48	
retrograde	16562 Jul 27 07:43	2° ♄ 08'35					
	16562 Sep 17 04:06	30° ♄ Υ		conjunction	16568 Jun 15 15:50	9° ♄ 49'24	-1°09'46
opposition	16562 Oct 03 07:40	28° Υ 45'26	0°55'32	minimum elong	16568 Jun 15 15:48	9° ♄ 49'23	1°10'22
min. Earth dist.	16562 Oct 03 19:01	28° Υ 43'12	8.53475 AU	max. Earth dist.	16568 Jun 15 00:38	9° ♄ 44'36	10.39340 AU
direct	16562 Dec 10 23:48	25° Υ 20'21		morning rise	16568 Jul 02 22:37	11° ♄ 59'19	
	16563 Feb 26 17:11	0° ♄		retrograde	16568 Oct 13 00:18	19° ♄ 40'38	
evening set	16563 Mar 24 17:20	2° ♄ 58'47		opposition	16568 Dec 19 21:40	16° ♄ 17'48	-1°35'57
				min. Earth dist.	16568 Dec 20 08:56	16° ♄ 15'35	8.39077 AU
conjunction	16563 Apr 11 09:37	5° ♄ 08'48	0°34'49	direct	16569 Feb 27 02:07	12° ♄ 51'36	
minimum elong	16563 Apr 11 09:38	5° ♄ 08'49	0°34'32	evening set	16569 Jun 11 19:21	20° ♄ 43'09	
max. Earth dist.	16563 Apr 10 17:26	5° ♄ 03'49	10.51676 AU				
morning rise	16563 Apr 29 00:33	7° ♄ 18'32		conjunction	16569 Jun 29 02:22	22° ♄ 53'20	-1°24'08
retrograde	16563 Aug 09 10:06	14° ♄ 53'23		minimum elong	16569 Jun 29 02:20	22° ♄ 53'19	1°24'43
opposition	16563 Oct 16 07:25	11° ♄ 30'17	0°29'52	max. Earth dist.	16569 Jun 28 13:25	22° ♄ 49'14	10.38869 AU
min. Earth dist.	16563 Oct 16 21:02	11° ♄ 27'36	8.49951 AU	morning rise	16569 Jul 16 07:08	25° ♄ 02'52	
direct	16563 Dec 24 02:09	8° ♄ 04'41			16569 Aug 30 06:54	0° ♄	
	16564 Mar 30 16:44	15° ♄		retrograde	16569 Oct 26 11:11	2° ♄ 45'02	
evening set	16564 Apr 06 03:18	15° ♄ 46'25			16569 Dec 25 10:13	30° ♄ ♄	
				opposition	16570 Jan 02 11:43	29° ♄ 22'18	-1°51'10
conjunction	16564 Apr 23 19:05	17° ♄ 56'55	0°13'14	min. Earth dist.	16570 Jan 02 20:58	29° ♄ 20'29	8.39029 AU
minimum elong	16564 Apr 23 19:06	17° ♄ 56'56	0°12'49	direct	16570 Mar 12 16:40	25° ♄ 56'26	
behind sun begin	16564 Apr 23 14:40	17° ♄ 55'34			16570 May 23 07:01	0° ♄	
behind sun end	16564 Apr 23 23:31	17° ♄ 58'17		evening set	16570 Jun 25 07:05	3° ♄ 47'46	
max. Earth dist.	16564 Apr 23 00:25	17° ♄ 51'09	10.48266 AU				
morning rise	16564 May 11 09:16	20° ♄ 07'02		conjunction	16570 Jul 12 11:54	5° ♄ 57'24	-1°34'09
retrograde	16564 Aug 21 13:52	27° ♄ 43'12		minimum elong	16570 Jul 12 11:53	5° ♄ 57'24	1°34'40
opposition	16564 Oct 28 09:54	24° ♄ 20'09	0°02'31	max. Earth dist.	16570 Jul 12 01:52	5° ♄ 54'14	10.39209 AU
min. Earth dist.	16564 Oct 29 00:59	24° ♄ 17'10	8.46685 AU	morning rise	16570 Jul 29 14:54	8° ♄ 06'30	
desc. node	16564 Dec 01 09:30	21° ♄ 55'19			16570 Oct 09 09:04	15° ♄	
direct	16565 Jan 05 07:48	20° ♄ 54'08		retrograde	16570 Nov 08 20:49	15° ♄ 49'10	
evening set	16565 Apr 19 14:51	28° ♄ 38'54			16570 Dec 09 21:08	15° ♄ ♄	
	16565 Apr 30 14:04	0° ♄		opposition	16571 Jan 16 02:39	12° ♄ 26'30	-2°00'37
max. Earth dist.	16565 May 06 10:06	0° ♄ 43'38	10.45190 AU	min. Earth dist.	16571 Jan 16 09:02	12° ♄ 25'15	8.39782 AU
				direct	16571 Mar 26 08:57	9° ♄ 01'08	
conjunction	16565 May 07 05:41	0° ♄ 49'44	-0°09'15		16571 Jun 23 07:33	15° ♄	
minimum elong	16565 May 07 05:40	0° ♄ 49'44	0°09'45	evening set	16571 Jul 08 16:59	16° ♄ 51'17	
behind sun begin	16565 May 06 23:47	0° ♄ 47'55					
behind sun end	16565 May 07 11:33	0° ♄ 51'33		conjunction	16571 Jul 25 20:01	19° ♄ 00'20	-1°39'18
morning rise	16565 May 24 18:37	3° ♄ 00'04		minimum elong	16571 Jul 25 20:01	19° ♄ 00'20	1°39'44
retrograde	16565 Sep 03 20:21	10° ♄ 37'34		max. Earth dist.	16571 Jul 25 14:06	18° ♄ 58'27	10.40348 AU
opposition	16565 Nov 10 15:02	7° ♄ 14'33	-0°25'10	morning rise	16571 Aug 11 21:34	21° ♄ 08'56	
min. Earth dist.	16565 Nov 11 06:16	7° ♄ 11'33	8.43841 AU	retrograde	16571 Nov 22 07:21	28° ♄ 51'43	
direct	16566 Jan 18 15:03	3° ♄ 48'14		opposition	16572 Jan 29 17:56	25° ♄ 29'03	-2°03'49
evening set	16566 May 03 03:33	11° ♄ 35'38		min. Earth dist.	16572 Jan 29 20:24	25° ♄ 28'35	8.41307 AU
				direct	16572 Apr 08 00:20	22° ♄ 04'18	
conjunction	16566 May 20 16:59	13° ♄ 46'36	-0°31'16	evening set	16572 Jul 21 00:26	29° ♄ 52'20	
minimum elong	16566 May 20 16:58	13° ♄ 46'36	0°31'51		16572 Jul 22 01:13	0° ♄ ♄	
max. Earth dist.	16566 May 19 22:01	13° ♄ 40'40	10.42595 AU				
morning rise	16566 Jun 07 04:11	15° ♄ 56'58		conjunction	16572 Aug 07 02:13	2° ♄ 00'48	-1°39'21
retrograde	16566 Sep 17 03:45	23° ♄ 35'50		minimum elong	16572 Aug 07 02:13	2° ♄ 00'48	1°39'40
opposition	16566 Nov 23 22:53	20° ♄ 12'51	-0°51'44	max. Earth dist.	16572 Aug 07 01:17	2° ♄ 00'30	10.42235 AU
min. Earth dist.	16566 Nov 24 13:07	20° ♄ 10'03	8.41549 AU	morning rise	16572 Aug 24 02:46	4° ♄ 08'55	
direct	16567 Feb 01 01:36	16° ♄ 46'25		retrograde	16572 Dec 04 18:11	11° ♄ 51'21	
evening set	16567 May 16 17:00	24° ♄ 35'56		opposition	16573 Feb 11 08:43	8° ♄ 28'41	-2°00'39
max. Earth dist.	16567 Jun 02 11:22	26° ♄ 41'23	10.40605 AU	min. Earth dist.	16573 Feb 11 07:16	8° ♄ 28'58	8.43526 AU
				direct	16573 Apr 21 13:27	5° ♄ 04'36	
conjunction	16567 Jun 03 04:33	26° ♄ 46'47	-0°51'49	evening set	16573 Aug 03 05:33	12° ♄ 49'45	
minimum elong	16567 Jun 03 04:31	26° ♄ 46'47	0°52'26				
morning rise	16567 Jun 20 13:33	28° ♄ 57'01		conjunction	16573 Aug 20 06:30	14° ♄ 57'39	-1°34'21
	16567 Jun 29 05:00	0° ♄		minimum elong	16573 Aug 20 06:31	14° ♄ 57'39	1°34'33
retrograde	16567 Sep 30 13:03	6° ♄ 37'11		max. Earth dist.	16573 Aug 20 10:06	14° ♄ 58'47	10.44775 AU
opposition	16567 Dec 07 09:11	3° ♄ 14'16	-1°15'46	morning rise	16573 Sep 06 06:37	17° ♄ 05'20	

retrograde	16573 Dec 18 02:26	24° $\mathring{\text{M}}$ 46'55	conjunction	16579 Nov 04 13:02	0° $\mathring{\text{Z}}$ 48'40	0°09'01
opposition	16574 Feb 24 22:17	21° $\mathring{\text{M}}$ 24'13 -1°51'22	minimum elong	16579 Nov 04 13:01	0° $\mathring{\text{Z}}$ 48'39	0°09'31
min. Earth dist.	16574 Feb 24 17:28	21° $\mathring{\text{M}}$ 25'09 8.46334 AU	behind sun begin	16579 Nov 04 07:06	0° $\mathring{\text{Z}}$ 46'52	
direct	16574 May 05 01:25	18° $\mathring{\text{M}}$ 00'49	behind sun end	16579 Nov 04 18:57	0° $\mathring{\text{Z}}$ 50'27	
evening set	16574 Aug 16 08:02	25° $\mathring{\text{M}}$ 42'33	max. Earth dist.	16579 Nov 05 06:48	0° $\mathring{\text{Z}}$ 54'06	10.64388 AU
			morning rise	16579 Nov 21 18:28	2° $\mathring{\text{Z}}$ 54'36	
conjunction	16574 Sep 02 08:32	27° $\mathring{\text{M}}$ 49'53 -1°24'38	retrograde	16580 Mar 04 13:04	10° $\mathring{\text{Z}}$ 27'26	
minimum elong	16574 Sep 02 08:34	27° $\mathring{\text{M}}$ 49'53 1°24'42	opposition	16580 May 13 05:40	7° $\mathring{\text{Z}}$ 04'10	0°24'28
max. Earth dist.	16574 Sep 02 15:52	27° $\mathring{\text{M}}$ 52'11 10.47848 AU	min. Earth dist.	16580 May 12 14:55	7° $\mathring{\text{Z}}$ 07'00	8.65589 AU
morning rise	16574 Sep 19 08:50	29° $\mathring{\text{M}}$ 57'09	direct	16580 Jul 20 20:25	3° $\mathring{\text{Z}}$ 43'26	
	16574 Sep 19 18:07	0° $\mathring{\text{L}}$	evening set	16580 Oct 30 01:06	11° $\mathring{\text{Z}}$ 05'07	
retrograde	16574 Dec 31 09:02	7° $\mathring{\text{L}}$ 37'32				
opposition	16575 Mar 10 10:15	4° $\mathring{\text{L}}$ 14'48 -1°36'34	conjunction	16580 Nov 16 05:31	13° $\mathring{\text{Z}}$ 10'18	0°30'07
min. Earth dist.	16575 Mar 10 02:45	4° $\mathring{\text{L}}$ 16'14 8.49598 AU	minimum elong	16580 Nov 16 05:30	13° $\mathring{\text{Z}}$ 10'18	0°30'41
direct	16575 May 18 11:48	0° $\mathring{\text{L}}$ 52'04	max. Earth dist.	16580 Nov 16 22:34	13° $\mathring{\text{Z}}$ 15'31	10.66628 AU
evening set	16575 Aug 29 07:41	8° $\mathring{\text{L}}$ 29'57	morning rise	16580 Dec 03 12:16	15° $\mathring{\text{Z}}$ 16'07	
			retrograde	16581 Mar 17 07:44	22° $\mathring{\text{Z}}$ 47'53	
conjunction	16575 Sep 15 08:10	10° $\mathring{\text{L}}$ 36'45 -1°10'46	min. Earth dist.	16581 May 25 11:34	19° $\mathring{\text{Z}}$ 27'10	8.67568 AU
minimum elong	16575 Sep 15 08:12	10° $\mathring{\text{L}}$ 36'46 1°10'43	opposition	16581 May 26 01:33	19° $\mathring{\text{Z}}$ 24'28	0°49'42
max. Earth dist.	16575 Sep 15 18:27	10° $\mathring{\text{L}}$ 39'58 10.51297 AU	direct	16581 Aug 02 15:48	16° $\mathring{\text{Z}}$ 03'42	
morning rise	16575 Oct 02 09:10	12° $\mathring{\text{L}}$ 43'41	evening set	16581 Nov 11 16:16	23° $\mathring{\text{Z}}$ 23'50	
retrograde	16576 Jan 13 13:38	20° $\mathring{\text{L}}$ 22'33				
opposition	16576 Mar 22 19:50	16° $\mathring{\text{L}}$ 59'45 -1°17'07	conjunction	16581 Nov 28 21:43	25° $\mathring{\text{Z}}$ 28'55	0°49'47
min. Earth dist.	16576 Mar 22 09:47	17° $\mathring{\text{L}}$ 01'41 8.53141 AU	minimum elong	16581 Nov 28 21:41	25° $\mathring{\text{Z}}$ 28'55	0°50'23
direct	16576 May 30 19:25	13° $\mathring{\text{L}}$ 37'38	max. Earth dist.	16581 Nov 29 14:05	25° $\mathring{\text{Z}}$ 33'54	10.68307 AU
evening set	16576 Sep 10 04:56	21° $\mathring{\text{L}}$ 11'32	morning rise	16581 Dec 16 05:32	27° $\mathring{\text{Z}}$ 34'38	
				16582 Jan 06 09:38	0° $\mathring{\text{Z}}$	
conjunction	16576 Sep 27 05:54	23° $\mathring{\text{L}}$ 17'53 -0°53'32	retrograde	16582 Mar 30 02:35	5° $\mathring{\text{Z}}$ 05'35	
minimum elong	16576 Sep 27 05:55	23° $\mathring{\text{L}}$ 17'54 0°53'22	opposition	16582 Jun 07 19:13	1° $\mathring{\text{Z}}$ 42'00	1°12'34
max. Earth dist.	16576 Sep 27 19:10	23° $\mathring{\text{L}}$ 22'01 10.54916 AU	min. Earth dist.	16582 Jun 07 05:52	1° $\mathring{\text{Z}}$ 44'35	8.68964 AU
morning rise	16576 Oct 14 07:50	25° $\mathring{\text{L}}$ 24'30		16582 Jun 30 22:07	30° $\mathring{\text{R}}$ $\mathring{\text{Z}}$	
	16576 Nov 25 06:40	0° $\mathring{\text{M}}$	direct	16582 Aug 15 07:57	28° $\mathring{\text{Z}}$ 21'05	
retrograde	16577 Jan 25 15:05	3° $\mathring{\text{M}}$ 01'41		16582 Sep 28 14:34	0° $\mathring{\text{Z}}$	
	16577 Mar 31 11:48	30° $\mathring{\text{R}}$ $\mathring{\text{L}}$	evening set	16582 Nov 24 07:40	5° $\mathring{\text{Z}}$ 40'21	
opposition	16577 Apr 05 02:25	29° $\mathring{\text{L}}$ 38'46 -0°54'04				
min. Earth dist.	16577 Apr 04 13:56	29° $\mathring{\text{L}}$ 41'10 8.56734 AU	conjunction	16582 Dec 11 14:14	7° $\mathring{\text{Z}}$ 45'24	1°07'07
direct	16577 Jun 13 00:46	26° $\mathring{\text{L}}$ 17'10	minimum elong	16582 Dec 11 14:13	7° $\mathring{\text{Z}}$ 45'24	1°07'43
	16577 Aug 20 05:14	0° $\mathring{\text{M}}$	max. Earth dist.	16582 Dec 12 06:01	7° $\mathring{\text{Z}}$ 50'12	10.69371 AU
evening set	16577 Sep 23 00:00	3° $\mathring{\text{M}}$ 47'16	morning rise	16582 Dec 28 23:00	9° $\mathring{\text{Z}}$ 51'07	
			retrograde	16583 Apr 11 20:29	17° $\mathring{\text{Z}}$ 21'28	
conjunction	16577 Oct 10 01:45	5° $\mathring{\text{M}}$ 53'14 -0°33'51	opposition	16583 Jun 20 10:59	13° $\mathring{\text{Z}}$ 57'43	1°32'03
minimum elong	16577 Oct 10 01:46	5° $\mathring{\text{M}}$ 53'14 0°33'34	min. Earth dist.	16583 Jun 19 22:39	14° $\mathring{\text{Z}}$ 00'06	8.69724 AU
max. Earth dist.	16577 Oct 10 17:40	5° $\mathring{\text{M}}$ 58'09 10.58447 AU	direct	16583 Aug 27 22:18	10° $\mathring{\text{Z}}$ 36'33	
morning rise	16577 Oct 27 04:43	7° $\mathring{\text{M}}$ 59'32	evening set	16583 Dec 06 23:44	17° $\mathring{\text{Z}}$ 55'39	
	16578 Jan 12 09:34	15° $\mathring{\text{M}}$				
retrograde	16578 Feb 07 15:54	15° $\mathring{\text{M}}$ 35'06	conjunction	16583 Dec 24 07:22	20° $\mathring{\text{Z}}$ 00'48	1°21'21
	16578 Mar 06 06:00	15° $\mathring{\text{R}}$ $\mathring{\text{M}}$	minimum elong	16583 Dec 24 07:21	20° $\mathring{\text{Z}}$ 00'48	1°21'57
opposition	16578 Apr 18 06:15	12° $\mathring{\text{M}}$ 12'04 -0°28'38	max. Earth dist.	16583 Dec 24 21:05	20° $\mathring{\text{Z}}$ 04'58	10.69773 AU
min. Earth dist.	16578 Apr 17 15:52	12° $\mathring{\text{M}}$ 14'50 8.60112 AU	morning rise	16584 Jan 10 17:05	22° $\mathring{\text{Z}}$ 06'34	
direct	16578 Jun 26 03:11	8° $\mathring{\text{M}}$ 50'54	retrograde	16584 Apr 23 14:33	29° $\mathring{\text{Z}}$ 36'35	
	16578 Sep 24 19:23	15° $\mathring{\text{M}}$	opposition	16584 Jul 02 01:29	26° $\mathring{\text{Z}}$ 12'43	1°47'20
evening set	16578 Oct 05 17:17	16° $\mathring{\text{M}}$ 17'35	min. Earth dist.	16584 Jul 01 15:27	26° $\mathring{\text{Z}}$ 14'40	8.69801 AU
			direct	16584 Sep 08 11:54	22° $\mathring{\text{Z}}$ 51'10	
conjunction	16578 Oct 22 19:53	18° $\mathring{\text{M}}$ 23'13 -0°12'42		16584 Dec 17 04:15	0° $\mathring{\text{Z}}$	
minimum elong	16578 Oct 22 19:54	18° $\mathring{\text{M}}$ 23'13 0°12'18	evening set	16584 Dec 18 16:47	0° $\mathring{\text{Z}}$ 10'49	
behind sun begin	16578 Oct 22 15:10	18° $\mathring{\text{M}}$ 21'47				
behind sun end	16578 Oct 23 00:38	18° $\mathring{\text{M}}$ 24'40	conjunction	16585 Jan 05 01:26	2° $\mathring{\text{Z}}$ 16'11	1°31'54
max. Earth dist.	16578 Oct 23 13:34	18° $\mathring{\text{M}}$ 28'39 10.61645 AU	minimum elong	16585 Jan 05 01:25	2° $\mathring{\text{Z}}$ 16'10	1°32'26
morning rise	16578 Nov 09 00:00	20° $\mathring{\text{M}}$ 29'18	max. Earth dist.	16585 Jan 05 11:39	2° $\mathring{\text{Z}}$ 19'16	10.69483 AU
retrograde	16579 Feb 20 15:56	28° $\mathring{\text{M}}$ 03'26	morning rise	16585 Jan 22 12:09	4° $\mathring{\text{Z}}$ 22'07	
opposition	16579 May 01 07:21	24° $\mathring{\text{M}}$ 40'17 -0°02'03	retrograde	16585 May 06 08:22	11° $\mathring{\text{Z}}$ 52'00	
min. Earth dist.	16579 Apr 30 16:11	24° $\mathring{\text{M}}$ 43'12 8.63086 AU	opposition	16585 Jul 14 15:11	8° $\mathring{\text{Z}}$ 28'05	1°57'46
asc. node	16579 May 30 01:08	22° $\mathring{\text{M}}$ 37'17	min. Earth dist.	16585 Jul 14 08:19	8° $\mathring{\text{Z}}$ 29'25	8.69181 AU
direct	16579 Jul 09 00:57	21° $\mathring{\text{M}}$ 19'26	direct	16585 Sep 21 00:14	5° $\mathring{\text{Z}}$ 06'03	
evening set	16579 Oct 18 09:32	28° $\mathring{\text{M}}$ 43'17	evening set	16585 Dec 31 11:07	12° $\mathring{\text{Z}}$ 26'54	
	16579 Oct 28 22:16	0° $\mathring{\text{Z}}$				
			conjunction	16586 Jan 17 20:55	14° $\mathring{\text{Z}}$ 32'36	1°38'15

minimum elong	16586 Jan 17 20:54	14° \approx 32'36	1°38'42	minimum elong	16592 Apr 04 11:33	29° Υ 25'41	0°44'07
max. Earth dist.	16586 Jan 18 03:10	14° \approx 34'30	10.68515 AU	max. Earth dist.	16592 Apr 03 20:48	29° Υ 21'08	10.52511 AU
	16586 Jan 21 15:21	15° \approx			16592 Apr 09 02:49	0° \mathcal{B}	
morning rise	16586 Feb 04 08:41	16° \approx 38'51		morning rise	16592 Apr 22 02:51	1° \mathcal{B} 35'19	
retrograde	16586 May 19 01:02	24° \approx 08'51		retrograde	16592 Aug 02 14:06	9° \mathcal{B} 10'05	
opposition	16586 Jul 27 04:39	20° \approx 44'53	2°02'50	opposition	16592 Oct 09 13:54	5° \mathcal{B} 46'52	0°42'08
min. Earth dist.	16586 Jul 27 00:52	20° \approx 45'38	8.67892 AU	min. Earth dist.	16592 Oct 10 01:50	5° \mathcal{B} 44'31	8.50923 AU
direct	16586 Oct 03 14:30	17° \approx 22'20		direct	16592 Dec 17 08:11	2° \mathcal{B} 21'29	
evening set	16587 Jan 13 06:55	24° \approx 44'56		evening set	16593 Mar 31 04:44	10° \mathcal{B} 02'09	
conjunction	16587 Jan 30 18:08	26° \approx 51'08	1°40'06	conjunction	16593 Apr 17 20:57	12° \mathcal{B} 12'33	0°23'27
minimum elong	16587 Jan 30 18:08	26° \approx 51'09	1°40'28	minimum elong	16593 Apr 17 20:57	12° \mathcal{B} 12'33	0°23'06
max. Earth dist.	16587 Jan 30 21:07	26° \approx 52'03	10.66901 AU	max. Earth dist.	16593 Apr 17 05:00	12° \mathcal{B} 07'37	10.49353 AU
morning rise	16587 Feb 17 06:51	28° \approx 57'48		morning rise	16593 May 05 11:36	14° \mathcal{B} 22'37	
	16587 Feb 26 03:22	0° \mathcal{H}			16593 May 10 15:49	15° \mathcal{B}	
retrograde	16587 May 31 19:10	6° \mathcal{H} 28'10		retrograde	16593 Aug 15 19:17	21° \mathcal{B} 58'41	
opposition	16587 Aug 08 18:19	3° \mathcal{H} 04'11	2°02'17	opposition	16593 Oct 22 15:39	18° \mathcal{B} 35'42	0°15'23
min. Earth dist.	16587 Aug 08 17:07	3° \mathcal{H} 04'25	8.65971 AU	min. Earth dist.	16593 Oct 23 04:30	18° \mathcal{B} 33'09	8.47869 AU
	16587 Sep 27 02:17	30° \mathcal{R} \approx		direct	16593 Dec 30 11:38	15° \mathcal{B} 10'04	
direct	16587 Oct 16 05:29	29° \approx 41'05		evening set	16594 Apr 13 16:21	22° \mathcal{B} 53'52	
	16587 Nov 04 05:01	0° \mathcal{H}					
evening set	16588 Jan 26 04:47	7° \mathcal{H} 05'55		conjunction	16594 May 01 07:55	25° \mathcal{B} 04'41	0°01'16
conjunction	16588 Feb 12 17:24	9° \mathcal{H} 12'47	1°37'20	minimum elong	16594 May 01 07:54	25° \mathcal{B} 04'41	0°00'49
minimum elong	16588 Feb 12 17:25	9° \mathcal{H} 12'47	1°37'36	behind sun begin	16594 May 01 00:42	25° \mathcal{B} 02'28	
max. Earth dist.	16588 Feb 12 17:04	9° \mathcal{H} 12'41	10.64697 AU	behind sun end	16594 May 01 15:07	25° \mathcal{B} 06'54	
morning rise	16588 Mar 01 06:55	11° \mathcal{H} 19'57		max. Earth dist.	16594 Apr 30 14:44	24° \mathcal{B} 59'21	10.46453 AU
retrograde	16588 Jun 12 16:05	18° \mathcal{H} 50'51		morning rise	16594 May 18 21:25	27° \mathcal{B} 15'00	
opposition	16588 Aug 20 08:47	15° \mathcal{H} 26'54	1°56'05	desc. node	16594 May 22 09:33	27° \mathcal{B} 40'30	
min. Earth dist.	16588 Aug 20 10:15	15° \mathcal{H} 26'37	8.63500 AU		16594 Jun 11 12:03	0° \mathcal{H}	
direct	16588 Oct 27 19:39	12° \mathcal{H} 03'16		retrograde	16594 Aug 29 02:47	4° \mathcal{H} 52'21	
evening set	16589 Feb 07 04:49	19° \mathcal{H} 30'49		opposition	16594 Nov 04 20:09	1° \mathcal{H} 29'34	-0°12'21
conjunction	16589 Feb 24 18:42	21° \mathcal{H} 38'23	1°30'01	min. Earth dist.	16594 Nov 05 10:04	1° \mathcal{H} 26'50	8.45154 AU
minimum elong	16589 Feb 24 18:44	21° \mathcal{H} 38'24	1°30'09		16594 Nov 24 10:26	30° \mathcal{R} \mathcal{B}	
max. Earth dist.	16589 Feb 24 14:33	21° \mathcal{H} 37'08	10.62015 AU	direct	16595 Jan 12 17:05	28° \mathcal{B} 03'44	
morning rise	16589 Mar 14 08:59	23° \mathcal{H} 46'10		evening set	16595 Mar 02 00:23	0° \mathcal{H}	
	16589 May 17 07:54	0° Υ			16595 Apr 27 05:33	5° \mathcal{H} 50'21	
retrograde	16589 Jun 25 13:04	1° Υ 17'48		conjunction	16595 May 14 19:44	8° \mathcal{H} 01'21	-0°21'09
	16589 Aug 04 04:11	30° \mathcal{R} \mathcal{H}		minimum elong	16595 May 14 19:44	8° \mathcal{H} 01'21	0°21'41
opposition	16589 Sep 02 00:51	27° \mathcal{H} 53'57	1°44'24	max. Earth dist.	16595 May 14 01:33	7° \mathcal{H} 55'40	10.43946 AU
min. Earth dist.	16589 Sep 02 05:29	27° \mathcal{H} 53'02	8.60612 AU	morning rise	16595 Jun 01 07:43	10° \mathcal{H} 11'46	
direct	16589 Nov 09 12:40	24° \mathcal{H} 29'47		retrograde	16595 Sep 11 10:00	17° \mathcal{H} 50'21	
	16590 Feb 02 23:44	0° Υ		opposition	16595 Nov 18 03:33	14° \mathcal{H} 27'46	-0°39'38
evening set	16590 Feb 20 07:05	2° Υ 00'23		min. Earth dist.	16595 Nov 18 18:04	14° \mathcal{H} 24'55	8.42893 AU
conjunction	16590 Mar 09 22:01	4° Υ 08'44	1°18'24	direct	16596 Jan 26 03:27	11° \mathcal{H} 01'48	
minimum elong	16590 Mar 09 22:03	4° Υ 08'44	1°18'25	evening set	16596 May 09 19:24	18° \mathcal{H} 50'43	
max. Earth dist.	16590 Mar 09 13:26	4° Υ 06'06	10.58994 AU	conjunction	16596 May 27 07:44	21° \mathcal{H} 01'39	-0°42'33
morning rise	16590 Mar 27 13:03	6° Υ 17'09		minimum elong	16596 May 27 07:43	21° \mathcal{H} 01'38	0°43'08
retrograde	16590 Jul 08 11:44	13° Υ 49'42		max. Earth dist.	16596 May 26 13:22	20° \mathcal{H} 55'53	10.41919 AU
opposition	16590 Sep 14 18:51	10° Υ 26'02	1°27'41	morning rise	16596 Jun 13 17:51	23° \mathcal{H} 11'59	
min. Earth dist.	16590 Sep 15 02:52	10° Υ 24'27	8.57451 AU		16596 Aug 23 12:31	0° \mathcal{B}	
direct	16590 Nov 22 08:12	7° Υ 01'22		retrograde	16596 Sep 23 18:27	0° \mathcal{B} 51'49	
evening set	16591 Mar 05 11:59	14° Υ 35'16			16596 Oct 25 11:20	30° \mathcal{R} \mathcal{H}	
conjunction	16591 Mar 23 03:45	16° Υ 44'24	1°02'57	opposition	16596 Nov 30 13:24	27° \mathcal{H} 29'21	-1°05'00
minimum elong	16591 Mar 23 03:47	16° Υ 44'24	1°02'50	min. Earth dist.	16596 Dec 01 03:38	27° \mathcal{H} 26'32	8.41138 AU
max. Earth dist.	16591 Mar 22 15:26	16° Υ 40'37	10.55776 AU	direct	16597 Feb 07 15:59	24° \mathcal{H} 03'21	
morning rise	16591 Apr 09 19:11	18° Υ 53'28			16597 May 07 13:07	0° \mathcal{B}	
retrograde	16591 Jul 21 12:12	26° Υ 27'02		evening set	16597 May 23 09:31	1° \mathcal{B} 53'56	
opposition	16591 Sep 27 15:00	23° Υ 03'35	1°06'38	conjunction	16597 Jun 09 19:47	4° \mathcal{B} 04'40	-1°01'49
min. Earth dist.	16591 Sep 28 01:32	23° Υ 01'31	8.54168 AU	minimum elong	16597 Jun 09 19:45	4° \mathcal{B} 04'39	1°02'25
direct	16591 Dec 05 06:19	19° Υ 38'32		max. Earth dist.	16597 Jun 09 02:27	3° \mathcal{B} 59'13	10.40393 AU
evening set	16592 Mar 17 19:18	27° Υ 15'51		morning rise	16597 Jun 27 03:47	6° \mathcal{B} 14'46	
conjunction	16592 Apr 04 11:32	29° Υ 25'41	0°44'21	retrograde	16597 Oct 07 04:57	13° \mathcal{B} 55'47	
				opposition	16597 Dec 14 01:14	10° \mathcal{B} 33'23	-1°27'06
				min. Earth dist.	16597 Dec 14 14:04	10° \mathcal{B} 30'52	8.39875 AU

direct	16598 Feb 21 05:18	7°☾07'30
evening set	16598 Jun 05 23:22	14°☾59'12
conjunction	16598 Jun 23 07:29	17°☾09'37 -1°17'56
minimum elong	16598 Jun 23 07:28	17°☾09'36 1°18'31
max. Earth dist.	16598 Jun 22 16:32	17°☾04'53 10.39354 AU
morning rise	16598 Jul 10 13:16	19°☾19'24
retrograde	16598 Oct 20 16:45	27°☾01'37
opposition	16598 Dec 27 15:09	23°☾39'15 -1°44'43
min. Earth dist.	16598 Dec 28 01:47	23°☾37'10 8.39125 AU
direct	16599 Mar 06 19:48	20°☾13'38
evening set	16599 Jun 19 12:23	28°☾05'43
	16599 Jul 04 16:39	0°♈
conjunction	16599 Jul 06 18:21	0°♈15'44 -1°30'01
minimum elong	16599 Jul 06 18:20	0°♈15'43 1°30'34
max. Earth dist.	16599 Jul 06 06:35	0°♈12'00 10.38888 AU
morning rise	16599 Jul 23 22:03	2°♈25'08
retrograde	16599 Nov 03 04:41	10°♈08'20
opposition	16600 Jan 10 06:38	6°♈45'58 -1°56'54
min. Earth dist.	16600 Jan 10 14:37	6°♈44'25 8.39016 AU
direct	16600 Mar 20 11:46	3°♈20'41
evening set	16600 Jul 03 00:08	11°♈12'17
conjunction	16600 Jul 20 04:07	13°♈21'48 -1°37'26
minimum elong	16600 Jul 20 04:06	13°♈21'47 1°37'54
max. Earth dist.	16600 Jul 19 19:48	13°♈19'10 10.39133 AU
	16600 Aug 02 03:21	15°♈
morning rise	16600 Aug 06 06:12	15°♈30'47
retrograde	16600 Nov 16 17:08	23°♈14'32
opposition	16601 Jan 23 22:51	19°♈52'04 -2°03'00
min. Earth dist.	16601 Jan 24 04:13	19°♈51'01 8.39648 AU
direct	16601 Apr 03 03:13	16°♈27'09
evening set	16601 Jul 16 09:55	24°♈17'18
conjunction	16601 Aug 02 12:18	26°♈26'17 -1°39'48
minimum elong	16601 Aug 02 12:18	26°♈26'17 1°40'11
max. Earth dist.	16601 Aug 02 07:18	26°♈24'42 10.40140 AU
morning rise	16601 Aug 19 13:22	28°♈34'53
	16601 Aug 31 05:22	0°♏
retrograde	16601 Nov 30 04:17	6°♏18'36