

retrograde	9600 Feb 12 02:39	13° \mathbb{M} 11'39		morning rise	9605 Dec 08 05:03	7° \mathbb{X} 26'57	
opposition	9600 Apr 27 05:25	11° \mathbb{M} 08'43	1°02'15	retrograde	9606 Mar 11 16:18	10° \mathbb{X} 49'23	
min. Earth dist.	9600 Apr 27 12:56	11° \mathbb{M} 07'54	17.81516 AU	opposition	9606 May 24 23:51	8° \mathbb{X} 46'18	0°52'12
direct	9600 Jul 10 22:53	9° \mathbb{M} 05'57		min. Earth dist.	9606 May 25 11:09	8° \mathbb{X} 45'05	17.53911 AU
evening set	9600 Oct 11 19:26	12° \mathbb{M} 23'26		direct	9606 Aug 07 21:57	6° \mathbb{X} 42'06	
				evening set	9606 Nov 10 00:59	10° \mathbb{X} 05'26	
conjunction	9600 Oct 28 09:47	13° \mathbb{M} 23'28	0°55'40				
minimum elong	9600 Oct 28 09:47	13° \mathbb{M} 23'28	0°55'54	conjunction	9606 Nov 26 16:33	11° \mathbb{X} 06'43	0°45'32
max. Earth dist.	9600 Oct 28 01:03	13° \mathbb{M} 22'09	19.78740 AU	minimum elong	9606 Nov 26 16:33	11° \mathbb{X} 06'43	0°45'50
morning rise	9600 Nov 14 00:48	14° \mathbb{M} 23'39		max. Earth dist.	9606 Nov 26 02:31	11° \mathbb{X} 04'33	19.52093 AU
	9600 Nov 24 10:58	15° \mathbb{M}		morning rise	9606 Dec 13 07:29	12° \mathbb{X} 07'55	
retrograde	9601 Feb 16 00:54	17° \mathbb{M} 43'59		retrograde	9607 Mar 16 16:17	15° \mathbb{X} 30'37	
opposition	9601 May 01 22:53	15° \mathbb{M} 40'57	1°01'33	opposition	9607 May 29 20:58	13° \mathbb{X} 27'31	0°49'13
min. Earth dist.	9601 May 02 06:00	15° \mathbb{M} 40'11	17.76079 AU	min. Earth dist.	9607 May 30 08:19	13° \mathbb{X} 26'17	17.50391 AU
	9601 May 18 01:21	15° \mathbb{R} \mathbb{M}		direct	9607 Aug 12 22:35	11° \mathbb{X} 23'04	
direct	9601 Jul 15 17:56	13° \mathbb{M} 37'53		evening set	9607 Nov 15 04:02	14° \mathbb{X} 47'11	
	9601 Sep 10 11:16	15° \mathbb{M}					
evening set	9601 Oct 16 18:32	16° \mathbb{M} 56'25		conjunction	9607 Dec 01 19:44	15° \mathbb{X} 48'37	0°42'41
				minimum elong	9607 Dec 01 19:44	15° \mathbb{X} 48'37	0°43'01
conjunction	9601 Nov 02 09:12	17° \mathbb{M} 56'41	0°54'51	max. Earth dist.	9607 Dec 01 05:51	15° \mathbb{X} 46'28	19.48718 AU
minimum elong	9601 Nov 02 09:12	17° \mathbb{M} 56'41	0°55'05	morning rise	9607 Dec 18 10:15	16° \mathbb{X} 49'55	
max. Earth dist.	9601 Nov 01 23:29	17° \mathbb{M} 55'13	19.73460 AU	retrograde	9608 Mar 20 14:53	20° \mathbb{X} 12'47	
morning rise	9601 Nov 19 00:18	18° \mathbb{M} 57'05		opposition	9608 Jun 02 18:30	18° \mathbb{X} 09'42	0°45'53
retrograde	9602 Feb 20 21:33	22° \mathbb{M} 17'55		min. Earth dist.	9608 Jun 03 07:00	18° \mathbb{X} 08'20	17.47174 AU
opposition	9602 May 06 17:07	20° \mathbb{M} 14'50	1°00'27	direct	9608 Aug 16 21:21	16° \mathbb{X} 05'01	
min. Earth dist.	9602 May 07 01:45	20° \mathbb{M} 13'54	17.70978 AU	evening set	9608 Nov 19 07:36	19° \mathbb{X} 29'51	
direct	9602 Jul 20 11:02	18° \mathbb{M} 11'31					
evening set	9602 Oct 21 18:21	21° \mathbb{M} 31'04		conjunction	9608 Dec 05 23:03	20° \mathbb{X} 31'23	0°39'32
				minimum elong	9608 Dec 05 23:03	20° \mathbb{X} 31'23	0°39'52
conjunction	9602 Nov 07 09:21	22° \mathbb{M} 31'35	0°53'40	max. Earth dist.	9608 Dec 05 07:27	20° \mathbb{X} 28'58	19.45681 AU
minimum elong	9602 Nov 07 09:21	22° \mathbb{M} 31'35	0°53'56	morning rise	9608 Dec 22 13:25	21° \mathbb{X} 32'46	
max. Earth dist.	9602 Nov 06 23:02	22° \mathbb{M} 30'00	19.68546 AU	retrograde	9609 Mar 25 14:57	24° \mathbb{X} 55'46	
morning rise	9602 Nov 24 00:36	23° \mathbb{M} 32'11		opposition	9609 Jun 07 16:28	22° \mathbb{X} 52'39	0°42'14
retrograde	9603 Feb 25 20:57	26° \mathbb{M} 53'29		min. Earth dist.	9609 Jun 08 05:09	22° \mathbb{X} 51'16	17.44322 AU
opposition	9603 May 11 11:48	24° \mathbb{M} 50'23	0°58'57	direct	9609 Aug 21 22:35	20° \mathbb{X} 47'44	
min. Earth dist.	9603 May 11 20:04	24° \mathbb{M} 49'29	17.66237 AU	evening set	9609 Nov 24 11:08	24° \mathbb{X} 13'12	
direct	9603 Jul 25 07:38	22° \mathbb{M} 46'49		max. Earth dist.	9609 Dec 10 11:42	25° \mathbb{X} 12'32	19.43019 AU
evening set	9603 Oct 26 18:55	26° \mathbb{M} 07'23					
				conjunction	9609 Dec 11 02:33	25° \mathbb{X} 14'50	0°36'07
conjunction	9603 Nov 12 10:13	27° \mathbb{M} 08'08	0°52'08	minimum elong	9609 Dec 11 02:33	25° \mathbb{X} 14'50	0°36'28
minimum elong	9603 Nov 12 10:13	27° \mathbb{M} 08'08	0°52'25	morning rise	9609 Dec 27 16:21	26° \mathbb{X} 16'16	
max. Earth dist.	9603 Nov 11 23:21	27° \mathbb{M} 06'28	19.63971 AU	retrograde	9610 Mar 30 14:31	29° \mathbb{X} 39'20	
morning rise	9603 Nov 29 01:26	28° \mathbb{M} 08'55		opposition	9610 Jun 12 14:52	27° \mathbb{X} 36'13	0°38'18
	9604 Jan 02 01:08	0° \mathbb{X}		min. Earth dist.	9610 Jun 13 04:00	27° \mathbb{X} 34'47	17.41863 AU
retrograde	9604 Mar 01 18:32	1° \mathbb{X} 30'39		direct	9610 Aug 26 22:58	25° \mathbb{X} 31'05	
	9604 May 02 16:40	30° \mathbb{R} \mathbb{M}		evening set	9610 Nov 29 15:02	28° \mathbb{X} 57'07	
opposition	9604 May 15 07:17	29° \mathbb{M} 27'33	0°57'05				
min. Earth dist.	9604 May 15 17:10	29° \mathbb{M} 26'29	17.61827 AU	conjunction	9610 Dec 16 06:03	29° \mathbb{X} 58'48	0°32'27
direct	9604 Jul 29 02:27	27° \mathbb{M} 23'47		minimum elong	9610 Dec 16 06:03	29° \mathbb{X} 58'48	0°32'48
	9604 Oct 17 21:42	0° \mathbb{X}		max. Earth dist.	9610 Dec 15 13:48	29° \mathbb{X} 56'16	19.40791 AU
evening set	9604 Oct 30 20:23	0° \mathbb{X} 45'20			9610 Dec 16 13:48	0° \mathbb{Z}	
				morning rise	9611 Jan 01 19:33	1° \mathbb{Z} 00'16	
conjunction	9604 Nov 16 11:49	1° \mathbb{X} 46'17	0°50'16	retrograde	9611 Apr 04 14:13	4° \mathbb{Z} 23'21	
minimum elong	9604 Nov 16 11:49	1° \mathbb{X} 46'17	0°50'34	opposition	9611 Jun 17 13:24	2° \mathbb{Z} 20'14	0°34'04
max. Earth dist.	9604 Nov 15 23:41	1° \mathbb{X} 44'25	19.59723 AU	min. Earth dist.	9611 Jun 18 02:44	2° \mathbb{Z} 18'46	17.39877 AU
morning rise	9604 Dec 03 03:04	2° \mathbb{X} 47'13		direct	9611 Sep 01 00:04	0° \mathbb{Z} 14'52	
retrograde	9605 Mar 06 18:11	6° \mathbb{X} 09'21		evening set	9611 Dec 04 18:52	3° \mathbb{Z} 41'24	
opposition	9605 May 20 03:08	4° \mathbb{X} 06'15	0°54'50				
min. Earth dist.	9605 May 20 12:58	4° \mathbb{X} 05'11	17.57728 AU	conjunction	9611 Dec 21 09:45	4° \mathbb{Z} 43'07	0°28'32
direct	9605 Aug 03 01:07	2° \mathbb{X} 02'15		minimum elong	9611 Dec 21 09:45	4° \mathbb{Z} 43'08	0°28'54
evening set	9605 Nov 04 22:28	5° \mathbb{X} 24'44		max. Earth dist.	9611 Dec 20 18:34	4° \mathbb{Z} 40'46	19.39049 AU
				morning rise	9612 Jan 06 22:36	5° \mathbb{Z} 44'36	
conjunction	9605 Nov 21 14:05	6° \mathbb{X} 25'52	0°48'03	retrograde	9612 Apr 08 14:43	9° \mathbb{Z} 07'37	
minimum elong	9605 Nov 21 14:05	6° \mathbb{X} 25'52	0°48'22	opposition	9612 Jun 21 12:19	7° \mathbb{Z} 04'31	0°29'37
max. Earth dist.	9605 Nov 21 01:39	6° \mathbb{X} 23'57	19.55759 AU	min. Earth dist.	9612 Jun 22 01:29	7° \mathbb{Z} 03'05	17.38384 AU

direct	9612 Sep 05 01:35	4°♂59'01		desc. node	9618 Jul 01 19:26	6°♂17'56	
evening set	9612 Dec 08 22:55	8°♂25'55		opposition	9618 Jul 20 09:31	5°♂30'52	-0°00'16
				min. Earth dist.	9618 Jul 20 19:58	5°♂29'44	17.41774 AU
conjunction	9612 Dec 25 13:13	9°♂27'39	0°24'26	direct	9618 Oct 04 11:42	3°♂25'27	
minimum elong	9612 Dec 25 13:13	9°♂27'39	0°24'48	evening set	9619 Jan 07 19:21	6°♂53'01	
max. Earth dist.	9612 Dec 24 21:08	9°♂25'09	19.37829 AU				
morning rise	9613 Jan 11 01:34	10°♂29'07		conjunction	9619 Jan 24 05:53	7°♂54'16	-0°02'41
retrograde	9613 Apr 13 13:55	13°♂52'02		minimum elong	9619 Jan 24 05:52	7°♂54'16	0°02'23
opposition	9613 Jun 26 11:26	11°♂48'59	0°24'56	behind sun begin	9619 Jan 23 23:10	7°♂53'14	
min. Earth dist.	9613 Jun 27 00:47	11°♂47'31	17.37457 AU	behind sun end	9619 Jan 24 12:34	7°♂55'17	
direct	9613 Sep 10 02:20	9°♂43'20		max. Earth dist.	9619 Jan 23 17:38	7°♂52'22	19.42928 AU
evening set	9613 Dec 14 02:43	13°♂10'34		morning rise	9619 Feb 09 13:29	8°♂55'05	
				retrograde	9619 May 12 10:49	12°♂16'31	
conjunction	9613 Dec 30 16:39	14°♂12'17	0°20'10	opposition	9619 Jul 25 09:20	10°♂14'26	-0°05'25
minimum elong	9613 Dec 30 16:39	14°♂12'17	0°20'31	min. Earth dist.	9619 Jul 25 20:25	10°♂13'14	17.44199 AU
max. Earth dist.	9613 Dec 30 01:54	14°♂09'59	19.37199 AU	direct	9619 Oct 09 12:57	8°♂09'09	
morning rise	9614 Jan 16 04:15	15°♂13'42		evening set	9620 Jan 12 21:48	11°♂36'30	
retrograde	9614 Apr 18 15:09	18°♂36'28					
opposition	9614 Jul 01 10:46	16°♂33'30	0°20'06	conjunction	9620 Jan 29 07:26	12°♂37'33	-0°07'17
min. Earth dist.	9614 Jul 01 23:12	16°♂32'08	17.37126 AU	minimum elong	9620 Jan 29 07:25	12°♂37'33	0°07'00
direct	9614 Sep 15 04:21	14°♂27'48		behind sun begin	9620 Jan 29 01:13	12°♂36'37	
evening set	9614 Dec 19 06:26	17°♂55'15		behind sun end	9620 Jan 29 13:37	12°♂38'30	
				max. Earth dist.	9620 Jan 28 19:15	12°♂35'40	19.45561 AU
conjunction	9615 Jan 04 19:43	18°♂56'56	0°15'46	morning rise	9620 Feb 14 14:15	13°♂38'12	
minimum elong	9615 Jan 04 19:44	18°♂56'56	0°16'06		9620 Mar 09 06:47	15°♂	
max. Earth dist.	9615 Jan 04 04:44	18°♂54'36	19.37182 AU	retrograde	9620 May 16 10:20	16°♂59'13	
morning rise	9615 Jan 21 06:42	19°♂58'17			9620 Jul 28 08:07	15°♂	
retrograde	9615 Apr 23 13:57	23°♂20'52		opposition	9620 Jul 29 09:06	14°♂57'19	-0°10'31
opposition	9615 Jul 06 10:21	21°♂18'01	0°15'07	min. Earth dist.	9620 Jul 29 18:43	14°♂56'16	17.47019 AU
min. Earth dist.	9615 Jul 06 22:59	21°♂16'39	17.37426 AU	direct	9620 Oct 13 16:44	12°♂52'09	
direct	9615 Sep 20 04:54	19°♂12'18			9620 Dec 25 02:06	15°♂	
evening set	9615 Dec 24 10:02	22°♂39'57		evening set	9621 Jan 16 23:36	16°♂19'10	
conjunction	9616 Jan 09 22:48	23°♂41'33	0°11'16	conjunction	9621 Feb 02 08:24	17°♂20'02	-0°11'48
minimum elong	9616 Jan 09 22:48	23°♂41'33	0°11'36	minimum elong	9621 Feb 02 08:24	17°♂20'02	0°11'33
behind sun begin	9616 Jan 09 18:03	23°♂40'49		behind sun begin	9621 Feb 02 03:36	17°♂19'18	
behind sun end	9616 Jan 10 03:34	23°♂42'17		behind sun end	9621 Feb 02 13:11	17°♂20'45	
max. Earth dist.	9616 Jan 09 08:53	23°♂39'23	19.37795 AU	max. Earth dist.	9621 Feb 01 21:25	17°♂18'20	19.48557 AU
morning rise	9616 Jan 26 08:59	24°♂42'48		morning rise	9621 Feb 18 14:09	18°♂20'27	
retrograde	9616 Apr 27 15:01	28°♂05'10		retrograde	9621 May 21 07:02	21°♂41'01	
opposition	9616 Jul 10 09:50	26°♂02'29	0°10'03	opposition	9621 Aug 03 08:53	19°♂39'17	-0°15'33
min. Earth dist.	9616 Jul 10 21:16	26°♂01'15	17.38325 AU	min. Earth dist.	9621 Aug 03 18:59	19°♂38'11	17.50196 AU
direct	9616 Sep 24 07:20	23°♂56'51		direct	9621 Oct 18 18:03	17°♂34'16	
evening set	9616 Dec 28 13:32	27°♂24'33		evening set	9622 Jan 22 00:52	21°♂00'51	
max. Earth dist.	9617 Jan 13 11:55	28°♂23'57	19.38987 AU				
				conjunction	9622 Feb 07 08:39	22°♂01'29	-0°16'15
conjunction	9617 Jan 14 01:34	28°♂26'04	0°06'42	minimum elong	9622 Feb 07 08:39	22°♂01'28	0°16'01
minimum elong	9617 Jan 14 01:34	28°♂26'04	0°07'01	max. Earth dist.	9622 Feb 06 21:29	21°♂59'45	19.51912 AU
behind sun begin	9617 Jan 13 19:21	28°♂25'07		morning rise	9622 Feb 23 13:37	23°♂01'41	
behind sun end	9617 Jan 14 07:47	28°♂27'01		retrograde	9622 May 26 05:34	26°♂21'43	
morning rise	9617 Jan 30 10:56	29°♂27'12		opposition	9622 Aug 08 08:14	24°♂20'08	-0°20'27
	9617 Feb 08 13:29	0°♂		min. Earth dist.	9622 Aug 08 16:47	24°♂19'13	17.53716 AU
retrograde	9617 May 02 13:14	2°♂49'19		direct	9622 Oct 23 20:48	22°♂15'15	
opposition	9617 Jul 15 09:43	0°♂46'49	0°04'54	evening set	9623 Jan 27 01:17	25°♂41'18	
min. Earth dist.	9617 Jul 15 21:34	0°♂45'32	17.39799 AU				
	9617 Aug 02 19:36	30°♂		conjunction	9623 Feb 12 08:18	26°♂41'42	-0°20'35
direct	9617 Sep 29 08:10	28°♂41'16		minimum elong	9623 Feb 12 08:18	26°♂41'42	0°20'21
	9617 Nov 24 00:16	0°♂		max. Earth dist.	9623 Feb 11 22:45	26°♂40'14	19.55589 AU
evening set	9618 Jan 02 16:32	2°♂08'59		morning rise	9623 Feb 28 12:13	27°♂41'41	
					9623 Apr 13 07:48	0°♂	
conjunction	9618 Jan 19 03:50	3°♂10'21	0°02'05	retrograde	9623 May 31 01:37	1°♂01'08	
minimum elong	9618 Jan 19 03:49	3°♂10'21	0°02'24		9623 Jul 19 17:24	30°♂	
behind sun begin	9618 Jan 18 21:06	3°♂09'20		opposition	9623 Aug 13 07:29	28°♂59'42	-0°25'11
behind sun end	9618 Jan 19 10:31	3°♂11'23		min. Earth dist.	9623 Aug 13 16:17	28°♂58'45	17.57546 AU
max. Earth dist.	9618 Jan 18 14:52	3°♂08'21	19.40726 AU	direct	9623 Oct 28 21:00	26°♂54'58	
morning rise	9618 Feb 04 12:23	4°♂11'21			9624 Jan 26 09:06	0°♂	
retrograde	9618 May 07 13:38	7°♂33'09		evening set	9624 Feb 01 01:08	0°♂20'23	

conjunction	9624 Feb 17 07:03	1° ✕ 20'32 -0°24'46	min. Earth dist.	9630 Sep 14 14:48	0° Υ 51'07 17.93590 AU
minimum elong	9624 Feb 17 07:03	1° ✕ 20'32 0°24'35		9630 Oct 05 14:47	30° ℞ ✕
max. Earth dist.	9624 Feb 16 21:15	1° ✕ 19'01 19.59581 AU	direct	9630 Nov 30 14:20	28° ✕ 48'12
morning rise	9624 Mar 04 10:11	2° ✕ 20'16		9631 Jan 23 08:29	0° Υ
retrograde	9624 Jun 03 23:17	5° ✕ 39'07	evening set	9631 Mar 04 22:18	2° Υ 07'40
opposition	9624 Aug 17 06:12	3° ✕ 37'47 -0°29'45			
min. Earth dist.	9624 Aug 17 13:28	3° ✕ 37'01 17.61696 AU	conjunction	9631 Mar 20 21:58	3° Υ 05'48 -0°47'44
direct	9624 Nov 01 22:34	1° ✕ 33'11	minimum elong	9631 Mar 20 21:57	3° Υ 05'48 0°47'43
evening set	9625 Feb 04 23:59	4° ✕ 57'55	max. Earth dist.	9631 Mar 20 21:48	3° Υ 05'46 19.96700 AU
			morning rise	9631 Apr 05 19:11	4° Υ 03'36
conjunction	9625 Feb 21 05:06	5° ✕ 57'48 -0°28'46	retrograde	9631 Jul 06 05:50	7° Υ 17'58
minimum elong	9625 Feb 21 05:06	5° ✕ 57'48 0°28'35	opposition	9631 Sep 19 09:37	5° Υ 17'49 -0°54'15
max. Earth dist.	9625 Feb 20 21:22	5° ✕ 56'36 19.63888 AU	min. Earth dist.	9631 Sep 19 09:11	5° Υ 17'52 17.99841 AU
morning rise	9625 Mar 09 07:10	6° ✕ 57'16	direct	9631 Dec 05 11:26	3° Υ 15'12
retrograde	9625 Jun 08 18:18	10° ✕ 15'28	evening set	9632 Mar 08 15:07	6° Υ 33'42
opposition	9625 Aug 22 04:45	8° ✕ 14'16 -0°34'06			
min. Earth dist.	9625 Aug 22 11:45	8° ✕ 13'31 17.66164 AU	conjunction	9632 Mar 24 13:48	7° Υ 31'32 -0°49'54
direct	9625 Nov 06 21:51	6° ✕ 09'50	minimum elong	9632 Mar 24 13:47	7° Υ 31'32 0°49'56
evening set	9626 Feb 09 21:54	9° ✕ 33'46	max. Earth dist.	9632 Mar 24 14:01	7° Υ 31'34 20.03007 AU
			morning rise	9632 Apr 09 10:26	8° Υ 29'03
conjunction	9626 Feb 26 01:55	10° ✕ 33'22 -0°32'33	retrograde	9632 Jul 09 21:15	11° Υ 42'50
minimum elong	9626 Feb 26 01:54	10° ✕ 33'22 0°32'25	opposition	9632 Sep 23 04:51	9° Υ 42'54 -0°56'30
max. Earth dist.	9626 Feb 25 18:15	10° ✕ 32'11 19.68529 AU	min. Earth dist.	9632 Sep 23 03:45	9° Υ 43'01 18.06198 AU
morning rise	9626 Mar 14 03:16	11° ✕ 32'34	direct	9632 Dec 09 06:56	7° Υ 40'40
retrograde	9626 Jun 13 14:32	14° ✕ 50'08	evening set	9633 Mar 13 06:59	10° Υ 58'11
opposition	9626 Aug 27 02:42	12° ✕ 49'01 -0°38'11			
min. Earth dist.	9626 Aug 27 08:07	12° ✕ 48'27 17.70982 AU	conjunction	9633 Mar 29 05:00	11° Υ 55'43 -0°51'47
direct	9626 Nov 11 22:15	10° ✕ 44'46	minimum elong	9633 Mar 29 05:00	11° Υ 55'43 0°51'50
evening set	9627 Feb 14 18:54	14° ✕ 07'53	max. Earth dist.	9633 Mar 29 06:59	11° Υ 56'01 20.09383 AU
			morning rise	9633 Apr 14 00:55	12° Υ 52'58
conjunction	9627 Mar 02 22:09	15° ✕ 07'12 -0°36'07	retrograde	9633 Jul 14 13:08	16° Υ 06'08
minimum elong	9627 Mar 02 22:09	15° ✕ 07'11 0°36'01	opposition	9633 Sep 27 23:30	14° Υ 06'26 -0°58'24
max. Earth dist.	9627 Mar 02 16:52	15° ✕ 06'23 19.73517 AU	min. Earth dist.	9633 Sep 27 21:01	14° Υ 06'41 18.12572 AU
morning rise	9627 Mar 18 22:28	16° ✕ 06'06	direct	9633 Dec 14 03:09	12° Υ 04'35
retrograde	9627 Jun 18 08:19	19° ✕ 23'00	evening set	9634 Mar 17 22:04	15° Υ 21'04
opposition	9627 Sep 01 00:11	17° ✕ 22'02 -0°42'01			
min. Earth dist.	9627 Sep 01 04:49	17° ✕ 21'33 17.76143 AU	conjunction	9634 Apr 02 19:16	16° Υ 18'19 -0°53'21
direct	9627 Nov 16 20:47	15° ✕ 18'02	minimum elong	9634 Apr 02 19:16	16° Υ 18'19 0°53'27
evening set	9628 Feb 19 15:13	18° ✕ 40'16	max. Earth dist.	9634 Apr 02 21:37	16° Υ 18'41 20.15740 AU
			morning rise	9634 Apr 18 14:44	17° Υ 15'19
conjunction	9628 Mar 06 17:21	19° ✕ 39'17 -0°39'26	retrograde	9634 Jul 19 02:47	20° Υ 27'54
minimum elong	9628 Mar 06 17:21	19° ✕ 39'17 0°39'20	opposition	9634 Oct 02 17:42	18° Υ 28'22 -0°59'57
max. Earth dist.	9628 Mar 06 12:17	19° ✕ 38'30 19.78859 AU	min. Earth dist.	9634 Oct 02 14:58	18° Υ 28'39 18.18911 AU
morning rise	9628 Mar 22 16:58	20° ✕ 37'55	direct	9634 Dec 18 20:53	16° Υ 26'53
retrograde	9628 Jun 22 03:03	23° ✕ 54'10	evening set	9635 Mar 22 12:20	19° Υ 42'21
opposition	9628 Sep 04 21:17	21° ✕ 53'22 -0°45'33			
min. Earth dist.	9628 Sep 05 00:23	21° ✕ 53'02 17.81667 AU	conjunction	9635 Apr 07 08:57	20° Υ 39'19 -0°54'36
direct	9628 Nov 20 19:37	19° ✕ 49'39	minimum elong	9635 Apr 07 08:57	20° Υ 39'19 0°54'42
evening set	9629 Feb 23 10:19	23° ✕ 10'58	max. Earth dist.	9635 Apr 07 12:36	20° Υ 39'52 20.22030 AU
			morning rise	9635 Apr 23 03:49	21° Υ 36'04
conjunction	9629 Mar 11 11:41	24° ✕ 09'42 -0°42'29	retrograde	9635 Jul 23 17:28	24° Υ 48'01
minimum elong	9629 Mar 11 11:41	24° ✕ 09'42 0°42'25	opposition	9635 Oct 07 11:09	22° Υ 48'41 -1°01'09
max. Earth dist.	9629 Mar 11 09:05	24° ✕ 09'18 19.84545 AU	min. Earth dist.	9635 Oct 07 06:57	22° Υ 49'07 18.25133 AU
morning rise	9629 Mar 27 10:21	25° ✕ 08'03	direct	9635 Dec 23 15:56	20° Υ 47'32
retrograde	9629 Jun 26 20:04	28° ✕ 23'40	evening set	9636 Mar 26 01:53	24° Υ 01'58
opposition	9629 Sep 09 17:58	26° ✕ 23'04 -0°48'46			
min. Earth dist.	9629 Sep 09 19:51	26° ✕ 22'52 17.87496 AU	conjunction	9636 Apr 10 21:48	24° Υ 58'40 -0°55'33
direct	9629 Nov 25 17:28	24° ✕ 19'42	minimum elong	9636 Apr 10 21:48	24° Υ 58'40 0°55'41
evening set	9630 Feb 28 04:49	27° ✕ 40'06	max. Earth dist.	9636 Apr 11 01:51	24° Υ 59'17 20.28181 AU
			morning rise	9636 Apr 26 16:16	25° Υ 55'10
conjunction	9630 Mar 16 05:09	28° ✕ 38'31 -0°45'15	retrograde	9636 Jul 27 05:44	29° Υ 06'32
minimum elong	9630 Mar 16 05:09	28° ✕ 38'31 0°45'12	opposition	9636 Oct 11 04:18	27° Υ 07'20 -1°02'00
max. Earth dist.	9630 Mar 16 02:54	28° ✕ 38'10 19.90513 AU	min. Earth dist.	9636 Oct 11 00:04	27° Υ 07'46 18.31219 AU
morning rise	9630 Apr 01 03:12	29° ✕ 36'36	direct	9636 Dec 27 08:03	25° Υ 06'29
	9630 Apr 07 17:45	0° Υ	evening set	9637 Mar 30 14:21	28° Υ 19'53
retrograde	9630 Jul 01 13:16	2° Υ 51'36			
opposition	9630 Sep 14 13:58	0° Υ 51'12 -0°51'41	conjunction	9637 Apr 15 09:47	29° Υ 16'19 -0°56'10






























































































































































minimum elong	9637 Apr 15 09:46	29° Υ 16'19	0°56'19	max. Earth dist.	9643 May 11 05:10	24° \mathcal{B} 28'23	20.67119 AU
max. Earth dist.	9637 Apr 15 14:57	29° Υ 17'05	20.34184 AU	morning rise	9643 May 26 11:40	25° \mathcal{B} 21'55	
	9637 Apr 27 14:18	0° \mathcal{B}		retrograde	9643 Aug 26 14:14	28° \mathcal{B} 29'37	
morning rise	9637 May 01 03:52	0° \mathcal{B} 12'35		opposition	9643 Nov 11 09:54	26° \mathcal{B} 31'01	-0°58'27
retrograde	9637 Jul 31 19:19	3° \mathcal{B} 23'21		min. Earth dist.	9643 Nov 10 22:19	26° \mathcal{B} 32'11	18.69650 AU
opposition	9637 Oct 15 20:39	1° \mathcal{B} 24'15	-1°02'30	direct	9644 Jan 27 10:26	24° \mathcal{B} 32'06	
min. Earth dist.	9637 Oct 15 14:46	1° \mathcal{B} 24'51	18.37127 AU	evening set	9644 Apr 28 08:43	27° \mathcal{B} 38'42	
	9637 Nov 22 21:55	30° $\mathcal{R}\Upsilon$					
direct	9638 Jan 01 01:13	29° Υ 23'42		conjunction	9644 May 14 01:54	28° \mathcal{B} 33'38	-0°52'01
	9638 Feb 08 00:47	0° \mathcal{B}		minimum elong	9644 May 14 01:54	28° \mathcal{B} 33'38	0°52'19
evening set	9638 Apr 04 02:08	2° \mathcal{B} 36'01		max. Earth dist.	9644 May 14 13:40	28° \mathcal{B} 35'22	20.72085 AU
				morning rise	9644 May 29 19:09	29° \mathcal{B} 28'37	
conjunction	9638 Apr 19 21:02	3° \mathcal{B} 32'12	-0°56'29		9644 Jun 08 02:34	0° Π	
minimum elong	9638 Apr 19 21:02	3° \mathcal{B} 32'12	0°56'39	retrograde	9644 Aug 29 22:43	2° Π 35'57	
max. Earth dist.	9638 Apr 20 02:50	3° \mathcal{B} 33'04	20.40003 AU	opposition	9644 Nov 14 22:27	0° Π 37'27	-0°56'41
morning rise	9638 May 05 14:51	4° \mathcal{B} 28'15		min. Earth dist.	9644 Nov 14 11:11	0° Π 38'35	18.74505 AU
retrograde	9638 Aug 05 06:21	7° \mathcal{B} 38'26			9644 Nov 30 17:11	30° $\mathcal{R}\mathcal{B}$	
opposition	9638 Oct 20 12:19	5° \mathcal{B} 39'24	-1°02'40	direct	9645 Jan 30 20:26	28° \mathcal{B} 38'52	
min. Earth dist.	9638 Oct 20 06:34	5° \mathcal{B} 39'59	18.42872 AU		9645 Mar 29 20:21	0° Π	
direct	9639 Jan 05 15:50	3° \mathcal{B} 39'06		evening set	9645 May 02 15:42	1° Π 44'38	
evening set	9639 Apr 08 13:01	6° \mathcal{B} 50'23					
				conjunction	9645 May 18 08:50	2° Π 39'25	-0°50'19
conjunction	9639 Apr 24 07:32	7° \mathcal{B} 46'20	-0°56'28	minimum elong	9645 May 18 08:50	2° Π 39'25	0°50'37
minimum elong	9639 Apr 24 07:32	7° \mathcal{B} 46'20	0°56'41	max. Earth dist.	9645 May 18 21:04	2° Π 41'13	20.76815 AU
max. Earth dist.	9639 Apr 24 14:21	7° \mathcal{B} 47'21	20.45675 AU	morning rise	9645 Jun 03 02:16	3° Π 34'16	
morning rise	9639 May 10 01:06	8° \mathcal{B} 42'09		retrograde	9645 Sep 03 09:54	6° Π 41'17	
retrograde	9639 Aug 09 18:53	11° \mathcal{B} 51'45		opposition	9645 Nov 19 10:20	4° Π 42'54	-0°54'39
opposition	9639 Oct 25 03:22	9° \mathcal{B} 52'48	-1°02'28	min. Earth dist.	9645 Nov 18 21:29	4° Π 44'11	18.79082 AU
min. Earth dist.	9639 Oct 24 19:42	9° \mathcal{B} 53'35	18.48468 AU	direct	9646 Feb 04 08:26	2° Π 44'35	
direct	9640 Jan 10 07:14	7° \mathcal{B} 52'45		evening set	9646 May 06 22:27	5° Π 49'37	
evening set	9640 Apr 11 23:04	11° \mathcal{B} 03'01					
				conjunction	9646 May 22 15:33	6° Π 44'16	-0°48'22
conjunction	9640 Apr 27 17:08	11° \mathcal{B} 58'43	-0°56'10	minimum elong	9646 May 22 15:34	6° Π 44'16	0°48'41
minimum elong	9640 Apr 27 17:08	11° \mathcal{B} 58'43	0°56'23	max. Earth dist.	9646 May 23 04:37	6° Π 46'10	20.81222 AU
max. Earth dist.	9640 Apr 28 01:01	11° \mathcal{B} 59'53	20.51203 AU	morning rise	9646 Jun 07 09:08	7° Π 39'01	
morning rise	9640 May 13 10:30	12° \mathcal{B} 54'21		retrograde	9646 Sep 07 18:04	10° Π 45'44	
	9640 Jun 23 19:51	15° \mathcal{B}		opposition	9646 Nov 23 21:53	8° Π 47'27	-0°52'20
retrograde	9640 Aug 13 05:03	16° \mathcal{B} 03'25		min. Earth dist.	9646 Nov 23 09:43	8° Π 48'40	18.83317 AU
	9640 Oct 05 00:59	15° $\mathcal{R}\mathcal{B}$		direct	9647 Feb 08 17:10	6° Π 49'25	
opposition	9640 Oct 28 18:00	14° \mathcal{B} 04'31	-1°01'56	evening set	9647 May 11 04:51	9° Π 53'45	
min. Earth dist.	9640 Oct 28 10:16	14° \mathcal{B} 05'18	18.53953 AU				
direct	9641 Jan 13 20:18	12° \mathcal{B} 04'44		conjunction	9647 May 26 21:59	10° Π 48'16	-0°46'10
	9641 Apr 12 06:35	15° \mathcal{B}		minimum elong	9647 May 26 21:59	10° Π 48'16	0°46'30
evening set	9641 Apr 16 08:24	15° \mathcal{B} 14'00		max. Earth dist.	9647 May 27 11:05	10° Π 50'11	20.85274 AU
				morning rise	9647 Jun 11 15:48	11° Π 42'55	
conjunction	9641 May 02 02:10	16° \mathcal{B} 09'30	-0°55'33	retrograde	9647 Sep 12 04:23	14° Π 49'23	
minimum elong	9641 May 02 02:10	16° \mathcal{B} 09'30	0°55'48	opposition	9647 Nov 28 09:03	12° Π 51'11	-0°49'47
max. Earth dist.	9641 May 02 11:04	16° \mathcal{B} 10'49	20.56638 AU	min. Earth dist.	9647 Nov 27 19:35	12° Π 52'32	18.87161 AU
morning rise	9641 May 17 19:26	17° \mathcal{B} 04'56		direct	9648 Feb 13 04:21	10° Π 53'24	
retrograde	9641 Aug 17 17:09	20° \mathcal{B} 13'30		evening set	9648 May 14 10:50	13° Π 57'04	
opposition	9641 Nov 02 07:45	18° \mathcal{B} 14'41	-1°01'05				
min. Earth dist.	9641 Nov 01 21:58	18° \mathcal{B} 15'41	18.59331 AU	conjunction	9648 May 30 04:03	14° Π 51'30	-0°43'46
direct	9642 Jan 18 10:10	16° \mathcal{B} 15'11		minimum elong	9648 May 30 04:04	14° Π 51'30	0°44'07
evening set	9642 Apr 20 17:05	19° \mathcal{B} 23'30		max. Earth dist.	9648 May 30 17:49	14° Π 53'30	20.88891 AU
				morning rise	9648 Jun 14 22:07	15° Π 46'04	
conjunction	9642 May 06 10:37	20° \mathcal{B} 18'48	-0°54'39	retrograde	9648 Sep 15 12:38	18° Π 52'20	
minimum elong	9642 May 06 10:37	20° \mathcal{B} 18'48	0°54'54	opposition	9648 Dec 01 20:04	16° Π 54'10	-0°46'59
max. Earth dist.	9642 May 06 20:35	20° \mathcal{B} 20'16	20.61949 AU	min. Earth dist.	9648 Dec 01 07:27	16° Π 55'26	18.90553 AU
morning rise	9642 May 22 03:49	21° \mathcal{B} 14'04		direct	9649 Feb 16 12:35	14° Π 56'36	
retrograde	9642 Aug 22 02:21	24° \mathcal{B} 22'11		evening set	9649 May 18 16:40	17° Π 59'39	
opposition	9642 Nov 06 21:10	22° \mathcal{B} 23'28	-0°59'55				
min. Earth dist.	9642 Nov 06 11:29	22° \mathcal{B} 24'27	18.64578 AU	conjunction	9649 Jun 03 10:02	18° Π 54'00	-0°41'09
direct	9643 Jan 22 21:38	20° \mathcal{B} 24'16		minimum elong	9649 Jun 03 10:02	18° Π 54'00	0°41'29
evening set	9643 Apr 25 01:08	23° \mathcal{B} 31'42		max. Earth dist.	9649 Jun 03 23:27	18° Π 55'56	20.92047 AU
				morning rise	9649 Jun 19 04:29	19° Π 48'30	
conjunction	9643 May 10 18:27	24° \mathcal{B} 26'48	-0°53'28	retrograde	9649 Sep 19 22:16	22° Π 54'35	
minimum elong	9643 May 10 18:27	24° \mathcal{B} 26'48	0°53'45	opposition	9649 Dec 06 06:22	20° Π 56'26	-0°43'58

min. Earth dist.	9649 Dec 05 16:45	20°II57'48	18.93455 AU	conjunction	9656 Jun 30 22:45	16°☾54'57	-0°18'08
direct	9650 Feb 20 22:31	18°II59'01		minimum elong	9656 Jun 30 22:45	16°☾54'57	0°18'28
evening set	9650 May 22 22:12	22°II01'31		max. Earth dist.	9656 Jul 01 13:20	16°☾57'03	21.01404 AU
				morning rise	9656 Jul 16 20:41	17°☾49'28	
conjunction	9650 Jun 07 15:49	22°II55'47	-0°38'20	retrograde	9656 Oct 18 05:36	20°☾55'21	
minimum elong	9650 Jun 07 15:49	22°II55'47	0°38'41	opposition	9657 Jan 03 22:37	18°☾56'44	-0°17'57
max. Earth dist.	9650 Jun 08 05:36	22°II57'47	20.94687 AU	min. Earth dist.	9657 Jan 03 09:17	18°☾58'04	19.01386 AU
morning rise	9650 Jun 23 10:37	23°II50'15		direct	9657 Mar 21 02:27	16°☾59'46	
retrograde	9650 Sep 24 06:02	26°II56'10		evening set	9657 Jun 19 07:46	19°☾59'55	
opposition	9650 Dec 10 16:34	24°II58'00	-0°40'45				
min. Earth dist.	9650 Dec 10 03:55	24°II59'16	18.95840 AU	conjunction	9657 Jul 05 04:04	20°☾54'10	-0°14'22
direct	9651 Feb 25 06:36	23°II00'42		minimum elong	9657 Jul 05 04:03	20°☾54'10	0°14'43
evening set	9651 May 27 03:23	26°II02'40		behind sun begin	9657 Jul 05 01:17	20°☾53'47	
				behind sun end	9657 Jul 05 06:50	20°☾54'34	
conjunction	9651 Jun 11 21:12	26°II56'53	-0°35'19	max. Earth dist.	9657 Jul 05 18:04	20°☾56'11	21.01256 AU
minimum elong	9651 Jun 11 21:13	26°II56'53	0°35'41	morning rise	9657 Jul 21 02:42	21°☾48'45	
max. Earth dist.	9651 Jun 12 10:35	26°II58'49	20.96833 AU	retrograde	9657 Oct 22 15:26	24°☾54'48	
morning rise	9651 Jun 27 16:29	27°II51'19		opposition	9658 Jan 08 06:47	22°☾56'08	-0°13'44
	9651 Aug 10 19:02	0°☾		min. Earth dist.	9658 Jan 07 16:53	22°☾57'31	19.01052 AU
retrograde	9651 Sep 28 15:07	0°☾57'06		direct	9658 Mar 25 08:55	20°☾59'11	
	9651 Nov 18 06:22	30°RII		evening set	9658 Jun 23 12:44	23°☾59'18	
opposition	9651 Dec 15 02:16	28°II58'52	-0°37'20				
min. Earth dist.	9651 Dec 14 12:37	29°II00'14	18.97742 AU	conjunction	9658 Jul 09 09:37	24°☾53'38	-0°10'33
direct	9652 Feb 29 15:25	27°II01'39		minimum elong	9658 Jul 09 09:37	24°☾53'38	0°10'53
	9652 May 29 10:03	0°☾		behind sun begin	9658 Jul 09 04:35	24°☾52'56	
evening set	9652 May 30 08:20	0°☾03'08		behind sun end	9658 Jul 09 14:38	24°☾54'20	
				max. Earth dist.	9658 Jul 10 00:04	24°☾55'42	21.00726 AU
conjunction	9652 Jun 15 02:31	0°☾57'19	-0°32'09	morning rise	9658 Jul 25 08:50	25°☾48'18	
minimum elong	9652 Jun 15 02:31	0°☾57'19	0°32'31	retrograde	9658 Oct 26 22:16	28°☾54'33	
max. Earth dist.	9652 Jun 15 16:28	0°☾59'20	20.98506 AU	opposition	9659 Jan 12 15:11	26°☾55'50	-0°09'28
morning rise	9652 Jun 30 22:12	1°☾51'44		min. Earth dist.	9659 Jan 12 02:15	26°☾57'08	19.00327 AU
retrograde	9652 Oct 01 22:12	4°☾57'26		direct	9659 Mar 29 14:33	24°☾58'55	
opposition	9652 Dec 18 11:43	2°☾59'07	-0°33'44	evening set	9659 Jun 27 17:54	27°☾59'03	
min. Earth dist.	9652 Dec 17 22:52	3°☾00'24	18.99206 AU				
direct	9653 Mar 04 23:03	1°☾01'57		conjunction	9659 Jul 13 15:17	28°☾53'27	-0°06'40
evening set	9653 Jun 03 13:04	4°☾03'01		minimum elong	9659 Jul 13 15:17	28°☾53'27	0°07'00
				behind sun begin	9659 Jul 13 09:10	28°☾52'36	
conjunction	9653 Jun 19 07:34	4°☾57'11	-0°28'50	behind sun end	9659 Jul 13 21:24	28°☾54'18	
minimum elong	9653 Jun 19 07:34	4°☾57'11	0°29'12	max. Earth dist.	9659 Jul 14 04:56	28°☾55'24	20.99812 AU
max. Earth dist.	9653 Jun 19 21:13	4°☾59'09	20.99778 AU	morning rise	9659 Jul 29 15:15	29°☾48'13	
morning rise	9653 Jul 05 03:52	5°☾51'36			9659 Aug 02 03:55	0°♂	
retrograde	9653 Oct 06 07:12	8°☾57'16		retrograde	9659 Oct 31 08:24	2°♂54'45	
opposition	9653 Dec 22 20:42	6°☾58'51	-0°29'59	opposition	9660 Jan 16 23:34	0°♂55'58	-0°05'08
min. Earth dist.	9653 Dec 22 06:49	7°☾00'14	19.00284 AU	min. Earth dist.	9660 Jan 16 10:19	0°♂57'18	18.99201 AU
direct	9654 Mar 09 06:49	5°☾01'44			9660 Feb 10 04:05	30°R☾	
evening set	9654 Jun 07 17:45	8°☾02'28		direct	9660 Apr 01 20:49	28°☾59'03	
					9660 May 21 10:55	0°♂	
conjunction	9654 Jun 23 12:39	8°☾56'38	-0°25'23	evening set	9660 Jun 30 23:28	1°♂59'16	
minimum elong	9654 Jun 23 12:39	8°☾56'38	0°25'44				
max. Earth dist.	9654 Jun 24 02:56	8°☾58'41	21.00662 AU	conjunction	9660 Jul 16 21:29	2°♂53'46	-0°02'45
morning rise	9654 Jul 09 09:23	9°☾51'04		minimum elong	9660 Jul 16 21:30	2°♂53'46	0°03'05
retrograde	9654 Oct 10 13:45	12°☾56'44		behind sun begin	9660 Jul 16 14:56	2°♂52'51	
opposition	9654 Dec 27 05:28	10°☾58'15	-0°26'05	behind sun end	9660 Jul 17 04:05	2°♂54'41	
min. Earth dist.	9654 Dec 26 16:19	10°☾59'34	19.00993 AU	max. Earth dist.	9660 Jul 17 11:22	2°♂55'45	20.98461 AU
direct	9655 Mar 13 13:30	9°☾01'11		morning rise	9660 Aug 01 22:06	3°♂48'39	
evening set	9655 Jun 11 22:24	12°☾01'40		retrograde	9660 Nov 03 16:24	6°♂55'29	
				opposition	9661 Jan 20 07:59	4°♂56'37	-0°00'47
conjunction	9655 Jun 27 17:41	12°☾55'50	-0°21'48	min. Earth dist.	9661 Jan 19 19:55	4°♂57'50	18.97623 AU
minimum elong	9655 Jun 27 17:41	12°☾55'50	0°22'10	asc. node	9661 Mar 25 14:38	3°♂03'02	
max. Earth dist.	9655 Jun 28 07:36	12°☾57'50	21.01209 AU	direct	9661 Apr 06 02:35	2°♂59'42	
morning rise	9655 Jul 13 15:03	13°☾50'18		evening set	9661 Jul 05 05:29	6°♂00'03	
retrograde	9655 Oct 14 23:12	16°☾56'03					
opposition	9655 Dec 31 14:03	14°☾57'29	-0°22'04	conjunction	9661 Jul 21 04:07	6°♂54'40	0°01'19
min. Earth dist.	9655 Dec 30 23:57	14°☾58'54	19.01367 AU	minimum elong	9661 Jul 21 04:06	6°♂54'40	0°01'01
direct	9656 Mar 16 20:33	13°☾00'28		behind sun begin	9661 Jul 20 21:30	6°♂53'44	
evening set	9656 Jun 15 02:56	16°☾00'45		behind sun end	9661 Jul 21 10:42	6°♂55'35	
				max. Earth dist.	9661 Jul 21 16:38	6°♂56'27	20.96652 AU

morning rise	9661 Aug 06 05:30	7°Ω49'40	conjunction	9667 Aug 15 04:46	1°♊13'27	0°24'27
retrograde	9661 Nov 08 02:53	10°Ω56'51	minimum elong	9667 Aug 15 04:46	1°♊13'27	0°24'15
opposition	9662 Jan 24 16:28	8°Ω57'52 0°03'36	max. Earth dist.	9667 Aug 15 12:38	1°♊14'35	20.75873 AU
min. Earth dist.	9662 Jan 24 04:32	8°Ω59'04 18.95563 AU	morning rise	9667 Aug 31 10:38	2°♊09'28	
direct	9662 Apr 10 09:06	7°Ω00'52	retrograde	9667 Dec 03 17:14	5°♊19'12	
evening set	9662 Jul 09 11:51	10°Ω01'26	opposition	9668 Feb 18 21:53	3°♊18'58	0°29'04
			min. Earth dist.	9668 Feb 18 14:23	3°♊19'44	18.73571 AU
conjunction	9662 Jul 25 11:10	10°Ω56'10 0°05'18	direct	9668 May 04 03:08	1°♊20'49	
minimum elong	9662 Jul 25 11:10	10°Ω56'10 0°05'00	evening set	9668 Aug 02 11:04	4°♊23'38	
behind sun begin	9662 Jul 25 04:44	10°Ω55'16				
behind sun end	9662 Jul 25 17:36	10°Ω57'04	conjunction	9668 Aug 18 14:45	5°♊19'26	0°28'02
max. Earth dist.	9662 Jul 25 23:31	10°Ω57'56 20.94323 AU	minimum elong	9668 Aug 18 14:45	5°♊19'26	0°27'52
morning rise	9662 Aug 10 13:09	11°Ω51'18	max. Earth dist.	9668 Aug 18 22:50	5°♊20'36	20.71211 AU
retrograde	9662 Nov 12 11:38	14°Ω58'50	morning rise	9668 Sep 03 21:14	6°♊15'39	
opposition	9663 Jan 29 01:07	12°Ω59'43 0°07'58	retrograde	9668 Dec 07 04:36	9°♊25'55	
min. Earth dist.	9663 Jan 28 14:27	13°Ω00'48 18.92972 AU	opposition	9669 Feb 22 07:18	7°♊25'29	0°32'58
direct	9663 Apr 14 15:18	11°Ω02'37	min. Earth dist.	9669 Feb 22 00:39	7°♊26'10	18.68802 AU
evening set	9663 Jul 13 18:41	14°Ω03'24	direct	9669 May 08 10:39	5°♊27'06	
			evening set	9669 Aug 06 20:55	8°♊30'33	
conjunction	9663 Jul 29 18:37	14°Ω58'17 0°09'14				
minimum elong	9663 Jul 29 18:37	14°Ω58'17 0°08'57	conjunction	9669 Aug 23 01:16	9°♊26'33	0°31'29
behind sun begin	9663 Jul 29 12:57	14°Ω57'29	minimum elong	9669 Aug 23 01:16	9°♊26'33	0°31'19
behind sun end	9663 Jul 30 00:17	14°Ω59'05	max. Earth dist.	9669 Aug 23 07:44	9°♊27'29	20.66351 AU
max. Earth dist.	9663 Jul 30 05:24	14°Ω59'49 20.91490 AU	morning rise	9669 Sep 08 08:36	10°♊23'00	
	9663 Jul 30 06:37	15°Ω	retrograde	9669 Dec 11 17:26	13°♊33'51	
morning rise	9663 Aug 14 21:27	15°Ω53'34	opposition	9670 Feb 26 17:08	11°♊33'14	0°36'43
retrograde	9663 Nov 16 22:39	19°Ω01'29	min. Earth dist.	9670 Feb 26 11:00	11°♊33'52	18.63853 AU
opposition	9664 Feb 02 09:51	17°Ω02'11 0°12'20	direct	9670 May 12 18:20	9°♊34'38	
min. Earth dist.	9664 Feb 01 23:29	17°Ω03'14 18.89887 AU	evening set	9670 Aug 11 07:15	12°♊38'45	
direct	9664 Apr 17 22:27	15°Ω04'54				
evening set	9664 Jul 17 01:46	18°Ω05'59	conjunction	9670 Aug 27 12:27	13°♊35'00	0°34'47
			minimum elong	9670 Aug 27 12:27	13°♊35'00	0°34'40
conjunction	9664 Aug 02 02:31	19°Ω01'01 0°13'08	max. Earth dist.	9670 Aug 27 19:10	13°♊35'59	20.61305 AU
minimum elong	9664 Aug 02 02:30	19°Ω01'01 0°12'52	morning rise	9670 Sep 12 20:20	14°♊31'40	
behind sun begin	9664 Aug 01 22:25	19°Ω00'26	retrograde	9670 Dec 16 06:25	17°♊43'09	
behind sun end	9664 Aug 02 06:36	19°Ω01'35	opposition	9671 Mar 03 03:22	15°♊42'22	0°40'17
max. Earth dist.	9664 Aug 02 13:10	19°Ω02'32 20.88160 AU	min. Earth dist.	9671 Mar 02 21:54	15°♊42'56	18.58725 AU
morning rise	9664 Aug 18 06:01	19°Ω56'28	direct	9671 May 17 03:11	13°♊43'35	
retrograde	9664 Nov 20 07:54	23°Ω04'46	evening set	9671 Aug 15 18:32	16°♊48'26	
opposition	9665 Feb 05 18:42	21°Ω05'15 0°16'38				
min. Earth dist.	9665 Feb 05 09:32	21°Ω06'11 18.86328 AU	conjunction	9671 Sep 01 00:22	17°♊44'55	0°37'55
direct	9665 Apr 22 04:54	19°Ω07'47	minimum elong	9671 Sep 01 00:22	17°♊44'55	0°37'48
evening set	9665 Jul 21 09:26	22°Ω09'12	max. Earth dist.	9671 Sep 01 05:20	17°♊45'38	20.56112 AU
			morning rise	9671 Sep 17 09:07	18°♊41'50	
conjunction	9665 Aug 06 10:49	23°Ω04'24 0°16'59	retrograde	9671 Dec 20 20:21	21°♊53'59	
minimum elong	9665 Aug 06 10:49	23°Ω04'24 0°16'45	opposition	9672 Mar 06 13:59	19°♊53'02	0°43'40
max. Earth dist.	9665 Aug 06 19:56	23°Ω05'42 20.84406 AU	min. Earth dist.	9672 Mar 06 09:18	19°♊53'31	18.53462 AU
morning rise	9665 Aug 22 15:11	24°Ω00'01	direct	9672 May 20 11:15	17°♊54'02	
retrograde	9665 Nov 24 19:14	27°Ω08'45	evening set	9672 Aug 19 06:31	20°♊59'42	
opposition	9666 Feb 10 03:28	25°Ω09'00 0°20'52				
min. Earth dist.	9666 Feb 09 18:42	25°Ω09'53 18.82384 AU	conjunction	9672 Sep 04 13:15	21°♊56'27	0°40'52
direct	9666 Apr 26 12:32	23°Ω11'18	minimum elong	9672 Sep 04 13:15	21°♊56'27	0°40'47
evening set	9666 Jul 25 17:28	26°Ω13'07	max. Earth dist.	9672 Sep 04 18:21	21°♊57'11	20.50764 AU
			morning rise	9672 Sep 20 22:33	22°♊53'36	
conjunction	9666 Aug 10 19:39	27°Ω08'30 0°20'46	retrograde	9672 Dec 24 11:02	26°♊06'25	
minimum elong	9666 Aug 10 19:39	27°Ω08'30 0°20'33	opposition	9673 Mar 11 01:03	24°♊05'22	0°46'50
max. Earth dist.	9666 Aug 11 04:53	27°Ω09'50 20.80282 AU	min. Earth dist.	9673 Mar 10 21:09	24°♊05'46	18.48028 AU
morning rise	9666 Aug 27 00:38	28°Ω04'18	direct	9673 May 24 21:28	22°♊06'10	
	9666 Oct 04 10:57	0°♊	evening set	9673 Aug 23 19:34	25°♊12'41	
retrograde	9666 Nov 29 05:16	1°♊13'30				
	9667 Jan 26 00:53	30°♊	conjunction	9673 Sep 09 02:53	26°♊09'42	0°43'37
opposition	9667 Feb 14 12:35	29°Ω13'31 0°25'01	minimum elong	9673 Sep 09 02:53	26°♊09'41	0°43'34
min. Earth dist.	9667 Feb 14 04:43	29°Ω14'19 18.78105 AU	max. Earth dist.	9673 Sep 09 05:51	26°♊10'08	20.45250 AU
direct	9667 Apr 30 19:18	27°Ω15'36	morning rise	9673 Sep 25 12:58	27°♊07'06	
	9667 Jul 24 17:56	0°♊		9673 Nov 30 09:33	0°♊	
evening set	9667 Jul 30 01:56	0°♊17'53	retrograde	9673 Dec 29 01:52	0°♊20'38	
				9674 Jan 26 23:46	30°♊	

opposition	9674 Mar 15 12:34	28° <u>19</u> '26	0°49'47	minimum elong	9680 Oct 10 03:05	26° <u>03</u> '08	0°55'54
min. Earth dist.	9674 Mar 15 09:55	28° <u>19</u> '43	18.42427 AU	max. Earth dist.	9680 Oct 09 22:21	26° <u>02</u> '25	20.02035 AU
direct	9674 May 29 07:07	26° <u>19</u> '00		morning rise	9680 Oct 26 16:49	27° <u>02</u> '21	
evening set	9674 Aug 28 09:24	29° <u>19</u> '27			9680 Dec 16 20:02	0° <u>18</u> '	
	9674 Sep 06 17:29	0° <u>01</u> '		retrograde	9681 Jan 28 23:27	0° <u>18</u> '47	26
					9681 Mar 13 21:53	30° <u>18</u> ' <u>01</u>	
conjunction	9674 Sep 13 17:35	0° <u>02</u> '43	0°46'08	opposition	9681 Apr 14 12:10	28° <u>02</u> '44	1°02'18
minimum elong	9674 Sep 13 17:35	0° <u>02</u> '43	0°46'07	min. Earth dist.	9681 Apr 14 16:26	28° <u>02</u> '44	17.98900 AU
max. Earth dist.	9674 Sep 13 20:26	0° <u>02</u> '58	20.39544 AU	direct	9681 Jun 28 05:56	26° <u>02</u> '43	03
morning rise	9674 Sep 30 04:07	1° <u>02</u> '22	24	evening set	9681 Sep 28 10:37	29° <u>02</u> '57	20
retrograde	9675 Jan 02 17:35	4° <u>03</u> '36	37		9681 Sep 29 04:47	0° <u>18</u> '	
opposition	9675 Mar 20 00:41	2° <u>03</u> '51	17				
min. Earth dist.	9675 Mar 19 22:51	2° <u>03</u> '52	18.36618 AU	conjunction	9681 Oct 14 23:18	0° <u>18</u> '56	34
direct	9675 Jun 02 18:36	0° <u>03</u> '53	37	minimum elong	9681 Oct 14 23:18	0° <u>18</u> '56	34
evening set	9675 Sep 02 00:11	3° <u>03</u> '43	58	max. Earth dist.	9681 Oct 14 16:38	0° <u>18</u> '55	34
				morning rise	9681 Oct 31 13:30	1° <u>18</u> '56	02
conjunction	9675 Sep 18 08:57	4° <u>03</u> '41	32	retrograde	9682 Feb 02 17:36	5° <u>18</u> '14	43
minimum elong	9675 Sep 18 08:56	4° <u>03</u> '41	32	opposition	9682 Apr 19 03:59	3° <u>18</u> '11	57
max. Earth dist.	9675 Sep 18 09:19	4° <u>03</u> '41	35	min. Earth dist.	9682 Apr 19 09:52	3° <u>18</u> '11	19
morning rise	9675 Oct 04 20:17	5° <u>03</u> '39	28	direct	9682 Jul 02 21:07	1° <u>18</u> '09	46
retrograde	9676 Jan 07 09:27	8° <u>03</u> '54	23	evening set	9682 Oct 03 07:08	4° <u>18</u> '25	06
opposition	9676 Mar 23 13:25	6° <u>03</u> '52	52				
min. Earth dist.	9676 Mar 23 13:09	6° <u>03</u> '52	54	conjunction	9682 Oct 19 20:30	5° <u>18</u> '24	36
direct	9676 Jun 06 06:20	4° <u>03</u> '52	54	minimum elong	9682 Oct 19 20:29	5° <u>18</u> '24	36
evening set	9676 Sep 05 15:52	8° <u>03</u> '02	12	max. Earth dist.	9682 Oct 19 13:56	5° <u>18</u> '23	37
				morning rise	9682 Nov 05 10:54	6° <u>18</u> '24	19
conjunction	9676 Sep 22 01:32	9° <u>03</u> '00	03	retrograde	9683 Feb 07 14:28	9° <u>18</u> '40	33
minimum elong	9676 Sep 22 01:32	9° <u>03</u> '00	03	opposition	9683 Apr 23 20:15	7° <u>18</u> '40	39
max. Earth dist.	9676 Sep 22 01:35	9° <u>03</u> '00	03	min. Earth dist.	9683 Apr 24 01:53	7° <u>18</u> '40	03
morning rise	9676 Oct 08 13:16	9° <u>03</u> '58	15	direct	9683 Jul 07 14:39	5° <u>18</u> '38	09
retrograde	9677 Jan 11 01:35	13° <u>03</u> '13	49	evening set	9683 Oct 08 04:34	8° <u>18</u> '54	31
opposition	9677 Mar 28 02:27	11° <u>03</u> '12	07				
min. Earth dist.	9677 Mar 28 02:56	11° <u>03</u> '12	04	conjunction	9683 Oct 24 18:20	9° <u>18</u> '54	17
direct	9677 Jun 10 19:28	9° <u>03</u> '11	49	minimum elong	9683 Oct 24 18:19	9° <u>18</u> '54	17
evening set	9677 Sep 10 08:30	12° <u>03</u> '22	05	max. Earth dist.	9683 Oct 24 10:10	9° <u>18</u> '53	03
				morning rise	9683 Nov 10 09:07	10° <u>18</u> '54	14
conjunction	9677 Sep 26 18:42	13° <u>03</u> '20	12	retrograde	9684 Feb 12 09:46	14° <u>18</u> '14	03
minimum elong	9677 Sep 26 18:42	13° <u>03</u> '20	12	opposition	9684 Apr 27 13:19	12° <u>18</u> '11	01
max. Earth dist.	9677 Sep 26 16:13	13° <u>03</u> '19	50	min. Earth dist.	9684 Apr 27 20:31	12° <u>18</u> '10	15
morning rise	9677 Oct 13 07:09	14° <u>03</u> '18	40	direct	9684 Jul 11 06:55	10° <u>18</u> '08	12
retrograde	9678 Jan 15 18:07	17° <u>03</u> '34	54	evening set	9684 Oct 12 02:50	13° <u>18</u> '25	38
opposition	9678 Apr 01 16:12	15° <u>03</u> '32	58				
min. Earth dist.	9678 Apr 01 18:20	15° <u>03</u> '32	44	conjunction	9684 Oct 28 17:08	14° <u>18</u> '25	40
direct	9678 Jun 15 08:45	13° <u>03</u> '32	18	minimum elong	9684 Oct 28 17:08	14° <u>18</u> '25	40
evening set	9678 Sep 15 01:37	16° <u>03</u> '43	33	max. Earth dist.	9684 Oct 28 08:51	14° <u>18</u> '24	25
					9684 Nov 07 03:19	15° <u>18</u> '	
conjunction	9678 Oct 01 12:39	17° <u>03</u> '41	57	morning rise	9684 Nov 14 08:04	15° <u>18</u> '25	51
minimum elong	9678 Oct 01 12:39	17° <u>03</u> '41	57	retrograde	9685 Feb 16 08:06	18° <u>18</u> '46	12
max. Earth dist.	9678 Oct 01 10:08	17° <u>03</u> '41	35	opposition	9685 May 02 06:44	16° <u>18</u> '43	06
morning rise	9678 Oct 18 01:27	18° <u>03</u> '40	40	min. Earth dist.	9685 May 02 13:36	16° <u>18</u> '42	22
retrograde	9679 Jan 20 11:17	21° <u>03</u> '57	31		9685 Jun 18 11:30	15° <u>18</u> ' <u>18</u>	
opposition	9679 Apr 06 06:22	19° <u>03</u> '55	23	direct	9685 Jul 16 01:48	14° <u>18</u> '40	01
min. Earth dist.	9679 Apr 06 08:51	19° <u>03</u> '55	07		9685 Aug 12 08:13	15° <u>18</u> '	
direct	9679 Jun 19 23:28	17° <u>03</u> '54	21	evening set	9685 Oct 17 02:00	17° <u>18</u> '58	31
evening set	9679 Sep 19 19:52	21° <u>03</u> '06	35				
				conjunction	9685 Nov 02 16:35	18° <u>18</u> '58	48
conjunction	9679 Oct 06 07:23	22° <u>03</u> '05	15	minimum elong	9685 Nov 02 16:35	18° <u>18</u> '58	48
minimum elong	9679 Oct 06 07:22	22° <u>03</u> '05	15	max. Earth dist.	9685 Nov 02 07:05	18° <u>18</u> '57	21
max. Earth dist.	9679 Oct 06 02:37	22° <u>03</u> '04	33	morning rise	9685 Nov 19 07:42	19° <u>18</u> '59	12
morning rise	9679 Oct 22 20:49	23° <u>03</u> '04	14	retrograde	9686 Feb 21 04:50	23° <u>18</u> '20	05
retrograde	9680 Jan 25 04:31	26° <u>03</u> '21	43	opposition	9686 May 07 01:04	21° <u>18</u> '16	58
opposition	9680 Apr 09 21:01	24° <u>03</u> '19	20	min. Earth dist.	9686 May 07 09:33	21° <u>18</u> '16	03
min. Earth dist.	9680 Apr 10 01:13	24° <u>03</u> '18	53	direct	9686 Jul 20 19:29	19° <u>18</u> '13	38
direct	9680 Jun 23 13:50	22° <u>03</u> '17	54	evening set	9686 Oct 22 01:44	22° <u>18</u> '33	12
evening set	9680 Sep 23 14:47	25° <u>03</u> '31	10				
				conjunction	9686 Nov 07 16:43	23° <u>18</u> '33	43
conjunction	9680 Oct 10 03:05	26° <u>03</u> '30	08	minimum elong	9686 Nov 07 16:43	23° <u>18</u> '33	43

max. Earth dist.	9686 Nov 07 06:47	23° \mathbb{M} 32'12	19.68305 AU	min. Earth dist.	9693 Jun 08 13:08	23° \mathbb{X} 54'20	17.43657 AU
morning rise	9686 Nov 24 07:56	24° \mathbb{M} 34'19		direct	9693 Aug 22 06:17	21° \mathbb{X} 50'44	
retrograde	9687 Feb 26 04:20	27° \mathbb{M} 55'42		evening set	9693 Nov 24 18:50	25° \mathbb{X} 16'16	
opposition	9687 May 11 19:52	25° \mathbb{M} 52'35	0°59'01				
min. Earth dist.	9687 May 12 04:06	25° \mathbb{M} 51'41	17.65989 AU	conjunction	9693 Dec 11 10:15	26° \mathbb{X} 17'54	0°35'59
direct	9687 Jul 25 15:41	23° \mathbb{M} 49'02		minimum elong	9693 Dec 11 10:15	26° \mathbb{X} 17'55	0°36'21
evening set	9687 Oct 27 02:32	27° \mathbb{M} 09'38		max. Earth dist.	9693 Dec 10 19:38	26° \mathbb{X} 15'38	19.42370 AU
				morning rise	9693 Dec 28 00:04	27° \mathbb{X} 19'22	
conjunction	9687 Nov 12 17:46	28° \mathbb{M} 10'23	0°52'11		9694 Feb 19 07:29	0° \mathbb{B}	
minimum elong	9687 Nov 12 17:46	28° \mathbb{M} 10'23	0°52'29	retrograde	9694 Mar 30 22:18	0° \mathbb{B} 42'32	
max. Earth dist.	9687 Nov 12 06:52	28° \mathbb{M} 08'42	19.63703 AU		9694 May 10 09:35	30° \mathbb{R} \mathbb{X}	
morning rise	9687 Nov 29 08:58	29° \mathbb{M} 11'10		opposition	9694 Jun 12 23:06	28° \mathbb{X} 39'22	0°38'08
	9687 Dec 13 08:46	0° \mathbb{X}		min. Earth dist.	9694 Jun 13 12:02	28° \mathbb{X} 37'57	17.41244 AU
retrograde	9688 Mar 02 02:20	2° \mathbb{X} 32'59		direct	9694 Aug 27 07:03	26° \mathbb{X} 34'12	
opposition	9688 May 15 15:21	0° \mathbb{X} 29'53	0°57'07	evening set	9694 Nov 29 22:36	0° \mathbb{B} 00'17	
min. Earth dist.	9688 May 16 01:25	0° \mathbb{X} 28'48	17.61528 AU		9694 Nov 29 20:45	0° \mathbb{B}	
	9688 May 27 05:13	30° \mathbb{R} \mathbb{M}					
direct	9688 Jul 29 11:02	28° \mathbb{M} 26'07		conjunction	9694 Dec 16 13:38	1° \mathbb{B} 01'59	0°32'17
	9688 Sep 28 09:21	0° \mathbb{X}		minimum elong	9694 Dec 16 13:39	1° \mathbb{B} 01'59	0°32'38
evening set	9688 Oct 31 04:05	1° \mathbb{X} 47'43		max. Earth dist.	9694 Dec 15 21:47	0° \mathbb{B} 59'31	19.40211 AU
				morning rise	9695 Jan 02 03:12	2° \mathbb{B} 03'29	
conjunction	9688 Nov 16 19:29	2° \mathbb{X} 48'40	0°50'17	retrograde	9695 Apr 04 22:10	5° \mathbb{B} 26'39	
minimum elong	9688 Nov 16 19:29	2° \mathbb{X} 48'40	0°50'35	opposition	9695 Jun 17 21:41	3° \mathbb{B} 23'29	0°33'52
max. Earth dist.	9688 Nov 16 07:27	2° \mathbb{X} 46'49	19.59379 AU	min. Earth dist.	9695 Jun 18 10:31	3° \mathbb{B} 22'05	17.39345 AU
morning rise	9688 Dec 03 10:42	3° \mathbb{X} 49'38		direct	9695 Sep 01 08:26	1° \mathbb{B} 18'07	
retrograde	9689 Mar 07 02:27	7° \mathbb{X} 11'50		evening set	9695 Dec 05 02:29	4° \mathbb{B} 44'40	
opposition	9689 May 20 11:26	5° \mathbb{X} 08'44	0°54'50				
min. Earth dist.	9689 May 20 21:21	5° \mathbb{X} 07'39	17.57334 AU	conjunction	9695 Dec 21 17:22	5° \mathbb{B} 46'25	0°28'21
direct	9689 Aug 03 08:53	3° \mathbb{X} 04'44		minimum elong	9695 Dec 21 17:22	5° \mathbb{B} 46'25	0°28'43
evening set	9689 Nov 05 06:05	6° \mathbb{X} 27'15		max. Earth dist.	9695 Dec 21 02:41	5° \mathbb{B} 44'08	19.38575 AU
				morning rise	9696 Jan 07 06:14	6° \mathbb{B} 47'54	
conjunction	9689 Nov 21 21:38	7° \mathbb{X} 28'24	0°48'03	retrograde	9696 Apr 08 22:07	10° \mathbb{B} 11'00	
minimum elong	9689 Nov 21 21:38	7° \mathbb{X} 28'24	0°48'22	opposition	9696 Jun 21 20:30	8° \mathbb{B} 07'53	0°29'23
max. Earth dist.	9689 Nov 21 09:06	7° \mathbb{X} 26'28	19.55307 AU	min. Earth dist.	9696 Jun 22 09:17	8° \mathbb{B} 06'29	17.37983 AU
morning rise	9689 Dec 08 12:37	8° \mathbb{X} 29'30		direct	9696 Sep 05 09:30	6° \mathbb{B} 02'21	
retrograde	9690 Mar 12 00:57	11° \mathbb{X} 52'02		evening set	9696 Dec 09 06:32	9° \mathbb{B} 29'18	
opposition	9690 May 25 08:13	9° \mathbb{X} 48'56	0°52'10				
min. Earth dist.	9690 May 25 19:40	9° \mathbb{X} 47'41	17.53405 AU	conjunction	9696 Dec 25 20:50	10° \mathbb{B} 31'03	0°24'13
direct	9690 Aug 08 06:20	7° \mathbb{X} 44'42		minimum elong	9696 Dec 25 20:50	10° \mathbb{B} 31'03	0°24'35
evening set	9690 Nov 10 08:43	11° \mathbb{X} 08'04		max. Earth dist.	9696 Dec 25 05:14	10° \mathbb{B} 28'37	19.37511 AU
max. Earth dist.	9690 Nov 26 10:18	12° \mathbb{X} 07'13	19.51537 AU	morning rise	9697 Jan 11 09:15	11° \mathbb{B} 32'31	
				retrograde	9697 Apr 13 22:27	14° \mathbb{B} 55'31	
conjunction	9690 Nov 27 00:16	12° \mathbb{X} 09'23	0°45'29	opposition	9697 Jun 26 19:42	12° \mathbb{B} 52'27	0°24'41
minimum elong	9690 Nov 27 00:16	12° \mathbb{X} 09'23	0°45'50	min. Earth dist.	9697 Jun 27 08:21	12° \mathbb{B} 51'04	17.37227 AU
morning rise	9690 Dec 13 15:12	13° \mathbb{X} 10'37		direct	9697 Sep 10 10:32	10° \mathbb{B} 46'49	
retrograde	9691 Mar 17 00:39	16° \mathbb{X} 33'25		evening set	9697 Dec 14 10:12	14° \mathbb{B} 14'05	
opposition	9691 May 30 05:14	14° \mathbb{X} 30'17	0°49'09	max. Earth dist.	9697 Dec 30 10:03	15° \mathbb{B} 13'37	19.37059 AU
min. Earth dist.	9691 May 30 16:34	14° \mathbb{X} 29'02	17.49793 AU				
direct	9691 Aug 13 05:42	12° \mathbb{X} 25'48		conjunction	9697 Dec 31 00:11	15° \mathbb{B} 15'49	0°19'56
evening set	9691 Nov 15 11:45	15° \mathbb{X} 49'58		minimum elong	9697 Dec 31 00:11	15° \mathbb{B} 15'49	0°20'18
				morning rise	9698 Jan 16 11:50	16° \mathbb{B} 17'14	
conjunction	9691 Dec 02 03:26	16° \mathbb{X} 51'25	0°42'36	retrograde	9698 Apr 18 22:51	19° \mathbb{B} 40'05	
minimum elong	9691 Dec 02 03:26	16° \mathbb{X} 51'25	0°42'57	opposition	9698 Jul 01 19:06	17° \mathbb{B} 37'08	0°19'49
max. Earth dist.	9691 Dec 01 13:32	16° \mathbb{X} 49'16	19.48087 AU	min. Earth dist.	9698 Jul 02 07:01	17° \mathbb{B} 35'50	17.37071 AU
morning rise	9691 Dec 18 17:59	17° \mathbb{X} 52'45		direct	9698 Sep 15 11:57	15° \mathbb{B} 31'29	
retrograde	9692 Mar 20 23:38	21° \mathbb{X} 15'44		evening set	9698 Dec 19 14:07	18° \mathbb{B} 58'58	
opposition	9692 Jun 03 02:53	19° \mathbb{X} 12'35	0°45'48				
min. Earth dist.	9692 Jun 03 15:23	19° \mathbb{X} 11'14	17.46520 AU	conjunction	9699 Jan 05 03:27	20° \mathbb{B} 00'39	0°15'31
direct	9692 Aug 17 05:25	17° \mathbb{X} 07'53		minimum elong	9699 Jan 05 03:26	20° \mathbb{B} 00'39	0°15'52
evening set	9692 Nov 19 15:14	20° \mathbb{X} 32'46		behind sun begin	9699 Jan 05 03:11	20° \mathbb{B} 00'37	
				behind sun end	9699 Jan 05 03:42	20° \mathbb{B} 00'41	
conjunction	9692 Dec 06 06:41	21° \mathbb{X} 34'19	0°39'26	max. Earth dist.	9699 Jan 04 12:48	19° \mathbb{B} 58'22	19.37212 AU
minimum elong	9692 Dec 06 06:41	21° \mathbb{X} 34'19	0°39'48	morning rise	9699 Jan 21 14:30	21° \mathbb{B} 02'01	
max. Earth dist.	9692 Dec 05 15:18	21° \mathbb{X} 31'56	19.45016 AU	retrograde	9699 Apr 23 22:42	24° \mathbb{B} 24'40	
morning rise	9692 Dec 22 21:03	22° \mathbb{X} 35'44		opposition	9699 Jul 06 18:34	22° \mathbb{B} 21'52	0°14'49
retrograde	9693 Mar 25 22:56	25° \mathbb{X} 58'51		min. Earth dist.	9699 Jul 07 06:42	22° \mathbb{B} 20'33	17.37523 AU
opposition	9693 Jun 08 00:45	23° \mathbb{X} 55'41	0°42'06	direct	9699 Sep 20 12:42	20° \mathbb{B} 16'13	

evening set	9699 Dec 24 17:50	23°  43'53	evening set	9705 Jan 18 08:00	17°  23'31
conjunction	9700 Jan 10 06:40	24°  45'30 0°10'59	conjunction	9705 Feb 03 16:51	18°  24'22 -0°12'10
minimum elong	9700 Jan 10 06:40	24°  45'30 0°11'20	minimum elong	9705 Feb 03 16:51	18°  24'22 0°11'54
behind sun begin	9700 Jan 10 01:47	24°  44'45	behind sun begin	9705 Feb 03 12:14	18°  23'40
behind sun end	9700 Jan 10 11:32	24°  46'15	behind sun end	9705 Feb 03 21:29	18°  25'05
max. Earth dist.	9700 Jan 09 17:10	24°  43'24 19.37950 AU	max. Earth dist.	9705 Feb 03 05:31	18°  22'37 19.48507 AU
morning rise	9700 Jan 26 16:54	25°  46'46	morning rise	9705 Feb 19 22:42	19°  24'49
retrograde	9700 Apr 28 23:13	29°  09'11	retrograde	9705 May 22 16:05	22°  45'21
opposition	9700 Jul 11 18:16	27°  06'34 0°09'44	opposition	9705 Aug 04 17:36	20°  43'35 -0°15'57
min. Earth dist.	9700 Jul 12 05:28	27°  05'21 17.38517 AU	min. Earth dist.	9705 Aug 05 03:50	20°  42'29 17.50097 AU
direct	9700 Sep 25 15:20	25°  00'59	direct	9705 Oct 20 01:54	18°  38'33
evening set	9700 Dec 29 21:24	28°  28'43	evening set	9706 Jan 23 09:10	22°  05'06
conjunction	9701 Jan 15 09:26	29°  30'14 0°06'24	conjunction	9706 Feb 08 17:03	23°  05'44 -0°16'37
minimum elong	9701 Jan 15 09:25	29°  30'14 0°06'45	minimum elong	9706 Feb 08 17:03	23°  05'44 0°16'22
behind sun begin	9701 Jan 15 03:09	29°  29'16	max. Earth dist.	9706 Feb 08 05:47	23°  03'59 19.51766 AU
behind sun end	9701 Jan 15 15:41	29°  31'11	morning rise	9706 Feb 24 22:08	24°  05'57
max. Earth dist.	9701 Jan 14 19:51	29°  28'07 19.39198 AU	retrograde	9706 May 27 14:40	27°  25'59
	9701 Jan 23 07:51	0° 	opposition	9706 Aug 09 17:00	25°  24'21 -0°20'51
morning rise	9701 Jan 31 18:52	0°  31'22	min. Earth dist.	9706 Aug 10 01:39	25°  23'25 17.53523 AU
retrograde	9701 May 03 21:55	3°  53'32	direct	9706 Oct 25 05:17	23°  19'26
opposition	9701 Jul 16 18:12	1°  51'06 0°04'34	evening set	9707 Jan 28 09:41	26°  45'27
min. Earth dist.	9701 Jul 17 05:53	1°  49'50 17.40015 AU			
	9701 Sep 07 06:33	30°  R 	conjunction	9707 Feb 13 16:47	27°  45'52 -0°20'57
direct	9701 Sep 30 16:25	29°  45'36	minimum elong	9707 Feb 13 16:47	27°  45'52 0°20'45
	9701 Oct 23 23:49	0° 	max. Earth dist.	9707 Feb 13 07:02	27°  44'21 19.55361 AU
evening set	9702 Jan 04 00:39	3°  13'18	morning rise	9707 Mar 01 20:47	28°  45'51
conjunction	9702 Jan 20 11:59	4°  14'41 0°01'46		9707 Mar 23 06:36	0° 
minimum elong	9702 Jan 20 11:59	4°  14'41 0°02'05	retrograde	9707 Jun 01 10:16	2°  H  05'18
behind sun begin	9702 Jan 20 05:16	4°  13'40	opposition	9707 Aug 14 16:07	0°  H  03'48 -0°25'37
behind sun end	9702 Jan 20 18:41	4°  15'42	min. Earth dist.	9707 Aug 15 01:05	0°  H  02'51 17.57292 AU
max. Earth dist.	9702 Jan 19 23:07	4°  12'41 19.40929 AU		9707 Aug 16 03:43	30°  R 
morning rise	9702 Feb 05 20:35	5°  15'41	direct	9707 Oct 30 05:46	27°  59'01
retrograde	9702 May 08 22:04	8°  37'31		9708 Jan 08 17:01	0°  H 
desc. node	9702 Jun 07 21:24	8°  13'25	evening set	9708 Feb 02 09:31	1°  H  24'27
opposition	9702 Jul 21 18:01	6°  35'15 -0°00'37	conjunction	9708 Feb 18 15:32	2°  H  24'35 -0°25'08
min. Earth dist.	9702 Jul 22 04:32	6°  34'07 17.41957 AU	minimum elong	9708 Feb 18 15:32	2°  H  24'35 0°24'56
direct	9702 Oct 05 19:52	4°  29'52	max. Earth dist.	9708 Feb 18 05:49	2°  H  23'05 19.59316 AU
evening set	9703 Jan 09 03:34	7°  57'25	morning rise	9708 Mar 05 18:46	3°  H  24'20
conjunction	9703 Jan 25 14:07	8°  58'40 -0°03'01	retrograde	9708 Jun 05 07:31	6°  H  43'12
minimum elong	9703 Jan 25 14:07	8°  58'40 0°02'42	opposition	9708 Aug 18 14:55	4°  H  41'49 -0°30'10
behind sun begin	9703 Jan 25 07:25	8°  57'38	min. Earth dist.	9708 Aug 18 22:07	4°  H  41'03 17.61427 AU
behind sun end	9703 Jan 25 20:49	8°  59'41	direct	9708 Nov 03 07:23	2°  H  37'11
max. Earth dist.	9703 Jan 25 01:36	8°  56'43 19.43074 AU	evening set	9709 Feb 06 08:13	6°  H  01'54
morning rise	9703 Feb 10 21:50	9°  59'29	conjunction	9709 Feb 22 13:25	7°  H  01'48 -0°29'08
retrograde	9703 May 13 19:54	13°  20'57	minimum elong	9709 Feb 22 13:24	7°  H  01'48 0°28'58
opposition	9703 Jul 26 18:03	11°  18'52 -0°05'47	max. Earth dist.	9709 Feb 22 05:55	7°  H  00'38 19.63632 AU
min. Earth dist.	9703 Jul 27 05:11	11°  17'39 17.44304 AU	morning rise	9709 Mar 10 15:34	8°  H  01'16
direct	9703 Oct 10 21:09	9°  13'34	retrograde	9709 Jun 10 02:41	11°  H  19'31
evening set	9704 Jan 14 06:05	12°  40'54	opposition	9709 Aug 23 13:27	9°  H  18'16 -0°34'30
conjunction	9704 Jan 30 15:46	13°  41'57 -0°07'37	min. Earth dist.	9709 Aug 23 20:24	9°  H  17'32 17.65937 AU
minimum elong	9704 Jan 30 15:46	13°  41'57 0°07'20	direct	9709 Nov 08 07:05	7°  H  13'50
behind sun begin	9704 Jan 30 09:38	13°  41'01	evening set	9710 Feb 11 06:17	10°  H  37'47
behind sun end	9704 Jan 30 21:54	13°  42'53	conjunction	9710 Feb 27 10:22	11°  H  37'23 -0°32'55
max. Earth dist.	9704 Jan 30 03:28	13°  40'03 19.45613 AU	minimum elong	9710 Feb 27 10:21	11°  H  37'23 0°32'47
morning rise	9704 Feb 15 22:38	14°  42'36	max. Earth dist.	9710 Feb 27 03:02	11°  H  36'15 19.68343 AU
	9704 Feb 20 17:45	15° 	morning rise	9710 Mar 15 11:47	12°  H  36'36
retrograde	9704 May 17 19:21	18°  03'37	retrograde	9710 Jun 14 22:36	15°  H  54'13
opposition	9704 Jul 30 17:47	16°  01'42 -0°10'55	opposition	9710 Aug 28 11:17	13°  H  53'07 -0°38'36
min. Earth dist.	9704 Jul 31 03:32	16°  00'39 17.47020 AU	min. Earth dist.	9710 Aug 28 16:22	13°  H  52'34 17.70852 AU
	9704 Aug 24 16:30	15°  R 	direct	9710 Nov 13 06:17	11°  H  48'53
direct	9704 Oct 15 01:00	13°  56'31	evening set	9711 Feb 16 03:21	15°  H  12'03
	9704 Dec 03 19:35	15° 			

conjunction	9711 Mar 04 06:40	16° $\mathbf{\text{H}}$ 11'23 -0°36'29	retrograde	9717 Jul 15 22:01	17° $\mathbf{\text{Y}}$ 12'39
minimum elong	9711 Mar 04 06:40	16° $\mathbf{\text{H}}$ 11'23 0°36'21	opposition	9717 Sep 29 08:33	15° $\mathbf{\text{Y}}$ 12'59 -0°58'43
max. Earth dist.	9711 Mar 04 01:45	16° $\mathbf{\text{H}}$ 10'37 19.73450 AU	min. Earth dist.	9717 Sep 29 06:19	15° $\mathbf{\text{Y}}$ 13'13 18.12781 AU
morning rise	9711 Mar 20 07:03	17° $\mathbf{\text{H}}$ 10'19	direct	9717 Dec 15 12:12	13° $\mathbf{\text{Y}}$ 11'10
retrograde	9711 Jun 19 17:18	20° $\mathbf{\text{H}}$ 27'17	evening set	9718 Mar 19 07:18	16° $\mathbf{\text{Y}}$ 27'40
opposition	9711 Sep 02 08:55	18° $\mathbf{\text{H}}$ 26'22 -0°42'24			
min. Earth dist.	9711 Sep 02 13:19	18° $\mathbf{\text{H}}$ 25'54 17.76146 AU	conjunction	9718 Apr 04 04:33	17° $\mathbf{\text{Y}}$ 24'55 -0°53'38
direct	9711 Nov 18 05:16	16° $\mathbf{\text{H}}$ 22'26	minimum elong	9718 Apr 04 04:33	17° $\mathbf{\text{Y}}$ 24'55 0°53'42
evening set	9712 Feb 20 23:41	19° $\mathbf{\text{H}}$ 44'45	max. Earth dist.	9718 Apr 04 06:29	17° $\mathbf{\text{Y}}$ 25'12 20.15906 AU
			morning rise	9718 Apr 20 00:04	18° $\mathbf{\text{Y}}$ 21'55
conjunction	9712 Mar 08 01:52	20° $\mathbf{\text{H}}$ 43'47 -0°39'47	retrograde	9718 Jul 20 12:20	21° $\mathbf{\text{Y}}$ 34'27
minimum elong	9712 Mar 08 01:52	20° $\mathbf{\text{H}}$ 43'47 0°39'42	opposition	9718 Oct 04 02:36	19° $\mathbf{\text{Y}}$ 34'56 -1°00'15
max. Earth dist.	9712 Mar 07 21:10	20° $\mathbf{\text{H}}$ 43'03 19.78930 AU	min. Earth dist.	9718 Oct 04 00:00	19° $\mathbf{\text{Y}}$ 35'12 18.19030 AU
morning rise	9712 Mar 24 01:33	21° $\mathbf{\text{H}}$ 42'26	direct	9718 Dec 20 05:59	17° $\mathbf{\text{Y}}$ 33'26
retrograde	9712 Jun 23 11:58	24° $\mathbf{\text{H}}$ 58'47	evening set	9719 Mar 23 21:37	20° $\mathbf{\text{Y}}$ 48'53
opposition	9712 Sep 06 06:01	22° $\mathbf{\text{H}}$ 58'04 -0°45'56			
min. Earth dist.	9712 Sep 06 08:43	22° $\mathbf{\text{H}}$ 57'47 17.81799 AU	conjunction	9719 Apr 08 18:19	21° $\mathbf{\text{Y}}$ 45'51 -0°54'52
direct	9712 Nov 22 02:55	20° $\mathbf{\text{H}}$ 54'27	minimum elong	9719 Apr 08 18:19	21° $\mathbf{\text{Y}}$ 45'51 0°54'59
evening set	9713 Feb 24 18:59	24° $\mathbf{\text{H}}$ 15'54	max. Earth dist.	9719 Apr 08 21:39	21° $\mathbf{\text{Y}}$ 46'21 20.22100 AU
			morning rise	9719 Apr 24 13:14	22° $\mathbf{\text{Y}}$ 42'35
conjunction	9713 Mar 12 20:26	25° $\mathbf{\text{H}}$ 14'38 -0°42'49	retrograde	9719 Jul 25 02:10	25° $\mathbf{\text{Y}}$ 54'29
minimum elong	9713 Mar 12 20:26	25° $\mathbf{\text{H}}$ 14'38 0°42'45	opposition	9719 Oct 08 20:07	23° $\mathbf{\text{Y}}$ 55'06 -1°01'25
max. Earth dist.	9713 Mar 12 18:10	25° $\mathbf{\text{H}}$ 14'17 19.84735 AU	min. Earth dist.	9719 Oct 08 16:13	23° $\mathbf{\text{Y}}$ 55'30 18.25154 AU
morning rise	9713 Mar 28 19:10	26° $\mathbf{\text{H}}$ 13'01	direct	9719 Dec 25 01:04	21° $\mathbf{\text{Y}}$ 53'53
retrograde	9713 Jun 28 05:51	29° $\mathbf{\text{H}}$ 28'44	evening set	9720 Mar 27 11:01	25° $\mathbf{\text{Y}}$ 08'15
opposition	9713 Sep 11 02:41	27° $\mathbf{\text{H}}$ 28'14 -0°49'09			
min. Earth dist.	9713 Sep 11 04:32	27° $\mathbf{\text{H}}$ 28'03 17.87732 AU	conjunction	9720 Apr 12 06:59	26° $\mathbf{\text{Y}}$ 04'57 -0°55'46
direct	9713 Nov 27 01:21	25° $\mathbf{\text{H}}$ 25'00	minimum elong	9720 Apr 12 06:59	26° $\mathbf{\text{Y}}$ 04'57 0°55'54
evening set	9714 Mar 01 13:31	28° $\mathbf{\text{H}}$ 45'30	max. Earth dist.	9720 Apr 12 10:37	26° $\mathbf{\text{Y}}$ 05'29 20.28157 AU
			morning rise	9720 Apr 28 01:32	27° $\mathbf{\text{Y}}$ 01'26
conjunction	9714 Mar 17 13:57	29° $\mathbf{\text{H}}$ 43'56 -0°45'35		9720 Jul 06 15:15	0° $\mathbf{\text{B}}$
minimum elong	9714 Mar 17 13:57	29° $\mathbf{\text{H}}$ 43'56 0°45'34	retrograde	9720 Jul 28 14:56	0° $\mathbf{\text{B}}$ 12'42
max. Earth dist.	9714 Mar 17 11:52	29° $\mathbf{\text{H}}$ 43'37 19.90785 AU		9720 Aug 20 00:38	30° $\mathbf{\text{R}}$ $\mathbf{\text{Y}}$
	9714 Mar 21 22:48	0° $\mathbf{\text{Y}}$	opposition	9720 Oct 12 13:09	28° $\mathbf{\text{Y}}$ 13'25 -1°02'15
morning rise	9714 Apr 02 12:06	0° $\mathbf{\text{Y}}$ 42'02	min. Earth dist.	9720 Oct 12 09:03	28° $\mathbf{\text{Y}}$ 13'50 18.31155 AU
retrograde	9714 Jul 02 23:01	3° $\mathbf{\text{Y}}$ 57'08	direct	9720 Dec 28 17:10	26° $\mathbf{\text{Y}}$ 12'28
opposition	9714 Sep 15 22:51	1° $\mathbf{\text{Y}}$ 56'52 -0°52'02	evening set	9721 Mar 31 23:29	29° $\mathbf{\text{Y}}$ 25'46
min. Earth dist.	9714 Sep 15 23:31	1° $\mathbf{\text{Y}}$ 56'47 17.93880 AU		9721 Apr 10 14:55	0° $\mathbf{\text{B}}$
	9714 Nov 16 13:49	30° $\mathbf{\text{R}}$ $\mathbf{\text{H}}$			
direct	9714 Dec 01 22:09	29° $\mathbf{\text{H}}$ 53'58	conjunction	9721 Apr 16 19:00	0° $\mathbf{\text{B}}$ 22'11 -0°56'22
	9714 Dec 17 05:12	0° $\mathbf{\text{Y}}$	minimum elong	9721 Apr 16 19:00	0° $\mathbf{\text{B}}$ 22'11 0°56'32
evening set	9715 Mar 06 07:11	3° $\mathbf{\text{Y}}$ 13'32	max. Earth dist.	9721 Apr 17 00:01	0° $\mathbf{\text{B}}$ 22'56 20.34093 AU
			morning rise	9721 May 02 13:08	1° $\mathbf{\text{B}}$ 18'26
conjunction	9715 Mar 22 06:54	4° $\mathbf{\text{Y}}$ 11'40 -0°48'03	retrograde	9721 Aug 02 03:50	4° $\mathbf{\text{B}}$ 29'04
minimum elong	9715 Mar 22 06:54	4° $\mathbf{\text{Y}}$ 11'40 0°48'03	opposition	9721 Oct 17 05:15	2° $\mathbf{\text{B}}$ 29'51 -1°02'43
max. Earth dist.	9715 Mar 22 06:53	4° $\mathbf{\text{Y}}$ 11'40 19.96999 AU	min. Earth dist.	9721 Oct 16 23:36	2° $\mathbf{\text{B}}$ 30'26 18.37021 AU
morning rise	9715 Apr 07 04:10	5° $\mathbf{\text{Y}}$ 09'29	direct	9722 Jan 02 10:47	0° $\mathbf{\text{B}}$ 29'10
retrograde	9715 Jul 07 15:19	8° $\mathbf{\text{Y}}$ 23'56	evening set	9722 Apr 05 11:06	3° $\mathbf{\text{B}}$ 41'23
opposition	9715 Sep 20 18:31	6° $\mathbf{\text{Y}}$ 23'54 -0°54'36			
min. Earth dist.	9715 Sep 20 18:14	6° $\mathbf{\text{Y}}$ 23'55 18.00140 AU	conjunction	9722 Apr 21 06:04	4° $\mathbf{\text{B}}$ 37'33 -0°56'39
direct	9715 Dec 06 20:03	4° $\mathbf{\text{Y}}$ 21'23	minimum elong	9722 Apr 21 06:03	4° $\mathbf{\text{B}}$ 37'33 0°56'50
evening set	9716 Mar 10 00:11	7° $\mathbf{\text{Y}}$ 39'56	max. Earth dist.	9722 Apr 21 11:40	4° $\mathbf{\text{B}}$ 38'24 20.39898 AU
			morning rise	9722 May 06 23:58	5° $\mathbf{\text{B}}$ 33'35
conjunction	9716 Mar 25 22:55	8° $\mathbf{\text{Y}}$ 37'47 -0°50'13	retrograde	9722 Aug 06 15:05	8° $\mathbf{\text{B}}$ 43'37
minimum elong	9716 Mar 25 22:55	8° $\mathbf{\text{Y}}$ 37'47 0°50'15	opposition	9722 Oct 21 20:54	6° $\mathbf{\text{B}}$ 44'28 -1°02'50
max. Earth dist.	9716 Mar 25 23:00	8° $\mathbf{\text{Y}}$ 37'48 20.03298 AU	min. Earth dist.	9722 Oct 21 15:06	6° $\mathbf{\text{B}}$ 45'03 18.42785 AU
morning rise	9716 Apr 10 19:38	9° $\mathbf{\text{Y}}$ 35'19	direct	9723 Jan 07 00:55	4° $\mathbf{\text{B}}$ 44'02
retrograde	9716 Jul 11 07:11	12° $\mathbf{\text{Y}}$ 49'09	evening set	9723 Apr 09 21:48	7° $\mathbf{\text{B}}$ 55'13
opposition	9716 Sep 24 13:51	10° $\mathbf{\text{Y}}$ 49'17 -0°56'50			
min. Earth dist.	9716 Sep 24 12:45	10° $\mathbf{\text{Y}}$ 49'24 18.06472 AU	conjunction	9723 Apr 25 16:22	8° $\mathbf{\text{B}}$ 51'08 -0°56'36
direct	9716 Dec 10 15:32	8° $\mathbf{\text{Y}}$ 47'07	minimum elong	9723 Apr 25 16:22	8° $\mathbf{\text{B}}$ 51'08 0°56'49
evening set	9717 Mar 14 16:02	12° $\mathbf{\text{Y}}$ 04'40	max. Earth dist.	9723 Apr 25 23:25	8° $\mathbf{\text{B}}$ 52'11 20.45616 AU
			morning rise	9723 May 11 09:57	9° $\mathbf{\text{B}}$ 46'56
conjunction	9717 Mar 30 14:08	13° $\mathbf{\text{Y}}$ 02'13 -0°52'05	retrograde	9723 Aug 11 03:07	12° $\mathbf{\text{B}}$ 56'24
minimum elong	9717 Mar 30 14:08	13° $\mathbf{\text{Y}}$ 02'13 0°52'08	opposition	9723 Oct 26 11:49	10° $\mathbf{\text{B}}$ 57'20 -1°02'36
max. Earth dist.	9717 Mar 30 16:00	13° $\mathbf{\text{Y}}$ 02'30 20.09627 AU	min. Earth dist.	9723 Oct 26 04:05	10° $\mathbf{\text{B}}$ 58'07 18.48458 AU
morning rise	9717 Apr 15 10:06	13° $\mathbf{\text{Y}}$ 59'29	direct	9724 Jan 11 16:58	8° $\mathbf{\text{B}}$ 57'11

evening set	9724 Apr 13 07:52	12°♄07'21	conjunction	9730 May 24 00:17	7°♄48'15 -0°48'17
			minimum elong	9730 May 24 00:17	7°♄48'15 0°48'37
conjunction	9724 Apr 29 01:58	13°♄03'03 -0°56'16	max. Earth dist.	9730 May 24 12:59	7°♄50'06 20.81673 AU
minimum elong	9724 Apr 29 01:58	13°♄03'03 0°56'31	morning rise	9730 Jun 08 17:52	8°♄42'59
max. Earth dist.	9724 Apr 29 09:54	13°♄04'13 20.51249 AU	retrograde	9730 Sep 09 02:21	11°♄49'41
morning rise	9724 May 14 19:23	13°♄58'39	opposition	9730 Nov 25 06:02	9°♄51'29 -0°52'15
	9724 Jun 02 05:49	15°♄	min. Earth dist.	9730 Nov 24 18:07	9°♄52'41 18.83744 AU
retrograde	9724 Aug 14 13:22	17°♄07'36	direct	9731 Feb 10 01:28	7°♄53'30
opposition	9724 Oct 30 02:19	15°♄08'38 -1°02'02	evening set	9731 May 12 13:28	10°♄57'52
min. Earth dist.	9724 Oct 29 18:24	15°♄09'26 18.54066 AU			
	9724 Nov 02 15:29	15°♄♄	conjunction	9731 May 28 06:37	11°♄52'24 -0°46'05
direct	9725 Jan 15 05:19	13°♄08'47	minimum elong	9731 May 28 06:37	11°♄52'24 0°46'26
	9725 Mar 24 17:59	15°♄	max. Earth dist.	9731 May 28 19:29	11°♄54'16 20.85662 AU
evening set	9725 Apr 17 17:00	16°♄17'59	morning rise	9731 Jun 13 00:25	12°♄47'02
			retrograde	9731 Sep 13 13:19	15°♄53'30
conjunction	9725 May 03 10:52	17°♄13'28 -0°55'37	opposition	9731 Nov 29 17:11	13°♄55'21 -0°49'40
minimum elong	9725 May 03 10:52	17°♄13'28 0°55'52	min. Earth dist.	9731 Nov 29 03:58	13°♄56'40 18.87506 AU
max. Earth dist.	9725 May 03 20:04	17°♄14'49 20.56814 AU	direct	9732 Feb 14 11:47	11°♄57'36
morning rise	9725 May 19 04:10	18°♄08'53	evening set	9732 May 15 19:34	15°♄01'17
retrograde	9725 Aug 19 00:55	21°♄17'22			
opposition	9725 Nov 03 16:04	19°♄18'31 -1°01'09	conjunction	9732 May 31 12:48	15°♄55'43 -0°43'38
min. Earth dist.	9725 Nov 03 06:10	19°♄19'31 18.59566 AU	minimum elong	9732 May 31 12:48	15°♄55'43 0°43'59
direct	9726 Jan 19 19:17	17°♄19'00	max. Earth dist.	9732 Jun 01 01:57	15°♄57'38 20.89184 AU
evening set	9726 Apr 22 01:43	20°♄27'17	morning rise	9732 Jun 16 06:51	16°♄50'17
			retrograde	9732 Sep 16 20:40	19°♄56'30
conjunction	9726 May 07 19:17	21°♄22'34 -0°54'41	opposition	9732 Dec 03 04:03	17°♄58'23 -0°46'50
minimum elong	9726 May 07 19:17	21°♄22'34 0°54'58	min. Earth dist.	9732 Dec 02 15:46	17°♄59'37 18.90795 AU
max. Earth dist.	9726 May 08 05:17	21°♄24'03 20.62243 AU	direct	9733 Feb 17 20:47	16°♄00'49
morning rise	9726 May 23 12:32	22°♄17'50	evening set	9733 May 20 01:14	19°♄03'52
retrograde	9726 Aug 23 10:33	25°♄25'52			
opposition	9726 Nov 08 05:19	23°♄27'10 -0°59'57	conjunction	9733 Jun 04 18:39	19°♄58'12 -0°41'00
min. Earth dist.	9726 Nov 07 19:35	23°♄28'09 18.64922 AU	minimum elong	9733 Jun 04 18:39	19°♄58'12 0°41'22
direct	9727 Jan 24 06:18	21°♄27'58	max. Earth dist.	9733 Jun 05 07:42	20°♄00'06 20.92236 AU
evening set	9727 Apr 26 09:47	24°♄35'24	morning rise	9733 Jun 20 13:06	20°♄52'42
			retrograde	9733 Sep 21 07:09	23°♄58'43
conjunction	9727 May 12 03:11	25°♄30'30 -0°53'29	opposition	9733 Dec 07 14:21	22°♄00'34 -0°43'48
minimum elong	9727 May 12 03:11	25°♄30'30 0°53'46	min. Earth dist.	9733 Dec 07 00:58	22°♄01'55 18.93593 AU
max. Earth dist.	9727 May 12 14:06	25°♄32'06 20.67511 AU	direct	9734 Feb 22 06:49	20°♄03'07
morning rise	9727 May 27 20:25	26°♄25'36	evening set	9734 May 24 06:38	23°♄05'35
retrograde	9727 Aug 27 21:39	29°♄33'15			
opposition	9727 Nov 12 18:07	27°♄34'42 -0°58'26	conjunction	9734 Jun 09 00:15	23°♄59'51 -0°38'09
min. Earth dist.	9727 Nov 12 06:33	27°♄35'51 18.70074 AU	minimum elong	9734 Jun 09 00:15	23°♄59'51 0°38'31
direct	9728 Jan 28 18:35	25°♄35'50	max. Earth dist.	9734 Jun 09 13:35	24°♄01'47 20.94790 AU
evening set	9728 Apr 29 17:16	28°♄42'25	morning rise	9734 Jun 24 19:02	24°♄54'18
			retrograde	9734 Sep 25 13:32	28°♄00'08
conjunction	9728 May 15 10:29	29°♄37'21 -0°52'00	min. Earth dist.	9734 Dec 11 11:54	26°♄03'10 18.95919 AU
minimum elong	9728 May 15 10:29	29°♄37'21 0°52'19	opposition	9734 Dec 12 00:20	26°♄01'55 -0°40'33
max. Earth dist.	9728 May 15 22:12	29°♄39'04 20.72537 AU	direct	9735 Feb 26 14:31	24°♄04'34
	9728 May 21 20:49	0°♄	evening set	9735 May 28 11:42	27°♄06'28
morning rise	9728 May 31 03:47	0°♄32'19			
retrograde	9728 Aug 31 07:03	3°♄39'38	conjunction	9735 Jun 13 05:33	28°♄00'41 -0°35'08
opposition	9728 Nov 16 06:38	1°♄41'12 -0°56'39	minimum elong	9735 Jun 13 05:33	28°♄00'41 0°35'31
min. Earth dist.	9728 Nov 15 19:28	1°♄42'20 18.74971 AU	max. Earth dist.	9735 Jun 13 18:55	28°♄02'36 20.96913 AU
	9729 Jan 05 12:27	30°♄♄	morning rise	9735 Jun 29 00:48	28°♄55'05
direct	9729 Feb 01 04:46	29°♄42'40		9735 Jul 19 04:14	0°♄
	9729 Feb 27 11:32	0°♄	retrograde	9735 Sep 29 22:56	2°♄00'46
evening set	9729 May 04 00:22	2°♄48'28	opposition	9735 Dec 16 09:53	0°♄02'29 -0°37'06
			min. Earth dist.	9735 Dec 15 20:15	0°♄03'51 18.97837 AU
conjunction	9729 May 19 17:33	3°♄43'15 -0°50'16		9735 Dec 17 10:44	30°♄♄
minimum elong	9729 May 19 17:33	3°♄43'15 0°50'36	direct	9736 Mar 02 00:04	28°♄05'11
max. Earth dist.	9729 May 20 05:48	3°♄45'03 20.77286 AU		9736 May 10 21:48	0°♄
morning rise	9729 Jun 04 10:59	4°♄38'06	evening set	9736 May 31 16:27	1°♄06'36
retrograde	9729 Sep 04 17:52	7°♄45'05			
opposition	9729 Nov 20 18:22	5°♄46'47 -0°54'35	conjunction	9736 Jun 16 10:36	2°♄00'46 -0°31'57
min. Earth dist.	9729 Nov 20 05:44	5°♄48'03 18.79548 AU	minimum elong	9736 Jun 16 10:36	2°♄00'46 0°32'19
direct	9730 Feb 05 15:42	3°♄48'32	max. Earth dist.	9736 Jun 17 00:33	2°♄02'47 20.98633 AU
evening set	9730 May 08 07:09	6°♄53'36	morning rise	9736 Jul 02 06:17	2°♄55'10

retrograde	9736 Oct 03 05:18	6° $\mathring{\text{U}}$ 00'45	direct	9743 Mar 30 21:52	26° $\mathring{\text{U}}$ 00'40
opposition	9736 Dec 19 19:13	4° $\mathring{\text{U}}$ 02'23 -0°33'29	evening set	9743 Jun 29 01:47	29° $\mathring{\text{U}}$ 00'44
min. Earth dist.	9736 Dec 19 06:22	4° $\mathring{\text{U}}$ 03'40 18.99382 AU			
direct	9737 Mar 06 06:36	2° $\mathring{\text{U}}$ 05'09	conjunction	9743 Jul 14 23:07	29° $\mathring{\text{U}}$ 55'06 -0°06'22
evening set	9737 Jun 04 21:07	5° $\mathring{\text{U}}$ 06'09	minimum elong	9743 Jul 14 23:07	29° $\mathring{\text{U}}$ 55'06 0°06'42
			behind sun begin	9743 Jul 14 16:57	29° $\mathring{\text{U}}$ 54'15
conjunction	9737 Jun 20 15:37	6° $\mathring{\text{U}}$ 00'17 -0°28'36	behind sun end	9743 Jul 15 05:17	29° $\mathring{\text{U}}$ 55'58
minimum elong	9737 Jun 20 15:37	6° $\mathring{\text{U}}$ 00'17 0°28'58	max. Earth dist.	9743 Jul 15 12:42	29° $\mathring{\text{U}}$ 57'03 21.00737 AU
max. Earth dist.	9737 Jun 21 05:32	6° $\mathring{\text{U}}$ 02'17 21.00011 AU		9743 Jul 16 09:11	0° $\mathring{\text{U}}$
morning rise	9737 Jul 06 11:50	6° $\mathring{\text{U}}$ 54'41	morning rise	9743 Jul 30 23:00	0° $\mathring{\text{U}}$ 49'50
retrograde	9737 Oct 07 14:06	10° $\mathring{\text{U}}$ 00'12	retrograde	9743 Nov 01 16:22	3° $\mathring{\text{U}}$ 56'16
opposition	9737 Dec 24 03:56	8° $\mathring{\text{U}}$ 01'46 -0°29'43	opposition	9744 Jan 18 06:49	1° $\mathring{\text{U}}$ 57'33 -0°04'48
min. Earth dist.	9737 Dec 23 13:56	8° $\mathring{\text{U}}$ 03'10 19.00586 AU	min. Earth dist.	9744 Jan 17 17:38	1° $\mathring{\text{U}}$ 58'52 19.00122 AU
direct	9738 Mar 10 14:55	6° $\mathring{\text{U}}$ 04'35	direct	9744 Apr 03 04:32	0° $\mathring{\text{U}}$ 00'42
evening set	9738 Jun 09 01:45	9° $\mathring{\text{U}}$ 05'15	evening set	9744 Jul 02 07:21	3° $\mathring{\text{U}}$ 00'52
conjunction	9738 Jun 24 20:37	9° $\mathring{\text{U}}$ 59'24 -0°25'08	conjunction	9744 Jul 18 05:20	3° $\mathring{\text{U}}$ 55'20 -0°02'26
minimum elong	9738 Jun 24 20:37	9° $\mathring{\text{U}}$ 59'24 0°25'31	minimum elong	9744 Jul 18 05:19	3° $\mathring{\text{U}}$ 55'20 0°02'45
max. Earth dist.	9738 Jun 25 11:02	10° $\mathring{\text{U}}$ 01'28 21.01040 AU	behind sun begin	9744 Jul 17 22:44	3° $\mathring{\text{U}}$ 54'25
morning rise	9738 Jul 10 17:20	10° $\mathring{\text{U}}$ 53'48	behind sun end	9744 Jul 18 11:54	3° $\mathring{\text{U}}$ 56'15
retrograde	9738 Oct 11 20:55	13° $\mathring{\text{U}}$ 59'20	max. Earth dist.	9744 Jul 18 18:43	3° $\mathring{\text{U}}$ 57'15 20.99357 AU
opposition	9738 Dec 28 12:45	12° $\mathring{\text{U}}$ 00'50 -0°25'48	morning rise	9744 Aug 03 05:51	4° $\mathring{\text{U}}$ 50'11
min. Earth dist.	9738 Dec 27 23:31	12° $\mathring{\text{U}}$ 02'10 19.01450 AU	retrograde	9744 Nov 05 00:20	7° $\mathring{\text{U}}$ 56'56
direct	9739 Mar 14 20:48	10° $\mathring{\text{U}}$ 03'44	opposition	9745 Jan 21 15:21	5° $\mathring{\text{U}}$ 58'08 -0°00'25
evening set	9739 Jun 13 06:10	13° $\mathring{\text{U}}$ 04'08	min. Earth dist.	9745 Jan 21 03:36	5° $\mathring{\text{U}}$ 59'19 18.98480 AU
			asc. node	9745 Feb 25 16:16	4° $\mathring{\text{U}}$ 40'41
conjunction	9739 Jun 29 01:28	13° $\mathring{\text{U}}$ 58'17 -0°21'33	direct	9745 Apr 07 10:16	4° $\mathring{\text{U}}$ 01'16
minimum elong	9739 Jun 29 01:28	13° $\mathring{\text{U}}$ 58'17 0°21'54	evening set	9745 Jul 06 13:24	7° $\mathring{\text{U}}$ 01'34
max. Earth dist.	9739 Jun 29 15:45	14° $\mathring{\text{U}}$ 00'20 21.01744 AU			
morning rise	9739 Jul 14 22:47	14° $\mathring{\text{U}}$ 52'43	conjunction	9745 Jul 22 11:58	7° $\mathring{\text{U}}$ 56'09 0°01'39
retrograde	9739 Oct 16 05:49	17° $\mathring{\text{U}}$ 58'20	minimum elong	9745 Jul 22 11:57	7° $\mathring{\text{U}}$ 56'09 0°01'20
opposition	9740 Jan 01 21:17	15° $\mathring{\text{U}}$ 59'47 -0°21'46	behind sun begin	9745 Jul 22 05:21	7° $\mathring{\text{U}}$ 55'14
min. Earth dist.	9740 Jan 01 06:59	16° $\mathring{\text{U}}$ 01'13 19.01976 AU	behind sun end	9745 Jul 22 18:34	7° $\mathring{\text{U}}$ 57'05
direct	9740 Mar 18 04:06	14° $\mathring{\text{U}}$ 02'45	max. Earth dist.	9745 Jul 23 00:07	7° $\mathring{\text{U}}$ 57'54 20.97454 AU
evening set	9740 Jun 16 10:48	17° $\mathring{\text{U}}$ 02'57	morning rise	9745 Aug 07 13:14	8° $\mathring{\text{U}}$ 51'08
			retrograde	9745 Nov 09 11:00	11° $\mathring{\text{U}}$ 58'13
conjunction	9740 Jul 02 06:35	17° $\mathring{\text{U}}$ 57'08 -0°17'51	opposition	9746 Jan 25 23:43	9° $\mathring{\text{U}}$ 59'18 0°03'58
minimum elong	9740 Jul 02 06:35	17° $\mathring{\text{U}}$ 57'08 0°18'14	min. Earth dist.	9746 Jan 25 12:03	10° $\mathring{\text{U}}$ 00'28 18.96301 AU
max. Earth dist.	9740 Jul 02 21:14	17° $\mathring{\text{U}}$ 59'14 21.02086 AU	direct	9746 Apr 11 17:11	8° $\mathring{\text{U}}$ 02'20
morning rise	9740 Jul 18 04:29	18° $\mathring{\text{U}}$ 51'37	evening set	9746 Jul 10 19:45	11° $\mathring{\text{U}}$ 02'51
retrograde	9740 Oct 19 13:13	21° $\mathring{\text{U}}$ 57'22			
opposition	9741 Jan 05 05:44	19° $\mathring{\text{U}}$ 58'46 -0°17'38	conjunction	9746 Jul 26 18:59	11° $\mathring{\text{U}}$ 57'34 0°05'38
min. Earth dist.	9741 Jan 04 16:23	20° $\mathring{\text{U}}$ 00'07 19.02135 AU	minimum elong	9746 Jul 26 18:59	11° $\mathring{\text{U}}$ 57'34 0°05'21
direct	9741 Mar 22 09:37	18° $\mathring{\text{U}}$ 01'48	behind sun begin	9746 Jul 26 12:36	11° $\mathring{\text{U}}$ 56'40
evening set	9741 Jun 20 15:33	21° $\mathring{\text{U}}$ 01'53	behind sun end	9746 Jul 27 01:23	11° $\mathring{\text{U}}$ 58'28
			max. Earth dist.	9746 Jul 27 06:47	11° $\mathring{\text{U}}$ 59'15 20.94999 AU
conjunction	9741 Jul 06 11:51	21° $\mathring{\text{U}}$ 56'07 -0°14'05	morning rise	9746 Aug 11 20:55	12° $\mathring{\text{U}}$ 52'40
minimum elong	9741 Jul 06 11:51	21° $\mathring{\text{U}}$ 56'07 0°14'27		9746 Sep 24 11:35	15° $\mathring{\text{U}}$
behind sun begin	9741 Jul 06 08:49	21° $\mathring{\text{U}}$ 55'42	retrograde	9746 Nov 13 18:57	16° $\mathring{\text{U}}$ 00'07
behind sun end	9741 Jul 06 14:52	21° $\mathring{\text{U}}$ 56'33		9747 Jan 04 20:45	15° $\mathring{\text{R}}$
max. Earth dist.	9741 Jul 07 02:02	21° $\mathring{\text{U}}$ 58'09 21.02063 AU	opposition	9747 Jan 30 08:25	14° $\mathring{\text{U}}$ 01'03 0°08'21
morning rise	9741 Jul 22 10:26	22° $\mathring{\text{U}}$ 50'41	min. Earth dist.	9747 Jan 29 22:11	14° $\mathring{\text{U}}$ 02'05 18.93582 AU
retrograde	9741 Oct 23 22:31	25° $\mathring{\text{U}}$ 56'36	direct	9747 Apr 15 23:19	12° $\mathring{\text{U}}$ 03'58
opposition	9742 Jan 09 14:02	23° $\mathring{\text{U}}$ 57'58 -0°13'25		9747 Jul 13 16:45	15° $\mathring{\text{U}}$
min. Earth dist.	9742 Jan 08 23:59	23° $\mathring{\text{U}}$ 59'22 19.01906 AU	evening set	9747 Jul 15 02:18	15° $\mathring{\text{U}}$ 04'42
direct	9742 Mar 26 16:18	22° $\mathring{\text{U}}$ 01'03			
evening set	9742 Jun 24 20:30	25° $\mathring{\text{U}}$ 01'06	conjunction	9747 Jul 31 02:13	15° $\mathring{\text{U}}$ 59'33 0°09'34
			minimum elong	9747 Jul 31 02:12	15° $\mathring{\text{U}}$ 59'33 0°09'16
conjunction	9742 Jul 10 17:18	25° $\mathring{\text{U}}$ 55'24 -0°10'15	behind sun begin	9747 Jul 30 20:37	15° $\mathring{\text{U}}$ 58'46
minimum elong	9742 Jul 10 17:18	25° $\mathring{\text{U}}$ 55'24 0°10'36	behind sun end	9747 Jul 31 07:47	16° $\mathring{\text{U}}$ 00'20
behind sun begin	9742 Jul 10 12:10	25° $\mathring{\text{U}}$ 54'41	max. Earth dist.	9747 Jul 31 12:48	16° $\mathring{\text{U}}$ 01'04 20.92045 AU
behind sun end	9742 Jul 10 22:26	25° $\mathring{\text{U}}$ 56'07	morning rise	9747 Aug 16 04:58	16° $\mathring{\text{U}}$ 54'49
max. Earth dist.	9742 Jul 11 07:39	25° $\mathring{\text{U}}$ 57'27 21.01616 AU	retrograde	9747 Nov 18 05:57	20° $\mathring{\text{U}}$ 02'39
morning rise	9742 Jul 26 16:28	26° $\mathring{\text{U}}$ 50'02	opposition	9748 Feb 03 17:04	18° $\mathring{\text{U}}$ 03'22 0°12'42
retrograde	9742 Oct 28 06:18	29° $\mathring{\text{U}}$ 56'11	min. Earth dist.	9748 Feb 03 06:56	18° $\mathring{\text{U}}$ 04'24 18.90389 AU
opposition	9743 Jan 13 22:28	27° $\mathring{\text{U}}$ 57'31 -0°09'08	direct	9748 Apr 19 06:21	16° $\mathring{\text{U}}$ 06'07
min. Earth dist.	9743 Jan 13 09:35	27° $\mathring{\text{U}}$ 58'49 19.01241 AU	evening set	9748 Jul 18 09:21	19° $\mathring{\text{U}}$ 07'09

conjunction	9748 Aug 03 10:01	20°02'10	0°13'28	max. Earth dist.	9754 Aug 29 02:06	14°03'24	20.61888 AU
minimum elong	9748 Aug 03 10:00	20°02'10	0°13'13	morning rise	9754 Sep 14 03:18	15°03'30	
behind sun begin	9748 Aug 03 06:07	20°01'37		retrograde	9754 Dec 17 13:05	18°04'35	
behind sun end	9748 Aug 03 13:54	20°02'42		opposition	9755 Mar 04 10:23	16°04'54	0°40'39
max. Earth dist.	9748 Aug 03 20:26	20°03'39	20.88628 AU	min. Earth dist.	9755 Mar 04 04:58	16°04'28	18.59313 AU
morning rise	9748 Aug 19 13:27	20°05'35		direct	9755 May 18 09:25	14°04'51	
retrograde	9748 Nov 21 14:33	24°05'50		evening set	9755 Aug 17 01:42	17°05'04	
opposition	9749 Feb 07 01:42	22°06'20	0°17'01				
min. Earth dist.	9749 Feb 06 16:54	22°07'14	18.86772 AU	conjunction	9755 Sep 02 07:26	18°04'32	0°38'14
direct	9749 Apr 23 12:51	20°08'53		minimum elong	9755 Sep 02 07:26	18°04'32	0°38'09
evening set	9749 Jul 22 16:51	23°01'16		max. Earth dist.	9755 Sep 02 12:23	18°04'15	20.56698 AU
				morning rise	9755 Sep 18 16:05	19°04'32	
conjunction	9749 Aug 07 18:10	24°05'27	0°17'19	retrograde	9755 Dec 22 04:02	22°05'35	
minimum elong	9749 Aug 07 18:10	24°05'27	0°17'04	opposition	9756 Mar 07 21:06	20°05'44	0°44'01
max. Earth dist.	9749 Aug 08 03:22	24°06'46	20.84838 AU	min. Earth dist.	9756 Mar 07 16:24	20°05'14	18.54026 AU
morning rise	9749 Aug 23 22:26	25°01'03		direct	9756 May 21 19:13	18°05'49	
retrograde	9749 Nov 26 01:56	28°09'45		evening set	9756 Aug 20 13:52	22°01'29	
opposition	9750 Feb 11 10:30	26°01'01	0°21'15				
min. Earth dist.	9750 Feb 11 01:45	26°01'55	18.82816 AU	conjunction	9756 Sep 05 20:29	22°05'14	0°41'11
direct	9750 Apr 27 19:48	24°01'21		minimum elong	9756 Sep 05 20:29	22°05'13	0°41'06
evening set	9750 Jul 27 00:41	27°01'40		max. Earth dist.	9756 Sep 06 01:18	22°05'56	20.51296 AU
				morning rise	9756 Sep 22 05:39	23°05'22	
conjunction	9750 Aug 12 02:45	28°09'31	0°21'06	retrograde	9756 Dec 25 17:39	27°08'11	
minimum elong	9750 Aug 12 02:44	28°09'31	0°20'53	opposition	9757 Mar 12 08:09	25°07'12	0°47'11
max. Earth dist.	9750 Aug 12 11:58	28°01'51	20.80717 AU	min. Earth dist.	9757 Mar 12 04:38	25°07'34	18.48512 AU
morning rise	9750 Aug 28 07:38	29°05'19		direct	9757 May 26 04:18	23°08'04	
	9750 Sep 14 02:34	0°00'		evening set	9757 Aug 25 03:02	26°01'43	
retrograde	9750 Nov 30 11:37	2°01'43					
opposition	9751 Feb 15 19:36	0°01'43	0°25'24	conjunction	9757 Sep 10 10:16	27°01'35	0°43'55
min. Earth dist.	9751 Feb 15 11:50	0°01'52	18.78556 AU	minimum elong	9757 Sep 10 10:15	27°01'35	0°43'53
	9751 Feb 21 18:18	30°00'		max. Earth dist.	9757 Sep 10 12:56	27°01'58	20.45672 AU
direct	9751 May 02 02:45	28°01'41		morning rise	9757 Sep 26 20:14	28°08'59	
	9751 Jul 06 12:05	0°00'			9757 Nov 01 15:47	0°00'	
evening set	9751 Jul 31 09:10	1°01'18		retrograde	9757 Dec 30 09:16	1°02'23	
					9758 Mar 01 02:28	30°00'	
conjunction	9751 Aug 16 11:55	2°01'43	0°24'48	opposition	9758 Mar 16 19:53	29°02'20	0°50'08
minimum elong	9751 Aug 16 11:55	2°01'43	0°24'36	min. Earth dist.	9758 Mar 16 17:29	29°02'35	18.42769 AU
max. Earth dist.	9751 Aug 16 19:53	2°01'54	20.76340 AU	direct	9758 May 30 15:05	27°02'56	
morning rise	9751 Sep 01 17:39	3°01'03			9758 Aug 21 00:49	0°00'	
retrograde	9751 Dec 05 00:11	6°02'01		evening set	9758 Aug 29 16:50	0°02'29	
opposition	9752 Feb 20 04:46	4°02'00	0°29'26				
min. Earth dist.	9752 Feb 19 21:08	4°02'51	18.74063 AU	conjunction	9758 Sep 15 00:54	1°02'37	0°46'27
direct	9752 May 05 10:10	2°02'15		minimum elong	9758 Sep 15 00:54	1°02'37	0°46'26
evening set	9752 Aug 03 18:13	5°02'49		max. Earth dist.	9758 Sep 15 03:19	1°02'56	20.39792 AU
				morning rise	9758 Oct 01 11:21	2°02'41	
conjunction	9752 Aug 19 21:48	6°02'35	0°28'22	retrograde	9759 Jan 04 00:25	5°03'28	
minimum elong	9752 Aug 19 21:47	6°02'35	0°28'11	opposition	9759 Mar 21 08:10	3°03'08	0°52'49
max. Earth dist.	9752 Aug 20 05:46	6°02'44	20.71722 AU	min. Earth dist.	9759 Mar 21 06:49	3°03'16	18.36764 AU
morning rise	9752 Sep 05 04:10	7°02'47		direct	9759 Jun 04 02:22	1°03'27	
retrograde	9752 Dec 08 11:02	10°02'03		evening set	9759 Sep 03 07:43	4°04'45	
opposition	9753 Feb 23 14:19	8°02'42	0°33'20				
min. Earth dist.	9753 Feb 23 07:39	8°02'23	18.69336 AU	conjunction	9759 Sep 19 16:25	5°04'18	0°48'44
direct	9753 May 09 17:18	6°02'25		minimum elong	9759 Sep 19 16:24	5°04'17	0°48'44
evening set	9753 Aug 08 04:01	9°03'15		max. Earth dist.	9759 Sep 19 16:22	5°04'17	20.33676 AU
				morning rise	9759 Oct 06 03:39	6°04'13	
conjunction	9753 Aug 24 08:15	10°02'51	0°31'49	retrograde	9760 Jan 08 16:20	9°05'56	
minimum elong	9753 Aug 24 08:15	10°02'51	0°31'40	opposition	9760 Mar 24 20:50	7°05'43	0°55'13
max. Earth dist.	9753 Aug 24 14:46	10°02'47	20.66903 AU	min. Earth dist.	9760 Mar 24 20:51	7°05'43	18.30543 AU
morning rise	9753 Sep 09 15:26	11°02'41		direct	9760 Jun 07 13:58	5°05'43	
retrograde	9753 Dec 13 00:52	14°03'50		evening set	9760 Sep 06 23:19	9°05'45	
opposition	9754 Feb 28 00:05	12°03'43	0°37'04				
min. Earth dist.	9754 Feb 27 17:44	12°03'51	18.64421 AU	conjunction	9760 Sep 23 08:54	10°06'35	0°50'46
direct	9754 May 14 01:48	10°03'05		minimum elong	9760 Sep 23 08:54	10°06'35	0°50'48
evening set	9754 Aug 12 14:27	13°04'01		max. Earth dist.	9760 Sep 23 08:35	10°06'32	20.27354 AU
				morning rise	9760 Oct 09 20:33	10°05'59	
conjunction	9754 Aug 28 19:31	14°03'27	0°35'07	retrograde	9761 Jan 12 08:59	14°05'18	
minimum elong	9754 Aug 28 19:31	14°03'27	0°34'58	opposition	9761 Mar 29 09:59	12°05'31	0°57'20

min. Earth dist.	9761 Mar 29 10:52	12° <u>♂</u> 13'25	18.24140 AU	conjunction	9767 Oct 26 01:17	10° <u>♂</u> 55'19	0°56'25
direct	9761 Jun 12 03:11	10° <u>♂</u> 13'09		minimum elong	9767 Oct 26 01:17	10° <u>♂</u> 55'19	0°56'39
evening set	9761 Sep 11 15:46	13° <u>♂</u> 23'21		max. Earth dist.	9767 Oct 25 17:13	10° <u>♂</u> 54'06	19.83496 AU
				morning rise	9767 Nov 11 16:03	11° <u>♂</u> 55'18	
conjunction	9761 Sep 28 01:52	14° <u>♂</u> 21'27	0°52'31		9768 Jan 20 18:42	15° <u>♂</u>	
minimum elong	9761 Sep 28 01:51	14° <u>♂</u> 21'27	0°52'34	retrograde	9768 Feb 13 16:59	15° <u>♂</u> 15'15	
max. Earth dist.	9761 Sep 27 23:13	14° <u>♂</u> 21'04	20.20900 AU		9768 Mar 08 22:23	15° <u>♂</u>	
morning rise	9761 Oct 14 14:13	15° <u>♂</u> 19'54		opposition	9768 Apr 28 20:48	13° <u>♂</u> 12'16	1°02'31
retrograde	9762 Jan 17 01:05	18° <u>♂</u> 36'06		min. Earth dist.	9768 Apr 29 03:45	13° <u>♂</u> 11'31	17.80738 AU
opposition	9762 Apr 02 23:39	16° <u>♂</u> 34'05	0°59'09	direct	9768 Jul 12 14:19	11° <u>♂</u> 09'30	
min. Earth dist.	9762 Apr 03 01:55	16° <u>♂</u> 33'50	18.117656 AU	evening set	9768 Oct 13 09:53	14° <u>♂</u> 27'04	
direct	9762 Jun 16 15:55	14° <u>♂</u> 33'20			9768 Oct 22 13:36	15° <u>♂</u>	
evening set	9762 Sep 16 08:55	17° <u>♂</u> 44'32					
				conjunction	9768 Oct 30 00:08	15° <u>♂</u> 27'07	0°55'53
conjunction	9762 Oct 02 19:51	18° <u>♂</u> 42'56	0°53'58	minimum elong	9768 Oct 30 00:08	15° <u>♂</u> 27'07	0°56'08
minimum elong	9762 Oct 02 19:51	18° <u>♂</u> 42'56	0°54'04	max. Earth dist.	9768 Oct 29 16:06	15° <u>♂</u> 25'54	19.78013 AU
max. Earth dist.	9762 Oct 02 17:16	18° <u>♂</u> 42'32	20.14394 AU	morning rise	9768 Nov 15 15:02	16° <u>♂</u> 27'19	
morning rise	9762 Oct 19 08:34	19° <u>♂</u> 41'38		retrograde	9769 Feb 17 15:32	19° <u>♂</u> 47'51	
retrograde	9763 Jan 21 18:58	22° <u>♂</u> 58'29		opposition	9769 May 03 14:24	17° <u>♂</u> 44'49	1°01'45
opposition	9763 Apr 07 13:44	20° <u>♂</u> 56'14	1°00'37	min. Earth dist.	9769 May 03 21:07	17° <u>♂</u> 44'05	17.75388 AU
min. Earth dist.	9763 Apr 07 16:28	20° <u>♂</u> 55'57	18.11152 AU	direct	9769 Jul 17 09:16	15° <u>♂</u> 41'49	
direct	9763 Jun 21 06:48	18° <u>♂</u> 55'08		evening set	9769 Oct 18 09:01	19° <u>♂</u> 00'26	
evening set	9763 Sep 21 03:02	22° <u>♂</u> 07'20					
				conjunction	9769 Nov 03 23:31	20° <u>♂</u> 00'45	0°55'00
conjunction	9763 Oct 07 14:28	23° <u>♂</u> 06'01	0°55'07	minimum elong	9769 Nov 03 23:31	20° <u>♂</u> 00'45	0°55'16
minimum elong	9763 Oct 07 14:27	23° <u>♂</u> 06'01	0°55'15	max. Earth dist.	9769 Nov 03 14:01	19° <u>♂</u> 59'18	19.72796 AU
max. Earth dist.	9763 Oct 07 09:42	23° <u>♂</u> 05'18	20.07914 AU	morning rise	9769 Nov 20 14:37	21° <u>♂</u> 01'10	
morning rise	9763 Oct 24 03:51	24° <u>♂</u> 04'59		retrograde	9770 Feb 22 12:28	24° <u>♂</u> 22'15	
retrograde	9764 Jan 26 11:48	27° <u>♂</u> 22'29		opposition	9770 May 08 08:50	22° <u>♂</u> 19'11	1°00'35
opposition	9764 Apr 11 04:27	25° <u>♂</u> 20'02	1°01'45	min. Earth dist.	9770 May 08 17:17	22° <u>♂</u> 18'16	17.70309 AU
min. Earth dist.	9764 Apr 11 08:36	25° <u>♂</u> 19'35	18.04715 AU	direct	9770 Jul 22 02:30	20° <u>♂</u> 15'56	
direct	9764 Jun 24 20:49	23° <u>♂</u> 18'33		evening set	9770 Oct 23 09:02	23° <u>♂</u> 35'38	
evening set	9764 Sep 24 21:53	26° <u>♂</u> 31'48					
				conjunction	9770 Nov 08 23:58	24° <u>♂</u> 36'10	0°53'45
conjunction	9764 Oct 11 10:06	27° <u>♂</u> 30'46	0°55'57	minimum elong	9770 Nov 08 23:58	24° <u>♂</u> 36'10	0°54'04
minimum elong	9764 Oct 11 10:06	27° <u>♂</u> 30'46	0°56'06	max. Earth dist.	9770 Nov 08 14:03	24° <u>♂</u> 34'39	19.67846 AU
max. Earth dist.	9764 Oct 11 05:29	27° <u>♂</u> 30'04	20.01522 AU	morning rise	9770 Nov 25 15:07	25° <u>♂</u> 36'48	
morning rise	9764 Oct 27 23:43	28° <u>♂</u> 29'59		retrograde	9771 Feb 27 12:41	28° <u>♂</u> 58'22	
	9764 Nov 24 11:04	0° <u>♂</u>		opposition	9771 May 13 03:40	26° <u>♂</u> 55'17	0°59'02
retrograde	9765 Jan 30 06:44	1° <u>♂</u> 48'07		min. Earth dist.	9771 May 13 12:00	26° <u>♂</u> 54'23	17.65476 AU
	9765 Apr 10 03:27	30° <u>♂</u>		direct	9771 Jul 26 23:25	24° <u>♂</u> 51'47	
opposition	9765 Apr 15 19:31	29° <u>♂</u> 45'29	1°02'30	evening set	9771 Oct 28 09:58	28° <u>♂</u> 12'29	
min. Earth dist.	9765 Apr 15 23:47	29° <u>♂</u> 45'01	17.98390 AU				
direct	9765 Jun 29 13:16	27° <u>♂</u> 43'39		conjunction	9771 Nov 14 01:07	29° <u>♂</u> 13'16	0°52'10
	9765 Sep 12 15:13	0° <u>♂</u>		minimum elong	9771 Nov 14 01:07	29° <u>♂</u> 13'16	0°52'29
evening set	9765 Sep 29 17:43	0° <u>♂</u> 57'57		max. Earth dist.	9771 Nov 13 13:50	29° <u>♂</u> 11'32	19.63120 AU
					9771 Nov 26 18:50	0° <u>♂</u>	
conjunction	9765 Oct 16 06:19	1° <u>♂</u> 57'12	0°56'27	morning rise	9771 Nov 30 16:19	0° <u>♂</u> 14'05	
minimum elong	9765 Oct 16 06:19	1° <u>♂</u> 57'12	0°56'38	retrograde	9772 Mar 03 10:09	3° <u>♂</u> 36'04	
max. Earth dist.	9765 Oct 15 23:44	1° <u>♂</u> 56'12	19.95283 AU	opposition	9772 May 16 23:23	1° <u>♂</u> 32'57	0°57'06
morning rise	9765 Nov 01 20:28	2° <u>♂</u> 56'41		min. Earth dist.	9772 May 17 09:35	1° <u>♂</u> 31'51	17.60872 AU
retrograde	9766 Feb 04 00:43	6° <u>♂</u> 15'26			9772 Jun 26 08:49	30° <u>♂</u>	
opposition	9766 Apr 20 11:25	4° <u>♂</u> 12'38	1°02'54	direct	9772 Jul 30 18:14	29° <u>♂</u> 29'11	
min. Earth dist.	9766 Apr 20 17:02	4° <u>♂</u> 12'02	17.92262 AU		9772 Sep 02 19:27	0° <u>♂</u>	
direct	9766 Jul 04 04:25	2° <u>♂</u> 10'28		evening set	9772 Nov 01 11:31	2° <u>♂</u> 50'52	
evening set	9766 Oct 04 14:03	5° <u>♂</u> 25'51					
				conjunction	9772 Nov 18 02:53	3° <u>♂</u> 51'50	0°50'14
conjunction	9766 Oct 21 03:22	6° <u>♂</u> 25'22	0°56'36	minimum elong	9772 Nov 18 02:53	3° <u>♂</u> 51'50	0°50'35
minimum elong	9766 Oct 21 03:22	6° <u>♂</u> 25'22	0°56'48	max. Earth dist.	9772 Nov 17 14:40	3° <u>♂</u> 49'57	19.58638 AU
max. Earth dist.	9766 Oct 20 21:04	6° <u>♂</u> 24'25	19.89265 AU	morning rise	9772 Dec 04 18:02	4° <u>♂</u> 52'49	
morning rise	9766 Nov 06 17:44	7° <u>♂</u> 25'06		retrograde	9773 Mar 08 10:36	8° <u>♂</u> 15'10	
retrograde	9767 Feb 08 21:20	10° <u>♂</u> 44'28		opposition	9773 May 21 19:28	6° <u>♂</u> 12'00	0°54'47
opposition	9767 Apr 25 03:47	8° <u>♂</u> 41'33	1°02'54	min. Earth dist.	9773 May 22 05:28	6° <u>♂</u> 10'55	17.56512 AU
min. Earth dist.	9767 Apr 25 09:12	8° <u>♂</u> 40'58	17.86362 AU	direct	9773 Aug 04 17:12	4° <u>♂</u> 07'58	
direct	9767 Jul 08 22:04	6° <u>♂</u> 39'05		evening set	9773 Nov 06 13:40	7° <u>♂</u> 30'32	
evening set	9767 Oct 09 11:37	9° <u>♂</u> 55'32					
				conjunction	9773 Nov 23 05:11	8° <u>♂</u> 31'42	0°47'58

minimum elong	9773 Nov 23 05:11	8°♂31'42	0°48'19	opposition	9780 Jun 23 04:44	9°♂10'15	0°29'05
max. Earth dist.	9773 Nov 22 16:14	8°♂29'42	19.54411 AU	min. Earth dist.	9780 Jun 23 17:10	9°♂08'53	17.37032 AU
morning rise	9773 Dec 09 20:09	9°♂32'50		direct	9780 Sep 06 17:17	7°♂04'40	
retrograde	9774 Mar 13 08:19	12°♂55'28		evening set	9780 Dec 10 13:59	10°♂31'39	
opposition	9774 May 26 16:15	10°♂52'16	0°52'05				
min. Earth dist.	9774 May 27 03:51	10°♂51'00	17.52439 AU	conjunction	9780 Dec 27 04:19	11°♂33'25	0°23'57
direct	9774 Aug 09 13:54	8°♂47'56		minimum elong	9780 Dec 27 04:19	11°♂33'25	0°24'20
evening set	9774 Nov 11 16:13	12°♂11'21		max. Earth dist.	9780 Dec 26 13:18	11°♂31'05	19.36637 AU
				morning rise	9781 Jan 12 16:46	12°♂34'56	
conjunction	9774 Nov 28 07:47	13°♂12'40	0°45'23	retrograde	9781 Apr 15 06:00	15°♂58'03	
minimum elong	9774 Nov 28 07:47	13°♂12'40	0°45'44	opposition	9781 Jun 28 03:59	13°♂54'55	0°24'22
max. Earth dist.	9774 Nov 27 17:45	13°♂10'30	19.50510 AU	min. Earth dist.	9781 Jun 28 16:02	13°♂53'36	17.36433 AU
morning rise	9774 Dec 14 22:44	14°♂13'56		direct	9781 Sep 11 18:43	11°♂49'16	
retrograde	9775 Mar 18 08:46	17°♂36'49		evening set	9781 Dec 15 17:54	15°♂16'37	
opposition	9775 May 31 13:20	15°♂33'32	0°49'01				
min. Earth dist.	9775 Jun 01 00:40	15°♂32'18	17.48707 AU	conjunction	9782 Jan 01 07:56	16°♂18'23	0°19'38
direct	9775 Aug 14 14:41	13°♂28'57		minimum elong	9782 Jan 01 07:56	16°♂18'23	0°20'00
evening set	9775 Nov 16 19:18	16°♂53'07		max. Earth dist.	9781 Dec 31 18:26	16°♂16'17	19.36349 AU
				morning rise	9782 Jan 17 19:37	17°♂19'51	
conjunction	9775 Dec 03 10:58	17°♂54'36	0°42'28	retrograde	9782 Apr 20 06:55	20°♂42'50	
minimum elong	9775 Dec 03 10:58	17°♂54'36	0°42'50	opposition	9782 Jul 03 03:22	18°♂39'53	0°19'29
max. Earth dist.	9775 Dec 02 20:54	17°♂52'25	19.46959 AU	min. Earth dist.	9782 Jul 03 15:02	18°♂38'36	17.36438 AU
morning rise	9775 Dec 20 01:32	18°♂55'57		direct	9782 Sep 16 20:04	16°♂34'15	
retrograde	9776 Mar 22 06:41	22°♂18'59		evening set	9782 Dec 20 21:57	20°♂01'52	
opposition	9776 Jun 04 10:54	20°♂15'41	0°45'38				
min. Earth dist.	9776 Jun 04 23:29	20°♂14'19	17.45360 AU	conjunction	9783 Jan 06 11:19	21°♂03'35	0°15'11
direct	9776 Aug 18 13:04	18°♂10'50		minimum elong	9783 Jan 06 11:19	21°♂03'35	0°15'34
evening set	9776 Nov 20 22:45	21°♂35'43		behind sun begin	9783 Jan 06 09:57	21°♂03'22	
				behind sun end	9783 Jan 06 12:41	21°♂03'47	
conjunction	9776 Dec 07 14:13	22°♂37'18	0°39'16	max. Earth dist.	9783 Jan 05 21:09	21°♂01'22	19.36651 AU
minimum elong	9776 Dec 07 14:13	22°♂37'18	0°39'38	morning rise	9783 Jan 22 22:28	22°♂04'59	
max. Earth dist.	9776 Dec 06 23:00	22°♂34'56	19.43840 AU	retrograde	9783 Apr 25 06:58	25°♂27'49	
morning rise	9776 Dec 24 04:37	23°♂38'44		opposition	9783 Jul 08 03:04	23°♂25'02	0°14'27
retrograde	9777 Mar 27 07:10	27°♂01'54		min. Earth dist.	9783 Jul 08 14:51	23°♂23'45	17.37019 AU
opposition	9777 Jun 09 08:49	24°♂58'33	0°41'54	direct	9783 Sep 21 21:12	21°♂19'27	
min. Earth dist.	9777 Jun 09 21:01	24°♂57'13	17.42473 AU	evening set	9783 Dec 26 01:49	24°♂47'15	
direct	9777 Aug 23 14:42	22°♂53'27					
evening set	9777 Nov 26 02:10	26°♂18'58		conjunction	9784 Jan 11 14:41	25°♂48'53	0°10'39
				minimum elong	9784 Jan 11 14:41	25°♂48'53	0°11'00
conjunction	9777 Dec 12 17:36	27°♂20'38	0°35'47	behind sun begin	9784 Jan 11 09:39	25°♂48'07	
minimum elong	9777 Dec 12 17:36	27°♂20'38	0°36'10	behind sun end	9784 Jan 11 19:42	25°♂49'40	
max. Earth dist.	9777 Dec 12 03:15	27°♂18'25	19.41193 AU	max. Earth dist.	9784 Jan 11 01:42	25°♂46'52	19.37491 AU
morning rise	9777 Dec 29 07:28	28°♂22'08		morning rise	9784 Jan 28 00:57	26°♂50'12	
	9778 Jan 27 06:19	0°♂			9784 Apr 07 20:42	0°♂	
retrograde	9778 Apr 01 05:55	1°♂45'21		retrograde	9784 Apr 29 08:07	0°♂12'48	
	9778 Jun 07 10:10	30°♂♂			9784 May 20 22:40	30°♂♂	
opposition	9778 Jun 14 07:13	29°♂42'00	0°37'53	opposition	9784 Jul 12 02:51	28°♂10'14	0°09'20
min. Earth dist.	9778 Jun 14 20:03	29°♂40'36	17.40084 AU	min. Earth dist.	9784 Jul 12 13:57	28°♂09'01	17.38096 AU
direct	9778 Aug 28 14:37	27°♂36'42		direct	9784 Sep 25 23:04	26°♂04'43	
	9778 Nov 13 08:10	0°♂		evening set	9784 Dec 30 05:36	29°♂32'35	
evening set	9778 Dec 01 06:03	1°♂02'46			9785 Jan 06 15:20	0°♂	
conjunction	9778 Dec 17 21:06	2°♂04'30	0°32'03	conjunction	9785 Jan 15 17:40	0°♂34'08	0°06'03
minimum elong	9778 Dec 17 21:06	2°♂04'30	0°32'26	minimum elong	9785 Jan 15 17:40	0°♂34'08	0°06'23
max. Earth dist.	9778 Dec 17 05:41	2°♂02'06	19.39084 AU	behind sun begin	9785 Jan 15 11:20	0°♂33'10	
morning rise	9779 Jan 03 10:43	3°♂06'01		behind sun end	9785 Jan 16 00:00	0°♂35'06	
retrograde	9779 Apr 06 06:05	6°♂29'15		max. Earth dist.	9785 Jan 15 04:18	0°♂32'03	19.38806 AU
opposition	9779 Jun 19 05:43	4°♂25'56	0°33'37	morning rise	9785 Feb 01 03:12	1°♂35'19	
min. Earth dist.	9779 Jun 19 18:08	4°♂24'34	17.38264 AU	retrograde	9785 May 04 07:24	4°♂57'39	
direct	9779 Sep 02 16:19	2°♂20'26		opposition	9785 Jul 17 02:57	2°♂55'15	0°04'09
evening set	9779 Dec 06 09:58	5°♂47'01		min. Earth dist.	9785 Jul 17 14:24	2°♂54'00	17.39646 AU
max. Earth dist.	9779 Dec 22 10:42	6°♂46'35	19.37553 AU	direct	9785 Oct 01 00:32	0°♂49'49	
				evening set	9786 Jan 04 08:50	4°♂17'38	
conjunction	9779 Dec 23 00:52	6°♂48'47	0°28'06				
minimum elong	9779 Dec 23 00:52	6°♂48'47	0°28'28	conjunction	9786 Jan 20 20:15	5°♂19'03	0°01'23
morning rise	9780 Jan 08 13:47	7°♂50'18		minimum elong	9786 Jan 20 20:16	5°♂19'03	0°01'43
retrograde	9780 Apr 10 05:54	11°♂13'30		behind sun begin	9786 Jan 20 13:33	5°♂18'02	

behind sun end	9786 Jan 21 02:59	5° \approx 20'04			9791 Dec 16 05:59	0° \approx	
max. Earth dist.	9786 Jan 20 07:43	5° \approx 17'06	19.40570 AU	evening set	9792 Feb 02 17:51	2° \approx 29'44	
morning rise	9786 Feb 06 04:57	6° \approx 20'05					
desc. node	9786 May 08 07:02	9° \approx 42'03		conjunction	9792 Feb 18 23:55	3° \approx 29'53	-0°25'33
retrograde	9786 May 09 07:37	9° \approx 42'04		minimum elong	9792 Feb 18 23:55	3° \approx 29'53	0°25'22
opposition	9786 Jul 22 02:55	7° \approx 39'51	-0°01'03	max. Earth dist.	9792 Feb 18 14:35	3° \approx 28'27	19.59071 AU
min. Earth dist.	9786 Jul 22 13:20	7° \approx 38'43	17.41602 AU	morning rise	9792 Mar 06 03:13	4° \approx 29'38	
direct	9786 Oct 06 03:29	5° \approx 34'31		retrograde	9792 Jun 05 16:12	7° \approx 48'29	
evening set	9787 Jan 09 11:57	9° \approx 02'10		opposition	9792 Aug 18 23:37	5° \approx 47'02	-0°30'38
				min. Earth dist.	9792 Aug 19 06:24	5° \approx 46'19	17.61235 AU
conjunction	9787 Jan 25 22:31	10° \approx 03'26	-0°03'25	direct	9792 Nov 03 16:22	3° \approx 42'22	
minimum elong	9787 Jan 25 22:32	10° \approx 03'26	0°03'07	evening set	9793 Feb 06 16:38	7° \approx 07'02	
behind sun begin	9787 Jan 25 15:51	10° \approx 02'25					
behind sun end	9787 Jan 26 05:13	10° \approx 04'27		conjunction	9793 Feb 22 21:53	8° \approx 06'56	-0°29'33
max. Earth dist.	9787 Jan 25 10:01	10° \approx 01'30	19.42719 AU	minimum elong	9793 Feb 22 21:53	8° \approx 06'56	0°29'22
morning rise	9787 Feb 11 06:20	11° \approx 04'18		max. Earth dist.	9793 Feb 22 14:40	8° \approx 05'49	19.63501 AU
retrograde	9787 May 14 05:21	14° \approx 25'53		morning rise	9793 Mar 11 00:06	9° \approx 06'25	
opposition	9787 Jul 27 02:53	12° \approx 23'49	-0°06'14	retrograde	9793 Jun 10 10:56	12° \approx 24'38	
min. Earth dist.	9787 Jul 27 13:53	12° \approx 22'38	17.43949 AU	opposition	9793 Aug 23 22:03	10° \approx 23'20	-0°34'57
direct	9787 Oct 11 05:20	10° \approx 18'34		min. Earth dist.	9793 Aug 24 04:37	10° \approx 22'38	17.65882 AU
evening set	9788 Jan 14 14:32	13° \approx 45'59		direct	9793 Nov 08 15:10	8° \approx 18'52	
				evening set	9794 Feb 11 14:39	11° \approx 42'47	
conjunction	9788 Jan 31 00:18	14° \approx 47'03	-0°08'02				
minimum elong	9788 Jan 31 00:17	14° \approx 47'03	0°07'44	conjunction	9794 Feb 27 18:49	12° \approx 42'23	-0°33'19
behind sun begin	9788 Jan 30 18:15	14° \approx 46'08		minimum elong	9794 Feb 27 18:49	12° \approx 42'23	0°33'11
behind sun end	9788 Jan 31 06:20	14° \approx 47'59		max. Earth dist.	9794 Feb 27 11:50	12° \approx 41'19	19.68364 AU
max. Earth dist.	9788 Jan 30 12:14	14° \approx 45'11	19.45258 AU	morning rise	9794 Mar 15 20:20	13° \approx 41'36	
	9788 Feb 03 11:02	15° \approx		retrograde	9794 Jun 15 07:32	16° \approx 59'12	
morning rise	9788 Feb 16 07:13	15° \approx 47'44		opposition	9794 Aug 28 19:58	14° \approx 58'04	-0°39'02
retrograde	9788 May 18 04:31	19° \approx 08'51		min. Earth dist.	9794 Aug 29 00:31	14° \approx 57'35	17.70948 AU
opposition	9788 Jul 31 02:44	17° \approx 06'56	-0°11'22	direct	9794 Nov 13 15:29	12° \approx 53'51	
min. Earth dist.	9788 Jul 31 12:22	17° \approx 05'54	17.46661 AU	evening set	9795 Feb 16 11:48	16° \approx 16'59	
direct	9788 Oct 15 09:05	15° \approx 01'47					
evening set	9789 Jan 18 16:21	18° \approx 28'49		conjunction	9795 Mar 04 15:10	17° \approx 16'18	-0°36'52
				minimum elong	9795 Mar 04 15:10	17° \approx 16'18	0°36'46
conjunction	9789 Feb 04 01:16	19° \approx 29'42	-0°12'35	max. Earth dist.	9795 Mar 04 10:31	17° \approx 15'35	19.73620 AU
minimum elong	9789 Feb 04 01:16	19° \approx 29'42	0°12'18	morning rise	9795 Mar 20 15:37	18° \approx 15'14	
behind sun begin	9789 Feb 03 20:51	19° \approx 29'01		retrograde	9795 Jun 20 01:33	21° \approx 32'12	
behind sun end	9789 Feb 04 05:41	19° \approx 30'22		opposition	9795 Sep 02 17:33	19° \approx 31'18	-0°42'50
max. Earth dist.	9789 Feb 03 14:01	19° \approx 27'57	19.48149 AU	min. Earth dist.	9795 Sep 02 21:42	19° \approx 30'51	17.76381 AU
morning rise	9789 Feb 20 07:12	20° \approx 30'09		direct	9795 Nov 18 13:23	17° \approx 27'23	
retrograde	9789 May 23 01:05	23° \approx 50'47		evening set	9796 Feb 21 08:15	20° \approx 49'41	
opposition	9789 Aug 05 02:32	21° \approx 48'59	-0°16'25				
min. Earth dist.	9789 Aug 05 12:37	21° \approx 47'54	17.49741 AU	conjunction	9796 Mar 08 10:31	21° \approx 48'43	-0°40'10
direct	9789 Oct 20 10:54	19° \approx 43'56		minimum elong	9796 Mar 08 10:31	21° \approx 48'43	0°40'04
evening set	9790 Jan 23 17:38	23° \approx 10'30		max. Earth dist.	9796 Mar 08 06:01	21° \approx 48'01	19.79226 AU
				morning rise	9796 Mar 24 10:18	22° \approx 47'22	
conjunction	9790 Feb 09 01:36	24° \approx 11'10	-0°17'02	retrograde	9796 Jun 23 20:53	26° \approx 03'43	
minimum elong	9790 Feb 09 01:36	24° \approx 11'09	0°16'48	opposition	9796 Sep 06 14:43	24° \approx 03'02	-0°46'20
max. Earth dist.	9790 Feb 08 14:36	24° \approx 09'27	19.51419 AU	min. Earth dist.	9796 Sep 06 17:08	24° \approx 02'46	17.82137 AU
morning rise	9790 Feb 25 06:45	25° \approx 11'24		direct	9796 Nov 22 12:16	21° \approx 59'28	
retrograde	9790 May 27 23:07	28° \approx 31'28		evening set	9797 Feb 25 03:33	25° \approx 20'53	
opposition	9790 Aug 10 01:44	26° \approx 29'47	-0°21'20				
min. Earth dist.	9790 Aug 10 10:13	26° \approx 28'53	17.53187 AU	conjunction	9797 Mar 13 05:05	26° \approx 19'37	-0°43'11
direct	9790 Oct 25 13:59	24° \approx 24'50		minimum elong	9797 Mar 13 05:05	26° \approx 19'37	0°43'09
evening set	9791 Jan 28 18:09	27° \approx 50'51		max. Earth dist.	9797 Mar 13 02:57	26° \approx 19'18	19.85105 AU
				morning rise	9797 Mar 29 03:54	27° \approx 18'00	
conjunction	9791 Feb 14 01:18	28° \approx 51'16	-0°21'23		9797 May 24 01:57	0° \approx	
minimum elong	9791 Feb 14 01:17	28° \approx 51'16	0°21'08	retrograde	9797 Jun 28 14:15	0° \approx 33'43	
max. Earth dist.	9791 Feb 13 15:42	28° \approx 49'47	19.55048 AU		9797 Aug 04 01:06	30° \approx	
morning rise	9791 Mar 02 05:24	29° \approx 51'16		opposition	9797 Sep 11 11:30	28° \approx 33'16	-0°49'33
	9791 Mar 04 15:06	0° \approx		min. Earth dist.	9797 Sep 11 13:25	28° \approx 33'04	17.88117 AU
retrograde	9791 Jun 01 18:49	3° \approx 10'44		direct	9797 Nov 27 09:39	26° \approx 30'04	
opposition	9791 Aug 15 00:55	1° \approx 09'11	-0°26'05	evening set	9798 Mar 01 22:21	29° \approx 50'34	
min. Earth dist.	9791 Aug 15 09:40	1° \approx 08'15	17.57009 AU		9798 Mar 04 13:15	0° \approx	
	9791 Sep 12 14:18	30° \approx					
direct	9791 Oct 30 14:28	29° \approx 04'21		conjunction	9798 Mar 17 22:50	0° \approx 49'00	-0°45'56

minimum elong	9798 Mar 17 22:50	0°♈49'00	0°45'54	min. Earth dist.	9804 Oct 13 18:01	29°♈19'22	18.31037 AU
max. Earth dist.	9798 Mar 17 20:38	0°♈48'40	19.91174 AU	direct	9804 Dec 30 02:22	27°♈18'00	
morning rise	9798 Apr 02 21:03	1°♈47'07			9805 Mar 24 06:20	0°♈	
retrograde	9798 Jul 03 07:56	5°♈02'11		evening set	9805 Apr 02 08:28	0°♈31'18	
opposition	9798 Sep 16 07:37	3°♈01'58	-0°52'26				
min. Earth dist.	9798 Sep 16 08:19	3°♈01'54	17.94262 AU	conjunction	9805 Apr 18 04:06	1°♈27'44	-0°56'35
direct	9798 Dec 02 06:53	0°♈59'07		minimum elong	9805 Apr 18 04:05	1°♈27'44	0°56'46
evening set	9799 Mar 06 16:10	4°♈18'41		max. Earth dist.	9805 Apr 18 09:13	1°♈28'30	20.33968 AU
				morning rise	9805 May 03 22:18	2°♈24'00	
conjunction	9799 Mar 22 15:57	5°♈16'50	-0°48'23	retrograde	9805 Aug 03 12:58	5°♈34'38	
minimum elong	9799 Mar 22 15:57	5°♈16'50	0°48'24	opposition	9805 Oct 18 14:08	3°♈35'25	-1°02'56
max. Earth dist.	9799 Mar 22 15:48	5°♈16'49	19.97363 AU	min. Earth dist.	9805 Oct 18 08:34	3°♈35'59	18.36903 AU
morning rise	9799 Apr 07 13:16	6°♈14'39		direct	9806 Jan 03 19:47	1°♈34'43	
retrograde	9799 Jul 08 00:37	9°♈29'05		evening set	9806 Apr 06 20:07	4°♈46'58	
opposition	9799 Sep 21 03:29	7°♈29'06	-0°54'59				
min. Earth dist.	9799 Sep 21 03:30	7°♈29'06	18.00479 AU	conjunction	9806 Apr 22 15:07	5°♈43'09	-0°56'50
direct	9799 Dec 07 03:59	5°♈26'37		minimum elong	9806 Apr 22 15:07	5°♈43'09	0°57'02
evening set	9800 Mar 11 09:11	8°♈45'11		max. Earth dist.	9806 Apr 22 20:44	5°♈43'59	20.39802 AU
				morning rise	9806 May 08 09:04	6°♈39'11	
conjunction	9800 Mar 27 07:58	9°♈43'02	-0°50'33	retrograde	9806 Aug 07 23:57	9°♈49'13	
minimum elong	9800 Mar 27 07:58	9°♈43'02	0°50'35	opposition	9806 Oct 23 05:39	7°♈50'04	-1°03'01
max. Earth dist.	9800 Mar 27 07:46	9°♈43'00	20.03597 AU	min. Earth dist.	9806 Oct 22 23:39	7°♈50'41	18.42729 AU
morning rise	9800 Apr 12 04:44	10°♈40'35		direct	9807 Jan 08 10:14	5°♈49'39	
retrograde	9800 Jul 12 16:26	13°♈54'24		evening set	9807 Apr 11 06:52	9°♈00'52	
opposition	9800 Sep 25 22:49	11°♈54'35	-0°57'11				
min. Earth dist.	9800 Sep 25 21:54	11°♈54'41	18.06728 AU	conjunction	9807 Apr 27 01:30	9°♈56'48	-0°56'46
direct	9800 Dec 11 23:50	9°♈52'27		minimum elong	9807 Apr 27 01:30	9°♈56'48	0°56'59
evening set	9801 Mar 16 01:12	13°♈10'01		max. Earth dist.	9807 Apr 27 08:45	9°♈57'53	20.45607 AU
				morning rise	9807 May 12 19:06	10°♈52'37	
conjunction	9801 Mar 31 23:23	14°♈07'34	-0°52'23	retrograde	9807 Aug 12 11:56	14°♈02'06	
minimum elong	9801 Mar 31 23:23	14°♈07'34	0°52'27	opposition	9807 Oct 27 20:36	12°♈03'04	-1°02'45
max. Earth dist.	9801 Apr 01 01:00	14°♈07'49	20.09830 AU	min. Earth dist.	9807 Oct 27 12:41	12°♈03'53	18.48502 AU
morning rise	9801 Apr 16 19:24	15°♈04'50		direct	9808 Jan 13 01:31	10°♈02'57	
retrograde	9801 Jul 17 08:09	18°♈18'00		evening set	9808 Apr 14 16:48	13°♈13'10	
opposition	9801 Sep 30 17:25	16°♈18'22	-0°59'03				
min. Earth dist.	9801 Sep 30 15:39	16°♈18'33	18.12932 AU	conjunction	9808 Apr 30 10:58	14°♈08'52	-0°56'23
direct	9801 Dec 16 20:16	14°♈16'34		minimum elong	9808 Apr 30 10:58	14°♈08'52	0°56'37
evening set	9802 Mar 20 16:30	17°♈33'05		max. Earth dist.	9808 Apr 30 18:55	14°♈10'03	20.51348 AU
					9808 May 14 21:32	15°♈	
conjunction	9802 Apr 05 13:50	18°♈30'21	-0°53'55	morning rise	9808 May 16 04:27	15°♈04'29	
minimum elong	9802 Apr 05 13:50	18°♈30'21	0°54'01	retrograde	9808 Aug 15 22:23	18°♈13'28	
max. Earth dist.	9802 Apr 05 15:22	18°♈30'35	20.15999 AU	opposition	9808 Oct 31 11:04	16°♈14'33	-1°02'09
morning rise	9802 Apr 21 09:26	19°♈27'22		min. Earth dist.	9808 Oct 31 02:53	16°♈15'22	18.54212 AU
retrograde	9802 Jul 21 21:51	22°♈39'54			9808 Dec 03 12:02	15°♈	
opposition	9802 Oct 05 11:36	20°♈40'24	-1°00'33	direct	9809 Jan 16 13:59	14°♈14'45	
min. Earth dist.	9802 Oct 05 09:16	20°♈40'39	18.19067 AU		9809 Feb 28 06:17	15°♈	
direct	9802 Dec 21 14:33	18°♈38'54		evening set	9809 Apr 19 02:04	17°♈24'00	
evening set	9803 Mar 25 06:44	21°♈54'22					
				conjunction	9809 May 04 20:01	18°♈19'29	-0°55'43
conjunction	9803 Apr 10 03:31	22°♈51'21	-0°55'08	minimum elong	9809 May 04 20:01	18°♈19'29	0°55'59
minimum elong	9803 Apr 10 03:31	22°♈51'21	0°55'15	max. Earth dist.	9809 May 05 05:20	18°♈20'52	20.57006 AU
max. Earth dist.	9803 Apr 10 06:43	22°♈51'50	20.22082 AU	morning rise	9809 May 20 13:20	19°♈14'55	
morning rise	9803 Apr 25 22:29	23°♈48'06		retrograde	9809 Aug 20 09:58	22°♈23'24	
retrograde	9803 Jul 26 12:05	26°♈59'59		opposition	9809 Nov 05 00:40	20°♈24'38	-1°01'14
opposition	9803 Oct 10 05:04	25°♈00'37	-1°01'43	min. Earth dist.	9809 Nov 04 14:46	20°♈25'38	18.59793 AU
min. Earth dist.	9803 Oct 10 01:33	25°♈00'59	18.25090 AU	direct	9810 Jan 21 03:56	18°♈25'08	
direct	9803 Dec 26 10:03	22°♈59'24		evening set	9810 Apr 23 10:51	21°♈33'29	
evening set	9804 Mar 28 20:11	26°♈13'47					
				conjunction	9810 May 09 04:27	22°♈28'46	-0°54'45
conjunction	9804 Apr 13 16:14	27°♈10'29	-0°56'01	minimum elong	9810 May 09 04:27	22°♈28'46	0°55'02
minimum elong	9804 Apr 13 16:14	27°♈10'29	0°56'11	max. Earth dist.	9810 May 09 14:19	22°♈30'13	20.62502 AU
max. Earth dist.	9804 Apr 13 19:38	27°♈11'00	20.28060 AU	morning rise	9810 May 24 21:45	23°♈24'02	
morning rise	9804 Apr 29 10:53	28°♈06'59		retrograde	9810 Aug 24 19:40	26°♈32'04	
	9804 Jun 04 05:27	0°♈		opposition	9810 Nov 09 14:05	24°♈33'26	-0°59'59
retrograde	9804 Jul 30 00:12	1°♈18'15		min. Earth dist.	9810 Nov 09 04:19	24°♈34'25	18.65199 AU
	9804 Sep 26 21:19	30°♈		direct	9811 Jan 25 14:43	22°♈34'17	
opposition	9804 Oct 13 22:00	29°♈18'57	-1°02'30	evening set	9811 Apr 27 18:52	25°♈41'44	

conjunction	9811 May 13 12:19	26° 8 36'50 -0°53'30	retrograde	9817 Sep 22 14:07	25° II 03'47
minimum elong	9811 May 13 12:19	26° 8 36'50 0°53'49	opposition	9817 Dec 08 22:46	23° II 05'32 -0°43'36
max. Earth dist.	9811 May 13 23:16	26° 8 38'27 20.67797 AU	min. Earth dist.	9817 Dec 08 09:44	23° II 06'50 18.93329 AU
morning rise	9811 May 29 05:34	27° 8 31'56	direct	9818 Feb 23 15:51	21° II 07'56
	9811 Jul 20 11:48	0° II	evening set	9818 May 25 15:44	24° II 10'20
retrograde	9811 Aug 29 07:06	0° II 39'34			
	9811 Oct 09 09:11	30° R 8	conjunction	9818 Jun 10 09:22	25° II 04'36 -0°37'58
opposition	9811 Nov 14 02:55	28° 8 41'04 -0°58'27	minimum elong	9818 Jun 10 09:22	25° II 04'36 0°38'21
min. Earth dist.	9811 Nov 13 15:31	28° 8 42'13 18.70359 AU	max. Earth dist.	9818 Jun 10 22:27	25° II 06'29 20.94515 AU
direct	9812 Jan 30 03:52	26° 8 42'13	morning rise	9818 Jun 26 04:11	25° II 59'02
evening set	9812 May 01 02:34	29° 8 48'49	retrograde	9818 Sep 26 21:30	29° II 04'44
	9812 May 04 08:15	0° II	opposition	9818 Dec 13 08:43	27° II 06'26 -0°40'19
			min. Earth dist.	9818 Dec 12 20:26	27° II 07'39 18.95650 AU
conjunction	9812 May 16 19:48	0° II 43'46 -0°52'00	direct	9819 Feb 27 23:33	25° II 08'56
minimum elong	9812 May 16 19:48	0° II 43'46 0°52'19	evening set	9819 May 29 20:33	28° II 10'48
max. Earth dist.	9812 May 17 07:13	0° II 45'26 20.72812 AU			
morning rise	9812 Jun 01 13:08	1° II 38'43	conjunction	9819 Jun 14 14:26	29° II 05'00 -0°34'55
retrograde	9812 Sep 01 16:02	4° II 46'00	minimum elong	9819 Jun 14 14:26	29° II 05'00 0°35'18
opposition	9812 Nov 17 15:22	2° II 47'36 -0°56'38	max. Earth dist.	9819 Jun 15 03:54	29° II 06'56 20.96662 AU
min. Earth dist.	9812 Nov 17 04:28	2° II 48'41 18.75229 AU	morning rise	9819 Jun 30 09:39	29° II 59'24
direct	9813 Feb 02 13:27	0° II 49'03		9819 Jun 30 13:57	0° III
evening set	9813 May 05 09:42	3° II 54'51	retrograde	9819 Oct 01 06:40	3° III 04'59
			opposition	9819 Dec 17 18:11	1° III 06'37 -0°36'51
conjunction	9813 May 21 02:55	4° II 49'38 -0°50'14	min. Earth dist.	9819 Dec 17 04:29	1° III 07'59 18.97621 AU
minimum elong	9813 May 21 02:55	4° II 49'38 0°50'34		9820 Jan 16 06:40	30° R II
max. Earth dist.	9813 May 21 14:57	4° II 51'23 20.77510 AU	direct	9820 Mar 03 07:58	29° II 09'14
morning rise	9813 Jun 05 20:21	5° II 44'28		9820 Apr 17 16:14	0° III
retrograde	9813 Sep 06 02:47	8° II 51'23	evening set	9820 Jun 02 01:19	2° III 10'38
opposition	9813 Nov 22 03:15	6° II 53'05 -0°54'31			
min. Earth dist.	9813 Nov 21 14:59	6° II 54'19 18.79730 AU	conjunction	9820 Jun 17 19:27	3° III 04'47 -0°31'42
direct	9814 Feb 07 01:43	4° II 54'49	minimum elong	9820 Jun 17 19:28	3° III 04'47 0°32'05
evening set	9814 May 09 16:32	7° II 59'51	max. Earth dist.	9820 Jun 18 09:20	3° III 06'47 20.98461 AU
			morning rise	9820 Jul 03 15:09	3° III 59'11
conjunction	9814 May 25 09:39	8° II 54'30 -0°48'13	retrograde	9820 Oct 04 13:23	7° III 04'41
minimum elong	9814 May 25 09:39	8° II 54'30 0°48'35	opposition	9820 Dec 21 03:20	5° III 06'17 -0°33'12
max. Earth dist.	9814 May 25 21:52	8° II 56'17 20.81802 AU	min. Earth dist.	9820 Dec 20 14:22	5° III 07'35 18.99265 AU
morning rise	9814 Jun 10 03:14	9° II 49'13	direct	9821 Mar 07 15:01	3° III 09'00
retrograde	9814 Sep 10 11:13	12° II 55'51	evening set	9821 Jun 06 05:53	6° III 10'01
opposition	9814 Nov 26 14:51	10° II 57'37 -0°52'09			
min. Earth dist.	9814 Nov 26 03:23	10° II 58'46 18.83816 AU	conjunction	9821 Jun 22 00:24	7° III 04'10 -0°28'20
direct	9815 Feb 11 10:32	8° II 59'34	minimum elong	9821 Jun 22 00:24	7° III 04'10 0°28'44
evening set	9815 May 13 22:56	12° II 03'53	max. Earth dist.	9821 Jun 22 14:28	7° III 06'11 20.99951 AU
			morning rise	9821 Jul 07 20:36	7° III 58'33
conjunction	9815 May 29 16:08	12° II 58'24 -0°45'59	retrograde	9821 Oct 08 23:04	11° III 04'02
minimum elong	9815 May 29 16:08	12° II 58'24 0°46'20	opposition	9821 Dec 25 12:08	9° III 05'37 -0°29'25
max. Earth dist.	9815 May 30 04:38	13° II 00'14 20.85669 AU	min. Earth dist.	9821 Dec 24 21:54	9° III 07'02 19.00584 AU
morning rise	9815 Jun 14 09:55	13° II 53'02	direct	9822 Mar 11 22:35	7° III 08'26
retrograde	9815 Sep 14 21:02	16° II 59'23	evening set	9822 Jun 10 10:23	10° III 09'08
opposition	9815 Dec 01 01:57	15° II 01'11 -0°49'32			
min. Earth dist.	9815 Nov 30 13:12	15° II 02'28 18.87447 AU	conjunction	9822 Jun 26 05:14	11° III 03'16 -0°24'51
direct	9816 Feb 15 21:49	13° II 03'20	minimum elong	9822 Jun 26 05:14	11° III 03'16 0°25'14
evening set	9816 May 17 04:52	16° II 06'57	max. Earth dist.	9822 Jun 26 19:38	11° III 05'20 21.01096 AU
			morning rise	9822 Jul 12 01:56	11° III 57'41
conjunction	9816 Jun 01 22:07	17° II 01'23 -0°43'31	retrograde	9822 Oct 13 05:30	15° III 03'13
minimum elong	9816 Jun 01 22:08	17° II 01'23 0°43'53	opposition	9822 Dec 29 20:57	13° III 04'46 -0°25'29
max. Earth dist.	9816 Jun 02 10:46	17° II 03'13 20.89063 AU	min. Earth dist.	9822 Dec 29 07:32	13° III 06'07 19.01562 AU
morning rise	9816 Jun 17 16:14	17° II 55'55	direct	9823 Mar 16 04:42	11° III 07'42
retrograde	9816 Sep 18 05:08	21° II 02'02	evening set	9823 Jun 14 14:54	14° III 08'09
opposition	9816 Dec 04 12:45	19° II 03'49 -0°46'41			
min. Earth dist.	9816 Dec 04 00:54	19° II 05'00 18.90611 AU	conjunction	9823 Jun 30 10:12	15° III 02'18 -0°21'15
direct	9817 Feb 19 06:00	17° II 06'07	minimum elong	9823 Jun 30 10:12	15° III 02'18 0°21'39
evening set	9817 May 21 10:28	20° II 09'06	max. Earth dist.	9823 Jul 01 00:39	15° III 04'23 21.01911 AU
			morning rise	9823 Jul 16 07:28	15° III 56'45
conjunction	9817 Jun 06 03:56	21° II 03'25 -0°40'50	retrograde	9823 Oct 17 15:26	19° III 02'23
minimum elong	9817 Jun 06 03:56	21° II 03'25 0°41'12	opposition	9824 Jan 03 05:26	17° III 03'54 -0°21'26
max. Earth dist.	9817 Jun 06 16:45	21° II 05'17 20.92007 AU	min. Earth dist.	9824 Jan 02 15:00	17° III 05'21 19.02191 AU
morning rise	9817 Jun 21 22:23	21° II 57'54	direct	9824 Mar 19 12:07	15° III 06'56

evening set	9824 Jun 17 19:28	18°07'12		behind sun end	9829 Jul 24 03:24	9°02'16	
				max. Earth dist.	9829 Jul 24 08:46	9°03'03	20.97647 AU
conjunction	9824 Jul 03 15:14	19°01'24 -0°17'32		morning rise	9829 Aug 08 22:01	9°05'18	
minimum elong	9824 Jul 03 15:14	19°01'24 0°17'55		retrograde	9829 Nov 10 18:49	13°03'19	
max. Earth dist.	9824 Jul 04 05:51	19°03'30 21.02345 AU		opposition	9830 Jan 27 08:03	11°04'23 0°04'24	
morning rise	9824 Jul 19 13:07	19°05'54		min. Earth dist.	9830 Jan 26 20:31	11°05'32 18.96463 AU	
retrograde	9824 Oct 20 22:01	23°01'40		direct	9830 Apr 13 02:10	9°07'22	
opposition	9825 Jan 06 13:59	21°03'10 -0°17'17		evening set	9830 Jul 12 04:22	12°07'49	
min. Earth dist.	9825 Jan 06 00:40	21°04'30 19.02426 AU					
direct	9825 Mar 23 17:21	19°06'17		conjunction	9830 Jul 28 03:34	13°02'31 0°06'02	
evening set	9825 Jun 22 00:17	22°06'27		minimum elong	9830 Jul 28 03:33	13°02'31 0°05'43	
				behind sun begin	9830 Jul 27 21:12	13°01'37	
conjunction	9825 Jul 07 20:32	23°00'41 -0°13'45		behind sun end	9830 Jul 28 09:54	13°03'24	
minimum elong	9825 Jul 07 20:33	23°00'41 0°14'08		max. Earth dist.	9830 Jul 28 15:06	13°04'10 20.95146 AU	
behind sun begin	9825 Jul 07 17:16	23°00'13		morning rise	9830 Aug 13 05:26	13°05'36	
behind sun end	9825 Jul 07 23:50	23°01'08			9830 Sep 01 15:12	15°00	
max. Earth dist.	9825 Jul 08 10:51	23°02'44 21.02380 AU		retrograde	9830 Nov 15 03:08	17°04'56	
morning rise	9825 Jul 23 19:03	23°05'14		opposition	9831 Jan 31 16:39	15°05'48 0°08'47	
retrograde	9825 Oct 25 07:54	27°01'11		min. Earth dist.	9831 Jan 31 06:33	15°06'49 18.93725 AU	
opposition	9826 Jan 10 22:13	25°02'40 -0°13'03			9831 Feb 03 02:06	15°00	
min. Earth dist.	9826 Jan 10 08:15	25°04'04 19.02238 AU		direct	9831 Apr 17 07:58	13°08'39	
direct	9826 Mar 28 00:44	23°05'51			9831 Jun 24 17:33	15°00	
evening set	9826 Jun 26 05:22	26°05'58		evening set	9831 Jul 16 10:53	16°09'17	
conjunction	9826 Jul 12 02:07	27°00'16 -0°09'54		conjunction	9831 Aug 01 10:44	17°04'07 0°09'58	
minimum elong	9826 Jul 12 02:06	27°00'16 0°10'15		minimum elong	9831 Aug 01 10:44	17°04'07 0°09'41	
behind sun begin	9826 Jul 11 20:51	26°05'32		behind sun begin	9831 Aug 01 05:17	17°03'21	
behind sun end	9826 Jul 12 07:22	27°01'00		behind sun end	9831 Aug 01 16:11	17°04'53	
max. Earth dist.	9826 Jul 12 16:16	27°02'18 21.01958 AU		max. Earth dist.	9831 Aug 01 21:24	17°05'38 20.92201 AU	
morning rise	9826 Jul 28 01:13	27°05'54		morning rise	9831 Aug 17 13:24	17°05'21	
	9826 Sep 08 20:11	0°00		retrograde	9831 Nov 19 13:30	21°07'03	
retrograde	9826 Oct 29 15:01	1°01'05		opposition	9832 Feb 05 01:04	19°07'41 0°13'09	
	9826 Dec 21 07:16	30°00		min. Earth dist.	9832 Feb 04 14:47	19°08'44 18.90575 AU	
opposition	9827 Jan 15 06:45	29°02'31 -0°08'45		direct	9832 Apr 20 15:22	17°10'21	
min. Earth dist.	9827 Jan 14 18:10	29°03'46 19.01581 AU		evening set	9832 Jul 19 17:47	20°11'16	
direct	9827 Apr 01 05:59	27°05'43					
	9827 Jun 28 16:45	0°00		conjunction	9832 Aug 04 18:21	21°06'15 0°13'52	
evening set	9827 Jun 30 10:35	0°05'51		minimum elong	9832 Aug 04 18:21	21°06'15 0°13'36	
				behind sun begin	9832 Aug 04 14:43	21°05'44	
conjunction	9827 Jul 16 07:55	1°00'13 -0°06'00		behind sun end	9832 Aug 04 21:59	21°06'45	
minimum elong	9827 Jul 16 07:54	1°00'13 0°06'21		max. Earth dist.	9832 Aug 05 04:45	21°07'44 20.88853 AU	
behind sun begin	9827 Jul 16 01:40	0°05'21		morning rise	9832 Aug 20 21:43	22°01'38	
behind sun end	9827 Jul 16 14:08	1°01'05		retrograde	9832 Nov 22 22:19	25°09'44	
max. Earth dist.	9827 Jul 16 21:25	1°02'09 21.01060 AU		opposition	9833 Feb 08 09:42	23°10'10 0°17'28	
morning rise	9827 Aug 01 07:43	1°05'57		min. Earth dist.	9833 Feb 08 00:44	23°11'04 18.87052 AU	
retrograde	9827 Nov 03 01:04	5°01'23		direct	9833 Apr 24 21:15	21°12'38	
opposition	9828 Jan 19 15:11	3°02'44 -0°04'23		evening set	9833 Jul 24 01:06	24°13'54	
min. Earth dist.	9828 Jan 19 02:14	3°04'02 19.00418 AU					
direct	9828 Apr 04 13:16	1°05'55		conjunction	9833 Aug 09 02:19	25°09'03 0°17'44	
evening set	9828 Jul 03 16:17	4°06'07		minimum elong	9833 Aug 09 02:19	25°09'03 0°17'29	
				max. Earth dist.	9833 Aug 09 11:49	25°10'24 20.85175 AU	
conjunction	9828 Jul 19 14:12	5°00'35 -0°02'03		morning rise	9833 Aug 25 06:27	26°04'37	
minimum elong	9828 Jul 19 14:12	5°00'35 0°02'23		retrograde	9833 Nov 27 09:34	29°13'09	
behind sun begin	9828 Jul 19 07:36	4°05'40		opposition	9834 Feb 12 18:20	27°13'22 0°21'42	
behind sun end	9828 Jul 19 20:48	5°01'30		min. Earth dist.	9834 Feb 12 09:11	27°14'18 18.83222 AU	
max. Earth dist.	9828 Jul 20 03:12	5°02'26 20.99619 AU		direct	9834 Apr 29 04:47	25°15'39	
morning rise	9828 Aug 04 14:40	5°05'25		evening set	9834 Jul 28 08:56	28°17'21	
retrograde	9828 Nov 06 08:53	9°02'08					
opposition	9829 Jan 22 23:36	7°03'22 -0°00'00		conjunction	9834 Aug 13 10:54	29°12'41 0°21'30	
min. Earth dist.	9829 Jan 22 12:15	7°04'30 18.98706 AU		minimum elong	9834 Aug 13 10:53	29°12'41 0°21'17	
asc. node	9829 Jan 23 02:57	7°03'01		max. Earth dist.	9834 Aug 13 20:14	29°14'01 20.81195 AU	
direct	9829 Apr 08 18:50	5°06'29			9834 Aug 27 04:05	0°00	
evening set	9829 Jul 07 22:15	8°06'46		morning rise	9834 Aug 29 15:41	0°08'26	
				retrograde	9834 Dec 01 19:15	3°00'17'28	
conjunction	9829 Jul 23 20:47	9°01'21 0°02'03		opposition	9835 Feb 17 03:22	1°00'17'30 0°25'50	
minimum elong	9829 Jul 23 20:48	9°01'21 0°01'43		min. Earth dist.	9835 Feb 16 19:24	1°00'18'19 18.79112 AU	
behind sun begin	9829 Jul 23 14:12	9°00'26			9835 Mar 23 14:30	30°00	

direct	9835 May 03 11:05	29° <u>Ω</u> 19'36	morning rise	9841 Sep 28 04:07	29° <u>Π</u> 12'02
	9835 Jun 12 06:47	0° <u>Π</u>		9841 Oct 12 13:20	0° <u>Ω</u>
evening set	9835 Aug 01 17:15	2° <u>Π</u> 21'47	retrograde	9841 Dec 31 17:30	2° <u>Ω</u> 25'34
			opposition	9842 Mar 18 04:01	0° <u>Ω</u> 24'31 0°50'31
conjunction	9835 Aug 17 19:56	3° <u>Π</u> 17'19 0°25'11	min. Earth dist.	9842 Mar 18 01:47	0° <u>Ω</u> 24'45 18.43496 AU
minimum elong	9835 Aug 17 19:56	3° <u>Π</u> 17'19 0°24'59		9842 Mar 28 00:59	30° <u>℞</u> <u>Π</u>
max. Earth dist.	9835 Aug 18 04:16	3° <u>Π</u> 18'31 20.76967 AU	direct	9842 May 31 22:59	28° <u>Π</u> 25'13
morning rise	9835 Sep 03 01:34	4° <u>Π</u> 13'16		9842 Aug 01 22:03	0° <u>Ω</u>
retrograde	9835 Dec 06 07:38	7° <u>Π</u> 22'51	evening set	9842 Aug 31 01:02	1° <u>Ω</u> 32'38
opposition	9836 Feb 21 12:33	5° <u>Π</u> 22'42 0°29'52			
min. Earth dist.	9836 Feb 21 04:34	5° <u>Π</u> 23'31 18.74759 AU	conjunction	9842 Sep 16 09:01	2° <u>Ω</u> 29'52 0°46'48
direct	9836 May 06 18:48	3° <u>Π</u> 24'38	minimum elong	9842 Sep 16 09:01	2° <u>Ω</u> 29'52 0°46'47
evening set	9836 Aug 05 02:20	6° <u>Π</u> 27'23	max. Earth dist.	9842 Sep 16 10:54	2° <u>Ω</u> 30'09 20.40441 AU
			morning rise	9842 Oct 02 19:21	3° <u>Ω</u> 27'31
conjunction	9836 Aug 21 05:48	7° <u>Π</u> 23'07 0°28'45	retrograde	9843 Jan 05 08:25	6° <u>Ω</u> 41'42
minimum elong	9836 Aug 21 05:48	7° <u>Π</u> 23'07 0°28'35	opposition	9843 Mar 22 16:14	4° <u>Ω</u> 40'27 0°53'12
max. Earth dist.	9836 Aug 21 13:56	7° <u>Π</u> 24'18 20.72484 AU	min. Earth dist.	9843 Mar 22 15:15	4° <u>Ω</u> 40'33 18.37337 AU
morning rise	9836 Sep 06 12:05	8° <u>Π</u> 19'17	direct	9843 Jun 05 09:44	2° <u>Ω</u> 40'50
retrograde	9836 Dec 09 18:34	11° <u>Π</u> 29'27	evening set	9843 Sep 04 15:46	5° <u>Ω</u> 49'07
opposition	9837 Feb 24 22:00	9° <u>Π</u> 29'09 0°33'45			
min. Earth dist.	9837 Feb 24 15:17	9° <u>Π</u> 29'51 18.70159 AU	conjunction	9843 Sep 21 00:24	6° <u>Ω</u> 46'39 0°49'04
direct	9837 May 11 01:52	7° <u>Π</u> 30'55	minimum elong	9843 Sep 21 00:23	6° <u>Ω</u> 46'39 0°49'06
evening set	9837 Aug 09 12:06	10° <u>Π</u> 34'18	max. Earth dist.	9843 Sep 21 00:00	6° <u>Ω</u> 46'35 20.34182 AU
			morning rise	9843 Oct 07 11:33	7° <u>Ω</u> 44'33
conjunction	9837 Aug 25 16:15	11° <u>Π</u> 30'16 0°32'12	retrograde	9844 Jan 10 01:07	10° <u>Ω</u> 59'25
minimum elong	9837 Aug 25 16:15	11° <u>Π</u> 30'16 0°32'02	opposition	9844 Mar 26 04:54	8° <u>Ω</u> 57'54 0°55'35
max. Earth dist.	9837 Aug 25 23:07	11° <u>Π</u> 31'16 20.67783 AU	min. Earth dist.	9844 Mar 26 05:01	8° <u>Ω</u> 57'53 18.30984 AU
morning rise	9837 Sep 10 23:21	12° <u>Π</u> 26'39	direct	9844 Jun 08 22:18	6° <u>Ω</u> 57'56
retrograde	9837 Dec 14 08:02	15° <u>Π</u> 37'27	evening set	9844 Sep 08 07:16	10° <u>Ω</u> 07'09
opposition	9838 Mar 01 07:54	13° <u>Π</u> 37'01 0°37'29			
min. Earth dist.	9838 Mar 01 01:23	13° <u>Π</u> 37'41 18.65344 AU	conjunction	9844 Sep 24 16:44	11° <u>Ω</u> 04'57 0°51'05
direct	9838 May 15 09:48	11° <u>Π</u> 38'36	minimum elong	9844 Sep 24 16:44	11° <u>Ω</u> 04'57 0°51'07
evening set	9838 Aug 13 22:26	14° <u>Π</u> 42'42	max. Earth dist.	9844 Sep 24 16:08	11° <u>Ω</u> 04'52 20.27743 AU
			morning rise	9844 Oct 11 04:17	12° <u>Ω</u> 03'07
conjunction	9838 Aug 30 03:25	15° <u>Π</u> 38'54 0°35'29	retrograde	9845 Jan 13 16:23	15° <u>Ω</u> 18'37
minimum elong	9838 Aug 30 03:24	15° <u>Π</u> 38'54 0°35'22	opposition	9845 Mar 30 17:55	13° <u>Ω</u> 16'52 0°57'41
max. Earth dist.	9838 Aug 30 10:07	15° <u>Π</u> 39'52 20.62843 AU	min. Earth dist.	9845 Mar 30 18:59	13° <u>Ω</u> 16'46 18.24490 AU
morning rise	9838 Sep 15 11:07	16° <u>Π</u> 35'31	direct	9845 Jun 13 10:24	11° <u>Ω</u> 16'32
retrograde	9838 Dec 18 20:40	19° <u>Π</u> 46'59	evening set	9845 Sep 12 23:39	14° <u>Ω</u> 26'42
opposition	9839 Mar 05 18:19	17° <u>Π</u> 46'25 0°41'03			
min. Earth dist.	9839 Mar 05 13:04	17° <u>Π</u> 46'58 18.60284 AU	conjunction	9845 Sep 29 09:39	15° <u>Ω</u> 24'47 0°52'49
direct	9839 May 19 18:04	15° <u>Π</u> 47'50	minimum elong	9845 Sep 29 09:38	15° <u>Ω</u> 24'47 0°52'54
evening set	9839 Aug 18 09:50	18° <u>Π</u> 52'42	max. Earth dist.	9845 Sep 29 06:55	15° <u>Ω</u> 24'22 20.21224 AU
			morning rise	9845 Oct 15 21:55	16° <u>Ω</u> 23'12
conjunction	9839 Sep 03 15:30	19° <u>Π</u> 49'09 0°38'36	retrograde	9846 Jan 18 09:39	19° <u>Ω</u> 39'23
minimum elong	9839 Sep 03 15:29	19° <u>Π</u> 49'09 0°38'30	opposition	9846 Apr 04 07:33	17° <u>Ω</u> 37'22 0°59'28
max. Earth dist.	9839 Sep 03 20:31	19° <u>Π</u> 49'53 20.57670 AU	min. Earth dist.	9846 Apr 04 09:40	17° <u>Ω</u> 37'08 18.17963 AU
morning rise	9839 Sep 20 00:02	20° <u>Π</u> 46'01	direct	9846 Jun 18 00:20	15° <u>Ω</u> 36'38
retrograde	9839 Dec 23 11:32	23° <u>Π</u> 58'10	evening set	9846 Sep 17 16:34	18° <u>Ω</u> 47'46
opposition	9840 Mar 09 04:58	21° <u>Π</u> 57'28 0°44'26			
min. Earth dist.	9840 Mar 09 00:24	21° <u>Π</u> 57'56 18.54982 AU	conjunction	9846 Oct 04 03:24	19° <u>Ω</u> 46'09 0°54'15
direct	9840 May 23 02:49	19° <u>Π</u> 58'40	minimum elong	9846 Oct 04 03:24	19° <u>Ω</u> 46'09 0°54'21
evening set	9840 Aug 21 22:05	23° <u>Π</u> 04'22	max. Earth dist.	9846 Oct 04 00:52	19° <u>Ω</u> 45'46 20.14692 AU
			morning rise	9846 Oct 20 16:03	20° <u>Ω</u> 44'50
conjunction	9840 Sep 07 04:34	24° <u>Π</u> 01'04 0°41'33	retrograde	9847 Jan 23 01:59	24° <u>Ω</u> 01'39
minimum elong	9840 Sep 07 04:34	24° <u>Π</u> 01'04 0°41'29	opposition	9847 Apr 08 21:39	21° <u>Ω</u> 59'24 1°00'55
max. Earth dist.	9840 Sep 07 09:05	24° <u>Π</u> 01'44 20.52214 AU	min. Earth dist.	9847 Apr 09 00:19	21° <u>Ω</u> 59'07 18.11447 AU
morning rise	9840 Sep 23 13:39	24° <u>Π</u> 58'11	direct	9847 Jun 22 14:17	19° <u>Ω</u> 58'19
retrograde	9840 Dec 27 01:33	28° <u>Π</u> 11'01	evening set	9847 Sep 22 10:38	23° <u>Ω</u> 10'27
opposition	9841 Mar 13 16:15	26° <u>Π</u> 10'10 0°47'35			
min. Earth dist.	9841 Mar 13 13:06	26° <u>Π</u> 10'30 18.49381 AU	conjunction	9847 Oct 08 21:58	24° <u>Ω</u> 09'06 0°55'22
direct	9841 May 27 12:25	24° <u>Π</u> 11'10	minimum elong	9847 Oct 08 21:58	24° <u>Ω</u> 09'06 0°55'30
evening set	9841 Aug 26 11:10	27° <u>Π</u> 17'41	max. Earth dist.	9847 Oct 08 17:20	24° <u>Ω</u> 08'24 20.08216 AU
			morning rise	9847 Oct 25 11:15	25° <u>Ω</u> 08'03
conjunction	9841 Sep 11 18:17	28° <u>Π</u> 14'39 0°44'17	retrograde	9848 Jan 27 19:40	28° <u>Ω</u> 25'30
minimum elong	9841 Sep 11 18:16	28° <u>Π</u> 14'39 0°44'15	opposition	9848 Apr 12 12:11	26° <u>Ω</u> 23'02 1°02'01
max. Earth dist.	9841 Sep 11 20:39	28° <u>Π</u> 15'00 20.46472 AU	min. Earth dist.	9848 Apr 12 16:03	26° <u>Ω</u> 22'38 18.05031 AU

direct	9848 Jun 26 05:04	24° <u>♄</u> 21'34		evening set	9854 Oct 24 16:42	24° <u>♄</u> 38'05	
evening set	9848 Sep 26 05:23	27° <u>♄</u> 34'44					
conjunction	9848 Oct 12 17:30	28° <u>♄</u> 33'41	0°56'11	conjunction	9854 Nov 10 07:36	25° <u>♄</u> 38'36	0°53'49
minimum elong	9848 Oct 12 17:29	28° <u>♄</u> 33'41	0°56'21	minimum elong	9854 Nov 10 07:36	25° <u>♄</u> 38'36	0°54'08
max. Earth dist.	9848 Oct 12 13:07	28° <u>♄</u> 33'02	20.01856 AU	max. Earth dist.	9854 Nov 09 21:32	25° <u>♄</u> 37'04	19.68101 AU
morning rise	9848 Oct 29 07:02	29° <u>♄</u> 32'53		morning rise	9854 Nov 26 22:42	26° <u>♄</u> 39'13	
	9848 Nov 06 03:05	0° <u>♄</u>			9855 Feb 23 10:59	0° <u>♄</u>	
retrograde	9849 Jan 31 13:54	2° <u>♄</u> 50'58		retrograde	9855 Feb 28 19:37	0° <u>♄</u> 00'46	
opposition	9849 Apr 17 03:21	0° <u>♄</u> 48'19	1°02'45		9855 Mar 06 04:39	30° <u>♄</u>	
min. Earth dist.	9849 Apr 17 07:26	0° <u>♄</u> 47'53	17.98749 AU	opposition	9855 May 14 11:48	27° <u>♄</u> 57'41	0°59'05
	9849 May 06 12:18	30° <u>♄</u>		min. Earth dist.	9855 May 14 20:26	27° <u>♄</u> 56'45	17.65646 AU
direct	9849 Jun 30 20:38	28° <u>♄</u> 46'31		direct	9855 Jul 28 07:37	25° <u>♄</u> 54'11	
	9849 Aug 23 11:18	0° <u>♄</u>		evening set	9855 Oct 29 17:42	29° <u>♄</u> 14'50	
evening set	9849 Oct 01 01:01	2° <u>♄</u> 00'44			9855 Nov 11 03:06	0° <u>♄</u>	
conjunction	9849 Oct 17 13:31	2° <u>♄</u> 59'57	0°56'39	conjunction	9855 Nov 15 08:46	0° <u>♄</u> 15'36	0°52'12
minimum elong	9849 Oct 17 13:31	2° <u>♄</u> 59'57	0°56'50	minimum elong	9855 Nov 15 08:46	0° <u>♄</u> 15'36	0°52'32
max. Earth dist.	9849 Oct 17 07:13	2° <u>♄</u> 59'00	19.95669 AU	max. Earth dist.	9855 Nov 14 21:02	0° <u>♄</u> 13'48	19.63201 AU
morning rise	9849 Nov 03 03:36	3° <u>♄</u> 59'24		morning rise	9855 Dec 01 23:55	1° <u>♄</u> 16'24	
retrograde	9850 Feb 05 08:33	7° <u>♄</u> 18'08		retrograde	9856 Mar 04 17:48	4° <u>♄</u> 38'23	
opposition	9850 Apr 21 19:15	5° <u>♄</u> 15'20	1°03'06	opposition	9856 May 18 07:26	2° <u>♄</u> 35'14	0°57'07
min. Earth dist.	9850 Apr 22 00:32	5° <u>♄</u> 14'46	17.92674 AU	min. Earth dist.	9856 May 18 17:55	2° <u>♄</u> 34'06	17.60862 AU
direct	9850 Jul 05 12:14	3° <u>♄</u> 13'11		direct	9856 Aug 01 03:22	0° <u>♄</u> 31'27	
evening set	9850 Oct 05 21:28	6° <u>♄</u> 28'29		evening set	9856 Nov 02 19:10	3° <u>♄</u> 53'04	
conjunction	9850 Oct 22 10:42	7° <u>♄</u> 27'59	0°56'47	conjunction	9856 Nov 19 10:31	4° <u>♄</u> 54'02	0°50'14
minimum elong	9850 Oct 22 10:42	7° <u>♄</u> 27'59	0°57'00	minimum elong	9856 Nov 19 10:31	4° <u>♄</u> 54'02	0°50'35
max. Earth dist.	9850 Oct 22 04:45	7° <u>♄</u> 27'05	19.89704 AU	max. Earth dist.	9856 Nov 18 22:08	4° <u>♄</u> 52'08	19.58543 AU
morning rise	9850 Nov 08 00:59	8° <u>♄</u> 27'41		morning rise	9856 Dec 06 01:39	5° <u>♄</u> 55'01	
retrograde	9851 Feb 10 04:56	11° <u>♄</u> 47'02		retrograde	9857 Mar 09 17:46	9° <u>♄</u> 17'21	
opposition	9851 Apr 26 11:33	9° <u>♄</u> 44'08	1°03'05	opposition	9857 May 23 03:32	7° <u>♄</u> 14'09	0°54'45
min. Earth dist.	9851 Apr 26 16:53	9° <u>♄</u> 43'33	17.86822 AU	min. Earth dist.	9857 May 23 13:44	7° <u>♄</u> 13'03	17.56333 AU
direct	9851 Jul 10 05:23	7° <u>♄</u> 41'42		direct	9857 Aug 06 01:21	5° <u>♄</u> 10'04	
evening set	9851 Oct 10 19:04	10° <u>♄</u> 58'05		evening set	9857 Nov 07 21:05	8° <u>♄</u> 32'36	
conjunction	9851 Oct 27 08:39	11° <u>♄</u> 57'51	0°56'34	conjunction	9857 Nov 24 12:34	9° <u>♄</u> 33'45	0°47'56
minimum elong	9851 Oct 27 08:39	11° <u>♄</u> 57'51	0°56'48	minimum elong	9857 Nov 24 12:34	9° <u>♄</u> 33'45	0°48'18
max. Earth dist.	9851 Oct 27 00:45	11° <u>♄</u> 56'40	19.83973 AU	max. Earth dist.	9857 Nov 23 23:21	9° <u>♄</u> 31'43	19.54158 AU
morning rise	9851 Nov 12 23:22	12° <u>♄</u> 57'49		morning rise	9857 Dec 11 03:35	10° <u>♄</u> 34'53	
	9851 Dec 21 13:05	15° <u>♄</u>		retrograde	9858 Mar 14 16:22	13° <u>♄</u> 57'33	
retrograde	9852 Feb 15 00:53	16° <u>♄</u> 17'45		opposition	9858 May 28 00:17	11° <u>♄</u> 54'17	0°52'01
	9852 Apr 12 06:36	15° <u>♄</u>		min. Earth dist.	9858 May 28 12:04	11° <u>♄</u> 53'00	17.52116 AU
opposition	9852 Apr 30 04:42	14° <u>♄</u> 14'47	1°02'40	direct	9858 Aug 10 22:27	9° <u>♄</u> 49'54	
min. Earth dist.	9852 Apr 30 11:34	14° <u>♄</u> 14'03	17.81214 AU	evening set	9858 Nov 12 23:37	13° <u>♄</u> 13'17	
direct	9852 Jul 13 22:00	12° <u>♄</u> 12'05		conjunction	9858 Nov 29 15:11	14° <u>♄</u> 14'36	0°45'18
	9852 Oct 06 06:30	15° <u>♄</u>		minimum elong	9858 Nov 29 15:11	14° <u>♄</u> 14'36	0°45'41
evening set	9852 Oct 14 17:22	15° <u>♄</u> 29'35		max. Earth dist.	9858 Nov 29 01:11	14° <u>♄</u> 12'26	19.50129 AU
conjunction	9852 Oct 31 07:31	16° <u>♄</u> 29'37	0°56'00	morning rise	9858 Dec 16 06:08	15° <u>♄</u> 15'53	
minimum elong	9852 Oct 31 07:31	16° <u>♄</u> 29'37	0°56'17	retrograde	9859 Mar 19 16:16	18° <u>♄</u> 38'47	
max. Earth dist.	9852 Oct 30 23:43	16° <u>♄</u> 28'26	19.78475 AU	opposition	9859 Jun 01 21:11	16° <u>♄</u> 35'27	0°48'55
morning rise	9852 Nov 16 22:18	17° <u>♄</u> 29'48		min. Earth dist.	9859 Jun 02 08:33	16° <u>♄</u> 34'12	17.48276 AU
retrograde	9853 Feb 18 23:04	20° <u>♄</u> 50'19		direct	9859 Aug 15 21:57	14° <u>♄</u> 30'47	
opposition	9853 May 04 22:20	18° <u>♄</u> 47'19	1°01'52	evening set	9859 Nov 18 02:36	17° <u>♄</u> 54'57	
min. Earth dist.	9853 May 05 05:13	18° <u>♄</u> 46'34	17.75821 AU	conjunction	9859 Dec 04 18:14	18° <u>♄</u> 56'26	0°42'21
direct	9853 Jul 18 16:57	16° <u>♄</u> 44'22		minimum elong	9859 Dec 04 18:14	18° <u>♄</u> 56'26	0°42'44
evening set	9853 Oct 19 16:44	20° <u>♄</u> 02'57		max. Earth dist.	9859 Dec 04 04:06	18° <u>♄</u> 54'15	19.46490 AU
conjunction	9853 Nov 05 07:08	21° <u>♄</u> 03'14	0°55'05	morning rise	9859 Dec 21 08:51	19° <u>♄</u> 57'48	
minimum elong	9853 Nov 05 07:08	21° <u>♄</u> 03'14	0°55'23	retrograde	9860 Mar 23 15:03	23° <u>♄</u> 20'54	
max. Earth dist.	9853 Nov 04 21:27	21° <u>♄</u> 01'45	19.73185 AU	opposition	9860 Jun 05 18:47	21° <u>♄</u> 17'31	0°45'29
morning rise	9853 Nov 21 22:10	22° <u>♄</u> 03'38		min. Earth dist.	9860 Jun 06 07:23	21° <u>♄</u> 16'09	17.44862 AU
retrograde	9854 Feb 23 20:12	25° <u>♄</u> 24'42		direct	9860 Aug 19 20:48	19° <u>♄</u> 12'37	
opposition	9854 May 09 16:49	23° <u>♄</u> 21'40	1°00'41	evening set	9860 Nov 22 05:48	22° <u>♄</u> 37'30	
min. Earth dist.	9854 May 10 01:30	23° <u>♄</u> 20'43	17.70641 AU	conjunction	9860 Dec 08 21:15	23° <u>♄</u> 39'05	0°39'07
direct	9854 Jul 23 11:03	21° <u>♄</u> 18'26		minimum elong	9860 Dec 08 21:16	23° <u>♄</u> 39'05	0°39'31

max. Earth dist.	9860 Dec 08 06:17	23° $\overline{\text{A}}$ 36'46	19.43320 AU	retrograde	9867 Apr 26 15:04	26° $\overline{\text{B}}$ 30'51	
morning rise	9860 Dec 25 11:41	24° $\overline{\text{A}}$ 40'32		opposition	9867 Jul 09 10:55	24° $\overline{\text{B}}$ 28'04	0°14'06
retrograde	9861 Mar 28 14:30	28° $\overline{\text{A}}$ 03'46		min. Earth dist.	9867 Jul 09 22:37	24° $\overline{\text{B}}$ 26'47	17.36595 AU
opposition	9861 Jun 10 16:37	26° $\overline{\text{A}}$ 00'22	0°41'44	direct	9867 Sep 23 04:34	22° $\overline{\text{B}}$ 22'29	
min. Earth dist.	9861 Jun 11 04:33	25° $\overline{\text{A}}$ 59'03	17.41945 AU	evening set	9867 Dec 27 09:11	25° $\overline{\text{B}}$ 50'20	
direct	9861 Aug 24 21:45	23° $\overline{\text{A}}$ 55'13					
evening set	9861 Nov 27 09:17	27° $\overline{\text{A}}$ 20'45		conjunction	9868 Jan 12 22:06	26° $\overline{\text{B}}$ 52'00	0°10'19
max. Earth dist.	9861 Dec 13 10:27	28° $\overline{\text{A}}$ 20'13	19.40664 AU	minimum elong	9868 Jan 12 22:06	26° $\overline{\text{B}}$ 52'00	0°10'41
				behind sun begin	9868 Jan 12 16:57	26° $\overline{\text{B}}$ 51'13	
conjunction	9861 Dec 14 00:42	28° $\overline{\text{A}}$ 22'26	0°35'36	behind sun end	9868 Jan 13 03:15	26° $\overline{\text{B}}$ 52'48	
minimum elong	9861 Dec 14 00:42	28° $\overline{\text{A}}$ 22'26	0°36'00	max. Earth dist.	9868 Jan 12 09:02	26° $\overline{\text{B}}$ 49'58	19.37022 AU
morning rise	9861 Dec 30 14:36	29° $\overline{\text{A}}$ 23'56		morning rise	9868 Jan 29 08:25	27° $\overline{\text{B}}$ 53'20	
	9862 Jan 09 16:40	0° $\overline{\text{B}}$			9868 Mar 08 04:29	0° \approx	
retrograde	9862 Apr 02 13:32	2° $\overline{\text{B}}$ 47'15		retrograde	9868 Apr 30 15:57	1° \approx 16'02	
opposition	9862 Jun 15 14:54	0° $\overline{\text{B}}$ 43'51	0°37'41		9868 Jun 25 03:31	30° $\overline{\text{R}}$ $\overline{\text{B}}$	
min. Earth dist.	9862 Jun 16 03:32	0° $\overline{\text{B}}$ 42'28	17.39571 AU	opposition	9868 Jul 13 10:55	29° $\overline{\text{B}}$ 13'26	0°08'58
	9862 Jul 02 16:17	30° $\overline{\text{R}}$ $\overline{\text{A}}$		min. Earth dist.	9868 Jul 13 22:09	29° $\overline{\text{B}}$ 12'12	17.37574 AU
direct	9862 Aug 29 21:53	28° $\overline{\text{A}}$ 38'30		direct	9868 Sep 27 07:08	27° $\overline{\text{B}}$ 07'54	
	9862 Oct 25 07:23	0° $\overline{\text{B}}$			9868 Dec 21 13:59	0° \approx	
evening set	9862 Dec 02 13:04	2° $\overline{\text{B}}$ 04'37		evening set	9868 Dec 31 12:59	0° \approx 35'47	
				max. Earth dist.	9869 Jan 16 11:25	1° \approx 35'13	19.38223 AU
conjunction	9862 Dec 19 04:09	3° $\overline{\text{B}}$ 06'22	0°31'51				
minimum elong	9862 Dec 19 04:09	3° $\overline{\text{B}}$ 06'22	0°32'15	conjunction	9869 Jan 17 01:05	1° \approx 37'21	0°05'42
max. Earth dist.	9862 Dec 18 12:58	3° $\overline{\text{B}}$ 04'00	19.38589 AU	minimum elong	9869 Jan 17 01:04	1° \approx 37'21	0°06'04
morning rise	9863 Jan 04 17:47	4° $\overline{\text{B}}$ 07'54		behind sun begin	9869 Jan 16 18:41	1° \approx 36'22	
retrograde	9863 Apr 07 13:31	7° $\overline{\text{B}}$ 31'15		behind sun end	9869 Jan 17 07:28	1° \approx 38'19	
opposition	9863 Jun 20 13:28	5° $\overline{\text{B}}$ 27'53	0°33'22	morning rise	9869 Feb 02 10:41	2° \approx 38'33	
min. Earth dist.	9863 Jun 21 01:25	5° $\overline{\text{B}}$ 26'34	17.37796 AU	retrograde	9869 May 05 15:05	6° \approx 00'58	
direct	9863 Sep 03 23:45	3° $\overline{\text{B}}$ 22'23		opposition	9869 Jul 18 11:03	3° \approx 58'30	0°03'45
evening set	9863 Dec 07 16:56	6° $\overline{\text{B}}$ 49'01		min. Earth dist.	9869 Jul 18 22:32	3° \approx 57'15	17.38999 AU
				direct	9869 Oct 02 08:24	1° \approx 53'01	
conjunction	9863 Dec 24 07:51	7° $\overline{\text{B}}$ 50'48	0°27'52	evening set	9870 Jan 05 16:26	5° \approx 20'51	
minimum elong	9863 Dec 24 07:51	7° $\overline{\text{B}}$ 50'48	0°28'16				
max. Earth dist.	9863 Dec 23 17:55	7° $\overline{\text{B}}$ 48'38	19.37112 AU	conjunction	9870 Jan 22 03:57	6° \approx 22'17	0°01'00
morning rise	9864 Jan 09 20:47	8° $\overline{\text{B}}$ 52'21		minimum elong	9870 Jan 22 03:56	6° \approx 22'17	0°01'20
retrograde	9864 Apr 11 13:13	12° $\overline{\text{B}}$ 15'40		behind sun begin	9870 Jan 21 21:13	6° \approx 21'16	
opposition	9864 Jun 24 12:28	10° $\overline{\text{B}}$ 12'25	0°28'49	behind sun end	9870 Jan 22 10:38	6° \approx 23'19	
min. Earth dist.	9864 Jun 25 00:38	10° $\overline{\text{B}}$ 11'05	17.36622 AU	max. Earth dist.	9870 Jan 21 15:16	6° \approx 20'19	19.39858 AU
direct	9864 Sep 08 00:32	8° $\overline{\text{B}}$ 06'51		morning rise	9870 Feb 07 12:39	7° \approx 23'20	
evening set	9864 Dec 11 21:02	11° $\overline{\text{B}}$ 33'54		desc. node	9870 Apr 09 16:58	10° \approx 19'01	
				retrograde	9870 May 10 15:28	10° \approx 45'23	
conjunction	9864 Dec 28 11:23	12° $\overline{\text{B}}$ 35'42	0°23'41	opposition	9870 Jul 23 10:58	8° \approx 43'04	-0°01'28
minimum elong	9864 Dec 28 11:23	12° $\overline{\text{B}}$ 35'42	0°24'05	min. Earth dist.	9870 Jul 23 21:37	8° \approx 41'55	17.40829 AU
max. Earth dist.	9864 Dec 27 20:35	12° $\overline{\text{B}}$ 33'24	19.36258 AU	direct	9870 Oct 07 11:59	6° \approx 37'38	
morning rise	9865 Jan 13 23:55	13° $\overline{\text{B}}$ 37'14		evening set	9871 Jan 10 19:40	10° \approx 05'19	
retrograde	9865 Apr 16 13:54	17° $\overline{\text{B}}$ 00'29					
opposition	9865 Jun 29 11:41	14° $\overline{\text{B}}$ 57'22	0°24'04	conjunction	9871 Jan 27 06:19	11° \approx 06'36	-0°03'48
min. Earth dist.	9865 Jun 29 23:23	14° $\overline{\text{B}}$ 56'05	17.36071 AU	minimum elong	9871 Jan 27 06:18	11° \approx 06'36	0°03'28
direct	9865 Sep 13 01:59	12° $\overline{\text{B}}$ 51'45		behind sun begin	9871 Jan 26 23:38	11° \approx 05'35	
evening set	9865 Dec 17 00:54	16° $\overline{\text{B}}$ 19'10		behind sun end	9871 Jan 27 12:58	11° \approx 07'37	
				max. Earth dist.	9871 Jan 26 17:29	11° \approx 04'36	19.41891 AU
conjunction	9866 Jan 02 15:00	17° $\overline{\text{B}}$ 20'58	0°19'21	morning rise	9871 Feb 12 14:11	12° \approx 07'29	
minimum elong	9866 Jan 02 15:00	17° $\overline{\text{B}}$ 20'58	0°19'45		9871 Apr 13 01:15	15° \approx	
max. Earth dist.	9866 Jan 02 01:40	17° $\overline{\text{B}}$ 18'53	19.35995 AU	retrograde	9871 May 15 13:14	15° \approx 29'07	
morning rise	9866 Jan 19 02:46	18° $\overline{\text{B}}$ 22'27			9871 Jun 17 16:23	15° $\overline{\text{R}}$ \approx	
retrograde	9866 Apr 21 14:37	21° $\overline{\text{B}}$ 45'35		opposition	9871 Jul 28 11:04	13° \approx 26'57	-0°06'40
opposition	9866 Jul 04 11:14	19° $\overline{\text{B}}$ 42'38	0°19'09	min. Earth dist.	9871 Jul 28 22:08	13° \approx 25'45	17.43070 AU
min. Earth dist.	9866 Jul 04 22:53	19° $\overline{\text{B}}$ 41'22	17.36072 AU	direct	9871 Oct 12 13:18	11° \approx 21'34	
direct	9866 Sep 18 03:20	17° $\overline{\text{B}}$ 37'03		evening set	9872 Jan 15 22:11	14° \approx 48'59	
evening set	9866 Dec 22 05:11	21° $\overline{\text{B}}$ 04'43			9872 Jan 18 22:06	15° \approx	
conjunction	9867 Jan 07 18:33	22° $\overline{\text{B}}$ 06'28	0°14'53	conjunction	9872 Feb 01 08:02	15° \approx 50'06	-0°08'25
minimum elong	9867 Jan 07 18:34	22° $\overline{\text{B}}$ 06'28	0°15'15	minimum elong	9872 Feb 01 08:01	15° \approx 50'06	0°08'07
behind sun begin	9867 Jan 07 16:38	22° $\overline{\text{B}}$ 06'10		behind sun begin	9872 Feb 01 02:04	15° \approx 49'11	
behind sun end	9867 Jan 07 20:29	22° $\overline{\text{B}}$ 06'45		behind sun end	9872 Feb 01 13:58	15° \approx 51'00	
max. Earth dist.	9867 Jan 07 04:17	22° $\overline{\text{B}}$ 04'14	19.36263 AU	max. Earth dist.	9872 Jan 31 20:00	15° \approx 48'14	19.44337 AU
morning rise	9867 Jan 24 05:46	23° $\overline{\text{B}}$ 07'54		morning rise	9872 Feb 17 15:00	16° \approx 50'47	

retrograde	9872 May 19 12:47	20° 11 '58	evening set	9879 Feb 17 19:51	17° 18 '20'20
opposition	9872 Aug 01 10:53	18° 09 '55 -0°11'49			
min. Earth dist.	9872 Aug 01 20:36	18° 08 '52 17.45709 AU	conjunction	9879 Mar 05 23:19	18° 19 '41 -0°37'15
direct	9872 Oct 16 17:19	16° 04 '38	minimum elong	9879 Mar 05 23:19	18° 19 '41 0°37'08
evening set	9873 Jan 20 00:10	19° 31 '40	max. Earth dist.	9879 Mar 05 19:07	18° 19 '02 19.73481 AU
			morning rise	9879 Mar 21 23:52	19° 18 '39
conjunction	9873 Feb 05 09:08	20° 32 '35 -0°12'59	retrograde	9879 Jun 21 09:58	22° 35 '44
minimum elong	9873 Feb 05 09:08	20° 32 '35 0°12'42	opposition	9879 Sep 04 01:50	20° 34 '55 -0°43'16
behind sun begin	9873 Feb 05 04:56	20° 31 '56	min. Earth dist.	9879 Sep 04 05:47	20° 34 '30 17.76316 AU
behind sun end	9873 Feb 05 13:20	20° 33 '13	direct	9879 Nov 19 21:22	18° 31 '07
max. Earth dist.	9873 Feb 04 21:46	20° 30 '49 19.47183 AU	evening set	9880 Feb 22 16:18	21° 53 '32
morning rise	9873 Feb 21 15:10	21° 33 '04			
retrograde	9873 May 24 09:11	24° 53 '44	conjunction	9880 Mar 09 18:40	22° 52 '36 -0°40'32
opposition	9873 Aug 06 10:34	22° 51 '48 -0°16'52	minimum elong	9880 Mar 09 18:39	22° 52 '36 0°40'28
min. Earth dist.	9873 Aug 06 20:38	22° 50 '43 17.48772 AU	max. Earth dist.	9880 Mar 09 14:33	22° 51 '58 19.79222 AU
direct	9873 Oct 21 18:06	20° 46 '36	morning rise	9880 Mar 25 18:32	23° 51 '17
evening set	9874 Jan 25 01:21	24° 13 '12	retrograde	9880 Jun 25 05:42	27° 07 '46
			opposition	9880 Sep 07 23:03	25° 07 '11 -0°46'46
conjunction	9874 Feb 10 09:27	25° 13 '53 -0°17'27	min. Earth dist.	9880 Sep 08 01:14	25° 06 '57 17.82178 AU
minimum elong	9874 Feb 10 09:26	25° 13 '53 0°17'12	direct	9880 Nov 23 19:39	23° 03 '43
max. Earth dist.	9874 Feb 09 22:42	25° 12 '13 19.50464 AU	evening set	9881 Feb 26 11:52	26° 25 '16
morning rise	9874 Feb 26 14:41	26° 14 '08			
retrograde	9874 May 29 07:44	29° 34 '15	conjunction	9881 Mar 14 13:29	27° 24 '02 -0°43'34
opposition	9874 Aug 11 09:52	27° 32 '26 -0°21'47	minimum elong	9881 Mar 14 13:28	27° 24 '02 0°43'30
min. Earth dist.	9874 Aug 11 18:12	27° 31 '33 17.52259 AU	max. Earth dist.	9881 Mar 14 11:31	27° 23 '44 19.85177 AU
direct	9874 Oct 26 21:56	25° 27 '22	morning rise	9881 Mar 30 12:22	28° 22 '26
evening set	9875 Jan 30 01:53	28° 53 '25		9881 Apr 28 21:56	0° 38 '15
			retrograde	9881 Jun 29 23:05	1° 38 '15
conjunction	9875 Feb 15 09:05	29° 53 '52 -0°21'47		9881 Sep 04 00:00	30° 37 '55
minimum elong	9875 Feb 15 09:05	29° 53 '52 0°21'35	opposition	9881 Sep 12 19:49	29° 37 '55 -0°49'57
max. Earth dist.	9875 Feb 14 23:46	29° 52 '25 19.54165 AU	min. Earth dist.	9881 Sep 12 21:48	29° 37 '42 17.88212 AU
	9875 Feb 17 00:31	0° 53 '53	direct	9881 Nov 28 17:12	27° 34 '49
morning rise	9875 Mar 03 13:16	0° 53 '53		9882 Feb 15 06:15	0° 55 '25
retrograde	9875 Jun 03 02:50	4° 13 '25	evening set	9882 Mar 03 06:48	0° 55 '25
opposition	9875 Aug 16 09:00	2° 11 '44 -0°26'32			
min. Earth dist.	9875 Aug 16 17:27	2° 10 '50 17.56193 AU	conjunction	9882 Mar 19 07:22	1° 53 '53 -0°46'18
direct	9875 Oct 31 22:09	0° 06 '49	minimum elong	9882 Mar 19 07:21	1° 53 '53 0°46'17
evening set	9876 Feb 04 01:39	3° 32 '16	max. Earth dist.	9882 Mar 19 05:10	1° 53 '33 19.91275 AU
			morning rise	9882 Apr 04 05:39	2° 52 '01
conjunction	9876 Feb 20 07:49	4° 32 '26 -0°25'58	retrograde	9882 Jul 04 17:26	6° 07 '11
minimum elong	9876 Feb 20 07:48	4° 32 '26 0°25'46	opposition	9882 Sep 17 16:08	4° 07 '03 -0°52'49
max. Earth dist.	9876 Feb 19 23:04	4° 31 '05 19.58336 AU	min. Earth dist.	9882 Sep 17 16:45	4° 06 '59 17.94361 AU
morning rise	9876 Mar 07 11:11	5° 32 '12	direct	9882 Dec 03 14:45	2° 04 '17
retrograde	9876 Jun 07 00:21	8° 51 '09	evening set	9883 Mar 08 00:40	5° 23 '56
opposition	9876 Aug 20 07:45	6° 49 '38 -0°31'05			
min. Earth dist.	9876 Aug 20 14:02	6° 48 '58 17.60596 AU	conjunction	9883 Mar 24 00:31	6° 22 '06 -0°48'44
direct	9876 Nov 05 00:18	4° 44 '55	minimum elong	9883 Mar 24 00:31	6° 22 '06 0°48'45
evening set	9877 Feb 08 00:24	8° 09 '40	max. Earth dist.	9883 Mar 24 00:19	6° 22 '04 19.97443 AU
			morning rise	9883 Apr 08 21:53	7° 19 '56
conjunction	9877 Feb 24 05:43	9° 09 '36 -0°29'57	retrograde	9883 Jul 09 09:23	10° 34 '26
minimum elong	9877 Feb 24 05:43	9° 09 '36 0°29'47	opposition	9883 Sep 22 12:04	8° 34 '30 -0°55'21
max. Earth dist.	9877 Feb 23 23:02	9° 08 '34 19.62966 AU	min. Earth dist.	9883 Sep 22 12:14	8° 34 '29 18.00541 AU
morning rise	9877 Mar 12 08:03	10° 09 '06	direct	9883 Dec 08 11:58	6° 32 '05
retrograde	9877 Jun 11 19:03	13° 27 '26	evening set	9884 Mar 11 17:52	9° 50 '42
opposition	9877 Aug 25 06:16	11° 26 '07 -0°35'24			
min. Earth dist.	9877 Aug 25 12:23	11° 25 '28 17.65451 AU	conjunction	9884 Mar 27 16:44	10° 48 '34 -0°50'52
direct	9877 Nov 09 23:26	9° 21 '41	minimum elong	9884 Mar 27 16:43	10° 48 '34 0°50'55
evening set	9878 Feb 12 22:34	12° 45 '42	max. Earth dist.	9884 Mar 27 16:17	10° 48 '30 20.03631 AU
			morning rise	9884 Apr 12 13:34	11° 46 '07
conjunction	9878 Mar 01 02:50	13° 45 '20 -0°33'43	retrograde	9884 Jul 13 02:06	14° 59 '59
minimum elong	9878 Mar 01 02:50	13° 45 '20 0°33'35	opposition	9884 Sep 26 07:23	13° 00 '12 -0°57'33
max. Earth dist.	9878 Feb 28 20:27	13° 44 '21 19.68040 AU	min. Earth dist.	9884 Sep 26 06:29	13° 00 '17 18.06733 AU
morning rise	9878 Mar 17 04:26	14° 44 '35	direct	9884 Dec 12 08:26	10° 58 '04
retrograde	9878 Jun 16 15:33	18° 02 '18	evening set	9885 Mar 16 09:53	14° 15 '39
opposition	9878 Aug 30 04:04	16° 01 '13 -0°39'28			
min. Earth dist.	9878 Aug 30 08:12	16° 00 '47 17.70717 AU	conjunction	9885 Apr 01 08:10	15° 13 '13 -0°52'42
direct	9878 Nov 14 23:17	13° 57 '04	minimum elong	9885 Apr 01 08:10	15° 13 '13 0°52'47

max. Earth dist.	9885 Apr 01 09:35	15° Υ 13'26	20.09799 AU		9891 Aug 28 20:13	15° κ 8
morning rise	9885 Apr 17 04:16	16° Υ 10'30		opposition	9891 Oct 28 05:01	13° δ 07'26 -1°02'54
retrograde	9885 Jul 17 16:17	19° ϕ 23'41		min. Earth dist.	9891 Oct 27 21:02	13° δ 08'15 18.48821 AU
opposition	9885 Oct 01 02:07	17° ϕ 24'02	-0°59'23	direct	9892 Jan 13 10:15	11° δ 07'20
min. Earth dist.	9885 Oct 01 00:33	17° ϕ 24'12	18.12865 AU	evening set	9892 Apr 15 01:37	14° δ 17'32
direct	9885 Dec 17 04:49	15° Υ 22'13			9892 Apr 27 02:38	15° δ
evening set	9886 Mar 21 01:15	18° Υ 38'44				
				conjunction	9892 Apr 30 19:50	15° δ 13'14 -0°56'30
conjunction	9886 Apr 05 22:39	19° Υ 36'00	-0°54'13	minimum elong	9892 Apr 30 19:50	15° δ 13'14 0°56'46
minimum elong	9886 Apr 05 22:39	19° Υ 35'59	0°54'18	max. Earth dist.	9892 May 01 03:53	15° δ 14'26 20.51732 AU
max. Earth dist.	9886 Apr 05 23:51	19° ϕ 36'10	20.15903 AU	morning rise	9892 May 16 13:22	16° δ 08'51
morning rise	9886 Apr 21 18:19	20° Υ 33'00		retrograde	9892 Aug 16 07:27	19° δ 17'47
retrograde	9886 Jul 22 07:04	23° ϕ 45'30		opposition	9892 Oct 31 19:24	17° δ 18'55 -1°02'16
opposition	9886 Oct 05 20:09	21° ϕ 45'58	-1°00'52	min. Earth dist.	9892 Oct 31 11:09	17° δ 19'45 18.54652 AU
min. Earth dist.	9886 Oct 05 17:49	21° ϕ 46'12	18.18946 AU	direct	9893 Jan 16 22:44	15° δ 19'09
direct	9886 Dec 21 23:34	19° Υ 44'24		evening set	9893 Apr 19 10:55	18° δ 28'25
evening set	9887 Mar 25 15:30	22° Υ 59'50				
				conjunction	9893 May 05 04:56	19° δ 23'55 -0°55'48
conjunction	9887 Apr 10 12:23	23° Υ 56'49	-0°55'24	minimum elong	9893 May 05 04:56	19° δ 23'55 0°56'05
minimum elong	9887 Apr 10 12:22	23° Υ 56'49	0°55'32	max. Earth dist.	9893 May 05 14:28	19° δ 25'19 20.57491 AU
max. Earth dist.	9887 Apr 10 15:29	23° ϕ 57'17	20.21953 AU	morning rise	9893 May 20 22:17	20° δ 19'21
morning rise	9887 Apr 26 07:24	24° ϕ 53'33		retrograde	9893 Aug 20 18:55	23° δ 27'48
retrograde	9887 Jul 26 20:04	28° ϕ 05'23		opposition	9893 Nov 05 09:11	21° δ 29'06 -1°01'18
opposition	9887 Oct 10 13:39	26° Υ 05'56	-1°01'59	min. Earth dist.	9893 Nov 04 23:24	21° δ 30'06 18.60311 AU
min. Earth dist.	9887 Oct 10 10:12	26° Υ 06'17	18.24963 AU	direct	9894 Jan 21 12:35	19° δ 29'42
direct	9887 Dec 26 18:28	24° Υ 04'38		evening set	9894 Apr 23 19:46	22° δ 38'04
evening set	9888 Mar 29 04:47	27° Υ 18'57				
				conjunction	9894 May 09 13:24	23° ϕ 33'21 -0°54'48
conjunction	9888 Apr 14 00:53	28° ϕ 15'39	-0°56'15	minimum elong	9894 May 09 13:24	23° ϕ 33'21 0°55'07
minimum elong	9888 Apr 14 00:53	28° ϕ 15'39	0°56'25	max. Earth dist.	9894 May 09 23:12	23° δ 34'48 20.63042 AU
max. Earth dist.	9888 Apr 14 04:16	28° ϕ 16'09	20.27952 AU	morning rise	9894 May 25 06:44	24° δ 28'36
morning rise	9888 Apr 29 19:37	29° Υ 12'09		retrograde	9894 Aug 25 04:40	27° δ 36'38
	9888 May 13 19:59	0° δ		opposition	9894 Nov 09 22:36	25° δ 38'06 -1°00'02
retrograde	9888 Jul 30 09:01	2° δ 23'20		min. Earth dist.	9894 Nov 09 12:55	25° δ 39'04 18.65752 AU
opposition	9888 Oct 14 06:30	0° δ 23'57	-1°02'45	direct	9895 Jan 25 23:58	23° δ 39'01
min. Earth dist.	9888 Oct 14 02:17	0° δ 24'23	18.30962 AU	evening set	9895 Apr 28 03:58	26° δ 46'31
	9888 Oct 24 01:30	30° κ Υ				
direct	9888 Dec 30 11:04	28° ϕ 22'54		conjunction	9895 May 13 21:28	27° δ 41'37 -0°53'32
	9889 Mar 03 22:00	0° δ		minimum elong	9895 May 13 21:28	27° δ 41'37 0°53'51
evening set	9889 Apr 02 17:08	1° δ 36'09		max. Earth dist.	9895 May 14 08:23	27° δ 43'14 20.68352 AU
				morning rise	9895 May 29 14:42	28° δ 36'43
conjunction	9889 Apr 18 12:50	2° δ 32'35	-0°56'47		9895 Jun 24 12:06	0° Π
minimum elong	9889 Apr 18 12:50	2° δ 32'35	0°56'59	retrograde	9895 Aug 29 15:38	1° Π 44'21
max. Earth dist.	9889 Apr 18 18:11	2° δ 33'23	20.33938 AU		9895 Nov 08 15:36	30° κ 8
morning rise	9889 May 04 07:04	3° δ 28'50		opposition	9895 Nov 14 11:28	29° δ 45'57 -0°58'28
retrograde	9889 Aug 03 21:21	6° δ 39'22		min. Earth dist.	9895 Nov 14 00:20	29° δ 47'05 18.70907 AU
opposition	9889 Oct 18 22:28	4° δ 40'06	-1°03'09	direct	9896 Jan 30 12:11	27° δ 47'12
min. Earth dist.	9889 Oct 18 16:48	4° δ 40'41	18.36937 AU		9896 Apr 15 04:43	0° Π
direct	9890 Jan 04 04:14	2° δ 39'21		evening set	9896 May 01 11:39	0° Π 53'51
evening set	9890 Apr 07 04:50	5° δ 51'33				
				conjunction	9896 May 17 04:56	1° Π 48'47 -0°51'59
conjunction	9890 Apr 22 23:53	6° δ 47'43	-0°57'00	minimum elong	9896 May 17 04:56	1° Π 48'47 0°52'20
minimum elong	9890 Apr 22 23:53	6° δ 47'43	0°57'13	max. Earth dist.	9896 May 17 15:58	1° Π 50'24 20.73338 AU
max. Earth dist.	9890 Apr 23 05:38	6° δ 48'34	20.39906 AU	morning rise	9896 Jun 01 22:19	2° Π 43'45
morning rise	9890 May 08 17:53	7° δ 43'45		retrograde	9896 Sep 02 00:55	5° Π 51'02
retrograde	9890 Aug 08 08:57	10° δ 53'42		opposition	9896 Nov 18 00:01	3° Π 52'44 -0°56'36
opposition	9890 Oct 23 14:04	8° δ 54'33	-1°03'12	min. Earth dist.	9896 Nov 17 13:21	3° Π 53'48 18.75723 AU
min. Earth dist.	9890 Oct 23 07:45	8° δ 55'11	18.42907 AU	direct	9897 Feb 02 22:33	1° Π 54'15
direct	9891 Jan 08 18:35	6° δ 54'06		evening set	9897 May 05 18:54	5° Π 00'07
evening set	9891 Apr 11 15:30	10° δ 05'17				
				conjunction	9897 May 21 12:10	5° Π 54'54 -0°50'12
conjunction	9891 Apr 27 10:12	11° δ 01'13	-0°56'54	minimum elong	9897 May 21 12:10	5° Π 54'54 0°50'33
minimum elong	9891 Apr 27 10:12	11° δ 01'13	0°57'08	max. Earth dist.	9897 May 21 23:52	5° Π 56'36 20.77958 AU
max. Earth dist.	9891 Apr 27 17:49	11° δ 02'21	20.45858 AU	morning rise	9897 Jun 06 05:35	6° Π 49'44
morning rise	9891 May 13 03:50	11° δ 57'01		retrograde	9897 Sep 06 11:23	9° Π 56'39
	9891 Jul 28 01:59	15° δ		opposition	9897 Nov 22 11:47	7° Π 58'27 -0°54'28
retrograde	9891 Aug 12 20:55	15° δ 06'27		min. Earth dist.	9897 Nov 21 23:54	7° Π 59'38 18.80128 AU

direct	9898 Feb 07 09:52	6°II00'13		minimum elong	9904 Jun 19 04:02	4°09'28 0°31'51	
evening set	9898 May 10 01:48	9°II05'19		max. Earth dist.	9904 Jun 19 17:54	4°11'28 20.98740 AU	
				morning rise	9904 Jul 04 23:44	5°03'50	
conjunction	9898 May 25 18:57	9°II59'57 -0°48'09		retrograde	9904 Oct 05 21:38	8°09'15	
minimum elong	9898 May 25 18:57	9°II59'57 0°48'31		opposition	9904 Dec 22 11:24	6°10'50 -0°32'55	
max. Earth dist.	9898 May 26 06:33	10°II01'39 20.82143 AU		min. Earth dist.	9904 Dec 21 22:24	6°12'08 18.99594 AU	
morning rise	9898 Jun 10 12:34	10°II54'41		direct	9905 Mar 08 22:53	4°13'31	
retrograde	9898 Sep 10 19:46	14°II01'17		evening set	9905 Jun 07 14:23	7°14'29	
opposition	9898 Nov 26 23:29	12°II03'07 -0°52'03					
min. Earth dist.	9898 Nov 26 12:18	12°II04'14 18.84097 AU		conjunction	9905 Jun 23 08:55	8°08'36 -0°28'03	
direct	9899 Feb 11 19:21	10°II05'06		minimum elong	9905 Jun 23 08:55	8°08'36 0°28'27	
evening set	9899 May 14 08:01	13°II09'26		max. Earth dist.	9905 Jun 23 23:10	8°10'39 21.00325 AU	
				morning rise	9905 Jul 09 05:03	9°02'58	
conjunction	9899 May 30 01:16	14°II03'57 -0°45'52		retrograde	9905 Oct 10 06:08	12°08'21	
minimum elong	9899 May 30 01:16	14°II03'57 0°46'15		opposition	9905 Dec 26 20:04	10°09'56 -0°29'05	
max. Earth dist.	9899 May 30 13:26	14°II05'43 20.85892 AU		min. Earth dist.	9905 Dec 26 05:48	10°11'21 19.01002 AU	
morning rise	9899 Jun 14 19:05	14°II58'35		direct	9906 Mar 13 07:21	8°12'43	
retrograde	9899 Sep 15 06:09	18°II04'53		evening set	9906 Jun 11 18:54	11°13'22	
opposition	9899 Dec 01 10:31	16°II06'43 -0°49'24					
min. Earth dist.	9899 Nov 30 22:06	16°II07'58 18.87612 AU		conjunction	9906 Jun 27 13:44	12°07'29 -0°24'33	
direct	9900 Feb 16 06:12	14°II08'51		minimum elong	9906 Jun 27 13:44	12°07'29 0°24'57	
evening set	9900 May 18 13:57	17°II12'29		max. Earth dist.	9906 Jun 28 04:03	12°09'33 21.01556 AU	
				morning rise	9906 Jul 13 10:25	13°01'52	
conjunction	9900 Jun 03 07:15	18°II06'53 -0°43'22		retrograde	9906 Oct 14 13:34	16°07'18	
minimum elong	9900 Jun 03 07:15	18°II06'53 0°43'45		opposition	9906 Dec 31 04:53	14°08'51 -0°25'08	
max. Earth dist.	9900 Jun 03 19:26	18°II08'39 20.89188 AU		min. Earth dist.	9906 Dec 30 15:31	14°10'11 19.02055 AU	
morning rise	9900 Jun 19 01:23	19°II01'26		direct	9907 Mar 17 12:47	12°11'46	
retrograde	9900 Sep 19 13:11	22°II07'28		evening set	9907 Jun 15 23:16	15°12'09	
opposition	9900 Dec 05 21:04	20°II09'15 -0°46'31					
min. Earth dist.	9900 Dec 05 09:29	20°II10'25 18.90707 AU		conjunction	9907 Jul 01 18:35	16°06'17 -0°20'55	
direct	9901 Feb 20 14:29	18°II11'30		minimum elong	9907 Jul 01 18:35	16°06'17 0°21'18	
evening set	9901 May 22 19:23	21°II14'28		max. Earth dist.	9907 Jul 02 09:07	16°08'22 21.02430 AU	
				morning rise	9907 Jul 17 15:49	17°00'42	
conjunction	9901 Jun 07 12:54	22°II08'47 -0°40'40		retrograde	9907 Oct 18 22:30	20°06'13	
minimum elong	9901 Jun 07 12:54	22°II08'47 0°41'04		opposition	9908 Jan 04 13:22	18°07'46 -0°21'04	
max. Earth dist.	9901 Jun 08 01:39	22°II10'38 20.92091 AU		min. Earth dist.	9908 Jan 03 23:00	18°09'12 19.02721 AU	
morning rise	9901 Jun 23 07:20	23°II03'16		direct	9908 Mar 20 20:08	16°10'47	
retrograde	9901 Sep 23 23:01	26°II09'03		evening set	9908 Jun 19 03:58	19°11'00	
opposition	9901 Dec 10 07:07	24°II10'47 -0°43'24					
min. Earth dist.	9901 Dec 09 18:11	24°II12'05 18.93416 AU		conjunction	9908 Jul 04 23:41	20°05'09 -0°17'12	
direct	9902 Feb 25 00:40	22°II13'08		minimum elong	9908 Jul 04 23:41	20°05'09 0°17'36	
evening set	9902 May 27 00:28	25°II15'30		max. Earth dist.	9908 Jul 05 14:00	20°07'12 21.02880 AU	
				morning rise	9908 Jul 20 21:32	20°59'37	
conjunction	9902 Jun 11 18:04	26°II09'45 -0°37'46		retrograde	9908 Oct 22 05:58	24°05'16	
minimum elong	9902 Jun 11 18:04	26°II09'45 0°38'09		opposition	9909 Jan 07 21:46	22°06'48 -0°16'54	
max. Earth dist.	9902 Jun 12 07:06	26°II11'38 20.94620 AU		min. Earth dist.	9909 Jan 07 08:42	22°08'07 19.02955 AU	
morning rise	9902 Jun 27 12:53	27°II04'10		direct	9909 Mar 25 01:36	20°09'54	
	9902 Sep 08 08:44	0°09		evening set	9909 Jun 23 08:47	23°10'01	
retrograde	9902 Sep 28 05:35	0°09'47					
	9902 Oct 18 08:57	30°R II		conjunction	9909 Jul 09 05:02	24°04'13 -0°13'23	
opposition	9902 Dec 14 16:58	28°II11'27 -0°40'05		minimum elong	9909 Jul 09 05:01	24°04'13 0°13'46	
min. Earth dist.	9902 Dec 14 04:39	28°II12'41 18.95789 AU		behind sun begin	9909 Jul 09 01:29	24°03'44	
direct	9903 Mar 01 07:35	26°II13'55		behind sun end	9909 Jul 09 08:34	24°04'43	
evening set	9903 May 31 05:17	29°II15'44		max. Earth dist.	9909 Jul 09 19:09	24°06'15 21.02890 AU	
	9903 Jun 13 02:40	0°09		morning rise	9909 Jul 25 03:27	24°58'45	
				retrograde	9909 Oct 26 15:35	28°04'36	
conjunction	9903 Jun 15 23:11	0°09'55 -0°34'41		opposition	9910 Jan 12 06:06	26°06'05 -0°12'38	
minimum elong	9903 Jun 15 23:11	0°09'55 0°35'06		min. Earth dist.	9910 Jan 11 16:23	26°07'28 19.02717 AU	
max. Earth dist.	9903 Jun 16 12:51	0°11'53 20.96841 AU		direct	9910 Mar 29 08:27	24°09'15	
morning rise	9903 Jul 01 18:22	1°04'18		evening set	9910 Jun 27 13:47	27°09'18	
retrograde	9903 Oct 02 14:34	4°09'47					
opposition	9903 Dec 19 02:15	2°11'24 -0°36'35		conjunction	9910 Jul 13 10:28	28°03'35 -0°09'31	
min. Earth dist.	9903 Dec 18 12:29	2°12'47 18.97850 AU		minimum elong	9910 Jul 13 10:28	28°03'35 0°09'54	
direct	9904 Mar 04 17:05	0°13'58		behind sun begin	9910 Jul 13 05:05	28°02'50	
evening set	9904 Jun 03 09:54	3°15'19		behind sun end	9910 Jul 13 15:50	28°04'20	
				max. Earth dist.	9910 Jul 14 00:07	28°05'32 21.02390 AU	
conjunction	9904 Jun 19 04:02	4°09'28 -0°31'26		morning rise	9910 Jul 29 09:31	28°58'12	

	9910 Aug 17 15:27	0°♈	retrograde	9915 Nov 20 21:13	22°♏08'53	
retrograde	9910 Oct 30 23:10	2°♏04'16	opposition	9916 Feb 06 08:25	20°♏09'30	0°13'37
opposition	9911 Jan 16 14:39	0°♏05'42 -0°08'19	min. Earth dist.	9916 Feb 05 22:06	20°♏10'32	18.90598 AU
min. Earth dist.	9911 Jan 16 02:25	0°♏06'55 19.01957 AU	direct	9916 Apr 21 23:24	18°♏12'08	
	9911 Jan 18 23:32	30°♏♌	evening set	9916 Jul 21 01:33	21°♏13'02	
direct	9911 Apr 02 14:09	28°♌08'52				
	9911 Jun 10 03:11	0°♏	conjunction	9916 Aug 06 02:01	22°♏08'01	0°14'18
evening set	9911 Jul 01 19:06	1°♏08'57	minimum elong	9916 Aug 06 02:01	22°♏08'01	0°14'02
			behind sun begin	9916 Aug 05 22:41	22°♏07'33	
conjunction	9911 Jul 17 16:23	2°♏03'18 -0°05'37	behind sun end	9916 Aug 06 05:20	22°♏08'29	
minimum elong	9911 Jul 17 16:24	2°♏03'18 0°05'59	max. Earth dist.	9916 Aug 06 12:24	22°♏09'30	20.88908 AU
behind sun begin	9911 Jul 17 10:06	2°♏02'25	morning rise	9916 Aug 22 05:18	23°♏03'23	
behind sun end	9911 Jul 17 22:41	2°♏04'10	retrograde	9916 Nov 24 05:21	26°♏11'26	
max. Earth dist.	9911 Jul 18 05:29	2°♏05'10 21.01369 AU	opposition	9917 Feb 09 16:53	24°♏11'52	0°17'55
morning rise	9911 Aug 02 16:07	2°♏58'00	min. Earth dist.	9917 Feb 09 07:56	24°♏12'47	18.87152 AU
retrograde	9911 Nov 04 09:22	6°♏04'20	direct	9917 Apr 26 05:08	22°♏14'21	
opposition	9912 Jan 20 22:55	4°♏05'39 -0°03'57	evening set	9917 Jul 25 08:45	25°♏15'37	
min. Earth dist.	9912 Jan 20 10:18	4°♏06'55 19.00658 AU				
direct	9912 Apr 05 21:17	2°♏08'47	conjunction	9917 Aug 10 09:56	26°♏10'46	0°18'09
evening set	9912 Jul 05 00:40	5°♏08'55	minimum elong	9917 Aug 10 09:56	26°♏10'46	0°17'53
			max. Earth dist.	9917 Aug 10 19:42	26°♏12'10	20.85327 AU
conjunction	9912 Jul 20 22:30	6°♏03'22 -0°01'38	morning rise	9917 Aug 26 13:58	27°♏06'19	
minimum elong	9912 Jul 20 22:32	6°♏03'22 0°01'59		9917 Nov 04 03:17	0°♏	
behind sun begin	9912 Jul 20 15:55	6°♏02'27	retrograde	9917 Nov 28 16:41	0°♏14'51	
behind sun end	9912 Jul 21 05:08	6°♏04'17		9917 Dec 23 13:08	30°♏♌	
max. Earth dist.	9912 Jul 21 10:54	6°♏05'08 20.99791 AU	opposition	9918 Feb 14 01:33	28°♏15'06	0°22'09
morning rise	9912 Aug 05 22:57	6°♏58'11	min. Earth dist.	9918 Feb 13 16:11	28°♏16'03	18.83432 AU
retrograde	9912 Nov 07 16:42	10°♏04'47	direct	9918 Apr 30 12:31	26°♏17'25	
asc. node	9912 Dec 17 17:11	9°♏27'59	evening set	9918 Jul 29 16:24	29°♏19'07	
opposition	9913 Jan 24 07:21	8°♏05'58 0°00'27		9918 Aug 10 14:22	0°♏	
min. Earth dist.	9913 Jan 23 20:22	8°♏07'05 18.98812 AU				
direct	9913 Apr 10 02:53	6°♏09'02	conjunction	9918 Aug 14 18:16	0°♏14'26	0°21'55
evening set	9913 Jul 09 06:23	9°♏09'15	minimum elong	9918 Aug 14 18:16	0°♏14'26	0°21'41
			max. Earth dist.	9918 Aug 15 03:44	0°♏15'48	20.81465 AU
conjunction	9913 Jul 25 04:54	10°♏03'49 0°02'28	morning rise	9918 Aug 30 23:00	1°♏10'11	
minimum elong	9913 Jul 25 04:54	10°♏03'49 0°02'08	retrograde	9918 Dec 03 02:19	4°♏19'13	
behind sun begin	9913 Jul 24 22:17	10°♏02'53	opposition	9919 Feb 18 10:37	2°♏19'18	0°26'17
behind sun end	9913 Jul 25 11:30	10°♏04'44	min. Earth dist.	9919 Feb 18 02:31	2°♏20'08	18.79443 AU
max. Earth dist.	9913 Jul 25 16:40	10°♏05'30 20.97701 AU	direct	9919 May 04 18:31	0°♏21'28	
morning rise	9913 Aug 10 06:00	10°♏58'45	evening set	9919 Aug 03 00:45	3°♏23'40	
retrograde	9913 Nov 12 03:05	14°♏05'39				
opposition	9914 Jan 28 15:35	12°♏06'40 0°04'52	conjunction	9919 Aug 19 03:22	4°♏19'11	0°25'36
min. Earth dist.	9914 Jan 28 04:15	12°♏07'48 18.96476 AU	minimum elong	9919 Aug 19 03:22	4°♏19'11	0°25'23
direct	9914 Apr 14 10:25	10°♏09'36	max. Earth dist.	9919 Aug 19 12:00	4°♏20'26	20.77361 AU
evening set	9914 Jul 13 12:27	13°♏09'59	morning rise	9919 Sep 04 08:54	5°♏15'08	
			retrograde	9919 Dec 07 14:47	8°♏24'43	
conjunction	9914 Jul 29 11:33	14°♏04'40 0°06'27	opposition	9920 Feb 22 19:41	6°♏24'39	0°30'19
minimum elong	9914 Jul 29 11:33	14°♏04'40 0°06'08	min. Earth dist.	9920 Feb 22 11:24	6°♏25'30	18.75213 AU
behind sun begin	9914 Jul 29 05:16	14°♏03'48	direct	9920 May 08 02:22	4°♏26'38	
behind sun end	9914 Jul 29 17:50	14°♏05'33	evening set	9920 Aug 06 09:47	7°♏29'25	
max. Earth dist.	9914 Jul 29 22:51	14°♏06'17 20.95141 AU				
morning rise	9914 Aug 14 13:23	14°♏59'44	conjunction	9920 Aug 22 13:10	8°♏25'09	0°29'10
	9914 Aug 14 15:14	15°♏	minimum elong	9920 Aug 22 13:09	8°♏25'09	0°28'58
retrograde	9914 Nov 16 10:24	18°♏06'59	max. Earth dist.	9920 Aug 22 21:22	8°♏26'20	20.72997 AU
opposition	9915 Feb 02 00:03	16°♏07'48 0°09'15	morning rise	9920 Sep 07 19:22	9°♏21'18	
min. Earth dist.	9915 Feb 01 14:09	16°♏08'48 18.93716 AU	retrograde	9920 Dec 11 01:38	12°♏31'28	
	9915 Mar 03 19:14	15°♏♌	opposition	9921 Feb 26 05:18	10°♏31'16	0°34'12
direct	9915 Apr 18 15:58	14°♏10'36	min. Earth dist.	9921 Feb 25 22:26	10°♏31'58	18.70722 AU
	9915 Jun 02 00:58	15°♏	direct	9921 May 12 08:44	8°♏33'07	
evening set	9915 Jul 17 18:42	17°♏11'12	evening set	9921 Aug 10 19:27	11°♏36'31	
conjunction	9915 Aug 02 18:31	18°♏06'01 0°10'23	conjunction	9921 Aug 26 23:31	12°♏32'27	0°32'36
minimum elong	9915 Aug 02 18:32	18°♏06'01 0°10'05	minimum elong	9921 Aug 26 23:31	12°♏32'27	0°32'27
behind sun begin	9915 Aug 02 13:12	18°♏05'17	max. Earth dist.	9921 Aug 27 06:37	12°♏33'29	20.68386 AU
behind sun end	9915 Aug 02 23:51	18°♏06'46	morning rise	9921 Sep 12 06:29	13°♏28'50	
max. Earth dist.	9915 Aug 03 05:20	18°♏07'34 20.92202 AU	retrograde	9921 Dec 15 15:40	16°♏39'38	
morning rise	9915 Aug 18 21:07	19°♏01'15	opposition	9922 Mar 02 15:13	14°♏39'17	0°37'56

min. Earth dist.	9922 Mar 02 08:28	14° \mathbb{M} 39'58	18.65975 AU	conjunction	9928 Sep 25 23:45	12° \mathbb{A} 05'48	0°51'24
direct	9922 May 16 17:35	12° \mathbb{M} 40'57		minimum elong	9928 Sep 25 23:45	12° \mathbb{A} 05'48	0°51'28
evening set	9922 Aug 15 06:00	15° \mathbb{M} 45'03		max. Earth dist.	9928 Sep 25 23:09	12° \mathbb{A} 05'43	20.27925 AU
				morning rise	9928 Oct 12 11:13	13° \mathbb{A} 03'56	
conjunction	9922 Aug 31 10:50	16° \mathbb{M} 41'14	0°35'53	retrograde	9929 Jan 14 23:05	16° \mathbb{A} 19'21	
minimum elong	9922 Aug 31 10:50	16° \mathbb{M} 41'14	0°35'44	opposition	9929 Apr 01 01:06	14° \mathbb{A} 17'32	0°58'02
max. Earth dist.	9922 Aug 31 17:25	16° \mathbb{M} 42'11	20.63490 AU	min. Earth dist.	9929 Apr 01 02:17	14° \mathbb{A} 17'24	18.24662 AU
morning rise	9922 Sep 16 18:26	17° \mathbb{M} 37'50		direct	9929 Jun 14 18:28	12° \mathbb{A} 17'09	
retrograde	9922 Dec 20 03:54	20° \mathbb{M} 49'17		evening set	9929 Sep 14 06:31	15° \mathbb{A} 27'12	
opposition	9923 Mar 07 01:36	18° \mathbb{M} 48'47	0°41'29				
min. Earth dist.	9923 Mar 06 20:29	18° \mathbb{M} 49'19	18.60934 AU	conjunction	9929 Sep 30 16:25	16° \mathbb{A} 25'15	0°53'07
direct	9923 May 21 00:57	16° \mathbb{M} 50'16		minimum elong	9929 Sep 30 16:25	16° \mathbb{A} 25'15	0°53'11
evening set	9923 Aug 19 17:24	19° \mathbb{M} 55'07		max. Earth dist.	9929 Sep 30 13:55	16° \mathbb{A} 24'53	20.21393 AU
				morning rise	9929 Oct 17 04:35	17° \mathbb{A} 23'39	
conjunction	9923 Sep 04 22:58	20° \mathbb{M} 51'32	0°39'00	retrograde	9930 Jan 19 15:43	20° \mathbb{A} 39'46	
minimum elong	9923 Sep 04 22:57	20° \mathbb{M} 51'32	0°38'55	opposition	9930 Apr 05 14:40	18° \mathbb{A} 37'43	0°59'47
max. Earth dist.	9923 Sep 05 03:53	20° \mathbb{M} 52'15	20.58298 AU	min. Earth dist.	9930 Apr 05 16:39	18° \mathbb{A} 37'30	18.18136 AU
morning rise	9923 Sep 21 07:22	21° \mathbb{M} 48'23		direct	9930 Jun 19 07:09	16° \mathbb{A} 36'57	
retrograde	9923 Dec 24 19:01	25° \mathbb{M} 00'29		evening set	9930 Sep 18 23:31	19° \mathbb{A} 48'01	
opposition	9924 Mar 10 12:24	22° \mathbb{M} 59'50	0°44'51				
min. Earth dist.	9924 Mar 10 07:52	23° \mathbb{M} 00'18	18.55576 AU	conjunction	9930 Oct 05 10:14	20° \mathbb{A} 46'22	0°54'31
direct	9924 May 24 11:01	21° \mathbb{M} 01'04		minimum elong	9930 Oct 05 10:14	20° \mathbb{A} 46'22	0°54'38
evening set	9924 Aug 23 05:40	24° \mathbb{M} 06'42		max. Earth dist.	9930 Oct 05 07:48	20° \mathbb{A} 46'00	20.14873 AU
				morning rise	9930 Oct 21 22:46	21° \mathbb{A} 45'02	
conjunction	9924 Sep 08 12:00	25° \mathbb{M} 03'23	0°41'56	retrograde	9931 Jan 24 09:22	25° \mathbb{A} 01'49	
minimum elong	9924 Sep 08 12:00	25° \mathbb{M} 03'23	0°41'52	opposition	9931 Apr 10 04:41	22° \mathbb{A} 59'34	1°01'13
max. Earth dist.	9924 Sep 08 16:08	25° \mathbb{M} 03'59	20.52757 AU	min. Earth dist.	9931 Apr 10 07:22	22° \mathbb{A} 59'16	18.11649 AU
morning rise	9924 Sep 24 20:57	26° \mathbb{M} 00'28		direct	9931 Jun 23 21:13	20° \mathbb{A} 58'28	
retrograde	9924 Dec 28 08:33	29° \mathbb{M} 13'14		evening set	9931 Sep 23 17:31	24° \mathbb{A} 10'34	
opposition	9925 Mar 14 23:39	27° \mathbb{M} 12'23	0°48'00				
min. Earth dist.	9925 Mar 14 20:48	27° \mathbb{M} 12'41	18.49868 AU	conjunction	9931 Oct 10 04:45	25° \mathbb{A} 09'12	0°55'38
direct	9925 May 28 20:10	25° \mathbb{M} 13'22		minimum elong	9931 Oct 10 04:45	25° \mathbb{A} 09'12	0°55'46
evening set	9925 Aug 27 18:43	28° \mathbb{M} 19'48		max. Earth dist.	9931 Oct 10 00:18	25° \mathbb{A} 08'32	20.08436 AU
				morning rise	9931 Oct 26 17:57	26° \mathbb{A} 08'09	
conjunction	9925 Sep 13 01:44	29° \mathbb{M} 16'44	0°44'39	retrograde	9932 Jan 29 02:53	29° \mathbb{A} 25'36	
minimum elong	9925 Sep 13 01:44	29° \mathbb{M} 16'44	0°44'37	opposition	9932 Apr 13 19:21	27° \mathbb{A} 23'10	1°02'17
max. Earth dist.	9925 Sep 13 03:55	29° \mathbb{M} 17'04	20.46901 AU	min. Earth dist.	9932 Apr 13 22:57	27° \mathbb{A} 22'47	18.05276 AU
	9925 Sep 25 09:38	0° \mathbb{A}		direct	9932 Jun 27 11:26	25° \mathbb{A} 21'44	
morning rise	9925 Sep 29 11:28	0° \mathbb{A} 14'05		evening set	9932 Sep 27 12:13	28° \mathbb{A} 34'54	
retrograde	9926 Jan 02 00:06	3° \mathbb{A} 27'31					
opposition	9926 Mar 19 11:24	1° \mathbb{A} 26'26	0°50'55	conjunction	9932 Oct 14 00:12	29° \mathbb{A} 33'50	0°56'24
min. Earth dist.	9926 Mar 19 09:17	1° \mathbb{A} 26'39	18.43864 AU	minimum elong	9932 Oct 14 00:12	29° \mathbb{A} 33'50	0°56'35
	9926 Apr 27 02:22	30° \mathbb{R} \mathbb{M}		max. Earth dist.	9932 Oct 13 20:01	29° \mathbb{A} 33'12	20.02123 AU
direct	9926 Jun 02 07:13	29° \mathbb{M} 27'06			9932 Oct 21 06:42	0° \mathbb{M}	
	9926 Jul 07 20:54	0° \mathbb{A}		morning rise	9932 Oct 30 13:38	0° \mathbb{M} 33'02	
evening set	9926 Sep 01 08:22	2° \mathbb{A} 34'22		retrograde	9933 Feb 01 21:34	3° \mathbb{M} 51'10	
				opposition	9933 Apr 18 10:35	1° \mathbb{M} 48'35	1°02'59
conjunction	9926 Sep 17 16:15	3° \mathbb{A} 31'35	0°47'09	min. Earth dist.	9933 Apr 18 14:32	1° \mathbb{M} 48'10	17.99042 AU
minimum elong	9926 Sep 17 16:14	3° \mathbb{A} 31'35	0°47'09		9933 Jun 09 19:22	30° \mathbb{R} \mathbb{A}	
max. Earth dist.	9926 Sep 17 17:54	3° \mathbb{A} 31'50	20.40757 AU	direct	9933 Jul 02 03:04	29° \mathbb{A} 46'52	
morning rise	9926 Oct 04 02:31	4° \mathbb{A} 29'11			9933 Jul 24 06:20	0° \mathbb{M}	
retrograde	9927 Jan 06 14:53	7° \mathbb{A} 43'17		evening set	9933 Oct 02 07:59	3° \mathbb{M} 01'07	
opposition	9927 Mar 23 23:36	5° \mathbb{A} 41'57	0°53'35				
min. Earth dist.	9927 Mar 23 22:54	5° \mathbb{A} 42'02	18.37602 AU	conjunction	9933 Oct 18 20:24	4° \mathbb{M} 00'20	0°56'51
direct	9927 Jun 06 18:13	3° \mathbb{A} 42'17		minimum elong	9933 Oct 18 20:23	4° \mathbb{M} 00'20	0°57'04
evening set	9927 Sep 05 23:01	6° \mathbb{A} 50'27		max. Earth dist.	9933 Oct 18 14:13	3° \mathbb{M} 59'24	19.95988 AU
				morning rise	9933 Nov 04 10:24	4° \mathbb{M} 59'48	
conjunction	9927 Sep 22 07:33	7° \mathbb{A} 47'56	0°49'25	retrograde	9934 Feb 06 16:17	8° \mathbb{M} 18'37	
minimum elong	9927 Sep 22 07:32	7° \mathbb{A} 47'56	0°49'25	opposition	9934 Apr 23 02:30	6° \mathbb{M} 15'54	1°03'19
max. Earth dist.	9927 Sep 22 07:11	7° \mathbb{A} 47'53	20.34411 AU	min. Earth dist.	9934 Apr 23 07:32	6° \mathbb{M} 15'22	17.93011 AU
morning rise	9927 Oct 08 18:35	8° \mathbb{A} 45'48		direct	9934 Jul 06 18:45	4° \mathbb{M} 13'54	
retrograde	9928 Jan 11 06:52	12° \mathbb{A} 00'33		evening set	9934 Oct 07 04:28	7° \mathbb{M} 29'16	
opposition	9928 Mar 27 12:01	9° \mathbb{A} 58'58	0°55'57				
min. Earth dist.	9928 Mar 27 12:11	9° \mathbb{A} 58'57	18.31183 AU	conjunction	9934 Oct 23 17:38	8° \mathbb{M} 28'46	0°56'58
direct	9928 Jun 10 05:51	7° \mathbb{A} 58'56		minimum elong	9934 Oct 23 17:38	8° \mathbb{M} 28'46	0°57'11
evening set	9928 Sep 09 14:25	11° \mathbb{A} 08'02		max. Earth dist.	9934 Oct 23 11:46	8° \mathbb{M} 27'53	19.90050 AU
				morning rise	9934 Nov 09 07:51	9° \mathbb{M} 28'29	

retrograde	9935 Feb 11 12:36	12° ℳ 47'56		opposition	9941 May 24 11:32	8° ♊ 17'17	0°54'44
opposition	9935 Apr 27 19:01	10° ℳ 45'11	1°03'16	min. Earth dist.	9941 May 24 21:48	8° ♊ 16'10	17.55840 AU
min. Earth dist.	9935 Apr 28 00:20	10° ℳ 44'36	17.87161 AU	direct	9941 Aug 07 09:33	6° ♊ 13'10	
direct	9935 Jul 11 12:04	8° ℳ 42'55		evening set	9941 Nov 09 04:29	9° ♊ 35'40	
evening set	9935 Oct 12 02:13	11° ℳ 59'24					
conjunction	9935 Oct 28 15:42	12° ℳ 59'10	0°56'43	conjunction	9941 Nov 25 19:56	10° ♊ 36'51	0°47'54
minimum elong	9935 Oct 28 15:42	12° ℳ 59'10	0°56'59	minimum elong	9941 Nov 25 19:56	10° ♊ 36'51	0°48'17
max. Earth dist.	9935 Oct 28 07:41	12° ℳ 57'57	19.84293 AU	max. Earth dist.	9941 Nov 25 06:32	10° ♊ 34'47	19.53617 AU
morning rise	9935 Nov 14 06:21	13° ℳ 59'08		morning rise	9941 Dec 12 10:57	11° ♊ 38'00	
	9935 Dec 02 02:18	15° ℳ		retrograde	9942 Mar 15 23:23	15° ♊ 00'42	
retrograde	9936 Feb 16 08:34	17° ℳ 19'13		opposition	9942 May 29 08:09	12° ♊ 57'20	0°51'58
opposition	9936 May 01 12:10	15° ℳ 16'23	1°02'50	min. Earth dist.	9942 May 29 20:00	12° ♊ 56'03	17.51535 AU
min. Earth dist.	9936 May 01 19:03	15° ℳ 15'39	17.81498 AU	direct	9942 Aug 12 06:15	10° ♊ 52'53	
	9936 May 07 20:55	15° ℳ		evening set	9942 Nov 14 06:57	14° ♊ 16'14	
direct	9936 Jul 15 05:10	13° ℳ 13'50		conjunction	9942 Nov 30 22:31	15° ♊ 17'34	0°45'13
	9936 Sep 18 09:42	15° ℳ		minimum elong	9942 Nov 30 22:32	15° ♊ 17'34	0°45'37
evening set	9936 Oct 16 00:41	16° ℳ 31'27		max. Earth dist.	9942 Nov 30 08:41	15° ♊ 15'26	19.49517 AU
conjunction	9936 Nov 01 14:46	17° ℳ 31'29	0°56'08	morning rise	9942 Dec 17 13:28	16° ♊ 18'51	
minimum elong	9936 Nov 01 14:46	17° ℳ 31'29	0°56'25	retrograde	9943 Mar 21 00:05	19° ♊ 41'47	
max. Earth dist.	9936 Nov 01 06:46	17° ℳ 30'17	19.78706 AU	opposition	9943 Jun 03 05:10	17° ♊ 38'21	0°48'49
morning rise	9936 Nov 18 05:29	18° ℳ 31'41		min. Earth dist.	9943 Jun 03 16:26	17° ♊ 37'07	17.47642 AU
retrograde	9937 Feb 20 06:50	21° ℳ 52'21		direct	9943 Aug 17 06:32	15° ♊ 33'36	
opposition	9937 May 06 06:02	19° ℳ 49'28	1°02'00	evening set	9943 Nov 19 09:52	18° ♊ 57'43	
min. Earth dist.	9937 May 06 13:07	19° ℳ 48'42	17.75986 AU	max. Earth dist.	9943 Dec 05 11:25	19° ♊ 57'02	19.45845 AU
direct	9937 Jul 20 00:13	17° ℳ 46'39					
evening set	9937 Oct 21 00:01	21° ℳ 05'19		conjunction	9943 Dec 06 01:27	19° ♊ 59'12	0°42'14
conjunction	9937 Nov 06 14:21	22° ℳ 05'36	0°55'11	minimum elong	9943 Dec 06 01:27	19° ♊ 59'12	0°42'39
minimum elong	9937 Nov 06 14:21	22° ℳ 05'36	0°55'29	morning rise	9943 Dec 22 16:04	21° ♊ 00'35	
max. Earth dist.	9937 Nov 06 04:16	22° ℳ 04'04	19.73270 AU	retrograde	9944 Mar 24 21:48	24° ♊ 23'42	
morning rise	9937 Nov 23 05:23	23° ℳ 06'02		opposition	9944 Jun 07 02:42	22° ♊ 20'13	0°45'20
retrograde	9938 Feb 25 03:56	26° ℳ 27'14		min. Earth dist.	9944 Jun 07 15:11	22° ♊ 18'51	17.44221 AU
opposition	9938 May 11 00:41	24° ℳ 24'16	1°00'46	direct	9944 Aug 21 04:40	20° ♊ 15'12	
min. Earth dist.	9938 May 11 09:30	24° ℳ 23'19	17.70636 AU	evening set	9944 Nov 23 13:06	23° ♊ 40'03	
direct	9938 Jul 24 18:27	22° ℳ 21'08		conjunction	9944 Dec 10 04:33	24° ♊ 41'38	0°38'58
evening set	9938 Oct 26 00:09	25° ℳ 40'50		minimum elong	9944 Dec 10 04:33	24° ♊ 41'38	0°39'22
conjunction	9938 Nov 11 15:00	26° ℳ 41'22	0°53'53	max. Earth dist.	9944 Dec 09 13:59	24° ♊ 39'23	19.42693 AU
minimum elong	9938 Nov 11 15:00	26° ℳ 41'22	0°54'13	morning rise	9944 Dec 26 18:59	25° ♊ 43'06	
max. Earth dist.	9938 Nov 11 04:39	26° ℳ 39'47	19.68003 AU	retrograde	9945 Mar 29 22:38	29° ♊ 06'22	
morning rise	9938 Nov 28 06:03	27° ℳ 42'00		opposition	9945 Jun 12 00:33	27° ♊ 02'50	0°41'33
	9939 Jan 11 12:49	0° ♊		min. Earth dist.	9945 Jun 12 12:10	27° ♊ 01'34	17.41344 AU
retrograde	9939 Mar 02 03:55	1° ♊ 03'40		direct	9945 Aug 26 05:56	24° ♊ 57'36	
	9939 Apr 21 23:07	30° ♋		evening set	9945 Nov 28 16:30	28° ♊ 23'06	
opposition	9939 May 15 19:39	29° ℳ 00'36	0°59'09	conjunction	9945 Dec 15 07:56	29° ♊ 24'48	0°35'25
min. Earth dist.	9939 May 16 04:31	28° ℳ 59'39	17.65456 AU	minimum elong	9945 Dec 15 07:56	29° ♊ 24'48	0°35'50
direct	9939 Jul 29 15:31	26° ℳ 57'09		max. Earth dist.	9945 Dec 14 17:59	29° ♊ 22'38	19.40094 AU
	9939 Oct 26 00:47	0° ♊			9945 Dec 24 18:20	0° ♋	
evening set	9939 Oct 31 01:08	0° ♊ 17'50		morning rise	9945 Dec 31 21:52	0° ♋ 26'19	
conjunction	9939 Nov 16 16:10	1° ♊ 18'36	0°52'14	retrograde	9946 Apr 03 21:06	3° ♋ 49'40	
minimum elong	9939 Nov 16 16:10	1° ♊ 18'36	0°52'34	opposition	9946 Jun 16 22:58	1° ♋ 46'11	0°37'27
max. Earth dist.	9939 Nov 16 04:03	1° ♊ 16'45	19.62926 AU	min. Earth dist.	9946 Jun 17 11:22	1° ♋ 44'50	17.39039 AU
morning rise	9939 Dec 03 07:19	2° ♊ 19'26			9946 Aug 04 06:38	30° ♋	
retrograde	9940 Mar 06 01:14	5° ♊ 41'29		direct	9946 Aug 31 05:21	29° ♊ 40'47	
opposition	9940 May 19 15:25	3° ♊ 38'20	0°57'08		9946 Sep 26 23:34	0° ♋	
min. Earth dist.	9940 May 20 02:02	3° ♊ 37'11	17.60505 AU	evening set	9946 Dec 03 20:24	3° ♋ 06'54	
direct	9940 Aug 02 10:44	1° ♊ 34'32		conjunction	9946 Dec 20 11:30	4° ♋ 08'39	0°31'37
evening set	9940 Nov 04 02:27	4° ♊ 56'10		minimum elong	9946 Dec 20 11:30	4° ♋ 08'39	0°32'02
conjunction	9940 Nov 20 17:47	5° ♊ 57'08	0°50'14	max. Earth dist.	9946 Dec 19 20:47	4° ♋ 06'22	19.38098 AU
minimum elong	9940 Nov 20 17:47	5° ♊ 57'08	0°50'36	morning rise	9947 Jan 06 01:09	5° ♋ 10'13	
max. Earth dist.	9940 Nov 20 05:25	5° ♊ 55'14	19.58115 AU	retrograde	9947 Apr 08 21:54	8° ♋ 33'37	
morning rise	9940 Dec 07 08:53	6° ♊ 58'08		opposition	9947 Jun 21 21:30	6° ♋ 30'12	0°33'06
retrograde	9941 Mar 11 01:56	10° ♊ 20'33		min. Earth dist.	9947 Jun 22 09:07	6° ♋ 28'56	17.37342 AU
				direct	9947 Sep 05 07:07	4° ♋ 24'42	
				evening set	9947 Dec 09 00:24	7° ♋ 51'21	

conjunction	9947 Dec 25 15:19	8° $\overline{3}$ 53'10	0°27'36	evening set	9954 Jan 07 00:34	6° \approx 24'46	
minimum elong	9947 Dec 25 15:19	8° $\overline{3}$ 53'10	0°28'01				
max. Earth dist.	9947 Dec 25 01:44	8° $\overline{3}$ 51'03	19.36699 AU	conjunction	9954 Jan 23 12:08	7° \approx 26'15	0°00'34
morning rise	9948 Jan 11 04:18	9° $\overline{3}$ 54'43		minimum elong	9954 Jan 23 12:08	7° \approx 26'15	0°00'55
retrograde	9948 Apr 12 21:26	13° $\overline{3}$ 18'07		behind sun begin	9954 Jan 23 05:26	7° \approx 25'13	
opposition	9948 Jun 25 20:38	11° $\overline{3}$ 14'51	0°28'31	behind sun end	9954 Jan 23 18:51	7° \approx 27'16	
min. Earth dist.	9948 Jun 26 08:43	11° $\overline{3}$ 13'32	17.36232 AU	max. Earth dist.	9954 Jan 22 23:22	7° \approx 24'15	19.39028 AU
direct	9948 Sep 09 07:47	9° $\overline{3}$ 09'19		morning rise	9954 Feb 08 20:56	8° \approx 27'21	
evening set	9948 Dec 13 04:29	12° $\overline{3}$ 36'25		desc. node	9954 Mar 07 08:14	9° \approx 58'06	
				retrograde	9954 May 11 23:55	11° \approx 49'31	
conjunction	9948 Dec 29 18:52	13° $\overline{3}$ 38'14	0°23'24	opposition	9954 Jul 24 19:34	9° \approx 47'09	-0°01'57
minimum elong	9948 Dec 29 18:52	13° $\overline{3}$ 38'14	0°23'49	min. Earth dist.	9954 Jul 25 06:24	9° \approx 45'59	17.39942 AU
max. Earth dist.	9948 Dec 29 04:25	13° $\overline{3}$ 35'59	19.35883 AU	direct	9954 Oct 08 19:31	7° \approx 41'40	
morning rise	9949 Jan 15 07:28	14° $\overline{3}$ 39'48		evening set	9955 Jan 12 03:46	11° \approx 09'26	
retrograde	9949 Apr 17 22:13	18° $\overline{3}$ 03'11					
opposition	9949 Jun 30 19:59	16° $\overline{3}$ 00'03	0°23'44	conjunction	9955 Jan 28 14:27	12° \approx 10'46	-0°04'14
min. Earth dist.	9949 Jul 01 07:33	15° $\overline{3}$ 58'47	17.35690 AU	minimum elong	9955 Jan 28 14:27	12° \approx 10'46	0°03'55
direct	9949 Sep 14 09:54	13° $\overline{3}$ 54'29		behind sun begin	9955 Jan 28 07:49	12° \approx 09'45	
evening set	9949 Dec 18 08:41	17° $\overline{3}$ 21'59		behind sun end	9955 Jan 28 21:05	12° \approx 11'47	
				max. Earth dist.	9955 Jan 28 01:24	12° \approx 08'44	19.40954 AU
conjunction	9950 Jan 03 22:48	18° $\overline{3}$ 23'47	0°19'02	morning rise	9955 Feb 13 22:26	13° \approx 11'41	
minimum elong	9950 Jan 03 22:48	18° $\overline{3}$ 23'47	0°19'26		9955 Mar 18 06:15	15° \approx	
max. Earth dist.	9950 Jan 03 09:35	18° $\overline{3}$ 21'44	19.35596 AU	retrograde	9955 May 16 22:28	16° \approx 33'27	
morning rise	9950 Jan 20 10:36	19° $\overline{3}$ 25'18			9955 Jul 18 14:43	15° \approx	
retrograde	9950 Apr 22 22:32	22° $\overline{3}$ 48'34		opposition	9955 Jul 29 19:33	14° \approx 31'12	-0°07'10
opposition	9950 Jul 05 19:33	20° $\overline{3}$ 45'37	0°18'47	min. Earth dist.	9955 Jul 30 06:35	14° \approx 30'00	17.42091 AU
min. Earth dist.	9950 Jul 06 07:24	20° $\overline{3}$ 44'20	17.35644 AU	direct	9955 Oct 13 21:45	12° \approx 25'45	
direct	9950 Sep 19 11:21	18° $\overline{3}$ 40'03			9956 Jan 02 05:49	15° \approx	
evening set	9950 Dec 23 13:07	22° $\overline{3}$ 07'50		evening set	9956 Jan 17 06:18	15° \approx 53'15	
conjunction	9951 Jan 09 02:31	23° $\overline{3}$ 09'36	0°14'32	conjunction	9956 Feb 02 16:14	16° \approx 54'24	-0°08'53
minimum elong	9951 Jan 09 02:31	23° $\overline{3}$ 09'36	0°14'56	minimum elong	9956 Feb 02 16:14	16° \approx 54'24	0°08'34
behind sun begin	9951 Jan 09 00:09	23° $\overline{3}$ 09'14		behind sun begin	9956 Feb 02 10:24	16° \approx 53'31	
behind sun end	9951 Jan 09 04:53	23° $\overline{3}$ 09'57		behind sun end	9956 Feb 02 22:04	16° \approx 55'17	
max. Earth dist.	9951 Jan 08 12:11	23° $\overline{3}$ 07'22	19.35792 AU	max. Earth dist.	9956 Feb 02 04:16	16° \approx 52'32	19.43329 AU
morning rise	9951 Jan 25 13:47	24° $\overline{3}$ 11'03		morning rise	9956 Feb 18 23:18	17° \approx 55'08	
retrograde	9951 Apr 27 23:19	27° $\overline{3}$ 34'09		retrograde	9956 May 20 21:07	21° \approx 16'25	
opposition	9951 Jul 10 19:26	25° $\overline{3}$ 31'22	0°13'42	opposition	9956 Aug 02 19:20	19° \approx 14'16	-0°12'20
min. Earth dist.	9951 Jul 11 07:10	25° $\overline{3}$ 30'05	17.36075 AU	min. Earth dist.	9956 Aug 03 05:02	19° \approx 13'13	17.44682 AU
direct	9951 Sep 24 13:28	23° $\overline{3}$ 25'47		direct	9956 Oct 18 00:53	17° \approx 08'54	
evening set	9951 Dec 28 17:08	26° $\overline{3}$ 53'44		evening set	9957 Jan 21 08:05	20° \approx 36'00	
conjunction	9952 Jan 14 06:05	27° $\overline{3}$ 55'26	0°09'57	conjunction	9957 Feb 06 17:09	21° \approx 36'57	-0°13'27
minimum elong	9952 Jan 14 06:05	27° $\overline{3}$ 55'26	0°10'20	minimum elong	9957 Feb 06 17:09	21° \approx 36'57	0°13'10
behind sun begin	9952 Jan 14 00:47	27° $\overline{3}$ 54'37		behind sun begin	9957 Feb 06 13:13	21° \approx 36'21	
behind sun end	9952 Jan 14 11:22	27° $\overline{3}$ 56'14		behind sun end	9957 Feb 06 21:04	21° \approx 37'33	
max. Earth dist.	9952 Jan 13 17:00	27° $\overline{3}$ 53'23	19.36438 AU	max. Earth dist.	9957 Feb 06 05:47	21° \approx 35'11	19.46149 AU
morning rise	9952 Jan 30 16:26	28° $\overline{3}$ 56'47		morning rise	9957 Feb 22 23:20	22° \approx 37'28	
	9952 Feb 17 14:39	0° \approx		retrograde	9957 May 25 17:56	25° \approx 58'14	
retrograde	9952 May 01 23:58	2° \approx 19'38		opposition	9957 Aug 07 19:01	23° \approx 56'11	-0°17'23
opposition	9952 Jul 14 19:29	0° \approx 17'01	0°08'32	min. Earth dist.	9957 Aug 08 04:51	23° \approx 55'08	17.47744 AU
min. Earth dist.	9952 Jul 15 06:58	0° \approx 15'46	17.36931 AU	direct	9957 Oct 23 02:52	21° \approx 50'54	
	9952 Jul 21 08:12	30° \approx		evening set	9958 Jan 26 09:19	25° \approx 17'33	
direct	9952 Sep 28 15:13	28° $\overline{3}$ 11'29					
	9952 Dec 03 14:07	0° \approx		conjunction	9958 Feb 11 17:30	26° \approx 18'16	-0°17'55
evening set	9953 Jan 01 21:07	1° \approx 39'28		minimum elong	9958 Feb 11 17:30	26° \approx 18'16	0°17'40
				max. Earth dist.	9958 Feb 11 07:05	26° \approx 16'39	19.49455 AU
conjunction	9953 Jan 18 09:15	2° \approx 41'04	0°05'18	morning rise	9958 Feb 27 22:49	27° \approx 18'33	
minimum elong	9953 Jan 18 09:15	2° \approx 41'04	0°05'40		9958 Apr 22 23:04	0° \approx	
behind sun begin	9953 Jan 18 02:48	2° \approx 40'05		retrograde	9958 May 30 15:33	0° \approx 38'45	
behind sun end	9953 Jan 18 15:42	2° \approx 42'03			9958 Jul 08 06:56	30° \approx	
max. Earth dist.	9953 Jan 17 19:21	2° \approx 38'54	19.37516 AU	opposition	9958 Aug 12 18:12	28° \approx 36'50	-0°22'19
morning rise	9953 Feb 03 18:56	3° \approx 42'18		min. Earth dist.	9958 Aug 13 02:14	28° \approx 35'58	17.51287 AU
retrograde	9953 May 07 00:03	7° \approx 04'51		direct	9958 Oct 28 05:49	26° \approx 31'40	
opposition	9953 Jul 19 19:32	5° \approx 02'21	0°03'18	evening set	9959 Jan 31 09:51	29° \approx 57'46	
min. Earth dist.	9953 Jul 20 07:07	5° \approx 01'06	17.38231 AU		9959 Feb 01 00:33	0° \approx	
direct	9953 Oct 03 17:16	2° \approx 56'50					

conjunction	9959 Feb 16 17:07	0° $\mathbf{\text{H}}$ 58'14 -0°22'15	min. Earth dist.	9965 Sep 14 06:44	0° $\mathbf{\text{Y}}$ 42'41 17.87881 AU
minimum elong	9959 Feb 16 17:07	0° $\mathbf{\text{H}}$ 58'14 0°22'01		9965 Oct 01 14:13	30° $\mathbf{\text{R}}$ $\mathbf{\text{H}}$
max. Earth dist.	9959 Feb 16 08:02	0° $\mathbf{\text{H}}$ 56'50 19.53244 AU	direct	9965 Nov 30 02:08	28° $\mathbf{\text{H}}$ 39'46
morning rise	9959 Mar 04 21:25	1° $\mathbf{\text{H}}$ 58'17		9966 Jan 26 00:42	0° $\mathbf{\text{Y}}$
retrograde	9959 Jun 04 11:21	5° $\mathbf{\text{H}}$ 17'54	evening set	9966 Mar 04 15:34	2° $\mathbf{\text{Y}}$ 00'24
opposition	9959 Aug 17 17:25	3° $\mathbf{\text{H}}$ 16'08 -0°27'03			
min. Earth dist.	9959 Aug 18 01:24	3° $\mathbf{\text{H}}$ 15'17 17.55337 AU	conjunction	9966 Mar 20 16:11	2° $\mathbf{\text{Y}}$ 58'53 -0°46'42
direct	9959 Nov 02 06:30	1° $\mathbf{\text{H}}$ 11'09	minimum elong	9966 Mar 20 16:11	2° $\mathbf{\text{Y}}$ 58'53 0°46'41
evening set	9960 Feb 05 09:30	4° $\mathbf{\text{H}}$ 36'38	max. Earth dist.	9966 Mar 20 13:56	2° $\mathbf{\text{Y}}$ 58'32 19.90940 AU
			morning rise	9966 Apr 05 14:31	3° $\mathbf{\text{Y}}$ 57'01
conjunction	9960 Feb 21 15:45	5° $\mathbf{\text{H}}$ 36'50 -0°26'25	retrograde	9966 Jul 06 01:42	7° $\mathbf{\text{Y}}$ 12'13
minimum elong	9960 Feb 21 15:45	5° $\mathbf{\text{H}}$ 36'50 0°26'14	opposition	9966 Sep 19 00:57	5° $\mathbf{\text{Y}}$ 12'03 -0°53'16
max. Earth dist.	9960 Feb 21 07:30	5° $\mathbf{\text{H}}$ 35'34 19.57550 AU	min. Earth dist.	9966 Sep 19 01:35	5° $\mathbf{\text{Y}}$ 11'59 17.94020 AU
morning rise	9960 Mar 08 19:12	6° $\mathbf{\text{H}}$ 36'38	direct	9966 Dec 04 23:45	3° $\mathbf{\text{Y}}$ 09'14
retrograde	9960 Jun 08 08:37	9° $\mathbf{\text{H}}$ 55'40	evening set	9967 Mar 09 09:35	6° $\mathbf{\text{Y}}$ 28'54
opposition	9960 Aug 21 16:10	7° $\mathbf{\text{H}}$ 54'05 -0°31'36			
min. Earth dist.	9960 Aug 21 21:58	7° $\mathbf{\text{H}}$ 53'28 17.59881 AU	conjunction	9967 Mar 25 09:31	7° $\mathbf{\text{Y}}$ 27'05 -0°49'08
direct	9960 Nov 06 08:23	5° $\mathbf{\text{H}}$ 49'20	minimum elong	9967 Mar 25 09:30	7° $\mathbf{\text{Y}}$ 27'05 0°49'09
evening set	9961 Feb 09 08:27	9° $\mathbf{\text{H}}$ 14'08	max. Earth dist.	9967 Mar 25 09:14	7° $\mathbf{\text{Y}}$ 27'03 19.97096 AU
			morning rise	9967 Apr 10 06:56	8° $\mathbf{\text{Y}}$ 24'56
conjunction	9961 Feb 25 13:51	10° $\mathbf{\text{H}}$ 14'05 -0°30'24	retrograde	9967 Jul 10 18:14	11° $\mathbf{\text{Y}}$ 39'27
minimum elong	9961 Feb 25 13:51	10° $\mathbf{\text{H}}$ 14'05 0°30'13	opposition	9967 Sep 23 20:58	9° $\mathbf{\text{Y}}$ 39'29 -0°55'47
max. Earth dist.	9961 Feb 25 07:24	10° $\mathbf{\text{H}}$ 13'05 19.62327 AU	min. Earth dist.	9967 Sep 23 21:19	9° $\mathbf{\text{Y}}$ 39'27 18.00185 AU
morning rise	9961 Mar 13 16:17	11° $\mathbf{\text{H}}$ 13'37	direct	9967 Dec 09 20:44	7° $\mathbf{\text{Y}}$ 37'00
retrograde	9961 Jun 13 03:35	14° $\mathbf{\text{H}}$ 32'01	evening set	9968 Mar 13 02:42	10° $\mathbf{\text{Y}}$ 55'38
opposition	9961 Aug 26 14:34	12° $\mathbf{\text{H}}$ 30'41 -0°35'54			
min. Earth dist.	9961 Aug 26 20:22	12° $\mathbf{\text{H}}$ 30'04 17.64880 AU	conjunction	9968 Mar 29 01:39	11° $\mathbf{\text{Y}}$ 53'31 -0°51'15
direct	9961 Nov 11 07:09	10° $\mathbf{\text{H}}$ 26'13	minimum elong	9968 Mar 29 01:38	11° $\mathbf{\text{Y}}$ 53'31 0°51'18
evening set	9962 Feb 14 06:43	13° $\mathbf{\text{H}}$ 50'18	max. Earth dist.	9968 Mar 29 01:08	11° $\mathbf{\text{Y}}$ 53'26 20.03267 AU
			morning rise	9968 Apr 13 22:35	12° $\mathbf{\text{Y}}$ 51'05
conjunction	9962 Mar 02 11:06	14° $\mathbf{\text{H}}$ 49'58 -0°34'10	retrograde	9968 Jul 14 10:25	16° $\mathbf{\text{Y}}$ 04'57
minimum elong	9962 Mar 02 11:05	14° $\mathbf{\text{H}}$ 49'58 0°34'01	opposition	9968 Sep 27 16:15	14° $\mathbf{\text{Y}}$ 05'07 -0°57'57
max. Earth dist.	9962 Mar 02 05:01	14° $\mathbf{\text{H}}$ 49'02 19.67532 AU	min. Earth dist.	9968 Sep 27 15:21	14° $\mathbf{\text{Y}}$ 05'12 18.06358 AU
morning rise	9962 Mar 18 12:47	15° $\mathbf{\text{H}}$ 49'14	direct	9968 Dec 13 16:41	12° $\mathbf{\text{Y}}$ 02'56
retrograde	9962 Jun 18 00:29	19° $\mathbf{\text{H}}$ 07'01	evening set	9969 Mar 17 18:49	15° $\mathbf{\text{Y}}$ 20'31
opposition	9962 Aug 31 12:35	17° $\mathbf{\text{H}}$ 05'55 -0°39'58			
min. Earth dist.	9962 Aug 31 16:25	17° $\mathbf{\text{H}}$ 05'31 17.70257 AU	conjunction	9969 Apr 02 17:11	16° $\mathbf{\text{Y}}$ 18'06 -0°53'03
direct	9962 Nov 16 07:39	15° $\mathbf{\text{H}}$ 01'46	minimum elong	9969 Apr 02 17:11	16° $\mathbf{\text{Y}}$ 18'06 0°53'08
evening set	9963 Feb 19 04:06	18° $\mathbf{\text{H}}$ 25'04	max. Earth dist.	9969 Apr 02 18:37	16° $\mathbf{\text{Y}}$ 18'19 20.09422 AU
			morning rise	9969 Apr 18 13:20	17° $\mathbf{\text{Y}}$ 15'24
conjunction	9963 Mar 07 07:37	19° $\mathbf{\text{H}}$ 24'27 -0°37'42	retrograde	9969 Jul 19 01:39	20° $\mathbf{\text{Y}}$ 28'33
minimum elong	9963 Mar 07 07:37	19° $\mathbf{\text{H}}$ 24'27 0°37'35	opposition	9969 Oct 02 10:48	18° $\mathbf{\text{Y}}$ 28'52 -0°59'46
max. Earth dist.	9963 Mar 07 03:34	19° $\mathbf{\text{H}}$ 23'50 19.73062 AU	min. Earth dist.	9969 Oct 02 09:26	18° $\mathbf{\text{Y}}$ 29'00 18.12493 AU
morning rise	9963 Mar 23 08:15	20° $\mathbf{\text{H}}$ 23'26	direct	9969 Dec 18 13:10	16° $\mathbf{\text{Y}}$ 26'59
retrograde	9963 Jun 22 18:42	23° $\mathbf{\text{H}}$ 40'36	evening set	9970 Mar 22 10:09	19° $\mathbf{\text{Y}}$ 43'30
opposition	9963 Sep 05 10:26	21° $\mathbf{\text{H}}$ 39'45 -0°43'45			
min. Earth dist.	9963 Sep 05 14:16	21° $\mathbf{\text{H}}$ 39'21 17.75929 AU	conjunction	9970 Apr 07 07:38	20° $\mathbf{\text{Y}}$ 40'47 -0°54'32
direct	9963 Nov 21 05:39	19° $\mathbf{\text{H}}$ 35'56	minimum elong	9970 Apr 07 07:37	20° $\mathbf{\text{Y}}$ 40'47 0°54'40
evening set	9964 Feb 24 00:49	22° $\mathbf{\text{H}}$ 58'25	max. Earth dist.	9970 Apr 07 08:55	20° $\mathbf{\text{Y}}$ 40'58 20.15548 AU
			morning rise	9970 Apr 23 03:23	21° $\mathbf{\text{Y}}$ 37'48
conjunction	9964 Mar 11 03:15	23° $\mathbf{\text{H}}$ 57'29 -0°40'58	retrograde	9970 Jul 23 15:43	24° $\mathbf{\text{Y}}$ 50'17
minimum elong	9964 Mar 11 03:15	23° $\mathbf{\text{H}}$ 57'29 0°40'53	opposition	9970 Oct 07 04:50	22° $\mathbf{\text{Y}}$ 50'42 -1°01'13
max. Earth dist.	9964 Mar 10 23:14	23° $\mathbf{\text{H}}$ 56'52 19.78860 AU	min. Earth dist.	9970 Oct 07 02:22	22° $\mathbf{\text{Y}}$ 50'57 18.18617 AU
morning rise	9964 Mar 27 03:11	24° $\mathbf{\text{H}}$ 56'12	direct	9970 Dec 23 07:38	20° $\mathbf{\text{Y}}$ 49'05
retrograde	9964 Jun 26 14:19	28° $\mathbf{\text{H}}$ 12'43	evening set	9971 Mar 27 00:13	24° $\mathbf{\text{Y}}$ 04'31
opposition	9964 Sep 09 07:41	26° $\mathbf{\text{H}}$ 12'06 -0°47'14			
min. Earth dist.	9964 Sep 09 09:46	26° $\mathbf{\text{H}}$ 11'53 17.81835 AU	conjunction	9971 Apr 11 21:10	25° $\mathbf{\text{Y}}$ 01'30 -0°55'42
direct	9964 Nov 25 04:46	24° $\mathbf{\text{H}}$ 08'38	minimum elong	9971 Apr 11 21:09	25° $\mathbf{\text{Y}}$ 01'30 0°55'50
evening set	9965 Feb 27 20:29	27° $\mathbf{\text{H}}$ 30'12	max. Earth dist.	9971 Apr 12 00:37	25° $\mathbf{\text{Y}}$ 02'02 20.21662 AU
			morning rise	9971 Apr 27 16:15	25° $\mathbf{\text{Y}}$ 58'16
conjunction	9965 Mar 15 22:10	28° $\mathbf{\text{H}}$ 29'00 -0°43'59	retrograde	9971 Jul 28 05:28	29° $\mathbf{\text{Y}}$ 10'04
minimum elong	9965 Mar 15 22:10	28° $\mathbf{\text{H}}$ 28'59 0°43'57	opposition	9971 Oct 11 22:15	27° $\mathbf{\text{Y}}$ 10'36 -1°02'18
max. Earth dist.	9965 Mar 15 20:11	28° $\mathbf{\text{H}}$ 28'41 19.84842 AU	min. Earth dist.	9971 Oct 11 18:45	27° $\mathbf{\text{Y}}$ 10'58 18.24728 AU
morning rise	9965 Mar 31 21:09	29° $\mathbf{\text{H}}$ 27'25	direct	9971 Dec 28 03:02	25° $\mathbf{\text{Y}}$ 09'16
	9965 Apr 10 02:37	0° $\mathbf{\text{Y}}$	evening set	9972 Mar 30 13:35	28° $\mathbf{\text{Y}}$ 23'37
retrograde	9965 Jul 01 07:45	2° $\mathbf{\text{Y}}$ 43'17			
opposition	9965 Sep 14 04:39	0° $\mathbf{\text{Y}}$ 42'54 -0°50'25	conjunction	9972 Apr 15 09:44	29° $\mathbf{\text{Y}}$ 20'20 -0°56'31






























































































































minimum elong	9972 Apr 15 09:44	29° Υ 20'20	0°56'42	max. Earth dist.	9978 May 11 08:04	24° \mathcal{B} 41'02	20.63474 AU
max. Earth dist.	9972 Apr 15 13:23	29° Υ 20'53	20.27781 AU	morning rise	9978 May 26 15:56	25° \mathcal{B} 34'54	
	9972 Apr 26 10:33	0° \mathcal{B}		retrograde	9978 Aug 26 14:12	28° \mathcal{B} 42'56	
morning rise	9972 May 01 04:31	0° \mathcal{B} 16'50		opposition	9978 Nov 11 07:21	26° \mathcal{B} 44'29	-1°00'08
retrograde	9972 Jul 31 18:07	3° \mathcal{B} 28'01		min. Earth dist.	9978 Nov 10 21:46	26° \mathcal{B} 45'26	18.66169 AU
opposition	9972 Oct 15 14:55	1° \mathcal{B} 28'38	-1°03'02	direct	9979 Jan 27 08:04	24° \mathcal{B} 45'28	
min. Earth dist.	9972 Oct 15 10:21	1° \mathcal{B} 29'06	18.30870 AU	evening set	9979 Apr 29 13:05	27° \mathcal{B} 52'59	
	9972 Nov 25 00:45	30° $\mathcal{R}\Upsilon$					
direct	9972 Dec 31 19:22	29° Υ 27'36		conjunction	9979 May 15 06:39	28° \mathcal{B} 48'06	-0°53'36
	9973 Feb 05 15:31	0° \mathcal{B}		minimum elong	9979 May 15 06:39	28° \mathcal{B} 48'06	0°53'57
evening set	9973 Apr 04 01:54	2° \mathcal{B} 40'54		max. Earth dist.	9979 May 15 17:24	28° \mathcal{B} 49'41	20.68740 AU
				morning rise	9979 May 30 23:55	29° \mathcal{B} 43'12	
conjunction	9973 Apr 19 21:41	3° \mathcal{B} 37'21	-0°57'02		9979 Jun 04 22:03	0° \mathcal{I}	
minimum elong	9973 Apr 19 21:40	3° \mathcal{B} 37'21	0°57'14	retrograde	9979 Aug 31 00:57	2° \mathcal{I} 50'49	
max. Earth dist.	9973 Apr 20 03:22	3° \mathcal{B} 38'12	20.33924 AU	opposition	9979 Nov 15 20:20	0° \mathcal{I} 52'29	-0°58'32
morning rise	9973 May 05 15:57	4° \mathcal{B} 33'37		min. Earth dist.	9979 Nov 15 09:34	0° \mathcal{I} 53'34	18.71257 AU
retrograde	9973 Aug 05 06:24	7° \mathcal{B} 44'11			9979 Dec 08 08:26	30° $\mathcal{R}\mathcal{B}$	
opposition	9973 Oct 20 06:59	5° \mathcal{B} 44'57	-1°03'24	direct	9980 Jan 31 21:32	28° \mathcal{B} 53'45	
min. Earth dist.	9973 Oct 20 01:06	5° \mathcal{B} 45'33	18.37005 AU		9980 Mar 23 22:55	0° \mathcal{I}	
direct	9974 Jan 05 12:43	3° \mathcal{B} 44'15		evening set	9980 May 02 21:02	2° \mathcal{I} 00'25	
evening set	9974 Apr 08 13:34	6° \mathcal{B} 56'31					
				conjunction	9980 May 18 14:19	2° \mathcal{I} 55'21	-0°52'02
conjunction	9974 Apr 24 08:39	7° \mathcal{B} 52'42	-0°57'13	minimum elong	9980 May 18 14:19	2° \mathcal{I} 55'21	0°52'23
minimum elong	9974 Apr 24 08:39	7° \mathcal{B} 52'42	0°57'27	max. Earth dist.	9980 May 19 00:54	2° \mathcal{I} 56'54	20.73639 AU
max. Earth dist.	9974 Apr 24 14:34	7° \mathcal{B} 53'35	20.40052 AU	morning rise	9980 Jun 03 07:44	3° \mathcal{I} 50'19	
morning rise	9974 May 10 02:42	8° \mathcal{B} 48'44		retrograde	9980 Sep 03 10:18	6° \mathcal{I} 57'33	
retrograde	9974 Aug 09 18:20	11° \mathcal{B} 58'45		opposition	9980 Nov 19 08:47	4° \mathcal{I} 59'17	-0°56'38
opposition	9974 Oct 24 22:31	9° \mathcal{B} 59'40	-1°03'25	min. Earth dist.	9980 Nov 18 22:31	5° \mathcal{I} 00'19	18.75969 AU
min. Earth dist.	9974 Oct 24 15:50	10° \mathcal{B} 00'21	18.43125 AU	direct	9981 Feb 04 07:21	3° \mathcal{I} 00'48	
direct	9975 Jan 10 03:06	7° \mathcal{B} 59'18		evening set	9981 May 07 04:20	6° \mathcal{I} 06'39	
evening set	9975 Apr 13 00:20	11° \mathcal{B} 10'34					
				conjunction	9981 May 22 21:40	7° \mathcal{I} 01'25	-0°50'12
conjunction	9975 Apr 28 19:07	12° \mathcal{B} 06'31	-0°57'05	minimum elong	9981 May 22 21:40	7° \mathcal{I} 01'25	0°50'35
minimum elong	9975 Apr 28 19:07	12° \mathcal{B} 06'31	0°57'21	max. Earth dist.	9981 May 23 09:03	7° \mathcal{I} 03'05	20.78143 AU
max. Earth dist.	9975 Apr 29 02:55	12° \mathcal{B} 07'41	20.46142 AU	morning rise	9981 Jun 07 15:05	7° \mathcal{I} 56'15	
morning rise	9975 May 14 12:48	13° \mathcal{B} 02'20		retrograde	9981 Sep 07 20:20	11° \mathcal{I} 03'06	
	9975 Jun 21 13:23	15° \mathcal{B}		opposition	9981 Nov 23 20:45	9° \mathcal{I} 04'53	-0°54'27
retrograde	9975 Aug 14 05:46	16° \mathcal{B} 11'48		min. Earth dist.	9981 Nov 23 09:22	9° \mathcal{I} 06'01	18.80248 AU
	9975 Oct 09 17:08	15° $\mathcal{R}\mathcal{B}$		direct	9982 Feb 08 19:47	7° \mathcal{I} 06'37	
opposition	9975 Oct 29 13:30	14° \mathcal{B} 12'54	-1°03'05	evening set	9982 May 11 11:10	10° \mathcal{I} 11'40	
min. Earth dist.	9975 Oct 29 05:25	14° \mathcal{B} 13'43	18.49160 AU				
direct	9976 Jan 14 18:26	12° \mathcal{B} 12'54		conjunction	9982 May 27 04:21	11° \mathcal{I} 06'18	-0°48'08
	9976 Apr 09 16:09	15° \mathcal{B}		minimum elong	9982 May 27 04:21	11° \mathcal{I} 06'18	0°48'31
evening set	9976 Apr 16 10:25	15° \mathcal{B} 23'11		max. Earth dist.	9982 May 27 15:31	11° \mathcal{I} 07'56	20.82203 AU
				morning rise	9982 Jun 11 22:00	12° \mathcal{I} 01'01	
conjunction	9976 May 02 04:42	16° \mathcal{B} 18'53	-0°56'39	retrograde	9982 Sep 12 04:50	15° \mathcal{I} 07'32	
minimum elong	9976 May 02 04:42	16° \mathcal{B} 18'53	0°56'56	opposition	9982 Nov 28 08:24	13° \mathcal{I} 09'19	-0°52'01
max. Earth dist.	9976 May 02 12:41	16° \mathcal{B} 20'04	20.52115 AU	min. Earth dist.	9982 Nov 27 21:35	13° \mathcal{I} 10'24	18.84100 AU
morning rise	9976 May 17 22:20	17° \mathcal{B} 14'31		direct	9983 Feb 13 05:02	11° \mathcal{I} 11'12	
retrograde	9976 Aug 17 16:57	20° \mathcal{B} 23'29		evening set	9983 May 15 17:25	14° \mathcal{I} 15'29	
opposition	9976 Nov 02 03:59	18° \mathcal{B} 24'44	-1°02'25				
min. Earth dist.	9976 Nov 01 19:34	18° \mathcal{B} 25'35	18.55062 AU	conjunction	9983 May 31 10:44	15° \mathcal{I} 10'00	-0°45'49
direct	9977 Jan 18 06:59	16° \mathcal{B} 25'04		minimum elong	9983 May 31 10:45	15° \mathcal{I} 10'00	0°46'13
evening set	9977 Apr 20 19:52	19° \mathcal{B} 34'25		max. Earth dist.	9983 May 31 22:45	15° \mathcal{I} 11'45	20.85853 AU
				morning rise	9983 Jun 16 04:33	16° \mathcal{I} 04'37	
conjunction	9977 May 06 13:57	20° \mathcal{B} 29'55	-0°55'55	retrograde	9983 Sep 16 13:59	19° \mathcal{I} 10'49	
minimum elong	9977 May 06 13:57	20° \mathcal{B} 29'55	0°56'14	opposition	9983 Dec 02 19:18	17° \mathcal{I} 12'34	-0°49'19
max. Earth dist.	9977 May 06 23:27	20° \mathcal{B} 31'19	20.57918 AU	min. Earth dist.	9983 Dec 02 07:15	17° \mathcal{I} 13'47	18.87544 AU
morning rise	9977 May 22 07:19	21° \mathcal{B} 25'20		direct	9984 Feb 17 16:02	15° \mathcal{I} 14'36	
retrograde	9977 Aug 22 03:54	24° \mathcal{B} 33'49		evening set	9984 May 18 23:14	18° \mathcal{I} 18'10	
opposition	9977 Nov 06 17:46	22° \mathcal{B} 35'14	-1°01'26				
min. Earth dist.	9977 Nov 06 08:08	22° \mathcal{B} 36'13	18.60744 AU	conjunction	9984 Jun 03 16:33	19° \mathcal{I} 12'35	-0°43'17
direct	9978 Jan 22 21:11	20° \mathcal{B} 35'55		minimum elong	9984 Jun 03 16:33	19° \mathcal{I} 12'35	0°43'42
evening set	9978 Apr 25 04:54	23° \mathcal{B} 44'20		max. Earth dist.	9984 Jun 04 04:31	19° \mathcal{I} 14'19	20.89108 AU
				morning rise	9984 Jun 19 10:44	20° \mathcal{I} 07'07	
conjunction	9978 May 10 22:33	24° \mathcal{B} 39'38	-0°54'54	retrograde	9984 Sep 19 21:50	23° \mathcal{I} 13'02	
minimum elong	9978 May 10 22:33	24° \mathcal{B} 39'38	0°55'13	opposition	9984 Dec 06 05:54	21° \mathcal{I} 14'45	-0°46'24

min. Earth dist.	9984 Dec 05 18:23	21° Π 15'54	18.90629 AU	conjunction	9991 Jul 02 04:00	17° \mathfrak{D} 12'12	-0°20'37
direct	9985 Feb 21 00:13	19° Π 16'55		minimum elong	9991 Jul 02 04:00	17° \mathfrak{D} 12'12	0°21'03
evening set	9985 May 23 04:36	22° Π 19'50		max. Earth dist.	9991 Jul 02 18:30	17° \mathfrak{D} 14'17	21.02729 AU
				morning rise	9991 Jul 18 01:11	18° \mathfrak{D} 06'37	
conjunction	9985 Jun 07 22:07	23° Π 14'09	-0°40'32	retrograde	9991 Oct 19 08:39	21° \mathfrak{D} 12'11	
minimum elong	9985 Jun 07 22:07	23° Π 14'09	0°40'57	opposition	9992 Jan 04 22:05	19° \mathfrak{D} 13'50	-0°20'43
max. Earth dist.	9985 Jun 08 10:59	23° Π 16'00	20.92027 AU	min. Earth dist.	9992 Jan 04 08:01	19° \mathfrak{D} 15'15	19.03007 AU
morning rise	9985 Jun 23 16:31	24° Π 08'36		direct	9992 Mar 21 04:41	17° \mathfrak{D} 16'56	
retrograde	9985 Sep 24 06:29	27° Π 14'19		evening set	9992 Jun 19 13:28	20° \mathfrak{D} 17'15	
opposition	9985 Dec 10 15:50	25° Π 16'00	-0°43'15				
min. Earth dist.	9985 Dec 10 02:52	25° Π 17'18	18.93384 AU	conjunction	9992 Jul 05 09:09	21° \mathfrak{D} 11'26	-0°16'52
direct	9986 Feb 25 09:39	23° Π 18'18		minimum elong	9992 Jul 05 09:08	21° \mathfrak{D} 11'26	0°17'16
evening set	9986 May 27 09:45	26° Π 20'38		max. Earth dist.	9992 Jul 05 23:06	21° \mathfrak{D} 13'25	21.03140 AU
				morning rise	9992 Jul 21 06:58	22° \mathfrak{D} 05'54	
conjunction	9986 Jun 12 03:21	27° Π 14'52	-0°37'36	retrograde	9992 Oct 22 15:43	25° \mathfrak{D} 11'36	
minimum elong	9986 Jun 12 03:21	27° Π 14'52	0°38'02	opposition	9993 Jan 08 06:40	23° \mathfrak{D} 13'13	-0°16'31
max. Earth dist.	9986 Jun 12 16:16	27° Π 16'44	20.94627 AU	min. Earth dist.	9993 Jan 07 18:00	23° \mathfrak{D} 14'29	19.03177 AU
morning rise	9986 Jun 27 22:10	28° Π 09'17		direct	9993 Mar 25 09:35	21° \mathfrak{D} 16'23	
	9986 Aug 03 11:35	0° \mathfrak{D}		evening set	9993 Jun 23 18:17	24° \mathfrak{D} 16'35	
retrograde	9986 Sep 28 13:55	1° \mathfrak{D} 14'50					
	9986 Nov 26 11:52	30° \mathfrak{R} Π		conjunction	9993 Jul 09 14:29	25° \mathfrak{D} 10'48	-0°13'02
opposition	9986 Dec 15 01:41	29° Π 16'30	-0°39'54	minimum elong	9993 Jul 09 14:29	25° \mathfrak{D} 10'48	0°13'27
min. Earth dist.	9986 Dec 14 13:12	29° Π 17'45	18.95843 AU	behind sun begin	9993 Jul 09 10:43	25° \mathfrak{D} 10'16	
direct	9987 Mar 01 16:51	27° Π 18'57		behind sun end	9993 Jul 09 18:15	25° \mathfrak{D} 11'20	
	9987 May 25 09:08	0° \mathfrak{D}		max. Earth dist.	9993 Jul 10 04:21	25° \mathfrak{D} 12'47	21.03057 AU
evening set	9987 May 31 14:25	0° \mathfrak{D} 20'46		morning rise	9993 Jul 25 12:50	26° \mathfrak{D} 05'20	
				retrograde	9993 Oct 27 01:11	29° \mathfrak{D} 11'12	
conjunction	9987 Jun 16 08:21	1° \mathfrak{D} 14'57	-0°34'30	opposition	9994 Jan 12 15:02	27° \mathfrak{D} 12'46	-0°12'14
minimum elong	9987 Jun 16 08:21	1° \mathfrak{D} 14'57	0°34'55	min. Earth dist.	9994 Jan 12 01:45	27° \mathfrak{D} 14'06	19.02822 AU
max. Earth dist.	9987 Jun 16 22:08	1° \mathfrak{D} 16'57	20.96940 AU	direct	9994 Mar 29 17:53	25° \mathfrak{D} 15'58	
morning rise	9987 Jul 02 03:32	2° \mathfrak{D} 09'20		evening set	9994 Jun 27 23:25	28° \mathfrak{D} 16'05	
retrograde	9987 Oct 02 23:11	5° \mathfrak{D} 14'47					
opposition	9987 Dec 19 10:59	3° \mathfrak{D} 16'27	-0°36'22	conjunction	9994 Jul 13 20:03	29° \mathfrak{D} 10'22	-0°09'09
min. Earth dist.	9987 Dec 18 21:06	3° \mathfrak{D} 17'50	18.97992 AU	minimum elong	9994 Jul 13 20:04	29° \mathfrak{D} 10'22	0°09'32
direct	9988 Mar 05 01:03	1° \mathfrak{D} 19'02		behind sun begin	9994 Jul 13 14:34	29° \mathfrak{D} 09'36	
evening set	9988 Jun 03 19:09	4° \mathfrak{D} 20'25		behind sun end	9994 Jul 14 01:33	29° \mathfrak{D} 11'08	
				max. Earth dist.	9994 Jul 14 09:06	29° \mathfrak{D} 12'13	21.02426 AU
conjunction	9988 Jun 19 13:17	5° \mathfrak{D} 14'34	-0°31'14		9994 Jul 28 07:42	0° \mathfrak{Q}	
minimum elong	9988 Jun 19 13:17	5° \mathfrak{D} 14'34	0°31'39	morning rise	9994 Jul 29 19:05	0° \mathfrak{Q} 04'58	
max. Earth dist.	9988 Jun 20 03:00	5° \mathfrak{D} 16'33	20.98925 AU	retrograde	9994 Oct 31 08:44	3° \mathfrak{Q} 11'03	
morning rise	9988 Jul 05 08:58	6° \mathfrak{D} 08'57		opposition	9995 Jan 16 23:35	1° \mathfrak{Q} 12'30	-0°07'53
retrograde	9988 Oct 06 06:02	9° \mathfrak{D} 14'20		min. Earth dist.	9995 Jan 16 11:50	1° \mathfrak{Q} 13'40	19.01921 AU
opposition	9988 Dec 22 20:00	7° \mathfrak{D} 16'00	-0°32'39		9995 Feb 18 11:17	30° \mathfrak{R} \mathfrak{D}	
min. Earth dist.	9988 Dec 22 06:56	7° \mathfrak{D} 17'19	18.99815 AU	direct	9995 Apr 02 23:01	29° \mathfrak{D} 15'39	
direct	9989 Mar 09 07:30	5° \mathfrak{D} 18'44			9995 May 15 02:25	0° \mathfrak{Q}	
evening set	9989 Jun 07 23:40	8° \mathfrak{D} 19'46		evening set	9995 Jul 02 04:33	2° \mathfrak{Q} 15'44	
conjunction	9989 Jun 23 18:12	9° \mathfrak{D} 13'54	-0°27'49	conjunction	9995 Jul 18 01:53	3° \mathfrak{Q} 10'06	-0°05'13
minimum elong	9989 Jun 23 18:13	9° \mathfrak{D} 13'54	0°28'14	minimum elong	9995 Jul 18 01:52	3° \mathfrak{Q} 10'06	0°05'35
max. Earth dist.	9989 Jun 24 08:31	9° \mathfrak{D} 15'57	21.00581 AU	behind sun begin	9995 Jul 17 19:31	3° \mathfrak{Q} 09'13	
morning rise	9989 Jul 09 14:19	10° \mathfrak{D} 08'16		behind sun end	9995 Jul 18 08:12	3° \mathfrak{Q} 10'59	
retrograde	9989 Oct 10 16:01	13° \mathfrak{D} 13'40		max. Earth dist.	9995 Jul 18 14:34	3° \mathfrak{Q} 11'55	21.01262 AU
opposition	9989 Dec 27 04:49	11° \mathfrak{D} 15'20	-0°28'48	morning rise	9995 Aug 03 01:33	4° \mathfrak{Q} 04'48	
min. Earth dist.	9989 Dec 26 14:34	11° \mathfrak{D} 16'45	19.01280 AU	retrograde	9995 Nov 04 18:00	7° \mathfrak{Q} 11'05	
direct	9990 Mar 13 15:11	9° \mathfrak{D} 18'12		opposition	9996 Jan 21 07:51	5° \mathfrak{Q} 12'23	-0°03'30
evening set	9990 Jun 12 04:10	12° \mathfrak{D} 18'56		min. Earth dist.	9996 Jan 20 19:38	5° \mathfrak{Q} 13'37	19.00480 AU
				direct	9996 Apr 06 06:56	3° \mathfrak{Q} 15'28	
conjunction	9990 Jun 27 22:58	13° \mathfrak{D} 13'03	-0°24'16	evening set	9996 Jul 05 10:03	6° \mathfrak{Q} 15'34	
minimum elong	9990 Jun 27 22:58	13° \mathfrak{D} 13'03	0°24'41				
max. Earth dist.	9990 Jun 28 13:09	13° \mathfrak{D} 15'05	21.01853 AU	conjunction	9996 Jul 21 07:52	7° \mathfrak{Q} 10'01	-0°01'13
morning rise	9990 Jul 13 19:39	14° \mathfrak{D} 07'27		minimum elong	9996 Jul 21 07:52	7° \mathfrak{Q} 10'01	0°01'34
retrograde	9990 Oct 14 22:42	17° \mathfrak{D} 12'55		behind sun begin	9996 Jul 21 01:16	7° \mathfrak{Q} 09'06	
opposition	9990 Dec 31 13:40	15° \mathfrak{D} 14'35	-0°24'49	behind sun end	9996 Jul 21 14:28	7° \mathfrak{Q} 10'56	
min. Earth dist.	9990 Dec 31 00:26	15° \mathfrak{D} 15'54	19.02358 AU	max. Earth dist.	9996 Jul 21 19:45	7° \mathfrak{Q} 11'43	20.99561 AU
direct	9991 Mar 17 20:47	13° \mathfrak{D} 17'35		morning rise	9996 Aug 06 08:16	8° \mathfrak{Q} 04'49	
evening set	9991 Jun 16 08:42	16° \mathfrak{D} 18'04		retrograde	9996 Nov 08 01:35	11° \mathfrak{Q} 11'21	
				asc. node	9996 Nov 08 19:03	11° \mathfrak{Q} 11'20	

opposition	9997 Jan 24 16:05	9°Ω12'28	0°00'55	evening set	10002 Jul 30 01:11	0°൬23'40	
min. Earth dist.	9997 Jan 24 05:26	9°Ω13'32	18.98542 AU				
direct	9997 Apr 10 12:23	7°Ω15'26		conjunction	10002 Aug 15 02:59	1°൬18'58	0°22'22
evening set	9997 Jul 09 15:38	10°Ω15'37		minimum elong	10002 Aug 15 02:59	1°൬18'58	0°22'07
				max. Earth dist.	10002 Aug 15 12:30	1°൬20'20	20.81517 AU
conjunction	9997 Jul 25 14:08	11°Ω10'10	0°02'54	morning rise	10002 Aug 31 07:39	2°൬14'41	
minimum elong	9997 Jul 25 14:08	11°Ω10'10	0°02'34	retrograde	10002 Dec 03 10:48	5°൬23'40	
behind sun begin	9997 Jul 25 07:32	11°Ω09'14		opposition	10003 Feb 18 19:03	3°൬23'44	0°26'47
behind sun end	9997 Jul 25 20:43	11°Ω11'05		min. Earth dist.	10003 Feb 18 10:51	3°൬24'34	18.79545 AU
max. Earth dist.	9997 Jul 26 01:48	11°Ω11'50	20.97412 AU	direct	10003 May 05 03:13	1°൬25'52	
morning rise	9997 Aug 10 15:11	12°Ω05'05		evening set	10003 Aug 03 09:27	4°൬28'02	
	9997 Oct 21 09:18	15°Ω					
retrograde	9997 Nov 12 10:53	15°Ω11'54		conjunction	10003 Aug 19 12:02	5°൬23'32	0°26'03
	9997 Dec 04 16:58	15°κΩ		minimum elong	10003 Aug 19 12:02	5°൬23'32	0°25'50
opposition	9998 Jan 29 00:18	13°Ω12'49	0°05'20	max. Earth dist.	10003 Aug 19 20:57	5°൬24'49	20.77505 AU
min. Earth dist.	9998 Jan 28 13:01	13°Ω13'57	18.96182 AU	morning rise	10003 Sep 04 17:28	6°൬19'28	
direct	9998 Apr 14 19:45	11°Ω15'38		retrograde	10003 Dec 07 23:36	9°൬29'01	
evening set	9998 Jul 13 21:28	14°Ω15'58		opposition	10004 Feb 23 04:13	7°൬28'57	0°30'48
	9998 Jul 26 18:40	15°Ω		min. Earth dist.	10004 Feb 22 19:48	7°൬29'48	18.75390 AU
				direct	10004 May 08 11:09	5°൬30'57	
conjunction	9998 Jul 29 20:30	15°Ω10'37	0°06'53	evening set	10004 Aug 06 18:31	8°൬33'43	
minimum elong	9998 Jul 29 20:31	15°Ω10'38	0°06'34				
behind sun begin	9998 Jul 29 14:18	15°Ω09'45		conjunction	10004 Aug 22 21:46	9°൬29'26	0°29'36
behind sun end	9998 Jul 30 02:44	15°Ω11'30		minimum elong	10004 Aug 22 21:46	9°൬29'26	0°29'26
max. Earth dist.	9998 Jul 30 07:41	15°Ω12'13	20.94856 AU	max. Earth dist.	10004 Aug 23 06:00	9°൬30'38	20.73198 AU
morning rise	9998 Aug 14 22:19	16°Ω05'41		morning rise	10004 Sep 08 03:53	10°൬25'34	
retrograde	9998 Nov 16 18:59	19°Ω12'50		retrograde	10004 Dec 11 10:10	13°൬35'44	
opposition	9999 Feb 02 08:42	17°Ω13'33	0°09'45	opposition	10005 Feb 26 13:49	11°൬35'33	0°34'41
min. Earth dist.	9999 Feb 01 22:46	17°Ω14'33	18.93453 AU	min. Earth dist.	10005 Feb 26 07:05	11°൬36'15	18.70939 AU
direct	9999 Apr 19 01:12	15°Ω16'14		direct	10005 May 12 17:56	9°൬37'26	
evening set	9999 Jul 18 03:42	18°Ω16'46		evening set	10005 Aug 11 04:18	12°൬40'51	
conjunction	9999 Aug 03 03:30	19°Ω11'34	0°10'50	conjunction	10005 Aug 27 08:18	13°൬36'47	0°33'02
minimum elong	9999 Aug 03 03:29	19°Ω11'34	0°10'32	minimum elong	10005 Aug 27 08:17	13°൬36'47	0°32'53
behind sun begin	9999 Aug 02 22:19	19°Ω10'51		max. Earth dist.	10005 Aug 27 15:29	13°൬37'50	20.68607 AU
behind sun end	9999 Aug 03 08:39	19°Ω12'18		morning rise	10005 Sep 12 15:08	14°൬33'09	
max. Earth dist.	9999 Aug 03 14:26	19°Ω13'08	20.91968 AU	retrograde	10005 Dec 16 00:03	17°൬43'58	
morning rise	9999 Aug 19 05:59	20°Ω06'46		opposition	10006 Mar 02 23:46	15°൬43'39	0°38'25
retrograde	9999 Nov 21 05:08	23°Ω14'18		min. Earth dist.	10006 Mar 02 17:09	15°൬44'20	18.66188 AU
opposition	10000 Feb 06 16:50	21°Ω14'49	0°14'07	direct	10006 May 17 02:31	13°൬45'22	
min. Earth dist.	10000 Feb 06 06:21	21°Ω15'53	18.90404 AU	evening set	10006 Aug 15 14:50	16°൬49'29	
direct	10000 Apr 22 08:24	19°Ω17'21					
evening set	10000 Jul 21 10:27	22°Ω18'12		conjunction	10006 Aug 31 19:34	17°൬45'40	0°36'19
				minimum elong	10006 Aug 31 19:34	17°൬45'40	0°36'12
conjunction	10000 Aug 06 10:51	23°Ω13'10	0°14'45	max. Earth dist.	10006 Sep 01 01:53	17°൬46'35	20.63675 AU
minimum elong	10000 Aug 06 10:50	23°Ω13'10	0°14'27	morning rise	10006 Sep 17 03:05	18°൬42'16	
behind sun begin	10000 Aug 06 07:52	23°Ω12'45		retrograde	10006 Dec 20 12:10	21°൬53'44	
behind sun end	10000 Aug 06 13:49	23°Ω13'35		opposition	10007 Mar 07 10:16	19°൬53'17	0°41'58
max. Earth dist.	10000 Aug 06 21:13	23°Ω14'38	20.88759 AU	min. Earth dist.	10007 Mar 07 05:29	19°൬53'46	18.61082 AU
morning rise	10000 Aug 22 14:04	24°Ω08'31		direct	10007 May 21 10:27	17°൬54'48	
retrograde	10000 Nov 24 13:50	27°Ω16'29		evening set	10007 Aug 20 02:20	20°൬59'40	
opposition	10001 Feb 10 01:24	25°Ω16'50	0°18'25				
min. Earth dist.	10001 Feb 09 16:16	25°Ω17'46	18.87055 AU	conjunction	10007 Sep 05 07:49	21°൬56'05	0°39'26
direct	10001 Apr 26 13:50	23°Ω19'14		minimum elong	10007 Sep 05 07:48	21°൬56'05	0°39'20
evening set	10001 Jul 25 17:27	26°Ω20'26		max. Earth dist.	10007 Sep 05 12:31	21°൬56'46	20.58399 AU
				morning rise	10007 Sep 21 16:05	22°൬52'55	
conjunction	10001 Aug 10 18:34	27°Ω15'34	0°18'36	retrograde	10007 Dec 25 03:09	26°൬05'02	
minimum elong	10001 Aug 10 18:34	27°Ω15'34	0°18'20	opposition	10008 Mar 10 20:57	24°൬04'24	0°45'20
max. Earth dist.	10001 Aug 11 04:38	27°Ω17'00	20.85278 AU	min. Earth dist.	10008 Mar 10 16:37	24°൬04'51	18.55627 AU
morning rise	10001 Aug 26 22:30	28°Ω11'06		direct	10008 May 24 20:15	22°൬05'40	
	10001 Oct 01 19:04	0°൬		evening set	10008 Aug 23 14:33	25°൬11'19	
retrograde	10001 Nov 29 01:19	1°൬19'33					
	10002 Jan 28 14:36	30°κΩ		conjunction	10008 Sep 08 20:47	26°൬08'00	0°42'21
opposition	10002 Feb 14 10:03	29°Ω19'44	0°22'39	minimum elong	10008 Sep 08 20:47	26°൬07'59	0°42'18
min. Earth dist.	10002 Feb 14 00:24	29°Ω20'43	18.83434 AU	max. Earth dist.	10008 Sep 09 00:32	26°൬08'32	20.52764 AU
direct	10002 Apr 30 21:21	27°Ω22'00		morning rise	10008 Sep 25 05:40	27°൬05'04	
	10002 Jul 22 22:52	0°൬			10008 Dec 02 01:09	0°Ω	

retrograde	10008 Dec 28 16:14	0° <u>♏</u> 17'50		conjunction	10015 Oct 10 12:43	26° <u>♏</u> 13'23	0°55'55
	10009 Jan 24 16:02	30° <u>♏</u> 17'00		minimum elong	10015 Oct 10 12:43	26° <u>♏</u> 13'23	0°56'04
opposition	10009 Mar 15 08:18	28° <u>♏</u> 17'00	0°48'28	max. Earth dist.	10015 Oct 10 08:46	26° <u>♏</u> 12'48	20.08938 AU
min. Earth dist.	10009 Mar 15 05:40	28° <u>♏</u> 17'17	18.49835 AU	morning rise	10015 Oct 27 01:49	27° <u>♏</u> 12'18	
direct	10009 May 29 05:12	26° <u>♏</u> 17'59			10015 Dec 26 10:02	0° <u>♏</u>	
evening set	10009 Aug 28 03:20	29° <u>♏</u> 24'26		retrograde	10016 Jan 29 11:16	0° <u>♏</u> 29'43	
	10009 Sep 07 08:45	0° <u>♏</u>			10016 Mar 03 20:55	30° <u>♏</u> <u>♏</u>	
conjunction	10009 Sep 13 10:18	0° <u>♏</u> 21'21	0°45'04	opposition	10016 Apr 14 03:34	28° <u>♏</u> 27'19	1°02'35
minimum elong	10009 Sep 13 10:17	0° <u>♏</u> 21'21	0°45'02	min. Earth dist.	10016 Apr 14 06:40	28° <u>♏</u> 26'59	18.05852 AU
max. Earth dist.	10009 Sep 13 12:26	0° <u>♏</u> 21'40	20.46843 AU	direct	10016 Jun 27 19:55	26° <u>♏</u> 25'57	
morning rise	10009 Sep 29 19:56	1° <u>♏</u> 18'41		evening set	10016 Sep 27 20:16	29° <u>♏</u> 39'03	
retrograde	10010 Jan 02 08:29	4° <u>♏</u> 32'08			10016 Oct 03 18:23	0° <u>♏</u>	
opposition	10010 Mar 19 19:58	2° <u>♏</u> 31'02	0°51'22	conjunction	10016 Oct 14 08:11	0° <u>♏</u> 37'57	0°56'40
min. Earth dist.	10010 Mar 19 17:46	2° <u>♏</u> 31'16	18.43789 AU	minimum elong	10016 Oct 14 08:10	0° <u>♏</u> 37'57	0°56'52
direct	10010 Jun 02 16:24	0° <u>♏</u> 31'41		max. Earth dist.	10016 Oct 14 04:24	0° <u>♏</u> 37'23	20.02770 AU
evening set	10010 Sep 01 17:01	3° <u>♏</u> 38'58		morning rise	10016 Oct 30 21:32	1° <u>♏</u> 37'07	
				retrograde	10017 Feb 02 05:27	4° <u>♏</u> 55'13	
conjunction	10010 Sep 18 00:47	4° <u>♏</u> 36'10	0°47'33	opposition	10017 Apr 18 18:53	2° <u>♏</u> 52'41	1°03'16
minimum elong	10010 Sep 18 00:46	4° <u>♏</u> 36'10	0°47'33	min. Earth dist.	10017 Apr 18 22:37	2° <u>♏</u> 52'17	17.99750 AU
max. Earth dist.	10010 Sep 18 02:20	4° <u>♏</u> 36'24	20.40684 AU	direct	10017 Jul 02 11:02	0° <u>♏</u> 51'03	
morning rise	10010 Oct 04 10:58	5° <u>♏</u> 33'46		evening set	10017 Oct 02 15:54	4° <u>♏</u> 05'13	
retrograde	10011 Jan 06 22:31	8° <u>♏</u> 47'51					
opposition	10011 Mar 24 07:59	6° <u>♏</u> 46'31	0°54'01	conjunction	10017 Oct 19 04:15	5° <u>♏</u> 04'24	0°57'05
min. Earth dist.	10011 Mar 24 07:17	6° <u>♏</u> 46'35	18.37548 AU	minimum elong	10017 Oct 19 04:15	5° <u>♏</u> 04'24	0°57'18
direct	10011 Jun 07 02:13	4° <u>♏</u> 46'50		max. Earth dist.	10017 Oct 18 22:29	5° <u>♏</u> 03'32	19.96745 AU
evening set	10011 Sep 06 07:31	7° <u>♏</u> 54'59		morning rise	10017 Nov 04 18:12	6° <u>♏</u> 03'51	
				retrograde	10018 Feb 07 00:45	9° <u>♏</u> 22'37	
conjunction	10011 Sep 22 15:57	8° <u>♏</u> 52'28	0°49'47	opposition	10018 Apr 23 10:52	7° <u>♏</u> 19'59	1°03'34
minimum elong	10011 Sep 22 15:57	8° <u>♏</u> 52'28	0°49'50	min. Earth dist.	10018 Apr 23 15:40	7° <u>♏</u> 19'29	17.93795 AU
max. Earth dist.	10011 Sep 22 15:48	8° <u>♏</u> 52'26	20.34385 AU	direct	10018 Jul 07 02:53	5° <u>♏</u> 18'04	
morning rise	10011 Oct 09 02:54	9° <u>♏</u> 50'19		evening set	10018 Oct 07 12:33	8° <u>♏</u> 33'21	
retrograde	10012 Jan 11 15:43	13° <u>♏</u> 05'03					
opposition	10012 Mar 27 20:27	11° <u>♏</u> 03'28	0°56'22	conjunction	10018 Oct 24 01:38	9° <u>♏</u> 32'50	0°57'10
min. Earth dist.	10012 Mar 27 20:15	11° <u>♏</u> 03'29	18.31200 AU	minimum elong	10018 Oct 24 01:37	9° <u>♏</u> 32'50	0°57'26
direct	10012 Jun 10 14:52	9° <u>♏</u> 03'26		max. Earth dist.	10018 Oct 23 19:58	9° <u>♏</u> 31'59	19.90846 AU
evening set	10012 Sep 09 22:42	12° <u>♏</u> 12'30		morning rise	10018 Nov 09 15:46	10° <u>♏</u> 32'31	
				retrograde	10019 Feb 11 21:01	13° <u>♏</u> 51'56	
conjunction	10012 Sep 26 07:54	13° <u>♏</u> 10'15	0°51'46	opposition	10019 Apr 28 03:20	11° <u>♏</u> 49'14	1°03'29
minimum elong	10012 Sep 26 07:54	13° <u>♏</u> 10'15	0°51'49	min. Earth dist.	10019 Apr 28 08:50	11° <u>♏</u> 48'39	17.87950 AU
max. Earth dist.	10012 Sep 26 07:31	13° <u>♏</u> 10'12	20.27990 AU	direct	10019 Jul 11 19:59	9° <u>♏</u> 47'03	
morning rise	10012 Oct 12 19:16	14° <u>♏</u> 08'23		evening set	10019 Oct 12 10:22	13° <u>♏</u> 03'27	
retrograde	10013 Jan 15 06:42	17° <u>♏</u> 23'47					
opposition	10013 Apr 01 09:27	15° <u>♏</u> 21'57	0°58'25	conjunction	10019 Oct 28 23:45	14° <u>♏</u> 03'12	0°56'55
min. Earth dist.	10013 Apr 01 10:22	15° <u>♏</u> 21'52	18.24791 AU	minimum elong	10019 Oct 28 23:45	14° <u>♏</u> 03'12	0°57'11
direct	10013 Jun 15 02:00	13° <u>♏</u> 21'34		max. Earth dist.	10019 Oct 28 15:44	14° <u>♏</u> 01'59	19.85054 AU
evening set	10013 Sep 14 14:48	16° <u>♏</u> 31'36			10019 Nov 13 17:08	15° <u>♏</u>	
				morning rise	10019 Nov 14 14:20	15° <u>♏</u> 03'08	
conjunction	10013 Oct 01 00:36	17° <u>♏</u> 29'38	0°53'27	retrograde	10020 Feb 16 17:20	18° <u>♏</u> 23'11	
minimum elong	10013 Oct 01 00:36	17° <u>♏</u> 29'38	0°53'33	opposition	10020 May 01 20:42	16° <u>♏</u> 20'24	1°03'02
max. Earth dist.	10013 Sep 30 22:31	17° <u>♏</u> 29'19	20.21589 AU	min. Earth dist.	10020 May 02 03:41	16° <u>♏</u> 19'39	17.82217 AU
morning rise	10013 Oct 17 12:40	18° <u>♏</u> 28'01			10020 Jun 04 20:21	15° <u>♏</u>	
retrograde	10014 Jan 20 00:37	21° <u>♏</u> 44'06		direct	10020 Jul 15 13:14	14° <u>♏</u> 17'54	
opposition	10014 Apr 05 22:55	19° <u>♏</u> 42'02	1°00'09		10020 Aug 24 12:33	15° <u>♏</u>	
min. Earth dist.	10014 Apr 06 00:23	19° <u>♏</u> 41'53	18.18409 AU	evening set	10020 Oct 16 08:43	17° <u>♏</u> 35'25	
direct	10014 Jun 19 15:58	17° <u>♏</u> 41'18					
evening set	10014 Sep 19 07:39	20° <u>♏</u> 52'19		conjunction	10020 Nov 01 22:43	18° <u>♏</u> 35'25	0°56'18
				minimum elong	10020 Nov 01 22:43	18° <u>♏</u> 35'25	0°56'36
conjunction	10014 Oct 05 18:16	21° <u>♏</u> 50'39	0°54'50	max. Earth dist.	10020 Nov 01 14:41	18° <u>♏</u> 34'12	19.79363 AU
minimum elong	10014 Oct 05 18:16	21° <u>♏</u> 50'39	0°54'58	morning rise	10020 Nov 18 13:22	19° <u>♏</u> 35'36	
max. Earth dist.	10014 Oct 05 16:12	21° <u>♏</u> 50'21	20.15220 AU	retrograde	10021 Feb 20 15:07	22° <u>♏</u> 56'13	
morning rise	10014 Oct 22 06:44	22° <u>♏</u> 49'18		opposition	10021 May 06 14:38	20° <u>♏</u> 53'21	1°02'10
retrograde	10015 Jan 24 16:52	26° <u>♏</u> 06'02		min. Earth dist.	10021 May 06 21:59	20° <u>♏</u> 52'33	17.76576 AU
opposition	10015 Apr 10 13:00	24° <u>♏</u> 03'48	1°01'32	direct	10021 Jul 20 08:32	18° <u>♏</u> 50'33	
min. Earth dist.	10015 Apr 10 15:21	24° <u>♏</u> 03'33	18.12075 AU	evening set	10021 Oct 21 08:11	22° <u>♏</u> 09'07	
direct	10015 Jun 24 05:04	22° <u>♏</u> 02'45					
evening set	10015 Sep 24 01:35	25° <u>♏</u> 14'47		conjunction	10021 Nov 06 22:26	23° <u>♏</u> 09'23	0°55'20

minimum elong	10021 Nov 06 22:26	23° \mathbb{M} 09'23	0°55'39	opposition	10028 Jun 07 11:03	23° \mathbb{X} 23'17	0°45'15
max. Earth dist.	10021 Nov 06 12:05	23° \mathbb{M} 07'48	19.73786 AU	min. Earth dist.	10028 Jun 07 23:13	23° \mathbb{X} 21'57	17.44340 AU
morning rise	10021 Nov 23 13:24	24° \mathbb{M} 09'47		direct	10028 Aug 21 12:22	21° \mathbb{X} 18'20	
retrograde	10022 Feb 25 12:10	27° \mathbb{M} 30'56		evening set	10028 Nov 23 20:41	24° \mathbb{X} 43'11	
opposition	10022 May 11 09:10	25° \mathbb{M} 27'57	1°00'55				
min. Earth dist.	10022 May 11 18:11	25° \mathbb{M} 26'59	17.71079 AU	conjunction	10028 Dec 10 12:08	25° \mathbb{X} 44'47	0°38'52
direct	10022 Jul 25 03:15	23° \mathbb{M} 24'49		minimum elong	10028 Dec 10 12:08	25° \mathbb{X} 44'47	0°39'18
evening set	10022 Oct 26 08:14	26° \mathbb{M} 44'25		max. Earth dist.	10028 Dec 09 21:58	25° \mathbb{X} 42'35	19.42840 AU
				morning rise	10028 Dec 27 02:34	26° \mathbb{X} 46'15	
conjunction	10022 Nov 11 23:02	27° \mathbb{M} 44'56	0°54'00		10029 Mar 11 15:16	0° \mathbb{Z}	
minimum elong	10022 Nov 11 23:02	27° \mathbb{M} 44'56	0°54'20	retrograde	10029 Mar 30 06:58	0° \mathbb{Z} 09'35	
max. Earth dist.	10022 Nov 11 12:34	27° \mathbb{M} 43'20	19.68374 AU		10029 Apr 17 23:54	30° \mathbb{R} \mathbb{X}	
morning rise	10022 Nov 28 14:01	28° \mathbb{M} 45'33		opposition	10029 Jun 12 08:56	28° \mathbb{X} 06'07	0°41'25
	10022 Dec 20 10:41	0° \mathbb{X}		min. Earth dist.	10029 Jun 12 20:08	28° \mathbb{X} 04'54	17.41521 AU
retrograde	10023 Mar 02 11:09	2° \mathbb{X} 07'09		direct	10029 Aug 26 13:18	26° \mathbb{X} 00'58	
opposition	10023 May 16 04:12	0° \mathbb{X} 04'04	0°59'15	evening set	10029 Nov 29 00:15	29° \mathbb{X} 26'31	
min. Earth dist.	10023 May 16 13:17	0° \mathbb{X} 03'05	17.65759 AU		10029 Dec 08 02:18	0° \mathbb{Z}	
	10023 May 17 17:48	30° \mathbb{R} \mathbb{M}		conjunction	10029 Dec 15 15:38	0° \mathbb{Z} 28'13	0°35'17
direct	10023 Jul 30 00:10	28° \mathbb{M} 00'37		minimum elong	10029 Dec 15 15:39	0° \mathbb{Z} 28'13	0°35'42
	10023 Oct 07 09:15	0° \mathbb{X}		max. Earth dist.	10029 Dec 15 01:51	0° \mathbb{Z} 26'04	19.40307 AU
evening set	10023 Oct 31 09:06	1° \mathbb{X} 21'12		morning rise	10030 Jan 01 05:37	1° \mathbb{Z} 29'45	
max. Earth dist.	10023 Nov 16 11:43	2° \mathbb{X} 20'04	19.63170 AU	retrograde	10030 Apr 04 06:02	4° \mathbb{Z} 53'11	
				opposition	10030 Jun 17 07:16	2° \mathbb{Z} 49'47	0°37'18
conjunction	10023 Nov 17 00:02	2° \mathbb{X} 21'57	0°52'19	min. Earth dist.	10030 Jun 17 19:25	2° \mathbb{Z} 48'28	17.39282 AU
minimum elong	10023 Nov 17 00:02	2° \mathbb{X} 21'57	0°52'41	direct	10030 Aug 31 12:34	0° \mathbb{Z} 44'30	
morning rise	10023 Dec 03 15:09	3° \mathbb{X} 22'45		evening set	10030 Dec 04 04:12	4° \mathbb{Z} 10'40	
retrograde	10024 Mar 06 09:08	6° \mathbb{X} 44'47					
opposition	10024 May 19 23:50	4° \mathbb{X} 41'36	0°57'12	conjunction	10030 Dec 20 19:18	5° \mathbb{Z} 12'27	0°31'28
min. Earth dist.	10024 May 20 10:30	4° \mathbb{X} 40'26	17.60698 AU	minimum elong	10030 Dec 20 19:19	5° \mathbb{Z} 12'27	0°31'54
direct	10024 Aug 02 20:10	2° \mathbb{X} 37'47		max. Earth dist.	10030 Dec 20 04:52	5° \mathbb{Z} 10'12	19.38370 AU
evening set	10024 Nov 04 10:25	5° \mathbb{X} 59'21		morning rise	10031 Jan 06 08:59	6° \mathbb{Z} 14'01	
				retrograde	10031 Apr 09 06:36	9° \mathbb{Z} 37'32	
conjunction	10024 Nov 21 01:42	7° \mathbb{X} 00'18	0°50'17	opposition	10031 Jun 22 05:57	7° \mathbb{Z} 34'13	0°32'54
minimum elong	10024 Nov 21 01:42	7° \mathbb{X} 00'18	0°50'39	min. Earth dist.	10031 Jun 22 17:17	7° \mathbb{Z} 32'59	17.37624 AU
max. Earth dist.	10024 Nov 20 13:22	6° \mathbb{X} 58'24	19.58268 AU	direct	10031 Sep 05 14:54	5° \mathbb{Z} 28'51	
morning rise	10024 Dec 07 16:45	8° \mathbb{X} 01'17		evening set	10031 Dec 09 08:13	8° \mathbb{Z} 55'34	
retrograde	10025 Mar 11 08:56	11° \mathbb{X} 23'40					
opposition	10025 May 24 19:52	9° \mathbb{X} 20'23	0°54'46	conjunction	10031 Dec 25 23:07	9° \mathbb{Z} 57'23	0°27'25
min. Earth dist.	10025 May 25 06:10	9° \mathbb{X} 19'16	17.55962 AU	minimum elong	10031 Dec 25 23:07	9° \mathbb{Z} 57'23	0°27'51
direct	10025 Aug 07 18:11	7° \mathbb{X} 16'16		max. Earth dist.	10031 Dec 25 09:35	9° \mathbb{Z} 55'16	19.36981 AU
evening set	10025 Nov 09 12:17	10° \mathbb{X} 38'43		morning rise	10032 Jan 11 12:08	10° \mathbb{Z} 58'58	
				retrograde	10032 Apr 13 06:06	14° \mathbb{Z} 22'29	
conjunction	10025 Nov 26 03:41	11° \mathbb{X} 39'52	0°47'54	opposition	10032 Jun 26 05:10	12° \mathbb{Z} 19'19	0°28'17
minimum elong	10025 Nov 26 03:41	11° \mathbb{X} 39'52	0°48'18	min. Earth dist.	10032 Jun 26 17:15	12° \mathbb{Z} 18'00	17.36500 AU
max. Earth dist.	10025 Nov 25 14:13	11° \mathbb{X} 37'47	19.53716 AU	direct	10032 Sep 09 15:22	10° \mathbb{Z} 13'53	
morning rise	10025 Dec 12 18:44	12° \mathbb{X} 41'00		evening set	10032 Dec 13 12:34	13° \mathbb{Z} 41'03	
retrograde	10026 Mar 16 07:39	16° \mathbb{X} 03'42					
opposition	10026 May 29 16:32	14° \mathbb{X} 00'20	0°51'57	conjunction	10032 Dec 30 02:57	14° \mathbb{Z} 42'53	0°23'11
min. Earth dist.	10026 May 30 04:16	13° \mathbb{X} 59'04	17.51618 AU	minimum elong	10032 Dec 30 02:57	14° \mathbb{Z} 42'53	0°23'36
direct	10026 Aug 12 14:59	11° \mathbb{X} 55'54		max. Earth dist.	10032 Dec 29 12:26	14° \mathbb{Z} 40'37	19.36120 AU
evening set	10026 Nov 14 14:43	15° \mathbb{X} 19'12		morning rise	10033 Jan 15 15:34	15° \mathbb{Z} 44'27	
				retrograde	10033 Apr 18 07:06	19° \mathbb{Z} 07'55	
conjunction	10026 Dec 01 06:16	16° \mathbb{X} 20'32	0°45'12	opposition	10033 Jul 01 04:30	17° \mathbb{Z} 04'53	0°23'28
minimum elong	10026 Dec 01 06:16	16° \mathbb{X} 20'32	0°45'36	min. Earth dist.	10033 Jul 01 16:05	17° \mathbb{Z} 03'37	17.35885 AU
max. Earth dist.	10026 Nov 30 16:40	16° \mathbb{X} 18'26	19.49592 AU	direct	10033 Sep 14 18:03	14° \mathbb{Z} 59'23	
morning rise	10026 Dec 17 21:11	17° \mathbb{X} 21'49		evening set	10033 Dec 18 16:52	18° \mathbb{Z} 26'55	
retrograde	10027 Mar 21 07:57	20° \mathbb{X} 44'46					
opposition	10027 Jun 03 13:25	18° \mathbb{X} 41'20	0°48'46	conjunction	10034 Jan 04 06:59	19° \mathbb{Z} 28'44	0°18'46
min. Earth dist.	10027 Jun 04 00:29	18° \mathbb{X} 40'07	17.47722 AU	minimum elong	10034 Jan 04 06:59	19° \mathbb{Z} 28'44	0°19'12
direct	10027 Aug 17 14:32	16° \mathbb{X} 36'36		max. Earth dist.	10034 Jan 03 17:31	19° \mathbb{Z} 26'38	19.35731 AU
evening set	10027 Nov 19 17:37	20° \mathbb{X} 00'44		morning rise	10034 Jan 20 18:49	20° \mathbb{Z} 30'16	
				retrograde	10034 Apr 23 07:25	23° \mathbb{Z} 53'36	
conjunction	10027 Dec 06 09:09	21° \mathbb{X} 02'12	0°42'11	opposition	10034 Jul 06 04:18	21° \mathbb{Z} 50'42	0°18'29
minimum elong	10027 Dec 06 09:09	21° \mathbb{X} 02'12	0°42'35	min. Earth dist.	10034 Jul 06 16:24	21° \mathbb{Z} 49'22	17.35715 AU
max. Earth dist.	10027 Dec 05 19:13	21° \mathbb{X} 00'03	19.45939 AU	direct	10034 Sep 19 19:35	19° \mathbb{Z} 45'10	
morning rise	10027 Dec 22 23:47	22° \mathbb{X} 03'35		evening set	10034 Dec 23 21:20	23° \mathbb{Z} 12'56	
retrograde	10028 Mar 25 06:43	25° \mathbb{X} 26'45					

conjunction	10035 Jan 09 10:45	24°  14'42	0°14'15	conjunction	10040 Feb 03 00:15	17°  58'28	-0°09'17
minimum elong	10035 Jan 09 10:45	24°  14'42	0°14'38	minimum elong	10040 Feb 03 00:14	17°  58'28	0°08'59
behind sun begin	10035 Jan 09 08:03	24°  14'18		behind sun begin	10040 Feb 02 18:31	17°  57'36	
behind sun end	10035 Jan 09 13:26	24°  15'07		behind sun end	10040 Feb 03 05:58	17°  59'20	
max. Earth dist.	10035 Jan 08 20:06	24°  12'25	19.35786 AU	max. Earth dist.	10040 Feb 02 12:31	17°  56'39	19.42706 AU
morning rise	10035 Jan 25 22:03	25°  16'10		morning rise	10040 Feb 19 07:23	18°  59'12	
retrograde	10035 Apr 28 08:01	28°  39'18		retrograde	10040 May 21 05:35	22°  20'28	
opposition	10035 Jul 11 04:09	26°  36'31	0°13'22	opposition	10040 Aug 03 03:56	20°  18'10	-0°12'48
min. Earth dist.	10035 Jul 11 15:59	26°  35'13	17.35991 AU	min. Earth dist.	10040 Aug 03 13:41	20°  17'07	17.44045 AU
direct	10035 Sep 24 21:50	24°  30'56		direct	10040 Oct 18 09:58	18°  12'40	
evening set	10035 Dec 29 01:25	27°  58'51		evening set	10041 Jan 21 16:07	21°  39'43	
conjunction	10036 Jan 14 14:25	29°  00'34	0°09'37	conjunction	10041 Feb 07 01:13	22°  40'40	-0°13'52
minimum elong	10036 Jan 14 14:25	29°  00'34	0°10'01	minimum elong	10041 Feb 07 01:13	22°  40'40	0°13'35
behind sun begin	10036 Jan 14 09:01	28°  59'44		behind sun begin	10041 Feb 06 21:34	22°  40'07	
behind sun end	10036 Jan 14 19:49	29°  01'23		behind sun end	10041 Feb 07 04:52	22°  41'13	
max. Earth dist.	10036 Jan 14 01:01	28°  58'28	19.36276 AU	max. Earth dist.	10041 Feb 06 13:57	22°  38'55	19.45512 AU
	10036 Jan 30 12:16	0° 		morning rise	10041 Feb 23 07:29	23°  41'12	
morning rise	10036 Jan 31 00:49	0°  01'55		retrograde	10041 May 26 02:00	27°  01'57	
retrograde	10036 May 02 08:36	3°  24'47		opposition	10041 Aug 08 03:26	24°  59'47	-0°17'52
opposition	10036 Jul 15 04:14	1°  22'06	0°08'09	min. Earth dist.	10041 Aug 08 13:08	24°  58'44	17.47123 AU
min. Earth dist.	10036 Jul 15 15:59	1°  20'50	17.36692 AU	direct	10041 Oct 23 10:38	22°  54'22	
	10036 Aug 18 11:07	30°  R 		evening set	10042 Jan 26 17:20	26°  21'00	
direct	10036 Sep 29 00:10	29°  16'31		conjunction	10042 Feb 12 01:35	27°  21'43	-0°18'21
	10036 Nov 08 17:29	0° 		minimum elong	10042 Feb 12 01:35	27°  21'43	0°18'05
evening set	10037 Jan 02 05:16	2°  44'27		max. Earth dist.	10042 Feb 11 15:34	27°  20'10	19.48858 AU
conjunction	10037 Jan 18 17:28	3°  46'03	0°04'57	morning rise	10042 Feb 28 06:57	28°  22'02	
minimum elong	10037 Jan 18 17:28	3°  46'03	0°05'20		10042 Mar 29 06:24	0° 	
behind sun begin	10037 Jan 18 10:58	3°  45'04		retrograde	10042 May 31 00:35	1°  42'15	
behind sun end	10037 Jan 18 23:58	3°  47'03			10042 Aug 05 10:18	30°  R 	
max. Earth dist.	10037 Jan 18 03:14	3°  43'50	19.37202 AU	opposition	10042 Aug 13 02:43	29°  40'14	-0°22'48
morning rise	10037 Feb 04 03:15	4°  47'18		min. Earth dist.	10042 Aug 13 10:34	29°  39'23	17.50727 AU
retrograde	10037 May 07 08:02	8°  09'51		direct	10042 Oct 28 14:04	27°  35'00	
opposition	10037 Jul 20 04:19	6°  07'16	0°02'53		10043 Jan 14 07:37	0° 	
min. Earth dist.	10037 Jul 20 15:58	6°  06'00	17.37843 AU	evening set	10043 Jan 31 17:51	1°  41'06	
direct	10037 Oct 04 01:53	4°  01'39		conjunction	10043 Feb 17 01:09	2°  41'36	-0°22'41
evening set	10038 Jan 07 08:45	7°  29'31		minimum elong	10043 Feb 17 01:09	2°  41'36	0°22'28
conjunction	10038 Jan 23 20:22	8°  31'00	0°00'11	max. Earth dist.	10043 Feb 16 16:16	2°  40'14	19.52725 AU
minimum elong	10038 Jan 23 20:23	8°  31'00	0°00'31	morning rise	10043 Mar 05 05:31	3°  41'40	
behind sun begin	10038 Jan 23 13:42	8°  29'59		retrograde	10043 Jun 04 19:53	6°  42'21	
behind sun end	10038 Jan 24 03:05	8°  32'02		opposition	10043 Aug 18 01:54	4°  41'32	-0°27'32
max. Earth dist.	10038 Jan 23 07:29	8°  29'00	19.38574 AU	min. Earth dist.	10043 Aug 18 09:35	4°  41'84	17.54863 AU
desc. node	10038 Feb 05 07:24	9°  32'06		direct	10043 Nov 02 13:57	2°  41'31	
morning rise	10038 Feb 09 05:15	12°  54'16		evening set	10044 Feb 05 17:38	5°  40'04	
retrograde	10038 May 12 08:14	10°  51'47	-0°02'23	conjunction	10044 Feb 21 23:59	6°  40'18	-0°26'52
opposition	10038 Jul 25 04:12	10°  50'34	17.39429 AU	minimum elong	10044 Feb 21 23:59	6°  40'18	0°26'39
min. Earth dist.	10038 Jul 25 15:16	8°  46'11		max. Earth dist.	10044 Feb 21 16:06	6°  39'05	19.57120 AU
direct	10038 Oct 09 05:08	12°  13'52		morning rise	10044 Mar 09 03:30	7°  40'07	
evening set	10039 Jan 12 11:55			retrograde	10044 Jun 08 17:40	10°  45'14	
conjunction	10039 Jan 28 22:39	13°  15'12	-0°04'38	opposition	10044 Aug 22 00:34	8°  45'39	-0°32'05
minimum elong	10039 Jan 28 22:40	13°  15'12	0°04'17	min. Earth dist.	10044 Aug 22 06:14	8°  45'03	17.59485 AU
behind sun begin	10039 Jan 28 16:03	13°  14'11		direct	10044 Nov 06 16:20	6°  45'25	
behind sun end	10039 Jan 29 05:16	13°  16'12		evening set	10045 Feb 09 16:37	10°  47'50	
max. Earth dist.	10039 Jan 28 09:27	13°  13'09	19.40396 AU	conjunction	10045 Feb 25 22:06	11°  47'49	-0°30'50
morning rise	10039 Feb 14 06:45	14°  16'08		minimum elong	10045 Feb 25 22:06	11°  47'49	0°30'40
	10039 Feb 26 13:10	15° 		max. Earth dist.	10045 Feb 25 15:46	11°  46'50	19.61956 AU
retrograde	10039 May 17 06:03	17°  37'52		morning rise	10045 Mar 14 00:39	12°  47'22	
opposition	10039 Jul 30 04:12	15°  35'28	-0°07'38	retrograde	10045 Jun 13 12:21	15°  43'55	
min. Earth dist.	10039 Jul 30 15:14	15°  34'16	17.41495 AU	opposition	10045 Aug 26 23:07	13°  43'35	-0°36'23
	10039 Aug 13 00:02	15°  R 		min. Earth dist.	10045 Aug 27 04:53	13°  43'58	17.64519 AU
direct	10039 Oct 14 06:26	13°  29'54		direct	10045 Nov 11 15:24	11°  43'10	
	10039 Dec 13 02:59	15° 		evening set	10046 Feb 14 15:02	14°  45'23	
evening set	10040 Jan 17 14:13	16°  57'19					

conjunction	10046 Mar 02 19:28	15° $\mathbf{\text{X}}$ 54'04	-0°34'36	retrograde	10052 Jul 14 19:43	17° $\mathbf{\text{Y}}$ 10'54	
minimum elong	10046 Mar 02 19:28	15° $\mathbf{\text{X}}$ 54'04	0°34'28	opposition	10052 Sep 28 00:46	15° $\mathbf{\text{Y}}$ 10'58	-0°58'21
max. Earth dist.	10046 Mar 02 13:35	15° $\mathbf{\text{X}}$ 53'10	19.67170 AU	min. Earth dist.	10052 Sep 27 23:54	15° $\mathbf{\text{Y}}$ 11'04	18.05520 AU
morning rise	10046 Mar 18 21:13	16° $\mathbf{\text{X}}$ 53'22		direct	10052 Dec 14 02:04	13° $\mathbf{\text{Y}}$ 08'41	
retrograde	10046 Jun 18 09:11	20° $\mathbf{\text{X}}$ 11'18		evening set	10053 Mar 18 03:34	16° $\mathbf{\text{Y}}$ 26'19	
opposition	10046 Aug 31 21:09	18° $\mathbf{\text{X}}$ 10'15	-0°40'27				
min. Earth dist.	10046 Sep 01 01:01	18° $\mathbf{\text{X}}$ 09'50	17.69884 AU	conjunction	10053 Apr 03 02:03	17° $\mathbf{\text{Y}}$ 23'55	-0°53'24
direct	10046 Nov 16 16:13	16° $\mathbf{\text{X}}$ 06'08		minimum elong	10053 Apr 03 02:02	17° $\mathbf{\text{Y}}$ 23'55	0°53'30
evening set	10047 Feb 19 12:36	19° $\mathbf{\text{X}}$ 29'35		max. Earth dist.	10053 Apr 03 03:24	17° $\mathbf{\text{Y}}$ 24'07	20.08583 AU
				morning rise	10053 Apr 18 22:18	18° $\mathbf{\text{Y}}$ 21'14	
conjunction	10047 Mar 07 16:10	20° $\mathbf{\text{X}}$ 29'00	-0°38'07	retrograde	10053 Jul 19 09:30	21° $\mathbf{\text{Y}}$ 34'23	
minimum elong	10047 Mar 07 16:10	20° $\mathbf{\text{X}}$ 29'00	0°38'01	opposition	10053 Oct 02 19:24	19° $\mathbf{\text{Y}}$ 34'35	-1°00'08
max. Earth dist.	10047 Mar 07 12:02	20° $\mathbf{\text{X}}$ 28'21	19.72669 AU	min. Earth dist.	10053 Oct 02 18:04	19° $\mathbf{\text{Y}}$ 34'44	18.11668 AU
morning rise	10047 Mar 23 16:53	21° $\mathbf{\text{X}}$ 28'01		direct	10053 Dec 18 21:33	17° $\mathbf{\text{Y}}$ 32'35	
retrograde	10047 Jun 23 03:19	24° $\mathbf{\text{X}}$ 45'19		evening set	10054 Mar 22 18:47	20° $\mathbf{\text{Y}}$ 49'06	
opposition	10047 Sep 05 19:06	22° $\mathbf{\text{X}}$ 44'31	-0°44'13				
min. Earth dist.	10047 Sep 05 23:05	22° $\mathbf{\text{X}}$ 44'06	17.75511 AU	conjunction	10054 Apr 07 16:20	21° $\mathbf{\text{Y}}$ 46'24	-0°54'51
direct	10047 Nov 21 14:06	20° $\mathbf{\text{X}}$ 40'45		minimum elong	10054 Apr 07 16:20	21° $\mathbf{\text{Y}}$ 46'24	0°54'59
evening set	10048 Feb 24 09:17	24° $\mathbf{\text{X}}$ 03'20		max. Earth dist.	10054 Apr 07 17:44	21° $\mathbf{\text{Y}}$ 46'37	20.14757 AU
				morning rise	10054 Apr 23 12:10	22° $\mathbf{\text{Y}}$ 43'26	
conjunction	10048 Mar 11 11:49	25° $\mathbf{\text{X}}$ 02'27	-0°41'24	retrograde	10054 Jul 24 00:35	25° $\mathbf{\text{Y}}$ 55'54	
minimum elong	10048 Mar 11 11:48	25° $\mathbf{\text{X}}$ 02'27	0°41'20	opposition	10054 Oct 07 13:23	23° $\mathbf{\text{Y}}$ 56'12	-1°01'33
max. Earth dist.	10048 Mar 11 07:45	25° $\mathbf{\text{X}}$ 01'50	19.78403 AU	min. Earth dist.	10054 Oct 07 10:34	23° $\mathbf{\text{Y}}$ 56'29	18.17881 AU
morning rise	10048 Mar 27 11:50	26° $\mathbf{\text{X}}$ 01'12		direct	10054 Dec 23 16:57	21° $\mathbf{\text{Y}}$ 54'27	
retrograde	10048 Jun 26 23:24	29° $\mathbf{\text{X}}$ 17'52		evening set	10055 Mar 27 08:54	25° $\mathbf{\text{Y}}$ 09'53	
opposition	10048 Sep 09 16:26	27° $\mathbf{\text{X}}$ 17'16	-0°47'42				
min. Earth dist.	10048 Sep 09 18:37	27° $\mathbf{\text{X}}$ 17'03	17.81334 AU	conjunction	10055 Apr 12 05:56	26° $\mathbf{\text{Y}}$ 06'54	-0°55'59
direct	10048 Nov 25 13:24	25° $\mathbf{\text{X}}$ 13'49		minimum elong	10055 Apr 12 05:56	26° $\mathbf{\text{Y}}$ 06'54	0°56'09
evening set	10049 Feb 28 05:10	28° $\mathbf{\text{X}}$ 35'31		max. Earth dist.	10055 Apr 12 09:41	26° $\mathbf{\text{Y}}$ 07'28	20.20999 AU
				morning rise	10055 Apr 28 01:05	27° $\mathbf{\text{Y}}$ 03'40	
conjunction	10049 Mar 16 06:55	29° $\mathbf{\text{X}}$ 34'20	-0°44'24		10055 Jul 04 07:28	0° $\mathbf{\text{B}}$	
minimum elong	10049 Mar 16 06:55	29° $\mathbf{\text{X}}$ 34'20	0°44'21	retrograde	10055 Jul 28 13:19	0° $\mathbf{\text{B}}$ 15'27	
max. Earth dist.	10049 Mar 16 04:39	29° $\mathbf{\text{X}}$ 33'59	19.84291 AU		10055 Aug 22 04:56	30° $\mathbf{\text{R}}$ $\mathbf{\text{Y}}$	
	10049 Mar 23 05:56	0° $\mathbf{\text{Y}}$		opposition	10055 Oct 12 06:46	28° $\mathbf{\text{Y}}$ 15'52	-1°02'37
morning rise	10049 Apr 01 05:58	0° $\mathbf{\text{Y}}$ 32'48		min. Earth dist.	10055 Oct 12 02:59	28° $\mathbf{\text{Y}}$ 16'16	18.24158 AU
retrograde	10049 Jul 01 16:16	3° $\mathbf{\text{Y}}$ 48'46		direct	10055 Dec 28 11:03	26° $\mathbf{\text{Y}}$ 14'27	
opposition	10049 Sep 14 13:19	1° $\mathbf{\text{Y}}$ 48'24	-0°50'52	evening set	10056 Mar 30 22:11	29° $\mathbf{\text{Y}}$ 28'48	
min. Earth dist.	10049 Sep 14 15:39	1° $\mathbf{\text{Y}}$ 48'10	17.87281 AU		10056 Apr 08 16:38	0° $\mathbf{\text{B}}$	
	10049 Nov 06 06:33	30° $\mathbf{\text{R}}$ $\mathbf{\text{X}}$					
direct	10049 Nov 30 10:19	29° $\mathbf{\text{X}}$ 45'16		conjunction	10056 Apr 15 18:26	0° $\mathbf{\text{B}}$ 25'31	-0°56'47
	10049 Dec 24 08:19	0° $\mathbf{\text{Y}}$		minimum elong	10056 Apr 15 18:26	0° $\mathbf{\text{B}}$ 25'31	0°56'58
evening set	10050 Mar 05 00:21	3° $\mathbf{\text{Y}}$ 06'01		max. Earth dist.	10056 Apr 15 22:23	0° $\mathbf{\text{B}}$ 26'06	20.27311 AU
				morning rise	10056 May 01 13:19	1° $\mathbf{\text{B}}$ 22'02	
conjunction	10050 Mar 21 01:03	4° $\mathbf{\text{Y}}$ 04'32	-0°47'06	retrograde	10056 Aug 01 02:48	4° $\mathbf{\text{B}}$ 33'11	
minimum elong	10050 Mar 21 01:03	4° $\mathbf{\text{Y}}$ 04'32	0°47'06	opposition	10056 Oct 15 23:30	2° $\mathbf{\text{B}}$ 33'45	-1°03'18
max. Earth dist.	10050 Mar 20 22:33	4° $\mathbf{\text{Y}}$ 04'09	19.90288 AU	min. Earth dist.	10056 Oct 15 18:23	2° $\mathbf{\text{B}}$ 34'16	18.30503 AU
morning rise	10050 Apr 05 23:28	5° $\mathbf{\text{Y}}$ 02'42		direct	10057 Jan 01 03:59	0° $\mathbf{\text{B}}$ 32'39	
retrograde	10050 Jul 06 11:13	8° $\mathbf{\text{Y}}$ 18'00		evening set	10057 Apr 04 10:36	3° $\mathbf{\text{B}}$ 45'57	
opposition	10050 Sep 19 09:43	6° $\mathbf{\text{Y}}$ 17'48	-0°53'43				
min. Earth dist.	10050 Sep 19 10:25	6° $\mathbf{\text{Y}}$ 17'44	17.93318 AU	conjunction	10057 Apr 20 06:27	4° $\mathbf{\text{B}}$ 42'24	-0°57'15
direct	10050 Dec 05 08:34	4° $\mathbf{\text{Y}}$ 14'57		minimum elong	10057 Apr 20 06:26	4° $\mathbf{\text{B}}$ 42'24	0°57'29
evening set	10051 Mar 09 18:18	7° $\mathbf{\text{Y}}$ 34'43		max. Earth dist.	10057 Apr 20 12:34	4° $\mathbf{\text{B}}$ 43'19	20.33665 AU
				morning rise	10057 May 06 00:45	5° $\mathbf{\text{B}}$ 38'41	
conjunction	10051 Mar 25 18:19	8° $\mathbf{\text{Y}}$ 32'55	-0°49'31	retrograde	10057 Aug 05 15:12	8° $\mathbf{\text{B}}$ 49'13	
minimum elong	10051 Mar 25 18:18	8° $\mathbf{\text{Y}}$ 32'55	0°49'32	opposition	10057 Oct 20 15:31	6° $\mathbf{\text{B}}$ 49'58	-1°03'38
max. Earth dist.	10051 Mar 25 17:46	8° $\mathbf{\text{Y}}$ 32'50	19.96346 AU	min. Earth dist.	10057 Oct 20 09:22	6° $\mathbf{\text{B}}$ 50'35	18.36849 AU
morning rise	10051 Apr 10 15:49	9° $\mathbf{\text{Y}}$ 30'48		direct	10058 Jan 05 20:36	4° $\mathbf{\text{B}}$ 49'14	
retrograde	10051 Jul 11 02:41	12° $\mathbf{\text{Y}}$ 45'24		evening set	10058 Apr 08 22:23	8° $\mathbf{\text{B}}$ 01'31	
opposition	10051 Sep 24 05:41	10° $\mathbf{\text{Y}}$ 45'22	-0°56'13				
min. Earth dist.	10051 Sep 24 06:15	10° $\mathbf{\text{Y}}$ 45'18	17.99396 AU	conjunction	10058 Apr 24 17:32	8° $\mathbf{\text{B}}$ 57'42	-0°57'25
direct	10051 Dec 10 04:52	8° $\mathbf{\text{Y}}$ 42'49		minimum elong	10058 Apr 24 17:32	8° $\mathbf{\text{B}}$ 57'42	0°57'39
evening set	10052 Mar 13 11:32	12° $\mathbf{\text{Y}}$ 01'31		max. Earth dist.	10058 Apr 24 23:47	8° $\mathbf{\text{B}}$ 58'38	20.40001 AU
				morning rise	10058 May 10 11:40	9° $\mathbf{\text{B}}$ 53'45	
conjunction	10052 Mar 29 10:35	12° $\mathbf{\text{Y}}$ 59'25	-0°51'37	retrograde	10058 Aug 10 03:19	13° $\mathbf{\text{B}}$ 03'44	
minimum elong	10052 Mar 29 10:34	12° $\mathbf{\text{Y}}$ 59'25	0°51'40	opposition	10058 Oct 25 07:09	11° $\mathbf{\text{B}}$ 04'39	-1°03'37
max. Earth dist.	10052 Mar 29 09:51	12° $\mathbf{\text{Y}}$ 59'18	20.02448 AU	min. Earth dist.	10058 Oct 25 00:05	11° $\mathbf{\text{B}}$ 05'22	18.43163 AU
morning rise	10052 Apr 14 07:36	13° $\mathbf{\text{Y}}$ 57'00		direct	10059 Jan 10 11:26	9° $\mathbf{\text{B}}$ 04'18	

evening set	10059 Apr 13 09:06	12°♄15'34	conjunction	10065 May 23 06:56	8°♄06'59 -0°50'12
			minimum elong	10065 May 23 06:56	8°♄06'59 0°50'35
conjunction	10059 Apr 29 03:59	13°♄11'31 -0°57'15	max. Earth dist.	10065 May 23 18:04	8°♄08'36 20.78403 AU
minimum elong	10059 Apr 29 03:59	13°♄11'31 0°57'31	morning rise	10065 Jun 08 00:22	9°♄01'48
max. Earth dist.	10059 Apr 29 12:13	13°♄12'45 20.46263 AU	retrograde	10065 Sep 08 04:54	12°♄08'37
morning rise	10059 May 14 21:42	14°♄07'21	opposition	10065 Nov 24 05:27	10°♄10'26 -0°54'26
	10059 May 30 13:15	15°♄	min. Earth dist.	10065 Nov 23 18:17	10°♄11'33 18.80481 AU
retrograde	10059 Aug 14 15:24	17°♄16'47	direct	10066 Feb 09 04:42	8°♄12'10
opposition	10059 Oct 29 22:12	15°♄17'55 -1°03'15	evening set	10066 May 11 20:23	11°♄17'13
min. Earth dist.	10059 Oct 29 14:04	15°♄18'44 18.49350 AU			
	10059 Nov 06 07:04	15°♄	conjunction	10066 May 27 13:35	12°♄11'51 -0°48'05
direct	10060 Jan 15 02:54	13°♄17'56	minimum elong	10066 May 27 13:35	12°♄11'51 0°48'30
	10060 Mar 20 10:44	15°♄	max. Earth dist.	10066 May 28 00:25	12°♄13'26 20.82427 AU
evening set	10060 Apr 16 19:27	16°♄28'14	morning rise	10066 Jun 12 07:17	13°♄06'34
			retrograde	10066 Sep 12 13:17	16°♄13'02
conjunction	10060 May 02 13:46	17°♄23'57 -0°56'48	opposition	10066 Nov 28 17:00	14°♄14'50 -0°51'57
minimum elong	10060 May 02 13:46	17°♄23'57 0°57'06	min. Earth dist.	10066 Nov 28 06:11	14°♄15'55 18.84324 AU
max. Earth dist.	10060 May 02 21:56	17°♄25'10 20.52368 AU	direct	10067 Feb 13 13:47	12°♄16'43
morning rise	10060 May 18 07:27	18°♄19'35	evening set	10067 May 16 02:24	15°♄21'00
retrograde	10060 Aug 18 02:15	21°♄28'31			
opposition	10060 Nov 02 12:35	19°♄29'49 -1°02'34	conjunction	10067 May 31 19:46	16°♄15'30 -0°45'45
min. Earth dist.	10060 Nov 02 04:06	19°♄30'40 18.55364 AU	minimum elong	10067 May 31 19:46	16°♄15'30 0°46'10
direct	10061 Jan 18 15:54	17°♄30'11	max. Earth dist.	10067 Jun 01 07:49	16°♄17'15 20.86091 AU
evening set	10061 Apr 21 05:01	20°♄39'34	morning rise	10067 Jun 16 13:36	17°♄10'06
			retrograde	10067 Sep 16 22:37	20°♄16'15
conjunction	10061 May 06 23:09	21°♄35'04 -0°56'02	opposition	10067 Dec 03 03:50	18°♄18'02 -0°49'14
minimum elong	10061 May 06 23:09	21°♄35'04 0°56'21	min. Earth dist.	10067 Dec 02 15:46	18°♄19'15 18.87810 AU
max. Earth dist.	10061 May 07 08:50	21°♄36'30 20.58258 AU	direct	10068 Feb 18 00:45	16°♄20'04
morning rise	10061 May 22 16:32	22°♄30'29	evening set	10068 May 19 08:14	19°♄23'38
retrograde	10061 Aug 22 13:31	25°♄38'57			
opposition	10061 Nov 07 02:34	23°♄40'25 -1°01'32	conjunction	10068 Jun 04 01:32	20°♄18'02 -0°43'11
min. Earth dist.	10061 Nov 06 17:05	23°♄41'23 18.61110 AU	minimum elong	10068 Jun 04 01:32	20°♄18'02 0°43'36
direct	10062 Jan 23 05:59	21°♄41'09	max. Earth dist.	10068 Jun 04 13:28	20°♄19'46 20.89415 AU
evening set	10062 Apr 25 14:03	24°♄49'36	morning rise	10068 Jun 19 19:43	21°♄12'34
			retrograde	10068 Sep 20 06:02	24°♄18'26
conjunction	10062 May 11 07:43	25°♄44'53 -0°54'59	opposition	10068 Dec 06 14:12	22°♄20'11 -0°46'16
minimum elong	10062 May 11 07:43	25°♄44'53 0°55'20	min. Earth dist.	10068 Dec 06 02:31	22°♄21'21 18.90992 AU
max. Earth dist.	10062 May 11 17:09	25°♄46'17 20.63850 AU	direct	10069 Feb 21 08:12	20°♄22'22
morning rise	10062 May 27 01:08	26°♄40'09	evening set	10069 May 23 13:34	23°♄25'17
retrograde	10062 Aug 26 23:35	29°♄48'11			
opposition	10062 Nov 11 16:10	27°♄49'47 -1°00'12	conjunction	10069 Jun 08 07:07	24°♄19'36 -0°40'25
min. Earth dist.	10062 Nov 11 06:39	27°♄50'44 18.66548 AU	minimum elong	10069 Jun 08 07:07	24°♄19'36 0°40'51
direct	10063 Jan 27 17:51	25°♄50'49	max. Earth dist.	10069 Jun 08 20:12	24°♄21'29 20.92450 AU
evening set	10063 Apr 29 22:25	28°♄58'23	morning rise	10069 Jun 24 01:30	25°♄14'03
			retrograde	10069 Sep 24 15:12	28°♄19'42
conjunction	10063 May 15 16:01	29°♄53'29 -0°53'39	min. Earth dist.	10069 Dec 10 11:07	26°♄22'45 18.93871 AU
minimum elong	10063 May 15 16:01	29°♄53'29 0°54'00	opposition	10069 Dec 11 00:10	26°♄21'26 -0°43'05
max. Earth dist.	10063 May 16 02:39	29°♄55'03 20.69107 AU	direct	10070 Feb 25 18:14	24°♄23'46
	10063 May 17 12:17	0°♄	evening set	10070 May 27 18:34	27°♄26'07
morning rise	10063 May 31 09:17	0°♄48'35			
retrograde	10063 Aug 31 10:00	3°♄56'11	conjunction	10070 Jun 12 12:10	28°♄20'21 -0°37'27
opposition	10063 Nov 16 05:04	1°♄57'54 -0°58'34	minimum elong	10070 Jun 12 12:10	28°♄20'21 0°37'53
min. Earth dist.	10063 Nov 15 18:36	1°♄58'58 18.71607 AU	max. Earth dist.	10070 Jun 13 01:12	28°♄22'14 20.95180 AU
	10064 Jan 26 16:31	30°♄	morning rise	10070 Jun 28 07:00	29°♄14'45
direct	10064 Feb 01 06:20	29°♄59'13		10070 Jul 12 01:26	0°♄
	10064 Feb 06 19:13	0°♄	retrograde	10070 Sep 28 22:39	2°♄20'15
evening set	10064 May 03 06:20	3°♄05'55	opposition	10070 Dec 15 09:58	0°♄21'59 -0°39'43
			min. Earth dist.	10070 Dec 14 21:23	0°♄23'15 18.96456 AU
conjunction	10064 May 18 23:40	4°♄00'51 -0°52'03		10070 Dec 24 15:13	30°♄
minimum elong	10064 May 18 23:40	4°♄00'51 0°52'26	direct	10071 Mar 02 00:40	28°♄24'28
max. Earth dist.	10064 May 19 09:48	4°♄02'20 20.73962 AU		10071 May 04 09:59	0°♄
morning rise	10064 Jun 03 17:07	4°♄55'48	evening set	10071 May 31 23:20	1°♄26'18
retrograde	10064 Sep 03 19:18	8°♄03'01			
opposition	10064 Nov 19 17:37	6°♄04'47 -0°56'38	conjunction	10071 Jun 16 17:18	2°♄20'28 -0°34'19
min. Earth dist.	10064 Nov 19 07:27	6°♄05'49 18.76260 AU	minimum elong	10071 Jun 16 17:18	2°♄20'28 0°34'46
direct	10065 Feb 04 17:00	4°♄06'20	max. Earth dist.	10071 Jun 17 07:19	2°♄22'30 20.97610 AU
evening set	10065 May 07 13:34	7°♄12'12	morning rise	10071 Jul 02 12:27	3°♄14'51

retrograde	10071 Oct 03 07:23	6°☿20'13	direct	10078 Mar 30 02:11	26°☿20'58
opposition	10071 Dec 19 19:10	4°☿21'58 -0°36'09	evening set	10078 Jun 28 08:28	29°☿21'01
min. Earth dist.	10071 Dec 19 05:21	4°☿23'21 18.98712 AU		10078 Jul 09 18:49	0°♄
direct	10072 Mar 05 09:53	2°☿24'37			
evening set	10072 Jun 04 04:04	5°☿26'00	conjunction	10078 Jul 14 05:06	0°♄15'16 -0°08'48
			minimum elong	10078 Jul 14 05:06	0°♄15'16 0°09'12
conjunction	10072 Jun 19 22:12	6°☿20'08 -0°31'01	behind sun begin	10078 Jul 13 23:30	0°♄14'29
minimum elong	10072 Jun 19 22:13	6°☿20'08 0°31'28	behind sun end	10078 Jul 14 10:41	0°♄16'03
max. Earth dist.	10072 Jun 20 11:54	6°☿22'06 20.99689 AU	max. Earth dist.	10078 Jul 14 17:31	0°♄17'02 21.02815 AU
morning rise	10072 Jul 05 17:54	7°☿14'29	morning rise	10078 Jul 30 04:07	1°♄09'51
retrograde	10072 Oct 06 15:14	10°☿19'49	retrograde	10078 Oct 31 16:49	4°♄15'48
opposition	10072 Dec 23 04:22	8°☿21'34 -0°32'25	opposition	10079 Jan 17 08:08	2°♄17'13 -0°07'29
min. Earth dist.	10072 Dec 22 15:20	8°☿22'52 19.00611 AU	min. Earth dist.	10079 Jan 16 20:45	2°♄18'22 19.02232 AU
direct	10073 Mar 09 15:40	6°☿24'21	direct	10079 Apr 03 07:58	0°♄20'19
evening set	10073 Jun 08 08:33	9°☿25'21	evening set	10079 Jul 02 13:33	3°♄20'19
conjunction	10073 Jun 24 03:06	10°☿19'28 -0°27'35	conjunction	10079 Jul 18 10:52	4°♄14'39 -0°04'51
minimum elong	10073 Jun 24 03:06	10°☿19'28 0°28'01	minimum elong	10079 Jul 18 10:51	4°♄14'39 0°05'13
max. Earth dist.	10073 Jun 24 17:30	10°☿21'32 21.01398 AU	behind sun begin	10079 Jul 18 04:28	4°♄13'46
morning rise	10073 Jul 09 23:09	11°☿13'49	behind sun end	10079 Jul 18 17:15	4°♄15'33
retrograde	10073 Oct 10 23:41	14°☿19'08	max. Earth dist.	10079 Jul 18 23:18	4°♄16'26 21.01513 AU
opposition	10073 Dec 27 13:14	12°☿20'54 -0°28'32	morning rise	10079 Aug 03 10:29	5°♄09'20
min. Earth dist.	10073 Dec 26 23:09	12°☿22'18 19.02108 AU	retrograde	10079 Nov 05 02:45	8°♄15'29
direct	10074 Mar 14 00:06	10°☿23'49	opposition	10080 Jan 21 16:08	6°♄16'44 -0°03'05
evening set	10074 Jun 12 13:13	13°☿24'31	min. Earth dist.	10080 Jan 21 04:14	6°♄17'56 19.00680 AU
			direct	10080 Apr 06 15:22	4°♄19'45
conjunction	10074 Jun 28 08:00	14°☿18'37 -0°24'01	evening set	10080 Jul 05 18:55	7°♄19'47
minimum elong	10074 Jun 28 08:00	14°☿18'37 0°24'28			
max. Earth dist.	10074 Jun 28 21:53	14°☿20'37 21.02683 AU	conjunction	10080 Jul 21 16:41	8°♄14'12 -0°00'49
morning rise	10074 Jul 14 04:40	15°☿12'59	minimum elong	10080 Jul 21 16:41	8°♄14'12 0°01'11
retrograde	10074 Oct 15 07:40	18°☿18'22	behind sun begin	10080 Jul 21 10:05	8°♄13'17
opposition	10074 Dec 31 22:07	16°☿20'06 -0°24'32	behind sun end	10080 Jul 21 23:17	8°♄15'07
min. Earth dist.	10074 Dec 31 09:06	16°☿21'24 19.03176 AU	max. Earth dist.	10080 Jul 22 04:17	8°♄15'51 20.99732 AU
direct	10075 Mar 18 05:40	14°☿23'09	morning rise	10080 Aug 06 17:03	9°♄08'59
evening set	10075 Jun 16 17:45	17°☿23'35	asc. node	10080 Oct 02 20:55	11°♄43'10
			retrograde	10080 Nov 08 09:42	12°♄15'24
conjunction	10075 Jul 02 13:04	18°☿17'43 -0°20'20	opposition	10081 Jan 25 00:24	10°♄16'29 0°01'21
minimum elong	10075 Jul 02 13:04	18°☿17'43 0°20'46	min. Earth dist.	10081 Jan 24 13:55	10°♄17'32 18.98695 AU
max. Earth dist.	10075 Jul 03 03:19	18°☿19'45 21.03518 AU	direct	10081 Apr 10 20:27	8°♄19'23
morning rise	10075 Jul 18 10:13	19°☿12'07	evening set	10081 Jul 10 00:15	11°♄19'30
retrograde	10075 Oct 19 16:33	22°☿17'34			
opposition	10076 Jan 05 06:41	20°☿19'17 -0°20'24	conjunction	10081 Jul 25 22:40	12°♄14'02 0°03'18
min. Earth dist.	10076 Jan 04 16:56	20°☿20'40 19.03753 AU	minimum elong	10081 Jul 25 22:42	12°♄14'02 0°02'57
direct	10076 Mar 21 13:10	18°☿22'25	behind sun begin	10081 Jul 25 16:07	12°♄13'07
evening set	10076 Jun 19 22:38	21°☿22'40	behind sun end	10081 Jul 26 05:16	12°♄14'57
			max. Earth dist.	10081 Jul 26 10:29	12°♄15'43 20.97558 AU
conjunction	10076 Jul 05 18:15	22°☿16'49 -0°16'34	morning rise	10081 Aug 10 23:40	13°♄08'56
minimum elong	10076 Jul 05 18:15	22°☿16'49 0°16'59		10081 Sep 16 21:59	15°♄
max. Earth dist.	10076 Jul 06 07:36	22°☿18'43 21.03828 AU	retrograde	10081 Nov 12 19:46	16°♄15'40
morning rise	10076 Jul 21 16:02	23°☿11'16		10082 Jan 10 23:17	15°♄
retrograde	10076 Oct 23 00:03	26°☿16'51	opposition	10082 Jan 29 08:31	14°♄16'33 0°05'48
opposition	10077 Jan 08 15:13	24°☿18'31 -0°16'10	min. Earth dist.	10082 Jan 28 21:17	14°♄17'41 18.96336 AU
min. Earth dist.	10077 Jan 08 02:55	24°☿19'45 19.03798 AU	direct	10082 Apr 15 04:19	12°♄19'21
direct	10077 Mar 25 18:57	22°☿21'41		10082 Jul 08 08:21	15°♄
evening set	10077 Jun 24 03:30	25°☿21'48	evening set	10082 Jul 14 06:06	15°♄19'38
conjunction	10077 Jul 09 23:42	26°☿16'00 -0°12'43	conjunction	10082 Jul 30 05:05	16°♄14'18 0°07'18
minimum elong	10077 Jul 09 23:42	26°☿16'00 0°13'06	minimum elong	10082 Jul 30 05:04	16°♄14'18 0°06'58
behind sun begin	10077 Jul 09 19:44	26°☿15'27	behind sun begin	10082 Jul 29 22:56	16°♄13'26
behind sun end	10077 Jul 10 03:40	26°☿16'33	behind sun end	10082 Jul 30 11:12	16°♄15'09
max. Earth dist.	10077 Jul 10 13:03	26°☿17'55 21.03603 AU	max. Earth dist.	10082 Jul 30 16:09	16°♄15'53 20.95024 AU
morning rise	10077 Jul 25 21:59	27°☿10'30	morning rise	10082 Aug 15 06:48	17°♄09'20
	10077 Oct 01 12:42	0°♄	retrograde	10082 Nov 17 03:16	20°♄16'26
retrograde	10077 Oct 27 09:41	0°♄16'15	opposition	10083 Feb 02 16:44	18°♄17'08 0°10'12
	10077 Nov 22 13:02	30°♄	min. Earth dist.	10083 Feb 02 06:52	18°♄18'08 18.93647 AU
opposition	10078 Jan 12 23:38	28°☿17'49 -0°11'52	direct	10083 Apr 19 09:04	16°♄19'49
min. Earth dist.	10078 Jan 12 10:44	28°☿19'07 19.03287 AU	evening set	10083 Jul 18 12:10	19°♄20'21

conjunction	10083 Aug 03 11:54	20° Ω 15'09	0°11'15	conjunction	10089 Aug 27 16:32	14° η 41'12	0°33'28
minimum elong	10083 Aug 03 11:54	20° Ω 15'09	0°10'56	minimum elong	10089 Aug 27 16:32	14° η 41'12	0°33'19
behind sun begin	10083 Aug 03 06:54	20° Ω 14'27		max. Earth dist.	10089 Aug 27 23:27	14° η 42'12	20.68801 AU
behind sun end	10083 Aug 03 16:55	20° Ω 15'51		morning rise	10089 Sep 12 23:16	15° η 37'33	
max. Earth dist.	10083 Aug 03 22:59	20° Ω 16'44	20.92184 AU	retrograde	10089 Dec 16 08:09	18° η 48'22	
morning rise	10083 Aug 19 14:19	21° Ω 10'20		opposition	10090 Mar 03 07:50	16° η 48'04	0°38'53
retrograde	10083 Nov 21 13:46	24° Ω 17'50		min. Earth dist.	10090 Mar 03 01:30	16° η 48'43	18.66305 AU
opposition	10084 Feb 07 00:55	22° Ω 18'23	0°14'35	direct	10090 May 17 11:06	14° η 49'47	
min. Earth dist.	10084 Feb 06 14:23	22° Ω 19'27	18.90649 AU	evening set	10090 Aug 15 23:18	17° η 53'54	
direct	10084 Apr 22 16:49	20° Ω 20'57					
evening set	10084 Jul 21 18:48	23° Ω 21'48		conjunction	10090 Sep 01 03:55	18° η 50'04	0°36'45
				minimum elong	10090 Sep 01 03:55	18° η 50'04	0°36'37
conjunction	10084 Aug 06 19:05	24° Ω 16'45	0°15'10	max. Earth dist.	10090 Sep 01 09:35	18° η 50'53	20.63706 AU
minimum elong	10084 Aug 06 19:05	24° Ω 16'45	0°14'54	morning rise	10090 Sep 17 11:22	19° η 46'38	
behind sun begin	10084 Aug 06 16:33	24° Ω 16'24		retrograde	10090 Dec 20 20:06	22° η 58'04	
behind sun end	10084 Aug 06 21:38	24° Ω 17'07		opposition	10091 Mar 07 18:17	20° η 57'35	0°42'26
max. Earth dist.	10084 Aug 07 05:23	24° Ω 18'14	20.89029 AU	min. Earth dist.	10091 Mar 07 13:55	20° η 58'02	18.61023 AU
morning rise	10084 Aug 22 22:14	25° Ω 12'06		direct	10091 May 21 18:42	18° η 59'03	
retrograde	10084 Nov 24 22:12	28° Ω 20'04		evening set	10091 Aug 20 10:38	22° η 03'53	
opposition	10085 Feb 10 09:22	26° Ω 20'28	0°18'53				
min. Earth dist.	10085 Feb 10 00:15	26° Ω 21'23	18.87354 AU	conjunction	10091 Sep 05 16:04	23° η 00'17	0°39'51
direct	10085 Apr 26 22:00	24° Ω 22'55		minimum elong	10091 Sep 05 16:03	23° η 00'17	0°39'46
evening set	10085 Jul 26 01:49	27° Ω 24'09		max. Earth dist.	10091 Sep 05 20:25	23° η 00'55	20.58251 AU
				morning rise	10091 Sep 22 00:14	23° η 57'06	
conjunction	10085 Aug 11 02:52	28° Ω 19'17	0°19'01	retrograde	10091 Dec 25 10:48	27° η 09'09	
minimum elong	10085 Aug 11 02:52	28° Ω 19'16	0°18'45	opposition	10092 Mar 11 05:01	25° η 08'26	0°45'47
max. Earth dist.	10085 Aug 11 13:01	28° Ω 20'44	20.85602 AU	min. Earth dist.	10092 Mar 11 00:56	25° η 08'52	18.55392 AU
morning rise	10085 Aug 27 06:41	29° Ω 14'48		direct	10092 May 25 04:56	23° η 09'37	
	10085 Sep 10 01:38	0° η		evening set	10092 Aug 23 22:37	26° η 15'11	
retrograde	10085 Nov 29 09:21	2° η 23'15					
opposition	10086 Feb 14 17:59	0° η 23'31	0°23'08	conjunction	10092 Sep 09 04:46	27° η 11'50	0°42'46
min. Earth dist.	10086 Feb 14 08:17	0° η 24'31	18.83779 AU	minimum elong	10092 Sep 09 04:46	27° η 11'50	0°42'42
	10086 Feb 24 10:41	30° κ 0		max. Earth dist.	10092 Sep 09 08:07	27° η 12'20	20.52456 AU
direct	10086 May 01 05:37	28° Ω 25'52		morning rise	10092 Sep 25 13:34	28° η 08'54	
	10086 Jul 02 10:10	0° η			10092 Oct 31 13:14	0° Ω	
evening set	10086 Jul 30 09:27	1° η 27'33		retrograde	10092 Dec 28 23:48	1° Ω 21'36	
					10093 Feb 27 14:01	30° κ η	
conjunction	10086 Aug 15 11:10	2° η 22'51	0°22'48	opposition	10093 Mar 15 16:17	29° η 20'38	0°48'55
minimum elong	10086 Aug 15 11:10	2° η 22'51	0°22'34	min. Earth dist.	10093 Mar 15 13:58	29° η 20'52	18.49464 AU
max. Earth dist.	10086 Aug 15 20:30	2° η 24'12	20.81877 AU	direct	10093 May 29 14:04	27° η 21'29	
morning rise	10086 Aug 31 15:47	3° η 18'34			10093 Aug 20 05:32	0° Ω	
retrograde	10086 Dec 03 19:15	6° η 27'34		evening set	10093 Aug 28 11:22	0° Ω 27'51	
opposition	10087 Feb 19 03:01	4° η 27'42	0°27'16				
min. Earth dist.	10087 Feb 18 18:56	4° η 28'32	18.79907 AU	conjunction	10093 Sep 13 18:16	1° Ω 24'45	0°45'28
direct	10087 May 05 11:20	2° η 29'56		minimum elong	10093 Sep 13 18:15	1° Ω 24'45	0°45'26
evening set	10087 Aug 03 17:47	5° η 32'08		max. Earth dist.	10093 Sep 13 20:22	1° Ω 25'04	20.46426 AU
				morning rise	10093 Sep 30 03:48	2° Ω 22'04	
conjunction	10087 Aug 19 20:17	6° η 27'38	0°26'28	retrograde	10094 Jan 02 15:10	5° Ω 35'25	
minimum elong	10087 Aug 19 20:17	6° η 27'38	0°26'16	opposition	10094 Mar 20 03:46	3° Ω 34'12	0°51'48
max. Earth dist.	10087 Aug 20 05:07	6° η 28'55	20.77860 AU	min. Earth dist.	10094 Mar 20 01:41	3° Ω 34'25	18.43340 AU
morning rise	10087 Sep 05 01:35	7° η 23'33		direct	10094 Jun 03 01:02	1° Ω 34'43	
retrograde	10087 Dec 08 07:23	10° η 33'07		evening set	10094 Sep 02 00:52	4° Ω 41'55	
opposition	10088 Feb 23 12:04	8° η 33'08	0°31'17				
min. Earth dist.	10088 Feb 23 03:48	8° η 33'59	18.75725 AU	conjunction	10094 Sep 18 08:33	5° Ω 39'06	0°47'56
direct	10088 May 08 19:29	6° η 35'13		minimum elong	10094 Sep 18 08:32	5° Ω 39'06	0°47'57
evening set	10088 Aug 07 02:56	9° η 38'01		max. Earth dist.	10094 Sep 18 10:00	5° Ω 39'19	20.40213 AU
				morning rise	10094 Oct 04 18:41	6° Ω 36'40	
conjunction	10088 Aug 23 06:04	10° η 33'44	0°30'02	retrograde	10095 Jan 07 05:32	9° Ω 50'40	
minimum elong	10088 Aug 23 06:04	10° η 33'44	0°29'51	opposition	10095 Mar 24 15:50	7° Ω 49'12	0°54'25
max. Earth dist.	10088 Aug 23 13:53	10° η 34'52	20.73504 AU	min. Earth dist.	10095 Mar 24 15:16	7° Ω 49'16	18.37068 AU
morning rise	10088 Sep 08 12:06	11° η 29'52		direct	10095 Jun 07 11:28	5° Ω 49'24	
retrograde	10088 Dec 11 18:24	14° η 40'02		evening set	10095 Sep 06 15:15	8° Ω 57'29	
opposition	10089 Feb 26 21:49	12° η 39'55	0°35'10				
min. Earth dist.	10089 Feb 26 15:23	12° η 40'35	18.71198 AU	conjunction	10095 Sep 22 23:35	9° Ω 54'56	0°50'09
direct	10089 May 13 01:50	10° η 41'50		minimum elong	10095 Sep 22 23:35	9° Ω 54'56	0°50'11
evening set	10089 Aug 11 12:37	13° η 45'16		max. Earth dist.	10095 Sep 22 23:40	9° Ω 54'57	20.33903 AU
				morning rise	10095 Oct 09 10:24	10° Ω 52'46	

retrograde	10096 Jan 11 21:49	14° <u>♊</u> 07'27	
opposition	10096 Mar 28 04:09	12° <u>♊</u> 05'45	0°56'45
min. Earth dist.	10096 Mar 28 03:48	12° <u>♊</u> 05'47	18.30732 AU
direct	10096 Jun 10 23:13	10° <u>♊</u> 05'36	
evening set	10096 Sep 10 06:23	13° <u>♊</u> 14'38	
conjunction	10096 Sep 26 15:29	14° <u>♊</u> 12'22	0°52'06
minimum elong	10096 Sep 26 15:29	14° <u>♊</u> 12'22	0°52'11
max. Earth dist.	10096 Sep 26 15:13	14° <u>♊</u> 12'20	20.27542 AU
morning rise	10096 Oct 13 02:47	15° <u>♊</u> 10'28	
retrograde	10097 Jan 15 13:35	18° <u>♊</u> 25'51	
opposition	10097 Apr 01 17:12	16° <u>♊</u> 23'56	0°58'47
min. Earth dist.	10097 Apr 01 18:02	16° <u>♊</u> 23'51	18.24376 AU
direct	10097 Jun 15 10:54	14° <u>♊</u> 23'29	
evening set	10097 Sep 14 22:17	17° <u>♊</u> 33'28	
conjunction	10097 Oct 01 08:02	18° <u>♊</u> 31'30	0°53'45
minimum elong	10097 Oct 01 08:02	18° <u>♊</u> 31'30	0°53'51
max. Earth dist.	10097 Oct 01 06:18	18° <u>♊</u> 31'15	20.21210 AU
morning rise	10097 Oct 17 20:01	19° <u>♊</u> 29'53	
retrograde	10098 Jan 20 07:14	22° <u>♊</u> 45'58	
opposition	10098 Apr 06 06:43	20° <u>♊</u> 43'52	1°00'29
min. Earth dist.	10098 Apr 06 07:50	20° <u>♊</u> 43'45	18.18070 AU
direct	10098 Jun 19 23:45	18° <u>♊</u> 43'06	
evening set	10098 Sep 19 15:13	21° <u>♊</u> 54'07	
conjunction	10098 Oct 06 01:45	22° <u>♊</u> 52'26	0°55'07
minimum elong	10098 Oct 06 01:45	22° <u>♊</u> 52'26	0°55'16
max. Earth dist.	10098 Oct 05 23:51	22° <u>♊</u> 52'10	20.14925 AU
morning rise	10098 Oct 22 14:08	23° <u>♊</u> 51'06	
retrograde	10099 Jan 25 00:33	27° <u>♊</u> 07'53	
opposition	10099 Apr 10 20:45	25° <u>♊</u> 05'38	1°01'51
min. Earth dist.	10099 Apr 10 22:56	25° <u>♊</u> 05'24	18.11828 AU
direct	10099 Jun 24 12:41	23° <u>♊</u> 04'36	
evening set	10099 Sep 24 09:08	26° <u>♊</u> 16'40	
conjunction	10099 Oct 10 20:12	27° <u>♊</u> 15'17	0°56'11
minimum elong	10099 Oct 10 20:12	27° <u>♊</u> 15'17	0°56'21
max. Earth dist.	10099 Oct 10 16:34	27° <u>♊</u> 14'45	20.08741 AU
morning rise	10099 Oct 27 09:14	28° <u>♊</u> 14'12	
	10099 Nov 29 11:25	0° <u>♋</u>	
retrograde	10100 Jan 29 19:20	1° <u>♋</u> 31'43	
	10100 Apr 03 08:11	30° <u>♋</u>	
opposition	10100 Apr 15 11:28	29° <u>♋</u> 29'21	1°02'52
min. Earth dist.	10100 Apr 15 14:11	29° <u>♋</u> 29'03	18.05699 AU
direct	10100 Jun 29 03:11	27° <u>♋</u> 28'02	
	10100 Sep 17 02:55	0° <u>♋</u>	
evening set	10100 Sep 29 03:46	0° <u>♋</u> 41'12	
conjunction	10100 Oct 15 15:34	1° <u>♋</u> 40'07	0°56'54
minimum elong	10100 Oct 15 15:33	1° <u>♋</u> 40'07	0°57'06
max. Earth dist.	10100 Oct 15 12:01	1° <u>♋</u> 39'35	20.02655 AU
morning rise	10100 Nov 01 04:52	2° <u>♋</u> 39'18	
retrograde	10101 Feb 03 13:56	5° <u>♋</u> 57'31	
opposition	10101 Apr 20 02:54	3° <u>♋</u> 55'04	1°03'31
min. Earth dist.	10101 Apr 20 06:32	3° <u>♋</u> 54'41	17.99661 AU
direct	10101 Jul 03 17:42	1° <u>♋</u> 53'31	
evening set	10101 Oct 03 23:40	5° <u>♋</u> 07'47	
conjunction	10101 Oct 20 11:54	6° <u>♋</u> 07'00	0°57'18
minimum elong	10101 Oct 20 11:54	6° <u>♋</u> 07'00	0°57'33
max. Earth dist.	10101 Oct 20 06:17	6° <u>♋</u> 06'09	19.96672 AU
morning rise	10101 Nov 06 01:46	7° <u>♋</u> 06'27	