













































































































































































































































































































































































































































































min. Earth dist.	7600 Feb 19 21:08	3° \mathring{M} 25'12	4.00056 AU	opposition	7605 Jul 28 00:29	11° \approx 02'57	0°34'28
opposition	7600 Feb 21 09:28	3° \mathring{M} 12'50	-0°07'16	min. Earth dist.	7605 Jul 29 06:47	10° \approx 53'16	4.46287 AU
	7600 Mar 18 05:28	30° \mathring{R} 0		direct	7605 Sep 28 17:26	6° \approx 01'40	
direct	7600 Apr 19 13:57	28° \mathring{O} 15'55			7605 Dec 21 20:54	15° \approx	
asc. node	7600 Apr 22 19:11	28° \mathring{O} 17'00		evening set	7606 Feb 01 02:21	23° \approx 26'44	
	7600 May 21 23:48	0° \mathring{M}		max. Earth dist.	7606 Feb 11 19:28	25° \approx 47'10	6.41638 AU
evening set	7600 Aug 24 05:57	17° \mathring{M} 41'09					
				conjunction	7606 Feb 13 21:42	26° \approx 14'43	0°11'07
conjunction	7600 Sep 06 22:27	20° \mathring{M} 52'39	0°10'37	minimum elong	7606 Feb 13 21:42	26° \approx 14'44	0°11'11
minimum elong	7600 Sep 06 22:26	20° \mathring{M} 52'39	0°10'37	behind sun begin	7606 Feb 13 15:47	26° \approx 11'30	
behind sun begin	7600 Sep 06 16:01	20° \mathring{M} 48'55		behind sun end	7606 Feb 14 03:38	26° \approx 17'58	
behind sun end	7600 Sep 07 04:51	20° \mathring{M} 56'22		morning rise	7606 Feb 26 15:09	29° \approx 02'01	
max. Earth dist.	7600 Sep 09 10:41	21° \mathring{M} 27'48	6.07130 AU		7606 Mar 03 01:49	0° \mathring{H}	
morning rise	7600 Sep 20 15:57	24° \mathring{M} 04'22		retrograde	7606 Jun 28 13:34	16° \mathring{H} 13'24	
	7600 Oct 16 23:57	0° \mathring{O}		desc. node	7606 Jul 27 01:09	14° \mathring{H} 59'28	
retrograde	7601 Jan 26 16:34	13° \mathring{O} 22'04		opposition	7606 Aug 28 11:44	11° \mathring{H} 20'50	-0°03'17
min. Earth dist.	7601 Mar 25 21:28	8° \mathring{O} 30'23	4.15227 AU	min. Earth dist.	7606 Aug 30 03:14	11° \mathring{H} 08'13	4.35348 AU
opposition	7601 Mar 27 09:28	8° \mathring{O} 18'13	0°36'52	direct	7606 Oct 29 17:50	6° \mathring{H} 20'47	
direct	7601 May 25 13:25	3° \mathring{O} 18'53		evening set	7607 Mar 04 02:55	24° \mathring{H} 18'47	
evening set	7601 Sep 29 02:59	21° \mathring{O} 55'44		max. Earth dist.	7607 Mar 14 13:12	26° \mathring{H} 40'02	6.27770 AU
conjunction	7601 Oct 12 17:10	24° \mathring{O} 58'48	0°36'31	conjunction	7607 Mar 16 20:51	27° \mathring{H} 11'33	-0°16'04
minimum elong	7601 Oct 12 17:08	24° \mathring{O} 58'47	0°36'34	minimum elong	7607 Mar 16 20:50	27° \mathring{H} 11'33	0°16'05
max. Earth dist.	7601 Oct 14 15:55	25° \mathring{O} 25'04	6.23695 AU	behind sun begin	7607 Mar 16 19:46	27° \mathring{H} 10'57	
morning rise	7601 Oct 26 07:07	28° \mathring{O} 01'21		behind sun end	7607 Mar 16 21:54	27° \mathring{H} 12'09	
	7601 Nov 04 05:40	0° \mathring{M}		morning rise	7607 Mar 29 14:08	0° \mathring{Y} 04'15	
	7602 Feb 01 14:45	15° \mathring{M}			7607 Mar 29 06:35	0° \mathring{Y}	
retrograde	7602 Feb 27 20:48	16° \mathring{M} 05'28		retrograde	7607 Aug 01 08:57	18° \mathring{Y} 15'08	
	7602 Mar 25 21:59	15° \mathring{R} \mathring{M}		opposition	7607 Oct 01 00:47	13° \mathring{Y} 21'29	-0°42'31
opposition	7602 Apr 28 23:26	11° \mathring{M} 04'13	1°05'42	min. Earth dist.	7607 Oct 02 12:56	13° \mathring{Y} 09'50	4.19390 AU
min. Earth dist.	7602 Apr 28 00:20	11° \mathring{M} 11'55	4.31652 AU	direct	7607 Dec 01 03:54	8° \mathring{Y} 23'25	
direct	7602 Jun 28 12:05	6° \mathring{M} 03'09		evening set	7608 Apr 04 20:03	27° \mathring{Y} 09'02	
	7602 Sep 19 04:30	15° \mathring{M}		max. Earth dist.	7608 Apr 15 21:46	29° \mathring{Y} 44'44	6.11016 AU
evening set	7602 Nov 01 17:30	23° \mathring{M} 54'58			7608 Apr 16 23:44	0° \mathring{B}	
conjunction	7602 Nov 15 02:46	26° \mathring{M} 49'41	0°49'43	conjunction	7608 Apr 17 15:31	0° \mathring{B} 09'17	-0°39'32
minimum elong	7602 Nov 15 02:46	26° \mathring{M} 49'41	0°49'49	minimum elong	7608 Apr 17 15:30	0° \mathring{B} 09'16	0°39'35
max. Earth dist.	7602 Nov 16 01:19	27° \mathring{M} 01'58	6.38696 AU	morning rise	7608 Apr 30 11:20	3° \mathring{B} 10'07	
morning rise	7602 Nov 28 10:14	29° \mathring{M} 43'21			7608 Jun 24 08:56	15° \mathring{B}	
	7602 Nov 29 17:04	0° \mathring{Z}		retrograde	7608 Sep 05 20:58	22° \mathring{B} 36'33	
retrograde	7603 Mar 30 06:05	16° \mathring{Z} 50'52		opposition	7608 Nov 05 01:13	17° \mathring{B} 40'45	-1°10'27
opposition	7603 May 29 18:47	11° \mathring{Z} 53'07	1°13'46	min. Earth dist.	7608 Nov 05 22:17	17° \mathring{B} 33'52	4.03187 AU
min. Earth dist.	7603 May 29 13:21	11° \mathring{Z} 54'54	4.44183 AU		7608 Nov 26 16:38	15° \mathring{R} \mathring{B}	
direct	7603 Jul 30 12:06	6° \mathring{Z} 51'20		direct	7609 Jan 03 18:03	12° \mathring{B} 45'05	
evening set	7603 Dec 03 09:16	24° \mathring{Z} 13'20			7609 Feb 10 05:59	15° \mathring{B}	
					7609 Apr 30 02:39	0° \mathring{I}	
conjunction	7603 Dec 16 12:42	27° \mathring{Z} 02'11	0°48'26	evening set	7609 May 09 19:56	2° \mathring{I} 19'12	
minimum elong	7603 Dec 16 12:43	27° \mathring{Z} 02'11	0°48'33				
max. Earth dist.	7603 Dec 16 04:16	26° \mathring{Z} 57'39	6.47844 AU	conjunction	7609 May 22 20:05	5° \mathring{I} 27'53	-0°50'15
morning rise	7603 Dec 29 14:02	29° \mathring{Z} 49'55		minimum elong	7609 May 22 20:05	5° \mathring{I} 27'53	0°50'21
	7603 Dec 30 08:59	0° \mathring{B}		max. Earth dist.	7609 May 22 05:55	5° \mathring{I} 19'19	5.96852 AU
retrograde	7604 Apr 27 23:49	16° \mathring{B} 28'11		morning rise	7609 Jun 04 22:16	8° \mathring{I} 37'52	
opposition	7604 Jun 27 18:55	11° \mathring{B} 33'28	1°02'03	retrograde	7609 Oct 14 07:38	29° \mathring{I} 09'41	
min. Earth dist.	7604 Jun 28 09:59	11° \mathring{B} 28'37	4.49480 AU	opposition	7609 Dec 13 00:46	24° \mathring{I} 10'37	-1°13'10
direct	7604 Aug 29 08:27	6° \mathring{B} 31'37		min. Earth dist.	7609 Dec 12 20:26	24° \mathring{I} 12'03	3.92584 AU
evening set	7605 Jan 01 20:30	23° \mathring{B} 44'15		direct	7610 Feb 09 09:57	19° \mathring{I} 16'19	
max. Earth dist.	7605 Jan 13 09:09	26° \mathring{B} 12'32	6.48894 AU		7610 May 06 16:38	0° \mathring{G}	
				evening set	7610 Jun 15 22:31	9° \mathring{G} 19'18	
conjunction	7605 Jan 14 19:11	26° \mathring{B} 30'50	0°34'22	conjunction	7610 Jun 29 06:12	12° \mathring{G} 34'22	-0°41'43
minimum elong	7605 Jan 14 19:13	26° \mathring{B} 30'50	0°34'27	minimum elong	7610 Jun 29 06:13	12° \mathring{G} 34'23	0°41'50
morning rise	7605 Jan 27 15:34	29° \mathring{B} 16'24		max. Earth dist.	7610 Jun 30 06:01	12° \mathring{G} 48'57	5.90884 AU
	7605 Jan 31 01:19	0° \approx		morning rise	7610 Jul 12 16:28	15° \mathring{G} 50'54	
	7605 May 03 08:02	15° \approx			7610 Sep 15 09:19	0° \mathring{O}	
retrograde	7605 May 28 00:34	15° \approx 55'54		retrograde	7610 Nov 22 01:05	6° \mathring{O} 44'03	
	7605 Jun 21 17:00	15° \mathring{R} \approx					

min. Earth dist.	7611 Jan 19 08:56	1°Ω50'27	3.92044 AU	evening set	7617 Jan 06 01:35	27°♄59'21	
opposition	7611 Jan 20 11:15	1°Ω41'31	-0°45'46		7617 Jan 15 10:28	0°♄	
	7611 Feb 02 05:25	30°♄56		max. Earth dist.	7617 Jan 17 10:16	0°♄25'45	6.48406 AU
direct	7611 Mar 19 08:20	26°♄46'34					
	7611 May 02 18:11	0°Ω		conjunction	7617 Jan 18 23:37	0°♄45'53	0°31'31
	7611 Jul 16 19:46	15°Ω		minimum elong	7617 Jan 18 23:38	0°♄45'54	0°31'37
evening set	7611 Jul 24 00:44	16°Ω43'00		morning rise	7617 Jan 31 19:30	3°♄31'27	
					7617 Apr 01 08:11	15°♄	
conjunction	7611 Aug 06 15:02	19°Ω58'52	-0°16'14	retrograde	7617 Jun 01 08:20	20°♄13'31	
minimum elong	7611 Aug 06 15:03	19°Ω58'53	0°16'19	opposition	7617 Aug 01 07:36	15°♄20'43	0°29'35
max. Earth dist.	7611 Aug 08 20:31	20°Ω31'01	5.95787 AU	min. Earth dist.	7617 Aug 02 16:47	15°♄10'08	4.45168 AU
morning rise	7611 Aug 20 07:30	23°Ω15'42			7617 Aug 04 00:33	15°♄	
	7611 Sep 18 11:20	0°♄		direct	7617 Oct 03 01:21	10°♄19'32	
retrograde	7611 Dec 29 01:47	13°♄33'05			7617 Nov 30 11:54	15°♄	
min. Earth dist.	7612 Feb 24 22:33	8°♄41'38	4.01818 AU	evening set	7618 Feb 05 08:30	27°♄48'06	
opposition	7612 Feb 26 12:40	8°♄28'39	-0°00'31		7618 Feb 15 09:02	0°♄	
asc. node	7612 Mar 01 22:38	7°♄52'42		max. Earth dist.	7618 Feb 15 22:25	0°♄07'22	6.39958 AU
direct	7612 Apr 24 18:34	3°♄31'25					
evening set	7612 Aug 29 11:30	22°♄50'15		conjunction	7618 Feb 18 03:33	0°♄36'37	0°07'24
				minimum elong	7618 Feb 18 03:33	0°♄36'37	0°07'27
conjunction	7612 Sep 12 03:47	26°♄00'38	0°14'52	behind sun begin	7618 Feb 17 20:16	0°♄32'38	
minimum elong	7612 Sep 12 03:46	26°♄00'37	0°14'52	behind sun end	7618 Feb 18 10:49	0°♄40'36	
behind sun begin	7612 Sep 12 00:49	25°♄58'55		morning rise	7618 Mar 02 20:56	3°♄24'31	
behind sun end	7612 Sep 12 06:43	26°♄02'20		desc. node	7618 Jun 05 16:48	19°♄34'05	
max. Earth dist.	7612 Sep 14 14:46	26°♄34'52	6.09396 AU	retrograde	7618 Jul 03 02:47	20°♄43'01	
morning rise	7612 Sep 25 21:10	29°♄11'10		opposition	7618 Sep 02 00:56	15°♄50'18	-0°08'58
	7612 Sep 29 10:18	0°♄		min. Earth dist.	7618 Sep 03 16:13	15°♄37'44	4.33201 AU
retrograde	7613 Jan 31 08:30	18°♄17'44		direct	7618 Nov 03 03:28	10°♄50'27	
min. Earth dist.	7613 Mar 30 16:52	13°♄25'50	4.17730 AU	evening set	7619 Mar 08 13:58	28°♄54'54	
opposition	7613 Apr 01 03:42	13°♄14'03	0°42'07		7619 Mar 13 09:02	0°♄	
direct	7613 May 30 12:29	8°♄14'22		max. Earth dist.	7619 Mar 19 02:17	1°♄18'02	6.25327 AU
evening set	7613 Oct 04 00:19	26°♄43'39					
				conjunction	7619 Mar 21 08:04	1°♄48'41	-0°19'48
conjunction	7613 Oct 17 14:03	29°♄45'23	0°39'15	minimum elong	7619 Mar 21 08:03	1°♄48'40	0°19'48
minimum elong	7613 Oct 17 14:02	29°♄45'22	0°39'18	morning rise	7619 Apr 03 01:23	4°♄42'25	
	7613 Oct 18 16:12	0°♄		retrograde	7619 Aug 06 08:42	23°♄03'54	
max. Earth dist.	7613 Oct 19 11:17	0°♄10'40	6.26216 AU	opposition	7619 Oct 05 22:37	18°♄10'03	-0°47'28
morning rise	7613 Oct 31 02:59	2°♄46'27		min. Earth dist.	7619 Oct 07 10:05	17°♄58'37	4.16824 AU
	7613 Dec 31 08:57	15°♄		direct	7619 Dec 05 21:42	13°♄12'21	
retrograde	7614 Mar 04 05:20	20°♄40'27			7620 Mar 31 14:47	0°♄	
opposition	7614 May 03 09:50	15°♄39'41	1°08'05	evening set	7620 Apr 09 15:04	2°♄05'50	
min. Earth dist.	7614 May 02 12:37	15°♄46'44	4.33964 AU	max. Earth dist.	7620 Apr 20 18:51	4°♄43'40	6.08553 AU
	7614 May 08 09:50	15°♄					
direct	7614 Jul 03 03:07	10°♄38'31		conjunction	7620 Apr 22 10:54	5°♄07'20	-0°42'01
	7614 Aug 27 13:30	15°♄		minimum elong	7620 Apr 22 10:52	5°♄07'19	0°42'05
evening set	7614 Nov 06 06:44	28°♄24'14		morning rise	7620 May 05 07:35	8°♄09'34	
	7614 Nov 13 15:42	0°♄			7620 Jun 04 07:41	15°♄	
conjunction	7614 Nov 19 15:00	1°♄17'48	0°50'23	retrograde	7620 Sep 11 04:34	27°♄47'15	
minimum elong	7614 Nov 19 14:59	1°♄17'48	0°50'28	opposition	7620 Nov 10 07:40	22°♄51'02	-1°12'38
max. Earth dist.	7614 Nov 20 07:53	1°♄26'59	6.40610 AU	min. Earth dist.	7620 Nov 11 00:30	22°♄45'30	4.01079 AU
morning rise	7614 Dec 02 21:41	4°♄10'22		direct	7621 Jan 08 18:44	17°♄55'39	
retrograde	7615 Apr 03 10:47	21°♄11'28			7621 Apr 12 06:23	0°♄	
opposition	7615 Jun 03 00:29	16°♄14'10	1°13'12	evening set	7621 May 14 23:15	7°♄36'02	
min. Earth dist.	7615 Jun 02 22:40	16°♄14'45	4.45587 AU	conjunction	7621 May 28 00:28	10°♄45'54	-0°50'16
direct	7615 Aug 03 22:19	11°♄12'17		minimum elong	7621 May 28 00:28	10°♄45'54	0°50'22
evening set	7615 Dec 07 16:36	28°♄31'07		max. Earth dist.	7621 May 27 16:53	10°♄41'18	5.95332 AU
	7615 Dec 14 15:13	0°♄		morning rise	7621 Jun 10 03:38	13°♄57'04	
					7621 Aug 25 17:42	0°♄	
conjunction	7615 Dec 20 19:27	1°♄19'24	0°47'08	retrograde	7621 Oct 19 20:55	4°♄35'28	
minimum elong	7615 Dec 20 19:27	1°♄19'24	0°47'15		7621 Dec 15 11:49	30°♄	
max. Earth dist.	7615 Dec 20 07:58	1°♄13'15	6.48641 AU	opposition	7621 Dec 18 12:02	29°♄35'51	-1°10'59
morning rise	7616 Jan 02 19:49	4°♄06'31		min. Earth dist.	7621 Dec 18 04:39	29°♄38'19	3.91850 AU
retrograde	7616 May 02 01:51	20°♄42'44		direct	7622 Feb 14 18:55	24°♄41'38	
opposition	7616 Jul 01 23:12	15°♄48'20	0°58'59		7622 Apr 13 20:27	0°♄	
min. Earth dist.	7616 Jul 02 16:04	15°♄42'55	4.49640 AU	evening set	7622 Jun 21 07:22	14°♄45'38	
direct	7616 Sep 02 13:25	10°♄46'32					

conjunction	7622 Jul 04 16:06	18°  01'10	-0°38'56	min. Earth dist.	7628 Jul 06 23:25	19°  53'44	4.49315 AU
minimum elong	7622 Jul 04 16:08	18°  01'11	0°39'02	direct	7628 Sep 06 19:20	14°  58'32	
max. Earth dist.	7622 Jul 05 21:59	18°  19'24	5.91019 AU		7628 Dec 30 19:02	0° 	
morning rise	7622 Jul 18 03:27	21°  18'05		evening set	7629 Jan 10 05:55	2°  13'06	
	7622 Aug 24 15:04	0° 		max. Earth dist.	7629 Jan 21 11:54	4°  38'24	6.47444 AU
retrograde	7622 Nov 27 09:47	12°  08'40					
opposition	7623 Jan 25 19:41	7°  05'44	-0°39'58	conjunction	7629 Jan 23 03:38	4°  59'51	0°28'34
min. Earth dist.	7623 Jan 24 14:07	7°  05'46	3.93060 AU	minimum elong	7629 Jan 23 03:39	4°  59'52	0°28'40
direct	7623 Mar 24 16:18	2°  10'32		morning rise	7629 Feb 04 23:00	7°  45'38	
	7623 Jun 28 22:55	15° 			7629 Mar 12 04:07	15° 	
evening set	7623 Jul 29 09:09	22°  02'09		retrograde	7629 Jun 05 15:03	24°  31'56	
				opposition	7629 Aug 05 15:13	19°  39'15	0°24'36
conjunction	7623 Aug 11 23:48	25°  01'22	-0°11'54	min. Earth dist.	7629 Aug 07 00:55	19°  28'30	4.43644 AU
minimum elong	7623 Aug 11 23:49	25°  01'23	0°11'58		7629 Sep 21 18:46	15°  R 	
behind sun begin	7623 Aug 11 18:07	25°  01'59		direct	7629 Oct 07 06:33	14°  38'17	
behind sun end	7623 Aug 12 05:31	25°  02'47			7629 Oct 22 20:42	15° 	
max. Earth dist.	7623 Aug 14 06:29	25°  05'05	5.97548 AU		7630 Jan 30 13:00	0° 	
morning rise	7623 Aug 25 16:47	28°  03'31		evening set	7630 Feb 09 15:38	2°  H 	11'45
	7623 Aug 31 19:21	0° 		max. Earth dist.	7630 Feb 20 04:57	4°  H 	31'20 6.37985 AU
retrograde	7624 Jan 02 23:24	18°  M 	41'01				
asc. node	7624 Jan 10 23:50	18°  M 	34'31	conjunction	7630 Feb 22 10:24	5°  H 	00'54 0°03'38
min. Earth dist.	7624 Feb 29 22:05	13°  M 	49'37 4.04105 AU	minimum elong	7630 Feb 22 10:24	5°  H 	00'54 0°03'41
opposition	7624 Mar 02 12:41	13°  M 	36'28 0°06'02	behind sun begin	7630 Feb 22 02:31	4°  H 	56'34
direct	7624 Apr 29 22:05	8°  M 	38'49	behind sun end	7630 Feb 22 18:18	5°  H 	05'15
evening set	7624 Sep 03 13:24	27°  M 	49'43	morning rise	7630 Mar 07 03:39	7°  H 	49'33
	7624 Sep 12 23:42	0° 		desc. node	7630 Apr 15 12:44	16°  H 	03'45
conjunction	7624 Sep 17 05:38	0°  A 	58'50 0°18'52	retrograde	7630 Jul 07 19:20	25°  H 	16'13
minimum elong	7624 Sep 17 05:37	0°  A 	58'50 0°18'52	opposition	7630 Sep 06 15:44	20°  H 	23'30 -0°14'37
max. Earth dist.	7624 Sep 19 16:27	1°  A 	32'47 6.11995 AU	min. Earth dist.	7630 Sep 08 07:51	20°  H 	10'39 4.30901 AU
morning rise	7624 Sep 30 22:25	4°  A 	07'56	direct	7630 Nov 07 15:53	15°  H 	23'58
retrograde	7625 Feb 04 22:15	23°  A 	02'47		7631 Feb 25 01:03	0° 	
min. Earth dist.	7625 Apr 04 09:16	18°  A 	10'35 4.20370 AU	evening set	7631 Mar 13 02:39	3°  Y 	35'23
opposition	7625 Apr 05 18:20	17°  A 	59'27 0°46'52	max. Earth dist.	7631 Mar 23 15:18	5°  Y 	59'33 6.22882 AU
direct	7625 Jun 04 08:06	12°  A 	59'32				
	7625 Oct 02 14:23	0° 		conjunction	7631 Mar 25 20:48	6°  Y 	30'11 -0°23'25
evening set	7625 Oct 08 17:45	1°  M 	21'08	minimum elong	7631 Mar 25 20:47	6°  Y 	30'11 0°23'25
conjunction	7625 Oct 22 06:39	4°  M 	21'30 0°41'37	morning rise	7631 Apr 07 14:31	9°  Y 	25'05
minimum elong	7625 Oct 22 06:37	4°  M 	21'29 0°41'42	retrograde	7631 Aug 11 08:38	27°  Y 	57'14
max. Earth dist.	7625 Oct 23 23:22	4°  M 	44'08 6.28662 AU	opposition	7631 Oct 10 22:05	23°  Y 	03'08 -0°52'08
morning rise	7625 Nov 04 18:51	7°  M 	21'12	min. Earth dist.	7631 Oct 12 06:25	22°  Y 	52'40 4.14434 AU
	7625 Dec 11 01:24	15° 		direct	7631 Dec 10 15:28	18°  Y 	05'47
retrograde	7626 Mar 08 10:19	25°  M 	05'57		7632 Mar 14 03:37	0° 	
opposition	7626 May 07 16:57	20°  M 	05'40 1°10'00	evening set	7632 Apr 14 11:08	7°  B 	06'22
min. Earth dist.	7626 May 06 22:27	20°  M 	11'48 4.36050 AU	max. Earth dist.	7632 Apr 25 20:45	9°  B 	48'22 6.06433 AU
direct	7626 Jul 07 14:39	15°  M 	04'20	conjunction	7632 Apr 27 07:33	10°  B 	09'02 -0°44'12
	7626 Oct 28 18:36	0° 		minimum elong	7632 Apr 27 07:32	10°  B 	09'02 0°44'17
evening set	7626 Nov 10 16:43	2°  A 	45'01	morning rise	7632 May 10 04:50	13°  B 	12'30
conjunction	7626 Nov 24 00:19	5°  A 	37'40 0°50'44		7632 May 17 19:50	15°  B 	
minimum elong	7626 Nov 24 00:19	5°  A 	37'40 0°50'50	retrograde	7632 Aug 03 06:21	0° 	
max. Earth dist.	7626 Nov 24 13:42	5°  A 	44'55 6.42192 AU		7632 Sep 16 14:12	2°  II 	59'59
morning rise	7626 Dec 07 05:56	8°  A 	29'14	opposition	7632 Oct 31 09:23	30°  R 	B 
retrograde	7627 Apr 07 12:40	25°  A 	25'16	min. Earth dist.	7632 Nov 15 14:38	28°  B 	03'19 -1°14'12
opposition	7627 Jun 07 03:48	20°  A 	28'30 1°12'17	direct	7632 Nov 16 04:54	27°  B 	58'37 3.99433 AU
min. Earth dist.	7627 Jun 07 04:42	20°  A 	28'13 4.46582 AU		7633 Jan 13 22:00	23°  B 	08'12
direct	7627 Aug 08 04:29	15°  A 	26'40	evening set	7633 Mar 22 12:28	0° 	
	7627 Nov 28 22:30	0° 			7633 May 20 02:33	12°  II 	52'57
evening set	7627 Dec 11 22:09	2°  B 	43'47	conjunction	7633 Jun 02 04:41	16°  II 	03'45 -0°49'51
max. Earth dist.	7627 Dec 24 07:01	5°  B 	22'29 6.48974 AU	minimum elong	7633 Jun 02 04:41	16°  II 	03'45 0°49'58
conjunction	7627 Dec 25 00:09	5°  B 	31'40 0°45'37	max. Earth dist.	7633 Jun 02 02:12	16°  II 	02'14 5.94310 AU
minimum elong	7627 Dec 25 00:10	5°  B 	31'40 0°45'44	morning rise	7633 Jun 15 08:59	19°  II 	15'54
morning rise	7628 Jan 07 00:01	8°  B 	18'27		7633 Aug 01 13:59	0° 	
retrograde	7628 May 06 06:16	24°  B 	54'20	retrograde	7633 Oct 25 06:29	9°  B 	58'19
opposition	7628 Jul 06 03:01	20°  B 	00'17 0°55'42	opposition	7633 Dec 23 21:07	4°  B 	58'14 -1°08'11
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



























































































































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conjunction	7634 Jul 10 00:05	23°  23'15	-0°35'51	retrograde	7640 May 10 10:24	29°  09'52	
minimum elong	7634 Jul 10 00:07	23°  23'16	0°35'57	opposition	7640 Jul 10 08:26	24°  16'08	0°52'03
max. Earth dist.	7634 Jul 11 09:15	23°  43'27	5.91523 AU	min. Earth dist.	7640 Jul 11 06:21	24°  09'07	4.48856 AU
morning rise	7634 Jul 23 12:30	26°  40'23		direct	7640 Sep 11 00:58	19°  14'32	
	7634 Aug 06 10:30	0°  ♏			7640 Dec 13 22:39	0°  ♏	
	7634 Oct 24 07:07	15°  ♏		evening set	7641 Jan 14 12:07	6°  ♏30'58	
retrograde	7634 Dec 02 14:06	17°  ♏27'04		max. Earth dist.	7641 Jan 25 14:19	8°  ♏54'39	6.46483 AU
	7635 Jan 10 20:45	15°  ♏♏					
min. Earth dist.	7635 Jan 29 17:20	12°  ♏34'27	3.94259 AU	conjunction	7641 Jan 27 09:12	9°  ♏17'53	0°25'23
opposition	7635 Jan 31 00:54	12°  ♏23'43	-0°33'57	minimum elong	7641 Jan 27 09:13	9°  ♏17'53	0°25'29
direct	7635 Mar 29 22:31	7°  ♏28'11		morning rise	7641 Feb 09 04:18	12°  ♏03'54	
	7635 Jun 08 16:54	15°  ♏			7641 Feb 22 23:08	15°  ♏	
evening set	7635 Aug 03 14:33	27°  ♏14'45		retrograde	7641 Jun 10 01:53	28°  ♏54'17	
	7635 Aug 15 04:32	0°  ♏♏		opposition	7641 Aug 10 00:58	24°  ♏01'44	0°19'21
				min. Earth dist.	7641 Aug 11 12:24	23°  ♏50'25	4.42255 AU
conjunction	7635 Aug 17 05:52	0°  ♏29'24	-0°07'33	direct	7641 Oct 11 15:56	19°  ♏00'57	
minimum elong	7635 Aug 17 05:52	0°  ♏29'24	0°07'36		7642 Jan 13 14:35	0°  ♏	
behind sun begin	7635 Aug 16 22:17	0°  ♏24'54		evening set	7642 Feb 13 23:52	6°  ♏38'27	
behind sun end	7635 Aug 17 13:27	0°  ♏33'53		desc. node	7642 Feb 22 22:13	8°  ♏36'58	
max. Earth dist.	7635 Aug 19 15:18	1°  ♏03'36	5.99328 AU	max. Earth dist.	7642 Feb 24 12:56	8°  ♏58'27	6.36293 AU
morning rise	7635 Aug 30 22:59	3°  ♏44'44					
asc. node	7635 Nov 21 04:40	20°  ♏12'16		conjunction	7642 Feb 26 18:29	9°  ♏28'11	-0°00'16
retrograde	7636 Jan 07 20:46	23°  ♏42'45		minimum elong	7642 Feb 26 18:30	9°  ♏28'11	0°00'15
min. Earth dist.	7636 Mar 05 20:07	18°  ♏51'07	4.06250 AU	behind sun begin	7642 Feb 26 10:35	9°  ♏23'49	
opposition	7636 Mar 07 09:59	18°  ♏38'14	0°12'24	behind sun end	7642 Feb 27 02:25	9°  ♏32'34	
direct	7636 May 04 23:09	13°  ♏40'15		morning rise	7642 Mar 11 11:36	12°  ♏17'27	
	7636 Aug 27 11:15	0°  ♏		retrograde	7642 Jul 12 10:35	29°  ♏51'16	
evening set	7636 Sep 08 13:11	2°  ♏44'08		opposition	7642 Sep 11 07:40	24°  ♏58'25	-0°20'15
				min. Earth dist.	7642 Sep 12 22:00	24°  ♏46'09	4.29034 AU
conjunction	7636 Sep 22 05:06	5°  ♏52'05	0°22'41	direct	7642 Nov 12 03:33	19°  ♏59'14	
minimum elong	7636 Sep 22 05:04	5°  ♏52'04	0°22'42		7643 Feb 07 11:01	0°  ♏	
max. Earth dist.	7636 Sep 24 13:55	6°  ♏24'41	6.14299 AU	evening set	7643 Mar 17 15:33	8°  ♏15'50	
morning rise	7636 Oct 05 21:34	8°  ♏59'57		max. Earth dist.	7643 Mar 28 07:06	10°  ♏42'17	6.20997 AU
retrograde	7637 Feb 09 08:47	27°  ♏44'27					
min. Earth dist.	7637 Apr 08 23:13	22°  ♏52'09	4.22629 AU	conjunction	7643 Mar 30 09:42	11°  ♏11'24	-0°26'52
opposition	7637 Apr 10 07:05	22°  ♏41'26	0°51'16	minimum elong	7643 Mar 30 09:41	11°  ♏11'24	0°26'53
direct	7637 Jun 09 00:45	17°  ♏41'13		morning rise	7643 Apr 12 03:36	14°  ♏07'09	
	7637 Sep 15 16:10	0°  ♏♏			7643 Jul 04 06:49	0°  ♏	
evening set	7637 Oct 13 10:11	5°  ♏56'41		retrograde	7643 Aug 16 09:46	2°  ♏47'54	
					7643 Sep 29 00:15	30°  ♏♏	
conjunction	7637 Oct 26 22:30	8°  ♏55'56	0°43'45	opposition	7643 Oct 15 20:55	27°  ♏53'31	-0°56'22
minimum elong	7637 Oct 26 22:28	8°  ♏55'56	0°43'48	min. Earth dist.	7643 Oct 17 03:54	27°  ♏43'29	4.12671 AU
max. Earth dist.	7637 Oct 28 11:29	9°  ♏16'25	6.30710 AU	direct	7643 Dec 15 11:17	22°  ♏56'31	
morning rise	7637 Nov 09 09:47	11°  ♏54'24			7644 Feb 23 10:28	0°  ♏	
	7637 Nov 23 16:12	15°  ♏		evening set	7644 Apr 19 05:43	12°  ♏01'49	
retrograde	7638 Mar 12 17:22	29°  ♏31'21		max. Earth dist.	7644 Apr 30 19:14	14°  ♏46'38	6.04956 AU
min. Earth dist.	7638 May 11 08:39	24°  ♏36'39	4.37733 AU		7644 May 01 17:39	15°  ♏	
opposition	7638 May 12 00:00	24°  ♏31'35	1°11'32				
direct	7638 Jul 12 02:20	19°  ♏30'07		conjunction	7644 May 02 02:38	15°  ♏05'21	-0°46'00
	7638 Oct 11 14:33	0°  ♏♏		minimum elong	7644 May 02 02:37	15°  ♏05'20	0°46'05
evening set	7638 Nov 15 02:52	7°  ♏40'54		morning rise	7644 May 15 00:37	18°  ♏09'46	
					7644 Jul 08 01:52	0°  ♏	
conjunction	7638 Nov 28 09:39	9°  ♏58'47	0°50'49	retrograde	7644 Sep 21 17:47	8°  ♏04'17	
minimum elong	7638 Nov 28 09:39	9°  ♏58'47	0°50'56	opposition	7644 Nov 20 18:09	3°  ♏07'12	-1°15'06
max. Earth dist.	7638 Nov 28 18:02	10°  ♏03'18	6.43384 AU	min. Earth dist.	7644 Nov 21 04:29	3°  ♏03'48	3.98408 AU
morning rise	7638 Dec 11 14:34	12°  ♏49'35			7644 Dec 16 10:23	30°  ♏♏	
retrograde	7639 Apr 11 16:23	29°  ♏41'45		direct	7645 Jan 18 20:22	28°  ♏12'20	
opposition	7639 Jun 11 08:23	24°  ♏45'23	1°10'59		7645 Feb 21 00:11	0°  ♏	
min. Earth dist.	7639 Jun 11 12:02	24°  ♏44'12	4.47238 AU	evening set	7645 May 25 02:13	17°  ♏59'20	
direct	7639 Aug 12 11:26	19°  ♏43'29					
	7639 Nov 11 21:31	0°  ♏		conjunction	7645 Jun 07 05:07	21°  ♏10'44	-0°49'03
evening set	7639 Dec 16 04:41	6°  ♏59'40		minimum elong	7645 Jun 07 05:08	21°  ♏10'45	0°49'11
max. Earth dist.	7639 Dec 28 10:55	9°  ♏36'57	6.49063 AU	max. Earth dist.	7645 Jun 07 06:32	21°  ♏11'36	5.93826 AU
				morning rise	7645 Jun 20 10:27	24°  ♏23'34	
conjunction	7639 Dec 29 06:11	9°  ♏47'17	0°43'51		7645 Jul 14 03:06	0°  ♏	

retrograde	7645 Oct 30 10:41	15°♏08'03		retrograde	7651 Apr 15 20:05	3°♌56'38	
min. Earth dist.	7645 Dec 28 10:59	10°♏12'13	3.91704 AU		7651 Jun 07 19:46	30°♊♌	
opposition	7645 Dec 29 01:06	10°♏07'29	-1°04'56	opposition	7651 Jun 15 12:08	29°♌00'43	1°09'18
direct	7646 Feb 25 04:00	5°♏13'09		min. Earth dist.	7651 Jun 15 18:28	28°♌58'40	4.47690 AU
evening set	7646 Jul 01 16:17	25°♏15'09		direct	7651 Aug 16 17:58	23°♌58'51	
					7651 Oct 23 04:02	0°♌	
conjunction	7646 Jul 15 02:54	28°♏30'59	-0°32'38	evening set	7651 Dec 20 10:28	11°♌14'28	
minimum elong	7646 Jul 15 02:56	28°♏31'00	0°32'44	max. Earth dist.	7652 Jan 01 11:49	13°♌49'16	6.49048 AU
max. Earth dist.	7646 Jul 16 16:47	28°♏54'01	5.92230 AU				
	7646 Jul 21 05:21	0°♏		conjunction	7652 Jan 02 11:14	14°♌01'50	0°41'50
morning rise	7646 Jul 28 15:59	1°♏48'07		minimum elong	7652 Jan 02 11:15	14°♌01'51	0°41'56
	7646 Sep 26 15:16	15°♏		morning rise	7652 Jan 15 09:46	16°♌48'06	
retrograde	7646 Dec 07 14:18	22°♏30'22			7652 Mar 27 05:32	0°♌	
min. Earth dist.	7647 Feb 03 16:12	17°♏37'43	3.95481 AU	retrograde	7652 May 14 15:28	3°♌24'38	
opposition	7647 Feb 05 00:14	17°♏26'50	-0°27'59		7652 Jul 02 19:01	30°♊♌	
	7647 Feb 23 21:37	15°♊♏		opposition	7652 Jul 14 13:29	28°♌31'04	0°48'07
direct	7647 Apr 03 22:57	12°♏31'04		min. Earth dist.	7652 Jul 15 13:21	28°♌23'25	4.48375 AU
	7647 May 12 19:58	15°♏		direct	7652 Sep 15 06:33	23°♌29'28	
	7647 Jul 30 03:47	0°♊			7652 Nov 24 16:54	0°♌	
evening set	7647 Aug 08 14:51	2°♊13'09		evening set	7653 Jan 18 17:01	10°♌47'29	
				max. Earth dist.	7653 Jan 29 18:23	13°♌11'00	6.45551 AU
conjunction	7647 Aug 22 06:27	5°♊27'11	-0°03'21				
minimum elong	7647 Aug 22 06:26	5°♊27'11	0°03'24	conjunction	7653 Jan 31 13:47	13°♌34'34	0°22'06
behind sun begin	7647 Aug 21 22:06	5°♊22'16		minimum elong	7653 Jan 31 13:47	13°♌34'34	0°22'11
behind sun end	7647 Aug 22 14:46	5°♊32'06			7653 Feb 07 03:05	15°♌	
max. Earth dist.	7647 Aug 24 15:51	6°♊01'13	6.00928 AU	morning rise	7653 Feb 13 08:17	16°♌20'45	
morning rise	7647 Sep 04 23:56	8°♊41'53			7653 Apr 28 05:55	0°♊	
asc. node	7647 Oct 03 10:03	15°♊10'49		retrograde	7653 Jun 14 09:33	3°♊15'00	
retrograde	7648 Jan 12 11:17	28°♊31'33			7653 Aug 01 09:27	30°♊♌	
min. Earth dist.	7648 Mar 10 11:54	23°♊40'07	4.08071 AU	opposition	7653 Aug 14 09:38	28°♌22'27	0°14'02
opposition	7648 Mar 12 01:56	23°♊27'11	0°18'22	min. Earth dist.	7653 Aug 15 21:24	28°♌11'02	4.40899 AU
direct	7648 May 09 17:20	18°♊28'54		direct	7653 Oct 15 22:25	23°♌21'49	
	7648 Aug 10 09:03	0°♊			7653 Dec 25 08:46	0°♊	
evening set	7648 Sep 13 08:33	7°♊27'34		desc. node	7654 Jan 02 18:52	1°♊29'08	
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conjunction	7648 Sep 27 00:15	10°♊34'34	0°26'11	max. Earth dist.	7654 Feb 28 18:51	13°♊23'03	6.34576 AU
minimum elong	7648 Sep 27 00:14	10°♊34'34	0°26'13				
max. Earth dist.	7648 Sep 29 06:16	11°♊05'27	6.16191 AU	conjunction	7654 Mar 03 01:20	13°♊53'26	-0°04'09
morning rise	7648 Oct 10 16:16	13°♊41'23		minimum elong	7654 Mar 03 01:19	13°♊53'25	0°04'07
	7649 Jan 06 08:54	0°♊		behind sun begin	7654 Mar 02 17:27	13°♊49'04	
retrograde	7649 Feb 13 19:17	2°♊17'38		behind sun end	7654 Mar 03 09:10	13°♊57'47	
	7649 Mar 24 00:08	30°♊♌		morning rise	7654 Mar 15 18:25	16°♊43'20	
min. Earth dist.	7649 Apr 13 11:41	27°♊24'49	4.24422 AU		7654 May 22 21:08	0°♊	
opposition	7649 Apr 14 16:46	27°♊15'03	0°55'10	retrograde	7654 Jul 17 03:20	4°♊24'27	
direct	7649 Jun 13 15:12	22°♊14'39			7654 Sep 12 05:16	30°♊♌	
	7649 Aug 27 23:21	0°♊		opposition	7654 Sep 15 22:31	29°♊31'26	-0°25'45
evening set	7649 Oct 17 23:41	10°♊25'45		min. Earth dist.	7654 Sep 17 13:23	29°♊18'58	4.27029 AU
				direct	7654 Nov 16 16:00	24°♊32'24	
conjunction	7649 Oct 31 11:26	13°♊24'07	0°45'31		7655 Jan 17 16:45	0°♊	
minimum elong	7649 Oct 31 11:25	13°♊24'06	0°45'35	evening set	7655 Mar 22 03:26	12°♊54'49	
max. Earth dist.	7649 Nov 01 21:35	13°♊42'57	6.32275 AU	max. Earth dist.	7655 Apr 01 20:40	15°♊22'56	6.18855 AU
	7649 Nov 07 17:18	15°♊					
morning rise	7649 Nov 13 21:59	16°♊21'38		conjunction	7655 Apr 03 21:51	15°♊51'21	-0°30'09
	7650 Jan 24 15:38	0°♊		minimum elong	7655 Apr 03 21:50	15°♊51'20	0°30'12
retrograde	7650 Mar 16 20:57	3°♊52'35		morning rise	7655 Apr 16 16:02	18°♊48'07	
	7650 May 07 17:18	30°♊♌			7655 Jun 08 07:50	0°♊	
opposition	7650 May 16 05:15	28°♊53'18	1°12'36	retrograde	7655 Aug 21 08:29	7°♊38'30	
min. Earth dist.	7650 May 15 15:28	28°♊57'51	4.38990 AU	opposition	7655 Oct 20 19:11	2°♊43'48	-1°00'18
direct	7650 Jul 16 09:52	23°♊51'46		min. Earth dist.	7655 Oct 21 23:38	2°♊34'33	4.10563 AU
	7650 Sep 21 19:59	0°♊			7655 Nov 12 01:46	30°♊♌	
evening set	7650 Nov 19 11:40	11°♊26'01		direct	7655 Dec 20 03:39	27°♊47'05	
					7656 Jan 26 19:03	0°♊	
conjunction	7650 Dec 02 17:45	14°♊17'17	0°50'35		7656 Apr 15 15:16	15°♊	
minimum elong	7650 Dec 02 17:46	14°♊17'17	0°50'42	evening set	7656 Apr 24 00:37	16°♊58'38	
max. Earth dist.	7650 Dec 02 22:49	14°♊20'01	6.44260 AU				
morning rise	7650 Dec 15 21:48	17°♊07'26		conjunction	7656 May 06 22:03	20°♊03'15	-0°47'31
	7651 Feb 22 16:42	0°♊		minimum elong	7656 May 06 22:02	20°♊03'15	0°47'36

max. Earth dist.	7656 May 05 17:57	19°  46'27	6.03061 AU		7662 Jan 02 01:20	0° 	
morning rise	7656 May 19 20:54	23°  08'53		retrograde	7662 Mar 21 02:56	8°  15'22	
	7656 Jun 18 13:39	0°  II		opposition	7662 May 20 11:45	3°  16'33	1°13'19
retrograde	7656 Sep 26 23:55	13°  II12'20		min. Earth dist.	7662 May 20 01:05	3°  20'03	4.40877 AU
opposition	7656 Nov 25 22:52	8°  II14'45	-1°15'31		7662 Jun 16 18:50	30°  R  III	
min. Earth dist.	7656 Nov 26 06:23	8°  II12'16	3.96909 AU	direct	7662 Jul 20 21:26	28°  III14'55	
direct	7657 Jan 23 22:04	3°  II20'00			7662 Aug 24 09:03	0° 	
evening set	7657 May 30 04:02	23°  II11'10		evening set	7662 Nov 23 20:10	15°  24'18	
conjunction	7657 Jun 12 08:08	26°  II23'33	-0°47'53	conjunction	7662 Dec 07 01:29	18°  23'41	0°50'09
minimum elong	7657 Jun 12 08:09	26°  II23'33	0°48'00	minimum elong	7662 Dec 07 01:30	18°  23'41	0°50'15
max. Earth dist.	7657 Jun 12 15:33	26°  II28'04	5.92887 AU	max. Earth dist.	7662 Dec 07 03:21	18°  23'54	6.45741 AU
morning rise	7657 Jun 25 14:28	29°  II37'19		morning rise	7662 Dec 20 04:38	21°  23'55	
	7657 Jun 27 03:58	0°  III			7663 Jan 31 21:58	0° 	
retrograde	7657 Nov 04 19:26	20°  III25'17		retrograde	7663 Apr 19 21:05	8°  III08'24	
opposition	7658 Jan 03 07:39	15°  III24'16	-1°01'07	opposition	7663 Jun 19 15:14	3°  III12'49	1°07'19
min. Earth dist.	7658 Jan 02 15:07	15°  III29'50	3.91451 AU	min. Earth dist.	7663 Jun 19 23:16	3°  III10'13	4.48681 AU
direct	7658 Mar 02 08:28	10°  III29'51			7663 Jul 16 17:11	30°  R 	
	7658 Jul 04 17:29	0°  II		direct	7663 Aug 20 22:51	28°  21'05'7	
evening set	7658 Jul 06 22:13	0°  II31'47			7663 Sep 25 13:29	0° 	
conjunction	7658 Jul 20 09:40	3°  II47'50	-0°29'03	evening set	7663 Dec 24 14:14	15°  III24'14	
minimum elong	7658 Jul 20 09:41	3°  II47'51	0°29'09	conjunction	7664 Jan 06 14:19	18°  III11'10	0°39'41
max. Earth dist.	7658 Jul 22 02:10	4°  II12'25	5.92670 AU	minimum elong	7664 Jan 06 14:20	18°  III11'10	0°39'48
morning rise	7658 Aug 02 23:51	7°  II05'12		max. Earth dist.	7664 Jan 05 12:16	17°  III57'11	6.49475 AU
	7658 Sep 06 03:20	15°  II		morning rise	7664 Jan 19 12:02	20°  III57'00	
retrograde	7658 Dec 12 16:13	27°  II43'29			7664 Mar 04 20:33	0° 	
min. Earth dist.	7659 Feb 08 16:35	22°  II51'25	3.96572 AU	retrograde	7664 May 18 17:39	7°  III32'52	
opposition	7659 Feb 10 03:06	22°  II39'41	-0°21'36	opposition	7664 Jul 18 16:25	2°  III39'34	0°44'05
direct	7659 Apr 09 02:04	17°  II43'35		min. Earth dist.	7664 Jul 19 18:49	2°  III31'07	4.48195 AU
	7659 Jul 12 11:32	0°  III			7664 Aug 09 14:59	30°  R 	
evening set	7659 Aug 13 19:27	7°  III21'32		direct	7664 Sep 19 10:37	27°  III38'03	
asc. node	7659 Aug 13 06:11	7°  III13'45			7664 Oct 30 07:09	0° 	
conjunction	7659 Aug 27 11:27	10°  III34'58	0°01'09	evening set	7665 Jan 22 19:21	14°  III56'54	
minimum elong	7659 Aug 27 11:26	10°  III34'57	0°01'06		7665 Jan 23 01:07	15° 	
behind sun begin	7659 Aug 27 03:03	10°  III30'01		max. Earth dist.	7665 Feb 02 16:03	17°  III18'14	6.44753 AU
behind sun end	7659 Aug 27 19:50	10°  III39'53		conjunction	7665 Feb 04 15:30	17°  III44'03	0°18'49
max. Earth dist.	7659 Aug 29 21:35	11°  III09'18	6.02571 AU	minimum elong	7665 Feb 04 15:31	17°  III44'04	0°18'53
morning rise	7659 Sep 10 05:03	13°  III48'55		morning rise	7665 Feb 17 09:48	20°  III30'27	
	7659 Nov 30 15:56	0°  III			7665 Apr 05 10:01	0° 	
retrograde	7660 Jan 17 07:32	3°  III29'46		retrograde	7665 Jun 18 16:37	7°  III28'38	
	7660 Mar 05 02:48	30°  R 		opposition	7665 Aug 18 15:58	2°  III36'04	0°08'48
min. Earth dist.	7660 Mar 15 09:00	28°  III38'02	4.10079 AU	min. Earth dist.	7665 Aug 20 05:28	2°  III24'05	4.39504 AU
opposition	7660 Mar 16 21:56	28°  III25'30	0°24'25		7665 Sep 09 02:41	30°  R 	
direct	7660 May 14 17:59	23°  III26'54		direct	7665 Oct 20 03:10	27°  III35'31	
	7660 Jul 20 19:00	0°  III		desc. node	7665 Nov 14 14:40	28°  III33'24	
evening set	7660 Sep 18 07:40	12°  III19'17			7665 Nov 29 22:50	0° 	
conjunction	7660 Oct 01 23:07	15°  III25'11	0°29'39	evening set	7666 Feb 22 11:20	15°  III21'08	
minimum elong	7660 Oct 01 23:06	15°  III25'10	0°29'41	max. Earth dist.	7666 Mar 04 23:02	17°  III41'32	6.32675 AU
max. Earth dist.	7660 Oct 04 04:59	15°  III55'48	6.18415 AU	conjunction	7666 Mar 07 05:38	18°  III12'07	-0°07'49
morning rise	7660 Oct 15 14:30	18°  III30'44		minimum elong	7666 Mar 07 05:37	18°  III12'06	0°07'47
	7660 Dec 10 04:51	0°  III		behind sun begin	7666 Mar 06 22:25	18°  III08'05	
retrograde	7661 Feb 18 05:15	6°  III57'02		behind sun end	7666 Mar 07 12:48	18°  III16'07	
min. Earth dist.	7661 Apr 18 00:23	2°  III04'26	4.26690 AU	morning rise	7666 Mar 19 22:34	21°  III02'44	
opposition	7661 Apr 19 04:58	1°  III54'52	0°58'52		7666 May 01 11:13	0° 	
	7661 May 03 21:54	30°  R 		retrograde	7666 Jul 21 17:00	8°  III52'19	
direct	7661 Jun 18 06:42	26°  III54'17		opposition	7666 Sep 20 11:31	3°  III59'10	-0°30'59
	7661 Aug 02 22:41	0°  III		min. Earth dist.	7666 Sep 22 02:04	3°  III46'48	4.24726 AU
evening set	7661 Oct 22 15:28	14°  III59'07			7666 Oct 26 14:17	30°  R 	
	7661 Oct 22 17:06	15°  III		direct	7666 Nov 21 00:17	29°  III00'26	
conjunction	7661 Nov 05 02:20	17°  III56'15	0°47'06		7666 Dec 16 10:01	0° 	
minimum elong	7661 Nov 05 02:19	17°  III56'14	0°47'11	evening set	7667 Mar 26 13:54	17°  III30'03	
max. Earth dist.	7661 Nov 06 08:22	18°  III12'45	6.34428 AU	max. Earth dist.	7667 Apr 06 07:41	19°  III59'21	6.16322 AU
morning rise	7661 Nov 18 12:02	20°  III52'31		conjunction	7667 Apr 08 08:26	20°  III27'42	-0°33'12

minimum elong	7667 Apr 08 08:24	20° Υ 27'41	0°33'15		7672 Nov 20 02:54	0° \mathbb{M}	
morning rise	7667 Apr 21 03:11	23° Υ 25'45		retrograde	7673 Feb 22 16:39	11° \mathbb{M} 38'41	
	7667 May 20 10:11	0° \mathcal{B}		opposition	7673 Apr 23 17:55	6° \mathbb{M} 36'48	1°02'10
retrograde	7667 Aug 26 08:48	12° \mathcal{B} 27'49		min. Earth dist.	7673 Apr 22 15:57	6° \mathbb{M} 45'29	4.29119 AU
opposition	7667 Oct 25 17:05	7° \mathcal{B} 32'47	-1°03'49	direct	7673 Jun 23 01:10	1° \mathbb{M} 35'57	
min. Earth dist.	7667 Oct 26 19:58	7° \mathcal{B} 24'01	4.07985 AU		7673 Oct 05 21:20	15° \mathbb{M}	
direct	7667 Dec 24 20:50	2° \mathcal{B} 36'21		evening set	7673 Oct 27 07:08	19° \mathbb{M} 33'58	
	7668 Mar 29 17:27	15° \mathcal{B}					
evening set	7668 Apr 28 19:47	21° \mathcal{B} 56'15		conjunction	7673 Nov 09 17:21	22° \mathbb{M} 29'54	0°48'23
				minimum elong	7673 Nov 09 17:20	22° \mathbb{M} 29'54	0°48'30
conjunction	7668 May 11 18:12	25° \mathcal{B} 02'21	-0°48'42	max. Earth dist.	7673 Nov 10 21:02	22° \mathbb{M} 45'03	6.36591 AU
minimum elong	7668 May 11 18:11	25° \mathcal{B} 02'21	0°48'48	morning rise	7673 Nov 23 01:55	25° \mathbb{M} 24'52	
max. Earth dist.	7668 May 10 18:41	24° \mathcal{B} 48'13	6.00690 AU		7673 Dec 14 16:02	0° \mathcal{A}	
morning rise	7668 May 24 17:55	28° \mathcal{B} 09'29		retrograde	7674 Mar 25 07:05	12° \mathcal{A} 39'54	
	7668 Jun 01 11:53	0° \mathbb{I}		opposition	7674 May 24 18:36	7° \mathcal{A} 41'32	1°13'37
retrograde	7668 Oct 02 09:11	18° \mathbb{I} 23'48		min. Earth dist.	7674 May 24 09:42	7° \mathcal{A} 44'27	4.42626 AU
opposition	7668 Dec 01 04:45	13° \mathbb{I} 25'52	-1°15'24	direct	7674 Jul 25 07:32	2° \mathcal{A} 39'50	
min. Earth dist.	7668 Dec 01 09:23	13° \mathbb{I} 24'20	3.95006 AU	evening set	7674 Nov 28 05:23	20° \mathcal{A} 04'57	
direct	7669 Jan 28 23:03	8° \mathbb{I} 31'20					
evening set	7669 Jun 04 08:10	28° \mathbb{I} 28'29		conjunction	7674 Dec 11 09:45	22° \mathcal{A} 54'30	0°49'24
	7669 Jun 10 14:25	0° \mathcal{E}		minimum elong	7674 Dec 11 09:46	22° \mathcal{A} 54'30	0°49'31
				max. Earth dist.	7674 Dec 11 06:22	22° \mathcal{A} 52'41	6.46947 AU
conjunction	7669 Jun 17 13:17	1° \mathcal{E} 41'59	-0°46'19	morning rise	7674 Dec 24 12:06	25° \mathcal{A} 42'57	
minimum elong	7669 Jun 17 13:18	1° \mathcal{E} 42'00	0°46'26		7675 Jan 13 23:55	0° \mathcal{B}	
max. Earth dist.	7669 Jun 18 00:35	1° \mathcal{E} 48'54	5.91635 AU	retrograde	7675 Apr 24 01:30	12° \mathcal{B} 23'48	
morning rise	7669 Jun 30 21:05	4° \mathcal{E} 57'00		opposition	7675 Jun 23 19:45	7° \mathcal{B} 28'36	1°04'56
retrograde	7669 Nov 10 04:32	25° \mathcal{E} 49'36		min. Earth dist.	7675 Jun 24 07:36	7° \mathcal{B} 24'47	4.49280 AU
opposition	7670 Jan 08 16:37	20° \mathcal{E} 48'04	-0°56'46	direct	7675 Aug 25 07:00	2° \mathcal{B} 26'42	
min. Earth dist.	7670 Jan 07 19:45	20° \mathcal{E} 55'07	3.91017 AU	evening set	7675 Dec 28 19:42	19° \mathcal{B} 38'58	
direct	7670 Mar 07 14:10	15° \mathcal{E} 53'33					
	7670 Jun 17 02:46	0° \mathcal{Q}		conjunction	7676 Jan 10 19:11	22° \mathcal{B} 25'40	0°37'15
evening set	7670 Jul 12 07:00	5° \mathcal{Q} 56'02		minimum elong	7676 Jan 10 19:13	22° \mathcal{B} 25'41	0°37'22
				max. Earth dist.	7676 Jan 09 13:04	22° \mathcal{B} 09'30	6.49415 AU
conjunction	7670 Jul 25 19:30	9° \mathcal{Q} 12'22	-0°25'11	morning rise	7676 Jan 23 16:20	25° \mathcal{B} 11'19	
minimum elong	7670 Jul 25 19:31	9° \mathcal{Q} 12'23	0°25'16		7676 Feb 15 18:31	0° \approx	
max. Earth dist.	7670 Jul 27 16:48	9° \mathcal{Q} 39'49	5.93101 AU	retrograde	7676 May 22 22:38	11° \approx 48'11	
morning rise	7670 Aug 08 10:29	12° \mathcal{Q} 29'52		opposition	7676 Jul 22 22:16	6° \approx 55'00	0°39'41
	7670 Aug 18 22:34	15° \mathcal{Q}		min. Earth dist.	7676 Jul 24 02:21	6° \approx 46'01	4.47492 AU
	7670 Nov 03 17:08	0° \mathbb{P}		direct	7676 Sep 23 15:37	1° \approx 53'32	
retrograde	7670 Dec 17 22:19	3° \mathbb{P} 03'53			7677 Jan 06 23:40	15° \approx	
	7671 Jan 31 05:11	30° \mathbb{R} \mathcal{Q}		evening set	7677 Jan 27 00:42	19° \approx 14'46	
min. Earth dist.	7671 Feb 13 20:56	28° \mathcal{Q} 11'53	3.97794 AU	max. Earth dist.	7677 Feb 06 20:14	21° \approx 35'52	6.43452 AU
opposition	7671 Feb 15 08:28	27° \mathcal{Q} 59'46	-0°14'58				
direct	7671 Apr 14 10:10	23° \mathcal{Q} 03'19		conjunction	7677 Feb 08 20:33	22° \approx 02'16	0°15'17
	7671 Jun 21 09:51	0° \mathbb{P}		minimum elong	7677 Feb 08 20:34	22° \approx 02'16	0°15'21
asc. node	7671 Jun 22 06:00	0° \mathbb{P} 09'12		behind sun begin	7677 Feb 08 18:03	22° \approx 00'54	
evening set	7671 Aug 19 02:37	12° \mathbb{P} 36'20		behind sun end	7677 Feb 08 23:05	22° \approx 03'38	
				morning rise	7677 Feb 21 14:24	24° \approx 49'01	
conjunction	7671 Sep 01 18:55	15° \mathbb{P} 48'59	0°05'37		7677 Mar 18 01:49	0° \mathcal{H}	
minimum elong	7671 Sep 01 18:55	15° \mathbb{P} 48'59	0°05'34	retrograde	7677 Jun 23 03:53	11° \mathcal{H} 52'46	
behind sun begin	7671 Sep 01 10:52	15° \mathbb{P} 44'17		opposition	7677 Aug 23 02:46	7° \mathcal{H} 00'13	0°03'15
behind sun end	7671 Sep 02 02:58	15° \mathbb{P} 53'42		min. Earth dist.	7677 Aug 24 17:39	6° \mathcal{H} 47'48	4.37672 AU
max. Earth dist.	7671 Sep 04 07:49	16° \mathbb{P} 24'46	6.04449 AU	desc. node	7677 Sep 24 09:47	3° \mathcal{H} 20'24	
morning rise	7671 Sep 15 12:30	19° \mathbb{P} 02'01		direct	7677 Oct 24 12:02	1° \mathcal{H} 59'52	
	7671 Nov 05 03:06	0° \mathcal{U}		evening set	7678 Feb 26 20:35	19° \mathcal{H} 51'01	
retrograde	7672 Jan 22 03:16	8° \mathcal{U} 32'37		max. Earth dist.	7678 Mar 09 06:20	22° \mathcal{H} 11'06	6.30436 AU
min. Earth dist.	7672 Mar 20 05:30	3° \mathcal{U} 41'09	4.12385 AU				
opposition	7672 Mar 21 19:03	3° \mathcal{U} 28'25	0°30'20	conjunction	7678 Mar 11 14:37	22° \mathcal{H} 42'47	-0°11'38
	7672 Apr 19 08:26	30° \mathbb{R} \mathbb{P}		minimum elong	7678 Mar 11 14:36	22° \mathcal{H} 42'47	0°11'36
direct	7672 May 19 17:57	28° \mathbb{P} 29'28		behind sun begin	7678 Mar 11 08:52	22° \mathcal{H} 39'34	
	7672 Jun 19 10:48	0° \mathcal{U}		behind sun end	7678 Mar 11 20:21	22° \mathcal{H} 46'00	
evening set	7672 Sep 23 07:58	17° \mathcal{U} 14'24		morning rise	7678 Mar 24 07:48	25° \mathcal{H} 34'22	
					7678 Apr 13 10:50	0° \mathcal{Y}	
conjunction	7672 Oct 06 22:46	20° \mathcal{U} 18'56	0°32'56	retrograde	7678 Jul 26 13:07	13° \mathcal{Y} 33'34	
minimum elong	7672 Oct 06 22:45	20° \mathcal{U} 18'55	0°32'58	opposition	7678 Sep 25 06:09	8° \mathcal{Y} 40'11	-0°36'20
max. Earth dist.	7672 Oct 09 01:18	20° \mathcal{U} 47'30	6.20907 AU	min. Earth dist.	7678 Sep 26 19:56	8° \mathcal{Y} 28'01	4.22221 AU
morning rise	7672 Oct 20 13:35	23° \mathcal{U} 23'04		direct	7678 Nov 25 14:44	3° \mathcal{Y} 41'41	

evening set	7679 Mar 31 05:54	22° Υ 19'02		evening set	7684 Sep 28 04:26	21° Ω 59'47	
max. Earth dist.	7679 Apr 11 03:30	24° Υ 51'21	6.13772 AU				
conjunction	7679 Apr 13 00:58	25° Υ 17'56	-0°36'12	conjunction	7684 Oct 11 18:50	25° Ω 02'58	0°35'53
minimum elong	7679 Apr 13 00:56	25° Υ 17'55	0°36'14	minimum elong	7684 Oct 11 18:49	25° Ω 02'57	0°35'55
morning rise	7679 Apr 25 20:06	28° Υ 17'17		max. Earth dist.	7684 Oct 13 19:42	25° Ω 30'26	6.23523 AU
	7679 May 03 05:43	0° \mathcal{B}		morning rise	7684 Oct 25 08:41	28° Ω 05'36	
	7679 Jul 22 00:51	15° \mathcal{B}			7684 Nov 02 23:32	0° \mathcal{M}	
retrograde	7679 Aug 31 14:41	17° \mathcal{B} 30'51		retrograde	7685 Jan 30 16:52	15° \mathcal{M}	
	7679 Oct 11 13:00	15° $\mathcal{R}\mathcal{B}$			7685 Feb 27 00:16	16° \mathcal{M} 10'43	
opposition	7679 Oct 30 20:51	12° \mathcal{B} 35'32	-1°07'03		7685 Mar 26 02:54	15° $\mathcal{R}\mathcal{M}$	
min. Earth dist.	7679 Oct 31 21:29	12° \mathcal{B} 27'30	4.05622 AU	min. Earth dist.	7685 Apr 27 03:16	11° \mathcal{M} 17'22	4.31498 AU
direct	7679 Dec 29 19:29	7° \mathcal{B} 39'30		opposition	7685 Apr 28 03:14	11° \mathcal{M} 09'23	1°04'58
	7680 Mar 09 15:25	15° \mathcal{B}		direct	7685 Jun 27 14:50	6° \mathcal{M} 08'25	
evening set	7680 May 03 20:28	27° \mathcal{B} 06'40		evening set	7685 Sep 17 19:22	15° \mathcal{M}	
	7680 May 15 20:21	0° \mathcal{I}			7685 Oct 31 19:38	24° \mathcal{M} 00'19	
conjunction	7680 May 16 19:34	0° \mathcal{I} 14'01	-0°49'33	conjunction	7685 Nov 14 04:52	26° \mathcal{M} 55'06	0°49'22
minimum elong	7680 May 16 19:34	0° \mathcal{I} 14'00	0°49'40	minimum elong	7685 Nov 14 04:52	26° \mathcal{M} 55'06	0°49'27
max. Earth dist.	7680 May 15 23:27	0° \mathcal{I} 01'52	5.98741 AU	max. Earth dist.	7685 Nov 15 02:32	27° \mathcal{M} 06'55	6.38544 AU
morning rise	7680 May 29 20:29	3° \mathcal{I} 22'33		morning rise	7685 Nov 27 12:43	29° \mathcal{M} 48'57	
retrograde	7680 Oct 07 20:05	23° \mathcal{I} 45'43			7685 Nov 28 09:10	0° \mathcal{J}	
opposition	7680 Dec 06 14:55	18° \mathcal{I} 47'17	-1°14'37	retrograde	7686 Mar 29 10:49	16° \mathcal{J} 57'24	
min. Earth dist.	7680 Dec 06 14:51	18° \mathcal{I} 47'19	3.93714 AU	opposition	7686 May 28 22:57	11° \mathcal{J} 59'32	1°13'31
direct	7681 Feb 03 04:43	13° \mathcal{I} 52'55		min. Earth dist.	7686 May 28 17:53	12° \mathcal{J} 01'12	4.44042 AU
	7681 May 24 10:44	0° \mathcal{E}		direct	7686 Jul 29 16:17	6° \mathcal{J} 57'45	
evening set	7681 Jun 09 15:53	3° \mathcal{E} 53'24		evening set	7686 Dec 02 11:53	24° \mathcal{J} 19'56	
conjunction	7681 Jun 22 22:13	7° \mathcal{E} 07'42	-0°44'20	conjunction	7686 Dec 15 15:43	27° \mathcal{J} 08'58	0°48'26
minimum elong	7681 Jun 22 22:14	7° \mathcal{E} 07'43	0°44'27	minimum elong	7686 Dec 15 15:43	27° \mathcal{J} 08'58	0°48'33
max. Earth dist.	7681 Jun 23 16:23	7° \mathcal{E} 18'49	5.91163 AU	max. Earth dist.	7686 Dec 15 09:01	27° \mathcal{J} 05'22	6.47729 AU
morning rise	7681 Jul 06 07:03	10° \mathcal{E} 23'26		morning rise	7686 Dec 28 17:09	29° \mathcal{J} 56'49	
	7681 Oct 18 13:21	0° \mathcal{Q}			7686 Dec 28 23:07	0° \mathcal{Z}	
retrograde	7681 Nov 15 15:55	1° \mathcal{Q} 16'50		retrograde	7687 Apr 28 02:48	16° \mathcal{Z} 35'44	
	7681 Dec 13 15:13	30° $\mathcal{R}\mathcal{E}$		opposition	7687 Jun 27 22:55	11° \mathcal{Z} 40'55	1°02'18
min. Earth dist.	7682 Jan 13 03:35	26° \mathcal{E} 22'41	3.91435 AU	min. Earth dist.	7687 Jun 28 12:41	11° \mathcal{Z} 36'29	4.49405 AU
opposition	7682 Jan 14 02:48	26° \mathcal{E} 14'50	-0°51'51	direct	7687 Aug 29 10:38	6° \mathcal{Z} 39'06	
direct	7682 Mar 13 00:37	21° \mathcal{E} 20'10		evening set	7688 Jan 02 00:08	23° \mathcal{Z} 51'57	
	7682 May 28 06:30	0° \mathcal{Q}					
evening set	7682 Jul 17 16:30	11° \mathcal{Q} 19'50		conjunction	7688 Jan 14 22:59	26° \mathcal{Z} 38'38	0°34'42
conjunction	7682 Jul 31 05:49	14° \mathcal{Q} 35'56	-0°21'07	minimum elong	7688 Jan 14 23:00	26° \mathcal{Z} 38'38	0°34'47
minimum elong	7682 Jul 31 05:50	14° \mathcal{Q} 35'56	0°21'12	max. Earth dist.	7688 Jan 13 13:14	26° \mathcal{Z} 20'29	6.48875 AU
	7682 Aug 01 21:43	15° \mathcal{Q}		morning rise	7688 Jan 27 19:38	29° \mathcal{Z} 24'18	
max. Earth dist.	7682 Aug 02 07:49	15° \mathcal{Q} 06'06	5.94362 AU		7688 Jan 30 14:35	0° \mathcal{A}	
morning rise	7682 Aug 13 21:28	17° \mathcal{Q} 53'06			7688 Apr 30 18:30	15° \mathcal{A}	
	7682 Oct 07 17:06	0° \mathcal{M}		retrograde	7688 May 27 05:39	16° \mathcal{A} 03'53	
retrograde	7682 Dec 23 01:13	8° \mathcal{M} 19'11			7688 Jun 22 15:01	15° $\mathcal{R}\mathcal{A}$	
min. Earth dist.	7683 Feb 18 22:23	3° \mathcal{M} 27'39	3.99749 AU	opposition	7688 Jul 27 04:18	11° \mathcal{A} 10'57	0°35'08
opposition	7683 Feb 20 11:52	3° \mathcal{M} 14'55	-0°08'19	min. Earth dist.	7688 Jul 28 11:19	11° \mathcal{A} 01'02	4.46325 AU
	7683 Mar 18 16:09	30° $\mathcal{R}\mathcal{Q}$		direct	7688 Sep 27 22:22	6° \mathcal{A} 09'37	
direct	7683 Apr 19 15:02	28° \mathcal{Q} 18'08			7688 Dec 20 07:30	15° \mathcal{A}	
asc. node	7683 May 02 02:05	28° \mathcal{Q} 34'00		evening set	7689 Jan 31 06:35	23° \mathcal{A} 34'46	
	7683 May 21 16:56	0° \mathcal{M}		max. Earth dist.	7689 Feb 10 22:50	25° \mathcal{A} 54'42	6.41740 AU
evening set	7683 Aug 24 07:28	17° \mathcal{M} 43'54					
conjunction	7683 Sep 06 23:38	20° \mathcal{M} 55'24	0°09'53	conjunction	7689 Feb 13 02:07	26° \mathcal{A} 22'48	0°11'42
minimum elong	7683 Sep 06 23:38	20° \mathcal{M} 55'24	0°09'52	minimum elong	7689 Feb 13 02:07	26° \mathcal{A} 22'48	0°11'46
behind sun begin	7683 Sep 06 16:52	20° \mathcal{M} 51'28		behind sun begin	7689 Feb 12 20:29	26° \mathcal{A} 19'44	
behind sun end	7683 Sep 07 06:23	20° \mathcal{M} 59'20		behind sun end	7689 Feb 13 07:45	26° \mathcal{A} 25'52	
max. Earth dist.	7683 Sep 09 11:10	21° \mathcal{M} 30'11	6.06878 AU	morning rise	7689 Feb 25 19:51	29° \mathcal{A} 10'09	
morning rise	7683 Sep 20 17:12	24° \mathcal{M} 07'13			7689 Mar 01 15:31	0° \mathcal{H}	
	7683 Oct 16 19:31	0° \mathcal{A}		retrograde	7689 Jun 27 16:33	16° \mathcal{H} 20'57	
retrograde	7684 Jan 26 18:55	13° \mathcal{A} 26'11		desc. node	7689 Aug 04 14:14	14° \mathcal{H} 13'46	
min. Earth dist.	7684 Mar 25 00:40	8° \mathcal{A} 34'26	4.15018 AU	opposition	7689 Aug 27 14:57	11° \mathcal{H} 28'20	-0°02'20
opposition	7684 Mar 26 12:55	8° \mathcal{A} 22'10	0°35'49	min. Earth dist.	7689 Aug 29 05:38	11° \mathcal{H} 15'59	4.35528 AU
direct	7684 May 24 16:40	3° \mathcal{A} 22'52		direct	7689 Oct 28 20:41	6° \mathcal{H} 28'13	
				evening set	7690 Mar 03 07:08	24° \mathcal{H} 25'55	
				max. Earth dist.	7690 Mar 13 19:00	26° \mathcal{H} 47'54	6.28032 AU

conjunction	7690 Mar 16 01:18	27°  18'39 -0°15'23	behind sun end	7695 Sep 12 05:46	25°  57'10	
minimum elong	7690 Mar 16 01:17	27°  18'39 0°15'24	max. Earth dist.	7695 Sep 14 13:39	26°  29'38	6.09153 AU
behind sun begin	7690 Mar 15 22:42	27°  17'11	morning rise	7695 Sep 25 18:54	29°  05'26	
behind sun end	7690 Mar 16 03:52	27°  20'06		7695 Sep 29 18:01	0° 	
	7690 Mar 27 22:31	0° 	retrograde	7696 Jan 31 09:46	18°  13'40	
morning rise	7690 Mar 28 18:29	0°  11'14	min. Earth dist.	7696 Mar 29 17:34	13°  21'40	4.17376 AU
retrograde	7690 Jul 31 11:38	18°  20'40	opposition	7696 Mar 31 04:18	13°  20'56	0°40'58
opposition	7690 Sep 30 03:04	13°  27'07 -0°41'31	direct	7696 May 29 12:22	8°  10'22	
min. Earth dist.	7690 Oct 01 15:58	13°  15'14 4.19732 AU	evening set	7696 Oct 02 23:15	26°  20'29	
direct	7690 Nov 30 07:36	8°  29'01				
evening set	7691 Apr 04 23:48	27°  13'45	conjunction	7696 Oct 16 12:56	29°  42'26	0°38'35
max. Earth dist.	7691 Apr 15 23:30	29°  48'11 6.11408 AU	minimum elong	7696 Oct 16 12:55	29°  42'25	0°38'39
	7691 Apr 16 19:37	0° 		7696 Oct 17 20:22	0° 	
			max. Earth dist.	7696 Oct 18 09:32	0°  07'22	6.25758 AU
conjunction	7691 Apr 17 19:06	0°  13'48 -0°38'57	morning rise	7696 Oct 30 02:12	2°  43'48	
minimum elong	7691 Apr 17 19:04	0°  13'47 0°39'00		7696 Dec 30 12:33	15° 	
morning rise	7691 Apr 30 15:00	3°  14'27	retrograde	7697 Mar 03 06:57	20°  40'02	
	7691 Jun 24 04:48	15° 	opposition	7697 May 02 11:45	15°  39'07	1°07'23
retrograde	7691 Sep 05 20:36	22°  38'40	min. Earth dist.	7697 May 01 14:18	15°  46'15	4.33449 AU
opposition	7691 Nov 05 01:58	17°  42'55 -1°09'46		7697 May 07 09:48	15°  46'15	
min. Earth dist.	7691 Nov 05 22:29	17°  36'13 4.03609 AU	direct	7697 Jul 02 03:44	10°  37'57	
	7691 Nov 27 01:48	15° 		7697 Aug 26 14:38	15° 	
direct	7692 Jan 03 19:26	12°  47'09	evening set	7697 Nov 05 07:21	28°  25'05	
	7692 Feb 10 01:14	15° 		7697 Nov 12 14:39	0° 	
	7692 Apr 29 03:13	0° 				
evening set	7692 May 08 22:05	2°  20'01	conjunction	7697 Nov 18 15:59	1°  18'59	0°50'04
			minimum elong	7697 Nov 18 15:59	1°  18'59	0°50'09
conjunction	7692 May 21 22:07	5°  28'26 -0°50'01	max. Earth dist.	7697 Nov 19 10:32	1°  29'04	6.40078 AU
minimum elong	7692 May 21 22:07	5°  28'26 0°50'07	morning rise	7697 Dec 01 22:47	4°  11'51	
max. Earth dist.	7692 May 21 08:30	5°  20'11 5.97276 AU	retrograde	7698 Apr 02 14:12	21°  15'04	
morning rise	7692 Jun 03 23:52	8°  23'8'03	opposition	7698 Jun 02 03:46	16°  17'43	1°13'02
retrograde	7692 Oct 13 07:46	29°  07'38	min. Earth dist.	7698 Jun 02 01:09	16°  18'34	4.45072 AU
opposition	7692 Dec 12 00:32	24°  08'38 -1°13'09	direct	7698 Aug 03 00:04	11°  15'56	
min. Earth dist.	7692 Dec 11 21:43	24°  09'35 3.92961 AU	evening set	7698 Dec 06 19:21	28°  36'14	
direct	7693 Feb 08 11:47	19°  14'19		7698 Dec 13 08:13	0° 	
	7693 May 05 22:26	0° 				
evening set	7693 Jun 14 22:38	9°  15'53	conjunction	7698 Dec 19 22:18	1°  24'47	0°47'11
			minimum elong	7698 Dec 19 22:19	1°  24'47	0°47'18
conjunction	7693 Jun 28 05:59	12°  30'40 -0°41'59	max. Earth dist.	7698 Dec 19 10:11	1°  18'17	6.48179 AU
minimum elong	7693 Jun 28 06:00	12°  30'41 0°42'06	morning rise	7699 Jan 01 23:10	4°  12'14	
max. Earth dist.	7693 Jun 29 05:17	12°  44'55 5.91175 AU	retrograde	7699 May 02 08:00	20°  35'07	
morning rise	7693 Jul 11 15:56	15°  46'53	opposition	7699 Jul 02 03:39	15°  35'40	0°59'19
	7693 Sep 14 18:50	0° 	min. Earth dist.	7699 Jul 02 20:49	15°  35'09	4.49272 AU
retrograde	7693 Nov 20 23:36	6°  38'42	direct	7699 Sep 02 17:54	10°  35'53	
min. Earth dist.	7694 Jan 18 07:50	1°  45'13 3.92230 AU	evening set	7700 Jan 06 05:57	28°  07'55	
opposition	7694 Jan 19 10:17	1°  36'16 -0°46'33		7700 Jan 14 22:53	0° 	
	7694 Jan 31 12:18	30° 	max. Earth dist.	7700 Jan 17 16:34	0°  35'23	6.48178 AU
direct	7694 Mar 18 07:03	26°  41'22				
	7694 May 02 09:30	0° 	conjunction	7700 Jan 19 04:26	0°  54'42	0°31'53
	7694 Jul 16 04:27	15° 	minimum elong	7700 Jan 19 04:27	0°  54'42	0°31'59
evening set	7694 Jul 22 23:25	16°  37'02	morning rise	7700 Feb 01 00:29	3°  40'28	
				7700 Mar 31 13:30	15° 	
conjunction	7694 Aug 05 13:14	19°  52'41 -0°16'57	retrograde	7700 Jun 01 12:31	20°  23'10	
minimum elong	7694 Aug 05 13:15	19°  52'41 0°17'02	opposition	7700 Aug 01 12:16	15°  30'24	0°30'17
max. Earth dist.	7694 Aug 07 16:30	20°  52'30 5.95828 AU	min. Earth dist.	7700 Aug 02 19:42	15°  20'22	4.45132 AU
morning rise	7694 Aug 19 05:32	23°  09'23		7700 Aug 05 11:39	15° 	
	7694 Sep 17 20:44	0° 	direct	7700 Oct 03 04:26	10°  29'19	
retrograde	7694 Dec 27 23:37	13°  27'05		7700 Nov 29 13:29	15° 	
min. Earth dist.	7695 Feb 23 22:10	8°  35'31 4.01706 AU	evening set	7701 Feb 05 14:03	27°  58'13	
opposition	7695 Feb 25 12:00	8°  22'38 -0°01'45		7701 Feb 14 20:18	0° 	
asc. node	7695 Mar 12 08:52	6°  24'50	max. Earth dist.	7701 Feb 16 05:46	0°  18'25	6.40154 AU
direct	7695 Apr 24 18:10	3°  25'26				
evening set	7695 Aug 29 09:28	22°  44'24	conjunction	7701 Feb 18 09:13	0°  46'44	0°07'58
			minimum elong	7701 Feb 18 09:13	0°  46'44	0°08'02
conjunction	7695 Sep 12 01:47	25°  54'52 0°14'01	behind sun begin	7701 Feb 18 02:06	0°  42'51	
minimum elong	7695 Sep 12 01:46	25°  54'51 0°14'01	behind sun end	7701 Feb 18 16:19	0°  50'38	
behind sun begin	7695 Sep 11 21:46	25°  52'32	morning rise	7701 Mar 03 02:42	3°  34'38	

desc. node	7701 Jun 15 02:20	20° H 21'19	direct	7707 Apr 30 15:30	8° H 20'06	
retrograde	7701 Jul 03 07:48	20° H 52'05	evening set	7707 Sep 04 06:35	27° H 33'19	
opposition	7701 Sep 02 05:05	15° H 59'31 -0°08'00		7707 Sep 14 20:40	0° H	
min. Earth dist.	7701 Sep 03 20:31	15° H 46'55 4.33657 AU				
direct	7701 Nov 03 09:05	10° H 59'45	conjunction	7707 Sep 17 22:43	0° H 42'50 0°17'53	
evening set	7702 Mar 08 18:50	29° H 02'49	minimum elong	7707 Sep 17 22:43	0° H 42'49 0°17'52	
	7702 Mar 13 00:03	0° Y	max. Earth dist.	7707 Sep 20 08:29	1° H 16'13 6.11111 AU	
max. Earth dist.	7702 Mar 19 06:49	1° Y 25'35 6.26038 AU	morning rise	7707 Oct 01 15:46	3° H 52'26	
			retrograde	7708 Feb 05 19:17	22° H 51'40	
conjunction	7702 Mar 21 12:54	1° Y 56'20 -0°19'06	min. Earth dist.	7708 Apr 04 05:57	17° H 59'37 4.19310 AU	
minimum elong	7702 Mar 21 12:53	1° Y 56'19 0°19'06	opposition	7708 Apr 05 15:36	17° H 48'16 0°45'38	
morning rise	7702 Apr 03 06:18	4° Y 49'48	direct	7708 Jun 04 03:05	12° H 48'26	
retrograde	7702 Aug 06 08:34	23° Y 07'59		7708 Oct 03 01:10	0° H	
opposition	7702 Oct 06 00:09	18° Y 14'13 -0°46'25	evening set	7708 Oct 08 14:21	1° H 13'30	
min. Earth dist.	7702 Oct 07 10:12	18° Y 03'14 4.17775 AU				
direct	7702 Dec 05 23:56	13° Y 16'29	conjunction	7708 Oct 22 03:36	4° H 14'29 0°40'56	
	7703 Apr 01 14:50	0° X	minimum elong	7708 Oct 22 03:34	4° H 14'29 0°41'00	
evening set	7703 Apr 10 17:15	2° X 06'44	max. Earth dist.	7708 Oct 23 21:02	4° H 37'35 6.27536 AU	
max. Earth dist.	7703 Apr 21 22:14	4° X 44'50 6.09668 AU	morning rise	7708 Nov 04 16:02	7° H 14'47	
				7708 Dec 11 09:20	15° H	
conjunction	7703 Apr 23 12:58	5° X 07'42 -0°41'24	retrograde	7709 Mar 08 13:24	25° H 03'58	
minimum elong	7703 Apr 23 12:57	5° X 07'41 0°41'28	opposition	7709 May 07 17:53	20° H 03'35 1°09'21	
morning rise	7703 May 06 09:15	8° X 09'18	min. Earth dist.	7709 May 06 23:13	20° H 09'47 4.34946 AU	
	7703 Jun 05 11:49	15° X	direct	7709 Jul 07 14:13	15° H 02'19	
retrograde	7703 Sep 12 02:20	27° X 41'48		7709 Oct 28 17:32	0° X	
opposition	7703 Nov 11 05:22	22° X 45'42 -1°11'53	evening set	7709 Nov 10 17:14	2° X 46'10	
min. Earth dist.	7703 Nov 11 23:43	22° X 39'40 4.02246 AU				
direct	7704 Jan 09 19:37	17° X 50'14	conjunction	7709 Nov 24 01:05	5° X 39'20 0°50'26	
	7704 Apr 12 19:44	0° H	minimum elong	7709 Nov 24 01:05	5° X 39'20 0°50'33	
evening set	7704 May 14 21:06	7° H 26'25	max. Earth dist.	7709 Nov 24 15:07	5° X 46'57 6.41192 AU	
			morning rise	7709 Dec 07 07:13	8° X 31'29	
conjunction	7704 May 27 21:52	10° H 35'35 -0°50'04	retrograde	7710 Apr 07 17:09	25° X 30'47	
minimum elong	7704 May 27 21:52	10° H 35'35 0°50'10	opposition	7710 Jun 07 07:29	20° X 33'49 1°12'09	
max. Earth dist.	7704 May 27 12:20	10° H 29'48 5.96418 AU	min. Earth dist.	7710 Jun 07 07:17	20° X 33'53 4.45765 AU	
morning rise	7704 Jun 10 00:38	13° H 46'02	direct	7710 Aug 08 06:19	15° X 31'57	
	7704 Aug 27 02:44	0° H		7710 Nov 28 12:05	0° H	
retrograde	7704 Oct 19 12:39	4° H 19'30	evening set	7710 Dec 12 01:26	2° H 51'07	
	7704 Dec 13 05:53	30° H				
opposition	7704 Dec 18 05:46	29° H 20'05 -1°11'07	conjunction	7710 Dec 25 03:54	5° H 39'21 0°45'41	
min. Earth dist.	7704 Dec 17 22:58	29° H 22'21 3.92730 AU	minimum elong	7710 Dec 25 03:55	5° H 39'22 0°45'47	
direct	7705 Feb 14 13:30	24° H 25'51	max. Earth dist.	7710 Dec 24 14:01	5° H 31'55 6.48415 AU	
	7705 Apr 15 06:49	0° H	morning rise	7711 Jan 07 03:54	8° H 26'26	
evening set	7705 Jun 21 01:04	14° H 26'54	retrograde	7711 May 07 10:43	25° H 03'47	
			opposition	7711 Jul 07 07:54	20° H 09'36 0°56'01	
conjunction	7705 Jul 04 09:13	17° H 41'54 -0°39'23	min. Earth dist.	7711 Jul 08 02:24	20° H 03'40 4.49046 AU	
minimum elong	7705 Jul 04 09:15	17° H 41'55 0°39'29	direct	7711 Sep 07 22:53	15° H 07'53	
max. Earth dist.	7705 Jul 05 11:38	17° H 58'01 5.91580 AU		7711 Dec 31 05:13	0° H	
morning rise	7705 Jul 17 20:10	20° H 58'21	evening set	7712 Jan 11 10:55	2° H 22'52	
	7705 Aug 25 21:12	0° H	max. Earth dist.	7712 Jan 22 17:32	4° H 48'31 6.47486 AU	
retrograde	7705 Nov 27 00:55	11° H 47'18				
min. Earth dist.	7706 Jan 24 07:56	6° H 54'01 3.93219 AU	conjunction	7712 Jan 24 08:41	5° H 09'40 0°28'55	
opposition	7706 Jan 25 11:57	6° H 44'31 -0°41'07	minimum elong	7712 Jan 24 08:42	5° H 09'40 0°29'01	
direct	7706 Mar 24 09:52	1° H 49'21	morning rise	7712 Feb 06 04:24	7° H 55'31	
	7706 Jun 30 05:33	15° H		7712 Mar 11 13:18	15° H	
evening set	7706 Jul 29 00:57	21° H 40'53	retrograde	7712 Jun 05 20:33	24° H 41'08	
			opposition	7712 Aug 05 19:43	19° H 48'24 0°25'17	
conjunction	7706 Aug 11 15:31	24° H 56'08 -0°12'51	min. Earth dist.	7712 Aug 07 05:12	19° H 37'42 4.43993 AU	
minimum elong	7706 Aug 11 15:32	24° H 56'09 0°12'55		7712 Sep 25 16:07	15° H	
behind sun begin	7706 Aug 11 10:29	24° H 53'08	direct	7712 Oct 07 12:17	14° H 47'21	
behind sun end	7706 Aug 11 20:35	24° H 59'09		7712 Oct 19 08:03	15° H	
max. Earth dist.	7706 Aug 13 21:37	25° H 28'32 5.97314 AU		7713 Jan 30 02:56	0° H	
morning rise	7706 Aug 25 08:05	28° H 12'16	evening set	7713 Feb 09 20:12	2° H 19'27	
	7706 Sep 01 22:45	0° H	max. Earth dist.	7713 Feb 20 10:49	4° H 39'30 6.38625 AU	
retrograde	7707 Jan 02 18:39	18° H 21'58				
asc. node	7707 Jan 23 17:21	17° H 37'59	conjunction	7713 Feb 22 15:10	5° H 08'25 0°04'15	
min. Earth dist.	7707 Mar 01 17:26	13° H 30'14 4.03517 AU	minimum elong	7713 Feb 22 15:10	5° H 08'25 0°04'17	
opposition	7707 Mar 03 06:41	13° H 17'34 0°04'30	behind sun begin	7713 Feb 22 07:20	5° H 04'07	

behind sun end	7713 Feb 22 23:01	5° H 12'43		max. Earth dist.	7718 Aug 19 04:35	0° H 40'11	5.98625 AU
morning rise	7713 Mar 07 08:25	7° H 56'49		morning rise	7718 Aug 30 14:25	3° H 22'53	
desc. node	7713 Apr 24 23:15	17° H 53'08		asc. node	7718 Dec 03 21:11	21° H 29'05	
retrograde	7713 Jul 07 19:45	25° H 20'35		retrograde	7719 Jan 07 15:05	23° H 24'56	
opposition	7713 Sep 06 17:52	20° H 27'49	-0°13'36	min. Earth dist.	7719 Mar 06 14:24	18° H 33'34	4.05286 AU
min. Earth dist.	7713 Sep 08 08:19	20° H 15'31	4.31809 AU	opposition	7719 Mar 08 04:42	18° H 20'32	0°10'55
direct	7713 Nov 07 18:06	15° H 28'14		direct	7719 May 05 15:33	13° H 22'45	
	7714 Feb 25 00:22	0° Y			7719 Aug 29 07:02	0° A	
evening set	7714 Mar 13 05:05	3° Y 36'33		evening set	7719 Sep 09 07:37	2° A 30'19	
max. Earth dist.	7714 Mar 23 18:49	6° Y 00'58	6.23986 AU				
				conjunction	7719 Sep 22 23:38	5° A 38'50	0°21'46
conjunction	7714 Mar 25 23:08	6° Y 30'52	-0°22'40	minimum elong	7719 Sep 22 23:37	5° A 38'49	0°21'46
minimum elong	7714 Mar 25 23:07	6° Y 30'51	0°22'41	max. Earth dist.	7719 Sep 25 08:20	6° A 11'27	6.13197 AU
morning rise	7714 Apr 07 16:41	9° Y 25'14		morning rise	7719 Oct 06 16:13	8° A 47'17	
retrograde	7714 Aug 11 07:22	27° Y 52'36		retrograde	7720 Feb 10 10:08	27° A 36'50	
opposition	7714 Oct 10 20:29	22° Y 58'32	-0°51'01	min. Earth dist.	7720 Apr 08 22:31	22° A 44'28	4.21521 AU
min. Earth dist.	7714 Oct 12 06:03	22° Y 47'41	4.15641 AU	opposition	7720 Apr 10 06:08	22° A 33'49	0°50'10
direct	7714 Dec 10 17:03	18° Y 01'03		direct	7720 Jun 08 22:52	17° A 33'47	
	7715 Mar 15 16:38	0° B			7720 Sep 15 23:50	0° M	
evening set	7715 Apr 15 09:49	6° B 57'30		evening set	7720 Oct 13 08:22	5° M 52'39	
max. Earth dist.	7715 Apr 26 17:32	9° B 37'57	6.07631 AU				
				conjunction	7720 Oct 26 20:58	8° M 52'27	0°43'08
conjunction	7715 Apr 28 06:00	9° B 59'32	-0°43'35	minimum elong	7720 Oct 26 20:57	8° M 52'27	0°43'12
minimum elong	7715 Apr 28 05:59	9° B 59'32	0°43'40	max. Earth dist.	7720 Oct 28 12:19	9° M 14'17	6.29716 AU
morning rise	7715 May 11 03:01	13° B 02'20		morning rise	7720 Nov 09 08:37	11° M 51'30	
	7715 May 19 11:53	15° B			7720 Nov 23 19:44	15° M	
	7715 Aug 05 23:33	0° II		retrograde	7721 Mar 12 19:02	29° M 32'06	
retrograde	7715 Sep 17 05:55	2° II 44'20		min. Earth dist.	7721 May 11 08:33	24° M 37'57	4.36957 AU
	7715 Oct 29 22:44	30° R B		opposition	7721 May 12 01:59	24° M 32'11	1°10'58
opposition	7715 Nov 16 08:25	27° B 47'48	-1°13'32	direct	7721 Jul 12 01:36	19° M 30'50	
min. Earth dist.	7715 Nov 16 23:03	27° B 43'00	4.00511 AU		7721 Oct 11 11:18	0° J	
direct	7716 Jan 14 16:42	22° B 52'35		evening set	7721 Nov 15 03:57	7° J 09'28	
	7716 Mar 23 20:44	0° II					
evening set	7716 May 19 21:03	12° II 33'48		conjunction	7721 Nov 28 10:59	10° J 01'39	0°50'36
				minimum elong	7721 Nov 28 10:59	10° J 01'38	0°50'43
conjunction	7716 Jun 01 22:40	15° II 43'59	-0°49'45	max. Earth dist.	7721 Nov 28 21:51	10° J 07'31	6.42904 AU
minimum elong	7716 Jun 01 22:40	15° II 43'59	0°49'52	morning rise	7721 Dec 11 16:07	12° J 52'44	
max. Earth dist.	7716 Jun 01 17:28	15° II 40'49	5.95149 AU	retrograde	7722 Apr 11 20:17	29° J 46'18	
morning rise	7716 Jun 15 02:31	18° II 55'30		opposition	7722 Jun 11 11:37	24° J 49'49	1°10'57
	7716 Aug 03 01:42	0° E		min. Earth dist.	7722 Jun 11 14:10	24° J 48'59	4.47068 AU
retrograde	7716 Oct 24 20:33	9° E 34'33		direct	7722 Aug 12 14:19	19° J 47'59	
opposition	7716 Dec 23 12:18	4° E 34'37	-1°08'32		7722 Nov 11 14:17	0° Z	
min. Earth dist.	7716 Dec 23 02:42	4° E 37'50	3.92070 AU	evening set	7722 Dec 16 06:45	7° Z 03'58	
	7717 Feb 05 22:49	30° R II					
direct	7717 Feb 19 18:16	29° II 40'19		conjunction	7722 Dec 29 08:20	9° Z 51'36	0°44'01
	7717 Mar 05 12:55	0° E		minimum elong	7722 Dec 29 08:21	9° Z 51'36	0°44'07
evening set	7717 Jun 26 05:53	19° E 42'40		max. Earth dist.	7722 Dec 28 13:48	9° Z 41'40	6.49203 AU
				morning rise	7723 Jan 11 07:43	12° Z 38'07	
conjunction	7717 Jul 09 15:15	22° E 58'12	-0°36'26	retrograde	7723 May 11 12:51	29° Z 13'27	
minimum elong	7717 Jul 09 15:16	22° E 58'13	0°36'32	opposition	7723 Jul 11 10:44	24° Z 19'32	0°52'32
max. Earth dist.	7717 Jul 10 23:22	23° E 17'46	5.91606 AU	min. Earth dist.	7723 Jul 12 07:45	24° Z 12'47	4.49273 AU
morning rise	7717 Jul 23 03:06	26° E 15'05		direct	7723 Sep 12 03:17	19° Z 17'49	
	7717 Aug 07 20:07	0° O			7723 Dec 14 19:29	0° X	
	7717 Oct 27 12:56	15° O		evening set	7724 Jan 15 13:24	6° X 32'31	
retrograde	7717 Dec 02 06:58	17° O 02'23		max. Earth dist.	7724 Jan 26 18:07	8° X 57'15	6.47129 AU
	7718 Jan 06 20:43	15° R O					
min. Earth dist.	7718 Jan 29 10:55	12° O 09'20	3.93935 AU	conjunction	7724 Jan 28 10:47	9° X 19'14	0°25'55
opposition	7718 Jan 30 16:33	11° O 59'17	-0°35'14	minimum elong	7724 Jan 28 10:48	9° X 19'15	0°26'02
direct	7718 Mar 29 14:07	7° O 03'53		morning rise	7724 Feb 10 05:49	12° X 05'01	
	7718 Jun 10 10:25	15° O			7724 Feb 23 23:14	15° X	
evening set	7718 Aug 03 06:16	26° O 52'19		retrograde	7724 Jun 10 00:04	28° X 52'52	
				opposition	7724 Aug 10 00:35	24° X 00'13	0°20'21
conjunction	7718 Aug 16 21:15	0° H 07'11	-0°08'32	min. Earth dist.	7724 Aug 11 11:11	23° X 49'11	4.43050 AU
minimum elong	7718 Aug 16 21:16	0° H 07'11	0°08'35	direct	7724 Oct 11 15:41	18° X 59'19	
behind sun begin	7718 Aug 16 13:59	0° H 02'52			7725 Jan 13 20:55	0° H	
behind sun end	7718 Aug 17 04:33	0° H 11'31		evening set	7725 Feb 13 23:31	6° H 34'17	
	7718 Aug 16 09:12	0° H		max. Earth dist.	7725 Feb 24 11:39	8° H 53'30	6.37141 AU

conjunction	7725 Feb 26 18:02	9° H 23'39	0°00'34	minimum elong	7730 Aug 22 06:02	5° H 24'57	0°04'09
minimum elong	7725 Feb 26 18:03	9° H 23'40	0°00'36	behind sun begin	7730 Aug 21 21:46	5° H 20'04	
behind sun begin	7725 Feb 26 10:05	9° H 19'16		behind sun end	7730 Aug 22 14:18	5° H 29'50	
behind sun end	7725 Feb 27 02:00	9° H 28'03		max. Earth dist.	7730 Aug 24 15:48	5° H 59'17	6.00020 AU
desc. node	7725 Mar 06 17:45	11° H 09'55		morning rise	7730 Sep 04 23:26	8° H 40'04	
morning rise	7725 Mar 11 11:15	12° H 12'36		asc. node	7730 Oct 13 02:15	17° H 14'35	
retrograde	7725 Jul 12 07:59	29° H 43'06		retrograde	7731 Jan 12 15:20	28° H 33'35	
opposition	7725 Sep 11 04:18	24° H 50'15	-0°18'57	min. Earth dist.	7731 Mar 11 14:46	23° H 41'59	4.07244 AU
min. Earth dist.	7725 Sep 12 20:14	24° H 37'28	4.29834 AU	opposition	7731 Mar 13 04:40	23° H 29'06	0°17'17
direct	7725 Nov 12 02:33	19° H 50'49		direct	7731 May 10 20:09	18° H 30'53	
	7726 Feb 08 04:04	0° Y			7731 Aug 11 04:25	0° H	
evening set	7726 Mar 17 12:51	8° Y 05'08		evening set	7731 Sep 14 10:25	7° H 31'44	
max. Earth dist.	7726 Mar 28 02:49	10° Y 30'25	6.21672 AU				
conjunction	7726 Mar 30 07:07	11° Y 00'27	-0°26'00	conjunction	7731 Sep 28 02:15	10° H 39'05	0°25'31
minimum elong	7726 Mar 30 07:05	11° Y 00'26	0°26'01	minimum elong	7731 Sep 28 02:14	10° H 39'04	0°25'33
morning rise	7726 Apr 12 00:55	13° Y 55'53		max. Earth dist.	7731 Sep 30 11:18	11° H 11'43	6.15517 AU
	7726 Jul 05 23:13	0° H		morning rise	7731 Oct 11 18:20	13° H 46'14	
retrograde	7726 Aug 16 02:30	2° H 33'39		retrograde	7732 Jan 06 12:30	0° H	
	7726 Sep 26 16:42	30° R Y			7732 Feb 14 23:08	2° H 24'54	
opposition	7726 Oct 15 14:40	27° Y 39'21	-0°55'13	opposition	7732 Mar 25 06:33	30° R H	
min. Earth dist.	7726 Oct 16 22:25	27° Y 29'04	4.13154 AU	min. Earth dist.	7732 Apr 14 21:38	27° H 22'07	0°54'21
direct	7726 Dec 15 05:07	22° Y 42'08		direct	7732 Apr 13 14:21	27° H 32'37	4.23956 AU
	7727 Feb 24 14:24	0° H			7732 Jun 13 17:53	22° H 21'47	
evening set	7727 Apr 20 01:33	11° H 46'34		evening set	7732 Aug 27 10:24	0° H	
					7732 Oct 18 03:09	10° H 33'31	
conjunction	7727 May 02 22:17	14° H 49'56	-0°45'26	conjunction	7732 Oct 31 14:53	13° H 32'00	0°45'04
minimum elong	7727 May 02 22:16	14° H 49'56	0°45'31	minimum elong	7732 Oct 31 14:52	13° H 31'59	0°45'09
max. Earth dist.	7727 May 01 12:28	14° H 29'47	6.05184 AU	max. Earth dist.	7732 Nov 02 01:54	13° H 51'20	6.32042 AU
	7727 May 03 15:10	15° H			7732 Nov 07 06:22	15° H	
morning rise	7727 May 15 20:09	17° H 54'11		morning rise	7732 Nov 14 01:40	16° H 29'40	
	7727 Jul 10 06:58	0° H			7733 Jan 23 19:45	0° H	
retrograde	7727 Sep 22 11:21	7° H 47'36		retrograde	7733 Mar 17 03:09	4° H 01'20	
opposition	7727 Nov 21 11:17	2° H 50'39	-1°14'40		7733 May 09 01:15	30° R H	
min. Earth dist.	7727 Nov 21 23:38	2° H 46'34	3.98323 AU	opposition	7733 May 16 10:45	29° H 01'51	1°12'10
	7727 Dec 14 12:04	30° R H		min. Earth dist.	7733 May 15 20:44	29° H 06'29	4.38977 AU
direct	7728 Jan 19 15:32	27° H 55'36		direct	7733 Jul 16 15:49	24° H 00'19	
	7728 Feb 24 08:00	0° H			7733 Sep 21 03:38	0° H	
evening set	7728 May 24 21:35	17° H 43'49		evening set	7733 Nov 19 15:14	11° H 33'48	
conjunction	7728 Jun 07 00:29	20° H 55'21	-0°49'04	conjunction	7733 Dec 02 21:30	14° H 25'02	0°50'27
minimum elong	7728 Jun 07 00:30	20° H 55'21	0°49'11	minimum elong	7733 Dec 02 21:31	14° H 25'03	0°50'34
max. Earth dist.	7728 Jun 07 01:05	20° H 55'43	5.93454 AU	max. Earth dist.	7733 Dec 03 04:35	14° H 28'51	6.44456 AU
morning rise	7728 Jun 20 05:29	24° H 08'15		morning rise	7733 Dec 16 01:42	17° H 15'10	
	7728 Jul 15 00:15	0° H			7734 Feb 22 00:20	0° H	
retrograde	7728 Oct 30 07:26	14° H 54'24		retrograde	7734 Apr 15 23:20	4° H 03'40	
opposition	7728 Dec 28 20:15	9° H 54'00	-1°05'26		7734 Jun 08 21:56	30° R H	
min. Earth dist.	7728 Dec 28 07:31	9° H 58'17	3.91082 AU	opposition	7734 Jun 15 16:35	29° H 07'33	1°09'20
direct	7729 Feb 24 22:45	4° H 59'43		min. Earth dist.	7734 Jun 15 21:14	29° H 06'02	4.48070 AU
evening set	7729 Jul 01 13:19	25° H 04'40		direct	7734 Aug 16 21:14	24° H 05'39	
					7734 Oct 22 15:44	0° H	
conjunction	7729 Jul 14 23:39	28° H 20'47	-0°33'10	evening set	7734 Dec 20 13:13	11° H 19'35	
minimum elong	7729 Jul 14 23:41	28° H 20'48	0°33'16				
max. Earth dist.	7729 Jul 16 11:16	28° H 42'29	5.91414 AU	conjunction	7735 Jan 02 14:09	14° H 06'47	0°42'03
	7729 Jul 21 18:37	0° H		minimum elong	7735 Jan 02 14:10	14° H 06'48	0°42'10
morning rise	7729 Jul 28 12:49	1° H 38'18		max. Earth dist.	7735 Jan 01 16:24	13° H 55'08	6.49585 AU
	7729 Sep 27 05:19	15° H		morning rise	7735 Jan 15 12:43	16° H 52'53	
retrograde	7729 Dec 07 12:31	22° H 24'15			7735 Mar 27 21:41	0° H	
opposition	7730 Feb 04 22:58	17° H 20'44	-0°29'03	retrograde	7735 May 15 17:39	3° H 27'41	
min. Earth dist.	7730 Feb 03 14:02	17° H 31'56	3.94568 AU		7735 Jul 04 07:15	30° R H	
	7730 Feb 22 23:49	15° R H		opposition	7735 Jul 15 15:58	28° H 34'03	0°48'41
direct	7730 Apr 03 20:08	12° H 25'01		min. Earth dist.	7735 Jul 16 15:43	28° H 26'27	4.49012 AU
	7730 May 13 12:29	15° H		direct	7735 Sep 16 09:42	23° H 32'25	
	7730 Jul 30 08:25	0° H			7735 Nov 25 13:45	0° H	
evening set	7730 Aug 08 14:26	2° H 10'30		evening set	7736 Jan 19 18:38	10° H 48'21	
				max. Earth dist.	7736 Jan 30 18:30	13° H 10'53	6.46227 AU
conjunction	7730 Aug 22 06:03	5° H 24'57	-0°04'06				

conjunction	7736 Feb 01 15:23	13° \approx 35'12	0°22'40	minimum elong	7741 Jul 20 10:31	3° Ω 47'59	0°29'40
minimum elong	7736 Feb 01 15:24	13° \approx 35'13	0°22'45	max. Earth dist.	7741 Jul 22 03:39	4° Ω 12'59	5.92119 AU
	7736 Feb 08 03:51	15° \approx		morning rise	7741 Aug 03 00:24	7° Ω 05'30	
morning rise	7736 Feb 14 10:11	16° \approx 21'13			7741 Sep 06 02:07	15° Ω	
	7736 Apr 28 10:51	0° \mathbb{X}		retrograde	7741 Dec 12 19:28	27° Ω 46'13	
retrograde	7736 Jun 14 09:55	3° \mathbb{X} 13'11		min. Earth dist.	7742 Feb 08 19:26	22° Ω 53'58	3.96069 AU
	7736 Aug 01 03:00	30° \mathbb{R} \approx		opposition	7742 Feb 10 05:27	22° Ω 42'24	-0°22'35
opposition	7736 Aug 14 09:34	28° \approx 20'35	0°15'03	direct	7742 Apr 09 05:09	17° Ω 46'23	
min. Earth dist.	7736 Aug 15 21:59	28° \approx 08'57	4.41557 AU		7742 Jul 12 06:48	0° \mathbb{P}	
direct	7736 Oct 15 23:12	23° \approx 19'47		evening set	7742 Aug 13 21:27	7° \mathbb{P} 25'43	
	7736 Dec 25 15:17	0° \mathbb{X}		asc. node	7742 Aug 22 12:06	9° \mathbb{P} 27'37	
desc. node	7737 Jan 14 02:55	3° \mathbb{X} 34'56					
evening set	7737 Feb 18 07:08	10° \mathbb{X} 59'23		conjunction	7742 Aug 27 13:22	10° \mathbb{P} 39'17	0°00'24
max. Earth dist.	7737 Feb 28 19:10	13° \mathbb{X} 19'08	6.35164 AU	minimum elong	7742 Aug 27 13:22	10° \mathbb{P} 39'17	0°00'21
				behind sun begin	7742 Aug 27 04:59	10° \mathbb{P} 34'21	
conjunction	7737 Mar 03 01:40	13° \mathbb{X} 49'29	-0°03'21	behind sun end	7742 Aug 27 21:44	10° \mathbb{P} 44'12	
minimum elong	7737 Mar 03 01:39	13° \mathbb{X} 49'29	0°03'18	max. Earth dist.	7742 Aug 30 01:40	11° \mathbb{P} 14'55	6.02151 AU
behind sun begin	7737 Mar 02 17:43	13° \mathbb{X} 45'05		morning rise	7742 Sep 10 06:51	13° \mathbb{P} 53'23	
behind sun end	7737 Mar 03 09:34	13° \mathbb{X} 53'52			7742 Nov 30 01:54	0° $\underline{\Omega}$	
morning rise	7737 Mar 15 18:38	16° \mathbb{X} 39'08		retrograde	7743 Jan 17 11:01	3° $\underline{\Omega}$ 35'52	
	7737 May 23 12:00	0° \mathbb{Y}			7743 Mar 07 01:23	30° \mathbb{R} \mathbb{P}	
retrograde	7737 Jul 17 00:21	4° \mathbb{Y} 18'03		min. Earth dist.	7743 Mar 16 11:21	28° \mathbb{P} 44'33	4.09765 AU
	7737 Sep 11 06:56	30° \mathbb{R} \mathbb{X}		opposition	7743 Mar 18 01:51	28° \mathbb{P} 31'29	0°23'22
opposition	7737 Sep 15 20:07	29° \mathbb{X} 25'06	-0°24'31	direct	7743 May 15 20:12	23° \mathbb{P} 32'58	
min. Earth dist.	7737 Sep 17 11:33	29° \mathbb{X} 12'28	4.27501 AU		7743 Jul 21 07:46	0° $\underline{\Omega}$	
direct	7737 Nov 16 13:43	24° \mathbb{X} 25'58		evening set	7743 Sep 19 10:10	12° $\underline{\Omega}$ 25'39	
	7738 Jan 18 08:05	0° \mathbb{Y}					
evening set	7738 Mar 22 02:29	12° \mathbb{Y} 47'30		conjunction	7743 Oct 03 01:25	15° $\underline{\Omega}$ 31'34	0°28'59
max. Earth dist.	7738 Apr 01 17:21	15° \mathbb{Y} 14'10	6.19156 AU	minimum elong	7743 Oct 03 01:23	15° $\underline{\Omega}$ 31'34	0°29'01
				max. Earth dist.	7743 Oct 05 06:54	16° $\underline{\Omega}$ 02'00	6.18185 AU
conjunction	7738 Apr 03 20:48	15° \mathbb{Y} 43'54	-0°29'22	morning rise	7743 Oct 16 16:57	18° $\underline{\Omega}$ 37'15	
minimum elong	7738 Apr 03 20:47	15° \mathbb{Y} 43'53	0°29'25		7743 Dec 10 15:54	0° \mathbb{M}	
morning rise	7738 Apr 16 15:06	18° \mathbb{Y} 40'34		retrograde	7744 Feb 19 09:49	7° \mathbb{M} .04'38	
	7738 Jun 09 00:12	0° \mathbb{B}		min. Earth dist.	7744 Apr 18 05:15	2° \mathbb{M} .11'46	4.26520 AU
retrograde	7738 Aug 21 05:57	7° \mathbb{B} 29'43		opposition	7744 Apr 19 09:41	2° \mathbb{M} .02'14	0°58'02
opposition	7738 Oct 20 15:40	2° \mathbb{B} 35'07	-0°59'19		7744 May 05 02:27	30° \mathbb{R} $\underline{\Omega}$	
min. Earth dist.	7738 Oct 21 21:47	2° \mathbb{B} 25'20	4.10644 AU	direct	7744 Jun 18 11:29	27° $\underline{\Omega}$ 01'39	
	7738 Nov 10 14:33	30° \mathbb{R} \mathbb{Y}			7744 Aug 02 02:44	0° \mathbb{M}	
direct	7738 Dec 20 01:28	27° \mathbb{Y} 38'15		evening set	7744 Oct 22 18:06	15° \mathbb{M} .06'21	
	7739 Jan 27 23:04	0° \mathbb{B}			7744 Oct 22 06:29	15° \mathbb{M}	
	7739 Apr 17 03:58	15° \mathbb{B}					
evening set	7739 Apr 24 23:17	16° \mathbb{B} 50'31		conjunction	7744 Nov 05 05:14	18° \mathbb{M} .03'36	0°46'39
				minimum elong	7744 Nov 05 05:13	18° \mathbb{M} .03'35	0°46'45
conjunction	7739 May 07 20:51	19° \mathbb{B} 55'14	-0°47'04	max. Earth dist.	7744 Nov 06 13:32	18° \mathbb{M} .21'20	6.34305 AU
minimum elong	7739 May 07 20:50	19° \mathbb{B} 55'14	0°47'09	morning rise	7744 Nov 18 14:57	20° \mathbb{M} .59'57	
max. Earth dist.	7739 May 06 15:47	19° \mathbb{B} 37'50	6.02926 AU		7745 Jan 01 12:09	0° \mathbb{X}	
morning rise	7739 May 20 19:29	23° \mathbb{B} 00'52		retrograde	7745 Mar 21 06:26	8° \mathbb{X} 23'28	
	7739 Jun 20 02:22	0° \mathbb{I}		opposition	7745 May 20 16:24	3° \mathbb{X} 24'29	1°12'55
retrograde	7739 Sep 27 22:25	13° \mathbb{I} 04'43		min. Earth dist.	7745 May 20 04:21	3° \mathbb{X} 28'27	4.40788 AU
opposition	7739 Nov 26 19:59	8° \mathbb{I} 07'25	-1°15'14		7745 Jun 18 08:04	30° \mathbb{R} \mathbb{M}	
min. Earth dist.	7739 Nov 27 04:54	8° \mathbb{I} 04'28	3.96582 AU	direct	7745 Jul 21 00:28	28° \mathbb{M} .22'54	
direct	7740 Jan 24 19:10	3° \mathbb{I} 12'42			7745 Aug 23 03:31	0° \mathbb{X}	
evening set	7740 May 30 03:40	23° \mathbb{I} 06'01		evening set	7745 Nov 23 23:28	15° \mathbb{X} 52'09	
conjunction	7740 Jun 12 07:28	26° \mathbb{I} 18'32	-0°47'57	conjunction	7745 Dec 07 04:50	18° \mathbb{X} 42'35	0°50'02
minimum elong	7740 Jun 12 07:29	26° \mathbb{I} 18'32	0°48'04	minimum elong	7745 Dec 07 04:50	18° \mathbb{X} 42'35	0°50'09
max. Earth dist.	7740 Jun 12 12:24	26° \mathbb{I} 21'32	5.92409 AU	max. Earth dist.	7745 Dec 07 06:16	18° \mathbb{X} 43'21	6.45683 AU
morning rise	7740 Jun 25 13:49	29° \mathbb{I} 32'31		morning rise	7745 Dec 20 08:15	21° \mathbb{X} 31'56	
	7740 Jun 27 11:13	0° \mathbb{E}			7746 Jan 31 07:59	0° \mathbb{Z}	
retrograde	7740 Nov 04 18:23	20° \mathbb{E} 22'34		retrograde	7746 Apr 20 02:55	8° \mathbb{Z} 16'49	
opposition	7741 Jan 03 07:13	15° \mathbb{E} 21'41	-1°01'38	opposition	7746 Jun 19 19:57	3° \mathbb{Z} 21'08	1°07'24
min. Earth dist.	7741 Jan 02 14:01	15° \mathbb{E} 27'28	3.90895 AU	min. Earth dist.	7746 Jun 20 04:36	3° \mathbb{Z} 18'20	4.48652 AU
direct	7741 Mar 02 06:51	10° \mathbb{E} 27'21			7746 Jul 18 08:01	30° \mathbb{R} \mathbb{X}	
	7741 Jul 04 18:36	0° Ω		direct	7746 Aug 21 04:08	28° \mathbb{X} 19'14	
evening set	7741 Jul 06 23:06	0° Ω 31'41			7746 Sep 24 07:10	0° \mathbb{Z}	
				evening set	7746 Dec 24 17:58	15° \mathbb{Z} 32'25	
conjunction	7741 Jul 20 10:29	3° Ω 47'58	-0°29'34				

conjunction	7747 Jan 06 18:19	18° Z 19'26	0°39'55	conjunction	7752 Jun 17 14:38	1° Z 41'04	-0°46'25
minimum elong	7747 Jan 06 18:20	18° Z 19'27	0°40'02	minimum elong	7752 Jun 17 14:39	1° Z 41'04	0°46'32
max. Earth dist.	7747 Jan 05 16:17	18° Z 05'29	6.49476 AU	max. Earth dist.	7752 Jun 18 02:27	1° Z 48'17	5.91913 AU
morning rise	7747 Jan 19 16:18	21° Z 05'22		morning rise	7752 Jun 30 21:56	4° Z 55'44	
	7747 Mar 05 06:19	0° \approx		retrograde	7752 Nov 10 04:59	25° Z 47'02	
retrograde	7747 May 19 21:42	7° \approx 41'17		opposition	7753 Jan 08 16:45	20° Z 45'37	-0°57'18
opposition	7747 Jul 19 20:34	2° \approx 47'51	0°44'38	min. Earth dist.	7753 Jan 07 21:20	20° Z 52'10	3.91209 AU
min. Earth dist.	7747 Jul 20 22:13	2° \approx 39'38	4.48241 AU	direct	7753 Mar 07 16:11	15° Z 51'08	
	7747 Aug 12 02:08	30° R Z			7753 Jun 17 08:17	0° Ω	
direct	7747 Sep 20 13:28	27° Z 46'16		evening set	7753 Jul 12 07:04	5° Ω 52'53	
	7747 Oct 30 04:45	0° \approx					
evening set	7748 Jan 23 23:40	15° \approx 05'04		conjunction	7753 Jul 25 19:16	9° Ω 09'01	-0°25'45
	7748 Jan 23 14:16	15° \approx		minimum elong	7753 Jul 25 19:18	9° Ω 09'02	0°25'50
max. Earth dist.	7748 Feb 03 22:08	17° \approx 27'15	6.44853 AU	max. Earth dist.	7753 Jul 27 16:34	9° Ω 36'27	5.93188 AU
				morning rise	7753 Aug 08 09:58	12° Ω 26'22	
conjunction	7748 Feb 05 20:08	17° \approx 52'17	0°19'19		7753 Aug 19 03:57	15° Ω	
minimum elong	7748 Feb 05 20:09	17° \approx 52'17	0°19'24		7753 Nov 04 03:33	0° R	
morning rise	7748 Feb 18 14:29	20° \approx 38'41		retrograde	7753 Dec 17 22:03	3° R 00'14	
	7748 Apr 04 20:51	0° H			7754 Jan 30 17:55	30° R Ω	
retrograde	7748 Jun 18 20:32	7° H 36'18		min. Earth dist.	7754 Feb 13 20:35	28° Ω 08'28	3.97775 AU
opposition	7748 Aug 18 19:30	2° H 43'46	0°09'41	opposition	7754 Feb 15 08:38	27° Ω 56'13	-0°16'04
min. Earth dist.	7748 Aug 20 09:17	2° H 31'42	4.39660 AU	direct	7754 Apr 14 09:24	22° Ω 59'53	
	7748 Sep 10 10:35	30° R \approx			7754 Jun 21 17:30	0° R	
direct	7748 Oct 20 07:10	27° \approx 43'11		asc. node	7754 Jul 02 06:30	2° R 00'33	
desc. node	7748 Nov 24 01:41	29° \approx 29'15		evening set	7754 Aug 19 01:59	12° R 32'50	
	7748 Nov 28 23:37	0° H					
evening set	7749 Feb 22 15:58	15° H 28'33		conjunction	7754 Sep 01 17:55	15° R 45'26	0°04'48
max. Earth dist.	7749 Mar 05 02:07	17° H 48'03	6.32881 AU	minimum elong	7754 Sep 01 17:55	15° R 45'26	0°04'47
				behind sun begin	7754 Sep 01 09:45	15° R 40'39	
conjunction	7749 Mar 07 10:14	18° H 19'28	-0°07'09	behind sun end	7754 Sep 02 02:06	15° R 50'13	
minimum elong	7749 Mar 07 10:13	18° H 19'28	0°07'07	max. Earth dist.	7754 Sep 04 04:57	16° R 20'08	6.04307 AU
behind sun begin	7749 Mar 07 02:51	18° H 15'22		morning rise	7754 Sep 15 11:30	18° R 58'30	
behind sun end	7749 Mar 07 17:35	18° H 23'34			7754 Nov 05 08:39	0° Ω	
morning rise	7749 Mar 20 03:26	21° H 10'05		retrograde	7755 Jan 22 03:39	8° Ω 30'20	
	7749 May 01 01:16	0° Y		min. Earth dist.	7755 Mar 21 07:00	3° Ω 38'42	4.12133 AU
retrograde	7749 Jul 21 20:08	8° Y 58'32		opposition	7755 Mar 22 20:11	3° Ω 26'05	0°29'10
opposition	7749 Sep 20 14:16	4° Y 05'23	-0°29'59		7755 Apr 19 23:53	30° R R	
min. Earth dist.	7749 Sep 22 04:54	3° Y 52'58	4.24980 AU	direct	7755 May 20 19:03	28° R 27'12	
	7749 Oct 28 02:14	30° R H			7755 Jun 20 20:26	0° Ω	
direct	7749 Nov 21 03:51	29° H 06'31		evening set	7755 Sep 24 07:22	17° Ω 12'42	
	7749 Dec 15 05:01	0° Y					
evening set	7750 Mar 26 18:01	17° Y 35'37		conjunction	7755 Oct 07 22:22	20° Ω 17'26	0°32'13
max. Earth dist.	7750 Apr 06 12:42	20° Y 05'17	6.16625 AU	minimum elong	7755 Oct 07 22:20	20° Ω 17'25	0°32'15
				max. Earth dist.	7755 Oct 10 02:32	20° Ω 46'57	6.20572 AU
conjunction	7750 Apr 08 12:46	20° Y 33'12	-0°32'34	morning rise	7755 Oct 21 13:05	23° Ω 21'44	
minimum elong	7750 Apr 08 12:44	20° Y 33'11	0°32'37		7755 Nov 21 04:21	0° R	
morning rise	7750 Apr 21 07:20	23° Y 31'05		retrograde	7756 Feb 23 18:58	11° R 39'13	
	7750 May 20 04:54	0° R		opposition	7756 Apr 23 20:12	6° R 37'18	1°01'20
retrograde	7750 Aug 26 10:28	12° R 31'19		min. Earth dist.	7756 Apr 22 17:30	6° R 46'13	4.28725 AU
opposition	7750 Oct 25 18:39	7° R 36'25	-1°03'00	direct	7756 Jun 23 01:47	1° R 36'35	
min. Earth dist.	7750 Oct 26 22:14	7° R 27'27	4.08330 AU		7756 Oct 05 19:31	15° R	
direct	7750 Dec 24 23:24	2° R 39'56		evening set	7756 Oct 27 08:03	19° R 35'38	
	7751 Mar 30 15:11	15° R					
evening set	7751 Apr 29 23:06	21° R 58'59		conjunction	7756 Nov 09 18:15	22° R 31'47	0°47'58
				minimum elong	7756 Nov 09 18:15	22° R 31'47	0°48'05
conjunction	7751 May 12 21:12	25° R 04'50	-0°48'20	max. Earth dist.	7756 Nov 10 20:51	22° R 46'21	6.36151 AU
minimum elong	7751 May 12 21:11	25° R 04'50	0°48'26	morning rise	7756 Nov 23 03:16	25° R 27'04	
max. Earth dist.	7751 May 11 19:36	24° R 49'27	6.01037 AU		7756 Dec 14 12:34	0° Z	
morning rise	7751 May 25 20:54	28° R 11'45		retrograde	7757 Mar 25 11:34	12° Z 44'05	
	7751 Jun 02 11:05	0° R		opposition	7757 May 24 22:02	7° Z 45'36	1°13'17
retrograde	7751 Oct 03 08:13	18° R 24'03		min. Earth dist.	7757 May 24 13:36	7° Z 48'22	4.42172 AU
opposition	7751 Dec 02 05:13	13° R 26'12	-1°15'09	direct	7757 Jul 25 10:34	2° Z 43'55	
min. Earth dist.	7751 Dec 02 09:35	13° R 24'45	3.95326 AU	evening set	7757 Nov 28 07:50	20° Z 10'21	
direct	7752 Jan 30 00:21	8° R 31'36					
evening set	7752 Jun 04 09:41	28° R 27'48		conjunction	7757 Dec 11 12:39	23° Z 00'13	0°49'21
	7752 Jun 10 17:11	0° Z		minimum elong	7757 Dec 11 12:39	23° Z 00'13	0°49'28
				max. Earth dist.	7757 Dec 11 11:02	22° Z 59'21	6.46512 AU

morning rise	7757 Dec 24 15:08	25° ♁ 48'56	opposition	7763 Dec 07 11:33	18° ♂ 38'47	-1°14'26
	7758 Jan 13 14:53	0° ♁	min. Earth dist.	7763 Dec 07 13:26	18° ♂ 38'09	3.94682 AU
retrograde	7758 Apr 24 05:15	12° ♁ 31'27	direct	7764 Feb 04 04:07	13° ♂ 44'20	
opposition	7758 Jun 24 00:05	7° ♁ 36'11	1°05'07	7764 May 25 03:09	0° ♂	
min. Earth dist.	7758 Jun 24 10:32	7° ♁ 32'49	4.48902 AU	evening set	7764 Jun 09 12:22	3° ♂ 41'14
direct	7758 Aug 25 08:58	2° ♁ 34'22				
evening set	7758 Dec 28 23:55	19° ♁ 47'50		conjunction	7764 Jun 22 18:10	6° ♂ 54'55
				minimum elong	7764 Jun 22 18:11	6° ♂ 54'56
conjunction	7759 Jan 10 23:35	22° ♁ 34'45	0°37'32	max. Earth dist.	7764 Jun 23 10:12	7° ♂ 04'42
minimum elong	7759 Jan 10 23:37	22° ♁ 34'46	0°37'39	morning rise	7764 Jul 06 02:34	10° ♂ 10'04
max. Earth dist.	7759 Jan 09 18:00	22° ♁ 18'51	6.49129 AU		7764 Oct 21 12:28	0° ♂
morning rise	7759 Jan 23 21:03	25° ♁ 20'38		retrograde	7764 Nov 15 08:56	1° ♂ 00'21
	7759 Feb 15 04:25	0° ♁			7764 Dec 10 02:35	30° ♂
retrograde	7759 May 24 05:16	11° ♁ 58'29		opposition	7765 Jan 13 20:55	25° ♂ 58'32
opposition	7759 Jul 24 03:17	7° ♁ 05'21	0°40'17	min. Earth dist.	7765 Jan 12 22:18	26° ♂ 06'10
min. Earth dist.	7759 Jul 25 07:43	6° ♁ 56'15	4.47328 AU	direct	7765 Mar 12 18:54	21° ♂ 03'53
direct	7759 Sep 24 21:09	2° ♁ 03'57			7765 May 29 11:08	0° ♂
	7760 Jan 07 07:29	15° ♁		evening set	7765 Jul 17 10:11	11° ♂ 02'07
evening set	7760 Jan 28 06:13	19° ♁ 25'53				
max. Earth dist.	7760 Feb 08 01:35	21° ♁ 46'56	6.43443 AU	conjunction	7765 Jul 30 22:59	14° ♂ 17'57
				minimum elong	7765 Jul 30 23:01	14° ♂ 17'58
conjunction	7760 Feb 10 02:16	22° ♁ 13'31	0°15'48	max. Earth dist.	7765 Aug 01 21:38	14° ♂ 46'07
minimum elong	7760 Feb 10 02:17	22° ♁ 13'31	0°15'52		7765 Aug 02 20:38	15° ♂
behind sun begin	7760 Feb 10 00:50	22° ♁ 12'44		morning rise	7765 Aug 13 14:23	17° ♂ 34'57
behind sun end	7760 Feb 10 03:44	22° ♁ 14'18			7765 Oct 08 23:48	0° ♂
morning rise	7760 Feb 22 20:25	25° ♁ 00'22		retrograde	7765 Dec 22 18:46	8° ♂ 01'40
	7760 Mar 17 09:42	0° ♂		min. Earth dist.	7766 Feb 18 18:08	3° ♂ 09'46
retrograde	7760 Jun 23 08:49	12° ♂ 03'55		opposition	7766 Feb 20 06:18	2° ♂ 57'27
opposition	7760 Aug 23 07:30	7° ♂ 11'24	0°04'07		7766 Mar 15 16:07	30° ♂
min. Earth dist.	7760 Aug 24 21:02	6° ♂ 59'25	4.37865 AU	direct	7766 Apr 19 09:42	28° ♂ 00'44
desc. node	7760 Oct 03 11:30	2° ♂ 51'52		asc. node	7766 May 14 04:28	29° ♂ 02'35
direct	7760 Oct 24 16:07	2° ♂ 11'06			7766 May 24 04:29	0° ♂
evening set	7761 Feb 27 02:18	20° ♂ 01'53		evening set	7766 Aug 24 00:58	17° ♂ 27'43
max. Earth dist.	7761 Mar 09 14:29	22° ♂ 23'08	6.30860 AU			
				conjunction	7766 Sep 06 17:12	20° ♂ 39'28
conjunction	7761 Mar 11 20:32	22° ♂ 53'33	-0°10'59	minimum elong	7766 Sep 06 17:12	20° ♂ 39'28
minimum elong	7761 Mar 11 20:32	22° ♂ 53'33	0°10'58	behind sun begin	7766 Sep 06 10:03	20° ♂ 35'18
behind sun begin	7761 Mar 11 14:28	22° ♂ 50'09		behind sun end	7766 Sep 07 00:21	20° ♂ 43'38
behind sun end	7761 Mar 12 02:35	22° ♂ 56'56		max. Earth dist.	7766 Sep 09 04:57	21° ♂ 14'25
morning rise	7761 Mar 24 13:36	25° ♂ 44'57		morning rise	7766 Sep 20 10:33	23° ♂ 51'31
	7761 Apr 12 21:26	0° ♂			7766 Oct 17 16:46	0° ♂
retrograde	7761 Jul 26 16:30	13° ♂ 42'03		retrograde	7767 Jan 26 17:06	13° ♂ 13'51
opposition	7761 Sep 25 09:36	8° ♂ 48'48	-0°35'20	min. Earth dist.	7767 Mar 25 22:03	8° ♂ 22'01
min. Earth dist.	7761 Sep 26 23:22	8° ♂ 36'40	4.22890 AU	opposition	7767 Mar 27 09:58	8° ♂ 09'51
direct	7761 Nov 25 19:32	3° ♂ 50'22		direct	7767 May 25 12:15	3° ♂ 10'43
evening set	7762 Mar 31 10:08	22° ♂ 25'27		evening set	7767 Sep 29 00:32	21° ♂ 50'21
max. Earth dist.	7762 Apr 11 06:32	24° ♂ 56'51	6.14640 AU			
				conjunction	7767 Oct 12 14:57	24° ♂ 54'00
conjunction	7762 Apr 13 04:57	25° ♂ 23'56	-0°35'34	minimum elong	7767 Oct 12 14:55	24° ♂ 53'59
minimum elong	7762 Apr 13 04:56	25° ♂ 23'55	0°35'37	max. Earth dist.	7767 Oct 14 14:58	25° ♂ 21'03
morning rise	7762 Apr 26 00:07	28° ♂ 22'53		morning rise	7767 Oct 26 05:14	27° ♂ 57'13
	7762 May 03 00:16	0° ♂			7767 Nov 04 10:46	0° ♂
	7762 Jul 21 19:00	15° ♂			7768 Feb 01 14:31	15° ♂
retrograde	7762 Aug 31 13:09	17° ♂ 32'17		retrograde	7768 Feb 28 00:51	16° ♂ 06'34
	7762 Oct 11 17:58	15° ♂			7768 Mar 25 07:39	15° ♂
opposition	7762 Oct 30 21:09	12° ♂ 37'00	-1°06'12	min. Earth dist.	7768 Apr 27 03:13	11° ♂ 13'10
min. Earth dist.	7762 Oct 31 21:00	12° ♂ 29'13	4.06631 AU	opposition	7768 Apr 28 03:32	11° ♂ 05'03
direct	7762 Dec 29 21:25	7° ♂ 40'51		direct	7768 Jun 27 13:21	6° ♂ 04'07
	7763 Mar 10 17:04	15° ♂			7768 Sep 18 00:14	15° ♂
evening set	7763 May 04 21:13	27° ♂ 04'22		evening set	7768 Oct 31 19:09	23° ♂ 59'05
conjunction	7763 May 17 20:07	0° ♂ 11'06	-0°49'13	conjunction	7768 Nov 14 04:52	26° ♂ 54'27
minimum elong	7763 May 17 20:06	0° ♂ 11'06	0°49'20	minimum elong	7768 Nov 14 04:52	26° ♂ 54'27
max. Earth dist.	7763 May 17 00:40	29° ♂ 59'24	5.99794 AU	max. Earth dist.	7768 Nov 15 04:44	27° ♂ 07'30
	7763 May 17 01:41	0° ♂		morning rise	7768 Nov 27 12:55	29° ♂ 48'49
morning rise	7763 May 30 20:27	3° ♂ 18'55			7768 Nov 28 09:34	0° ♂
retrograde	7763 Oct 08 16:32	23° ♂ 37'06		retrograde	7769 Mar 29 14:25	17° ♂ 00'46

opposition	7769 May 29 02:05	12° \mathbb{A} 02'47	1°13'15	direct	7775 Jan 03 19:04	12° \mathbb{B} 38'17	
min. Earth dist.	7769 May 28 19:46	12° \mathbb{A} 04'51	4.43160 AU		7775 Feb 11 07:53	15° \mathbb{B}	
direct	7769 Jul 29 17:27	7° \mathbb{A} 01'05			7775 Apr 30 21:04	0° \mathbb{B}	
evening set	7769 Dec 02 14:45	24° \mathbb{A} 25'37		evening set	7775 May 09 19:07	2° \mathbb{B} 07'26	
conjunction	7769 Dec 15 18:43	27° \mathbb{A} 15'00	0°48'24	conjunction	7775 May 22 18:44	5° \mathbb{B} 15'14	-0°49'44
minimum elong	7769 Dec 15 18:43	27° \mathbb{A} 15'00	0°48'31	minimum elong	7775 May 22 18:44	5° \mathbb{B} 15'14	0°49'51
max. Earth dist.	7769 Dec 15 12:10	27° \mathbb{A} 11'29	6.47025 AU	max. Earth dist.	7775 May 22 02:29	5° \mathbb{B} 05'25	5.98237 AU
morning rise	7769 Dec 28 20:40	0° \mathbb{B} 03'17		morning rise	7775 Jun 04 20:11	8° \mathbb{B} 24'15	
	7769 Dec 28 14:30	0° \mathbb{B}		retrograde	7775 Oct 13 22:55	28° \mathbb{B} 49'34	
retrograde	7770 Apr 28 09:21	16° \mathbb{B} 44'20		opposition	7775 Dec 12 17:35	23° \mathbb{B} 50'47	-1°13'09
opposition	7770 Jun 28 03:58	11° \mathbb{B} 49'23	1°02'30	min. Earth dist.	7775 Dec 12 15:19	23° \mathbb{B} 51'32	3.93672 AU
min. Earth dist.	7770 Jun 28 17:28	11° \mathbb{B} 45'02	4.48929 AU	direct	7776 Feb 09 05:17	18° \mathbb{B} 56'28	
direct	7770 Aug 29 15:40	6° \mathbb{B} 47'33			7776 May 07 04:08	0° \mathbb{B}	
evening set	7771 Jan 02 04:51	24° \mathbb{B} 01'28		evening set	7776 Jun 14 16:08	8° \mathbb{B} 55'56	
max. Earth dist.	7771 Jan 13 20:44	26° \mathbb{B} 31'30	6.48671 AU				
conjunction	7771 Jan 15 04:07	26° \mathbb{B} 48'22	0°34'58	conjunction	7776 Jun 27 22:58	12° \mathbb{B} 10'18	-0°42'21
minimum elong	7771 Jan 15 04:08	26° \mathbb{B} 48'23	0°35'04	minimum elong	7776 Jun 27 22:59	12° \mathbb{B} 10'19	0°42'28
morning rise	7771 Jan 28 00:56	29° \mathbb{B} 34'12		max. Earth dist.	7776 Jun 28 19:06	12° \mathbb{B} 22'36	5.91552 AU
	7771 Jan 30 01:16	0° \mathbb{B}		morning rise	7776 Jul 11 08:30	15° \mathbb{B} 26'09	
	7771 Apr 29 22:12	15° \mathbb{B}			7776 Sep 16 11:20	0° \mathbb{B}	
retrograde	7771 May 28 09:51	16° \mathbb{B} 14'03		retrograde	7776 Nov 20 15:21	6° \mathbb{B} 17'07	
	7771 Jun 25 22:30	15° \mathbb{B}		min. Earth dist.	7777 Jan 18 01:57	1° \mathbb{B} 23'14	3.92208 AU
opposition	7771 Jul 28 09:21	11° \mathbb{B} 21'01	0°35'43	opposition	7777 Jan 19 02:40	1° \mathbb{B} 14'52	-0°47'33
min. Earth dist.	7771 Jul 29 14:14	11° \mathbb{B} 11'47	4.46416 AU		7777 Jan 28 10:29	30° \mathbb{B}	
direct	7771 Sep 29 02:05	6° \mathbb{B} 19'43		direct	7777 Mar 18 00:53	26° \mathbb{B} 20'00	
	7771 Dec 20 15:07	15° \mathbb{B}			7777 May 04 14:22	0° \mathbb{B}	
evening set	7772 Feb 01 11:57	23° \mathbb{B} 44'22		evening set	7777 Jul 17 07:46	15° \mathbb{B}	
max. Earth dist.	7772 Feb 12 06:13	26° \mathbb{B} 05'16	6.42126 AU		7777 Jul 22 15:44	16° \mathbb{B} 16'22	
conjunction	7772 Feb 14 07:36	26° \mathbb{B} 32'19	0°12'12	conjunction	7777 Aug 05 05:29	19° \mathbb{B} 32'09	-0°17'49
minimum elong	7772 Feb 14 07:36	26° \mathbb{B} 32'19	0°12'17	minimum elong	7777 Aug 05 05:30	19° \mathbb{B} 32'10	0°17'54
behind sun begin	7772 Feb 14 02:16	26° \mathbb{B} 29'25		max. Earth dist.	7777 Aug 07 08:26	20° \mathbb{B} 02'49	5.95431 AU
behind sun end	7772 Feb 14 12:56	26° \mathbb{B} 35'13		morning rise	7777 Aug 18 21:23	22° \mathbb{B} 48'56	
morning rise	7772 Feb 27 01:25	29° \mathbb{B} 19'34			7777 Sep 19 00:39	0° \mathbb{B}	
	7772 Mar 01 03:52	0° \mathbb{B}		retrograde	7777 Dec 27 19:33	13° \mathbb{B} 09'28	
retrograde	7772 Jun 27 20:45	16° \mathbb{B} 28'31		min. Earth dist.	7778 Feb 23 17:52	8° \mathbb{B} 17'42	4.00990 AU
desc. node	7772 Aug 13 14:35	13° \mathbb{B} 21'51		opposition	7778 Feb 25 06:35	8° \mathbb{B} 05'12	-0°03'12
opposition	7772 Aug 27 18:44	11° \mathbb{B} 35'56	-0°01'26	asc. node	7778 Mar 24 12:36	4° \mathbb{B} 43'55	
min. Earth dist.	7772 Aug 29 09:33	11° \mathbb{B} 23'32	4.36182 AU	direct	7778 Apr 24 11:41	3° \mathbb{B} 08'14	
direct	7772 Oct 29 02:13	6° \mathbb{B} 35'50		evening set	7778 Aug 29 03:46	22° \mathbb{B} 30'09	
evening set	7773 Mar 03 11:09	24° \mathbb{B} 31'17		conjunction	7778 Sep 11 19:57	25° \mathbb{B} 41'02	0°13'04
max. Earth dist.	7773 Mar 13 22:23	26° \mathbb{B} 52'41	6.28910 AU	minimum elong	7778 Sep 11 19:56	25° \mathbb{B} 41'02	0°13'04
conjunction	7773 Mar 16 05:15	27° \mathbb{B} 23'41	-0°14'43	behind sun begin	7778 Sep 11 15:03	25° \mathbb{B} 38'12	
minimum elong	7773 Mar 16 05:14	27° \mathbb{B} 23'40	0°14'43	behind sun end	7778 Sep 12 00:49	25° \mathbb{B} 43'52	
behind sun begin	7773 Mar 16 01:46	27° \mathbb{B} 21'43		max. Earth dist.	7778 Sep 14 06:45	26° \mathbb{B} 15'16	6.08189 AU
behind sun end	7773 Mar 16 08:42	27° \mathbb{B} 25'37		morning rise	7778 Sep 25 13:20	28° \mathbb{B} 52'10	
	7773 Mar 27 18:12	0° \mathbb{B}			7778 Sep 30 11:20	0° \mathbb{B}	
morning rise	7773 Mar 28 22:30	0° \mathbb{B} 15'55		retrograde	7779 Jan 31 07:50	18° \mathbb{B} 05'06	
retrograde	7773 Jul 31 10:31	18° \mathbb{B} 21'32		min. Earth dist.	7779 Mar 30 15:05	13° \mathbb{B} 13'23	4.16306 AU
opposition	7773 Sep 30 03:40	13° \mathbb{B} 28'00	-0°40'26	opposition	7779 Apr 01 02:37	13° \mathbb{B} 01'23	0°39'46
min. Earth dist.	7773 Oct 01 15:28	13° \mathbb{B} 16'28	4.20782 AU	direct	7779 May 30 08:25	8° \mathbb{B} 02'00	
direct	7773 Nov 30 09:06	8° \mathbb{B} 29'49		evening set	7779 Oct 03 20:51	26° \mathbb{B} 35'38	
evening set	7774 Apr 05 00:48	27° \mathbb{B} 11'02		conjunction	7779 Oct 17 10:52	29° \mathbb{B} 38'09	0°37'54
max. Earth dist.	7774 Apr 16 01:22	29° \mathbb{B} 45'33	6.12544 AU	minimum elong	7779 Oct 17 10:50	29° \mathbb{B} 38'08	0°37'58
conjunction	7774 Apr 17 20:01	0° \mathbb{B} 10'33	-0°38'18	max. Earth dist.	7779 Oct 19 09:00	0° \mathbb{B} 04'02	6.24717 AU
minimum elong	7774 Apr 17 19:59	0° \mathbb{B} 10'33	0°38'21		7779 Oct 19 01:49	0° \mathbb{B}	
	7774 Apr 17 02:00	0° \mathbb{B}		morning rise	7779 Oct 31 00:18	2° \mathbb{B} 40'06	
morning rise	7774 Apr 30 15:31	3° \mathbb{B} 10'35			7779 Dec 31 15:06	15° \mathbb{B}	
	7774 Jun 24 17:56	15° \mathbb{B}		retrograde	7780 Mar 03 10:42	20° \mathbb{B} 40'30	
retrograde	7774 Sep 05 17:25	22° \mathbb{B} 29'45		opposition	7780 May 02 13:42	15° \mathbb{B} 39'32	1°06'42
opposition	7774 Nov 04 22:32	17° \mathbb{B} 34'09	-1°08'56	min. Earth dist.	7780 May 01 15:32	15° \mathbb{B} 46'54	4.32545 AU
min. Earth dist.	7774 Nov 05 20:52	17° \mathbb{B} 26'51	4.04716 AU	direct	7780 May 07 12:55	15° \mathbb{B}	
	7774 Nov 25 14:50	15° \mathbb{B}			7780 Jul 02 04:30	10° \mathbb{B} 38'31	
					7780 Aug 26 11:35	15° \mathbb{B}	

evening set	7780 Nov 05 08:22	28° \mathbb{M} 28'00		morning rise	7786 May 05 05:13	7° \mathcal{B} 53'59	
	7780 Nov 12 09:58	0° \mathcal{A}			7786 Jun 05 12:52	15° \mathcal{B}	
				retrograde	7786 Sep 10 18:08	27° \mathcal{B} 24'17	
conjunction	7780 Nov 18 17:11	1° \mathcal{A} 22'17	0°49'45	opposition	7786 Nov 09 22:09	22° \mathcal{B} 28'17	-1°11'11
minimum elong	7780 Nov 18 17:10	1° \mathcal{A} 22'17	0°49'51	min. Earth dist.	7786 Nov 10 17:21	22° \mathcal{B} 21'59	4.02413 AU
max. Earth dist.	7780 Nov 19 13:08	1° \mathcal{A} 33'08	6.39399 AU	direct	7787 Jan 08 12:12	17° \mathcal{B} 32'38	
morning rise	7780 Dec 02 00:25	4° \mathcal{A} 15'34			7787 Apr 13 22:22	0° \mathbb{I}	
retrograde	7781 Apr 02 18:00	21° \mathcal{A} 20'58		evening set	7787 May 14 16:18	7° \mathbb{I} 09'12	
opposition	7781 Jun 02 07:25	16° \mathcal{A} 23'24	1°12'52				
min. Earth dist.	7781 Jun 02 03:22	16° \mathcal{A} 24'43	4.44679 AU	conjunction	7787 May 27 16:52	10° \mathbb{I} 18'21	-0°49'54
direct	7781 Aug 03 02:29	11° \mathcal{A} 21'37		minimum elong	7787 May 27 16:52	10° \mathbb{I} 18'21	0°50'00
evening set	7781 Dec 06 21:54	28° \mathcal{A} 42'26		max. Earth dist.	7787 May 27 04:53	10° \mathbb{I} 11'05	5.96260 AU
	7781 Dec 12 23:15	0° \mathcal{B}		morning rise	7787 Jun 09 19:25	13° \mathbb{I} 28'46	
					7787 Aug 28 17:59	0° \mathcal{C}	
conjunction	7781 Dec 20 01:13	1° \mathcal{B} 31'06	0°47'14	retrograde	7787 Oct 19 07:19	4° \mathcal{C} 03'03	
minimum elong	7781 Dec 20 01:13	1° \mathcal{B} 31'07	0°47'23		7787 Dec 10 22:23	30° \mathcal{R} \mathbb{I}	
max. Earth dist.	7781 Dec 19 16:41	1° \mathcal{B} 26'32	6.48118 AU	opposition	7787 Dec 17 23:42	29° \mathbb{I} 03'45	-1°11'23
morning rise	7782 Jan 02 02:07	4° \mathcal{B} 18'37		min. Earth dist.	7787 Dec 17 18:47	29° \mathbb{I} 05'24	3.92231 AU
retrograde	7782 May 02 10:15	20° \mathcal{B} 56'21		direct	7788 Feb 14 08:41	24° \mathbb{I} 09'26	
opposition	7782 Jul 02 07:05	16° \mathcal{B} 01'45	0°59'39		7788 Apr 15 14:23	0° \mathcal{C}	
min. Earth dist.	7782 Jul 02 22:17	15° \mathcal{B} 56'52	4.49530 AU	evening set	7788 Jun 19 21:05	14° \mathcal{C} 13'13	
direct	7782 Sep 02 20:45	10° \mathcal{B} 59'58					
evening set	7783 Jan 06 08:24	28° \mathcal{B} 12'32		conjunction	7788 Jul 03 05:16	17° \mathcal{C} 28'33	-0°39'48
	7783 Jan 14 16:58	0° \mathcal{A}		minimum elong	7788 Jul 03 05:17	17° \mathcal{C} 28'34	0°39'55
max. Earth dist.	7783 Jan 17 19:17	0° \mathcal{A} 39'59	6.48720 AU	max. Earth dist.	7788 Jul 04 07:31	17° \mathcal{C} 44'35	5.90815 AU
				morning rise	7788 Jul 16 15:55	20° \mathcal{C} 45'17	
conjunction	7783 Jan 19 06:51	0° \mathcal{A} 59'07	0°32'19		7788 Aug 25 15:10	0° \mathcal{Q}	
minimum elong	7783 Jan 19 06:52	0° \mathcal{A} 59'08	0°32'25	retrograde	7788 Nov 26 00:27	11° \mathcal{Q} 37'52	
morning rise	7783 Feb 01 03:12	3° \mathcal{A} 44'44		min. Earth dist.	7789 Jan 23 06:20	6° \mathcal{Q} 44'27	3.92276 AU
	7783 Mar 31 08:19	15° \mathcal{A}		opposition	7789 Jan 24 09:35	6° \mathcal{Q} 35'12	-0°42'05
retrograde	7783 Jun 01 14:13	20° \mathcal{A} 25'16		direct	7789 Mar 23 06:17	1° \mathcal{Q} 40'08	
opposition	7783 Aug 01 13:40	15° \mathcal{A} 32'20	0°31'08		7789 Jun 29 15:57	15° \mathcal{Q}	
min. Earth dist.	7783 Aug 02 21:21	15° \mathcal{A} 22'13	4.45889 AU	evening set	7789 Jul 27 23:52	21° \mathcal{Q} 35'31	
	7783 Aug 05 19:03	15° \mathcal{R} \mathcal{A}					
direct	7783 Oct 03 07:44	10° \mathcal{A} 31'03		conjunction	7789 Aug 10 14:15	24° \mathcal{Q} 51'13	-0°13'34
	7783 Nov 29 12:00	15° \mathcal{A}		minimum elong	7789 Aug 10 14:16	24° \mathcal{Q} 51'14	0°13'39
evening set	7784 Feb 05 14:44	27° \mathcal{A} 57'17		behind sun begin	7789 Aug 10 09:49	24° \mathcal{Q} 48'35	
	7784 Feb 14 23:12	0° \mathcal{H}		behind sun end	7789 Aug 10 18:42	24° \mathcal{Q} 53'53	
max. Earth dist.	7784 Feb 16 06:42	0° \mathcal{H} 17'17	6.41041 AU	max. Earth dist.	7789 Aug 12 19:27	25° \mathcal{Q} 23'09	5.96276 AU
				morning rise	7789 Aug 24 07:00	28° \mathcal{Q} 07'53	
conjunction	7784 Feb 18 10:04	0° \mathcal{H} 45'29	0°08'43		7789 Sep 01 04:34	0° \mathcal{H}	
minimum elong	7784 Feb 18 10:05	0° \mathcal{H} 45'29	0°08'47	retrograde	7790 Jan 01 20:02	18° \mathcal{H} 22'06	
behind sun begin	7784 Feb 18 03:11	0° \mathcal{H} 41'43		asc. node	7790 Feb 01 09:43	16° \mathcal{H} 50'28	
behind sun end	7784 Feb 18 16:58	0° \mathcal{H} 49'15		min. Earth dist.	7790 Feb 28 17:59	13° \mathcal{H} 30'46	4.02502 AU
morning rise	7784 Mar 02 03:34	3° \mathcal{H} 33'02		opposition	7790 Mar 02 08:31	13° \mathcal{H} 17'39	0°03'23
desc. node	7784 Jun 25 20:54	20° \mathcal{H} 43'14		direct	7790 Apr 29 15:23	8° \mathcal{H} 20'16	
retrograde	7784 Jul 02 03:52	20° \mathcal{H} 46'58		evening set	7790 Sep 03 08:30	27° \mathcal{H} 36'46	
opposition	7784 Sep 01 02:57	15° \mathcal{H} 54'16	-0°06'45		7790 Sep 13 16:09	0° \mathcal{Q}	
min. Earth dist.	7784 Sep 02 17:45	15° \mathcal{H} 41'53	4.34588 AU				
direct	7784 Nov 02 07:24	10° \mathcal{H} 54'17		conjunction	7790 Sep 17 00:44	0° \mathcal{Q} 46'43	0°17'11
evening set	7785 Mar 07 17:12	28° \mathcal{H} 54'29		minimum elong	7790 Sep 17 00:43	0° \mathcal{Q} 46'42	0°17'10
	7785 Mar 12 13:25	0° \mathcal{Y}		max. Earth dist.	7790 Sep 19 11:51	1° \mathcal{Q} 20'58	6.10221 AU
max. Earth dist.	7785 Mar 18 04:53	1° \mathcal{Y} 16'46	6.26909 AU	morning rise	7790 Sep 30 17:46	3° \mathcal{Q} 56'44	
				retrograde	7791 Feb 05 02:03	22° \mathcal{Q} 59'27	
conjunction	7785 Mar 20 11:14	1° \mathcal{Y} 47'37	-0°18'13	min. Earth dist.	7791 Apr 04 10:54	18° \mathcal{Q} 07'22	4.18607 AU
minimum elong	7785 Mar 20 11:13	1° \mathcal{Y} 47'37	0°18'13	opposition	7791 Apr 05 20:53	17° \mathcal{Q} 55'54	0°44'45
morning rise	7785 Apr 02 04:32	4° \mathcal{Y} 40'41		direct	7791 Jun 04 08:11	12° \mathcal{Q} 56'10	
retrograde	7785 Aug 05 04:20	22° \mathcal{Y} 55'17			7791 Oct 02 12:33	0° \mathbb{M}	
opposition	7785 Oct 04 18:59	18° \mathcal{Y} 01'32	-0°45'09	evening set	7791 Oct 08 18:21	1° \mathbb{M} 22'46	
min. Earth dist.	7785 Oct 06 07:23	17° \mathcal{Y} 49'47	4.18484 AU				
direct	7785 Dec 04 21:26	13° \mathcal{Y} 03'32		conjunction	7791 Oct 22 07:43	4° \mathbb{M} 24'00	0°40'26
	7786 Apr 01 12:27	0° \mathcal{B}		minimum elong	7791 Oct 22 07:42	4° \mathbb{M} 23'59	0°40'30
evening set	7786 Apr 09 13:18	1° \mathcal{B} 51'54		max. Earth dist.	7791 Oct 24 03:47	4° \mathbb{M} 48'35	6.27065 AU
max. Earth dist.	7786 Apr 20 15:07	4° \mathcal{B} 27'59	6.10134 AU	morning rise	7791 Nov 04 20:23	7° \mathbb{M} 24'34	
					7791 Dec 10 16:55	15° \mathbb{M}	
conjunction	7786 Apr 22 08:58	4° \mathcal{B} 52'38	-0°40'43	retrograde	7792 Mar 07 18:37	25° \mathbb{M} 15'18	
minimum elong	7786 Apr 22 08:57	4° \mathcal{B} 52'37	0°40'47	min. Earth dist.	7792 May 06 03:33	20° \mathbb{M} 21'35	4.34730 AU

opposition	7792 May 07 00:18	20° \mathbb{M} 14'42	1°08'49	conjunction	7798 Apr 27 04:34	9° \mathcal{S} 51'31	-0°43'00
direct	7792 Jul 06 18:54	15° \mathbb{M} 13'29		minimum elong	7798 Apr 27 04:33	9° \mathcal{S} 51'30	0°43'05
	7792 Oct 27 01:18	0° \mathcal{A}		morning rise	7798 May 10 01:32	12° \mathcal{S} 54'15	
evening set	7792 Nov 09 22:04	2° \mathcal{A} 57'13			7798 May 19 00:21	15° \mathcal{S}	
					7798 Aug 06 00:43	0° \mathbb{I}	
conjunction	7792 Nov 23 06:04	5° \mathcal{A} 50'26	0°50'13	retrograde	7798 Sep 16 03:28	2° \mathbb{I} 35'54	
minimum elong	7792 Nov 23 06:04	5° \mathcal{A} 50'25	0°50'20		7798 Oct 27 14:08	30° \mathcal{R} \mathcal{S}	
max. Earth dist.	7792 Nov 23 22:11	5° \mathcal{A} 59'10	6.41245 AU	opposition	7798 Nov 15 04:46	27° \mathcal{S} 39'32	-1°13'01
morning rise	7792 Dec 06 12:17	8° \mathcal{A} 42'35		min. Earth dist.	7798 Nov 15 21:29	27° \mathcal{S} 34'02	4.00305 AU
retrograde	7793 Apr 06 23:20	25° \mathcal{A} 41'37		direct	7799 Jan 13 14:35	22° \mathcal{S} 44'12	
opposition	7793 Jun 06 13:33	20° \mathcal{A} 44'33	1°12'03		7799 Mar 24 11:25	0° \mathbb{I}	
min. Earth dist.	7793 Jun 06 12:39	20° \mathcal{A} 44'51	4.46049 AU	evening set	7799 May 19 19:58	12° \mathbb{I} 27'14	
direct	7793 Aug 07 12:44	15° \mathcal{A} 42'45					
	7793 Nov 26 21:58	0° \mathcal{S}		conjunction	7799 Jun 01 21:39	15° \mathbb{I} 37'37	-0°49'40
evening set	7793 Dec 11 05:46	3° \mathcal{S} 00'25		minimum elong	7799 Jun 01 21:39	15° \mathbb{I} 37'37	0°49'47
				max. Earth dist.	7799 Jun 01 15:40	15° \mathbb{I} 33'59	5.94711 AU
conjunction	7793 Dec 24 08:13	5° \mathcal{S} 48'30	0°45'47	morning rise	7799 Jun 15 01:16	18° \mathbb{I} 49'17	
minimum elong	7793 Dec 24 08:14	5° \mathcal{S} 48'30	0°45'54		7799 Aug 03 11:05	0° \mathcal{S}	
max. Earth dist.	7793 Dec 23 18:27	5° \mathcal{S} 41'07	6.48895 AU	retrograde	7799 Oct 24 20:49	9° \mathcal{S} 30'09	
morning rise	7794 Jan 06 08:30	8° \mathcal{S} 35'27		opposition	7799 Dec 23 10:54	4° \mathcal{S} 30'27	-1°08'51
retrograde	7794 May 06 14:48	25° \mathcal{S} 11'16		min. Earth dist.	7799 Dec 23 02:10	4° \mathcal{S} 33'23	3.91468 AU
opposition	7794 Jul 06 12:09	20° \mathcal{S} 16'58	0°56'24		7800 Feb 04 11:34	30° \mathcal{R} \mathbb{I}	
min. Earth dist.	7794 Jul 07 06:11	20° \mathcal{S} 11'10	4.49680 AU	direct	7800 Feb 19 16:16	29° \mathbb{I} 36'15	
direct	7794 Sep 07 03:22	15° \mathcal{S} 15'11			7800 Mar 06 20:47	0° \mathcal{S}	
	7794 Dec 29 21:54	0° \approx		evening set	7800 Jun 26 06:33	19° \mathcal{S} 41'28	
evening set	7795 Jan 10 13:45	2° \approx 27'58					
max. Earth dist.	7795 Jan 21 22:21	4° \approx 54'22	6.48232 AU	conjunction	7800 Jul 09 15:37	22° \mathcal{S} 57'14	-0°36'50
				minimum elong	7800 Jul 09 15:39	22° \mathcal{S} 57'15	0°36'57
conjunction	7795 Jan 23 11:49	5° \approx 14'33	0°29'23	max. Earth dist.	7800 Jul 10 21:53	23° \mathcal{S} 15'43	5.90911 AU
minimum elong	7795 Jan 23 11:50	5° \approx 14'33	0°29'29	morning rise	7800 Jul 23 03:32	26° \mathcal{S} 14'27	
morning rise	7795 Feb 05 07:28	8° \approx 00'08			7800 Aug 07 20:47	0° \mathcal{Q}	
	7795 Mar 11 08:25	15° \approx			7800 Oct 27 07:04	15° \mathcal{Q}	
retrograde	7795 Jun 05 20:31	24° \approx 43'16		retrograde	7800 Dec 02 07:42	17° \mathcal{Q} 04'44	
opposition	7795 Aug 05 21:04	19° \approx 50'31	0°26'11		7801 Jan 07 07:22	15° \mathcal{R} \mathcal{Q}	
min. Earth dist.	7795 Aug 07 06:01	19° \approx 40'00	4.44788 AU	min. Earth dist.	7801 Jan 29 11:37	12° \mathcal{Q} 12'06	3.93240 AU
	7795 Sep 26 17:34	15° \mathcal{R} \approx		opposition	7801 Jan 30 18:23	12° \mathcal{Q} 01'39	-0°36'08
direct	7795 Oct 07 13:43	14° \approx 49'24		direct	7801 Mar 29 14:46	7° \mathcal{Q} 06'20	
	7795 Oct 18 10:34	15° \approx			7801 Jun 10 05:20	15° \mathcal{Q}	
	7796 Jan 30 04:03	0° \mathcal{H}		evening set	7801 Aug 03 08:46	26° \mathcal{Q} 57'10	
evening set	7796 Feb 09 21:30	2° \mathcal{H} 19'13					
max. Earth dist.	7796 Feb 20 10:51	4° \mathcal{H} 38'22	6.39396 AU	conjunction	7801 Aug 16 23:45	0° \mathcal{H} 12'17	-0°09'12
				minimum elong	7801 Aug 16 23:45	0° \mathcal{H} 12'17	0°09'15
conjunction	7796 Feb 22 16:23	5° \mathcal{H} 07'53	0°04'59	behind sun begin	7801 Aug 16 16:43	0° \mathcal{H} 08'06	
minimum elong	7796 Feb 22 16:24	5° \mathcal{H} 07'53	0°05'02	behind sun end	7801 Aug 17 06:47	0° \mathcal{H} 16'28	
behind sun begin	7796 Feb 22 08:39	5° \mathcal{H} 03'39			7801 Aug 16 03:11	0° \mathcal{H}	
behind sun end	7796 Feb 23 00:08	5° \mathcal{H} 12'08		max. Earth dist.	7801 Aug 19 08:00	0° \mathcal{H} 45'54	5.98012 AU
morning rise	7796 Mar 06 09:48	7° \mathcal{H} 56'02		morning rise	7801 Aug 30 16:42	3° \mathcal{H} 28'12	
desc. node	7796 May 05 08:27	19° \mathcal{H} 47'01		asc. node	7801 Dec 12 22:41	22° \mathcal{H} 27'10	
retrograde	7796 Jul 06 19:22	25° \mathcal{H} 17'04		retrograde	7802 Jan 07 20:40	23° \mathcal{H} 32'40	
opposition	7796 Sep 05 16:33	20° \mathcal{H} 24'21	-0°12'23	min. Earth dist.	7802 Mar 06 19:09	18° \mathcal{H} 41'07	4.04785 AU
min. Earth dist.	7796 Sep 07 08:48	20° \mathcal{H} 11'29	4.32478 AU	opposition	7802 Mar 08 09:17	18° \mathcal{H} 28'09	0°09'53
direct	7796 Nov 06 18:59	15° \mathcal{H} 24'35		direct	7802 May 05 20:55	13° \mathcal{H} 30'23	
	7797 Feb 24 09:02	0° \mathcal{Y}			7802 Aug 28 19:42	0° \mathcal{L}	
evening set	7797 Mar 12 04:30	3° \mathcal{Y} 31'14		evening set	7802 Sep 09 11:13	2° \mathcal{L} 38'54	
max. Earth dist.	7797 Mar 22 16:30	5° \mathcal{Y} 54'29	6.24498 AU				
				conjunction	7802 Sep 23 03:15	5° \mathcal{L} 47'33	0°21'05
conjunction	7797 Mar 24 22:41	6° \mathcal{Y} 25'23	-0°21'51	minimum elong	7802 Sep 23 03:13	5° \mathcal{L} 47'32	0°21'05
minimum elong	7797 Mar 24 22:41	6° \mathcal{Y} 25'23	0°21'51	max. Earth dist.	7802 Sep 25 14:19	6° \mathcal{L} 21'34	6.12823 AU
morning rise	7797 Apr 06 16:12	9° \mathcal{Y} 19'33		morning rise	7802 Oct 06 19:49	8° \mathcal{L} 56'09	
retrograde	7797 Aug 10 03:10	27° \mathcal{Y} 44'47		retrograde	7803 Feb 10 14:33	27° \mathcal{L} 46'59	
opposition	7797 Oct 09 16:59	22° \mathcal{Y} 50'50	-0°49'53	min. Earth dist.	7803 Apr 10 02:25	22° \mathcal{L} 54'59	4.21275 AU
min. Earth dist.	7797 Oct 11 03:10	22° \mathcal{Y} 39'48	4.15951 AU	opposition	7803 Apr 11 11:51	22° \mathcal{L} 43'44	0°49'16
direct	7797 Dec 09 13:17	17° \mathcal{Y} 53'13		direct	7803 Jun 10 02:48	17° \mathcal{L} 43'42	
	7798 Mar 15 05:54	0° \mathcal{S}			7803 Sep 16 08:54	0° \mathbb{M}	
evening set	7798 Apr 14 08:28	6° \mathcal{S} 49'32		evening set	7803 Oct 14 12:23	6° \mathbb{M} 02'31	
max. Earth dist.	7798 Apr 25 14:05	9° \mathcal{S} 28'42	6.07699 AU				
				conjunction	7803 Oct 28 00:57	9° \mathbb{M} 02'21	0°42'38

minimum elong	7803 Oct 28 00:56	9° \mathbb{M} 02'20	0°42'42	min. Earth dist.	7809 Oct 17 02:03	27° \mathbb{Y} 34'54	4.13415 AU
max. Earth dist.	7803 Oct 29 16:22	9° \mathbb{M} 24'14	6.29573 AU	direct	7809 Dec 15 09:26	22° \mathbb{Y} 48'09	
morning rise	7803 Nov 10 12:45	12° \mathbb{M} 01'30			7810 Feb 24 05:36	0° \mathcal{B}	
	7803 Nov 24 05:07	15° \mathbb{M}		evening set	7810 Apr 20 05:49	11° \mathcal{B} 52'08	
retrograde	7804 Mar 13 01:48	29° \mathbb{M} 42'43		max. Earth dist.	7810 May 01 16:52	14° \mathcal{B} 35'17	6.05450 AU
opposition	7804 May 12 08:03	24° \mathbb{M} 42'35	1°10'27				
min. Earth dist.	7804 May 11 14:56	24° \mathbb{M} 48'15	4.36881 AU	conjunction	7810 May 03 02:39	14° \mathcal{B} 55'24	-0°44'59
direct	7804 Jul 12 08:05	19° \mathbb{M} 41'11		minimum elong	7810 May 03 02:38	14° \mathcal{B} 55'23	0°45'04
	7804 Oct 10 18:55	0° \mathcal{A}			7810 May 03 10:23	15° \mathcal{B}	
evening set	7804 Nov 15 08:14	7° \mathcal{A} 19'28		morning rise	7810 May 16 00:18	17° \mathcal{B} 59'28	
					7810 Jul 10 00:49	0° \mathbb{I}	
conjunction	7804 Nov 28 15:28	10° \mathcal{A} 11'43	0°50'23	retrograde	7810 Sep 22 13:15	7° \mathbb{I} 51'14	
minimum elong	7804 Nov 28 15:28	10° \mathcal{A} 11'43	0°50'31	opposition	7810 Nov 21 13:08	2° \mathbb{I} 54'28	-1°14'14
max. Earth dist.	7804 Nov 29 03:30	10° \mathcal{A} 18'13	6.42874 AU	min. Earth dist.	7810 Nov 22 02:04	2° \mathbb{I} 50'13	3.98589 AU
morning rise	7804 Dec 11 20:46	13° \mathcal{A} 02'52			7810 Dec 15 04:28	30° \mathbb{R} \mathcal{B}	
retrograde	7805 Apr 12 01:07	29° \mathcal{A} 56'40		direct	7811 Jan 19 17:48	27° \mathcal{B} 59'28	
opposition	7805 Jun 11 17:14	25° \mathcal{A} 00'00	1°10'53		7811 Feb 23 21:31	0° \mathbb{I}	
min. Earth dist.	7805 Jun 11 18:39	24° \mathcal{A} 59'32	4.47078 AU	evening set	7811 May 26 00:54	17° \mathbb{I} 47'05	
direct	7805 Aug 12 18:24	19° \mathcal{A} 58'07					
	7805 Nov 10 21:56	0° \mathcal{Z}		conjunction	7811 Jun 08 03:23	20° \mathbb{I} 58'22	-0°49'00
evening set	7805 Dec 16 11:23	7° \mathcal{Z} 13'49		minimum elong	7811 Jun 08 03:23	20° \mathbb{I} 58'22	0°49'08
				max. Earth dist.	7811 Jun 08 01:53	20° \mathbb{I} 57'28	5.93681 AU
conjunction	7805 Dec 29 13:11	10° \mathcal{Z} 01'29	0°44'07	morning rise	7811 Jun 21 08:16	24° \mathbb{I} 11'04	
minimum elong	7805 Dec 29 13:12	10° \mathcal{Z} 01'29	0°44'15		7811 Jul 15 22:14	0° \mathcal{E}	
max. Earth dist.	7805 Dec 28 19:45	9° \mathcal{Z} 52'08	6.49258 AU	retrograde	7811 Oct 31 07:25	14° \mathcal{E} 56'00	
morning rise	7806 Jan 11 12:39	12° \mathcal{Z} 48'01		opposition	7811 Dec 29 21:38	9° \mathcal{E} 55'44	-1°05'42
retrograde	7806 May 11 18:30	29° \mathcal{Z} 23'16		min. Earth dist.	7811 Dec 29 08:35	10° \mathcal{E} 00'07	3.91248 AU
opposition	7806 Jul 11 15:58	24° \mathcal{Z} 29'17	0°52'56	direct	7812 Feb 26 00:30	5° \mathcal{E} 01'28	
min. Earth dist.	7806 Jul 12 13:01	24° \mathcal{Z} 22'32	4.49365 AU	evening set	7812 Jul 01 15:07	25° \mathcal{E} 05'57	
direct	7806 Sep 12 08:30	19° \mathcal{Z} 27'33					
	7806 Dec 14 04:38	0° \approx		conjunction	7812 Jul 15 01:16	28° \mathcal{E} 21'55	-0°33'34
evening set	7807 Jan 15 18:21	6° \approx 41'57		minimum elong	7812 Jul 15 01:17	28° \mathcal{E} 21'56	0°33'41
max. Earth dist.	7807 Jan 26 21:51	9° \approx 06'01	6.47247 AU	max. Earth dist.	7812 Jul 16 13:19	28° \mathcal{E} 43'53	5.91518 AU
					7812 Jul 21 18:18	0° \mathcal{O}	
conjunction	7807 Jan 28 15:49	9° \approx 28'42	0°26'20	morning rise	7812 Jul 28 13:56	1° \mathcal{O} 39'12	
minimum elong	7807 Jan 28 15:50	9° \approx 28'42	0°26'27		7812 Sep 27 04:37	15° \mathcal{O}	
morning rise	7807 Feb 10 11:14	12° \approx 14'33		retrograde	7812 Dec 07 14:38	22° \mathcal{O} 24'59	
	7807 Feb 23 10:30	15° \approx		min. Earth dist.	7813 Feb 03 16:55	17° \mathcal{O} 32'22	3.94585 AU
retrograde	7807 Jun 11 05:39	29° \approx 01'57		opposition	7813 Feb 05 00:41	17° \mathcal{O} 21'34	-0°29'56
opposition	7807 Aug 11 05:07	24° \approx 09'15	0°21'07		7813 Feb 23 04:26	15° \mathcal{R} \mathcal{O}	
min. Earth dist.	7807 Aug 12 16:02	23° \approx 58'06	4.43198 AU	direct	7813 Apr 03 23:02	12° \mathcal{O} 25'58	
direct	7807 Oct 12 20:19	19° \approx 08'14			7813 May 13 11:26	15° \mathcal{O}	
	7808 Jan 14 08:03	0° \mathcal{H}			7813 Jul 30 08:12	0° \mathbb{N}	
evening set	7808 Feb 15 04:36	6° \mathcal{H} 43'00		evening set	7813 Aug 08 15:20	2° \mathbb{N} 11'14	
max. Earth dist.	7808 Feb 25 17:52	9° \mathcal{H} 02'43	6.37320 AU				
				conjunction	7813 Aug 22 06:44	5° \mathbb{N} 25'38	-0°04'49
conjunction	7808 Feb 27 23:28	9° \mathcal{H} 32'25	0°01'12	minimum elong	7813 Aug 22 06:44	5° \mathbb{N} 25'38	0°04'52
minimum elong	7808 Feb 27 23:29	9° \mathcal{H} 32'26	0°01'14	behind sun begin	7813 Aug 21 22:33	5° \mathbb{N} 20'47	
behind sun begin	7808 Feb 27 15:30	9° \mathcal{H} 28'02		behind sun end	7813 Aug 22 14:54	5° \mathbb{N} 30'28	
behind sun end	7808 Feb 28 07:27	9° \mathcal{H} 36'49		max. Earth dist.	7813 Aug 24 17:09	6° \mathbb{N} 00'21	5.99941 AU
morning rise	7808 Mar 11 16:39	12° \mathcal{H} 21'19		morning rise	7813 Sep 04 23:57	8° \mathbb{N} 40'43	
desc. node	7808 Mar 16 00:40	13° \mathcal{H} 18'28		asc. node	7813 Oct 22 13:16	19° \mathbb{N} 11'03	
retrograde	7808 Jul 12 11:04	29° \mathcal{H} 50'53		retrograde	7814 Jan 12 17:02	28° \mathbb{N} 35'02	
opposition	7808 Sep 11 07:51	24° \mathcal{H} 58'06	-0°17'58	min. Earth dist.	7814 Mar 11 16:02	23° \mathbb{N} 43'48	4.07087 AU
min. Earth dist.	7808 Sep 12 23:29	24° \mathcal{H} 45'24	4.30056 AU	opposition	7814 Mar 13 06:53	23° \mathbb{N} 30'36	0°16'10
direct	7808 Nov 12 05:41	19° \mathcal{H} 58'38		direct	7814 May 10 20:54	18° \mathbb{N} 32'32	
	7809 Feb 07 17:25	0° \mathbb{Y}			7814 Aug 11 02:05	0° \mathcal{U}	
evening set	7809 Mar 17 17:57	8° \mathbb{Y} 12'39		evening set	7814 Sep 14 11:17	7° \mathcal{U} 33'39	
max. Earth dist.	7809 Mar 28 07:00	10° \mathbb{Y} 37'22	6.21921 AU				
				conjunction	7814 Sep 28 02:54	10° \mathcal{U} 41'02	0°24'47
conjunction	7809 Mar 30 12:07	11° \mathbb{Y} 07'52	-0°25'21	minimum elong	7814 Sep 28 02:52	10° \mathcal{U} 41'02	0°24'49
minimum elong	7809 Mar 30 12:06	11° \mathbb{Y} 07'51	0°25'22	max. Earth dist.	7814 Sep 30 10:40	11° \mathcal{U} 12'59	6.15281 AU
morning rise	7809 Apr 12 06:02	14° \mathbb{Y} 03'13		morning rise	7814 Oct 11 19:04	13° \mathcal{U} 48'19	
	7809 Jul 05 06:20	0° \mathcal{B}			7815 Jan 06 03:16	0° \mathbb{M}	
retrograde	7809 Aug 16 06:09	2° \mathcal{B} 39'41		retrograde	7815 Feb 15 02:43	2° \mathbb{M} 28'35	
	7809 Sep 27 16:40	30° \mathbb{R} \mathbb{Y}			7815 Mar 26 22:17	30° \mathbb{R} \mathcal{U}	
opposition	7809 Oct 15 17:30	27° \mathbb{Y} 45'27	-0°54'20	min. Earth dist.	7815 Apr 14 18:14	27° \mathcal{U} 36'02	4.23658 AU





























































































































opposition	7815 Apr 16 00:58	27°♏25'42	0°53'26	retrograde	7820 Jul 17 05:55	4°♑30'02	
direct	7815 Jun 14 21:07	22°♏25'27			7820 Sep 13 01:41	30°♑	
	7815 Aug 28 03:20	0°♏		opposition	7820 Sep 16 01:07	29°♑37'07	-0°23'35
evening set	7815 Oct 19 04:34	10°♏37'48		min. Earth dist.	7820 Sep 17 16:02	29°♑24'37	4.27888 AU
				direct	7820 Nov 16 19:26	24°♑37'57	
conjunction	7815 Nov 01 16:36	13°♏36'30	0°44'34		7821 Jan 17 08:57	0°♑	
minimum elong	7815 Nov 01 16:35	13°♏36'29	0°44'39	evening set	7821 Mar 22 08:18	12°♑58'16	
max. Earth dist.	7815 Nov 03 05:30	13°♏56'54	6.31703 AU	max. Earth dist.	7821 Apr 02 00:56	15°♑25'42	6.19746 AU
	7815 Nov 07 23:48	15°♏					
morning rise	7815 Nov 15 03:25	16°♏34'23		conjunction	7821 Apr 04 02:47	15°♑54'27	-0°28'45
	7816 Jan 24 06:27	0°♏		minimum elong	7821 Apr 04 02:46	15°♑54'27	0°28'48
retrograde	7816 Mar 17 06:33	4°♏07'44		morning rise	7821 Apr 16 20:52	18°♑50'49	
	7816 May 10 00:53	30°♏			7821 Jun 08 09:56	0°♑	
opposition	7816 May 16 14:48	29°♏08'08	1°11'41	retrograde	7821 Aug 21 08:03	7°♑36'56	
min. Earth dist.	7816 May 15 23:29	29°♏13'11	4.38619 AU	opposition	7821 Oct 20 18:38	2°♑42'25	-0°58'26
direct	7816 Jul 16 17:34	24°♏06'41		min. Earth dist.	7821 Oct 22 00:37	2°♑32'41	4.11430 AU
	7816 Sep 20 13:53	0°♏			7821 Nov 11 20:26	30°♑	
evening set	7816 Nov 19 18:13	11°♏41'05		direct	7821 Dec 20 05:41	27°♑45'33	
					7822 Jan 27 03:27	0°♑	
conjunction	7816 Dec 03 00:35	14°♏32'32	0°50'17		7822 Apr 16 23:40	15°♑	
minimum elong	7816 Dec 03 00:35	14°♏32'32	0°50'24	evening set	7822 Apr 25 03:00	16°♑54'56	
max. Earth dist.	7816 Dec 03 07:05	14°♏36'02	6.44099 AU	max. Earth dist.	7822 May 06 17:38	19°♑40'53	6.03828 AU
morning rise	7816 Dec 16 05:08	17°♏22'55					
	7817 Feb 21 04:13	0°♑		conjunction	7822 May 08 00:10	19°♑59'07	-0°46'38
retrograde	7817 Apr 16 06:04	4°♑12'54		minimum elong	7822 May 08 00:09	19°♑59'07	0°46'43
	7817 Jun 10 07:40	30°♑		morning rise	7822 May 20 22:41	23°♑04'15	
opposition	7817 Jun 15 21:39	29°♑16'43	1°09'21		7822 Jun 20 01:02	0°♑	
min. Earth dist.	7817 Jun 16 02:54	29°♑15'01	4.47728 AU	retrograde	7822 Sep 27 20:01	13°♑03'35	
direct	7817 Aug 17 02:19	24°♑14'51		opposition	7822 Nov 26 19:35	8°♑06'18	-1°14'50
	7817 Oct 21 19:46	0°♑		min. Earth dist.	7822 Nov 27 04:23	8°♑03'23	3.97506 AU
evening set	7817 Dec 20 17:32	11°♑29'42		direct	7823 Jan 24 20:46	3°♑11'26	
				evening set	7823 May 31 03:28	23°♑01'16	
conjunction	7818 Jan 02 18:46	14°♑17'09	0°42'13				
minimum elong	7818 Jan 02 18:47	14°♑17'09	0°42'20	conjunction	7823 Jun 13 06:59	26°♑13'12	-0°47'58
max. Earth dist.	7818 Jan 01 21:19	14°♑05'39	6.49282 AU	minimum elong	7823 Jun 13 07:00	26°♑13'13	0°48'06
morning rise	7818 Jan 15 17:39	17°♑03'29		max. Earth dist.	7823 Jun 13 12:03	26°♑16'18	5.93255 AU
	7818 Mar 26 17:33	0°♑		morning rise	7823 Jun 26 12:41	29°♑26'30	
retrograde	7818 May 15 23:21	3°♑39'21			7823 Jun 28 20:06	0°♑	
	7818 Jul 06 02:46	30°♑		retrograde	7823 Nov 05 15:07	20°♑12'47	
opposition	7818 Jul 15 21:28	28°♑45'38	0°49'07	opposition	7824 Jan 04 04:10	15°♑11'59	-1°02'05
min. Earth dist.	7818 Jul 16 20:14	28°♑38'20	4.48784 AU	min. Earth dist.	7824 Jan 03 13:04	15°♑17'04	3.91540 AU
direct	7818 Sep 16 13:16	23°♑44'00		direct	7824 Mar 02 06:18	10°♑17'38	
	7818 Nov 24 13:51	0°♑			7824 Jul 05 10:59	0°♑	
evening set	7819 Jan 20 00:20	11°♑00'44		evening set	7824 Jul 06 19:25	0°♑19'35	
max. Earth dist.	7819 Jan 31 02:26	13°♑24'26	6.46111 AU				
				conjunction	7824 Jul 20 06:21	3°♑35'28	-0°30'09
conjunction	7819 Feb 01 21:25	13°♑47'45	0°23'05	minimum elong	7824 Jul 20 06:23	3°♑35'29	0°30'16
minimum elong	7819 Feb 01 21:26	13°♑47'45	0°23'11	max. Earth dist.	7824 Jul 21 21:53	3°♑59'29	5.92476 AU
	7819 Feb 07 10:39	15°♑		morning rise	7824 Aug 02 19:56	6°♑52'40	
morning rise	7819 Feb 14 16:19	16°♑33'53			7824 Sep 06 21:31	15°♑	
	7819 Apr 28 01:59	0°♑		retrograde	7824 Dec 12 14:43	27°♑32'30	
retrograde	7819 Jun 15 16:07	3°♑26'03		min. Earth dist.	7825 Feb 08 15:39	22°♑40'19	3.96112 AU
	7819 Aug 04 03:32	30°♑		opposition	7825 Feb 10 01:30	22°♑28'49	-0°23'47
opposition	7819 Aug 15 15:07	28°♑33'30	0°15'49	direct	7825 Apr 09 00:23	17°♑32'53	
min. Earth dist.	7819 Aug 17 03:18	28°♑21'58	4.41584 AU		7825 Jul 13 03:20	0°♑	
direct	7819 Oct 17 04:41	23°♑32'46		evening set	7825 Aug 13 16:44	7°♑12'18	
	7819 Dec 25 14:25	0°♑					
desc. node	7820 Jan 23 20:55	5°♑30'04		conjunction	7825 Aug 27 08:19	10°♑25'53	-0°00'32
evening set	7820 Feb 19 13:43	11°♑12'29		minimum elong	7825 Aug 27 08:18	10°♑25'52	0°00'35
max. Earth dist.	7820 Mar 01 01:01	13°♑31'50	6.35358 AU	behind sun begin	7825 Aug 26 23:56	10°♑20'56	
				behind sun end	7825 Aug 27 16:41	10°♑30'48	
conjunction	7820 Mar 03 08:14	14°♑02'34	-0°02'45	max. Earth dist.	7825 Aug 29 17:40	10°♑59'49	6.01869 AU
minimum elong	7820 Mar 03 08:13	14°♑02'33	0°02'43	asc. node	7825 Sep 02 22:17	11°♑59'15	
behind sun begin	7820 Mar 03 00:16	13°♑58'09		morning rise	7825 Sep 10 01:44	13°♑40'05	
behind sun end	7820 Mar 03 16:11	14°♑06'58			7825 Dec 01 08:03	0°♑	
morning rise	7820 Mar 16 01:31	16°♑52'14		retrograde	7826 Jan 17 08:26	3°♑24'49	
	7820 May 22 08:46	0°♑			7826 Mar 05 12:45	30°♑	

min. Earth dist.	7826 Mar 16 10:01	28° \mathbb{M} 33'10	4.09203 AU	min. Earth dist.	7831 Aug 21 12:56	2° \mathbb{H} 43'38	4.40065 AU
opposition	7826 Mar 17 23:28	28° \mathbb{M} 20'26	0°22'03		7831 Sep 13 11:45	30° \mathbb{R} \approx	
direct	7826 May 15 17:37	23° \mathbb{M} 22'00		direct	7831 Oct 21 11:52	27° \approx 54'38	
	7826 Jul 22 03:54	0° $\underline{\mathbb{A}}$			7831 Nov 28 10:54	0° \mathbb{H}	
evening set	7826 Sep 19 06:39	12° $\underline{\mathbb{A}}$ 16'42		desc. node	7831 Dec 03 15:14	0° \mathbb{H} 34'49	
				evening set	7832 Feb 23 21:32	15° \mathbb{H} 38'44	
conjunction	7826 Oct 02 22:08	15° $\underline{\mathbb{A}}$ 23'03	0°28'10	max. Earth dist.	7832 Mar 05 10:06	17° \mathbb{H} 59'19	6.33532 AU
minimum elong	7826 Oct 02 22:07	15° $\underline{\mathbb{A}}$ 23'02	0°28'13				
max. Earth dist.	7826 Oct 05 04:49	15° $\underline{\mathbb{A}}$ 54'12	6.17417 AU	conjunction	7832 Mar 07 15:57	18° \mathbb{H} 29'26	-0°06'33
morning rise	7826 Oct 16 13:39	18° $\underline{\mathbb{A}}$ 29'06		minimum elong	7832 Mar 07 15:57	18° \mathbb{H} 29'26	0°06'31
	7826 Dec 11 03:44	0° \mathbb{M}		behind sun begin	7832 Mar 07 08:28	18° \mathbb{H} 25'16	
retrograde	7827 Feb 19 10:51	7° \mathbb{M} 00'11		behind sun end	7832 Mar 07 23:27	18° \mathbb{H} 33'36	
min. Earth dist.	7827 Apr 19 04:58	2° \mathbb{M} 07'31	4.25639 AU	morning rise	7832 Mar 20 09:01	21° \mathbb{H} 19'47	
opposition	7827 Apr 20 10:07	1° \mathbb{M} 57'45	0°57'07		7832 Apr 30 12:34	0° \mathbb{Y}	
	7827 May 05 11:58	30° \mathbb{R} $\underline{\mathbb{A}}$		retrograde	7832 Jul 21 22:42	9° \mathbb{Y} 05'21	
direct	7827 Jun 19 09:28	26° $\underline{\mathbb{A}}$ 57'19		opposition	7832 Sep 20 17:11	4° \mathbb{Y} 12'18	-0°29'00
	7827 Aug 03 14:04	0° \mathbb{M}		min. Earth dist.	7832 Sep 22 07:56	3° \mathbb{Y} 59'52	4.25844 AU
evening set	7827 Oct 23 17:38	15° \mathbb{M} 04'45			7832 Oct 29 21:21	30° \mathbb{R} \mathbb{H}	
	7827 Oct 23 08:57	15° \mathbb{M}		direct	7832 Nov 21 08:08	29° \mathbb{H} 13'27	
					7832 Dec 13 18:28	0° \mathbb{Y}	
conjunction	7827 Nov 06 04:51	18° \mathbb{M} 02'28	0°46'10	evening set	7833 Mar 26 21:28	17° \mathbb{Y} 39'43	
minimum elong	7827 Nov 06 04:50	18° \mathbb{M} 02'27	0°46'17	max. Earth dist.	7833 Apr 06 14:34	20° \mathbb{Y} 08'11	6.17622 AU
max. Earth dist.	7827 Nov 07 12:20	18° \mathbb{M} 19'48	6.33378 AU				
morning rise	7827 Nov 19 15:05	20° \mathbb{M} 59'22		conjunction	7833 Apr 08 15:57	20° \mathbb{Y} 36'49	-0°31'56
	7828 Jan 02 10:57	0° \mathbb{Z}		minimum elong	7833 Apr 08 15:55	20° \mathbb{Y} 36'48	0°31'58
retrograde	7828 Mar 21 11:09	8° \mathbb{Z} 26'32		morning rise	7833 Apr 21 10:32	23° \mathbb{Y} 34'15	
opposition	7828 May 20 19:38	3° \mathbb{Z} 27'25	1°12'31		7833 May 20 03:51	0° \mathbb{B}	
min. Earth dist.	7828 May 20 07:44	3° \mathbb{Z} 31'21	4.39901 AU	retrograde	7833 Aug 26 08:02	12° \mathbb{B} 30'05	
	7828 Jun 18 23:01	30° \mathbb{R} \mathbb{M}		opposition	7833 Oct 25 17:59	7° \mathbb{B} 35'14	-1°02'06
direct	7828 Jul 21 02:43	28° \mathbb{M} 25'51		min. Earth dist.	7833 Oct 26 21:16	7° \mathbb{B} 26'21	4.09379 AU
	7828 Aug 22 15:23	0° \mathbb{Z}		direct	7833 Dec 25 00:34	2° \mathbb{B} 38'38	
evening set	7828 Nov 24 02:02	15° \mathbb{Z} 57'39			7834 Mar 30 21:58	15° \mathbb{B}	
				evening set	7834 Apr 29 22:53	21° \mathbb{B} 54'10	
conjunction	7828 Dec 07 07:53	18° \mathbb{Z} 48'34	0°49'55				
minimum elong	7828 Dec 07 07:54	18° \mathbb{Z} 48'34	0°50'02	conjunction	7834 May 12 20:53	24° \mathbb{B} 59'29	-0°47'56
max. Earth dist.	7828 Dec 07 11:51	18° \mathbb{Z} 50'42	6.44911 AU	minimum elong	7834 May 12 20:52	24° \mathbb{B} 59'28	0°48'02
morning rise	7828 Dec 20 11:31	21° \mathbb{Z} 38'20		max. Earth dist.	7834 May 11 19:32	24° \mathbb{B} 44'17	6.02044 AU
	7829 Jan 30 19:41	0° \mathbb{B}		morning rise	7834 May 25 20:04	28° \mathbb{B} 05'45	
retrograde	7829 Apr 20 07:34	8° \mathbb{B} 25'46			7834 Jun 02 20:54	0° \mathbb{I}	
opposition	7829 Jun 20 01:02	3° \mathbb{B} 29'59	1°07'29	retrograde	7834 Oct 03 04:21	18° \mathbb{I} 13'31	
min. Earth dist.	7829 Jun 20 07:47	3° \mathbb{B} 27'47	4.48053 AU	opposition	7834 Dec 02 01:01	13° \mathbb{I} 15'51	-1°14'52
	7829 Jul 20 02:30	30° \mathbb{R} \mathbb{Z}		min. Earth dist.	7834 Dec 02 07:36	13° \mathbb{I} 13'40	3.96173 AU
direct	7829 Aug 21 06:36	28° \mathbb{Z} 28'10		direct	7835 Jan 29 22:41	8° \mathbb{I} 21'11	
	7829 Sep 22 19:47	0° \mathbb{B}		evening set	7835 Jun 05 05:53	28° \mathbb{I} 14'38	
evening set	7829 Dec 24 23:02	15° \mathbb{B} 42'57			7835 Jun 12 11:06	0° \mathbb{B}	
conjunction	7830 Jan 06 23:33	18° \mathbb{B} 30'13	0°40'05	conjunction	7835 Jun 18 10:21	1° \mathbb{B} 27'24	-0°46'34
minimum elong	7830 Jan 06 23:34	18° \mathbb{B} 30'13	0°40'13	minimum elong	7835 Jun 18 10:22	1° \mathbb{B} 27'25	0°46'41
max. Earth dist.	7830 Jan 05 22:47	18° \mathbb{B} 16'55	6.49104 AU	max. Earth dist.	7835 Jun 18 19:12	1° \mathbb{B} 32'49	5.92496 AU
morning rise	7830 Jan 19 21:52	21° \mathbb{B} 16'24		morning rise	7835 Jul 01 17:19	4° \mathbb{B} 41'38	
	7830 Mar 04 10:29	0° \approx		retrograde	7835 Nov 10 21:43	25° \mathbb{B} 30'38	
retrograde	7830 May 20 05:09	7° \approx 53'18		opposition	7836 Jan 09 10:41	20° \mathbb{B} 29'26	-0°57'59
opposition	7830 Jul 20 02:37	2° \approx 59'51	0°45'05	min. Earth dist.	7836 Jan 08 15:50	20° \mathbb{B} 35'47	3.91466 AU
min. Earth dist.	7830 Jul 21 04:05	2° \approx 51'42	4.48118 AU	direct	7836 Mar 07 09:58	15° \mathbb{B} 35'00	
	7830 Aug 14 06:11	30° \mathbb{R} \mathbb{B}			7836 Jun 18 07:38	0° \mathbb{Q}	
direct	7830 Sep 20 19:59	27° \mathbb{B} 58'19		evening set	7836 Jul 12 01:13	5° \mathbb{Q} 36'19	
	7830 Oct 28 12:20	0° \approx					
	7831 Jan 22 21:30	15° \approx		conjunction	7836 Jul 25 13:00	8° \mathbb{Q} 52'20	-0°26'28
evening set	7831 Jan 24 05:41	15° \approx 17'19		minimum elong	7836 Jul 25 13:01	8° \mathbb{Q} 52'21	0°26'34
max. Earth dist.	7831 Feb 04 04:37	17° \approx 39'45	6.44991 AU	max. Earth dist.	7836 Jul 27 07:14	9° \mathbb{Q} 17'56	5.93087 AU
				morning rise	7836 Aug 08 03:27	12° \mathbb{Q} 09'36	
conjunction	7831 Feb 06 02:20	18° \approx 04'35	0°19'45		7836 Aug 20 01:42	15° \mathbb{Q}	
minimum elong	7831 Feb 06 02:21	18° \approx 04'36	0°19'49		7836 Nov 05 23:00	0° \mathbb{M}	
morning rise	7831 Feb 18 20:58	20° \approx 51'02		retrograde	7836 Dec 17 17:07	2° \mathbb{M} 44'58	
	7831 Apr 05 00:36	0° \mathbb{H}			7837 Jan 28 11:04	30° \mathbb{R} \mathbb{Q}	
retrograde	7831 Jun 20 01:39	7° \mathbb{H} 47'49		min. Earth dist.	7837 Feb 13 17:09	27° \mathbb{Q} 52'49	3.97317 AU
opposition	7831 Aug 20 00:40	2° \mathbb{H} 55'13	0°10'27	opposition	7837 Feb 15 03:44	27° \mathbb{Q} 41'02	-0°17'23

direct	7837 Apr 14 04:49	22°♎44'46		conjunction	7843 Feb 10 04:56	22°♊16'37	0°16'26
	7837 Jun 22 19:36	0°♎		minimum elong	7843 Feb 10 04:56	22°♊16'38	0°16'30
asc. node	7837 Jul 13 21:12	4°♎12'22		morning rise	7843 Feb 22 23:06	25°♊03'09	
evening set	7837 Aug 18 20:46	12°♎19'47			7843 Mar 18 08:13	0°♋	
				retrograde	7843 Jun 24 08:49	12°♋03'17	
conjunction	7837 Sep 01 12:49	15°♎32'46	0°03'53	opposition	7843 Aug 24 07:42	7°♋10'41	0°05'14
minimum elong	7837 Sep 01 12:49	15°♎32'46	0°03'51	min. Earth dist.	7843 Aug 25 22:06	6°♋58'26	4.38858 AU
behind sun begin	7837 Sep 01 04:32	15°♎27'54		desc. node	7843 Oct 15 23:32	2°♋18'56	
behind sun end	7837 Sep 01 21:07	15°♎37'37		direct	7843 Oct 25 18:46	2°♋10'12	
max. Earth dist.	7837 Sep 04 00:21	16°♎07'50	6.03564 AU	evening set	7844 Feb 28 02:25	19°♋57'43	
morning rise	7837 Sep 15 06:13	18°♎46'10		max. Earth dist.	7844 Mar 09 12:34	22°♋17'32	6.31867 AU
	7837 Nov 06 02:17	0°♏					
retrograde	7838 Jan 22 03:13	8°♏21'56		conjunction	7844 Mar 11 20:36	22°♋48'58	-0°10'08
min. Earth dist.	7838 Mar 21 05:25	3°♏30'21	4.11202 AU	minimum elong	7844 Mar 11 20:36	22°♋48'58	0°10'07
opposition	7838 Mar 22 18:33	3°♏17'46	0°27'54	behind sun begin	7844 Mar 11 14:10	22°♋45'23	
	7838 Apr 18 12:10	30°♏		behind sun end	7844 Mar 12 03:01	22°♋52'33	
direct	7838 May 20 15:30	28°♏19'05		morning rise	7844 Mar 24 13:45	25°♋39'58	
	7838 Jun 22 01:30	0°♏			7844 Apr 13 08:02	0°♌	
evening set	7838 Sep 24 05:10	17°♏07'47		retrograde	7844 Jul 26 11:33	13°♌33'01	
				opposition	7844 Sep 25 06:01	8°♌39'42	-0°34'02
conjunction	7838 Oct 07 20:09	20°♏13'01	0°31'28	min. Earth dist.	7844 Sep 26 19:54	8°♌27'31	4.23808 AU
minimum elong	7838 Oct 07 20:08	20°♏13'00	0°31'30	direct	7844 Nov 25 17:04	3°♌41'00	
max. Earth dist.	7838 Oct 09 23:47	20°♏42'17	6.19548 AU	evening set	7845 Mar 31 07:23	22°♌13'26	
morning rise	7838 Oct 21 11:18	23°♏17'55		max. Earth dist.	7845 Apr 11 03:18	24°♌44'14	6.15373 AU
	7838 Nov 21 08:06	0°♍					
retrograde	7839 Feb 23 21:02	11°♍39'44		conjunction	7845 Apr 13 02:15	25°♌11'35	-0°34'47
opposition	7839 Apr 24 22:08	6°♍37'42	1°00'32	minimum elong	7845 Apr 13 02:13	25°♌11'34	0°34'50
min. Earth dist.	7839 Apr 23 18:43	6°♍46'52	4.27742 AU	morning rise	7845 Apr 25 21:08	28°♌10'07	
direct	7839 Jun 24 02:11	1°♍37'05			7845 May 03 19:54	0°♍	
	7839 Oct 06 15:19	15°♍			7845 Jul 23 18:50	15°♍	
evening set	7839 Oct 28 09:07	19°♍38'54		retrograde	7845 Aug 31 07:59	17°♍16'24	
					7845 Oct 09 02:42	15°♍	
conjunction	7839 Nov 10 19:46	22°♍35'33	0°47'34	opposition	7845 Oct 30 14:52	12°♍21'15	-1°05'16
minimum elong	7839 Nov 10 19:46	22°♍35'33	0°47'41	min. Earth dist.	7845 Oct 31 17:28	12°♍12'35	4.07083 AU
max. Earth dist.	7839 Nov 12 01:21	22°♍51'47	6.35335 AU	direct	7845 Dec 29 17:21	7°♍24'53	
morning rise	7839 Nov 24 04:55	25°♍31'16			7846 Mar 11 23:27	15°♍	
	7839 Dec 15 05:16	0°♎		evening set	7846 May 04 16:48	26°♍47'41	
retrograde	7840 Mar 25 15:56	12°♎51'04					
opposition	7840 May 25 02:21	7°♎52'28	1°13'00	conjunction	7846 May 17 15:28	29°♎54'17	-0°48'52
min. Earth dist.	7840 May 24 16:09	7°♎55'49	4.41597 AU	minimum elong	7846 May 17 15:28	29°♎54'17	0°48'59
direct	7840 Jul 25 13:19	2°♎50'53		max. Earth dist.	7846 May 16 16:09	29°♎40'15	5.99904 AU
evening set	7840 Nov 28 11:24	20°♎18'26			7846 May 18 00:58	0°♏	
				morning rise	7846 May 30 15:46	3°♏02'00	
conjunction	7840 Dec 11 16:16	23°♎08'28	0°49'19	retrograde	7846 Oct 08 09:14	23°♏19'42	
minimum elong	7840 Dec 11 16:17	23°♎08'28	0°49'26	opposition	7846 Dec 07 04:49	18°♏21'34	-1°14'24
max. Earth dist.	7840 Dec 11 15:26	23°♎08'01	6.46237 AU	min. Earth dist.	7846 Dec 07 07:29	18°♏20'41	3.94424 AU
morning rise	7840 Dec 24 19:12	25°♎57'25		direct	7847 Feb 03 20:40	13°♏27'03	
	7841 Jan 13 02:05	0°♐			7847 May 27 01:08	0°♑	
retrograde	7841 Apr 24 10:58	12°♐40'31		evening set	7847 Jun 10 08:09	3°♑26'04	
opposition	7841 Jun 24 05:06	7°♐45'04	1°05'18				
min. Earth dist.	7841 Jun 24 14:57	7°♐41'53	4.48941 AU	conjunction	7847 Jun 23 13:46	6°♑39'58	-0°44'50
direct	7841 Aug 25 14:43	2°♐43'12		minimum elong	7847 Jun 23 13:47	6°♑39'58	0°44'58
evening set	7841 Dec 29 03:41	19°♐55'49		max. Earth dist.	7847 Jun 24 03:17	6°♑48'13	5.91322 AU
max. Earth dist.	7842 Jan 10 00:44	22°♐28'14	6.49489 AU	morning rise	7847 Jul 06 21:57	9°♑55'18	
					7847 Oct 25 00:01	0°♒	
conjunction	7842 Jan 11 03:40	22°♐42'41	0°37'50	retrograde	7847 Nov 16 06:13	0°♒48'43	
minimum elong	7842 Jan 11 03:41	22°♐42'41	0°37'57		7847 Dec 08 10:12	30°♒	
morning rise	7842 Jan 24 01:11	25°♐28'27		opposition	7848 Jan 14 17:22	25°♑47'02	-0°53'30
	7842 Feb 14 17:48	0°♑		min. Earth dist.	7848 Jan 13 20:09	25°♑54'12	3.91001 AU
retrograde	7842 May 24 06:50	12°♑04'42		direct	7848 Mar 12 15:45	20°♑52'25	
opposition	7842 Jul 24 06:37	7°♑11'21	0°40'57		7848 May 30 03:27	0°♒	
min. Earth dist.	7842 Jul 25 09:00	7°♑02'55	4.47974 AU	evening set	7848 Jul 17 08:12	10°♒54'42	
direct	7842 Sep 25 00:02	2°♑09'52					
	7843 Jan 07 02:18	15°♑		conjunction	7848 Jul 30 21:07	14°♒11'04	-0°22'36
evening set	7843 Jan 28 08:50	19°♑29'20		minimum elong	7848 Jul 30 21:09	14°♒11'05	0°22'41
max. Earth dist.	7843 Feb 08 05:30	21°♑50'47	6.44311 AU	max. Earth dist.	7848 Aug 01 20:45	14°♒39'54	5.93390 AU
					7848 Aug 03 05:58	15°♒	

morning rise	7848 Aug 13 12:21	17°Ω28'34			7854 Jun 27 14:13	15°R≈	
	7848 Oct 09 06:33	0°Π		opposition	7854 Jul 28 13:09	11°≈28'42	0°36'25
retrograde	7848 Dec 22 21:44	8°Π00'16		min. Earth dist.	7854 Jul 29 18:40	11°≈19'16	4.47270 AU
min. Earth dist.	7849 Feb 18 19:14	3°Π08'27	3.98349 AU	direct	7854 Sep 29 07:49	6°≈27'17	
opposition	7849 Feb 20 07:27	2°Π56'08	-0°10'52		7854 Dec 20 04:56	15°≈	
	7849 Mar 15 11:57	30°RΩ		evening set	7855 Feb 01 14:47	23°≈49'12	
direct	7849 Apr 19 09:07	27°Ω59'34		max. Earth dist.	7855 Feb 12 08:59	26°≈09'45	6.43015 AU
asc. node	7849 May 23 20:42	29°Ω57'02					
	7849 May 24 07:31	0°Π		conjunction	7855 Feb 14 10:36	26°≈36'51	0°12'51
evening set	7849 Aug 24 02:49	17°Π30'40		minimum elong	7855 Feb 14 10:37	26°≈36'51	0°12'57
				behind sun begin	7855 Feb 14 05:42	26°≈34'11	
conjunction	7849 Sep 06 18:56	20°Π42'56	0°08'11	behind sun end	7855 Feb 14 15:31	26°≈39'32	
minimum elong	7849 Sep 06 18:56	20°Π42'56	0°08'10	morning rise	7855 Feb 27 04:26	29°≈23'46	
behind sun begin	7849 Sep 06 11:32	20°Π38'37			7855 Mar 01 23:14	0°X	
behind sun end	7849 Sep 07 02:20	20°Π47'15		retrograde	7855 Jun 28 19:23	16°X29'34	
max. Earth dist.	7849 Sep 09 06:49	21°Π18'03	6.05196 AU	desc. node	7855 Aug 25 17:20	12°X00'28	
morning rise	7849 Sep 20 12:34	23°Π55'36		opposition	7855 Aug 28 19:04	11°X36'57	-0°00'18
	7849 Oct 17 09:31	0°Ω		min. Earth dist.	7855 Aug 30 09:30	11°X24'40	4.37043 AU
retrograde	7850 Jan 26 21:44	13°Ω22'20		direct	7855 Oct 30 02:52	6°X36'40	
min. Earth dist.	7850 Mar 26 01:45	8°Ω30'53	4.13245 AU	evening set	7856 Mar 03 11:59	24°X29'43	
opposition	7850 Mar 27 15:06	8°Ω18'13	0°33'33	max. Earth dist.	7856 Mar 13 22:47	26°X50'36	6.29662 AU
direct	7850 May 25 15:34	3°Ω19'11					
evening set	7850 Sep 29 05:10	22°Ω01'29		conjunction	7856 Mar 16 06:05	27°X21'48	-0°13'54
				minimum elong	7856 Mar 16 06:04	27°X21'47	0°13'53
conjunction	7850 Oct 12 19:47	25°Ω05'31	0°34'34	behind sun begin	7856 Mar 16 01:50	27°X19'24	
minimum elong	7850 Oct 12 19:45	25°Ω05'31	0°34'37	behind sun end	7856 Mar 16 10:19	27°X24'10	
max. Earth dist.	7850 Oct 14 22:19	25°Ω34'02	6.21818 AU		7856 Mar 27 22:50	0°Υ	
morning rise	7850 Oct 26 10:05	28°Ω09'05		morning rise	7856 Mar 28 23:14	0°Υ13'42	
	7850 Nov 03 17:49	0°Π		retrograde	7856 Jul 31 09:11	18°Υ16'22	
	7851 Jan 30 03:00	15°Π		opposition	7856 Sep 30 01:22	13°Υ22'56	-0°39'14
retrograde	7851 Feb 28 09:27	16°Π20'58		min. Earth dist.	7856 Oct 01 15:36	13°Υ10'38	4.21343 AU
	7851 Mar 29 10:03	15°RΠ		direct	7856 Nov 30 09:18	8°Υ24'31	
min. Earth dist.	7851 Apr 28 09:48	11°Π27'47	4.30000 AU	evening set	7857 Apr 04 23:55	27°Υ04'31	
opposition	7851 Apr 29 11:08	11°Π19'20	1°03'33	max. Earth dist.	7857 Apr 15 21:16	29°Υ37'03	6.12857 AU
direct	7851 Jun 28 20:33	6°Π18'30					
	7851 Sep 17 22:36	15°Π		conjunction	7857 Apr 17 19:05	0°Ω03'52	-0°37'36
evening set	7851 Nov 02 01:19	24°Π14'06		minimum elong	7857 Apr 17 19:04	0°Ω03'52	0°37'39
					7857 Apr 17 12:28	0°Ω	
conjunction	7851 Nov 15 11:04	27°Π09'34	0°48'40	morning rise	7857 Apr 30 14:38	3°Ω03'45	
minimum elong	7851 Nov 15 11:03	27°Π09'34	0°48'46		7857 Jun 25 08:59	15°Ω	
max. Earth dist.	7851 Nov 16 12:27	27°Π23'26	6.37368 AU	retrograde	7857 Sep 05 12:58	22°Ω21'27	
morning rise	7851 Nov 28 19:25	0°X04'06		opposition	7857 Nov 04 18:48	17°Ω25'57	-1°08'11
	7851 Nov 28 11:51	0°X		min. Earth dist.	7857 Nov 05 17:50	17°Ω18'26	4.04745 AU
retrograde	7852 Mar 29 21:33	17°X16'32			7857 Nov 24 06:03	15°RΩ	
opposition	7852 May 29 09:51	12°X18'20	1°13'01	direct	7858 Jan 03 14:53	12°Ω29'54	
min. Earth dist.	7852 May 29 02:15	12°X20'49	4.43252 AU		7858 Feb 12 09:20	15°Ω	
direct	7852 Jul 30 00:47	7°X16'38			7858 May 01 08:31	0°Π	
evening set	7852 Dec 02 20:51	24°X40'11		evening set	7858 May 09 17:56	2°Π00'01	
conjunction	7852 Dec 16 01:03	27°X29'29	0°48'23	conjunction	7858 May 22 17:29	5°Π07'54	-0°49'29
minimum elong	7852 Dec 16 01:04	27°X29'30	0°48'32	minimum elong	7858 May 22 17:29	5°Π07'53	0°49'36
max. Earth dist.	7852 Dec 15 21:35	27°X27'38	6.47384 AU	max. Earth dist.	7858 May 21 23:26	4°Π56'58	5.97977 AU
	7852 Dec 27 17:51	0°Ω		morning rise	7858 Jun 04 18:45	8°Π16'57	
morning rise	7852 Dec 29 02:56	0°Ω17'38		retrograde	7858 Oct 13 21:46	28°Π43'26	
retrograde	7853 Apr 28 14:07	16°Ω57'23		opposition	7858 Dec 12 15:20	23°Π44'49	-1°13'14
opposition	7853 Jun 28 10:15	12°Ω02'21	1°02'43	min. Earth dist.	7858 Dec 12 14:56	23°Π44'57	3.93129 AU
min. Earth dist.	7853 Jun 28 22:14	11°Ω58'29	4.49508 AU	direct	7859 Feb 09 04:20	18°Π50'26	
direct	7853 Aug 29 21:56	7°Ω00'33			7859 May 08 12:00	0°Ω	
evening set	7854 Jan 02 09:49	24°Ω12'15		evening set	7859 Jun 15 16:14	8°Ω52'47	
max. Earth dist.	7854 Jan 14 01:13	26°Ω41'49	6.49420 AU				
				conjunction	7859 Jun 28 23:05	12°Ω07'29	-0°42'37
conjunction	7854 Jan 15 08:58	26°Ω58'51	0°35'18	minimum elong	7859 Jun 28 23:06	12°Ω07'30	0°42'45
minimum elong	7854 Jan 15 08:59	26°Ω58'52	0°35'24	max. Earth dist.	7859 Jun 29 19:13	12°Ω19'49	5.90819 AU
morning rise	7854 Jan 28 06:00	29°Ω44'27		morning rise	7859 Jul 12 08:24	15°Ω23'37	
	7854 Jan 29 11:11	0°≈			7859 Sep 17 12:50	0°Ω	
	7854 Apr 28 13:01	15°≈		retrograde	7859 Nov 21 18:15	6°Ω17'48	
retrograde	7854 May 28 13:49	16°≈21'49		min. Earth dist.	7860 Jan 19 03:27	1°Ω23'58	3.91391 AU

opposition	7860 Jan 20 03:56	1°♏15'41 -0°48'20			7866 Jan 14 00:18	0°♊	
	7860 Jan 29 14:17	30°♏		max. Earth dist.	7866 Jan 18 02:58	0°♊53'02	6.48874 AU
direct	7860 Mar 18 00:53	26°♏20'56					
	7860 May 04 11:44	0°♏		conjunction	7866 Jan 19 12:59	1°♊11'19	0°32'37
	7860 Jul 17 03:44	15°♏		minimum elong	7866 Jan 19 13:00	1°♊11'20	0°32'43
evening set	7860 Jul 22 18:21	16°♏20'29		morning rise	7866 Feb 01 09:21	3°♊56'56	
					7866 Mar 30 08:39	15°♊	
conjunction	7860 Aug 05 07:51	19°♏36'35 -0°18'26		retrograde	7866 Jun 01 19:12	20°♊37'02	
minimum elong	7860 Aug 05 07:52	19°♏36'35 0°18'31		opposition	7866 Aug 01 19:24	15°♊44'06	0°31'45
max. Earth dist.	7860 Aug 07 10:00	20°♏06'49 5.94616 AU		min. Earth dist.	7866 Aug 03 02:23	15°♊34'12	4.46072 AU
morning rise	7860 Aug 18 23:54	22°♏53'45			7866 Aug 07 14:00	15°♏	
	7860 Sep 18 16:50	0°♏		direct	7866 Oct 03 12:38	10°♊42'50	
retrograde	7860 Dec 27 23:17	13°♏17'35			7866 Nov 28 09:07	15°♊	
min. Earth dist.	7861 Feb 23 21:10	8°♏26'10 4.00266 AU		evening set	7867 Feb 05 20:50	28°♊08'44	
opposition	7861 Feb 25 11:13	8°♏13'12 -0°04'12			7867 Feb 14 08:30	0°♏	
asc. node	7861 Apr 02 08:14	4°♏07'00		max. Earth dist.	7867 Feb 16 12:08	0°♏28'20	6.41243 AU
direct	7861 Apr 24 15:10	3°♏16'15					
evening set	7861 Aug 29 08:20	22°♏40'11		conjunction	7867 Feb 18 16:11	0°♏56'54	0°09'15
				minimum elong	7867 Feb 18 16:12	0°♏56'54	0°09'19
conjunction	7861 Sep 12 00:33	25°♏51'19 0°12'24		behind sun begin	7867 Feb 18 09:29	0°♏53'15	
minimum elong	7861 Sep 12 00:33	25°♏51'19 0°12'24		behind sun end	7867 Feb 18 22:54	1°♏00'34	
behind sun begin	7861 Sep 11 19:10	25°♏48'12		morning rise	7867 Mar 03 09:57	3°♏44'27	
behind sun end	7861 Sep 12 05:55	25°♏54'26		retrograde	7867 Jul 03 10:13	20°♏57'37	
max. Earth dist.	7861 Sep 14 12:53	26°♏26'30 6.07621 AU		desc. node	7867 Jul 05 17:51	20°♏57'07	
morning rise	7861 Sep 25 17:49	29°♏02'40		opposition	7867 Sep 02 07:51	16°♏05'01	-0°05'52
	7861 Sep 29 21:25	0°♏		min. Earth dist.	7867 Sep 03 23:50	15°♏52'14	4.34796 AU
retrograde	7862 Jan 31 15:49	18°♏17'38		direct	7867 Nov 03 13:43	11°♏04'57	
min. Earth dist.	7862 Mar 30 21:54	13°♏25'46 4.15898 AU		evening set	7868 Mar 07 23:06	29°♏04'56	
opposition	7862 Apr 01 09:35	13°♏13'43 0°38'51			7868 Mar 12 00:50	0°♏	
direct	7862 May 30 15:50	8°♏14'19		max. Earth dist.	7868 Mar 18 10:10	1°♏26'47	6.27121 AU
evening set	7862 Oct 04 02:14	26°♏48'21					
				conjunction	7868 Mar 20 17:20	1°♏58'04	-0°17'36
conjunction	7862 Oct 17 16:14	29°♏50'58 0°37'21		minimum elong	7868 Mar 20 17:19	1°♏58'03	0°17'36
minimum elong	7862 Oct 17 16:13	29°♏50'57 0°37'25		morning rise	7868 Apr 02 10:40	4°♏51'05	
	7862 Oct 18 08:21	0°♏		retrograde	7868 Aug 05 07:35	23°♏04'35	
max. Earth dist.	7862 Oct 19 16:15	0°♏17'54 6.24457 AU		opposition	7868 Oct 04 22:56	18°♏10'57	-0°44'14
morning rise	7862 Oct 31 05:49	2°♏53'03		min. Earth dist.	7868 Oct 06 10:48	17°♏59'23	4.18708 AU
	7862 Dec 30 12:22	15°♏		direct	7868 Dec 05 00:45	13°♏12'56	
retrograde	7863 Mar 04 16:35	20°♏54'18			7869 Apr 01 01:52	0°♏	
opposition	7863 May 03 21:05	15°♏53'04 1°06'04		evening set	7869 Apr 09 18:52	2°♏01'05	
min. Earth dist.	7863 May 02 21:23	16°♏00'57 4.32413 AU		max. Earth dist.	7869 Apr 20 20:24	4°♏36'56	6.10356 AU
	7863 May 10 13:30	15°♏					
direct	7863 Jul 03 10:26	10°♏52'00		conjunction	7869 Apr 22 14:27	5°♏01'42	-0°40'11
	7863 Aug 26 04:25	15°♏		minimum elong	7869 Apr 22 14:26	5°♏01'41	0°40'16
evening set	7863 Nov 06 14:03	28°♏41'11		morning rise	7869 May 05 10:37	8°♏02'57	
	7863 Nov 12 15:28	0°♏			7869 Jun 05 02:00	15°♏	
				retrograde	7869 Sep 10 22:35	27°♏32'04	
conjunction	7863 Nov 19 23:00	1°♏35'30 0°49'26		opposition	7869 Nov 10 01:33	22°♏36'12	-1°10'36
minimum elong	7863 Nov 19 22:59	1°♏35'30 0°49'33		min. Earth dist.	7869 Nov 10 21:58	22°♏29'30	4.02610 AU
max. Earth dist.	7863 Nov 20 20:03	1°♏46'58 6.39376 AU		direct	7870 Jan 08 17:15	17°♏40'30	
morning rise	7863 Dec 03 06:19	4°♏28'50			7870 Apr 13 13:07	0°♏	
retrograde	7864 Apr 03 01:36	21°♏34'23		evening set	7870 May 14 21:03	7°♏16'49	
opposition	7864 Jun 02 14:37	16°♏36'43 1°12'38					
min. Earth dist.	7864 Jun 02 10:28	16°♏38'04 4.44723 AU		conjunction	7870 May 27 21:35	10°♏25'52	-0°49'42
direct	7864 Aug 03 09:52	11°♏34'56		minimum elong	7870 May 27 21:35	10°♏25'52	0°49'48
evening set	7864 Dec 07 03:47	28°♏55'14		max. Earth dist.	7870 May 27 09:29	10°♏18'32	5.96425 AU
	7864 Dec 12 05:10	0°♏		morning rise	7870 Jun 09 23:52	13°♏36'07	
					7870 Aug 28 03:40	0°♏	
conjunction	7864 Dec 20 07:09	1°♏43'55 0°47'14		retrograde	7870 Oct 19 10:38	4°♏09'18	
minimum elong	7864 Dec 20 07:10	1°♏43'56 0°47'23			7870 Dec 11 20:42	30°♏	
max. Earth dist.	7864 Dec 19 21:58	1°♏39'00 6.48204 AU		opposition	7870 Dec 18 02:38	29°♏10'13	-1°11'24
morning rise	7865 Jan 02 08:24	4°♏31'30		min. Earth dist.	7870 Dec 17 22:05	29°♏11'44	3.92366 AU
retrograde	7865 May 02 17:16	21°♏09'07		direct	7871 Feb 14 11:42	24°♏15'59	
opposition	7865 Jul 02 13:44	16°♏14'24 0°59'52			7871 Apr 16 03:27	0°♏	
min. Earth dist.	7865 Jul 03 04:50	16°♏09'32 4.49650 AU		evening set	7871 Jun 21 00:59	14°♏19'31	
direct	7865 Sep 03 02:59	11°♏12'32					
evening set	7866 Jan 06 14:11	28°♏24'41		conjunction	7871 Jul 04 08:41	17°♏34'39	-0°40'03

minimum elong	7871 Jul 04 08:42	17°  34'39	0°40'10	direct	7877 Sep 07 09:17	15°  28'16	
max. Earth dist.	7871 Jul 05 08:55	17°  49'27	5.90891 AU		7877 Dec 29 01:53	0° 	
morning rise	7871 Jul 17 19:13	20°  51'15		evening set	7878 Jan 10 20:00	2°  41'39	
	7871 Aug 26 07:12	0° 		max. Earth dist.	7878 Jan 22 03:45	5°  07'40	6.48075 AU
retrograde	7871 Nov 27 01:46	11°  043'34					
min. Earth dist.	7872 Jan 24 08:57	6°  050'24	3.92288 AU	conjunction	7878 Jan 23 18:09	5°  28'21	0°29'42
opposition	7872 Jan 25 12:46	6°  040'58	-0°42'45	minimum elong	7878 Jan 23 18:10	5°  28'22	0°29'50
direct	7872 Mar 23 09:15	1°  045'59		morning rise	7878 Feb 05 14:14	8°  14'08	
	7872 Jun 29 08:43	15° 			7878 Mar 10 10:00	15° 	
evening set	7872 Jul 28 02:41	21°  041'14		retrograde	7878 Jun 06 04:23	24°  57'42	
				opposition	7878 Aug 06 03:38	20°  04'54	0°26'49
conjunction	7872 Aug 10 16:56	24°  056'52	-0°14'10	min. Earth dist.	7878 Aug 07 12:34	19°  54'22	4.44713 AU
minimum elong	7872 Aug 10 16:57	24°  056'53	0°14'15	direct	7878 Oct 07 19:51	15°  03'43	
behind sun begin	7872 Aug 10 13:05	24°  054'35			7879 Jan 29 07:36	0° 	
behind sun end	7872 Aug 10 20:48	24°  059'11		evening set	7879 Feb 10 04:34	2°  33'55	
max. Earth dist.	7872 Aug 12 22:27	25°  029'01	5.96235 AU	max. Earth dist.	7879 Feb 20 19:45	4°  54'00	6.39435 AU
morning rise	7872 Aug 24 09:18	28°  013'26					
	7872 Aug 31 21:29	0° 		conjunction	7879 Feb 22 23:50	5°  22'43	0°05'30
retrograde	7873 Jan 02 00:39	18°  028'16		minimum elong	7879 Feb 22 23:51	5°  22'43	0°05'33
asc. node	7873 Feb 10 02:28	16°  002'10		behind sun begin	7879 Feb 22 16:11	5°  18'30	
min. Earth dist.	7873 Feb 28 22:47	13°  036'39	4.02396 AU	behind sun end	7879 Feb 23 07:31	5°  26'55	
opposition	7873 Mar 02 12:27	13°  023'50	0°02'22	morning rise	7879 Mar 07 17:17	8°  10'53	
direct	7873 Apr 29 20:19	8°  026'33		desc. node	7879 May 14 16:42	21°  15'39	
evening set	7873 Sep 03 11:05	27°  043'04		retrograde	7879 Jul 08 01:05	25°  31'25	
	7873 Sep 13 07:42	0° 		opposition	7879 Sep 06 22:41	20°  38'46	-0°11'32
				min. Earth dist.	7879 Sep 08 14:00	20°  36'12	4.32671 AU
conjunction	7873 Sep 17 03:13	0°  053'03	0°16'29	direct	7879 Nov 08 00:23	15°  39'02	
minimum elong	7873 Sep 17 03:12	0°  053'02	0°16'28		7880 Feb 24 14:18	0° 	
max. Earth dist.	7873 Sep 19 15:25	1°  027'56	6.10049 AU	evening set	7880 Mar 12 11:56	3°  45'16	
morning rise	7873 Sep 30 20:12	4°  003'08		max. Earth dist.	7880 Mar 22 23:58	6°  08'27	6.24856 AU
retrograde	7874 Feb 05 05:36	23°  006'58					
min. Earth dist.	7874 Apr 04 14:13	18°  015'14	4.18395 AU	conjunction	7880 Mar 25 06:02	6°  39'17	-0°21'16
opposition	7874 Apr 06 01:25	18°  003'21	0°43'48	minimum elong	7880 Mar 25 06:01	6°  39'16	0°21'16
direct	7874 Jun 04 10:57	13°  003'43		morning rise	7880 Apr 06 23:39	9°  33'19	
	7874 Oct 02 01:15	0° 		retrograde	7880 Aug 10 08:52	27°  35'40	
evening set	7874 Oct 08 21:17	1°  030'36		opposition	7880 Oct 09 22:09	23°  30'24	-0°49'02
				min. Earth dist.	7880 Oct 11 08:33	22°  35'39	4.16478 AU
conjunction	7874 Oct 22 10:36	4°  031'55	0°39'53	direct	7880 Dec 09 20:14	18°  30'05	
minimum elong	7874 Oct 22 10:35	4°  031'54	0°39'57		7881 Mar 14 15:55	0° 	
max. Earth dist.	7874 Oct 24 06:11	4°  056'15	6.26822 AU	evening set	7881 Apr 14 14:25	6°  35'35	
morning rise	7874 Nov 04 23:24	7°  032'39		max. Earth dist.	7881 Apr 25 20:44	9°  38'54	6.08380 AU
	7874 Dec 10 03:13	15° 					
retrograde	7875 Mar 09 01:09	25°  024'45		conjunction	7881 Apr 27 10:32	10°  30'16	-0°42'31
min. Earth dist.	7875 May 07 09:34	20°  030'43	4.34464 AU	minimum elong	7881 Apr 27 10:31	10°  30'15	0°42'36
opposition	7875 May 08 05:44	20°  024'01	1°08'13	morning rise	7881 May 10 07:15	13°  30'37	
direct	7875 Jul 08 00:19	15°  022'49			7881 May 18 14:17	15° 	
	7875 Oct 27 10:35	0° 			7881 Aug 05 06:49	0° 	
evening set	7875 Nov 11 01:46	3°  007'00		retrograde	7881 Sep 16 04:59	2°  34'40	
					7881 Oct 28 12:55	30°  08'38	
conjunction	7875 Nov 24 10:02	6°  000'24	0°49'57	opposition	7881 Nov 15 07:26	27°  34'52	-1°12'27
minimum elong	7875 Nov 24 10:01	6°  000'24	0°50'04	min. Earth dist.	7881 Nov 16 00:08	27°  39'55	4.01103 AU
max. Earth dist.	7875 Nov 25 03:11	6°  009'42	6.40963 AU	direct	7882 Jan 13 18:16	22°  35'02	
morning rise	7875 Dec 07 16:29	8°  005'24			7882 Mar 24 05:20	0° 	
retrograde	7876 Apr 07 04:46	25°  005'30		evening set	7882 May 19 23:12	12°  30'05	
opposition	7876 Jun 06 19:23	20°  005'48	1°11'54				
min. Earth dist.	7876 Jun 06 17:25	20°  005'26	4.45772 AU	conjunction	7882 Jun 02 00:23	15°  39'53	-0°49'31
direct	7876 Aug 07 16:29	15°  005'58		minimum elong	7882 Jun 02 00:23	15°  39'53	0°49'39
	7876 Nov 26 04:09	0° 		max. Earth dist.	7882 Jun 01 16:28	15°  35'05	5.95523 AU
evening set	7876 Dec 11 10:47	3°  031'28		morning rise	7882 Jun 15 03:46	18°  35'02	
					7882 Aug 03 12:36	0° 	
conjunction	7876 Dec 24 13:31	6°  030'33	0°45'50	retrograde	7882 Oct 24 18:32	9°  27'59	
minimum elong	7876 Dec 24 13:31	6°  030'34	0°45'58	opposition	7882 Dec 23 10:41	4°  28'20	-1°09'00
max. Earth dist.	7876 Dec 24 00:47	5°  053'44	6.48646 AU	min. Earth dist.	7882 Dec 23 02:11	4°  31'11	3.92183 AU
morning rise	7877 Jan 06 13:57	8°  047'41			7883 Feb 03 20:38	30°  08'11	
retrograde	7877 May 06 22:00	25°  032'43		direct	7883 Feb 19 17:44	29°  34'03	
opposition	7877 Jul 06 18:30	20°  030'02	0°56'42		7883 Mar 07 14:41	0° 	
min. Earth dist.	7877 Jul 07 12:31	20°  032'45	4.49469 AU	evening set	7883 Jun 26 06:05	19°  36'36	

conjunction	7883 Jul 09 14:52	22° \mathfrak{D} 51'56	-0°37'13	max. Earth dist.	7888 Dec 28 02:38	10° \mathfrak{Z} 05'29	6.48758 AU
minimum elong	7883 Jul 09 14:53	22° \mathfrak{D} 51'57	0°37'20	morning rise	7889 Jan 10 18:46	13° \mathfrak{Z} 01'06	
max. Earth dist.	7883 Jul 10 20:57	23° \mathfrak{D} 10'17	5.91451 AU	retrograde	7889 May 11 01:34	29° \mathfrak{Z} 37'52	
morning rise	7883 Jul 23 02:09	26° \mathfrak{D} 08'38		opposition	7889 Jul 10 22:49	24° \mathfrak{Z} 43'48	0°53'15
	7883 Aug 08 05:47	0° \mathfrak{Q}		min. Earth dist.	7889 Jul 11 18:19	24° \mathfrak{Z} 37'32	4.49070 AU
	7883 Oct 28 08:23	15° \mathfrak{Q}		direct	7889 Sep 11 13:12	19° \mathfrak{Z} 42'06	
retrograde	7883 Dec 02 06:23	16° \mathfrak{Q} 57'04			7889 Dec 12 03:48	0° \mathfrak{X}	
	7884 Jan 06 01:05	15° \mathfrak{R} \mathfrak{Q}		evening set	7890 Jan 15 01:13	6° \mathfrak{X} 57'16	
min. Earth dist.	7884 Jan 29 11:59	12° \mathfrak{Q} 03'53	3.93519 AU	max. Earth dist.	7890 Jan 26 07:38	9° \mathfrak{X} 22'53	6.47194 AU
opposition	7884 Jan 30 16:49	11° \mathfrak{Q} 54'06	-0°37'03				
direct	7884 Mar 28 14:45	6° \mathfrak{Q} 58'51		conjunction	7890 Jan 27 22:59	9° \mathfrak{X} 44'09	0°26'40
	7884 Jun 09 20:08	15° \mathfrak{Q}		minimum elong	7890 Jan 27 23:00	9° \mathfrak{X} 44'09	0°26'47
evening set	7884 Aug 02 06:17	26° \mathfrak{Q} 48'48		morning rise	7890 Feb 09 18:29	12° \mathfrak{X} 30'05	
					7890 Feb 21 12:18	15° \mathfrak{X}	
conjunction	7884 Aug 15 20:58	0° \mathfrak{P} 03'48	-0°09'58	retrograde	7890 Jun 10 12:40	29° \mathfrak{X} 17'20	
minimum elong	7884 Aug 15 20:59	0° \mathfrak{P} 03'48	0°10'02	opposition	7890 Aug 10 11:48	24° \mathfrak{X} 24'40	0°21'45
behind sun begin	7884 Aug 15 14:16	29° \mathfrak{Q} 59'49		min. Earth dist.	7890 Aug 11 22:01	24° \mathfrak{X} 13'44	4.43396 AU
behind sun end	7884 Aug 16 03:41	0° \mathfrak{P} 07'48		direct	7890 Oct 12 02:58	19° \mathfrak{X} 23'42	
	7884 Aug 15 14:34	0° \mathfrak{P}			7891 Jan 12 08:30	0° \mathfrak{X}	
max. Earth dist.	7884 Aug 18 04:14	0° \mathfrak{P} 36'49	5.97994 AU	evening set	7891 Feb 14 11:46	6° \mathfrak{X} 57'48	
morning rise	7884 Aug 29 13:45	3° \mathfrak{P} 19'39		max. Earth dist.	7891 Feb 25 00:32	9° \mathfrak{X} 17'10	6.37753 AU
asc. node	7884 Dec 22 12:14	23° \mathfrak{P} 01'57					
retrograde	7885 Jan 06 18:58	23° \mathfrak{P} 25'08		conjunction	7891 Feb 27 06:36	9° \mathfrak{X} 47'06	0°01'44
min. Earth dist.	7885 Mar 05 17:40	18° \mathfrak{P} 33'48	4.04496 AU	minimum elong	7891 Feb 27 06:35	9° \mathfrak{X} 47'05	0°01'46
opposition	7885 Mar 07 08:06	18° \mathfrak{P} 20'44	0°08'38	behind sun begin	7891 Feb 26 22:37	9° \mathfrak{X} 42'42	
direct	7885 May 04 18:07	13° \mathfrak{P} 23'07		behind sun end	7891 Feb 27 14:34	9° \mathfrak{X} 51'29	
	7885 Aug 28 04:38	0° \mathfrak{Q}		morning rise	7891 Mar 12 00:02	12° \mathfrak{X} 35'52	
evening set	7885 Sep 08 09:11	2° \mathfrak{Q} 32'52		desc. node	7891 Mar 24 03:53	15° \mathfrak{X} 15'01	
					7891 Jul 06 15:32	0° \mathfrak{Y}	
conjunction	7885 Sep 22 01:04	5° \mathfrak{Q} 41'44	0°20'16	retrograde	7891 Jul 12 16:43	0° \mathfrak{Y} 03'27	
minimum elong	7885 Sep 22 01:03	5° \mathfrak{Q} 41'44	0°20'17		7891 Jul 18 17:18	30° \mathfrak{R} \mathfrak{X}	
max. Earth dist.	7885 Sep 24 10:04	6° \mathfrak{Q} 14'37	6.12292 AU	opposition	7891 Sep 11 12:55	25° \mathfrak{X} 10'39	-0°17'06
morning rise	7885 Oct 05 17:46	8° \mathfrak{Q} 50'38		min. Earth dist.	7891 Sep 13 04:09	24° \mathfrak{X} 58'05	4.30704 AU
retrograde	7886 Feb 09 16:40	27° \mathfrak{Q} 44'32		direct	7891 Nov 12 11:47	20° \mathfrak{X} 11'06	
min. Earth dist.	7886 Apr 09 04:30	22° \mathfrak{Q} 52'14	4.20570 AU		7892 Feb 07 00:14	0° \mathfrak{Y}	
opposition	7886 Apr 10 13:01	22° \mathfrak{Q} 41'16	0°48'16	evening set	7892 Mar 16 23:31	8° \mathfrak{Y} 23'03	
direct	7886 Jun 09 03:29	17° \mathfrak{Q} 41'22		max. Earth dist.	7892 Mar 27 13:55	10° \mathfrak{Y} 48'12	6.22742 AU
	7886 Sep 15 10:10	0° \mathfrak{M}					
evening set	7886 Oct 13 12:18	6° \mathfrak{M} 02'30		conjunction	7892 Mar 29 17:49	11° \mathfrak{Y} 17'57	-0°24'45
				minimum elong	7892 Mar 29 17:48	11° \mathfrak{Y} 17'56	0°24'46
conjunction	7886 Oct 27 01:13	9° \mathfrak{M} 02'48	0°42'05	morning rise	7892 Apr 11 11:30	14° \mathfrak{Y} 12'54	
minimum elong	7886 Oct 27 01:11	9° \mathfrak{M} 02'47	0°42'09		7892 Jul 03 11:35	0° \mathfrak{Z}	
max. Earth dist.	7886 Oct 28 18:24	9° \mathfrak{M} 25'42	6.28768 AU	retrograde	7892 Aug 15 07:13	2° \mathfrak{Z} 45'36	
morning rise	7886 Nov 09 13:10	12° \mathfrak{M} 02'23			7892 Sep 27 15:33	30° \mathfrak{R} \mathfrak{Y}	
	7886 Nov 23 03:19	15° \mathfrak{M}		opposition	7892 Oct 14 19:38	27° \mathfrak{Y} 51'27	-0°53'26
retrograde	7887 Mar 13 05:20	29° \mathfrak{M} 47'04		min. Earth dist.	7892 Oct 16 04:17	27° \mathfrak{Y} 40'53	4.14363 AU
opposition	7887 May 12 11:37	24° \mathfrak{M} 46'53	1°09'55	direct	7892 Dec 14 12:38	22° \mathfrak{Y} 54'07	
min. Earth dist.	7887 May 11 17:04	24° \mathfrak{M} 53'01	4.36061 AU		7893 Feb 22 22:42	0° \mathfrak{Z}	
direct	7887 Jul 12 08:34	19° \mathfrak{M} 45'37		evening set	7893 Apr 19 08:36	11° \mathfrak{Z} 54'51	
	7887 Oct 10 09:07	0° \mathfrak{X}		max. Earth dist.	7893 Apr 30 17:25	14° \mathfrak{Z} 36'24	6.06423 AU
evening set	7887 Nov 15 11:15	7° \mathfrak{X} 26'23					
				conjunction	7893 May 02 05:03	14° \mathfrak{Z} 57'34	-0°44'30
conjunction	7887 Nov 28 18:40	10° \mathfrak{X} 19'02	0°50'10	minimum elong	7893 May 02 05:02	14° \mathfrak{Z} 57'33	0°44'35
minimum elong	7887 Nov 28 18:40	10° \mathfrak{X} 19'02	0°50'18		7893 May 02 09:09	15° \mathfrak{Z}	
max. Earth dist.	7887 Nov 29 06:32	10° \mathfrak{X} 25'28	6.42108 AU	morning rise	7893 May 15 02:35	18° \mathfrak{Z} 01'06	
morning rise	7887 Dec 12 00:23	13° \mathfrak{X} 10'40			7893 Jul 09 03:16	0° \mathfrak{I}	
	7888 Apr 02 15:32	0° \mathfrak{Z}		retrograde	7893 Sep 21 10:19	7° \mathfrak{I} 48'25	
retrograde	7888 Apr 11 09:03	0° \mathfrak{Z} 07'12		opposition	7893 Nov 20 11:45	2° \mathfrak{I} 51'41	-1°13'44
	7888 Apr 20 00:36	30° \mathfrak{R} \mathfrak{X}		min. Earth dist.	7893 Nov 21 01:08	2° \mathfrak{I} 47'17	3.99483 AU
opposition	7888 Jun 10 22:59	25° \mathfrak{X} 10'29	1°10'49		7893 Dec 13 17:13	30° \mathfrak{R} \mathfrak{Z}	
min. Earth dist.	7888 Jun 11 00:37	25° \mathfrak{X} 09'57	4.46420 AU	direct	7894 Jan 18 18:41	27° \mathfrak{Z} 56'30	
direct	7888 Aug 11 23:40	20° \mathfrak{X} 08'40			7894 Feb 23 09:35	0° \mathfrak{I}	
	7888 Nov 09 02:17	0° \mathfrak{Z}		evening set	7894 May 25 00:01	17° \mathfrak{I} 41'07	
evening set	7888 Dec 15 16:50	7° \mathfrak{Z} 26'14					
				conjunction	7894 Jun 07 02:18	20° \mathfrak{I} 51'55	-0°48'57
conjunction	7888 Dec 28 18:58	10° \mathfrak{Z} 14'14	0°44'13	minimum elong	7894 Jun 07 02:19	20° \mathfrak{I} 51'55	0°49'06
minimum elong	7888 Dec 28 18:59	10° \mathfrak{Z} 14'15	0°44'20	max. Earth dist.	7894 Jun 07 00:30	20° \mathfrak{I} 50'49	5.94410 AU

morning rise	7894 Jun 20 06:35	24° Π 04'02	morning rise	7899 Dec 16 09:54	17° \times 33'19
	7894 Jul 15 09:48	0° \mathfrak{D}		7900 Feb 20 02:35	0° \mathfrak{Z}
retrograde	7894 Oct 30 04:01	14° \mathfrak{D} 45'47	retrograde	7900 Apr 16 11:11	4° \mathfrak{Z} 24'43
opposition	7894 Dec 28 17:53	9° \mathfrak{D} 45'40 -1°06'04		7900 Jun 12 02:15	30° \mathfrak{R} \times
min. Earth dist.	7894 Dec 28 07:11	9° \mathfrak{D} 49'15 3.91714 AU	opposition	7900 Jun 16 03:53	29° \times 28'22 1°09'24
direct	7895 Feb 24 22:41	4° \mathfrak{D} 51'22	min. Earth dist.	7900 Jun 16 06:47	29° \times 27'26 4.47542 AU
evening set	7895 Jul 01 11:35	24° \mathfrak{D} 54'27	direct	7900 Aug 17 06:38	24° \times 26'34
				7900 Oct 20 19:09	0° \mathfrak{Z}
conjunction	7895 Jul 14 21:17	28° \mathfrak{D} 10'09 -0°34'05	evening set	7900 Dec 20 23:05	11° \mathfrak{Z} 41'23
minimum elong	7895 Jul 14 21:18	28° \mathfrak{D} 10'10 0°34'13	max. Earth dist.	7901 Jan 02 04:37	14° \mathfrak{Z} 18'13 6.49432 AU
max. Earth dist.	7895 Jul 16 06:58	28° \mathfrak{D} 30'40 5.91659 AU			
	7895 Jul 22 09:47	0° Ω	conjunction	7901 Jan 03 00:22	14° \mathfrak{Z} 28'49 0°42'24
morning rise	7895 Jul 28 09:42	1° Ω 27'13	minimum elong	7901 Jan 03 00:23	14° \mathfrak{Z} 28'49 0°42'32
	7895 Sep 28 02:17	15° Ω	morning rise	7901 Jan 15 23:28	17° \mathfrak{Z} 15'09
retrograde	7895 Dec 07 10:18	22° Ω 12'59		7901 Mar 25 14:54	0° \approx
opposition	7896 Feb 04 20:57	17° Ω 09'42 -0°31'03	retrograde	7901 May 16 05:29	3° \approx 50'10
min. Earth dist.	7896 Feb 03 13:22	17° Ω 20'26 3.94396 AU		7901 Jul 07 18:42	30° \mathfrak{R} \mathfrak{Z}
	7896 Feb 21 09:23	15° \mathfrak{R} Ω	opposition	7901 Jul 16 03:09	28° \mathfrak{Z} 56'21 0°49'37
direct	7896 Apr 02 18:21	12° Ω 14'09	min. Earth dist.	7901 Jul 17 01:32	28° \mathfrak{Z} 49'10 4.49248 AU
	7896 May 13 21:08	15° Ω	direct	7901 Sep 16 20:21	23° \mathfrak{Z} 54'42
	7896 Jul 29 22:55	0° \mathfrak{N}		7901 Nov 23 18:20	0° \approx
evening set	7896 Aug 07 11:30	2° \mathfrak{N} 00'29	evening set	7902 Jan 20 05:00	11° \approx 09'27
			max. Earth dist.	7902 Jan 31 07:32	13° \approx 33'10 6.46852 AU
conjunction	7896 Aug 21 02:39	5° \mathfrak{N} 15'02 -0°05'39			
minimum elong	7896 Aug 21 02:38	5° \mathfrak{N} 15'01 0°05'43	conjunction	7902 Feb 02 02:10	13° \approx 56'13 0°23'36
behind sun begin	7896 Aug 20 18:37	5° \mathfrak{N} 10'16	minimum elong	7902 Feb 02 02:11	13° \approx 56'14 0°23'42
behind sun end	7896 Aug 21 10:40	5° \mathfrak{N} 19'47		7902 Feb 07 00:03	15° \approx
max. Earth dist.	7896 Aug 23 10:23	5° \mathfrak{N} 48'12 5.99438 AU	morning rise	7902 Feb 14 21:14	16° \approx 42'06
morning rise	7896 Sep 03 19:49	8° \mathfrak{N} 30'19		7902 Apr 27 11:32	0° \mathfrak{H}
asc. node	7896 Nov 01 13:23	21° \mathfrak{N} 09'43	retrograde	7902 Jun 15 18:05	3° \mathfrak{H} 31'25
retrograde	7897 Jan 11 16:05	28° \mathfrak{N} 27'43		7902 Aug 04 23:34	30° \mathfrak{R} \approx
min. Earth dist.	7897 Mar 10 15:55	23° \mathfrak{N} 36'06 4.06328 AU	opposition	7902 Aug 15 17:58	28° \approx 38'43 0°16'46
opposition	7897 Mar 12 05:40	23° \mathfrak{N} 23'16 0°14'55	min. Earth dist.	7902 Aug 17 04:59	28° \approx 27'32 4.42539 AU
direct	7897 May 09 19:20	18° \mathfrak{N} 25'16	direct	7902 Oct 17 07:59	23° \approx 37'50
	7897 Aug 10 10:54	0° \mathfrak{L}		7902 Dec 25 08:02	0° \mathfrak{H}
evening set	7897 Sep 13 09:29	7° \mathfrak{L} 29'09	desc. node	7903 Feb 04 02:05	7° \mathfrak{H} 51'47
			evening set	7903 Feb 19 16:05	11° \mathfrak{H} 14'21
conjunction	7897 Sep 27 01:21	10° \mathfrak{L} 37'02 0°24'00	max. Earth dist.	7903 Mar 02 04:51	13° \mathfrak{H} 34'06 6.36435 AU
minimum elong	7897 Sep 27 01:20	10° \mathfrak{L} 37'02 0°24'02			
max. Earth dist.	7897 Sep 29 10:37	11° \mathfrak{L} 09'54 6.14361 AU	conjunction	7903 Mar 04 10:43	14° \mathfrak{H} 04'01 -0°01'58
morning rise	7897 Oct 10 17:31	13° \mathfrak{L} 44'47	minimum elong	7903 Mar 04 10:43	14° \mathfrak{H} 04'01 0°01'55
	7898 Jan 05 04:31	0° \mathfrak{M}	behind sun begin	7903 Mar 04 02:44	13° \mathfrak{H} 59'37
retrograde	7898 Feb 14 05:28	2° \mathfrak{M} 29'09	behind sun end	7903 Mar 04 18:41	14° \mathfrak{H} 08'25
	7898 Mar 26 02:57	30° \mathfrak{R} \mathfrak{L}	morning rise	7903 Mar 17 03:48	16° \mathfrak{H} 53'13
min. Earth dist.	7898 Apr 13 19:23	27° \mathfrak{L} 36'55 4.22692 AU		7903 May 23 14:38	0° \mathfrak{Y}
opposition	7898 Apr 15 03:07	27° \mathfrak{L} 26'15 0°52'32	retrograde	7903 Jul 18 04:05	4° \mathfrak{Y} 26'48
direct	7898 Jun 13 20:43	22° \mathfrak{L} 26'11		7903 Sep 13 14:25	30° \mathfrak{R} \mathfrak{H}
	7898 Aug 26 23:58	0° \mathfrak{M}	opposition	7903 Sep 17 00:03	29° \mathfrak{H} 33'54 -0°22'20
evening set	7898 Oct 18 06:10	10° \mathfrak{M} 41'28	min. Earth dist.	7903 Sep 18 15:58	29° \mathfrak{H} 21'07 4.28975 AU
			direct	7903 Nov 17 20:11	24° \mathfrak{H} 34'35
conjunction	7898 Oct 31 18:15	13° \mathfrak{M} 40'37 0°44'05		7904 Jan 18 20:01	0° \mathfrak{Y}
minimum elong	7898 Oct 31 18:13	13° \mathfrak{M} 40'37 0°44'10	evening set	7904 Mar 22 07:43	12° \mathfrak{Y} 51'35
max. Earth dist.	7898 Nov 02 07:00	14° \mathfrak{M} 00'58 6.30794 AU	max. Earth dist.	7904 Apr 01 21:13	15° \mathfrak{Y} 16'56 6.20719 AU
	7898 Nov 06 17:44	15° \mathfrak{M}			
morning rise	7898 Nov 14 05:32	16° \mathfrak{M} 39'03	conjunction	7904 Apr 04 01:57	15° \mathfrak{Y} 47'17 -0°27'56
	7899 Jan 22 14:40	0° \times	minimum elong	7904 Apr 04 01:55	15° \mathfrak{Y} 47'17 0°27'58
retrograde	7899 Mar 17 12:48	4° \times 15'47	morning rise	7904 Apr 16 20:03	18° \mathfrak{Y} 43'13
	7899 May 11 06:27	30° \mathfrak{R} \mathfrak{M}		7904 Jun 09 05:07	0° \mathfrak{B}
opposition	7899 May 16 19:56	29° \mathfrak{M} 16'03 1°11'17	retrograde	7904 Aug 21 02:22	7° \mathfrak{B} 25'24
min. Earth dist.	7899 May 16 04:16	29° \mathfrak{M} 21'14 4.37874 AU	opposition	7904 Oct 20 13:55	2° \mathfrak{B} 30'55 -0°57'20
direct	7899 Jul 16 22:02	24° \mathfrak{M} 14'40	min. Earth dist.	7904 Oct 21 20:56	2° \mathfrak{B} 20'52 4.12171 AU
	7899 Sep 19 19:59	0° \times		7904 Nov 09 22:19	30° \mathfrak{R} \mathfrak{Y}
evening set	7899 Nov 19 22:25	11° \times 50'52	direct	7904 Dec 20 02:43	27° \mathfrak{Y} 33'49
				7905 Jan 28 17:32	0° \mathfrak{B}
conjunction	7899 Dec 03 05:13	14° \times 42'39 0°50'09		7905 Apr 17 19:16	15° \mathfrak{B}
minimum elong	7899 Dec 03 05:13	14° \times 42'39 0°50'16	evening set	7905 Apr 24 23:36	16° \mathfrak{B} 41'24
max. Earth dist.	7899 Dec 03 15:08	14° \times 48'00 6.43610 AU			

conjunction	7905 May 07 20:48	19°♏45'21	-0°46'07	max. Earth dist.	7910 Nov 07 23:17	18°♍40'14	6.32927 AU
minimum elong	7905 May 07 20:47	19°♏45'20	0°46'12	morning rise	7910 Nov 19 22:30	21°♍18'04	
max. Earth dist.	7905 May 06 13:05	19°♏26'25	6.04266 AU		7911 Jan 01 01:36	0°♏	
morning rise	7905 May 20 18:57	22°♏50'10		retrograde	7911 Mar 22 19:50	8°♏46'31	
	7905 Jun 20 23:38	0°♐		opposition	7911 May 22 05:02	3°♏47'14	1°12'10
retrograde	7905 Sep 27 15:11	12°♐47'43		min. Earth dist.	7911 May 21 15:14	3°♏51'47	4.39754 AU
opposition	7905 Nov 26 13:19	7°♐50'40	-1°14'29		7911 Jun 24 01:06	30°♍	
min. Earth dist.	7905 Nov 27 01:00	7°♐46'49	3.97565 AU	direct	7911 Jul 22 11:19	28°♍45'45	
direct	7906 Jan 24 16:02	2°♐55'42			7911 Aug 20 05:43	0°♏	
evening set	7906 May 30 23:23	22°♐46'28		evening set	7911 Nov 25 10:04	16°♏17'08	
conjunction	7906 Jun 13 02:37	25°♐58'28	-0°48'03	conjunction	7911 Dec 08 15:51	19°♏07'59	0°49'48
minimum elong	7906 Jun 13 02:38	25°♐58'29	0°48'11	minimum elong	7911 Dec 08 15:51	19°♏07'59	0°49'55
max. Earth dist.	7906 Jun 13 03:44	25°♐59'09	5.92915 AU	max. Earth dist.	7911 Dec 08 20:25	19°♏10'26	6.45064 AU
morning rise	7906 Jun 26 08:16	29°♐11'53		morning rise	7911 Dec 21 19:48	21°♏57'45	
	7906 Jun 29 15:49	0°♑			7912 Jan 30 10:33	0°♑	
retrograde	7906 Nov 05 10:20	20°♑00'01		retrograde	7912 Apr 20 16:17	8°♑44'26	
opposition	7907 Jan 03 23:34	14°♑59'28	-1°02'43	opposition	7912 Jun 20 09:40	3°♑48'28	1°07'31
min. Earth dist.	7907 Jan 03 08:56	15°♑04'24	3.90832 AU	min. Earth dist.	7912 Jun 20 16:05	3°♑46'23	4.48474 AU
direct	7907 Mar 03 00:15	10°♑05'10			7912 Jul 23 23:48	30°♍♏	
	7907 Jul 06 23:05	0°♒		direct	7912 Aug 21 16:34	28°♏46'36	
evening set	7907 Jul 07 16:57	0°♒10'48			7912 Sep 19 15:25	0°♑	
				evening set	7912 Dec 25 06:02	15°♑59'27	
conjunction	7907 Jul 21 03:44	3°♒27'07	-0°30'45	max. Earth dist.	7913 Jan 06 08:12	18°♑34'25	6.49760 AU
minimum elong	7907 Jul 21 03:46	3°♒27'08	0°30'52				
max. Earth dist.	7907 Jul 22 17:15	3°♒49'58	5.91485 AU	conjunction	7913 Jan 07 06:47	18°♑46'30	0°40'18
morning rise	7907 Aug 03 17:13	6°♒44'46		minimum elong	7913 Jan 07 06:48	18°♑46'31	0°40'26
	7907 Sep 08 06:51	15°♒		morning rise	7913 Jan 20 05:03	21°♑32'26	
retrograde	7907 Dec 13 16:02	27°♒29'33			7913 Mar 03 08:21	0°♓	
min. Earth dist.	7908 Feb 09 16:35	22°♒37'11	3.94933 AU	retrograde	7913 May 20 09:20	8°♓07'02	
opposition	7908 Feb 11 01:33	22°♒25'57	-0°24'54	opposition	7913 Jul 20 08:52	3°♓13'25	0°45'36
direct	7908 Apr 09 00:17	17°♒30'08		min. Earth dist.	7913 Jul 21 08:39	3°♓05'48	4.48959 AU
	7908 Jul 13 03:28	0°♑			7913 Aug 16 19:04	30°♍♑	
evening set	7908 Aug 13 17:50	7°♑14'11		direct	7913 Sep 21 02:06	28°♑11'50	
					7913 Oct 26 14:08	0°♓	
conjunction	7908 Aug 27 09:39	10°♑28'26	-0°01'18		7914 Jan 22 06:47	15°♓	
minimum elong	7908 Aug 27 09:38	10°♑28'25	0°01'21	evening set	7914 Jan 24 10:47	15°♓27'53	
behind sun begin	7908 Aug 27 01:14	10°♑23'28		max. Earth dist.	7914 Feb 04 10:28	17°♓50'24	6.45951 AU
behind sun end	7908 Aug 27 18:03	10°♑33'23					
max. Earth dist.	7908 Aug 29 21:02	11°♑03'40	6.00642 AU	conjunction	7914 Feb 06 07:25	18°♓14'47	0°20'16
morning rise	7908 Sep 10 03:01	13°♑43'14		minimum elong	7914 Feb 06 07:26	18°♓14'47	0°20'21
asc. node	7908 Sep 12 16:43	14°♑19'26		morning rise	7914 Feb 19 02:04	21°♓00'51	
	7908 Nov 30 14:23	0°♒			7914 Apr 04 10:53	0°♏	
retrograde	7909 Jan 17 14:35	3°♒33'10		retrograde	7914 Jun 20 04:23	7°♏54'17	
	7909 Mar 06 19:34	30°♍♑		opposition	7914 Aug 20 03:42	3°♏01'39	0°11'25
min. Earth dist.	7909 Mar 16 13:55	28°♑41'48	4.08050 AU	min. Earth dist.	7914 Aug 21 17:02	2°♏49'44	4.41063 AU
opposition	7909 Mar 18 04:18	28°♑28'46	0°21'02		7914 Sep 14 15:57	30°♍♓	
direct	7909 May 15 20:11	23°♑30'30		direct	7914 Oct 21 17:19	28°♓00'54	
	7909 Jul 21 09:37	0°♒			7914 Nov 27 16:17	0°♏	
evening set	7909 Sep 19 11:39	12°♒28'50		desc. node	7914 Dec 14 09:48	2°♏02'58	
				evening set	7915 Feb 24 00:11	15°♏41'52	
conjunction	7909 Oct 03 03:05	15°♒35'38	0°27'34	max. Earth dist.	7915 Mar 06 10:32	18°♏00'56	6.34477 AU
minimum elong	7909 Oct 03 03:04	15°♒35'38	0°27'36				
max. Earth dist.	7909 Oct 05 10:18	16°♒07'10	6.16424 AU	conjunction	7915 Mar 08 18:34	18°♏32'11	-0°05'47
morning rise	7909 Oct 16 18:58	18°♒42'15		minimum elong	7915 Mar 08 18:35	18°♏32'11	0°05'45
	7909 Dec 10 00:07	0°♍		behind sun begin	7915 Mar 08 10:56	18°♏27'57	
retrograde	7910 Feb 19 18:42	7°♍16'55		behind sun end	7915 Mar 09 02:13	18°♏36'26	
min. Earth dist.	7910 Apr 19 11:56	2°♍24'28	4.24884 AU	morning rise	7915 Mar 21 11:45	21°♏22'10	
opposition	7910 Apr 20 18:18	2°♍14'16	0°56'25		7915 May 01 12:43	0°♑	
	7910 May 08 02:45	30°♍♒		retrograde	7915 Jul 22 20:55	9°♑04'09	
direct	7910 Jun 19 16:44	27°♒13'53		opposition	7915 Sep 21 16:35	4°♑11'02	-0°27'48
	7910 Aug 01 14:24	0°♍		min. Earth dist.	7915 Sep 23 07:37	3°♑58'31	4.26657 AU
	7910 Oct 22 06:48	15°♍			7915 Oct 30 13:18	30°♍♏	
evening set	7910 Oct 24 00:45	15°♍22'57		direct	7915 Nov 22 08:38	29°♏11'56	
					7915 Dec 15 04:48	0°♑	
conjunction	7910 Nov 06 12:17	18°♍20'56	0°45'48	evening set	7916 Mar 26 21:46	17°♑35'59	
minimum elong	7910 Nov 06 12:16	18°♍20'55	0°45'54	max. Earth dist.	7916 Apr 06 14:24	20°♑03'55	6.18230 AU

conjunction	7916 Apr 08 16:20	20° Υ 32'49	-0°31'10	morning rise	7921 Oct 21 17:56	23° Ω 33'44	
minimum elong	7916 Apr 08 16:19	20° Υ 32'48	0°31'13		7921 Nov 20 07:32	0° \mathbb{M}	
morning rise	7916 Apr 21 10:41	23° Υ 29'55		retrograde	7922 Feb 24 06:33	11° \mathbb{M} 57'01	
	7916 May 20 13:07	0° \mathcal{B}		min. Earth dist.	7922 Apr 24 03:01	7° \mathbb{M} 04'11	4.27487 AU
retrograde	7916 Aug 26 06:30	12° \mathcal{B} 23'12		opposition	7922 Apr 25 07:04	6° \mathbb{M} 54'48	0°59'50
opposition	7916 Oct 25 15:16	7° \mathcal{B} 28'28	-1°01'09	direct	7922 Jun 24 11:05	1° \mathbb{M} 54'13	
min. Earth dist.	7916 Oct 26 21:11	7° \mathcal{B} 18'44	4.09708 AU		7922 Oct 05 13:35	15° \mathbb{M}	
direct	7916 Dec 24 23:43	2° \mathcal{B} 31'39		evening set	7922 Oct 28 16:17	19° \mathbb{M} 55'59	
	7917 Mar 31 10:18	15° \mathcal{B}					
evening set	7917 Apr 29 21:58	21° \mathcal{B} 46'51		conjunction	7922 Nov 11 02:54	22° \mathbb{M} 52'41	0°47'11
				minimum elong	7922 Nov 11 02:53	22° \mathbb{M} 52'40	0°47'18
conjunction	7917 May 12 19:47	24° \mathcal{B} 52'06	-0°47'31	max. Earth dist.	7922 Nov 12 09:12	23° \mathbb{M} 09'18	6.35226 AU
minimum elong	7917 May 12 19:47	24° \mathcal{B} 52'06	0°47'38	morning rise	7922 Nov 24 12:20	25° \mathbb{M} 48'30	
max. Earth dist.	7917 May 11 14:41	24° \mathcal{B} 34'39	6.02048 AU		7922 Dec 14 03:28	0° \mathcal{A}	
morning rise	7917 May 25 19:01	27° \mathcal{B} 58'22		retrograde	7923 Mar 27 00:05	13° \mathcal{A} 08'44	
	7917 Jun 03 08:17	0° \mathbb{I}		opposition	7923 May 26 11:11	8° \mathcal{A} 09'55	1°12'38
retrograde	7917 Oct 03 01:01	18° \mathbb{I} 06'05		min. Earth dist.	7923 May 26 00:19	8° \mathcal{A} 13'29	4.41602 AU
opposition	7917 Dec 01 22:15	13° \mathbb{I} 08'33	-1°14'41	direct	7923 Jul 26 21:38	3° \mathcal{A} 08'17	
min. Earth dist.	7917 Dec 02 05:24	13° \mathbb{I} 06'11	3.95844 AU	evening set	7923 Nov 29 18:32	20° \mathcal{A} 35'19	
direct	7918 Jan 29 19:02	8° \mathbb{I} 13'48					
evening set	7918 Jun 05 05:40	28° \mathbb{I} 09'33		conjunction	7923 Dec 12 23:41	23° \mathcal{A} 25'24	0°49'12
	7918 Jun 12 19:00	0° \mathcal{E}		minimum elong	7923 Dec 12 23:42	23° \mathcal{A} 25'24	0°49'20
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conjunction	7918 Jun 18 10:03	1° \mathcal{E} 22'35	-0°46'42	morning rise	7923 Dec 26 02:37	26° \mathcal{A} 14'20	
minimum elong	7918 Jun 18 10:04	1° \mathcal{E} 22'35	0°46'49		7924 Jan 13 00:43	0° \mathcal{B}	
max. Earth dist.	7918 Jun 18 17:15	1° \mathcal{E} 26'59	5.91881 AU	retrograde	7924 Apr 24 18:09	12° \mathcal{B} 57'17	
morning rise	7918 Jul 01 16:49	4° \mathcal{E} 37'01		opposition	7924 Jun 24 13:11	8° \mathcal{B} 01'46	1°05'21
retrograde	7918 Nov 10 23:15	25° \mathcal{E} 29'01		min. Earth dist.	7924 Jun 24 22:07	7° \mathcal{B} 58'53	4.49097 AU
opposition	7919 Jan 09 11:03	20° \mathcal{E} 27'57	-0°58'35	direct	7924 Aug 25 22:16	2° \mathcal{B} 59'57	
min. Earth dist.	7919 Jan 08 17:31	20° \mathcal{E} 33'51	3.90629 AU	evening set	7924 Dec 29 10:54	20° \mathcal{B} 11'56	
direct	7919 Mar 08 10:54	15° \mathcal{E} 33'32		max. Earth dist.	7925 Jan 10 06:54	22° \mathcal{B} 43'46	6.49681 AU
	7919 Jun 19 07:12	0° Ω					
evening set	7919 Jul 13 03:17	5° Ω 38'33		conjunction	7925 Jan 11 10:51	22° \mathcal{B} 58'45	0°38'01
				minimum elong	7925 Jan 11 10:52	22° \mathcal{B} 58'46	0°38'09
conjunction	7919 Jul 26 15:09	8° Ω 55'01	-0°27'00	morning rise	7925 Jan 24 08:41	25° \mathcal{B} 44'33	
minimum elong	7919 Jul 26 15:10	8° Ω 55'02	0°27'07		7925 Feb 13 17:45	0° \approx	
max. Earth dist.	7919 Jul 28 10:40	9° Ω 21'27	5.92155 AU	retrograde	7925 May 24 15:09	12° \approx 20'21	
morning rise	7919 Aug 09 05:26	12° Ω 12'42		opposition	7925 Jul 24 13:58	7° \approx 27'00	0°41'24
	7919 Aug 20 21:47	15° Ω		min. Earth dist.	7925 Jul 25 17:09	7° \approx 18'18	4.48184 AU
	7919 Nov 06 05:55	0° \mathbb{P}		direct	7925 Sep 25 08:22	2° \approx 25'28	
retrograde	7919 Dec 18 23:04	2° \mathbb{P} 52'09			7926 Jan 06 03:20	15° \approx	
	7920 Jan 30 15:38	30° \mathbb{R} Ω		evening set	7926 Jan 28 15:47	19° \approx 44'25	
min. Earth dist.	7920 Feb 14 21:14	28° Ω 00'11	3.96413 AU	max. Earth dist.	7926 Feb 08 12:44	22° \approx 05'54	6.44533 AU
opposition	7920 Feb 16 08:17	27° Ω 48'16	-0°18'21				
direct	7920 Apr 14 07:46	22° Ω 52'07		conjunction	7926 Feb 10 12:10	22° \approx 31'43	0°16'52
	7920 Jun 22 05:36	0° \mathbb{P}		minimum elong	7926 Feb 10 12:11	22° \approx 31'44	0°16'57
asc. node	7920 Jul 22 15:02	6° \mathbb{P} 12'51		morning rise	7926 Feb 23 06:28	25° \approx 18'14	
evening set	7920 Aug 19 01:46	12° \mathbb{P} 30'10			7926 Mar 17 10:33	0° \mathcal{H}	
				retrograde	7926 Jun 24 14:01	12° \mathcal{H} 17'38	
conjunction	7920 Sep 01 17:38	15° \mathbb{P} 43'28	0°03'13	opposition	7926 Aug 24 13:48	7° \mathcal{H} 25'02	0°06'01
minimum elong	7920 Sep 01 17:38	15° \mathbb{P} 43'28	0°03'11	min. Earth dist.	7926 Aug 26 03:24	7° \mathcal{H} 13'02	4.39090 AU
behind sun begin	7920 Sep 01 09:17	15° \mathbb{P} 38'34		desc. node	7926 Oct 24 08:18	2° \mathcal{H} 24'46	
behind sun end	7920 Sep 02 01:59	15° \mathbb{P} 48'22		direct	7926 Oct 26 00:03	2° \mathcal{H} 24'31	
max. Earth dist.	7920 Sep 04 05:20	16° \mathbb{P} 18'42	6.02760 AU	evening set	7927 Feb 28 09:24	20° \mathcal{H} 11'44	
morning rise	7920 Sep 15 11:16	18° \mathbb{P} 57'18		max. Earth dist.	7927 Mar 10 20:08	22° \mathcal{H} 31'47	6.32097 AU
	7920 Nov 05 05:25	0° Ω					
retrograde	7921 Jan 22 09:49	8° Ω 36'09		conjunction	7927 Mar 13 03:43	23° \mathcal{H} 02'58	-0°09'33
min. Earth dist.	7921 Mar 21 11:39	3° Ω 44'50	4.10563 AU	minimum elong	7927 Mar 13 03:42	23° \mathcal{H} 02'57	0°09'32
opposition	7921 Mar 23 02:04	3° Ω 31'47	0°26'58	behind sun begin	7927 Mar 12 21:03	22° \mathcal{H} 59'14	
	7921 Apr 21 05:15	30° \mathbb{R} \mathbb{P}		behind sun end	7927 Mar 13 10:20	23° \mathcal{H} 06'39	
direct	7921 May 20 21:52	28° \mathbb{P} 33'08		morning rise	7927 Mar 25 20:52	25° \mathcal{H} 53'54	
	7921 Jun 19 21:28	0° Ω			7927 Apr 13 13:24	0° Υ	
evening set	7921 Sep 24 11:46	17° Ω 23'14		retrograde	7927 Jul 27 18:05	13° Υ 45'56	
				opposition	7927 Sep 26 11:21	8° Υ 52'46	-0°33'08
conjunction	7921 Oct 08 02:53	20° Ω 28'40	0°30'54	min. Earth dist.	7927 Sep 28 02:43	8° Υ 40'07	4.24020 AU
minimum elong	7921 Oct 08 02:52	20° Ω 28'39	0°30'56	direct	7927 Nov 27 00:09	3° Υ 54'00	
max. Earth dist.	7921 Oct 10 08:49	20° Ω 59'16	6.19112 AU	evening set	7928 Mar 31 14:04	22° Υ 26'13	


















































































































max. Earth dist.	7928 Apr 11 08:11	24° Υ 55'57	6.15560 AU	conjunction	7933 Oct 13 00:22	25° Ω 16'49	0°33'59
				minimum elong	7933 Oct 13 00:20	25° Ω 16'48	0°34'02
conjunction	7928 Apr 13 08:55	25° Υ 24'19	-0°34'13	max. Earth dist.	7933 Oct 15 03:39	25° Ω 45'45	6.21626 AU
minimum elong	7928 Apr 13 08:54	25° Υ 24'18	0°34'16	morning rise	7933 Oct 26 14:47	28° Ω 20'29	
morning rise	7928 Apr 26 03:53	28° Υ 22'48			7933 Nov 03 01:41	0° \mathbb{M}	
	7928 May 03 04:30	0° \mathcal{B}			7934 Jan 28 03:33	15° \mathbb{M}	
	7928 Jul 22 07:33	15° \mathcal{B}		retrograde	7934 Feb 28 14:54	16° \mathbb{M} 33'23	
retrograde	7928 Aug 31 11:43	17° \mathcal{B} 27'59			7934 Mar 31 22:06	15° $\mathcal{R}\mathbb{M}$	
	7928 Oct 11 01:30	15° $\mathcal{R}\mathcal{B}$		opposition	7934 Apr 29 17:47	11° \mathbb{M} 31'36	1°02'52
opposition	7928 Oct 30 19:26	12° \mathcal{B} 32'56	-1°04'34	min. Earth dist.	7934 Apr 28 15:22	11° \mathbb{M} 40'25	4.29799 AU
min. Earth dist.	7928 Oct 31 21:31	12° \mathcal{B} 24'26	4.07247 AU	direct	7934 Jun 29 01:38	6° \mathbb{M} 30'46	
direct	7928 Dec 29 21:29	7° \mathcal{B} 36'32			7934 Sep 17 01:13	15° \mathbb{M}	
	7929 Mar 11 04:35	15° \mathcal{B}		evening set	7934 Nov 02 06:24	24° \mathbb{M} 26'34	
evening set	7929 May 04 23:02	26° \mathcal{B} 59'16					
				conjunction	7934 Nov 15 16:18	27° \mathbb{M} 22'09	0°48'19
conjunction	7929 May 17 21:39	0° \mathbb{I} 05'46	-0°48'33	minimum elong	7934 Nov 15 16:17	27° \mathbb{M} 22'09	0°48'25
minimum elong	7929 May 17 21:39	0° \mathbb{I} 05'46	0°48'40	max. Earth dist.	7934 Nov 16 18:19	27° \mathbb{M} 36'22	6.37170 AU
max. Earth dist.	7929 May 16 22:22	29° \mathcal{B} 51'45	6.00040 AU		7934 Nov 27 17:44	0° \mathcal{A}	
	7929 May 17 12:04	0° \mathbb{I}		morning rise	7934 Nov 29 00:45	0° \mathcal{A} 16'49	
morning rise	7929 May 30 21:44	3° \mathbb{I} 13'21		retrograde	7935 Mar 31 05:32	17° \mathcal{A} 30'12	
retrograde	7929 Oct 08 14:04	23° \mathbb{I} 30'10		opposition	7935 May 30 17:01	12° \mathcal{A} 31'54	1°12'44
opposition	7929 Dec 07 09:11	18° \mathbb{I} 32'09	-1°14'12	min. Earth dist.	7935 May 30 09:30	12° \mathcal{A} 34'22	4.43055 AU
min. Earth dist.	7929 Dec 07 13:08	18° \mathbb{I} 30'51	3.94509 AU	direct	7935 Jul 31 07:47	7° \mathcal{A} 30'11	
direct	7930 Feb 04 02:53	13° \mathbb{I} 37'36		evening set	7935 Dec 04 02:57	24° \mathcal{A} 54'03	
	7930 May 26 12:54	0° \mathcal{E}					
evening set	7930 Jun 10 13:40	3° \mathcal{E} 36'37		conjunction	7935 Dec 17 07:16	27° \mathcal{A} 43'30	0°48'20
				minimum elong	7935 Dec 17 07:17	27° \mathcal{A} 43'30	0°48'29
conjunction	7930 Jun 23 19:11	6° \mathcal{E} 50'25	-0°44'54	max. Earth dist.	7935 Dec 17 03:05	27° \mathcal{A} 41'15	6.47185 AU
minimum elong	7930 Jun 23 19:12	6° \mathcal{E} 50'25	0°45'03		7935 Dec 27 21:53	0° \mathcal{B}	
max. Earth dist.	7930 Jun 24 08:53	6° \mathcal{E} 58'47	5.91359 AU	morning rise	7935 Dec 30 09:32	0° \mathcal{B} 31'50	
morning rise	7930 Jul 07 03:04	10° \mathcal{E} 05'37		retrograde	7936 Apr 28 22:09	17° \mathcal{B} 12'21	
	7930 Oct 22 23:12	0° Ω		opposition	7936 Jun 28 17:36	12° \mathcal{B} 17'11	1°02'51
retrograde	7930 Nov 16 11:24	0° Ω 58'37		min. Earth dist.	7936 Jun 29 05:31	12° \mathcal{B} 13'20	4.49324 AU
	7930 Dec 10 19:27	30° $\mathcal{R}\mathcal{E}$		direct	7936 Aug 30 04:26	7° \mathcal{B} 15'17	
opposition	7931 Jan 14 22:01	25° \mathcal{E} 57'05	-0°53'55	evening set	7937 Jan 02 16:48	24° \mathcal{B} 27'30	
min. Earth dist.	7931 Jan 14 00:55	26° \mathcal{E} 04'13	3.91000 AU	max. Earth dist.	7937 Jan 14 10:13	26° \mathcal{B} 58'06	6.49271 AU
direct	7931 Mar 13 20:12	21° \mathcal{E} 02'33					
	7931 May 30 12:37	0° Ω		conjunction	7937 Jan 15 16:21	27° \mathcal{B} 14'17	0°35'31
evening set	7931 Jul 18 13:06	11° Ω 04'47		minimum elong	7937 Jan 15 16:22	27° \mathcal{B} 14'18	0°35'38
				morning rise	7937 Jan 28 13:26	29° \mathcal{B} 59'59	
conjunction	7931 Aug 01 01:36	14° Ω 21'02	-0°23'03		7937 Jan 28 13:27	0° \approx	
minimum elong	7931 Aug 01 01:37	14° Ω 21'02	0°23'08		7937 Apr 25 23:34	15° \approx	
max. Earth dist.	7931 Aug 02 23:32	14° Ω 48'51	5.93335 AU	retrograde	7937 May 28 20:52	16° \approx 37'49	
	7931 Aug 03 17:58	15° Ω			7937 Jun 30 20:24	15° $\mathcal{R}\approx$	
morning rise	7931 Aug 14 16:46	17° Ω 38'28		opposition	7937 Jul 28 20:36	11° \approx 44'40	0°36'55
	7931 Oct 09 13:47	0° \mathbb{P}		min. Earth dist.	7937 Jul 30 01:17	11° \approx 35'30	4.47174 AU
retrograde	7931 Dec 24 01:13	8° \mathbb{P} 10'33		direct	7937 Sep 29 14:04	6° \approx 43'15	
min. Earth dist.	7932 Feb 19 23:55	3° \mathbb{P} 18'56	3.98249 AU		7937 Dec 19 00:46	15° \approx	
opposition	7932 Feb 21 12:44	3° \mathbb{P} 06'24	-0°11'44	evening set	7938 Feb 01 22:46	24° \approx 05'38	
	7932 Mar 17 08:07	30° $\mathcal{R}\Omega$		max. Earth dist.	7938 Feb 12 16:42	26° \approx 26'03	6.42987 AU
direct	7932 Apr 19 14:09	28° Ω 09'53					
	7932 May 22 22:29	0° \mathbb{P}		conjunction	7938 Feb 14 18:39	26° \approx 53'21	0°13'18
asc. node	7932 May 31 20:26	1° \mathbb{P} 03'00		minimum elong	7938 Feb 14 18:39	26° \approx 53'21	0°13'23
evening set	7932 Aug 24 07:17	17° \mathbb{P} 41'01		behind sun begin	7938 Feb 14 14:04	26° \approx 50'51	
				behind sun end	7938 Feb 14 23:15	26° \approx 55'51	
conjunction	7932 Sep 06 23:23	20° \mathbb{P} 53'18	0°07'33	morning rise	7938 Feb 27 12:48	29° \approx 40'23	
minimum elong	7932 Sep 06 23:23	20° \mathbb{P} 53'18	0°07'32		7938 Mar 01 00:57	0° \mathcal{H}	
behind sun begin	7932 Sep 06 15:47	20° \mathbb{P} 48'52		retrograde	7938 Jun 29 04:29	16° \mathcal{H} 46'07	
behind sun end	7932 Sep 07 06:58	20° \mathbb{P} 57'43		opposition	7938 Aug 29 02:32	11° \mathcal{H} 53'33	0°00'26
max. Earth dist.	7932 Sep 09 11:50	21° \mathbb{P} 28'46	6.05070 AU	min. Earth dist.	7938 Aug 30 17:42	11° \mathcal{H} 41'03	4.37100 AU
morning rise	7932 Sep 20 16:45	24° \mathbb{P} 05'55		desc. node	7938 Sep 02 12:26	11° \mathcal{H} 19'46	
	7932 Oct 16 18:26	0° Ω		direct	7938 Oct 30 11:23	6° \mathcal{H} 53'14	
retrograde	7933 Jan 27 04:46	13° Ω 33'31		evening set	7939 Mar 04 20:24	24° \mathcal{H} 46'26	
min. Earth dist.	7933 Mar 26 08:25	8° Ω 41'49	4.13087 AU	max. Earth dist.	7939 Mar 15 07:21	27° \mathcal{H} 07'20	6.29829 AU
opposition	7933 Mar 27 21:14	8° Ω 29'21	0°32'38				
direct	7933 May 25 22:30	3° Ω 30'22		conjunction	7939 Mar 17 14:44	27° \mathcal{H} 38'32	-0°13'21
evening set	7933 Sep 29 09:48	22° Ω 12'43		minimum elong	7939 Mar 17 14:43	27° \mathcal{H} 38'32	0°13'21

behind sun begin	7939 Mar 17 10:03	27° H 35'55	morning rise	7944 Sep 25 17:18	29° H 01'22	
behind sun end	7939 Mar 17 19:23	27° H 41'09		7944 Sep 29 23:03	0° H	
	7939 Mar 28 01:46	0° Y	retrograde	7945 Jan 31 17:21	18° H 18'28	
morning rise	7939 Mar 30 07:57	0° Y 30'25	min. Earth dist.	7945 Mar 30 23:13	13° H 26'54	4.15400 AU
retrograde	7939 Aug 01 14:56	18° Y 32'02	opposition	7945 Apr 01 11:36	13° H 14'36	0°37'49
opposition	7939 Oct 01 07:59	13° Y 38'41 -0°38'25	direct	7945 May 30 15:46	8° H 15'22	
min. Earth dist.	7939 Oct 02 21:02	13° Y 26'45 4.21664 AU	evening set	7945 Oct 04 03:16	26° H 51'10	
direct	7939 Dec 01 15:16	8° Y 40'18				
evening set	7940 Apr 05 07:57	27° Y 19'30	conjunction	7945 Oct 17 17:19	29° H 54'06	0°36'45
max. Earth dist.	7940 Apr 16 06:02	29° Y 52'19 6.13328 AU	minimum elong	7945 Oct 17 17:17	29° H 54'05	0°36'49
	7940 Apr 16 19:10	0° H		7945 Oct 18 03:49	0° H	
			max. Earth dist.	7945 Oct 19 16:24	0° H 20'34	6.23816 AU
conjunction	7940 Apr 18 03:02	0° H 18'39 -0°37'06	morning rise	7945 Oct 31 07:04	2° H 56'33	
minimum elong	7940 Apr 18 03:01	0° H 18'38 0°37'10		7945 Dec 30 02:12	15° H	
morning rise	7940 Apr 30 22:27	3° H 18'17	retrograde	7946 Mar 04 22:49	21° H 00'54	
	7940 Jun 24 10:56	15° H	min. Earth dist.	7946 May 03 02:28	16° H 07'18	4.31696 AU
retrograde	7940 Sep 05 18:57	22° H 33'34	opposition	7946 May 04 01:30	15° H 59'38	1°05'26
opposition	7940 Nov 05 00:09	17° H 38'10 -1°07'32		7946 May 11 13:48	15° H	
min. Earth dist.	7940 Nov 05 23:57	17° H 30'24 4.05345 AU	direct	7946 Jul 03 14:17	10° H 58'41	
	7940 Nov 26 07:25	15° H		7946 Aug 25 10:54	15° H	
direct	7941 Jan 03 22:22	12° H 42'06	evening set	7946 Nov 06 17:23	28° H 50'02	
	7941 Feb 10 23:29	15° H		7946 Nov 12 02:18	0° H	
	7941 Apr 30 21:12	0° H				
evening set	7941 May 09 23:52	2° H 10'04	conjunction	7946 Nov 20 02:39	1° H 44'46	0°49'08
			minimum elong	7946 Nov 20 02:39	1° H 44'46	0°49'15
conjunction	7941 May 22 23:17	5° H 17'34 -0°49'13	max. Earth dist.	7946 Nov 21 00:59	1° H 56'57	6.38645 AU
minimum elong	7941 May 22 23:17	5° H 17'34 0°49'20	morning rise	7946 Dec 03 10:17	4° H 38'32	
max. Earth dist.	7941 May 22 05:17	5° H 06'42 5.98659 AU	retrograde	7947 Apr 04 08:01	21° H 46'54	
morning rise	7941 Jun 05 00:16	8° H 26'12	opposition	7947 Jun 03 02:53	16° H 49'06	1°12'28
retrograde	7941 Oct 13 23:46	28° H 49'09	min. Earth dist.	7947 Jun 03 15:22	16° H 50'55	4.44049 AU
opposition	7941 Dec 12 18:07	23° H 50'40 -1°13'07	direct	7947 Aug 04 13:21	11° H 47'23	
min. Earth dist.	7941 Dec 12 17:56	23° H 50'44 3.93832 AU	evening set	7947 Dec 08 09:43	29° H 09'37	
direct	7942 Feb 09 07:46	18° H 56'17		7947 Dec 12 08:09	0° H	
	7942 May 08 07:26	0° H				
evening set	7942 Jun 15 19:14	8° H 56'03	conjunction	7947 Dec 21 13:24	1° H 58'38	0°47'14
			minimum elong	7947 Dec 21 13:25	1° H 58'39	0°47'23
conjunction	7942 Jun 29 01:32	12° H 10'14 -0°42'48	max. Earth dist.	7947 Dec 21 05:48	1° H 54'33	6.47651 AU
minimum elong	7942 Jun 29 01:33	12° H 10'15 0°42'57	morning rise	7948 Jan 03 14:53	4° H 46'32	
max. Earth dist.	7942 Jun 29 19:15	12° H 21'04 5.91434 AU	retrograde	7948 May 03 02:13	21° H 25'55	
morning rise	7942 Jul 12 10:34	15° H 25'54	opposition	7948 Jul 02 21:30	16° H 31'10	1°00'04
	7942 Sep 17 12:29	0° H	min. Earth dist.	7948 Jul 03 12:05	16° H 26'28	4.49250 AU
retrograde	7942 Nov 21 17:04	6° H 17'30	direct	7948 Sep 03 10:00	11° H 29'23	
min. Earth dist.	7943 Jan 19 04:31	1° H 23'41 3.91825 AU	evening set	7949 Jan 06 21:57	28° H 42'34	
opposition	7943 Jan 20 04:44	1° H 15'29 -0°48'58		7949 Jan 12 22:38	0° H	
	7943 Jan 29 14:48	30° H	max. Earth dist.	7949 Jan 18 10:40	1° H 10'58	6.48661 AU
direct	7943 Mar 19 02:32	26° H 20'45				
	7943 May 05 14:30	0° H	conjunction	7949 Jan 19 20:51	1° H 29'21	0°32'51
	7943 Jul 18 06:40	15° H	minimum elong	7949 Jan 19 20:52	1° H 29'22	0°32'58
evening set	7943 Jul 23 18:31	16° H 18'49	morning rise	7949 Feb 01 17:37	4° H 15'10	
				7949 Mar 28 19:33	15° H	
conjunction	7943 Aug 06 07:49	19° H 34'42 -0°19'03	retrograde	7949 Jun 02 04:26	20° H 55'43	
minimum elong	7943 Aug 06 07:50	19° H 34'42 0°19'09	opposition	7949 Aug 02 03:34	16° H 02'42	0°32'16
max. Earth dist.	7943 Aug 08 09:29	20° H 04'39 5.94828 AU	min. Earth dist.	7949 Aug 03 10:00	15° H 52'58	4.46071 AU
morning rise	7943 Aug 19 23:22	22° H 51'36		7949 Aug 10 09:03	15° H	
	7943 Sep 19 20:21	0° H	direct	7949 Oct 03 20:22	11° H 01'23	
retrograde	7943 Dec 29 00:45	13° H 15'26		7949 Nov 26 12:09	15° H	
min. Earth dist.	7944 Feb 24 23:31	8° H 23'36 4.00221 AU	evening set	7950 Feb 06 05:05	28° H 27'09	
opposition	7944 Feb 26 12:00	8° H 11'11 -0°05'19		7950 Feb 13 07:20	0° H	
asc. node	7944 Apr 12 00:23	3° H 30'53	max. Earth dist.	7950 Feb 16 22:50	0° H 47'56	6.41470 AU
direct	7944 Apr 24 16:38	3° H 14'22				
evening set	7944 Aug 29 07:56	22° H 38'36	conjunction	7950 Feb 19 00:48	1° H 15'20	0°09'41
			minimum elong	7950 Feb 19 00:48	1° H 15'20	0°09'45
conjunction	7944 Sep 12 00:02	25° H 49'51 0°11'38	behind sun begin	7950 Feb 18 18:15	1° H 11'46	
minimum elong	7944 Sep 12 00:01	25° H 49'51 0°11'37	behind sun end	7950 Feb 19 07:21	1° H 18'55	
behind sun begin	7944 Sep 11 18:09	25° H 46'26	morning rise	7950 Mar 03 18:32	4° H 02'49	
behind sun end	7944 Sep 12 05:54	25° H 53'15	retrograde	7950 Jul 03 16:19	21° H 14'42	
max. Earth dist.	7944 Sep 14 12:06	26° H 24'53 6.07319 AU	desc. node	7950 Jul 13 07:57	21° H 06'01	

opposition	7950 Sep 02 14:51	16° H 22'05	-0°05'07		7956 Sep 13 12:07	0° L	
min. Earth dist.	7950 Sep 04 05:36	16° H 09'42	4.35254 AU				
direct	7950 Nov 03 20:15	11° H 22'00		conjunction	7956 Sep 17 02:15	0° L 50'03	0°15'42
evening set	7951 Mar 09 06:50	29° H 20'29		minimum elong	7956 Sep 17 02:14	0° L 50'03	0°15'42
	7951 Mar 12 05:08	0° Y		behind sun begin	7956 Sep 17 01:10	0° L 49'26	
max. Earth dist.	7951 Mar 19 17:55	1° Y 42'09	6.27771 AU	behind sun end	7956 Sep 17 03:17	0° L 50'39	
				max. Earth dist.	7956 Sep 19 12:35	1° L 23'56	6.09287 AU
conjunction	7951 Mar 22 00:56	2° Y 13'19	-0°17'02	morning rise	7956 Sep 30 19:21	4° L 00'32	
minimum elong	7951 Mar 22 00:55	2° Y 13'19	0°17'02	retrograde	7957 Feb 05 09:15	23° L 08'10	
morning rise	7951 Apr 03 18:21	5° Y 06'04		min. Earth dist.	7957 Apr 04 17:33	18° L 16'09	4.17500 AU
retrograde	7951 Aug 06 12:52	23° Y 16'35		opposition	7957 Apr 06 03:58	18° L 04'31	0°42'50
opposition	7951 Oct 06 03:49	18° Y 22'58	-0°43'23	direct	7957 Jun 04 12:59	13° L 04'59	
min. Earth dist.	7951 Oct 07 16:12	18° Y 11'13	4.19500 AU		7957 Oct 01 19:53	0° L	
direct	7951 Dec 06 07:48	13° Y 24'49		evening set	7957 Oct 08 23:10	1° L 34'50	
	7952 Mar 31 14:54	0° B					
evening set	7952 Apr 10 00:09	2° B 10'13		conjunction	7957 Oct 22 12:49	4° L 36'41	0°39'20
max. Earth dist.	7952 Apr 21 01:38	4° B 45'41	6.11232 AU	minimum elong	7957 Oct 22 12:47	4° L 36'40	0°39'25
				max. Earth dist.	7957 Oct 24 10:32	5° L 02'15	6.25895 AU
conjunction	7952 Apr 22 19:43	5° B 10'25	-0°39'41	morning rise	7957 Nov 05 01:44	7° L 37'54	
minimum elong	7952 Apr 22 19:42	5° B 10'24	0°39'46		7957 Dec 09 17:04	15° L	
morning rise	7952 May 05 15:37	8° B 11'10		retrograde	7958 Mar 09 06:35	25° L 33'43	
	7952 Jun 04 17:19	15° B		opposition	7958 May 08 11:18	20° L 32'56	1°07'41
retrograde	7952 Sep 10 22:33	27° B 36'05		min. Earth dist.	7958 May 07 13:18	20° L 40'15	4.33620 AU
opposition	7952 Nov 10 03:11	22° B 40'17	-1°09'58	direct	7958 Jul 08 02:50	15° L 31'55	
min. Earth dist.	7952 Nov 10 23:50	22° B 33'32	4.03505 AU		7958 Oct 26 18:11	0° A	
direct	7953 Jan 08 19:59	17° B 44'31		evening set	7958 Nov 11 06:46	3° A 18'28	
	7953 Apr 13 12:13	0° H					
evening set	7953 May 14 23:19	7° H 17'41		conjunction	7958 Nov 24 15:09	6° A 12'14	0°49'43
				minimum elong	7958 Nov 24 15:08	6° A 12'13	0°49'51
conjunction	7953 May 27 23:22	10° H 26'10	-0°49'30	max. Earth dist.	7958 Nov 25 08:58	6° A 21'55	6.40301 AU
minimum elong	7953 May 27 23:22	10° H 26'10	0°49'37	morning rise	7958 Dec 07 21:58	9° A 04'59	
max. Earth dist.	7953 May 27 08:52	10° H 17'23	5.97232 AU	retrograde	7959 Apr 08 14:06	26° A 07'32	
morning rise	7953 Jun 10 01:25	13° H 35'54		opposition	7959 Jun 08 03:02	21° A 10'14	1°11'49
	7953 Aug 28 11:23	0° E		min. Earth dist.	7959 Jun 08 00:40	21° A 11'00	4.45360 AU
retrograde	7953 Oct 19 07:44	4° E 05'21		direct	7959 Aug 08 23:58	16° A 08'30	
	7953 Dec 11 07:36	30° R H			7959 Nov 26 05:17	0° B	
opposition	7953 Dec 18 01:20	29° H 06'20	-1°11'27	evening set	7959 Dec 12 17:36	3° B 27'37	
min. Earth dist.	7953 Dec 17 21:38	29° H 07'34	3.92977 AU				
direct	7954 Feb 14 12:25	24° H 11'57		conjunction	7959 Dec 25 20:34	6° B 16'01	0°45'55
	7954 Apr 16 14:12	0° E		minimum elong	7959 Dec 25 20:35	6° B 16'02	0°46'03
evening set	7954 Jun 20 23:59	14° E 13'29		max. Earth dist.	7959 Dec 25 09:55	6° B 10'19	6.48540 AU
				morning rise	7960 Jan 07 21:14	9° B 03'17	
conjunction	7954 Jul 04 07:29	17° E 28'17	-0°40'22	retrograde	7960 May 07 04:54	25° B 40'05	
minimum elong	7954 Jul 04 07:30	17° E 28'18	0°40'30	opposition	7960 Jul 07 02:03	20° B 45'36	0°57'01
max. Earth dist.	7954 Jul 05 07:15	17° E 42'49	5.91252 AU	min. Earth dist.	7960 Jul 07 18:04	20° B 40'27	4.49691 AU
morning rise	7954 Jul 17 17:25	20° E 44'29		direct	7960 Sep 07 15:26	15° B 43'52	
	7954 Aug 26 18:42	0° L			7960 Dec 28 04:27	0° C	
retrograde	7954 Nov 27 00:23	11° L 35'38		evening set	7961 Jan 11 02:48	2° C 56'08	
min. Earth dist.	7955 Jan 24 09:04	6° L 41'54	3.92340 AU	max. Earth dist.	7961 Jan 22 13:40	5° C 23'35	6.48626 AU
opposition	7955 Jan 25 10:47	6° L 33'11	-0°43'37				
direct	7955 Mar 24 08:35	1° L 38'13		conjunction	7961 Jan 24 01:07	5° C 42'41	0°30'06
	7955 Jun 30 20:42	15° L		minimum elong	7961 Jan 24 01:08	5° C 42'42	0°30'13
evening set	7955 Jul 29 00:27	21° L 33'34		morning rise	7961 Feb 05 21:08	8° C 28'15	
					7961 Mar 09 13:05	15° C	
conjunction	7955 Aug 11 14:23	24° L 49'11	-0°14'54	retrograde	7961 Jun 06 09:22	25° C 09'40	
minimum elong	7955 Aug 11 14:24	24° L 49'12	0°14'59	opposition	7961 Aug 06 09:17	20° C 16'49	0°27'34
behind sun begin	7955 Aug 11 11:29	24° L 47'27		min. Earth dist.	7961 Aug 07 17:28	20° C 06'33	4.45550 AU
behind sun end	7955 Aug 11 17:19	24° L 50'57		direct	7961 Oct 08 02:21	15° C 15'40	
max. Earth dist.	7955 Aug 13 18:26	25° L 20'27	5.95965 AU		7962 Jan 28 18:48	0° H	
morning rise	7955 Aug 25 06:39	28° L 05'49		evening set	7962 Feb 10 09:31	2° H 42'56	
	7955 Sep 02 07:32	0° M		max. Earth dist.	7962 Feb 20 23:48	5° H 02'15	6.40476 AU
retrograde	7956 Jan 02 23:37	18° M 22'36					
asc. node	7956 Feb 21 09:11	14° M 39'53		conjunction	7962 Feb 23 04:40	5° H 31'19	0°06'10
min. Earth dist.	7956 Feb 29 21:52	13° M 31'11	4.01854 AU	minimum elong	7962 Feb 23 04:39	5° H 31'18	0°06'13
opposition	7956 Mar 02 11:55	13° M 18'15	0°01'11	behind sun begin	7962 Feb 22 21:07	5° H 27'11	
direct	7956 Apr 29 18:01	8° M 21'04		behind sun end	7962 Feb 23 12:12	5° H 35'26	
evening set	7956 Sep 03 10:12	27° M 39'44		morning rise	7962 Mar 07 22:15	8° H 19'05	

desc. node	7962 May 25 10:23	22° H 46'30	asc. node	7968 Jan 02 07:08	23° H 28'29
retrograde	7962 Jul 08 03:04	25° H 35'43	retrograde	7968 Jan 08 00:25	23° H 31'47
opposition	7962 Sep 07 00:39	20° H 43'00 -0°10'24	min. Earth dist.	7968 Mar 05 22:05	18° H 40'16 4.03203 AU
min. Earth dist.	7962 Sep 08 16:12	20° H 30'21 4.33819 AU	opposition	7968 Mar 07 12:09	18° H 27'18 0°07'33
direct	7962 Nov 08 04:12	15° H 43'04	direct	7968 May 04 21:19	13° H 29'45
	7963 Feb 24 14:18	0° Y		7968 Aug 27 14:25	0° L
evening set	7963 Mar 13 13:39	3° Y 45'40	evening set	7968 Sep 08 13:37	2° L 43'55
max. Earth dist.	7963 Mar 24 01:44	6° Y 08'25 6.25996 AU			
			conjunction	7968 Sep 22 05:50	5° L 53'27 0°19'36
conjunction	7963 Mar 26 07:52	6° Y 39'12 -0°20'27	minimum elong	7968 Sep 22 05:49	5° L 53'26 0°19'37
minimum elong	7963 Mar 26 07:50	6° Y 39'11 0°20'27	max. Earth dist.	7968 Sep 24 17:42	6° L 28'04 6.11088 AU
morning rise	7963 Apr 08 01:12	9° Y 32'41	morning rise	7968 Oct 05 22:36	9° L 02'57
retrograde	7963 Aug 11 05:22	27° Y 51'26	retrograde	7969 Feb 10 01:21	28° L 01'21
opposition	7963 Oct 10 19:46	22° Y 57'37 -0°47'50	min. Earth dist.	7969 Apr 09 10:56	23° L 09'30 4.19554 AU
min. Earth dist.	7963 Oct 12 07:15	22° Y 46'10 4.17495 AU	opposition	7969 Apr 10 21:15	22° L 57'56 0°47'29
direct	7963 Dec 10 18:52	17° Y 59'47	direct	7969 Jun 09 09:06	17° L 58'09
	7964 Mar 15 04:24	0° Z		7969 Sep 14 05:39	0° M
evening set	7964 Apr 14 13:00	6° Z 51'20	evening set	7969 Oct 13 20:10	6° M 21'54
max. Earth dist.	7964 Apr 25 15:40	9° Z 28'17 6.09151 AU			
			conjunction	7969 Oct 27 09:02	9° M 22'33 0°41'38
conjunction	7964 Apr 27 08:47	9° Z 52'34 -0°41'52	minimum elong	7969 Oct 27 09:01	9° M 22'32 0°41'42
minimum elong	7964 Apr 27 08:46	9° Z 52'34 0°41'58	max. Earth dist.	7969 Oct 29 02:58	9° M 45'54 6.28012 AU
morning rise	7964 May 10 05:25	12° Z 54'31	morning rise	7969 Nov 09 21:22	12° M 22'33
	7964 May 19 04:28	15° Z		7969 Nov 21 21:30	15° M
	7964 Aug 06 17:54	0° II		7970 Mar 03 17:48	0° Z
retrograde	7964 Sep 15 23:07	2° II 29'27	retrograde	7970 Mar 13 16:20	0° Z 09'36
	7964 Oct 26 13:06	30° R 8		7970 Mar 23 13:37	30° R 8
opposition	7964 Nov 15 02:16	27° R 33'18 -1°11'49	opposition	7970 May 12 22:13	25° M 09'08 1°09'28
min. Earth dist.	7964 Nov 15 20:41	27° R 27'15 4.01516 AU	min. Earth dist.	7970 May 12 02:56	25° M 15'32 4.35604 AU
direct	7965 Jan 13 15:00	22° R 37'43	direct	7970 Jul 12 19:11	20° M 07'52
	7965 Mar 25 04:40	0° II		7970 Oct 08 19:17	0° Z
evening set	7965 May 19 19:37	12° II 17'16	evening set	7970 Nov 15 20:24	7° Z 49'06
conjunction	7965 Jun 01 20:49	15° II 27'01 -0°49'24	conjunction	7970 Nov 29 04:09	10° Z 41'53 0°49'58
minimum elong	7965 Jun 01 20:49	15° II 27'01 0°49'33	minimum elong	7970 Nov 29 04:09	10° Z 41'53 0°50'06
max. Earth dist.	7965 Jun 01 11:20	15° II 21'16 5.95542 AU	max. Earth dist.	7970 Nov 29 19:43	10° Z 50'19 6.41984 AU
morning rise	7965 Jun 14 23:48	18° II 38'01	morning rise	7970 Dec 12 09:54	13° Z 33'35
	7965 Aug 04 10:08	0° S		7971 Mar 25 20:34	0° Z
retrograde	7965 Oct 24 15:39	9° S 15'17	retrograde	7971 Apr 12 17:40	0° Z 30'09
opposition	7965 Dec 23 05:51	4° S 15'52 -1°09'20		7971 Apr 30 14:03	30° R 8
min. Earth dist.	7965 Dec 23 00:06	4° S 17'48 3.91778 AU	opposition	7971 Jun 12 09:26	25° Z 33'12 1°10'43
	7966 Jan 31 03:21	30° R II	min. Earth dist.	7971 Jun 12 08:45	25° Z 33'26 4.46612 AU
direct	7966 Feb 19 13:24	29° II 21'34	direct	7971 Aug 13 08:53	20° Z 31'24
	7966 Mar 10 21:56	0° S		7971 Nov 08 12:45	0° Z
evening set	7966 Jun 26 03:16	19° S 26'45	evening set	7971 Dec 17 01:57	7° Z 47'34
conjunction	7966 Jul 09 11:48	22° S 42'23 -0°37'42	conjunction	7971 Dec 30 04:04	10° Z 35'23 0°44'18
minimum elong	7966 Jul 09 11:49	22° S 42'24 0°37'49	minimum elong	7971 Dec 30 04:04	10° Z 35'23 0°44'25
max. Earth dist.	7966 Jul 10 14:55	22° S 58'57 5.90658 AU	max. Earth dist.	7971 Dec 29 13:00	10° Z 27'18 6.49249 AU
morning rise	7966 Jul 22 23:06	25° S 59'27	morning rise	7972 Jan 12 04:01	13° Z 22'05
	7966 Aug 08 17:25	0° L	retrograde	7972 May 11 10:27	29° Z 56'58
	7966 Oct 29 04:06	15° L	opposition	7972 Jul 11 07:42	25° Z 02'47 0°53'34
retrograde	7966 Dec 02 05:32	16° L 51'53	min. Earth dist.	7972 Jul 12 03:08	24° Z 56'33 4.49801 AU
	7967 Jan 05 04:55	15° R 8	direct	7972 Sep 11 23:58	20° Z 01'02
min. Earth dist.	7967 Jan 29 10:35	11° L 58'56 3.92439 AU		7972 Dec 10 23:33	0° R
opposition	7967 Jan 30 15:34	11° L 49'06 -0°38'06	evening set	7973 Jan 15 08:34	7° R 13'24
direct	7967 Mar 29 11:24	6° L 53'56	max. Earth dist.	7973 Jan 26 15:00	9° R 38'43 6.48109 AU
	7967 Jun 11 01:46	15° L			
evening set	7967 Aug 03 06:37	26° L 48'31	conjunction	7973 Jan 28 06:21	9° R 59'56 0°27'04
			minimum elong	7973 Jan 28 06:22	9° R 59'56 0°27'11
conjunction	7967 Aug 16 21:16	0° H 04'07 -0°10'43	morning rise	7973 Feb 10 01:58	12° R 45'32
minimum elong	7967 Aug 16 21:17	0° H 04'08 0°10'47		7973 Feb 20 14:56	15° R
behind sun begin	7967 Aug 16 14:55	0° H 00'20	retrograde	7973 Jun 10 17:13	29° R 29'35
behind sun end	7967 Aug 17 03:39	0° H 07'55	opposition	7973 Aug 10 17:30	24° R 36'46 0°22'32
	7967 Aug 16 14:23	0° H	min. Earth dist.	7973 Aug 12 02:50	24° R 26'07 4.44431 AU
max. Earth dist.	7967 Aug 19 03:16	0° H 36'29 5.96747 AU	direct	7973 Oct 12 09:13	19° R 35'40
morning rise	7967 Aug 30 14:09	3° H 20'37		7974 Jan 11 17:34	0° H

evening set	7974 Feb 14 16:33	7° K 06'22		7979 May 14 04:55	15° Q	
max. Earth dist.	7974 Feb 25 06:29	9° K 25'57	6.38832 AU	7979 Jul 30 11:52	0° P	
				evening set	7979 Aug 08 16:00	2° P 09'58
conjunction	7974 Feb 27 11:31	9° K 55'14	0°02'25			
minimum elong	7974 Feb 27 11:31	9° K 55'14	0°02'28	conjunction	7979 Aug 22 07:18	5° P 25'01 -0°06'18
behind sun begin	7974 Feb 27 03:33	9° K 50'52		minimum elong	7979 Aug 22 07:18	5° P 25'01 0°06'21
behind sun end	7974 Feb 27 19:28	9° K 59'37		behind sun begin	7979 Aug 21 23:24	5° P 20'20
morning rise	7974 Mar 12 04:46	12° K 43'33		behind sun end	7979 Aug 22 15:12	5° P 29'43
desc. node	7974 Apr 03 14:06	17° K 32'14		max. Earth dist.	7979 Aug 24 17:27	5° P 59'43 5.98450 AU
	7974 Jul 03 23:19	0° Y		morning rise	7979 Sep 05 00:24	8° P 40'47
retrograde	7974 Jul 12 17:40	0° Y 07'10		asc. node	7979 Nov 11 06:59	22° P 52'22
	7974 Jul 21 11:22	30° R K		retrograde	7980 Jan 13 00:34	28° P 42'17
opposition	7974 Sep 11 14:45	25° K 14'22	-0°15'58	min. Earth dist.	7980 Mar 10 22:19	23° P 51'02 4.05471 AU
min. Earth dist.	7974 Sep 13 07:01	25° K 01'29	4.31735 AU	opposition	7980 Mar 12 13:14	23° P 37'48 0°13'57
direct	7974 Nov 12 15:18	20° K 14'40		direct	7980 May 10 01:00	18° P 39'57
	7975 Feb 06 23:01	0° Y			7980 Aug 09 10:51	0° Q
evening set	7975 Mar 18 01:41	8° Y 23'32		evening set	7980 Sep 13 16:54	7° Q 46'19
max. Earth dist.	7975 Mar 28 12:58	10° Y 46'39	6.23625 AU			
				conjunction	7980 Sep 27 08:38	10° Q 54'29 0°23'24
conjunction	7975 Mar 30 19:48	11° Y 18'01	-0°23'58	minimum elong	7980 Sep 27 08:36	10° Q 54'28 0°23'26
minimum elong	7975 Mar 30 19:47	11° Y 18'00	0°24'00	max. Earth dist.	7980 Sep 29 18:15	11° Q 27'36 6.13683 AU
morning rise	7975 Apr 12 13:34	14° Y 12'36		morning rise	7980 Oct 11 01:04	14° Q 02'36
	7975 Jul 04 22:02	0° B			7981 Jan 02 20:18	0° M
retrograde	7975 Aug 16 05:16	2° B 41'50		retrograde	7981 Feb 14 14:33	2° M 49'20
	7975 Sep 28 00:52	30° R Y			7981 Mar 29 08:35	30° R Q
opposition	7975 Oct 15 18:17	27° Y 47'42	-0°52'21	min. Earth dist.	7981 Apr 14 04:12	27° Q 57'12 4.22221 AU
min. Earth dist.	7975 Oct 17 04:01	27° Y 36'46	4.15000 AU	opposition	7981 Apr 15 12:50	27° Q 46'12 0°51'46
direct	7975 Dec 15 12:58	22° Y 50'07		direct	7981 Jun 14 05:56	22° Q 46'07
	7976 Feb 24 08:50	0° B			7981 Aug 25 10:52	0° M
evening set	7976 Apr 19 08:26	11° B 49'22		evening set	7981 Oct 18 14:35	11° M 02'08
max. Earth dist.	7976 Apr 30 16:17	14° B 30'08	6.06761 AU			
				conjunction	7981 Nov 01 02:54	14° M 01'27 0°43'38
conjunction	7976 May 02 04:58	14° B 51'55	-0°43'57	minimum elong	7981 Nov 01 02:52	14° M 01'26 0°43'44
minimum elong	7976 May 02 04:57	14° B 51'54	0°44'02	max. Earth dist.	7981 Nov 02 18:30	14° M 23'23 6.30539 AU
	7976 May 02 18:35	15° B			7981 Nov 05 12:37	15° M
morning rise	7976 May 15 02:11	17° B 55'13		morning rise	7981 Nov 14 14:06	16° M 59'58
	7976 Jul 09 16:24	0° II			7982 Jan 20 14:04	0° J
retrograde	7976 Sep 21 09:09	7° II 41'10		retrograde	7982 Mar 17 22:18	4° J 37'28
opposition	7976 Nov 20 09:16	2° II 44'39	-1°13'16		7982 May 14 10:11	30° R M
min. Earth dist.	7976 Nov 21 01:13	2° II 39'24	3.99467 AU	opposition	7982 May 17 06:11	29° M 37'34 1°10'48
	7976 Dec 12 12:27	30° R B		min. Earth dist.	7982 May 16 13:13	29° M 43'10 4.37793 AU
direct	7977 Jan 18 17:15	27° B 49'22		direct	7982 Jul 17 07:36	24° M 36'13
	7977 Feb 24 09:25	0° II			7982 Sep 17 22:51	0° J
evening set	7977 May 24 23:41	17° II 35'07		evening set	7982 Nov 20 07:07	12° J 11'58
conjunction	7977 Jun 07 01:45	20° II 46'02	-0°48'55	conjunction	7982 Dec 03 13:52	15° J 03'44 0°49'56
minimum elong	7977 Jun 07 01:45	20° II 46'02	0°49'03	minimum elong	7982 Dec 03 13:52	15° J 03'44 0°50'04
max. Earth dist.	7977 Jun 06 20:03	20° II 42'34	5.94033 AU	max. Earth dist.	7982 Dec 03 23:26	15° J 08'54 6.43660 AU
morning rise	7977 Jun 20 06:04	23° II 58'19		morning rise	7982 Dec 16 18:53	17° J 54'28
	7977 Jul 15 18:32	0° Q			7983 Feb 18 03:15	0° Z
retrograde	7977 Oct 30 02:54	14° Q 41'59		retrograde	7983 Apr 16 21:19	4° Z 45'46
opposition	7977 Dec 28 17:03	9° Q 42'05	-1°06'27		7983 Jun 15 04:36	30° R J
min. Earth dist.	7977 Dec 28 06:35	9° Q 45'36	3.91021 AU	opposition	7983 Jun 16 13:38	29° J 49'16 1°09'17
direct	7978 Feb 24 20:28	4° Q 47'50		min. Earth dist.	7983 Jun 16 16:50	29° J 48'14 4.47683 AU
evening set	7978 Jul 01 13:07	24° Q 54'34		direct	7983 Aug 17 17:13	24° J 47'25
					7983 Oct 18 22:27	0° Z
conjunction	7978 Jul 14 22:44	28° Q 10'41	-0°34'32	evening set	7983 Dec 21 07:32	12° Z 01'31
minimum elong	7978 Jul 14 22:46	28° Q 10'42	0°34'40			
max. Earth dist.	7978 Jul 16 07:07	28° Q 30'28	5.90752 AU	conjunction	7984 Jan 03 09:07	14° Z 48'56 0°42'28
	7978 Jul 22 09:52	0° Q		minimum elong	7984 Jan 03 09:07	14° Z 48'57 0°42'37
morning rise	7978 Jul 28 11:01	1° Q 28'10		max. Earth dist.	7984 Jan 02 14:46	14° Z 39'07 6.49634 AU
	7978 Sep 27 20:59	15° Q		morning rise	7984 Jan 16 08:14	17° Z 35'14
retrograde	7978 Dec 07 15:09	22° Q 18'20			7984 Mar 22 15:56	0° Z
min. Earth dist.	7979 Feb 03 17:42	17° Q 25'37	3.93381 AU	retrograde	7984 May 15 12:53	4° Z 09'41
opposition	7979 Feb 05 00:32	17° Q 15'09	-0°31'58		7984 Jul 09 17:16	30° R Z
	7979 Feb 22 06:52	15° R Q		opposition	7984 Jul 15 11:43	29° Z 15'46 0°49'55
direct	7979 Apr 03 22:06	12° Q 19'43		min. Earth dist.	7984 Jul 16 08:56	29° Z 08'58 4.49492 AU

direct	7984 Sep 16 04:02	24°  14'07		direct	7990 Mar 02 07:46	10°  18'04	
	7984 Nov 21 02:45	0° 			7990 Jul 05 07:51	0° 	
evening set	7985 Jan 19 13:18	11°  28'10		evening set	7990 Jul 06 23:21	0°  23'55	
max. Earth dist.	7985 Jan 30 16:13	13°  51'59	6.47120 AU				
conjunction	7985 Feb 01 10:33	14°  14'52	0°23'56	conjunction	7990 Jul 20 10:02	3°  40'11	-0°31'04
minimum elong	7985 Feb 01 10:33	14°  14'53	0°24'02	minimum elong	7990 Jul 20 10:03	3°  40'12	0°31'11
	7985 Feb 04 21:59	15° 		max. Earth dist.	7990 Jul 22 00:22	4°  03'32	5.91404 AU
morning rise	7985 Feb 14 05:44	17°  00'42		morning rise	7990 Aug 02 23:12	6°  05'44	
	7985 Apr 24 15:07	0° 			7990 Sep 06 12:47	15° 	
retrograde	7985 Jun 15 02:24	3°  49'08		retrograde	7990 Dec 12 22:56	27°  04'49	
	7985 Aug 06 16:37	30° 		min. Earth dist.	7991 Feb 08 22:58	22°  03'32	3.94830 AU
opposition	7985 Aug 15 01:35	28°  56'28	0°17'24	opposition	7991 Feb 10 08:09	22°  03'16	-0°25'35
min. Earth dist.	7985 Aug 16 13:37	28°  44'58	4.42810 AU	direct	7991 Apr 09 06:10	17°  04'31	
direct	7985 Oct 16 16:52	23°  55'32			7991 Jul 12 09:14	0° 	
	7985 Dec 22 21:35	0° 		evening set	7991 Aug 14 00:04	7°  07'40	
desc. node	7986 Feb 11 01:48	9°  47'36		conjunction	7991 Aug 27 15:30	10°  04'50	-0°01'51
evening set	7986 Feb 19 00:01	11°  31'27		minimum elong	7991 Aug 27 15:30	10°  04'50	0°01'55
max. Earth dist.	7986 Mar 01 11:13	13°  50'16	6.36687 AU	behind sun begin	7991 Aug 27 07:06	10°  06'53	
				behind sun end	7991 Aug 27 23:54	10°  06'48	
conjunction	7986 Mar 03 18:44	14°  21'04	-0°01'26	max. Earth dist.	7991 Aug 30 01:48	11°  16'26	6.00510 AU
minimum elong	7986 Mar 03 18:45	14°  21'04	0°01'23	morning rise	7991 Sep 10 08:56	13°  05'41	
behind sun begin	7986 Mar 03 10:46	14°  16'40		asc. node	7991 Sep 20 02:59	16°  07'17	
behind sun end	7986 Mar 04 02:44	14°  25'28			7991 Nov 29 04:57	0° 	
morning rise	7986 Mar 16 12:05	17°  10'15		retrograde	7992 Jan 17 20:33	3°  04'22	
	7986 May 21 02:54	0° 			7992 Mar 07 22:21	30° 	
retrograde	7986 Jul 17 10:05	4°  42'46		min. Earth dist.	7992 Mar 15 20:48	28°  05'04	4.07901 AU
	7986 Sep 14 22:47	30° 		opposition	7992 Mar 17 11:39	28°  04'52	0°20'09
opposition	7986 Sep 16 06:24	29°  49'52	-0°21'29	direct	7992 May 15 03:13	23°  04'36	
min. Earth dist.	7986 Sep 17 22:01	29°  37'10	4.29205 AU		7992 Jul 19 07:31	0° 	
direct	7986 Nov 17 02:37	24°  50'26		evening set	7992 Sep 18 17:46	12°  04'01	
	7987 Jan 16 11:35	0° 					
evening set	7987 Mar 22 15:22	13°  07'08		conjunction	7992 Oct 02 09:19	15°  04'53	0°26'59
max. Earth dist.	7987 Apr 02 05:47	15°  32'54	6.20918 AU	minimum elong	7992 Oct 02 09:17	15°  04'53	0°27'01
				max. Earth dist.	7992 Oct 04 17:43	16°  02'07	6.16278 AU
conjunction	7987 Apr 04 09:47	16°  02'49	-0°27'22	morning rise	7992 Oct 16 01:01	18°  05'32	
minimum elong	7987 Apr 04 09:46	16°  02'49	0°27'24		7992 Dec 07 22:00	0° 	
morning rise	7987 Apr 17 03:45	18°  05'39		retrograde	7993 Feb 19 03:26	7°  03'22	
	7987 Jun 08 03:48	0° 		min. Earth dist.	7993 Apr 18 20:01	2°  03'31	4.24736 AU
retrograde	7987 Aug 21 09:08	7°  39'41		opposition	7993 Apr 20 02:23	2°  02'20	0°55'40
opposition	7987 Oct 20 19:37	2°  45'21	-0°56'34		7993 May 09 13:57	30° 	
min. Earth dist.	7987 Oct 22 04:04	2°  34'50	4.12333 AU	direct	7993 Jun 19 00:53	27°  04'29'01	
	7987 Nov 12 08:32	30° 			7993 Jul 29 19:04	0° 	
direct	7987 Dec 20 09:47	27°  48'10		evening set	7993 Oct 20 09:39	15° 	
	7988 Jan 26 22:46	0° 			7993 Oct 23 07:12	15° 	
	7988 Apr 16 02:11	15° 		conjunction	7993 Nov 05 18:40	18°  03'06	0°45'23
evening set	7988 Apr 24 06:58	16°  55'39		minimum elong	7993 Nov 05 18:39	18°  03'05	0°45'29
max. Earth dist.	7988 May 05 18:11	19°  39'20	6.04377 AU	max. Earth dist.	7993 Nov 07 05:37	18°  05'21	6.32770 AU
				morning rise	7993 Nov 19 05:10	21°  03'22	
conjunction	7988 May 07 04:01	19°  59'31	-0°45'43		7993 Dec 29 23:27	0° 	
minimum elong	7988 May 07 04:00	19°  59'30	0°45'49	retrograde	7994 Mar 22 03:44	9°  02'41	
morning rise	7988 May 20 02:14	23°  04'16		opposition	7994 May 21 13:24	4°  03'14	1°11'45
	7988 Jun 19 05:17	0° 		min. Earth dist.	7994 May 20 23:14	4°  07'54	4.39602 AU
retrograde	7988 Sep 26 19:32	13°  00'56			7994 Jun 26 16:42	30° 	
opposition	7988 Nov 25 18:38	8°  03'57	-1°14'06	direct	7994 Jul 21 18:54	29°  01'43	
min. Earth dist.	7988 Nov 26 05:49	8°  00'15	3.97629 AU		7994 Aug 16 04:16	0° 	
direct	7989 Jan 23 20:50	3°  08'55		evening set	7994 Nov 24 16:59	16°  07'33'15	
evening set	7989 May 30 06:16	22°  05'51					
				conjunction	7994 Dec 07 23:06	19°  07'24'14	0°49'39
conjunction	7989 Jun 12 09:25	26°  00'56	-0°47'59	minimum elong	7994 Dec 07 23:06	19°  07'24'14	0°49'46
minimum elong	7989 Jun 12 09:26	26°  00'56	0°48'07	max. Earth dist.	7994 Dec 08 05:26	19°  07'27'39	6.44931 AU
max. Earth dist.	7989 Jun 12 10:32	26° 00'56	5.92936 AU	morning rise	7994 Dec 21 03:05	22° 07'14'07	
morning rise	7989 Jun 25 14:47	29° 05'05			7995 Jan 28 06:46	0°	
	7989 Jun 28 00:31	0°		retrograde	7995 Apr 21 00:14	9° 01'27	
retrograde	7989 Nov 04 16:32	20° 06'12'53		opposition	7995 Jun 20 18:02	4° 05'25	1°07'30
opposition	7990 Jan 03 05:22	15° 06'12'24	-1°02'55	min. Earth dist.	7995 Jun 20 23:42	4° 03'35	4.48353 AU
min. Earth dist.	7990 Jan 02 15:51	15° 06'16'57	3.90794 AU				

	7995 Jul 27 22:35	30° RZ		min. Earth dist.	8000 Dec 01 12:00	13° II 18'53	3.96431 AU
direct	7995 Aug 22 00:05	29° Z 03'35		direct	8001 Jan 29 02:54	8° II 26'50	
	7995 Sep 16 07:09	0° Z		evening set	8001 Jun 04 11:29	28° II 20'22	
evening set	7995 Dec 25 13:57	16° Z 16'43			8001 Jun 11 07:16	0° Z	
conjunction	7996 Jan 07 14:43	19° Z 03'52	0°40'25	conjunction	8001 Jun 17 15:36	1° Z 32'59	-0°46'43
minimum elong	7996 Jan 07 14:44	19° Z 03'52	0°40'33	minimum elong	8001 Jun 17 15:36	1° Z 32'59	0°46'51
max. Earth dist.	7996 Jan 06 14:58	18° Z 51'09	6.49651 AU	max. Earth dist.	8001 Jun 17 22:39	1° Z 37'17	5.92469 AU
morning rise	7996 Jan 20 13:22	21° Z 49'58		morning rise	8001 Jun 30 22:00	4° Z 46'59	
	7996 Mar 01 02:03	0° \approx		retrograde	8001 Nov 10 02:11	25° Z 36'04	
retrograde	7996 May 19 19:16	8° \approx 25'02		opposition	8002 Jan 08 14:25	20° Z 35'09	-0°58'56
opposition	7996 Jul 19 17:27	3° \approx 31'24	0°45'57	min. Earth dist.	8002 Jan 07 21:09	20° Z 40'58	3.91147 AU
min. Earth dist.	7996 Jul 20 17:58	3° \approx 23'32	4.48865 AU	direct	8002 Mar 07 14:45	15° Z 40'47	
	7996 Aug 19 08:08	30° RZ			8002 Jun 18 00:38	0° Ω	
direct	7996 Sep 20 11:11	28° Z 29'46		evening set	8002 Jul 12 06:26	5° Ω 43'52	
	7996 Oct 22 17:45	0° \approx					
	7997 Jan 20 04:59	15° \approx		conjunction	8002 Jul 25 17:44	8° Ω 59'57	-0°27'28
evening set	7997 Jan 23 19:15	15° \approx 46'14		minimum elong	8002 Jul 25 17:45	8° Ω 59'58	0°27'34
max. Earth dist.	7997 Feb 03 19:36	18° \approx 09'05	6.45888 AU	max. Earth dist.	8002 Jul 27 10:29	9° Ω 24'42	5.92509 AU
				morning rise	8002 Aug 08 07:47	12° Ω 17'19	
conjunction	7997 Feb 05 16:13	18° \approx 33'16	0°20'37		8002 Aug 19 16:22	15° Ω	
minimum elong	7997 Feb 05 16:14	18° \approx 33'17	0°20'43		8002 Nov 04 20:12	0° M	
morning rise	7997 Feb 18 11:00	21° \approx 19'27		retrograde	8002 Dec 17 23:29	2° M 55'45	
	7997 Apr 02 03:05	0° H			8003 Jan 30 05:56	30° $\text{R}\Omega$	
retrograde	7997 Jun 19 12:03	8° H 13'04		min. Earth dist.	8003 Feb 13 23:58	28° Ω 03'47	3.96554 AU
opposition	7997 Aug 19 12:02	3° H 20'27	0°12'03	opposition	8003 Feb 15 10:48	27° Ω 51'55	-0°19'16
min. Earth dist.	7997 Aug 21 00:16	3° H 08'53	4.41055 AU	direct	8003 Apr 14 10:29	22° Ω 55'51	
	7997 Sep 17 05:12	30° $\text{R}\approx$			8003 Jun 22 00:08	0° M	
direct	7997 Oct 21 00:17	28° \approx 19'44		asc. node	8003 Jul 31 15:04	8° M 16'13	
	7997 Nov 23 20:34	0° H		evening set	8003 Aug 19 03:11	12° M 33'27	
desc. node	7997 Dec 20 19:03	3° H 24'00					
evening set	7998 Feb 23 09:28	16° H 01'06		conjunction	8003 Sep 01 18:59	15° M 46'42	0°02'31
max. Earth dist.	7998 Mar 05 20:57	18° H 20'46	6.34543 AU	minimum elong	8003 Sep 01 19:00	15° M 46'43	0°02'29
				behind sun begin	8003 Sep 01 10:37	15° M 41'47	
conjunction	7998 Mar 08 04:02	18° H 51'29	-0°05'18	behind sun end	8003 Sep 02 03:23	15° M 51'38	
minimum elong	7998 Mar 08 04:00	18° H 51'29	0°05'16	max. Earth dist.	8003 Sep 04 06:28	16° M 21'50	6.02682 AU
behind sun begin	7998 Mar 07 20:18	18° H 47'12		morning rise	8003 Sep 15 12:18	19° M 00'30	
behind sun end	7998 Mar 08 11:43	18° H 55'45			8003 Nov 04 23:08	0° $\underline{\Omega}$	
morning rise	7998 Mar 20 21:15	21° H 41'29		retrograde	8004 Jan 22 14:15	8° $\underline{\Omega}$ 40'36	
	7998 Apr 29 06:25	0° Y		min. Earth dist.	8004 Mar 20 16:05	3° $\underline{\Omega}$ 48'58	4.10275 AU
retrograde	7998 Jul 22 06:16	9° Y 23'01		opposition	8004 Mar 22 05:26	3° $\underline{\Omega}$ 36'18	0°25'57
opposition	7998 Sep 21 00:40	4° Y 30'04	-0°27'01		8004 Apr 21 04:15	30° RM	
min. Earth dist.	7998 Sep 22 16:37	4° Y 17'15	4.26817 AU	direct	8004 May 20 01:44	28° M 37'46	
	7998 Nov 04 01:08	30° RH			8004 Jun 18 03:46	0° $\underline{\Omega}$	
direct	7998 Nov 21 18:09	29° H 31'00		evening set	8004 Sep 23 13:56	17° $\underline{\Omega}$ 28'52	
	7998 Dec 09 09:23	0° Y					
evening set	7999 Mar 27 07:09	17° Y 54'55		conjunction	8004 Oct 07 05:01	20° $\underline{\Omega}$ 34'31	0°30'16
max. Earth dist.	7999 Apr 06 22:46	20° Y 22'14	6.18500 AU	minimum elong	8004 Oct 07 04:59	20° $\underline{\Omega}$ 34'30	0°30'18
				max. Earth dist.	8004 Oct 09 10:48	21° $\underline{\Omega}$ 05'04	6.18635 AU
conjunction	7999 Apr 09 01:42	20° Y 51'41	-0°30'40	morning rise	8004 Oct 20 20:14	23° $\underline{\Omega}$ 39'52	
minimum elong	7999 Apr 09 01:41	20° Y 51'40	0°30'43		8004 Nov 18 21:08	0° M	
morning rise	7999 Apr 21 20:09	23° Y 48'43		retrograde	8005 Feb 23 10:57	12° M 05'38	
	7999 May 19 11:51	0° Z		min. Earth dist.	8005 Apr 23 07:12	7° M 13'01	4.26896 AU
retrograde	7999 Aug 26 12:31	12° Z 40'28		opposition	8005 Apr 24 12:00	7° M 03'22	0°59'06
opposition	7999 Oct 25 22:24	7° Z 45'51	-1°00'28	direct	8005 Jun 23 14:03	2° M 02'51	
min. Earth dist.	7999 Oct 27 03:09	7° Z 36'31	4.10110 AU		8005 Oct 03 22:18	15° M	
direct	7999 Dec 25 06:43	2° Z 49'05		evening set	8005 Oct 27 20:18	20° M 06'26	
	8000 Mar 29 11:56	15° Z					
evening set	8000 Apr 29 06:12	22° Z 03'04		conjunction	8005 Nov 10 07:08	23° M 03'28	0°46'49
max. Earth dist.	8000 May 10 23:52	24° Z 51'14	6.02568 AU	minimum elong	8005 Nov 10 07:07	23° M 03'28	0°46'56
				max. Earth dist.	8005 Nov 11 13:58	23° M 20'25	6.34586 AU
conjunction	8000 May 12 03:55	25° Z 08'02	-0°47'10	morning rise	8005 Nov 23 16:42	25° M 59'39	
minimum elong	8000 May 12 03:54	25° Z 08'02	0°47'17		8005 Dec 12 09:48	0° Z	
morning rise	8000 May 25 02:50	28° Z 13'57		retrograde	8006 Mar 26 08:32	13° Z 22'29	
	8000 Jun 01 13:54	0° II		opposition	8006 May 25 18:12	8° Z 23'37	1°12'20
retrograde	8000 Oct 02 06:50	18° II 19'02		min. Earth dist.	8006 May 25 07:17	8° Z 27'12	4.40968 AU
opposition	8000 Dec 01 03:49	13° II 21'36	-1°14'22	direct	8006 Jul 26 03:50	3° Z 22'03	

evening set	8006 Nov 29 00:53	20° ♌ 50'50		minimum elong	8012 May 17 02:12	0° ♊ 12'14	0°48'22
				morning rise	8012 May 30 02:01	3° ♊ 19'19	
conjunction	8006 Dec 12 06:13	23° ♌ 41'14	0°49'06	retrograde	8012 Oct 07 14:12	23° ♊ 32'13	
minimum elong	8006 Dec 12 06:13	23° ♌ 41'14	0°49'15	opposition	8012 Dec 06 10:29	18° ♊ 34'20	-1°14'01
max. Earth dist.	8006 Dec 12 07:23	23° ♌ 41'51	6.45752 AU	min. Earth dist.	8012 Dec 06 14:56	18° ♊ 32'51	3.95228 AU
morning rise	8006 Dec 25 09:35	26° ♌ 30'32		direct	8013 Feb 03 04:51	13° ♊ 39'43	
	8007 Jan 10 23:40	0° ♋			8013 May 25 14:40	0° ♋	
retrograde	8007 Apr 25 03:31	13° ♋ 15'27		evening set	8013 Jun 09 15:26	3° ♋ 36'18	
opposition	8007 Jun 24 21:39	8° ♋ 19'48	1°05'26				
min. Earth dist.	8007 Jun 25 06:02	8° ♋ 17'06	4.48619 AU	conjunction	8013 Jun 22 20:27	6° ♋ 49'38	-0°45'03
direct	8007 Aug 26 05:21	3° ♋ 17'56		minimum elong	8013 Jun 22 20:28	6° ♋ 49'39	0°45'12
evening set	8007 Dec 29 19:11	20° ♋ 31'12		max. Earth dist.	8013 Jun 23 07:18	6° ♋ 56'17	5.91888 AU
				morning rise	8013 Jul 06 04:04	10° ♋ 04'27	
conjunction	8008 Jan 11 19:33	23° ♋ 18'16	0°38'11		8013 Oct 22 15:08	0° ♌	
minimum elong	8008 Jan 11 19:34	23° ♋ 18'17	0°38'19	retrograde	8013 Nov 15 09:36	0° ♌ 55'21	
max. Earth dist.	8008 Jan 10 18:01	23° ♋ 04'35	6.49358 AU		8013 Dec 09 02:08	30° ♌ 00'00	
morning rise	8008 Jan 24 17:27	26° ♋ 04'14		opposition	8014 Jan 13 21:41	25° ♌ 53'55	-0°54'31
	8008 Feb 12 11:43	0° ♍		min. Earth dist.	8014 Jan 13 01:24	26° ♌ 00'46	3.91258 AU
retrograde	8008 May 23 23:46	12° ♍ 40'51		direct	8014 Mar 12 20:58	20° ♌ 59'22	
opposition	8008 Jul 23 23:02	7° ♍ 47'26	0°41'48		8014 May 29 19:51	0° ♍	
min. Earth dist.	8008 Jul 25 00:52	7° ♍ 39'10	4.48046 AU	evening set	8014 Jul 17 12:41	11° ♍ 00'59	
direct	8008 Sep 24 16:14	2° ♍ 45'56					
	8009 Jan 03 19:48	15° ♍		conjunction	8014 Jul 31 01:02	14° ♍ 17'07	-0°23'38
evening set	8009 Jan 28 01:15	20° ♍ 05'08		minimum elong	8014 Jul 31 01:03	14° ♍ 17'08	0°23'45
max. Earth dist.	8009 Feb 07 22:35	22° ♍ 26'51	6.44597 AU	max. Earth dist.	8014 Aug 01 22:27	14° ♍ 44'38	5.93311 AU
					8014 Aug 02 23:48	15° ♍	
conjunction	8009 Feb 09 21:38	22° ♍ 52'27	0°17'13	morning rise	8014 Aug 13 15:43	17° ♍ 34'25	
minimum elong	8009 Feb 09 21:39	22° ♍ 52'28	0°17'19		8014 Oct 08 20:30	0° ♎	
morning rise	8009 Feb 22 16:12	25° ♍ 39'01		retrograde	8014 Dec 23 02:50	8° ♎ 07'28	
	8009 Mar 15 04:00	0° ♏		min. Earth dist.	8015 Feb 19 02:04	3° ♎ 15'25	3.97935 AU
retrograde	8009 Jun 24 00:00	12° ♏ 37'48		opposition	8015 Feb 20 13:17	3° ♎ 03'26	-0°12'49
opposition	8009 Aug 23 22:38	7° ♏ 45'11	0°06'39		8015 Mar 16 21:34	30° ♎ 00'00	
min. Earth dist.	8009 Aug 25 12:31	7° ♏ 33'05	4.39359 AU	direct	8015 Apr 19 14:56	28° ♎ 07'03	
direct	8009 Oct 25 10:14	2° ♏ 44'35			8015 May 23 09:05	0° ♏	
desc. node	8009 Oct 30 11:06	2° ♏ 46'55		asc. node	8015 Jun 10 14:11	2° ♏ 22'28	
evening set	8010 Feb 27 18:30	20° ♏ 30'50		evening set	8015 Aug 24 07:14	17° ♏ 39'34	
max. Earth dist.	8010 Mar 10 05:48	22° ♏ 51'02	6.32559 AU				
				conjunction	8015 Sep 06 23:13	20° ♏ 52'05	0°06'47
conjunction	8010 Mar 12 12:59	23° ♏ 21'56	-0°09'03	minimum elong	8015 Sep 06 23:13	20° ♏ 52'05	0°06'46
minimum elong	8010 Mar 12 12:59	23° ♏ 21'56	0°09'02	behind sun begin	8015 Sep 06 15:25	20° ♏ 47'31	
behind sun begin	8010 Mar 12 06:10	23° ♏ 18'08		behind sun end	8015 Sep 07 07:00	20° ♏ 56'38	
behind sun end	8010 Mar 12 19:48	23° ♏ 25'44		max. Earth dist.	8015 Sep 09 11:05	21° ♏ 27'15	6.04493 AU
morning rise	8010 Mar 25 06:11	26° ♏ 12'43		morning rise	8015 Sep 20 16:40	24° ♏ 05'01	
	8010 Apr 11 12:16	0° ♐			8015 Oct 16 19:01	0° ♐	
retrograde	8010 Jul 26 23:33	14° ♐ 02'28		retrograde	8016 Jan 27 07:15	13° ♐ 35'47	
opposition	8010 Sep 25 18:14	9° ♐ 09'17	-0°32'21	min. Earth dist.	8016 Mar 25 10:25	8° ♐ 44'24	4.12330 AU
min. Earth dist.	8010 Sep 27 08:21	8° ♐ 57'02	4.24666 AU	opposition	8016 Mar 27 00:01	8° ♐ 31'40	0°31'36
direct	8010 Nov 26 06:50	4° ♐ 10'28		direct	8016 May 24 22:56	3° ♐ 32'50	
evening set	8011 Mar 31 21:44	22° ♐ 40'32		evening set	8016 Sep 28 12:07	22° ♐ 17'55	
max. Earth dist.	8011 Apr 11 16:22	25° ♐ 10'18	6.16333 AU				
				conjunction	8016 Oct 12 02:47	25° ♐ 22'27	0°33'22
conjunction	8011 Apr 13 16:27	25° ♐ 38'15	-0°33'43	minimum elong	8016 Oct 12 02:46	25° ♐ 22'26	0°33'26
minimum elong	8011 Apr 13 16:26	25° ♐ 38'14	0°33'45	max. Earth dist.	8016 Oct 14 05:29	25° ♐ 51'08	6.20767 AU
morning rise	8011 Apr 26 11:15	28° ♐ 36'20		morning rise	8016 Oct 25 17:25	28° ♐ 26'36	
	8011 May 02 12:36	0° ♑			8016 Nov 01 16:57	0° ♑	
	8011 Jul 21 01:16	15° ♑			8017 Jan 25 18:09	15° ♑	
retrograde	8011 Aug 31 16:21	17° ♑ 37'55		retrograde	8017 Feb 27 22:54	16° ♑ 43'21	
	8011 Oct 12 16:31	15° ♑ 00'00			8017 Apr 01 21:26	15° ♑ 00'00	
opposition	8011 Oct 30 23:47	12° ♑ 42'55	-1°03'52	opposition	8017 Apr 28 23:50	11° ♑ 41'33	1°02'13
min. Earth dist.	8011 Nov 01 03:06	12° ♑ 34'01	4.08078 AU	min. Earth dist.	8017 Apr 27 21:46	11° ♑ 50'15	4.28926 AU
direct	8011 Dec 30 04:29	7° ♑ 46'24		direct	8017 Jun 28 06:57	6° ♑ 40'54	
	8012 Mar 09 15:10	15° ♑			8017 Sep 15 04:57	15° ♑	
evening set	8012 May 04 03:47	27° ♑ 06'11		evening set	8017 Nov 01 11:33	24° ♑ 39'20	
max. Earth dist.	8012 May 16 02:01	29° ♑ 57'42	6.00853 AU				
	8012 May 16 05:51	0° ♒		conjunction	8017 Nov 14 21:45	27° ♑ 35'23	0°48'00
				minimum elong	8017 Nov 14 21:44	27° ♑ 35'23	0°48'06
conjunction	8012 May 17 02:13	0° ♒ 12'15	-0°48'14	max. Earth dist.	8017 Nov 16 01:47	27° ♑ 50'44	6.36381 AU

	8017 Nov 25 22:23	0°♏		opposition	8023 Nov 04 20:42	17°♏30'37	-1°06'39
morning rise	8017 Nov 28 06:30	0°♏30'30		min. Earth dist.	8023 Nov 05 21:45	17°♏22'27	4.06126 AU
retrograde	8018 Mar 30 13:42	17°♏46'51			8023 Nov 25 00:58	15°♏	
opposition	8018 May 30 01:17	12°♏48'29	1°12'31	direct	8024 Jan 03 19:44	12°♏34'22	
min. Earth dist.	8018 May 29 15:48	12°♏51'35	4.42449 AU		8024 Feb 12 01:16	15°♏	
direct	8018 Jul 30 13:12	7°♏46'55			8024 Apr 30 11:18	0°♏	
evening set	8018 Dec 03 10:32	25°♏12'20		evening set	8024 May 08 21:37	2°♏00'15	
conjunction	8018 Dec 16 15:07	28°♏02'01	0°48'19	conjunction	8024 May 21 20:41	5°♏07'25	-0°48'55
minimum elong	8018 Dec 16 15:08	28°♏02'02	0°48'27	minimum elong	8024 May 21 20:41	5°♏07'25	0°49'02
max. Earth dist.	8018 Dec 16 13:20	28°♏01'04	6.46854 AU	max. Earth dist.	8024 May 20 22:57	4°♏54'18	5.99076 AU
	8018 Dec 25 18:53	0°♏		morning rise	8024 Jun 03 21:30	8°♏15'44	
morning rise	8018 Dec 29 17:34	0°♏50'35		retrograde	8024 Oct 12 18:43	28°♏37'13	
retrograde	8019 Apr 29 08:06	17°♏32'05		opposition	8024 Dec 11 13:22	23°♏38'51	-1°13'08
opposition	8019 Jun 29 02:45	12°♏36'54	1°03'01	min. Earth dist.	8024 Dec 11 15:07	23°♏38'16	3.93801 AU
min. Earth dist.	8019 Jun 29 13:34	12°♏33'24	4.49299 AU	direct	8025 Feb 08 04:36	18°♏44'18	
direct	8019 Aug 30 13:16	7°♏35'08			8025 May 08 01:28	0°♏	
evening set	8020 Jan 03 01:14	24°♏46'59		evening set	8025 Jun 14 16:11	8°♏45'14	
max. Earth dist.	8020 Jan 14 19:19	27°♏17'52	6.49574 AU				
conjunction	8020 Jan 16 00:48	27°♏33'42	0°35'47	conjunction	8025 Jun 27 22:29	11°♏59'35	-0°43'07
minimum elong	8020 Jan 16 00:49	27°♏33'43	0°35'54	minimum elong	8025 Jun 27 22:30	11°♏59'36	0°43'16
	8020 Jan 27 09:52	0°♏		max. Earth dist.	8025 Jun 28 14:57	12°♏09'40	5.90973 AU
morning rise	8020 Jan 28 22:13	0°♏19'23		morning rise	8025 Jul 11 07:08	15°♏15'20	
	8020 Apr 22 06:23	15°♏			8025 Sep 17 06:07	0°♏	
retrograde	8020 May 28 05:08	16°♏55'57		retrograde	8025 Nov 20 16:33	6°♏09'35	
	8020 Jul 03 06:33	15°♏		min. Earth dist.	8026 Jan 18 04:23	1°♏15'11	3.90973 AU
opposition	8020 Jul 28 04:43	12°♏02'43	0°37'30	opposition	8026 Jan 19 02:23	1°♏07'45	-0°49'51
min. Earth dist.	8020 Jul 29 08:26	11°♏53'51	4.47792 AU		8026 Jan 27 12:36	30°♏	
direct	8020 Sep 28 22:24	7°♏01'18		direct	8026 Mar 18 00:01	26°♏31'03	
	8020 Dec 16 18:31	15°♏			8026 May 05 07:44	0°♏	
evening set	8021 Feb 01 05:48	24°♏21'20		evening set	8026 Jul 17 12:35	15°♏	
max. Earth dist.	8021 Feb 12 02:20	26°♏42'50	6.43887 AU		8026 Jul 22 17:50	16°♏15'08	
conjunction	8021 Feb 14 01:54	27°♏08'46	0°13'51	conjunction	8026 Aug 05 07:00	19°♏31'30	-0°19'46
minimum elong	8021 Feb 14 01:54	27°♏08'46	0°13'56	minimum elong	8026 Aug 05 07:01	19°♏31'31	0°19'52
behind sun begin	8021 Feb 13 21:46	27°♏06'31		max. Earth dist.	8026 Aug 07 07:08	20°♏00'36	5.93672 AU
behind sun end	8021 Feb 14 06:03	27°♏11'01		morning rise	8026 Aug 18 22:41	22°♏49'01	
morning rise	8021 Feb 26 19:54	29°♏55'25			8026 Sep 18 21:59	0°♏	
	8021 Feb 27 04:22	0°♏		retrograde	8026 Dec 28 03:42	13°♏18'14	
retrograde	8021 Jun 28 07:27	16°♏57'44		min. Earth dist.	8027 Feb 24 01:06	8°♏26'45	3.98910 AU
opposition	8021 Aug 28 07:23	12°♏05'08	0°01'25	opposition	8027 Feb 25 14:29	8°♏14'01	-0°06'27
min. Earth dist.	8021 Aug 29 21:25	11°♏53'00	4.38218 AU	asc. node	8027 Apr 21 20:59	3°♏18'06	
desc. node	8021 Sep 11 15:40	10°♏17'39		direct	8027 Apr 24 16:37	3°♏17'17	
direct	8021 Oct 29 16:38	7°♏04'46		evening set	8027 Aug 29 11:25	22°♏46'23	
evening set	8022 Mar 04 00:51	24°♏54'11		conjunction	8027 Sep 12 03:36	25°♏58'18	0°10'55
max. Earth dist.	8022 Mar 14 11:02	27°♏14'17	6.31053 AU	minimum elong	8027 Sep 12 03:35	25°♏58'17	0°10'54
conjunction	8022 Mar 16 18:58	27°♏45'44	-0°12'36	behind sun begin	8027 Sep 11 21:19	25°♏54'38	
minimum elong	8022 Mar 16 18:57	27°♏45'44	0°12'36	behind sun end	8027 Sep 12 09:52	26°♏01'57	
behind sun begin	8022 Mar 16 13:47	27°♏42'50		max. Earth dist.	8027 Sep 14 15:15	26°♏33'13	6.05985 AU
behind sun end	8022 Mar 17 00:08	27°♏48'38		morning rise	8027 Sep 25 21:05	29°♏10'30	
	8022 Mar 26 17:55	0°♏			8027 Sep 29 10:41	0°♏	
morning rise	8022 Mar 29 12:11	0°♏37'05		retrograde	8028 Feb 01 02:25	18°♏33'03	
retrograde	8022 Jul 31 15:42	18°♏33'55		min. Earth dist.	8028 Mar 30 06:49	13°♏41'19	4.14158 AU
opposition	8022 Sep 30 08:32	13°♏40'33	-0°37'13	opposition	8028 Mar 31 19:12	13°♏29'00	0°36'55
min. Earth dist.	8022 Oct 01 23:02	13°♏28'09	4.22860 AU	direct	8028 May 29 22:33	8°♏29'47	
direct	8022 Nov 30 18:44	8°♏41'56		evening set	8028 Oct 03 10:49	27°♏09'17	
evening set	8023 Apr 05 08:36	27°♏17'18			8028 Oct 16 02:30	0°♏	
max. Earth dist.	8023 Apr 16 04:52	29°♏48'38	6.14374 AU	conjunction	8028 Oct 17 01:10	0°♏12'46	0°36'13
	8023 Apr 17 00:19	0°♏		minimum elong	8028 Oct 17 01:09	0°♏12'45	0°36'18
conjunction	8023 Apr 18 03:40	0°♏15'57	-0°36'23	max. Earth dist.	8028 Oct 19 03:33	0°♏41'08	6.22774 AU
minimum elong	8023 Apr 18 03:38	0°♏15'56	0°36'27	morning rise	8028 Oct 30 15:04	3°♏15'44	
morning rise	8023 Apr 30 22:49	3°♏15'02			8028 Dec 27 08:53	15°♏	
	8023 Jun 24 22:12	15°♏		retrograde	8029 Mar 04 09:02	21°♏23'30	
retrograde	8023 Sep 05 14:03	22°♏25'55		min. Earth dist.	8029 May 02 10:48	16°♏30'29	4.30929 AU
				opposition	8029 May 03 12:15	16°♏22'01	1°04'53

	8029 May 13 21:58	15°♈♌		conjunction	8035 Apr 22 20:47	5°♈08'10 -0°39'01
direct	8029 Jul 02 22:22	11°♌21'08		minimum elong	8035 Apr 22 20:46	5°♈08'09 0°39'06
	8029 Aug 22 02:24	15°♌		morning rise	8035 May 05 16:39	8°♈08'35
evening set	8029 Nov 06 03:32	29°♌14'04			8035 Jun 05 00:16	15°♈
	8029 Nov 09 16:10	0°♈		retrograde	8035 Sep 10 20:08	27°♈30'48
				opposition	8035 Nov 10 01:03	22°♈35'08 -1°09'13
conjunction	8029 Nov 19 12:49	2°♈09'01 0°48'51		min. Earth dist.	8035 Nov 10 23:30	22°♈27'47 4.03842 AU
minimum elong	8029 Nov 19 12:49	2°♈09'01 0°48'58		direct	8036 Jan 08 19:39	17°♈39'10
max. Earth dist.	8029 Nov 20 12:24	2°♈21'53 6.38206 AU			8036 Apr 12 21:48	0°♌
morning rise	8029 Dec 02 20:44	5°♈03'01		evening set	8036 May 13 22:54	7°♌12'11
retrograde	8030 Apr 03 20:59	22°♈12'28				
opposition	8030 Jun 03 08:54	17°♈14'28 1°12'14		conjunction	8036 May 26 23:02	10°♌20'40 -0°49'16
min. Earth dist.	8030 Jun 03 02:48	17°♈16'27 4.43941 AU		minimum elong	8036 May 26 23:02	10°♌20'40 0°49'24
direct	8030 Aug 04 01:53	12°♈12'44		max. Earth dist.	8036 May 26 07:05	10°♌11'01 5.97200 AU
evening set	8030 Dec 07 20:19	29°♈34'26		morning rise	8036 Jun 09 00:45	13°♌30'19
	8030 Dec 09 20:17	0°♈			8036 Aug 28 00:42	0°♌
				retrograde	8036 Oct 18 08:09	4°♌00'14
conjunction	8030 Dec 21 00:11	2°♈23'25 0°47'12			8036 Dec 09 14:55	30°♌♌
minimum elong	8030 Dec 21 00:12	2°♈23'26 0°47'21		opposition	8036 Dec 16 23:42	29°♌01'30 -1°11'35
max. Earth dist.	8030 Dec 20 18:50	2°♈20'33 6.47872 AU		min. Earth dist.	8036 Dec 16 22:27	29°♌01'55 3.92562 AU
morning rise	8031 Jan 03 01:48	5°♈11'17		direct	8037 Feb 13 11:05	24°♌07'08
retrograde	8031 May 03 11:44	21°♈49'35			8037 Apr 15 23:11	0°♌
opposition	8031 Jul 03 08:20	16°♈54'38 1°00'12		evening set	8037 Jun 20 00:42	14°♌11'27
min. Earth dist.	8031 Jul 03 21:05	16°♈50'32 4.49773 AU				
direct	8031 Sep 03 20:00	11°♈52'50		conjunction	8037 Jul 03 07:58	17°♌26'34 -0°40'41
evening set	8032 Jan 07 07:33	29°♈03'50		minimum elong	8037 Jul 03 07:59	17°♌26'35 0°40'49
	8032 Jan 11 16:50	0°♌		max. Earth dist.	8037 Jul 04 04:37	17°♌39'12 5.90499 AU
max. Earth dist.	8032 Jan 18 22:51	1°♌33'19 6.49452 AU		morning rise	8037 Jul 16 17:59	20°♌43'08
					8037 Aug 25 19:20	0°♌
conjunction	8032 Jan 20 06:33	1°♌50'20 0°33'07		retrograde	8037 Nov 26 02:22	11°♌38'03
minimum elong	8032 Jan 20 06:34	1°♌50'21 0°33'14		min. Earth dist.	8038 Jan 23 10:32	6°♌44'39 3.91359 AU
morning rise	8032 Feb 02 03:13	4°♌35'50		opposition	8038 Jan 24 12:35	6°♌35'50 -0°44'26
	8032 Mar 26 06:21	15°♌		direct	8038 Mar 23 08:20	1°♌41'00
retrograde	8032 Jun 01 11:43	21°♌13'32			8038 Jun 29 13:33	15°♌
opposition	8032 Aug 01 11:47	16°♌20'29 0°32'50		evening set	8038 Jul 28 04:04	21°♌40'41
min. Earth dist.	8032 Aug 02 17:48	16°♌10'54 4.47064 AU				
	8032 Aug 12 02:51	15°♌		conjunction	8038 Aug 10 17:58	24°♌56'50 -0°15'31
direct	8032 Oct 03 05:50	11°♌19'10		minimum elong	8038 Aug 10 17:59	24°♌56'51 0°15'36
	8032 Nov 23 18:21	15°♌		behind sun begin	8038 Aug 10 16:18	24°♌55'50
evening set	8033 Feb 05 12:21	28°♌41'34		behind sun end	8038 Aug 10 19:41	24°♌57'52
	8033 Feb 11 12:31	0°♌		max. Earth dist.	8038 Aug 12 21:23	25°♌27'50 5.94891 AU
max. Earth dist.	8033 Feb 16 04:47	1°♌01'20 6.42584 AU		morning rise	8038 Aug 24 10:13	28°♌14'00
					8038 Aug 31 20:46	0°♌
conjunction	8033 Feb 18 07:53	1°♌29'18 0°10'14		retrograde	8039 Jan 02 07:46	18°♌35'40
minimum elong	8033 Feb 18 07:53	1°♌29'18 0°10'19		min. Earth dist.	8039 Mar 01 04:45	13°♌44'09 4.00803 AU
behind sun begin	8033 Feb 18 01:34	1°♌25'52		asc. node	8039 Mar 01 03:07	13°♌44'43
behind sun end	8033 Feb 18 14:12	1°♌32'44		opposition	8039 Mar 02 18:31	13°♌31'17 0°00'12
morning rise	8033 Mar 03 01:46	4°♌16'22		direct	8039 Apr 30 00:22	8°♌34'12
retrograde	8033 Jul 02 20:46	21°♌24'19		evening set	8039 Sep 03 17:07	27°♌56'23
desc. node	8033 Jul 22 05:35	20°♌49'28			8039 Sep 12 13:57	0°♌
opposition	8033 Sep 01 19:17	16°♌31'39 -0°04'07				
min. Earth dist.	8033 Sep 03 10:29	16°♌19'07 4.36402 AU		conjunction	8039 Sep 17 09:23	1°♌07'12 0°15'04
direct	8033 Nov 03 02:29	11°♌31'24		minimum elong	8039 Sep 17 09:22	1°♌07'11 0°15'03
evening set	8034 Mar 08 10:52	29°♌26'20		behind sun begin	8039 Sep 17 06:43	1°♌05'39
	8034 Mar 10 22:55	0°♌		behind sun end	8039 Sep 17 12:02	1°♌08'43
max. Earth dist.	8034 Mar 18 21:52	1°♌47'33 6.28862 AU		max. Earth dist.	8039 Sep 19 22:42	1°♌42'53 6.08376 AU
				morning rise	8039 Oct 01 02:29	4°♌18'07
conjunction	8034 Mar 21 05:07	2°♌18'45 -0°16'17		retrograde	8040 Feb 05 19:10	23°♌29'05
minimum elong	8034 Mar 21 05:06	2°♌18'45 0°16'17		min. Earth dist.	8040 Apr 04 01:34	18°♌37'32 4.16794 AU
morning rise	8034 Apr 02 22:17	5°♌11'00		opposition	8040 Apr 05 13:44	18°♌25'19 0°41'59
retrograde	8034 Aug 05 12:06	23°♌17'19		direct	8040 Jun 03 20:29	13°♌25'52
opposition	8034 Oct 05 04:08	18°♌23'47 -0°42'14			8040 Sep 29 12:22	0°♌
min. Earth dist.	8034 Oct 06 17:33	18°♌11'44 4.20441 AU		evening set	8040 Oct 08 08:24	1°♌57'19
direct	8034 Dec 05 08:53	13°♌25'31				
	8035 Mar 31 19:03	0°♌		conjunction	8040 Oct 21 21:56	4°♌59'21 0°38'50
evening set	8035 Apr 10 01:30	2°♌08'21		minimum elong	8040 Oct 21 21:55	4°♌59'20 0°38'55
max. Earth dist.	8035 Apr 20 23:34	4°♌41'37 6.11920 AU		max. Earth dist.	8040 Oct 23 19:57	5°♌25'07 6.25417 AU

morning rise	8040 Nov 04 11:09	8°♍00'50		max. Earth dist.	8047 Apr 26 00:19	9°♋44'05	6.09274 AU
	8040 Dec 07 04:00	15°♍					
retrograde	8041 Mar 08 17:59	25°♍58'06		conjunction	8047 Apr 27 16:59	10°♋08'05	-0°41'24
opposition	8041 May 07 22:32	20°♍57'03	1°07'07	minimum elong	8047 Apr 27 16:58	10°♋08'04	0°41'30
min. Earth dist.	8041 May 07 00:13	21°♍04'28	4.33356 AU	morning rise	8047 May 10 13:23	13°♋09'55	
direct	8041 Jul 07 14:22	15°♍55'57			8047 May 18 09:58	15°♋	
	8041 Oct 24 05:56	0°♊			8047 Aug 05 00:13	0°♊	
evening set	8041 Nov 10 16:20	3°♊42'28		retrograde	8047 Sep 16 06:27	2°♊43'56	
					8047 Oct 28 22:06	30°♋♋	
conjunction	8041 Nov 24 00:59	6°♊36'18	0°49'25	opposition	8047 Nov 15 08:31	27°♋47'54	-1°11'17
minimum elong	8041 Nov 24 00:58	6°♊36'18	0°49'33	min. Earth dist.	8047 Nov 16 04:07	27°♋41'28	4.01584 AU
max. Earth dist.	8041 Nov 24 21:39	6°♊47'32	6.40234 AU	direct	8048 Jan 13 22:01	22°♋52'17	
morning rise	8041 Dec 07 07:48	9°♊29'06			8048 Mar 23 04:55	0°♊	
retrograde	8042 Apr 07 23:14	26°♊31'43		evening set	8048 May 19 03:23	12°♊31'59	
opposition	8042 Jun 07 13:53	21°♊34'11	1°11'33				
min. Earth dist.	8042 Jun 07 09:52	21°♊35'30	4.45442 AU	conjunction	8048 Jun 01 04:19	15°♊41'40	-0°49'13
direct	8042 Aug 08 09:32	16°♊32'26		minimum elong	8048 Jun 01 04:19	15°♊41'40	0°49'22
	8042 Nov 23 17:28	0°♋		max. Earth dist.	8048 May 31 16:40	15°♊34'35	5.95543 AU
evening set	8042 Dec 12 03:15	3°♋50'45		morning rise	8048 Jun 14 07:20	18°♊52'38	
					8048 Aug 02 12:26	0°♋	
conjunction	8042 Dec 25 06:13	6°♋39'06	0°45'53	retrograde	8048 Oct 23 20:40	9°♋29'34	
minimum elong	8042 Dec 25 06:14	6°♋39'06	0°46'01	opposition	8048 Dec 22 12:15	4°♋30'14	-1°09'20
max. Earth dist.	8042 Dec 24 19:39	6°♋33'26	6.48732 AU	min. Earth dist.	8048 Dec 22 05:52	4°♋32'22	3.91722 AU
morning rise	8043 Jan 07 07:06	9°♋26'20			8049 Feb 03 12:45	30°♋♊	
retrograde	8043 May 07 15:34	26°♋02'27		direct	8049 Feb 18 19:19	29°♊35'55	
opposition	8043 Jul 07 12:01	21°♋07'53	0°57'09		8049 Mar 06 03:03	0°♋	
min. Earth dist.	8043 Jul 08 04:39	21°♋02'32	4.49946 AU	evening set	8049 Jun 25 10:48	19°♋41'35	
direct	8043 Sep 08 02:41	16°♋06'04					
	8043 Dec 26 20:16	0°♌		conjunction	8049 Jul 08 19:11	22°♋57'10	-0°37'52
evening set	8044 Jan 11 12:00	3°♌17'22		minimum elong	8049 Jul 08 19:12	22°♋57'11	0°38'00
max. Earth dist.	8044 Jan 22 22:20	5°♌44'26	6.48912 AU	max. Earth dist.	8049 Jul 09 22:03	23°♋13'36	5.90560 AU
				morning rise	8049 Jul 22 06:09	26°♋14'09	
conjunction	8044 Jan 24 10:28	6°♌03'52	0°30'19		8049 Aug 06 23:20	0°♌	
minimum elong	8044 Jan 24 10:29	6°♌03'52	0°30'27		8049 Oct 26 03:42	15°♌	
morning rise	8044 Feb 06 06:41	8°♌49'23		retrograde	8049 Dec 01 13:10	17°♌07'01	
	8044 Mar 07 03:59	15°♌			8050 Jan 06 20:41	15°♋♌	
retrograde	8044 Jun 05 17:57	25°♌29'50		opposition	8050 Jan 29 22:56	12°♌04'16	-0°38'37
opposition	8044 Aug 05 18:02	20°♌36'53	0°28'05	min. Earth dist.	8050 Jan 28 18:52	12°♌13'47	3.92298 AU
min. Earth dist.	8044 Aug 07 01:35	20°♌26'47	4.45849 AU	direct	8050 Mar 28 20:14	7°♌09'08	
direct	8044 Oct 07 10:39	15°♌35'36			8050 Jun 09 01:24	15°♌	
	8045 Jan 26 15:12	0°♎		evening set	8050 Aug 02 13:51	27°♌04'06	
evening set	8045 Feb 09 18:12	3°♎02'02			8050 Aug 14 19:33	0°♎	
max. Earth dist.	8045 Feb 20 09:48	5°♎21'54	6.40775 AU				
				conjunction	8050 Aug 16 04:25	0°♎19'42	-0°11'10
conjunction	8045 Feb 22 13:35	5°♎50'21	0°06'37	minimum elong	8050 Aug 16 04:25	0°♎19'43	0°11'14
minimum elong	8045 Feb 22 13:35	5°♎50'21	0°06'40	behind sun begin	8050 Aug 15 22:18	0°♎16'03	
behind sun begin	8045 Feb 22 06:08	5°♎46'17		behind sun end	8050 Aug 16 10:33	0°♎23'22	
behind sun end	8045 Feb 22 21:03	5°♎54'26		max. Earth dist.	8050 Aug 18 12:02	0°♎53'03	5.96587 AU
morning rise	8045 Mar 07 07:09	8°♎38'02		morning rise	8050 Aug 29 21:00	3°♎36'11	
desc. node	8045 Jun 01 02:06	23°♎54'31		retrograde	8051 Jan 07 08:42	23°♎48'10	
retrograde	8045 Jul 07 10:31	25°♎53'28		asc. node	8051 Jan 08 05:02	23°♎48'05	
opposition	8045 Sep 06 08:10	21°♎00'47	-0°09'38	min. Earth dist.	8051 Mar 06 05:47	18°♎56'52	4.03051 AU
min. Earth dist.	8045 Sep 08 00:19	20°♎47'57	4.34100 AU	opposition	8051 Mar 07 20:29	18°♎43'42	0°06'45
direct	8045 Nov 07 12:12	16°♎00'46		direct	8051 May 05 04:40	13°♎46'16	
	8046 Feb 22 14:43	0°♏			8051 Aug 26 16:15	0°♏	
evening set	8046 Mar 12 22:09	4°♏02'47		evening set	8051 Sep 08 20:59	3°♏00'35	
max. Earth dist.	8046 Mar 23 08:11	6°♏24'21	6.26234 AU				
				conjunction	8051 Sep 22 12:55	6°♏10'06	0°19'03
conjunction	8046 Mar 25 16:17	6°♏56'14	-0°19'54	minimum elong	8051 Sep 22 12:54	6°♏10'05	0°19'04
minimum elong	8046 Mar 25 16:16	6°♏56'13	0°19'54	max. Earth dist.	8051 Sep 24 23:54	6°♏44'13	6.10934 AU
morning rise	8046 Apr 07 09:51	9°♏49'40		morning rise	8051 Oct 06 05:49	9°♏19'42	
retrograde	8046 Aug 10 11:59	28°♏07'15		retrograde	8052 Feb 10 09:31	28°♏19'02	
opposition	8046 Oct 10 02:16	23°♏13'26	-0°47'02	min. Earth dist.	8052 Apr 08 19:49	23°♏27'08	4.19409 AU
min. Earth dist.	8046 Oct 11 14:03	23°♏01'53	4.17675 AU	opposition	8052 Apr 10 06:15	23°♏15'31	0°46'43
direct	8046 Dec 10 02:26	18°♏15'27		direct	8052 Jun 08 17:57	18°♏15'46	
	8047 Mar 14 07:00	0°♐			8052 Sep 12 02:51	0°♐	
evening set	8047 Apr 14 21:01	7°♐06'52		evening set	8052 Oct 13 03:35	6°♐39'34	

conjunction	8052 Oct 26 16:39	9° \mathbb{M} 40'19	0°41'10	max. Earth dist.	8058 Mar 28 00:39	11° \mathbb{Y} 09'01	6.23766 AU
minimum elong	8052 Oct 26 16:37	9° \mathbb{M} 40'18	0°41'15				
max. Earth dist.	8052 Oct 28 12:27	10° \mathbb{M} 04'42	6.27889 AU	conjunction	8058 Mar 30 06:00	11° \mathbb{Y} 39'31	-0°23'28
morning rise	8052 Nov 09 04:50	12° \mathbb{M} 40'22		minimum elong	8058 Mar 30 05:59	11° \mathbb{Y} 39'30	0°23'30
	8052 Nov 19 20:05	15° \mathbb{M}		morning rise	8058 Apr 11 23:40	14° \mathbb{Y} 34'03	
	8053 Feb 23 21:44	0° \mathbb{Z}			8058 Jul 01 12:38	0° \mathbb{B}	
retrograde	8053 Mar 13 01:11	0° \mathbb{Z} 28'11		retrograde	8058 Aug 15 14:18	3° \mathbb{B} 02'22	
	8053 Mar 30 02:13	30° \mathbb{R} \mathbb{M}			8058 Sep 30 07:53	30° \mathbb{R} \mathbb{Y}	
min. Earth dist.	8053 May 11 11:29	25° \mathbb{M} 34'19	4.35500 AU	opposition	8058 Oct 15 02:38	28° \mathbb{Y} 08'25	-0°51'38
opposition	8053 May 12 07:32	25° \mathbb{M} 27'40	1°08'57	min. Earth dist.	8058 Oct 16 13:08	27° \mathbb{Y} 57'16	4.15242 AU
direct	8053 Jul 12 03:41	20° \mathbb{M} 26'30		direct	8058 Dec 14 22:33	23° \mathbb{Y} 10'54	
	8053 Oct 06 12:06	0° \mathbb{Z}			8059 Feb 21 20:43	0° \mathbb{B}	
evening set	8053 Nov 15 04:18	8° \mathbb{Z} 07'42		evening set	8059 Apr 19 18:07	12° \mathbb{B} 09'36	
				max. Earth dist.	8059 May 01 00:30	14° \mathbb{B} 49'28	6.07103 AU
conjunction	8053 Nov 28 11:58	11° \mathbb{Z} 00'32	0°49'43		8059 May 01 18:17	15° \mathbb{B}	
minimum elong	8053 Nov 28 11:58	11° \mathbb{Z} 00'32	0°49'52				
max. Earth dist.	8053 Nov 29 02:43	11° \mathbb{Z} 08'31	6.41891 AU	conjunction	8059 May 02 14:27	15° \mathbb{B} 11'58	-0°43'33
morning rise	8053 Dec 11 18:04	13° \mathbb{Z} 52'22		minimum elong	8059 May 02 14:26	15° \mathbb{B} 11'57	0°43'38
	8054 Mar 20 02:21	0° \mathbb{B}		morning rise	8059 May 15 11:43	18° \mathbb{B} 15'06	
retrograde	8054 Apr 12 03:49	0° \mathbb{B} 49'36			8059 Jul 08 08:51	0° \mathbb{I}	
	8054 May 05 02:03	30° \mathbb{R} \mathbb{Z}		retrograde	8059 Sep 21 15:02	7° \mathbb{I} 59'06	
opposition	8054 Jun 11 18:54	25° \mathbb{Z} 52'33	1°10'33	opposition	8059 Nov 20 16:28	3° \mathbb{I} 02'39	-1°12'49
min. Earth dist.	8054 Jun 11 18:41	25° \mathbb{Z} 52'37	4.46530 AU	min. Earth dist.	8059 Nov 21 07:26	2° \mathbb{I} 57'44	3.99907 AU
direct	8054 Aug 12 18:39	20° \mathbb{Z} 50'44			8059 Dec 15 16:14	30° \mathbb{R} \mathbb{B}	
	8054 Nov 06 03:22	0° \mathbb{B}		direct	8060 Jan 19 00:39	28° \mathbb{B} 07'21	
evening set	8054 Dec 16 10:14	8° \mathbb{B} 07'01			8060 Feb 22 01:07	0° \mathbb{I}	
conjunction	8054 Dec 29 12:42	10° \mathbb{B} 54'57	0°44'18	evening set	8060 May 24 07:40	17° \mathbb{I} 51'31	
minimum elong	8054 Dec 29 12:43	10° \mathbb{B} 54'58	0°44'27				
max. Earth dist.	8054 Dec 28 23:01	10° \mathbb{B} 47'38	6.49181 AU	conjunction	8060 Jun 06 09:33	21° \mathbb{I} 02'06	-0°48'47
morning rise	8055 Jan 11 12:45	13° \mathbb{B} 41'46		minimum elong	8060 Jun 06 09:34	21° \mathbb{I} 02'06	0°48'56
	8055 Apr 28 06:45	0° \approx		max. Earth dist.	8060 Jun 06 04:43	20° \mathbb{I} 59'09	5.94542 AU
retrograde	8055 May 11 18:51	0° \approx 17'05		morning rise	8060 Jun 19 13:28	24° \mathbb{I} 13'58	
	8055 May 25 07:05	30° \mathbb{R} \mathbb{B}			8060 Jul 13 23:11	0° \mathbb{B}	
opposition	8055 Jul 11 16:51	25° \mathbb{B} 22'49	0°53'46	retrograde	8060 Oct 29 08:17	14° \mathbb{B} 55'02	
min. Earth dist.	8055 Jul 12 11:09	25° \mathbb{B} 16'56	4.49747 AU	opposition	8060 Dec 27 22:42	9° \mathbb{B} 55'11	-1°06'33
direct	8055 Sep 12 07:41	20° \mathbb{B} 21'07		min. Earth dist.	8060 Dec 27 13:26	9° \mathbb{B} 58'17	3.91522 AU
	8055 Dec 09 13:33	0° \approx		direct	8061 Feb 24 04:28	5° \mathbb{B} 00'53	
evening set	8056 Jan 15 17:41	7° \approx 33'46		evening set	8061 Jun 30 18:34	25° \mathbb{B} 05'35	
max. Earth dist.	8056 Jan 27 00:27	9° \approx 59'17	6.48074 AU				
conjunction	8056 Jan 28 15:34	10° \approx 20'22	0°27'20	conjunction	8061 Jul 14 03:55	28° \mathbb{B} 21'20	-0°34'49
minimum elong	8056 Jan 28 15:35	10° \approx 20'23	0°27'27	minimum elong	8061 Jul 14 03:57	28° \mathbb{B} 21'21	0°34'58
morning rise	8056 Feb 10 11:22	13° \approx 06'04		max. Earth dist.	8061 Jul 15 12:16	28° \mathbb{B} 41'04	5.91174 AU
	8056 Feb 19 09:26	15° \approx		morning rise	8061 Jul 20 21:45	0° \mathbb{Q}	
retrograde	8056 Jun 10 03:33	29° \approx 50'19			8061 Jul 27 15:49	1° \mathbb{Q} 38'26	
opposition	8056 Aug 10 02:40	24° \approx 57'33	0°23'04	retrograde	8061 Sep 26 05:11	15° \mathbb{Q}	
min. Earth dist.	8056 Aug 11 12:52	24° \approx 46'38	4.44415 AU	min. Earth dist.	8061 Dec 06 19:20	22° \mathbb{Q} 26'47	
direct	8056 Oct 11 19:08	19° \approx 56'28		opposition	8062 Feb 02 22:13	17° \mathbb{Q} 34'05	3.93669 AU
	8057 Jan 09 07:47	0° \mathbb{H}			8062 Feb 04 04:53	17° \mathbb{Q} 23'41	-0°32'41
evening set	8057 Feb 14 02:11	7° \mathbb{H} 27'31		direct	8062 Feb 22 16:07	15° \mathbb{R} \mathbb{Q}	
max. Earth dist.	8057 Feb 24 15:06	9° \mathbb{H} 46'34	6.38844 AU		8062 Apr 03 02:15	12° \mathbb{Q} 28'19	
					8062 May 12 06:48	15° \mathbb{Q}	
conjunction	8057 Feb 26 21:16	10° \mathbb{H} 16'27	0°02'52	evening set	8062 Jul 29 02:35	0° \mathbb{H}	
minimum elong	8057 Feb 26 21:17	10° \mathbb{H} 16'28	0°02'55		8062 Aug 07 19:31	2° \mathbb{H} 17'23	
behind sun begin	8057 Feb 26 13:20	10° \mathbb{H} 12'06		conjunction	8062 Aug 21 10:21	5° \mathbb{H} 32'13	-0°06'54
behind sun end	8057 Feb 27 05:14	10° \mathbb{H} 20'50		minimum elong	8062 Aug 21 10:21	5° \mathbb{H} 32'13	0°06'58
morning rise	8057 Mar 11 14:49	13° \mathbb{H} 04'53		behind sun begin	8062 Aug 21 02:36	5° \mathbb{H} 27'37	
desc. node	8057 Apr 09 17:41	19° \mathbb{H} 16'32		behind sun end	8062 Aug 21 18:06	5° \mathbb{H} 36'50	
	8057 Jun 24 16:14	0° \mathbb{Y}		max. Earth dist.	8062 Aug 23 18:07	6° \mathbb{H} 05'30	5.98541 AU
retrograde	8057 Jul 12 02:27	0° \mathbb{Y} 28'21		morning rise	8062 Sep 04 03:23	8° \mathbb{H} 47'53	
	8057 Jul 29 13:13	30° \mathbb{R} \mathbb{H}		asc. node	8062 Nov 18 17:35	24° \mathbb{H} 19'46	
opposition	8057 Sep 10 23:32	25° \mathbb{H} 35'36	-0°15'15	retrograde	8063 Jan 12 03:32	28° \mathbb{H} 49'42	
min. Earth dist.	8057 Sep 12 15:06	25° \mathbb{H} 22'56	4.31800 AU	min. Earth dist.	8063 Mar 11 03:01	23° \mathbb{H} 58'20	4.05359 AU
direct	8057 Nov 11 23:32	20° \mathbb{H} 35'54		opposition	8063 Mar 12 17:39	23° \mathbb{H} 45'11	0°12'59
	8058 Feb 04 12:53	0° \mathbb{Y}		direct	8063 May 10 05:14	18° \mathbb{H} 47'23	
evening set	8058 Mar 17 11:40	8° \mathbb{Y} 45'00			8063 Aug 08 23:43	0° \mathbb{Q}	
				evening set	8063 Sep 13 20:02	7° \mathbb{Q} 54'03	

conjunction	8063 Sep 27 11:53	11°♏02'22	0°22'45	max. Earth dist.	8069 Feb 28 23:08	14°♏12'45	6.36996 AU
minimum elong	8063 Sep 27 11:52	11°♏02'21	0°22'48				
max. Earth dist.	8063 Sep 29 21:57	11°♏35'46	6.13395 AU	conjunction	8069 Mar 03 05:02	14°♏42'38	-0°00'59
morning rise	8063 Oct 11 04:09	14°♏10'35		minimum elong	8069 Mar 03 05:01	14°♏42'37	0°00'57
	8064 Jan 01 18:49	0°♏		behind sun begin	8069 Mar 02 21:02	14°♏38'13	
retrograde	8064 Feb 14 21:18	2°♏59'09		behind sun end	8069 Mar 03 12:59	14°♏47'01	
	8064 Mar 29 22:41	30°♏♏		morning rise	8069 Mar 15 22:23	17°♏31'42	
min. Earth dist.	8064 Apr 13 10:19	28°♏06'52	4.21790 AU		8069 May 18 07:28	0°♏	
opposition	8064 Apr 14 18:33	27°♏56'02	0°50'58	retrograde	8069 Jul 16 19:31	5°♏02'44	
direct	8064 Jun 13 11:22	22°♏56'02		opposition	8069 Sep 15 15:10	0°♏09'53	-0°20'46
	8064 Aug 23 15:53	0°♏			8069 Sep 16 22:00	30°♏♏	
evening set	8064 Oct 17 19:12	11°♏13'20		min. Earth dist.	8069 Sep 17 07:20	29°♏57'01	4.29697 AU
				direct	8069 Nov 16 13:14	25°♏10'25	
conjunction	8064 Oct 31 07:31	14°♏12'54	0°43'12		8070 Jan 13 18:39	0°♏	
minimum elong	8064 Oct 31 07:29	14°♏12'53	0°43'18	evening set	8070 Mar 22 00:37	13°♏25'32	
max. Earth dist.	8064 Nov 01 22:37	14°♏34'34	6.29996 AU	max. Earth dist.	8070 Apr 01 14:00	15°♏50'32	6.21554 AU
	8064 Nov 03 20:29	15°♏					
morning rise	8064 Nov 13 19:04	17°♏11'46		conjunction	8070 Apr 03 18:58	16°♏20'57	-0°26'52
	8065 Jan 18 09:03	0°♏		minimum elong	8070 Apr 03 18:57	16°♏20'57	0°26'55
retrograde	8065 Mar 17 05:45	4°♏51'39		morning rise	8070 Apr 16 13:00	19°♏16'31	
	8065 May 15 12:14	30°♏♏			8070 Jun 06 00:46	0°♏	
opposition	8065 May 16 13:35	29°♏51'37	1°10'22	retrograde	8070 Aug 20 13:45	7°♏54'33	
min. Earth dist.	8065 May 15 20:17	29°♏57'20	4.37210 AU	opposition	8070 Oct 20 01:52	3°♏00'16	-0°55'50
direct	8065 Jul 16 13:39	24°♏50'16		min. Earth dist.	8070 Oct 21 09:24	2°♏50'02	4.13081 AU
	8065 Sep 15 15:15	0°♏			8070 Nov 14 00:06	30°♏♏	
evening set	8065 Nov 19 13:31	12°♏27'38		direct	8070 Dec 19 16:30	28°♏03'01	
					8071 Jan 24 00:56	0°♏	
conjunction	8065 Dec 02 20:39	15°♏19'45	0°49'45		8071 Apr 15 11:28	15°♏	
minimum elong	8065 Dec 02 20:39	15°♏19'45	0°49'54	evening set	8071 Apr 24 13:56	17°♏08'02	
max. Earth dist.	8065 Dec 03 08:13	15°♏26'00	6.43098 AU	max. Earth dist.	8071 May 06 01:38	19°♏51'41	6.05172 AU
morning rise	8065 Dec 16 01:46	18°♏10'47					
	8066 Feb 15 13:11	0°♏		conjunction	8071 May 07 10:51	20°♏11'28	-0°45'20
retrograde	8066 Apr 16 06:14	5°♏04'07		minimum elong	8071 May 07 10:50	20°♏11'28	0°45'26
opposition	8066 Jun 15 22:30	0°♏07'33	1°09'14	morning rise	8071 May 20 08:42	23°♏15'45	
min. Earth dist.	8066 Jun 16 00:38	0°♏06'52	4.47187 AU		8071 Jun 18 16:10	0°♏	
	8066 Jun 16 21:46	30°♏♏		retrograde	8071 Sep 26 23:38	13°♏08'45	
direct	8066 Aug 17 00:44	25°♏05'45		opposition	8071 Nov 25 22:20	8°♏11'53	-1°13'43
	8066 Oct 16 04:40	0°♏		min. Earth dist.	8071 Nov 26 11:09	8°♏07'39	3.98383 AU
evening set	8066 Dec 20 16:09	12°♏21'09		direct	8072 Jan 24 03:06	3°♏16'47	
				evening set	8072 May 29 10:08	23°♏05'06	
conjunction	8067 Jan 02 17:49	15°♏08'48	0°42'33				
minimum elong	8067 Jan 02 17:50	15°♏08'49	0°42'42	conjunction	8072 Jun 11 13:00	26°♏16'36	-0°47'58
max. Earth dist.	8067 Jan 01 22:57	14°♏58'41	6.49243 AU	minimum elong	8072 Jun 11 13:01	26°♏16'37	0°48'07
morning rise	8067 Jan 15 17:23	17°♏55'23		max. Earth dist.	8072 Jun 11 12:53	26°♏16'32	5.93568 AU
	8067 Mar 20 16:03	0°♏		morning rise	8072 Jun 24 18:03	29°♏29'27	
retrograde	8067 May 16 00:07	4°♏31'00			8072 Jun 26 20:34	0°♏	
	8067 Jul 12 21:50	30°♏♏		retrograde	8072 Nov 03 17:18	20°♏14'27	
opposition	8067 Jul 15 21:33	29°♏37'01	0°50'11	opposition	8073 Jan 02 06:45	15°♏14'10	-1°03'14
min. Earth dist.	8067 Jul 16 18:58	29°♏30'09	4.49239 AU	min. Earth dist.	8073 Jan 01 17:48	15°♏18'31	3.91237 AU
direct	8067 Sep 16 14:05	24°♏35'19		direct	8073 Mar 01 09:13	10°♏19'52	
	8067 Nov 19 05:20	0°♏			8073 Jul 04 08:33	0°♏	
evening set	8068 Jan 19 23:07	11°♏50'01		evening set	8073 Jul 06 00:55	0°♏24'25	
max. Earth dist.	8068 Jan 31 03:39	14°♏14'40	6.47035 AU				
				conjunction	8073 Jul 19 11:05	3°♏40'24	-0°31'31
conjunction	8068 Feb 01 20:42	14°♏36'52	0°24'13	minimum elong	8073 Jul 19 11:07	3°♏40'25	0°31'38
minimum elong	8068 Feb 01 20:43	14°♏36'52	0°24'19	max. Earth dist.	8073 Jul 20 22:13	4°♏01'48	5.91589 AU
	8068 Feb 03 15:30	15°♏		morning rise	8073 Aug 02 00:03	6°♏57'45	
morning rise	8068 Feb 14 16:00	17°♏22'47			8073 Sep 05 13:42	15°♏	
	8068 Apr 21 10:55	0°♏		retrograde	8073 Dec 11 22:38	27°♏42'42	
retrograde	8068 Jun 14 11:10	4°♏11'13		min. Earth dist.	8074 Feb 08 00:47	22°♏50'19	3.94727 AU
	8068 Aug 09 00:53	30°♏♏		opposition	8074 Feb 09 09:19	22°♏39'15	-0°26'32
opposition	8068 Aug 14 11:22	29°♏18'29	0°17'56	direct	8074 Apr 08 07:33	17°♏43'34	
min. Earth dist.	8068 Aug 15 21:42	29°♏07'31	4.42921 AU		8074 Jul 11 09:21	0°♏	
direct	8068 Oct 16 01:24	24°♏17'33		evening set	8074 Aug 13 00:48	7°♏28'27	
	8068 Dec 20 01:18	0°♏					
desc. node	8069 Feb 16 22:53	11°♏33'43		conjunction	8074 Aug 26 16:14	10°♏42'45	-0°02'35
evening set	8069 Feb 18 10:11	11°♏53'04		minimum elong	8074 Aug 26 16:14	10°♏42'45	0°02'39

behind sun begin	8074 Aug 26 07:52	10° \cap 37'48		max. Earth dist.	8080 Feb 04 05:32	18° \approx 30'06	6.46577 AU
behind sun end	8074 Aug 27 00:37	10° \cap 47'43					
max. Earth dist.	8074 Aug 29 02:22	11° \cap 17'18	6.00146 AU	conjunction	8080 Feb 06 01:18	18° \approx 53'48	0°21'03
morning rise	8074 Sep 09 09:21	13° \cap 57'42		minimum elong	8080 Feb 06 01:18	18° \approx 53'48	0°21'09
asc. node	8074 Sep 28 13:11	18° \cap 23'40		morning rise	8080 Feb 18 20:15	21° \approx 39'44	
	8074 Nov 27 22:40	0° $\underline{\cap}$			8080 Mar 30 18:17	0° H	
retrograde	8075 Jan 17 01:04	3° $\underline{\cap}$ 50'51		retrograde	8080 Jun 18 19:47	8° H 30'38	
	8075 Mar 08 12:10	30° R \cap		opposition	8080 Aug 18 19:34	3° H 37'58	0°12'52
min. Earth dist.	8075 Mar 16 00:58	28° \cap 59'18	4.07315 AU	min. Earth dist.	8080 Aug 20 07:53	3° H 26'22	4.42020 AU
opposition	8075 Mar 17 14:48	28° \cap 46'28	0°19'06		8080 Sep 19 18:24	30° R \approx	
direct	8075 May 15 06:06	23° \cap 48'22		direct	8080 Oct 20 10:09	28° \approx 37'10	
	8075 Jul 18 23:30	0° $\underline{\cap}$			8080 Nov 20 01:51	0° H	
evening set	8075 Sep 18 20:12	12° $\underline{\cap}$ 48'58		desc. node	8080 Dec 29 11:35	5° H 11'13	
				evening set	8081 Feb 22 16:10	16° H 15'05	
conjunction	8075 Oct 02 11:44	15° $\underline{\cap}$ 56'13	0°26'20	max. Earth dist.	8081 Mar 05 04:02	18° H 34'34	6.35713 AU
minimum elong	8075 Oct 02 11:43	15° $\underline{\cap}$ 56'12	0°26'22				
max. Earth dist.	8075 Oct 04 20:01	16° $\underline{\cap}$ 28'25	6.15515 AU	conjunction	8081 Mar 07 10:47	19° H 05'01	-0°04'38
morning rise	8075 Oct 16 03:43	19° $\underline{\cap}$ 03'18		minimum elong	8081 Mar 07 10:47	19° H 05'00	0°04'35
	8075 Dec 07 06:58	0° \cap		behind sun begin	8081 Mar 07 02:58	19° H 00'41	
retrograde	8076 Feb 19 08:57	7° \cap 42'25		behind sun end	8081 Mar 07 18:35	19° H 09'19	
min. Earth dist.	8076 Apr 18 00:51	2° \cap 50'11	4.23893 AU	morning rise	8081 Mar 20 03:56	21° H 54'30	
opposition	8076 Apr 19 08:08	2° \cap 39'41	0°54'55		8081 Apr 27 13:13	0° Y	
	8076 May 10 08:01	30° R $\underline{\cap}$		retrograde	8081 Jul 21 07:10	9° Y 31'22	
direct	8076 Jun 18 04:21	27° $\underline{\cap}$ 39'30		opposition	8081 Sep 20 03:51	4° Y 38'20	-0°25'54
	8076 Jul 27 09:35	0° \cap		min. Earth dist.	8081 Sep 21 18:59	4° Y 25'48	4.28099 AU
	8076 Oct 18 14:44	15° \cap			8081 Nov 05 22:44	30° R H	
evening set	8076 Oct 22 12:26	15° \cap 51'18		direct	8081 Nov 20 22:06	29° H 39'05	
					8081 Dec 05 22:47	0° Y	
conjunction	8076 Nov 05 00:10	18° \cap 49'48	0°44'59	evening set	8082 Mar 26 10:19	17° Y 58'43	
minimum elong	8076 Nov 05 00:09	18° \cap 49'48	0°45'06	max. Earth dist.	8082 Apr 06 01:20	20° Y 25'15	6.19757 AU
max. Earth dist.	8076 Nov 06 12:04	19° \cap 09'38	6.31940 AU				
morning rise	8076 Nov 18 10:49	21° \cap 47'31		conjunction	8082 Apr 08 04:42	20° Y 54'53	-0°29'55
	8076 Dec 27 21:26	0° Z		minimum elong	8082 Apr 08 04:41	20° Y 54'52	0°29'58
retrograde	8077 Mar 21 13:53	9° Z 20'07		morning rise	8082 Apr 20 22:55	23° Y 51'16	
opposition	8077 May 20 21:56	4° Z 20'40	1°11'25		8082 May 18 11:52	0° B	
min. Earth dist.	8077 May 20 07:19	4° Z 25'29	4.38870 AU	retrograde	8082 Aug 25 11:25	12° B 37'48	
	8077 Jun 30 04:25	30° R \cap		opposition	8082 Oct 24 21:08	7° B 43'13	-0°59'25
direct	8077 Jul 21 02:29	29° \cap 19'19		min. Earth dist.	8082 Oct 26 04:17	7° B 33'06	4.11193 AU
	8077 Aug 11 04:18	0° Z		direct	8082 Dec 24 08:41	2° B 46'10	
evening set	8077 Nov 24 00:55	16° Z 52'53			8083 Mar 29 21:15	15° B	
				evening set	8083 Apr 29 05:27	21° B 56'45	
conjunction	8077 Dec 07 07:12	19° Z 44'11	0°49'32	max. Earth dist.	8083 May 10 19:53	24° B 42'40	6.03361 AU
minimum elong	8077 Dec 07 07:12	19° Z 44'11	0°49'40				
max. Earth dist.	8077 Dec 07 14:23	19° Z 48'04	6.44380 AU	conjunction	8083 May 12 02:58	25° B 01'15	-0°46'41
morning rise	8077 Dec 20 11:35	22° Z 34'26		minimum elong	8083 May 12 02:58	25° B 01'15	0°46'49
	8078 Jan 25 19:05	0° B		morning rise	8083 May 25 01:38	28° B 06'41	
retrograde	8078 Apr 20 10:48	9° B 23'35			8083 Jun 02 01:20	0° II	
opposition	8078 Jun 20 04:03	4° B 27'28	1°07'32	retrograde	8083 Oct 02 01:22	18° II 08'22	
min. Earth dist.	8078 Jun 20 08:27	4° B 26'02	4.48061 AU	opposition	8083 Nov 30 23:32	13° II 11'05	-1°14'03
	8078 Aug 01 22:05	30° R Z		min. Earth dist.	8083 Dec 01 09:14	13° II 07'53	3.96834 AU
direct	8078 Aug 21 08:43	29° Z 25'41		direct	8084 Jan 28 23:06	8° II 16'09	
	8078 Sep 09 23:47	0° B		evening set	8084 Jun 03 08:47	28° II 09'09	
evening set	8078 Dec 24 23:19	16° B 39'19			8084 Jun 10 22:56	0° B	
max. Earth dist.	8079 Jan 06 04:06	19° B 15'41	6.49682 AU				
				conjunction	8084 Jun 16 12:33	1° B 21'38	-0°46'49
conjunction	8079 Jan 07 00:26	19° B 26'34	0°40'34	minimum elong	8084 Jun 16 12:34	1° B 21'38	0°46'57
minimum elong	8079 Jan 07 00:27	19° B 26'35	0°40'43	max. Earth dist.	8084 Jun 16 15:35	1° B 23'29	5.92429 AU
morning rise	8079 Jan 19 23:07	22° B 12'42		morning rise	8084 Jun 29 18:47	4° B 35'33	
	8079 Feb 27 11:04	0° \approx		retrograde	8084 Nov 08 22:30	25° B 25'24	
retrograde	8079 May 20 03:51	8° \approx 47'21		opposition	8085 Jan 07 10:46	20° B 24'37	-0°59'36
opposition	8079 Jul 20 03:06	3° \approx 53'40	0°46'22	min. Earth dist.	8085 Jan 06 19:16	20° B 29'51	3.90636 AU
min. Earth dist.	8079 Jul 21 01:45	3° \approx 46'25	4.49230 AU	direct	8085 Mar 06 11:44	15° B 30'10	
	8079 Aug 24 03:09	30° R B			8085 Jun 17 13:21	0° Ω	
direct	8079 Sep 20 20:16	28° B 52'08		evening set	8085 Jul 11 04:31	5° Ω 36'13	
	8079 Oct 18 17:58	0° \approx					
	8080 Jan 18 22:58	15° \approx		conjunction	8085 Jul 24 15:54	8° Ω 52'43	-0°28'06
evening set	8080 Jan 24 04:26	16° \approx 07'02		minimum elong	8085 Jul 24 15:56	8° Ω 52'44	0°28'12

max. Earth dist.	8085 Jul 26 08:00	9°♎17'07	5.91609 AU	retrograde	8091 May 24 09:52	13°♊03'58	
morning rise	8085 Aug 07 05:41	12°♎10'27		opposition	8091 Jul 24 09:24	8°♊10'28	0°42'11
	8085 Aug 19 01:20	15°♎		min. Earth dist.	8091 Jul 25 10:30	8°♊02'26	4.48872 AU
	8085 Nov 04 05:40	0°♏		direct	8091 Sep 25 03:11	3°♊08'55	
retrograde	8085 Dec 17 02:27	2°♏53'32			8092 Jan 02 11:31	15°♊	
	8086 Jan 28 23:42	30°♏♎		evening set	8092 Jan 28 10:24	20°♊25'15	
min. Earth dist.	8086 Feb 13 02:02	28°♎01'12	3.95362 AU	max. Earth dist.	8092 Feb 08 09:55	22°♊47'45	6.45635 AU
opposition	8086 Feb 14 11:28	27°♎49'50	-0°20'25				
direct	8086 Apr 13 10:13	22°♎53'51		conjunction	8092 Feb 10 06:58	23°♊12'13	0°17'39
	8086 Jun 21 01:28	0°♏		minimum elong	8092 Feb 10 06:58	23°♊12'13	0°17'46
asc. node	8086 Aug 09 19:25	10°♏38'04		morning rise	8092 Feb 23 01:20	25°♊58'20	
evening set	8086 Aug 18 05:01	12°♏36'16			8092 Mar 13 01:03	0°♋	
				retrograde	8092 Jun 23 04:49	12°♋53'28	
conjunction	8086 Aug 31 20:49	15°♏50'12	0°01'44	opposition	8092 Aug 23 05:28	8°♋00'51	0°07'29
minimum elong	8086 Aug 31 20:50	15°♏50'13	0°01'42	min. Earth dist.	8092 Aug 24 18:28	7°♋49'03	4.40539 AU
behind sun begin	8086 Aug 31 12:26	15°♏45'15		direct	8092 Oct 24 17:33	3°♋00'14	
behind sun end	8086 Sep 01 05:15	15°♏55'10		desc. node	8092 Nov 07 21:52	3°♋18'21	
max. Earth dist.	8086 Sep 03 08:07	16°♏25'18	6.01320 AU	evening set	8093 Feb 27 00:43	20°♋42'42	
morning rise	8086 Sep 14 14:25	19°♏04'44		max. Earth dist.	8093 Mar 09 10:59	23°♋01'58	6.33781 AU
	8086 Nov 03 11:50	0°♑					
retrograde	8087 Jan 21 20:21	8°♑50'42		conjunction	8093 Mar 11 19:00	23°♋33'16	-0°08'22
min. Earth dist.	8087 Mar 20 20:28	3°♑59'31	4.08900 AU	minimum elong	8093 Mar 11 19:00	23°♋33'16	0°08'21
opposition	8087 Mar 22 11:17	3°♑46'20	0°24'55	behind sun begin	8093 Mar 11 11:58	23°♋29'22	
	8087 Apr 23 06:31	30°♏♏		behind sun end	8093 Mar 12 02:02	23°♋37'11	
direct	8087 May 20 04:40	28°♏47'53		morning rise	8093 Mar 24 12:13	26°♋23'32	
	8087 Jun 16 09:03	0°♑			8093 Apr 09 23:13	0°♌	
evening set	8087 Sep 23 20:24	17°♑43'35		retrograde	8093 Jul 26 02:38	14°♌08'52	
				opposition	8093 Sep 24 20:55	9°♌15'43	-0°31'13
conjunction	8087 Oct 07 11:40	20°♑49'52	0°29'39	min. Earth dist.	8093 Sep 26 12:36	9°♌02'58	4.25817 AU
minimum elong	8087 Oct 07 11:39	20°♑49'52	0°29'42	direct	8093 Nov 25 12:18	4°♌16'42	
max. Earth dist.	8087 Oct 09 18:11	21°♑20'57	6.17375 AU	evening set	8094 Mar 31 00:30	22°♌43'19	
morning rise	8087 Oct 21 03:08	23°♑55'53		max. Earth dist.	8094 Apr 10 17:13	25°♌11'36	6.17313 AU
	8087 Nov 17 19:24	0°♍					
retrograde	8088 Feb 23 23:04	12°♍26'15		conjunction	8094 Apr 12 19:13	25°♌40'35	-0°32'59
opposition	8088 Apr 23 22:14	7°♍23'49	0°58'26	minimum elong	8094 Apr 12 19:12	25°♌40'35	0°33'03
min. Earth dist.	8088 Apr 22 17:04	7°♍33'35	4.25839 AU	morning rise	8094 Apr 25 13:48	28°♌38'11	
direct	8088 Jun 22 23:38	2°♍23'21			8094 May 01 12:10	0°♍	
	8088 Oct 01 12:06	15°♍			8094 Jul 20 05:59	15°♍	
evening set	8088 Oct 27 06:12	20°♍29'45		retrograde	8094 Aug 30 14:01	17°♍35'48	
					8094 Oct 11 08:26	15°♏♍	
conjunction	8088 Nov 09 17:17	23°♍27'12	0°46'26	opposition	8094 Oct 29 22:35	12°♏40'57	-1°02'55
minimum elong	8088 Nov 09 17:16	23°♍27'11	0°46'34	min. Earth dist.	8094 Oct 31 03:00	12°♏31'42	4.08794 AU
max. Earth dist.	8088 Nov 11 03:00	23°♍45'45	6.33808 AU	direct	8094 Dec 29 03:38	7°♏44'17	
morning rise	8088 Nov 23 03:05	26°♍23'47			8095 Mar 09 21:51	15°♏	
	8088 Dec 09 21:35	0°♎		evening set	8095 May 04 04:02	27°♏02'25	
retrograde	8089 Mar 25 20:12	13°♎48'55		max. Earth dist.	8095 May 15 22:38	29°♏51'39	6.01220 AU
opposition	8089 May 25 06:31	8°♎49'50	1°11'59		8095 May 16 12:32	0°♐	
min. Earth dist.	8089 May 24 17:14	8°♎54'12	4.40516 AU				
direct	8089 Jul 25 13:52	3°♎48'19		conjunction	8095 May 17 02:10	0°♐08'12	-0°47'50
evening set	8089 Nov 28 12:17	21°♎17'43		minimum elong	8095 May 17 02:10	0°♐08'11	0°47'58
				morning rise	8095 May 30 01:49	3°♐15'01	
conjunction	8089 Dec 11 17:47	24°♎08'12	0°48'58	retrograde	8095 Oct 07 12:01	23°♐26'42	
minimum elong	8089 Dec 11 17:47	24°♎08'13	0°49'07	opposition	8095 Dec 06 08:16	18°♐28'59	-1°13'50
max. Earth dist.	8089 Dec 11 21:34	24°♎10'15	6.45663 AU	min. Earth dist.	8095 Dec 06 14:44	18°♐26'50	3.95174 AU
morning rise	8089 Dec 24 21:14	26°♎57'35		direct	8096 Feb 03 04:12	13°♐34'14	
	8090 Jan 08 07:05	0°♑			8096 May 24 21:46	0°♑	
retrograde	8090 Apr 24 16:11	13°♑42'27		evening set	8096 Jun 08 15:03	3°♑32'10	
opposition	8090 Jun 24 10:02	8°♑46'42	1°05'25				
min. Earth dist.	8090 Jun 24 17:20	8°♑44'21	4.48869 AU	conjunction	8096 Jun 21 20:06	6°♑45'42	-0°45'12
direct	8090 Aug 25 18:02	3°♑44'54		minimum elong	8096 Jun 21 20:07	6°♑45'43	0°45'22
evening set	8090 Dec 29 06:22	20°♑56'46		max. Earth dist.	8096 Jun 22 05:49	6°♑51'39	5.91440 AU
max. Earth dist.	8091 Jan 10 05:40	23°♑30'14	6.49918 AU	morning rise	8096 Jul 05 03:24	10°♑00'38	
					8096 Oct 21 22:55	0°♒	
conjunction	8091 Jan 11 06:42	23°♑43'38	0°38'19	retrograde	8096 Nov 14 11:47	0°♒54'07	
minimum elong	8091 Jan 11 06:43	23°♑43'39	0°38'27		8096 Dec 07 20:12	30°♏♑	
morning rise	8091 Jan 24 04:50	26°♑29'27		opposition	8097 Jan 12 21:48	25°♑52'55	-0°55'11
	8091 Feb 09 22:29	0°♒		min. Earth dist.	8097 Jan 12 03:30	25°♑59'05	3.90466 AU

direct	8097 Mar 11 20:33	20°♊58'27	
	8097 May 28 19:20	0°♊	
evening set	8097 Jul 16 14:42	11°♊03'58	
conjunction	8097 Jul 30 02:52	14°♊20'35	-0°24'13
minimum elong	8097 Jul 30 02:53	14°♊20'35	0°24'20
max. Earth dist.	8097 Jul 31 22:41	14°♊47'11	5.92271 AU
	8097 Aug 01 19:48	15°♊	
morning rise	8097 Aug 12 17:41	17°♊38'25	
	8097 Oct 07 09:39	0°♊	
retrograde	8097 Dec 22 07:33	8°♊16'19	
min. Earth dist.	8098 Feb 18 05:33	3°♊24'42	3.96803 AU
opposition	8098 Feb 19 17:50	3°♊12'22	-0°13'50
	8098 Mar 17 12:15	30°♊♋	
direct	8098 Apr 18 17:18	28°♊16'06	
	8098 May 21 00:55	0°♊	
asc. node	8098 Jun 18 14:41	3°♊58'00	
evening set	8098 Aug 23 12:48	17°♊52'49	
conjunction	8098 Sep 06 04:50	21°♊05'53	0°06'07
minimum elong	8098 Sep 06 04:49	21°♊05'52	0°06'06
behind sun begin	8098 Sep 05 20:52	21°♊01'12	
behind sun end	8098 Sep 06 12:45	21°♊10'32	
max. Earth dist.	8098 Sep 08 16:47	21°♊41'12	6.03403 AU
morning rise	8098 Sep 19 22:21	24°♊19'21	
	8098 Oct 14 20:51	0°♊	
retrograde	8099 Jan 26 17:31	13°♊54'33	
min. Earth dist.	8099 Mar 25 19:18	9°♊03'03	4.11377 AU
opposition	8099 Mar 27 08:59	8°♊50'16	0°30'41
direct	8099 May 25 07:33	3°♊51'27	
evening set	8099 Sep 28 20:37	22°♊39'06	
conjunction	8099 Oct 12 11:32	25°♊44'01	0°32'49
minimum elong	8099 Oct 12 11:30	25°♊44'01	0°32'52
max. Earth dist.	8099 Oct 14 17:24	26°♊14'33	6.20028 AU
morning rise	8099 Oct 26 02:14	28°♊48'32	
	8099 Oct 31 10:02	0°♊	
	8100 Jan 22 08:57	15°♊	
retrograde	8100 Feb 28 09:06	17°♊07'36	
	8100 Apr 06 05:25	15°♊♋	
min. Earth dist.	8100 Apr 28 06:41	12°♊14'59	4.28427 AU
opposition	8100 Apr 29 10:55	12°♊05'33	1°01'33
direct	8100 Jun 28 15:45	7°♊04'53	
	8100 Sep 13 09:33	15°♊	
evening set	8100 Nov 01 21:39	25°♊03'59	
conjunction	8100 Nov 15 07:48	28°♊00'07	0°47'37
minimum elong	8100 Nov 15 07:47	28°♊00'07	0°47'44
max. Earth dist.	8100 Nov 16 12:22	28°♊15'46	6.36124 AU
	8100 Nov 24 10:59	0°♊♋	
morning rise	8100 Nov 28 16:44	0°♊55'22	
retrograde	8101 Mar 31 02:10	18°♊12'16	
opposition	8101 May 30 13:01	13°♊13'38	1°12'08
min. Earth dist.	8101 May 30 03:32	13°♊16'45	4.42391 AU
direct	8101 Jul 31 01:42	8°♊11'59	
evening set	8101 Dec 03 20:37	25°♊36'45	
conjunction	8101 Dec 17 01:23	28°♊26'26	0°48'10
minimum elong	8101 Dec 17 01:24	28°♊26'26	0°48'20
max. Earth dist.	8101 Dec 17 01:01	28°♊26'14	6.46954 AU
	8101 Dec 24 07:45	0°♊♋	
morning rise	8101 Dec 30 03:59	1°♊14'59	