

retrograde	10600 Jan 29 00:23	6° $\mathbb{M}$ 40'55		max. Earth dist.	10606 Oct 25 13:03	12° $\mathbb{M}$ 58'57	43.73038 AU
opposition	10600 Apr 21 08:16	5° $\mathbb{M}$ 38'06	-4°02'53				
min. Earth dist.	10600 Apr 22 15:23	5° $\mathbb{M}$ 36'32	43.06906 AU	conjunction	10606 Oct 27 06:41	13° $\mathbb{M}$ 01'36	-1°48'12
direct	10600 Jul 11 16:23	4° $\mathbb{M}$ 35'36		minimum elong	10606 Oct 27 06:44	13° $\mathbb{M}$ 01'36	1°47'52
evening set	10600 Oct 04 08:28	5° $\mathbb{M}$ 47'48		morning rise	10606 Nov 12 03:35	13° $\mathbb{M}$ 25'36	
max. Earth dist.	10600 Oct 18 08:12	6° $\mathbb{M}$ 08'19	44.96938 AU	retrograde	10607 Feb 07 05:09	14° $\mathbb{M}$ 42'02	
				opposition	10607 Apr 29 23:19	13° $\mathbb{M}$ 37'45	-1°42'51
conjunction	10600 Oct 19 17:56	6° $\mathbb{M}$ 10'24	-3°43'02	min. Earth dist.	10607 May 01 13:41	13° $\mathbb{M}$ 35'46	41.62114 AU
minimum elong	10600 Oct 19 18:02	6° $\mathbb{M}$ 10'24	3°42'46	direct	10607 Jul 20 01:00	12° $\mathbb{M}$ 33'35	
morning rise	10600 Nov 04 05:03	6° $\mathbb{M}$ 33'08		evening set	10607 Oct 12 21:05	13° $\mathbb{M}$ 48'05	
retrograde	10601 Jan 30 11:48	7° $\mathbb{M}$ 47'49		max. Earth dist.	10607 Oct 27 00:17	14° $\mathbb{M}$ 09'31	43.51283 AU
opposition	10601 Apr 22 16:28	6° $\mathbb{M}$ 44'51	-3°43'39				
min. Earth dist.	10601 Apr 23 23:51	6° $\mathbb{M}$ 43'16	42.87456 AU	conjunction	10607 Oct 28 17:41	14° $\mathbb{M}$ 12'09	-1°28'13
direct	10601 Jul 12 22:15	5° $\mathbb{M}$ 42'10		minimum elong	10607 Oct 28 17:43	14° $\mathbb{M}$ 12'10	1°27'53
evening set	10601 Oct 05 16:08	6° $\mathbb{M}$ 54'39		morning rise	10607 Nov 13 15:30	14° $\mathbb{M}$ 36'21	
max. Earth dist.	10601 Oct 19 15:31	7° $\mathbb{M}$ 15'15	44.77328 AU		10607 Nov 30 04:17	15° $\mathbb{M}$	
				retrograde	10608 Feb 08 14:40	15° $\mathbb{M}$ 53'09	
conjunction	10601 Oct 21 03:31	7° $\mathbb{M}$ 17'29	-3°24'30		10608 Apr 21 04:42	15° $\mathbb{R}$ $\mathbb{M}$	
minimum elong	10601 Oct 21 03:37	7° $\mathbb{M}$ 17'29	3°24'12	opposition	10608 Apr 30 09:14	14° $\mathbb{M}$ 48'37	-1°21'49
morning rise	10601 Nov 05 16:43	7° $\mathbb{M}$ 40'26		min. Earth dist.	10608 May 01 23:20	14° $\mathbb{M}$ 46'38	41.40222 AU
retrograde	10602 Jan 31 22:14	8° $\mathbb{M}$ 55'22		direct	10608 Jul 20 12:37	13° $\mathbb{M}$ 44'11	
opposition	10602 Apr 24 01:11	7° $\mathbb{M}$ 52'14	-3°24'10	evening set	10608 Oct 13 07:35	14° $\mathbb{M}$ 59'07	
min. Earth dist.	10602 Apr 25 10:42	7° $\mathbb{M}$ 50'32	42.67545 AU		10608 Oct 13 21:47	15° $\mathbb{M}$	
direct	10602 Jul 14 06:44	6° $\mathbb{M}$ 49'20		max. Earth dist.	10608 Oct 27 09:47	15° $\mathbb{M}$ 20'36	43.29335 AU
evening set	10602 Oct 06 23:50	8° $\mathbb{M}$ 02'07					
max. Earth dist.	10602 Oct 21 01:03	8° $\mathbb{M}$ 22'55	44.57254 AU	conjunction	10608 Oct 29 04:55	15° $\mathbb{M}$ 23'22	-1°08'00
				minimum elong	10608 Oct 29 04:57	15° $\mathbb{M}$ 23'22	1°07'39
conjunction	10602 Oct 22 13:18	8° $\mathbb{M}$ 25'10	-3°05'43	morning rise	10608 Nov 14 03:45	15° $\mathbb{M}$ 47'45	
minimum elong	10602 Oct 22 13:22	8° $\mathbb{M}$ 25'10	3°05'25	retrograde	10609 Feb 09 01:10	17° $\mathbb{M}$ 04'56	
morning rise	10602 Nov 07 04:12	8° $\mathbb{M}$ 48'21		opposition	10609 May 01 19:22	16° $\mathbb{M}$ 00'10	-1°00'30
retrograde	10603 Feb 02 05:35	10° $\mathbb{M}$ 03'33		min. Earth dist.	10609 May 03 10:34	15° $\mathbb{M}$ 58'07	41.18166 AU
opposition	10603 Apr 25 10:03	9° $\mathbb{M}$ 00'12	-3°04'25		10609 Jul 02 12:51	15° $\mathbb{R}$ $\mathbb{M}$	
min. Earth dist.	10603 Apr 26 20:01	8° $\mathbb{M}$ 58'28	42.47172 AU	direct	10609 Jul 21 23:30	14° $\mathbb{M}$ 55'28	
direct	10603 Jul 15 18:12	7° $\mathbb{M}$ 57'05			10609 Aug 10 06:49	15° $\mathbb{M}$	
evening set	10603 Oct 08 08:12	9° $\mathbb{M}$ 10'10		evening set	10609 Oct 14 18:24	16° $\mathbb{M}$ 10'51	
max. Earth dist.	10603 Oct 22 08:49	9° $\mathbb{M}$ 31'02	44.36740 AU	max. Earth dist.	10609 Oct 28 21:20	16° $\mathbb{M}$ 32'29	43.07210 AU
conjunction	10603 Oct 23 23:16	9° $\mathbb{M}$ 33'26	-2°46'42	conjunction	10609 Oct 30 16:36	16° $\mathbb{M}$ 35'17	-0°47'32
minimum elong	10603 Oct 23 23:20	9° $\mathbb{M}$ 33'26	2°46'23	minimum elong	10609 Oct 30 16:37	16° $\mathbb{M}$ 35'17	0°47'11
morning rise	10603 Nov 08 16:04	9° $\mathbb{M}$ 56'50		morning rise	10609 Nov 15 15:56	16° $\mathbb{M}$ 59'50	
retrograde	10604 Feb 03 16:10	11° $\mathbb{M}$ 12'18		retrograde	10610 Feb 10 11:17	18° $\mathbb{M}$ 17'28	
opposition	10604 Apr 25 18:58	10° $\mathbb{M}$ 08'45	-2°44'25	opposition	10610 May 03 05:59	17° $\mathbb{M}$ 12'27	-0°38'56
min. Earth dist.	10604 Apr 27 06:15	10° $\mathbb{M}$ 06'57	42.26395 AU	min. Earth dist.	10610 May 04 21:55	17° $\mathbb{M}$ 10'22	40.95933 AU
direct	10604 Jul 16 02:38	9° $\mathbb{M}$ 05'23		direct	10610 Jul 23 10:39	16° $\mathbb{M}$ 07'30	
evening set	10604 Oct 08 16:50	10° $\mathbb{M}$ 18'47		evening set	10610 Oct 16 05:39	17° $\mathbb{M}$ 23'22	
max. Earth dist.	10604 Oct 22 18:23	10° $\mathbb{M}$ 39'47	44.15822 AU	max. Earth dist.	10610 Oct 30 08:14	17° $\mathbb{M}$ 45'07	42.84915 AU
conjunction	10604 Oct 24 09:37	10° $\mathbb{M}$ 42'15	-2°27'26	conjunction	10610 Nov 01 04:19	17° $\mathbb{M}$ 47'59	-0°26'51
minimum elong	10604 Oct 24 09:41	10° $\mathbb{M}$ 42'16	2°27'07	minimum elong	10610 Nov 01 04:20	17° $\mathbb{M}$ 47'59	0°26'29
morning rise	10604 Nov 09 03:51	11° $\mathbb{M}$ 05'52		morning rise	10610 Nov 17 04:14	18° $\mathbb{M}$ 12'43	
retrograde	10605 Feb 04 02:00	12° $\mathbb{M}$ 21'39		retrograde	10611 Feb 12 00:52	19° $\mathbb{M}$ 30'48	
opposition	10605 Apr 27 04:16	11° $\mathbb{M}$ 17'51	-2°24'10	opposition	10611 May 04 16:46	18° $\mathbb{M}$ 25'34	-0°17'06
min. Earth dist.	10605 Apr 28 16:51	11° $\mathbb{M}$ 15'58	42.05245 AU	min. Earth dist.	10611 May 06 08:49	18° $\mathbb{M}$ 23'28	40.73518 AU
direct	10605 Jul 17 11:43	10° $\mathbb{M}$ 14'14		direct	10611 Jul 24 19:08	17° $\mathbb{M}$ 20'21	
evening set	10605 Oct 10 01:52	11° $\mathbb{M}$ 27'58		evening set	10611 Oct 17 17:39	18° $\mathbb{M}$ 36'45	
max. Earth dist.	10605 Oct 24 04:05	11° $\mathbb{M}$ 49'07	43.94573 AU	max. Earth dist.	10611 Oct 31 19:05	18° $\mathbb{M}$ 58'33	42.62383 AU
conjunction	10605 Oct 25 20:02	11° $\mathbb{M}$ 51'38	-2°07'57	conjunction	10611 Nov 02 16:38	19° $\mathbb{M}$ 01'31	-0°05'58
minimum elong	10605 Oct 25 20:06	11° $\mathbb{M}$ 51'38	2°07'36	minimum elong	10611 Nov 02 16:38	19° $\mathbb{M}$ 01'31	0°05'36
morning rise	10605 Nov 10 15:40	12° $\mathbb{M}$ 15'27		behind sun begin	10611 Nov 02 10:24	19° $\mathbb{M}$ 01'08	
retrograde	10606 Feb 05 15:07	13° $\mathbb{M}$ 31'32		behind sun end	10611 Nov 02 22:52	19° $\mathbb{M}$ 01'54	
opposition	10606 Apr 28 13:34	12° $\mathbb{M}$ 27'30	-2°03'38	morning rise	10611 Nov 18 16:49	19° $\mathbb{M}$ 26'25	
min. Earth dist.	10606 Apr 30 02:13	12° $\mathbb{M}$ 25'37	41.83801 AU	retrograde	10612 Feb 13 15:32	20° $\mathbb{M}$ 45'01	
direct	10606 Jul 18 18:24	11° $\mathbb{M}$ 23'37		asc. node	10612 Feb 13 07:52	20° $\mathbb{M}$ 45'01	
evening set	10606 Oct 11 11:21	12° $\mathbb{M}$ 37'43		opposition	10612 May 05 03:55	19° $\mathbb{M}$ 39'32	0°04'58

min. Earth dist.	10612 May 06 21:51	19° $\overline{\text{M}}$ 37'19	40.50848 AU	conjunction	10618 Nov 11 17:09	28° $\overline{\text{M}}$ 00'34	2°26'47
direct	10612 Jul 25 03:46	18° $\overline{\text{M}}$ 34'03		minimum elong	10618 Nov 11 17:04	28° $\overline{\text{M}}$ 00'34	2°27'14
evening set	10612 Oct 18 06:13	19° $\overline{\text{M}}$ 51'00		morning rise	10618 Nov 27 13:04	28° $\overline{\text{M}}$ 26'20	
max. Earth dist.	10612 Nov 01 07:44	20° $\overline{\text{M}}$ 12'57	42.39564 AU	retrograde	10619 Feb 22 22:20	29° $\overline{\text{M}}$ 49'08	
				opposition	10619 May 14 19:40	28° $\overline{\text{M}}$ 41'35	2°46'17
conjunction	10612 Nov 03 05:27	20° $\overline{\text{M}}$ 15'57	0°15'17	min. Earth dist.	10619 May 16 19:49	28° $\overline{\text{M}}$ 38'56	38.83337 AU
minimum elong	10612 Nov 03 05:27	20° $\overline{\text{M}}$ 15'57	0°15'41	direct	10619 Aug 03 14:21	27° $\overline{\text{M}}$ 33'46	
behind sun begin	10612 Nov 03 04:33	20° $\overline{\text{M}}$ 15'53		evening set	10619 Oct 28 14:42	28° $\overline{\text{M}}$ 55'24	
behind sun end	10612 Nov 03 06:20	20° $\overline{\text{M}}$ 16'00		max. Earth dist.	10619 Nov 11 03:41	29° $\overline{\text{M}}$ 17'32	40.70905 AU
morning rise	10612 Nov 19 05:36	20° $\overline{\text{M}}$ 40'59					
retrograde	10613 Feb 14 06:19	22° $\overline{\text{M}}$ 00'07		conjunction	10619 Nov 13 08:32	29° $\overline{\text{M}}$ 21'10	2°49'25
opposition	10613 May 06 15:23	20° $\overline{\text{M}}$ 54'23	0°27'18	minimum elong	10619 Nov 13 08:26	29° $\overline{\text{M}}$ 21'10	2°49'51
min. Earth dist.	10613 May 08 09:28	20° $\overline{\text{M}}$ 52'09	40.27857 AU	morning rise	10619 Nov 29 02:42	29° $\overline{\text{M}}$ 47'00	
direct	10613 Jul 26 14:53	19° $\overline{\text{M}}$ 48'37			10619 Dec 07 08:04	0° $\overline{\text{A}}$	
evening set	10613 Oct 19 19:29	21° $\overline{\text{M}}$ 06'09		retrograde	10620 Feb 24 13:13	1° $\overline{\text{A}}$ 10'32	
max. Earth dist.	10613 Nov 02 18:19	21° $\overline{\text{M}}$ 28'04	42.16385 AU	opposition	10620 May 15 09:33	0° $\overline{\text{A}}$ 02'40	3°10'14
				min. Earth dist.	10620 May 17 09:36	0° $\overline{\text{A}}$ 00'01	38.58616 AU
conjunction	10613 Nov 04 18:26	21° $\overline{\text{M}}$ 31'15	0°36'39		10620 May 17 09:49	30° $\overline{\text{R}}$ $\overline{\text{M}}$	
minimum elong	10613 Nov 04 18:25	21° $\overline{\text{M}}$ 31'15	0°37'02	direct	10620 Aug 04 06:05	28° $\overline{\text{M}}$ 54'30	
morning rise	10613 Nov 20 18:33	21° $\overline{\text{M}}$ 56'26			10620 Oct 18 14:00	0° $\overline{\text{A}}$	
retrograde	10614 Feb 15 21:03	23° $\overline{\text{M}}$ 16'06		evening set	10620 Oct 29 08:17	0° $\overline{\text{A}}$ 16'58	
opposition	10614 May 08 03:17	22° $\overline{\text{M}}$ 10'06	0°49'52	max. Earth dist.	10620 Nov 11 17:54	0° $\overline{\text{A}}$ 39'01	40.46092 AU
min. Earth dist.	10614 May 09 23:10	22° $\overline{\text{M}}$ 07'46	40.04508 AU				
direct	10614 Jul 28 01:54	21° $\overline{\text{M}}$ 04'02		conjunction	10620 Nov 14 00:11	0° $\overline{\text{A}}$ 42'47	3°12'14
evening set	10614 Oct 21 09:10	22° $\overline{\text{M}}$ 22'10		minimum elong	10620 Nov 14 00:05	0° $\overline{\text{A}}$ 42'47	3°12'41
max. Earth dist.	10614 Nov 04 07:27	22° $\overline{\text{M}}$ 44'10	41.92834 AU	morning rise	10620 Nov 29 16:38	1° $\overline{\text{A}}$ 08'41	
				retrograde	10621 Feb 25 06:06	2° $\overline{\text{A}}$ 33'01	
conjunction	10614 Nov 06 07:59	22° $\overline{\text{M}}$ 47'24	0°58'15	opposition	10621 May 16 23:56	1° $\overline{\text{A}}$ 24'50	3°34'24
minimum elong	10614 Nov 06 07:58	22° $\overline{\text{M}}$ 47'24	0°58'40	min. Earth dist.	10621 May 19 00:34	1° $\overline{\text{A}}$ 22'08	38.33863 AU
morning rise	10614 Nov 22 07:34	23° $\overline{\text{M}}$ 12'44		direct	10621 Aug 05 19:13	0° $\overline{\text{A}}$ 16'19	
retrograde	10615 Feb 17 08:16	24° $\overline{\text{M}}$ 32'57		evening set	10621 Oct 31 02:23	1° $\overline{\text{A}}$ 39'39	
opposition	10615 May 09 15:30	23° $\overline{\text{M}}$ 26'40	1°12'41	max. Earth dist.	10621 Nov 13 09:47	2° $\overline{\text{A}}$ 01'43	40.21230 AU
min. Earth dist.	10615 May 11 12:06	23° $\overline{\text{M}}$ 24'17	39.80794 AU				
direct	10615 Jul 29 15:33	22° $\overline{\text{M}}$ 20'16		conjunction	10621 Nov 15 16:18	2° $\overline{\text{A}}$ 05'32	3°35'13
evening set	10615 Oct 22 23:29	23° $\overline{\text{M}}$ 39'02		minimum elong	10621 Nov 15 16:11	2° $\overline{\text{A}}$ 05'32	3°35'41
max. Earth dist.	10615 Nov 05 19:39	24° $\overline{\text{M}}$ 01'02	41.68942 AU	morning rise	10621 Dec 01 06:27	2° $\overline{\text{A}}$ 31'29	
				retrograde	10622 Feb 26 20:31	3° $\overline{\text{A}}$ 56'39	
conjunction	10615 Nov 07 21:43	24° $\overline{\text{M}}$ 04'24	1°20'04	opposition	10622 May 18 14:51	2° $\overline{\text{A}}$ 48'10	3°58'44
minimum elong	10615 Nov 07 21:40	24° $\overline{\text{M}}$ 04'24	1°20'28	min. Earth dist.	10622 May 20 16:11	2° $\overline{\text{A}}$ 45'25	38.09077 AU
morning rise	10615 Nov 23 20:52	24° $\overline{\text{M}}$ 29'51		direct	10622 Aug 07 09:14	1° $\overline{\text{A}}$ 39'19	
retrograde	10616 Feb 18 22:21	25° $\overline{\text{M}}$ 50'40		evening set	10622 Nov 01 21:24	3° $\overline{\text{A}}$ 03'35	
opposition	10616 May 10 04:00	24° $\overline{\text{M}}$ 44'05	1°35'44	max. Earth dist.	10622 Nov 15 02:12	3° $\overline{\text{A}}$ 25'38	39.96353 AU
min. Earth dist.	10616 May 12 01:19	24° $\overline{\text{M}}$ 41'38	39.56768 AU				
direct	10616 Jul 30 03:03	23° $\overline{\text{M}}$ 37'20		conjunction	10622 Nov 17 08:55	3° $\overline{\text{A}}$ 29'30	3°58'22
evening set	10616 Oct 23 14:27	24° $\overline{\text{M}}$ 56'45		minimum elong	10622 Nov 17 08:47	3° $\overline{\text{A}}$ 29'29	3°58'50
max. Earth dist.	10616 Nov 06 08:35	25° $\overline{\text{M}}$ 18'46	41.44730 AU	morning rise	10622 Dec 02 20:41	3° $\overline{\text{A}}$ 55'28	
				retrograde	10623 Feb 28 15:08	5° $\overline{\text{A}}$ 21'32	
conjunction	10616 Nov 08 11:57	25° $\overline{\text{M}}$ 22'14	1°42'06	opposition	10623 May 20 06:03	4° $\overline{\text{A}}$ 12'45	4°23'15
minimum elong	10616 Nov 08 11:54	25° $\overline{\text{M}}$ 22'14	1°42'32	min. Earth dist.	10623 May 22 07:07	4° $\overline{\text{A}}$ 10'00	37.84274 AU
morning rise	10616 Nov 24 10:12	25° $\overline{\text{M}}$ 47'48		direct	10623 Aug 08 21:19	3° $\overline{\text{A}}$ 03'33	
retrograde	10617 Feb 19 13:12	27° $\overline{\text{M}}$ 09'15		evening set	10623 Nov 03 17:14	4° $\overline{\text{A}}$ 28'49	
opposition	10617 May 11 16:50	26° $\overline{\text{M}}$ 02'21	1°59'02	max. Earth dist.	10623 Nov 16 17:53	4° $\overline{\text{A}}$ 50'46	39.71405 AU
min. Earth dist.	10617 May 13 15:49	25° $\overline{\text{M}}$ 59'48	39.32466 AU				
direct	10617 Jul 31 13:19	24° $\overline{\text{M}}$ 55'15		conjunction	10623 Nov 19 02:04	4° $\overline{\text{A}}$ 54'45	4°21'39
evening set	10617 Oct 25 05:56	26° $\overline{\text{M}}$ 15'22		minimum elong	10623 Nov 19 01:56	4° $\overline{\text{A}}$ 54'45	4°22'07
max. Earth dist.	10617 Nov 07 22:55	26° $\overline{\text{M}}$ 37'27	41.20285 AU	morning rise	10623 Dec 04 11:08	5° $\overline{\text{A}}$ 20'45	
				retrograde	10624 Mar 01 10:54	6° $\overline{\text{A}}$ 47'46	
conjunction	10617 Nov 10 02:30	26° $\overline{\text{M}}$ 40'57	2°04'21	opposition	10624 May 20 21:55	5° $\overline{\text{A}}$ 38'41	4°47'55
minimum elong	10617 Nov 10 02:26	26° $\overline{\text{M}}$ 40'57	2°04'46	min. Earth dist.	10624 May 23 00:43	5° $\overline{\text{A}}$ 35'49	37.59382 AU
morning rise	10617 Nov 25 23:38	27° $\overline{\text{M}}$ 06'37		direct	10624 Aug 09 09:03	4° $\overline{\text{A}}$ 29'08	
retrograde	10618 Feb 21 05:08	28° $\overline{\text{M}}$ 28'43		evening set	10624 Nov 04 14:01	5° $\overline{\text{A}}$ 55'26	
opposition	10618 May 13 06:00	27° $\overline{\text{M}}$ 21'30	2°22'33	max. Earth dist.	10624 Nov 17 11:54	6° $\overline{\text{A}}$ 17'22	39.46334 AU
min. Earth dist.	10618 May 15 04:40	27° $\overline{\text{M}}$ 18'57	39.07970 AU				
direct	10618 Aug 02 01:38	26° $\overline{\text{M}}$ 14'02		conjunction	10624 Nov 19 19:57	6° $\overline{\text{A}}$ 21'22	4°45'04
evening set	10618 Oct 26 21:58	27° $\overline{\text{M}}$ 34'54		minimum elong	10624 Nov 19 19:48	6° $\overline{\text{A}}$ 21'22	4°45'33
max. Earth dist.	10618 Nov 09 11:52	27° $\overline{\text{M}}$ 56'56	40.95655 AU	morning rise	10624 Dec 05 01:49	6° $\overline{\text{A}}$ 47'21	
				retrograde	10625 Mar 03 06:18	8° $\overline{\text{A}}$ 15'21	

opposition	10625 May 22 14:06	7° <del>2</del> 05'57	5°12'46	minimum elong	10631 Dec 01 15:36	17° <del>2</del> 04'43	7°32'13
min. Earth dist.	10625 May 24 16:49	7° <del>2</del> 03'04	37.34343 AU	morning rise	10631 Dec 15 14:22	17° <del>2</del> 29'57	
direct	10625 Aug 11 02:14	5° <del>2</del> 56'02		retrograde	10632 Mar 14 08:11	19° <del>2</del> 05'56	
evening set	10625 Nov 06 11:47	7° <del>2</del> 23'25		opposition	10632 Jun 01 23:10	17° <del>2</del> 53'50	8°09'41
max. Earth dist.	10625 Nov 19 04:08	7° <del>2</del> 45'09	39.21081 AU	min. Earth dist.	10632 Jun 04 06:18	17° <del>2</del> 50'33	35.55280 AU
				direct	10632 Aug 21 05:49	16° <del>2</del> 40'52	
conjunction	10625 Nov 21 14:14	7° <del>2</del> 49'20	5°08'37	evening set	10632 Nov 18 21:00	18° <del>2</del> 17'03	
minimum elong	10625 Nov 21 14:05	7° <del>2</del> 49'20	5°09'07	max. Earth dist.	10632 Nov 29 23:17	18° <del>2</del> 37'15	37.40645 AU
morning rise	10625 Dec 06 16:51	8° <del>2</del> 15'18					
retrograde	10626 Mar 05 03:43	9° <del>2</del> 44'18		conjunction	10632 Dec 02 14:04	18° <del>2</del> 42'03	7°55'36
opposition	10626 May 24 07:00	8° <del>2</del> 34'34	5°37'44	minimum elong	10632 Dec 02 13:48	18° <del>2</del> 42'02	7°56'07
min. Earth dist.	10626 May 26 11:08	8° <del>2</del> 31'35	37.09124 AU	morning rise	10632 Dec 16 06:41	19° <del>2</del> 07'03	
direct	10626 Aug 12 18:50	7° <del>2</del> 24'16		retrograde	10633 Mar 16 09:12	20° <del>2</del> 44'23	
evening set	10626 Nov 08 10:07	8° <del>2</del> 52'46		opposition	10633 Jun 03 19:48	19° <del>2</del> 31'53	8°35'05
max. Earth dist.	10626 Nov 20 22:51	9° <del>2</del> 14'24	38.95619 AU	min. Earth dist.	10633 Jun 06 03:25	19° <del>2</del> 28'34	35.29774 AU
				direct	10633 Aug 23 01:46	18° <del>2</del> 18'28	
conjunction	10626 Nov 23 09:06	9° <del>2</del> 18'39	5°32'17	evening set	10633 Nov 21 02:15	19° <del>2</del> 56'10	
minimum elong	10626 Nov 23 08:56	9° <del>2</del> 18'38	5°32'47	max. Earth dist.	10633 Dec 01 22:43	20° <del>2</del> 16'06	37.15003 AU
morning rise	10626 Dec 08 07:50	9° <del>2</del> 44'33					
retrograde	10627 Mar 06 22:21	11° <del>2</del> 14'36		conjunction	10633 Dec 04 13:04	20° <del>2</del> 20'55	8°19'28
opposition	10627 May 26 00:28	10° <del>2</del> 04'30	6°02'51	minimum elong	10633 Dec 04 12:49	20° <del>2</del> 20'54	8°20'00
min. Earth dist.	10627 May 28 05:15	10° <del>2</del> 01'28	36.83699 AU	morning rise	10633 Dec 17 23:03	20° <del>2</del> 45'39	
direct	10627 Aug 14 13:09	8° <del>2</del> 53'48		retrograde	10634 Mar 18 07:31	22° <del>2</del> 24'26	
evening set	10627 Nov 10 09:39	10° <del>2</del> 23'27		opposition	10634 Jun 05 17:16	21° <del>2</del> 11'32	9°00'26
max. Earth dist.	10627 Nov 22 16:58	10° <del>2</del> 44'52	38.69971 AU	min. Earth dist.	10634 Jun 08 01:00	21° <del>2</del> 08'11	35.04440 AU
				direct	10634 Aug 24 22:39	19° <del>2</del> 57'41	
conjunction	10627 Nov 25 04:32	10° <del>2</del> 49'15	5°56'03	evening set	10634 Nov 23 08:41	21° <del>2</del> 36'58	
minimum elong	10627 Nov 25 04:22	10° <del>2</del> 49'14	5°56'33	max. Earth dist.	10634 Dec 03 21:59	21° <del>2</del> 56'33	36.89557 AU
morning rise	10627 Dec 09 23:20	11° <del>2</del> 15'05					
retrograde	10628 Mar 07 17:35	12° <del>2</del> 46'12		conjunction	10634 Dec 06 12:30	22° <del>2</del> 01'25	8°43'13
opposition	10628 May 26 18:12	11° <del>2</del> 35'44	6°28'05	minimum elong	10634 Dec 06 12:14	22° <del>2</del> 01'24	8°43'45
min. Earth dist.	10628 May 28 23:31	11° <del>2</del> 32'39	36.58118 AU	morning rise	10634 Dec 19 15:40	22° <del>2</del> 25'51	
direct	10628 Aug 15 06:01	10° <del>2</del> 24'36		retrograde	10635 Mar 20 07:57	24° <del>2</del> 06'09	
evening set	10628 Nov 11 10:02	11° <del>2</del> 55'26		opposition	10635 Jun 07 15:15	22° <del>2</del> 52'54	9°25'41
max. Earth dist.	10628 Nov 23 11:53	12° <del>2</del> 16'39	38.44158 AU	min. Earth dist.	10635 Jun 09 22:36	22° <del>2</del> 49'33	34.79304 AU
				direct	10635 Aug 26 18:58	21° <del>2</del> 38'37	
conjunction	10628 Nov 26 00:37	12° <del>2</del> 21'08	6°19'54	evening set	10635 Nov 25 16:21	23° <del>2</del> 19'35	
minimum elong	10628 Nov 26 00:25	12° <del>2</del> 21'08	6°20'24	max. Earth dist.	10635 Dec 05 21:40	23° <del>2</del> 38'44	36.64265 AU
morning rise	10628 Dec 10 14:54	12° <del>2</del> 46'52					
retrograde	10629 Mar 09 12:31	14° <del>2</del> 19'08		conjunction	10635 Dec 08 12:54	23° <del>2</del> 43'43	9°06'51
opposition	10629 May 28 12:42	13° <del>2</del> 08'16	6°53'25	minimum elong	10635 Dec 08 12:38	23° <del>2</del> 43'41	9°07'24
min. Earth dist.	10629 May 30 19:24	13° <del>2</del> 05'05	36.32414 AU	morning rise	10635 Dec 21 08:40	24° <del>2</del> 07'48	
direct	10629 Aug 16 22:25	11° <del>2</del> 56'41		retrograde	10636 Mar 21 08:39	25° <del>2</del> 49'42	
evening set	10629 Nov 13 11:13	13° <del>2</del> 28'45		opposition	10636 Jun 08 13:56	24° <del>2</del> 36'05	9°50'49
max. Earth dist.	10629 Nov 25 08:25	13° <del>2</del> 49'48	38.18258 AU	min. Earth dist.	10636 Jun 10 22:31	24° <del>2</del> 32'38	34.54317 AU
				direct	10636 Aug 27 14:05	23° <del>2</del> 21'23	
conjunction	10629 Nov 27 21:03	13° <del>2</del> 54'20	6°43'48	evening set	10636 Nov 27 01:24	25° <del>2</del> 04'07	
minimum elong	10629 Nov 27 20:51	13° <del>2</del> 54'19	6°44'20	max. Earth dist.	10636 Dec 06 23:17	25° <del>2</del> 22'52	36.39105 AU
morning rise	10629 Dec 12 06:28	14° <del>2</del> 19'55					
retrograde	10630 Mar 11 10:01	15° <del>2</del> 53'22		conjunction	10636 Dec 09 14:05	25° <del>2</del> 27'51	9°30'20
opposition	10630 May 30 07:35	14° <del>2</del> 42'06	7°18'48	minimum elong	10636 Dec 09 13:48	25° <del>2</del> 27'50	9°30'52
min. Earth dist.	10630 Jun 01 13:47	14° <del>2</del> 38'55	36.06663 AU	morning rise	10636 Dec 22 01:51	25° <del>2</del> 51'33	
direct	10630 Aug 18 15:13	13° <del>2</del> 30'03		retrograde	10637 Mar 23 11:19	27° <del>2</del> 35'08	
evening set	10630 Nov 15 13:28	15° <del>2</del> 03'25		opposition	10637 Jun 10 13:20	26° <del>2</del> 21'10	10°15'47
max. Earth dist.	10630 Nov 27 03:55	15° <del>2</del> 24'10	37.92325 AU	min. Earth dist.	10637 Jun 12 21:16	26° <del>2</del> 17'43	34.29440 AU
				direct	10637 Aug 29 11:50	25° <del>2</del> 06'02	
conjunction	10630 Nov 29 18:05	15° <del>2</del> 28'51	7°07'45	evening set	10637 Nov 29 11:34	26° <del>2</del> 50'36	
minimum elong	10630 Nov 29 17:51	15° <del>2</del> 28'50	7°08'16	max. Earth dist.	10637 Dec 08 23:33	27° <del>2</del> 08'45	36.14013 AU
morning rise	10630 Dec 13 22:22	15° <del>2</del> 54'16					
retrograde	10631 Mar 13 08:58	17° <del>2</del> 28'57		conjunction	10637 Dec 11 15:48	27° <del>2</del> 13'54	9°53'38
opposition	10631 Jun 01 03:05	16° <del>2</del> 17'16	7°44'14	minimum elong	10637 Dec 11 15:30	27° <del>2</del> 13'53	9°54'11
min. Earth dist.	10631 Jun 03 10:41	16° <del>2</del> 13'59	35.80935 AU	morning rise	10637 Dec 23 19:17	27° <del>2</del> 37'10	
direct	10631 Aug 20 08:32	15° <del>2</del> 04'45		retrograde	10638 Mar 25 15:44	29° <del>2</del> 22'30	
evening set	10631 Nov 17 16:36	16° <del>2</del> 39'30		opposition	10638 Jun 12 13:37	28° <del>2</del> 08'08	10°40'34
max. Earth dist.	10631 Nov 29 02:20	17° <del>2</del> 00'04	37.66435 AU	min. Earth dist.	10638 Jun 14 22:52	28° <del>2</del> 04'36	34.04632 AU
				direct	10638 Aug 31 09:56	26° <del>2</del> 52'34	
conjunction	10631 Dec 01 15:50	17° <del>2</del> 04'44	7°31'41	evening set	10638 Dec 01 23:06	28° <del>2</del> 39'02	

max. Earth dist.	10638 Dec 11 02:55	28° $\overline{2}$ 56'43	35.88977 AU	morning rise	10645 Jan 03 02:10	10° $\overline{3}$ 47'06	
				retrograde	10645 Apr 08 07:50	12° $\overline{3}$ 46'30	
conjunction	10638 Dec 13 18:33	29° $\overline{2}$ 01'52	10°16'43	opposition	10645 Jun 25 11:34	11° $\overline{3}$ 29'10	13°24'47
minimum elong	10638 Dec 13 18:15	29° $\overline{2}$ 01'50	10°17'16	min. Earth dist.	10645 Jun 27 21:08	11° $\overline{3}$ 25'25	32.35419 AU
morning rise	10638 Dec 25 12:55	29° $\overline{2}$ 24'38		direct	10645 Sep 13 00:05	10° $\overline{3}$ 10'09	
	10639 Jan 13 17:13	0° $\overline{3}$		evening set	10645 Dec 18 22:54	12° $\overline{3}$ 12'07	
retrograde	10639 Mar 27 20:29	1° $\overline{3}$ 11'46		max. Earth dist.	10645 Dec 24 18:46	12° $\overline{3}$ 24'09	34.18789 AU
	10639 Jun 12 14:20	30° $\overline{R}$ $\overline{2}$					
opposition	10639 Jun 14 14:29	29° $\overline{2}$ 57'00	11°05'07	conjunction	10645 Dec 27 10:07	12° $\overline{3}$ 29'38	12°48'20
min. Earth dist.	10639 Jun 16 23:30	29° $\overline{2}$ 53'27	33.79880 AU	minimum elong	10645 Dec 27 09:47	12° $\overline{3}$ 29'37	12°48'54
direct	10639 Sep 02 11:40	28° $\overline{2}$ 40'58		morning rise	10646 Jan 04 20:16	12° $\overline{3}$ 47'07	
	10639 Nov 18 19:35	0° $\overline{3}$		retrograde	10646 Apr 10 16:23	14° $\overline{3}$ 48'53	
evening set	10639 Dec 04 12:07	0° $\overline{3}$ 29'25		opposition	10646 Jun 27 17:51	13° $\overline{3}$ 31'07	13°46'10
max. Earth dist.	10639 Dec 13 04:49	0° $\overline{3}$ 46'23	35.64010 AU	min. Earth dist.	10646 Jun 30 01:59	13° $\overline{3}$ 27'27	32.12683 AU
				direct	10646 Sep 15 05:38	12° $\overline{3}$ 11'38	
conjunction	10639 Dec 15 21:58	0° $\overline{3}$ 51'42	10°39'34	evening set	10646 Dec 21 22:10	14° $\overline{3}$ 16'12	
minimum elong	10639 Dec 15 21:39	0° $\overline{3}$ 51'40	10°40'07	max. Earth dist.	10646 Dec 27 03:06	14° $\overline{3}$ 27'04	33.96049 AU
morning rise	10639 Dec 27 06:59	1° $\overline{3}$ 13'56					
retrograde	10640 Mar 29 02:09	3° $\overline{3}$ 02'55		conjunction	10646 Dec 29 18:48	14° $\overline{3}$ 32'38	13°07'50
opposition	10640 Jun 15 16:09	1° $\overline{3}$ 47'44	11°29'25	minimum elong	10646 Dec 29 18:29	14° $\overline{3}$ 32'36	13°08'22
min. Earth dist.	10640 Jun 18 01:51	1° $\overline{3}$ 44'08	33.55222 AU	morning rise	10647 Jan 06 14:35	14° $\overline{3}$ 49'01	
direct	10640 Sep 03 12:00	0° $\overline{3}$ 31'14		retrograde	10647 Apr 13 03:42	16° $\overline{3}$ 53'15	
evening set	10640 Dec 06 02:19	2° $\overline{3}$ 21'43		opposition	10647 Jun 30 00:51	15° $\overline{3}$ 35'06	14°06'47
max. Earth dist.	10640 Dec 14 09:20	2° $\overline{3}$ 38'03	35.39134 AU	min. Earth dist.	10647 Jul 02 08:52	15° $\overline{3}$ 31'25	31.90503 AU
				direct	10647 Sep 17 10:55	14° $\overline{3}$ 15'10	
conjunction	10640 Dec 17 02:14	2° $\overline{3}$ 43'24	11°02'06	evening set	10647 Dec 24 23:22	16° $\overline{3}$ 22'28	
minimum elong	10640 Dec 17 01:55	2° $\overline{3}$ 43'22	11°02'39	max. Earth dist.	10647 Dec 29 14:27	16° $\overline{3}$ 32'14	33.73860 AU
morning rise	10640 Dec 28 01:01	3° $\overline{3}$ 05'01					
retrograde	10641 Mar 31 06:08	4° $\overline{3}$ 55'55		conjunction	10648 Jan 01 04:32	16° $\overline{3}$ 37'42	13°26'34
opposition	10641 Jun 17 18:33	3° $\overline{3}$ 40'20	11°53'23	minimum elong	10648 Jan 01 04:14	16° $\overline{3}$ 37'40	13°27'08
min. Earth dist.	10641 Jun 20 04:34	3° $\overline{3}$ 36'40	33.30688 AU	morning rise	10648 Jan 08 08:44	16° $\overline{3}$ 52'52	
direct	10641 Sep 05 14:30	2° $\overline{3}$ 23'20		retrograde	10648 Apr 14 14:47	18° $\overline{3}$ 59'42	
evening set	10641 Dec 08 18:02	4° $\overline{3}$ 15'56		opposition	10648 Jul 01 08:49	17° $\overline{3}$ 41'11	14°26'36
max. Earth dist.	10641 Dec 16 13:53	4° $\overline{3}$ 31'30	35.14435 AU	min. Earth dist.	10648 Jul 03 16:14	17° $\overline{3}$ 37'31	31.68852 AU
				direct	10648 Sep 18 19:33	16° $\overline{3}$ 20'49	
conjunction	10641 Dec 19 07:05	4° $\overline{3}$ 36'56	11°24'18	evening set	10648 Dec 27 02:34	18° $\overline{3}$ 30'59	
minimum elong	10641 Dec 19 06:46	4° $\overline{3}$ 36'55	11°24'51	max. Earth dist.	10648 Dec 31 00:47	18° $\overline{3}$ 39'21	33.52209 AU
morning rise	10641 Dec 29 19:13	4° $\overline{3}$ 57'52					
retrograde	10642 Apr 02 12:58	6° $\overline{3}$ 50'47		conjunction	10649 Jan 02 14:54	18° $\overline{3}$ 44'53	13°44'31
opposition	10642 Jun 19 21:37	5° $\overline{3}$ 34'45	12°16'59	minimum elong	10649 Jan 02 14:35	18° $\overline{3}$ 44'51	13°45'03
min. Earth dist.	10642 Jun 22 07:08	5° $\overline{3}$ 31'06	33.06375 AU	morning rise	10649 Jan 09 02:26	18° $\overline{3}$ 58'42	
direct	10642 Sep 07 16:37	4° $\overline{3}$ 17'15		retrograde	10649 Apr 17 03:31	21° $\overline{3}$ 08'16	
evening set	10642 Dec 11 10:51	6° $\overline{3}$ 12'03		opposition	10649 Jul 03 17:30	19° $\overline{3}$ 49'23	14°45'32
max. Earth dist.	10642 Dec 18 19:17	6° $\overline{3}$ 26'49	34.89966 AU	min. Earth dist.	10649 Jul 06 00:07	19° $\overline{3}$ 45'45	31.47725 AU
				direct	10649 Sep 21 03:27	18° $\overline{3}$ 28'37	
conjunction	10642 Dec 21 12:40	6° $\overline{3}$ 32'19	11°46'05	evening set	10649 Dec 30 08:09	20° $\overline{3}$ 41'48	
minimum elong	10642 Dec 21 12:20	6° $\overline{3}$ 32'17	11°46'37	max. Earth dist.	10650 Jan 02 13:05	20° $\overline{3}$ 48'42	33.31053 AU
morning rise	10642 Dec 31 13:27	6° $\overline{3}$ 52'30					
retrograde	10643 Apr 04 18:01	8° $\overline{3}$ 47'30		conjunction	10650 Jan 05 02:18	20° $\overline{3}$ 54'11	14°01'36
opposition	10643 Jun 22 01:35	7° $\overline{3}$ 31'02	12°40'07	minimum elong	10650 Jan 05 02:00	20° $\overline{3}$ 54'10	14°02'09
min. Earth dist.	10643 Jun 24 11:53	7° $\overline{3}$ 27'17	32.82334 AU	morning rise	10650 Jan 10 19:39	21° $\overline{3}$ 06'31	
direct	10643 Sep 09 17:29	6° $\overline{3}$ 13'01		retrograde	10650 Apr 19 15:13	23° $\overline{3}$ 18'57	
evening set	10643 Dec 14 05:27	8° $\overline{3}$ 10'06		opposition	10650 Jul 06 03:14	21° $\overline{3}$ 59'43	15°03'33
max. Earth dist.	10643 Dec 21 02:34	8° $\overline{3}$ 24'03	34.65820 AU	min. Earth dist.	10650 Jul 08 10:00	21° $\overline{3}$ 56'02	31.27077 AU
				direct	10650 Sep 23 11:43	20° $\overline{3}$ 38'32	
conjunction	10643 Dec 23 19:07	8° $\overline{3}$ 29'32	12°07'24	evening set	10651 Jan 02 16:36	22° $\overline{3}$ 54'55	
minimum elong	10643 Dec 23 18:47	8° $\overline{3}$ 29'30	12°07'57	max. Earth dist.	10651 Jan 05 01:52	23° $\overline{3}$ 00'06	33.10397 AU
morning rise	10644 Jan 02 07:45	8° $\overline{3}$ 48'54					
retrograde	10644 Apr 06 00:04	10° $\overline{3}$ 46'03		conjunction	10651 Jan 07 14:23	23° $\overline{3}$ 05'36	14°17'46
opposition	10644 Jun 23 06:02	9° $\overline{3}$ 29'09	13°02'45	minimum elong	10651 Jan 07 14:06	23° $\overline{3}$ 05'34	14°18'17
min. Earth dist.	10644 Jun 25 15:10	9° $\overline{3}$ 25'28	32.58656 AU	morning rise	10651 Jan 12 11:30	23° $\overline{3}$ 16'12	
direct	10644 Sep 10 21:50	8° $\overline{3}$ 10'38		retrograde	10651 Apr 22 05:43	25° $\overline{3}$ 31'41	
evening set	10644 Dec 16 01:25	10° $\overline{3}$ 10'06		opposition	10651 Jul 08 13:41	24° $\overline{3}$ 12'06	15°20'35
max. Earth dist.	10644 Dec 22 09:08	10° $\overline{3}$ 23'03	34.42064 AU	min. Earth dist.	10651 Jul 10 19:06	24° $\overline{3}$ 08'30	31.06906 AU
				direct	10651 Sep 25 21:36	22° $\overline{3}$ 50'29	
conjunction	10644 Dec 25 02:16	10° $\overline{3}$ 28'38	12°28'10	evening set	10652 Jan 06 05:04	25° $\overline{3}$ 10'24	
minimum elong	10644 Dec 25 01:56	10° $\overline{3}$ 28'36	12°28'43	max. Earth dist.	10652 Jan 07 15:07	25° $\overline{3}$ 13'31	32.90214 AU

conjunction	10652 Jan 10 03:29	25° $\mathfrak{Z}$ 19'02	14°32'58	opposition	10659 Jul 27 05:36	12° $\approx$ 57'19	16°51'09
minimum elong	10652 Jan 10 03:13	25° $\mathfrak{Z}$ 19'00	14°33'30	min. Earth dist.	10659 Jul 29 02:37	12° $\approx$ 54'10	29.68277 AU
morning rise	10652 Jan 14 01:17	25° $\mathfrak{Z}$ 27'36		direct	10659 Oct 14 06:58	11° $\approx$ 32'45	
retrograde	10652 Apr 23 18:21	27° $\mathfrak{Z}$ 46'26		max. Earth dist.	10660 Jan 27 12:02	14° $\approx$ 06'46	31.53314 AU
opposition	10652 Jul 10 01:03	26° $\mathfrak{Z}$ 26'29	15°36'32				
min. Earth dist.	10652 Jul 12 06:59	26° $\mathfrak{Z}$ 22'49	30.87222 AU	conjunction	10660 Jan 29 12:34	14° $\approx$ 11'28	15°50'10
direct	10652 Sep 27 05:58	25° $\mathfrak{Z}$ 04'27		minimum elong	10660 Jan 29 12:31	14° $\approx$ 11'28	15°50'36
evening set	10653 Jan 09 00:31	27° $\mathfrak{Z}$ 28'26			10660 Feb 19 17:00	15° $\approx$	
max. Earth dist.	10653 Jan 09 06:26	27° $\mathfrak{Z}$ 28'59	32.70565 AU	retrograde	10660 May 13 07:45	16° $\approx$ 47'50	
				opposition	10660 Jul 28 22:36	15° $\approx$ 25'26	16°55'28
conjunction	10653 Jan 11 17:18	27° $\mathfrak{Z}$ 34'25	14°47'07	min. Earth dist.	10660 Jul 30 17:04	15° $\approx$ 22'27	29.54805 AU
minimum elong	10653 Jan 11 17:03	27° $\mathfrak{Z}$ 34'24	14°47'37		10660 Aug 13 06:26	15° $\mathfrak{R}$ $\approx$	
morning rise	10653 Jan 14 09:34	27° $\mathfrak{Z}$ 40'21		direct	10660 Oct 16 00:31	14° $\approx$ 00'39	
	10653 Apr 12 18:32	0° $\approx$			10660 Dec 15 21:09	15° $\approx$	
retrograde	10653 Apr 26 08:01	0° $\approx$ 03'05		max. Earth dist.	10661 Jan 29 09:15	16° $\approx$ 35'54	31.40266 AU
	10653 May 09 23:53	30° $\mathfrak{R}$ $\mathfrak{Z}$					
opposition	10653 Jul 12 13:10	28° $\mathfrak{Z}$ 42'47	15°51'21	conjunction	10661 Jan 31 07:34	16° $\approx$ 40'25	15°53'07
min. Earth dist.	10653 Jul 14 17:21	28° $\mathfrak{Z}$ 39'14	30.68072 AU	minimum elong	10661 Jan 31 07:31	16° $\approx$ 40'24	15°53'31
direct	10653 Sep 29 18:22	27° $\mathfrak{Z}$ 20'20		retrograde	10661 May 16 01:56	19° $\approx$ 17'39	
max. Earth dist.	10654 Jan 11 20:43	29° $\mathfrak{Z}$ 46'13	32.51487 AU	opposition	10661 Jul 31 16:31	17° $\approx$ 55'06	16°57'59
				min. Earth dist.	10661 Aug 02 10:12	17° $\approx$ 52'10	29.42297 AU
conjunction	10654 Jan 14 07:38	29° $\mathfrak{Z}$ 51'42	15°00'09	direct	10661 Oct 18 16:42	16° $\approx$ 30'08	
minimum elong	10654 Jan 14 07:25	29° $\mathfrak{Z}$ 51'40	15°00'39	max. Earth dist.	10662 Feb 01 06:52	19° $\approx$ 06'31	31.28207 AU
	10654 Jan 18 01:02	0° $\approx$					
retrograde	10654 Apr 28 22:35	2° $\approx$ 21'37		conjunction	10662 Feb 03 02:52	19° $\approx$ 10'50	15°54'23
opposition	10654 Jul 15 02:10	1° $\approx$ 00'56	16°04'55	minimum elong	10662 Feb 03 02:53	19° $\approx$ 10'50	15°54'47
min. Earth dist.	10654 Jul 17 06:22	0° $\approx$ 57'22	30.49520 AU	retrograde	10662 May 18 22:34	21° $\approx$ 48'52	
	10654 Aug 25 17:31	30° $\mathfrak{R}$ $\mathfrak{Z}$		opposition	10662 Aug 03 10:50	20° $\approx$ 26'11	16°58'42
direct	10654 Oct 02 04:51	29° $\mathfrak{Z}$ 38'05		min. Earth dist.	10662 Aug 05 01:53	20° $\approx$ 23'25	29.30720 AU
	10654 Nov 08 02:24	0° $\approx$		direct	10662 Oct 21 11:37	19° $\approx$ 01'03	
max. Earth dist.	10655 Jan 14 14:17	2° $\approx$ 05'29	32.33057 AU	max. Earth dist.	10663 Feb 04 04:18	21° $\approx$ 38'24	31.17080 AU
conjunction	10655 Jan 16 22:57	2° $\approx$ 10'47	15°11'58	conjunction	10663 Feb 05 22:52	21° $\approx$ 42'35	15°53'57
minimum elong	10655 Jan 16 22:45	2° $\approx$ 10'46	15°12'27	minimum elong	10663 Feb 05 22:54	21° $\approx$ 42'36	15°54'19
retrograde	10655 May 01 13:33	4° $\approx$ 41'53		retrograde	10663 May 21 18:53	24° $\approx$ 21'20	
opposition	10655 Jul 17 15:41	3° $\approx$ 20'53	16°17'11	opposition	10663 Aug 06 05:45	22° $\approx$ 58'31	16°57'34
min. Earth dist.	10655 Jul 19 18:13	3° $\approx$ 17'24	30.31623 AU	min. Earth dist.	10663 Aug 07 20:05	22° $\approx$ 55'48	29.20049 AU
direct	10655 Oct 04 18:14	1° $\approx$ 57'37		direct	10663 Oct 24 04:14	21° $\approx$ 33'13	
max. Earth dist.	10656 Jan 17 06:24	4° $\approx$ 26'18	32.15343 AU	max. Earth dist.	10664 Feb 07 03:26	24° $\approx$ 11'34	31.06889 AU
conjunction	10656 Jan 19 14:50	4° $\approx$ 31'37	15°22'30	conjunction	10664 Feb 08 19:21	24° $\approx$ 15'30	15°51'47
minimum elong	10656 Jan 19 14:39	4° $\approx$ 31'36	15°23'00	minimum elong	10664 Feb 08 19:27	24° $\approx$ 15'31	15°52'09
retrograde	10656 May 03 06:23	7° $\approx$ 03'53		retrograde	10664 May 23 14:11	26° $\approx$ 54'52	
opposition	10656 Jul 19 06:05	5° $\approx$ 42'32	16°28'01	opposition	10664 Aug 08 01:12	25° $\approx$ 31'55	16°54'33
min. Earth dist.	10656 Jul 21 07:50	5° $\approx$ 39'05	30.14476 AU	min. Earth dist.	10664 Aug 09 12:58	25° $\approx$ 29'22	29.10267 AU
direct	10656 Oct 06 07:29	4° $\approx$ 18'53		direct	10664 Oct 26 00:22	24° $\approx$ 06'29	
max. Earth dist.	10657 Jan 19 01:41	6° $\approx$ 49'03	31.98427 AU	max. Earth dist.	10665 Feb 09 01:10	26° $\approx$ 45'32	30.97619 AU
conjunction	10657 Jan 21 07:23	6° $\approx$ 54'09	15°31'41	conjunction	10665 Feb 10 15:57	26° $\approx$ 49'23	15°47'52
minimum elong	10657 Jan 21 07:13	6° $\approx$ 54'08	15°32'09	minimum elong	10665 Feb 10 16:03	26° $\approx$ 49'24	15°48'13
retrograde	10657 May 05 22:39	9° $\approx$ 27'30		retrograde	10665 May 26 09:57	29° $\approx$ 29'15	
opposition	10657 Jul 21 21:16	8° $\approx$ 05'50	16°37'21	opposition	10665 Aug 10 21:07	28° $\approx$ 06'10	16°49'39
min. Earth dist.	10657 Jul 23 21:30	8° $\approx$ 02'29	29.98144 AU	min. Earth dist.	10665 Aug 12 07:39	28° $\approx$ 03'43	29.01400 AU
direct	10657 Oct 08 23:36	6° $\approx$ 41'51		direct	10665 Oct 28 19:15	26° $\approx$ 40'36	
max. Earth dist.	10658 Jan 21 19:39	9° $\approx$ 13'16	31.82411 AU	max. Earth dist.	10666 Feb 12 01:26	29° $\approx$ 20'29	30.89307 AU
conjunction	10658 Jan 24 00:26	9° $\approx$ 18'19	15°39'24	conjunction	10666 Feb 13 12:59	29° $\approx$ 24'01	15°42'11
minimum elong	10658 Jan 24 00:18	9° $\approx$ 18'18	15°39'52	minimum elong	10666 Feb 13 13:09	29° $\approx$ 24'02	15°42'31
retrograde	10658 May 08 17:09	11° $\approx$ 52'44			10666 Feb 28 17:20	0° $\mathfrak{H}$	
opposition	10658 Jul 24 13:00	10° $\approx$ 30'46	16°45'05	retrograde	10666 May 29 05:42	2° $\mathfrak{H}$ 04'16	
min. Earth dist.	10658 Jul 26 11:14	10° $\approx$ 27'33	29.82735 AU	opposition	10666 Aug 13 17:15	0° $\mathfrak{H}$ 41'05	16°42'50
direct	10658 Oct 11 14:53	9° $\approx$ 06'28		min. Earth dist.	10666 Aug 15 01:35	0° $\mathfrak{H}$ 38'47	28.93458 AU
max. Earth dist.	10659 Jan 24 16:04	11° $\approx$ 39'16	31.67356 AU		10666 Sep 07 20:29	30° $\mathfrak{R}$ $\approx$	
				direct	10666 Oct 31 15:52	29° $\approx$ 15'23	
conjunction	10659 Jan 26 18:15	11° $\approx$ 44'06	15°45'35		10666 Dec 22 14:39	0° $\mathfrak{H}$	
minimum elong	10659 Jan 26 18:09	11° $\approx$ 44'05	15°46'01	max. Earth dist.	10667 Feb 14 23:38	1° $\mathfrak{H}$ 55'45	30.81974 AU
retrograde	10659 May 11 11:10	14° $\approx$ 19'30					

conjunction	10667 Feb 16 10:05	1°♄59'11	15°34'43	opposition	10674 Sep 03 15:08	21°♄23'37	14°39'01
minimum elong	10667 Feb 16 10:15	1°♄59'12	15°35'02	min. Earth dist.	10674 Sep 04 04:08	21°♄22'42	28.69234 AU
retrograde	10667 Jun 01 01:56	4°♄39'43		direct	10674 Nov 21 21:11	19°♄58'09	
opposition	10667 Aug 16 13:40	3°♄16'26	16°34'05	evening set	10675 Mar 02 11:47	22°♄24'47	
min. Earth dist.	10667 Aug 17 20:04	3°♄14'17	28.86495 AU				
direct	10667 Nov 03 11:43	1°♄50'38		conjunction	10675 Mar 09 09:10	22°♄41'15	13°31'12
max. Earth dist.	10668 Feb 18 00:29	4°♄31'37	30.75659 AU	minimum elong	10675 Mar 09 09:33	22°♄41'17	13°31'20
				max. Earth dist.	10675 Mar 08 21:48	22°♄40'07	30.64267 AU
conjunction	10668 Feb 19 07:24	4°♄34'42	15°25'28	morning rise	10675 Mar 16 06:51	22°♄57'44	
minimum elong	10668 Feb 19 07:38	4°♄34'44	15°25'45	retrograde	10675 Jun 21 17:35	25°♄20'43	
retrograde	10668 Jun 02 20:34	7°♄15'25		opposition	10675 Sep 06 11:36	23°♄57'44	14°15'22
opposition	10668 Aug 18 10:19	5°♄52'03	16°23'24	min. Earth dist.	10675 Sep 06 21:25	23°♄57'02	28.71419 AU
min. Earth dist.	10668 Aug 19 14:46	5°♄50'01	28.80539 AU	direct	10675 Nov 24 19:47	22°♄32'27	
direct	10668 Nov 05 10:13	4°♄26'10		evening set	10676 Mar 03 13:03	24°♄56'46	
max. Earth dist.	10669 Feb 19 23:08	7°♄07'26	30.70429 AU				
				conjunction	10676 Mar 11 05:05	25°♄15'02	13°08'21
conjunction	10669 Feb 21 04:31	7°♄10'23	15°14'24	minimum elong	10676 Mar 11 05:30	25°♄15'04	13°08'26
minimum elong	10669 Feb 21 04:45	7°♄10'24	15°14'40	max. Earth dist.	10676 Mar 10 19:54	25°♄14'07	30.67311 AU
retrograde	10669 Jun 05 17:47	9°♄51'10		morning rise	10676 Mar 18 21:24	25°♄33'19	
opposition	10669 Aug 21 07:05	8°♄27'43	16°10'45	retrograde	10676 Jun 23 11:51	27°♄53'59	
min. Earth dist.	10669 Aug 22 08:32	8°♄25'55	28.75685 AU	opposition	10676 Sep 08 07:58	26°♄31'10	13°50'09
direct	10669 Nov 08 07:49	7°♄01'47		min. Earth dist.	10676 Sep 08 15:54	26°♄30'37	28.74660 AU
max. Earth dist.	10670 Feb 23 00:02	9°♄43'29	30.66344 AU	direct	10676 Nov 26 16:06	25°♄06'07	
				evening set	10677 Mar 05 15:26	27°♄28'09	
conjunction	10670 Feb 24 01:37	9°♄46'03	15°01'33				
minimum elong	10670 Feb 24 01:55	9°♄46'04	15°01'47	conjunction	10677 Mar 14 00:45	27°♄48'04	12°44'06
retrograde	10670 Jun 08 12:40	12°♄26'49		minimum elong	10677 Mar 14 01:10	27°♄48'07	12°44'10
opposition	10670 Aug 24 04:01	11°♄03'20	15°56'10	max. Earth dist.	10677 Mar 13 18:51	27°♄47'29	30.71407 AU
min. Earth dist.	10670 Aug 25 03:40	11°♄01'39	28.71975 AU	morning rise	10677 Mar 22 10:07	28°♄07'59	
direct	10670 Nov 11 05:15	9°♄37'24			10677 May 18 07:52	0°♄	
evening set	10671 Feb 24 06:00	12°♄15'07		retrograde	10677 Jun 26 05:56	0°♄26'25	
					10677 Aug 05 08:38	30°♄	
conjunction	10671 Feb 26 22:38	12°♄21'36	14°46'54	opposition	10677 Sep 11 03:58	29°♄03'48	13°23'27
minimum elong	10671 Feb 26 22:56	12°♄21'37	14°47'07	min. Earth dist.	10677 Sep 11 09:18	29°♄03'25	28.78908 AU
max. Earth dist.	10671 Feb 25 23:09	12°♄19'15	30.63475 AU	direct	10677 Nov 29 13:43	27°♄38'57	
morning rise	10671 Mar 01 15:50	12°♄28'07		evening set	10678 Mar 07 18:21	29°♄58'46	
retrograde	10671 Jun 11 10:06	15°♄02'15			10678 Mar 08 06:57	0°♄	
opposition	10671 Aug 27 00:45	13°♄38'48	15°39'39				
min. Earth dist.	10671 Aug 27 20:49	13°♄37'22	28.69477 AU	conjunction	10678 Mar 16 19:47	0°♄20'11	12°18'31
direct	10671 Nov 14 04:24	12°♄12'54		minimum elong	10678 Mar 16 20:13	0°♄20'14	12°18'33
evening set	10672 Feb 25 18:36	14°♄47'15		max. Earth dist.	10678 Mar 16 15:31	0°♄19'46	30.76505 AU
				morning rise	10678 Mar 25 21:21	0°♄41'37	
conjunction	10672 Feb 29 19:41	14°♄56'58	14°30'29	retrograde	10678 Jun 28 23:41	2°♄57'52	
minimum elong	10672 Feb 29 20:02	14°♄57'00	14°30'40	opposition	10678 Sep 13 23:37	1°♄35'25	12°55'22
max. Earth dist.	10672 Feb 28 23:49	14°♄54'58	30.61846 AU	min. Earth dist.	10678 Sep 14 02:29	1°♄35'13	28.84152 AU
morning rise	10672 Mar 04 21:19	15°♄06'43		direct	10678 Dec 02 09:10	0°♄10'47	
retrograde	10672 Jun 13 05:04	17°♄37'27		evening set	10679 Mar 09 21:57	2°♄28'25	
opposition	10672 Aug 28 21:46	16°♄14'03	15°21'14				
min. Earth dist.	10672 Aug 29 16:07	16°♄12'45	28.68205 AU	conjunction	10679 Mar 19 14:34	2°♄51'13	11°51'41
direct	10672 Nov 16 01:49	14°♄48'15		minimum elong	10679 Mar 19 15:00	2°♄51'16	11°51'43
evening set	10673 Feb 26 13:33	17°♄19'49		max. Earth dist.	10679 Mar 19 13:44	2°♄51'08	30.82587 AU
				morning rise	10679 Mar 29 06:59	3°♄14'02	
conjunction	10673 Mar 03 16:17	17°♄32'05	14°12'21	retrograde	10679 Jul 01 14:33	5°♄28'07	
minimum elong	10673 Mar 03 16:38	17°♄32'07	14°12'32	opposition	10679 Sep 16 18:48	4°♄05'52	12°26'01
max. Earth dist.	10673 Mar 02 23:06	17°♄30'22	30.61474 AU	min. Earth dist.	10679 Sep 16 19:44	4°♄05'48	28.90356 AU
morning rise	10673 Mar 08 19:29	17°♄44'23		direct	10679 Dec 05 06:47	2°♄41'28	
retrograde	10673 Jun 16 02:09	20°♄12'18		evening set	10680 Mar 11 01:59	4°♄56'56	
opposition	10673 Aug 31 18:30	18°♄49'01	15°01'00				
min. Earth dist.	10673 Sep 01 09:07	18°♄47'59	28.68139 AU	conjunction	10680 Mar 21 08:37	5°♄21'00	11°23'43
direct	10673 Nov 19 00:30	17°♄23'22		minimum elong	10680 Mar 21 09:03	5°♄21'03	11°23'42
evening set	10674 Feb 28 11:38	19°♄52'24		max. Earth dist.	10680 Mar 21 09:09	5°♄21'03	30.89645 AU
				morning rise	10680 Mar 31 15:13	5°♄45'04	
conjunction	10674 Mar 06 12:51	20°♄06'53	13°52'34	retrograde	10680 Jul 03 07:25	7°♄57'04	
minimum elong	10674 Mar 06 13:14	20°♄06'55	13°52'43	opposition	10680 Sep 18 13:32	6°♄34'59	11°55'27
max. Earth dist.	10674 Mar 05 22:36	20°♄05'28	30.62293 AU	min. Earth dist.	10680 Sep 18 11:22	6°♄35'08	28.97550 AU
morning rise	10674 Mar 12 14:28	20°♄21'24		direct	10680 Dec 07 02:18	5°♄10'49	
retrograde	10674 Jun 18 22:02	22°♄46'46		evening set	10681 Mar 13 06:00	7°♄24'08	

conjunction	10681 Mar 24 02:02	7° $\Upsilon$ 49'22	10°54'40	direct	10687 Dec 25 10:43	21° $\Upsilon$ 52'48	
minimum elong	10681 Mar 24 02:27	7° $\Upsilon$ 49'25	10°54'40	evening set	10688 Mar 26 15:02	23° $\Upsilon$ 52'42	
max. Earth dist.	10681 Mar 24 06:15	7° $\Upsilon$ 49'47	30.97691 AU				
morning rise	10681 Apr 03 21:38	8° $\Upsilon$ 14'35		conjunction	10688 Apr 09 08:49	24° $\Upsilon$ 23'20	7°08'53
retrograde	10681 Jul 05 21:32	10° $\Upsilon$ 24'32		minimum elong	10688 Apr 09 09:07	24° $\Upsilon$ 23'22	7°08'41
opposition	10681 Sep 21 07:51	9° $\Upsilon$ 02'38	11°23'47	max. Earth dist.	10688 Apr 10 07:21	24° $\Upsilon$ 25'26	31.83172 AU
min. Earth dist.	10681 Sep 21 04:06	9° $\Upsilon$ 02'53	29.05743 AU	morning rise	10688 Apr 23 01:31	24° $\Upsilon$ 53'53	
direct	10681 Dec 09 21:14	7° $\Upsilon$ 38'42		retrograde	10688 Jul 21 18:11	26° $\Upsilon$ 51'09	
evening set	10682 Mar 15 10:29	9° $\Upsilon$ 49'55		opposition	10688 Oct 07 22:36	25° $\Upsilon$ 31'10	7°19'24
				min. Earth dist.	10688 Oct 07 00:41	25° $\Upsilon$ 32'38	29.92474 AU
conjunction	10682 Mar 26 18:44	10° $\Upsilon$ 16'12	10°24'39	direct	10688 Dec 27 03:33	24° $\Upsilon$ 09'36	
minimum elong	10682 Mar 26 19:08	10° $\Upsilon$ 16'14	10°24'36	evening set	10689 Mar 28 20:04	26° $\Upsilon$ 07'49	
max. Earth dist.	10682 Mar 27 00:41	10° $\Upsilon$ 16'47	31.06760 AU				
morning rise	10682 Apr 07 02:42	10° $\Upsilon$ 42'28		conjunction	10689 Apr 11 20:36	26° $\Upsilon$ 38'52	6°34'34
retrograde	10682 Jul 08 13:09	12° $\Upsilon$ 50'23		minimum elong	10689 Apr 11 20:53	26° $\Upsilon$ 38'54	6°34'22
opposition	10682 Sep 24 01:15	11° $\Upsilon$ 28'41	10°51'06	max. Earth dist.	10689 Apr 12 20:22	26° $\Upsilon$ 41'05	31.99121 AU
min. Earth dist.	10682 Sep 23 17:56	11° $\Upsilon$ 29'11	29.14985 AU	morning rise	10689 Apr 25 20:20	27° $\Upsilon$ 09'50	
direct	10682 Dec 12 17:52	10° $\Upsilon$ 05'00		retrograde	10689 Jul 24 05:27	29° $\Upsilon$ 05'34	
evening set	10683 Mar 17 14:56	12° $\Upsilon$ 14'10		min. Earth dist.	10689 Oct 09 11:27	27° $\Upsilon$ 47'33	30.08550 AU
				opposition	10689 Oct 10 11:58	27° $\Upsilon$ 45'55	6°42'32
conjunction	10683 Mar 29 10:52	12° $\Upsilon$ 41'25	9°53'44	direct	10689 Dec 29 17:17	26° $\Upsilon$ 24'44	
minimum elong	10683 Mar 29 11:17	12° $\Upsilon$ 41'28	9°53'40	evening set	10690 Mar 31 01:06	28° $\Upsilon$ 21'21	
max. Earth dist.	10683 Mar 29 20:26	12° $\Upsilon$ 42'21	31.16881 AU				
morning rise	10683 Apr 10 06:13	13° $\Upsilon$ 08'38		conjunction	10690 Apr 14 08:00	28° $\Upsilon$ 52'45	6°00'01
retrograde	10683 Jul 11 02:40	15° $\Upsilon$ 14'36		minimum elong	10690 Apr 14 08:16	28° $\Upsilon$ 52'46	5°59'47
opposition	10683 Sep 26 18:26	13° $\Upsilon$ 53'07	10°17'30	max. Earth dist.	10690 Apr 15 10:42	28° $\Upsilon$ 55'12	32.15797 AU
min. Earth dist.	10683 Sep 26 09:22	13° $\Upsilon$ 53'44	29.25310 AU	morning rise	10690 Apr 28 13:43	29° $\Upsilon$ 24'03	
direct	10683 Dec 15 12:32	12° $\Upsilon$ 29'43			10690 May 15 20:50	0° $\mathcal{B}$	
evening set	10684 Mar 18 19:38	14° $\Upsilon$ 36'54		retrograde	10690 Jul 26 13:15	1° $\mathcal{B}$ 18'17	
				min. Earth dist.	10690 Oct 11 23:04	0° $\mathcal{B}$ 00'40	30.25327 AU
conjunction	10684 Mar 31 02:09	15° $\Upsilon$ 05'00	9°21'59		10690 Oct 12 09:10	30° $\mathcal{R}\Upsilon$	
minimum elong	10684 Mar 31 02:32	15° $\Upsilon$ 05'03	9°21'53	opposition	10690 Oct 13 00:36	29° $\Upsilon$ 58'59	6°05'29
max. Earth dist.	10684 Mar 31 13:58	15° $\Upsilon$ 06'08	31.28099 AU	direct	10691 Jan 01 07:48	28° $\Upsilon$ 38'11	
morning rise	10684 Apr 12 08:07	15° $\Upsilon$ 33'04			10691 Mar 17 04:22	0° $\mathcal{B}$	
retrograde	10684 Jul 12 17:16	17° $\Upsilon$ 37'09		evening set	10691 Apr 02 06:20	0° $\mathcal{B}$ 33'15	
opposition	10684 Sep 28 10:52	16° $\Upsilon$ 15'56	9°43'05				
min. Earth dist.	10684 Sep 27 22:00	16° $\Upsilon$ 16'48	29.36732 AU	conjunction	10691 Apr 16 18:35	1° $\mathcal{B}$ 04'54	5°25'19
direct	10684 Dec 17 07:31	14° $\Upsilon$ 52'51		minimum elong	10691 Apr 16 18:49	1° $\mathcal{B}$ 04'56	5°25'05
evening set	10685 Mar 21 00:18	16° $\Upsilon$ 58'07		max. Earth dist.	10691 Apr 17 21:59	1° $\mathcal{B}$ 07'25	32.33133 AU
				morning rise	10691 May 01 05:54	1° $\mathcal{B}$ 36'29	
conjunction	10685 Apr 02 16:50	17° $\Upsilon$ 26'59	8°49'32	retrograde	10691 Jul 28 22:37	3° $\mathcal{B}$ 29'18	
minimum elong	10685 Apr 02 17:12	17° $\Upsilon$ 27'01	8°49'25	min. Earth dist.	10691 Oct 14 08:14	2° $\mathcal{B}$ 12'10	30.42768 AU
max. Earth dist.	10685 Apr 03 07:38	17° $\Upsilon$ 28'23	31.40392 AU	opposition	10691 Oct 15 12:36	2° $\mathcal{B}$ 10'19	5°28'20
morning rise	10685 Apr 15 08:41	17° $\Upsilon$ 55'48		direct	10692 Jan 03 20:49	0° $\mathcal{B}$ 49'52	
retrograde	10685 Jul 15 06:55	19° $\Upsilon$ 58'05		evening set	10692 Apr 03 11:14	2° $\mathcal{B}$ 43'27	
min. Earth dist.	10685 Sep 30 11:59	18° $\Upsilon$ 38'08	29.49238 AU				
opposition	10685 Oct 01 02:44	18° $\Upsilon$ 37'08	9°07'57	conjunction	10692 Apr 18 04:26	3° $\mathcal{B}$ 15'19	4°50'34
direct	10685 Dec 20 00:45	17° $\Upsilon$ 14'24		minimum elong	10692 Apr 18 04:38	3° $\mathcal{B}$ 15'20	4°50'18
evening set	10686 Mar 23 05:05	19° $\Upsilon$ 17'49		max. Earth dist.	10692 Apr 19 10:38	3° $\mathcal{B}$ 18'04	32.51083 AU
				morning rise	10692 May 02 20:25	3° $\mathcal{B}$ 47'05	
conjunction	10686 Apr 05 06:47	19° $\Upsilon$ 47'22	8°16'28	retrograde	10692 Jul 30 05:55	5° $\mathcal{B}$ 38'32	
minimum elong	10686 Apr 05 07:08	19° $\Upsilon$ 47'24	8°16'18	min. Earth dist.	10692 Oct 15 18:51	4° $\mathcal{B}$ 21'46	30.60832 AU
max. Earth dist.	10686 Apr 06 00:15	19° $\Upsilon$ 49'01	31.53732 AU	opposition	10692 Oct 17 00:04	4° $\mathcal{B}$ 19'52	4°51'11
morning rise	10686 Apr 18 07:40	20° $\Upsilon$ 16'50		direct	10693 Jan 05 08:45	2° $\mathcal{B}$ 59'48	
retrograde	10686 Jul 17 20:26	22° $\Upsilon$ 17'23		evening set	10693 Apr 05 16:10	4° $\mathcal{B}$ 51'55	
opposition	10686 Oct 03 17:55	20° $\Upsilon$ 56'45	8°32'13				
min. Earth dist.	10686 Oct 03 00:13	20° $\Upsilon$ 57'56	29.62742 AU	conjunction	10693 Apr 20 13:30	5° $\mathcal{B}$ 23'55	4°15'48
direct	10686 Dec 22 19:37	19° $\Upsilon$ 34'23		minimum elong	10693 Apr 20 13:41	5° $\mathcal{B}$ 23'56	4°15'32
evening set	10687 Mar 25 10:03	21° $\Upsilon$ 36'01		max. Earth dist.	10693 Apr 21 20:44	5° $\mathcal{B}$ 26'44	32.69639 AU
				morning rise	10693 May 05 09:45	5° $\mathcal{B}$ 55'50	
conjunction	10687 Apr 07 20:04	22° $\Upsilon$ 06'09	7°42'52	retrograde	10693 Aug 01 14:18	7° $\mathcal{B}$ 45'57	
minimum elong	10687 Apr 07 20:25	22° $\Upsilon$ 06'11	7°42'43	min. Earth dist.	10693 Oct 18 02:32	6° $\mathcal{B}$ 29'39	30.79515 AU
max. Earth dist.	10687 Apr 08 15:37	22° $\Upsilon$ 07'59	31.68010 AU	opposition	10693 Oct 19 10:30	6° $\mathcal{B}$ 27'36	4°14'04
morning rise	10687 Apr 21 05:22	22° $\Upsilon$ 36'12		direct	10694 Jan 07 21:16	5° $\mathcal{B}$ 07'53	
retrograde	10687 Jul 20 08:01	24° $\Upsilon$ 35'05		evening set	10694 Apr 07 20:51	6° $\mathcal{B}$ 58'38	
opposition	10687 Oct 06 08:31	23° $\Upsilon$ 14'46	7°56'00				
min. Earth dist.	10687 Oct 05 12:39	23° $\Upsilon$ 16'06	29.77186 AU	conjunction	10694 Apr 22 21:48	7° $\mathcal{B}$ 30'42	3°41'06

minimum elong	10694 Apr 22 21:58	7° $\text{♁}$ 30'43	3°40'47	min. Earth dist.	10700 Nov 01 20:18	20° $\text{♁}$ 36'06	32.28486 AU
max. Earth dist.	10694 Apr 24 07:16	7° $\text{♁}$ 33'42	32.88791 AU	opposition	10700 Nov 03 17:15	20° $\text{♁}$ 33'19	0°01'08
morning rise	10694 May 07 21:37	8° $\text{♁}$ 02'41		desc. node	10700 Nov 15 15:17	20° $\text{♁}$ 15'45	
retrograde	10694 Aug 03 21:53	9° $\text{♁}$ 51'33		direct	10701 Jan 23 15:35	19° $\text{♁}$ 16'25	
min. Earth dist.	10694 Oct 20 11:18	8° $\text{♁}$ 35'37	30.98841 AU	evening set	10701 Apr 22 01:45	20° $\text{♁}$ 59'18	
opposition	10694 Oct 21 20:27	8° $\text{♁}$ 33'29	3°37'05				
direct	10695 Jan 10 09:06	7° $\text{♁}$ 14'08		conjunction	10701 May 07 11:51	21° $\text{♁}$ 30'29	-0°15'21
evening set	10695 Apr 10 01:23	9° $\text{♁}$ 03'34		minimum elong	10701 May 07 11:51	21° $\text{♁}$ 30'29	0°15'45
				behind sun begin	10701 May 07 10:20	21° $\text{♁}$ 30'22	
conjunction	10695 Apr 25 05:19	9° $\text{♁}$ 35'39	3°06'32	behind sun end	10701 May 07 13:21	21° $\text{♁}$ 30'37	
minimum elong	10695 Apr 25 05:27	9° $\text{♁}$ 35'39	3°06'13	max. Earth dist.	10701 May 09 09:47	21° $\text{♁}$ 34'24	34.40318 AU
max. Earth dist.	10695 Apr 26 16:39	9° $\text{♁}$ 38'47	33.08581 AU	morning rise	10701 May 22 20:54	22° $\text{♁}$ 01'36	
morning rise	10695 May 10 08:01	10° $\text{♁}$ 07'38		retrograde	10701 Aug 18 02:18	23° $\text{♁}$ 43'31	
retrograde	10695 Aug 06 04:49	11° $\text{♁}$ 55'19		min. Earth dist.	10701 Nov 04 01:10	22° $\text{♁}$ 30'42	32.51900 AU
min. Earth dist.	10695 Oct 22 18:04	10° $\text{♁}$ 39'50	31.18830 AU	opposition	10701 Nov 05 22:31	22° $\text{♁}$ 27'55	-0°33'23
opposition	10695 Oct 24 05:33	10° $\text{♁}$ 37'33	3°00'18	direct	10702 Jan 25 19:45	21° $\text{♁}$ 11'26	
direct	10696 Jan 12 21:54	9° $\text{♁}$ 18'35		evening set	10702 Apr 24 05:22	22° $\text{♁}$ 53'25	
evening set	10696 Apr 11 05:54	11° $\text{♁}$ 06'46					
				conjunction	10702 May 09 14:48	23° $\text{♁}$ 24'19	-0°47'36
conjunction	10696 Apr 26 12:04	11° $\text{♁}$ 38'48	2°32'08	minimum elong	10702 May 09 14:47	23° $\text{♁}$ 24'19	0°48'02
minimum elong	10696 Apr 26 12:11	11° $\text{♁}$ 38'49	2°31'47	max. Earth dist.	10702 May 11 13:21	23° $\text{♁}$ 28'14	34.63878 AU
max. Earth dist.	10696 Apr 28 01:04	11° $\text{♁}$ 42'04	33.29030 AU	morning rise	10702 May 24 23:12	23° $\text{♁}$ 55'08	
morning rise	10696 May 11 17:14	12° $\text{♁}$ 10'46		retrograde	10702 Aug 20 04:53	25° $\text{♁}$ 36'16	
retrograde	10696 Aug 07 10:18	13° $\text{♁}$ 57'19		min. Earth dist.	10702 Nov 06 04:02	24° $\text{♁}$ 23'54	32.75609 AU
min. Earth dist.	10696 Oct 24 00:26	12° $\text{♁}$ 42'17	31.39532 AU	opposition	10702 Nov 08 03:07	24° $\text{♁}$ 21'02	-1°07'21
opposition	10696 Oct 25 14:07	12° $\text{♁}$ 39'54	2°23'44	direct	10703 Jan 28 01:50	23° $\text{♁}$ 04'56	
direct	10697 Jan 14 06:52	11° $\text{♁}$ 21'19		evening set	10703 Apr 26 08:54	24° $\text{♁}$ 46'05	
evening set	10697 Apr 13 09:59	13° $\text{♁}$ 08'18					
				conjunction	10703 May 11 17:05	25° $\text{♁}$ 16'39	-1°19'23
conjunction	10697 Apr 28 18:08	13° $\text{♁}$ 40'16	1°57'58	minimum elong	10703 May 11 17:02	25° $\text{♁}$ 16'39	1°19'48
minimum elong	10697 Apr 28 18:13	13° $\text{♁}$ 40'16	1°57'38	max. Earth dist.	10703 May 13 16:36	25° $\text{♁}$ 20'37	34.87673 AU
max. Earth dist.	10697 Apr 30 09:50	13° $\text{♁}$ 43'44	33.50165 AU	morning rise	10703 May 27 00:26	25° $\text{♁}$ 47'09	
morning rise	10697 May 14 01:00	14° $\text{♁}$ 12'08		retrograde	10703 Aug 22 07:48	27° $\text{♁}$ 27'33	
	10697 Jun 08 03:59	15° $\text{♁}$		min. Earth dist.	10703 Nov 08 07:25	26° $\text{♁}$ 15'33	32.99564 AU
retrograde	10697 Aug 09 13:23	15° $\text{♁}$ 57'38		opposition	10703 Nov 10 07:18	26° $\text{♁}$ 12'38	-1°40'46
	10697 Oct 14 22:48	15° $\text{♁}$		direct	10704 Jan 30 07:11	24° $\text{♁}$ 56'56	
min. Earth dist.	10697 Oct 26 06:40	14° $\text{♁}$ 43'03	31.60903 AU	evening set	10704 Apr 27 12:11	26° $\text{♁}$ 37'15	
opposition	10697 Oct 27 21:54	14° $\text{♁}$ 40'34	1°47'30				
direct	10698 Jan 16 18:02	13° $\text{♁}$ 22'24		conjunction	10704 May 12 18:58	27° $\text{♁}$ 07'28	-1°50'38
	10698 Apr 11 11:37	15° $\text{♁}$		minimum elong	10704 May 12 18:54	27° $\text{♁}$ 07'28	1°51'06
evening set	10698 Apr 15 14:13	15° $\text{♁}$ 08'16		max. Earth dist.	10704 May 14 19:45	27° $\text{♁}$ 11'31	35.11675 AU
				morning rise	10704 May 28 00:40	27° $\text{♁}$ 37'37	
conjunction	10698 Apr 30 23:29	15° $\text{♁}$ 40'06	1°24'06	retrograde	10704 Aug 23 08:30	29° $\text{♁}$ 17'18	
minimum elong	10698 Apr 30 23:32	15° $\text{♁}$ 40'07	1°23'43	min. Earth dist.	10704 Nov 09 10:13	28° $\text{♁}$ 05'39	33.23700 AU
max. Earth dist.	10698 May 02 16:00	15° $\text{♁}$ 43'37	33.71929 AU	opposition	10704 Nov 11 10:48	28° $\text{♁}$ 02'42	-2°13'36
morning rise	10698 May 16 07:47	16° $\text{♁}$ 11'51		direct	10705 Jan 31 14:05	26° $\text{♁}$ 47'21	
retrograde	10698 Aug 11 18:17	17° $\text{♁}$ 56'21		evening set	10705 Apr 29 15:18	28° $\text{♁}$ 26'54	
min. Earth dist.	10698 Oct 28 11:02	16° $\text{♁}$ 42'17	31.82909 AU				
opposition	10698 Oct 30 04:51	16° $\text{♁}$ 39'39	1°11'37	conjunction	10705 May 14 19:59	28° $\text{♁}$ 56'44	-2°21'22
direct	10699 Jan 19 01:40	15° $\text{♁}$ 21'55		minimum elong	10705 May 14 19:54	28° $\text{♁}$ 56'44	2°21'49
evening set	10699 Apr 17 18:11	17° $\text{♁}$ 06'44		max. Earth dist.	10705 May 16 20:53	29° $\text{♁}$ 00'46	35.35828 AU
				morning rise	10705 May 29 23:59	29° $\text{♁}$ 26'31	
conjunction	10699 May 03 04:21	17° $\text{♁}$ 38'24	0°50'34		10705 Jun 17 04:55	0° $\text{♁}$	
minimum elong	10699 May 03 04:23	17° $\text{♁}$ 38'24	0°50'12	retrograde	10705 Aug 25 09:05	1° $\text{♁}$ 05'31	
max. Earth dist.	10699 May 04 23:33	17° $\text{♁}$ 42'07	33.94265 AU		10705 Nov 07 11:29	30° $\text{♁}$	
morning rise	10699 May 18 13:16	18° $\text{♁}$ 09'58		min. Earth dist.	10705 Nov 11 11:27	29° $\text{♁}$ 54'14	33.48011 AU
retrograde	10699 Aug 13 20:07	19° $\text{♁}$ 53'34		opposition	10705 Nov 13 13:39	29° $\text{♁}$ 51'13	-2°45'49
min. Earth dist.	10699 Oct 30 17:01	18° $\text{♁}$ 39'53	32.05462 AU	direct	10706 Feb 02 17:41	28° $\text{♁}$ 36'12	
opposition	10699 Nov 01 11:25	18° $\text{♁}$ 37'14	0°36'08		10706 Apr 23 18:41	0° $\text{♁}$	
direct	10700 Jan 21 09:36	17° $\text{♁}$ 19'55		evening set	10706 May 01 18:06	0° $\text{♁}$ 15'00	
evening set	10700 Apr 19 22:01	19° $\text{♁}$ 03'45					
				conjunction	10706 May 16 20:38	0° $\text{♁}$ 44'26	-2°51'32
conjunction	10700 May 05 08:18	19° $\text{♁}$ 35'11	0°17'26	minimum elong	10706 May 16 20:32	0° $\text{♁}$ 44'25	2°52'01
minimum elong	10700 May 05 08:18	19° $\text{♁}$ 35'11	0°17'01	max. Earth dist.	10706 May 18 23:23	0° $\text{♁}$ 48'35	35.60138 AU
max. Earth dist.	10700 May 07 04:01	19° $\text{♁}$ 38'56	34.17091 AU	morning rise	10706 May 31 22:10	1° $\text{♁}$ 13'48	
morning rise	10700 May 20 17:36	20° $\text{♁}$ 06'33		retrograde	10706 Aug 27 05:34	2° $\text{♁}$ 52'09	
retrograde	10700 Aug 15 23:26	21° $\text{♁}$ 49'16		min. Earth dist.	10706 Nov 13 13:38	1° $\text{♁}$ 41'09	33.72494 AU



opposition	10706 Nov 15 15:49	1°II38'08 -3°17'25	morning rise	10713 Jun 11 08:24	13°II04'24	
direct	10707 Feb 04 23:09	0°II23'28	retrograde	10713 Sep 07 11:49	14°II39'34	
evening set	10707 May 03 20:47	2°II01'33	min. Earth dist.	10713 Nov 25 06:41	13°II31'03	35.50375 AU
			opposition	10713 Nov 27 15:38	13°II27'46	-6°39'46
conjunction	10707 May 18 20:28	2°II30'32 -3°21'08	direct	10714 Feb 17 05:21	12°II15'37	
minimum elong	10707 May 18 20:21	2°II30'32 3°21'36	evening set	10714 May 16 08:31	13°II50'07	
max. Earth dist.	10707 May 20 23:09	2°II34'40 35.84635 AU				
morning rise	10707 Jun 02 19:29	2°II59'29	conjunction	10714 May 30 04:25	14°II15'37	-6°31'00
retrograde	10707 Aug 29 04:18	4°II37'14	minimum elong	10714 May 30 04:13	14°II15'36	6°31'32
min. Earth dist.	10707 Nov 15 13:07	3°II26'37 33.97208 AU	max. Earth dist.	10714 Jun 01 13:16	14°II20'02	37.62124 AU
opposition	10707 Nov 17 17:25	3°II23'30 -3°48'22	morning rise	10714 Jun 12 23:58	14°II41'07	
direct	10708 Feb 07 01:37	2°II09'09	retrograde	10714 Sep 09 07:44	16°II15'59	
evening set	10708 May 04 22:58	3°II46'34	min. Earth dist.	10714 Nov 27 03:03	15°II07'51	35.76251 AU
			opposition	10714 Nov 29 13:26	15°II04'31	-7°05'54
conjunction	10708 May 19 19:40	4°II15'07 -3°50'08	direct	10715 Feb 19 03:40	13°II52'43	
minimum elong	10708 May 19 19:32	4°II15'06 3°50'37	evening set	10715 May 18 09:28	15°II26'51	
max. Earth dist.	10708 May 22 00:24	4°II19'22 36.09362 AU				
morning rise	10708 Jun 03 15:37	4°II43'36	conjunction	10715 Jun 01 00:21	15°II51'48	-6°55'35
retrograde	10708 Aug 30 02:09	6°II20'49	minimum elong	10715 Jun 01 00:09	15°II51'47	6°56'07
min. Earth dist.	10708 Nov 16 14:03	5°II10'30 34.22192 AU	max. Earth dist.	10715 Jun 03 10:17	15°II56'16	37.87787 AU
opposition	10708 Nov 18 18:36	5°II07'23 -4°18'40	morning rise	10715 Jun 14 14:51	16°II16'45	
direct	10709 Feb 08 02:49	3°II53'22	retrograde	10715 Sep 11 03:15	17°II51'21	
evening set	10709 May 07 01:06	5°II30'11	min. Earth dist.	10715 Nov 29 01:18	16°II43'29	36.02058 AU
			opposition	10715 Dec 01 11:06	16°II40'11	-7°31'21
conjunction	10709 May 21 18:25	5°II58'15 -4°18'31	direct	10716 Feb 21 01:08	15°II28'44	
minimum elong	10709 May 21 18:16	5°II58'14 4°19'00	evening set	10716 May 19 10:10	17°II02'30	
max. Earth dist.	10709 May 23 23:44	6°II02'31 36.34363 AU				
morning rise	10709 Jun 05 11:01	6°II26'17	conjunction	10716 Jun 01 19:47	17°II26'54	-7°19'32
retrograde	10709 Sep 01 00:39	8°II02'59	minimum elong	10716 Jun 01 19:34	17°II26'53	7°20'04
min. Earth dist.	10709 Nov 18 12:29	6°II53'04 34.47446 AU	max. Earth dist.	10716 Jun 04 05:33	17°II31'19	38.13352 AU
opposition	10709 Nov 20 18:51	6°II49'52 -4°48'16	morning rise	10716 Jun 15 04:57	17°II51'17	
direct	10710 Feb 10 04:12	5°II36'12	retrograde	10716 Sep 11 23:32	19°II25'37	
evening set	10710 May 09 03:01	7°II12'28	min. Earth dist.	10716 Nov 29 21:33	18°II18'04	36.27731 AU
			opposition	10716 Dec 02 08:06	18°II14'45	-7°56'07
conjunction	10710 May 23 16:36	7°II40'03 -4°46'17	direct	10717 Feb 21 21:59	17°II03'37	
minimum elong	10710 May 23 16:26	7°II40'03 4°46'48	evening set	10717 May 21 10:48	18°II37'04	
max. Earth dist.	10710 May 25 22:59	7°II44'23 36.59610 AU				
morning rise	10710 Jun 07 05:39	8°II07'36	conjunction	10717 Jun 03 14:47	19°II00'54	-7°42'52
retrograde	10710 Sep 03 00:26	9°II43'52	minimum elong	10717 Jun 03 14:35	19°II00'53	7°43'24
min. Earth dist.	10710 Nov 20 11:37	8°II34'18 34.72955 AU	max. Earth dist.	10717 Jun 06 00:35	19°II05'17	38.38759 AU
opposition	10710 Nov 22 18:50	8°II31'04 -5°17'11	morning rise	10717 Jun 16 18:37	19°II24'42	
direct	10711 Feb 12 03:19	7°II17'47	retrograde	10717 Sep 13 20:28	20°II58'47	
evening set	10711 May 11 04:35	8°II53'33	min. Earth dist.	10717 Dec 01 17:53	19°II51'29	36.53265 AU
			opposition	10717 Dec 04 04:35	19°II48'11	-8°20'13
conjunction	10711 May 25 14:16	9°II20'38 -5°13'25	direct	10718 Feb 23 16:42	18°II37'20	
minimum elong	10711 May 25 14:06	9°II20'37 5°13'56	evening set	10718 May 23 11:03	20°II10'28	
max. Earth dist.	10711 May 27 21:58	9°II25'02 36.85079 AU				
morning rise	10711 Jun 08 23:13	9°II47'41	conjunction	10718 Jun 05 09:28	20°II33'43	-8°05'34
retrograde	10711 Sep 04 20:55	11°II23'33	minimum elong	10718 Jun 05 09:14	20°II33'42	8°06'07
min. Earth dist.	10711 Nov 22 10:24	10°II14'20 34.98648 AU	max. Earth dist.	10718 Jun 07 19:59	20°II38'08	38.64028 AU
opposition	10711 Nov 24 18:16	10°II11'05 -5°45'25	morning rise	10718 Jun 18 07:25	20°II56'57	
direct	10712 Feb 14 04:37	8°II58'10	retrograde	10718 Sep 15 12:49	22°II30'47	
evening set	10712 May 12 06:09	10°II33'29	min. Earth dist.	10718 Dec 03 14:14	21°II23'42	36.78656 AU
			opposition	10718 Dec 06 00:40	21°II20'25	-8°43'38
conjunction	10712 May 26 11:23	11°II00'03 -5°39'55	direct	10719 Feb 25 15:34	20°II09'51	
minimum elong	10712 May 26 11:12	11°II00'03 5°40'27	evening set	10719 May 25 11:04	21°II42'42	
max. Earth dist.	10712 May 28 19:07	11°II04'26 37.10696 AU				
morning rise	10712 Jun 09 16:16	11°II26'36	conjunction	10719 Jun 07 03:20	22°II05'21	-8°27'38
retrograde	10712 Sep 05 17:54	13°II02'06	minimum elong	10719 Jun 07 03:08	22°II05'20	8°28'12
min. Earth dist.	10712 Nov 23 07:50	11°II53'17 35.24487 AU	max. Earth dist.	10719 Jun 09 13:16	22°II09'41	38.89177 AU
opposition	10712 Nov 25 17:10	11°II49'58 -6°12'56	morning rise	10719 Jun 19 19:31	22°II28'00	
direct	10713 Feb 15 04:04	10°II37'26	retrograde	10719 Sep 17 05:33	24°II01'36	
evening set	10713 May 14 07:17	12°II12'20	min. Earth dist.	10719 Dec 05 08:38	22°II54'49	37.03977 AU
			opposition	10719 Dec 07 20:19	22°II51'28	-9°06'23
conjunction	10713 May 28 08:09	12°II38'23 -6°05'47	direct	10720 Feb 27 13:07	21°II41'10	
minimum elong	10713 May 28 07:58	12°II38'22 6°06'18	evening set	10720 May 26 10:45	23°II13'44	
max. Earth dist.	10713 May 30 17:36	12°II42'51 37.36405 AU				

conjunction	10720 Jun 07 21:00	23°II35'48 -8°49'05	retrograde	10726 Sep 26 20:52	4°☾08'19	
minimum elong	10720 Jun 07 20:46	23°II35'47 8°49'39	min. Earth dist.	10726 Dec 15 11:39	3°☾03'22	38.80585 AU
max. Earth dist.	10720 Jun 10 08:29	23°II40'13 39.14279 AU	opposition	10726 Dec 18 01:41	3°☾00'00	-11°26'48
morning rise	10720 Jun 20 06:56	23°II57'51	direct	10727 Mar 09 22:56	1°☾51'44	
retrograde	10720 Sep 17 20:31	25°II31'15	evening set	10727 Jun 08 03:10	3°☾23'11	
min. Earth dist.	10720 Dec 06 04:19	24°II24'40 37.29280 AU				
opposition	10720 Dec 08 15:31	24°II21'21 -9°28'27	conjunction	10727 Jun 18 13:17	3°☾40'58	-11°01'46
direct	10721 Feb 28 10:56	23°II11'20	minimum elong	10727 Jun 18 13:05	3°☾40'57	11°02'21
evening set	10721 May 28 10:17	24°II43'39	max. Earth dist.	10727 Jun 21 02:36	3°☾45'20	40.89210 AU
			morning rise	10727 Jun 28 23:20	3°☾58'44	
conjunction	10721 Jun 09 14:05	25°II05'06 -9°09'54	retrograde	10727 Sep 28 11:00	5°☾31'33	
minimum elong	10721 Jun 09 13:53	25°II05'05 9°10'28	min. Earth dist.	10727 Dec 17 05:26	4°☾26'46	39.05302 AU
max. Earth dist.	10721 Jun 12 01:15	25°II09'29 39.39388 AU	opposition	10727 Dec 19 18:20	4°☾23'29	-11°44'18
morning rise	10721 Jun 21 17:45	25°II26'33	direct	10728 Mar 10 16:43	3°☾15'30	
retrograde	10721 Sep 19 12:35	26°II59'48	evening set	10728 Jun 09 01:38	4°☾46'54	
min. Earth dist.	10721 Dec 07 21:23	25°II53'31 37.54593 AU				
opposition	10721 Dec 10 10:08	25°II50'09 -9°49'50	conjunction	10728 Jun 19 04:10	5°☾04'02	-11°18'21
direct	10722 Mar 02 06:36	24°II40'24	minimum elong	10728 Jun 19 03:58	5°☾04'01	11°18'55
evening set	10722 May 30 09:32	26°II12'30	max. Earth dist.	10728 Jun 21 16:47	5°☾08'21	41.13588 AU
			morning rise	10728 Jun 29 06:36	5°☾21'11	
conjunction	10722 Jun 11 06:50	26°II33'21 -9°30'05	retrograde	10728 Sep 29 01:39	6°☾53'59	
minimum elong	10722 Jun 11 06:36	26°II33'20 9°30'38	min. Earth dist.	10728 Dec 17 20:59	5°☾49'29	39.29721 AU
max. Earth dist.	10722 Jun 13 18:54	26°II37'46 39.64502 AU	opposition	10728 Dec 20 10:21	5°☾46'11	-12°01'13
morning rise	10722 Jun 23 04:01	26°II54'12	direct	10729 Mar 12 09:17	4°☾38'27	
retrograde	10722 Sep 21 05:47	28°II27'18	evening set	10729 Jun 10 23:49	6°☾09'48	
min. Earth dist.	10722 Dec 09 15:52	27°II21'15 37.79923 AU				
opposition	10722 Dec 12 04:26	27°II17'55 -10°10'32	conjunction	10729 Jun 20 18:39	6°☾26'18	-11°34'24
direct	10723 Mar 04 00:28	26°II08'27	minimum elong	10729 Jun 20 18:27	6°☾26'18	11°34'59
evening set	10723 Jun 01 08:38	27°II40'22	max. Earth dist.	10729 Jun 23 06:48	6°☾30'33	41.37644 AU
			morning rise	10729 Jun 30 13:32	6°☾42'50	
conjunction	10723 Jun 12 23:16	28°II00'37 -9°49'38	retrograde	10729 Sep 30 18:26	8°☾15'38	
minimum elong	10723 Jun 12 23:03	28°II00'36 9°50'12	min. Earth dist.	10729 Dec 19 13:25	7°☾11'18	39.53820 AU
max. Earth dist.	10723 Jun 15 11:49	28°II05'02 39.89632 AU	opposition	10729 Dec 22 02:13	7°☾08'03	-12°17'33
morning rise	10723 Jun 24 13:39	28°II20'51	direct	10730 Mar 13 23:16	6°☾00'35	
retrograde	10723 Sep 22 23:07	29°II53'51	evening set	10730 Jun 12 21:52	7°☾31'53	
min. Earth dist.	10723 Dec 11 09:10	28°II48'05 38.05233 AU				
opposition	10723 Dec 13 22:20	28°II44'44 -10°30'34	conjunction	10730 Jun 22 08:53	7°☾47'45	-11°49'54
direct	10724 Mar 04 17:33	27°II35'34	minimum elong	10730 Jun 22 08:42	7°☾47'44	11°50'27
evening set	10724 Jun 02 07:27	29°II07'19	max. Earth dist.	10730 Jun 24 21:17	7°☾52'00	41.61385 AU
			morning rise	10730 Jul 01 19:45	8°☾03'38	
conjunction	10724 Jun 13 15:06	29°II26'57 -10°08'34	retrograde	10730 Oct 02 08:15	9°☾36'26	
minimum elong	10724 Jun 13 14:53	29°II26'56 10°09'07	min. Earth dist.	10730 Dec 21 05:25	8°☾32'17	39.77593 AU
max. Earth dist.	10724 Jun 16 03:31	29°II31'21 40.14718 AU	opposition	10730 Dec 23 17:35	8°☾29'05	-12°33'20
morning rise	10724 Jun 24 22:47	29°II46'36	direct	10731 Mar 15 14:56	7°☾21'51	
	10724 Jul 02 20:45	0°☾	evening set	10731 Jun 14 19:46	8°☾53'07	
retrograde	10724 Sep 23 16:35	1°☾19'31				
min. Earth dist.	10724 Dec 12 02:02	0°☾14'02 38.30494 AU	conjunction	10731 Jun 23 22:37	9°☾08'21	-12°04'51
opposition	10724 Dec 14 15:53	0°☾10'39 -10°49'57	minimum elong	10731 Jun 23 22:25	9°☾08'20	12°05'26
	10724 Dec 22 19:13	30°☾II	max. Earth dist.	10731 Jun 26 09:59	9°☾12'29	41.84835 AU
direct	10725 Mar 06 09:41	29°II01'47	morning rise	10731 Jul 03 01:32	9°☾23'34	
	10725 May 14 18:02	0°☾	retrograde	10731 Oct 03 22:04	10°☾56'24	
evening set	10725 Jun 04 06:08	0°☾33'25	min. Earth dist.	10731 Dec 22 19:47	9°☾52'29	40.01121 AU
			opposition	10731 Dec 25 08:40	9°☾49'15	-12°48'31
conjunction	10725 Jun 15 06:54	0°☾52'27 -10°26'53	direct	10732 Mar 16 05:52	8°☾42'15	
minimum elong	10725 Jun 15 06:41	0°☾52'26 10°27'28	evening set	10732 Jun 15 17:16	10°☾13'30	
max. Earth dist.	10725 Jun 17 20:26	0°☾56'53 40.39722 AU				
morning rise	10725 Jun 26 07:26	1°☾11'28	conjunction	10732 Jun 24 12:00	10°☾28'05	-12°19'16
retrograde	10725 Sep 25 06:15	2°☾44'19	minimum elong	10732 Jun 24 11:50	10°☾28'04	12°19'50
min. Earth dist.	10725 Dec 13 19:49	1°☾39'03 38.55627 AU	max. Earth dist.	10732 Jun 27 00:28	10°☾32'17	42.08063 AU
opposition	10725 Dec 16 08:55	1°☾35'44 -11°08'41	morning rise	10732 Jul 03 06:41	10°☾42'40	
direct	10726 Mar 08 05:05	0°☾27'10	retrograde	10732 Oct 04 08:08	12°☾15'32	
evening set	10726 Jun 06 04:52	1°☾58'42	min. Earth dist.	10732 Dec 23 11:33	11°☾11'45	40.24447 AU
			opposition	10732 Dec 25 23:27	11°☾08'35	-13°03'09
conjunction	10726 Jun 16 22:15	2°☾17'06 -10°44'37	direct	10733 Mar 17 23:55	10°☾01'49	
minimum elong	10726 Jun 16 22:02	2°☾17'05 10°45'11	evening set	10733 Jun 17 14:55	11°☾33'05	
max. Earth dist.	10726 Jun 19 10:42	2°☾21'27 40.64574 AU				
morning rise	10726 Jun 27 15:40	2°☾35'30	conjunction	10733 Jun 26 01:09	11°☾47'01	-12°33'09

minimum elong	10733 Jun 26 00:58	11°☾47'00	12°33'43	evening set	10740 Jun 28 20:32	20°☾32'12	
max. Earth dist.	10733 Jun 28 12:47	11°☾51'08	42.31128 AU				
morning rise	10733 Jul 04 11:22	12°☾00'57		conjunction	10740 Jul 04 13:41	20°☾41'21	-13°55'43
retrograde	10733 Oct 05 20:08	13°☾33'53		minimum elong	10740 Jul 04 13:34	20°☾41'20	13°56'16
min. Earth dist.	10733 Dec 25 00:44	12°☾30'22	40.47621 AU	max. Earth dist.	10740 Jul 07 00:27	20°☾45'16	43.87398 AU
opposition	10733 Dec 27 13:36	12°☾27'09	-13°17'12	morning rise	10740 Jul 10 06:48	20°☾50'29	
direct	10734 Mar 19 15:32	11°☾20'37		retrograde	10740 Oct 14 09:53	22°☾24'37	
evening set	10734 Jun 19 12:18	12°☾51'56		min. Earth dist.	10741 Jan 02 23:49	21°☾22'27	42.04145 AU
				opposition	10741 Jan 05 10:32	21°☾19'26	-14°40'23
conjunction	10734 Jun 27 13:59	13°☾05'12	-12°46'29	direct	10741 Mar 28 13:23	20°☾14'36	
minimum elong	10734 Jun 27 13:49	13°☾05'11	12°47'02	evening set	10741 Jun 30 18:27	21°☾46'56	
max. Earth dist.	10734 Jun 30 02:03	13°☾09'20	42.54050 AU				
morning rise	10734 Jul 05 15:43	13°☾18'29		conjunction	10741 Jul 06 00:57	21°☾55'19	-14°05'37
retrograde	10734 Oct 07 10:02	14°☾51'31		minimum elong	10741 Jul 06 00:49	21°☾55'19	14°06'09
min. Earth dist.	10734 Dec 26 15:30	13°☾48'10	40.70665 AU	max. Earth dist.	10741 Jul 08 10:28	21°☾59'08	44.08435 AU
opposition	10734 Dec 29 03:46	13°☾45'00	-13°30'40	morning rise	10741 Jul 11 07:26	22°☾03'43	
direct	10735 Mar 21 05:25	12°☾38'43		retrograde	10741 Oct 15 23:00	23°☾38'06	
evening set	10735 Jun 21 09:33	14°☾10'06		min. Earth dist.	10742 Jan 04 12:45	22°☾36'04	42.25116 AU
				opposition	10742 Jan 06 22:43	22°☾33'06	-14°50'19
conjunction	10735 Jun 29 02:28	14°☾22'42	-12°59'17	direct	10742 Mar 30 00:08	21°☾28'27	
minimum elong	10735 Jun 29 02:18	14°☾22'42	12°59'50	evening set	10742 Jul 02 16:52	23°☾01'02	
max. Earth dist.	10735 Jul 01 14:54	14°☾26'50	42.76847 AU				
morning rise	10735 Jul 06 19:18	14°☾35'20		conjunction	10742 Jul 07 12:05	23°☾08'38	-14°15'05
retrograde	10735 Oct 08 23:22	16°☾08'29		minimum elong	10742 Jul 07 11:59	23°☾08'38	14°15'38
min. Earth dist.	10735 Dec 28 05:02	15°☾05'22	40.93549 AU	max. Earth dist.	10742 Jul 09 21:51	23°☾12'27	44.29037 AU
opposition	10735 Dec 30 17:34	15°☾02'12	-13°43'36	morning rise	10742 Jul 12 07:13	23°☾16'15	
direct	10736 Mar 21 18:44	13°☾56'10		retrograde	10742 Oct 17 09:46	24°☾50'54	
evening set	10736 Jun 22 06:51	15°☾27'39		min. Earth dist.	10743 Jan 06 01:58	23°☾48'58	42.45638 AU
				opposition	10743 Jan 08 10:45	23°☾46'04	-14°59'48
conjunction	10736 Jun 29 14:42	15°☾39'35	-13°11'33	direct	10743 Mar 31 12:01	22°☾41'36	
minimum elong	10736 Jun 29 14:34	15°☾39'35	13°12'07	evening set	10743 Jul 04 15:34	24°☾14'29	
max. Earth dist.	10736 Jul 02 02:22	15°☾43'39	42.99475 AU				
morning rise	10736 Jul 06 22:39	15°☾51'32		conjunction	10743 Jul 08 22:39	24°☾21'15	-14°24'08
retrograde	10736 Oct 09 14:31	17°☾24'50		minimum elong	10743 Jul 08 22:32	24°☾21'15	14°24'40
min. Earth dist.	10736 Dec 28 18:13	16°☾21'57	41.16261 AU	max. Earth dist.	10743 Jul 11 06:49	24°☾24'57	44.49224 AU
opposition	10736 Dec 31 07:01	16°☾18'47	-13°55'58	morning rise	10743 Jul 13 05:41	24°☾28'02	
direct	10737 Mar 23 04:50	15°☾13'01		retrograde	10743 Oct 18 20:38	26°☾03'01	
evening set	10737 Jun 24 04:04	16°☾44'37		min. Earth dist.	10744 Jan 07 13:15	25°☾01'14	42.65780 AU
				opposition	10744 Jan 09 22:29	24°☾58'20	-15°08'50
conjunction	10737 Jul 01 02:50	16°☾55'53	-13°23'19	direct	10744 Mar 31 22:56	23°☾54'01	
minimum elong	10737 Jul 01 02:41	16°☾55'52	13°23'53	evening set	10744 Jul 05 15:12	25°☾27'16	
max. Earth dist.	10737 Jul 03 15:18	16°☾59'58	43.21906 AU				
morning rise	10737 Jul 08 01:30	17°☾07'08		conjunction	10744 Jul 09 09:09	25°☾33'10	-14°32'44
retrograde	10737 Oct 11 02:03	18°☾40'37		minimum elong	10744 Jul 09 09:03	25°☾33'09	14°33'17
min. Earth dist.	10737 Dec 30 08:38	17°☾37'54	41.38728 AU	max. Earth dist.	10744 Jul 11 17:48	25°☾36'52	44.69059 AU
opposition	10738 Jan 01 20:17	17°☾34'48	-14°07'49	morning rise	10744 Jul 13 03:01	25°☾39'02	
direct	10738 Mar 24 18:37	16°☾29'17		retrograde	10744 Oct 19 04:47	27°☾14'26	
evening set	10738 Jun 26 01:26	18°☾01'01		min. Earth dist.	10745 Jan 08 02:12	26°☾12'43	42.85603 AU
				opposition	10745 Jan 10 09:53	26°☾09'53	-15°17'26
conjunction	10738 Jul 02 14:35	18°☾11'36	-13°34'35	direct	10745 Apr 02 12:16	25°☾05'45	
minimum elong	10738 Jul 02 14:27	18°☾11'36	13°35'09	evening set	10745 Jul 07 16:15	26°☾39'29	
max. Earth dist.	10738 Jul 05 01:51	18°☾15'36	43.44074 AU				
morning rise	10738 Jul 09 03:43	18°☾22'10		conjunction	10745 Jul 10 19:23	26°☾44'23	-14°40'55
retrograde	10738 Oct 12 11:36	19°☾55'50		minimum elong	10745 Jul 10 19:18	26°☾44'22	14°41'26
min. Earth dist.	10738 Dec 31 20:53	18°☾53'22	41.60904 AU	morning rise	10745 Jul 13 22:26	26°☾49'16	
opposition	10739 Jan 03 09:12	18°☾50'15	-14°19'09	max. Earth dist.	10745 Jul 13 03:23	26°☾48'02	44.88619 AU
direct	10739 Mar 26 09:06	17°☾44'58		retrograde	10745 Oct 20 13:26	28°☾25'11	
evening set	10739 Jun 27 22:49	19°☾16'53		min. Earth dist.	10746 Jan 09 12:41	27°☾23'39	43.05154 AU
				opposition	10746 Jan 11 20:57	27°☾20'48	-15°25'33
conjunction	10739 Jul 04 02:14	19°☾26'46	-13°45'23	direct	10746 Apr 04 01:32	26°☾16'50	
minimum elong	10739 Jul 04 02:06	19°☾26'45	13°45'56	evening set	10746 Jul 09 19:41	27°☾51'15	
max. Earth dist.	10739 Jul 06 13:43	19°☾30'45	43.65919 AU				
morning rise	10739 Jul 10 05:37	19°☾36'37		conjunction	10746 Jul 12 05:14	27°☾54'59	-14°48'39
retrograde	10739 Oct 13 22:14	21°☾10'31		minimum elong	10746 Jul 12 05:09	27°☾54'58	14°49'11
min. Earth dist.	10740 Jan 02 11:11	20°☾08'10	41.82734 AU	morning rise	10746 Jul 14 14:42	27°☾58'42	
opposition	10740 Jan 04 22:05	20°☾05'08	-14°30'00	max. Earth dist.	10746 Jul 14 12:47	27°☾58'35	45.07923 AU
direct	10740 Mar 27 00:01	19°☾00'05		retrograde	10746 Oct 22 01:44	29°☾35'21	

min. Earth dist.	10747 Jan 11 00:13	28°☾33'56	43.24477 AU	conjunction	10754 Jul 21 06:44	7°♂03'57	-15°35'54
opposition	10747 Jan 13 07:56	28°☾31'08	-15°33'13	minimum elong	10754 Jul 21 06:43	7°♂03'57	15°36'23
direct	10747 Apr 05 11:26	27°☾27'21		max. Earth dist.	10754 Jul 23 10:20	7°♂07'11	46.51755 AU
evening set	10747 Jul 12 06:06	29°☾02'54		retrograde	10754 Oct 31 05:45	8°♂41'17	
				min. Earth dist.	10755 Jan 20 13:57	7°♂40'56	44.67574 AU
conjunction	10747 Jul 13 15:04	29°☾05'02	-14°55'57	opposition	10755 Jan 22 15:59	7°♂38'29	-16°19'37
minimum elong	10747 Jul 13 15:01	29°☾05'02	14°56'28	direct	10755 Apr 14 16:43	6°♂36'11	
morning rise	10747 Jul 14 23:56	29°☾07'09					
max. Earth dist.	10747 Jul 15 23:05	29°☾08'39	45.27017 AU	conjunction	10755 Jul 22 15:10	8°♂10'41	-15°40'11
	10747 Aug 20 04:12	0°♂		minimum elong	10755 Jul 22 15:10	8°♂10'41	15°40'41
retrograde	10747 Oct 23 11:45	0°♂44'59		max. Earth dist.	10755 Jul 24 17:22	8°♂13'50	46.67845 AU
	10747 Dec 29 17:30	30°♂☾		retrograde	10755 Nov 01 10:44	9°♂47'39	
min. Earth dist.	10748 Jan 12 11:23	29°☾43'43	43.43560 AU	min. Earth dist.	10756 Jan 21 22:45	8°♂47'25	44.83521 AU
opposition	10748 Jan 14 18:36	29°☾40'57	-15°40'27	opposition	10756 Jan 24 01:03	8°♂44'57	-16°23'45
direct	10748 Apr 05 21:48	28°☾37'22		direct	10756 Apr 15 03:57	7°♂42'47	
	10748 Jul 04 12:42	0°♂					
				conjunction	10756 Jul 22 23:19	9°♂16'53	-15°44'07
conjunction	10748 Jul 14 00:31	0°♂14'37	-15°02'50	minimum elong	10756 Jul 22 23:18	9°♂16'53	15°44'35
minimum elong	10748 Jul 14 00:27	0°♂14'36	15°03'21	max. Earth dist.	10756 Jul 25 01:03	9°♂20'00	46.83527 AU
max. Earth dist.	10748 Jul 16 07:16	0°♂18'08	45.45874 AU	retrograde	10756 Nov 01 18:22	10°♂53'29	
retrograde	10748 Oct 23 22:12	1°♂54'09		min. Earth dist.	10757 Jan 22 09:06	9°♂53'18	44.99102 AU
min. Earth dist.	10749 Jan 12 21:30	0°♂53'05	43.62400 AU	opposition	10757 Jan 24 10:03	9°♂50'54	-16°27'31
opposition	10749 Jan 15 05:04	0°♂50'18	-15°47'14	direct	10757 Apr 16 15:04	8°♂48'51	
	10749 Mar 04 08:36	30°♂☾					
direct	10749 Apr 07 06:22	29°☾46'56		conjunction	10757 Jul 24 07:25	10°♂22'34	-15°47'42
	10749 May 10 14:51	0°♂		minimum elong	10757 Jul 24 07:26	10°♂22'34	15°48'10
				max. Earth dist.	10757 Jul 26 09:05	10°♂25'40	46.98886 AU
conjunction	10749 Jul 15 09:58	1°♂23'46	-15°09'17	retrograde	10757 Nov 03 02:14	11°♂58'48	
minimum elong	10749 Jul 15 09:55	1°♂23'46	15°09'48	min. Earth dist.	10758 Jan 23 17:51	10°♂58'43	45.14364 AU
max. Earth dist.	10749 Jul 17 17:19	1°♂27'19	45.64462 AU	opposition	10758 Jan 25 18:35	10°♂56'20	-16°30'55
retrograde	10749 Oct 25 05:27	3°♂02'56		direct	10758 Apr 18 01:06	9°♂54'25	
min. Earth dist.	10750 Jan 14 09:10	2°♂01'58	43.80941 AU				
opposition	10750 Jan 16 15:15	1°♂59'16	-15°53'35	conjunction	10758 Jul 25 15:11	11°♂27'45	-15°50'55
direct	10750 Apr 08 18:03	0°♂56'06		minimum elong	10758 Jul 25 15:12	11°♂27'45	15°51'22
				max. Earth dist.	10758 Jul 27 15:35	11°♂30'45	47.13961 AU
conjunction	10750 Jul 16 19:12	2°♂32'33	-15°15'21	retrograde	10758 Nov 04 12:38	13°♂03'39	
minimum elong	10750 Jul 16 19:08	2°♂32'33	15°15'51	min. Earth dist.	10759 Jan 25 02:33	12°♂03'40	45.29374 AU
max. Earth dist.	10750 Jul 19 01:25	2°♂36'01	45.82751 AU	opposition	10759 Jan 27 03:11	12°♂01'17	-16°33'57
retrograde	10750 Oct 26 13:31	4°♂11'20		direct	10759 Apr 19 07:32	10°♂59'31	
min. Earth dist.	10751 Jan 15 18:52	3°♂10'35	43.99146 AU				
opposition	10751 Jan 18 01:19	3°♂07'52	-15°59'32	conjunction	10759 Jul 26 22:50	12°♂32'30	-15°53'47
direct	10751 Apr 10 04:59	2°♂04'54		minimum elong	10759 Jul 26 22:51	12°♂32'30	15°54'15
				max. Earth dist.	10759 Jul 28 23:58	12°♂35'31	47.28788 AU
conjunction	10751 Jul 18 04:09	3°♂40'58	-15°21'01	retrograde	10759 Nov 05 20:07	14°♂08'03	
minimum elong	10751 Jul 18 04:07	3°♂40'58	15°21'32	min. Earth dist.	10760 Jan 26 12:07	13°♂08'08	45.44119 AU
max. Earth dist.	10751 Jul 20 09:49	3°♂44'23	46.00669 AU	opposition	10760 Jan 28 11:37	13°♂05'49	-16°36'37
retrograde	10751 Oct 28 00:07	5°♂19'25		direct	10760 Apr 19 14:47	12°♂04'11	
min. Earth dist.	10752 Jan 17 06:21	4°♂18'46	44.16964 AU				
opposition	10752 Jan 19 11:23	4°♂16'08	-16°05'06	conjunction	10760 Jul 27 06:23	13°♂36'50	-15°56'18
direct	10752 Apr 10 15:30	3°♂13'22		minimum elong	10760 Jul 27 06:26	13°♂36'50	15°56'44
				max. Earth dist.	10760 Jul 29 06:15	13°♂39'47	47.43369 AU
conjunction	10752 Jul 18 13:15	4°♂49'02	-15°26'20		10760 Oct 03 21:34	15°♂	
minimum elong	10752 Jul 18 13:13	4°♂49'01	15°26'50	retrograde	10760 Nov 06 02:56	15°♂12'04	
max. Earth dist.	10752 Jul 20 18:44	4°♂52'25	46.18178 AU		10760 Dec 09 21:02	15°♂☾	
retrograde	10752 Oct 28 10:27	6°♂27'07		min. Earth dist.	10761 Jan 26 19:37	14°♂12'19	45.58602 AU
min. Earth dist.	10753 Jan 17 16:44	5°♂26'36	44.34322 AU	opposition	10761 Jan 28 19:38	14°♂09'59	-16°38'55
opposition	10753 Jan 19 20:58	5°♂24'01	-16°10'17	direct	10761 Apr 20 21:30	13°♂08'29	
direct	10753 Apr 12 00:51	4°♂21'25					
				conjunction	10761 Jul 28 13:49	14°♂40'49	-15°58'27
conjunction	10753 Jul 19 22:04	5°♂56'43	-15°31'17	minimum elong	10761 Jul 28 13:51	14°♂40'49	15°58'55
minimum elong	10753 Jul 19 22:04	5°♂56'42	15°31'47	max. Earth dist.	10761 Jul 30 13:27	14°♂43'45	47.57666 AU
max. Earth dist.	10753 Jul 22 01:37	5°♂59'58	46.35212 AU		10761 Aug 10 16:45	15°♂	
retrograde	10753 Oct 29 22:22	7°♂34'26		retrograde	10761 Nov 07 09:15	16°♂15'46	
min. Earth dist.	10754 Jan 19 02:44	6°♂34'02	44.51197 AU	min. Earth dist.	10762 Jan 28 05:19	15°♂16'04	45.72789 AU
opposition	10754 Jan 21 06:33	6°♂31'29	-16°15'07	opposition	10762 Jan 30 03:45	15°♂13'49	-16°40'51
direct	10754 Apr 13 06:43	5°♂29'03			10762 Feb 11 02:47	15°♂☾	
				direct	10762 Apr 22 07:21	14°♂12'28	

	10762 Jun 28 05:40	15°♈		minimum elong	10770 Aug 07 03:58	24°♈03'22	16°04'45
				max. Earth dist.	10770 Aug 08 19:47	24°♈05'45	48.67749 AU
conjunction	10762 Jul 29 21:05	15°♈44'30 -16°00'17		retrograde	10770 Nov 17 02:39	25°♈35'54	
minimum elong	10762 Jul 29 21:09	15°♈44'30 16°00'43		min. Earth dist.	10771 Feb 07 06:22	24°♈36'53	46.81078 AU
max. Earth dist.	10762 Jul 31 20:34	15°♈47'24 47.71659 AU		opposition	10771 Feb 08 22:09	24°♈34'59	-16°44'40
retrograde	10762 Nov 08 15:48	17°♈19'10		direct	10771 May 01 23:09	23°♈34'45	
min. Earth dist.	10763 Jan 29 13:19	16°♈19'36 45.86626 AU					
opposition	10763 Jan 31 11:38	16°♈17'21 -16°42'28		conjunction	10771 Aug 08 10:09	25°♈04'18	-16°03'34
direct	10763 Apr 23 17:19	15°♈16'10		minimum elong	10771 Aug 08 10:16	25°♈04'19	16°03'56
				max. Earth dist.	10771 Aug 10 01:59	25°♈06'40	48.77997 AU
conjunction	10763 Jul 31 04:16	16°♈47'54 -16°01'48		retrograde	10771 Nov 18 07:04	26°♈36'38	
minimum elong	10763 Jul 31 04:18	16°♈47'54 16°02'14		min. Earth dist.	10772 Feb 08 14:43	25°♈37'38	46.91175 AU
max. Earth dist.	10763 Aug 02 02:07	16°♈50'42 47.85281 AU		opposition	10772 Feb 10 04:54	25°♈35'49	-16°43'35
retrograde	10763 Nov 10 02:33	18°♈22'17		direct	10772 May 02 06:36	24°♈35'41	
min. Earth dist.	10764 Jan 30 21:55	17°♈22'49 46.00079 AU					
opposition	10764 Feb 01 19:27	17°♈20'38 -16°43'45		conjunction	10772 Aug 08 16:22	26°♈05'00	-16°02'29
direct	10764 Apr 23 22:49	16°♈19'36		minimum elong	10772 Aug 08 16:28	26°♈05'01	16°02'52
				max. Earth dist.	10772 Aug 10 07:50	26°♈07'21	48.87970 AU
conjunction	10764 Jul 31 11:29	17°♈51'03 -16°03'00		retrograde	10772 Nov 18 11:05	27°♈37'08	
minimum elong	10764 Jul 31 11:34	17°♈51'03 16°03'26		min. Earth dist.	10773 Feb 08 21:03	26°♈38'15	47.00968 AU
max. Earth dist.	10764 Aug 02 09:28	17°♈53'50 47.98481 AU		opposition	10773 Feb 10 11:24	26°♈36'25	-16°42'13
retrograde	10764 Nov 10 10:24	19°♈25'10		direct	10773 May 03 16:17	25°♈36'24	
min. Earth dist.	10765 Jan 31 07:16	18°♈25'45 46.13056 AU					
opposition	10765 Feb 02 03:07	18°♈23'39 -16°44'45		conjunction	10773 Aug 09 22:22	27°♈05'31	-16°01'07
direct	10765 Apr 25 06:16	17°♈22'45		minimum elong	10773 Aug 09 22:30	27°♈05'32	16°01'27
				max. Earth dist.	10773 Aug 11 12:24	27°♈07'47	48.97627 AU
conjunction	10765 Aug 01 18:36	18°♈53'55 -16°03'56		retrograde	10773 Nov 19 20:18	28°♈37'27	
minimum elong	10765 Aug 01 18:39	18°♈53'55 16°04'20		min. Earth dist.	10774 Feb 10 04:26	27°♈38'38	47.10444 AU
max. Earth dist.	10765 Aug 03 14:37	18°♈56'35 48.11193 AU		opposition	10774 Feb 11 17:52	27°♈36'51	-16°40'33
retrograde	10765 Nov 11 16:21	20°♈27'46		direct	10774 May 04 22:26	26°♈36'58	
min. Earth dist.	10766 Feb 01 14:50	19°♈28'28 46.25524 AU					
opposition	10766 Feb 03 10:33	19°♈26'22 -16°45'27		conjunction	10774 Aug 11 04:28	28°♈05'52	-15°59'27
direct	10766 Apr 26 12:40	18°♈25'36		minimum elong	10774 Aug 11 04:35	28°♈05'53	15°59'48
				max. Earth dist.	10774 Aug 12 18:49	28°♈08'08	49.06955 AU
conjunction	10766 Aug 03 01:36	19°♈56'30 -16°04'35		retrograde	10774 Nov 21 04:10	29°♈37'37	
minimum elong	10766 Aug 03 01:42	19°♈56'30 16°04'59		min. Earth dist.	10775 Feb 11 12:03	28°♈38'51	47.19552 AU
max. Earth dist.	10766 Aug 04 20:56	19°♈59'07 48.23382 AU		opposition	10775 Feb 13 00:18	28°♈37'08	-16°38'37
retrograde	10766 Nov 12 21:41	21°♈30'05		direct	10775 May 06 04:14	27°♈37'22	
min. Earth dist.	10767 Feb 03 00:21	20°♈30'47 46.37473 AU					
opposition	10767 Feb 04 18:07	20°♈28'47 -16°45'53		conjunction	10775 Aug 12 10:19	29°♈06'04	-15°57'31
direct	10767 Apr 27 21:49	19°♈28'08		minimum elong	10775 Aug 12 10:27	29°♈06'05	15°57'51
				max. Earth dist.	10775 Aug 13 23:00	29°♈08'14	49.15903 AU
conjunction	10767 Aug 04 08:24	20°♈58'44 -16°04'57		retrograde	10775 Sep 22 03:56	0°♈	
minimum elong	10767 Aug 04 08:28	20°♈58'44 16°05'21			10775 Nov 22 11:15	0°♈37'38	
max. Earth dist.	10767 Aug 06 03:00	21°♈01'18 48.35085 AU		min. Earth dist.	10776 Jan 24 16:18	30°♈♈	
retrograde	10767 Nov 14 03:32	22°♈32'03		opposition	10776 Feb 12 18:32	29°♈38'58	47.28249 AU
min. Earth dist.	10768 Feb 04 07:50	21°♈32'50 46.48937 AU		direct	10776 Feb 14 06:38	29°♈37'16	-16°36'23
opposition	10768 Feb 06 01:21	21°♈30'51 -16°46'01			10776 May 06 07:31	28°♈37'36	
direct	10768 Apr 28 07:10	20°♈30'17			10776 Aug 08 08:19	0°♈	
conjunction	10768 Aug 04 15:02	22°♈00'36 -16°05'03		conjunction	10776 Aug 12 16:21	0°♈06'08	-15°55'21
minimum elong	10768 Aug 04 15:07	22°♈00'37 16°05'27		minimum elong	10776 Aug 12 16:28	0°♈06'08	15°55'40
max. Earth dist.	10768 Aug 06 08:05	22°♈03'04 48.46331 AU		max. Earth dist.	10776 Aug 14 04:23	0°♈08'15	49.24391 AU
retrograde	10768 Nov 14 12:23	23°♈33'40		retrograde	10776 Nov 22 15:18	1°♈37'29	
min. Earth dist.	10769 Feb 04 15:54	22°♈34'29 46.59996 AU		min. Earth dist.	10777 Feb 13 02:53	0°♈38'49	47.36458 AU
opposition	10769 Feb 06 08:22	22°♈32'33 -16°45'52		opposition	10777 Feb 14 12:49	0°♈37'13	-16°33'55
direct	10769 Apr 29 13:25	21°♈32'06		direct	10777 Mar 21 23:35	30°♈♈	
					10777 May 07 13:56	29°♈37'39	
conjunction	10769 Aug 05 21:39	23°♈02'08 -16°04'51			10777 Jun 22 03:24	0°♈	
minimum elong	10769 Aug 05 21:44	23°♈02'09 16°05'14					
max. Earth dist.	10769 Aug 07 15:02	23°♈04'37 48.57202 AU		conjunction	10777 Aug 13 22:23	1°♈06'00	-15°52'55
retrograde	10769 Nov 15 19:40	24°♈34'56		minimum elong	10777 Aug 13 22:32	1°♈06'00	15°53'15
min. Earth dist.	10770 Feb 05 23:53	23°♈35'48 46.70689 AU		max. Earth dist.	10777 Aug 15 09:21	1°♈08'03	49.32380 AU
opposition	10770 Feb 07 15:20	23°♈33'55 -16°45'25		retrograde	10777 Nov 23 18:37	2°♈37'10	
direct	10770 Apr 30 19:11	22°♈33'34		min. Earth dist.	10778 Feb 14 09:20	1°♈38'34	47.44125 AU
				opposition	10778 Feb 15 18:57	1°♈36'59	-16°31'13
conjunction	10770 Aug 07 03:52	24°♈03'22 -16°04'22		direct	10778 May 08 21:44	0°♈37'29	

conjunction	10778 Aug 15 04:05	2° $\mathring{M}$ 05'38	-15°50'16	retrograde	10786 Dec 02 22:39	11° $\mathring{M}$ 22'42	
minimum elong	10778 Aug 15 04:13	2° $\mathring{M}$ 05'38	15°50'35	opposition	10787 Feb 24 21:52	10° $\mathring{M}$ 23'00	-15°55'40
max. Earth dist.	10778 Aug 16 13:09	2° $\mathring{M}$ 07'34	49.39814 AU	min. Earth dist.	10787 Feb 23 20:26	10° $\mathring{M}$ 24'11	47.93964 AU
retrograde	10778 Nov 25 01:39	3° $\mathring{M}$ 36'37		direct	10787 May 17 22:58	9° $\mathring{M}$ 24'04	
min. Earth dist.	10779 Feb 15 17:06	2° $\mathring{M}$ 37'59	47.51251 AU				
opposition	10779 Feb 17 01:08	2° $\mathring{M}$ 36'29	-16°28'17	conjunction	10787 Aug 24 04:32	10° $\mathring{M}$ 50'46	-15°15'23
direct	10779 May 10 04:49	1° $\mathring{M}$ 37'03		minimum elong	10787 Aug 24 04:42	10° $\mathring{M}$ 50'46	15°15'38
				max. Earth dist.	10787 Aug 25 07:11	10° $\mathring{M}$ 52'18	49.88555 AU
conjunction	10779 Aug 16 09:56	3° $\mathring{M}$ 04'58	-15°47'24	retrograde	10787 Dec 04 01:25	12° $\mathring{M}$ 20'23	
minimum elong	10779 Aug 16 10:06	3° $\mathring{M}$ 04'59	15°47'43	min. Earth dist.	10788 Feb 25 01:42	11° $\mathring{M}$ 21'57	47.97761 AU
max. Earth dist.	10779 Aug 17 18:55	3° $\mathring{M}$ 06'54	49.46723 AU	opposition	10788 Feb 26 03:01	11° $\mathring{M}$ 20'47	-15°50'25
retrograde	10779 Nov 26 08:08	4° $\mathring{M}$ 35'46		direct	10788 May 18 05:00	10° $\mathring{M}$ 21'55	
min. Earth dist.	10780 Feb 17 00:12	3° $\mathring{M}$ 37'07	47.57856 AU				
opposition	10780 Feb 18 07:01	3° $\mathring{M}$ 35'40	-16°25'07	conjunction	10788 Aug 24 09:40	11° $\mathring{M}$ 48'32	-15°10'16
direct	10780 May 10 11:45	2° $\mathring{M}$ 36'17		minimum elong	10788 Aug 24 09:52	11° $\mathring{M}$ 48'32	15°10'30
				max. Earth dist.	10788 Aug 25 10:36	11° $\mathring{M}$ 49'58	49.92207 AU
conjunction	10780 Aug 16 15:32	4° $\mathring{M}$ 04'00	-15°44'17	retrograde	10788 Dec 04 07:59	13° $\mathring{M}$ 18'05	
minimum elong	10780 Aug 16 15:40	4° $\mathring{M}$ 04'01	15°44'35	min. Earth dist.	10789 Feb 25 08:45	12° $\mathring{M}$ 19'39	48.01099 AU
max. Earth dist.	10780 Aug 17 22:32	4° $\mathring{M}$ 05'49	49.53156 AU	opposition	10789 Feb 26 08:20	12° $\mathring{M}$ 18'33	-15°44'58
retrograde	10780 Nov 26 15:49	5° $\mathring{M}$ 34'35		direct	10789 May 19 11:01	11° $\mathring{M}$ 19'46	
min. Earth dist.	10781 Feb 17 06:11	4° $\mathring{M}$ 35'58	47.64021 AU				
opposition	10781 Feb 18 12:47	4° $\mathring{M}$ 34'32	-16°21'42	conjunction	10789 Aug 25 14:56	12° $\mathring{M}$ 46'16	-15°04'56
direct	10781 May 11 14:35	3° $\mathring{M}$ 35'11		minimum elong	10789 Aug 25 15:07	12° $\mathring{M}$ 46'17	15°05'09
				max. Earth dist.	10789 Aug 26 15:35	12° $\mathring{M}$ 47'41	49.95368 AU
conjunction	10781 Aug 17 21:01	5° $\mathring{M}$ 02'43	-15°40'56	retrograde	10789 Dec 05 14:02	14° $\mathring{M}$ 15'45	
minimum elong	10781 Aug 17 21:11	5° $\mathring{M}$ 02'43	15°41'13	opposition	10790 Feb 27 13:32	13° $\mathring{M}$ 16'16	-15°39'17
max. Earth dist.	10781 Aug 19 03:45	5° $\mathring{M}$ 04'30	49.59166 AU	min. Earth dist.	10790 Feb 26 15:04	13° $\mathring{M}$ 17'19	48.03905 AU
retrograde	10781 Nov 27 20:23	6° $\mathring{M}$ 33'06		direct	10790 May 20 17:27	12° $\mathring{M}$ 17'33	
opposition	10782 Feb 19 18:29	5° $\mathring{M}$ 33'05	-16°18'01				
min. Earth dist.	10782 Feb 18 13:43	5° $\mathring{M}$ 34'26	47.69796 AU	conjunction	10790 Aug 26 20:05	13° $\mathring{M}$ 43'58	-14°59'24
direct	10782 May 12 19:49	4° $\mathring{M}$ 33'47		minimum elong	10790 Aug 26 20:17	13° $\mathring{M}$ 43'58	14°59'37
				evening set	10790 Aug 26 09:12	13° $\mathring{M}$ 43'20	
conjunction	10782 Aug 19 02:28	6° $\mathring{M}$ 01'07	-15°37'19	morning rise	10790 Aug 27 07:24	13° $\mathring{M}$ 44'37	
minimum elong	10782 Aug 19 02:38	6° $\mathring{M}$ 01'08	15°37'35	max. Earth dist.	10790 Aug 27 18:33	13° $\mathring{M}$ 45'15	49.98004 AU
max. Earth dist.	10782 Aug 20 08:40	6° $\mathring{M}$ 02'53	49.64839 AU	retrograde	10790 Dec 06 22:25	15° $\mathring{M}$ 13'20	
retrograde	10782 Nov 28 22:37	7° $\mathring{M}$ 31'20		opposition	10791 Feb 28 18:44	14° $\mathring{M}$ 13'54	-15°33'23
min. Earth dist.	10783 Feb 19 18:57	6° $\mathring{M}$ 32'44	47.75244 AU	min. Earth dist.	10791 Feb 27 20:51	14° $\mathring{M}$ 14'55	48.06189 AU
opposition	10783 Feb 21 00:04	6° $\mathring{M}$ 31'22	-16°14'05	direct	10791 May 21 18:53	13° $\mathring{M}$ 15'12	
direct	10783 May 14 03:39	5° $\mathring{M}$ 32'07		evening set	10791 Aug 26 05:17	14° $\mathring{M}$ 39'01	
conjunction	10783 Aug 20 07:39	6° $\mathring{M}$ 59'18	-15°33'26	conjunction	10791 Aug 28 01:09	14° $\mathring{M}$ 41'32	-14°53'39
minimum elong	10783 Aug 20 07:49	6° $\mathring{M}$ 59'18	15°33'43	minimum elong	10791 Aug 28 01:21	14° $\mathring{M}$ 41'32	14°53'51
max. Earth dist.	10783 Aug 21 12:28	7° $\mathring{M}$ 00'58	49.70194 AU	morning rise	10791 Aug 29 21:27	14° $\mathring{M}$ 44'04	
retrograde	10783 Nov 30 04:55	8° $\mathring{M}$ 29'22		max. Earth dist.	10791 Aug 28 22:59	14° $\mathring{M}$ 42'47	50.00113 AU
min. Earth dist.	10784 Feb 21 01:43	7° $\mathring{M}$ 30'46	47.80394 AU	retrograde	10791 Dec 08 04:08	16° $\mathring{M}$ 10'47	
opposition	10784 Feb 22 05:41	7° $\mathring{M}$ 29'27	-16°09'52	opposition	10792 Feb 29 23:56	15° $\mathring{M}$ 11'23	-15°27'17
direct	10784 May 14 10:07	6° $\mathring{M}$ 30'16		min. Earth dist.	10792 Feb 29 04:08	15° $\mathring{M}$ 12'18	48.07958 AU
				direct	10792 May 21 22:07	14° $\mathring{M}$ 12'42	
conjunction	10784 Aug 20 13:04	7° $\mathring{M}$ 57'18	-15°29'18	evening set	10792 Aug 25 16:48	15° $\mathring{M}$ 35'24	
minimum elong	10784 Aug 20 13:15	7° $\mathring{M}$ 57'18	15°29'34				
max. Earth dist.	10784 Aug 21 18:15	7° $\mathring{M}$ 58'59	49.75259 AU	conjunction	10792 Aug 28 06:16	15° $\mathring{M}$ 38'55	-14°47'41
retrograde	10784 Nov 30 11:18	9° $\mathring{M}$ 27'14		minimum elong	10792 Aug 28 06:28	15° $\mathring{M}$ 38'56	14°47'53
min. Earth dist.	10785 Feb 21 07:49	8° $\mathring{M}$ 28'39	47.85235 AU	max. Earth dist.	10792 Aug 29 03:12	15° $\mathring{M}$ 40'07	50.01752 AU
opposition	10785 Feb 22 11:00	8° $\mathring{M}$ 27'23	-16°05'24	morning rise	10792 Aug 30 20:14	15° $\mathring{M}$ 42'28	
direct	10785 May 15 15:46	7° $\mathring{M}$ 28'16		retrograde	10792 Dec 08 05:15	17° $\mathring{M}$ 08'04	
				min. Earth dist.	10793 Mar 01 08:56	16° $\mathring{M}$ 09'36	48.09280 AU
conjunction	10785 Aug 21 18:14	8° $\mathring{M}$ 55'10	-15°24'55	opposition	10793 Mar 02 04:44	16° $\mathring{M}$ 08'41	-15°20'58
minimum elong	10785 Aug 21 18:25	8° $\mathring{M}$ 55'11	15°25'11	direct	10793 May 23 05:06	15° $\mathring{M}$ 10'01	
max. Earth dist.	10785 Aug 22 21:50	8° $\mathring{M}$ 56'46	49.80027 AU	evening set	10793 Aug 26 07:37	16° $\mathring{M}$ 31'48	
retrograde	10785 Dec 01 18:40	10° $\mathring{M}$ 24'59					
opposition	10786 Feb 23 16:23	9° $\mathring{M}$ 25'13	-16°00'39	conjunction	10793 Aug 29 11:09	16° $\mathring{M}$ 36'07	-14°41'30
min. Earth dist.	10786 Feb 22 13:17	9° $\mathring{M}$ 26'29	47.89774 AU	minimum elong	10793 Aug 29 11:21	16° $\mathring{M}$ 36'08	14°41'41
direct	10786 May 16 18:15	8° $\mathring{M}$ 26'11		max. Earth dist.	10793 Aug 30 06:25	16° $\mathring{M}$ 37'14	50.02970 AU
				morning rise	10793 Sep 01 15:13	16° $\mathring{M}$ 40'29	
conjunction	10786 Aug 22 23:18	9° $\mathring{M}$ 52'59	-15°20'16	retrograde	10793 Dec 09 09:12	18° $\mathring{M}$ 05'11	
minimum elong	10786 Aug 22 23:30	9° $\mathring{M}$ 52'59	15°20'31	opposition	10794 Mar 03 09:45	17° $\mathring{M}$ 05'48	-15°14'24
max. Earth dist.	10786 Aug 24 02:41	9° $\mathring{M}$ 54'33	49.84467 AU	min. Earth dist.	10794 Mar 02 15:23	17° $\mathring{M}$ 06'39	48.10227 AU

direct	10794 May 24 12:17	16° $\mathring{M}$ 07'09	retrograde	10800 Dec 15 23:04	24° $\mathring{M}$ 42'22	
evening set	10794 Aug 27 00:18	17° $\mathring{M}$ 28'09	opposition	10801 Mar 09 19:12	23° $\mathring{M}$ 43'10	-14°21'40
			min. Earth dist.	10801 Mar 09 06:03	23° $\mathring{M}$ 43'46	48.07812 AU
conjunction	10794 Aug 30 15:58	17° $\mathring{M}$ 33'10 -14°35'06	direct	10801 May 30 19:25	22° $\mathring{M}$ 44'41	
minimum elong	10794 Aug 30 16:11	17° $\mathring{M}$ 33'10 14°35'17	evening set	10801 Aug 30 18:00	24° $\mathring{M}$ 01'47	
max. Earth dist.	10794 Aug 31 11:39	17° $\mathring{M}$ 34'17 50.03841 AU				
morning rise	10794 Sep 03 08:11	17° $\mathring{M}$ 38'13	conjunction	10801 Sep 06 02:00	24° $\mathring{M}$ 10'26	-13°43'36
retrograde	10794 Dec 10 14:45	19° $\mathring{M}$ 02'08	minimum elong	10801 Sep 06 02:14	24° $\mathring{M}$ 10'27	13°43'42
opposition	10795 Mar 04 14:40	18° $\mathring{M}$ 02'45 -15°07'36	max. Earth dist.	10801 Sep 06 15:03	24° $\mathring{M}$ 11'10	50.00927 AU
min. Earth dist.	10795 Mar 03 20:56	18° $\mathring{M}$ 03'35 48.10834 AU	morning rise	10801 Sep 12 10:55	24° $\mathring{M}$ 19'07	
direct	10795 May 25 18:57	17° $\mathring{M}$ 04'07	retrograde	10801 Dec 17 05:43	25° $\mathring{M}$ 39'09	
evening set	10795 Aug 27 18:13	18° $\mathring{M}$ 24'25	opposition	10802 Mar 11 00:08	24° $\mathring{M}$ 39'57	-14°13'13
			min. Earth dist.	10802 Mar 10 13:05	24° $\mathring{M}$ 40'28	48.05824 AU
conjunction	10795 Aug 31 20:47	18° $\mathring{M}$ 30'03 -14°28'26	direct	10802 May 31 22:14	23° $\mathring{M}$ 41'30	
minimum elong	10795 Aug 31 21:00	18° $\mathring{M}$ 30'04 14°28'36	evening set	10802 Aug 31 15:19	24° $\mathring{M}$ 58'09	
max. Earth dist.	10795 Sep 01 14:51	18° $\mathring{M}$ 31'05 50.04405 AU				
morning rise	10795 Sep 04 23:59	18° $\mathring{M}$ 35'43	conjunction	10802 Sep 07 06:55	25° $\mathring{M}$ 07'13	-13°35'23
retrograde	10795 Dec 11 22:30	19° $\mathring{M}$ 58'57	minimum elong	10802 Sep 07 07:08	25° $\mathring{M}$ 07'14	13°35'29
opposition	10796 Mar 04 19:23	18° $\mathring{M}$ 59'35 -15°00'33	max. Earth dist.	10802 Sep 07 18:48	25° $\mathring{M}$ 07'54	49.98793 AU
min. Earth dist.	10796 Mar 04 01:48	19° $\mathring{M}$ 00'24 48.11153 AU	morning rise	10802 Sep 13 23:22	25° $\mathring{M}$ 16'20	
direct	10796 May 25 21:27	18° $\mathring{M}$ 00'58	retrograde	10802 Dec 18 08:33	26° $\mathring{M}$ 35'55	
evening set	10796 Aug 27 12:53	19° $\mathring{M}$ 20'38	opposition	10803 Mar 12 04:56	25° $\mathring{M}$ 36'44	-14°04'36
			min. Earth dist.	10803 Mar 11 18:03	25° $\mathring{M}$ 37'14	48.03288 AU
conjunction	10796 Sep 01 01:38	19° $\mathring{M}$ 26'50 -14°21'32	direct	10803 Jun 02 03:15	24° $\mathring{M}$ 38'16	
minimum elong	10796 Sep 01 01:51	19° $\mathring{M}$ 26'51 14°21'43	evening set	10803 Sep 01 12:54	25° $\mathring{M}$ 54'30	
max. Earth dist.	10796 Sep 01 19:23	19° $\mathring{M}$ 27'51 50.04672 AU				
morning rise	10796 Sep 05 15:04	19° $\mathring{M}$ 33'04	conjunction	10803 Sep 08 11:52	26° $\mathring{M}$ 03'59	-13°26'58
retrograde	10796 Dec 12 03:09	20° $\mathring{M}$ 55'40	minimum elong	10803 Sep 08 12:06	26° $\mathring{M}$ 04'00	13°27'04
min. Earth dist.	10797 Mar 05 08:13	19° $\mathring{M}$ 57'04 48.11170 AU	max. Earth dist.	10803 Sep 08 21:42	26° $\mathring{M}$ 04'33	49.96108 AU
opposition	10797 Mar 06 00:14	19° $\mathring{M}$ 56'19 -14°53'15	morning rise	10803 Sep 15 11:53	26° $\mathring{M}$ 13'32	
direct	10797 May 27 00:37	18° $\mathring{M}$ 57'43	retrograde	10803 Dec 19 12:30	27° $\mathring{M}$ 32'41	
evening set	10797 Aug 28 08:13	20° $\mathring{M}$ 16'48	opposition	10804 Mar 12 09:41	26° $\mathring{M}$ 33'28	-13°55'45
			min. Earth dist.	10804 Mar 12 00:48	26° $\mathring{M}$ 33'53	48.00228 AU
conjunction	10797 Sep 02 06:26	20° $\mathring{M}$ 23'32 -14°14'24	direct	10804 Jun 02 09:44	25° $\mathring{M}$ 35'00	
minimum elong	10797 Sep 02 06:39	20° $\mathring{M}$ 23'33 14°14'33	evening set	10804 Sep 01 10:41	26° $\mathring{M}$ 50'50	
max. Earth dist.	10797 Sep 02 23:42	20° $\mathring{M}$ 24'32 50.04656 AU				
morning rise	10797 Sep 07 05:20	20° $\mathring{M}$ 30'19	conjunction	10804 Sep 08 16:55	27° $\mathring{M}$ 00'42	-13°18'21
retrograde	10797 Dec 13 05:31	21° $\mathring{M}$ 52'19	minimum elong	10804 Sep 08 17:08	27° $\mathring{M}$ 00'43	13°18'26
opposition	10798 Mar 07 04:56	20° $\mathring{M}$ 53'00 -14°45'42	max. Earth dist.	10804 Sep 09 02:39	27° $\mathring{M}$ 01'16	49.92923 AU
min. Earth dist.	10798 Mar 06 12:39	20° $\mathring{M}$ 53'46 48.10885 AU	morning rise	10804 Sep 16 00:03	27° $\mathring{M}$ 10'40	
direct	10798 May 28 05:00	19° $\mathring{M}$ 54'26	retrograde	10804 Dec 19 17:17	28° $\mathring{M}$ 29'24	
evening set	10798 Aug 29 03:56	21° $\mathring{M}$ 12'58	opposition	10805 Mar 13 14:23	27° $\mathring{M}$ 30'10	-13°46'43
			min. Earth dist.	10805 Mar 13 06:20	27° $\mathring{M}$ 30'33	47.96682 AU
conjunction	10798 Sep 03 11:10	21° $\mathring{M}$ 20'13 -14°07'02	direct	10805 Jun 03 16:27	26° $\mathring{M}$ 31'40	
minimum elong	10798 Sep 03 11:23	21° $\mathring{M}$ 20'14 14°07'11	evening set	10805 Sep 02 08:34	27° $\mathring{M}$ 47'06	
max. Earth dist.	10798 Sep 04 02:56	21° $\mathring{M}$ 21'07 50.04322 AU				
morning rise	10798 Sep 08 19:11	21° $\mathring{M}$ 27'31	conjunction	10805 Sep 09 21:39	27° $\mathring{M}$ 57'22	-13°09'32
retrograde	10798 Dec 14 10:28	22° $\mathring{M}$ 48'58	minimum elong	10805 Sep 09 21:53	27° $\mathring{M}$ 57'23	13°09'37
opposition	10799 Mar 08 09:48	21° $\mathring{M}$ 49'41 -14°37'54	max. Earth dist.	10805 Sep 10 05:30	27° $\mathring{M}$ 57'49	49.89295 AU
min. Earth dist.	10799 Mar 07 19:03	21° $\mathring{M}$ 50'22 48.10277 AU	morning rise	10805 Sep 17 11:50	28° $\mathring{M}$ 07'43	
direct	10799 May 29 10:21	20° $\mathring{M}$ 51'09	retrograde	10805 Dec 21 01:09	29° $\mathring{M}$ 26'03	
evening set	10799 Aug 30 00:11	22° $\mathring{M}$ 09'11	opposition	10806 Mar 14 19:03	28° $\mathring{M}$ 26'49	-13°37'27
			min. Earth dist.	10806 Mar 14 11:30	28° $\mathring{M}$ 27'10	47.92735 AU
conjunction	10799 Sep 04 16:04	22° $\mathring{M}$ 16'55 -13°59'26	direct	10806 Jun 04 18:57	27° $\mathring{M}$ 28'18	
minimum elong	10799 Sep 04 16:17	22° $\mathring{M}$ 16'56 13°59'33	evening set	10806 Sep 03 06:33	28° $\mathring{M}$ 43'21	
max. Earth dist.	10799 Sep 05 07:56	22° $\mathring{M}$ 17'49 50.03640 AU				
morning rise	10799 Sep 10 08:42	22° $\mathring{M}$ 24'42	conjunction	10806 Sep 11 02:33	28° $\mathring{M}$ 54'01	-13°00'30
retrograde	10799 Dec 15 14:59	23° $\mathring{M}$ 45'39	minimum elong	10806 Sep 11 02:46	28° $\mathring{M}$ 54'01	13°00'33
opposition	10800 Mar 08 14:34	22° $\mathring{M}$ 46'24 -14°29'54	max. Earth dist.	10806 Sep 11 09:56	28° $\mathring{M}$ 54'26	49.85280 AU
min. Earth dist.	10800 Mar 08 00:36	22° $\mathring{M}$ 47'03 48.09269 AU	morning rise	10806 Sep 18 23:37	29° $\mathring{M}$ 04'44	
direct	10800 May 29 17:05	21° $\mathring{M}$ 47'54		10806 Nov 04 14:10	0° $\mathring{A}$	
evening set	10800 Aug 29 20:56	23° $\mathring{M}$ 05'27	retrograde	10806 Dec 22 06:10	0° $\mathring{A}$ 22'42	
				10807 Feb 08 14:30	30° $\mathring{R}$ $\mathring{M}$	
conjunction	10800 Sep 04 20:58	23° $\mathring{M}$ 13'39 -13°51'37	opposition	10807 Mar 15 23:47	29° $\mathring{M}$ 23'27	-13°27'57
minimum elong	10800 Sep 04 21:11	23° $\mathring{M}$ 13'40 13°51'44	min. Earth dist.	10807 Mar 15 17:49	29° $\mathring{M}$ 23'43	47.88426 AU
max. Earth dist.	10800 Sep 05 10:48	23° $\mathring{M}$ 14'26 50.02534 AU	direct	10807 Jun 05 22:08	28° $\mathring{M}$ 24'55	
morning rise	10800 Sep 10 21:51	23° $\mathring{M}$ 21'54	evening set	10807 Sep 04 04:48	29° $\mathring{M}$ 39'36	


























































































































conjunction	10807 Sep 12 07:25	29° <u>0</u> 50'39	-12°51'14	retrograde	10813 Dec 28 17:26	7° <u>0</u> 01'28	
minimum elong	10807 Sep 12 07:38	29° <u>0</u> 50'39	12°51'18	opposition	10814 Mar 22 08:50	6° <u>0</u> 02'08	-12°14'59
max. Earth dist.	10807 Sep 12 14:18	29° <u>0</u> 51'02	49.80942 AU	min. Earth dist.	10814 Mar 22 09:11	6° <u>0</u> 02'07	47.48765 AU
	10807 Sep 19 04:10	0° <u>0</u>		direct	10814 Jun 12 04:49	5° <u>0</u> 03'30	
morning rise	10807 Sep 20 11:06	0° <u>0</u> 01'45		evening set	10814 Sep 08 21:03	6° <u>0</u> 16'14	
retrograde	10807 Dec 23 08:48	1° <u>0</u> 19'21					
opposition	10808 Mar 16 04:24	0° <u>0</u> 20'05	-13°18'14	conjunction	10814 Sep 18 18:42	6° <u>0</u> 29'44	-11°40'08
min. Earth dist.	10808 Mar 15 22:15	0° <u>0</u> 20'22	47.83796 AU	minimum elong	10814 Sep 18 18:56	6° <u>0</u> 29'45	11°40'08
	10808 Apr 03 12:48	30° <u>0</u> 00'00		max. Earth dist.	10814 Sep 18 18:43	6° <u>0</u> 29'44	49.40819 AU
direct	10808 Jun 06 02:33	29° <u>0</u> 21'32		morning rise	10814 Sep 28 17:38	6° <u>0</u> 43'20	
	10808 Aug 06 20:14	0° <u>0</u>		retrograde	10814 Dec 29 20:37	7° <u>0</u> 58'56	
evening set	10808 Sep 04 03:11	0° <u>0</u> 35'54		opposition	10815 Mar 23 13:42	6° <u>0</u> 59'33	-12°03'41
				min. Earth dist.	10815 Mar 23 14:57	6° <u>0</u> 59'29	47.41297 AU
conjunction	10808 Sep 12 12:16	0° <u>0</u> 47'19	-12°41'45	direct	10815 Jun 13 12:55	6° <u>0</u> 00'51	
minimum elong	10808 Sep 12 12:30	0° <u>0</u> 47'20	12°41'47	evening set	10815 Sep 09 20:45	7° <u>0</u> 13'20	
max. Earth dist.	10808 Sep 12 17:31	0° <u>0</u> 47'37	49.76282 AU				
morning rise	10808 Sep 20 22:37	0° <u>0</u> 58'47		conjunction	10815 Sep 19 23:56	7° <u>0</u> 27'10	-11°29'09
retrograde	10808 Dec 23 12:55	2° <u>0</u> 16'04		minimum elong	10815 Sep 20 00:09	7° <u>0</u> 27'11	11°29'07
opposition	10809 Mar 17 09:01	1° <u>0</u> 16'46	-13°08'16	max. Earth dist.	10815 Sep 19 21:40	7° <u>0</u> 27'02	49.33230 AU
min. Earth dist.	10809 Mar 17 04:22	1° <u>0</u> 16'59	47.78863 AU	morning rise	10815 Sep 30 04:38	7° <u>0</u> 41'05	
direct	10809 Jun 07 07:58	0° <u>0</u> 18'13		retrograde	10815 Dec 31 04:30	8° <u>0</u> 56'26	
evening set	10809 Sep 05 01:40	1° <u>0</u> 32'17		opposition	10816 Mar 23 18:36	7° <u>0</u> 56'59	-11°52'12
				min. Earth dist.	10816 Mar 23 20:46	7° <u>0</u> 56'53	47.33311 AU
conjunction	10809 Sep 13 17:15	1° <u>0</u> 44'03	-12°32'02	direct	10816 Jun 13 16:38	6° <u>0</u> 58'13	
minimum elong	10809 Sep 13 17:29	1° <u>0</u> 44'04	12°32'04	evening set	10816 Sep 09 20:28	8° <u>0</u> 10'26	
max. Earth dist.	10809 Sep 13 22:44	1° <u>0</u> 44'22	49.71326 AU				
morning rise	10809 Sep 22 09:56	1° <u>0</u> 55'54		conjunction	10816 Sep 20 05:18	8° <u>0</u> 24'36	-11°17'58
retrograde	10809 Dec 24 17:04	3° <u>0</u> 12'52		minimum elong	10816 Sep 20 05:32	8° <u>0</u> 24'36	11°17'57
opposition	10810 Mar 18 13:44	2° <u>0</u> 13'34	-12°58'03	max. Earth dist.	10816 Sep 20 02:13	8° <u>0</u> 24'25	49.25127 AU
min. Earth dist.	10810 Mar 18 09:28	2° <u>0</u> 13'46	47.73615 AU	morning rise	10816 Sep 30 15:37	8° <u>0</u> 38'51	
direct	10810 Jun 08 14:41	1° <u>0</u> 15'00		retrograde	10816 Dec 31 10:52	9° <u>0</u> 53'56	
evening set	10810 Sep 06 00:18	2° <u>0</u> 28'46		opposition	10817 Mar 24 23:27	8° <u>0</u> 54'24	-11°40'29
				min. Earth dist.	10817 Mar 25 03:29	8° <u>0</u> 54'13	47.24843 AU
conjunction	10810 Sep 14 22:00	2° <u>0</u> 40'54	-12°22'05	direct	10817 Jun 14 20:39	7° <u>0</u> 55'33	
minimum elong	10810 Sep 14 22:14	2° <u>0</u> 40'54	12°22'06	evening set	10817 Sep 10 20:25	9° <u>0</u> 07'32	
max. Earth dist.	10810 Sep 15 01:53	2° <u>0</u> 41'07	49.66060 AU				
morning rise	10810 Sep 23 21:02	2° <u>0</u> 53'07		conjunction	10817 Sep 21 10:38	9° <u>0</u> 22'01	-11°06'35
retrograde	10810 Dec 26 01:34	4° <u>0</u> 09'47		minimum elong	10817 Sep 21 10:51	9° <u>0</u> 22'01	11°06'31
opposition	10811 Mar 19 18:29	3° <u>0</u> 10'30	-12°47'37	max. Earth dist.	10817 Sep 21 06:50	9° <u>0</u> 21'48	49.16596 AU
min. Earth dist.	10811 Mar 19 14:45	3° <u>0</u> 10'40	47.68047 AU	morning rise	10817 Oct 02 02:17	9° <u>0</u> 36'35	
direct	10811 Jun 09 17:22	2° <u>0</u> 11'55		retrograde	10818 Jan 01 15:21	10° <u>0</u> 51'24	
evening set	10811 Sep 06 23:05	3° <u>0</u> 25'24		opposition	10818 Mar 26 04:18	9° <u>0</u> 51'48	-11°28'33
				min. Earth dist.	10818 Mar 26 08:17	9° <u>0</u> 51'37	47.15977 AU
conjunction	10811 Sep 16 03:03	3° <u>0</u> 37'54	-12°11'54	direct	10818 Jun 16 00:27	8° <u>0</u> 52'52	
minimum elong	10811 Sep 16 03:16	3° <u>0</u> 37'54	12°11'56	evening set	10818 Sep 11 20:15	10° <u>0</u> 04'38	
max. Earth dist.	10811 Sep 16 06:23	3° <u>0</u> 38'05	49.60433 AU				
morning rise	10811 Sep 25 08:18	3° <u>0</u> 50'28		conjunction	10818 Sep 22 15:45	10° <u>0</u> 19'25	-10°54'58
retrograde	10811 Dec 27 09:32	5° <u>0</u> 06'51		minimum elong	10818 Sep 22 15:58	10° <u>0</u> 19'26	10°54'55
opposition	10812 Mar 19 23:11	4° <u>0</u> 07'34	-12°36'57	max. Earth dist.	10818 Sep 22 10:15	10° <u>0</u> 19'06	49.07682 AU
min. Earth dist.	10812 Mar 19 21:19	4° <u>0</u> 07'39	47.62090 AU	morning rise	10818 Oct 03 12:57	10° <u>0</u> 34'18	
direct	10812 Jun 09 19:04	3° <u>0</u> 08'59		retrograde	10819 Jan 02 19:34	11° <u>0</u> 48'54	
evening set	10812 Sep 06 22:19	4° <u>0</u> 22'13		opposition	10819 Mar 27 09:20	10° <u>0</u> 49'13	-11°16'24
				min. Earth dist.	10819 Mar 27 14:57	10° <u>0</u> 48'57	47.06765 AU
conjunction	10812 Sep 16 08:15	4° <u>0</u> 35'03	-12°01'31	direct	10819 Jun 17 05:32	9° <u>0</u> 50'12	
minimum elong	10812 Sep 16 08:29	4° <u>0</u> 35'04	12°01'31	evening set	10819 Sep 12 20:22	11° <u>0</u> 01'46	
max. Earth dist.	10812 Sep 16 10:38	4° <u>0</u> 35'11	49.54402 AU				
morning rise	10812 Sep 25 19:27	4° <u>0</u> 47'58		conjunction	10819 Sep 23 21:14	11° <u>0</u> 16'52	-10°43'07
retrograde	10812 Dec 27 14:04	6° <u>0</u> 04'05		minimum elong	10819 Sep 23 21:27	11° <u>0</u> 16'52	10°43'03
opposition	10813 Mar 21 03:53	5° <u>0</u> 04'47	-12°26'04	max. Earth dist.	10819 Sep 23 15:58	11° <u>0</u> 16'34	48.98448 AU
min. Earth dist.	10813 Mar 21 02:10	5° <u>0</u> 04'52	47.55684 AU	morning rise	10819 Oct 04 23:32	11° <u>0</u> 32'03	
direct	10813 Jun 10 22:05	4° <u>0</u> 06'11		retrograde	10820 Jan 03 22:59	12° <u>0</u> 46'28	
evening set	10813 Sep 07 21:33	5° <u>0</u> 19'10		opposition	10820 Mar 27 14:09	11° <u>0</u> 46'42	-11°03'59
				min. Earth dist.	10820 Mar 27 20:03	11° <u>0</u> 46'25	46.97242 AU
conjunction	10813 Sep 17 13:18	5° <u>0</u> 32'21	-11°50'56	direct	10820 Jun 17 12:44	10° <u>0</u> 47'35	
minimum elong	10813 Sep 17 13:31	5° <u>0</u> 32'21	11°50'55	evening set	10820 Sep 12 20:44	11° <u>0</u> 58'59	
max. Earth dist.	10813 Sep 17 13:38	5° <u>0</u> 32'22	49.47873 AU				
morning rise	10813 Sep 27 06:33	5° <u>0</u> 45'36		conjunction	10820 Sep 24 02:35	12° <u>0</u> 14'23	-10°31'03



minimum elong	10820 Sep 24 02:48	12° <u>0</u> 14'24	10°30'59	evening set	10827 Sep 19 03:59	18° <u>0</u> 46'22	
max. Earth dist.	10820 Sep 23 19:41	12° <u>0</u> 13'59	48.88926 AU				
morning rise	10820 Oct 05 10:11	12° <u>0</u> 29'54		conjunction	10827 Oct 01 19:15	19° <u>0</u> 03'52	-9°00'09
retrograde	10821 Jan 04 06:25	13° <u>0</u> 44'07		minimum elong	10827 Oct 01 19:27	19° <u>0</u> 03'53	9°00'01
opposition	10821 Mar 28 19:09	12° <u>0</u> 44'17	-10°51'20	max. Earth dist.	10827 Oct 01 05:33	19° <u>0</u> 03'04	48.12785 AU
min. Earth dist.	10821 Mar 29 01:38	12° <u>0</u> 43'59	46.87448 AU	morning rise	10827 Oct 14 12:15	19° <u>0</u> 21'30	
direct	10821 Jun 18 16:45	11° <u>0</u> 45'07		retrograde	10828 Jan 12 04:25	20° <u>0</u> 34'55	
evening set	10821 Sep 13 20:58	12° <u>0</u> 56'21		opposition	10828 Apr 04 08:21	19° <u>0</u> 34'42	-9°16'11
				min. Earth dist.	10828 Apr 04 21:39	19° <u>0</u> 34'04	46.08915 AU
conjunction	10821 Sep 25 07:58	13° <u>0</u> 12'04	-10°18'44	direct	10828 Jun 25 00:07	18° <u>0</u> 35'03	
minimum elong	10821 Sep 25 08:12	13° <u>0</u> 12'04	10°18'39	evening set	10828 Sep 19 05:55	19° <u>0</u> 45'39	
max. Earth dist.	10821 Sep 25 00:42	13° <u>0</u> 11'39	48.79121 AU	max. Earth dist.	10828 Oct 01 09:38	20° <u>0</u> 02'31	48.00072 AU
morning rise	10821 Oct 06 20:37	13° <u>0</u> 27'53					
retrograde	10822 Jan 05 14:00	14° <u>0</u> 41'57		conjunction	10828 Oct 02 01:27	20° <u>0</u> 03'26	-8°46'18
opposition	10822 Mar 30 00:20	13° <u>0</u> 42'04	-10°38'27	minimum elong	10828 Oct 02 01:39	20° <u>0</u> 03'27	8°46'08
min. Earth dist.	10822 Mar 30 08:06	13° <u>0</u> 41'42	46.77371 AU	morning rise	10828 Oct 14 22:57	20° <u>0</u> 21'21	
direct	10822 Jun 19 19:54	12° <u>0</u> 42'50		retrograde	10829 Jan 12 09:54	21° <u>0</u> 34'41	
evening set	10822 Sep 14 21:35	13° <u>0</u> 53'56		opposition	10829 Apr 05 14:03	20° <u>0</u> 34'20	-9°01'42
				min. Earth dist.	10829 Apr 06 05:20	20° <u>0</u> 33'37	45.95849 AU
conjunction	10822 Sep 26 13:32	14° <u>0</u> 09'57	-10°06'12	direct	10829 Jun 26 05:35	19° <u>0</u> 34'34	
minimum elong	10822 Sep 26 13:44	14° <u>0</u> 09'58	10°06'07	evening set	10829 Sep 20 07:47	20° <u>0</u> 45'07	
max. Earth dist.	10822 Sep 26 05:43	14° <u>0</u> 09'30	48.69053 AU				
morning rise	10822 Oct 08 07:05	14° <u>0</u> 26'05		conjunction	10829 Oct 03 07:43	21° <u>0</u> 03'11	-8°32'14
retrograde	10823 Jan 06 20:21	15° <u>0</u> 40'00		minimum elong	10829 Oct 03 07:55	21° <u>0</u> 03'11	8°32'04
opposition	10823 Mar 31 05:23	14° <u>0</u> 40'05	-10°25'19	max. Earth dist.	10829 Oct 02 15:57	21° <u>0</u> 02'15	47.86928 AU
min. Earth dist.	10823 Mar 31 12:56	14° <u>0</u> 39'43	46.67012 AU	morning rise	10829 Oct 16 09:20	21° <u>0</u> 21'22	
direct	10823 Jun 20 22:30	13° <u>0</u> 40'48		retrograde	10830 Jan 13 13:27	22° <u>0</u> 34'38	
evening set	10823 Sep 15 22:23	14° <u>0</u> 51'48		opposition	10830 Apr 06 19:45	21° <u>0</u> 34'10	-8°46'58
				min. Earth dist.	10830 Apr 07 11:20	21° <u>0</u> 33'25	45.82375 AU
conjunction	10823 Sep 27 19:08	15° <u>0</u> 08'07	-9°53'25	direct	10830 Jun 27 13:58	20° <u>0</u> 34'16	
minimum elong	10823 Sep 27 19:21	15° <u>0</u> 08'08	9°53'19	evening set	10830 Sep 21 10:06	21° <u>0</u> 44'45	
max. Earth dist.	10823 Sep 27 09:41	15° <u>0</u> 07'34	48.58667 AU				
morning rise	10823 Oct 09 17:44	15° <u>0</u> 24'33		conjunction	10830 Oct 04 14:01	22° <u>0</u> 03'05	-8°17'56
retrograde	10824 Jan 08 01:30	16° <u>0</u> 38'21		minimum elong	10830 Oct 04 14:13	22° <u>0</u> 03'06	8°17'45
opposition	10824 Mar 31 10:41	15° <u>0</u> 38'23	-10°11'56	max. Earth dist.	10830 Oct 03 20:27	22° <u>0</u> 02'04	47.73415 AU
min. Earth dist.	10824 Mar 31 20:06	15° <u>0</u> 37'57	46.56314 AU	morning rise	10830 Oct 17 19:57	22° <u>0</u> 21'34	
direct	10824 Jun 21 04:20	14° <u>0</u> 39'04		retrograde	10831 Jan 14 20:33	23° <u>0</u> 34'46	
evening set	10824 Sep 15 23:24	15° <u>0</u> 49'58		opposition	10831 Apr 08 01:29	22° <u>0</u> 34'11	-8°32'00
				min. Earth dist.	10831 Apr 08 17:59	22° <u>0</u> 33'24	45.68572 AU
conjunction	10824 Sep 28 01:03	16° <u>0</u> 06'36	-9°40'25	direct	10831 Jun 28 19:42	21° <u>0</u> 34'09	
minimum elong	10824 Sep 28 01:15	16° <u>0</u> 06'36	9°40'18	evening set	10831 Sep 22 12:26	22° <u>0</u> 44'35	
max. Earth dist.	10824 Sep 27 15:31	16° <u>0</u> 06'03	48.47907 AU				
morning rise	10824 Oct 10 04:16	16° <u>0</u> 23'20		conjunction	10831 Oct 05 20:33	23° <u>0</u> 03'12	-8°03'24
retrograde	10825 Jan 08 05:04	17° <u>0</u> 37'02		minimum elong	10831 Oct 05 20:44	23° <u>0</u> 03'13	8°03'13
opposition	10825 Apr 01 15:52	16° <u>0</u> 37'02	-9°58'20	max. Earth dist.	10831 Oct 05 02:28	23° <u>0</u> 02'09	47.59572 AU
min. Earth dist.	10825 Apr 02 01:57	16° <u>0</u> 36'33	46.45200 AU	morning rise	10831 Oct 19 06:30	23° <u>0</u> 21'57	
direct	10825 Jun 22 12:19	15° <u>0</u> 37'39		retrograde	10832 Jan 16 04:58	24° <u>0</u> 35'07	
evening set	10825 Sep 17 00:49	16° <u>0</u> 48'29		opposition	10832 Apr 08 07:25	23° <u>0</u> 34'24	-8°16'46
				min. Earth dist.	10832 Apr 09 01:12	23° <u>0</u> 33'33	45.54454 AU
conjunction	10825 Sep 29 06:56	17° <u>0</u> 05'24	-9°27'12	direct	10832 Jun 29 00:39	22° <u>0</u> 34'15	
minimum elong	10825 Sep 29 07:09	17° <u>0</u> 05'25	9°27'05	evening set	10832 Sep 22 15:07	23° <u>0</u> 44'40	
max. Earth dist.	10825 Sep 28 19:15	17° <u>0</u> 04'43	48.36707 AU	max. Earth dist.	10832 Oct 05 08:28	24° <u>0</u> 02'27	47.45449 AU
morning rise	10825 Oct 11 14:57	17° <u>0</u> 22'26					
retrograde	10826 Jan 09 13:50	18° <u>0</u> 36'04		conjunction	10832 Oct 06 03:09	24° <u>0</u> 03'33	-7°48'38
opposition	10826 Apr 02 21:19	17° <u>0</u> 36'00	-9°44'30	minimum elong	10832 Oct 06 03:20	24° <u>0</u> 03'33	7°48'26
min. Earth dist.	10826 Apr 03 08:25	17° <u>0</u> 35'28	46.33624 AU	morning rise	10832 Oct 19 17:00	24° <u>0</u> 22'34	
direct	10826 Jun 23 16:05	16° <u>0</u> 36'33		retrograde	10833 Jan 16 14:26	25° <u>0</u> 35'42	
evening set	10826 Sep 18 02:10	17° <u>0</u> 47'17		opposition	10833 Apr 09 13:15	24° <u>0</u> 34'52	-8°01'18
				min. Earth dist.	10833 Apr 10 06:47	24° <u>0</u> 34'01	45.40070 AU
conjunction	10826 Sep 30 12:58	18° <u>0</u> 04'30	-9°13'47	direct	10833 Jun 30 03:05	23° <u>0</u> 34'34	
minimum elong	10826 Sep 30 13:10	18° <u>0</u> 04'31	9°13'39	evening set	10833 Sep 23 18:00	24° <u>0</u> 45'00	
max. Earth dist.	10826 Sep 30 00:22	18° <u>0</u> 03'47	48.25000 AU				
morning rise	10826 Oct 13 01:32	18° <u>0</u> 21'50		conjunction	10833 Oct 07 09:48	25° <u>0</u> 04'09	-7°33'37
retrograde	10827 Jan 10 21:58	19° <u>0</u> 35'23		minimum elong	10833 Oct 07 09:58	25° <u>0</u> 04'10	7°33'25
opposition	10827 Apr 04 02:57	18° <u>0</u> 35'14	-9°30'27	max. Earth dist.	10833 Oct 06 13:36	25° <u>0</u> 02'58	47.31055 AU
min. Earth dist.	10827 Apr 04 15:55	18° <u>0</u> 34'37	46.21520 AU	morning rise	10833 Oct 21 03:38	25° <u>0</u> 23'27	
direct	10827 Jun 24 20:18	17° <u>0</u> 35'42		retrograde	10834 Jan 17 21:10	26° <u>0</u> 36'34	

opposition	10834 Apr 10 19:30	25° <u>♂</u> 35'37	-7°45'34	direct	10840 Jul 07 00:20	0° <u>♂</u> 47'02	
min. Earth dist.	10834 Apr 11 14:40	25° <u>♂</u> 34'42	45.25429 AU	evening set	10840 Sep 29 22:01	1° <u>♂</u> 57'58	
direct	10834 Jul 01 08:25	24° <u>♂</u> 35'12		max. Earth dist.	10840 Oct 13 09:26	2° <u>♂</u> 17'15	46.20289 AU
evening set	10834 Sep 24 20:55	25° <u>♂</u> 45'39					
				conjunction	10840 Oct 14 13:44	2° <u>♂</u> 18'57	-5°41'58
conjunction	10834 Oct 08 16:38	26° <u>♂</u> 05'04	-7°18'22	minimum elong	10840 Oct 14 13:53	2° <u>♂</u> 18'57	5°41'42
minimum elong	10834 Oct 08 16:49	26° <u>♂</u> 05'05	7°18'09	morning rise	10840 Oct 29 07:29	2° <u>♂</u> 40'04	
max. Earth dist.	10834 Oct 07 20:41	26° <u>♂</u> 03'53	47.16405 AU	retrograde	10841 Jan 25 01:16	3° <u>♂</u> 53'36	
morning rise	10834 Oct 22 14:05	26° <u>♂</u> 24'38		opposition	10841 Apr 17 18:21	2° <u>♂</u> 51'45	-5°48'32
retrograde	10835 Jan 19 00:49	27° <u>♂</u> 37'46		min. Earth dist.	10841 Apr 18 20:42	2° <u>♂</u> 50'27	44.12378 AU
opposition	10835 Apr 12 01:44	26° <u>♂</u> 36'42	-7°29'35	direct	10841 Jul 08 07:18	1° <u>♂</u> 50'18	
min. Earth dist.	10835 Apr 12 21:00	26° <u>♂</u> 35'46	45.10509 AU	evening set	10841 Oct 01 03:05	3° <u>♂</u> 01'22	
direct	10835 Jul 02 17:21	25° <u>♂</u> 36'10					
evening set	10835 Sep 26 00:25	26° <u>♂</u> 46'39		conjunction	10841 Oct 15 21:52	3° <u>♂</u> 22'35	-5°25'06
				minimum elong	10841 Oct 15 22:00	3° <u>♂</u> 22'36	5°24'48
conjunction	10835 Oct 09 23:38	27° <u>♂</u> 06'21	-7°02'52	max. Earth dist.	10841 Oct 14 16:58	3° <u>♂</u> 20'51	46.02640 AU
minimum elong	10835 Oct 09 23:48	27° <u>♂</u> 06'22	7°02'39	morning rise	10841 Oct 30 18:25	3° <u>♂</u> 43'58	
max. Earth dist.	10835 Oct 09 01:47	27° <u>♂</u> 05'03	47.01463 AU	retrograde	10842 Jan 26 09:17	4° <u>♂</u> 57'36	
morning rise	10835 Oct 24 00:54	27° <u>♂</u> 26'11		opposition	10842 Apr 19 01:41	3° <u>♂</u> 55'34	-5°30'51
retrograde	10836 Jan 20 08:29	28° <u>♂</u> 39'21		min. Earth dist.	10842 Apr 20 05:14	3° <u>♂</u> 54'13	43.94434 AU
opposition	10836 Apr 12 08:00	27° <u>♂</u> 38'11	-7°13'21	direct	10842 Jul 09 14:56	2° <u>♂</u> 53'57	
min. Earth dist.	10836 Apr 13 04:21	27° <u>♂</u> 37'12	44.95282 AU	evening set	10842 Oct 02 08:24	4° <u>♂</u> 05'08	
direct	10836 Jul 02 23:35	26° <u>♂</u> 37'32		max. Earth dist.	10842 Oct 16 00:10	4° <u>♂</u> 24'48	45.84631 AU
evening set	10836 Sep 26 04:06	27° <u>♂</u> 48'05					
max. Earth dist.	10836 Oct 09 08:34	28° <u>♂</u> 06'43	46.86159 AU	conjunction	10842 Oct 17 05:59	4° <u>♂</u> 26'36	-5°07'59
				minimum elong	10842 Oct 17 06:07	4° <u>♂</u> 26'37	5°07'42
conjunction	10836 Oct 10 06:58	28° <u>♂</u> 08'03	-6°47'09	morning rise	10842 Nov 01 05:25	4° <u>♂</u> 48'13	
minimum elong	10836 Oct 10 07:08	28° <u>♂</u> 08'03	6°46'55	retrograde	10843 Jan 27 20:31	6° <u>♂</u> 01'59	
morning rise	10836 Oct 24 11:39	28° <u>♂</u> 28'09		opposition	10843 Apr 20 09:02	4° <u>♂</u> 59'47	-5°12'54
retrograde	10837 Jan 20 16:45	29° <u>♂</u> 41'22		min. Earth dist.	10843 Apr 21 12:40	4° <u>♂</u> 58'25	43.76160 AU
opposition	10837 Apr 13 14:37	28° <u>♂</u> 40'06	-6°56'52	direct	10843 Jul 10 19:13	3° <u>♂</u> 57'57	
min. Earth dist.	10837 Apr 14 12:31	28° <u>♂</u> 39'02	44.79657 AU	evening set	10843 Oct 03 14:10	5° <u>♂</u> 09'19	
direct	10837 Jul 04 05:45	27° <u>♂</u> 39'19		max. Earth dist.	10843 Oct 17 07:02	5° <u>♂</u> 29'07	45.66291 AU
evening set	10837 Sep 27 08:04	28° <u>♂</u> 49'57					
				conjunction	10843 Oct 18 14:24	5° <u>♂</u> 31'02	-4°50'39
conjunction	10837 Oct 11 14:17	29° <u>♂</u> 10'10	-6°31'11	minimum elong	10843 Oct 18 14:31	5° <u>♂</u> 31'02	4°50'20
minimum elong	10837 Oct 11 14:27	29° <u>♂</u> 10'11	6°30'56	morning rise	10843 Nov 02 16:33	5° <u>♂</u> 52'53	
max. Earth dist.	10837 Oct 10 14:47	29° <u>♂</u> 08'46	46.70438 AU	retrograde	10844 Jan 29 06:18	7° <u>♂</u> 06'47	
morning rise	10837 Oct 25 22:23	29° <u>♂</u> 30'32		opposition	10844 Apr 20 16:33	6° <u>♂</u> 04'24	-4°54'41
	10837 Nov 17 06:24	0° <u>♂</u>		min. Earth dist.	10844 Apr 21 22:01	6° <u>♂</u> 02'56	43.57593 AU
retrograde	10838 Jan 22 02:15	0° <u>♂</u> 43'49		direct	10844 Jul 11 00:39	5° <u>♂</u> 02'23	
	10838 Mar 30 15:49	30° <u>♂</u> 42'26		evening set	10844 Oct 03 20:08	6° <u>♂</u> 13'56	
opposition	10838 Apr 14 21:19	29° <u>♂</u> 42'26	-6°40'08				
min. Earth dist.	10838 Apr 15 19:34	29° <u>♂</u> 41'21	44.63582 AU	conjunction	10844 Oct 18 23:04	6° <u>♂</u> 35'53	-4°33'03
direct	10838 Jul 05 10:04	28° <u>♂</u> 41'31		minimum elong	10844 Oct 18 23:11	6° <u>♂</u> 35'53	4°32'45
evening set	10838 Sep 28 12:28	29° <u>♂</u> 52'15		max. Earth dist.	10844 Oct 17 15:49	6° <u>♂</u> 33'58	45.47686 AU
	10838 Oct 04 00:32	0° <u>♂</u>		morning rise	10844 Nov 03 03:37	6° <u>♂</u> 57'58	
				retrograde	10845 Jan 29 12:48	8° <u>♂</u> 12'03	
conjunction	10838 Oct 12 21:56	0° <u>♂</u> 12'43	-6°15'00	opposition	10845 Apr 22 00:16	7° <u>♂</u> 09'29	-4°36'13
minimum elong	10838 Oct 12 22:06	0° <u>♂</u> 12'44	6°14'46	min. Earth dist.	10845 Apr 23 05:32	7° <u>♂</u> 08'01	43.38776 AU
max. Earth dist.	10838 Oct 11 20:16	0° <u>♂</u> 11'11	46.54220 AU	direct	10845 Jul 12 10:35	6° <u>♂</u> 07'16	
morning rise	10838 Oct 27 09:25	0° <u>♂</u> 33'20		evening set	10845 Oct 05 02:25	7° <u>♂</u> 19'02	
retrograde	10839 Jan 23 11:28	1° <u>♂</u> 46'42		max. Earth dist.	10845 Oct 18 22:35	7° <u>♂</u> 39'12	45.28846 AU
opposition	10839 Apr 16 04:15	0° <u>♂</u> 45'10	-6°23'11				
min. Earth dist.	10839 Apr 17 04:42	0° <u>♂</u> 43'59	44.47003 AU	conjunction	10845 Oct 20 07:36	7° <u>♂</u> 41'13	-4°15'13
	10839 May 29 10:21	30° <u>♂</u> 42'26		minimum elong	10845 Oct 20 07:42	7° <u>♂</u> 41'14	4°14'53
direct	10839 Jul 06 15:26	29° <u>♂</u> 44'06		morning rise	10845 Nov 04 14:43	8° <u>♂</u> 03'33	
	10839 Aug 13 12:21	0° <u>♂</u>		retrograde	10846 Jan 30 20:57	9° <u>♂</u> 17'49	
evening set	10839 Sep 29 17:03	0° <u>♂</u> 54'55		opposition	10846 Apr 23 08:17	8° <u>♂</u> 15'05	-4°17'28
max. Earth dist.	10839 Oct 13 03:51	1° <u>♂</u> 14'06	46.37501 AU	min. Earth dist.	10846 Apr 24 14:34	8° <u>♂</u> 13'34	43.19744 AU
				direct	10846 Jul 13 19:09	7° <u>♂</u> 12'41	
conjunction	10839 Oct 14 05:53	1° <u>♂</u> 15'39	-5°58'36	evening set	10846 Oct 06 09:02	8° <u>♂</u> 24'41	
minimum elong	10839 Oct 14 06:01	1° <u>♂</u> 15'40	5°58'20	max. Earth dist.	10846 Oct 20 07:37	8° <u>♂</u> 45'04	45.09778 AU
morning rise	10839 Oct 28 20:24	1° <u>♂</u> 36'32					
retrograde	10840 Jan 24 17:19	2° <u>♂</u> 49'58		conjunction	10846 Oct 21 16:40	8° <u>♂</u> 47'07	-3°57'07
opposition	10840 Apr 16 11:16	1° <u>♂</u> 48'17	-6°05'59	minimum elong	10846 Oct 21 16:47	8° <u>♂</u> 47'07	3°56'48
min. Earth dist.	10840 Apr 17 12:07	1° <u>♂</u> 47'04	44.29916 AU	morning rise	10846 Nov 06 01:56	9° <u>♂</u> 09'40	

retrograde	10847 Feb 01 05:18	10° $\mathcal{M}$ .24'10		evening set	10853 Oct 13 19:36	16° $\mathcal{M}$ .21'54	
opposition	10847 Apr 24 16:25	9° $\mathcal{M}$ .21'16	-3°58'28	max. Earth dist.	10853 Oct 27 21:27	16° $\mathcal{M}$ .43'10	43.66905 AU
min. Earth dist.	10847 Apr 25 23:32	9° $\mathcal{M}$ .19'42	43.00481 AU				
direct	10847 Jul 15 03:46	8° $\mathcal{M}$ .18'41		conjunction	10853 Oct 29 15:05	16° $\mathcal{M}$ .45'49	-1°43'44
evening set	10847 Oct 07 16:09	9° $\mathcal{M}$ .30'56		minimum elong	10853 Oct 29 15:08	16° $\mathcal{M}$ .45'49	1°43'21
max. Earth dist.	10847 Oct 21 15:50	9° $\mathcal{M}$ .51'29	44.90482 AU	morning rise	10853 Nov 14 12:01	17° $\mathcal{M}$ .09'52	
				retrograde	10854 Feb 09 10:08	18° $\mathcal{M}$ .26'25	
conjunction	10847 Oct 23 01:55	9° $\mathcal{M}$ .53'36	-3°38'47	opposition	10854 May 02 08:05	17° $\mathcal{M}$ .22'04	-1°38'10
minimum elong	10847 Oct 23 02:01	9° $\mathcal{M}$ .53'36	3°38'27	min. Earth dist.	10854 May 03 22:42	17° $\mathcal{M}$ .20'04	41.55894 AU
morning rise	10847 Nov 07 13:24	10° $\mathcal{M}$ .16'23		direct	10854 Jul 22 12:01	16° $\mathcal{M}$ .17'50	
retrograde	10848 Feb 02 17:07	11° $\mathcal{M}$ .31'08		evening set	10854 Oct 15 05:36	17° $\mathcal{M}$ .32'25	
opposition	10848 Apr 25 00:43	10° $\mathcal{M}$ .28'05	-3°39'12	max. Earth dist.	10854 Oct 29 08:25	17° $\mathcal{M}$ .53'51	43.44987 AU
min. Earth dist.	10848 Apr 26 08:06	10° $\mathcal{M}$ .26'30	42.80970 AU				
direct	10848 Jul 15 09:29	9° $\mathcal{M}$ .25'18		conjunction	10854 Oct 31 02:13	17° $\mathcal{M}$ .56'32	-1°23'43
evening set	10848 Oct 07 23:41	10° $\mathcal{M}$ .37'52		minimum elong	10854 Oct 31 02:15	17° $\mathcal{M}$ .56'32	1°23'19
max. Earth dist.	10848 Oct 21 23:46	10° $\mathcal{M}$ .58'32	44.70881 AU	morning rise	10854 Nov 16 00:07	18° $\mathcal{M}$ .20'46	
				retrograde	10855 Feb 10 22:14	19° $\mathcal{M}$ .37'40	
conjunction	10848 Oct 23 11:23	11° $\mathcal{M}$ .00'44	-3°20'12	opposition	10855 May 03 17:57	18° $\mathcal{M}$ .33'02	-1°17'05
minimum elong	10848 Oct 23 11:28	11° $\mathcal{M}$ .00'44	3°19'51	min. Earth dist.	10855 May 05 08:26	18° $\mathcal{M}$ .31'03	41.33809 AU
morning rise	10848 Nov 08 00:50	11° $\mathcal{M}$ .23'45		direct	10855 Jul 23 21:51	17° $\mathcal{M}$ .28'31	
retrograde	10849 Feb 03 05:56	12° $\mathcal{M}$ .38'47		evening set	10855 Oct 16 16:10	18° $\mathcal{M}$ .43'31	
opposition	10849 Apr 26 09:22	11° $\mathcal{M}$ .35'33	-3°19'40	max. Earth dist.	10855 Oct 30 17:45	19° $\mathcal{M}$ .05'00	43.22811 AU
min. Earth dist.	10849 Apr 27 18:39	11° $\mathcal{M}$ .33'52	42.61134 AU				
direct	10849 Jul 16 15:00	10° $\mathcal{M}$ .32'35		conjunction	10855 Nov 01 13:31	19° $\mathcal{M}$ .07'49	-1°03'29
evening set	10849 Oct 09 07:36	11° $\mathcal{M}$ .45'27		minimum elong	10855 Nov 01 13:33	19° $\mathcal{M}$ .07'49	1°03'04
max. Earth dist.	10849 Oct 23 09:29	12° $\mathcal{M}$ .06'19	44.50933 AU	morning rise	10855 Nov 17 12:22	19° $\mathcal{M}$ .32'14	
				retrograde	10856 Feb 12 11:09	20° $\mathcal{M}$ .49'31	
conjunction	10849 Oct 24 21:16	12° $\mathcal{M}$ .08'33	-3°01'23	opposition	10856 May 04 04:18	19° $\mathcal{M}$ .44'37	-0°55'45
minimum elong	10849 Oct 24 21:21	12° $\mathcal{M}$ .08'33	3°01'01	min. Earth dist.	10856 May 05 20:16	19° $\mathcal{M}$ .42'32	41.11505 AU
morning rise	10849 Nov 09 12:25	12° $\mathcal{M}$ .31'47		direct	10856 Jul 24 07:27	18° $\mathcal{M}$ .39'48	
retrograde	10850 Feb 04 17:00	13° $\mathcal{M}$ .47'05		evening set	10856 Oct 17 03:00	19° $\mathcal{M}$ .55'16	
opposition	10850 Apr 27 18:11	12° $\mathcal{M}$ .43'40	-2°59'53	max. Earth dist.	10856 Oct 31 05:42	20° $\mathcal{M}$ .16'56	43.00427 AU
min. Earth dist.	10850 Apr 29 03:36	12° $\mathcal{M}$ .41'59	42.40917 AU				
direct	10850 Jul 17 23:19	11° $\mathcal{M}$ .40'29		conjunction	10856 Nov 02 01:10	20° $\mathcal{M}$ .19'44	-0°42'59
evening set	10850 Oct 10 16:01	12° $\mathcal{M}$ .53'41		minimum elong	10856 Nov 02 01:11	20° $\mathcal{M}$ .19'44	0°42'33
max. Earth dist.	10850 Oct 24 17:06	13° $\mathcal{M}$ .14'36	44.30566 AU	morning rise	10856 Nov 18 00:26	20° $\mathcal{M}$ .44'19	
				retrograde	10857 Feb 12 21:13	22° $\mathcal{M}$ .02'02	
conjunction	10850 Oct 26 07:15	13° $\mathcal{M}$ .17'00	-2°42'20	opposition	10857 May 05 14:51	20° $\mathcal{M}$ .56'52	-0°34'09
minimum elong	10850 Oct 26 07:19	13° $\mathcal{M}$ .17'00	2°41'57	min. Earth dist.	10857 May 07 06:57	20° $\mathcal{M}$ .54'46	40.89019 AU
morning rise	10850 Nov 11 00:15	13° $\mathcal{M}$ .40'27		direct	10857 Jul 25 19:36	19° $\mathcal{M}$ .51'46	
retrograde	10851 Feb 06 03:16	14° $\mathcal{M}$ .56'03		evening set	10857 Oct 18 14:28	21° $\mathcal{M}$ .07'42	
opposition	10851 Apr 29 03:22	13° $\mathcal{M}$ .52'25	-2°39'50	max. Earth dist.	10857 Nov 01 16:16	21° $\mathcal{M}$ .29'26	42.77894 AU
min. Earth dist.	10851 Apr 30 14:40	13° $\mathcal{M}$ .50'37	42.20272 AU				
direct	10851 Jul 19 08:16	12° $\mathcal{M}$ .49'00		conjunction	10857 Nov 03 12:59	21° $\mathcal{M}$ .32'21	-0°22'17
evening set	10851 Oct 12 00:50	14° $\mathcal{M}$ .02'31		minimum elong	10857 Nov 03 13:00	21° $\mathcal{M}$ .32'21	0°21'51
max. Earth dist.	10851 Oct 26 03:02	14° $\mathcal{M}$ .23'36	44.09750 AU	morning rise	10857 Nov 19 12:51	21° $\mathcal{M}$ .57'07	
				retrograde	10858 Feb 14 09:21	23° $\mathcal{M}$ .15'17	
conjunction	10851 Oct 27 17:47	14° $\mathcal{M}$ .26'03	-2°23'02	opposition	10858 May 07 01:41	22° $\mathcal{M}$ .09'52	-0°12'17
minimum elong	10851 Oct 27 17:52	14° $\mathcal{M}$ .26'03	2°22'40	min. Earth dist.	10858 May 08 18:13	22° $\mathcal{M}$ .07'44	40.66412 AU
morning rise	10851 Nov 12 12:08	14° $\mathcal{M}$ .49'43		direct	10858 Jul 27 05:21	21° $\mathcal{M}$ .04'29	
	10851 Nov 19 14:32	15° $\mathcal{M}$ .		evening set	10858 Oct 20 02:19	22° $\mathcal{M}$ .20'57	
retrograde	10852 Feb 07 10:20	16° $\mathcal{M}$ .05'36		max. Earth dist.	10858 Nov 03 03:47	22° $\mathcal{M}$ .42'47	42.55218 AU
opposition	10852 Apr 29 12:39	15° $\mathcal{M}$ .01'45	-2°19'32				
	10852 Apr 30 22:48	15° $\mathcal{K}$ $\mathcal{M}$ .		conjunction	10858 Nov 05 01:15	22° $\mathcal{M}$ .45'45	-0°01'20
min. Earth dist.	10852 May 01 00:55	14° $\mathcal{M}$ .59'53	41.99183 AU	minimum elong	10858 Nov 05 01:13	22° $\mathcal{M}$ .45'45	0°00'53
direct	10852 Jul 19 20:20	13° $\mathcal{M}$ .58'05		behind sun begin	10858 Nov 04 18:45	22° $\mathcal{M}$ .45'21	
	10852 Oct 04 04:03	15° $\mathcal{M}$ .		behind sun end	10858 Nov 05 07:42	22° $\mathcal{M}$ .46'09	
evening set	10852 Oct 12 10:08	15° $\mathcal{M}$ .11'56		morning rise	10858 Nov 21 01:15	23° $\mathcal{M}$ .10'41	
max. Earth dist.	10852 Oct 26 12:03	15° $\mathcal{M}$ .33'06	43.88519 AU	asc. node	10858 Nov 27 16:55	23° $\mathcal{M}$ .20'42	
				retrograde	10859 Feb 15 22:22	24° $\mathcal{M}$ .29'21	
conjunction	10852 Oct 28 04:22	15° $\mathcal{M}$ .35'40	-2°03'30	opposition	10859 May 08 12:59	23° $\mathcal{M}$ .23'42	0°09'49
minimum elong	10852 Oct 28 04:26	15° $\mathcal{M}$ .35'40	2°03'07	min. Earth dist.	10859 May 10 06:40	23° $\mathcal{M}$ .21'30	40.43664 AU
morning rise	10852 Nov 13 00:11	15° $\mathcal{M}$ .59'31		direct	10859 Jul 28 14:47	22° $\mathcal{M}$ .18'03	
retrograde	10853 Feb 07 21:52	17° $\mathcal{M}$ .15'44		evening set	10859 Oct 21 14:54	23° $\mathcal{M}$ .35'05	
opposition	10853 Apr 30 22:11	16° $\mathcal{M}$ .11'38	-1°58'59	max. Earth dist.	10859 Nov 04 16:20	23° $\mathcal{M}$ .57'03	42.32406 AU
min. Earth dist.	10853 May 02 11:02	16° $\mathcal{M}$ .09'44	41.77710 AU				
direct	10853 Jul 21 04:33	15° $\mathcal{M}$ .07'41		conjunction	10859 Nov 06 13:56	24° $\mathcal{M}$ .00'03	0°19'54

minimum elong	10859 Nov 06 13:55	24°  00'03	0°20'21	min. Earth dist.	10866 May 19 05:38	2°  25'33	38.77566 AU
morning rise	10859 Nov 22 13:58	24°  25'07		direct	10866 Aug 05 22:12	1°  20'24	
retrograde	10860 Feb 17 13:52	25°  44'20		evening set	10866 Oct 31 00:35	2°  42'18	
opposition	10860 May 09 00:19	24°  38'28	0°32'11	max. Earth dist.	10866 Nov 13 12:59	3°  04'27	40.65096 AU
min. Earth dist.	10860 May 10 17:46	24°  36'15	40.20768 AU				
direct	10860 Jul 28 23:23	23°  32'33		conjunction	10866 Nov 15 17:54	3°  08'06	2°54'11
evening set	10860 Oct 22 04:09	24°  50'11		minimum elong	10866 Nov 15 17:48	3°  08'05	2°54'42
max. Earth dist.	10860 Nov 05 03:32	25°  12'10	42.09402 AU	morning rise	10866 Dec 01 11:35	3°  33'57	
				retrograde	10867 Feb 27 00:53	4°  35'47	
conjunction	10860 Nov 07 02:55	25°  15'18	0°41'18	opposition	10867 May 18 19:31	3°  49'55	3°15'17
minimum elong	10860 Nov 07 02:54	25°  15'18	0°41'46	min. Earth dist.	10867 May 20 19:31	3°  47'16	38.52759 AU
morning rise	10860 Nov 23 02:50	25°  40'32		direct	10867 Aug 07 12:16	2°  41'45	
retrograde	10861 Feb 18 04:59	27°  00'20		evening set	10867 Nov 01 18:27	4°  04'29	
opposition	10861 May 10 12:17	25°  54'13	0°54'47	max. Earth dist.	10867 Nov 15 03:01	4°  26'31	40.40140 AU
min. Earth dist.	10861 May 12 07:35	25°  51'55	39.97667 AU				
direct	10861 Jul 30 09:19	24°  48'03		conjunction	10867 Nov 17 09:45	4°  30'20	3°17'01
evening set	10861 Oct 23 17:46	26°  06'20		minimum elong	10867 Nov 17 09:39	4°  30'19	3°17'32
max. Earth dist.	10861 Nov 06 17:00	26°  28'26	41.86149 AU	morning rise	10867 Dec 03 01:39	4°  56'15	
				retrograde	10868 Feb 28 17:56	6°  20'51	
conjunction	10861 Nov 08 16:20	26°  31'36	1°02'56	opposition	10868 May 19 09:59	5°  12'38	3°39'28
minimum elong	10861 Nov 08 16:19	26°  31'36	1°03'23	min. Earth dist.	10868 May 21 11:19	5°  09'54	38.27823 AU
morning rise	10861 Nov 24 15:41	26°  56'57		direct	10868 Aug 08 02:19	4°  04'05	
retrograde	10862 Feb 19 18:02	28°  17'22		evening set	10868 Nov 02 12:50	5°  27'40	
opposition	10862 May 12 00:34	27°  11'01	1°17'37	max. Earth dist.	10868 Nov 15 19:31	5°  49'44	40.15062 AU
min. Earth dist.	10862 May 13 20:08	27°  08'40	39.74283 AU				
direct	10862 Jul 31 23:24	26°  04'33		conjunction	10868 Nov 18 02:09	5°  53'34	3°40'01
evening set	10862 Oct 25 08:22	27°  23'31		minimum elong	10868 Nov 18 02:02	5°  53'34	3°40'33
max. Earth dist.	10862 Nov 08 04:47	27°  45'36	41.62585 AU	morning rise	10868 Dec 03 15:40	6°  19'32	
				retrograde	10869 Mar 01 08:24	7°  44'56	
conjunction	10862 Nov 10 06:13	27°  48'55	1°24'46	opposition	10869 May 21 01:02	6°  36'23	4°03'49
minimum elong	10862 Nov 10 06:11	27°  48'55	1°25'15	min. Earth dist.	10869 May 23 02:39	6°  33'37	38.02801 AU
morning rise	10862 Nov 26 05:05	28°  14'24		direct	10869 Aug 09 19:25	5°  27'27	
retrograde	10863 Feb 21 08:43	29°  35'27		evening set	10869 Nov 04 07:55	6°  51'57	
opposition	10863 May 13 13:08	28°  28'50	1°40'42	max. Earth dist.	10869 Nov 17 11:15	7°  13'58	39.89934 AU
min. Earth dist.	10863 May 15 10:00	28°  26'24	39.50582 AU				
direct	10863 Aug 02 11:42	27°  22'04		conjunction	10869 Nov 19 18:43	7°  17'53	4°03'11
evening set	10863 Oct 26 23:31	28°  41'44		minimum elong	10869 Nov 19 18:36	7°  17'52	4°03'43
max. Earth dist.	10863 Nov 09 18:23	29°  03'51	41.38666 AU	morning rise	10869 Dec 05 05:52	7°  43'52	
				retrograde	10870 Mar 03 02:10	9°  10'09	
conjunction	10863 Nov 11 20:41	29°  07'15	1°46'49	opposition	10870 May 22 16:28	8°  01'15	4°28'21
minimum elong	10863 Nov 11 20:38	29°  07'15	1°47'18	min. Earth dist.	10870 May 24 18:04	7°  58'27	37.77760 AU
morning rise	10863 Nov 27 18:32	29°  32'51		direct	10870 Aug 11 09:37	6°  51'56	
	10863 Dec 15 18:22	0°  37'00		evening set	10870 Nov 06 03:55	8°  17'23	
retrograde	10864 Feb 22 22:04	0°  54'33		max. Earth dist.	10870 Nov 19 03:49	8°  39'19	39.64770 AU
	10864 May 04 13:08	30°  08'18					
opposition	10864 May 14 02:16	29°  47'39	2°04'01	conjunction	10870 Nov 21 12:03	8°  43'19	4°26'29
min. Earth dist.	10864 May 16 00:27	29°  45'09	39.26528 AU	minimum elong	10870 Nov 21 11:55	8°  43'19	4°27'00
direct	10864 Aug 03 00:25	28°  40'34		morning rise	10870 Dec 06 20:20	9°  09'19	
evening set	10864 Oct 27 15:15	0°  30'57		retrograde	10871 Mar 04 19:03	10°  36'31	
	10864 Oct 27 00:57	0°  37'00		opposition	10871 May 24 08:24	9°  27'18	4°53'03
max. Earth dist.	10864 Nov 10 08:03	0°  32'04	41.14418 AU	min. Earth dist.	10871 May 26 11:11	9°  24'25	37.52704 AU
				direct	10871 Aug 12 23:10	8°  17'36	
conjunction	10864 Nov 12 11:19	0°  32'34	2°09'05	evening set	10871 Nov 08 00:47	9°  44'04	
minimum elong	10864 Nov 12 11:15	0°  32'33	2°09'35	max. Earth dist.	10871 Nov 20 21:53	10°  05'59	39.39603 AU
morning rise	10864 Nov 28 08:04	0°  52'16					
retrograde	10865 Feb 23 14:00	2°  14'39		conjunction	10871 Nov 23 05:55	10°  31'00	4°49'55
opposition	10865 May 15 15:35	1°  07'27	2°27'33	minimum elong	10871 Nov 23 05:47	10°  09'59	4°50'28
min. Earth dist.	10865 May 17 14:01	1°  04'55	39.02174 AU	morning rise	10871 Dec 08 11:04	10°  35'59	
direct	10865 Aug 04 11:43	0°  30'01		retrograde	10872 Mar 05 14:50	12°  04'10	
evening set	10865 Oct 29 07:39	1°  21'08		opposition	10872 May 25 00:46	10°  54'36	5°17'53
max. Earth dist.	10865 Nov 11 21:18	1°  43'13	40.89871 AU	min. Earth dist.	10872 May 27 03:07	10°  51'44	37.27640 AU
				direct	10872 Aug 13 13:50	9°  44'33	
conjunction	10865 Nov 14 02:23	1°  46'51	2°31'32	evening set	10872 Nov 08 22:28	11°  31'06	
minimum elong	10865 Nov 14 02:18	1°  46'50	2°32'03	max. Earth dist.	10872 Nov 21 14:23	11°  33'50	39.14388 AU
morning rise	10865 Nov 29 21:47	2°  12'38					
retrograde	10866 Feb 25 08:09	3°  35'44		conjunction	10872 Nov 24 00:07	11°  38'00	5°13'27
opposition	10866 May 17 05:24	2°  28'12	2°51'19	minimum elong	10872 Nov 23 23:57	11°  37'59	5°14'00

morning rise	10872 Dec 09 01:53	12°♂03'57		conjunction	10879 Dec 06 01:26	22°♂33'28	8°00'15
retrograde	10873 Mar 07 12:46	13°♂33'10		minimum elong	10879 Dec 06 01:11	22°♂33'26	8°00'51
opposition	10873 May 26 17:46	12°♂23'17	5°42'52	morning rise	10879 Dec 19 16:46	22°♂58'25	
min. Earth dist.	10873 May 28 21:39	12°♂20'19	37.02523 AU	retrograde	10880 Mar 18 20:49	24°♂36'10	
direct	10873 Aug 15 03:52	11°♂12'50		opposition	10880 Jun 06 07:58	23°♂23'36	8°40'03
evening set	10873 Nov 10 21:03	12°♂41'32		min. Earth dist.	10880 Jun 08 16:25	23°♂20'14	35.23273 AU
max. Earth dist.	10873 Nov 23 09:44	13°♂03'13	38.89082 AU	direct	10880 Aug 25 11:07	22°♂10'07	
				evening set	10880 Nov 23 15:08	23°♂48'11	
conjunction	10873 Nov 25 19:09	13°♂07'23	5°37'06	max. Earth dist.	10880 Dec 04 09:54	24°♂08'03	37.08315 AU
minimum elong	10873 Nov 25 18:58	13°♂07'23	5°37'40				
morning rise	10873 Dec 10 16:58	13°♂33'17		conjunction	10880 Dec 07 00:31	24°♂12'54	8°24'06
retrograde	10874 Mar 09 08:04	15°♂03'34		minimum elong	10880 Dec 07 00:16	24°♂12'52	8°24'41
opposition	10874 May 28 11:13	13°♂53'21	6°07'57	morning rise	10880 Dec 20 09:05	24°♂37'35	
min. Earth dist.	10874 May 30 15:10	13°♂50'22	36.77292 AU	retrograde	10881 Mar 20 20:19	26°♂16'46	
direct	10874 Aug 16 21:38	12°♂42'32		opposition	10881 Jun 08 05:31	25°♂03'47	9°05'24
evening set	10874 Nov 12 20:47	14°♂12'25		min. Earth dist.	10881 Jun 10 13:36	25°♂00'24	34.97623 AU
max. Earth dist.	10874 Nov 25 03:30	14°♂33'51	38.63633 AU	direct	10881 Aug 27 09:31	23°♂49'50	
				evening set	10881 Nov 25 21:56	25°♂29'30	
conjunction	10874 Nov 27 14:39	14°♂38'12	6°00'50	max. Earth dist.	10881 Dec 06 08:46	25°♂48'57	36.82537 AU
minimum elong	10874 Nov 27 14:28	14°♂38'11	6°01'24				
morning rise	10874 Dec 12 08:31	15°♂04'00		conjunction	10881 Dec 09 00:12	25°♂53'54	8°47'51
retrograde	10875 Mar 11 05:35	16°♂35'25		minimum elong	10881 Dec 08 23:55	25°♂53'53	8°48'27
opposition	10875 May 30 05:17	15°♂24'51	6°33'09	morning rise	10881 Dec 22 01:54	26°♂18'17	
min. Earth dist.	10875 Jun 01 10:19	15°♂21'46	36.51908 AU	retrograde	10882 Mar 22 22:13	27°♂58'58	
direct	10875 Aug 18 15:20	14°♂13'37		opposition	10882 Jun 10 03:34	26°♂45'35	9°30'38
evening set	10875 Nov 14 21:23	15°♂44'43		min. Earth dist.	10882 Jun 12 11:41	26°♂42'11	34.72175 AU
max. Earth dist.	10875 Nov 26 23:08	16°♂05'59	38.37988 AU	direct	10882 Aug 29 07:15	25°♂31'10	
				evening set	10882 Nov 28 05:44	27°♂12'31	
conjunction	10875 Nov 29 10:57	16°♂10'25	6°24'39	max. Earth dist.	10882 Dec 08 09:26	27°♂31'35	36.56957 AU
minimum elong	10875 Nov 29 10:45	16°♂10'24	6°25'14				
morning rise	10875 Dec 14 00:08	16°♂36'07		conjunction	10882 Dec 11 00:43	27°♂36'34	9°11'28
retrograde	10876 Mar 12 01:01	18°♂08'41		minimum elong	10882 Dec 11 00:27	27°♂36'33	9°12'03
opposition	10876 May 30 23:55	16°♂57'45	6°58'27	morning rise	10882 Dec 23 18:50	28°♂00'35	
min. Earth dist.	10876 Jun 02 06:05	16°♂54'35	36.26339 AU	retrograde	10883 Mar 24 22:44	29°♂42'53	
direct	10876 Aug 19 09:43	15°♂46'06		opposition	10883 Jun 12 02:31	28°♂29'06	9°55'45
evening set	10876 Nov 15 23:02	17°♂18'29		min. Earth dist.	10883 Jun 14 11:05	28°♂25'38	34.46951 AU
max. Earth dist.	10876 Nov 27 19:04	17°♂39'30	38.12187 AU	direct	10883 Aug 31 04:37	27°♂14'14	
				evening set	10883 Nov 30 14:55	28°♂57'19	
conjunction	10876 Nov 30 07:42	17°♂44'02	6°48'32	max. Earth dist.	10883 Dec 10 10:48	29°♂15'57	36.31628 AU
minimum elong	10876 Nov 30 07:30	17°♂44'01	6°49'05				
morning rise	10876 Dec 14 16:03	18°♂09'36		conjunction	10883 Dec 13 01:52	29°♂20'59	9°34'54
retrograde	10877 Mar 13 22:39	19°♂43'23		minimum elong	10883 Dec 13 01:34	29°♂20'57	9°35'31
opposition	10877 Jun 01 19:03	18°♂32'04	7°23'49	morning rise	10883 Dec 25 12:00	29°♂44'36	
min. Earth dist.	10877 Jun 04 01:11	18°♂28'53	36.00641 AU		10884 Jan 02 19:10	0°♂	
direct	10877 Aug 21 03:10	17°♂19'58		retrograde	10884 Mar 25 24:00	1°♂28'34	
evening set	10877 Nov 18 01:26	18°♂53'40		opposition	10884 Jun 13 01:55	0°♂14'24	10°20'40
max. Earth dist.	10877 Nov 29 14:53	19°♂14'24	37.86249 AU	min. Earth dist.	10884 Jun 15 09:43	0°♂10'58	34.21989 AU
					10884 Jun 22 21:08	30°♂	
conjunction	10877 Dec 02 04:55	19°♂19'04	7°12'26	direct	10884 Sep 01 02:25	28°♂59'06	
minimum elong	10877 Dec 02 04:42	19°♂19'03	7°13'01		10884 Nov 07 10:53	0°♂	
morning rise	10877 Dec 16 08:01	19°♂44'28		evening set	10884 Dec 02 01:13	0°♂44'02	
retrograde	10878 Mar 15 20:21	21°♂19'31		max. Earth dist.	10884 Dec 11 11:54	1°♂02'07	36.06537 AU
opposition	10878 Jun 03 14:54	20°♂07'47	7°49'13				
min. Earth dist.	10878 Jun 05 22:34	20°♂04'30	35.74849 AU	conjunction	10884 Dec 14 03:45	1°♂07'15	9°58'08
direct	10878 Aug 22 20:36	18°♂55'15		minimum elong	10884 Dec 14 03:27	1°♂07'14	9°58'44
evening set	10878 Nov 20 05:00	20°♂30'20		morning rise	10884 Dec 26 05:27	1°♂30'26	
max. Earth dist.	10878 Dec 01 13:17	20°♂50'51	37.60250 AU	retrograde	10885 Mar 28 02:32	3°♂16'09	
				opposition	10885 Jun 15 02:16	2°♂01'37	10°45'22
conjunction	10878 Dec 04 02:57	20°♂55'32	7°36'21	min. Earth dist.	10885 Jun 17 11:03	1°♂58'05	33.97269 AU
minimum elong	10878 Dec 04 02:42	20°♂55'31	7°36'56	direct	10885 Sep 02 22:53	0°♂45'52	
morning rise	10878 Dec 18 00:15	21°♂20'44		evening set	10885 Dec 04 12:47	2°♂32'43	
retrograde	10879 Mar 17 20:02	22°♂57'06		max. Earth dist.	10885 Dec 13 15:28	2°♂50'21	35.81669 AU
opposition	10879 Jun 05 11:02	21°♂44'57	8°14'39				
min. Earth dist.	10879 Jun 07 18:17	21°♂41'40	35.49035 AU	conjunction	10885 Dec 16 06:22	2°♂55'27	10°21'07
direct	10879 Aug 24 16:13	20°♂31'56		minimum elong	10885 Dec 16 06:04	2°♂55'26	10°21'44
evening set	10879 Nov 22 09:41	22°♂08'29		morning rise	10885 Dec 27 22:57	3°♂18'08	
max. Earth dist.	10879 Dec 03 10:07	22°♂28'36	37.34248 AU	retrograde	10886 Mar 30 06:39	5°♂05'41	

opposition	10886 Jun 17 03:15	3° $\overline{3}$ 50'46	11°09'48	minimum elong	10892 Dec 29 23:07	16° $\overline{3}$ 26'27	12°52'17
min. Earth dist.	10886 Jun 19 11:18	3° $\overline{3}$ 47'16	33.72742 AU	morning rise	10893 Jan 07 07:09	16° $\overline{3}$ 43'46	
direct	10886 Sep 04 22:14	2° $\overline{3}$ 34'35		retrograde	10893 Apr 13 07:37	18° $\overline{3}$ 46'03	
evening set	10886 Dec 07 01:57	4° $\overline{3}$ 23'26		opposition	10893 Jun 30 07:57	17° $\overline{3}$ 28'09	13°49'44
max. Earth dist.	10886 Dec 15 17:36	4° $\overline{3}$ 40'21	35.56961 AU	min. Earth dist.	10893 Jul 02 15:58	17° $\overline{3}$ 24'29	32.06678 AU
				direct	10893 Sep 17 20:35	16° $\overline{3}$ 08'32	
conjunction	10886 Dec 18 09:53	4° $\overline{3}$ 45'37	10°43'50	evening set	10893 Dec 24 14:10	18° $\overline{3}$ 13'34	
minimum elong	10886 Dec 18 09:35	4° $\overline{3}$ 45'35	10°44'26	max. Earth dist.	10893 Dec 29 16:28	18° $\overline{3}$ 24'14	33.89956 AU
morning rise	10886 Dec 29 17:02	5° $\overline{3}$ 07'44					
retrograde	10887 Apr 01 12:47	6° $\overline{3}$ 57'11		conjunction	10894 Jan 01 08:14	18° $\overline{3}$ 29'49	13°11'03
opposition	10887 Jun 19 04:59	5° $\overline{3}$ 41'52	11°33'57	minimum elong	10894 Jan 01 07:55	18° $\overline{3}$ 29'48	13°11'38
min. Earth dist.	10887 Jun 21 14:08	5° $\overline{3}$ 38'17	33.48376 AU	morning rise	10894 Jan 09 01:28	18° $\overline{3}$ 46'01	
direct	10887 Sep 06 21:38	4° $\overline{3}$ 25'14		retrograde	10894 Apr 15 17:15	20° $\overline{3}$ 50'46	
evening set	10887 Dec 09 16:26	6° $\overline{3}$ 16'09		opposition	10894 Jul 02 15:15	19° $\overline{3}$ 32'26	14°10'13
max. Earth dist.	10887 Dec 17 22:42	6° $\overline{3}$ 32'28	35.32389 AU	min. Earth dist.	10894 Jul 04 23:32	19° $\overline{3}$ 28'44	31.84410 AU
				direct	10894 Sep 20 01:22	18° $\overline{3}$ 12'20	
conjunction	10887 Dec 20 14:21	6° $\overline{3}$ 37'43	11°06'14	evening set	10894 Dec 27 15:45	20° $\overline{3}$ 20'06	
minimum elong	10887 Dec 20 14:01	6° $\overline{3}$ 37'42	11°06'50	max. Earth dist.	10895 Jan 01 04:17	20° $\overline{3}$ 29'40	33.67690 AU
morning rise	10887 Dec 31 11:09	6° $\overline{3}$ 59'14					
retrograde	10888 Apr 02 19:06	8° $\overline{3}$ 50'37		conjunction	10895 Jan 03 18:06	20° $\overline{3}$ 35'07	13°29'38
opposition	10888 Jun 20 07:38	7° $\overline{3}$ 34'54	11°57'46	minimum elong	10895 Jan 03 17:48	20° $\overline{3}$ 35'06	13°30'12
min. Earth dist.	10888 Jun 22 16:38	7° $\overline{3}$ 31'18	33.24143 AU	morning rise	10895 Jan 10 19:33	20° $\overline{3}$ 50'05	
direct	10888 Sep 08 01:30	6° $\overline{3}$ 17'48		retrograde	10895 Apr 18 03:26	22° $\overline{3}$ 57'25	
evening set	10888 Dec 11 08:17	8° $\overline{3}$ 10'51		opposition	10895 Jul 04 23:15	21° $\overline{3}$ 38'42	14°29'52
max. Earth dist.	10888 Dec 19 02:37	8° $\overline{3}$ 26'21	35.07972 AU	min. Earth dist.	10895 Jul 07 06:09	21° $\overline{3}$ 35'03	31.62714 AU
				direct	10895 Sep 22 09:12	20° $\overline{3}$ 18'08	
conjunction	10888 Dec 21 19:14	8° $\overline{3}$ 31'44	11°28'16	evening set	10895 Dec 30 19:14	22° $\overline{3}$ 28'47	
minimum elong	10888 Dec 21 18:56	8° $\overline{3}$ 31'43	11°28'52	max. Earth dist.	10896 Jan 03 14:38	22° $\overline{3}$ 36'55	33.46040 AU
morning rise	10889 Jan 01 05:21	8° $\overline{3}$ 52'34					
retrograde	10889 Apr 05 02:55	10° $\overline{3}$ 45'59		conjunction	10896 Jan 06 04:37	22° $\overline{3}$ 42'26	13°47'24
opposition	10889 Jun 22 11:00	9° $\overline{3}$ 29'50	12°21'11	minimum elong	10896 Jan 06 04:19	22° $\overline{3}$ 42'24	13°47'59
min. Earth dist.	10889 Jun 24 20:03	9° $\overline{3}$ 26'12	33.00089 AU	morning rise	10896 Jan 12 13:16	22° $\overline{3}$ 56'02	
direct	10889 Sep 10 04:19	8° $\overline{3}$ 12'14		retrograde	10896 Apr 19 16:22	25° $\overline{3}$ 06'06	
evening set	10889 Dec 14 01:31	10° $\overline{3}$ 07'30		opposition	10896 Jul 06 08:13	23° $\overline{3}$ 47'01	14°48'35
max. Earth dist.	10889 Dec 21 08:48	10° $\overline{3}$ 22'13	34.83732 AU	min. Earth dist.	10896 Jul 08 14:36	23° $\overline{3}$ 43'23	31.41654 AU
				direct	10896 Sep 23 15:56	22° $\overline{3}$ 26'02	
conjunction	10889 Dec 24 01:12	10° $\overline{3}$ 27'38	11°49'54	evening set	10897 Jan 02 00:57	24° $\overline{3}$ 39'44	
minimum elong	10889 Dec 24 00:52	10° $\overline{3}$ 27'37	11°50'30	max. Earth dist.	10897 Jan 05 03:52	24° $\overline{3}$ 46'27	33.25030 AU
morning rise	10890 Jan 02 23:47	10° $\overline{3}$ 47'42					
retrograde	10890 Apr 07 08:17	12° $\overline{3}$ 43'12		conjunction	10897 Jan 07 15:57	24° $\overline{3}$ 51'51	14°04'15
opposition	10890 Jun 24 15:05	11° $\overline{3}$ 26'38	12°44'10	minimum elong	10897 Jan 07 15:41	24° $\overline{3}$ 51'50	14°04'49
min. Earth dist.	10890 Jun 27 00:39	11° $\overline{3}$ 22'56	32.76241 AU	morning rise	10897 Jan 13 06:11	25° $\overline{3}$ 03'56	
direct	10890 Sep 12 07:42	10° $\overline{3}$ 08'32		retrograde	10897 Apr 22 05:05	27° $\overline{3}$ 16'54	
evening set	10890 Dec 16 20:28	12° $\overline{3}$ 06'06		opposition	10897 Jul 08 18:03	25° $\overline{3}$ 57'28	15°06'20
max. Earth dist.	10890 Dec 23 15:33	12° $\overline{3}$ 19'55	34.59748 AU	min. Earth dist.	10897 Jul 10 23:41	25° $\overline{3}$ 53'52	31.21216 AU
				direct	10897 Sep 26 01:54	24° $\overline{3}$ 36'07	
conjunction	10890 Dec 26 07:50	12° $\overline{3}$ 25'24	12°11'03	evening set	10898 Jan 05 09:45	26° $\overline{3}$ 53'04	
minimum elong	10890 Dec 26 07:32	12° $\overline{3}$ 25'22	12°11'39	max. Earth dist.	10898 Jan 07 16:22	26° $\overline{3}$ 58'01	33.04661 AU
morning rise	10891 Jan 04 18:17	12° $\overline{3}$ 44'37					
retrograde	10891 Apr 09 16:11	14° $\overline{3}$ 42'17		conjunction	10898 Jan 10 04:09	27° $\overline{3}$ 03'27	14°20'09
opposition	10891 Jun 26 19:53	13° $\overline{3}$ 25'17	13°06'38	minimum elong	10898 Jan 10 03:53	27° $\overline{3}$ 03'26	14°20'43
min. Earth dist.	10891 Jun 29 04:39	13° $\overline{3}$ 21'36	32.52677 AU	morning rise	10898 Jan 14 21:55	27° $\overline{3}$ 13'46	
direct	10891 Sep 14 11:57	12° $\overline{3}$ 06'40		retrograde	10898 Apr 24 20:12	29° $\overline{3}$ 29'52	
evening set	10891 Dec 19 16:43	14° $\overline{3}$ 06'38		opposition	10898 Jul 11 04:30	28° $\overline{3}$ 10'07	15°23'02
max. Earth dist.	10891 Dec 25 22:38	14° $\overline{3}$ 19'27	34.36058 AU	min. Earth dist.	10898 Jul 13 09:00	28° $\overline{3}$ 06'34	31.01397 AU
				direct	10898 Sep 28 11:48	26° $\overline{3}$ 48'23	
conjunction	10891 Dec 28 15:15	14° $\overline{3}$ 25'00	12°31'41	evening set	10899 Jan 08 22:44	29° $\overline{3}$ 08'56	
minimum elong	10891 Dec 28 14:55	14° $\overline{3}$ 24'59	12°32'17	max. Earth dist.	10899 Jan 10 06:43	29° $\overline{3}$ 11'51	32.84880 AU
morning rise	10892 Jan 06 12:50	14° $\overline{3}$ 43'18					
retrograde	10892 Apr 10 23:35	16° $\overline{3}$ 43'14		conjunction	10899 Jan 12 17:25	29° $\overline{3}$ 17'14	14°35'01
opposition	10892 Jun 28 01:35	15° $\overline{3}$ 25'47	13°28'31	minimum elong	10899 Jan 12 17:10	29° $\overline{3}$ 17'13	14°35'34
min. Earth dist.	10892 Jun 30 11:07	15° $\overline{3}$ 22'02	32.29459 AU	morning rise	10899 Jan 16 11:31	29° $\overline{3}$ 25'29	
direct	10892 Sep 15 14:33	14° $\overline{3}$ 06'40			10899 Feb 01 10:27	0° $\approx$	
evening set	10892 Dec 21 14:43	16° $\overline{3}$ 09'07		retrograde	10899 Apr 27 09:25	1° $\approx$ 45'00	
max. Earth dist.	10892 Dec 27 08:05	16° $\overline{3}$ 20'58	34.12772 AU	opposition	10899 Jul 13 16:06	0° $\approx$ 24'56	15°38'38
				min. Earth dist.	10899 Jul 15 20:42	0° $\approx$ 21'22	30.82138 AU
conjunction	10892 Dec 29 23:25	16° $\overline{3}$ 26'28	12°51'42		10899 Jul 29 05:09	30° $\overline{R}$ $\overline{3}$	

direct	10899 Sep 30 21:36	29°30'25.1		retrograde	10907 May 17 22:31	20°52'20	
	10899 Nov 30 23:28	0°		opposition	10907 Aug 02 15:36	19°29'51	16°54'38
evening set	10900 Jan 12 19:14	1°27'36		min. Earth dist.	10907 Aug 04 10:15	19°26'52	29.51270 AU
max. Earth dist.	10900 Jan 12 21:35	1°27'49	32.65678 AU	direct	10907 Oct 20 14:53	18°05'00	
				max. Earth dist.	10908 Feb 03 01:50	20°40'27	31.36712 AU
conjunction	10900 Jan 15 07:19	1°33'09	14°48'49				
minimum elong	10900 Jan 15 07:04	1°33'08	14°49'22	conjunction	10908 Feb 04 23:39	20°44'55	15°52'06
morning rise	10900 Jan 17 18:53	1°38'39		minimum elong	10908 Feb 04 23:39	20°44'55	15°52'32
retrograde	10900 Apr 30 01:19	4°02'13		retrograde	10908 May 19 17:00	23°22'21	
opposition	10900 Jul 16 04:23	2°41'51	15°53'03	opposition	10908 Aug 04 09:39	21°59'40	16°56'49
min. Earth dist.	10900 Jul 18 07:24	2°38'22	30.63439 AU	min. Earth dist.	10908 Aug 06 02:57	21°56'46	29.38719 AU
direct	10900 Oct 03 09:20	1°19'24		direct	10908 Oct 22 08:27	20°34'36	
max. Earth dist.	10901 Jan 15 12:46	3°45'47	32.47042 AU	max. Earth dist.	10909 Feb 04 23:08	23°11'04	31.24672 AU
conjunction	10901 Jan 17 22:06	3°51'07	15°01'29	conjunction	10909 Feb 06 19:07	23°15'23	15°53'02
minimum elong	10901 Jan 17 21:53	3°51'06	15°02'00	minimum elong	10909 Feb 06 19:08	23°15'23	15°53'26
retrograde	10901 May 02 16:35	6°21'27		retrograde	10909 May 22 14:23	25°53'35	
opposition	10901 Jul 18 17:37	5°00'46	16°06'13	opposition	10909 Aug 07 03:59	24°30'43	16°57'09
min. Earth dist.	10901 Jul 20 20:52	4°57'16	30.45309 AU	min. Earth dist.	10909 Aug 08 18:26	24°28'00	29.27222 AU
direct	10901 Oct 05 19:05	3°37'57		direct	10909 Oct 25 03:55	23°05'28	
max. Earth dist.	10902 Jan 18 05:57	6°05'49	32.29017 AU	max. Earth dist.	10910 Feb 07 21:39	25°42'59	31.13694 AU
conjunction	10902 Jan 20 13:36	6°11'02	15°12'55	conjunction	10910 Feb 09 15:09	25°47'04	15°52'13
minimum elong	10902 Jan 20 13:24	6°11'01	15°13'27	minimum elong	10910 Feb 09 15:12	25°47'05	15°52'37
retrograde	10902 May 05 07:38	8°42'34		retrograde	10910 May 25 09:23	28°25'57	
opposition	10902 Jul 21 07:31	7°21'35	16°18'05	opposition	10910 Aug 09 23:03	27°02'58	16°55'35
min. Earth dist.	10902 Jul 23 08:56	7°18'11	30.27773 AU	min. Earth dist.	10910 Aug 11 12:38	27°00'18	29.16744 AU
direct	10902 Oct 08 09:13	5°58'23		direct	10910 Oct 27 22:06	25°37'33	
max. Earth dist.	10903 Jan 20 22:16	8°27'32	32.11623 AU	max. Earth dist.	10911 Feb 10 20:22	28°16'01	31.03763 AU
conjunction	10903 Jan 23 05:50	8°32'47	15°23'06	conjunction	10911 Feb 12 11:32	28°19'53	15°49'38
minimum elong	10903 Jan 23 05:40	8°32'46	15°23'35	minimum elong	10911 Feb 12 11:37	28°19'54	15°49'59
retrograde	10903 May 07 23:30	11°05'28			10911 Mar 29 21:59	0°	
opposition	10903 Jul 23 22:10	9°44'10	16°28'32	retrograde	10911 May 28 06:46	0°59'21	
min. Earth dist.	10903 Jul 25 23:24	9°40'45	30.10890 AU		10911 Jul 29 14:58	30°	
direct	10903 Oct 10 21:47	8°20'36		opposition	10911 Aug 12 18:24	29°36'16	16°52'06
max. Earth dist.	10904 Jan 23 17:40	10°51'11	31.94934 AU	min. Earth dist.	10911 Aug 14 05:05	29°33'49	29.07260 AU
				direct	10911 Oct 30 18:26	28°10'45	
conjunction	10904 Jan 25 22:47	10°56'15	15°31'55		10912 Jan 23 08:46	0°	
minimum elong	10904 Jan 25 22:38	10°56'14	15°32'25	max. Earth dist.	10912 Feb 13 18:56	0°50'00	30.94828 AU
retrograde	10904 May 09 16:00	13°30'00					
opposition	10904 Jul 25 13:36	12°08'24	16°37'30	conjunction	10912 Feb 15 08:18	0°53'43	15°45'17
min. Earth dist.	10904 Jul 27 13:04	12°05'06	29.94716 AU	minimum elong	10912 Feb 15 08:26	0°53'43	15°45'38
direct	10904 Oct 12 12:55	10°44'29		retrograde	10912 May 30 03:31	3°33'41	
max. Earth dist.	10905 Jan 25 11:25	13°16'15	31.79019 AU	opposition	10912 Aug 14 14:25	2°10'30	16°46'42
				min. Earth dist.	10912 Aug 16 00:09	2°08'06	28.98745 AU
conjunction	10905 Jan 27 16:00	13°21'17	15°39'18	direct	10912 Nov 01 12:55	0°44'53	
minimum elong	10905 Jan 27 15:54	13°21'17	15°39'46	max. Earth dist.	10913 Feb 15 18:40	3°24'54	30.86892 AU
	10905 Mar 14 23:59	15°					
retrograde	10905 May 12 09:46	15°56'05		conjunction	10913 Feb 17 05:14	3°28'21	15°39'08
	10905 Jul 12 12:39	15°		minimum elong	10913 Feb 17 05:24	3°28'22	15°39'27
opposition	10905 Jul 28 05:39	14°34'09	16°44'53	retrograde	10913 Jun 01 23:54	6°08'43	
min. Earth dist.	10905 Jul 30 04:02	14°30'55	29.79341 AU	opposition	10913 Aug 17 10:40	4°45'28	16°39'23
direct	10905 Oct 15 03:29	13°09'54		min. Earth dist.	10913 Aug 18 17:37	4°43'16	28.91173 AU
	10906 Jan 09 10:25	15°		direct	10913 Nov 04 10:01	3°19'46	
max. Earth dist.	10906 Jan 28 08:21	15°43'00	31.63953 AU	max. Earth dist.	10914 Feb 18 17:17	6°00'19	30.79922 AU
conjunction	10906 Jan 30 10:07	15°47'48	15°45'10	conjunction	10914 Feb 20 02:30	6°03'38	15°31'13
minimum elong	10906 Jan 30 10:02	15°47'48	15°45'38	minimum elong	10914 Feb 20 02:42	6°03'39	15°31'31
retrograde	10906 May 15 02:56	18°23'32		retrograde	10914 Jun 04 19:51	8°44'17	
opposition	10906 Jul 30 22:18	17°01'20	16°50'38	opposition	10914 Aug 20 07:10	7°20'59	16°30'09
min. Earth dist.	10906 Aug 01 19:12	16°58'12	29.64825 AU	min. Earth dist.	10914 Aug 21 12:53	7°18'52	28.84558 AU
direct	10906 Oct 17 21:33	15°36'46		direct	10914 Nov 07 05:48	5°55'13	
max. Earth dist.	10907 Jan 31 03:53	18°10'59	31.49830 AU				
				conjunction	10915 Feb 22 23:59	8°39'21	15°21'31
conjunction	10907 Feb 02 04:37	18°15'42	15°49'28	minimum elong	10915 Feb 23 00:13	8°39'23	15°21'47
minimum elong	10907 Feb 02 04:35	18°15'42	15°49'54	max. Earth dist.	10915 Feb 21 18:00	8°36'21	30.73946 AU

retrograde	10915 Jun 07 15:49	11° <del>✕</del> 20'11		morning rise	10922 Mar 20 05:00	27° <del>✕</del> 03'35	
opposition	10915 Aug 23 03:58	9° <del>✕</del> 56'50	16°19'00	retrograde	10922 Jun 25 08:43	29° <del>✕</del> 25'56	
min. Earth dist.	10915 Aug 24 07:17	9° <del>✕</del> 54'54	28.78899 AU	opposition	10922 Sep 10 04:54	28° <del>✕</del> 02'51	14°08'36
direct	10915 Nov 10 03:27	8° <del>✕</del> 31'01		min. Earth dist.	10922 Sep 10 13:51	28° <del>✕</del> 02'13	28.70111 AU
				direct	10922 Nov 28 12:29	26° <del>✕</del> 37'30	
conjunction	10916 Feb 25 21:12	11° <del>✕</del> 15'19	15°10'03	evening set	10923 Mar 08 00:35	29° <del>✕</del> 01'11	
minimum elong	10916 Feb 25 21:29	11° <del>✕</del> 15'21	15°10'18				
max. Earth dist.	10916 Feb 24 16:36	11° <del>✕</del> 12'27	30.68974 AU	conjunction	10923 Mar 15 21:39	29° <del>✕</del> 19'55	13°01'50
retrograde	10916 Jun 09 12:12	13° <del>✕</del> 56'15		minimum elong	10923 Mar 15 22:04	29° <del>✕</del> 19'58	13°01'54
opposition	10916 Aug 25 00:52	12° <del>✕</del> 32'51	16°05'55	max. Earth dist.	10923 Mar 15 13:37	29° <del>✕</del> 19'08	30.66225 AU
min. Earth dist.	10916 Aug 26 02:06	12° <del>✕</del> 31'03	28.74251 AU	morning rise	10923 Mar 23 18:56	29° <del>✕</del> 38'42	
direct	10916 Nov 11 23:35	11° <del>✕</del> 07'00			10923 Apr 01 21:05	0° <del>∇</del>	
evening set	10917 Feb 26 11:38	13° <del>✕</del> 48'14		retrograde	10923 Jun 28 03:45	1° <del>∇</del> 58'47	
				opposition	10923 Sep 13 01:08	0° <del>∇</del> 35'52	13°43'02
conjunction	10917 Feb 27 18:37	13° <del>✕</del> 51'20	14°56'49	min. Earth dist.	10923 Sep 13 08:19	0° <del>∇</del> 35'22	28.73635 AU
minimum elong	10917 Feb 27 18:54	13° <del>✕</del> 51'22	14°57'02		10923 Oct 05 00:40	30° <del>℞</del> <del>✕</del>	
max. Earth dist.	10917 Feb 26 17:36	13° <del>✕</del> 48'49	30.65052 AU	direct	10923 Dec 01 09:14	29° <del>✕</del> 10'45	
morning rise	10917 Mar 01 02:11	13° <del>✕</del> 54'30			10924 Jan 25 07:07	0° <del>∇</del>	
retrograde	10917 Jun 12 06:38	16° <del>✕</del> 32'13		evening set	10924 Mar 09 03:00	1° <del>∇</del> 32'11	
opposition	10917 Aug 27 21:43	15° <del>✕</del> 08'48	15°50'57				
min. Earth dist.	10917 Aug 28 20:51	15° <del>✕</del> 07'10	28.70636 AU	conjunction	10924 Mar 17 16:55	1° <del>∇</del> 52'32	12°37'15
direct	10917 Nov 14 22:11	13° <del>✕</del> 42'57		minimum elong	10924 Mar 17 17:21	1° <del>∇</del> 52'35	12°37'17
evening set	10918 Feb 27 11:28	16° <del>✕</del> 19'34		max. Earth dist.	10924 Mar 17 11:51	1° <del>∇</del> 52'02	30.70665 AU
				morning rise	10924 Mar 26 06:57	2° <del>∇</del> 12'54	
conjunction	10918 Mar 02 15:44	16° <del>✕</del> 27'12	14°41'49	retrograde	10924 Jun 29 22:42	4° <del>∇</del> 30'47	
minimum elong	10918 Mar 02 16:04	16° <del>✕</del> 27'14	14°42'01	opposition	10924 Sep 14 20:55	3° <del>∇</del> 08'04	13°15'59
max. Earth dist.	10918 Mar 01 16:15	16° <del>✕</del> 24'51	30.62225 AU	min. Earth dist.	10924 Sep 15 00:48	3° <del>∇</del> 07'47	28.78268 AU
morning rise	10918 Mar 05 20:36	16° <del>✕</del> 34'54		direct	10924 Dec 03 07:52	1° <del>∇</del> 43'11	
retrograde	10918 Jun 15 03:20	19° <del>✕</del> 07'58		evening set	10925 Mar 11 06:03	4° <del>∇</del> 02'25	
opposition	10918 Aug 30 18:33	17° <del>✕</del> 44'32	15°34'06				
min. Earth dist.	10918 Aug 31 14:45	17° <del>✕</del> 43'06	28.68128 AU	conjunction	10925 Mar 20 11:52	4° <del>∇</del> 24'15	12°11'21
direct	10918 Nov 17 20:12	16° <del>✕</del> 18'41		minimum elong	10925 Mar 20 12:17	4° <del>∇</del> 24'17	12°11'21
evening set	10919 Mar 01 03:13	18° <del>✕</del> 52'13		max. Earth dist.	10925 Mar 20 09:04	4° <del>∇</del> 23'58	30.76184 AU
				morning rise	10925 Mar 29 17:45	4° <del>∇</del> 46'05	
conjunction	10919 Mar 05 12:45	19° <del>✕</del> 02'46	14°25'07	retrograde	10925 Jul 02 15:41	7° <del>∇</del> 01'48	
minimum elong	10919 Mar 05 13:05	19° <del>✕</del> 02'48	14°25'17	opposition	10925 Sep 17 16:18	5° <del>∇</del> 39'17	12°47'33
max. Earth dist.	10919 Mar 04 17:07	19° <del>✕</del> 00'48	30.60544 AU	min. Earth dist.	10925 Sep 17 18:21	5° <del>∇</del> 39'09	28.83968 AU
morning rise	10919 Mar 09 22:45	19° <del>✕</del> 13'23		direct	10925 Dec 06 03:23	4° <del>∇</del> 14'39	
retrograde	10919 Jun 17 21:38	21° <del>✕</del> 43'19		evening set	10926 Mar 13 09:49	6° <del>∇</del> 31'43	
opposition	10919 Sep 02 15:28	20° <del>✕</del> 19'54	15°15'23				
min. Earth dist.	10919 Sep 03 09:45	20° <del>✕</del> 18'37	28.66773 AU	conjunction	10926 Mar 23 06:28	6° <del>∇</del> 54'55	11°44'13
direct	10919 Nov 20 17:22	18° <del>✕</del> 54'07		minimum elong	10926 Mar 23 06:55	6° <del>∇</del> 54'57	11°44'11
evening set	10920 Mar 01 23:42	21° <del>✕</del> 24'57		max. Earth dist.	10926 Mar 23 06:52	6° <del>∇</del> 54'57	30.82749 AU
				morning rise	10926 Apr 02 02:57	7° <del>∇</del> 18'05	
conjunction	10920 Mar 07 09:22	21° <del>✕</del> 37'54	14°06'42	retrograde	10926 Jul 05 08:47	9° <del>∇</del> 31'41	
minimum elong	10920 Mar 07 09:45	21° <del>✕</del> 37'56	14°06'51	opposition	10926 Sep 20 11:24	8° <del>∇</del> 09'23	12°17'52
max. Earth dist.	10920 Mar 06 15:56	21° <del>✕</del> 36'10	30.60088 AU	min. Earth dist.	10926 Sep 20 10:50	8° <del>∇</del> 09'26	28.90663 AU
morning rise	10920 Mar 12 19:32	21° <del>✕</del> 50'55		direct	10926 Dec 09 01:00	6° <del>∇</del> 45'01	
retrograde	10920 Jun 19 18:27	24° <del>✕</del> 18'08		evening set	10927 Mar 15 13:52	8° <del>∇</del> 59'56	
opposition	10920 Sep 04 12:07	22° <del>✕</del> 54'47	14°54'51				
min. Earth dist.	10920 Sep 05 02:41	22° <del>✕</del> 53'46	28.66651 AU	conjunction	10927 Mar 26 00:21	9° <del>∇</del> 24'22	11°15'57
direct	10920 Nov 22 16:32	21° <del>✕</del> 29'06		minimum elong	10927 Mar 26 00:46	9° <del>∇</del> 24'25	11°15'54
evening set	10921 Mar 03 22:28	23° <del>✕</del> 57'27		max. Earth dist.	10927 Mar 26 02:22	9° <del>∇</del> 24'34	30.90290 AU
				morning rise	10927 Apr 05 10:45	9° <del>∇</del> 48'47	
conjunction	10921 Mar 10 05:46	24° <del>✕</del> 12'31	13°46'39	retrograde	10927 Jul 08 01:29	12° <del>∇</del> 00'18	
minimum elong	10921 Mar 10 06:09	24° <del>✕</del> 12'33	13°46'46	opposition	10927 Sep 23 06:04	10° <del>∇</del> 38'14	11°47'00
max. Earth dist.	10921 Mar 09 16:05	24° <del>✕</del> 11'09	30.60888 AU	min. Earth dist.	10927 Sep 23 02:59	10° <del>∇</del> 38'26	28.98338 AU
morning rise	10921 Mar 16 13:23	24° <del>✕</del> 27'38		direct	10927 Dec 11 19:49	9° <del>∇</del> 14'06	
retrograde	10921 Jun 22 12:37	26° <del>✕</del> 52'22		evening set	10928 Mar 16 18:17	11° <del>∇</del> 26'56	
opposition	10921 Sep 07 08:46	25° <del>✕</del> 29'08	14°32'34				
min. Earth dist.	10921 Sep 07 21:29	25° <del>✕</del> 28'14	28.67769 AU	conjunction	10928 Mar 27 17:51	11° <del>∇</del> 52'29	10°46'39
direct	10921 Nov 25 14:10	24° <del>✕</del> 03'35		minimum elong	10928 Mar 27 18:17	11° <del>∇</del> 52'32	10°46'34
evening set	10922 Mar 05 23:04	26° <del>✕</del> 29'34		max. Earth dist.	10928 Mar 27 23:15	11° <del>∇</del> 53'01	30.98796 AU
				morning rise	10928 Apr 07 16:59	12° <del>∇</del> 18'02	
conjunction	10922 Mar 13 01:51	26° <del>✕</del> 46'33	13°25'00	retrograde	10928 Jul 09 15:04	14° <del>∇</del> 27'31	
minimum elong	10922 Mar 13 02:17	26° <del>✕</del> 46'35	13°25'05	opposition	10928 Sep 25 00:13	13° <del>∇</del> 05'39	11°15'04
max. Earth dist.	10922 Mar 12 14:45	26° <del>✕</del> 45'26	30.62954 AU	min. Earth dist.	10928 Sep 24 19:13	13° <del>∇</del> 06'00	29.06954 AU



direct	10928 Dec 13 16:24	11° $\Upsilon$ 41'48			10935 May 30 15:30	0° $\mathcal{B}$	
evening set	10929 Mar 18 22:54	13° $\Upsilon$ 52'32		retrograde	10935 Jul 26 10:00	0° $\mathcal{B}$ 51'24	
					10935 Sep 24 06:40	30° $\mathcal{R}\Upsilon$	
conjunction	10929 Mar 30 10:30	14° $\Upsilon$ 19'08	10°16'24	opposition	10935 Oct 12 14:02	29° $\Upsilon$ 31'25	7°09'57
minimum elong	10929 Mar 30 10:54	14° $\Upsilon$ 19'10	10°16'18	min. Earth dist.	10935 Oct 11 15:12	29° $\Upsilon$ 32'56	29.94647 AU
max. Earth dist.	10929 Mar 30 17:10	14° $\Upsilon$ 19'47	31.08239 AU	direct	10935 Dec 31 19:19	28° $\Upsilon$ 09'51	
morning rise	10929 Apr 10 21:51	14° $\Upsilon$ 45'41			10936 Mar 28 19:51	0° $\mathcal{B}$	
retrograde	10929 Jul 12 06:09	16° $\Upsilon$ 53'11		evening set	10936 Apr 01 09:19	0° $\mathcal{B}$ 07'42	
opposition	10929 Sep 27 17:44	15° $\Upsilon$ 31'32	10°42'10				
min. Earth dist.	10929 Sep 27 09:45	15° $\Upsilon$ 32'05	29.16516 AU	conjunction	10936 Apr 15 11:44	0° $\mathcal{B}$ 38'52	6°25'42
direct	10929 Dec 16 10:48	14° $\Upsilon$ 07'56		minimum elong	10936 Apr 15 12:01	0° $\mathcal{B}$ 38'54	6°25'25
evening set	10930 Mar 21 03:38	16° $\Upsilon$ 16'39		max. Earth dist.	10936 Apr 16 12:28	0° $\mathcal{B}$ 41'10	32.01509 AU
				morning rise	10936 Apr 29 13:17	1° $\mathcal{B}$ 09'58	
conjunction	10930 Apr 02 02:42	16° $\Upsilon$ 44'10	9°45'18	retrograde	10936 Jul 27 20:51	3° $\mathcal{B}$ 05'20	
minimum elong	10930 Apr 02 03:06	16° $\Upsilon$ 44'13	9°45'10	min. Earth dist.	10936 Oct 13 02:04	1° $\mathcal{B}$ 47'22	30.11044 AU
max. Earth dist.	10930 Apr 02 12:53	16° $\Upsilon$ 45'09	31.18612 AU	opposition	10936 Oct 14 03:07	1° $\mathcal{B}$ 45'43	6°33'02
morning rise	10930 Apr 14 01:05	17° $\Upsilon$ 11'38		direct	10937 Jan 02 09:01	0° $\mathcal{B}$ 24'34	
retrograde	10930 Jul 14 18:50	19° $\Upsilon$ 17'11		evening set	10937 Apr 03 14:16	2° $\mathcal{B}$ 20'51	
opposition	10930 Sep 30 10:43	17° $\Upsilon$ 55'46	10°08'25				
min. Earth dist.	10930 Sep 30 01:17	17° $\Upsilon$ 56'25	29.27017 AU	conjunction	10937 Apr 17 22:52	2° $\mathcal{B}$ 52'21	5°51'06
direct	10930 Dec 19 04:49	16° $\Upsilon$ 32'27		minimum elong	10937 Apr 17 23:07	2° $\mathcal{B}$ 52'22	5°50'49
evening set	10931 Mar 23 08:35	18° $\Upsilon$ 39'11		max. Earth dist.	10937 Apr 19 02:25	2° $\mathcal{B}$ 54'53	32.18543 AU
				morning rise	10937 May 02 06:15	3° $\mathcal{B}$ 23'46	
conjunction	10931 Apr 04 17:59	19° $\Upsilon$ 07'31	9°13'26	retrograde	10937 Jul 30 04:59	5° $\mathcal{B}$ 17'41	
minimum elong	10931 Apr 04 18:22	19° $\Upsilon$ 07'33	9°13'18	opposition	10937 Oct 16 15:37	3° $\mathcal{B}$ 58'26	5°55'57
max. Earth dist.	10931 Apr 05 05:46	19° $\Upsilon$ 08'38	31.29943 AU	min. Earth dist.	10937 Oct 15 12:53	4° $\mathcal{B}$ 00'12	30.28209 AU
morning rise	10931 Apr 17 02:54	19° $\Upsilon$ 35'48		direct	10938 Jan 05 00:07	2° $\mathcal{B}$ 37'43	
retrograde	10931 Jul 17 08:53	21° $\Upsilon$ 39'28		evening set	10938 Apr 05 19:26	4° $\mathcal{B}$ 32'29	
opposition	10931 Oct 03 03:03	20° $\Upsilon$ 18'17	9°33'53				
min. Earth dist.	10931 Oct 02 14:02	20° $\Upsilon$ 19'10	29.38510 AU	conjunction	10938 Apr 20 09:11	5° $\mathcal{B}$ 04'14	5°16'24
direct	10931 Dec 21 23:31	18° $\Upsilon$ 55'14		minimum elong	10938 Apr 20 09:25	5° $\mathcal{B}$ 04'16	5°16'04
evening set	10932 Mar 24 13:17	21° $\Upsilon$ 00'02		max. Earth dist.	10938 Apr 21 13:41	5° $\mathcal{B}$ 06'51	32.36285 AU
				morning rise	10938 May 04 22:01	5° $\mathcal{B}$ 35'54	
conjunction	10932 Apr 06 08:31	21° $\Upsilon$ 29'07	8°40'54	retrograde	10938 Aug 01 14:22	7° $\mathcal{B}$ 28'27	
minimum elong	10932 Apr 06 08:53	21° $\Upsilon$ 29'09	8°40'43	min. Earth dist.	10938 Oct 17 22:09	6° $\mathcal{B}$ 11'28	30.46085 AU
max. Earth dist.	10932 Apr 06 23:52	21° $\Upsilon$ 30'35	31.42260 AU	opposition	10938 Oct 19 03:26	6° $\mathcal{B}$ 09'34	5°18'47
morning rise	10932 Apr 19 02:58	21° $\Upsilon$ 58'08		direct	10939 Jan 07 12:15	4° $\mathcal{B}$ 49'15	
retrograde	10932 Jul 18 21:03	24° $\Upsilon$ 00'00		evening set	10939 Apr 08 00:27	6° $\mathcal{B}$ 42'34	
opposition	10932 Oct 04 18:53	22° $\Upsilon$ 39'03	8°58'40				
min. Earth dist.	10932 Oct 04 04:13	22° $\Upsilon$ 40'03	29.51024 AU	conjunction	10939 Apr 22 19:01	7° $\mathcal{B}$ 14'31	4°41'38
direct	10932 Dec 23 16:58	21° $\Upsilon$ 16'20		minimum elong	10939 Apr 22 19:13	7° $\mathcal{B}$ 14'32	4°41'18
evening set	10933 Mar 26 18:18	23° $\Upsilon$ 19'17		max. Earth dist.	10939 Apr 24 02:20	7° $\mathcal{B}$ 17'22	32.54675 AU
				morning rise	10939 May 07 12:19	7° $\mathcal{B}$ 46'22	
conjunction	10933 Apr 08 22:23	23° $\Upsilon$ 49'00	8°07'45	retrograde	10939 Aug 03 21:20	9° $\mathcal{B}$ 37'35	
minimum elong	10933 Apr 08 22:44	23° $\Upsilon$ 49'02	8°07'34	min. Earth dist.	10939 Oct 20 08:38	8° $\mathcal{B}$ 21'01	30.64587 AU
max. Earth dist.	10933 Apr 09 15:45	23° $\Upsilon$ 50'39	31.55607 AU	opposition	10939 Oct 21 14:47	8° $\mathcal{B}$ 19'03	4°41'38
morning rise	10933 Apr 22 01:43	24° $\Upsilon$ 18'40		direct	10940 Jan 10 00:39	6° $\mathcal{B}$ 59'09	
retrograde	10933 Jul 21 10:02	26° $\Upsilon$ 18'47		evening set	10940 Apr 09 05:25	8° $\mathcal{B}$ 51'04	
opposition	10933 Oct 07 09:45	24° $\Upsilon$ 58'08	8°22'52				
min. Earth dist.	10933 Oct 06 15:33	24° $\Upsilon$ 59'21	29.64571 AU	conjunction	10940 Apr 24 03:53	9° $\mathcal{B}$ 23'08	4°06'53
direct	10933 Dec 26 10:33	23° $\Upsilon$ 35'45		minimum elong	10940 Apr 24 04:04	9° $\mathcal{B}$ 23'09	4°06'32
evening set	10934 Mar 28 23:18	25° $\Upsilon$ 36'56		max. Earth dist.	10940 Apr 25 11:51	9° $\mathcal{B}$ 26'01	32.73643 AU
				morning rise	10940 May 09 01:20	9° $\mathcal{B}$ 55'06	
conjunction	10934 Apr 11 11:37	26° $\Upsilon$ 07'13	7°34'07	retrograde	10940 Aug 05 04:59	11° $\mathcal{B}$ 45'02	
minimum elong	10934 Apr 11 11:57	26° $\Upsilon$ 07'15	7°33'53	min. Earth dist.	10940 Oct 21 16:24	10° $\mathcal{B}$ 28'59	30.83662 AU
max. Earth dist.	10934 Apr 12 07:47	26° $\Upsilon$ 09'07	31.69959 AU	opposition	10940 Oct 23 01:16	10° $\mathcal{B}$ 26'51	4°04'34
morning rise	10934 Apr 24 23:04	26° $\Upsilon$ 37'26		direct	10941 Jan 11 12:22	9° $\mathcal{B}$ 07'20	
retrograde	10934 Jul 23 21:59	28° $\Upsilon$ 35'54		evening set	10941 Apr 11 10:21	10° $\mathcal{B}$ 57'54	
min. Earth dist.	10934 Oct 09 04:14	27° $\Upsilon$ 16'54	29.79138 AU				
opposition	10934 Oct 10 00:16	27° $\Upsilon$ 15'34	7°46'36	conjunction	10941 Apr 26 12:20	11° $\mathcal{B}$ 30'02	3°32'13
direct	10934 Dec 29 01:57	25° $\Upsilon$ 53'35		minimum elong	10941 Apr 26 12:29	11° $\mathcal{B}$ 30'03	3°31'52
evening set	10935 Mar 31 04:14	27° $\Upsilon$ 53'04		max. Earth dist.	10941 Apr 27 22:44	11° $\mathcal{B}$ 33'07	32.93128 AU
				morning rise	10941 May 11 13:04	12° $\mathcal{B}$ 02'04	
conjunction	10935 Apr 14 00:01	28° $\Upsilon$ 23'50	7°00'03	retrograde	10941 Aug 07 11:10	13° $\mathcal{B}$ 50'46	
minimum elong	10935 Apr 14 00:19	28° $\Upsilon$ 23'52	6°59'49	min. Earth dist.	10941 Oct 24 01:38	12° $\mathcal{B}$ 35'03	31.03260 AU
max. Earth dist.	10935 Apr 14 22:47	28° $\Upsilon$ 25'58	31.85292 AU	opposition	10941 Oct 25 11:05	12° $\mathcal{B}$ 32'54	3°27'39
morning rise	10935 Apr 27 18:46	28° $\Upsilon$ 54'31		direct	10942 Jan 13 22:40	11° $\mathcal{B}$ 13'46	

evening set	10942 Apr 13 15:13	13° $\mathbf{8}$ 03'02		conjunction	10948 May 10 02:02	25° $\mathbf{8}$ 28'20	-0°23'27
				minimum elong	10948 May 10 02:01	25° $\mathbf{8}$ 28'20	0°23'56
conjunction	10942 Apr 28 19:57	13° $\mathbf{8}$ 35'09	2°57'43	max. Earth dist.	10948 May 11 23:59	25° $\mathbf{8}$ 32'14	34.44080 AU
minimum elong	10942 Apr 28 20:05	13° $\mathbf{8}$ 35'10	2°57'19	morning rise	10948 May 25 11:05	25° $\mathbf{8}$ 59'23	
max. Earth dist.	10942 Apr 30 07:11	13° $\mathbf{8}$ 38'17	33.13112 AU	retrograde	10948 Aug 20 15:11	27° $\mathbf{8}$ 41'03	
morning rise	10942 May 13 23:32	14° $\mathbf{8}$ 07'11		min. Earth dist.	10948 Nov 06 15:19	26° $\mathbf{8}$ 28'13	32.55662 AU
	10942 Jun 10 13:19	15° $\mathbf{8}$		opposition	10948 Nov 08 12:33	26° $\mathbf{8}$ 25'25	-0°41'55
retrograde	10942 Aug 09 17:56	15° $\mathbf{8}$ 54'43		direct	10949 Jan 28 13:19	25° $\mathbf{8}$ 08'54	
	10942 Oct 12 16:42	15° $\mathbf{8}$		evening set	10949 Apr 26 19:26	26° $\mathbf{8}$ 50'40	
min. Earth dist.	10942 Oct 26 08:18	14° $\mathbf{8}$ 39'27	31.23363 AU				
opposition	10942 Oct 27 20:11	14° $\mathbf{8}$ 37'09	2°50'56	conjunction	10949 May 12 04:46	27° $\mathbf{8}$ 21'30	-0°55'34
direct	10943 Jan 16 09:14	13° $\mathbf{8}$ 18'22		minimum elong	10949 May 12 04:44	27° $\mathbf{8}$ 21'30	0°56'03
	10943 Apr 12 16:52	15° $\mathbf{8}$		max. Earth dist.	10949 May 14 03:08	27° $\mathbf{8}$ 25'25	34.67659 AU
evening set	10943 Apr 15 19:44	15° $\mathbf{8}$ 06'23		morning rise	10949 May 27 13:08	27° $\mathbf{8}$ 52'16	
				retrograde	10949 Aug 22 17:13	29° $\mathbf{8}$ 33'10	
conjunction	10943 May 01 02:41	15° $\mathbf{8}$ 38'27	2°23'24	min. Earth dist.	10949 Nov 08 17:19	28° $\mathbf{8}$ 20'49	32.79442 AU
minimum elong	10943 May 01 02:47	15° $\mathbf{8}$ 38'27	2°23'01	opposition	10949 Nov 10 16:49	28° $\mathbf{8}$ 17'54	-1°15'44
max. Earth dist.	10943 May 02 15:49	15° $\mathbf{8}$ 41'43	33.33578 AU	direct	10950 Jan 30 18:23	27° $\mathbf{8}$ 01'47	
morning rise	10943 May 16 08:31	16° $\mathbf{8}$ 10'26		evening set	10950 Apr 28 22:53	28° $\mathbf{8}$ 42'43	
retrograde	10943 Aug 12 00:01	17° $\mathbf{8}$ 56'50					
min. Earth dist.	10943 Oct 28 15:42	16° $\mathbf{8}$ 41'54	31.44003 AU	conjunction	10950 May 14 06:58	29° $\mathbf{8}$ 13'14	-1°27'11
opposition	10943 Oct 30 04:43	16° $\mathbf{8}$ 39'34	2°14'30	minimum elong	10950 May 14 06:54	29° $\mathbf{8}$ 13'13	1°27'42
direct	10944 Jan 18 19:35	15° $\mathbf{8}$ 21'08		max. Earth dist.	10950 May 16 07:09	29° $\mathbf{8}$ 17'15	34.91564 AU
evening set	10944 Apr 17 00:05	17° $\mathbf{8}$ 07'56		morning rise	10950 May 29 14:05	29° $\mathbf{8}$ 43'40	
					10950 Jun 07 02:32	0° $\mathbf{II}$	
conjunction	10944 May 02 08:47	17° $\mathbf{8}$ 39'54	1°49'21	retrograde	10950 Aug 24 19:27	1° $\mathbf{II}$ 23'51	
minimum elong	10944 May 02 08:52	17° $\mathbf{8}$ 39'54	1°48'56	min. Earth dist.	10950 Nov 10 20:54	0° $\mathbf{II}$ 11'51	33.03544 AU
max. Earth dist.	10944 May 03 23:45	17° $\mathbf{8}$ 43'18	33.54577 AU	opposition	10950 Nov 12 20:50	0° $\mathbf{II}$ 08'56	-1°48'58
morning rise	10944 May 17 16:14	18° $\mathbf{8}$ 11'46			10950 Nov 19 00:00	30° $\mathbf{R}$ $\mathbf{8}$	
retrograde	10944 Aug 13 05:29	19° $\mathbf{8}$ 57'05		direct	10951 Feb 01 21:51	28° $\mathbf{8}$ 53'14	
min. Earth dist.	10944 Oct 29 21:24	18° $\mathbf{8}$ 42'34	31.65197 AU		10951 Apr 13 00:33	0° $\mathbf{II}$	
opposition	10944 Oct 31 12:17	18° $\mathbf{8}$ 40'07	1°38'23	evening set	10951 May 01 02:02	0° $\mathbf{II}$ 33'23	
direct	10945 Jan 20 07:09	17° $\mathbf{8}$ 22'02					
evening set	10945 Apr 19 04:22	19° $\mathbf{8}$ 07'43		conjunction	10951 May 16 08:30	1° $\mathbf{II}$ 03'32	-1°58'18
				minimum elong	10951 May 16 08:26	1° $\mathbf{II}$ 03'32	1°58'48
conjunction	10945 May 04 14:04	19° $\mathbf{8}$ 39'32	1°15'36	max. Earth dist.	10951 May 18 09:28	1° $\mathbf{II}$ 07'36	35.15740 AU
minimum elong	10945 May 04 14:07	19° $\mathbf{8}$ 39'32	1°15'10	morning rise	10951 May 31 13:57	1° $\mathbf{II}$ 33'37	
max. Earth dist.	10945 May 06 06:17	19° $\mathbf{8}$ 43'01	33.76123 AU	retrograde	10951 Aug 26 20:41	3° $\mathbf{II}$ 13'08	
morning rise	10945 May 19 22:47	20° $\mathbf{8}$ 11'15		min. Earth dist.	10951 Nov 12 22:52	2° $\mathbf{II}$ 01'33	33.27878 AU
retrograde	10945 Aug 15 10:06	21° $\mathbf{8}$ 55'34		opposition	10951 Nov 15 00:08	1° $\mathbf{II}$ 58'34	-2°21'38
min. Earth dist.	10945 Nov 01 02:16	20° $\mathbf{8}$ 41'29	31.86989 AU	direct	10952 Feb 04 02:32	0° $\mathbf{II}$ 43'15	
opposition	10945 Nov 02 19:20	20° $\mathbf{8}$ 38'54	1°02'38	evening set	10952 May 02 05:12	2° $\mathbf{II}$ 22'41	
direct	10946 Jan 22 15:08	19° $\mathbf{8}$ 21'11					
evening set	10946 Apr 21 08:19	21° $\mathbf{8}$ 05'48		conjunction	10952 May 17 09:30	2° $\mathbf{II}$ 52'26	-2°28'51
				minimum elong	10952 May 17 09:25	2° $\mathbf{II}$ 52'26	2°29'23
conjunction	10946 May 06 18:47	21° $\mathbf{8}$ 37'25	0°42'11	max. Earth dist.	10952 May 19 11:02	2° $\mathbf{II}$ 56'31	35.40093 AU
minimum elong	10946 May 06 18:48	21° $\mathbf{8}$ 37'25	0°41'44	morning rise	10952 Jun 01 13:04	3° $\mathbf{II}$ 22'08	
max. Earth dist.	10946 May 08 13:33	21° $\mathbf{8}$ 41'06	33.98245 AU	retrograde	10952 Aug 27 21:45	5° $\mathbf{II}$ 01'01	
morning rise	10946 May 22 03:57	22° $\mathbf{8}$ 08'57		min. Earth dist.	10952 Nov 14 00:36	3° $\mathbf{II}$ 49'49	33.52398 AU
retrograde	10946 Aug 17 11:17	23° $\mathbf{8}$ 52'19		opposition	10952 Nov 16 02:47	3° $\mathbf{II}$ 46'48	-2°53'40
min. Earth dist.	10946 Nov 03 07:30	22° $\mathbf{8}$ 38'37	32.09353 AU	direct	10953 Feb 05 05:53	2° $\mathbf{II}$ 31'51	
opposition	10946 Nov 05 01:43	22° $\mathbf{8}$ 35'59	0°27'18	evening set	10953 May 04 08:06	4° $\mathbf{II}$ 10'35	
direct	10947 Jan 25 00:36	21° $\mathbf{8}$ 18'40					
evening set	10947 Apr 23 12:17	23° $\mathbf{8}$ 02'16		conjunction	10953 May 19 10:08	4° $\mathbf{II}$ 39'56	-2°58'51
				minimum elong	10953 May 19 10:02	4° $\mathbf{II}$ 39'56	2°59'23
conjunction	10947 May 08 22:41	23° $\mathbf{8}$ 33'39	0°09'12	max. Earth dist.	10953 May 21 13:03	4° $\mathbf{II}$ 44'06	35.64588 AU
minimum elong	10947 May 08 22:42	23° $\mathbf{8}$ 33'39	0°08'45	morning rise	10953 Jun 03 11:10	5° $\mathbf{II}$ 09'14	
behind sun begin	10947 May 08 17:09	23° $\mathbf{8}$ 33'12		retrograde	10953 Aug 29 20:01	6° $\mathbf{II}$ 47'30	
behind sun end	10947 May 09 04:16	23° $\mathbf{8}$ 34'07		min. Earth dist.	10953 Nov 16 02:30	5° $\mathbf{II}$ 36'38	33.77026 AU
max. Earth dist.	10947 May 10 18:03	23° $\mathbf{8}$ 37'22	34.20916 AU	opposition	10953 Nov 18 04:57	5° $\mathbf{II}$ 33'36	-3°25'04
morning rise	10947 May 24 08:11	24° $\mathbf{8}$ 04'58		direct	10954 Feb 07 11:44	4° $\mathbf{II}$ 19'01	
retrograde	10947 Aug 19 14:11	25° $\mathbf{8}$ 47'27		evening set	10954 May 06 10:51	5° $\mathbf{II}$ 57'05	
desc. node	10947 Aug 19 12:52	25° $\mathbf{8}$ 47'27					
min. Earth dist.	10947 Nov 05 10:35	24° $\mathbf{8}$ 34'15	32.32273 AU	conjunction	10954 May 21 09:55	6° $\mathbf{II}$ 26'00	-3°28'17
opposition	10947 Nov 07 07:24	24° $\mathbf{8}$ 31'28	-0°07'33	minimum elong	10954 May 21 09:48	6° $\mathbf{II}$ 26'00	3°28'50
direct	10948 Jan 27 07:15	23° $\mathbf{8}$ 14'32		max. Earth dist.	10954 May 23 12:34	6° $\mathbf{II}$ 30'07	35.89164 AU
evening set	10948 Apr 24 15:49	24° $\mathbf{8}$ 57'12		morning rise	10954 Jun 05 08:22	6° $\mathbf{II}$ 54'52	

retrograde	10954 Aug 31 19:45	8°II32'35		minimum elong	10961 Jun 01 17:01	18°II09'50	6°37'36
min. Earth dist.	10954 Nov 18 02:21	7°II22'05	34.01760 AU	max. Earth dist.	10961 Jun 04 01:59	18°II14'14	37.65468 AU
opposition	10954 Nov 20 06:30	7°II18'59	-3°55'50	morning rise	10961 Jun 15 11:43	18°II35'13	
direct	10955 Feb 09 14:26	6°II04'45		retrograde	10961 Sep 11 22:07	20°II09'59	
evening set	10955 May 08 13:12	7°II42'10		min. Earth dist.	10961 Nov 29 15:02	19°II01'51	35.79678 AU
				opposition	10961 Dec 02 01:33	18°II58'30	-7°12'07
conjunction	10955 May 23 09:19	8°II10'38	-3°57'07	direct	10962 Feb 21 14:48	17°II46'39	
minimum elong	10955 May 23 09:11	8°II10'37	3°57'40	evening set	10962 May 20 23:04	19°II20'44	
max. Earth dist.	10955 May 25 13:43	8°II14'52	36.13837 AU				
morning rise	10955 Jun 07 04:32	8°II39'03		conjunction	10962 Jun 03 12:52	19°II45'35	-7°01'24
retrograde	10955 Sep 02 15:38	10°II16'14		minimum elong	10962 Jun 03 12:40	19°II45'34	7°02'00
min. Earth dist.	10955 Nov 20 03:40	9°II05'59	34.26610 AU	max. Earth dist.	10962 Jun 05 23:17	19°II50'04	37.91241 AU
opposition	10955 Nov 22 07:33	9°II02'55	-4°25'57	morning rise	10962 Jun 17 02:10	20°II10'24	
direct	10956 Feb 11 17:30	7°II49'01		retrograde	10962 Sep 13 14:32	21°II44'54	
evening set	10956 May 09 15:19	9°II25'49		min. Earth dist.	10962 Dec 01 12:57	20°II37'02	36.05642 AU
				opposition	10962 Dec 03 22:59	20°II33'43	-7°37'22
conjunction	10956 May 24 07:53	9°II53'48	-4°25'21	direct	10963 Feb 23 14:51	19°II22'14	
minimum elong	10956 May 24 07:44	9°II53'48	4°25'55	evening set	10963 May 22 23:46	20°II55'58	
max. Earth dist.	10956 May 26 12:12	9°II58'00	36.38636 AU				
morning rise	10956 Jun 07 23:49	10°II21'45		conjunction	10963 Jun 05 08:08	21°II20'15	-7°25'09
retrograde	10956 Sep 03 13:23	11°II58'25		minimum elong	10963 Jun 05 07:56	21°II20'14	7°25'46
min. Earth dist.	10956 Nov 21 02:02	10°II48'34	34.51616 AU	max. Earth dist.	10963 Jun 07 18:07	21°II24'41	38.17018 AU
opposition	10956 Nov 23 07:49	10°II45'24	-4°55'23	morning rise	10963 Jun 18 16:09	21°II44'30	
direct	10957 Feb 12 18:17	9°II31'48		retrograde	10963 Sep 15 09:20	23°II18'46	
evening set	10957 May 11 17:12	11°II08'03		min. Earth dist.	10963 Dec 03 08:31	22°II11'15	36.31579 AU
				opposition	10963 Dec 05 19:47	22°II07'54	-8°01'55
conjunction	10957 May 26 06:00	11°II35'33	-4°52'57	direct	10964 Feb 25 12:03	20°II56'44	
minimum elong	10957 May 26 05:51	11°II35'32	4°53'31	evening set	10964 May 24 00:10	22°II30'10	
max. Earth dist.	10957 May 28 11:58	11°II39'51	36.63595 AU				
morning rise	10957 Jun 09 18:11	12°II03'00		conjunction	10964 Jun 06 02:58	22°II53'52	-7°48'16
retrograde	10957 Sep 05 11:34	13°II39'14		minimum elong	10964 Jun 06 02:46	22°II53'51	7°48'52
min. Earth dist.	10957 Nov 23 01:32	12°II29'39	34.76831 AU	max. Earth dist.	10964 Jun 08 13:40	22°II58'19	38.42718 AU
opposition	10957 Nov 25 07:38	12°II26'29	-5°24'08	morning rise	10964 Jun 19 05:31	23°II17'34	
direct	10958 Feb 14 16:36	11°II13'14		retrograde	10964 Sep 16 04:51	24°II51'36	
evening set	10958 May 13 18:51	12°II48'58		min. Earth dist.	10964 Dec 04 05:25	23°II44'20	36.57422 AU
				opposition	10964 Dec 06 16:19	23°II41'01	-8°25'46
conjunction	10958 May 28 03:37	13°II15'57	-5°19'56	direct	10965 Feb 26 07:33	22°II30'11	
minimum elong	10958 May 28 03:27	13°II15'56	5°20'30	evening set	10965 May 26 00:29	24°II03'19	
max. Earth dist.	10958 May 30 10:23	13°II20'16	36.88779 AU				
morning rise	10958 Jun 11 11:41	13°II42'54		conjunction	10965 Jun 07 21:33	24°II26'26	-8°10'46
retrograde	10958 Sep 07 08:27	15°II18'42		minimum elong	10965 Jun 07 21:21	24°II26'25	8°11'22
min. Earth dist.	10958 Nov 24 23:20	14°II09'30	35.02267 AU	max. Earth dist.	10965 Jun 10 08:26	24°II30'52	38.68292 AU
opposition	10958 Nov 27 06:53	14°II06'16	-5°52'11	morning rise	10965 Jun 20 18:12	24°II49'33	
direct	10959 Feb 16 17:25	12°II53'21		retrograde	10965 Sep 17 23:14	26°II23'21	
evening set	10959 May 15 20:12	14°II28'37		min. Earth dist.	10965 Dec 06 01:05	25°II16'22	36.83097 AU
				opposition	10965 Dec 08 12:13	25°II13'03	-8°48'58
conjunction	10959 May 30 00:30	14°II55'05	-5°46'16	direct	10966 Feb 28 04:36	24°II02'32	
minimum elong	10959 May 30 00:19	14°II55'04	5°46'51	evening set	10966 May 28 00:42	25°II35'23	
max. Earth dist.	10959 Jun 01 07:56	14°II59'25	37.14170 AU				
morning rise	10959 Jun 13 04:24	15°II21'31		conjunction	10966 Jun 09 15:37	25°II57'55	-8°32'38
retrograde	10959 Sep 09 07:00	16°II56'57		minimum elong	10966 Jun 09 15:24	25°II57'54	8°33'14
min. Earth dist.	10959 Nov 26 21:01	15°II48'05	35.27929 AU	max. Earth dist.	10966 Jun 12 01:56	26°II02'17	38.93682 AU
opposition	10959 Nov 29 05:42	15°II44'48	-6°19'32	morning rise	10966 Jun 22 06:27	26°II20'27	
direct	10960 Feb 18 16:06	14°II32'15		retrograde	10966 Sep 19 18:57	27°II54'02	
evening set	10960 May 16 21:19	16°II07'05		min. Earth dist.	10966 Dec 07 20:12	26°II47'19	37.08604 AU
				opposition	10966 Dec 10 07:54	26°II43'59	-9°11'30
conjunction	10960 May 30 21:10	16°II33'02	-6°11'58	direct	10967 Mar 01 23:23	25°II33'45	
minimum elong	10960 May 30 20:58	16°II33'01	6°12'33	evening set	10967 May 30 00:21	27°II06'20	
max. Earth dist.	10960 Jun 02 06:10	16°II37'28	37.39757 AU				
morning rise	10960 Jun 13 20:20	16°II58'56		conjunction	10967 Jun 11 09:16	27°II28'17	-8°53'53
retrograde	10960 Sep 10 02:19	18°II34'01		minimum elong	10967 Jun 11 09:04	27°II28'16	8°54'30
min. Earth dist.	10960 Nov 27 18:57	17°II25'29	35.53747 AU	max. Earth dist.	10967 Jun 13 20:36	27°II32'41	39.18897 AU
opposition	10960 Nov 30 03:48	17°II22'12	-6°46'11	morning rise	10967 Jun 23 17:49	27°II50'13	
direct	10961 Feb 19 16:47	16°II10'00		retrograde	10967 Sep 21 10:44	29°II23'37	
evening set	10961 May 18 22:24	17°II44'27		min. Earth dist.	10967 Dec 09 16:09	28°II17'05	37.33930 AU
				opposition	10967 Dec 12 03:04	28°II13'48	-9°33'22
conjunction	10961 Jun 01 17:13	18°II09'51	-6°37'00	direct	10968 Mar 02 20:43	27°II03'49	

evening set	10968 May 31 00:04	28° $\Pi$ 36'10		max. Earth dist.	10974 Jun 23 14:41	7° $\mathfrak{D}$ 36'28	40.93013 AU
				morning rise	10974 Jul 01 09:44	7° $\mathfrak{D}$ 49'44	
conjunction	10968 Jun 12 02:27	28° $\Pi$ 57'30 -9°14'32		retrograde	10974 Sep 30 23:19	9° $\mathfrak{D}$ 22'32	
minimum elong	10968 Jun 12 02:14	28° $\Pi$ 57'29 9°15'08		min. Earth dist.	10974 Dec 19 16:26	8° $\mathfrak{D}$ 17'49	39.09185 AU
max. Earth dist.	10968 Jun 14 12:56	29° $\Pi$ 01'50 39.43954 AU		opposition	10974 Dec 22 05:19	8° $\mathfrak{D}$ 14'32	-11°48'02
morning rise	10968 Jun 24 04:44	29° $\Pi$ 18'50		direct	10975 Mar 14 02:44	7° $\mathfrak{D}$ 06'35	
	10968 Jul 19 09:09	0° $\mathfrak{D}$		evening set	10975 Jun 12 14:59	8° $\mathfrak{D}$ 38'03	
retrograde	10968 Sep 22 02:04	0° $\mathfrak{D}$ 52'03					
	10968 Nov 29 13:57	30° $\mathfrak{K}$ $\Pi$		conjunction	10975 Jun 22 15:53	8° $\mathfrak{D}$ 55'04	-11°21'50
min. Earth dist.	10968 Dec 10 09:20	29° $\Pi$ 45'49 37.59134 AU		minimum elong	10975 Jun 22 15:41	8° $\mathfrak{D}$ 55'03	11°22'28
opposition	10968 Dec 12 21:31	29° $\Pi$ 42'28 -9°54'35		max. Earth dist.	10975 Jun 25 04:22	8° $\mathfrak{D}$ 59'21	41.17499 AU
direct	10969 Mar 04 16:58	28° $\Pi$ 32'45		morning rise	10975 Jul 02 16:46	9° $\mathfrak{D}$ 12'05	
	10969 May 30 03:25	0° $\mathfrak{D}$		retrograde	10975 Oct 02 12:43	10° $\mathfrak{D}$ 44'54	
evening set	10969 Jun 01 23:20	0° $\mathfrak{D}$ 04'53		min. Earth dist.	10975 Dec 21 07:36	9° $\mathfrak{D}$ 40'30	39.33749 AU
				opposition	10975 Dec 23 21:19	9° $\mathfrak{D}$ 37'11	-12°04'44
conjunction	10969 Jun 13 19:14	0° $\mathfrak{D}$ 25'37 -9°34'33		direct	10976 Mar 14 20:30	8° $\mathfrak{D}$ 29'31	
minimum elong	10969 Jun 13 19:02	0° $\mathfrak{D}$ 25'36 9°35'11		evening set	10976 Jun 13 13:06	10° $\mathfrak{D}$ 00'57	
max. Earth dist.	10969 Jun 16 07:00	0° $\mathfrak{D}$ 30'00 39.68908 AU					
morning rise	10969 Jun 25 14:57	0° $\mathfrak{D}$ 46'20		conjunction	10976 Jun 23 06:20	10° $\mathfrak{D}$ 17'21	-11°37'41
retrograde	10969 Sep 23 17:02	2° $\mathfrak{D}$ 19'24		minimum elong	10976 Jun 23 06:09	10° $\mathfrak{D}$ 17'20	11°38'17
min. Earth dist.	10969 Dec 12 04:16	1° $\mathfrak{D}$ 13'21 37.84268 AU		max. Earth dist.	10976 Jun 25 19:08	10° $\mathfrak{D}$ 21'38	41.41729 AU
opposition	10969 Dec 14 15:51	1° $\mathfrak{D}$ 10'04 -10°15'07		morning rise	10976 Jul 02 23:35	10° $\mathfrak{D}$ 33'44	
direct	10970 Mar 06 13:03	0° $\mathfrak{D}$ 00'37		retrograde	10976 Oct 03 04:20	12° $\mathfrak{D}$ 06'35	
evening set	10970 Jun 03 22:24	1° $\mathfrak{D}$ 32'33		min. Earth dist.	10976 Dec 22 00:19	11° $\mathfrak{D}$ 02'22	39.58039 AU
				opposition	10976 Dec 24 13:00	10° $\mathfrak{D}$ 59'07	-12°20'51
conjunction	10970 Jun 15 11:30	1° $\mathfrak{D}$ 52'40 -9°53'57		direct	10977 Mar 16 11:50	9° $\mathfrak{D}$ 51'45	
minimum elong	10970 Jun 15 11:17	1° $\mathfrak{D}$ 52'39 9°54'34		evening set	10977 Jun 15 11:13	11° $\mathfrak{D}$ 23'10	
max. Earth dist.	10970 Jun 17 23:07	1° $\mathfrak{D}$ 57'01 39.93823 AU					
morning rise	10970 Jun 27 00:24	2° $\mathfrak{D}$ 12'46		conjunction	10977 Jun 24 20:35	11° $\mathfrak{D}$ 38'55	-11°52'58
retrograde	10970 Sep 25 09:08	3° $\mathfrak{D}$ 45'44		minimum elong	10977 Jun 24 20:24	11° $\mathfrak{D}$ 38'54	11°53'35
min. Earth dist.	10970 Dec 13 20:54	2° $\mathfrak{D}$ 39'59 38.09368 AU		max. Earth dist.	10977 Jun 27 09:01	11° $\mathfrak{D}$ 43'10	41.65663 AU
opposition	10970 Dec 16 09:41	2° $\mathfrak{D}$ 36'39 -10°35'00		morning rise	10977 Jul 04 05:50	11° $\mathfrak{D}$ 54'41	
direct	10971 Mar 08 07:07	1° $\mathfrak{D}$ 27'29		retrograde	10977 Oct 04 18:32	13° $\mathfrak{D}$ 27'34	
evening set	10971 Jun 05 21:17	2° $\mathfrak{D}$ 59'15		min. Earth dist.	10977 Dec 23 15:52	12° $\mathfrak{D}$ 23'34	39.81984 AU
				opposition	10977 Dec 26 04:25	12° $\mathfrak{D}$ 20'21	-12°36'25
conjunction	10971 Jun 17 03:26	3° $\mathfrak{D}$ 18'45 -10°12'44		direct	10978 Mar 18 03:15	11° $\mathfrak{D}$ 13'14	
minimum elong	10971 Jun 17 03:13	3° $\mathfrak{D}$ 18'44 10°13'22		evening set	10978 Jun 17 09:05	12° $\mathfrak{D}$ 44'38	
max. Earth dist.	10971 Jun 19 15:28	3° $\mathfrak{D}$ 23'06 40.18708 AU					
morning rise	10971 Jun 28 09:35	3° $\mathfrak{D}$ 38'15		conjunction	10978 Jun 26 10:19	12° $\mathfrak{D}$ 59'45	-12°07'44
retrograde	10971 Sep 27 02:26	5° $\mathfrak{D}$ 11'09		minimum elong	10978 Jun 26 10:09	12° $\mathfrak{D}$ 59'44	12°08'21
min. Earth dist.	10971 Dec 15 14:14	4° $\mathfrak{D}$ 05'38 38.34455 AU		max. Earth dist.	10978 Jun 28 21:44	13° $\mathfrak{D}$ 03'53	41.89234 AU
opposition	10971 Dec 18 03:08	4° $\mathfrak{D}$ 02'18 -10°54'13		morning rise	10978 Jul 05 11:40	13° $\mathfrak{D}$ 14'52	
direct	10972 Mar 08 23:16	2° $\mathfrak{D}$ 53'26		retrograde	10978 Oct 06 10:31	14° $\mathfrak{D}$ 47'48	
evening set	10972 Jun 06 19:55	4° $\mathfrak{D}$ 25'05		min. Earth dist.	10978 Dec 25 07:13	13° $\mathfrak{D}$ 44'00	40.05573 AU
				opposition	10978 Dec 27 19:39	13° $\mathfrak{D}$ 40'48	-12°51'25
conjunction	10972 Jun 17 19:06	4° $\mathfrak{D}$ 43'59 -10°30'54		direct	10979 Mar 19 16:40	12° $\mathfrak{D}$ 33'56	
minimum elong	10972 Jun 17 18:54	4° $\mathfrak{D}$ 43'58 10°31'31		evening set	10979 Jun 19 06:52	14° $\mathfrak{D}$ 05'19	
max. Earth dist.	10972 Jun 20 08:01	4° $\mathfrak{D}$ 48'22 40.43572 AU					
morning rise	10972 Jun 28 18:03	5° $\mathfrak{D}$ 02'52		conjunction	10979 Jun 28 00:01	14° $\mathfrak{D}$ 19'48	-12°21'59
retrograde	10972 Sep 27 18:02	6° $\mathfrak{D}$ 35'41		minimum elong	10979 Jun 27 23:49	14° $\mathfrak{D}$ 19'47	12°22'36
min. Earth dist.	10972 Dec 16 07:13	5° $\mathfrak{D}$ 30'27 38.59476 AU		max. Earth dist.	10979 Jun 30 11:58	14° $\mathfrak{D}$ 23'57	42.12449 AU
opposition	10972 Dec 18 20:10	5° $\mathfrak{D}$ 27'08 -11°12'47		morning rise	10979 Jul 06 17:01	14° $\mathfrak{D}$ 34'16	
direct	10973 Mar 10 16:37	4° $\mathfrak{D}$ 18'34		retrograde	10979 Oct 07 22:48	16° $\mathfrak{D}$ 07'14	
evening set	10973 Jun 08 18:28	5° $\mathfrak{D}$ 50'08		min. Earth dist.	10979 Dec 26 23:06	15° $\mathfrak{D}$ 03'33	40.28794 AU
				opposition	10979 Dec 29 10:23	15° $\mathfrak{D}$ 00'25	-13°05'53
conjunction	10973 Jun 19 10:17	6° $\mathfrak{D}$ 08'24 -10°48'28		direct	10980 Mar 20 08:34	13° $\mathfrak{D}$ 53'46	
minimum elong	10973 Jun 19 10:04	6° $\mathfrak{D}$ 08'23 10°49'06		evening set	10980 Jun 20 04:34	15° $\mathfrak{D}$ 25'10	
max. Earth dist.	10973 Jun 21 22:30	6° $\mathfrak{D}$ 12'43 40.68352 AU					
morning rise	10973 Jun 30 02:08	6° $\mathfrak{D}$ 26'40		conjunction	10980 Jun 28 13:10	15° $\mathfrak{D}$ 38'59	-12°35'44
retrograde	10973 Sep 29 10:37	7° $\mathfrak{D}$ 59'28		minimum elong	10980 Jun 28 13:00	15° $\mathfrak{D}$ 38'58	12°36'21
min. Earth dist.	10973 Dec 17 22:56	6° $\mathfrak{D}$ 54'32 38.84407 AU		max. Earth dist.	10980 Jun 30 23:48	15° $\mathfrak{D}$ 43'02	42.35328 AU
opposition	10973 Dec 20 12:49	6° $\mathfrak{D}$ 51'11 -11°30'43		morning rise	10980 Jul 06 21:48	15° $\mathfrak{D}$ 52'47	
direct	10974 Mar 12 08:29	5° $\mathfrak{D}$ 42'56		retrograde	10980 Oct 08 11:28	17° $\mathfrak{D}$ 25'48	
evening set	10974 Jun 10 16:46	7° $\mathfrak{D}$ 14'26		min. Earth dist.	10980 Dec 27 12:43	16° $\mathfrak{D}$ 22'21	40.51707 AU
				opposition	10980 Dec 30 00:43	16° $\mathfrak{D}$ 19'11	-13°19'48
conjunction	10974 Jun 21 01:19	7° $\mathfrak{D}$ 32'05 -11°05'27		direct	10981 Mar 21 23:06	15° $\mathfrak{D}$ 12'44	
minimum elong	10974 Jun 21 01:07	7° $\mathfrak{D}$ 32'04 11°06'03		evening set	10981 Jun 22 01:55	16° $\mathfrak{D}$ 44'09	

conjunction	10981 Jun 30 02:00	16°☾57'18 -12°48'57	direct	10988 Mar 30 23:44	24°☾04'29
minimum elong	10981 Jun 30 01:50	16°☾57'18 12°49'33	evening set	10988 Jul 03 07:46	25°☾36'51
max. Earth dist.	10981 Jul 02 13:16	17°☾01'22 42.57921 AU			
morning rise	10981 Jul 08 02:02	17°☾10'27	conjunction	10988 Jul 08 12:21	25°☾45'06 -14°07'16
retrograde	10981 Oct 09 21:19	18°☾43'32	minimum elong	10988 Jul 08 12:14	25°☾45'06 14°07'52
min. Earth dist.	10981 Dec 29 03:58	17°☾40'11 40.74372 AU	max. Earth dist.	10988 Jul 10 22:09	25°☾48'57 44.10653 AU
opposition	10981 Dec 31 14:51	17°☾37'06 -13°33'11	morning rise	10988 Jul 13 16:55	25°☾53'22
direct	10982 Mar 23 16:26	16°☾30'51	retrograde	10988 Oct 18 08:06	27°☾27'44
evening set	10982 Jun 23 23:24	18°☾02'18	min. Earth dist.	10989 Jan 06 23:29	26°☾25'40 42.27411 AU
			opposition	10989 Jan 09 09:08	26°☾22'43 -14°51'56
conjunction	10982 Jul 01 14:35	18°☾14'47 -13°01'39	direct	10989 Apr 01 12:06	25°☾18'03
minimum elong	10982 Jul 01 14:26	18°☾14'46 13°02'16	evening set	10989 Jul 05 06:01	26°☾50'42
max. Earth dist.	10982 Jul 04 01:31	18°☾18'49 42.80316 AU			
morning rise	10982 Jul 09 05:42	18°☾27'16	conjunction	10989 Jul 09 23:18	26°☾58'10 -14°16'34
retrograde	10982 Oct 11 09:08	20°☾00'27	minimum elong	10989 Jul 09 23:13	26°☾58'10 14°17'08
min. Earth dist.	10982 Dec 30 17:01	18°☾57'18 40.96848 AU	max. Earth dist.	10989 Jul 12 09:01	27°☾01'59 44.31373 AU
opposition	10983 Jan 02 04:34	18°☾54'11 -13°46'00	morning rise	10989 Jul 14 16:31	27°☾05'39
direct	10983 Mar 25 07:41	17°☾48'08	retrograde	10989 Oct 19 20:01	28°☾40'20
evening set	10983 Jun 25 20:34	19°☾19'40	min. Earth dist.	10990 Jan 08 12:02	27°☾38'26 42.48054 AU
			opposition	10990 Jan 10 21:02	27°☾35'32 -15°01'14
conjunction	10983 Jul 03 02:43	19°☾31'28 -13°13'50	direct	10990 Apr 02 23:21	26°☾31'04
minimum elong	10983 Jul 03 02:34	19°☾31'27 13°14'25	evening set	10990 Jul 07 04:51	28°☾04'04
max. Earth dist.	10983 Jul 05 13:28	19°☾35'28 43.02534 AU			
morning rise	10983 Jul 10 08:55	19°☾43'17	conjunction	10990 Jul 11 10:01	28°☾10'42 -14°25'26
retrograde	10983 Oct 12 23:47	21°☾16'35	minimum elong	10990 Jul 11 09:54	28°☾10'42 14°26'01
min. Earth dist.	10984 Jan 01 06:37	20°☾13'37 41.19165 AU	max. Earth dist.	10990 Jul 13 18:08	28°☾14'23 44.51664 AU
opposition	10984 Jan 03 18:03	20°☾10'31 -13°58'17	morning rise	10990 Jul 15 15:07	28°☾17'21
direct	10984 Mar 25 19:13	19°☾04'41	retrograde	10990 Oct 21 09:00	29°☾52'25
evening set	10984 Jun 26 17:54	20°☾36'19	min. Earth dist.	10991 Jan 09 23:54	28°☾50'40 42.68270 AU
			opposition	10991 Jan 12 08:47	28°☾47'47 -15°10'06
conjunction	10984 Jul 03 14:49	20°☾47'26 -13°25'30	direct	10991 Apr 04 08:51	27°☾43'31
minimum elong	10984 Jul 03 14:41	20°☾47'25 13°26'06	evening set	10991 Jul 09 04:34	29°☾16'55
max. Earth dist.	10984 Jul 06 02:13	20°☾51'27 43.24599 AU			
morning rise	10984 Jul 10 11:40	20°☾58'34	conjunction	10991 Jul 12 20:34	29°☾22'40 -14°33'54
retrograde	10984 Oct 13 11:10	22°☾32'00	minimum elong	10991 Jul 12 20:29	29°☾22'40 14°34'27
min. Earth dist.	10985 Jan 01 20:07	21°☾29'12 41.41297 AU	max. Earth dist.	10991 Jul 15 04:59	29°☾26'21 44.71520 AU
opposition	10985 Jan 04 07:01	21°☾26'09 -14°10'01	morning rise	10991 Jul 16 12:30	29°☾28'25
direct	10985 Mar 27 08:56	20°☾20'32		10991 Aug 06 04:45	0°♂
evening set	10985 Jun 28 15:13	21°☾52'17	retrograde	10991 Oct 22 17:03	1°♂03'55
			min. Earth dist.	10992 Jan 11 13:01	0°♂02'16 42.88035 AU
conjunction	10985 Jul 05 02:31	22°☾02'44 -13°36'40	opposition	10992 Jan 13 20:17	29°☾59'28 -15°18'33
minimum elong	10985 Jul 05 02:22	22°☾02'43 13°37'15		10992 Jan 13 09:36	30°☾☾
max. Earth dist.	10985 Jul 07 12:45	22°☾06'39 43.46481 AU	direct	10992 Apr 04 22:00	28°☾55'22
morning rise	10985 Jul 11 13:50	22°☾13'10		10992 Jun 21 01:38	0°♂
retrograde	10985 Oct 14 23:31	23°☾46'47	evening set	10992 Jul 10 05:50	0°♂29'16
min. Earth dist.	10986 Jan 03 08:19	22°☾44'13 41.63240 AU			
opposition	10986 Jan 05 19:55	22°☾41'08 -14°21'15	conjunction	10992 Jul 13 06:49	0°♂34'02 -14°41'57
direct	10986 Mar 28 20:20	21°☾35'45	minimum elong	10992 Jul 13 06:44	0°♂34'02 14°42'31
evening set	10986 Jun 30 12:24	23°☾07'41	morning rise	10992 Jul 16 07:43	0°♂38'47
			max. Earth dist.	10992 Jul 15 13:44	0°♂37'37 44.90960 AU
conjunction	10986 Jul 06 13:57	23°☾17'25 -13°47'20	retrograde	10992 Oct 23 00:57	2°♂14'49
minimum elong	10986 Jul 06 13:49	23°☾17'24 13°47'56	min. Earth dist.	10993 Jan 11 23:38	1°♂13'20 43.07406 AU
max. Earth dist.	10986 Jul 09 01:07	23°☾21'22 43.68149 AU	opposition	10993 Jan 14 07:14	1°♂10'31 -15°26'33
morning rise	10986 Jul 12 15:26	23°☾27'08	direct	10993 Apr 06 10:53	0°♂06'36
retrograde	10986 Oct 16 09:35	25°☾00'58	evening set	10993 Jul 12 09:50	1°♂41'12
min. Earth dist.	10987 Jan 04 22:21	23°☾58'32 41.84940 AU			
opposition	10987 Jan 07 08:40	23°☾55'32 -14°31'57	conjunction	10993 Jul 14 16:47	1°♂44'46 -14°49'35
direct	10987 Mar 30 10:17	22°☾50'24	minimum elong	10993 Jul 14 16:44	1°♂44'46 14°50'08
evening set	10987 Jul 02 10:01	24°☾22'31	morning rise	10993 Jul 16 23:42	1°♂48'20
			max. Earth dist.	10993 Jul 16 23:43	1°♂48'20 45.10036 AU
conjunction	10987 Jul 08 01:15	24°☾31'32 -13°57'32	retrograde	10993 Oct 24 10:58	3°♂25'07
minimum elong	10987 Jul 08 01:08	24°☾31'31 13°58'07	min. Earth dist.	10994 Jan 13 11:51	2°♂23'43 43.26459 AU
max. Earth dist.	10987 Jul 10 11:30	24°☾35'25 43.89565 AU	opposition	10994 Jan 15 18:15	2°♂20'58 -15°34'08
morning rise	10987 Jul 13 16:27	24°☾40'32	direct	10994 Apr 07 23:12	1°♂17'13
retrograde	10987 Oct 17 19:45	26°☾14'37	evening set	10994 Jul 14 21:52	2°♂53'04
min. Earth dist.	10988 Jan 06 10:03	25°☾12'25 42.06348 AU			
opposition	10988 Jan 08 20:54	25°☾09'23 -14°42'11	conjunction	10994 Jul 16 02:28	2°♂54'55 -14°56'48

minimum elong	10994 Jul 16 02:23	2°Ω54'55	14°57'21	retrograde	11002 Nov 04 23:31	13°Ω36'26	
morning rise	10994 Jul 17 06:56	2°Ω56'45		min. Earth dist.	11003 Jan 25 08:22	12°Ω36'16	44.85464 AU
max. Earth dist.	10994 Jul 18 09:23	2°Ω58'28	45.28838 AU	opposition	11003 Jan 27 10:50	12°Ω33'47	-16°23'24
retrograde	10994 Oct 25 20:26	4°Ω34'50		direct	11003 Apr 19 12:39	11°Ω31'39	
min. Earth dist.	10995 Jan 14 22:21	3°Ω33'35	43.45242 AU				
opposition	10995 Jan 17 04:54	3°Ω30'50	-15°41'16	conjunction	11003 Jul 27 10:16	13°Ω05'46	-15°43'44
direct	10995 Apr 09 10:47	2°Ω27'16		minimum elong	11003 Jul 27 10:16	13°Ω05'46	15°44'15
				max. Earth dist.	11003 Jul 29 12:14	13°Ω08'53	46.85538 AU
conjunction	10995 Jul 17 11:56	4°Ω04'30	-15°03'35	retrograde	11003 Nov 06 06:16	14°Ω42'19	
minimum elong	10995 Jul 17 11:54	4°Ω04'30	15°04'08	min. Earth dist.	11004 Jan 26 19:20	13°Ω42'10	45.01129 AU
max. Earth dist.	10995 Jul 19 17:50	4°Ω07'58	45.47396 AU	opposition	11004 Jan 28 19:47	13°Ω39'47	-16°27'01
retrograde	10995 Oct 27 09:07	5°Ω44'00		direct	11004 Apr 19 22:19	12°Ω37'47	
min. Earth dist.	10996 Jan 16 08:48	4°Ω42'54	43.63808 AU				
opposition	10996 Jan 18 15:15	4°Ω40'10	-15°47'58	conjunction	11004 Jul 27 18:28	14°Ω11'30	-15°47'11
direct	10996 Apr 09 18:09	3°Ω36'47		minimum elong	11004 Jul 27 18:30	14°Ω11'31	15°47'40
				max. Earth dist.	11004 Jul 29 19:25	14°Ω14'33	47.00911 AU
conjunction	10996 Jul 17 21:21	5°Ω13'36	-15°09'58		11004 Aug 30 20:34	15°Ω	
minimum elong	10996 Jul 17 21:18	5°Ω13'36	15°10'30	retrograde	11004 Nov 06 12:18	15°Ω47'42	
max. Earth dist.	10996 Jul 20 04:01	5°Ω17'06	45.65742 AU		11005 Jan 16 12:30	15°Ω	
retrograde	10996 Oct 27 18:47	6°Ω52'41		min. Earth dist.	11005 Jan 27 04:01	14°Ω47'39	45.16324 AU
min. Earth dist.	10997 Jan 16 20:01	5°Ω51'42	43.82136 AU	opposition	11005 Jan 29 04:29	14°Ω45'17	-16°30'19
opposition	10997 Jan 19 01:28	5°Ω49'02	-15°54'14	direct	11005 Apr 21 09:36	13°Ω43'24	
direct	10997 Apr 11 03:14	4°Ω45'50			11005 Jul 17 18:33	15°Ω	
conjunction	10997 Jul 19 06:21	6°Ω22'14	-15°15'55	conjunction	11005 Jul 29 02:13	15°Ω16'44	-15°50'18
minimum elong	10997 Jul 19 06:20	6°Ω22'14	15°16'28	minimum elong	11005 Jul 29 02:14	15°Ω16'44	15°50'48
max. Earth dist.	10997 Jul 21 11:52	6°Ω25'39	45.83862 AU	max. Earth dist.	11005 Jul 31 01:58	15°Ω19'41	47.15842 AU
retrograde	10997 Oct 29 03:03	8°Ω00'56		retrograde	11005 Nov 07 21:41	16°Ω52'34	
min. Earth dist.	10998 Jan 18 05:15	7°Ω00'09	44.00227 AU	min. Earth dist.	11006 Jan 28 13:42	15°Ω52'35	45.31129 AU
opposition	10998 Jan 20 11:26	6°Ω57'27	-16°00'04	opposition	11006 Jan 30 13:09	15°Ω50'16	-16°33'15
direct	10998 Apr 12 12:24	5°Ω54'27			11006 Mar 21 11:45	15°Ω	
				direct	11006 Apr 22 18:38	14°Ω48'30	
conjunction	10998 Jul 20 15:19	7°Ω30'27	-15°21'28		11006 May 24 09:56	15°Ω	
minimum elong	10998 Jul 20 15:17	7°Ω30'27	15°22'00				
max. Earth dist.	10998 Jul 22 20:58	7°Ω33'52	46.01727 AU	conjunction	11006 Jul 30 10:02	16°Ω21'28	-15°53'06
retrograde	10998 Oct 30 09:45	9°Ω08'47		minimum elong	11006 Jul 30 10:05	16°Ω21'28	15°53'34
min. Earth dist.	10999 Jan 19 16:33	8°Ω08'06	44.18046 AU	max. Earth dist.	11006 Aug 01 10:15	16°Ω24'26	47.30425 AU
opposition	10999 Jan 21 21:20	8°Ω05'29	-16°05'29	retrograde	11006 Nov 09 06:16	17°Ω56'58	
direct	10999 Apr 14 01:09	7°Ω02'40		min. Earth dist.	11007 Jan 29 22:54	16°Ω57'02	45.45595 AU
				opposition	11007 Jan 31 21:31	16°Ω54'46	-16°35'51
conjunction	10999 Jul 22 00:08	8°Ω38'17	-15°26'38	direct	11007 Apr 24 02:28	15°Ω53'08	
minimum elong	10999 Jul 22 00:07	8°Ω38'17	15°27'10				
max. Earth dist.	10999 Jul 24 05:24	8°Ω41'39	46.19310 AU	conjunction	11007 Jul 31 17:31	17°Ω25'45	-15°55'32
retrograde	10999 Oct 31 18:18	10°Ω16'16		minimum elong	11007 Jul 31 17:33	17°Ω25'45	15°56'00
min. Earth dist.	11000 Jan 21 02:12	9°Ω15'45	44.35533 AU	max. Earth dist.	11007 Aug 02 16:14	17°Ω28'37	47.44704 AU
opposition	11000 Jan 23 06:54	9°Ω13'08	-16°10'31	retrograde	11007 Nov 10 15:22	19°Ω00'55	
direct	11000 Apr 15 12:35	8°Ω10'30		min. Earth dist.	11008 Jan 31 06:44	18°Ω01'07	45.59774 AU
				opposition	11008 Feb 02 05:41	17°Ω58'51	-16°38'05
conjunction	11000 Jul 23 08:48	9°Ω45'44	-15°31'26	direct	11008 Apr 24 08:27	16°Ω57'20	
minimum elong	11000 Jul 23 08:47	9°Ω45'44	15°31'56				
max. Earth dist.	11000 Jul 25 12:47	9°Ω49'01	46.36530 AU	conjunction	11008 Aug 01 00:59	18°Ω29'38	-15°57'38
retrograde	11000 Nov 02 05:48	11°Ω23'22		minimum elong	11008 Aug 01 01:02	18°Ω29'39	15°58'05
min. Earth dist.	11001 Jan 22 12:23	10°Ω22'59	44.52641 AU	max. Earth dist.	11008 Aug 02 23:56	18°Ω32'31	47.58695 AU
opposition	11001 Jan 24 16:17	10°Ω20'25	-16°15'10	retrograde	11008 Nov 10 20:17	20°Ω04'31	
direct	11001 Apr 16 20:22	9°Ω17'59		min. Earth dist.	11009 Jan 31 16:16	19°Ω04'46	45.73664 AU
				opposition	11009 Feb 02 13:42	19°Ω02'34	-16°39'58
conjunction	11001 Jul 24 17:30	10°Ω52'50	-15°35'52	direct	11009 Apr 25 17:38	18°Ω01'12	
minimum elong	11001 Jul 24 17:29	10°Ω52'50	15°36'23				
max. Earth dist.	11001 Jul 26 21:38	10°Ω56'06	46.53343 AU	conjunction	11009 Aug 02 08:17	19°Ω33'12	-15°59'24
retrograde	11001 Nov 03 14:48	12°Ω30'07		minimum elong	11009 Aug 02 08:20	19°Ω33'12	15°59'51
min. Earth dist.	11002 Jan 23 23:08	11°Ω29'48	44.69295 AU	max. Earth dist.	11009 Aug 04 06:32	19°Ω36'02	47.72424 AU
opposition	11002 Jan 26 01:38	11°Ω27'19	-16°19'27	retrograde	11009 Nov 12 01:42	21°Ω07'48	
direct	11002 Apr 18 05:26	10°Ω25'03		min. Earth dist.	11010 Feb 01 23:44	20°Ω08'13	45.87269 AU
				opposition	11010 Feb 03 21:35	20°Ω05'59	-16°41'30
conjunction	11002 Jul 26 01:51	11°Ω59'31	-15°39'58	direct	11010 Apr 27 03:06	19°Ω04'47	
minimum elong	11002 Jul 26 01:51	11°Ω59'31	15°40'27				
max. Earth dist.	11002 Jul 28 04:03	12°Ω02'40	46.69692 AU	conjunction	11010 Aug 03 15:18	20°Ω36'30	-16°00'50

minimum elong	11010 Aug 03 15:22	20°Ω36'30	16°01'16	retrograde	11018 Nov 21 19:43	0°൬26'26	
max. Earth dist.	11010 Aug 05 12:44	20°Ω39'16	47.85851 AU		11019 Jan 12 13:32	30°℞Ω	
retrograde	11010 Nov 13 11:01	22°Ω10'50		min. Earth dist.	11019 Feb 12 02:02	29°Ω27'23	46.90842 AU
min. Earth dist.	11011 Feb 03 08:43	21°Ω11'20	46.00569 AU	opposition	11019 Feb 13 14:57	29°Ω25'38	-16°41'45
opposition	11011 Feb 05 05:28	21°Ω09'10	-16°42'42	direct	11019 May 06 17:58	28°Ω25'30	
direct	11011 Apr 28 10:58	20°Ω08'08					
				conjunction	11019 Aug 13 03:32	29°Ω54'49	-16°00'42
conjunction	11011 Aug 04 22:29	21°Ω39'34	-16°01'56	minimum elong	11019 Aug 13 03:40	29°Ω54'49	16°01'03
minimum elong	11011 Aug 04 22:33	21°Ω39'34	16°02'22	max. Earth dist.	11019 Aug 14 17:27	29°Ω57'04	48.87461 AU
max. Earth dist.	11011 Aug 06 20:05	21°Ω42'20	47.98958 AU		11019 Aug 16 18:57	0°൬	
retrograde	11011 Nov 14 18:49	23°Ω13'39		retrograde	11019 Nov 22 22:54	1°൬26'52	
min. Earth dist.	11012 Feb 04 17:03	22°Ω14'16	46.13502 AU	min. Earth dist.	11020 Feb 13 08:03	0°൬27'55	47.00220 AU
opposition	11012 Feb 06 12:56	22°Ω12'09	-16°43'34	opposition	11020 Feb 14 21:18	0°൬26'09	-16°40'21
direct	11012 Apr 28 18:38	21°Ω11'16			11020 Mar 09 14:09	30°℞Ω	
				direct	11020 May 07 00:50	29°Ω26'05	
conjunction	11012 Aug 05 05:26	22°Ω42'26	-16°02'44		11020 Jul 02 14:32	0°൬	
minimum elong	11012 Aug 05 05:32	22°Ω42'26	16°03'11	conjunction	11020 Aug 13 09:34	0°൬55'10	-15°59'17
max. Earth dist.	11012 Aug 07 01:12	22°Ω45'05	48.11684 AU	minimum elong	11020 Aug 13 09:41	0°൬55'10	15°59'39
retrograde	11012 Nov 15 04:18	24°Ω16'16		max. Earth dist.	11020 Aug 14 22:38	0°൬57'22	48.96709 AU
min. Earth dist.	11013 Feb 05 00:54	23°Ω17'00	46.26031 AU	retrograde	11020 Nov 23 04:29	2°൬27'00	
opposition	11013 Feb 06 20:27	23°Ω14'55	-16°44'09	min. Earth dist.	11021 Feb 13 15:53	1°൬28'03	47.09311 AU
direct	11013 Apr 29 22:20	22°Ω14'11		opposition	11021 Feb 15 03:51	1°൬26'21	-16°38'39
				direct	11021 May 08 08:25	0°൬26'22	
conjunction	11013 Aug 06 12:19	23°Ω45'07	-16°03'15	conjunction	11021 Aug 14 15:30	1°൬55'13	-15°57'36
minimum elong	11013 Aug 06 12:24	23°Ω45'07	16°03'40	minimum elong	11021 Aug 14 15:39	1°൬55'14	15°57'57
max. Earth dist.	11013 Aug 08 08:01	23°Ω47'45	48.23963 AU	max. Earth dist.	11021 Aug 16 04:49	1°൬57'26	49.05684 AU
retrograde	11013 Nov 16 10:50	25°Ω18'43		retrograde	11021 Nov 24 09:51	3°൬26'51	
min. Earth dist.	11014 Feb 06 10:22	24°Ω19'29	46.38080 AU	min. Earth dist.	11022 Feb 14 22:29	2°൬27'59	47.18104 AU
opposition	11014 Feb 08 03:59	24°Ω17'29	-16°44'26	opposition	11022 Feb 16 10:12	2°൬26'17	-16°36'40
direct	11014 May 01 04:48	23°Ω16'54		direct	11022 May 09 16:43	1°൬26'24	
conjunction	11014 Aug 07 19:14	24°Ω47'34	-16°03'30				
minimum elong	11014 Aug 07 19:19	24°Ω47'34	16°03'55	conjunction	11022 Aug 15 21:19	2°൬55'02	-15°55'37
max. Earth dist.	11014 Aug 09 13:31	24°Ω50'07	48.35757 AU	minimum elong	11022 Aug 15 21:26	2°൬55'02	15°55'57
retrograde	11014 Nov 17 15:10	26°Ω20'55		max. Earth dist.	11022 Aug 17 09:00	2°൬57'08	49.14370 AU
min. Earth dist.	11015 Feb 07 17:42	25°Ω21'48	46.49610 AU	retrograde	11022 Nov 25 18:57	4°൬26'28	
opposition	11015 Feb 09 11:12	25°Ω19'49	-16°44'26	min. Earth dist.	11023 Feb 16 05:02	3°൬27'40	47.26608 AU
direct	11015 May 02 13:24	24°Ω19'20		opposition	11023 Feb 17 16:25	3°൬26'00	-16°34'23
				direct	11023 May 10 20:46	2°൬26'13	
conjunction	11015 Aug 09 01:58	25°Ω49'44	-16°03'28	conjunction	11023 Aug 17 03:10	3°൬54'39	-15°53'21
minimum elong	11015 Aug 09 02:04	25°Ω49'45	16°03'52	minimum elong	11023 Aug 17 03:20	3°൬54'40	15°53'42
max. Earth dist.	11015 Aug 10 18:44	25°Ω52'12	48.47012 AU	max. Earth dist.	11023 Aug 18 15:09	3°൬56'46	49.22740 AU
retrograde	11015 Nov 18 21:49	27°Ω22'51		retrograde	11023 Nov 27 01:53	5°൬25'54	
min. Earth dist.	11016 Feb 09 02:41	26°Ω23'44	46.60605 AU	opposition	11024 Feb 18 22:37	4°൬25'32	-16°31'49
opposition	11016 Feb 10 18:26	26°Ω21'50	-16°44'11	min. Earth dist.	11024 Feb 17 12:52	4°൬27'07	47.34761 AU
direct	11016 May 02 23:05	25°Ω21'28		direct	11024 May 11 01:21	3°൬25'51	
conjunction	11016 Aug 09 08:39	26°Ω51'35	-16°03'11				
minimum elong	11016 Aug 09 08:45	26°Ω51'35	16°03'35	conjunction	11024 Aug 17 08:55	4°൬54'07	-15°50'50
max. Earth dist.	11016 Aug 11 01:14	26°Ω54'01	48.57753 AU	minimum elong	11024 Aug 17 09:04	4°൬54'07	15°51'08
retrograde	11016 Nov 19 05:22	28°Ω24'26		max. Earth dist.	11024 Aug 18 19:36	4°൬56'09	49.30751 AU
min. Earth dist.	11017 Feb 09 10:32	27°Ω25'21	46.71086 AU	retrograde	11024 Nov 27 06:23	6°൬25'11	
opposition	11017 Feb 11 01:18	27°Ω23'30	-16°43'39	min. Earth dist.	11025 Feb 17 18:40	5°൬26'31	47.42521 AU
direct	11017 May 04 07:16	26°Ω23'12		opposition	11025 Feb 19 04:34	5°൬24'55	-16°29'00
				direct	11025 May 12 06:17	4°൬25'21	
conjunction	11017 Aug 10 15:03	27°Ω53'03	-16°02'38				
minimum elong	11017 Aug 10 15:10	27°Ω53'03	16°03'01	conjunction	11025 Aug 18 14:38	5°൬53'26	-15°48'03
max. Earth dist.	11017 Aug 12 05:45	27°Ω55'21	48.68027 AU	minimum elong	11025 Aug 18 14:48	5°൬53'26	15°48'22
retrograde	11017 Nov 20 14:49	29°Ω25'37		max. Earth dist.	11025 Aug 20 00:07	5°൬55'24	49.38333 AU
min. Earth dist.	11018 Feb 10 17:38	28°Ω26'35	46.81150 AU	retrograde	11025 Nov 28 11:19	7°൬24'21	
opposition	11018 Feb 12 08:11	28°Ω24'46	-16°42'50	min. Earth dist.	11026 Feb 19 02:45	6°൬25'41	47.49833 AU
direct	11018 May 05 11:40	27°Ω24'33		opposition	11026 Feb 20 10:43	6°൬24'10	-16°25'55
				direct	11026 May 13 14:09	5°൬24'42	
conjunction	11018 Aug 11 21:18	28°Ω54'07	-16°01'49				
minimum elong	11018 Aug 11 21:24	28°Ω54'07	16°02'11	conjunction	11026 Aug 19 20:24	6°൬52'37	-15°45'02
max. Earth dist.	11018 Aug 13 12:09	28°Ω56'26	48.77906 AU	minimum elong	11026 Aug 19 20:34	6°൬52'38	15°45'20
	11018 Oct 02 06:03	0°൬					

max. Earth dist.	11026 Aug 21 05:37	6° $\mathring{M}$ 54'34	49.45444 AU	opposition	11035 Mar 01 12:46	15° $\mathring{M}$ 09'20	-15°47'18
retrograde	11026 Nov 29 16:53	8° $\mathring{M}$ 23'23		direct	11035 May 22 11:52	14° $\mathring{M}$ 10'27	
min. Earth dist.	11027 Feb 20 09:28	7° $\mathring{M}$ 24'46	47.56624 AU				
opposition	11027 Feb 21 16:40	7° $\mathring{M}$ 23'18	-16°22'36	conjunction	11035 Aug 28 20:15	15° $\mathring{M}$ 37'04	-15°07'12
direct	11027 May 14 22:06	6° $\mathring{M}$ 23'55		minimum elong	11035 Aug 28 20:27	15° $\mathring{M}$ 37'04	15°07'25
				max. Earth dist.	11035 Aug 29 21:08	15° $\mathring{M}$ 38'30	49.90034 AU
conjunction	11027 Aug 21 02:06	7° $\mathring{M}$ 51'39	-15°41'48	retrograde	11035 Dec 08 18:43	17° $\mathring{M}$ 06'35	
minimum elong	11027 Aug 21 02:16	7° $\mathring{M}$ 51'40	15°42'06	opposition	11036 Mar 01 17:56	16° $\mathring{M}$ 07'02	-15°41'44
max. Earth dist.	11027 Aug 22 09:01	7° $\mathring{M}$ 53'28	49.52026 AU	min. Earth dist.	11036 Feb 29 18:33	16° $\mathring{M}$ 08'07	47.98909 AU
retrograde	11027 Dec 01 01:46	9° $\mathring{M}$ 22'16		direct	11036 May 22 18:52	15° $\mathring{M}$ 08'13	
opposition	11028 Feb 22 22:26	8° $\mathring{M}$ 22'14	-16°19'04				
min. Earth dist.	11028 Feb 21 16:10	8° $\mathring{M}$ 23'40	47.62891 AU	conjunction	11036 Aug 29 01:27	16° $\mathring{M}$ 34'44	-15°01'46
direct	11028 May 15 01:47	7° $\mathring{M}$ 22'55		minimum elong	11036 Aug 29 01:39	16° $\mathring{M}$ 34'45	15°01'59
				max. Earth dist.	11036 Aug 30 02:17	16° $\mathring{M}$ 36'10	49.93300 AU
conjunction	11028 Aug 21 07:47	8° $\mathring{M}$ 50'30	-15°38'20	retrograde	11036 Dec 08 21:54	18° $\mathring{M}$ 04'11	
minimum elong	11028 Aug 21 07:58	8° $\mathring{M}$ 50'31	15°38'37	opposition	11037 Mar 02 23:06	17° $\mathring{M}$ 04'41	-15°35'56
max. Earth dist.	11028 Aug 22 14:24	8° $\mathring{M}$ 52'17	49.58085 AU	min. Earth dist.	11037 Mar 02 00:10	17° $\mathring{M}$ 05'46	48.01873 AU
retrograde	11028 Dec 01 07:20	10° $\mathring{M}$ 20'56		direct	11037 May 24 03:04	16° $\mathring{M}$ 05'56	
min. Earth dist.	11029 Feb 21 23:47	9° $\mathring{M}$ 22'18	47.68643 AU	evening set	11037 Aug 28 20:20	17° $\mathring{M}$ 30'25	
opposition	11029 Feb 23 04:16	9° $\mathring{M}$ 20'58	-16°15'17				
direct	11029 May 16 07:02	8° $\mathring{M}$ 21'43		conjunction	11037 Aug 30 06:22	17° $\mathring{M}$ 32'23	-14°56'06
				minimum elong	11037 Aug 30 06:33	17° $\mathring{M}$ 32'23	14°56'17
conjunction	11029 Aug 22 13:08	9° $\mathring{M}$ 49'07	-15°34'38	morning rise	11037 Aug 31 16:50	17° $\mathring{M}$ 34'22	
minimum elong	11029 Aug 22 13:17	9° $\mathring{M}$ 49'07	15°34'55	max. Earth dist.	11037 Aug 31 05:06	17° $\mathring{M}$ 33'41	49.96135 AU
max. Earth dist.	11029 Aug 23 18:28	9° $\mathring{M}$ 50'49	49.63679 AU	retrograde	11037 Dec 10 06:23	19° $\mathring{M}$ 01'45	
retrograde	11029 Dec 02 10:33	11° $\mathring{M}$ 19'23		min. Earth dist.	11038 Mar 03 06:24	18° $\mathring{M}$ 03'20	48.04385 AU
min. Earth dist.	11030 Feb 23 05:22	10° $\mathring{M}$ 20'48	47.73959 AU	opposition	11038 Mar 04 04:21	18° $\mathring{M}$ 02'19	-15°29'54
opposition	11030 Feb 24 09:54	10° $\mathring{M}$ 19'28	-16°11'16	direct	11038 May 25 07:11	17° $\mathring{M}$ 03'38	
direct	11030 May 17 12:05	9° $\mathring{M}$ 20'15		evening set	11038 Aug 29 04:54	18° $\mathring{M}$ 26'50	
conjunction	11030 Aug 23 18:28	10° $\mathring{M}$ 47'30	-15°30'42	conjunction	11038 Aug 31 11:37	18° $\mathring{M}$ 29'58	-14°50'13
minimum elong	11030 Aug 23 18:39	10° $\mathring{M}$ 47'31	15°30'58	minimum elong	11038 Aug 31 11:49	18° $\mathring{M}$ 29'59	14°50'25
max. Earth dist.	11030 Aug 24 22:49	10° $\mathring{M}$ 49'09	49.68857 AU	max. Earth dist.	11038 Sep 01 10:01	18° $\mathring{M}$ 31'15	49.98474 AU
retrograde	11030 Dec 03 14:36	12° $\mathring{M}$ 17'37		morning rise	11038 Sep 02 18:48	18° $\mathring{M}$ 33'08	
opposition	11031 Feb 25 15:27	11° $\mathring{M}$ 17'44	-16°07'00	retrograde	11038 Dec 11 13:04	19° $\mathring{M}$ 59'16	
min. Earth dist.	11031 Feb 24 12:32	11° $\mathring{M}$ 19'00	47.78902 AU	opposition	11039 Mar 05 09:29	18° $\mathring{M}$ 59'53	-15°23'40
direct	11031 May 18 18:41	10° $\mathring{M}$ 18'35		min. Earth dist.	11039 Mar 04 13:27	19° $\mathring{M}$ 00'49	48.06363 AU
				direct	11039 May 26 11:59	18° $\mathring{M}$ 01'14	
conjunction	11031 Aug 24 23:49	11° $\mathring{M}$ 45'41	-15°26'31	evening set	11039 Aug 29 18:54	19° $\mathring{M}$ 23'28	
minimum elong	11031 Aug 24 23:59	11° $\mathring{M}$ 45'41	15°26'46				
max. Earth dist.	11031 Aug 26 04:10	11° $\mathring{M}$ 47'19	49.73699 AU	conjunction	11039 Sep 01 16:48	19° $\mathring{M}$ 27'29	-14°44'08
retrograde	11031 Dec 04 18:51	13° $\mathring{M}$ 15'39		minimum elong	11039 Sep 01 17:01	19° $\mathring{M}$ 27'30	14°44'18
opposition	11032 Feb 26 20:49	12° $\mathring{M}$ 15'50	-16°02'28	max. Earth dist.	11039 Sep 02 13:29	19° $\mathring{M}$ 28'40	50.00279 AU
min. Earth dist.	11032 Feb 25 18:07	12° $\mathring{M}$ 17'05	47.83507 AU	morning rise	11039 Sep 04 15:14	19° $\mathring{M}$ 31'31	
direct	11032 May 19 02:32	11° $\mathring{M}$ 16'44		retrograde	11039 Dec 12 17:45	20° $\mathring{M}$ 56'40	
				opposition	11040 Mar 05 14:33	19° $\mathring{M}$ 57'19	-15°17'13
conjunction	11032 Aug 25 04:55	12° $\mathring{M}$ 43'41	-15°22'04	min. Earth dist.	11040 Mar 04 18:49	19° $\mathring{M}$ 58'14	48.07789 AU
minimum elong	11032 Aug 25 05:07	12° $\mathring{M}$ 43'41	15°22'18	direct	11040 May 26 14:51	18° $\mathring{M}$ 58'40	
max. Earth dist.	11032 Aug 26 07:38	12° $\mathring{M}$ 45'14	49.78224 AU	evening set	11040 Aug 29 11:08	20° $\mathring{M}$ 20'06	
retrograde	11032 Dec 05 03:13	14° $\mathring{M}$ 13'32					
min. Earth dist.	11033 Feb 25 23:58	13° $\mathring{M}$ 15'00	47.87818 AU	conjunction	11040 Sep 01 21:48	20° $\mathring{M}$ 24'50	-14°37'51
opposition	11033 Feb 27 02:09	13° $\mathring{M}$ 13'46	-15°57'41	minimum elong	11040 Sep 01 22:00	20° $\mathring{M}$ 24'51	14°38'01
direct	11033 May 20 06:37	12° $\mathring{M}$ 14'44		max. Earth dist.	11040 Sep 02 16:56	20° $\mathring{M}$ 25'56	50.01522 AU
				morning rise	11040 Sep 05 09:02	20° $\mathring{M}$ 29'36	
conjunction	11033 Aug 26 10:07	13° $\mathring{M}$ 41'34	-15°17'22	retrograde	11040 Dec 12 21:09	21° $\mathring{M}$ 53'55	
minimum elong	11033 Aug 26 10:17	13° $\mathring{M}$ 41'34	15°17'36	opposition	11041 Mar 06 19:40	20° $\mathring{M}$ 54'34	-15°10'34
max. Earth dist.	11033 Aug 27 13:05	13° $\mathring{M}$ 43'07	49.82459 AU	min. Earth dist.	11041 Mar 06 02:00	20° $\mathring{M}$ 55'23	48.08678 AU
retrograde	11033 Dec 06 10:15	15° $\mathring{M}$ 11'17		direct	11041 May 27 20:03	19° $\mathring{M}$ 55'56	
min. Earth dist.	11034 Feb 27 06:38	14° $\mathring{M}$ 12'45	47.91832 AU	evening set	11041 Aug 30 04:55	21° $\mathring{M}$ 16'38	
opposition	11034 Feb 28 07:32	14° $\mathring{M}$ 11'36	-15°52'37				
direct	11034 May 21 09:37	13° $\mathring{M}$ 12'38		conjunction	11041 Sep 03 02:52	21° $\mathring{M}$ 22'00	-14°31'22
				minimum elong	11041 Sep 03 03:06	21° $\mathring{M}$ 22'01	14°31'30
conjunction	11034 Aug 27 15:09	14° $\mathring{M}$ 39'21	-15°12'25	max. Earth dist.	11041 Sep 03 21:44	21° $\mathring{M}$ 23'05	50.02272 AU
minimum elong	11034 Aug 27 15:22	14° $\mathring{M}$ 39'21	15°12'38	morning rise	11041 Sep 07 01:25	21° $\mathring{M}$ 27'25	
max. Earth dist.	11034 Aug 28 17:03	14° $\mathring{M}$ 40'50	49.86413 AU	retrograde	11041 Dec 13 23:49	22° $\mathring{M}$ 51'00	
retrograde	11034 Dec 07 15:36	16° $\mathring{M}$ 08'58		min. Earth dist.	11042 Mar 07 07:18	21° $\mathring{M}$ 52'27	48.09090 AU
min. Earth dist.	11035 Feb 28 11:32	15° $\mathring{M}$ 10'31	47.95541 AU	opposition	11042 Mar 08 00:36	21° $\mathring{M}$ 51'38	-15°03'42



direct	11042 May 29 03:39	20° $\mathring{M}$ 53'00	retrograde	11048 Dec 20 15:09	29° $\mathring{M}$ 27'45
evening set	11042 Aug 30 23:24	22° $\mathring{M}$ 13'01	opposition	11049 Mar 14 10:11	28° $\mathring{M}$ 28'32 -14°09'02
			min. Earth dist.	11049 Mar 13 23:04	28° $\mathring{M}$ 29'03 48.02133 AU
conjunction	11042 Sep 04 07:40	22° $\mathring{M}$ 18'58 -14°24'39	direct	11049 Jun 04 11:23	27° $\mathring{M}$ 30'03
minimum elong	11042 Sep 04 07:53	22° $\mathring{M}$ 18'59 14°24'48	evening set	11049 Sep 03 22:24	28° $\mathring{M}$ 46'33
max. Earth dist.	11042 Sep 05 00:38	22° $\mathring{M}$ 19'57 50.02579 AU			
morning rise	11042 Sep 08 16:35	22° $\mathring{M}$ 24'58	conjunction	11049 Sep 10 17:34	28° $\mathring{M}$ 55'50 -13°31'16
retrograde	11042 Dec 15 06:25	23° $\mathring{M}$ 47'53	minimum elong	11049 Sep 10 17:48	28° $\mathring{M}$ 55'51 13°31'21
opposition	11043 Mar 09 05:33	22° $\mathring{M}$ 48'31 -14°56'36	max. Earth dist.	11049 Sep 11 05:15	28° $\mathring{M}$ 56'30 49.95190 AU
min. Earth dist.	11043 Mar 08 13:15	22° $\mathring{M}$ 49'17 48.09101 AU	morning rise	11049 Sep 17 13:41	29° $\mathring{M}$ 05'10
direct	11043 May 30 08:39	21° $\mathring{M}$ 49'54		11049 Nov 02 04:07	0° $\mathring{A}$
evening set	11043 Aug 31 18:44	23° $\mathring{M}$ 09'17	retrograde	11049 Dec 21 20:30	0° $\mathring{A}$ 24'35
				11050 Feb 10 09:03	30° $\mathring{R}$ $\mathring{M}$
conjunction	11043 Sep 05 12:40	23° $\mathring{M}$ 15'47 -14°17'44	opposition	11050 Mar 15 14:54	29° $\mathring{M}$ 25'24 -14°00'18
minimum elong	11043 Sep 05 12:54	23° $\mathring{M}$ 15'48 14°17'51	min. Earth dist.	11050 Mar 15 04:03	29° $\mathring{M}$ 25'54 47.99668 AU
max. Earth dist.	11043 Sep 06 05:39	23° $\mathring{M}$ 16'45 50.02499 AU	direct	11050 Jun 05 13:07	28° $\mathring{M}$ 26'57
morning rise	11043 Sep 10 07:17	23° $\mathring{M}$ 22'19	evening set	11050 Sep 04 20:00	29° $\mathring{M}$ 43'03
retrograde	11043 Dec 16 12:32	24° $\mathring{M}$ 44'37			
opposition	11044 Mar 09 10:19	23° $\mathring{M}$ 45'16 -14°49'17	conjunction	11050 Sep 11 22:30	29° $\mathring{M}$ 52'45 -13°22'46
min. Earth dist.	11044 Mar 08 19:19	23° $\mathring{M}$ 45'57 48.08741 AU	minimum elong	11050 Sep 11 22:43	29° $\mathring{M}$ 52'46 13°22'49
direct	11044 May 30 12:53	22° $\mathring{M}$ 46'38	max. Earth dist.	11050 Sep 12 08:34	29° $\mathring{M}$ 53'20 49.92588 AU
evening set	11044 Aug 31 14:34	24° $\mathring{M}$ 05'27		11050 Sep 17 05:54	0° $\mathring{A}$
			morning rise	11050 Sep 19 02:01	0° $\mathring{A}$ 02'30
conjunction	11044 Sep 05 17:31	24° $\mathring{M}$ 12'28 -14°10'34	retrograde	11050 Dec 23 00:15	1° $\mathring{A}$ 21'32
minimum elong	11044 Sep 05 17:43	24° $\mathring{M}$ 12'29 14°10'41	opposition	11051 Mar 16 19:47	0° $\mathring{A}$ 22'21 -13°51'21
max. Earth dist.	11044 Sep 06 09:17	24° $\mathring{M}$ 13'22 50.02092 AU	min. Earth dist.	11051 Mar 16 11:06	0° $\mathring{A}$ 22'46 47.96686 AU
morning rise	11044 Sep 10 21:10	24° $\mathring{M}$ 19'31		11051 Apr 06 09:39	30° $\mathring{R}$ $\mathring{M}$
retrograde	11044 Dec 16 18:17	25° $\mathring{M}$ 41'14	direct	11051 Jun 06 17:45	29° $\mathring{M}$ 23'55
opposition	11045 Mar 10 15:06	24° $\mathring{M}$ 41'54 -14°41'43		11051 Aug 05 08:45	0° $\mathring{A}$
min. Earth dist.	11045 Mar 09 23:50	24° $\mathring{M}$ 42'36 48.08066 AU	evening set	11051 Sep 05 18:05	0° $\mathring{A}$ 39'39
direct	11045 May 31 14:48	23° $\mathring{M}$ 43'17			
evening set	11045 Sep 01 10:31	25° $\mathring{M}$ 01'34	conjunction	11051 Sep 13 03:39	0° $\mathring{A}$ 49'45 -13°14'04
			minimum elong	11051 Sep 13 03:53	0° $\mathring{A}$ 49'45 13°14'07
conjunction	11045 Sep 06 22:10	25° $\mathring{M}$ 09'04 -14°03'10	max. Earth dist.	11051 Sep 13 13:10	0° $\mathring{A}$ 50'17 49.89458 AU
minimum elong	11045 Sep 06 22:24	25° $\mathring{M}$ 09'05 14°03'17	morning rise	11051 Sep 20 14:11	0° $\mathring{A}$ 59'53
max. Earth dist.	11045 Sep 07 13:04	25° $\mathring{M}$ 09'55 50.01366 AU	retrograde	11051 Dec 24 02:32	2° $\mathring{A}$ 18'31
morning rise	11045 Sep 12 10:38	25° $\mathring{M}$ 16'37	opposition	11052 Mar 17 00:26	1° $\mathring{A}$ 19'21 -13°42'13
retrograde	11045 Dec 17 21:57	26° $\mathring{M}$ 37'49	min. Earth dist.	11052 Mar 16 16:20	1° $\mathring{A}$ 19'43 47.93150 AU
opposition	11046 Mar 11 20:02	25° $\mathring{M}$ 38'29 -14°33'54	direct	11052 Jun 07 01:05	0° $\mathring{A}$ 20'53
min. Earth dist.	11046 Mar 11 06:26	25° $\mathring{M}$ 39'07 48.07084 AU	evening set	11052 Sep 05 16:16	1° $\mathring{A}$ 36'15
direct	11046 Jun 01 20:03	24° $\mathring{M}$ 39'54			
evening set	11046 Sep 02 07:05	25° $\mathring{M}$ 57'42	conjunction	11052 Sep 13 08:36	1° $\mathring{A}$ 46'43 -13°05'10
			minimum elong	11052 Sep 13 08:50	1° $\mathring{A}$ 46'44 13°05'12
conjunction	11046 Sep 08 03:04	26° $\mathring{M}$ 05'40 -13°55'32	max. Earth dist.	11052 Sep 13 15:50	1° $\mathring{A}$ 47'08 49.85785 AU
minimum elong	11046 Sep 08 03:17	26° $\mathring{M}$ 05'40 13°55'38	morning rise	11052 Sep 21 02:06	1° $\mathring{A}$ 57'16
max. Earth dist.	11046 Sep 08 18:02	26° $\mathring{M}$ 06'31 50.00347 AU	retrograde	11052 Dec 24 08:56	3° $\mathring{A}$ 15'31
morning rise	11046 Sep 13 23:48	26° $\mathring{M}$ 13'41	opposition	11053 Mar 18 05:16	2° $\mathring{A}$ 16'19 -13°32'53
retrograde	11046 Dec 19 00:22	27° $\mathring{M}$ 34'23	min. Earth dist.	11053 Mar 17 22:30	2° $\mathring{A}$ 16'38 47.89098 AU
min. Earth dist.	11047 Mar 12 11:10	26° $\mathring{M}$ 35'43 48.05787 AU	direct	11053 Jun 08 06:10	1° $\mathring{A}$ 17'50
opposition	11047 Mar 13 00:40	26° $\mathring{M}$ 35'05 -14°25'51	evening set	11053 Sep 06 14:19	2° $\mathring{A}$ 32'48
direct	11047 Jun 03 03:29	25° $\mathring{M}$ 36'32			
evening set	11047 Sep 03 03:55	26° $\mathring{M}$ 53'53	conjunction	11053 Sep 14 13:29	2° $\mathring{A}$ 43'39 -12°56'04
			minimum elong	11053 Sep 14 13:43	2° $\mathring{A}$ 43'40 12°56'06
conjunction	11047 Sep 09 07:51	27° $\mathring{M}$ 02'18 -13°47'40	max. Earth dist.	11053 Sep 14 20:27	2° $\mathring{A}$ 44'03 49.81609 AU
minimum elong	11047 Sep 09 08:05	27° $\mathring{M}$ 02'18 13°47'46	morning rise	11053 Sep 22 13:43	2° $\mathring{A}$ 54'35
max. Earth dist.	11047 Sep 09 20:54	27° $\mathring{M}$ 03'02 49.99005 AU	retrograde	11053 Dec 25 15:33	4° $\mathring{A}$ 12'27
morning rise	11047 Sep 15 12:42	27° $\mathring{M}$ 10'46	opposition	11054 Mar 19 10:04	3° $\mathring{A}$ 13'13 -13°23'20
retrograde	11047 Dec 20 08:11	28° $\mathring{M}$ 31'01	min. Earth dist.	11054 Mar 19 04:44	3° $\mathring{A}$ 13'28 47.84565 AU
opposition	11048 Mar 13 05:25	27° $\mathring{M}$ 31'46 -14°17'33	direct	11054 Jun 09 11:03	2° $\mathring{A}$ 14'42
min. Earth dist.	11048 Mar 12 16:50	27° $\mathring{M}$ 32'21 48.04159 AU	evening set	11054 Sep 07 12:50	3° $\mathring{A}$ 29'18
direct	11048 Jun 03 07:20	26° $\mathring{M}$ 33'15			
evening set	11048 Sep 03 00:53	27° $\mathring{M}$ 50'09	conjunction	11054 Sep 15 18:26	3° $\mathring{A}$ 40'31 -12°46'45
			minimum elong	11054 Sep 15 18:41	3° $\mathring{A}$ 40'32 12°46'47
conjunction	11048 Sep 09 12:40	27° $\mathring{M}$ 59'00 -13°39'35	max. Earth dist.	11054 Sep 16 00:06	3° $\mathring{A}$ 40'50 49.77006 AU
minimum elong	11048 Sep 09 12:53	27° $\mathring{M}$ 59'01 13°39'39	morning rise	11054 Sep 24 01:11	3° $\mathring{A}$ 51'49
max. Earth dist.	11048 Sep 10 01:43	27° $\mathring{M}$ 59'45 49.97300 AU	retrograde	11054 Dec 26 22:51	5° $\mathring{A}$ 09'18
morning rise	11048 Sep 16 01:17	28° $\mathring{M}$ 07'55	opposition	11055 Mar 20 14:36	4° $\mathring{A}$ 10'02 -13°13'34

min. Earth dist.	11055 Mar 20 09:19	4° <u>♁</u> 10'16	47.79637 AU	morning rise	11061 Oct 02 06:34	10° <u>♁</u> 32'06	
direct	11055 Jun 10 12:08	3° <u>♁</u> 11'28		retrograde	11062 Jan 02 06:40	11° <u>♁</u> 47'33	
evening set	11055 Sep 08 11:17	4° <u>♁</u> 25'43		opposition	11062 Mar 26 23:51	10° <u>♁</u> 48'05	-11°58'35
				min. Earth dist.	11062 Mar 27 00:21	10° <u>♁</u> 48'03	47.36247 AU
conjunction	11055 Sep 16 23:20	4° <u>♁</u> 37'19	-12°37'14	direct	11062 Jun 16 22:03	9° <u>♁</u> 49'18	
minimum elong	11055 Sep 16 23:34	4° <u>♁</u> 37'19	12°37'15	evening set	11062 Sep 13 04:54	11° <u>♁</u> 01'40	
max. Earth dist.	11055 Sep 17 03:49	4° <u>♁</u> 37'34	49.72016 AU				
morning rise	11055 Sep 25 12:39	4° <u>♁</u> 48'58		conjunction	11062 Sep 23 10:27	11° <u>♁</u> 15'39	-11°24'10
retrograde	11055 Dec 28 03:04	6° <u>♁</u> 06'06		minimum elong	11062 Sep 23 10:40	11° <u>♁</u> 15'40	11°24'07
opposition	11056 Mar 20 19:22	5° <u>♁</u> 06'47	-13°03'34	max. Earth dist.	11062 Sep 23 08:40	11° <u>♁</u> 15'33	49.28374 AU
min. Earth dist.	11056 Mar 20 15:55	5° <u>♁</u> 06'57	47.74358 AU	morning rise	11062 Oct 03 17:36	11° <u>♁</u> 29'43	
direct	11056 Jun 10 15:48	4° <u>♁</u> 08'11		retrograde	11063 Jan 03 13:05	12° <u>♁</u> 44'57	
evening set	11056 Sep 08 09:52	5° <u>♁</u> 22'06		opposition	11063 Mar 28 04:42	11° <u>♁</u> 45'27	-11°46'58
				min. Earth dist.	11063 Mar 28 06:48	11° <u>♁</u> 45'21	47.28535 AU
conjunction	11056 Sep 17 04:13	5° <u>♁</u> 34'02	-12°27'29	direct	11063 Jun 18 02:45	10° <u>♁</u> 46'39	
minimum elong	11056 Sep 17 04:28	5° <u>♁</u> 34'03	12°27'29	evening set	11063 Sep 14 04:45	11° <u>♁</u> 58'48	
max. Earth dist.	11056 Sep 17 08:47	5° <u>♁</u> 34'18	49.66709 AU				
morning rise	11056 Sep 25 23:42	5° <u>♁</u> 46'03		conjunction	11063 Sep 24 15:56	12° <u>♁</u> 13'06	-11°12'52
retrograde	11056 Dec 28 03:50	7° <u>♁</u> 02'52		minimum elong	11063 Sep 24 16:10	12° <u>♁</u> 13'06	11°12'47
opposition	11057 Mar 21 23:59	6° <u>♁</u> 03'30	-12°53'20	max. Earth dist.	11063 Sep 24 13:32	12° <u>♁</u> 12'57	49.20525 AU
min. Earth dist.	11057 Mar 21 20:24	6° <u>♁</u> 03'40	47.68765 AU	morning rise	11063 Oct 05 04:33	12° <u>♁</u> 27'30	
direct	11057 Jun 11 23:48	5° <u>♁</u> 04'51		retrograde	11064 Jan 04 19:18	13° <u>♁</u> 42'30	
evening set	11057 Sep 09 08:39	6° <u>♁</u> 18'28		opposition	11064 Mar 28 09:43	12° <u>♁</u> 42'58	-11°35'08
				min. Earth dist.	11064 Mar 28 13:17	12° <u>♁</u> 42'48	47.20277 AU
conjunction	11057 Sep 18 09:03	6° <u>♁</u> 30'45	-12°17'30	direct	11064 Jun 18 08:24	11° <u>♁</u> 44'07	
minimum elong	11057 Sep 18 09:16	6° <u>♁</u> 30'46	12°17'29	evening set	11064 Sep 14 04:48	12° <u>♁</u> 56'03	
max. Earth dist.	11057 Sep 18 11:49	6° <u>♁</u> 30'55	49.61110 AU				
morning rise	11057 Sep 27 10:50	6° <u>♁</u> 43'07		conjunction	11064 Sep 24 21:16	13° <u>♁</u> 10'40	-11°01'22
retrograde	11057 Dec 29 09:29	7° <u>♁</u> 59'37		minimum elong	11064 Sep 24 21:29	13° <u>♁</u> 10'41	11°01'17
opposition	11058 Mar 23 04:43	7° <u>♁</u> 00'13	-12°42'52	max. Earth dist.	11064 Sep 24 17:15	13° <u>♁</u> 10'26	49.12151 AU
min. Earth dist.	11058 Mar 23 01:59	7° <u>♁</u> 00'21	47.62904 AU	morning rise	11064 Oct 05 15:16	13° <u>♁</u> 25'24	
direct	11058 Jun 13 05:19	6° <u>♁</u> 01'32		retrograde	11065 Jan 05 03:00	14° <u>♁</u> 40'11	
evening set	11058 Sep 10 07:26	7° <u>♁</u> 14'52		opposition	11065 Mar 29 14:40	13° <u>♁</u> 40'35	-11°23'06
				min. Earth dist.	11065 Mar 29 18:39	13° <u>♁</u> 40'24	47.11504 AU
conjunction	11058 Sep 19 14:02	7° <u>♁</u> 27'30	-12°07'17	direct	11065 Jun 19 10:24	12° <u>♁</u> 41'40	
minimum elong	11058 Sep 19 14:17	7° <u>♁</u> 27'31	12°07'16	evening set	11065 Sep 15 04:54	13° <u>♁</u> 53'25	
max. Earth dist.	11058 Sep 19 17:00	7° <u>♁</u> 27'40	49.55233 AU				
morning rise	11058 Sep 28 21:54	7° <u>♁</u> 40'13		conjunction	11065 Sep 26 02:40	14° <u>♁</u> 08'21	-10°49'40
retrograde	11058 Dec 30 16:03	8° <u>♁</u> 56'26		minimum elong	11065 Sep 26 02:54	14° <u>♁</u> 08'22	10°49'34
opposition	11059 Mar 24 09:30	7° <u>♁</u> 57'00	-12°32'08	max. Earth dist.	11065 Sep 25 21:10	14° <u>♁</u> 08'02	49.03267 AU
min. Earth dist.	11059 Mar 24 07:52	7° <u>♁</u> 57'05	47.56745 AU	morning rise	11065 Oct 07 02:05	14° <u>♁</u> 23'23	
direct	11059 Jun 14 10:20	6° <u>♁</u> 58'17		retrograde	11066 Jan 06 09:02	15° <u>♁</u> 37'58	
evening set	11059 Sep 11 06:36	8° <u>♁</u> 11'20		opposition	11066 Mar 30 19:44	14° <u>♁</u> 38'18	-11°10'51
				min. Earth dist.	11066 Mar 31 01:49	14° <u>♁</u> 38'01	47.02258 AU
conjunction	11059 Sep 20 19:03	8° <u>♁</u> 24'19	-11°56'50	direct	11066 Jun 20 13:33	13° <u>♁</u> 39'19	
minimum elong	11059 Sep 20 19:16	8° <u>♁</u> 24'20	11°56'48	evening set	11066 Sep 16 05:09	14° <u>♁</u> 50'52	
max. Earth dist.	11059 Sep 20 20:51	8° <u>♁</u> 24'25	49.49070 AU				
morning rise	11059 Sep 30 08:50	8° <u>♁</u> 37'23		conjunction	11066 Sep 27 08:12	15° <u>♁</u> 06'07	-10°37'45
retrograde	11059 Dec 31 22:42	9° <u>♁</u> 53'18		minimum elong	11066 Sep 27 08:24	15° <u>♁</u> 06'08	10°37'38
opposition	11060 Mar 24 14:05	8° <u>♁</u> 53'52	-12°21'11	max. Earth dist.	11066 Sep 27 02:25	15° <u>♁</u> 05'47	48.93947 AU
min. Earth dist.	11060 Mar 24 12:26	8° <u>♁</u> 53'57	47.50288 AU	morning rise	11066 Oct 08 12:42	15° <u>♁</u> 21'28	
direct	11060 Jun 14 12:13	7° <u>♁</u> 55'08		retrograde	11067 Jan 07 11:12	16° <u>♁</u> 35'51	
evening set	11060 Sep 11 05:47	9° <u>♁</u> 07'56		opposition	11067 Apr 01 00:42	15° <u>♁</u> 36'07	-10°58'23
				min. Earth dist.	11067 Apr 01 06:54	15° <u>♁</u> 35'49	46.92592 AU
conjunction	11060 Sep 21 00:04	9° <u>♁</u> 21'16	-11°46'10	direct	11067 Jun 21 21:24	14° <u>♁</u> 37'03	
minimum elong	11060 Sep 21 00:18	9° <u>♁</u> 21'16	11°46'08	evening set	11067 Sep 17 05:39	15° <u>♁</u> 48'26	
max. Earth dist.	11060 Sep 21 00:39	9° <u>♁</u> 21'18	49.42574 AU				
morning rise	11060 Sep 30 19:51	9° <u>♁</u> 34'40		conjunction	11067 Sep 28 13:37	16° <u>♁</u> 03'59	-10°25'37
retrograde	11061 Jan 01 03:57	10° <u>♁</u> 50'20		minimum elong	11067 Sep 28 13:51	16° <u>♁</u> 03'59	10°25'29
opposition	11061 Mar 25 19:00	9° <u>♁</u> 50'53	-12°10'00	max. Earth dist.	11067 Sep 28 05:53	16° <u>♁</u> 03'32	48.84232 AU
min. Earth dist.	11061 Mar 25 19:11	9° <u>♁</u> 50'53	47.43479 AU	morning rise	11067 Oct 09 23:23	16° <u>♁</u> 19'38	
direct	11061 Jun 15 15:42	8° <u>♁</u> 52'08		retrograde	11068 Jan 08 16:34	17° <u>♁</u> 33'50	
evening set	11061 Sep 12 05:07	10° <u>♁</u> 04'43		opposition	11068 Apr 01 05:42	16° <u>♁</u> 34'02	-10°45'41
				min. Earth dist.	11068 Apr 01 13:07	16° <u>♁</u> 33'41	46.82572 AU
conjunction	11061 Sep 22 05:11	10° <u>♁</u> 18'22	-11°35'16	direct	11068 Jun 22 03:34	15° <u>♁</u> 34'53	
minimum elong	11061 Sep 22 05:25	10° <u>♁</u> 18'23	11°35'12	evening set	11068 Sep 17 06:08	16° <u>♁</u> 46'07	
max. Earth dist.	11061 Sep 22 05:41	10° <u>♁</u> 18'24	49.35704 AU				

conjunction	11068 Sep 28 19:14	17° <u>♂</u> 01'58	-10°13'16	direct	11075 Jun 29 12:25	22° <u>♂</u> 25'53	
minimum elong	11068 Sep 28 19:26	17° <u>♂</u> 01'59	10°13'08	evening set	11075 Sep 23 15:24	23° <u>♂</u> 36'29	
max. Earth dist.	11068 Sep 28 11:31	17° <u>♂</u> 01'32	48.74179 AU				
morning rise	11068 Oct 10 09:54	17° <u>♂</u> 17'56		conjunction	11075 Oct 06 12:39	23° <u>♂</u> 54'23	-8°40'18
retrograde	11069 Jan 08 23:28	18° <u>♂</u> 31'59		minimum elong	11075 Oct 06 12:51	23° <u>♂</u> 54'24	8°40'06
opposition	11069 Apr 02 10:54	17° <u>♂</u> 32'07	-10°32'44	max. Earth dist.	11075 Oct 05 21:13	23° <u>♂</u> 53'30	47.94766 AU
min. Earth dist.	11069 Apr 02 19:16	17° <u>♂</u> 31'43	46.72229 AU	morning rise	11075 Oct 19 11:48	24° <u>♂</u> 12'25	
direct	11069 Jun 23 08:57	16° <u>♂</u> 32'53		retrograde	11076 Jan 17 00:04	25° <u>♂</u> 25'46	
evening set	11069 Sep 18 06:47	17° <u>♂</u> 43'58		opposition	11076 Apr 09 01:03	24° <u>♂</u> 25'25	-8°55'25
				min. Earth dist.	11076 Apr 09 16:28	24° <u>♂</u> 24'41	45.90521 AU
conjunction	11069 Sep 30 00:41	18° <u>♂</u> 00'07	-10°00'40	direct	11076 Jun 29 14:56	23° <u>♂</u> 25'39	
minimum elong	11069 Sep 30 00:54	18° <u>♂</u> 00'08	10°00'32	evening set	11076 Sep 23 17:39	24° <u>♂</u> 36'12	
max. Earth dist.	11069 Sep 29 15:53	17° <u>♂</u> 59'37	48.63836 AU				
morning rise	11069 Oct 11 20:17	18° <u>♂</u> 16'24		conjunction	11076 Oct 06 19:11	24° <u>♂</u> 54'23	-8°26'09
retrograde	11070 Jan 10 07:40	19° <u>♂</u> 30'18		minimum elong	11076 Oct 06 19:23	24° <u>♂</u> 54'23	8°25'56
opposition	11070 Apr 03 16:04	18° <u>♂</u> 30'22	-10°19'33	max. Earth dist.	11076 Oct 06 03:11	24° <u>♂</u> 53'26	47.81655 AU
min. Earth dist.	11070 Apr 04 00:22	18° <u>♂</u> 29'58	46.61605 AU	morning rise	11076 Oct 19 22:25	25° <u>♂</u> 12'41	
direct	11070 Jun 24 11:07	17° <u>♂</u> 31'04		retrograde	11077 Jan 17 04:09	26° <u>♂</u> 25'58	
evening set	11070 Sep 19 07:40	18° <u>♂</u> 42'02		opposition	11077 Apr 10 06:54	25° <u>♂</u> 25'30	-8°40'37
				min. Earth dist.	11077 Apr 10 22:30	25° <u>♂</u> 24'45	45.77014 AU
conjunction	11070 Oct 01 06:23	18° <u>♂</u> 58'29	-9°47'51	direct	11077 Jun 30 22:18	24° <u>♂</u> 25'35	
minimum elong	11070 Oct 01 06:35	18° <u>♂</u> 58'30	9°47'41	evening set	11077 Sep 24 20:01	25° <u>♂</u> 36'05	
max. Earth dist.	11070 Sep 30 20:25	18° <u>♂</u> 57'54	48.53197 AU	max. Earth dist.	11077 Oct 07 07:16	25° <u>♂</u> 53'28	47.68036 AU
morning rise	11070 Oct 13 06:54	19° <u>♂</u> 15'03					
retrograde	11071 Jan 11 13:49	20° <u>♂</u> 28'49		conjunction	11077 Oct 08 01:32	25° <u>♂</u> 54'32	-8°11'47
opposition	11071 Apr 04 21:18	19° <u>♂</u> 28'49	-10°06'07	minimum elong	11077 Oct 08 01:43	25° <u>♂</u> 54'32	8°11'34
min. Earth dist.	11071 Apr 05 07:18	19° <u>♂</u> 28'21	46.50692 AU	morning rise	11077 Oct 21 09:05	26° <u>♂</u> 13'07	
direct	11071 Jun 25 14:39	18° <u>♂</u> 29'28		retrograde	11078 Jan 18 09:08	27° <u>♂</u> 26'20	
evening set	11071 Sep 20 08:45	19° <u>♂</u> 40'20		opposition	11078 Apr 11 12:53	26° <u>♂</u> 25'43	-8°25'35
				min. Earth dist.	11078 Apr 12 06:11	26° <u>♂</u> 24'53	45.63033 AU
conjunction	11071 Oct 02 12:15	19° <u>♂</u> 57'05	-9°34'47	direct	11078 Jul 02 05:33	25° <u>♂</u> 25'40	
minimum elong	11071 Oct 02 12:28	19° <u>♂</u> 57'06	9°34'38	evening set	11078 Sep 25 22:35	26° <u>♂</u> 36'07	
max. Earth dist.	11071 Oct 02 02:21	19° <u>♂</u> 56'31	48.42278 AU				
morning rise	11071 Oct 14 17:22	20° <u>♂</u> 13'57		conjunction	11078 Oct 09 08:16	26° <u>♂</u> 54'50	-7°57'12
retrograde	11072 Jan 12 16:57	21° <u>♂</u> 27'36		minimum elong	11078 Oct 09 08:27	26° <u>♂</u> 54'51	7°56'58
opposition	11072 Apr 05 02:36	20° <u>♂</u> 27'33	-9°52'27	max. Earth dist.	11078 Oct 08 13:46	26° <u>♂</u> 53'45	47.53958 AU
min. Earth dist.	11072 Apr 05 12:34	20° <u>♂</u> 27'05	46.39475 AU	morning rise	11078 Oct 22 19:41	27° <u>♂</u> 13'42	
direct	11072 Jun 25 20:58	19° <u>♂</u> 28'07		retrograde	11079 Jan 19 14:32	28° <u>♂</u> 26'51	
evening set	11072 Sep 20 09:59	20° <u>♂</u> 38'55		opposition	11079 Apr 12 18:46	27° <u>♂</u> 26'07	-8°10'18
				min. Earth dist.	11079 Apr 13 13:09	27° <u>♂</u> 25'13	45.48622 AU
conjunction	11072 Oct 02 17:56	20° <u>♂</u> 55'57	-9°21'30	direct	11079 Jul 03 13:29	26° <u>♂</u> 25'54	
minimum elong	11072 Oct 02 18:08	20° <u>♂</u> 55'58	9°21'19	evening set	11079 Sep 27 01:28	27° <u>♂</u> 36'19	
max. Earth dist.	11072 Oct 02 06:06	20° <u>♂</u> 55'16	48.31034 AU				
morning rise	11072 Oct 15 03:50	21° <u>♂</u> 13'07		conjunction	11079 Oct 10 14:56	27° <u>♂</u> 55'19	-7°42'23
retrograde	11073 Jan 12 23:21	22° <u>♂</u> 26'41		minimum elong	11079 Oct 10 15:07	27° <u>♂</u> 55'19	7°42'09
opposition	11073 Apr 06 08:06	21° <u>♂</u> 26'35	-9°38'32	max. Earth dist.	11079 Oct 09 18:59	27° <u>♂</u> 54'08	47.39495 AU
min. Earth dist.	11073 Apr 06 19:25	21° <u>♂</u> 26'02	46.27922 AU	morning rise	11079 Oct 24 06:20	28° <u>♂</u> 14'26	
direct	11073 Jun 27 02:32	20° <u>♂</u> 27'05		retrograde	11080 Jan 20 23:13	29° <u>♂</u> 27'34	
evening set	11073 Sep 21 11:26	21° <u>♂</u> 37'48		opposition	11080 Apr 13 00:46	28° <u>♂</u> 26'41	-7°54'47
max. Earth dist.	11073 Oct 03 11:59	21° <u>♂</u> 54'26	48.19414 AU	min. Earth dist.	11080 Apr 13 19:26	28° <u>♂</u> 25'47	45.33861 AU
				direct	11080 Jul 03 17:47	27° <u>♂</u> 26'19	
conjunction	11073 Oct 04 00:03	21° <u>♂</u> 55'08	-9°07'59	evening set	11080 Sep 27 04:18	28° <u>♂</u> 36'43	
minimum elong	11073 Oct 04 00:16	21° <u>♂</u> 55'09	9°07'48				
morning rise	11073 Oct 16 14:22	22° <u>♂</u> 12'35		conjunction	11080 Oct 10 21:33	28° <u>♂</u> 55'59	-7°27'20
retrograde	11074 Jan 14 05:13	23° <u>♂</u> 26'06		minimum elong	11080 Oct 10 21:45	28° <u>♂</u> 56'00	7°27'05
opposition	11074 Apr 07 13:38	22° <u>♂</u> 25'55	-9°24'23	max. Earth dist.	11080 Oct 10 00:31	28° <u>♂</u> 54'45	47.24685 AU
min. Earth dist.	11074 Apr 08 02:10	22° <u>♂</u> 25'19	46.15952 AU	morning rise	11080 Oct 24 16:46	29° <u>♂</u> 15'23	
direct	11074 Jun 28 09:35	21° <u>♂</u> 26'21			11080 Nov 29 18:12	0° <u>♂</u>	
evening set	11074 Sep 22 13:20	22° <u>♂</u> 37'00		retrograde	11081 Jan 21 07:12	0° <u>♂</u> 28'29	
					11081 Mar 15 15:52	30° <u>♂</u>	
conjunction	11074 Oct 05 06:16	22° <u>♂</u> 54'37	-8°54'15	opposition	11081 Apr 14 07:02	29° <u>♂</u> 27'28	-7°39'01
minimum elong	11074 Oct 05 06:28	22° <u>♂</u> 54'38	8°54'02	min. Earth dist.	11081 Apr 15 03:18	29° <u>♂</u> 26'29	45.18784 AU
max. Earth dist.	11074 Oct 04 16:37	22° <u>♂</u> 53'50	48.07354 AU	direct	11081 Jul 04 22:18	28° <u>♂</u> 26'57	
morning rise	11074 Oct 18 01:03	23° <u>♂</u> 12'22		evening set	11081 Sep 28 07:30	29° <u>♂</u> 37'23	
retrograde	11075 Jan 15 14:51	24° <u>♂</u> 25'48		max. Earth dist.	11081 Oct 11 07:32	29° <u>♂</u> 55'40	47.09597 AU
opposition	11075 Apr 08 19:15	23° <u>♂</u> 25'33	-9°10'01				
min. Earth dist.	11075 Apr 09 08:23	23° <u>♂</u> 24'55	46.03506 AU	conjunction	11081 Oct 12 04:32	29° <u>♂</u> 56'54	-7°12'03

minimum elong	11081 Oct 12 04:42	29° <u>05</u> '55	7°11'47	min. Earth dist.	11088 Apr 22 08:27	6° <u>00</u> '42'37	44.05005 AU
	11081 Oct 14 08:55	0° <u>00</u> '		direct	11088 Jul 11 17:02	5° <u>00</u> '42'28	
morning rise	11081 Oct 26 03:19	0° <u>00</u> '16'34		evening set	11088 Oct 04 13:54	6° <u>00</u> '53'38	
retrograde	11082 Jan 22 13:13	1° <u>00</u> '29'40		max. Earth dist.	11088 Oct 18 05:14	7° <u>00</u> '13'15	45.95345 AU
opposition	11082 Apr 15 13:12	0° <u>00</u> '28'31	-7°23'00				
min. Earth dist.	11082 Apr 16 09:16	0° <u>00</u> '27'32	45.03440 AU	conjunction	11088 Oct 19 09:40	7° <u>00</u> '14'59	-5°18'19
	11082 May 11 00:52	30° <u>00</u> ' <u>00</u> '		minimum elong	11088 Oct 19 09:48	7° <u>00</u> '14'59	5°18'00
direct	11082 Jul 06 04:35	29° <u>00</u> '27'52		morning rise	11088 Nov 03 07:09	7° <u>00</u> '36'27	
	11082 Aug 30 03:31	0° <u>00</u> '		retrograde	11089 Jan 29 20:20	8° <u>00</u> '50'12	
evening set	11082 Sep 29 11:01	0° <u>00</u> '38'20		opposition	11089 Apr 22 13:30	7° <u>00</u> '48'10	-5°23'45
				min. Earth dist.	11089 Apr 23 16:47	7° <u>00</u> '46'49	43.87119 AU
conjunction	11082 Oct 13 11:31	0° <u>00</u> '58'08	-6°56'31	direct	11089 Jul 13 03:12	6° <u>00</u> '46'32	
minimum elong	11082 Oct 13 11:41	0° <u>00</u> '58'08	6°56'15	evening set	11089 Oct 05 19:33	7° <u>00</u> '57'50	
max. Earth dist.	11082 Oct 12 12:37	0° <u>00</u> '56'46	46.94243 AU	max. Earth dist.	11089 Oct 19 11:43	8° <u>00</u> '17'35	45.77346 AU
morning rise	11082 Oct 27 14:04	1° <u>00</u> '18'03					
retrograde	11083 Jan 23 20:30	2° <u>00</u> '31'12		conjunction	11089 Oct 20 17:59	8° <u>00</u> '19'25	-5°01'09
opposition	11083 Apr 16 19:40	1° <u>00</u> '29'54	-7°06'43	minimum elong	11089 Oct 20 18:07	8° <u>00</u> '19'26	5°00'47
min. Earth dist.	11083 Apr 17 17:03	1° <u>00</u> '28'52	44.87845 AU	morning rise	11089 Nov 04 18:21	8° <u>00</u> '41'08	
direct	11083 Jul 07 10:54	0° <u>00</u> '29'08		retrograde	11090 Jan 31 06:03	9° <u>00</u> '55'02	
evening set	11083 Sep 30 14:40	1° <u>00</u> '39'40		opposition	11090 Apr 23 20:56	8° <u>00</u> '52'49	-5°05'44
				min. Earth dist.	11090 Apr 25 00:58	8° <u>00</u> '51'25	43.68811 AU
conjunction	11083 Oct 14 18:47	1° <u>00</u> '59'43	-6°40'45	direct	11090 Jul 14 09:28	7° <u>00</u> '50'58	
minimum elong	11083 Oct 14 18:56	1° <u>00</u> '59'44	6°40'27	evening set	11090 Oct 07 01:25	9° <u>00</u> '02'27	
max. Earth dist.	11083 Oct 13 19:57	1° <u>00</u> '58'22	46.78629 AU	max. Earth dist.	11090 Oct 20 19:03	9° <u>00</u> '22'20	45.58923 AU
morning rise	11083 Oct 29 00:38	2° <u>00</u> '19'55					
retrograde	11084 Jan 25 02:16	3° <u>00</u> '33'07		conjunction	11090 Oct 22 02:33	9° <u>00</u> '24'15	-4°43'44
opposition	11084 Apr 17 02:11	2° <u>00</u> '31'43	-6°50'11	minimum elong	11090 Oct 22 02:40	9° <u>00</u> '24'16	4°43'22
min. Earth dist.	11084 Apr 18 00:08	2° <u>00</u> '30'39	44.71980 AU	morning rise	11090 Nov 06 05:31	9° <u>00</u> '46'13	
direct	11084 Jul 07 18:54	1° <u>00</u> '30'49		retrograde	11091 Feb 01 16:18	11° <u>00</u> '00'15	
evening set	11084 Sep 30 18:43	2° <u>00</u> '41'27		opposition	11091 Apr 25 04:41	9° <u>00</u> '57'50	-4°47'27
max. Earth dist.	11084 Oct 14 02:03	3° <u>00</u> '00'19	46.62753 AU	min. Earth dist.	11091 Apr 26 10:27	9° <u>00</u> '56'21	43.50111 AU
				direct	11091 Jul 15 15:25	8° <u>00</u> '55'47	
conjunction	11084 Oct 15 02:05	3° <u>00</u> '01'46	-6°24'44	evening set	11091 Oct 08 07:32	10° <u>00</u> '07'26	
minimum elong	11084 Oct 15 02:15	3° <u>00</u> '01'46	6°24'26	max. Earth dist.	11091 Oct 22 03:28	10° <u>00</u> '27'33	45.40150 AU
morning rise	11084 Oct 29 11:25	3° <u>00</u> '22'13					
retrograde	11085 Jan 25 12:26	4° <u>00</u> '35'30		conjunction	11091 Oct 23 11:14	10° <u>00</u> '29'29	-4°26'05
opposition	11085 Apr 18 08:52	3° <u>00</u> '34'00	-6°33'23	minimum elong	11091 Oct 23 11:21	10° <u>00</u> '29'29	4°25'42
min. Earth dist.	11085 Apr 19 07:12	3° <u>00</u> '32'55	44.55838 AU	morning rise	11091 Nov 07 16:36	10° <u>00</u> '51'40	
direct	11085 Jul 08 23:10	2° <u>00</u> '32'59		retrograde	11092 Feb 03 02:42	12° <u>00</u> '05'51	
evening set	11085 Oct 01 22:56	3° <u>00</u> '43'43		opposition	11092 Apr 25 12:24	11° <u>00</u> '03'15	-4°28'55
max. Earth dist.	11085 Oct 15 08:21	4° <u>00</u> '02'48	46.46545 AU	min. Earth dist.	11092 Apr 26 18:03	11° <u>00</u> '01'46	43.31093 AU
				direct	11092 Jul 15 21:37	10° <u>00</u> '00'58	
conjunction	11085 Oct 16 09:35	4° <u>00</u> '04'18	-6°08'29	evening set	11092 Oct 08 14:04	11° <u>00</u> '12'50	
minimum elong	11085 Oct 16 09:44	4° <u>00</u> '04'19	6°08'09	max. Earth dist.	11092 Oct 22 10:18	11° <u>00</u> '33'02	45.21077 AU
morning rise	11085 Oct 30 22:10	4° <u>00</u> '25'01					
retrograde	11086 Jan 26 23:41	5° <u>00</u> '38'25		conjunction	11092 Oct 23 19:59	11° <u>00</u> '35'06	-4°08'11
opposition	11086 Apr 19 15:51	4° <u>00</u> '36'48	-6°16'21	minimum elong	11092 Oct 23 20:05	11° <u>00</u> '35'07	4°07'48
min. Earth dist.	11086 Apr 20 16:07	4° <u>00</u> '35'37	44.39334 AU	morning rise	11092 Nov 08 03:50	11° <u>00</u> '57'31	
direct	11086 Jul 10 02:30	3° <u>00</u> '35'39		retrograde	11093 Feb 03 12:47	13° <u>00</u> '11'53	
evening set	11086 Oct 03 03:38	4° <u>00</u> '46'32		opposition	11093 Apr 26 20:28	12° <u>00</u> '09'04	-4°10'07
				min. Earth dist.	11093 Apr 28 03:42	12° <u>00</u> '07'30	43.11817 AU
conjunction	11086 Oct 17 17:30	5° <u>00</u> '07'22	-5°51'59	direct	11093 Jul 17 04:33	11° <u>00</u> '06'34	
minimum elong	11086 Oct 17 17:39	5° <u>00</u> '07'23	5°51'41	evening set	11093 Oct 09 20:41	12° <u>00</u> '18'39	
max. Earth dist.	11086 Oct 16 15:46	5° <u>00</u> '05'50	46.29950 AU	max. Earth dist.	11093 Oct 23 19:36	12° <u>00</u> '39'05	45.01757 AU
morning rise	11086 Nov 01 09:08	5° <u>00</u> '28'21					
retrograde	11087 Jan 28 07:24	6° <u>00</u> '41'51		conjunction	11093 Oct 25 05:02	12° <u>00</u> '41'09	-3°50'02
opposition	11087 Apr 20 22:43	5° <u>00</u> '40'07	-5°59'04	minimum elong	11093 Oct 25 05:08	12° <u>00</u> '41'10	3°49'39
min. Earth dist.	11087 Apr 21 23:11	5° <u>00</u> '38'55	44.22405 AU	morning rise	11093 Nov 09 14:57	13° <u>00</u> '03'48	
direct	11087 Jul 11 09:00	4° <u>00</u> '38'49		retrograde	11094 Feb 04 19:09	14° <u>00</u> '18'22	
evening set	11087 Oct 04 08:47	5° <u>00</u> '49'52		opposition	11094 Apr 28 04:43	13° <u>00</u> '15'20	-3°51'03
max. Earth dist.	11087 Oct 17 21:24	6° <u>00</u> '09'15	46.12890 AU	min. Earth dist.	11094 Apr 29 12:03	13° <u>00</u> '13'46	42.92305 AU
				direct	11094 Jul 18 14:54	12° <u>00</u> '12'38	
conjunction	11087 Oct 19 01:31	6° <u>00</u> '10'57	-5°35'16	evening set	11094 Oct 11 03:57	13° <u>00</u> '24'57	
minimum elong	11087 Oct 19 01:39	6° <u>00</u> '10'57	5°34'56	max. Earth dist.	11094 Oct 25 03:26	13° <u>00</u> '45'31	44.82224 AU
morning rise	11087 Nov 02 20:16	6° <u>00</u> '32'10					
retrograde	11088 Jan 29 14:44	7° <u>00</u> '45'48		conjunction	11094 Oct 26 14:16	13° <u>00</u> '47'40	-3°31'39
opposition	11088 Apr 21 06:02	6° <u>00</u> '43'55	-5°41'32	minimum elong	11094 Oct 26 14:21	13° <u>00</u> '47'41	3°31'15

morning rise	11094 Nov 11 02:24	14° <del>ℳ</del> 10'33	opposition	11101 May 06 20:54	21° <del>ℳ</del> 16'25	-1°30'13	
	11094 Dec 20 04:45	15° <del>ℳ</del>	min. Earth dist.	11101 May 08 11:01	21° <del>ℳ</del> 14'27	41.48517 AU	
retrograde	11095 Feb 06 03:57	15° <del>ℳ</del> 25'20	direct	11101 Jul 27 02:35	20° <del>ℳ</del> 12'09		
	11095 Mar 26 23:26	15° <del>ℝ</del> <del>ℳ</del>	evening set	11101 Oct 19 18:18	21° <del>ℳ</del> 26'56		
opposition	11095 Apr 29 12:59	14° <del>ℳ</del> 22'07	-3°31'43	max. Earth dist.	11101 Nov 02 21:13	21° <del>ℳ</del> 48'26	43.37668 AU
min. Earth dist.	11095 Apr 30 20:54	14° <del>ℳ</del> 20'30	42.72602 AU				
direct	11095 Jul 19 23:26	13° <del>ℳ</del> 19'11		conjunction	11101 Nov 04 15:02	21° <del>ℳ</del> 51'07	-1°16'06
evening set	11095 Oct 12 11:29	14° <del>ℳ</del> 31'46		minimum elong	11101 Nov 04 15:04	21° <del>ℳ</del> 51'07	1°15'38
				morning rise	11101 Nov 20 13:08	22° <del>ℳ</del> 15'25	
conjunction	11095 Oct 27 23:48	14° <del>ℳ</del> 54'44	-3°13'00				
minimum elong	11095 Oct 27 23:54	14° <del>ℳ</del> 54'44	3°12'36				
max. Earth dist.	11095 Oct 26 12:17	14° <del>ℳ</del> 52'31	44.62481 AU				
	11095 Oct 31 12:28	15° <del>ℳ</del>					
morning rise	11095 Nov 12 13:46	15° <del>ℳ</del> 17'49					
retrograde	11096 Feb 07 14:53	16° <del>ℳ</del> 32'52					
opposition	11096 Apr 29 21:44	15° <del>ℳ</del> 29'28	-3°12'07				
min. Earth dist.	11096 May 01 06:55	15° <del>ℳ</del> 27'47	42.52690 AU				
	11096 May 25 01:44	15° <del>ℝ</del> <del>ℳ</del>					
direct	11096 Jul 20 06:24	14° <del>ℳ</del> 26'20					
	11096 Sep 13 04:38	15° <del>ℳ</del>					
evening set	11096 Oct 12 19:17	15° <del>ℳ</del> 39'13					
max. Earth dist.	11096 Oct 26 21:41	16° <del>ℳ</del> 00'09	44.42536 AU				
conjunction	11096 Oct 28 09:26	16° <del>ℳ</del> 02'23	-2°54'07				
minimum elong	11096 Oct 28 09:31	16° <del>ℳ</del> 02'23	2°53'42				
morning rise	11096 Nov 13 01:09	16° <del>ℳ</del> 25'41					
retrograde	11097 Feb 08 02:47	17° <del>ℳ</del> 41'02					
opposition	11097 May 01 06:36	16° <del>ℳ</del> 37'27	-2°52'15				
min. Earth dist.	11097 May 02 15:32	16° <del>ℳ</del> 35'46	42.32557 AU				
direct	11097 Jul 21 12:43	15° <del>ℳ</del> 34'06					
evening set	11097 Oct 14 03:47	16° <del>ℳ</del> 47'20					
max. Earth dist.	11097 Oct 28 05:52	17° <del>ℳ</del> 08'21	44.22324 AU				
conjunction	11097 Oct 29 19:28	17° <del>ℳ</del> 10'43	-2°34'59				
minimum elong	11097 Oct 29 19:32	17° <del>ℳ</del> 10'43	2°34'34				
morning rise	11097 Nov 14 12:54	17° <del>ℳ</del> 34'14					
retrograde	11098 Feb 09 14:45	18° <del>ℳ</del> 49'53					
opposition	11098 May 02 15:43	17° <del>ℳ</del> 46'07	-2°32'07				
min. Earth dist.	11098 May 04 02:36	17° <del>ℳ</del> 44'20	42.12139 AU				
direct	11098 Jul 22 20:35	16° <del>ℳ</del> 42'34					
evening set	11098 Oct 15 12:42	17° <del>ℳ</del> 56'10					
max. Earth dist.	11098 Oct 29 16:20	18° <del>ℳ</del> 17'23	44.01782 AU				
conjunction	11098 Oct 31 06:02	18° <del>ℳ</del> 19'45	-2°15'37				
minimum elong	11098 Oct 31 06:06	18° <del>ℳ</del> 19'46	2°15'10				
morning rise	11098 Nov 16 00:44	18° <del>ℳ</del> 43'29					
retrograde	11099 Feb 10 23:58	19° <del>ℳ</del> 59'28					
opposition	11099 May 04 01:09	18° <del>ℳ</del> 55'30	-2°11'44				
min. Earth dist.	11099 May 05 12:31	18° <del>ℳ</del> 53'42	41.91349 AU				
direct	11099 Jul 24 07:44	17° <del>ℳ</del> 51'44					
evening set	11099 Oct 16 22:12	19° <del>ℳ</del> 05'43					
max. Earth dist.	11099 Oct 31 00:46	19° <del>ℳ</del> 26'59	43.80839 AU				
conjunction	11099 Nov 01 16:40	19° <del>ℳ</del> 29'31	-1°56'01				
minimum elong	11099 Nov 01 16:43	19° <del>ℳ</del> 29'31	1°55'34				
morning rise	11099 Nov 17 12:47	19° <del>ℳ</del> 53'26					
retrograde	11100 Feb 12 11:35	21° <del>ℳ</del> 09'47					
opposition	11100 May 05 10:50	20° <del>ℳ</del> 05'37	-1°51'06				
min. Earth dist.	11100 May 06 23:29	20° <del>ℳ</del> 03'44	41.70150 AU				
direct	11100 Jul 25 16:45	19° <del>ℳ</del> 01'37					
evening set	11100 Oct 18 08:03	20° <del>ℳ</del> 15'59					
max. Earth dist.	11100 Nov 01 10:53	20° <del>ℳ</del> 37'22	43.59457 AU				
conjunction	11100 Nov 03 03:46	20° <del>ℳ</del> 39'58	-1°36'11				
minimum elong	11100 Nov 03 03:49	20° <del>ℳ</del> 39'59	1°35'42				
morning rise	11100 Nov 19 00:52	21° <del>ℳ</del> 04'06					
retrograde	11101 Feb 13 21:56	22° <del>ℳ</del> 20'49					