

retrograde	3100 Jan 31 00:56	21°♏45'17		max. Earth dist.	3105 Dec 17 15:46	25°♏00'47	10.95910 AU
opposition	3100 Apr 08 08:18	18°♏23'11	2°38'36	morning rise	3106 Jan 03 09:44	26°♏59'30	
min. Earth dist.	3100 Apr 08 06:30	18°♏23'33	8.47870 AU		3106 Jan 30 20:46	0°♏	
direct	3100 Jun 16 22:36	14°♏56'00		retrograde	3106 Apr 13 06:23	4°♏00'53	
evening set	3100 Sep 30 21:43	22°♏45'03		opposition	3106 Jun 22 00:32	0°♏43'12	1°28'00
				min. Earth dist.	3106 Jun 22 02:52	0°♏42'46	8.98291 AU
conjunction	3100 Oct 18 06:38	24°♏53'10	2°11'28		3106 Jul 01 18:48	30°♏♏	
minimum elong	3100 Oct 18 06:37	24°♏53'09	2°11'28	direct	3106 Sep 01 02:01	27°♏22'33	
max. Earth dist.	3100 Oct 18 08:13	24°♏53'39	10.52995 AU		3106 Oct 29 14:30	0°♏	
morning rise	3100 Nov 04 10:51	26°♏59'53		evening set	3106 Dec 12 13:50	4°♏31'34	
	3100 Nov 30 14:08	0°♏					
retrograde	3101 Feb 12 17:32	4°♏25'17		conjunction	3106 Dec 29 07:05	6°♏29'37	1°00'18
opposition	3101 Apr 21 09:44	1°♏04'18	2°43'49	minimum elong	3106 Dec 29 07:07	6°♏29'38	1°00'17
min. Earth dist.	3101 Apr 21 08:56	1°♏04'27	8.58357 AU	max. Earth dist.	3106 Dec 29 03:44	6°♏28'38	11.00102 AU
	3101 May 05 09:26	30°♏♏		morning rise	3107 Jan 14 22:42	8°♏27'12	
direct	3101 Jun 30 10:17	27°♏38'04		retrograde	3107 Apr 25 01:48	15°♏27'46	
	3101 Aug 24 00:48	0°♏		opposition	3107 Jul 04 05:21	12°♏10'08	0°58'56
evening set	3101 Oct 14 00:38	5°♏19'34		min. Earth dist.	3107 Jul 04 08:18	12°♏09'35	9.01482 AU
				direct	3107 Sep 13 05:23	8°♏50'20	
conjunction	3101 Oct 31 05:29	7°♏25'11	2°12'43	evening set	3107 Dec 24 01:29	15°♏55'45	
minimum elong	3101 Oct 31 05:29	7°♏25'11	2°12'43				
max. Earth dist.	3101 Oct 31 05:57	7°♏25'19	10.63393 AU	conjunction	3108 Jan 09 17:53	17°♏53'20	0°35'33
morning rise	3101 Nov 17 05:52	9°♏29'29		minimum elong	3108 Jan 09 17:54	17°♏53'21	0°35'33
	3102 Jan 10 05:27	15°♏		max. Earth dist.	3108 Jan 09 14:18	17°♏52'17	11.02309 AU
retrograde	3102 Feb 25 03:17	16°♏47'51		morning rise	3108 Jan 26 09:26	19°♏50'41	
	3102 Apr 13 12:49	15°♏♏		retrograde	3108 May 05 23:57	26°♏51'56	
opposition	3102 May 04 06:09	13°♏27'51	2°41'13	opposition	3108 Jul 15 09:31	23°♏34'04	0°27'40
min. Earth dist.	3102 May 04 06:32	13°♏27'47	8.68562 AU	min. Earth dist.	3108 Jul 15 12:10	23°♏33'35	9.02644 AU
direct	3102 Jul 13 16:44	10°♏02'42		direct	3108 Sep 24 06:32	20°♏14'58	
	3102 Oct 03 18:56	15°♏		evening set	3109 Jan 03 11:50	27°♏18'04	
evening set	3102 Oct 26 18:07	17°♏36'34					
				conjunction	3109 Jan 20 03:51	29°♏15'33	0°09'30
conjunction	3102 Nov 12 19:24	19°♏39'57	2°07'49	minimum elong	3109 Jan 20 03:51	29°♏15'33	0°09'30
minimum elong	3102 Nov 12 19:25	19°♏39'57	2°07'49	behind sun begin	3109 Jan 19 22:00	29°♏13'50	
max. Earth dist.	3102 Nov 12 18:18	19°♏39'37	10.73282 AU	behind sun end	3109 Jan 20 09:41	29°♏17'15	
morning rise	3102 Nov 29 16:42	21°♏42'08		max. Earth dist.	3109 Jan 20 00:54	29°♏14'42	11.02448 AU
retrograde	3103 Mar 09 08:32	28°♏54'24			3109 Jan 26 10:08	0°♏	
opposition	3103 May 16 21:51	25°♏35'16	2°31'25	morning rise	3109 Feb 05 19:33	1°♏12'59	
min. Earth dist.	3103 May 16 22:43	25°♏35'06	8.78023 AU	retrograde	3109 May 17 23:15	8°♏16'23	
direct	3103 Jul 26 15:58	22°♏11'16		desc. node	3109 Jun 03 06:59	8°♏03'29	
evening set	3103 Nov 08 02:49	29°♏37'46		opposition	3109 Jul 27 13:47	4°♏58'02	-0°04'41
	3103 Nov 11 06:01	0°♏♏		min. Earth dist.	3109 Jul 27 16:02	4°♏57'37	9.01735 AU
				direct	3109 Oct 06 04:21	1°♏39'26	
conjunction	3103 Nov 25 01:17	1°♏39'17	1°57'22	evening set	3110 Jan 14 22:30	8°♏41'38	
minimum elong	3103 Nov 25 01:19	1°♏39'18	1°57'22				
max. Earth dist.	3103 Nov 24 23:37	1°♏38'47	10.82236 AU	conjunction	3110 Jan 31 14:18	10°♏39'18	-0°17'06
morning rise	3103 Dec 11 20:11	3°♏39'45		minimum elong	3110 Jan 31 14:17	10°♏39'17	0°17'05
retrograde	3104 Mar 20 09:24	10°♏47'04		max. Earth dist.	3110 Jan 31 11:12	10°♏38'23	11.00508 AU
opposition	3104 May 28 09:44	7°♏28'36	2°15'18	morning rise	3110 Feb 17 06:36	12°♏37'10	
min. Earth dist.	3104 May 28 10:31	7°♏28'27	8.86340 AU		3110 Mar 10 16:38	15°♏	
direct	3104 Aug 07 09:06	4°♏05'48		retrograde	3110 May 30 02:29	19°♏44'07	
evening set	3104 Nov 19 03:51	11°♏25'31		opposition	3110 Aug 08 19:29	16°♏25'06	-0°36'59
				min. Earth dist.	3110 Aug 08 22:11	16°♏24'36	8.98777 AU
conjunction	3104 Dec 06 00:12	13°♏25'31	1°42'05		3110 Aug 28 14:42	15°♏♏	
minimum elong	3104 Dec 06 00:14	13°♏25'32	1°42'05	direct	3110 Oct 18 02:06	13°♏06'44	
max. Earth dist.	3104 Dec 05 22:43	13°♏25'05	10.89880 AU		3110 Dec 05 15:19	15°♏	
morning rise	3104 Dec 22 17:18	15°♏24'38		evening set	3111 Jan 26 10:52	20°♏09'24	
retrograde	3105 Apr 01 09:32	22°♏28'19					
opposition	3105 Jun 09 18:24	19°♏10'21	1°53'49	conjunction	3111 Feb 12 02:39	22°♏07'35	-0°43'04
min. Earth dist.	3105 Jun 09 19:32	19°♏10'08	8.93183 AU	minimum elong	3111 Feb 12 02:38	22°♏07'35	0°43'03
direct	3105 Aug 19 20:49	15°♏48'41		max. Earth dist.	3111 Feb 11 22:45	22°♏06'26	10.96548 AU
evening set	3105 Nov 30 23:04	23°♏02'29		morning rise	3111 Feb 28 19:59	24°♏06'14	
					3111 May 01 21:57	0°♏♏	
conjunction	3105 Dec 17 17:42	25°♏01'21	1°22'46	retrograde	3111 Jun 11 07:58	1°♏18'06	
minimum elong	3105 Dec 17 17:44	25°♏01'22	1°22'46		3111 Jul 22 17:40	30°♏♏	

opposition	3111 Aug 21 03:18	27° \approx 58'11	-1°08'06	opposition	3117 Nov 04 13:02	11° \mathbb{B} 49'03	-2°42'27
min. Earth dist.	3111 Aug 21 06:30	27° \approx 57'35	8.93859 AU	min. Earth dist.	3117 Nov 04 13:35	11° \mathbb{B} 48'56	8.36961 AU
direct	3111 Oct 29 23:52	24° \approx 39'48		direct	3118 Jan 10 18:09	8° \mathbb{B} 26'06	
	3112 Jan 22 19:47	0° \mathbb{H}			3118 Apr 12 16:33	15° \mathbb{B}	
evening set	3112 Feb 07 02:26	1° \mathbb{H} 44'23		evening set	3118 Apr 21 17:03	16° \mathbb{B} 06'16	
conjunction	3112 Feb 23 18:46	3° \mathbb{H} 43'24	-1°07'32	conjunction	3118 May 09 01:30	18° \mathbb{B} 17'22	-2°08'02
minimum elong	3112 Feb 23 18:44	3° \mathbb{H} 43'24	1°07'32	minimum elong	3118 May 09 01:32	18° \mathbb{B} 17'23	2°08'01
max. Earth dist.	3112 Feb 23 14:47	3° \mathbb{H} 42'13	10.90676 AU	max. Earth dist.	3118 May 09 01:52	18° \mathbb{B} 17'29	10.31811 AU
morning rise	3112 Mar 11 13:25	5° \mathbb{H} 43'08		morning rise	3118 May 26 14:20	20° \mathbb{B} 29'55	
retrograde	3112 Jun 22 18:36	13° \mathbb{H} 01'11		retrograde	3118 Sep 10 06:06	28° \mathbb{B} 35'35	
opposition	3112 Sep 01 13:52	9° \mathbb{H} 40'08	-1°36'50	opposition	3118 Nov 18 03:40	25° \mathbb{B} 07'06	-2°32'44
min. Earth dist.	3112 Sep 01 16:59	9° \mathbb{H} 39'33	8.87102 AU	min. Earth dist.	3118 Nov 18 02:50	25° \mathbb{B} 07'16	8.27177 AU
direct	3112 Nov 10 01:24	6° \mathbb{H} 21'30		direct	3119 Jan 24 01:51	21° \mathbb{B} 42'56	
evening set	3113 Feb 17 22:32	13° \mathbb{H} 29'24		evening set	3119 May 05 13:30	29° \mathbb{B} 30'37	
					3119 May 09 10:56	0° \mathbb{H}	
conjunction	3113 Mar 06 16:02	15° \mathbb{H} 29'39	-1°29'29	conjunction	3119 May 23 02:45	1° \mathbb{H} 44'24	-1°56'29
minimum elong	3113 Mar 06 15:59	15° \mathbb{H} 29'38	1°29'30	minimum elong	3119 May 23 02:48	1° \mathbb{H} 44'25	1°56'28
max. Earth dist.	3113 Mar 06 12:50	15° \mathbb{H} 28'41	10.83031 AU	max. Earth dist.	3119 May 23 04:32	1° \mathbb{H} 44'58	10.22647 AU
morning rise	3113 Mar 23 12:18	17° \mathbb{H} 30'47		morning rise	3119 Jun 09 20:03	3° \mathbb{H} 59'30	
retrograde	3113 Jul 05 13:02	24° \mathbb{H} 56'09		retrograde	3119 Sep 24 13:17	12° \mathbb{H} 10'36	
opposition	3113 Sep 14 04:06	21° \mathbb{H} 33'51	-2°01'58	opposition	3119 Dec 01 22:34	8° \mathbb{H} 41'24	-2°14'22
min. Earth dist.	3113 Sep 14 06:28	21° \mathbb{H} 33'24	8.78679 AU	min. Earth dist.	3119 Dec 01 20:39	8° \mathbb{H} 41'48	8.18730 AU
direct	3113 Nov 22 04:37	18° \mathbb{H} 14'46		direct	3120 Feb 06 14:45	5° \mathbb{H} 15'58	
evening set	3114 Mar 02 00:41	25° \mathbb{H} 27'19		evening set	3120 May 18 18:48	13° \mathbb{H} 10'46	
conjunction	3114 Mar 18 19:43	27° \mathbb{H} 29'08	-1°47'56	conjunction	3120 Jun 05 12:47	15° \mathbb{H} 27'00	-1°38'12
minimum elong	3114 Mar 18 19:41	27° \mathbb{H} 29'08	1°47'57	minimum elong	3120 Jun 05 12:50	15° \mathbb{H} 27'01	1°38'12
max. Earth dist.	3114 Mar 18 16:42	27° \mathbb{H} 28'13	10.73867 AU	max. Earth dist.	3120 Jun 05 15:08	15° \mathbb{H} 27'46	10.15080 AU
morning rise	3114 Apr 04 18:08	29° \mathbb{H} 32'03		morning rise	3120 Jun 23 10:19	17° \mathbb{H} 44'24	
	3114 Apr 08 16:28	0° \mathbb{Y}		retrograde	3120 Oct 07 23:33	25° \mathbb{H} 58'56	
retrograde	3114 Jul 18 13:12	7° \mathbb{Y} 05'35		opposition	3120 Dec 14 20:50	22° \mathbb{H} 29'22	-1°47'56
opposition	3114 Sep 26 22:49	3° \mathbb{Y} 41'58	-2°22'15	min. Earth dist.	3120 Dec 14 18:31	22° \mathbb{H} 29'51	8.12103 AU
min. Earth dist.	3114 Sep 27 00:46	3° \mathbb{Y} 41'36	8.68943 AU	direct	3121 Feb 19 10:00	19° \mathbb{H} 02'44	
direct	3114 Dec 04 10:26	0° \mathbb{Y} 22'13		evening set	3121 Jun 02 07:38	27° \mathbb{H} 03'47	
evening set	3115 Mar 14 10:03	7° \mathbb{Y} 40'37					
conjunction	3115 Mar 31 07:15	9° \mathbb{Y} 44'21	-2°01'52	conjunction	3121 Jun 20 05:51	29° \mathbb{H} 22'04	-1°14'01
minimum elong	3115 Mar 31 07:14	9° \mathbb{Y} 44'20	2°01'52	minimum elong	3121 Jun 20 05:54	29° \mathbb{H} 22'05	1°14'00
max. Earth dist.	3115 Mar 31 04:03	9° \mathbb{Y} 43'22	10.63638 AU	max. Earth dist.	3121 Jun 20 08:31	29° \mathbb{H} 22'56	10.09554 AU
morning rise	3115 Apr 17 08:32	11° \mathbb{Y} 49'21			3121 Jun 25 03:05	0° \mathbb{B}	
retrograde	3115 Jul 31 19:48	19° \mathbb{Y} 31'28		morning rise	3121 Jul 08 06:54	1° \mathbb{B} 41'16	
opposition	3115 Oct 09 22:32	16° \mathbb{Y} 06'31	-2°36'29	retrograde	3121 Oct 22 10:54	9° \mathbb{B} 57'04	
min. Earth dist.	3115 Oct 10 00:22	16° \mathbb{Y} 06'09	8.58392 AU	opposition	3121 Dec 28 21:38	6° \mathbb{B} 27'29	-1°14'48
direct	3115 Dec 16 23:00	12° \mathbb{Y} 45'50		min. Earth dist.	3121 Dec 28 19:10	6° \mathbb{B} 27'59	8.07701 AU
evening set	3116 Mar 26 03:26	20° \mathbb{Y} 10'58		direct	3122 Mar 05 11:48	2° \mathbb{B} 59'46	
				evening set	3122 Jun 17 02:13	11° \mathbb{B} 05'48	
conjunction	3116 Apr 12 03:38	22° \mathbb{Y} 16'57	-2°10'21	conjunction	3122 Jul 05 03:46	13° \mathbb{B} 25'31	-0°45'13
minimum elong	3116 Apr 12 03:38	22° \mathbb{Y} 16'56	2°10'21	minimum elong	3122 Jul 05 03:48	13° \mathbb{B} 25'31	0°45'13
max. Earth dist.	3116 Apr 12 00:50	22° \mathbb{Y} 16'04	10.52861 AU	max. Earth dist.	3122 Jul 05 06:56	13° \mathbb{B} 26'32	10.06406 AU
morning rise	3116 Apr 29 08:23	24° \mathbb{Y} 24'19		morning rise	3122 Jul 23 07:09	15° \mathbb{B} 45'47	
	3116 Jun 21 13:29	0° \mathbb{B}		retrograde	3122 Nov 05 20:17	24° \mathbb{B} 00'39	
retrograde	3116 Aug 13 09:17	2° \mathbb{B} 14'59		opposition	3123 Jan 11 23:37	20° \mathbb{B} 31'23	-0°36'55
	3116 Oct 06 15:08	30° \mathbb{R} \mathbb{Y}		min. Earth dist.	3123 Jan 11 20:52	20° \mathbb{B} 31'57	8.05802 AU
opposition	3116 Oct 22 03:19	28° \mathbb{Y} 48'43	-2°43'31	direct	3123 Mar 19 18:28	17° \mathbb{B} 02'49	
min. Earth dist.	3116 Oct 22 04:55	28° \mathbb{Y} 48'24	8.47551 AU	evening set	3123 Jul 02 00:50	25° \mathbb{B} 12'18	
direct	3116 Dec 28 17:09	25° \mathbb{Y} 26'57					
	3117 Mar 13 14:15	0° \mathbb{B}		conjunction	3123 Jul 20 04:22	27° \mathbb{B} 32'38	-0°13'38
evening set	3117 Apr 08 05:41	2° \mathbb{B} 59'28		minimum elong	3123 Jul 20 04:23	27° \mathbb{B} 32'38	0°13'38
conjunction	3117 Apr 25 09:41	5° \mathbb{B} 07'55	-2°12'35	behind sun begin	3123 Jul 20 00:34	27° \mathbb{B} 31'25	
minimum elong	3117 Apr 25 09:42	5° \mathbb{B} 07'55	2°12'34	behind sun end	3123 Jul 20 08:11	27° \mathbb{B} 33'51	
max. Earth dist.	3117 Apr 25 08:20	5° \mathbb{B} 07'30	10.42065 AU	max. Earth dist.	3123 Jul 20 07:59	27° \mathbb{B} 33'47	10.05831 AU
morning rise	3117 May 12 18:17	7° \mathbb{B} 17'50		morning rise	3123 Aug 07 08:28	29° \mathbb{B} 53'06	
	3117 Aug 09 07:52	15° \mathbb{B}			3123 Aug 08 06:12	0° \mathbb{B}	
retrograde	3117 Aug 27 04:50	15° \mathbb{B} 16'31		retrograde	3123 Nov 20 03:36	8° \mathbb{B} 04'56	
	3117 Sep 14 03:37	15° \mathbb{R} \mathbb{B}		asc. node	3123 Dec 26 13:42	6° \mathbb{B} 54'07	

opposition	3124 Jan 26 01:16	4°♏36'18	0°03'15	opposition	3130 Apr 15 21:24	25°♊36'30	2°42'15
min. Earth dist.	3124 Jan 25 22:03	4°♏36'58	8.06526 AU	min. Earth dist.	3130 Apr 15 19:38	25°♊36'51	8.53680 AU
direct	3124 Apr 02 02:34	1°♏07'09		direct	3130 Jun 24 17:14	22°♊10'08	
evening set	3124 Jul 16 00:49	9°♏18'18		evening set	3130 Oct 08 12:17	29°♊55'30	
					3130 Oct 09 03:13	0°♏	
conjunction	3124 Aug 03 04:40	11°♏38'23	0°18'47	conjunction	3130 Oct 25 18:57	2°♏02'16	2°12'47
minimum elong	3124 Aug 03 04:39	11°♏38'22	0°18'47	minimum elong	3130 Oct 25 18:57	2°♏02'16	2°12'47
max. Earth dist.	3124 Aug 03 08:52	11°♏39'44	10.07865 AU	max. Earth dist.	3130 Oct 25 20:10	2°♏02'39	10.58955 AU
morning rise	3124 Aug 21 07:42	13°♏58'11		morning rise	3130 Nov 11 21:12	4°♏07'42	
	3124 Aug 29 13:14	15°♏		retrograde	3131 Feb 19 22:55	11°♏29'28	
retrograde	3124 Dec 03 08:12	22°♏05'09		opposition	3131 Apr 28 20:32	8°♏09'24	2°43'07
opposition	3125 Feb 08 01:41	18°♏37'26	0°43'01	min. Earth dist.	3131 Apr 28 19:08	8°♏09'41	8.64387 AU
min. Earth dist.	3125 Feb 07 21:44	18°♏38'15	8.09833 AU	direct	3131 Jul 08 03:00	4°♏44'11	
direct	3125 Apr 16 11:17	15°♏08'01		evening set	3131 Oct 21 10:39	12°♏21'46	
evening set	3125 Jul 30 23:12	23°♏18'55					
conjunction	3125 Aug 18 01:42	25°♏37'53	0°49'50	conjunction	3131 Nov 07 13:38	14°♏26'09	2°10'36
minimum elong	3125 Aug 18 01:40	25°♏37'52	0°49'49	minimum elong	3131 Nov 07 13:38	14°♏26'09	2°10'36
max. Earth dist.	3125 Aug 18 06:34	25°♏39'27	10.12389 AU	max. Earth dist.	3131 Nov 07 14:27	14°♏26'24	10.69406 AU
morning rise	3125 Sep 05 02:05	27°♏56'11			3131 Nov 12 04:40	15°♏	
	3125 Sep 21 22:12	0°♏		morning rise	3131 Nov 24 12:11	16°♏29'15	
retrograde	3125 Dec 17 08:01	5°♏56'53		retrograde	3132 Mar 03 08:06	23°♏44'22	
opposition	3126 Feb 21 23:33	2°♏30'18	1°19'49	opposition	3132 May 10 14:57	20°♏25'16	2°36'28
min. Earth dist.	3126 Feb 21 19:26	2°♏31'08	8.15523 AU	min. Earth dist.	3132 May 10 14:36	20°♏25'20	8.74447 AU
	3126 Mar 28 06:53	30°♏♏		direct	3132 Jul 20 04:37	17°♏01'13	
direct	3126 Apr 30 19:08	29°♏00'58		evening set	3132 Nov 01 23:48	24°♏31'08	
	3126 Jun 03 04:59	0°♏					
evening set	3126 Aug 14 17:42	7°♏09'43		conjunction	3132 Nov 18 23:37	26°♏33'28	2°02'34
conjunction	3126 Sep 01 17:24	9°♏26'51	1°17'39	minimum elong	3132 Nov 18 23:38	26°♏33'28	2°02'35
minimum elong	3126 Sep 01 17:21	9°♏26'50	1°17'38	max. Earth dist.	3132 Nov 18 23:13	26°♏33'20	10.78956 AU
max. Earth dist.	3126 Sep 01 22:12	9°♏28'23	10.19126 AU	morning rise	3132 Dec 05 19:24	28°♏34'39	
morning rise	3126 Sep 19 13:55	11°♏43'01			3132 Dec 18 02:14	0°♏	
retrograde	3126 Dec 31 00:53	19°♏36'21		retrograde	3133 Mar 15 11:07	5°♏44'10	
opposition	3127 Mar 07 17:48	16°♏11'05	1°51'27	opposition	3133 May 23 05:02	2°♏25'51	2°23'04
min. Earth dist.	3127 Mar 07 14:14	16°♏11'49	8.23247 AU	min. Earth dist.	3133 May 23 06:28	2°♏25'35	8.83353 AU
direct	3127 May 15 01:22	12°♏42'07			3133 Jun 28 04:16	30°♏♏	
evening set	3127 Aug 29 05:54	20°♏47'01		direct	3133 Aug 02 00:30	29°♏02'56	
					3133 Sep 05 11:04	0°♏	
conjunction	3127 Sep 16 01:42	23°♏01'47	1°40'41	evening set	3133 Nov 14 04:47	6°♏25'47	
minimum elong	3127 Sep 16 01:39	23°♏01'46	1°40'41	conjunction	3133 Dec 01 01:59	8°♏26'26	1°49'20
max. Earth dist.	3127 Sep 16 05:45	23°♏03'04	10.27669 AU	minimum elong	3133 Dec 01 02:02	8°♏26'26	1°49'21
morning rise	3127 Oct 03 17:38	25°♏15'22		max. Earth dist.	3133 Nov 30 23:25	8°♏25'39	10.87134 AU
	3127 Nov 15 03:25	0°♏		morning rise	3133 Dec 17 19:54	10°♏26'07	
retrograde	3128 Jan 13 10:48	3°♏00'44		retrograde	3134 Mar 27 11:08	17°♏31'27	
	3128 Mar 15 12:27	30°♏♏		opposition	3134 Jun 04 15:30	14°♏13'41	2°03'52
opposition	3128 Mar 20 07:57	29°♏36'53	2°16'18	min. Earth dist.	3134 Jun 04 18:05	14°♏13'12	8.90690 AU
min. Earth dist.	3128 Mar 20 05:19	29°♏37'25	8.32540 AU	direct	3134 Aug 14 15:52	10°♏51'50	
direct	3128 May 28 03:34	26°♏08'34		evening set	3134 Nov 26 03:07	18°♏08'30	
	3128 Aug 05 23:49	0°♏					
evening set	3128 Sep 11 09:42	4°♏08'01		conjunction	3134 Dec 12 22:23	20°♏07'53	1°31'42
conjunction	3128 Sep 29 00:59	6°♏20'07	1°57'52	minimum elong	3134 Dec 12 22:25	20°♏07'53	1°31'42
minimum elong	3128 Sep 29 00:57	6°♏20'06	1°57'52	max. Earth dist.	3134 Dec 12 18:39	20°♏06'46	10.93617 AU
max. Earth dist.	3128 Sep 29 03:50	6°♏21'01	10.37518 AU	morning rise	3134 Dec 29 14:59	22°♏06'28	
morning rise	3128 Oct 16 12:06	8°♏30'55		retrograde	3135 Apr 08 09:00	29°♏09'01	
retrograde	3129 Jan 25 13:41	16°♏08'09		opposition	3135 Jun 16 23:13	25°♏51'32	1°39'50
opposition	3129 Apr 02 17:18	12°♏45'41	2°33'21	min. Earth dist.	3135 Jun 17 01:58	25°♏51'01	8.96226 AU
min. Earth dist.	3129 Apr 02 15:19	12°♏46'04	8.42872 AU	direct	3135 Aug 27 01:16	22°♏30'39	
direct	3129 Jun 11 01:05	9°♏18'16		evening set	3135 Dec 07 20:14	29°♏42'08	
evening set	3129 Sep 25 04:01	17°♏11'03			3135 Dec 10 09:36	0°♏	
conjunction	3129 Oct 12 14:48	19°♏20'26	2°08'37	conjunction	3135 Dec 24 14:11	1°♏40'35	1°10'31
minimum elong	3129 Oct 12 14:47	19°♏20'25	2°08'37	minimum elong	3135 Dec 24 14:13	1°♏40'36	1°10'31
max. Earth dist.	3129 Oct 12 16:30	19°♏20'58	10.48136 AU	max. Earth dist.	3135 Dec 24 10:37	1°♏39'32	10.98231 AU
morning rise	3129 Oct 29 21:17	21°♏28'28		morning rise	3136 Jan 10 05:55	3°♏38'28	
retrograde	3130 Feb 07 09:05	28°♏57'42		retrograde	3136 Apr 19 06:49	10°♏39'42	
				opposition	3136 Jun 28 05:10	7°♏22'11	1°12'03

min. Earth dist.	3136 Jun 28 08:01	7°♄21'40	8.99829 AU	opposition	3142 Sep 09 01:57	16°♄38'55	-1°51'43
direct	3136 Sep 07 06:49	4°♄02'06		min. Earth dist.	3142 Sep 09 04:58	16°♄38'21	8.80024 AU
evening set	3136 Dec 18 09:38	11°♄09'30		direct	3142 Nov 17 06:33	13°♄19'24	
				evening set	3143 Feb 25 03:51	20°♄30'45	
conjunction	3137 Jan 04 02:35	13°♄07'24	0°46'39				
minimum elong	3137 Jan 04 02:37	13°♄07'24	0°46'38	conjunction	3143 Mar 13 22:06	22°♄32'06	-1°40'31
max. Earth dist.	3137 Jan 03 22:41	13°♄06'14	11.00855 AU	minimum elong	3143 Mar 13 22:03	22°♄32'05	1°40'31
morning rise	3137 Jan 20 18:03	15°♄04'55		max. Earth dist.	3143 Mar 13 18:25	22°♄30'59	10.75587 AU
retrograde	3137 May 01 05:17	22°♄06'14		morning rise	3143 Mar 30 19:44	24°♄34'30	
opposition	3137 Jul 10 10:06	18°♄48'28	0°41'36		3143 May 22 21:58	0°♄	
min. Earth dist.	3137 Jul 10 13:48	18°♄47'47	9.01410 AU	retrograde	3143 Jul 13 05:45	2°♄05'17	
direct	3137 Sep 19 07:52	15°♄28'57			3143 Sep 04 05:01	30°♄	
evening set	3137 Dec 29 21:05	22°♄33'32		opposition	3143 Sep 21 19:12	28°♄41'39	-2°14'18
				min. Earth dist.	3143 Sep 21 21:39	28°♄41'11	8.71006 AU
conjunction	3138 Jan 15 13:15	24°♄31'11	0°21'01	direct	3143 Nov 29 12:10	25°♄21'35	
minimum elong	3138 Jan 15 13:16	24°♄31'12	0°21'01		3144 Feb 14 09:41	0°♄	
max. Earth dist.	3138 Jan 15 08:16	24°♄29'43	11.01424 AU	evening set	3144 Mar 08 10:11	2°♄38'13	
morning rise	3138 Feb 01 04:57	26°♄28'43					
	3138 Mar 06 01:26	0°♄		conjunction	3144 Mar 25 06:30	4°♄41'20	-1°56'32
retrograde	3138 May 13 01:58	3°♄31'34		minimum elong	3144 Mar 25 06:27	4°♄41'19	1°56'32
opposition	3138 Jul 22 14:44	0°♄13'15	0°09'33	max. Earth dist.	3144 Mar 25 04:15	4°♄40'39	10.66047 AU
min. Earth dist.	3138 Jul 22 19:08	0°♄12'26	9.00934 AU	morning rise	3144 Apr 11 06:34	6°♄45'38	
	3138 Jul 25 14:28	30°♄		retrograde	3144 Jul 25 09:38	14°♄24'49	
direct	3138 Oct 01 07:31	26°♄54'06		opposition	3144 Oct 03 16:55	10°♄59'53	-2°31'18
desc. node	3138 Nov 10 09:04	28°♄11'18		min. Earth dist.	3144 Oct 03 18:11	10°♄59'39	8.61102 AU
	3138 Dec 03 19:57	0°♄		direct	3144 Dec 10 23:40	7°♄39'08	
evening set	3139 Jan 10 07:52	3°♄57'16		evening set	3145 Mar 21 00:19	15°♄02'02	
conjunction	3139 Jan 26 23:41	5°♄55'00	-0°05'33	conjunction	3145 Apr 06 23:21	17°♄07'14	-2°07'28
minimum elong	3139 Jan 26 23:41	5°♄55'00	0°05'32	minimum elong	3145 Apr 06 23:19	17°♄07'14	2°07'28
behind sun begin	3139 Jan 26 16:58	5°♄53'02		max. Earth dist.	3145 Apr 06 22:28	17°♄06'58	10.55833 AU
behind sun end	3139 Jan 27 06:24	5°♄56'58		morning rise	3145 Apr 24 02:25	19°♄13'45	
max. Earth dist.	3139 Jan 26 18:30	5°♄53'29	10.99938 AU	retrograde	3145 Aug 07 22:01	27°♄01'29	
morning rise	3139 Feb 12 15:54	7°♄52'51		opposition	3145 Oct 16 19:48	23°♄35'21	-2°41'31
retrograde	3139 May 25 03:28	14°♄58'45		min. Earth dist.	3145 Oct 16 19:47	23°♄35'21	8.50747 AU
opposition	3139 Aug 03 20:14	11°♄39'39	-0°22'58	direct	3145 Dec 23 14:15	20°♄13'45	
min. Earth dist.	3139 Aug 04 00:10	11°♄38'55	8.98436 AU	evening set	3146 Apr 02 22:59	27°♄43'41	
direct	3139 Oct 13 07:36	8°♄20'41					
	3140 Jan 18 09:24	15°♄		conjunction	3146 Apr 20 01:18	29°♄51'12	-2°12'27
evening set	3140 Jan 21 19:30	15°♄23'46		minimum elong	3146 Apr 20 01:18	29°♄51'12	2°12'26
				max. Earth dist.	3146 Apr 20 01:05	29°♄51'08	10.45426 AU
conjunction	3140 Feb 07 11:26	17°♄21'55	-0°31'52		3146 Apr 21 05:24	0°♄	
minimum elong	3140 Feb 07 11:25	17°♄21'55	0°31'52	morning rise	3146 May 07 08:05	2°♄00'10	
max. Earth dist.	3140 Feb 07 07:21	17°♄20'42	10.96452 AU	retrograde	3146 Aug 21 16:20	9°♄56'08	
morning rise	3140 Feb 24 04:20	19°♄20'25		opposition	3146 Oct 30 03:59	6°♄28'55	-2°43'58
retrograde	3140 Jun 05 08:49	26°♄30'46		min. Earth dist.	3146 Oct 30 03:15	6°♄29'04	8.40448 AU
opposition	3140 Aug 15 03:19	23°♄10'42	-0°54'49	direct	3147 Jan 05 11:32	3°♄06'23	
min. Earth dist.	3140 Aug 15 06:23	23°♄10'07	8.94003 AU	evening set	3147 Apr 16 06:52	10°♄43'47	
direct	3140 Oct 24 05:23	19°♄51'45					
evening set	3141 Feb 01 09:51	26°♄56'12		conjunction	3147 May 03 13:14	12°♄53'51	-2°10'48
				minimum elong	3147 May 03 13:15	12°♄53'51	2°10'48
conjunction	3141 Feb 18 02:08	28°♄55'05	-0°57'10	max. Earth dist.	3147 May 03 13:36	12°♄53'58	10.35362 AU
minimum elong	3141 Feb 18 02:06	28°♄55'05	0°57'09		3147 May 20 06:53	15°♄	
max. Earth dist.	3141 Feb 17 22:24	28°♄53'58	10.91088 AU	morning rise	3147 May 21 00:17	15°♄05'23	
	3141 Feb 27 03:24	0°♄		retrograde	3147 Sep 04 15:52	23°♄08'43	
morning rise	3141 Mar 06 20:08	0°♄54'33		opposition	3147 Nov 12 17:09	19°♄40'38	-2°37'55
retrograde	3141 Jun 17 18:14	8°♄10'39		min. Earth dist.	3147 Nov 12 16:04	19°♄40'51	8.30751 AU
opposition	3141 Aug 27 12:49	4°♄49'28	-1°24'48	direct	3148 Jan 18 16:45	16°♄17'03	
min. Earth dist.	3141 Aug 27 15:39	4°♄48'56	8.87789 AU	evening set	3148 Apr 29 00:01	24°♄01'59	
direct	3141 Nov 05 04:51	1°♄30'20					
evening set	3142 Feb 13 04:15	8°♄37'35		conjunction	3148 May 16 11:02	26°♄14'41	-2°02'11
				minimum elong	3148 May 16 11:04	26°♄14'42	2°02'11
conjunction	3142 Mar 01 21:12	10°♄37'33	-1°20'23	max. Earth dist.	3148 May 16 12:26	26°♄15'08	10.26179 AU
minimum elong	3142 Mar 01 21:10	10°♄37'32	1°20'23	morning rise	3148 Jun 03 02:35	28°♄28'48	
max. Earth dist.	3142 Mar 01 17:01	10°♄36'17	10.84045 AU		3148 Jun 15 12:23	0°♄	
morning rise	3142 Mar 18 16:50	12°♄38'19		retrograde	3148 Sep 17 20:45	6°♄38'06	
retrograde	3142 Jun 30 09:28	20°♄01'17		opposition	3148 Nov 25 10:52	3°♄09'24	-2°23'06

min. Earth dist.	3148 Nov 25 09:12	3° Π 09'44	8.22186 AU	conjunction	3154 Aug 12 04:33	19° Ω 59'37	0°37'03
	3149 Jan 14 14:23	30° κ 8		minimum elong	3154 Aug 12 04:31	19° Ω 59'37	0°37'03
direct	3149 Jan 31 04:27	29° \mathcal{B} 44'45		max. Earth dist.	3154 Aug 12 07:42	20° Ω 00'38	10.11321 AU
	3149 Feb 16 16:23	0° Π		morning rise	3154 Aug 30 06:14	22° Ω 18'34	
evening set	3149 May 13 02:04	7° Π 36'51			3154 Nov 22 01:28	0° \mathfrak{M}	
				retrograde	3154 Dec 11 21:28	0° \mathfrak{M} 21'53	
conjunction	3149 May 30 17:56	9° Π 52'04	-1°46'39		3154 Dec 31 17:58	30° κ 8	
minimum elong	3149 May 30 17:59	9° Π 52'05	1°46'39	opposition	3155 Feb 16 12:31	26° Ω 55'17	1°04'49
max. Earth dist.	3149 May 30 20:52	9° Π 53'00	10.18389 AU	min. Earth dist.	3155 Feb 16 10:01	26° Ω 55'48	8.13815 AU
morning rise	3149 Jun 17 13:46	12° Π 08'33		direct	3155 Apr 25 03:19	23° Ω 26'18	
retrograde	3149 Oct 02 05:35	20° Π 22'01			3155 Jul 26 21:49	0° \mathfrak{M}	
opposition	3149 Dec 09 08:18	16° Π 52'57	-1°59'54	evening set	3155 Aug 08 22:14	1° \mathfrak{M} 36'05	
min. Earth dist.	3149 Dec 09 05:38	16° Π 53'29	8.15244 AU				
direct	3150 Feb 13 22:34	13° Π 27'14		conjunction	3155 Aug 26 23:06	3° \mathfrak{M} 53'58	1°06'26
evening set	3150 May 27 12:11	21° Π 25'45		minimum elong	3155 Aug 26 23:03	3° \mathfrak{M} 53'58	1°06'26
				max. Earth dist.	3155 Aug 27 01:45	3° \mathfrak{M} 54'49	10.16812 AU
conjunction	3150 Jun 14 08:41	23° Π 43'09	-1°24'48	morning rise	3155 Sep 13 21:30	6° \mathfrak{M} 11'04	
minimum elong	3150 Jun 14 08:44	23° Π 43'10	1°24'48	retrograde	3155 Dec 25 16:06	14° \mathfrak{M} 07'34	
max. Earth dist.	3150 Jun 14 13:09	23° Π 44'36	10.12449 AU	opposition	3156 Mar 01 08:31	10° \mathfrak{M} 42'06	1°38'52
morning rise	3150 Jul 02 08:16	26° Π 01'35		min. Earth dist.	3156 Mar 01 05:56	10° \mathfrak{M} 42'38	8.20358 AU
	3150 Aug 05 01:32	0° \mathfrak{S}		direct	3156 May 08 11:45	7° \mathfrak{M} 13'14	
retrograde	3150 Oct 16 16:29	4° \mathfrak{S} 17'03		evening set	3156 Aug 22 13:29	15° \mathfrak{M} 19'57	
opposition	3150 Dec 23 08:27	0° \mathfrak{S} 47'53	-1°29'22				
min. Earth dist.	3150 Dec 23 04:42	0° \mathfrak{S} 48'39	8.10330 AU	conjunction	3156 Sep 09 10:58	17° \mathfrak{M} 35'43	1°31'39
	3151 Jan 02 04:30	30° κ 11		minimum elong	3156 Sep 09 10:54	17° \mathfrak{M} 35'42	1°31'39
direct	3151 Feb 27 22:16	27° Π 21'10		max. Earth dist.	3156 Sep 09 13:34	17° \mathfrak{M} 36'33	10.24266 AU
	3151 Apr 23 20:08	0° \mathfrak{S}		morning rise	3156 Sep 27 05:01	19° \mathfrak{M} 50'26	
evening set	3151 Jun 11 04:53	5° \mathfrak{S} 24'57		retrograde	3157 Jan 07 04:58	27° \mathfrak{M} 39'17	
				opposition	3157 Mar 15 00:38	24° \mathfrak{M} 15'00	2°06'46
conjunction	3151 Jun 29 05:14	7° \mathfrak{S} 44'01	-0°57'45	min. Earth dist.	3157 Mar 14 21:52	24° \mathfrak{M} 15'34	8.28668 AU
minimum elong	3151 Jun 29 05:17	7° \mathfrak{S} 44'02	0°57'45	direct	3157 May 22 15:34	20° \mathfrak{M} 46'31	
max. Earth dist.	3151 Jun 29 10:21	7° \mathfrak{S} 45'40	10.08678 AU	evening set	3157 Sep 05 20:55	28° \mathfrak{M} 48'25	
morning rise	3151 Jul 17 07:35	10° \mathfrak{S} 03'46			3157 Sep 15 10:34	0° \mathfrak{A}	
retrograde	3151 Oct 31 03:33	18° \mathfrak{S} 18'58					
opposition	3152 Jan 06 10:08	14° \mathfrak{S} 50'01	-0°53'13	conjunction	3157 Sep 23 14:18	1° \mathfrak{A} 01'42	1°51'25
min. Earth dist.	3152 Jan 06 06:08	14° \mathfrak{S} 50'51	8.07676 AU	minimum elong	3157 Sep 23 14:15	1° \mathfrak{A} 01'41	1°51'25
direct	3152 Mar 13 02:08	11° \mathfrak{S} 22'23		max. Earth dist.	3157 Sep 23 17:00	1° \mathfrak{A} 02'33	10.33254 AU
evening set	3152 Jun 25 02:18	19° \mathfrak{S} 30'05		morning rise	3157 Oct 11 03:31	3° \mathfrak{A} 13'42	
				retrograde	3158 Jan 20 11:53	10° \mathfrak{A} 54'31	
conjunction	3152 Jul 13 05:09	21° \mathfrak{S} 50'04	-0°27'07	opposition	3158 Mar 28 12:01	7° \mathfrak{A} 31'25	2°27'12
minimum elong	3152 Jul 13 05:10	21° \mathfrak{S} 50'05	0°27'07	min. Earth dist.	3158 Mar 28 09:30	7° \mathfrak{A} 31'55	8.38255 AU
max. Earth dist.	3152 Jul 13 09:55	21° \mathfrak{S} 51'37	10.07211 AU	direct	3158 Jun 05 14:41	4° \mathfrak{A} 03'33	
morning rise	3152 Jul 31 08:51	24° \mathfrak{S} 10'22		evening set	3158 Sep 19 19:25	11° \mathfrak{A} 59'18	
	3152 Sep 22 03:58	0° Ω					
retrograde	3152 Nov 13 13:25	2° Ω 23'16		conjunction	3158 Oct 07 08:21	14° \mathfrak{A} 09'54	2°04'56
	3153 Jan 06 02:20	30° κ 8		minimum elong	3158 Oct 07 08:19	14° \mathfrak{A} 09'54	2°04'55
opposition	3153 Jan 19 12:05	28° \mathfrak{S} 54'52	-0°13'44	max. Earth dist.	3158 Oct 07 10:46	14° \mathfrak{A} 10'39	10.43253 AU
min. Earth dist.	3153 Jan 19 08:32	28° \mathfrak{S} 55'36	8.07357 AU	morning rise	3158 Oct 24 16:42	16° \mathfrak{A} 19'08	
direct	3153 Mar 27 08:30	25° \mathfrak{S} 26'31		retrograde	3159 Feb 02 10:32	23° \mathfrak{A} 51'50	
asc. node	3153 May 28 10:55	28° \mathfrak{S} 43'29		opposition	3159 Apr 10 18:15	20° \mathfrak{A} 29'54	2°39'35
	3153 Jun 09 19:12	0° Ω		min. Earth dist.	3159 Apr 10 16:51	20° \mathfrak{A} 30'11	8.48577 AU
evening set	3153 Jul 10 02:00	3° Ω 36'40		direct	3159 Jun 19 08:50	17° \mathfrak{A} 02'51	
				evening set	3159 Oct 03 08:00	24° \mathfrak{A} 51'31	
conjunction	3153 Jul 28 05:47	5° Ω 56'48	0°05'15				
minimum elong	3153 Jul 28 05:46	5° Ω 56'47	0°05'15	conjunction	3159 Oct 20 16:30	26° \mathfrak{A} 59'26	2°11'52
behind sun begin	3153 Jul 27 22:39	5° Ω 54'31		minimum elong	3159 Oct 20 16:29	26° \mathfrak{A} 59'26	2°11'52
behind sun end	3153 Jul 28 12:53	5° Ω 59'04		max. Earth dist.	3159 Oct 20 17:44	26° \mathfrak{A} 59'49	10.53721 AU
max. Earth dist.	3153 Jul 28 09:46	5° Ω 58'03	10.08084 AU	morning rise	3159 Nov 06 20:25	29° \mathfrak{A} 06'00	
morning rise	3153 Aug 15 09:15	8° Ω 16'49			3159 Nov 14 08:51	0° \mathfrak{M}	
	3153 Oct 18 22:44	15° Ω		retrograde	3160 Feb 15 02:06	6° \mathfrak{M} 30'59	
retrograde	3153 Nov 27 20:12	16° Ω 25'42		opposition	3160 Apr 22 19:30	3° \mathfrak{M} 10'09	2°43'48
	3154 Jan 07 02:23	15° κ 8		min. Earth dist.	3160 Apr 22 19:10	3° \mathfrak{M} 10'13	8.59097 AU
opposition	3154 Feb 02 13:17	12° Ω 58'07	0°26'29		3160 Jun 14 01:08	30° κ 8	
min. Earth dist.	3154 Feb 02 10:24	12° Ω 58'43	8.09412 AU	direct	3160 Jul 01 21:20	29° \mathfrak{A} 44'03	
direct	3154 Apr 10 17:30	9° Ω 29'18			3160 Jul 19 16:50	0° \mathfrak{M}	
	3154 Jul 03 01:33	15° Ω		evening set	3160 Oct 15 10:16	7° \mathfrak{M} 25'04	
evening set	3154 Jul 25 01:28	17° Ω 40'13					



























































































































conjunction	3160 Nov 01 14:42	9° \mathbb{M} 30'30	2°12'20	evening set	3166 Dec 25 07:46	17° \mathfrak{Z} 54'50	
minimum elong	3160 Nov 01 14:43	9° \mathbb{M} 30'30	2°12'20				
max. Earth dist.	3160 Nov 01 14:36	9° \mathbb{M} 30'28	10.64137 AU	conjunction	3167 Jan 11 00:14	19° \mathfrak{Z} 52'22	0°32'15
morning rise	3160 Nov 18 14:55	11° \mathbb{M} 34'39		minimum elong	3167 Jan 11 00:15	19° \mathfrak{Z} 52'23	0°32'15
	3160 Dec 19 03:59	15° \mathbb{M}		max. Earth dist.	3167 Jan 10 21:27	19° \mathfrak{Z} 51'33	11.02648 AU
retrograde	3161 Feb 26 12:03	18° \mathbb{M} 52'36		morning rise	3167 Jan 27 15:43	21° \mathfrak{Z} 49'40	
opposition	3161 May 05 15:40	15° \mathbb{M} 32'43	2°40'15	retrograde	3167 May 08 06:50	28° \mathfrak{Z} 50'47	
min. Earth dist.	3161 May 05 15:51	15° \mathbb{M} 32'41	8.69304 AU	opposition	3167 Jul 17 17:12	25° \mathfrak{Z} 32'51	0°23'34
	3161 May 12 18:24	15° \mathbb{R} \mathbb{M}		min. Earth dist.	3167 Jul 17 19:14	25° \mathfrak{Z} 32'28	9.02921 AU
direct	3161 Jul 15 02:34	12° \mathbb{M} 07'42		direct	3167 Sep 26 13:33	22° \mathfrak{Z} 13'46	
	3161 Sep 13 23:38	15° \mathbb{M}		evening set	3168 Jan 05 17:56	29° \mathfrak{Z} 16'28	
evening set	3161 Oct 28 02:58	19° \mathbb{M} 40'58			3168 Jan 11 23:21	0° \approx	
conjunction	3161 Nov 14 04:03	21° \mathbb{M} 44'13	2°06'42	conjunction	3168 Jan 22 09:55	1° \approx 13'54	0°06'08
minimum elong	3161 Nov 14 04:05	21° \mathbb{M} 44'14	2°06'42	minimum elong	3168 Jan 22 09:55	1° \approx 13'54	0°06'09
max. Earth dist.	3161 Nov 14 03:10	21° \mathbb{M} 43'57	10.74018 AU	behind sun begin	3168 Jan 22 03:17	1° \approx 11'58	
morning rise	3161 Dec 01 01:12	23° \mathbb{M} 46'17		behind sun end	3168 Jan 22 16:33	1° \approx 15'50	
	3162 Feb 05 02:23	0° \mathfrak{Z}		max. Earth dist.	3168 Jan 22 07:14	1° \approx 13'08	11.02668 AU
retrograde	3162 Mar 10 16:14	0° \mathfrak{Z} 58'09		morning rise	3168 Feb 08 01:38	3° \approx 11'18	
	3162 Apr 13 23:39	30° \mathbb{R} \mathbb{M}		desc. node	3168 Apr 17 17:53	9° \approx 26'27	
opposition	3162 May 18 07:01	27° \mathbb{M} 39'03	2°29'37	retrograde	3168 May 19 06:59	10° \approx 14'40	
min. Earth dist.	3162 May 18 07:09	27° \mathbb{M} 39'02	8.78735 AU	opposition	3168 Jul 28 21:27	6° \approx 56'16	-0°08'48
direct	3162 Jul 28 02:00	24° \mathbb{M} 15'10		min. Earth dist.	3168 Jul 28 23:51	6° \approx 55'49	9.01899 AU
	3162 Oct 25 18:47	0° \mathfrak{Z}		direct	3168 Oct 07 11:30	3° \approx 37'39	
evening set	3162 Nov 09 11:01	1° \mathfrak{Z} 41'03		evening set	3169 Jan 16 04:26	10° \approx 39'32	
conjunction	3162 Nov 26 09:26	3° \mathfrak{Z} 42'27	1°55'35	conjunction	3169 Feb 01 20:07	12° \approx 37'10	-0°20'24
minimum elong	3162 Nov 26 09:28	3° \mathfrak{Z} 42'27	1°55'36	minimum elong	3169 Feb 01 20:07	12° \approx 37'10	0°20'24
max. Earth dist.	3162 Nov 26 08:39	3° \mathfrak{Z} 42'12	10.82928 AU	max. Earth dist.	3169 Feb 01 16:27	12° \approx 36'06	11.00621 AU
morning rise	3162 Dec 13 04:07	5° \mathfrak{Z} 42'47		morning rise	3169 Feb 18 12:36	14° \approx 35'03	
retrograde	3163 Mar 22 18:29	12° \mathfrak{Z} 49'44			3169 Feb 22 03:06	15° \approx	
opposition	3163 May 30 18:36	9° \mathfrak{Z} 31'17	2°12'45	retrograde	3169 May 31 08:45	21° \approx 42'03	
min. Earth dist.	3163 May 30 19:11	9° \mathfrak{Z} 31'11	8.86993 AU	opposition	3169 Aug 10 03:00	18° \approx 22'58	-0°40'57
direct	3163 Aug 09 18:47	6° \mathfrak{Z} 08'34		min. Earth dist.	3169 Aug 10 06:08	18° \approx 22'23	8.98842 AU
evening set	3163 Nov 21 11:35	13° \mathfrak{Z} 27'39		direct	3169 Oct 19 08:23	15° \approx 04'36	
				evening set	3170 Jan 27 16:48	22° \approx 07'07	
conjunction	3163 Dec 08 07:48	15° \mathfrak{Z} 27'33	1°39'44	conjunction	3170 Feb 13 08:35	24° \approx 05'16	-0°46'12
minimum elong	3163 Dec 08 07:50	15° \mathfrak{Z} 27'34	1°39'45	minimum elong	3170 Feb 13 08:34	24° \approx 05'15	0°46'12
max. Earth dist.	3163 Dec 08 06:34	15° \mathfrak{Z} 27'11	10.90501 AU	max. Earth dist.	3170 Feb 13 04:46	24° \approx 04'08	10.96567 AU
morning rise	3163 Dec 25 00:47	17° \mathfrak{Z} 26'33		morning rise	3170 Mar 02 02:02	26° \approx 03'55	
retrograde	3164 Apr 02 17:06	24° \mathfrak{Z} 29'52			3170 Apr 08 01:42	0° \mathfrak{H}	
opposition	3164 Jun 11 03:03	21° \mathfrak{Z} 11'55	1°50'39	retrograde	3170 Jun 12 14:18	3° \mathfrak{H} 15'57	
min. Earth dist.	3164 Jun 11 04:38	21° \mathfrak{Z} 11'37	8.93762 AU		3170 Aug 21 12:45	30° \mathbb{R} \approx	
direct	3164 Aug 21 03:59	17° \mathfrak{Z} 50'18		opposition	3170 Aug 22 10:34	29° \approx 55'57	-1°11'46
evening set	3164 Dec 02 06:17	25° \mathfrak{Z} 03'31		min. Earth dist.	3170 Aug 22 13:30	29° \approx 55'24	8.93841 AU
conjunction	3164 Dec 19 00:43	27° \mathfrak{Z} 02'16	1°19'59	direct	3170 Oct 31 07:50	26° \approx 37'35	
minimum elong	3164 Dec 19 00:45	27° \mathfrak{Z} 02'16	1°19'59		3171 Jan 04 23:52	0° \mathfrak{H}	
max. Earth dist.	3164 Dec 18 22:14	27° \mathfrak{Z} 01'31	10.96451 AU	evening set	3171 Feb 08 08:23	3° \mathfrak{H} 42'05	
morning rise	3165 Jan 04 16:48	29° \mathfrak{Z} 00'21					
	3165 Jan 13 08:54	0° \mathfrak{Z}		conjunction	3171 Feb 25 00:50	5° \mathfrak{H} 41'08	-1°10'22
retrograde	3165 Apr 14 12:34	6° \mathfrak{Z} 01'26		minimum elong	3171 Feb 25 00:48	5° \mathfrak{H} 41'07	1°10'22
opposition	3165 Jun 23 08:55	2° \mathfrak{Z} 43'44	1°24'23	max. Earth dist.	3171 Feb 24 21:49	5° \mathfrak{H} 40'14	10.90625 AU
min. Earth dist.	3165 Jun 23 11:26	2° \mathfrak{Z} 43'16	8.98788 AU	morning rise	3171 Mar 13 19:28	7° \mathfrak{H} 40'52	
	3165 Aug 05 10:54	30° \mathbb{R} \mathfrak{Z}		retrograde	3171 Jun 25 02:51	14° \mathfrak{H} 59'09	
direct	3165 Sep 02 11:07	29° \mathfrak{Z} 23'05		opposition	3171 Sep 03 21:07	11° \mathfrak{H} 38'03	-1°40'04
	3165 Sep 30 03:06	0° \mathfrak{Z}		min. Earth dist.	3171 Sep 03 23:20	11° \mathfrak{H} 37'38	8.87039 AU
evening set	3165 Dec 13 20:29	6° \mathfrak{Z} 31'34		direct	3171 Nov 12 07:59	8° \mathfrak{H} 19'27	
				evening set	3172 Feb 20 04:40	15° \mathfrak{H} 27'18	
conjunction	3165 Dec 30 13:42	8° \mathfrak{Z} 29'32	0°57'11	conjunction	3172 Mar 07 22:11	17° \mathfrak{H} 27'34	-1°31'54
minimum elong	3165 Dec 30 13:43	8° \mathfrak{Z} 29'32	0°57'11	minimum elong	3172 Mar 07 22:09	17° \mathfrak{H} 27'33	1°31'54
max. Earth dist.	3165 Dec 30 10:23	8° \mathfrak{Z} 28'33	11.00554 AU	max. Earth dist.	3172 Mar 07 19:28	17° \mathfrak{H} 26'45	10.82959 AU
morning rise	3166 Jan 16 05:22	10° \mathfrak{Z} 27'02		morning rise	3172 Mar 24 18:30	19° \mathfrak{H} 28'44	
retrograde	3166 Apr 26 09:32	17° \mathfrak{Z} 27'24		retrograde	3172 Jul 06 20:28	26° \mathfrak{H} 54'19	
opposition	3166 Jul 05 13:18	14° \mathfrak{Z} 09'41	0°54'59	opposition	3172 Sep 15 11:23	23° \mathfrak{H} 31'59	-2°04'36
min. Earth dist.	3166 Jul 05 15:40	14° \mathfrak{Z} 09'15	9.01877 AU	min. Earth dist.	3172 Sep 15 13:23	23° \mathfrak{H} 31'36	8.78614 AU
direct	3166 Sep 14 14:25	10° \mathfrak{Z} 49'55					

direct	3172 Nov 23 10:14	20° X 12'56	retrograde	3178 Sep 25 22:52	14° II 12'29
evening set	3173 Mar 03 07:06	27° X 25'31	opposition	3178 Dec 03 06:11	10° II 43'22 -2°11'44
			min. Earth dist.	3178 Dec 03 04:49	10° II 43'39 8.18500 AU
conjunction	3173 Mar 20 02:08	29° X 27'21 -1°49'48	direct	3179 Feb 07 21:37	7° II 17'55
minimum elong	3173 Mar 20 02:06	29° X 27'20 1°49'48	evening set	3179 May 21 03:22	15° II 13'04
max. Earth dist.	3173 Mar 19 22:35	29° X 26'16 10.73799 AU			
	3173 Mar 24 13:26	0° Y	conjunction	3179 Jun 07 21:36	17° II 29'25 -1°35'46
morning rise	3173 Apr 06 00:45	1° Y 30'18	minimum elong	3179 Jun 07 21:40	17° II 29'27 1°35'46
retrograde	3173 Jul 19 20:33	9° Y 04'01	max. Earth dist.	3179 Jun 07 22:58	17° II 29'52 10.14875 AU
opposition	3173 Sep 28 05:58	5° Y 40'25 -2°24'10	morning rise	3179 Jun 25 19:33	19° II 46'58
min. Earth dist.	3173 Sep 28 08:24	5° Y 39'57 8.68867 AU	retrograde	3179 Oct 10 07:47	28° II 01'29
direct	3173 Dec 05 17:17	2° Y 20'40	opposition	3179 Dec 17 04:37	24° II 32'01 -1°44'33
evening set	3174 Mar 15 16:40	9° Y 39'10	min. Earth dist.	3179 Dec 17 03:07	24° II 32'19 8.11914 AU
			direct	3180 Feb 21 18:45	21° II 05'20
conjunction	3174 Apr 01 13:58	11° Y 42'58 -2°03'06	evening set	3180 Jun 03 16:37	29° II 06'44
minimum elong	3174 Apr 01 13:57	11° Y 42'57 2°03'06		3180 Jun 10 15:36	0° Z
max. Earth dist.	3174 Apr 01 10:21	11° Y 41'51 10.63544 AU			
morning rise	3174 Apr 18 15:29	13° Y 48'02	conjunction	3180 Jun 21 15:08	1° Z 25'07 -1°11'02
retrograde	3174 Aug 02 03:23	21° Y 30'21	minimum elong	3180 Jun 21 15:11	1° Z 25'08 1°11'02
opposition	3174 Oct 11 05:42	18° Y 05'26 -2°37'34	max. Earth dist.	3180 Jun 21 17:13	1° Z 25'48 10.09400 AU
min. Earth dist.	3174 Oct 11 08:01	18° Y 04'59 8.58275 AU	morning rise	3180 Jul 09 16:30	3° Z 44'24
direct	3174 Dec 18 05:16	14° Y 44'47	retrograde	3180 Oct 23 17:57	12° Z 00'08
evening set	3175 Mar 28 10:14	22° Y 10'07	opposition	3180 Dec 30 05:29	8° Z 30'37 -1°10'50
			min. Earth dist.	3180 Dec 30 03:27	8° Z 31'02 8.07573 AU
conjunction	3175 Apr 14 10:43	24° Y 16'09 -2°10'52	direct	3181 Mar 06 20:59	5° Z 02'53
minimum elong	3175 Apr 14 10:42	24° Y 16'09 2°10'51	evening set	3181 Jun 18 11:34	13° Z 09'11
max. Earth dist.	3175 Apr 14 08:18	24° Y 15'24 10.52718 AU			
morning rise	3175 May 01 15:37	26° Y 23'36	conjunction	3181 Jul 06 13:22	15° Z 28'59 -0°41'53
	3175 Jun 02 08:14	0° Z	minimum elong	3181 Jul 06 13:24	15° Z 29'00 0°41'53
retrograde	3175 Aug 15 16:16	4° Z 14'32	max. Earth dist.	3181 Jul 06 16:32	15° Z 30'00 10.06314 AU
opposition	3175 Oct 24 10:31	0° Z 48'17 -2°43'41	morning rise	3181 Jul 24 16:50	17° Z 49'17
min. Earth dist.	3175 Oct 24 11:59	0° Z 48'00 8.47385 AU	retrograde	3181 Nov 07 04:00	26° Z 04'01
	3175 Nov 03 19:24	30° K Y	opposition	3182 Jan 13 07:27	22° Z 34'48 -0°32'36
direct	3175 Dec 31 00:31	27° Y 26'34	min. Earth dist.	3182 Jan 13 04:34	22° Z 35'23 8.05745 AU
	3176 Feb 23 15:45	0° Z	direct	3182 Mar 21 02:22	19° Z 06'11
evening set	3176 Apr 09 12:52	4° Z 59'19	evening set	3182 Jul 03 10:22	27° Z 15'52
conjunction	3176 Apr 26 17:15	7° Z 07'54 -2°12'20	conjunction	3182 Jul 21 14:02	29° Z 36'14 -0°10'08
minimum elong	3176 Apr 26 17:16	7° Z 07'54 2°12'20	minimum elong	3182 Jul 21 14:03	29° Z 36'14 0°10'09
max. Earth dist.	3176 Apr 26 16:27	7° Z 07'39 10.41875 AU	behind sun begin	3182 Jul 21 08:14	29° Z 34'22
morning rise	3176 May 14 02:03	9° Z 17'55	behind sun end	3182 Jul 21 19:52	29° Z 38'07
	3176 Jul 06 17:04	15° Z	max. Earth dist.	3182 Jul 21 18:08	29° Z 37'33 10.05815 AU
retrograde	3176 Aug 28 12:26	17° Z 16'50		3182 Jul 24 15:15	0° Z
	3176 Oct 21 16:49	15° K Z	morning rise	3182 Aug 08 18:01	1° Z 56'42
opposition	3176 Nov 05 20:16	13° Z 49'24 -2°41'40	asc. node	3182 Nov 16 19:04	10° Z 07'04
min. Earth dist.	3176 Nov 05 20:23	13° Z 49'22 8.36752 AU	retrograde	3182 Nov 21 12:39	10° Z 08'19
direct	3177 Jan 12 01:30	10° Z 26'29	opposition	3183 Jan 27 09:09	6° Z 39'43 0°07'38
	3177 Mar 27 13:06	15° Z	min. Earth dist.	3183 Jan 27 05:32	6° Z 40'27 8.06552 AU
evening set	3177 Apr 23 00:46	18° Z 06'56	direct	3183 Apr 04 10:33	3° Z 10'30
			evening set	3183 Jul 18 10:26	11° Z 21'47
conjunction	3177 May 10 09:33	20° Z 18'12 -2°07'01			
minimum elong	3177 May 10 09:35	20° Z 18'12 2°07'00	conjunction	3183 Aug 05 14:17	13° Z 41'51 0°22'15
max. Earth dist.	3177 May 10 09:46	20° Z 18'16 10.31587 AU	minimum elong	3183 Aug 05 14:16	13° Z 41'50 0°22'15
morning rise	3177 May 27 22:40	22° Z 30'52	max. Earth dist.	3183 Aug 05 18:58	13° Z 43'21 10.07931 AU
	3177 Aug 16 01:27	0° II		3183 Aug 15 16:12	15° Z
retrograde	3177 Sep 11 15:47	0° II 36'42	morning rise	3183 Aug 23 17:04	16° Z 01'35
	3177 Oct 08 07:14	30° K Z	retrograde	3183 Dec 05 16:58	24° Z 08'17
opposition	3177 Nov 19 11:03	27° Z 08'17 -2°31'00	opposition	3184 Feb 10 09:32	20° Z 40'34 0°47'12
min. Earth dist.	3177 Nov 19 10:12	27° Z 08'27 8.26941 AU	min. Earth dist.	3184 Feb 10 05:36	20° Z 41'23 8.09938 AU
direct	3178 Jan 25 07:20	23° Z 44'07	direct	3184 Apr 17 19:45	17° Z 11'05
	3178 Apr 24 09:16	0° II	evening set	3184 Aug 01 08:54	25° Z 22'04
evening set	3178 May 06 21:40	1° II 32'08			
			conjunction	3184 Aug 19 11:11	27° Z 40'56 0°53'02
conjunction	3178 May 24 11:10	3° II 46'03 -1°54'43	minimum elong	3184 Aug 19 11:09	27° Z 40'55 0°53'01
minimum elong	3178 May 24 11:13	3° II 46'04 1°54'42	max. Earth dist.	3184 Aug 19 15:58	27° Z 42'29 10.12525 AU
max. Earth dist.	3178 May 24 12:06	3° II 46'21 10.22416 AU	morning rise	3184 Sep 06 11:13	29° Z 59'08
morning rise	3178 Jun 11 04:50	6° II 01'18		3184 Sep 06 13:58	0° Z

retrograde	3184 Dec 18 15:45	7° \mathbb{M} 59'29		retrograde	3191 Mar 05 13:49	25° \mathbb{M} 42'25	
opposition	3185 Feb 23 07:23	4° \mathbb{M} 32'56	1°23'33	opposition	3191 May 12 22:01	22° \mathbb{M} 23'24	2°35'07
min. Earth dist.	3185 Feb 23 03:50	4° \mathbb{M} 33'40	8.15699 AU	min. Earth dist.	3191 May 12 22:02	22° \mathbb{M} 23'24	8.74899 AU
direct	3185 May 02 04:00	1° \mathbb{M} 03'31		direct	3191 Jul 22 11:51	18° \mathbb{M} 59'26	
evening set	3185 Aug 16 03:09	9° \mathbb{M} 12'16		evening set	3191 Nov 04 06:15	26° \mathbb{M} 28'59	
conjunction	3185 Sep 03 02:27	11° \mathbb{M} 29'15	1°20'24	conjunction	3191 Nov 21 05:48	28° \mathbb{M} 31'12	2°01'09
minimum elong	3185 Sep 03 02:24	11° \mathbb{M} 29'14	1°20'23	minimum elong	3191 Nov 21 05:49	28° \mathbb{M} 31'12	2°01'10
max. Earth dist.	3185 Sep 03 06:35	11° \mathbb{M} 30'35	10.19329 AU	max. Earth dist.	3191 Nov 21 05:03	28° \mathbb{M} 30'59	10.79455 AU
morning rise	3185 Sep 20 22:38	13° \mathbb{M} 45'17			3191 Dec 03 12:52	0° \mathbb{M}	
retrograde	3186 Jan 01 08:25	21° \mathbb{M} 38'16		morning rise	3191 Dec 08 01:33	0° \mathbb{M} 32'18	
opposition	3186 Mar 09 01:36	18° \mathbb{M} 13'01	1°54'31	retrograde	3192 Mar 16 16:56	7° \mathbb{M} 41'36	
min. Earth dist.	3186 Mar 08 22:41	18° \mathbb{M} 13'37	8.23490 AU	opposition	3192 May 24 11:59	4° \mathbb{M} 23'20	2°20'58
direct	3186 May 16 09:31	14° \mathbb{M} 43'59		min. Earth dist.	3192 May 24 13:07	4° \mathbb{M} 23'08	8.83901 AU
evening set	3186 Aug 30 14:50	22° \mathbb{M} 48'45		direct	3192 Aug 03 08:35	1° \mathbb{M} 00'31	
				evening set	3192 Nov 15 10:37	8° \mathbb{M} 22'53	
conjunction	3186 Sep 17 10:13	25° \mathbb{M} 03'22	1°42'51	conjunction	3192 Dec 02 07:41	10° \mathbb{M} 23'26	1°47'21
minimum elong	3186 Sep 17 10:10	25° \mathbb{M} 03'21	1°42'50	minimum elong	3192 Dec 02 07:44	10° \mathbb{M} 23'27	1°47'22
max. Earth dist.	3186 Sep 17 13:23	25° \mathbb{M} 04'23	10.27934 AU	max. Earth dist.	3192 Dec 02 05:31	10° \mathbb{M} 22'47	10.87740 AU
morning rise	3186 Oct 05 01:53	27° \mathbb{M} 16'49		morning rise	3192 Dec 19 01:35	12° \mathbb{M} 23'02	
	3186 Oct 27 22:51	0° \mathbb{M}		retrograde	3193 Mar 28 16:47	19° \mathbb{M} 28'05	
retrograde	3187 Jan 14 18:04	5° \mathbb{M} 01'50		opposition	3193 Jun 05 22:11	16° \mathbb{M} 10'21	2°01'07
opposition	3187 Mar 22 15:34	1° \mathbb{M} 37'59	2°18'33	min. Earth dist.	3193 Jun 05 23:46	16° \mathbb{M} 10'03	8.91333 AU
min. Earth dist.	3187 Mar 22 13:07	1° \mathbb{M} 38'28	8.32837 AU	direct	3193 Aug 15 22:31	12° \mathbb{M} 48'39	
	3187 Apr 12 21:05	30° \mathbb{R} \mathbb{M}		evening set	3193 Nov 27 08:25	20° \mathbb{M} 04'44	
direct	3187 May 30 12:11	28° \mathbb{M} 09'38					
	3187 Jul 16 11:26	0° \mathbb{M}		conjunction	3193 Dec 14 03:42	22° \mathbb{M} 04'01	1°29'15
evening set	3187 Sep 13 18:11	6° \mathbb{M} 08'53		minimum elong	3193 Dec 14 03:44	22° \mathbb{M} 04'02	1°29'15
conjunction	3187 Oct 01 09:08	8° \mathbb{M} 20'51	1°59'20	max. Earth dist.	3193 Dec 14 01:05	22° \mathbb{M} 03'14	10.94294 AU
minimum elong	3187 Oct 01 09:05	8° \mathbb{M} 20'50	1°59'20	morning rise	3193 Dec 30 20:11	24° \mathbb{M} 02'31	
max. Earth dist.	3187 Oct 01 11:29	8° \mathbb{M} 21'35	10.37831 AU		3194 Mar 04 12:23	0° \mathbb{M}	
morning rise	3187 Oct 18 19:57	10° \mathbb{M} 31'30		retrograde	3194 Apr 09 15:09	1° \mathbb{M} 04'47	
retrograde	3188 Jan 27 19:41	18° \mathbb{M} 08'24			3194 May 16 14:55	30° \mathbb{R} \mathbb{M}	
opposition	3188 Apr 04 00:39	14° \mathbb{M} 45'56	2°34'43	opposition	3194 Jun 18 05:31	27° \mathbb{M} 47'21	1°36'35
min. Earth dist.	3188 Apr 03 22:13	14° \mathbb{M} 46'25	8.43204 AU	min. Earth dist.	3194 Jun 18 07:35	27° \mathbb{M} 46'58	8.96906 AU
direct	3188 Jun 12 10:16	11° \mathbb{M} 18'31		direct	3194 Aug 28 08:02	24° \mathbb{M} 26'37	
evening set	3188 Sep 26 11:56	19° \mathbb{M} 11'03			3194 Nov 24 16:11	0° \mathbb{M}	
				evening set	3194 Dec 09 01:10	1° \mathbb{M} 37'33	
conjunction	3188 Oct 13 22:29	21° \mathbb{M} 20'18	2°09'20	conjunction	3194 Dec 25 19:04	3° \mathbb{M} 35'55	1°07'42
minimum elong	3188 Oct 13 22:28	21° \mathbb{M} 20'17	2°09'20	minimum elong	3194 Dec 25 19:06	3° \mathbb{M} 35'56	1°07'42
max. Earth dist.	3188 Oct 14 00:37	21° \mathbb{M} 20'58	10.48482 AU	max. Earth dist.	3194 Dec 25 16:02	3° \mathbb{M} 35'01	10.98913 AU
morning rise	3188 Oct 31 04:36	23° \mathbb{M} 28'11		morning rise	3195 Jan 11 10:45	5° \mathbb{M} 33'42	
	3189 Jan 06 21:49	0° \mathbb{M}		retrograde	3195 Apr 21 13:06	12° \mathbb{M} 34'40	
retrograde	3189 Feb 08 15:54	0° \mathbb{M} 57'10		opposition	3195 Jun 30 11:16	9° \mathbb{M} 17'16	1°08'27
	3189 Mar 13 23:25	30° \mathbb{R} \mathbb{M}		min. Earth dist.	3195 Jun 30 14:20	9° \mathbb{M} 16'42	9.00495 AU
opposition	3189 Apr 17 04:44	27° \mathbb{M} 35'59	2°42'40	direct	3195 Sep 09 11:56	5° \mathbb{M} 57'20	
min. Earth dist.	3189 Apr 17 02:23	27° \mathbb{M} 36'26	8.54038 AU	evening set	3195 Dec 20 14:15	13° \mathbb{M} 04'13	
direct	3189 Jun 26 01:32	24° \mathbb{M} 09'40					
	3189 Sep 23 11:56	0° \mathbb{M}		conjunction	3196 Jan 06 07:02	15° \mathbb{M} 02'01	0°43'36
evening set	3189 Oct 09 19:34	1° \mathbb{M} 54'42		minimum elong	3196 Jan 06 07:04	15° \mathbb{M} 02'02	0°43'36
conjunction	3189 Oct 27 02:03	4° \mathbb{M} 01'21	2°12'45	max. Earth dist.	3196 Jan 06 02:41	15° \mathbb{M} 00'44	11.01503 AU
minimum elong	3189 Oct 27 02:03	4° \mathbb{M} 01'21	2°12'45	morning rise	3196 Jan 22 22:36	16° \mathbb{M} 59'30	
max. Earth dist.	3189 Oct 27 04:09	4° \mathbb{M} 02'00	10.59331 AU	retrograde	3196 May 02 08:47	24° \mathbb{M} 00'37	
morning rise	3189 Nov 13 03:56	6° \mathbb{M} 06'39		opposition	3196 Jul 11 16:01	20° \mathbb{M} 42'55	0°37'46
retrograde	3190 Feb 21 06:46	13° \mathbb{M} 28'11		min. Earth dist.	3196 Jul 11 20:00	20° \mathbb{M} 42'11	9.02030 AU
opposition	3190 Apr 30 03:47	10° \mathbb{M} 08'10	2°42'37	direct	3196 Sep 20 12:55	17° \mathbb{M} 23'33	
min. Earth dist.	3190 Apr 30 02:21	10° \mathbb{M} 08'26	8.64780 AU	evening set	3196 Dec 31 01:22	24° \mathbb{M} 27'43	
direct	3190 Jul 09 08:59	6° \mathbb{M} 43'02					
evening set	3190 Oct 22 17:31	14° \mathbb{M} 20'15		conjunction	3197 Jan 16 17:30	26° \mathbb{M} 25'17	0°17'52
	3190 Oct 28 05:57	15° \mathbb{M}		minimum elong	3197 Jan 16 17:30	26° \mathbb{M} 25'17	0°17'52
				max. Earth dist.	3197 Jan 16 12:32	26° \mathbb{M} 23'50	11.02013 AU
conjunction	3190 Nov 08 20:16	16° \mathbb{M} 24'32	2°09'51	morning rise	3197 Feb 02 09:17	28° \mathbb{M} 22'45	
minimum elong	3190 Nov 08 20:17	16° \mathbb{M} 24'32	2°09'51		3197 Feb 16 17:58	0° \mathbb{M}	
max. Earth dist.	3190 Nov 08 21:21	16° \mathbb{M} 24'52	10.69825 AU	retrograde	3197 May 14 07:38	5° \mathbb{M} 25'30	
morning rise	3190 Nov 25 18:39	18° \mathbb{M} 27'34		opposition	3197 Jul 23 20:19	2° \mathbb{M} 07'15	0°05'40



























































































































min. Earth dist.	3197 Jul 24 00:18	2°≈06'30	9.01481 AU	minimum elong	3203 Mar 27 10:42	6°Υ34'09	1°57'56
	3197 Aug 24 00:10	30°κϜ		max. Earth dist.	3203 Mar 27 08:46	6°Υ33'33	10.65927 AU
desc. node	3197 Sep 27 15:36	28°Ϝ49'25		morning rise	3203 Apr 13 10:51	8°Υ38'30	
direct	3197 Oct 02 14:10	28°Ϝ48'14		retrograde	3203 Jul 27 16:09	16°Υ17'50	
	3197 Nov 10 02:54	0°≈		opposition	3203 Oct 05 21:39	12°Υ52'48	-2°32'39
evening set	3198 Jan 11 11:56	5°≈51'00		min. Earth dist.	3203 Oct 05 22:37	12°Υ52'37	8.60925 AU
				direct	3203 Dec 13 02:48	9°Υ31'59	
conjunction	3198 Jan 28 03:51	7°≈48'41	-0°08'41	evening set	3204 Mar 22 04:38	16°Υ54'56	
minimum elong	3198 Jan 28 03:50	7°≈48'41	0°08'41				
behind sun begin	3198 Jan 27 21:46	7°≈46'54		conjunction	3204 Apr 08 03:44	19°Υ00'11	-2°08'14
behind sun end	3198 Jan 28 09:55	7°≈50'28		minimum elong	3204 Apr 08 03:43	19°Υ00'10	2°08'14
max. Earth dist.	3198 Jan 27 23:30	7°≈47'25	11.00434 AU	max. Earth dist.	3204 Apr 08 02:10	18°Υ59'41	10.55595 AU
morning rise	3198 Feb 13 20:01	9°≈46'29		morning rise	3204 Apr 25 07:03	21°Υ06'45	
	3198 Apr 07 15:52	15°≈		retrograde	3204 Aug 09 03:00	28°Υ54'38	
retrograde	3198 May 26 08:52	16°≈52'19		opposition	3204 Oct 18 00:33	25°Υ28'25	-2°42'04
	3198 Jul 15 20:33	15°κ≈		min. Earth dist.	3204 Oct 18 00:58	25°Υ28'20	8.50451 AU
opposition	3198 Aug 05 01:32	13°≈33'14	-0°26'46	direct	3204 Dec 24 18:12	22°Υ06'43	
min. Earth dist.	3198 Aug 05 04:48	13°≈32'38	8.98876 AU	evening set	3205 Apr 04 03:37	29°Υ36'48	
direct	3198 Oct 14 11:52	10°≈14'25			3205 Apr 07 07:03	0°Ϝ	
	3199 Jan 02 12:07	15°≈					
evening set	3199 Jan 22 23:30	17°≈17'11		conjunction	3205 Apr 21 06:05	1°Ϝ44'25	-2°12'32
				minimum elong	3205 Apr 21 06:05	1°Ϝ44'25	2°12'32
conjunction	3199 Feb 08 15:25	19°≈15'16	-0°34'54	max. Earth dist.	3205 Apr 21 04:46	1°Ϝ44'00	10.45077 AU
minimum elong	3199 Feb 08 15:24	19°≈15'16	0°34'53	morning rise	3205 May 08 13:11	3°Ϝ53'28	
max. Earth dist.	3199 Feb 08 11:33	19°≈14'07	10.96831 AU	retrograde	3205 Aug 22 20:34	11°Ϝ49'36	
morning rise	3199 Feb 25 08:19	21°≈13'43		opposition	3205 Oct 31 08:39	8°Ϝ22'18	-2°43'39
retrograde	3199 Jun 07 13:46	28°≈24'04		min. Earth dist.	3205 Oct 31 08:52	8°Ϝ22'15	8.40044 AU
opposition	3199 Aug 17 08:33	25°≈04'01	-0°58'23	direct	3206 Jan 06 16:38	4°Ϝ59'37	
min. Earth dist.	3199 Aug 17 11:42	25°≈03'26	8.94323 AU	evening set	3206 Apr 17 11:43	12°Ϝ37'16	
direct	3199 Oct 26 09:59	21°≈45'09					
evening set	3200 Feb 03 13:50	28°≈49'21		conjunction	3206 May 04 18:23	14°Ϝ47'28	-2°10'11
	3200 Feb 13 12:44	0°κ		minimum elong	3206 May 04 18:24	14°Ϝ47'28	2°10'11
				max. Earth dist.	3206 May 04 18:19	14°Ϝ47'27	10.34914 AU
conjunction	3200 Feb 20 06:01	0°κ48'12	-0°59'57		3206 May 06 10:00	15°Ϝ	
minimum elong	3200 Feb 20 05:59	0°κ48'11	0°59'56	morning rise	3206 May 22 05:43	16°Ϝ59'08	
max. Earth dist.	3200 Feb 20 01:38	0°κ46'53	10.91349 AU	retrograde	3206 Sep 05 20:48	25°Ϝ02'40	
morning rise	3200 Mar 08 00:09	2°κ47'38		opposition	3206 Nov 13 21:55	21°Ϝ34'29	-2°36'43
retrograde	3200 Jun 18 23:37	10°κ03'45		min. Earth dist.	3206 Nov 13 21:19	21°Ϝ34'36	8.30257 AU
opposition	3200 Aug 28 18:01	6°κ42'35	-1°28'01	direct	3207 Jan 19 21:26	18°Ϝ10'46	
min. Earth dist.	3200 Aug 28 21:27	6°κ41'56	8.87993 AU	evening set	3207 May 01 05:06	25°Ϝ56'01	
direct	3200 Nov 06 08:56	3°κ23'28					
evening set	3201 Feb 14 08:10	10°κ30'32		conjunction	3207 May 18 16:33	28°Ϝ08'53	-2°00'51
				minimum elong	3207 May 18 16:35	28°Ϝ08'54	2°00'51
conjunction	3201 Mar 03 01:08	12°κ30'28	-1°22'48	max. Earth dist.	3207 May 18 18:14	28°Ϝ09'25	10.25652 AU
minimum elong	3201 Mar 03 01:06	12°κ30'27	1°22'49		3207 Jun 02 06:28	0°Π	
max. Earth dist.	3201 Mar 02 20:43	12°κ29'08	10.84187 AU	morning rise	3207 Jun 05 08:20	0°Π23'09	
morning rise	3201 Mar 19 20:54	14°κ31'13		retrograde	3207 Sep 20 02:13	8°Π32'41	
retrograde	3201 Jul 01 13:00	21°κ54'16		opposition	3207 Nov 27 15:44	5°Π03'54	-2°21'03
opposition	3201 Sep 10 06:55	18°κ31'51	-1°54'25	min. Earth dist.	3207 Nov 27 13:56	5°Π04'15	8.21626 AU
min. Earth dist.	3201 Sep 10 10:10	18°κ31'14	8.80105 AU	direct	3208 Feb 02 09:37	1°Π39'07	
direct	3201 Nov 18 11:20	15°κ12'19		evening set	3208 May 14 07:42	9°Π31'39	
evening set	3202 Feb 26 07:50	22°κ23'35					
				conjunction	3208 Jun 01 00:01	11°Π47'03	-1°44'40
conjunction	3202 Mar 15 02:14	24°κ24'56	-1°42'28	minimum elong	3208 Jun 01 00:05	11°Π47'04	1°44'40
minimum elong	3202 Mar 15 02:12	24°κ24'56	1°42'29	max. Earth dist.	3208 Jun 01 03:18	11°Π48'06	10.17814 AU
max. Earth dist.	3202 Mar 14 23:08	24°κ24'00	10.75597 AU	morning rise	3208 Jun 18 20:04	14°Π03'41	
morning rise	3202 Mar 31 23:52	26°κ27'19		retrograde	3208 Oct 03 11:10	22°Π17'23	
	3202 May 02 23:45	0°Υ		opposition	3208 Dec 10 13:18	18°Π48'16	-1°57'05
retrograde	3202 Jul 14 10:23	3°Υ58'15		min. Earth dist.	3208 Dec 10 10:17	18°Π48'53	8.14657 AU
opposition	3202 Sep 22 23:56	0°Υ34'31	-2°16'23	direct	3209 Feb 15 03:42	15°Π22'28	
min. Earth dist.	3202 Sep 23 01:58	0°Υ34'07	8.70956 AU	evening set	3209 May 28 18:25	23°Π21'29	
	3202 Sep 30 13:45	30°κκ					
direct	3202 Nov 30 17:54	27°κ14'25		conjunction	3209 Jun 15 15:14	25°Π39'05	-1°22'15
	3203 Jan 27 13:16	0°Υ		minimum elong	3209 Jun 15 15:18	25°Π39'06	1°22'14
evening set	3203 Mar 10 14:18	4°Υ31'01		max. Earth dist.	3209 Jun 15 19:39	25°Π40'31	10.11873 AU
				morning rise	3209 Jul 03 15:01	27°Π57'40	
conjunction	3203 Mar 27 10:44	6°Υ34'10	-1°57'56		3209 Jul 20 04:34	0°Ϟ	

retrograde	3209 Oct 17 22:51	6°♊13'23		direct	3215 May 10 17:30	9°♏11'32	
opposition	3209 Dec 24 13:49	2°♊44'13 -1°25'54		evening set	3215 Aug 24 20:53	17°♏18'17	
min. Earth dist.	3209 Dec 24 10:03	2°♊44'59 8.09776 AU					
	3210 Feb 01 06:44	30°♏II		conjunction	3215 Sep 11 18:10	19°♏34'00	1°33'57
direct	3210 Mar 01 02:54	29°♏II17'26		minimum elong	3215 Sep 11 18:07	19°♏33'59	1°33'56
	3210 Mar 28 19:37	0°♊		max. Earth dist.	3215 Sep 11 21:24	19°♏35'01	10.24507 AU
evening set	3210 Jun 12 11:38	7°♊21'45		morning rise	3215 Sep 29 11:47	21°♏48'34	
				retrograde	3216 Jan 09 12:31	29°♏37'16	
conjunction	3210 Jun 30 12:08	9°♊40'59 -0°54'46		opposition	3216 Mar 16 06:45	26°♏13'05	2°09'14
minimum elong	3210 Jun 30 12:10	9°♊41'00 0°54'45		min. Earth dist.	3216 Mar 16 03:59	26°♏13'38	8.28934 AU
max. Earth dist.	3210 Jun 30 16:47	9°♊42'30 10.08179 AU		direct	3216 May 23 21:09	22°♏44'41	
morning rise	3210 Jul 18 14:41	12°♊00'52			3216 Aug 31 19:57	0°♊	
retrograde	3210 Nov 01 10:49	20°♊16'17		evening set	3216 Sep 07 04:12	0°♊46'36	
opposition	3211 Jan 07 15:54	16°♊47'23 -0°49'18					
min. Earth dist.	3211 Jan 07 12:15	16°♊48'08 8.07250 AU		conjunction	3216 Sep 24 21:15	2°♊59'46	1°53'05
direct	3211 Mar 15 06:51	13°♊19'41		minimum elong	3216 Sep 24 21:12	2°♊59'45	1°53'05
evening set	3211 Jun 27 09:35	21°♊27'53		max. Earth dist.	3216 Sep 25 00:11	3°♊00'42	10.33539 AU
				morning rise	3216 Oct 12 10:01	5°♊11'39	
conjunction	3211 Jul 15 12:28	23°♊47'59 -0°23'52		retrograde	3217 Jan 21 17:46	12°♊52'17	
minimum elong	3211 Jul 15 12:29	23°♊47'59 0°23'52		opposition	3217 Mar 29 18:17	9°♊29'19	2°28'51
max. Earth dist.	3211 Jul 15 16:39	23°♊49'20 10.06892 AU		min. Earth dist.	3217 Mar 29 16:18	9°♊29'42	8.38566 AU
morning rise	3211 Aug 02 16:20	26°♊08'22		direct	3217 Jun 06 21:33	6°♊01'32	
	3211 Sep 04 04:50	0°♏		evening set	3217 Sep 21 02:24	13°♊57'13	
retrograde	3211 Nov 15 20:46	4°♏21'18					
opposition	3212 Jan 21 18:04	0°♏52'57 -0°09'37		conjunction	3217 Oct 08 14:55	16°♊07'42	2°05'54
min. Earth dist.	3212 Jan 21 14:58	0°♏53'35 8.07150 AU		minimum elong	3217 Oct 08 14:53	16°♊07'41	2°05'54
	3212 Feb 01 13:53	30°♏♊		max. Earth dist.	3217 Oct 08 16:54	16°♊08'19	10.43580 AU
direct	3212 Mar 28 15:10	27°♊24'32		morning rise	3217 Oct 25 22:58	18°♊16'49	
asc. node	3212 Apr 21 01:15	27°♊54'48		retrograde	3218 Feb 03 16:04	25°♊49'20	
	3212 May 22 06:46	0°♏		opposition	3218 Apr 12 00:32	22°♊27'32	2°40'20
evening set	3212 Jul 11 09:37	5°♏35'03		min. Earth dist.	3218 Apr 11 23:38	22°♊27'43	8.48929 AU
				direct	3218 Jun 20 15:53	19°♊00'34	
conjunction	3212 Jul 29 13:21	7°♏55'11 0°08'32		evening set	3218 Oct 04 14:36	26°♊49'05	
minimum elong	3212 Jul 29 13:20	7°♏55'11 0°08'32					
behind sun begin	3212 Jul 29 06:57	7°♏53'08		conjunction	3218 Oct 21 22:45	28°♊56'54	2°12'08
behind sun end	3212 Jul 29 19:43	7°♏57'14		minimum elong	3218 Oct 21 22:44	28°♊56'54	2°12'08
max. Earth dist.	3212 Jul 29 16:46	7°♏56'16 10.07987 AU		max. Earth dist.	3218 Oct 21 23:16	28°♊57'04	10.54085 AU
morning rise	3212 Aug 16 16:51	10°♏15'13			3218 Oct 30 11:07	0°♏	
	3212 Sep 26 21:47	15°♏		morning rise	3218 Nov 08 02:32	1°♏03'22	
retrograde	3212 Nov 29 01:49	18°♏23'57		retrograde	3219 Feb 16 07:57	8°♏28'10	
opposition	3213 Feb 03 19:22	14°♏56'27 0°30'32		opposition	3219 Apr 25 01:43	5°♏07'25	2°43'40
	3213 Feb 03 02:04	15°♏♏		min. Earth dist.	3219 Apr 25 01:12	5°♏07'31	8.59473 AU
min. Earth dist.	3213 Feb 03 16:41	14°♏57'00 8.09407 AU		direct	3219 Jul 04 03:48	1°♏41'25	
direct	3213 Apr 12 01:22	11°♏27'37		evening set	3219 Oct 17 16:31	9°♏22'12	
	3213 Jun 16 01:15	15°♏					
evening set	3213 Jul 26 09:04	19°♏38'44		conjunction	3219 Nov 03 20:45	11°♏27'32	2°11'52
				minimum elong	3219 Nov 03 20:46	11°♏27'32	2°11'53
conjunction	3213 Aug 13 12:01	21°♏58'06 0°40'11		max. Earth dist.	3219 Nov 03 20:43	11°♏27'31	10.64519 AU
minimum elong	3213 Aug 13 11:59	21°♏58'05 0°40'11		morning rise	3219 Nov 20 20:47	13°♏31'36	
max. Earth dist.	3213 Aug 13 15:01	21°♏59'04 10.11388 AU			3219 Dec 03 10:00	15°♏	
morning rise	3213 Aug 31 13:31	24°♏16'58		retrograde	3220 Feb 28 16:56	20°♏49'22	
	3213 Oct 22 14:28	0°♏		opposition	3220 May 06 21:50	17°♏29'32	2°39'16
retrograde	3213 Dec 13 02:31	2°♏20'08		min. Earth dist.	3220 May 06 21:19	17°♏29'38	8.69683 AU
	3214 Feb 04 00:09	30°♏♏			3220 Jun 12 09:05	15°♏♏	
opposition	3214 Feb 17 18:35	28°♏53'37 1°08'32		direct	3220 Jul 16 10:00	14°♏04'37	
min. Earth dist.	3214 Feb 17 15:45	28°♏54'12 8.13943 AU			3220 Aug 19 01:36	15°♏	
direct	3214 Apr 26 10:40	25°♏24'40		evening set	3220 Oct 29 08:46	21°♏37'34	
	3214 Jul 10 23:31	0°♏					
evening set	3214 Aug 10 05:43	3°♏34'33		conjunction	3220 Nov 15 09:47	23°♏40'44	2°05'34
				minimum elong	3220 Nov 15 09:48	23°♏40'44	2°05'35
conjunction	3214 Aug 28 06:26	5°♏52'23 1°09'14		max. Earth dist.	3220 Nov 15 09:46	23°♏40'44	10.74400 AU
minimum elong	3214 Aug 28 06:23	5°♏52'22 1°09'13		morning rise	3220 Dec 02 06:41	25°♏42'42	
max. Earth dist.	3214 Aug 28 09:31	5°♏53'22 10.16985 AU			3221 Jan 11 06:39	0°♏	
morning rise	3214 Sep 15 04:30	8°♏09'22		retrograde	3221 Mar 11 22:54	2°♏54'24	
retrograde	3214 Dec 26 22:24	16°♏05'43			3221 May 14 03:17	30°♏♏	
opposition	3215 Mar 03 14:34	12°♏40'20 1°42'03		opposition	3221 May 19 13:15	29°♏35'20	2°27'51
min. Earth dist.	3215 Mar 03 11:31	12°♏40'57 8.20570 AU		min. Earth dist.	3221 May 19 13:03	29°♏35'22	8.79107 AU





























































































































direct	3221 Jul 29 08:29	26°  11'32		min. Earth dist.	3227 Jul 31 05:31	8°  48'12	9.02030 AU
	3221 Oct 08 13:23	0°  37		direct	3227 Oct 09 15:26	5°  30'07	
evening set	3221 Nov 10 16:23	3°  37'00		evening set	3228 Jan 18 08:10	12°  31'46	
conjunction	3221 Nov 27 14:43	5°  38'20	1°53'52	conjunction	3228 Feb 03 23:48	14°  29'22	-0°23'28
minimum elong	3221 Nov 27 14:45	5°  38'20	1°53'52	minimum elong	3228 Feb 03 23:48	14°  29'21	0°23'27
max. Earth dist.	3221 Nov 27 14:26	5°  38'15	10.83298 AU	max. Earth dist.	3228 Feb 03 20:06	14°  28'16	11.00723 AU
morning rise	3221 Dec 14 09:17	7°  38'36			3228 Feb 08 07:12	15° 	
retrograde	3222 Mar 24 00:16	14°  45'20		morning rise	3228 Feb 20 16:23	16°  27'14	
opposition	3222 Jun 01 00:45	11°  26'54	2°10'18	retrograde	3228 Jun 01 12:32	23°  34'19	
min. Earth dist.	3222 Jun 01 01:41	11°  26'43	8.87352 AU	opposition	3228 Aug 11 08:04	20°  15'09	-0°44'36
direct	3222 Aug 10 23:40	8°  04'14		min. Earth dist.	3228 Aug 11 10:55	20°  14'38	8.98914 AU
evening set	3222 Nov 22 16:40	15°  22'54		direct	3228 Oct 20 14:07	16°  56'47	
				evening set	3229 Jan 28 20:27	23°  59'08	
conjunction	3222 Dec 09 12:42	17°  22'43	1°37'30	conjunction	3229 Feb 14 12:22	25°  57'18	-0°49'04
minimum elong	3222 Dec 09 12:45	17°  22'44	1°37'30	minimum elong	3229 Feb 14 12:21	25°  57'17	0°49'04
max. Earth dist.	3222 Dec 09 11:03	17°  22'13	10.90848 AU	max. Earth dist.	3229 Feb 14 09:24	25°  56'25	10.96608 AU
morning rise	3222 Dec 26 05:45	19°  21'41		morning rise	3229 Mar 03 05:48	27°  55'56	
retrograde	3223 Apr 04 21:03	26°  24'48			3229 Mar 21 14:57	0° 	
opposition	3223 Jun 13 08:59	23°  06'49	1°47'39	retrograde	3229 Jun 13 20:12	5°  08'06	
min. Earth dist.	3223 Jun 13 10:47	23°  06'29	8.94094 AU	opposition	3229 Aug 23 15:22	1°  48'02	-1°15'07
direct	3223 Aug 23 10:46	19°  45'12		min. Earth dist.	3229 Aug 23 17:31	1°  47'38	8.93858 AU
evening set	3223 Dec 04 10:58	26°  58'01			3229 Sep 18 05:20	30° 	
conjunction	3223 Dec 21 05:19	28°  56'42	1°17'21	direct	3229 Nov 01 12:22	28°  29'43	
minimum elong	3223 Dec 21 05:21	28°  56'43	1°17'21		3229 Dec 14 08:38	0° 	
max. Earth dist.	3223 Dec 21 02:43	28°  55'55	10.96770 AU	evening set	3230 Feb 09 12:09	5°  34'08	
	3223 Dec 30 02:47	0° 					
morning rise	3224 Jan 06 21:28	0°  54'44		conjunction	3230 Feb 26 04:39	7°  33'10	-1°12'56
retrograde	3224 Apr 15 17:54	7°  55'41		minimum elong	3230 Feb 26 04:37	7°  33'10	1°12'56
opposition	3224 Jun 24 14:43	4°  37'54	1°20'57	max. Earth dist.	3230 Feb 26 02:08	7°  32'25	10.90617 AU
min. Earth dist.	3224 Jun 24 16:34	4°  37'34	8.99085 AU	morning rise	3230 Mar 14 23:17	9°  32'55	
direct	3224 Sep 03 17:34	1°  31'17		retrograde	3230 Jun 26 07:37	16°  51'22	
evening set	3224 Dec 15 00:43	8°  32'51'9		opposition	3230 Sep 05 01:53	13°  30'14	-1°42'58
				min. Earth dist.	3230 Sep 05 03:43	13°  29'53	8.87022 AU
conjunction	3224 Dec 31 18:00	10°  32'15	0°54'16	direct	3230 Nov 13 11:22	10°  31'41	
minimum elong	3224 Dec 31 18:01	10°  32'15	0°54'16	evening set	3231 Feb 21 08:31	17°  31'31	
max. Earth dist.	3224 Dec 31 15:38	10°  32'33	11.00831 AU				
morning rise	3225 Jan 17 09:37	12°  32'04'3		conjunction	3231 Mar 10 01:59	19°  31'47	-1°34'03
retrograde	3225 Apr 27 14:17	19°  32'05'8		minimum elong	3231 Mar 10 01:56	19°  31'46	1°34'03
opposition	3225 Jul 06 18:53	16°  30'31'1	0°51'17	max. Earth dist.	3231 Mar 09 22:52	19°  31'51	10.82942 AU
min. Earth dist.	3225 Jul 06 20:26	16°  30'25'3	9.02125 AU	morning rise	3231 Mar 26 22:27	21°  31'58	
direct	3225 Sep 15 19:31	12°  34'32'6		retrograde	3231 Jul 09 01:25	28°  34'44	
evening set	3225 Dec 26 11:50	19°  34'7'58		opposition	3231 Sep 17 16:11	25°  34'23	-2°06'57
				min. Earth dist.	3231 Sep 17 18:31	25°  33'57	8.78614 AU
conjunction	3226 Jan 12 04:20	21°  34'52'7	0°29'10	direct	3231 Nov 25 14:32	22°  33'05'21	
minimum elong	3226 Jan 12 04:21	21°  34'52'7	0°29'10	evening set	3232 Mar 04 11:01	29°  33'17'55	
max. Earth dist.	3226 Jan 12 02:03	21°  34'44'7	11.02870 AU		3232 Mar 10 07:21	0° 	
morning rise	3226 Jan 28 19:47	23°  34'24'2					
	3226 Apr 09 13:30	0° 		conjunction	3232 Mar 21 06:06	1°  33'19'46	-1°51'27
retrograde	3226 May 09 12:33	0°  43'45		minimum elong	3232 Mar 21 06:03	1°  33'19'45	1°51'27
	3226 Jun 08 22:39	30° 		max. Earth dist.	3232 Mar 21 02:26	1°  33'18'39	10.73817 AU
opposition	3226 Jul 18 22:31	27°  32'54'5	0°19'44	morning rise	3232 Apr 07 04:56	3°  33'22'45	
min. Earth dist.	3226 Jul 19 00:37	27°  32'52'2	9.03112 AU	retrograde	3232 Jul 21 01:14	10°  33'56'36	
direct	3226 Sep 27 18:42	24°  30'6'41		opposition	3232 Sep 29 10:40	7°  33'32'59	-2°25'50
	3226 Dec 27 18:45	0° 		min. Earth dist.	3232 Sep 29 13:24	7°  33'32'28	8.68898 AU
evening set	3227 Jan 06 21:53	1°  33'09'04		direct	3232 Dec 06 21:02	4°  33'13'15	
				evening set	3233 Mar 16 20:40	11°  33'31'47	
conjunction	3227 Jan 23 13:45	3°  33'06'27	0°03'00	conjunction	3233 Apr 02 18:12	13°  33'35'35	-2°04'08
minimum elong	3227 Jan 23 13:45	3°  33'06'27	0°03'01	minimum elong	3233 Apr 02 18:11	13°  33'35'34	2°04'08
behind sun begin	3227 Jan 23 06:48	3°  33'04'25		max. Earth dist.	3233 Apr 02 15:10	13°  33'34'39	10.63570 AU
behind sun end	3227 Jan 23 20:42	3°  33'08'29		morning rise	3233 Apr 19 19:50	15°  33'40'41	
max. Earth dist.	3227 Jan 23 10:35	3°  33'05'34	11.02830 AU	retrograde	3233 Aug 03 07:00	23°  33'23'08	
morning rise	3227 Feb 09 05:35	5°  33'03'51		opposition	3233 Oct 12 10:11	19°  33'58'12	-2°38'26
desc. node	3227 Mar 06 09:58	7°  33'49'31		min. Earth dist.	3233 Oct 12 12:17	19°  33'57'48	8.58294 AU
retrograde	3227 May 21 10:49	12°  33'07'10		direct	3233 Dec 19 10:29	16°  33'37'35	
opposition	3227 Jul 31 02:42	8°  33'48'43	-0°12'36				

evening set	3234 Mar 29 14:27	24°♊02'59	opposition	3240 Jan 01 10:12	10°♊25'51	-1°07'10
			min. Earth dist.	3240 Jan 01 07:54	10°♊26'20	8.07521 AU
conjunction	3234 Apr 15 15:10	26°♊09'05 -2°11'14	direct	3240 Mar 08 01:38	6°♊58'05	
minimum elong	3234 Apr 15 15:10	26°♊09'05 2°11'14	evening set	3240 Jun 19 17:41	15°♊04'36	
max. Earth dist.	3234 Apr 15 13:24	26°♊08'32 10.52711 AU				
morning rise	3234 May 02 20:09	28°♊16'34	conjunction	3240 Jul 07 19:44	17°♊24'26	-0°38'48
	3234 May 17 08:25	0°♋	minimum elong	3240 Jul 07 19:46	17°♊24'27	0°38'48
retrograde	3234 Aug 16 21:37	6°♋07'38	max. Earth dist.	3240 Jul 07 23:22	17°♊25'37	10.06288 AU
opposition	3234 Oct 25 14:58	2°♋41'24 -2°43'43	morning rise	3240 Jul 25 23:10	19°♊44'46	
min. Earth dist.	3234 Oct 25 15:52	2°♋41'14 8.47360 AU	retrograde	3240 Nov 08 09:58	27°♊59'19	
	3234 Dec 04 11:19	30°♋	opposition	3241 Jan 14 12:09	24°♋30'08	-0°28'40
direct	3235 Jan 01 04:38	29°♊19'44	min. Earth dist.	3241 Jan 14 08:57	24°♋30'48	8.05744 AU
	3235 Jan 28 12:05	0°♋	direct	3241 Mar 22 07:29	21°♋01'30	
evening set	3235 Apr 11 17:19	6°♋52'35	evening set	3241 Jul 04 16:42	29°♋11'22	
				3241 Jul 11 00:52	0°♌	
conjunction	3235 Apr 28 21:54	9°♋01'14 -2°12'01	conjunction	3241 Jul 22 20:25	1°♌31'43	-0°06'57
minimum elong	3235 Apr 28 21:55	9°♋01'14 2°12'01	minimum elong	3241 Jul 22 20:26	1°♌31'44	0°06'57
max. Earth dist.	3235 Apr 28 20:55	9°♋00'55 10.41828 AU	behind sun begin	3241 Jul 22 13:38	1°♌29'33	
morning rise	3235 May 16 06:55	11°♋11'20	behind sun end	3241 Jul 23 03:14	1°♌33'55	
	3235 Jun 18 13:16	15°♋	max. Earth dist.	3241 Jul 23 00:43	1°♌33'05	10.05844 AU
retrograde	3235 Aug 30 19:03	19°♋10'21	morning rise	3241 Aug 10 00:15	3°♌52'10	
opposition	3235 Nov 08 00:48	15°♋42'58 -2°40'49	asc. node	3241 Oct 11 13:21	10°♌28'00	
min. Earth dist.	3235 Nov 08 00:54	15°♋42'57 8.36685 AU	retrograde	3241 Nov 22 17:57	12°♌03'34	
	3235 Nov 17 03:02	15°♋	opposition	3242 Jan 28 13:58	8°♌35'00	0°11'36
direct	3236 Jan 14 04:11	12°♋20'05	min. Earth dist.	3242 Jan 28 10:26	8°♌35'43	8.06613 AU
	3236 Mar 09 18:12	15°♋	direct	3242 Apr 05 15:43	5°♌05'45	
evening set	3236 Apr 24 05:34	20°♋00'41	evening set	3242 Jul 19 16:45	13°♌17'08	
				3242 Aug 02 01:36	15°♌	
conjunction	3236 May 11 14:33	22°♋12'01 -2°05'59	conjunction	3242 Aug 06 20:29	15°♌37'09	0°25'23
minimum elong	3236 May 11 14:35	22°♋12'02 2°05'59	minimum elong	3242 Aug 06 20:28	15°♌37'09	0°25'22
max. Earth dist.	3236 May 11 13:52	22°♋11'48 10.31509 AU	max. Earth dist.	3242 Aug 07 00:51	15°♌38'34	10.08024 AU
morning rise	3236 May 29 04:02	24°♋24'48	morning rise	3242 Aug 24 23:06	17°♌56'50	
	3236 Jul 19 15:20	0°♍	retrograde	3242 Dec 06 22:07	26°♌03'15	
retrograde	3236 Sep 12 21:33	2°♍30'40	opposition	3243 Feb 11 14:23	22°♌35'36	0°50'57
	3236 Nov 08 12:27	30°♋	min. Earth dist.	3243 Feb 11 11:05	22°♌36'16	8.10066 AU
opposition	3236 Nov 20 15:40	29°♋02'20 -2°29'18	direct	3243 Apr 20 00:38	19°♌06'03	
min. Earth dist.	3236 Nov 20 15:28	29°♋02'22 8.26845 AU	evening set	3243 Aug 03 15:14	27°♌17'04	
direct	3237 Jan 26 11:47	25°♋38'09				
	3237 Apr 08 22:18	0°♍	conjunction	3243 Aug 21 17:15	29°♌35'52	0°55'54
evening set	3237 May 08 02:51	3°♍26'25	minimum elong	3243 Aug 21 17:12	29°♌35'51	0°55'53
			max. Earth dist.	3243 Aug 21 21:05	29°♌37'06	10.12680 AU
conjunction	3237 May 25 16:35	5°♍40'25 -1°53'01		3243 Aug 24 20:13	0°♎	
minimum elong	3237 May 25 16:38	5°♍40'26 1°53'00	morning rise	3243 Sep 08 17:06	1°♎53'58	
max. Earth dist.	3237 May 25 16:35	5°♍40'25 10.22317 AU	retrograde	3243 Dec 20 20:46	9°♎54'00	
morning rise	3237 Jun 12 10:36	7°♍55'45	opposition	3244 Feb 25 12:08	6°♎27'29	1°26'52
retrograde	3237 Sep 27 03:01	16°♍06'55	min. Earth dist.	3244 Feb 25 09:19	6°♎28'03	8.15887 AU
opposition	3237 Dec 04 10:50	12°♍37'54 -2°09'14	direct	3244 May 03 09:08	2°♎58'00	
min. Earth dist.	3237 Dec 04 10:14	12°♍38'01 8.18394 AU	evening set	3244 Aug 17 09:16	11°♎06'44	
direct	3238 Feb 09 03:10	9°♍12'26				
evening set	3238 May 22 08:48	17°♍07'48	conjunction	3244 Sep 04 08:14	13°♎23'37	1°22'50
			minimum elong	3244 Sep 04 08:11	13°♎23'36	1°22'50
conjunction	3238 Jun 09 03:21	19°♍24'16 -1°33'29	max. Earth dist.	3244 Sep 04 11:22	13°♎24'37	10.19536 AU
minimum elong	3238 Jun 09 03:24	19°♍24'17 1°33'29	morning rise	3244 Sep 22 04:11	15°♎39'31	
max. Earth dist.	3238 Jun 09 04:24	19°♍24'37 10.14780 AU	retrograde	3245 Jan 02 12:37	23°♎32'11	
morning rise	3238 Jun 27 01:33	21°♍41'53	opposition	3245 Mar 10 06:18	20°♎06'58	1°57'13
retrograde	3238 Oct 11 12:16	29°♍56'23	min. Earth dist.	3245 Mar 10 03:31	20°♎07'32	8.23723 AU
opposition	3238 Dec 18 09:21	26°♍26'58 -1°41'23	direct	3245 May 17 15:44	16°♎37'53	
min. Earth dist.	3238 Dec 18 08:06	26°♍27'13 8.11825 AU	evening set	3245 Aug 31 20:26	24°♎42'32	
direct	3239 Feb 22 23:49	23°♍00'16				
	3239 May 28 16:38	0°♏	conjunction	3245 Sep 18 15:30	26°♎57'01	1°44'44
evening set	3239 Jun 05 22:18	1°♏01'51	minimum elong	3245 Sep 18 15:27	26°♎57'01	1°44'43
			max. Earth dist.	3245 Sep 18 18:22	26°♎57'56	10.28180 AU
conjunction	3239 Jun 23 21:10	3°♏20'21 -1°08'16	morning rise	3245 Oct 06 06:53	29°♎10'21	
minimum elong	3239 Jun 23 21:13	3°♏20'22 1°08'16		3245 Oct 13 00:27	0°♐	
max. Earth dist.	3239 Jun 23 23:35	3°♏21'08 10.09331 AU	retrograde	3246 Jan 15 21:01	6°♐55'06	
morning rise	3239 Jul 11 22:40	5°♏39'41				
retrograde	3239 Oct 25 23:19	13°♏55'19				

opposition	3246 Mar 23 20:04	3° <u>♂</u> 31'14	2°20'30	opposition	3252 Jun 07 01:59	18° <u>♂</u> 00'29	1°58'31
min. Earth dist.	3246 Mar 23 17:09	3° <u>♂</u> 31'49	8.33100 AU	min. Earth dist.	3252 Jun 07 02:46	18° <u>♂</u> 00'20	8.91756 AU
direct	3246 May 31 18:33	0° <u>♂</u> 02'53		direct	3252 Aug 17 02:59	14° <u>♂</u> 38'53	
evening set	3246 Sep 14 23:19	8° <u>♂</u> 01'57		evening set	3252 Nov 28 11:06	21° <u>♂</u> 54'34	
conjunction	3246 Oct 02 14:05	10° <u>♂</u> 13'47	2°00'35	conjunction	3252 Dec 15 06:22	23° <u>♂</u> 53'46	1°26'57
minimum elong	3246 Oct 02 14:02	10° <u>♂</u> 13'47	2°00'34	minimum elong	3252 Dec 15 06:24	23° <u>♂</u> 53'47	1°26'57
max. Earth dist.	3246 Oct 02 16:52	10° <u>♂</u> 14'40	10.38104 AU	max. Earth dist.	3252 Dec 15 04:37	23° <u>♂</u> 53'15	10.94756 AU
morning rise	3246 Oct 20 00:33	12° <u>♂</u> 24'19		morning rise	3252 Dec 31 22:46	25° <u>♂</u> 52'12	
retrograde	3247 Jan 29 00:13	20° <u>♂</u> 00'58			3253 Feb 09 03:45	0° <u>♂</u>	
opposition	3247 Apr 06 04:57	16° <u>♂</u> 38'30	2°35'50	retrograde	3253 Apr 10 19:10	2° <u>♂</u> 54'16	
min. Earth dist.	3247 Apr 06 02:05	16° <u>♂</u> 39'04	8.43481 AU		3253 Jun 14 04:35	30° <u>♂</u>	
direct	3247 Jun 14 14:41	13° <u>♂</u> 11'06		opposition	3253 Jun 19 09:10	29° <u>♂</u> 36'53	1°33'33
evening set	3247 Sep 28 16:39	21° <u>♂</u> 03'25		min. Earth dist.	3253 Jun 19 11:18	29° <u>♂</u> 36'29	8.97389 AU
				direct	3253 Aug 29 10:23	26° <u>♂</u> 16'15	
conjunction	3247 Oct 16 03:02	23° <u>♂</u> 12'34	2°09'54		3253 Nov 08 03:58	0° <u>♂</u>	
minimum elong	3247 Oct 16 03:01	23° <u>♂</u> 12'33	2°09'54	evening set	3253 Dec 10 03:34	3° <u>♂</u> 26'44	
max. Earth dist.	3247 Oct 16 05:51	23° <u>♂</u> 13'26	10.48763 AU				
morning rise	3247 Nov 02 08:46	25° <u>♂</u> 20'20		conjunction	3253 Dec 26 21:20	5° <u>♂</u> 25'03	1°05'05
	3247 Dec 15 01:41	0° <u>♂</u>		minimum elong	3253 Dec 26 21:22	5° <u>♂</u> 25'03	1°05'05
retrograde	3248 Feb 10 20:44	2° <u>♂</u> 49'05		max. Earth dist.	3253 Dec 26 18:00	5° <u>♂</u> 24'03	10.99408 AU
	3248 Apr 11 12:22	30° <u>♂</u>		morning rise	3254 Jan 12 13:07	7° <u>♂</u> 22'48	
opposition	3248 Apr 18 09:00	29° <u>♂</u> 27'55	2°42'57	retrograde	3254 Apr 22 14:27	14° <u>♂</u> 23'33	
min. Earth dist.	3248 Apr 18 06:51	29° <u>♂</u> 28'20	8.54317 AU	opposition	3254 Jul 01 14:40	11° <u>♂</u> 06'12	1°05'05
direct	3248 Jun 27 04:57	26° <u>♂</u> 01'39		min. Earth dist.	3254 Jul 01 18:06	11° <u>♂</u> 05'34	9.00987 AU
	3248 Sep 07 06:14	0° <u>♂</u>		direct	3254 Sep 10 14:42	7° <u>♂</u> 46'21	
evening set	3248 Oct 10 23:50	3° <u>♂</u> 46'25		evening set	3254 Dec 21 16:24	14° <u>♂</u> 52'53	
conjunction	3248 Oct 28 06:03	5° <u>♂</u> 52'59	2°12'38	conjunction	3255 Jan 07 09:06	16° <u>♂</u> 50'37	0°40'46
minimum elong	3248 Oct 28 06:03	5° <u>♂</u> 52'59	2°12'38	minimum elong	3255 Jan 07 09:07	16° <u>♂</u> 50'37	0°40'46
max. Earth dist.	3248 Oct 28 08:12	5° <u>♂</u> 53'39	10.59612 AU	max. Earth dist.	3255 Jan 07 04:35	16° <u>♂</u> 49'17	11.01985 AU
morning rise	3248 Nov 14 07:42	7° <u>♂</u> 58'13		morning rise	3255 Jan 24 00:44	18° <u>♂</u> 48'02	
	3249 Feb 03 05:32	15° <u>♂</u>		retrograde	3255 May 04 11:39	25° <u>♂</u> 49'02	
retrograde	3249 Feb 22 09:38	15° <u>♂</u> 19'33		opposition	3255 Jul 13 19:10	22° <u>♂</u> 31'23	0°34'14
	3249 Mar 13 17:06	15° <u>♂</u>		min. Earth dist.	3255 Jul 13 22:44	22° <u>♂</u> 30'43	9.02490 AU
opposition	3249 May 01 08:01	11° <u>♂</u> 59'35	2°42'04	direct	3255 Sep 22 17:33	19° <u>♂</u> 12'08	
min. Earth dist.	3249 May 01 07:05	11° <u>♂</u> 59'46	8.65066 AU	evening set	3256 Jan 02 03:15	26° <u>♂</u> 15'56	
direct	3249 Jul 10 13:50	8° <u>♂</u> 34'29					
	3249 Oct 13 17:40	15° <u>♂</u>		conjunction	3256 Jan 18 19:27	28° <u>♂</u> 13'28	0°14'56
evening set	3249 Oct 23 21:21	16° <u>♂</u> 11'28		minimum elong	3256 Jan 18 19:27	28° <u>♂</u> 13'28	0°14'57
				behind sun begin	3256 Jan 18 16:37	28° <u>♂</u> 12'38	
conjunction	3249 Nov 09 23:50	18° <u>♂</u> 15'40	2°09'04	behind sun end	3256 Jan 18 22:17	28° <u>♂</u> 14'18	
minimum elong	3249 Nov 09 23:51	18° <u>♂</u> 15'41	2°09'05	max. Earth dist.	3256 Jan 18 15:18	28° <u>♂</u> 12'15	11.02448 AU
max. Earth dist.	3249 Nov 10 00:23	18° <u>♂</u> 15'50	10.70120 AU		3256 Feb 02 21:37	0° <u>♂</u>	
morning rise	3249 Nov 26 22:10	20° <u>♂</u> 18'38		morning rise	3256 Feb 04 11:11	0° <u>♂</u> 10'53	
retrograde	3250 Mar 06 17:20	27° <u>♂</u> 33'21		retrograde	3256 May 15 10:35	7° <u>♂</u> 13'34	
opposition	3250 May 14 02:02	24° <u>♂</u> 14'23	2°33'47	opposition	3256 Jul 24 23:24	3° <u>♂</u> 55'20	0°02'05
min. Earth dist.	3250 May 14 02:03	24° <u>♂</u> 14'23	8.75206 AU	min. Earth dist.	3256 Jul 25 02:34	3° <u>♂</u> 54'45	9.01886 AU
direct	3250 Jul 23 16:29	20° <u>♂</u> 50'29		desc. node	3256 Aug 18 04:07	2° <u>♂</u> 13'15	
evening set	3250 Nov 05 09:40	28° <u>♂</u> 19'46		direct	3256 Oct 03 16:10	0° <u>♂</u> 36'28	
	3250 Nov 19 08:27	0° <u>♂</u>		evening set	3257 Jan 12 13:42	7° <u>♂</u> 38'55	
conjunction	3250 Nov 22 09:05	0° <u>♂</u> 21'56	1°59'47	conjunction	3257 Jan 29 05:40	9° <u>♂</u> 36'33	-0°11'35
minimum elong	3250 Nov 22 09:07	0° <u>♂</u> 21'57	1°59'47	minimum elong	3257 Jan 29 05:39	9° <u>♂</u> 36'33	0°11'34
max. Earth dist.	3250 Nov 22 08:20	0° <u>♂</u> 21'43	10.79784 AU	behind sun begin	3257 Jan 29 00:35	9° <u>♂</u> 35'04	
morning rise	3250 Dec 09 04:50	2° <u>♂</u> 23'00		behind sun end	3257 Jan 29 10:43	9° <u>♂</u> 38'02	
retrograde	3251 Mar 18 19:58	9° <u>♂</u> 32'08		max. Earth dist.	3257 Jan 29 01:50	9° <u>♂</u> 35'26	11.00804 AU
opposition	3251 May 26 15:51	6° <u>♂</u> 13'55	2°18'57	morning rise	3257 Feb 14 21:48	11° <u>♂</u> 34'18	
min. Earth dist.	3251 May 26 16:08	6° <u>♂</u> 13'52	8.84251 AU		3257 Mar 18 17:56	15° <u>♂</u>	
direct	3251 Aug 05 12:34	2° <u>♂</u> 51'14		retrograde	3257 May 27 11:53	18° <u>♂</u> 40'07	
evening set	3251 Nov 17 13:40	10° <u>♂</u> 13'15		opposition	3257 Aug 06 04:31	15° <u>♂</u> 21'05	-0°30'16
				min. Earth dist.	3257 Aug 06 07:40	15° <u>♂</u> 20'30	8.99210 AU
conjunction	3251 Dec 04 10:44	12° <u>♂</u> 13'45	1°45'28		3257 Aug 10 22:33	15° <u>♂</u>	
minimum elong	3251 Dec 04 10:46	12° <u>♂</u> 13'45	1°45'28	direct	3257 Oct 15 14:18	12° <u>♂</u> 02'21	
max. Earth dist.	3251 Dec 04 09:41	12° <u>♂</u> 13'26	10.88132 AU		3257 Dec 16 06:24	15° <u>♂</u>	
morning rise	3251 Dec 21 04:29	14° <u>♂</u> 13'17		evening set	3258 Jan 24 01:21	19° <u>♂</u> 04'52	
retrograde	3252 Mar 29 20:07	21° <u>♂</u> 18'11					

conjunction	3258 Feb 09 17:10	21°  02'55 -0°37'40	evening set	3264 Apr 05 05:49	1°  23'57
minimum elong	3258 Feb 09 17:09	21°  02'55 0°37'40			
max. Earth dist.	3258 Feb 09 12:42	21°  01'36 10.97125 AU	conjunction	3264 Apr 22 08:32	3°  31'38 -2°12'32
morning rise	3258 Feb 26 10:11	23°  01'21	minimum elong	3264 Apr 22 08:32	3°  31'38 2°12'31
	3258 May 24 05:24	0°  ✕	max. Earth dist.	3264 Apr 22 07:07	3°  31'11 10.44971 AU
retrograde	3258 Jun 08 16:50	0°  ✕11'41	morning rise	3264 May 09 15:52	5°  40'44
	3258 Jun 24 05:26	30°  ✕	retrograde	3264 Aug 23 22:58	13°  36'52
opposition	3258 Aug 18 11:25	26°  51'39 -1°01'39	opposition	3264 Nov 01 10:53	10°  09'32 -2°43'14
min. Earth dist.	3258 Aug 18 15:09	26°  50'58 8.94581 AU	min. Earth dist.	3264 Nov 01 11:25	10°  09'26 8.39910 AU
direct	3258 Oct 27 12:06	23°  32'51	direct	3265 Jan 07 18:52	6°  46'46
	3259 Jan 30 08:28	0°  ✕	evening set	3265 Apr 18 14:02	14°  24'30
evening set	3259 Feb 04 15:39	0°  ✕36'52		3265 Apr 23 08:12	15°  8
conjunction	3259 Feb 21 07:47	2°  ✕35'40 -1°02'29	conjunction	3265 May 05 21:03	16°  34'47 -2°09'31
minimum elong	3259 Feb 21 07:45	2°  ✕35'39 1°02'29	minimum elong	3265 May 05 21:04	16°  34'47 2°09'31
max. Earth dist.	3259 Feb 21 03:08	2°  ✕34'16 10.91569 AU	max. Earth dist.	3265 May 05 21:27	16°  34'55 10.34752 AU
morning rise	3259 Mar 10 02:02	4°  ✕35'06	morning rise	3265 May 23 08:33	18°  46'31
retrograde	3259 Jun 21 00:36	11°  ✕51'15	retrograde	3265 Sep 06 22:50	26°  50'03
opposition	3259 Aug 30 20:52	8°  ✕30'03 -1°30'55	opposition	3265 Nov 14 24:00	23°  21'49 -2°35'30
min. Earth dist.	3259 Aug 31 00:25	8°  ✕29'23 8.88177 AU	min. Earth dist.	3265 Nov 14 23:07	23°  21'59 8.30068 AU
direct	3259 Nov 08 11:28	5°  ✕10'59	direct	3266 Jan 21 00:11	19°  58'02
evening set	3260 Feb 16 09:55	12°  ✕17'54	evening set	3266 May 02 07:32	27°  43'24
conjunction	3260 Mar 04 03:00	14°  ✕17'48 -1°25'00	conjunction	3266 May 19 19:18	29°  56'22 -1°59'34
minimum elong	3260 Mar 04 02:58	14°  ✕17'48 1°25'00	minimum elong	3266 May 19 19:20	29°  56'23 1°59'34
max. Earth dist.	3260 Mar 03 23:19	14°  ✕16'42 10.84330 AU	max. Earth dist.	3266 May 19 21:17	29°  57'00 10.25439 AU
morning rise	3260 Mar 20 22:45	16°  ✕18'33		3266 May 20 06:41	0°  II
retrograde	3260 Jul 02 16:08	23°  ✕41'41	morning rise	3266 Jun 06 11:13	2°  II10'42
opposition	3260 Sep 11 09:37	20°  ✕19'12 -1°56'51	retrograde	3266 Sep 21 04:26	10°  II20'16
min. Earth dist.	3260 Sep 11 12:15	20°  ✕18'43 8.80215 AU	opposition	3266 Nov 28 17:46	6°  II51'25 -2°19'05
direct	3260 Nov 19 14:42	16°  ✕59'42	min. Earth dist.	3266 Nov 28 15:38	6°  II51'51 8.21393 AU
evening set	3261 Feb 27 09:47	24°  ✕10'50	direct	3267 Feb 03 11:30	3°  II26'35
			evening set	3267 May 16 10:19	11°  II19'16
conjunction	3261 Mar 16 04:17	26°  ✕12'11 -1°44'13	conjunction	3267 Jun 03 02:53	13°  II34'47 -1°42'48
minimum elong	3261 Mar 16 04:15	26°  ✕12'11 1°44'13	minimum elong	3267 Jun 03 02:57	13°  II34'48 1°42'48
max. Earth dist.	3261 Mar 16 01:39	26°  ✕11'23 10.75664 AU	max. Earth dist.	3267 Jun 03 05:51	13°  II35'44 10.17571 AU
morning rise	3261 Apr 02 01:56	28°  ✕14'34	morning rise	3267 Jun 20 23:11	15°  II51'31
	3261 Apr 17 06:09	0°  Y	retrograde	3267 Oct 05 14:54	24°  II05'14
retrograde	3261 Jul 15 14:13	5°  Y45'32	opposition	3267 Dec 12 15:20	20°  II36'05 -1°54'26
opposition	3261 Sep 24 02:26	2°  Y21'46 -2°18'13	min. Earth dist.	3267 Dec 12 12:31	20°  II36'39 8.14401 AU
min. Earth dist.	3261 Sep 24 04:03	2°  Y21'27 8.70993 AU	direct	3268 Feb 17 04:22	17°  II10'11
	3261 Oct 28 12:05	30°  R✕	evening set	3268 May 29 21:21	25°  II09'28
direct	3261 Dec 01 19:06	29°  ✕01'40			
	3262 Jan 04 09:20	0°  Y			
evening set	3262 Mar 11 16:24	6°  Y18'12	conjunction	3268 Jun 16 18:20	27°  II27'10 -1°19'54
conjunction	3262 Mar 28 12:51	8°  Y21'21 -1°59'09	minimum elong	3268 Jun 16 18:24	27°  II27'12 1°19'54
minimum elong	3262 Mar 28 12:49	8°  Y21'20 1°59'09	max. Earth dist.	3268 Jun 16 21:45	27°  II28'17 10.11622 AU
max. Earth dist.	3262 Mar 28 10:19	8°  Y20'34 10.65927 AU	morning rise	3268 Jul 04 18:24	29°  II45'52
morning rise	3262 Apr 14 13:07	10°  Y25'42		3268 Jul 06 15:12	0°  8
retrograde	3262 Jul 28 18:19	18°  Y05'04	retrograde	3268 Oct 19 02:37	8°  801'33
opposition	3262 Oct 07 00:10	14°  Y40'00 -2°33'48	opposition	3268 Dec 25 15:56	4°  832'25 -1°22'44
min. Earth dist.	3262 Oct 07 01:29	14°  Y39'44 8.60895 AU	min. Earth dist.	3268 Dec 25 12:56	4°  833'02 8.09525 AU
direct	3262 Dec 14 04:42	11°  Y19'08	direct	3269 Mar 02 04:41	1°  805'33
evening set	3263 Mar 24 06:44	18°  Y42'05	evening set	3269 Jun 13 14:47	9°  810'13
conjunction	3263 Apr 10 05:53	20°  Y47'21 -2°08'52	conjunction	3269 Jul 01 15:22	11°  829'31 -0°52'03
minimum elong	3263 Apr 10 05:52	20°  Y47'20 2°08'52	minimum elong	3269 Jul 01 15:25	11°  829'32 0°52'03
max. Earth dist.	3263 Apr 10 03:34	20°  Y46'37 10.55539 AU	max. Earth dist.	3269 Jul 01 19:02	11°  830'42 10.07953 AU
morning rise	3263 Apr 27 09:28	22°  Y53'58	morning rise	3269 Jul 19 18:08	13°  849'29
	3263 Jul 13 07:40	0°  8	retrograde	3269 Nov 02 13:31	22°  804'53
retrograde	3263 Aug 11 05:26	0°  841'53	opposition	3270 Jan 08 18:08	18°  836'03 -0°45'47
	3263 Sep 09 07:40	30°  RY	min. Earth dist.	3270 Jan 08 15:07	18°  836'40 8.07058 AU
opposition	3263 Oct 20 03:01	27°  Y15'36 -2°42'27	direct	3270 Mar 16 10:19	15°  808'19
min. Earth dist.	3263 Oct 20 04:08	27°  Y15'23 8.50367 AU	evening set	3270 Jun 28 12:55	23°  816'51
direct	3263 Dec 26 20:38	23°  Y53'50	conjunction	3270 Jul 16 15:53	25°  836'59 -0°20'58
	3264 Mar 24 14:21	0°  8	minimum elong	3270 Jul 16 15:54	25°  837'00 0°20'58

max. Earth dist.	3270 Jul 16 19:45	25° \mathfrak{D} 38'14	10.06759 AU	retrograde	3276 Jan 23 20:02	14° \mathfrak{D} 40'15	
morning rise	3270 Aug 03 19:51	27° \mathfrak{D} 57'25		opposition	3276 Mar 30 20:36	11° \mathfrak{D} 17'23	2°30'10
	3270 Aug 20 08:41	0° \mathfrak{Q}		min. Earth dist.	3276 Mar 30 19:16	11° \mathfrak{D} 17'39	8.38730 AU
retrograde	3270 Nov 16 21:55	6° \mathfrak{Q} 10'18		direct	3276 Jun 07 24:00	7° \mathfrak{D} 49'39	
opposition	3271 Jan 22 20:22	2° \mathfrak{Q} 42'01	-0°05'58	evening set	3276 Sep 22 05:21	15° \mathfrak{D} 45'22	
min. Earth dist.	3271 Jan 22 17:15	2° \mathfrak{Q} 42'40	8.07092 AU				
	3271 Mar 01 13:01	30° \mathfrak{R} \mathfrak{D}		conjunction	3276 Oct 09 17:31	17° \mathfrak{D} 55'46	2°06'40
asc. node	3271 Mar 19 20:39	29° \mathfrak{D} 20'14		minimum elong	3276 Oct 09 17:29	17° \mathfrak{D} 55'45	2°06'39
direct	3271 Mar 30 18:54	29° \mathfrak{D} 13'35		max. Earth dist.	3276 Oct 09 18:35	17° \mathfrak{D} 56'05	10.43719 AU
	3271 Apr 28 20:38	0° \mathfrak{Q}		morning rise	3276 Oct 27 01:24	20° \mathfrak{D} 04'48	
evening set	3271 Jul 13 13:06	7° \mathfrak{Q} 24'17		retrograde	3277 Feb 04 18:08	27° \mathfrak{D} 37'18	
				opposition	3277 Apr 13 03:03	24° \mathfrak{D} 15'34	2°40'52
conjunction	3271 Jul 31 16:53	9° \mathfrak{Q} 44'26	0°11'26	min. Earth dist.	3277 Apr 13 02:03	24° \mathfrak{D} 15'46	8.49054 AU
minimum elong	3271 Jul 31 16:53	9° \mathfrak{Q} 44'26	0°11'26	direct	3277 Jun 21 18:46	20° \mathfrak{D} 48'40	
behind sun begin	3271 Jul 31 11:39	9° \mathfrak{Q} 42'45		evening set	3277 Oct 05 17:15	28° \mathfrak{D} 37'10	
behind sun end	3271 Jul 31 22:06	9° \mathfrak{Q} 46'06			3277 Oct 16 23:55	0° \mathfrak{M}	
max. Earth dist.	3271 Jul 31 20:40	9° \mathfrak{Q} 45'38	10.08015 AU				
morning rise	3271 Aug 18 20:18	12° \mathfrak{Q} 04'26		conjunction	3277 Oct 23 01:13	0° \mathfrak{M} 44'56	2°12'14
	3271 Sep 11 23:46	15° \mathfrak{Q}		minimum elong	3277 Oct 23 01:12	0° \mathfrak{M} 44'56	2°12'14
retrograde	3271 Dec 01 03:34	20° \mathfrak{Q} 13'00		max. Earth dist.	3277 Oct 23 01:39	0° \mathfrak{M} 45'04	10.54189 AU
opposition	3272 Feb 05 21:36	16° \mathfrak{Q} 45'31	0°34'05	morning rise	3277 Nov 09 04:49	2° \mathfrak{M} 51'21	
min. Earth dist.	3272 Feb 05 18:26	16° \mathfrak{Q} 46'10	8.09512 AU	retrograde	3278 Feb 17 09:30	10° \mathfrak{M} 16'10	
	3272 Feb 28 08:30	15° \mathfrak{R} \mathfrak{Q}		opposition	3278 Apr 26 04:19	6° \mathfrak{M} 55'28	2°43'25
direct	3272 Apr 13 03:42	13° \mathfrak{Q} 16'41		min. Earth dist.	3278 Apr 26 03:11	6° \mathfrak{M} 55'41	8.59556 AU
	3272 May 27 09:32	15° \mathfrak{Q}		direct	3278 Jul 05 07:34	3° \mathfrak{M} 29'33	
evening set	3272 Jul 27 12:36	21° \mathfrak{Q} 27'50		evening set	3278 Oct 18 19:06	11° \mathfrak{M} 10'17	
conjunction	3272 Aug 14 15:30	23° \mathfrak{Q} 47'09	0°42'56	conjunction	3278 Nov 04 23:17	13° \mathfrak{M} 15'36	2°11'21
minimum elong	3272 Aug 14 15:28	23° \mathfrak{Q} 47'08	0°42'55	minimum elong	3278 Nov 04 23:18	13° \mathfrak{M} 15'36	2°11'21
max. Earth dist.	3272 Aug 14 19:09	23° \mathfrak{Q} 48'20	10.11547 AU	max. Earth dist.	3278 Nov 04 23:55	13° \mathfrak{M} 15'48	10.64585 AU
morning rise	3272 Sep 01 16:42	26° \mathfrak{Q} 05'55			3278 Nov 19 05:48	15° \mathfrak{M}	
	3272 Oct 04 20:05	0° \mathfrak{M}		morning rise	3278 Nov 21 23:04	15° \mathfrak{M} 19'37	
retrograde	3272 Dec 14 05:36	4° \mathfrak{M} 08'51		retrograde	3279 Mar 01 20:41	22° \mathfrak{M} 37'26	
opposition	3273 Feb 18 20:44	0° \mathfrak{M} 42'23	1°11'46	opposition	3279 May 09 00:35	19° \mathfrak{M} 17'38	2°38'15
min. Earth dist.	3273 Feb 18 17:29	0° \mathfrak{M} 43'03	8.14138 AU	min. Earth dist.	3279 May 08 23:53	19° \mathfrak{M} 17'46	8.69723 AU
	3273 Feb 27 13:29	30° \mathfrak{R} \mathfrak{Q}		direct	3279 Jul 18 12:41	15° \mathfrak{M} 52'48	
direct	3273 Apr 27 12:30	27° \mathfrak{Q} 13'26		evening set	3279 Oct 31 11:19	23° \mathfrak{M} 25'40	
	3273 Jun 23 21:45	0° \mathfrak{M}					
evening set	3273 Aug 11 09:04	5° \mathfrak{M} 23'18		conjunction	3279 Nov 17 12:14	25° \mathfrak{M} 28'50	2°04'27
				minimum elong	3279 Nov 17 12:15	25° \mathfrak{M} 28'50	2°04'28
conjunction	3273 Aug 29 09:36	7° \mathfrak{M} 41'04	1°11'38	max. Earth dist.	3279 Nov 17 12:37	25° \mathfrak{M} 28'57	10.74427 AU
minimum elong	3273 Aug 29 09:33	7° \mathfrak{M} 41'03	1°11'37	morning rise	3279 Dec 04 08:58	27° \mathfrak{M} 30'47	
max. Earth dist.	3273 Aug 29 13:14	7° \mathfrak{M} 42'13	10.17194 AU		3279 Dec 26 05:49	0° \mathfrak{J}	
morning rise	3273 Sep 16 07:17	9° \mathfrak{M} 57'56		retrograde	3280 Mar 13 01:46	4° \mathfrak{J} 42'30	
retrograde	3273 Dec 28 01:28	17° \mathfrak{M} 54'05		opposition	3280 May 20 16:20	1° \mathfrak{J} 23'29	2°26'08
opposition	3274 Mar 04 16:46	14° \mathfrak{M} 28'46	1°44'46	min. Earth dist.	3280 May 20 16:34	1° \mathfrak{J} 23'26	8.79115 AU
min. Earth dist.	3274 Mar 04 13:53	14° \mathfrak{M} 29'21	8.20787 AU		3280 Jun 08 13:06	30° \mathfrak{R} \mathfrak{M}	
direct	3274 May 11 19:45	10° \mathfrak{M} 59'59		direct	3280 Jul 30 10:05	27° \mathfrak{M} 59'44	
evening set	3274 Aug 26 00:03	19° \mathfrak{M} 06'45			3280 Sep 18 23:26	0° \mathfrak{J}	
				evening set	3280 Nov 11 18:46	5° \mathfrak{J} 25'06	
conjunction	3274 Sep 12 21:03	21° \mathfrak{M} 22'21	1°35'53				
minimum elong	3274 Sep 12 21:00	21° \mathfrak{M} 22'20	1°35'52	conjunction	3280 Nov 28 16:55	7° \mathfrak{J} 26'24	1°52'12
max. Earth dist.	3274 Sep 13 00:08	21° \mathfrak{M} 23'20	10.24713 AU	minimum elong	3280 Nov 28 16:57	7° \mathfrak{J} 26'25	1°52'12
morning rise	3274 Sep 30 14:20	23° \mathfrak{M} 36'50		max. Earth dist.	3280 Nov 28 16:12	7° \mathfrak{J} 26'11	10.83295 AU
	3274 Dec 01 17:58	0° \mathfrak{D}		morning rise	3280 Dec 15 11:32	9° \mathfrak{J} 26'42	
retrograde	3275 Jan 10 14:14	1° \mathfrak{D} 25'23		retrograde	3281 Mar 25 01:47	16° \mathfrak{J} 33'29	
	3275 Feb 20 02:28	30° \mathfrak{R} \mathfrak{M}		opposition	3281 Jun 02 03:56	13° \mathfrak{J} 15'03	2°07'59
opposition	3275 Mar 18 09:00	28° \mathfrak{M} 01'17	2°11'17	min. Earth dist.	3281 Jun 02 05:10	13° \mathfrak{J} 14'49	8.87339 AU
min. Earth dist.	3275 Mar 18 06:57	28° \mathfrak{M} 01'42	8.29134 AU	direct	3281 Aug 12 03:19	9° \mathfrak{J} 52'24	
direct	3275 May 26 00:16	24° \mathfrak{M} 32'54		evening set	3281 Nov 23 18:56	17° \mathfrak{J} 10'57	
	3275 Aug 18 13:42	0° \mathfrak{D}					
evening set	3275 Sep 09 07:19	2° \mathfrak{D} 34'51		conjunction	3281 Dec 10 14:52	19° \mathfrak{J} 10'46	1°35'23
				minimum elong	3281 Dec 10 14:55	19° \mathfrak{J} 10'47	1°35'23
conjunction	3275 Sep 26 23:59	4° \mathfrak{D} 47'55	1°54'28	max. Earth dist.	3281 Dec 10 12:56	19° \mathfrak{J} 10'11	10.90829 AU
minimum elong	3275 Sep 26 23:57	4° \mathfrak{D} 47'54	1°54'27	morning rise	3281 Dec 27 08:01	21° \mathfrak{J} 09'45	
max. Earth dist.	3275 Sep 27 02:05	4° \mathfrak{D} 48'35	10.33715 AU	retrograde	3282 Apr 05 24:00	28° \mathfrak{J} 12'56	
morning rise	3275 Oct 14 12:31	6° \mathfrak{D} 59'43		opposition	3282 Jun 14 12:03	24° \mathfrak{J} 54'54	1°44'49

min. Earth dist.	3282 Jun 14 13:20	24°  54'40	8.94062 AU	retrograde	3288 Jun 14 22:44	6°  56'03	
direct	3282 Aug 24 14:36	21°  33'20		opposition	3288 Aug 24 18:19	3°  35'56	-1°18'13
evening set	3282 Dec 05 13:04	28°  45'59		min. Earth dist.	3288 Aug 24 19:58	3°  35'37	8.93840 AU
	3282 Dec 16 01:00	0°  3		direct	3288 Nov 02 13:51	0°  17'37	
				evening set	3289 Feb 10 14:06	7°  21'59	
conjunction	3282 Dec 22 07:29	0°  344'41	1°14'52				
minimum elong	3282 Dec 22 07:31	0°  344'42	1°14'51	conjunction	3289 Feb 27 06:33	9°  21'01	-1°15'17
max. Earth dist.	3282 Dec 22 05:39	0°  344'09	10.96734 AU	minimum elong	3289 Feb 27 06:31	9°  21'00	1°15'18
morning rise	3283 Jan 07 23:37	2°  342'44		max. Earth dist.	3289 Feb 27 03:48	9°  20'12	10.90613 AU
retrograde	3283 Apr 17 20:34	9°  343'46		morning rise	3289 Mar 16 01:20	11°  20'46	
opposition	3283 Jun 26 17:53	6°  325'56	1°17'44	retrograde	3289 Jun 27 11:04	18°  39'20	
min. Earth dist.	3283 Jun 26 18:54	6°  325'45	8.99034 AU	opposition	3289 Sep 06 04:44	15°  18'11	-1°45'38
direct	3283 Sep 05 20:29	3°  305'21		min. Earth dist.	3289 Sep 06 06:49	15°  17'47	8.87046 AU
evening set	3283 Dec 17 02:43	10°  313'13		direct	3289 Nov 14 13:45	11°  59'38	
				evening set	3290 Feb 22 10:31	19°  07'26	
conjunction	3284 Jan 02 20:02	12°  311'09	0°51'31				
minimum elong	3284 Jan 02 20:04	12°  311'10	0°51'31	conjunction	3290 Mar 11 03:57	21°  07'41	-1°36'00
max. Earth dist.	3284 Jan 02 18:30	12°  310'42	11.00780 AU	minimum elong	3290 Mar 11 03:54	21°  07'40	1°36'01
morning rise	3284 Jan 19 11:37	14°  308'38		max. Earth dist.	3290 Mar 11 00:43	21°  06'42	10.82997 AU
retrograde	3284 Apr 28 18:00	21°  308'59		morning rise	3290 Mar 28 00:35	23°  08'53	
opposition	3284 Jul 07 22:10	17°  351'09	0°47'49		3290 Jun 13 12:32	0°  0	
min. Earth dist.	3284 Jul 07 23:36	17°  350'53	9.02069 AU	retrograde	3290 Jul 10 03:31	0°  0	
direct	3284 Sep 16 22:23	14°  331'25			3290 Aug 06 01:10	30°  R 	
evening set	3284 Dec 27 13:51	21°  335'48		opposition	3290 Sep 18 18:54	27°  12'21	-2°09'03
				min. Earth dist.	3290 Sep 18 21:20	27°  11'54	8.78716 AU
conjunction	3285 Jan 13 06:16	23°  333'18	0°26'16	direct	3290 Nov 26 16:26	23°  15'32	
minimum elong	3285 Jan 13 06:16	23°  333'18	0°26'16		3291 Feb 25 04:26	0°  0	
max. Earth dist.	3285 Jan 13 03:45	23°  332'33	11.02819 AU	evening set	3291 Mar 06 12:59	1°  05'50	
morning rise	3285 Jan 29 21:51	25°  330'35					
	3285 Mar 14 16:28	0°  0		conjunction	3291 Mar 23 08:11	3°  07'39	-1°52'54
retrograde	3285 May 10 14:32	2°  331'42		minimum elong	3291 Mar 23 08:09	3°  07'39	1°52'54
	3285 Jul 09 12:18	30°  R 		max. Earth dist.	3291 Mar 23 05:28	3°  06'50	10.73968 AU
opposition	3285 Jul 20 01:43	29°  313'39	0°16'09	morning rise	3291 Apr 09 07:04	5°  10'37	
min. Earth dist.	3285 Jul 20 04:10	29°  313'12	9.03064 AU	retrograde	3291 Jul 23 02:32	12°  04'42	
direct	3285 Sep 28 20:26	25°  354'35		opposition	3291 Oct 01 13:14	9°  20'50	-2°27'16
	3285 Dec 11 22:24	0°  0		min. Earth dist.	3291 Oct 01 15:18	9°  20'26	8.69110 AU
evening set	3286 Jan 07 23:50	2°  356'52		direct	3291 Dec 09 00:28	6°  01'07	
				evening set	3292 Mar 17 22:37	13°  01'28	
conjunction	3286 Jan 24 15:39	4°  354'15	0°00'01				
minimum elong	3286 Jan 24 15:39	4°  354'15	0°00'01	conjunction	3292 Apr 03 20:22	15°  02'31	-2°05'01
behind sun begin	3286 Jan 24 10:49	4°  352'51		minimum elong	3292 Apr 03 20:20	15°  02'31	2°05'01
behind sun end	3286 Jan 24 20:30	4°  355'38		max. Earth dist.	3292 Apr 03 18:17	15°  02'39	10.63819 AU
desc. node	3286 Jan 24 16:27	4°  354'25		morning rise	3292 Apr 20 22:02	17°  02'21	
max. Earth dist.	3286 Jan 24 12:21	4°  353'19	11.02786 AU	retrograde	3292 Aug 04 10:36	25°  01'04	
morning rise	3286 Feb 10 07:39	6°  351'40		opposition	3292 Oct 13 12:27	21°  04'46	-2°39'08
retrograde	3286 May 22 13:02	13°  355'07		min. Earth dist.	3292 Oct 13 13:49	21°  04'53	8.58580 AU
opposition	3286 Aug 01 05:46	10°  336'36	-0°16'10	direct	3292 Dec 20 12:28	18°  02'51	
min. Earth dist.	3286 Aug 01 08:21	10°  336'07	9.01987 AU	evening set	3293 Mar 30 16:32	25°  02'23	
direct	3286 Oct 10 19:23	7°  317'59					
evening set	3287 Jan 19 10:01	14°  319'33		conjunction	3293 Apr 16 17:22	27°  05'29	-2°11'30
	3287 Jan 25 04:42	15°  300		minimum elong	3293 Apr 16 17:22	27°  05'28	2°11'30
				max. Earth dist.	3293 Apr 16 15:31	27°  05'54	10.53009 AU
conjunction	3287 Feb 05 01:45	16°  317'09	-0°26'19	morning rise	3293 May 03 22:30	0°  03'57	
minimum elong	3287 Feb 05 01:44	16°  317'09	0°26'19		3293 May 03 09:30	0°  0	
max. Earth dist.	3287 Feb 04 22:58	16°  316'20	11.00681 AU	retrograde	3293 Aug 18 01:08	7°  05'48	
morning rise	3287 Feb 21 18:17	18°  315'01		opposition	3293 Oct 26 16:58	4°  02'37	-2°43'37
retrograde	3287 Jun 03 16:10	25°  322'15		min. Earth dist.	3293 Oct 26 17:48	4°  02'27	8.47668 AU
opposition	3287 Aug 13 11:03	22°  303'02	-0°48'00	direct	3294 Jan 02 05:06	1°  06'59	
min. Earth dist.	3287 Aug 13 12:55	22°  302'41	8.98877 AU	evening set	3294 Apr 12 19:24	8°  03'41	
direct	3287 Oct 22 16:51	18°  344'41					
evening set	3288 Jan 30 22:19	25°  346'56		conjunction	3294 Apr 30 00:04	10°  04'19	-2°11'38
				minimum elong	3294 Apr 30 00:05	10°  04'19	2°11'38
conjunction	3288 Feb 16 14:17	27°  345'05	-0°51'44	max. Earth dist.	3294 Apr 29 22:10	10°  04'47	10.42139 AU
minimum elong	3288 Feb 16 14:16	27°  345'05	0°51'44	morning rise	3294 May 17 09:21	12°  05'8'25	
max. Earth dist.	3288 Feb 16 12:08	27°  344'27	10.96575 AU		3294 Jun 03 08:35	15°  0	
morning rise	3288 Mar 04 07:41	29°  343'44		retrograde	3294 Aug 31 20:49	20°  05'7'11	
	3288 Mar 06 15:45	0°  0		opposition	3294 Nov 09 02:44	17°  02'29'52	-2°39'55

min. Earth dist.	3294 Nov 09 03:28	17°♄29'43	8.36990 AU	max. Earth dist.	3300 Jul 25 02:03	3°♄18'20	10.06015 AU
	3294 Dec 14 13:41	15°♄8		morning rise	3300 Aug 12 02:30	5°♄37'41	
direct	3295 Jan 15 06:17	14°♄07'00		asc. node	3300 Sep 10 14:21	9°♄09'35	
	3295 Feb 15 12:42	15°♄		retrograde	3300 Nov 24 19:47	13°♄48'49	
evening set	3295 Apr 26 07:32	21°♄47'28		opposition	3301 Jan 30 15:02	10°♄20'20	0°15'06
				min. Earth dist.	3301 Jan 30 12:21	10°♄20'54	8.06771 AU
conjunction	3295 May 13 16:42	23°♄58'49	-2°04'57	direct	3301 Apr 07 16:21	6°♄51'04	
minimum elong	3295 May 13 16:45	23°♄58'50	2°04'57	evening set	3301 Jul 21 18:57	15°♄02'31	
max. Earth dist.	3295 May 13 15:23	23°♄58'24	10.31814 AU		3301 Jul 21 11:00	15°♄	
morning rise	3295 May 31 06:30	26°♄11'36					
	3295 Jul 03 02:44	0°♄		conjunction	3301 Aug 08 22:28	17°♄22'29	0°28'06
retrograde	3295 Sep 14 22:15	4°♄17'12		minimum elong	3301 Aug 08 22:27	17°♄22'28	0°28'06
opposition	3295 Nov 22 17:23	0°♄48'56	-2°27'38	max. Earth dist.	3301 Aug 09 01:42	17°♄23'31	10.08170 AU
min. Earth dist.	3295 Nov 22 17:51	0°♄48'51	8.27136 AU	morning rise	3301 Aug 27 01:02	19°♄42'06	
	3295 Dec 02 23:28	30°♄8		retrograde	3301 Dec 08 23:40	27°♄48'19	
direct	3296 Jan 28 14:25	27°♄24'46		opposition	3302 Feb 13 15:24	24°♄20'43	0°54'13
	3296 Mar 23 01:01	0°♄		min. Earth dist.	3302 Feb 13 12:52	24°♄21'15	8.10204 AU
evening set	3296 May 09 04:54	5°♄12'54		direct	3302 Apr 22 02:33	20°♄51'09	
				evening set	3302 Aug 05 17:18	29°♄02'14	
conjunction	3296 May 26 18:57	7°♄26'56	-1°51'24		3302 Aug 13 07:11	0°♄	
minimum elong	3296 May 26 19:00	7°♄26'57	1°51'23				
max. Earth dist.	3296 May 26 18:53	7°♄26'55	10.22599 AU	conjunction	3302 Aug 23 19:07	1°♄20'58	0°58'22
morning rise	3296 Jun 13 13:12	9°♄42'18		minimum elong	3302 Aug 23 19:04	1°♄20'57	0°58'22
retrograde	3296 Sep 28 04:38	17°♄53'09		max. Earth dist.	3302 Aug 23 22:01	1°♄21'54	10.12803 AU
opposition	3296 Dec 05 12:13	14°♄24'12	-2°06'53	morning rise	3302 Sep 10 18:52	3°♄39'01	
min. Earth dist.	3296 Dec 05 11:48	14°♄24'17	8.18658 AU	retrograde	3302 Dec 22 20:49	11°♄38'52	
direct	3297 Feb 10 04:33	10°♄58'45		opposition	3303 Feb 27 13:02	8°♄12'24	1°29'43
evening set	3297 May 23 10:52	18°♄54'02		min. Earth dist.	3303 Feb 27 10:24	8°♄12'56	8.15999 AU
				direct	3303 May 06 11:50	4°♄42'53	
conjunction	3297 Jun 10 05:45	21°♄10'32	-1°31'21	evening set	3303 Aug 20 11:11	12°♄51'41	
minimum elong	3297 Jun 10 05:48	21°♄10'33	1°31'21				
max. Earth dist.	3297 Jun 10 07:11	21°♄11'00	10.15030 AU	conjunction	3303 Sep 07 09:59	15°♄08'29	1°24'55
morning rise	3297 Jun 28 04:02	23°♄28'09		minimum elong	3303 Sep 07 09:56	15°♄08'28	1°24'55
	3297 Aug 29 05:07	0°♄		max. Earth dist.	3303 Sep 07 12:51	15°♄09'24	10.19627 AU
retrograde	3297 Oct 12 14:12	1°♄42'20		morning rise	3303 Sep 25 05:43	17°♄24'19	
	3297 Nov 26 12:25	30°♄8		retrograde	3304 Jan 05 12:27	25°♄16'52	
opposition	3297 Dec 19 10:35	28°♄13'00	-1°38'28	opposition	3304 Mar 12 07:10	21°♄51'40	1°59'31
min. Earth dist.	3297 Dec 19 09:01	28°♄13'19	8.12058 AU	min. Earth dist.	3304 Mar 12 04:02	21°♄52'18	8.23797 AU
direct	3298 Feb 24 01:24	24°♄46'20		direct	3304 May 19 17:52	18°♄22'35	
	3298 May 14 23:09	0°♄		evening set	3304 Sep 02 22:07	26°♄27'15	
evening set	3298 Jun 07 00:21	2°♄47'50					
				conjunction	3304 Sep 20 17:01	28°♄41'40	1°46'19
conjunction	3298 Jun 24 23:28	5°♄06'21	-1°05'46	minimum elong	3304 Sep 20 16:58	28°♄41'39	1°46'18
minimum elong	3298 Jun 24 23:31	5°♄06'22	1°05'45	max. Earth dist.	3304 Sep 20 20:20	28°♄42'43	10.28232 AU
max. Earth dist.	3298 Jun 25 02:13	5°♄07'15	10.09552 AU		3304 Oct 01 00:30	0°♄	
morning rise	3298 Jul 13 00:59	7°♄25'41		morning rise	3304 Oct 08 08:02	0°♄54'53	
retrograde	3298 Oct 27 00:59	15°♄41'02		retrograde	3305 Jan 17 22:48	8°♄39'36	
opposition	3299 Jan 02 11:20	12°♄11'38	-1°03'51	opposition	3305 Mar 25 20:59	5°♄15'43	2°22'07
min. Earth dist.	3299 Jan 02 08:49	12°♄12'09	8.07726 AU	min. Earth dist.	3305 Mar 25 17:47	5°♄16'22	8.33135 AU
direct	3299 Mar 10 03:06	8°♄43'53		direct	3305 Jun 02 18:37	1°♄47'22	
evening set	3299 Jun 21 19:53	16°♄50'22		evening set	3305 Sep 17 00:43	9°♄46'25	
conjunction	3299 Jul 09 22:02	19°♄10'13	-0°36'03	conjunction	3305 Oct 04 15:18	11°♄58'13	2°01'36
minimum elong	3299 Jul 09 22:04	19°♄10'14	0°36'03	minimum elong	3305 Oct 04 15:16	11°♄58'12	2°01'35
max. Earth dist.	3299 Jul 10 01:22	19°♄11'18	10.06484 AU	max. Earth dist.	3305 Oct 04 18:38	11°♄59'15	10.38122 AU
morning rise	3299 Jul 28 01:29	21°♄30'31		morning rise	3305 Oct 22 01:25	14°♄08'40	
retrograde	3299 Nov 10 11:23	29°♄44'47		retrograde	3306 Jan 31 01:37	21°♄45'16	
opposition	3300 Jan 16 13:10	26°♄15'41	-0°25'09	opposition	3306 Apr 08 05:53	18°♄22'48	2°36'43
min. Earth dist.	3300 Jan 16 10:25	26°♄16'15	8.05925 AU	min. Earth dist.	3306 Apr 08 03:21	18°♄23'18	8.43485 AU
direct	3300 Mar 24 08:23	22°♄47'03		direct	3306 Jun 16 15:08	14°♄55'23	
	3300 Jun 29 05:39	0°♄		evening set	3306 Sep 30 17:52	22°♄47'42	
evening set	3300 Jul 06 19:01	0°♄56'56					
				conjunction	3306 Oct 18 04:00	24°♄56'48	2°10'18
conjunction	3300 Jul 24 22:40	3°♄17'17	-0°04'08	minimum elong	3306 Oct 18 03:59	24°♄56'48	2°10'18
minimum elong	3300 Jul 24 22:41	3°♄17'17	0°04'08	max. Earth dist.	3306 Oct 18 06:40	24°♄57'38	10.48751 AU
behind sun begin	3300 Jul 24 15:26	3°♄14'58		morning rise	3306 Nov 04 09:32	27°♄04'32	
behind sun end	3300 Jul 25 05:56	3°♄19'37			3306 Nov 29 16:08	0°♄	

retrograde	3307 Feb 12 20:46	4° \mathbb{M} 33'15		max. Earth dist.	3312 Dec 28 18:05	7° \mathbb{Z} 07'48	10.99633 AU
opposition	3307 Apr 21 10:00	1° \mathbb{M} 12'07	2°43'04	morning rise	3313 Jan 14 13:22	9° \mathbb{Z} 06'32	
min. Earth dist.	3307 Apr 21 08:34	1° \mathbb{M} 12'24	8.54294 AU	retrograde	3313 Apr 24 15:19	16° \mathbb{Z} 07'15	
	3307 May 07 03:02	30° \mathbb{R} \mathbb{A}		opposition	3313 Jul 03 15:54	12° \mathbb{Z} 49'52	1°01'56
direct	3307 Jun 30 06:39	27° \mathbb{A} 45'49		min. Earth dist.	3313 Jul 03 18:47	12° \mathbb{Z} 49'20	9.01243 AU
	3307 Aug 22 03:03	0° \mathbb{M}		direct	3313 Sep 12 17:08	9° \mathbb{Z} 30'05	
evening set	3307 Oct 14 00:54	5° \mathbb{M} 30'37		evening set	3313 Dec 23 16:26	16° \mathbb{Z} 36'20	
conjunction	3307 Oct 31 06:49	7° \mathbb{M} 37'08	2°12'25	conjunction	3314 Jan 09 09:12	18° \mathbb{Z} 34'02	0°38'07
minimum elong	3307 Oct 31 06:49	7° \mathbb{M} 37'08	2°12'26	minimum elong	3314 Jan 09 09:13	18° \mathbb{Z} 34'02	0°38'06
max. Earth dist.	3307 Oct 31 08:09	7° \mathbb{M} 37'33	10.59576 AU	max. Earth dist.	3314 Jan 09 05:34	18° \mathbb{Z} 32'58	11.02262 AU
morning rise	3307 Nov 17 08:23	9° \mathbb{M} 42'20		morning rise	3314 Jan 26 00:48	20° \mathbb{Z} 31'25	
	3308 Jan 07 04:36	15° \mathbb{M}		retrograde	3314 May 06 12:37	27° \mathbb{Z} 32'21	
retrograde	3308 Feb 25 10:13	17° \mathbb{M} 03'42		opposition	3314 Jul 15 20:10	24° \mathbb{Z} 14'42	0°30'55
	3308 Apr 16 11:42	15° \mathbb{R} \mathbb{M}		min. Earth dist.	3314 Jul 15 22:46	24° \mathbb{Z} 14'13	9.02777 AU
opposition	3308 May 03 09:05	13° \mathbb{M} 43'44	2°41'27	direct	3314 Sep 24 18:02	20° \mathbb{Z} 55'32	
min. Earth dist.	3308 May 03 08:14	13° \mathbb{M} 43'54	8.65025 AU	evening set	3315 Jan 04 03:14	27° \mathbb{Z} 59'05	
direct	3308 Jul 12 15:30	10° \mathbb{M} 18'40					
	3308 Sep 30 01:49	15° \mathbb{M}		conjunction	3315 Jan 20 19:27	29° \mathbb{Z} 56'33	0°12'12
evening set	3308 Oct 25 22:08	17° \mathbb{M} 55'37		minimum elong	3315 Jan 20 19:28	29° \mathbb{Z} 56'34	0°12'13
				behind sun begin	3315 Jan 20 14:42	29° \mathbb{Z} 55'10	
conjunction	3308 Nov 12 00:27	19° \mathbb{M} 59'48	2°08'16	behind sun end	3315 Jan 21 00:13	29° \mathbb{Z} 57'57	
minimum elong	3308 Nov 12 00:28	19° \mathbb{M} 59'48	2°08'17	max. Earth dist.	3315 Jan 20 16:06	29° \mathbb{Z} 55'35	11.02741 AU
max. Earth dist.	3308 Nov 12 00:49	19° \mathbb{M} 59'55	10.70077 AU		3315 Jan 21 07:08	0° \mathbb{A}	
morning rise	3308 Nov 28 22:45	22° \mathbb{M} 02'45		morning rise	3315 Feb 06 11:06	1° \mathbb{A} 53'57	
retrograde	3309 Mar 08 17:29	29° \mathbb{M} 17'32		retrograde	3315 May 18 11:39	8° \mathbb{A} 56'36	
opposition	3309 May 16 03:10	25° \mathbb{M} 58'33	2°32'28	desc. node	3315 Jul 13 07:10	6° \mathbb{A} 42'27	
min. Earth dist.	3309 May 16 02:28	25° \mathbb{M} 58'41	8.75165 AU	opposition	3315 Jul 28 00:29	5° \mathbb{A} 38'23	-0°01'16
direct	3309 Jul 25 17:39	22° \mathbb{M} 34'43		min. Earth dist.	3315 Jul 28 03:20	5° \mathbb{A} 37'52	9.02179 AU
	3309 Nov 06 20:56	0° \mathbb{A}		direct	3315 Oct 06 16:48	2° \mathbb{A} 19'36	
evening set	3309 Nov 07 10:12	0° \mathbb{A} 03'55		evening set	3316 Jan 15 13:39	9° \mathbb{A} 21'48	
conjunction	3309 Nov 24 09:39	2° \mathbb{A} 06'05	1°58'26	conjunction	3316 Feb 01 05:30	11° \mathbb{A} 19'24	-0°14'17
minimum elong	3309 Nov 24 09:40	2° \mathbb{A} 06'06	1°58'27	minimum elong	3316 Feb 01 05:29	11° \mathbb{A} 19'23	0°14'16
max. Earth dist.	3309 Nov 24 09:46	2° \mathbb{A} 06'07	10.79758 AU	behind sun begin	3316 Feb 01 02:01	11° \mathbb{A} 18'23	
morning rise	3309 Dec 11 05:17	4° \mathbb{A} 07'09		behind sun end	3316 Feb 01 08:56	11° \mathbb{A} 20'24	
retrograde	3310 Mar 20 21:10	11° \mathbb{A} 16'23		max. Earth dist.	3316 Feb 01 01:25	11° \mathbb{A} 18'12	11.01098 AU
opposition	3310 May 28 17:03	7° \mathbb{A} 58'09	2°17'00	morning rise	3316 Feb 17 21:43	13° \mathbb{A} 17'08	
min. Earth dist.	3310 May 28 16:36	7° \mathbb{A} 58'14	8.84238 AU		3316 Mar 04 02:48	15° \mathbb{A}	
direct	3310 Aug 07 14:23	4° \mathbb{A} 35'31		retrograde	3316 May 29 12:48	20° \mathbb{A} 22'54	
evening set	3310 Nov 19 14:13	11° \mathbb{A} 57'27		opposition	3316 Aug 08 05:35	17° \mathbb{A} 03'55	-0°33'30
				min. Earth dist.	3316 Aug 08 09:08	17° \mathbb{A} 03'15	8.99503 AU
conjunction	3310 Dec 06 11:17	13° \mathbb{A} 57'56	1°43'39		3316 Sep 07 08:38	15° \mathbb{R} \mathbb{A}	
minimum elong	3310 Dec 06 11:19	13° \mathbb{A} 57'57	1°43'40	direct	3316 Oct 17 14:09	13° \mathbb{A} 45'14	
max. Earth dist.	3310 Dec 06 11:09	13° \mathbb{A} 57'54	10.88158 AU		3316 Nov 25 19:31	15° \mathbb{A}	
morning rise	3310 Dec 23 04:55	15° \mathbb{A} 57'28		evening set	3317 Jan 26 01:19	20° \mathbb{A} 47'33	
retrograde	3311 Apr 01 22:12	23° \mathbb{A} 02'23					
opposition	3311 Jun 10 03:19	19° \mathbb{A} 44'42	1°56'03	conjunction	3317 Feb 11 17:05	22° \mathbb{A} 45'33	-0°40'14
min. Earth dist.	3311 Jun 10 04:05	19° \mathbb{A} 44'33	8.91823 AU	minimum elong	3317 Feb 11 17:03	22° \mathbb{A} 45'32	0°40'14
direct	3311 Aug 20 03:20	16° \mathbb{A} 23'10		max. Earth dist.	3317 Feb 11 12:18	22° \mathbb{A} 44'08	10.97412 AU
evening set	3311 Dec 01 11:35	23° \mathbb{A} 38'39		morning rise	3317 Feb 28 10:13	24° \mathbb{A} 43'57	
					3317 Apr 22 11:34	0° \mathbb{H}	
conjunction	3311 Dec 18 06:42	25° \mathbb{A} 37'50	1°24'45	retrograde	3317 Jun 10 15:58	1° \mathbb{H} 54'16	
minimum elong	3311 Dec 18 06:44	25° \mathbb{A} 37'51	1°24'45		3317 Jul 31 15:23	30° \mathbb{R} \mathbb{A}	
max. Earth dist.	3311 Dec 18 04:58	25° \mathbb{A} 37'19	10.94883 AU	opposition	3317 Aug 20 12:14	28° \mathbb{A} 34'15	-1°04'39
morning rise	3312 Jan 03 23:09	27° \mathbb{A} 36'16		min. Earth dist.	3317 Aug 20 16:02	28° \mathbb{A} 33'33	8.94858 AU
	3312 Jan 25 10:20	0° \mathbb{Z}		direct	3317 Oct 29 12:46	25° \mathbb{A} 15'29	
retrograde	3312 Apr 12 18:27	4° \mathbb{Z} 38'17			3318 Jan 16 22:40	0° \mathbb{H}	
opposition	3312 Jun 21 10:36	1° \mathbb{Z} 20'54	1°30'40	evening set	3318 Feb 06 15:34	2° \mathbb{H} 19'21	
min. Earth dist.	3312 Jun 21 12:51	1° \mathbb{Z} 20'29	8.97568 AU				
	3312 Jul 10 02:47	30° \mathbb{R} \mathbb{A}		conjunction	3318 Feb 23 07:47	4° \mathbb{H} 18'07	-1°04'48
direct	3312 Aug 31 11:05	28° \mathbb{A} 00'18		minimum elong	3318 Feb 23 07:45	4° \mathbb{H} 18'06	1°04'48
	3312 Oct 21 03:05	0° \mathbb{Z}		max. Earth dist.	3318 Feb 23 03:48	4° \mathbb{H} 16'55	10.91829 AU
evening set	3312 Dec 12 03:46	5° \mathbb{Z} 10'33		morning rise	3318 Mar 12 02:01	6° \mathbb{H} 17'30	
				retrograde	3318 Jun 23 01:53	13° \mathbb{H} 33'40	
conjunction	3312 Dec 28 21:27	7° \mathbb{Z} 08'48	1°02'36	opposition	3318 Sep 01 21:32	10° \mathbb{H} 12'28	-1°33'34
minimum elong	3312 Dec 28 21:29	7° \mathbb{Z} 08'48	1°02'36	min. Earth dist.	3318 Sep 02 00:26	10° \mathbb{H} 11'55	8.88421 AU

direct	3318 Nov 10 13:13	6° X 53'27	direct	3325 Jan 22 23:12	21° B 39'28
evening set	3319 Feb 18 09:49	14° X 00'11	evening set	3325 May 04 07:32	29° B 24'50
				3325 May 08 23:31	0° II
conjunction	3319 Mar 07 02:58	16° X 00'04 -1°26'59	conjunction	3325 May 21 19:27	1° II 37'52 -1°58'18
minimum elong	3319 Mar 07 02:55	16° X 00'03 1°26'59	minimum elong	3325 May 21 19:30	1° II 37'53 1°58'19
max. Earth dist.	3319 Mar 06 23:56	15° X 59'09 10.84551 AU	max. Earth dist.	3325 May 21 20:43	1° II 38'16 10.25385 AU
morning rise	3319 Mar 23 22:39	18° X 00'47	morning rise	3325 Jun 08 11:36	3° II 52'16
retrograde	3319 Jul 05 17:25	25° X 23'54	retrograde	3325 Sep 23 05:43	12° II 01'43
opposition	3319 Sep 14 10:12	22° X 01'26 -1°59'01	opposition	3325 Nov 30 17:16	8° II 32'51 -2°17'11
min. Earth dist.	3319 Sep 14 12:17	22° X 01'02 8.80423 AU	min. Earth dist.	3325 Nov 30 15:33	8° II 33'12 8.21306 AU
direct	3319 Nov 22 13:48	18° X 41'58	direct	3326 Feb 05 09:38	5° II 07'55
evening set	3320 Mar 01 09:46	25° X 52'57	evening set	3326 May 18 10:20	13° II 00'42
conjunction	3320 Mar 18 04:15	27° X 54'17 -1°45'46	conjunction	3326 Jun 05 03:02	15° II 16'16 -1°41'02
minimum elong	3320 Mar 18 04:13	27° X 54'16 1°45'46	minimum elong	3326 Jun 05 03:05	15° II 16'17 1°41'02
max. Earth dist.	3320 Mar 18 01:13	27° X 53'21 10.75854 AU	max. Earth dist.	3326 Jun 05 04:52	15° II 16'51 10.17464 AU
morning rise	3320 Apr 04 02:02	29° X 56'39	morning rise	3326 Jun 22 23:36	17° II 33'05
	3320 Apr 04 13:20	0° Y	retrograde	3326 Oct 07 15:09	25° II 46'41
retrograde	3320 Jul 17 14:25	7° Y 27'34	opposition	3326 Dec 14 14:49	22° II 17'32 -1°51'58
opposition	3320 Sep 26 02:50	4° Y 03'48 -2°19'49	min. Earth dist.	3326 Dec 14 12:50	22° II 17'56 8.14267 AU
min. Earth dist.	3320 Sep 26 04:48	4° Y 03'25 8.71166 AU	direct	3327 Feb 19 04:33	18° II 51'32
direct	3320 Dec 03 19:00	0° Y 43'42	evening set	3327 Jun 01 21:23	26° II 50'59
evening set	3321 Mar 13 16:24	8° Y 00'09			
conjunction	3321 Mar 30 12:51	10° Y 03'16 -2°00'13	conjunction	3327 Jun 19 18:33	29° II 08'45 -1°17'42
minimum elong	3321 Mar 30 12:49	10° Y 03'16 2°00'12	minimum elong	3327 Jun 19 18:37	29° II 08'46 1°17'43
max. Earth dist.	3321 Mar 30 09:36	10° Y 02'17 10.66082 AU	max. Earth dist.	3327 Jun 19 21:01	29° II 09'32 10.11475 AU
morning rise	3321 Apr 16 13:20	12° Y 07'38		3327 Jun 26 09:16	0° B
retrograde	3321 Jul 30 18:35	19° Y 46'56	morning rise	3327 Jul 07 18:55	1° B 27'30
opposition	3321 Oct 09 00:22	16° Y 21'52 -2°34'45	retrograde	3327 Oct 22 01:15	9° B 43'07
min. Earth dist.	3321 Oct 09 02:24	16° Y 21'29 8.61029 AU	opposition	3327 Dec 28 15:21	6° B 14'00 -1°19'48
direct	3321 Dec 16 04:52	13° Y 01'00	min. Earth dist.	3327 Dec 28 13:03	6° B 14'28 8.09359 AU
evening set	3322 Mar 26 06:36	20° Y 23'52	direct	3328 Mar 04 05:25	2° B 47'03
			evening set	3328 Jun 15 15:03	10° B 51'56
conjunction	3322 Apr 12 05:55	22° Y 29'07 -2°09'22	conjunction	3328 Jul 03 15:50	13° B 11'18 -0°49'34
minimum elong	3322 Apr 12 05:54	22° Y 29'07 2°09'21	minimum elong	3328 Jul 03 15:52	13° B 11'19 0°49'34
max. Earth dist.	3322 Apr 12 03:40	22° Y 28'26 10.55651 AU	max. Earth dist.	3328 Jul 03 19:10	13° B 12'23 10.07783 AU
morning rise	3322 Apr 29 09:37	24° Y 35'45	morning rise	3328 Jul 21 18:43	15° B 31'19
	3322 Jun 19 13:22	0° B	retrograde	3328 Nov 04 12:05	23° B 46'42
retrograde	3322 Aug 13 04:58	2° B 23'37	opposition	3329 Jan 10 17:28	20° B 17'53 -0°42'34
	3322 Oct 08 12:42	30° K Y	min. Earth dist.	3329 Jan 10 14:30	20° B 18'29 8.06888 AU
opposition	3322 Oct 22 03:00	28° Y 57'19 -2°42'42	direct	3329 Mar 18 10:17	16° B 50'06
min. Earth dist.	3322 Oct 22 04:17	28° Y 57'04 8.50457 AU	evening set	3329 Jun 30 13:18	24° B 58'52
direct	3322 Dec 28 20:42	25° Y 35'32			
	3323 Mar 12 12:53	0° B	conjunction	3329 Jul 18 16:26	27° B 19'04 -0°18'20
evening set	3323 Apr 08 05:38	3° B 05'36	minimum elong	3329 Jul 18 16:27	27° B 19'05 0°18'20
conjunction	3323 Apr 25 08:37	5° B 13'18 -2°12'26	max. Earth dist.	3329 Jul 18 20:45	27° B 20'28 10.06609 AU
minimum elong	3323 Apr 25 08:38	5° B 13'18 2°12'25	morning rise	3329 Aug 05 20:20	29° B 39'31
max. Earth dist.	3323 Apr 25 07:54	5° B 13'04 10.45034 AU		3329 Aug 08 13:07	0° J
morning rise	3323 May 12 16:03	7° B 22'25	retrograde	3329 Nov 18 21:44	7° J 52'25
	3323 Aug 07 23:58	15° B	opposition	3330 Jan 24 19:49	4° J 24'09 -0°02'39
retrograde	3323 Aug 26 22:20	15° B 18'30	min. Earth dist.	3330 Jan 24 16:08	4° J 24'54 8.06981 AU
	3323 Sep 14 23:54	15° K B	asc. node	3330 Feb 18 17:14	2° J 28'17
opposition	3323 Nov 04 10:39	11° B 51'06 -2°42'44	direct	3330 Apr 01 17:52	0° J 55'42
min. Earth dist.	3323 Nov 04 10:46	11° B 51'05 8.39948 AU	evening set	3330 Jul 15 13:38	9° J 06'36
direct	3324 Jan 10 19:25	8° B 28'19			
	3324 Apr 11 13:31	15° B	conjunction	3330 Aug 02 17:29	11° J 26'46 0°14'04
evening set	3324 Apr 20 13:56	16° B 06'01	minimum elong	3330 Aug 02 17:29	11° J 26'45 0°14'04
			behind sun begin	3330 Aug 02 14:03	11° J 25'39
conjunction	3324 May 07 21:13	18° B 16'22 -2°08'50	behind sun end	3330 Aug 02 20:54	11° J 27'51
minimum elong	3324 May 07 21:15	18° B 16'22 2°08'50	max. Earth dist.	3330 Aug 02 22:08	11° J 28'15 10.07963 AU
max. Earth dist.	3324 May 07 21:47	18° B 16'32 10.34759 AU	morning rise	3330 Aug 20 20:44	13° J 46'45
morning rise	3324 May 25 08:51	20° B 28'07		3330 Aug 30 15:21	15° J
retrograde	3324 Sep 08 23:16	28° B 31'34	retrograde	3330 Dec 03 04:28	21° J 55'15
opposition	3324 Nov 16 23:33	25° B 03'18 -2°34'17	opposition	3331 Feb 07 21:08	18° J 27'46 0°37'17
min. Earth dist.	3324 Nov 16 22:27	25° B 03'31 8.30043 AU	min. Earth dist.	3331 Feb 07 17:26	18° J 28'31 8.09531 AU

	3331 Apr 11 16:19	15° κ 8 Ω	opposition	3337 Apr 28 04:17	8° μ 36'35	2°43'05
direct	3331 Apr 16 03:18	14° Ω 58'54	min. Earth dist.	3337 Apr 28 03:02	8° μ 36'50	8.59571 AU
	3331 Apr 20 14:21	15° Ω	direct	3337 Jul 07 06:51	5° μ 10'45	
evening set	3331 Jul 30 13:18	23° Ω 10'08	evening set	3337 Oct 20 18:51	12° μ 51'28	
conjunction	3331 Aug 17 16:07	25° Ω 29'24 0°45'23	conjunction	3337 Nov 06 22:58	14° μ 56'47	2°10'47
minimum elong	3331 Aug 17 16:05	25° Ω 29'23 0°45'23	minimum elong	3337 Nov 06 22:59	14° μ 56'48	2°10'47
max. Earth dist.	3331 Aug 17 20:18	25° Ω 30'44 10.11634 AU	max. Earth dist.	3337 Nov 06 23:56	14° μ 57'05	10.64575 AU
morning rise	3331 Sep 04 17:04	27° Ω 48'06		3337 Nov 07 09:27	15° μ	
	3331 Sep 22 15:58	0° μ	morning rise	3337 Nov 23 22:35	17° μ 00'48	
retrograde	3331 Dec 17 05:23	5° μ 50'48	retrograde	3338 Mar 03 20:51	24° μ 18'42	
opposition	3332 Feb 21 20:15	2° μ 24'22 1°14'39	opposition	3338 May 11 00:44	20° μ 58'58	2°37'13
min. Earth dist.	3332 Feb 21 17:10	2° μ 24'59 8.14278 AU	min. Earth dist.	3338 May 11 00:34	20° μ 58'59	8.69685 AU
	3332 Mar 25 10:16	30° κ 8 Ω	direct	3338 Jul 20 11:26	17° μ 34'11	
direct	3332 Apr 29 12:32	28° Ω 55'23	evening set	3338 Nov 02 11:08	25° μ 07'05	
	3332 Jun 03 10:41	0° μ				
evening set	3332 Aug 13 09:42	7° μ 05'15	conjunction	3338 Nov 19 11:53	27° μ 10'14	2°03'20
			minimum elong	3338 Nov 19 11:55	27° μ 10'15	2°03'21
conjunction	3332 Aug 31 09:59	9° μ 22'55 1°13'46	max. Earth dist.	3338 Nov 19 11:42	27° μ 10'11	10.74363 AU
minimum elong	3332 Aug 31 09:56	9° μ 22'54 1°13'46	morning rise	3338 Dec 06 08:38	29° μ 12'14	
max. Earth dist.	3332 Aug 31 13:18	9° μ 23'58 10.17362 AU		3338 Dec 13 03:13	0° \mathcal{A}	
morning rise	3332 Sep 18 07:24	11° μ 39'41	retrograde	3339 Mar 16 01:07	6° \mathcal{A} 24'04	
retrograde	3332 Dec 30 00:47	19° μ 35'37	opposition	3339 May 23 16:42	3° \mathcal{A} 05'05	2°24'28
opposition	3333 Mar 06 16:22	16° μ 10'21 1°47'10	min. Earth dist.	3339 May 23 17:23	3° \mathcal{A} 04'58	8.79024 AU
min. Earth dist.	3333 Mar 06 14:14	16° μ 10'47 8.20974 AU		3339 Jul 13 22:04	30° κ μ	
direct	3333 May 13 19:40	12° μ 41'32	direct	3339 Aug 02 11:12	29° μ 41'24	
evening set	3333 Aug 28 00:22	20° μ 48'16		3339 Aug 21 22:16	0° \mathcal{A}	
			evening set	3339 Nov 14 18:32	7° \mathcal{A} 06'47	
conjunction	3333 Sep 14 21:02	23° μ 03'47 1°37'35				
minimum elong	3333 Sep 14 20:59	23° μ 03'46 1°37'34	conjunction	3339 Dec 01 16:33	9° \mathcal{A} 08'06	1°50'36
max. Earth dist.	3333 Sep 14 23:10	23° μ 04'28 10.24895 AU	minimum elong	3339 Dec 01 16:35	9° \mathcal{A} 08'07	1°50'36
morning rise	3333 Oct 02 14:10	25° μ 18'10	max. Earth dist.	3339 Dec 01 15:21	9° \mathcal{A} 07'44	10.83182 AU
	3333 Nov 13 07:15	0° \mathcal{A}	morning rise	3339 Dec 18 11:14	11° \mathcal{A} 08'25	
retrograde	3334 Jan 12 13:42	3° \mathcal{A} 06'34	retrograde	3340 Mar 27 02:05	18° \mathcal{A} 15'23	
	3334 Mar 16 17:31	30° κ μ	opposition	3340 Jun 04 04:30	14° \mathcal{A} 56'58	2°05'45
opposition	3334 Mar 20 08:35	29° μ 42'31 2°13'05	min. Earth dist.	3340 Jun 04 05:18	14° \mathcal{A} 56'49	8.87198 AU
min. Earth dist.	3334 Mar 20 07:04	29° μ 42'49 8.29313 AU	direct	3340 Aug 14 04:05	11° \mathcal{A} 34'22	
direct	3334 May 27 23:54	26° μ 14'09	evening set	3340 Nov 25 18:37	18° \mathcal{A} 52'55	
	3334 Aug 04 17:41	0° \mathcal{A}				
evening set	3334 Sep 11 07:30	4° \mathcal{A} 16'05	conjunction	3340 Dec 12 14:38	20° \mathcal{A} 52'46	1°33'22
			minimum elong	3340 Dec 12 14:40	20° \mathcal{A} 52'46	1°33'22
conjunction	3334 Sep 28 23:53	6° \mathcal{A} 29'04 1°55'38	max. Earth dist.	3340 Dec 12 13:19	20° \mathcal{A} 52'22	10.90672 AU
minimum elong	3334 Sep 28 23:50	6° \mathcal{A} 29'03 1°55'38	morning rise	3340 Dec 29 07:45	22° \mathcal{A} 51'47	
max. Earth dist.	3334 Sep 29 01:05	6° \mathcal{A} 29'27 10.33870 AU	retrograde	3341 Apr 08 00:08	29° \mathcal{A} 55'10	
morning rise	3334 Oct 16 12:17	8° \mathcal{A} 40'48	opposition	3341 Jun 16 12:43	26° \mathcal{A} 37'06	1°42'09
retrograde	3335 Jan 25 18:51	16° \mathcal{A} 21'14	min. Earth dist.	3341 Jun 16 13:16	26° \mathcal{A} 37'00	8.93877 AU
opposition	3335 Apr 02 20:08	12° \mathcal{A} 58'25 2°31'16	direct	3341 Aug 26 15:01	23° \mathcal{A} 15'34	
min. Earth dist.	3335 Apr 02 18:44	12° \mathcal{A} 58'42 8.38865 AU		3341 Dec 03 11:07	0° \mathcal{B}	
direct	3335 Jun 11 00:38	9° \mathcal{A} 30'43	evening set	3341 Dec 07 12:49	0° \mathcal{B} 28'14	
evening set	3335 Sep 25 05:21	17° \mathcal{A} 26'26				
			conjunction	3341 Dec 24 07:19	2° \mathcal{B} 26'58	1°12'31
conjunction	3335 Oct 12 17:22	19° \mathcal{A} 36'46 2°07'16	minimum elong	3341 Dec 24 07:21	2° \mathcal{B} 26'58	1°12'31
minimum elong	3335 Oct 12 17:20	19° \mathcal{A} 36'46 2°07'15	max. Earth dist.	3341 Dec 24 06:17	2° \mathcal{B} 26'39	10.96532 AU
max. Earth dist.	3335 Oct 12 18:19	19° \mathcal{A} 37'04 10.43825 AU	morning rise	3342 Jan 09 23:23	4° \mathcal{B} 25'03	
morning rise	3335 Oct 30 01:03	21° \mathcal{A} 45'46	retrograde	3342 Apr 19 22:28	11° \mathcal{B} 26'16	
retrograde	3336 Feb 07 17:08	29° \mathcal{A} 18'17	opposition	3342 Jun 28 18:42	8° \mathcal{B} 08'25	1°14'43
opposition	3336 Apr 15 02:47	25° \mathcal{A} 56'35 2°41'15	min. Earth dist.	3342 Jun 28 19:42	8° \mathcal{B} 08'14	8.98811 AU
min. Earth dist.	3336 Apr 15 01:13	25° \mathcal{A} 56'54 8.49129 AU	direct	3342 Sep 07 20:59	4° \mathcal{B} 47'52	
direct	3336 Jun 23 19:35	22° \mathcal{A} 29'46	evening set	3342 Dec 19 02:38	11° \mathcal{B} 55'44	
	3336 Oct 05 04:35	0° μ				
evening set	3336 Oct 07 17:02	0° μ 18'14	conjunction	3343 Jan 04 19:52	13° \mathcal{B} 53'42	0°48'56
			minimum elong	3343 Jan 04 19:54	13° \mathcal{B} 53'42	0°48'56
conjunction	3336 Oct 25 00:56	2° μ 25'58 2°12'15	max. Earth dist.	3343 Jan 04 18:08	13° \mathcal{B} 53'11	11.00545 AU
minimum elong	3336 Oct 25 00:55	2° μ 25'58 2°12'15	morning rise	3343 Jan 21 11:30	15° \mathcal{B} 51'14	
max. Earth dist.	3336 Oct 25 02:05	2° μ 26'19 10.54236 AU	retrograde	3343 May 01 17:54	22° \mathcal{B} 51'47	
morning rise	3336 Nov 11 04:16	4° μ 32'21	opposition	3343 Jul 10 23:10	19° \mathcal{B} 33'54	0°44'34
retrograde	3337 Feb 19 10:20	11° μ 57'15	min. Earth dist.	3343 Jul 11 01:04	19° \mathcal{B} 33'33	9.01826 AU

direct	3343 Sep 19 21:46	16°♄14'10			3349 May 18 19:02	0°♄
evening set	3343 Dec 30 13:46	23°♄18'35		retrograde	3349 Jul 12 03:52	2°♄18'57
					3349 Sep 06 14:34	30°♄
conjunction	3344 Jan 16 06:06	25°♄16'05 0°23'34		opposition	3349 Sep 20 19:57	28°♄56'32 -2°10'57
minimum elong	3344 Jan 16 06:06	25°♄16'05 0°23'34		min. Earth dist.	3349 Sep 20 21:43	28°♄56'12 8.78619 AU
max. Earth dist.	3344 Jan 16 03:16	25°♄15'15 11.02572 AU		direct	3349 Nov 28 18:27	25°♄37'31
morning rise	3344 Feb 01 21:49	27°♄13'25			3350 Feb 11 11:25	0°♄
	3344 Feb 27 06:02	0°♄		evening set	3350 Mar 08 13:31	2°♄50'01
retrograde	3344 May 12 14:21	4°♄14'49				
opposition	3344 Jul 22 02:47	0°♄56'40 0°12'48		conjunction	3350 Mar 25 08:53	4°♄51'53 -1°54'13
min. Earth dist.	3344 Jul 22 05:00	0°♄56'16 9.02815 AU		minimum elong	3350 Mar 25 08:51	4°♄51'52 1°54'13
	3344 Aug 04 01:52	30°♄		max. Earth dist.	3350 Mar 25 07:19	4°♄51'24 10.73922 AU
direct	3344 Sep 30 22:10	27°♄37'35		morning rise	3350 Apr 11 07:44	6°♄54'51
	3344 Nov 25 02:34	0°♄		retrograde	3350 Jul 25 04:55	14°♄28'48
desc. node	3344 Dec 18 17:03	2°♄12'13		opposition	3350 Oct 03 14:17	11°♄05'06 -2°28'32
evening set	3345 Jan 09 23:42	4°♄39'54		min. Earth dist.	3350 Oct 03 15:18	11°♄04'54 8.69140 AU
				direct	3350 Dec 11 01:06	7°♄45'25
conjunction	3345 Jan 26 15:38	6°♄37'18 -0°02'48		evening set	3351 Mar 20 23:16	15°♄03'40
minimum elong	3345 Jan 26 15:38	6°♄37'18 0°02'47				
behind sun begin	3345 Jan 26 08:40	6°♄35'16		conjunction	3351 Apr 06 21:04	17°♄07'28 -2°05'47
behind sun end	3345 Jan 26 22:35	6°♄39'20		minimum elong	3351 Apr 06 21:02	17°♄07'27 2°05'47
max. Earth dist.	3345 Jan 26 13:03	6°♄36'36 11.02533 AU		max. Earth dist.	3351 Apr 06 19:16	17°♄06'55 10.63920 AU
morning rise	3345 Feb 12 07:38	8°♄34'46		morning rise	3351 Apr 23 22:51	19°♄12'33
	3345 Apr 26 11:39	15°♄		retrograde	3351 Aug 07 12:21	26°♄54'49
retrograde	3345 May 24 14:48	15°♄38'28		opposition	3351 Oct 16 13:26	23°♄29'51 -2°39'41
	3345 Jun 22 03:51	15°♄		min. Earth dist.	3351 Oct 16 14:29	23°♄29'39 8.58753 AU
opposition	3345 Aug 03 06:44	12°♄19'51 -0°19'29		direct	3351 Dec 23 11:48	20°♄09'17
min. Earth dist.	3345 Aug 03 08:27	12°♄19'32 9.01733 AU		evening set	3352 Apr 01 17:19	27°♄34'21
direct	3345 Oct 12 20:12	9°♄01'14				
	3346 Jan 12 05:57	15°♄		conjunction	3352 Apr 18 18:12	29°♄40'25 -2°11'40
evening set	3346 Jan 21 10:01	16°♄02'49		minimum elong	3352 Apr 18 18:12	29°♄40'25 2°11'39
				max. Earth dist.	3352 Apr 18 15:49	29°♄39'41 10.53241 AU
conjunction	3346 Feb 07 01:50	18°♄00'27 -0°28'58			3352 Apr 21 09:17	0°♄
minimum elong	3346 Feb 07 01:49	18°♄00'27 0°28'58		morning rise	3352 May 05 23:35	1°♄47'54
max. Earth dist.	3346 Feb 06 23:52	17°♄59'53 11.00420 AU		retrograde	3352 Aug 20 01:08	9°♄38'31
morning rise	3346 Feb 23 18:19	19°♄58'21		opposition	3352 Oct 28 17:39	6°♄12'22 -2°43'25
retrograde	3346 Jun 05 17:00	27°♄05'50		min. Earth dist.	3352 Oct 28 18:58	6°♄12'07 8.47946 AU
opposition	3346 Aug 15 12:03	23°♄46'31 -0°51'09		direct	3353 Jan 04 06:20	2°♄50'43
min. Earth dist.	3346 Aug 15 13:25	23°♄46'16 8.98622 AU		evening set	3353 Apr 14 20:08	10°♄23'16
direct	3346 Oct 24 16:46	20°♄28'11				
evening set	3347 Feb 01 22:28	27°♄30'28		conjunction	3353 May 02 00:58	12°♄31'54 -2°11'10
				minimum elong	3353 May 02 00:59	12°♄31'55 2°11'10
conjunction	3347 Feb 18 14:22	29°♄28'39 -0°54'12		max. Earth dist.	3353 May 01 22:47	12°♄31'13 10.42457 AU
minimum elong	3347 Feb 18 14:21	29°♄28'38 0°54'12		morning rise	3353 May 19 10:29	14°♄42'00
max. Earth dist.	3347 Feb 18 12:02	29°♄27'57 10.96326 AU			3353 May 21 21:18	15°♄
	3347 Feb 22 23:46	0°♄		retrograde	3353 Sep 02 21:03	22°♄40'29
morning rise	3347 Mar 07 07:52	1°♄27'20		opposition	3353 Nov 11 03:11	19°♄13'13 -2°38'57
retrograde	3347 Jun 18 00:21	8°♄39'53		min. Earth dist.	3353 Nov 11 04:21	19°♄12'59 8.37334 AU
opposition	3347 Aug 27 19:32	5°♄19'42 -1°21'04		direct	3354 Jan 17 07:07	15°♄50'22
min. Earth dist.	3347 Aug 27 21:25	5°♄19'21 8.93610 AU		evening set	3354 Apr 28 08:05	23°♄30'39
direct	3347 Nov 05 14:40	2°♄01'21				
evening set	3348 Feb 13 14:19	9°♄05'45		conjunction	3354 May 15 17:34	25°♄41'59 -2°03'53
				minimum elong	3354 May 15 17:36	25°♄42'00 2°03'53
conjunction	3348 Mar 01 06:44	11°♄04'48 -1°17'28		max. Earth dist.	3354 May 15 16:42	25°♄41'43 10.32183 AU
minimum elong	3348 Mar 01 06:42	11°♄04'48 1°17'29		morning rise	3354 Jun 02 07:30	27°♄54'46
max. Earth dist.	3348 Mar 01 03:46	11°♄03'55 10.90404 AU			3354 Jun 19 15:11	0°♄
morning rise	3348 Mar 18 01:42	13°♄04'37		retrograde	3354 Sep 16 22:40	6°♄00'02
retrograde	3348 Jun 29 11:13	20°♄23'23		opposition	3354 Nov 24 17:33	2°♄31'50 -2°25'56
opposition	3348 Sep 08 05:56	17°♄02'10 -1°48'04		min. Earth dist.	3354 Nov 24 17:51	2°♄31'46 8.27522 AU
min. Earth dist.	3348 Sep 08 08:08	17°♄01'45 8.86867 AU			3354 Dec 30 08:00	30°♄
direct	3348 Nov 16 13:48	13°♄43'36		direct	3355 Jan 30 14:47	29°♄07'43
evening set	3349 Feb 24 10:53	20°♄51'27			3355 Mar 02 12:07	0°♄
				evening set	3355 May 12 05:27	6°♄55'38
conjunction	3349 Mar 13 04:27	22°♄51'43 -1°37'47				
minimum elong	3349 Mar 13 04:25	22°♄51'42 1°37'48		conjunction	3355 May 29 19:52	9°♄09'40 -1°49'47
max. Earth dist.	3349 Mar 13 01:59	22°♄50'59 10.82849 AU		minimum elong	3355 May 29 19:55	9°♄09'41 1°49'47
morning rise	3349 Mar 30 01:08	24°♄52'57		max. Earth dist.	3355 May 29 20:24	9°♄09'51 10.23003 AU

































































































































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retrograde	3355 Oct 01 04:45	19° Π 35'28		evening set	3361 Aug 06 16:53	0° Π 41'54	
opposition	3355 Dec 08 12:03	16° Π 06'36	-2°04'34				
min. Earth dist.	3355 Dec 08 11:13	16° Π 06'46	8.19069 AU	conjunction	3361 Aug 24 18:36	3° Π 00'32	1°00'37
direct	3356 Feb 13 05:09	12° Π 41'12		minimum elong	3361 Aug 24 18:33	3° Π 00'31	1°00'36
evening set	3356 May 25 11:29	20° Π 36'17		max. Earth dist.	3361 Aug 24 21:31	3° Π 01'28	10.13122 AU
				morning rise	3361 Sep 11 18:07	5° Π 18'28	
conjunction	3356 Jun 12 06:36	22° Π 52'47	-1°29'17	retrograde	3361 Dec 23 19:13	13° Π 18'05	
minimum elong	3356 Jun 12 06:40	22° Π 52'48	1°29'17	opposition	3362 Feb 28 11:33	9° Π 51'39	1°32'17
max. Earth dist.	3356 Jun 12 08:11	22° Π 53'18	10.15451 AU	min. Earth dist.	3362 Feb 28 08:35	9° Π 52'15	8.16283 AU
morning rise	3356 Jun 30 04:58	25° Π 10'22		direct	3362 May 07 10:21	6° Π 22'10	
	3356 Aug 11 11:12	0° Ξ		evening set	3362 Aug 21 10:29	14° Π 30'51	
retrograde	3356 Oct 14 14:10	3° Ξ 24'07					
	3356 Dec 20 09:08	30° κ Π		conjunction	3362 Sep 08 09:11	16° Π 47'35	1°26'47
opposition	3356 Dec 21 10:12	29° Π 54'52	-1°35'38	minimum elong	3362 Sep 08 09:08	16° Π 47'34	1°26'46
min. Earth dist.	3356 Dec 21 08:30	29° Π 55'13	8.12479 AU	max. Earth dist.	3362 Sep 08 12:30	16° Π 48'39	10.19866 AU
direct	3357 Feb 26 00:45	26° Π 28'15		morning rise	3362 Sep 26 04:35	19° Π 03'18	
	3357 May 01 05:38	0° Ξ		retrograde	3363 Jan 06 11:55	26° Π 55'40	
evening set	3357 Jun 09 00:51	4° Ξ 29'35		opposition	3363 Mar 14 05:33	23° Π 30'28	2°01'32
				min. Earth dist.	3363 Mar 14 02:27	23° Π 31'06	8.23990 AU
conjunction	3357 Jun 27 00:03	6° Ξ 48'04	-1°03'21	direct	3363 May 21 15:34	20° Π 01'24	
minimum elong	3357 Jun 27 00:05	6° Ξ 48'05	1°03'21	evening set	3363 Sep 04 21:15	28° Π 06'00	
max. Earth dist.	3357 Jun 27 02:16	6° Ξ 48'47	10.09980 AU		3363 Sep 19 23:48	0° Ω	
morning rise	3357 Jul 15 01:39	9° Ξ 07'21					
retrograde	3357 Oct 29 01:31	17° Ξ 22'15		conjunction	3363 Sep 22 15:58	0° Ω 20'21	1°47'42
opposition	3358 Jan 04 10:48	13° Ξ 52'59	-1°00'42	minimum elong	3363 Sep 22 15:55	0° Ω 20'20	1°47'41
min. Earth dist.	3358 Jan 04 08:46	13° Ξ 53'24	8.08152 AU	max. Earth dist.	3363 Sep 22 19:24	0° Ω 21'26	10.28370 AU
direct	3358 Mar 12 01:51	10° Ξ 25'15		morning rise	3363 Oct 10 06:37	2° Ω 33'29	
evening set	3358 Jun 23 20:14	18° Ξ 31'35		retrograde	3364 Jan 19 21:23	10° Ω 18'03	
				opposition	3364 Mar 26 19:22	6° Ω 54'12	2°23'31
conjunction	3358 Jul 11 22:22	20° Ξ 51'23	-0°33'27	min. Earth dist.	3364 Mar 26 16:50	6° Ω 54'42	8.33226 AU
minimum elong	3358 Jul 11 22:24	20° Ξ 51'23	0°33'27	direct	3364 Jun 03 17:19	3° Ω 25'49	
max. Earth dist.	3358 Jul 12 00:37	20° Ξ 52'06	10.06915 AU	evening set	3364 Sep 17 23:36	11° Ω 24'50	
morning rise	3358 Jul 30 01:56	23° Ξ 11'38					
	3358 Oct 03 12:00	0° Ω		conjunction	3364 Oct 05 13:53	13° Ω 36'33	2°02'27
retrograde	3358 Nov 12 11:38	1° Ω 25'27		minimum elong	3364 Oct 05 13:51	13° Ω 36'33	2°02'26
	3358 Dec 22 18:11	30° κ Ξ		max. Earth dist.	3364 Oct 05 16:38	13° Ω 37'25	10.38156 AU
opposition	3359 Jan 18 12:25	27° Ξ 56'29	-0°21'52	morning rise	3364 Oct 22 23:47	15° Ω 46'58	
min. Earth dist.	3359 Jan 18 10:34	27° Ξ 56'52	8.06349 AU	retrograde	3365 Jan 31 23:17	23° Ω 23'31	
direct	3359 Mar 26 07:46	24° Ξ 27'51		opposition	3365 Apr 09 04:20	20° Ω 01'03	2°37'26
	3359 Jun 17 06:56	0° Ω		min. Earth dist.	3365 Apr 09 02:38	20° Ω 01'23	8.43478 AU
evening set	3359 Jul 08 19:13	2° Ω 37'38		direct	3365 Jun 17 14:15	16° Ω 33'36	
				evening set	3365 Oct 01 16:27	24° Ω 25'54	
conjunction	3359 Jul 26 22:47	4° Ω 57'54	-0°01'28				
minimum elong	3359 Jul 26 22:49	4° Ω 57'54	0°01'29	conjunction	3365 Oct 19 02:18	26° Ω 34'58	2°10'35
behind sun begin	3359 Jul 26 15:27	4° Ω 55'32		minimum elong	3365 Oct 19 02:17	26° Ω 34'57	2°10'36
behind sun end	3359 Jul 27 06:11	5° Ω 00'16		max. Earth dist.	3365 Oct 19 03:56	26° Ω 35'28	10.48690 AU
max. Earth dist.	3359 Jul 27 01:02	4° Ω 58'33	10.06432 AU	morning rise	3365 Nov 05 07:47	28° Ω 42'40	
asc. node	3359 Aug 12 16:48	7° Ω 07'28			3365 Nov 16 02:14	0° \mathbb{M}	
morning rise	3359 Aug 14 02:41	7° Ω 18'14		retrograde	3366 Feb 13 19:01	6° \mathbb{M} 11'25	
	3359 Nov 03 21:45	15° Ω		opposition	3366 Apr 22 08:25	2° \mathbb{M} 50'15	2°43'05
retrograde	3359 Nov 26 18:44	15° Ω 28'57		min. Earth dist.	3366 Apr 22 07:16	2° \mathbb{M} 50'28	8.54190 AU
	3359 Dec 19 16:00	15° κ Ω			3366 Jun 04 06:27	30° κ Ω	
opposition	3360 Feb 01 14:01	12° Ω 00'35	0°18'20	direct	3366 Jul 01 05:14	29° Ω 23'55	
min. Earth dist.	3360 Feb 01 12:01	12° Ω 01'00	8.07172 AU		3366 Jul 28 01:12	0° \mathbb{M}	
direct	3360 Apr 08 17:07	8° Ω 31'21		evening set	3366 Oct 14 23:20	7° \mathbb{M} 08'44	
	3360 Jul 08 23:13	15° Ω					
evening set	3360 Jul 22 18:55	16° Ω 42'42		conjunction	3366 Nov 01 05:06	9° \mathbb{M} 15'15	2°12'09
				minimum elong	3366 Nov 01 05:07	9° \mathbb{M} 15'16	2°12'09
conjunction	3360 Aug 09 22:20	19° Ω 02'33	0°30'37	max. Earth dist.	3366 Nov 01 05:54	9° \mathbb{M} 15'30	10.59423 AU
minimum elong	3360 Aug 09 22:18	19° Ω 02'33	0°30'37	morning rise	3366 Nov 18 06:38	11° \mathbb{M} 20'27	
max. Earth dist.	3360 Aug 10 00:53	19° Ω 03'23	10.08547 AU		3366 Dec 20 23:21	15° \mathbb{M}	
morning rise	3360 Aug 28 00:47	21° Ω 22'05		retrograde	3367 Feb 26 07:50	18° \mathbb{M} 41'55	
retrograde	3360 Dec 09 20:55	29° Ω 27'57		opposition	3367 May 05 07:32	15° \mathbb{M} 21'54	2°40'47
opposition	3361 Feb 14 14:08	26° Ω 00'28	0°57'12	min. Earth dist.	3367 May 05 06:14	15° \mathbb{M} 22'09	8.64826 AU
min. Earth dist.	3361 Feb 14 11:40	26° Ω 00'58	8.10558 AU		3367 May 10 01:16	15° κ \mathbb{M}	
direct	3361 Apr 23 02:42	22° Ω 30'56		direct	3367 Jul 14 14:29	11° \mathbb{M} 56'49	

	3367 Sep 15 08:21	15° \mathbb{M}		evening set	3374 Jan 05 01:59	29° \mathfrak{Z} 38'41	
evening set	3367 Oct 27 20:26	19° \mathbb{M} 33'49			3374 Jan 08 03:24	0° \approx	
conjunction	3367 Nov 13 22:46	21° \mathbb{M} 38'01	2°07'27	conjunction	3374 Jan 21 18:08	1° \approx 36'10	0°09'35
minimum elong	3367 Nov 13 22:47	21° \mathbb{M} 38'01	2°07'28	minimum elong	3374 Jan 21 18:09	1° \approx 36'10	0°09'36
max. Earth dist.	3367 Nov 13 23:39	21° \mathbb{M} 38'17	10.69843 AU	behind sun begin	3374 Jan 21 12:20	1° \approx 34'29	
morning rise	3367 Nov 30 20:56	23° \mathbb{M} 41'00		behind sun end	3374 Jan 21 23:57	1° \approx 37'52	
	3368 Feb 05 19:46	0° \mathfrak{Z}		max. Earth dist.	3374 Jan 21 14:45	1° \approx 35'11	11.02714 AU
retrograde	3368 Mar 09 16:20	0° \mathfrak{Z} 55'58		morning rise	3374 Feb 07 09:52	3° \approx 33'35	
	3368 Apr 12 04:39	30° \mathbb{R} \mathbb{M}		retrograde	3374 May 19 11:40	10° \approx 36'22	
opposition	3368 May 17 01:56	27° \mathbb{M} 36'55	2°31'10	desc. node	3374 Jun 06 21:21	10° \approx 19'59	
min. Earth dist.	3368 May 17 00:47	27° \mathbb{M} 37'09	8.74894 AU	opposition	3374 Jul 29 00:22	7° \approx 18'11	-0°04'28
direct	3368 Jul 26 17:13	24° \mathbb{M} 13'05		min. Earth dist.	3374 Jul 29 03:30	7° \approx 17'36	9.02175 AU
	3368 Oct 24 13:09	0° \mathfrak{Z}		direct	3374 Oct 07 15:37	3° \approx 59'27	
evening set	3368 Nov 08 08:24	1° \mathfrak{Z} 42'20		evening set	3375 Jan 16 12:32	11° \approx 01'37	
conjunction	3368 Nov 25 07:53	3° \mathfrak{Z} 44'33	1°57'08	conjunction	3375 Feb 02 04:16	12° \approx 59'12	-0°16'52
minimum elong	3368 Nov 25 07:54	3° \mathfrak{Z} 44'34	1°57'08	minimum elong	3375 Feb 02 04:15	12° \approx 59'12	0°16'51
max. Earth dist.	3368 Nov 25 08:42	3° \mathfrak{Z} 44'48	10.79470 AU	max. Earth dist.	3375 Feb 01 23:58	12° \approx 57'56	11.01116 AU
morning rise	3368 Dec 12 03:26	5° \mathfrak{Z} 45'39		morning rise	3375 Feb 18 20:37	14° \approx 56'57	
retrograde	3369 Mar 21 21:03	12° \mathfrak{Z} 55'05			3375 Feb 19 07:07	15° \approx	
opposition	3369 May 29 16:05	9° \mathfrak{Z} 36'51	2°15'08	retrograde	3375 May 31 11:12	22° \approx 02'55	
min. Earth dist.	3369 May 29 15:51	9° \mathfrak{Z} 36'53	8.83936 AU	opposition	3375 Aug 10 05:34	18° \approx 43'55	-0°36'36
direct	3369 Aug 08 11:39	6° \mathfrak{Z} 14'13		min. Earth dist.	3375 Aug 10 09:03	18° \approx 43'17	8.99543 AU
evening set	3369 Nov 20 12:35	13° \mathfrak{Z} 36'12		direct	3375 Oct 19 13:53	15° \approx 25'20	
				evening set	3376 Jan 28 00:15	22° \approx 27'37	
conjunction	3369 Dec 07 09:35	15° \mathfrak{Z} 36'45	1°41'54	conjunction	3376 Feb 13 16:05	24° \approx 25'37	-0°42'42
minimum elong	3369 Dec 07 09:37	15° \mathfrak{Z} 36'45	1°41'54	minimum elong	3376 Feb 13 16:03	24° \approx 25'36	0°42'41
max. Earth dist.	3369 Dec 07 09:18	15° \mathfrak{Z} 36'39	10.87863 AU	max. Earth dist.	3376 Feb 13 12:06	24° \approx 24'26	10.97471 AU
morning rise	3369 Dec 24 03:18	17° \mathfrak{Z} 36'21		morning rise	3376 Mar 01 09:13	26° \approx 24'01	
retrograde	3370 Apr 02 19:53	24° \mathfrak{Z} 41'27			3376 Apr 03 20:40	0° \mathfrak{H}	
opposition	3370 Jun 11 02:33	21° \mathfrak{Z} 23'45	1°53'41	retrograde	3376 Jun 11 16:31	3° \mathfrak{H} 34'31	
min. Earth dist.	3370 Jun 11 03:40	21° \mathfrak{Z} 23'33	8.91547 AU	opposition	3376 Aug 21 12:07	0° \mathfrak{H} 14'30	-1°07'32
direct	3370 Aug 21 01:51	18° \mathfrak{Z} 02'12		min. Earth dist.	3376 Aug 21 15:04	0° \mathfrak{H} 13'57	8.94937 AU
evening set	3370 Dec 02 10:04	25° \mathfrak{Z} 17'46			3376 Aug 24 18:11	30° \mathbb{R} \approx	
conjunction	3370 Dec 19 05:06	27° \mathfrak{Z} 16'58	1°22'39	direct	3376 Oct 30 13:09	26° \approx 55'50	
minimum elong	3370 Dec 19 05:09	27° \mathfrak{Z} 16'59	1°22'38		3377 Jan 01 00:42	0° \mathfrak{H}	
max. Earth dist.	3370 Dec 19 03:09	27° \mathfrak{Z} 16'23	10.94646 AU	evening set	3377 Feb 07 14:39	3° \mathfrak{H} 59'38	
morning rise	3371 Jan 04 21:43	29° \mathfrak{Z} 15'28					
	3371 Jan 11 08:02	0° \mathfrak{Z}		conjunction	3377 Feb 24 06:58	5° \mathfrak{H} 58'24	-1°07'01
retrograde	3371 Apr 14 17:37	6° \mathfrak{Z} 17'41		minimum elong	3377 Feb 24 06:56	5° \mathfrak{H} 58'24	1°07'01
opposition	3371 Jun 23 10:06	3° \mathfrak{Z} 00'15	1°27'55	max. Earth dist.	3377 Feb 24 03:53	5° \mathfrak{H} 57'29	10.91918 AU
min. Earth dist.	3371 Jun 23 11:46	2° \mathfrak{Z} 59'56	8.97372 AU	morning rise	3377 Mar 13 01:08	7° \mathfrak{H} 57'48	
	3371 Aug 12 20:05	30° \mathbb{R} \mathfrak{Z}		retrograde	3377 Jun 24 02:21	15° \mathfrak{H} 14'05	
direct	3371 Sep 02 11:53	29° \mathfrak{Z} 39'40		opposition	3377 Sep 02 21:22	11° \mathfrak{H} 52'54	-1°36'05
	3371 Sep 22 22:27	0° \mathfrak{Z}		min. Earth dist.	3377 Sep 02 23:36	11° \mathfrak{H} 52'29	8.88530 AU
evening set	3371 Dec 14 02:11	6° \mathfrak{Z} 49'51		direct	3377 Nov 11 11:34	8° \mathfrak{H} 33'59	
				evening set	3378 Feb 19 09:03	15° \mathfrak{H} 40'40	
conjunction	3371 Dec 30 19:56	8° \mathfrak{Z} 48'09	1°00'13	conjunction	3378 Mar 08 02:08	17° \mathfrak{H} 40'32	-1°28'51
minimum elong	3371 Dec 30 19:58	8° \mathfrak{Z} 48'09	1°00'13	minimum elong	3378 Mar 08 02:06	17° \mathfrak{H} 40'31	1°28'52
max. Earth dist.	3371 Dec 30 17:29	8° \mathfrak{Z} 47'25	10.99487 AU	max. Earth dist.	3378 Mar 07 22:59	17° \mathfrak{H} 39'35	10.84674 AU
morning rise	3372 Jan 16 11:51	10° \mathfrak{Z} 45'54		morning rise	3378 Mar 24 21:54	19° \mathfrak{H} 41'14	
retrograde	3372 Apr 25 14:41	17° \mathfrak{Z} 46'47		retrograde	3378 Jul 06 17:19	27° \mathfrak{H} 04'26	
opposition	3372 Jul 04 15:32	14° \mathfrak{Z} 29'21	0°58'54	opposition	3378 Sep 15 10:03	23° \mathfrak{H} 41'59	-2°01'04
min. Earth dist.	3372 Jul 04 17:20	14° \mathfrak{Z} 29'01	9.01132 AU	min. Earth dist.	3378 Sep 15 12:16	23° \mathfrak{H} 41'34	8.80569 AU
direct	3372 Sep 13 16:02	11° \mathfrak{Z} 09'37		direct	3378 Nov 23 13:15	20° \mathfrak{H} 22'36	
evening set	3372 Dec 24 14:58	18° \mathfrak{Z} 15'46		evening set	3379 Mar 03 09:01	27° \mathfrak{H} 33'30	
conjunction	3373 Jan 10 07:50	20° \mathfrak{Z} 13'29	0°35'33	conjunction	3379 Mar 20 03:27	29° \mathfrak{H} 34'49	-1°47'14
minimum elong	3373 Jan 10 07:52	20° \mathfrak{Z} 13'30	0°35'33	minimum elong	3379 Mar 20 03:25	29° \mathfrak{H} 34'48	1°47'14
max. Earth dist.	3373 Jan 10 05:18	20° \mathfrak{Z} 12'44	11.02186 AU	max. Earth dist.	3379 Mar 19 23:59	29° \mathfrak{H} 33'46	10.76022 AU
morning rise	3373 Jan 26 23:24	22° \mathfrak{Z} 10'53			3379 Mar 23 14:26	0° \mathfrak{Y}	
retrograde	3373 May 07 12:28	29° \mathfrak{Z} 11'59		morning rise	3379 Apr 06 01:24	1° \mathfrak{Y} 37'11	
opposition	3373 Jul 16 19:52	25° \mathfrak{Z} 54'18	0°27'44	retrograde	3379 Jul 19 14:20	9° \mathfrak{Y} 08'07	
min. Earth dist.	3373 Jul 16 22:03	25° \mathfrak{Z} 53'54	9.02726 AU	opposition	3379 Sep 28 02:38	5° \mathfrak{Y} 44'22	-2°21'18
direct	3373 Sep 25 17:15	22° \mathfrak{Z} 35'12					

min. Earth dist.	3379 Sep 28 05:03	5°♈43'55	8.71360 AU	retrograde	3385 Oct 08 11:27	27°♊24'19	
direct	3379 Dec 05 18:08	2°♈24'19		opposition	3385 Dec 15 12:38	23°♊55'09	-1°49'33
evening set	3380 Mar 14 15:36	9°♈40'39		min. Earth dist.	3385 Dec 15 11:11	23°♊55'27	8.14492 AU
				direct	3386 Feb 20 03:21	20°♊29'05	
conjunction	3380 Mar 31 12:11	11°♈43'45	-2°01'10	evening set	3386 Jun 02 19:37	28°♊28'19	
minimum elong	3380 Mar 31 12:09	11°♈43'45	2°01'10		3386 Jun 14 18:21	0°♊	
max. Earth dist.	3380 Mar 31 09:20	11°♈42'53	10.66297 AU				
morning rise	3380 Apr 17 12:46	13°♈48'06		conjunction	3386 Jun 20 17:02	0°♊46'06	-1°15'37
retrograde	3380 Jul 31 17:13	21°♈27'20		minimum elong	3386 Jun 20 17:05	0°♊46'07	1°15'37
opposition	3380 Oct 09 23:51	18°♈02'17	-2°35'35	max. Earth dist.	3386 Jun 20 19:32	0°♊46'54	10.11681 AU
min. Earth dist.	3380 Oct 10 01:46	18°♈01'55	8.61265 AU	morning rise	3386 Jul 08 17:29	3°♊04'50	
direct	3380 Dec 17 04:36	14°♈41'26		retrograde	3386 Oct 22 22:41	11°♊20'05	
evening set	3381 Mar 27 05:48	22°♈04'10		opposition	3386 Dec 29 12:48	7°♊50'56	-1°17'01
				min. Earth dist.	3386 Dec 29 10:27	7°♊51'25	8.09536 AU
conjunction	3381 Apr 13 05:19	24°♈09'25	-2°09'46	direct	3387 Mar 06 03:00	4°♊23'55	
minimum elong	3381 Apr 13 05:18	24°♈09'25	2°09'46	evening set	3387 Jun 17 13:15	12°♊28'40	
max. Earth dist.	3381 Apr 13 03:54	24°♈08'59	10.55895 AU				
morning rise	3381 Apr 30 09:01	26°♈16'01		conjunction	3387 Jul 05 14:16	14°♊48'03	-0°47'14
	3381 Jun 02 11:04	0°♈		minimum elong	3387 Jul 05 14:18	14°♊48'03	0°47'14
retrograde	3381 Aug 14 03:46	4°♈03'44		max. Earth dist.	3387 Jul 05 18:00	14°♊49'16	10.07935 AU
opposition	3381 Oct 23 02:08	0°♈37'26	-2°42'49	morning rise	3387 Jul 23 17:07	17°♊08'02	
min. Earth dist.	3381 Oct 23 02:48	0°♈37'18	8.50718 AU	retrograde	3387 Nov 06 10:02	25°♊23'05	
	3381 Oct 31 02:53	30°♈		opposition	3388 Jan 12 14:38	21°♊54'16	-0°39'34
direct	3381 Dec 29 20:53	27°♈15'40		min. Earth dist.	3388 Jan 12 11:19	21°♊54'57	8.07013 AU
	3382 Feb 24 15:33	0°♈		direct	3388 Mar 19 07:39	18°♊26'26	
evening set	3382 Apr 09 04:45	4°♈45'31		evening set	3388 Jul 01 11:31	26°♊35'11	
conjunction	3382 Apr 26 07:53	6°♈53'14	-2°12'16	conjunction	3388 Jul 19 14:45	28°♊55'22	-0°15'53
minimum elong	3382 Apr 26 07:53	6°♈53'14	2°12'15	minimum elong	3388 Jul 19 14:45	28°♊55'23	0°15'54
max. Earth dist.	3382 Apr 26 07:27	6°♈53'06	10.45301 AU	max. Earth dist.	3388 Jul 19 19:22	28°♊56'52	10.06715 AU
morning rise	3382 May 13 15:22	9°♈02'20			3388 Jul 27 22:07	0°♊	
	3382 Jul 09 21:52	15°♈		morning rise	3388 Aug 06 18:32	1°♊15'47	
retrograde	3382 Aug 27 22:59	16°♈58'10		retrograde	3388 Nov 19 19:38	9°♊28'27	
	3382 Oct 16 22:27	15°♈		asc. node	3389 Jan 22 01:55	6°♊18'07	
opposition	3382 Nov 05 09:34	13°♈30'46	-2°42'09	opposition	3389 Jan 25 16:59	6°♊00'12	0°00'23
min. Earth dist.	3382 Nov 05 09:18	13°♈30'49	8.40226 AU	min. Earth dist.	3389 Jan 25 13:13	6°♊00'58	8.07077 AU
direct	3383 Jan 11 17:01	10°♈07'59		direct	3389 Apr 02 15:27	2°♊31'44	
	3383 Mar 30 04:49	15°♈		evening set	3389 Jul 16 11:46	10°♊42'40	
evening set	3383 Apr 22 12:54	17°♈45'26					
				conjunction	3389 Aug 03 15:33	13°♊02'47	0°16'28
conjunction	3383 May 09 20:16	19°♈55'45	-2°08'06	minimum elong	3389 Aug 03 15:32	13°♊02'47	0°16'28
minimum elong	3383 May 09 20:18	19°♈55'46	2°08'06	max. Earth dist.	3389 Aug 03 20:08	13°♊04'15	10.08065 AU
max. Earth dist.	3383 May 09 20:11	19°♈55'44	10.35041 AU		3389 Aug 18 19:12	15°♊	
morning rise	3383 May 27 08:08	22°♈07'31		morning rise	3389 Aug 21 18:40	15°♊22'43	
	3383 Aug 27 16:19	0°♊		retrograde	3389 Dec 04 01:35	23°♊31'02	
retrograde	3383 Sep 10 22:56	0°♊10'37		opposition	3390 Feb 08 18:20	20°♊03'35	0°40'11
	3383 Sep 25 04:15	30°♈		min. Earth dist.	3390 Feb 08 15:02	20°♊04'16	8.09660 AU
opposition	3383 Nov 18 22:09	26°♈42'21	-2°33'00	direct	3390 Apr 17 00:34	16°♊34'42	
min. Earth dist.	3383 Nov 18 21:27	26°♈42'30	8.30322 AU	evening set	3390 Jul 31 11:28	24°♊45'56	
direct	3384 Jan 24 21:12	23°♈18'27					
	3384 Apr 26 15:41	0°♊		conjunction	3390 Aug 18 14:06	27°♊05'08	0°47'36
evening set	3384 May 05 06:24	1°♊03'39		minimum elong	3390 Aug 18 14:04	27°♊05'08	0°47'36
				max. Earth dist.	3390 Aug 18 17:42	27°♊06'18	10.11799 AU
conjunction	3384 May 22 18:25	3°♊16'38	-1°57'02	morning rise	3390 Sep 05 14:56	29°♊23'46	
minimum elong	3384 May 22 18:28	3°♊16'39	1°57'02		3390 Sep 10 10:31	0°♊	
max. Earth dist.	3384 May 22 18:37	3°♊16'42	10.25662 AU	retrograde	3390 Dec 18 02:48	7°♊26'13	
morning rise	3384 Jun 09 10:50	5°♊31'01		opposition	3391 Feb 22 17:22	3°♊59'48	1°17'13
retrograde	3384 Sep 24 03:19	13°♊40'03		min. Earth dist.	3391 Feb 22 15:00	4°♊00'17	8.14481 AU
opposition	3384 Dec 01 15:24	10°♊11'12	-2°15'18	direct	3391 May 01 09:31	0°♊30'46	
min. Earth dist.	3384 Dec 01 14:34	10°♊11'22	8.21566 AU	evening set	3391 Aug 15 07:43	8°♊40'34	
direct	3385 Feb 06 09:09	6°♊46'11					
evening set	3385 May 19 08:54	14°♊38'46		conjunction	3391 Sep 02 07:44	10°♊58'08	1°15'40
				minimum elong	3391 Sep 02 07:41	10°♊58'07	1°15'40
conjunction	3385 Jun 06 01:46	16°♊54'20	-1°39'18	max. Earth dist.	3391 Sep 02 10:01	10°♊58'52	10.17579 AU
minimum elong	3385 Jun 06 01:50	16°♊54'21	1°39'18	morning rise	3391 Sep 20 05:04	13°♊14'50	
max. Earth dist.	3385 Jun 06 02:59	16°♊54'43	10.17714 AU	retrograde	3391 Dec 31 21:49	21°♊10'29	
morning rise	3385 Jun 23 22:33	19°♊11'07		opposition	3392 Mar 07 13:26	17°♊45'15	1°49'16

min. Earth dist.	3392 Mar 07 11:46	17° \mathring{M} 45'35	8.21193 AU	opposition	3398 May 24 14:47	4° \mathring{A} 41'38	2°22'49
direct	3392 May 14 17:32	14° \mathring{M} 16'25		min. Earth dist.	3398 May 24 15:13	4° \mathring{A} 41'33	8.78689 AU
evening set	3392 Aug 28 22:02	22° \mathring{M} 23'04		direct	3398 Aug 03 08:57	1° \mathring{A} 18'00	
				evening set	3398 Nov 15 16:15	8° \mathring{A} 43'37	
conjunction	3392 Sep 15 18:27	24° \mathring{M} 38'29	1°39'04	conjunction	3398 Dec 02 14:20	10° \mathring{A} 45'01	1°49'02
minimum elong	3392 Sep 15 18:24	24° \mathring{M} 38'28	1°39'03	minimum elong	3398 Dec 02 14:22	10° \mathring{A} 45'02	1°49'02
max. Earth dist.	3392 Sep 15 19:50	24° \mathring{M} 38'56	10.25086 AU	max. Earth dist.	3398 Dec 02 13:27	10° \mathring{A} 44'45	10.82814 AU
morning rise	3392 Oct 03 11:26	26° \mathring{M} 52'48		morning rise	3398 Dec 19 09:00	12° \mathring{A} 45'25	
	3392 Oct 29 20:31	0° \mathring{A}		retrograde	3399 Mar 29 00:18	19° \mathring{A} 52'44	
retrograde	3393 Jan 13 09:38	4° \mathring{A} 41'03		opposition	3399 Jun 06 02:57	16° \mathring{A} 34'18	2°03'36
opposition	3393 Mar 21 05:32	1° \mathring{A} 17'02	2°14'37	min. Earth dist.	3399 Jun 06 03:05	16° \mathring{A} 34'17	8.86789 AU
min. Earth dist.	3393 Mar 21 03:53	1° \mathring{A} 17'22	8.29471 AU	direct	3399 Aug 16 02:38	13° \mathring{A} 11'46	
	3393 Apr 06 14:20	30° \mathring{R} \mathring{M}		evening set	3399 Nov 27 16:30	20° \mathring{A} 30'32	
direct	3393 May 28 22:27	27° \mathring{M} 48'42					
	3393 Jul 19 05:25	0° \mathring{A}		conjunction	3399 Dec 14 12:36	22° \mathring{A} 30'27	1°31'25
evening set	3393 Sep 12 04:52	5° \mathring{A} 50'36		minimum elong	3399 Dec 14 12:38	22° \mathring{A} 30'28	1°31'25
conjunction	3393 Sep 29 21:08	8° \mathring{A} 03'32	1°56'38	max. Earth dist.	3399 Dec 14 12:09	22° \mathring{A} 30'19	10.90240 AU
minimum elong	3393 Sep 29 21:06	8° \mathring{A} 03'31	1°56'37	morning rise	3399 Dec 31 05:40	24° \mathring{A} 29'33	
max. Earth dist.	3393 Sep 29 22:21	8° \mathring{A} 03'55	10.33980 AU		3400 Feb 25 12:10	0° \mathring{B}	
morning rise	3393 Oct 17 09:20	10° \mathring{A} 15'12		retrograde	3400 Apr 10 00:13	1° \mathring{B} 33'19	
retrograde	3394 Jan 26 15:17	17° \mathring{A} 55'39			3400 May 24 20:41	30° \mathring{R} \mathring{A}	
opposition	3394 Apr 03 17:05	14° \mathring{A} 32'51	2°32'11	opposition	3400 Jun 18 11:39	28° \mathring{A} 15'15	1°39'33
min. Earth dist.	3394 Apr 03 15:21	14° \mathring{A} 33'12	8.38921 AU	min. Earth dist.	3400 Jun 18 12:11	28° \mathring{A} 15'09	8.93420 AU
direct	3394 Jun 11 22:14	11° \mathring{A} 05'13		direct	3400 Aug 28 13:28	24° \mathring{A} 53'44	
evening set	3394 Sep 26 02:39	19° \mathring{A} 00'59			3400 Nov 20 15:41	0° \mathring{B}	
				evening set	3400 Dec 09 10:54	2° \mathring{B} 06'34	
conjunction	3394 Oct 13 14:37	21° \mathring{A} 11'18	2°07'44	conjunction	3400 Dec 26 05:23	4° \mathring{B} 05'23	1°10'15
minimum elong	3394 Oct 13 14:36	21° \mathring{A} 11'18	2°07'43	minimum elong	3400 Dec 26 05:25	4° \mathring{B} 05'24	1°10'15
max. Earth dist.	3394 Oct 13 16:01	21° \mathring{A} 11'44	10.43824 AU	max. Earth dist.	3400 Dec 26 04:15	4° \mathring{B} 05'03	10.96061 AU
morning rise	3394 Oct 30 22:02	23° \mathring{A} 20'15		morning rise	3401 Jan 11 21:33	6° \mathring{B} 03'34	
	3395 Jan 08 05:28	0° \mathring{M}		retrograde	3401 Apr 21 20:51	13° \mathring{B} 05'09	
retrograde	3395 Feb 08 15:46	0° \mathring{M} 52'52		opposition	3401 Jun 30 17:56	9° \mathring{B} 47'15	1°11'48
	3395 Mar 12 11:45	30° \mathring{R} \mathring{A}		min. Earth dist.	3401 Jun 30 19:23	9° \mathring{B} 46'59	8.98329 AU
opposition	3395 Apr 16 23:58	27° \mathring{A} 31'14	2°41'30	direct	3401 Sep 09 18:11	6° \mathring{B} 26'41	
min. Earth dist.	3395 Apr 16 22:32	27° \mathring{A} 31'31	8.49069 AU	evening set	3401 Dec 21 00:58	13° \mathring{B} 34'45	
direct	3395 Jun 25 15:20	24° \mathring{A} 04'29					
	3395 Sep 23 14:41	0° \mathring{M}		conjunction	3402 Jan 06 18:08	15° \mathring{B} 32'46	0°46'27
evening set	3395 Oct 09 14:25	1° \mathring{M} 53'04		minimum elong	3402 Jan 06 18:10	15° \mathring{B} 32'47	0°46'27
conjunction	3395 Oct 26 22:11	4° \mathring{M} 00'49	2°12'10	max. Earth dist.	3402 Jan 06 15:56	15° \mathring{B} 32'07	11.00058 AU
minimum elong	3395 Oct 26 22:10	4° \mathring{M} 00'49	2°12'10	morning rise	3402 Jan 23 09:57	17° \mathring{B} 30'24	
max. Earth dist.	3395 Oct 26 23:27	4° \mathring{M} 01'13	10.54120 AU	retrograde	3402 May 03 16:32	24° \mathring{B} 31'20	
morning rise	3395 Nov 13 01:18	6° \mathring{M} 07'12		opposition	3402 Jul 12 22:35	21° \mathring{B} 13'22	0°41'26
retrograde	3396 Feb 21 07:51	13° \mathring{M} 32'17		min. Earth dist.	3402 Jul 13 00:24	21° \mathring{B} 13'02	9.01337 AU
opposition	3396 Apr 29 01:50	10° \mathring{M} 11'42	2°42'40	direct	3402 Sep 21 22:00	17° \mathring{B} 53'36	
min. Earth dist.	3396 Apr 29 01:19	10° \mathring{M} 11'48	8.59405 AU	evening set	3403 Jan 01 12:14	24° \mathring{B} 58'11	
direct	3396 Jul 08 03:39	6° \mathring{M} 45'56					
evening set	3396 Oct 21 16:19	14° \mathring{M} 26'51		conjunction	3403 Jan 18 04:38	26° \mathring{B} 55'46	0°20'57
	3396 Oct 26 06:17	15° \mathring{M}		minimum elong	3403 Jan 18 04:39	26° \mathring{B} 55'46	0°20'58
conjunction	3396 Nov 07 20:14	16° \mathring{M} 32'11	2°10'10	max. Earth dist.	3403 Jan 18 02:23	26° \mathring{B} 55'06	11.02086 AU
minimum elong	3396 Nov 07 20:15	16° \mathring{M} 32'12	2°10'11	morning rise	3403 Feb 03 20:24	28° \mathring{B} 53'10	
max. Earth dist.	3396 Nov 07 20:29	16° \mathring{M} 32'16	10.64362 AU		3403 Feb 13 15:11	0° \mathring{A}	
morning rise	3396 Nov 24 19:52	18° \mathring{M} 36'15		retrograde	3403 May 15 14:44	5° \mathring{A} 54'56	
retrograde	3397 Mar 04 17:49	25° \mathring{M} 54'25		opposition	3403 Jul 25 02:29	2° \mathring{A} 36'41	0°09'35
opposition	3397 May 11 22:34	22° \mathring{M} 34'45	2°36'10	min. Earth dist.	3403 Jul 25 03:44	2° \mathring{A} 36'27	9.02334 AU
min. Earth dist.	3397 May 11 22:56	22° \mathring{M} 34'40	8.69432 AU		3403 Sep 03 20:27	30° \mathring{R} \mathring{B}	
direct	3397 Jul 21 09:52	19° \mathring{M} 10'01		direct	3403 Oct 03 21:51	29° \mathring{B} 17'34	
evening set	3397 Nov 03 08:41	26° \mathring{M} 43'10			3403 Nov 02 10:10	0° \mathring{A}	
				desc. node	3403 Nov 14 01:41	0° \mathring{A} 38'54	
conjunction	3397 Nov 20 09:21	28° \mathring{M} 46'22	2°02'13	evening set	3404 Jan 12 22:18	6° \mathring{A} 19'59	
minimum elong	3397 Nov 20 09:22	28° \mathring{M} 46'22	2°02'14	conjunction	3404 Jan 29 14:20	8° \mathring{A} 17'28	-0°05'26
max. Earth dist.	3397 Nov 20 08:27	28° \mathring{M} 46'06	10.74070 AU	minimum elong	3404 Jan 29 14:20	8° \mathring{A} 17'28	0°05'25
	3397 Nov 30 12:28	0° \mathring{A}		behind sun begin	3404 Jan 29 07:36	8° \mathring{A} 15'30	
morning rise	3397 Dec 07 06:12	0° \mathring{A} 48'25		behind sun end	3404 Jan 29 21:04	8° \mathring{A} 19'26	
retrograde	3398 Mar 16 23:16	8° \mathring{A} 00'35		max. Earth dist.	3404 Jan 29 12:49	8° \mathring{A} 17'03	11.02061 AU

morning rise	3404 Feb 15 06:18	10° \approx 15'00	morning rise	3410 Apr 25 22:50	20° Υ 54'13
	3404 Apr 02 02:11	15° \approx	retrograde	3410 Aug 09 11:38	28° Υ 36'26
retrograde	3404 May 26 14:16	17° \approx 19'04	opposition	3410 Oct 18 13:30	25° Υ 11'27 -2°40'09
	3404 Jul 22 14:48	15° \approx	min. Earth dist.	3410 Oct 18 14:48	25° Υ 11'11 8.58873 AU
opposition	3404 Aug 05 06:39	14° \approx 00'19 -0°22'40	direct	3410 Dec 25 12:15	21° Υ 50'51
min. Earth dist.	3404 Aug 05 07:44	14° \approx 00'07 9.01275 AU	evening set	3411 Apr 04 17:04	29° Υ 15'47
direct	3404 Oct 14 18:48	10° \approx 41'40		3411 Apr 10 17:42	0° δ
	3404 Dec 29 14:53	15° \approx			
evening set	3405 Jan 23 08:59	17° \approx 43'22	conjunction	3411 Apr 21 18:06	1° δ 21'51 -2°11'45
			minimum elong	3411 Apr 21 18:06	1° δ 21'51 2°11'44
conjunction	3405 Feb 09 00:45	19° \approx 41'03 -0°31'31	max. Earth dist.	3411 Apr 21 15:54	1° δ 21'10 10.53444 AU
minimum elong	3405 Feb 09 00:44	19° \approx 41'03 0°31'31	morning rise	3411 May 08 23:42	3° δ 29'20
max. Earth dist.	3405 Feb 08 22:49	19° \approx 40'29 10.99979 AU	retrograde	3411 Aug 23 01:01	11° δ 19'46
morning rise	3405 Feb 25 17:20	21° \approx 39'01	opposition	3411 Oct 31 17:27	7° δ 53'37 -2°43'07
retrograde	3405 Jun 07 17:39	28° \approx 46'48	min. Earth dist.	3411 Oct 31 18:56	7° δ 53'19 8.48214 AU
opposition	3405 Aug 17 12:05	25° \approx 27'23 -0°54'10	direct	3412 Jan 07 05:59	4° δ 31'58
min. Earth dist.	3405 Aug 17 13:39	25° \approx 27'06 8.98204 AU	evening set	3412 Apr 16 19:51	12° δ 04'20
direct	3405 Oct 26 16:10	22° \approx 08'58			
evening set	3406 Feb 03 21:39	29° \approx 11'23	conjunction	3412 May 04 00:58	14° δ 12'58 -2°10'39
	3406 Feb 10 19:16	0° χ	minimum elong	3412 May 04 00:59	14° δ 12'58 2°10'39
			max. Earth dist.	3412 May 03 23:32	14° δ 12'31 10.42773 AU
conjunction	3406 Feb 20 13:29	1° χ 09'35 -0°56'33		3412 May 10 07:00	15° δ
minimum elong	3406 Feb 20 13:27	1° χ 09'35 0°56'34	morning rise	3412 May 21 10:36	16° δ 23'02
max. Earth dist.	3406 Feb 20 10:47	1° χ 08'47 10.95934 AU	retrograde	3412 Sep 04 20:14	24° δ 21'14
morning rise	3406 Mar 09 07:08	3° χ 08'20	opposition	3412 Nov 13 02:38	20° δ 54'01 -2°37'55
retrograde	3406 Jun 19 23:23	10° χ 21'10	min. Earth dist.	3412 Nov 13 03:27	20° δ 53'51 8.37687 AU
opposition	3406 Aug 29 19:44	7° χ 00'52 -1°23'48	direct	3413 Jan 19 07:10	17° δ 31'13
min. Earth dist.	3406 Aug 29 21:44	7° χ 00'30 8.93249 AU	evening set	3413 Apr 30 07:44	25° δ 11'17
direct	3406 Nov 07 13:53	3° χ 42'27			
evening set	3407 Feb 15 13:34	10° χ 46'57	conjunction	3413 May 17 17:29	27° δ 22'38 -2°02'48
			minimum elong	3413 May 17 17:31	27° δ 22'39 2°02'48
conjunction	3407 Mar 04 06:04	12° χ 46'02 -1°19'32	max. Earth dist.	3413 May 17 17:20	27° δ 22'35 10.32560 AU
minimum elong	3407 Mar 04 06:01	12° χ 46'02 1°19'32	morning rise	3413 Jun 04 07:29	29° δ 35'22
max. Earth dist.	3407 Mar 04 03:51	12° χ 45'23 10.90075 AU		3413 Jun 07 15:18	0° Π
morning rise	3407 Mar 21 01:04	14° χ 45'53	retrograde	3413 Sep 18 21:48	7° Π 40'20
retrograde	3407 Jul 02 10:32	22° χ 04'57	opposition	3413 Nov 26 16:45	4° Π 12'11 -2°24'13
opposition	3407 Sep 11 06:10	18° χ 43'35 -1°50'23	min. Earth dist.	3413 Nov 26 16:25	4° Π 12'15 8.27918 AU
min. Earth dist.	3407 Sep 11 07:38	18° χ 43'18 8.86581 AU	direct	3414 Feb 01 14:24	0° Π 48'08
direct	3407 Nov 19 15:06	15° χ 24'58	evening set	3414 May 14 05:03	8° Π 35'51
evening set	3408 Feb 27 10:21	22° χ 32'52			
			conjunction	3414 May 31 19:37	10° Π 49'53 -1°48'10
conjunction	3408 Mar 15 04:04	24° χ 33'12 -1°39'28	minimum elong	3414 May 31 19:41	10° Π 49'54 1°48'10
minimum elong	3408 Mar 15 04:02	24° χ 33'11 1°39'28	max. Earth dist.	3414 May 31 20:10	10° Π 50'03 10.23415 AU
max. Earth dist.	3408 Mar 15 02:42	24° χ 32'47 10.82603 AU	morning rise	3414 Jun 18 14:06	13° Π 05'12
morning rise	3408 Apr 01 00:44	26° χ 34'27	retrograde	3414 Oct 03 04:30	21° Π 15'18
	3408 May 02 02:17	0° Υ	opposition	3414 Dec 10 11:02	17° Π 46'31 -2°02'15
retrograde	3408 Jul 14 05:35	4° Υ 00'39	min. Earth dist.	3414 Dec 10 10:08	17° Π 46'42 8.19490 AU
opposition	3408 Sep 22 20:02	0° Υ 38'08 -2°12'44	direct	3415 Feb 15 03:10	14° Π 21'11
min. Earth dist.	3408 Sep 22 20:51	0° Υ 37'59 8.78429 AU	evening set	3415 May 28 11:02	22° Π 16'04
	3408 Oct 01 06:43	30° \approx			
direct	3408 Nov 30 17:40	27° χ 19'06	conjunction	3415 Jun 15 06:15	24° Π 32'33 -1°27'14
	3409 Jan 26 23:09	0° Υ	minimum elong	3415 Jun 15 06:19	24° Π 32'34 1°27'14
evening set	3409 Mar 10 13:14	4° Υ 31'38	max. Earth dist.	3415 Jun 15 07:02	24° Π 32'48 10.15884 AU
			morning rise	3415 Jul 03 04:50	26° Π 50'07
conjunction	3409 Mar 27 08:38	6° Υ 33'30 -1°55'25		3415 Jul 29 14:54	0° δ
minimum elong	3409 Mar 27 08:36	6° Υ 33'30 1°55'25	retrograde	3415 Oct 17 14:31	5° δ 03'27
max. Earth dist.	3409 Mar 27 07:22	6° Υ 33'07 10.73789 AU	opposition	3415 Dec 24 08:56	1° δ 34'21 -1°32'51
morning rise	3409 Apr 13 07:36	8° Υ 36'31	min. Earth dist.	3415 Dec 24 07:52	1° δ 34'34 8.12909 AU
retrograde	3409 Jul 27 05:20	16° Υ 10'32		3416 Jan 13 08:39	30° \approx Π
opposition	3409 Oct 05 14:23	12° Υ 46'47 -2°29'42	direct	3416 Feb 28 22:56	28° Π 07'46
min. Earth dist.	3409 Oct 05 15:03	12° Υ 46'40 8.69085 AU		3416 Apr 14 16:57	0° δ
direct	3409 Dec 12 23:55	9° Υ 27'05	evening set	3416 Jun 11 00:22	6° δ 08'57
evening set	3410 Mar 22 23:04	16° Υ 45'19			
			conjunction	3416 Jun 28 23:34	8° δ 27'24 -1°00'59
conjunction	3410 Apr 08 20:50	18° Υ 49'07 -2°06'27	minimum elong	3416 Jun 28 23:37	8° δ 27'24 1°00'59
minimum elong	3410 Apr 08 20:49	18° Υ 49'07 2°06'26	max. Earth dist.	3416 Jun 29 00:38	8° δ 27'44 10.10414 AU
max. Earth dist.	3410 Apr 08 18:46	18° Υ 48'29 10.63950 AU	morning rise	3416 Jul 17 01:20	10° δ 46'39

retrograde	3416 Oct 31 00:21	19°  01'07		3422 Sep 09 03:12	0° 	
opposition	3417 Jan 06 09:16	15°  32'00 -0°57'37				
min. Earth dist.	3417 Jan 06 08:05	15°  32'14 8.08579 AU	conjunction	3422 Sep 24 14:02	1°  56'58 1°48'59	
direct	3417 Mar 14 01:30	12°  04'19	minimum elong	3422 Sep 24 13:59	1°  56'57 1°48'58	
evening set	3417 Jun 25 19:31	20°  10'32	max. Earth dist.	3422 Sep 24 16:35	1°  57'46 10.28518 AU	
			morning rise	3422 Oct 12 04:30	4°  10'01	
conjunction	3417 Jul 13 21:40	22°  30'16 -0°30'55	retrograde	3423 Jan 21 18:19	11°  54'24	
minimum elong	3417 Jul 13 21:41	22°  30'16 0°30'55	opposition	3423 Mar 29 16:53	8°  30'34 2°24'47	
max. Earth dist.	3417 Jul 13 23:05	22°  30'43 10.07340 AU	min. Earth dist.	3423 Mar 29 15:14	8°  30'54 8.33337 AU	
morning rise	3417 Aug 01 01:18	24°  50'27	direct	3423 Jun 06 15:27	5°  02'08	
	3417 Sep 15 10:29	0° 	evening set	3423 Sep 20 21:41	13°  01'07	
retrograde	3417 Nov 14 08:52	3°  03'53				
	3418 Jan 15 09:19	30°  R 	conjunction	3423 Oct 08 11:40	15°  12'46 2°03'12	
opposition	3418 Jan 20 10:38	29°  35'03 -0°18'40	minimum elong	3423 Oct 08 11:38	15°  12'45 2°03'12	
min. Earth dist.	3418 Jan 20 09:13	29°  35'21 8.06765 AU	max. Earth dist.	3423 Oct 08 13:15	15°  13'16 10.38214 AU	
direct	3418 Mar 28 07:39	26°  06'29	morning rise	3423 Oct 25 21:28	17°  23'06	
	3418 Jun 04 07:44	0° 	retrograde	3424 Feb 03 20:43	24°  59'33	
evening set	3418 Jul 10 18:16	4°  01'08	opposition	3424 Apr 11 01:54	21°  37'03 2°38'02	
asc. node	3418 Jul 15 16:49	4°  53'55	min. Earth dist.	3424 Apr 11 00:24	21°  37'21 8.43496 AU	
			direct	3424 Jun 19 11:56	18°  09'34	
conjunction	3418 Jul 28 21:53	6°  01'10 0°01'10	evening set	3424 Oct 03 14:04	26°  01'48	
minimum elong	3418 Jul 28 21:54	6°  01'09				
behind sun begin	3418 Jul 28 14:33	6°  33'59	conjunction	3424 Oct 20 23:46	28°  10'49 2°10'48	
behind sun end	3418 Jul 29 05:16	6°  38'42	minimum elong	3424 Oct 20 23:45	28°  10'49 2°10'48	
max. Earth dist.	3418 Jul 28 23:56	6°  36'56 10.06837 AU	max. Earth dist.	3424 Oct 21 00:55	28°  11'11 10.48657 AU	
morning rise	3418 Aug 16 01:43	8°  56'35		3424 Nov 04 16:34	0° 	
	3418 Oct 10 16:48	15° 	morning rise	3424 Nov 07 05:09	0°  M.18'30	
retrograde	3418 Nov 28 15:38	17°  06'57	retrograde	3425 Feb 15 15:15	7°  M.47'13	
	3419 Jan 17 14:31	15°  R 	opposition	3425 Apr 24 05:55	4°  M.25'59 2°43'01	
opposition	3419 Feb 03 11:56	13°  38'43 0°21'27	min. Earth dist.	3425 Apr 24 04:17	4°  M.26'18 8.54111 AU	
min. Earth dist.	3419 Feb 03 09:49	13°  39'09 8.07559 AU	direct	3425 Jul 03 04:00	0°  M.59'37	
direct	3419 Apr 11 15:43	10°  09'32	evening set	3425 Oct 16 20:43	8°  M.44'24	
	3419 Jun 27 20:01	15° 				
evening set	3419 Jul 25 17:55	18°  02'45	conjunction	3425 Nov 03 02:30	10°  M.50'54 2°11'49	
			minimum elong	3425 Nov 03 02:30	10°  M.50'54 2°11'49	
conjunction	3419 Aug 12 21:20	20°  04'33 0°33'02	max. Earth dist.	3425 Nov 03 03:43	10°  M.51'16 10.59299 AU	
minimum elong	3419 Aug 12 21:18	20°  04'33 0°33'02	morning rise	3425 Nov 20 03:52	12°  M.56'05	
max. Earth dist.	3419 Aug 13 00:07	20°  04'12 10.08910 AU		3425 Dec 07 20:24	15°  M.	
morning rise	3419 Aug 30 23:33	22°  05'58	retrograde	3426 Feb 28 05:27	20°  M.17'36	
	3419 Nov 08 04:33	0° 	opposition	3426 May 07 05:02	16°  M.57'31 2°40'04	
retrograde	3419 Dec 12 19:23	1°  M.05'33	min. Earth dist.	3426 May 07 03:27	16°  M.57'49 8.64652 AU	
	3420 Jan 16 17:17	30°  R 		3426 Jun 03 06:37	15°  R 	
opposition	3420 Feb 17 11:51	27°  03'07 1°00'03	direct	3426 Jul 16 12:33	13°  M.32'24	
min. Earth dist.	3420 Feb 17 09:08	27°  03'41 8.10893 AU		3426 Aug 28 00:40	15°  M.	
direct	3420 Apr 24 23:57	24°  08'39	evening set	3426 Oct 29 17:44	21°  M.09'23	
	3420 Jul 20 13:57	0° 				
evening set	3420 Aug 08 15:42	2°  M.19'30	conjunction	3426 Nov 15 20:05	23°  M.13'36 2°06'36	
			minimum elong	3426 Nov 15 20:06	23°  M.13'37 2°06'37	
conjunction	3420 Aug 26 17:18	4°  M.38'04 1°02'46	max. Earth dist.	3426 Nov 15 21:29	23°  M.14'02 10.69629 AU	
minimum elong	3420 Aug 26 17:16	4°  M.38'03 1°02'45	morning rise	3426 Dec 02 18:06	25°  M.16'35	
max. Earth dist.	3420 Aug 26 20:34	4°  M.39'07 10.13426 AU		3427 Jan 16 09:03	0° 	
morning rise	3420 Sep 13 16:29	6°  M.55'53	retrograde	3427 Mar 12 14:57	2°  M.31'39	
retrograde	3420 Dec 25 17:59	14°  M.55'14		3427 May 09 12:51	30°  R 	
opposition	3421 Mar 02 09:13	11°  M.28'52 1°34'43	opposition	3427 May 19 23:43	29°  M.12'34 2°29'50	
min. Earth dist.	3421 Mar 02 06:22	11°  M.29'27 8.16556 AU	min. Earth dist.	3427 May 19 22:58	29°  M.12'42 8.74638 AU	
direct	3421 May 09 08:06	7°  M.59'24	direct	3427 Jul 29 13:28	25°  M.48'42	
evening set	3421 Aug 23 08:59	16°  M.08'00		3427 Oct 12 11:51	0° 	
			evening set	3427 Nov 11 05:42	3°  M.17'58	
conjunction	3421 Sep 10 07:30	18°  M.24'39 1°28'32				
minimum elong	3421 Sep 10 07:26	18°  M.24'38 1°28'32	conjunction	3427 Nov 28 05:03	5°  M.20'13 1°55'48	
max. Earth dist.	3421 Sep 10 10:44	18°  M.25'41 10.20098 AU	minimum elong	3427 Nov 28 05:05	5°  M.20'13 1°55'48	
morning rise	3421 Sep 28 02:36	20°  M.40'16	max. Earth dist.	3427 Nov 28 05:34	5°  M.20'22 10.79185 AU	
retrograde	3422 Jan 08 09:23	28°  M.32'25	morning rise	3427 Dec 15 00:38	7°  M.21'22	
opposition	3422 Mar 16 03:11	25°  M.07'16 2°03'26	retrograde	3428 Mar 23 17:33	14°  M.30'58	
min. Earth dist.	3422 Mar 16 00:51	25°  M.07'45 8.24188 AU	opposition	3428 May 31 14:07	11°  M.12'40 2°13'15	
direct	3422 May 23 13:50	21°  M.38'10	min. Earth dist.	3428 May 31 14:23	11°  M.12'37 8.83629 AU	
evening set	3422 Sep 06 19:36	29°  M.42'42	direct	3428 Aug 10 09:37	7°  M.50'00	

evening set	3428 Nov 22 09:54	15° \mathbb{A} 12'04		direct	3434 Oct 21 13:29	17° \approx 03'25	
				evening set	3435 Jan 29 22:22	24° \approx 05'46	
conjunction	3428 Dec 09 06:49	17° \mathbb{A} 12'39	1°40'10				
minimum elong	3428 Dec 09 06:52	17° \mathbb{A} 12'39	1°40'10	conjunction	3435 Feb 15 14:17	26° \approx 03'48	-0°45'03
max. Earth dist.	3428 Dec 09 05:59	17° \mathbb{A} 12'24	10.87548 AU	minimum elong	3435 Feb 15 14:16	26° \approx 03'48	0°45'03
morning rise	3428 Dec 26 00:42	19° \mathbb{A} 12'19		max. Earth dist.	3435 Feb 15 11:18	26° \approx 02'55	10.97375 AU
retrograde	3429 Apr 04 17:40	26° \mathbb{A} 17'39		morning rise	3435 Mar 04 07:22	28° \approx 02'15	
opposition	3429 Jun 13 00:40	22° \mathbb{A} 59'54	1°51'20		3435 Mar 21 17:36	0° \mathbb{H}	
min. Earth dist.	3429 Jun 13 01:28	22° \mathbb{A} 59'45	8.91229 AU	retrograde	3435 Jun 14 16:04	5° \mathbb{H} 13'01	
direct	3429 Aug 23 00:48	19° \mathbb{A} 38'21		opposition	3435 Aug 24 11:18	1° \mathbb{H} 53'02	-1°10'18
evening set	3429 Dec 04 07:27	26° \mathbb{A} 53'59		min. Earth dist.	3435 Aug 24 13:29	1° \mathbb{H} 52'37	8.94854 AU
					3435 Sep 20 09:49	30° \mathbb{R} \approx	
conjunction	3429 Dec 21 02:35	28° \mathbb{A} 53'15	1°20'34	direct	3435 Nov 02 10:42	28° \approx 34'28	
minimum elong	3429 Dec 21 02:37	28° \mathbb{A} 53'16	1°20'33		3435 Dec 14 04:59	0° \mathbb{H}	
max. Earth dist.	3429 Dec 21 01:11	28° \mathbb{A} 52'50	10.94344 AU	evening set	3436 Feb 10 13:00	5° \mathbb{H} 38'20	
	3429 Dec 30 11:00	0° \mathbb{B}					
morning rise	3430 Jan 06 19:14	0° \mathbb{B} 51'48		conjunction	3436 Feb 27 05:18	7° \mathbb{H} 37'08	-1°09'08
retrograde	3430 Apr 16 15:49	7° \mathbb{B} 54'15		minimum elong	3436 Feb 27 05:16	7° \mathbb{H} 37'07	1°09'09
opposition	3430 Jun 25 08:24	4° \mathbb{B} 36'45	1°25'12	max. Earth dist.	3436 Feb 27 02:13	7° \mathbb{H} 36'13	10.91842 AU
min. Earth dist.	3430 Jun 25 09:07	4° \mathbb{B} 36'38	8.97086 AU	morning rise	3436 Mar 14 23:34	9° \mathbb{H} 36'33	
direct	3430 Sep 04 09:48	1° \mathbb{B} 16'13		retrograde	3436 Jun 26 01:52	16° \mathbb{H} 53'06	
evening set	3430 Dec 15 23:42	8° \mathbb{B} 26'27		opposition	3436 Sep 04 20:41	13° \mathbb{H} 31'57	-1°38'30
				min. Earth dist.	3436 Sep 04 23:03	13° \mathbb{H} 31'31	8.88468 AU
conjunction	3431 Jan 01 17:33	10° \mathbb{B} 24'46	0°57'53	direct	3436 Nov 13 10:14	10° \mathbb{H} 13'06	
minimum elong	3431 Jan 01 17:35	10° \mathbb{B} 24'47	0°57'53	evening set	3437 Feb 21 07:41	17° \mathbb{H} 19'52	
max. Earth dist.	3431 Jan 01 16:14	10° \mathbb{B} 24'23	10.99239 AU				
morning rise	3431 Jan 18 09:25	12° \mathbb{B} 22'35		conjunction	3437 Mar 10 00:43	19° \mathbb{H} 19'45	-1°30'39
retrograde	3431 Apr 28 13:51	19° \mathbb{B} 23'41		minimum elong	3437 Mar 10 00:40	19° \mathbb{H} 19'44	1°30'40
opposition	3431 Jul 07 14:08	16° \mathbb{B} 06'12	0°55'56	max. Earth dist.	3437 Mar 09 21:06	19° \mathbb{H} 18'40	10.84623 AU
min. Earth dist.	3431 Jul 07 15:26	16° \mathbb{B} 05'58	9.00915 AU	morning rise	3437 Mar 26 20:38	21° \mathbb{H} 20'30	
direct	3431 Sep 16 14:27	12° \mathbb{B} 46'30		retrograde	3437 Jul 08 16:59	28° \mathbb{H} 43'54	
evening set	3431 Dec 27 12:40	19° \mathbb{B} 52'39		opposition	3437 Sep 17 09:24	25° \mathbb{H} 21'29	-2°03'01
				min. Earth dist.	3437 Sep 17 12:02	25° \mathbb{H} 20'59	8.80535 AU
conjunction	3432 Jan 13 05:29	21° \mathbb{B} 50'24	0°33'04	direct	3437 Nov 25 11:35	22° \mathbb{H} 02'08	
minimum elong	3432 Jan 13 05:30	21° \mathbb{B} 50'25	0°33'05	evening set	3438 Mar 05 07:45	29° \mathbb{H} 13'07	
max. Earth dist.	3432 Jan 13 03:11	21° \mathbb{B} 49'43	11.02004 AU		3438 Mar 11 20:31	0° \mathbb{Y}	
morning rise	3432 Jan 29 21:08	23° \mathbb{B} 47'51					
	3432 Apr 07 17:57	0° \approx		conjunction	3438 Mar 22 02:16	1° \mathbb{Y} 14'26	-1°48'36
retrograde	3432 May 09 11:11	0° \approx 49'08		minimum elong	3438 Mar 22 02:13	1° \mathbb{Y} 14'25	1°48'36
	3432 Jun 10 18:25	30° \mathbb{R} \mathbb{B}		max. Earth dist.	3438 Mar 21 23:11	1° \mathbb{Y} 13'30	10.76005 AU
opposition	3432 Jul 18 18:39	27° \mathbb{B} 31'27	0°24'38	morning rise	3438 Apr 08 00:17	3° \mathbb{Y} 16'49	
min. Earth dist.	3432 Jul 18 21:10	27° \mathbb{B} 30'59	9.02571 AU	retrograde	3438 Jul 21 12:30	10° \mathbb{Y} 47'56	
direct	3432 Sep 27 14:26	24° \mathbb{B} 12'22		opposition	3438 Sep 30 02:02	7° \mathbb{Y} 24'11	-2°22'41
	3432 Dec 26 20:14	0° \approx		min. Earth dist.	3438 Sep 30 04:12	7° \mathbb{Y} 23'46	8.71367 AU
evening set	3433 Jan 06 23:48	1° \approx 15'54		direct	3438 Dec 07 17:51	4° \mathbb{Y} 04'09	
				evening set	3439 Mar 17 14:24	11° \mathbb{Y} 20'30	
conjunction	3433 Jan 23 15:53	3° \approx 13'24	0°07'03				
minimum elong	3433 Jan 23 15:53	3° \approx 13'24	0°07'04	conjunction	3439 Apr 03 11:10	13° \mathbb{Y} 23'39	-2°02'02
behind sun begin	3433 Jan 23 09:25	3° \approx 11'31		minimum elong	3439 Apr 03 11:09	13° \mathbb{Y} 23'38	2°02'02
behind sun end	3433 Jan 23 22:21	3° \approx 15'17		max. Earth dist.	3439 Apr 03 09:24	13° \mathbb{Y} 23'06	10.66320 AU
max. Earth dist.	3433 Jan 23 12:05	3° \approx 12'18	11.02580 AU	morning rise	3439 Apr 20 11:46	15° \mathbb{Y} 27'59	
morning rise	3433 Feb 09 07:47	5° \approx 10'52		retrograde	3439 Aug 03 16:51	23° \mathbb{Y} 07'20	
desc. node	3433 May 03 13:03	11° \approx 58'13		opposition	3439 Oct 12 23:08	19° \mathbb{Y} 42'15	-2°36'19
retrograde	3433 May 21 08:49	12° \approx 13'53		min. Earth dist.	3439 Oct 13 00:11	19° \mathbb{Y} 42'02	8.61317 AU
opposition	3433 Jul 30 23:11	8° \approx 55'42	-0°07'35	direct	3439 Dec 20 04:22	16° \mathbb{Y} 21'25	
min. Earth dist.	3433 Jul 31 02:22	8° \approx 55'06	9.02057 AU	evening set	3440 Mar 29 04:50	23° \mathbb{Y} 44'06	
direct	3433 Oct 09 14:03	5° \approx 37'01					
evening set	3434 Jan 18 10:28	12° \approx 39'16		conjunction	3440 Apr 15 04:28	25° \mathbb{Y} 49'22	-2°10'06
				minimum elong	3440 Apr 15 04:27	25° \mathbb{Y} 49'22	2°10'05
conjunction	3434 Feb 04 02:15	14° \approx 36'52	-0°19'22	max. Earth dist.	3440 Apr 15 03:21	25° \mathbb{Y} 49'02	10.55966 AU
minimum elong	3434 Feb 04 02:14	14° \approx 36'52	0°19'22	morning rise	3440 May 02 08:15	27° \mathbb{Y} 56'00	
max. Earth dist.	3434 Feb 03 22:32	14° \approx 35'47	11.01006 AU		3440 May 19 22:20	0° \mathbb{B}	
	3434 Feb 07 08:18	15° \approx		retrograde	3440 Aug 16 04:42	5° \mathbb{B} 43'39	
morning rise	3434 Feb 20 18:37	16° \approx 34'39		opposition	3440 Oct 25 01:09	2° \mathbb{B} 17'20	-2°42'52
retrograde	3434 Jun 02 11:08	23° \approx 40'54		min. Earth dist.	3440 Oct 25 01:28	2° \mathbb{B} 17'17	8.50817 AU
opposition	3434 Aug 12 04:30	20° \approx 21'55	-0°39'36		3440 Nov 26 06:32	30° \mathbb{R} \mathbb{Y}	
min. Earth dist.	3434 Aug 12 07:12	20° \approx 21'25	8.99443 AU	direct	3440 Dec 31 18:16	28° \mathbb{Y} 55'34	

	3441 Feb 04 14:51	0°♄	direct	3447 Mar 22 04:58	20°♄02'27	
evening set	3441 Apr 11 03:50	6°♄25'21	evening set	3447 Jul 04 09:40	28°♄11'03	
				3447 Jul 18 12:38	0°♄	
conjunction	3441 Apr 28 07:01	8°♄33'02 -2°12'01				
minimum elong	3441 Apr 28 07:02	8°♄33'03 2°12'00	conjunction	3447 Jul 22 12:51	0°♄31'12 -0°13'26	
max. Earth dist.	3441 Apr 28 06:00	8°♄32'43 10.5425 AU	minimum elong	3447 Jul 22 12:52	0°♄31'12 0°13'27	
morning rise	3441 May 15 14:43	10°♄42'10	behind sun begin	3447 Jul 22 08:53	0°♄29'55	
	3441 Jun 22 21:50	15°♄	behind sun end	3447 Jul 22 16:50	0°♄32'28	
retrograde	3441 Aug 29 21:56	18°♄37'49	max. Earth dist.	3447 Jul 22 16:49	0°♄32'28 10.06939 AU	
opposition	3441 Nov 07 08:28	15°♄10'25 -2°41'29	morning rise	3447 Aug 09 16:38	2°♄51'32	
min. Earth dist.	3441 Nov 07 08:32	15°♄10'24 8.40374 AU	retrograde	3447 Nov 22 17:07	11°♄03'50	
	3441 Nov 09 13:07	15°♄♄	asc. node	3447 Dec 27 07:30	9°♄59'36	
direct	3442 Jan 13 15:48	11°♄47'35	opposition	3448 Jan 28 14:04	7°♄35'37 0°03'26	
	3442 Mar 16 04:28	15°♄	min. Earth dist.	3448 Jan 28 11:02	7°♄36'15 8.07294 AU	
evening set	3442 Apr 24 11:49	19°♄24'55	direct	3448 Apr 04 12:15	4°♄07'07	
			evening set	3448 Jul 18 09:44	12°♄17'57	
conjunction	3442 May 11 19:17	21°♄35'14 -2°07'17				
minimum elong	3442 May 11 19:19	21°♄35'15 2°07'16	conjunction	3448 Aug 05 13:20	14°♄38'01 0°18'51	
max. Earth dist.	3442 May 11 18:33	21°♄35'00 10.35219 AU	minimum elong	3448 Aug 05 13:19	14°♄38'00 0°18'51	
morning rise	3442 May 29 07:25	23°♄47'00	max. Earth dist.	3448 Aug 05 16:56	14°♄39'10 10.08288 AU	
	3442 Jul 28 00:22	0°♄		3448 Aug 08 09:16	15°♄	
retrograde	3442 Sep 12 20:33	1°♄49'49	morning rise	3448 Aug 23 16:25	16°♄57'53	
	3442 Oct 30 11:11	30°♄♄	retrograde	3448 Dec 05 23:03	25°♄05'54	
opposition	3442 Nov 20 20:48	28°♄21'32 -2°31'38	opposition	3449 Feb 10 15:20	21°♄38'31 0°43'03	
min. Earth dist.	3442 Nov 20 20:45	28°♄21'33 8.30519 AU	min. Earth dist.	3449 Feb 10 12:40	21°♄39'04 8.09902 AU	
direct	3443 Jan 26 20:52	24°♄57'34	direct	3449 Apr 18 21:45	18°♄09'37	
	3443 Apr 15 12:55	0°♄	evening set	3449 Aug 02 09:12	26°♄20'47	
evening set	3443 May 08 05:12	2°♄42'34				
			conjunction	3449 Aug 20 11:38	28°♄39'53 0°49'47	
conjunction	3443 May 25 17:29	4°♄55'34 -1°55'41	minimum elong	3449 Aug 20 11:35	28°♄39'52 0°49'47	
minimum elong	3443 May 25 17:32	4°♄55'35 1°55'41	max. Earth dist.	3449 Aug 20 14:32	28°♄40'49 10.12072 AU	
max. Earth dist.	3443 May 25 17:37	4°♄55'37 10.25883 AU		3449 Aug 30 20:41	0°♄	
morning rise	3443 Jun 12 10:07	7°♄09'57	morning rise	3449 Sep 07 12:25	0°♄58'27	
retrograde	3443 Sep 27 00:58	15°♄18'36	retrograde	3449 Dec 19 23:05	9°♄00'35	
opposition	3443 Dec 04 13:36	11°♄49'43 -2°13'19	opposition	3450 Feb 24 14:10	5°♄34'13 1°19'45	
min. Earth dist.	3443 Dec 04 13:00	11°♄49'50 8.21797 AU	min. Earth dist.	3450 Feb 24 11:54	5°♄34'41 8.14799 AU	
direct	3444 Feb 09 08:01	8°♄24'38	direct	3450 May 03 08:04	2°♄05'12	
evening set	3444 May 21 07:33	16°♄16'59	evening set	3450 Aug 17 05:11	10°♄14'50	
conjunction	3444 Jun 08 00:44	18°♄32'33 -1°37'30	conjunction	3450 Sep 04 05:03	12°♄32'17 1°17'32	
minimum elong	3444 Jun 08 00:47	18°♄32'34 1°37'30	minimum elong	3450 Sep 04 05:00	12°♄32'16 1°17'31	
max. Earth dist.	3444 Jun 08 02:23	18°♄33'04 10.17955 AU	max. Earth dist.	3450 Sep 04 07:09	12°♄32'58 10.17932 AU	
morning rise	3444 Jun 25 21:35	20°♄49'19	morning rise	3450 Sep 22 02:13	14°♄48'53	
retrograde	3444 Oct 10 09:39	29°♄02'04	retrograde	3451 Jan 02 16:55	22°♄44'11	
opposition	3444 Dec 17 10:28	25°♄32'52 -1°47'04	opposition	3451 Mar 10 09:56	19°♄18'59 1°51'19	
min. Earth dist.	3444 Dec 17 08:42	25°♄33'14 8.14734 AU	min. Earth dist.	3451 Mar 10 07:55	19°♄19'24 8.21564 AU	
direct	3445 Feb 22 01:34	22°♄06'44	direct	3451 May 17 15:31	15°♄50'11	
	3445 Jun 03 23:54	0°♄	evening set	3451 Aug 31 19:12	23°♄56'37	
evening set	3445 Jun 04 18:00	0°♄05'43				
			conjunction	3451 Sep 18 15:28	26°♄11'55 1°40'29	
conjunction	3445 Jun 22 15:39	2°♄23'28 -1°13'27	minimum elong	3451 Sep 18 15:25	26°♄11'54 1°40'28	
minimum elong	3445 Jun 22 15:42	2°♄23'29 1°13'28	max. Earth dist.	3451 Sep 18 17:11	26°♄12'28 10.25446 AU	
max. Earth dist.	3445 Jun 22 18:39	2°♄24'26 10.11924 AU	morning rise	3451 Oct 06 08:08	28°♄26'06	
morning rise	3445 Jul 10 16:05	4°♄42'10		3451 Oct 19 03:54	0°♄	
retrograde	3445 Oct 24 20:29	12°♄56'59	retrograde	3452 Jan 16 06:01	6°♄14'06	
opposition	3445 Dec 31 10:20	9°♄27'48 -1°14'10	opposition	3452 Mar 23 01:53	2°♄50'07 2°16'05	
min. Earth dist.	3445 Dec 31 07:36	9°♄28'22 8.09773 AU	min. Earth dist.	3452 Mar 22 23:53	2°♄50'31 8.29801 AU	
direct	3446 Mar 08 01:16	6°♄00'43		3452 May 03 14:33	30°♄♄	
evening set	3446 Jun 19 11:28	14°♄05'15	direct	3452 May 30 18:45	29°♄21'50	
				3452 Jun 26 20:49	0°♄	
conjunction	3446 Jul 07 12:36	16°♄24'36 -0°44'51	evening set	3452 Sep 14 01:39	7°♄23'33	
minimum elong	3446 Jul 07 12:39	16°♄24'36 0°44'52				
max. Earth dist.	3446 Jul 07 16:24	16°♄25'49 10.08172 AU	conjunction	3452 Oct 01 17:48	9°♄36'24 1°57'33	
morning rise	3446 Jul 25 15:28	18°♄44'32	minimum elong	3452 Oct 01 17:45	9°♄36'23 1°57'33	
retrograde	3446 Nov 08 07:25	26°♄59'10	max. Earth dist.	3452 Oct 01 19:32	9°♄36'57 10.34260 AU	
opposition	3447 Jan 14 11:53	23°♄30'20 -0°36'32	morning rise	3452 Oct 19 05:39	11°♄47'58	
min. Earth dist.	3447 Jan 14 08:42	23°♄30'59 8.07240 AU	retrograde	3453 Jan 28 12:46	19°♄28'16	

opposition	3453 Apr 05 13:23	16°♊05'32	2°33'00	retrograde	3459 Apr 11 21:46	3°♊09'33	
min. Earth dist.	3453 Apr 05 11:59	16°♊05'49	8.39143 AU		3459 Jun 18 12:05	30°♊♊	
direct	3453 Jun 13 17:21	12°♊37'57		opposition	3459 Jun 20 09:45	29°♊51'28	1°37'00
evening set	3453 Sep 27 23:14	20°♊33'40		min. Earth dist.	3459 Jun 20 10:58	29°♊51'14	8.92791 AU
				direct	3459 Aug 30 09:39	26°♊29'57	
conjunction	3453 Oct 15 11:01	22°♊43'56	2°08'07		3459 Nov 06 15:34	0°♊	
minimum elong	3453 Oct 15 11:00	22°♊43'56	2°08'08	evening set	3459 Dec 11 08:12	3°♊43'06	
max. Earth dist.	3453 Oct 15 12:12	22°♊44'18	10.43973 AU				
morning rise	3453 Nov 01 18:14	24°♊52'51		conjunction	3459 Dec 28 02:37	5°♊42'01	1°08'01
	3453 Dec 19 07:35	0°♊		minimum elong	3459 Dec 28 02:39	5°♊42'01	1°08'00
retrograde	3454 Feb 10 11:38	2°♊25'26		max. Earth dist.	3459 Dec 28 00:47	5°♊41'28	10.95392 AU
	3454 Apr 06 18:52	30°♊♊		morning rise	3460 Jan 13 19:00	7°♊40'20	
opposition	3454 Apr 18 20:19	29°♊03'53	2°41'40	retrograde	3460 Apr 22 18:17	14°♊42'25	
min. Earth dist.	3454 Apr 18 19:49	29°♊03'59	8.49147 AU	opposition	3460 Jul 01 16:26	11°♊24'27	1°08'55
direct	3454 Jun 27 11:59	25°♊37'10		min. Earth dist.	3460 Jul 01 17:56	11°♊24'10	8.97623 AU
	3454 Sep 11 07:18	0°♊		direct	3460 Sep 10 17:20	8°♊03'49	
evening set	3454 Oct 11 11:00	3°♊25'52		evening set	3460 Dec 21 22:36	15°♊12'14	
conjunction	3454 Oct 28 18:31	5°♊33'35	2°12'02	conjunction	3461 Jan 07 15:52	17°♊10'22	0°44'00
minimum elong	3454 Oct 28 18:31	5°♊33'35	2°12'03	minimum elong	3461 Jan 07 15:53	17°♊10'22	0°43'59
max. Earth dist.	3454 Oct 28 18:44	5°♊33'39	10.54113 AU	max. Earth dist.	3461 Jan 07 13:54	17°♊09'47	10.99324 AU
morning rise	3454 Nov 14 21:35	7°♊39'58		morning rise	3461 Jan 24 07:47	19°♊08'07	
	3455 Feb 13 08:47	15°♊		retrograde	3461 May 04 15:58	26°♊09'33	
retrograde	3455 Feb 23 04:03	15°♊05'10		opposition	3461 Jul 13 21:21	22°♊51'29	0°38'21
	3455 Mar 05 00:08	15°♊♊		min. Earth dist.	3461 Jul 13 22:25	22°♊51'17	9.00576 AU
opposition	3455 May 01 22:20	11°♊44'40	2°42'11	direct	3461 Sep 22 20:28	19°♊31'39	
min. Earth dist.	3455 May 01 22:33	11°♊44'38	8.59324 AU	evening set	3462 Jan 02 10:15	26°♊36'33	
direct	3455 Jul 11 00:34	8°♊18'57					
	3455 Oct 16 01:59	15°♊		conjunction	3462 Jan 19 02:48	28°♊34'15	0°18'22
evening set	3455 Oct 24 12:51	16°♊00'02		minimum elong	3462 Jan 19 02:48	28°♊34'16	0°18'23
				max. Earth dist.	3462 Jan 19 01:30	28°♊33'53	11.01309 AU
conjunction	3455 Nov 10 16:37	18°♊05'24	2°09'31		3462 Jan 31 05:25	0°♊	
minimum elong	3455 Nov 10 16:38	18°♊05'24	2°09'32	morning rise	3462 Feb 04 18:33	0°♊31'47	
max. Earth dist.	3455 Nov 10 15:52	18°♊05'10	10.64201 AU	retrograde	3462 May 16 13:55	7°♊34'04	
morning rise	3455 Nov 27 16:15	20°♊09'30		opposition	3462 Jul 26 01:45	4°♊15'41	0°06'23
retrograde	3456 Mar 06 14:34	27°♊27'54		min. Earth dist.	3462 Jul 26 02:26	4°♊15'34	9.01545 AU
opposition	3456 May 13 19:22	24°♊08'17	2°35'05	direct	3462 Oct 04 20:03	0°♊56'31	
min. Earth dist.	3456 May 13 19:34	24°♊08'14	8.69196 AU	desc. node	3462 Oct 08 17:23	0°♊57'15	
direct	3456 Jul 23 06:28	20°♊43'38		evening set	3463 Jan 13 20:44	7°♊59'15	
evening set	3456 Nov 05 05:09	28°♊16'59					
	3456 Nov 19 11:14	0°♊		conjunction	3463 Jan 30 12:46	9°♊56'50	-0°08'01
				minimum elong	3463 Jan 30 12:45	9°♊56'50	0°08'01
conjunction	3456 Nov 22 05:51	0°♊20'15	2°01'05	behind sun begin	3463 Jan 30 06:30	9°♊55'00	
minimum elong	3456 Nov 22 05:53	0°♊20'15	2°01'06	behind sun end	3463 Jan 30 19:01	9°♊58'39	
max. Earth dist.	3456 Nov 22 05:04	0°♊20'00	10.73761 AU	max. Earth dist.	3463 Jan 30 11:22	9°♊56'26	11.01271 AU
morning rise	3456 Dec 09 02:42	2°♊22'22		morning rise	3463 Feb 16 04:49	11°♊54'28	
retrograde	3457 Mar 18 19:56	9°♊34'53			3463 Mar 16 15:17	15°♊	
opposition	3457 May 26 11:51	6°♊15'57	2°21'11	retrograde	3463 May 28 14:48	18°♊59'04	
min. Earth dist.	3457 May 26 11:52	6°♊15'57	8.78303 AU	opposition	3463 Aug 07 06:26	15°♊40'11	-0°25'50
direct	3457 Aug 05 06:24	2°♊52'23		min. Earth dist.	3463 Aug 07 07:41	15°♊39'57	9.00495 AU
evening set	3457 Nov 17 12:58	10°♊18'17			3463 Aug 16 09:02	15°♊♊	
				direct	3463 Oct 16 18:03	12°♊21'27	
conjunction	3457 Dec 04 11:10	12°♊19'46	1°47'28		3463 Dec 13 21:26	15°♊	
minimum elong	3457 Dec 04 11:12	12°♊19'46	1°47'28	evening set	3464 Jan 25 07:52	19°♊23'27	
max. Earth dist.	3457 Dec 04 10:47	12°♊19'39	10.82361 AU				
morning rise	3457 Dec 21 05:45	14°♊20'14		conjunction	3464 Feb 10 23:35	21°♊21'14	-0°34'03
retrograde	3458 Mar 30 23:26	21°♊27'58		minimum elong	3464 Feb 10 23:34	21°♊21'14	0°34'02
opposition	3458 Jun 08 00:26	18°♊09'34	2°01'27	max. Earth dist.	3464 Feb 10 21:17	21°♊20'33	10.99217 AU
min. Earth dist.	3458 Jun 08 00:45	18°♊09'30	8.86266 AU	morning rise	3464 Feb 27 16:22	23°♊19'19	
direct	3458 Aug 17 23:15	14°♊47'03			3464 May 15 21:36	0°♊	
evening set	3458 Nov 29 13:34	22°♊06'06		retrograde	3464 Jun 08 16:21	0°♊27'36	
					3464 Jul 02 18:45	30°♊♊	
conjunction	3458 Dec 16 09:39	24°♊06'09	1°29'28	opposition	3464 Aug 18 12:06	27°♊08'02	-0°57'11
minimum elong	3458 Dec 16 09:42	24°♊06'09	1°29'28	min. Earth dist.	3464 Aug 18 13:51	27°♊07'42	8.97468 AU
max. Earth dist.	3458 Dec 16 08:58	24°♊05'57	10.89662 AU	direct	3464 Oct 27 14:53	23°♊49'30	
morning rise	3459 Jan 02 02:47	26°♊05'21			3465 Jan 28 07:17	0°♊	
	3459 Feb 07 16:41	0°♊		evening set	3465 Feb 04 20:51	0°♊52'15	

conjunction	3465 Feb 21 12:46	2°♄50'33 -0°58'54	conjunction	3471 May 06 01:52	15°♄56'24 -2°10'03
minimum elong	3465 Feb 21 12:45	2°♄50'32 0°58'54	minimum elong	3471 May 06 01:53	15°♄56'25 2°10'03
max. Earth dist.	3465 Feb 21 10:36	2°♄49'54 10.95223 AU	max. Earth dist.	3471 May 06 01:28	15°♄56'17 10.43040 AU
morning rise	3465 Mar 10 06:31	4°♄49'23	morning rise	3471 May 23 11:36	18°♄06'28
retrograde	3465 Jun 20 23:16	12°♄02'43	retrograde	3471 Sep 06 21:15	26°♄04'27
opposition	3465 Aug 30 19:57	8°♄42'15 -1°26'31	opposition	3471 Nov 15 03:06	22°♄37'15 -2°36'47
min. Earth dist.	3465 Aug 30 21:17	8°♄42'00 8.92573 AU	min. Earth dist.	3471 Nov 15 03:05	22°♄37'15 8.38042 AU
direct	3465 Nov 08 14:53	5°♄23'45	direct	3472 Jan 21 07:21	19°♄14'30
evening set	3466 Feb 16 13:05	12°♄28'32	evening set	3472 May 01 08:25	26°♄54'21
conjunction	3466 Mar 05 05:44	14°♄27'43 -1°21'34	conjunction	3472 May 18 18:19	29°♄05'41 -2°01'36
minimum elong	3466 Mar 05 05:42	14°♄27'42 1°21'35	minimum elong	3472 May 18 18:21	29°♄05'42 2°01'36
max. Earth dist.	3466 Mar 05 04:43	14°♄27'25 10.89432 AU	max. Earth dist.	3472 May 18 18:12	29°♄05'39 10.32982 AU
morning rise	3466 Mar 22 00:42	16°♄27'39		3472 May 25 22:03	0°♄
retrograde	3466 Jul 03 12:34	23°♄47'10	morning rise	3472 Jun 05 08:28	1°♄18'25
opposition	3466 Sep 12 06:40	20°♄25'39 -1°52'41	retrograde	3472 Sep 19 23:30	9°♄22'58
min. Earth dist.	3466 Sep 12 07:07	20°♄25'34 8.85990 AU	opposition	3472 Nov 27 16:49	5°♄54'56 -2°22'23
direct	3466 Nov 20 14:51	17°♄07'00	min. Earth dist.	3472 Nov 27 16:22	5°♄55'02 8.28400 AU
evening set	3467 Feb 28 10:17	24°♄15'08	direct	3473 Feb 02 13:17	2°♄30'57
conjunction	3467 Mar 17 04:03	26°♄15'32 -1°41'07	evening set	3473 May 15 05:33	10°♄18'24
minimum elong	3467 Mar 17 04:01	26°♄15'31 1°41'08	conjunction	3473 Jun 01 20:12	12°♄32'23 -1°46'26
max. Earth dist.	3467 Mar 17 03:08	26°♄15'15 10.82066 AU	minimum elong	3473 Jun 01 20:16	12°♄32'24 1°46'27
morning rise	3467 Apr 03 00:50	28°♄16'53	max. Earth dist.	3473 Jun 01 20:00	12°♄32'19 10.23954 AU
	3467 Apr 17 23:16	0°♄	morning rise	3473 Jun 19 14:55	14°♄47'40
retrograde	3467 Jul 16 06:19	5°♄43'27	retrograde	3473 Oct 04 05:16	22°♄57'16
opposition	3467 Sep 24 20:49	2°♄20'50 -2°14'30	opposition	3473 Dec 11 10:51	19°♄28'37 -1°59'48
min. Earth dist.	3467 Sep 24 21:16	2°♄20'45 8.77965 AU	min. Earth dist.	3473 Dec 11 10:28	19°♄28'42 8.20071 AU
	3467 Oct 29 06:48	30°♄	direct	3474 Feb 16 03:01	16°♄03'21
direct	3467 Dec 02 16:57	29°♄01'44	evening set	3474 May 29 11:13	23°♄57'56
	3468 Jan 05 10:46	0°♄	conjunction	3474 Jun 16 06:32	26°♄14'21 -1°25'05
evening set	3468 Mar 11 13:30	6°♄14'30	minimum elong	3474 Jun 16 06:36	26°♄14'22 1°25'05
conjunction	3468 Mar 28 08:56	8°♄16'27 -1°56'35	max. Earth dist.	3474 Jun 16 06:36	26°♄14'22 10.16508 AU
minimum elong	3468 Mar 28 08:54	8°♄16'26 1°56'35	morning rise	3474 Jul 04 05:21	28°♄31'52
max. Earth dist.	3468 Mar 28 07:26	8°♄15'59 10.73404 AU		3474 Jul 16 02:40	0°♄
morning rise	3468 Apr 14 08:10	10°♄19'32	retrograde	3474 Oct 18 13:08	6°♄44'37
retrograde	3468 Jul 28 06:20	17°♄53'49	opposition	3474 Dec 25 08:18	3°♄15'39 -1°29'57
opposition	3468 Oct 06 15:18	14°♄30'01 -2°30'48	min. Earth dist.	3474 Dec 25 07:50	3°♄15'45 8.13559 AU
min. Earth dist.	3468 Oct 06 16:10	14°♄29'51 8.68794 AU		3475 Feb 16 01:50	30°♄
direct	3468 Dec 14 00:29	11°♄10'16	direct	3475 Mar 01 23:56	29°♄49'09
evening set	3469 Mar 23 23:34	18°♄28'40		3475 Mar 15 20:34	0°♄
conjunction	3469 Apr 09 21:28	20°♄32'31 -2°07'04	evening set	3475 Jun 13 00:21	7°♄50'00
minimum elong	3469 Apr 09 21:27	20°♄32'31 2°07'03	conjunction	3475 Jun 30 23:41	10°♄08'22 -0°58'32
max. Earth dist.	3469 Apr 09 19:55	20°♄32'02 10.63766 AU	minimum elong	3475 Jun 30 23:44	10°♄08'23 0°58'32
morning rise	3469 Apr 26 23:40	22°♄37'41	max. Earth dist.	3475 Jul 01 00:25	10°♄08'36 10.11088 AU
	3469 Jul 21 13:09	0°♄	morning rise	3475 Jul 19 01:33	12°♄27'31
retrograde	3469 Aug 10 12:30	0°♄20'01	retrograde	3475 Nov 01 21:56	20°♄41'22
	3469 Aug 30 14:21	30°♄	opposition	3476 Jan 08 08:04	17°♄12'24 -0°54'26
opposition	3469 Oct 19 14:24	26°♄55'00 -2°40'32	min. Earth dist.	3476 Jan 08 07:06	17°♄12'36 8.09263 AU
min. Earth dist.	3469 Oct 19 15:28	26°♄54'48 8.58810 AU	direct	3476 Mar 15 01:06	13°♄44'48
direct	3469 Dec 26 12:53	23°♄34'24	evening set	3476 Jun 26 19:10	21°♄50'38
	3470 Mar 28 11:41	0°♄	conjunction	3476 Jul 14 21:25	24°♄10'18 -0°28'19
evening set	3470 Apr 05 17:39	0°♄59'20	minimum elong	3476 Jul 14 21:26	24°♄10'18 0°28'20
conjunction	3470 Apr 22 18:56	3°♄05'27 -2°11'46	max. Earth dist.	3476 Jul 14 23:03	24°♄10'49 10.08029 AU
minimum elong	3470 Apr 22 18:56	3°♄05'27 2°11'45	morning rise	3476 Aug 02 00:57	26°♄30'21
max. Earth dist.	3470 Apr 22 18:03	3°♄05'10 10.53499 AU		3476 Aug 31 05:47	0°♄
morning rise	3470 May 10 00:38	5°♄12'57	retrograde	3476 Nov 15 07:21	4°♄43'10
retrograde	3470 Aug 24 01:05	13°♄03'19	opposition	3477 Jan 21 09:02	1°♄14'28 -0°15'25
opposition	3470 Nov 01 18:13	9°♄37'09 -2°42'45	min. Earth dist.	3477 Jan 21 07:16	1°♄14'50 8.07450 AU
min. Earth dist.	3470 Nov 01 18:51	9°♄37'01 8.48388 AU		3477 Feb 05 18:46	30°♄
direct	3471 Jan 08 07:30	6°♄15'32	direct	3477 Mar 29 06:06	27°♄45'59
evening set	3471 Apr 18 20:29	13°♄47'45		3477 May 18 15:52	0°♄
	3471 Apr 28 13:43	15°♄	asc. node	3477 Jun 16 07:00	2°♄50'52
			evening set	3477 Jul 11 17:27	5°♄55'14

conjunction	3477 Jul 29 21:07	8°♏15'20	0°03'46	min. Earth dist.	3483 Apr 12 21:01	23°♑11'45	8.43567 AU
minimum elong	3477 Jul 29 21:08	8°♏15'20	0°03'46	direct	3483 Jun 21 10:40	19°♑43'52	
behind sun begin	3477 Jul 29 13:51	8°♏13'00		evening set	3483 Oct 05 11:05	27°♑36'00	
behind sun end	3477 Jul 30 04:24	8°♏17'40					
max. Earth dist.	3477 Jul 29 23:41	8°♏16'07	10.07510 AU	conjunction	3483 Oct 22 20:43	29°♑44'58	2°10'57
morning rise	3477 Aug 17 00:44	10°♏35'26		minimum elong	3483 Oct 22 20:42	29°♑44'57	2°10'57
	3477 Sep 23 20:38	15°♏		max. Earth dist.	3483 Oct 22 22:10	29°♑45'25	10.48649 AU
retrograde	3477 Nov 29 14:30	18°♏45'15			3483 Oct 24 21:03	0°♐	
opposition	3478 Feb 04 09:56	15°♏17'06	0°24'34	morning rise	3483 Nov 09 01:51	1°♐52'35	
min. Earth dist.	3478 Feb 04 07:33	15°♏17'35	8.08212 AU	retrograde	3484 Feb 17 12:53	9°♐21'18	
	3478 Feb 07 21:04	15°♏♏		opposition	3484 Apr 25 02:52	6°♐00'00	2°42'52
direct	3478 Apr 12 13:44	11°♏47'59		min. Earth dist.	3484 Apr 25 01:08	6°♐00'20	8.54023 AU
	3478 Jun 13 00:01	15°♏		direct	3484 Jul 04 00:45	2°♐33'37	
evening set	3478 Jul 26 16:49	19°♏58'52		evening set	3484 Oct 17 17:33	10°♐18'19	
conjunction	3478 Aug 13 20:10	22°♏18'32	0°35'26	conjunction	3484 Nov 03 23:17	12°♐24'50	2°11'25
minimum elong	3478 Aug 13 20:08	22°♏18'31	0°35'26	minimum elong	3484 Nov 03 23:18	12°♐24'50	2°11'26
max. Earth dist.	3478 Aug 13 23:04	22°♏19'28	10.09535 AU	max. Earth dist.	3484 Nov 04 00:49	12°♐25'18	10.59139 AU
morning rise	3478 Aug 31 22:08	24°♏37'48		morning rise	3484 Nov 21 00:28	14°♐30'00	
	3478 Oct 18 21:06	0°♐			3484 Nov 25 04:38	15°♐	
retrograde	3478 Dec 13 17:29	2°♐42'49		retrograde	3485 Mar 01 03:02	21°♐51'34	
	3479 Feb 09 07:13	30°♐♏		opposition	3485 May 08 02:04	18°♐31'27	2°39'16
opposition	3479 Feb 18 09:28	29°♏15'30	1°02'52	min. Earth dist.	3485 May 08 01:08	18°♐31'37	8.64419 AU
min. Earth dist.	3479 Feb 18 07:09	29°♏15'59	8.11482 AU	direct	3485 Jul 17 08:18	15°♐06'16	
direct	3479 Apr 26 22:24	25°♏46'04		evening set	3485 Oct 30 14:36	22°♐43'18	
	3479 Jul 07 23:38	0°♐					
evening set	3479 Aug 10 14:18	3°♐56'39		conjunction	3485 Nov 16 16:49	24°♐47'34	2°05'43
				minimum elong	3485 Nov 16 16:50	24°♐47'34	2°05'43
conjunction	3479 Aug 28 15:41	6°♐15'03	1°04'52	max. Earth dist.	3485 Nov 16 17:37	24°♐47'48	10.69330 AU
minimum elong	3479 Aug 28 15:38	6°♐15'02	1°04'51	morning rise	3485 Dec 03 14:51	26°♐50'35	
max. Earth dist.	3479 Aug 28 18:21	6°♐15'55	10.13967 AU		3485 Dec 31 16:53	0°♑	
morning rise	3479 Sep 15 14:36	8°♐32'43		retrograde	3486 Mar 13 10:48	4°♑05'48	
retrograde	3479 Dec 27 14:57	16°♐31'37		opposition	3486 May 20 20:56	0°♑46'40	2°28'27
opposition	3480 Mar 03 06:41	13°♐05'20	1°37'05	min. Earth dist.	3486 May 20 20:57	0°♑46'40	8.74277 AU
min. Earth dist.	3480 Mar 03 04:44	13°♐05'44	8.17050 AU		3486 May 31 03:35	30°♐♐	
direct	3480 May 10 05:51	9°♐35'53		direct	3486 Jul 30 10:57	27°♐22'45	
evening set	3480 Aug 24 07:05	17°♐44'12			3486 Sep 26 13:07	0°♑	
				evening set	3486 Nov 12 02:36	4°♑52'11	
conjunction	3480 Sep 11 05:15	20°♐00'42	1°30'14	conjunction	3486 Nov 29 01:50	6°♑54'28	1°54'26
minimum elong	3480 Sep 11 05:11	20°♐00'41	1°30'13	minimum elong	3486 Nov 29 01:52	6°♑54'28	1°54'26
max. Earth dist.	3480 Sep 11 07:21	20°♐01'22	10.20529 AU	max. Earth dist.	3486 Nov 29 01:28	6°♑54'21	10.78768 AU
morning rise	3480 Sep 29 00:10	22°♐16'11		morning rise	3486 Dec 15 21:31	8°♑55'41	
	3480 Dec 28 07:07	0°♑		retrograde	3487 Mar 25 14:52	16°♑05'34	
retrograde	3481 Jan 09 06:34	0°♑07'59		opposition	3487 Jun 02 11:35	12°♑47'13	2°11'20
	3481 Jan 21 05:51	30°♐♐		min. Earth dist.	3487 Jun 02 11:47	12°♑47'11	8.83164 AU
opposition	3481 Mar 17 00:25	26°♐42'53	2°05'14	direct	3487 Aug 12 07:44	9°♑24'31	
min. Earth dist.	3481 Mar 16 22:58	26°♐43'11	8.24563 AU	evening set	3487 Nov 24 06:49	16°♑46'47	
direct	3481 May 24 11:17	23°♐13'45					
	3481 Aug 28 01:22	0°♑		conjunction	3487 Dec 11 03:47	18°♑47'27	1°38'23
evening set	3481 Sep 07 17:17	1°♑18'04		minimum elong	3487 Dec 11 03:50	18°♑47'28	1°38'23
				max. Earth dist.	3487 Dec 11 03:09	18°♑47'15	10.87049 AU
conjunction	3481 Sep 25 11:26	3°♑32'13	1°50'12	morning rise	3487 Dec 27 21:43	20°♑47'12	
minimum elong	3481 Sep 25 11:23	3°♑32'12	1°50'11	retrograde	3488 Apr 05 15:12	27°♑52'55	
max. Earth dist.	3481 Sep 25 12:43	3°♑32'38	10.28820 AU	opposition	3488 Jun 13 22:25	24°♑35'05	1°48'58
morning rise	3481 Oct 13 01:47	5°♑45'10		min. Earth dist.	3488 Jun 13 22:26	24°♑35'05	8.90699 AU
retrograde	3482 Jan 22 14:46	13°♑29'16		direct	3488 Aug 23 22:08	21°♑13'33	
opposition	3482 Mar 30 13:50	10°♑05'27	2°25'58	evening set	3488 Dec 05 04:31	28°♑29'25	
min. Earth dist.	3482 Mar 30 12:26	10°♑05'44	8.33570 AU		3488 Dec 17 23:13	0°♒	
direct	3482 Jun 07 13:22	6°♑36'59					
evening set	3482 Sep 21 19:01	14°♑35'48		conjunction	3488 Dec 21 23:48	0°♒28'48	1°18'27
				minimum elong	3488 Dec 21 23:50	0°♒28'48	1°18'26
conjunction	3482 Oct 09 08:50	16°♑47'22	2°03'53	max. Earth dist.	3488 Dec 21 23:24	0°♒28'41	10.93805 AU
minimum elong	3482 Oct 09 08:48	16°♑47'21	2°03'53	morning rise	3489 Jan 07 16:26	2°♒27'26	
max. Earth dist.	3482 Oct 09 09:53	16°♑47'42	10.38366 AU	retrograde	3489 Apr 17 14:33	9°♒30'19	
morning rise	3482 Oct 26 18:28	18°♑57'38		opposition	3489 Jun 26 06:30	6°♒12'47	1°22'27
retrograde	3483 Feb 04 16:10	26°♑33'56		min. Earth dist.	3489 Jun 26 06:52	6°♒12'43	8.96545 AU
opposition	3483 Apr 12 22:46	23°♑11'24	2°38'33				

direct	3489 Sep 05 07:33	2°♄52'15		min. Earth dist.	3495 Sep 06 23:15	15°♄12'05	8.88261 AU
evening set	3489 Dec 16 21:09	10°♄02'44		direct	3495 Nov 15 08:51	11°♄53'46	
				evening set	3496 Feb 23 06:50	19°♄00'43	
conjunction	3490 Jan 02 15:00	12°♄01'09	0°55'31				
minimum elong	3490 Jan 02 15:02	12°♄01'10	0°55'31	conjunction	3496 Mar 10 23:57	21°♄00'38	-1°32'27
max. Earth dist.	3490 Jan 02 13:56	12°♄00'50	10.98719 AU	minimum elong	3496 Mar 10 23:55	21°♄00'37	1°32'27
morning rise	3490 Jan 19 06:55	13°♄59'03		max. Earth dist.	3496 Mar 10 20:45	20°♄59'40	10.84447 AU
retrograde	3490 Apr 29 12:36	21°♄00'32		morning rise	3496 Mar 27 19:59	23°♄01'26	
opposition	3490 Jul 08 12:39	17°♄43'03	0°52'56		3496 Jun 17 01:51	0°♄	
min. Earth dist.	3490 Jul 08 14:11	17°♄42'46	9.00427 AU	retrograde	3496 Jul 09 15:27	0°♄25'06	
direct	3490 Sep 17 11:10	14°♄23'21			3496 Aug 01 11:51	30°♄	
evening set	3490 Dec 28 10:22	21°♄29'44		opposition	3496 Sep 18 09:15	27°♄02'41	-2°04'59
				min. Earth dist.	3496 Sep 18 11:31	27°♄02'15	8.80394 AU
conjunction	3491 Jan 14 03:07	23°♄27'33	0°30'32	direct	3496 Nov 26 11:38	23°♄43'21	
minimum elong	3491 Jan 14 03:08	23°♄27'34	0°30'33		3497 Feb 26 13:29	0°♄	
max. Earth dist.	3491 Jan 14 00:31	23°♄26'47	11.01557 AU	evening set	3497 Mar 06 07:08	0°♄54'27	
morning rise	3491 Jan 30 18:55	25°♄25'06					
	3491 Mar 16 13:24	0°♄		conjunction	3497 Mar 23 01:49	2°♄55'50	-1°49'57
retrograde	3491 May 11 08:43	2°♄26'46		minimum elong	3497 Mar 23 01:47	2°♄55'49	1°49'58
	3491 Jul 09 02:14	30°♄		max. Earth dist.	3497 Mar 22 23:45	2°♄55'12	10.75892 AU
opposition	3491 Jul 20 17:31	29°♄09'03	0°21'30	morning rise	3497 Apr 08 23:50	4°♄58'14	
min. Earth dist.	3491 Jul 20 20:00	29°♄08'36	9.02161 AU	retrograde	3497 Jul 22 13:45	12°♄29'33	
direct	3491 Sep 29 13:08	25°♄49'59		opposition	3497 Oct 01 01:56	9°♄05'46	-2°24'03
	3491 Dec 13 09:34	0°♄		min. Earth dist.	3497 Oct 01 03:12	9°♄05'32	8.71293 AU
evening set	3492 Jan 08 21:37	2°♄53'43		direct	3497 Dec 08 17:57	5°♄45'47	
				evening set	3498 Mar 18 13:57	13°♄02'09	
conjunction	3492 Jan 25 13:46	4°♄51'18	0°04'29				
minimum elong	3492 Jan 25 13:46	4°♄51'18	0°04'29	conjunction	3498 Apr 04 10:50	15°♄05'19	-2°02'53
behind sun begin	3492 Jan 25 06:55	4°♄49'18		minimum elong	3498 Apr 04 10:48	15°♄05'18	2°02'53
behind sun end	3492 Jan 25 20:36	4°♄53'18		max. Earth dist.	3498 Apr 04 09:31	15°♄04'55	10.66280 AU
max. Earth dist.	3492 Jan 25 10:31	4°♄50'22	11.02200 AU	morning rise	3498 Apr 21 11:30	17°♄09'42	
morning rise	3492 Feb 11 05:45	6°♄48'49		retrograde	3498 Aug 04 18:12	24°♄49'06	
desc. node	3492 Mar 28 12:50	11°♄31'17		opposition	3498 Oct 13 23:06	21°♄24'00	-2°37'01
retrograde	3492 May 22 08:37	13°♄52'16		min. Earth dist.	3498 Oct 13 23:41	21°♄23'53	8.61321 AU
opposition	3492 Jul 31 22:13	10°♄34'03	-0°10'44	direct	3498 Dec 21 02:38	18°♄03'11	
min. Earth dist.	3492 Aug 01 00:31	10°♄33'37	9.01703 AU	evening set	3499 Mar 31 04:35	25°♄25'50	
direct	3492 Oct 10 13:34	7°♄15'25					
evening set	3493 Jan 19 08:37	14°♄17'52		conjunction	3499 Apr 17 04:18	27°♄31'07	-2°10'23
	3493 Jan 25 08:58	15°♄		minimum elong	3499 Apr 17 04:17	27°♄31'06	2°10'22
conjunction	3493 Feb 05 00:32	16°♄15'32	-0°21'55	max. Earth dist.	3499 Apr 17 02:41	27°♄30'37	10.56015 AU
minimum elong	3493 Feb 05 00:31	16°♄15'32	0°21'55	morning rise	3499 May 04 08:20	29°♄37'45	
max. Earth dist.	3493 Feb 04 21:53	16°♄14'45	11.00669 AU		3499 May 07 10:03	0°♄	
morning rise	3493 Feb 21 16:51	18°♄13'23		retrograde	3499 Aug 18 04:12	7°♄25'20	
retrograde	3493 Jun 03 10:30	25°♄20'01		opposition	3499 Oct 27 01:00	3°♄59'00	-2°42'50
opposition	3493 Aug 13 03:42	22°♄01'02	-0°42'39	min. Earth dist.	3499 Oct 27 01:40	3°♄58'52	8.50906 AU
min. Earth dist.	3493 Aug 13 05:38	22°♄00'41	8.99129 AU	direct	3500 Jan 02 18:02	0°♄37'11	
direct	3493 Oct 22 11:00	18°♄42'37		evening set	3500 Apr 13 03:37	8°♄06'53	
evening set	3494 Jan 30 20:56	25°♄45'10					
conjunction	3494 Feb 16 12:50	27°♄43'16	-0°47'27	conjunction	3500 Apr 30 06:57	10°♄14'36	-2°11'42
minimum elong	3494 Feb 16 12:48	27°♄43'15	0°47'28	minimum elong	3500 Apr 30 06:57	10°♄14'36	2°11'42
max. Earth dist.	3494 Feb 16 10:02	27°♄42'26	10.97080 AU	max. Earth dist.	3500 Apr 30 05:31	10°♄14'09	10.45559 AU
morning rise	3494 Mar 05 05:56	29°♄41'46		morning rise	3500 May 17 14:56	12°♄23'44	
	3494 Mar 07 20:51	0°♄			3500 Jun 08 18:50	15°♄	
retrograde	3494 Jun 15 16:24	6°♄52'55		retrograde	3500 Aug 31 20:51	20°♄19'10	
opposition	3494 Aug 25 10:56	3°♄32'57	-1°13'06	opposition	3500 Nov 09 08:07	16°♄51'45	-2°40'43
min. Earth dist.	3494 Aug 25 13:06	3°♄32'33	8.94586 AU	min. Earth dist.	3500 Nov 09 08:41	16°♄51'38	8.40541 AU
direct	3494 Nov 03 09:39	0°♄14'27			3500 Dec 04 06:35	15°♄	
evening set	3495 Feb 11 11:50	7°♄18'30		direct	3501 Jan 15 16:08	13°♄28'52	
				evening set	3501 Feb 26 01:46	15°♄	
conjunction	3495 Feb 28 04:04	9°♄17'21	-1°11'17		3501 Apr 26 11:26	21°♄06'01	
minimum elong	3495 Feb 28 04:01	9°♄17'20	1°11'18	conjunction	3501 May 13 19:10	23°♄16'20	-2°06'23
max. Earth dist.	3495 Feb 28 00:33	9°♄16'18	10.91603 AU	minimum elong	3501 May 13 19:12	23°♄16'21	2°06'23
morning rise	3495 Mar 16 22:30	11°♄16'50		max. Earth dist.	3501 May 13 18:44	23°♄16'12	10.35424 AU
retrograde	3495 Jun 28 01:45	18°♄33'43		morning rise	3501 May 31 07:28	25°♄28'07	
opposition	3495 Sep 06 20:34	15°♄12'36	-1°40'56		3501 Jul 10 12:43	0°♄	
				retrograde	3501 Sep 14 20:01	3°♄30'36	

opposition	3501 Nov 22 20:08	0° Π 02'18 -2°30'10	max. Earth dist.	3507 Aug 08 14:31	16° Ω 15'20	10.08519 AU
min. Earth dist.	3501 Nov 22 20:04	0° Π 02'19 8.30752 AU	morning rise	3507 Aug 26 14:42	18° Ω 34'13	
	3501 Nov 23 07:38	30° \mathbb{R} 8	retrograde	3507 Dec 08 19:18	26° Ω 41'57	
direct	3502 Jan 28 20:24	26° \mathbb{B} 38'17	opposition	3508 Feb 13 12:39	23° Ω 14'38	0°45'58
	3502 Apr 01 16:07	0° Π	min. Earth dist.	3508 Feb 13 10:06	23° Ω 15'10	8.10128 AU
evening set	3502 May 10 04:39	4° Π 23'01	direct	3508 Apr 20 20:57	19° Ω 45'45	
			evening set	3508 Aug 04 07:24	27° Ω 56'54	
conjunction	3502 May 27 17:15	6° Π 36'01 -1°54'15		3508 Aug 20 08:20	0° \mathbb{N}	
minimum elong	3502 May 27 17:18	6° Π 36'02 1°54'15				
max. Earth dist.	3502 May 27 18:13	6° Π 36'20 10.26143 AU	conjunction	3508 Aug 22 09:44	0° \mathbb{N} 15'56	0°52'00
morning rise	3502 Jun 14 10:00	8° Π 50'23	minimum elong	3508 Aug 22 09:42	0° \mathbb{N} 15'55	0°52'00
retrograde	3502 Sep 28 23:56	16° Π 58'37	max. Earth dist.	3508 Aug 22 12:46	0° \mathbb{N} 16'54	10.12301 AU
opposition	3502 Dec 06 12:33	13° Π 29'42 -2°11'13	morning rise	3508 Sep 09 10:19	2° \mathbb{N} 34'24	
min. Earth dist.	3502 Dec 06 11:25	13° Π 29'55 8.22075 AU	retrograde	3508 Dec 21 19:20	10° \mathbb{N} 36'21	
direct	3503 Feb 11 07:38	10° Π 04'33	opposition	3509 Feb 26 11:23	7° \mathbb{N} 10'03	1°22'18
evening set	3503 May 24 06:54	17° Π 56'37	min. Earth dist.	3509 Feb 26 08:36	7° \mathbb{N} 10'37	8.15052 AU
			direct	3509 May 05 05:37	3° \mathbb{N} 41'05	
conjunction	3503 Jun 11 00:20	20° Π 12'11 -1°35'36	evening set	3509 Aug 19 03:08	11° \mathbb{N} 50'37	
minimum elong	3503 Jun 11 00:23	20° Π 12'12 1°35'37				
max. Earth dist.	3503 Jun 11 02:23	20° Π 12'50 10.18244 AU	conjunction	3509 Sep 06 02:55	14° \mathbb{N} 08'00	1°19'24
morning rise	3503 Jun 28 21:17	22° Π 28'54	minimum elong	3509 Sep 06 02:52	14° \mathbb{N} 07'59	1°19'23
	3503 Sep 15 12:18	0° \mathbb{B}	max. Earth dist.	3509 Sep 06 05:46	14° \mathbb{N} 08'55	10.18215 AU
retrograde	3503 Oct 13 08:07	0° \mathbb{B} 41'11	morning rise	3509 Sep 23 23:47	16° \mathbb{N} 24'28	
	3503 Nov 10 06:25	30° \mathbb{R} 11	retrograde	3510 Jan 04 15:03	24° \mathbb{N} 19'35	
opposition	3503 Dec 20 09:00	27° Π 11'57 -1°44'28	opposition	3510 Mar 12 07:02	20° \mathbb{N} 54'25	1°53'22
min. Earth dist.	3503 Dec 20 06:57	27° Π 12'22 8.15026 AU	min. Earth dist.	3510 Mar 12 04:32	20° \mathbb{N} 54'55	8.21879 AU
direct	3504 Feb 25 00:41	23° Π 45'45	direct	3510 May 19 11:56	17° \mathbb{N} 25'39	
	3504 May 23 14:43	0° \mathbb{B}	evening set	3510 Sep 02 16:58	25° \mathbb{N} 31'54	
evening set	3504 Jun 06 17:09	1° \mathbb{B} 44'27				
conjunction	3504 Jun 24 14:53	4° \mathbb{B} 02'10 -1°11'13	conjunction	3510 Sep 20 13:06	27° \mathbb{N} 47'07	1°41'54
minimum elong	3504 Jun 24 14:56	4° \mathbb{B} 02'11 1°11'14	minimum elong	3510 Sep 20 13:03	27° \mathbb{N} 47'06	1°41'54
max. Earth dist.	3504 Jun 24 17:31	4° \mathbb{B} 03'01 10.12217 AU	max. Earth dist.	3510 Sep 20 15:23	27° \mathbb{N} 47'51	10.25777 AU
morning rise	3504 Jul 12 15:23	6° \mathbb{B} 20'49	morning rise	3510 Oct 08 05:25	0° \mathbb{A} 01'11	
retrograde	3504 Oct 26 18:57	14° \mathbb{B} 35'09		3510 Oct 08 01:38	0° \mathbb{A}	
opposition	3505 Jan 02 08:31	11° \mathbb{B} 05'57 -1°11'13	retrograde	3511 Jan 18 03:33	7° \mathbb{A} 48'53	
min. Earth dist.	3505 Jan 02 06:06	11° \mathbb{B} 06'27 8.10059 AU	opposition	3511 Mar 25 22:50	4° \mathbb{A} 24'59	2°17'32
direct	3505 Mar 09 22:46	7° \mathbb{B} 38'48	min. Earth dist.	3511 Mar 25 21:09	4° \mathbb{A} 25'19	8.30128 AU
evening set	3505 Jun 21 10:19	15° \mathbb{B} 43'04	direct	3511 Jun 02 15:39	0° \mathbb{A} 56'43	
			evening set	3511 Sep 16 23:08	8° \mathbb{A} 58'17	
conjunction	3505 Jul 09 11:25	18° \mathbb{B} 02'23 -0°42'24	conjunction	3511 Oct 04 15:00	11° \mathbb{A} 11'02	1°58'28
minimum elong	3505 Jul 09 11:27	18° \mathbb{B} 02'23 0°42'25	minimum elong	3511 Oct 04 14:58	11° \mathbb{A} 11'01	1°58'28
max. Earth dist.	3505 Jul 09 14:16	18° \mathbb{B} 03'18 10.08454 AU	max. Earth dist.	3511 Oct 04 16:27	11° \mathbb{A} 11'29	10.34557 AU
morning rise	3505 Jul 27 14:22	20° \mathbb{B} 22'16	morning rise	3511 Oct 22 02:35	13° \mathbb{A} 22'30	
retrograde	3505 Nov 10 06:16	28° \mathbb{B} 36'27	retrograde	3512 Jan 31 09:00	21° \mathbb{A} 02'37	
opposition	3506 Jan 16 09:46	25° \mathbb{B} 07'37 -0°33'24	opposition	3512 Apr 07 10:22	17° \mathbb{A} 39'58	2°33'48
min. Earth dist.	3506 Jan 16 07:24	25° \mathbb{B} 08'07 8.07510 AU	min. Earth dist.	3512 Apr 07 09:48	17° \mathbb{A} 40'04	8.39405 AU
direct	3506 Mar 24 02:53	21° \mathbb{B} 39'39	direct	3512 Jun 15 15:03	14° \mathbb{A} 12'25	
evening set	3506 Jul 06 08:14	29° \mathbb{B} 48'05	evening set	3512 Sep 29 20:17	22° \mathbb{A} 08'01	
	3506 Jul 07 21:44	0° Ω				
conjunction	3506 Jul 24 11:21	2° Ω 08'10 -0°10'55	conjunction	3512 Oct 17 07:47	24° \mathbb{A} 18'12	2°08'30
minimum elong	3506 Jul 24 11:22	2° Ω 08'11 0°10'56	minimum elong	3512 Oct 17 07:46	24° \mathbb{A} 18'12	2°08'30
behind sun begin	3506 Jul 24 05:53	2° Ω 06'25	max. Earth dist.	3512 Oct 17 07:57	24° \mathbb{A} 18'15	10.44173 AU
behind sun end	3506 Jul 24 16:50	2° Ω 09'56	morning rise	3512 Nov 03 14:54	26° \mathbb{A} 27'04	
max. Earth dist.	3506 Jul 24 14:08	2° Ω 09'04 10.07198 AU		3512 Dec 04 15:22	0° \mathbb{M}	
morning rise	3506 Aug 11 15:13	4° Ω 28'29	retrograde	3513 Feb 12 08:17	3° \mathbb{M} 59'36	
retrograde	3506 Nov 24 14:45	12° Ω 40'22	opposition	3513 Apr 20 17:14	0° \mathbb{M} 38'07	2°41'47
asc. node	3506 Nov 29 18:03	12° Ω 38'54	min. Earth dist.	3513 Apr 20 17:18	0° \mathbb{M} 38'06	8.49290 AU
opposition	3507 Jan 30 11:39	9° Ω 12'12 0°06'32		3513 Apr 28 20:18	30° \mathbb{R} 11	
min. Earth dist.	3507 Jan 30 09:22	9° Ω 12'40 8.07540 AU	direct	3513 Jun 29 09:02	27° \mathbb{A} 11'28	
direct	3507 Apr 07 11:09	5° Ω 43'39		3513 Aug 27 20:48	0° \mathbb{M}	
evening set	3507 Jul 21 08:11	13° Ω 54'26	evening set	3513 Oct 13 07:54	5° \mathbb{M} 00'07	
	3507 Jul 29 21:25	15° Ω				
conjunction	3507 Aug 08 11:41	16° Ω 14'25 0°21'17	conjunction	3513 Oct 30 15:14	7° \mathbb{M} 07'49	2°11'52
minimum elong	3507 Aug 08 11:40	16° Ω 14'25 0°21'17	minimum elong	3513 Oct 30 15:14	7° \mathbb{M} 07'49	2°11'52
			max. Earth dist.	3513 Oct 30 14:31	7° \mathbb{M} 07'35	10.54182 AU
			morning rise	3513 Nov 16 18:17	9° \mathbb{M} 14'11	

	3514 Jan 12 06:24	15° \mathbb{M}		retrograde	3520 May 06 15:01	27° \mathbb{Z} 48'06	
retrograde	3514 Feb 25 00:22	16° \mathbb{M} 39'25		opposition	3520 Jul 15 20:21	24° \mathbb{Z} 29'54	0°35'11
	3514 Apr 11 01:43	15° $\mathbb{R}\mathbb{M}$		min. Earth dist.	3520 Jul 15 21:00	24° \mathbb{Z} 29'47	8.99801 AU
opposition	3514 May 03 19:13	13° \mathbb{M} 18'59	2°41'39	direct	3520 Sep 24 18:35	21° \mathbb{Z} 10'01	
min. Earth dist.	3514 May 03 19:19	13° \mathbb{M} 18'58	8.59319 AU	evening set	3521 Jan 04 08:33	28° \mathbb{Z} 15'15	
direct	3514 Jul 12 21:37	9° \mathbb{M} 53'20			3521 Jan 19 05:01	0° \approx	
	3514 Oct 04 00:25	15° \mathbb{M}					
evening set	3514 Oct 26 09:40	17° \mathbb{M} 34'28		conjunction	3521 Jan 21 01:08	0° \approx 13'04	0°15'44
				minimum elong	3521 Jan 21 01:09	0° \approx 13'04	0°15'45
conjunction	3514 Nov 12 13:24	19° \mathbb{M} 39'51	2°08'49	behind sun begin	3521 Jan 20 23:21	0° \approx 12'33	
minimum elong	3514 Nov 12 13:25	19° \mathbb{M} 39'51	2°08'50	behind sun end	3521 Jan 21 02:56	0° \approx 13'35	
max. Earth dist.	3514 Nov 12 12:39	19° \mathbb{M} 39'37	10.64118 AU	max. Earth dist.	3521 Jan 20 23:58	0° \approx 12'43	11.00500 AU
morning rise	3514 Nov 29 12:57	21° \mathbb{M} 43'58		morning rise	3521 Feb 06 16:57	2° \approx 10'42	
retrograde	3515 Mar 09 11:16	29° \mathbb{M} 02'33		retrograde	3521 May 18 14:09	9° \approx 13'31	
opposition	3515 May 16 16:33	25° \mathbb{M} 42'58	2°33'55	opposition	3521 Jul 28 01:12	5° \approx 55'01	0°03'09
min. Earth dist.	3515 May 16 16:19	25° \mathbb{M} 43'00	8.69031 AU	min. Earth dist.	3521 Jul 28 02:17	5° \approx 54'49	9.00709 AU
direct	3515 Jul 26 04:22	22° \mathbb{M} 18'23		desc. node	3521 Sep 02 19:05	3° \approx 29'38	
evening set	3515 Nov 08 01:57	29° \mathbb{M} 51'50		direct	3521 Oct 06 18:35	2° \approx 35'44	
	3515 Nov 09 05:23	0° \mathbb{Z}		evening set	3522 Jan 15 19:29	9° \approx 38'51	
conjunction	3515 Nov 25 02:42	1° \mathbb{Z} 55'09	1°59'54	conjunction	3522 Feb 01 11:26	11° \approx 36'32	-0°10'40
minimum elong	3515 Nov 25 02:44	1° \mathbb{Z} 55'10	1°59'54	minimum elong	3522 Feb 01 11:25	11° \approx 36'32	0°10'39
max. Earth dist.	3515 Nov 25 02:30	1° \mathbb{Z} 55'05	10.73523 AU	behind sun begin	3522 Feb 01 05:58	11° \approx 34'56	
morning rise	3515 Dec 11 23:24	3° \mathbb{Z} 57'18		behind sun end	3522 Feb 01 16:52	11° \approx 38'08	
retrograde	3516 Mar 20 18:52	11° \mathbb{Z} 10'07		max. Earth dist.	3522 Feb 01 09:23	11° \approx 35'57	11.00417 AU
opposition	3516 May 28 09:25	7° \mathbb{Z} 51'12	2°19'26	morning rise	3522 Feb 18 03:39	13° \approx 34'18	
min. Earth dist.	3516 May 28 09:40	7° \mathbb{Z} 51'09	8.77986 AU		3522 Mar 02 17:52	15° \approx	
direct	3516 Aug 07 03:14	4° \mathbb{Z} 27'42		retrograde	3522 May 30 13:29	20° \approx 39'27	
evening set	3516 Nov 19 10:01	11° \mathbb{Z} 53'44		opposition	3522 Aug 09 06:21	17° \approx 20'26	-0°29'02
				min. Earth dist.	3522 Aug 09 07:57	17° \approx 20'08	8.99631 AU
conjunction	3516 Dec 06 08:11	13° \mathbb{Z} 55'18	1°45'50		3522 Sep 13 09:13	15° $\mathbb{R}\approx$	
minimum elong	3516 Dec 06 08:13	13° \mathbb{Z} 55'19	1°45'49	direct	3522 Oct 18 16:43	14° \approx 01'35	
max. Earth dist.	3516 Dec 06 07:33	13° \mathbb{Z} 55'06	10.81977 AU		3522 Nov 22 07:18	15° \approx	
morning rise	3516 Dec 23 02:48	15° \mathbb{Z} 55'51		evening set	3523 Jan 27 06:56	21° \approx 04'00	
retrograde	3517 Apr 01 20:33	23° \mathbb{Z} 03'54					
opposition	3517 Jun 09 22:17	19° \mathbb{Z} 45'30	1°59'13	conjunction	3523 Feb 12 22:43	23° \approx 01'53	-0°36'36
min. Earth dist.	3517 Jun 09 23:23	19° \mathbb{Z} 45'17	8.85813 AU	minimum elong	3523 Feb 12 22:42	23° \approx 01'53	0°36'36
direct	3517 Aug 19 19:21	16° \mathbb{Z} 23'00		max. Earth dist.	3523 Feb 12 20:44	23° \approx 01'18	10.98346 AU
evening set	3517 Dec 01 10:55	23° \mathbb{Z} 42'18		morning rise	3523 Mar 01 15:37	25° \approx 00'06	
					3523 Apr 20 06:41	0° \mathbb{H}	
conjunction	3517 Dec 18 06:56	25° \mathbb{Z} 42'25	1°27'28	retrograde	3523 Jun 11 16:38	2° \mathbb{H} 09'00	
minimum elong	3517 Dec 18 06:58	25° \mathbb{Z} 42'26	1°27'27		3523 Aug 05 06:46	30° $\mathbb{R}\approx$	
max. Earth dist.	3517 Dec 18 05:20	25° \mathbb{Z} 41'56	10.89147 AU	opposition	3523 Aug 21 12:23	28° \approx 49'15	-1°00'13
morning rise	3518 Jan 04 00:13	27° \mathbb{Z} 41'44		min. Earth dist.	3523 Aug 21 13:35	28° \approx 49'01	8.96600 AU
	3518 Jan 24 11:46	0° \mathbb{Z}		direct	3523 Oct 30 16:02	25° \approx 30'37	
retrograde	3518 Apr 13 19:10	4° \mathbb{Z} 46'20			3524 Jan 15 19:08	0° \mathbb{H}	
opposition	3518 Jun 22 08:00	1° \mathbb{Z} 28'12	1°34'21	evening set	3524 Feb 07 20:18	2° \mathbb{H} 33'45	
min. Earth dist.	3518 Jun 22 09:28	1° \mathbb{Z} 27'56	8.92211 AU				
	3518 Jul 12 16:33	30° $\mathbb{R}\mathbb{Z}$		conjunction	3524 Feb 24 12:25	4° \mathbb{H} 32'12	-1°01'15
direct	3518 Sep 01 08:46	28° \mathbb{Z} 06'39		minimum elong	3524 Feb 24 12:23	4° \mathbb{H} 32'11	1°01'16
	3518 Oct 20 10:51	0° \mathbb{Z}		max. Earth dist.	3524 Feb 24 11:17	4° \mathbb{H} 31'51	10.94354 AU
evening set	3518 Dec 13 05:45	5° \mathbb{Z} 20'06		morning rise	3524 Mar 12 06:10	6° \mathbb{H} 31'09	
				retrograde	3524 Jun 23 01:05	13° \mathbb{H} 45'05	
conjunction	3518 Dec 30 00:12	7° \mathbb{Z} 19'07	1°05'42	opposition	3524 Sep 01 20:32	10° \mathbb{H} 24'28	-1°29'15
minimum elong	3518 Dec 30 00:14	7° \mathbb{Z} 19'07	1°05'42	min. Earth dist.	3524 Sep 01 20:59	10° \mathbb{H} 24'23	8.91719 AU
max. Earth dist.	3518 Dec 29 22:20	7° \mathbb{Z} 18'33	10.94759 AU	direct	3524 Nov 10 14:16	7° \mathbb{H} 05'53	
morning rise	3519 Jan 15 16:39	9° \mathbb{Z} 17'31		evening set	3525 Feb 18 13:06	14° \mathbb{H} 11'05	
retrograde	3519 Apr 25 17:31	16° \mathbb{Z} 20'06					
opposition	3519 Jul 04 15:04	13° \mathbb{Z} 02'01	1°05'58	conjunction	3525 Mar 07 05:48	16° \mathbb{H} 10'23	-1°23'38
min. Earth dist.	3519 Jul 04 15:58	13° \mathbb{Z} 01'51	8.96934 AU	minimum elong	3525 Mar 07 05:46	16° \mathbb{H} 10'22	1°23'39
direct	3519 Sep 13 16:07	9° \mathbb{Z} 41'22		max. Earth dist.	3525 Mar 07 05:05	16° \mathbb{H} 10'10	10.88589 AU
evening set	3519 Dec 24 20:26	16° \mathbb{Z} 50'03		morning rise	3525 Mar 24 00:51	18° \mathbb{H} 10'26	
				retrograde	3525 Jul 05 13:38	25° \mathbb{H} 30'32	
conjunction	3520 Jan 10 13:52	18° \mathbb{Z} 48'18	0°41'29	opposition	3525 Sep 14 07:39	22° \mathbb{H} 08'54	-1°54'59
minimum elong	3520 Jan 10 13:53	18° \mathbb{Z} 48'18	0°41'29	min. Earth dist.	3525 Sep 14 07:53	22° \mathbb{H} 08'51	8.85177 AU
max. Earth dist.	3520 Jan 10 12:43	18° \mathbb{Z} 47'58	10.98593 AU	direct	3525 Nov 22 14:24	18° \mathbb{H} 50'09	
morning rise	3520 Jan 27 05:46	20° \mathbb{Z} 46'10		evening set	3526 Mar 02 10:47	25° \mathbb{H} 58'44	

conjunction	3526 Mar 19 04:31	27° X 59'14	-1°42'46	minimum elong	3532 Jun 03 22:39	14° II 19'19	1°44'34
minimum elong	3526 Mar 19 04:29	27° X 59'14	1°42'47	max. Earth dist.	3532 Jun 03 22:04	14° II 19'07	10.24272 AU
max. Earth dist.	3526 Mar 19 03:14	27° X 58'51	10.81288 AU	morning rise	3532 Jun 21 17:35	16° II 34'35	
	3526 Apr 04 23:05	0° Y		retrograde	3532 Oct 06 05:45	24° II 43'48	
morning rise	3526 Apr 05 01:31	0° Y 00'43		opposition	3532 Dec 13 12:17	21° II 15'16	-1°57'08
retrograde	3526 Jul 18 08:18	7° Y 27'52		min. Earth dist.	3532 Dec 13 12:15	21° II 15'17	8.20455 AU
opposition	3526 Sep 26 22:17	4° Y 05'08	-2°16'15	direct	3533 Feb 18 05:39	17° II 50'01	
min. Earth dist.	3526 Sep 26 22:57	4° Y 05'00	8.77239 AU	evening set	3533 May 31 13:10	25° II 44'25	
direct	3526 Dec 04 17:51	0° Y 45'58					
evening set	3527 Mar 14 14:20	7° Y 59'08		conjunction	3533 Jun 18 08:46	28° II 00'50	-1°22'44
				minimum elong	3533 Jun 18 08:49	28° II 00'51	1°22'44
conjunction	3527 Mar 31 09:55	10° Y 01'12	-1°57'44	max. Earth dist.	3533 Jun 18 09:11	28° II 00'58	10.16961 AU
minimum elong	3527 Mar 31 09:53	10° Y 01'11	1°57'44		3533 Jul 03 21:38	0° Z	
max. Earth dist.	3527 Mar 31 08:41	10° Y 00'49	10.72737 AU	morning rise	3533 Jul 06 07:43	0° Z 18'18	
morning rise	3527 Apr 17 09:22	12° Y 04'26		retrograde	3533 Oct 20 13:45	8° Z 30'36	
retrograde	3527 Jul 31 07:42	19° Y 39'13		opposition	3533 Dec 27 09:24	5° Z 01'45	-1°26'48
opposition	3527 Oct 09 16:59	16° Y 15'20	-2°31'54	min. Earth dist.	3533 Dec 27 08:43	5° Z 01'53	8.14067 AU
min. Earth dist.	3527 Oct 09 17:42	16° Y 15'12	8.68201 AU	direct	3534 Mar 04 01:13	1° Z 35'18	
direct	3527 Dec 17 01:24	12° Y 55'32		evening set	3534 Jun 15 02:10	9° Z 35'52	
evening set	3528 Mar 26 00:54	20° Y 14'19					
				conjunction	3534 Jul 03 01:47	11° Z 54'11	-0°55'52
conjunction	3528 Apr 11 23:04	22° Y 18'17	-2°07'39	minimum elong	3534 Jul 03 01:50	11° Z 54'12	0°55'53
minimum elong	3528 Apr 11 23:03	22° Y 18'17	2°07'38	max. Earth dist.	3534 Jul 03 03:11	11° Z 54'38	10.11651 AU
max. Earth dist.	3528 Apr 11 22:44	22° Y 18'11	10.63251 AU	morning rise	3534 Jul 21 03:40	14° Z 13'17	
morning rise	3528 Apr 29 01:22	24° Y 23'33		retrograde	3534 Nov 03 23:30	22° Z 26'33	
	3528 Jun 22 08:11	0° Z		opposition	3535 Jan 10 08:44	18° Z 57'41	-0°51'00
retrograde	3528 Aug 12 13:56	2° Z 06'17		min. Earth dist.	3535 Jan 10 07:16	18° Z 57'59	8.09868 AU
	3528 Oct 04 06:14	30° R Y		direct	3535 Mar 18 02:01	15° Z 30'09	
opposition	3528 Oct 21 16:08	28° Y 41'12	-2°40'52	evening set	3535 Jun 29 20:51	23° Z 35'40	
min. Earth dist.	3528 Oct 21 16:15	28° Y 41'11	8.58402 AU				
direct	3528 Dec 28 15:08	25° Y 20'35		conjunction	3535 Jul 17 23:14	25° Z 55'13	-0°25'31
	3529 Mar 14 22:34	0° Z		minimum elong	3535 Jul 17 23:15	25° Z 55'14	0°25'31
evening set	3529 Apr 07 19:22	2° Z 45'48		max. Earth dist.	3535 Jul 18 01:23	25° Z 55'55	10.08672 AU
				morning rise	3535 Aug 05 02:39	28° Z 15'10	
conjunction	3529 Apr 24 20:55	4° Z 52'01	-2°11'43		3535 Aug 19 05:16	0° Z	
minimum elong	3529 Apr 24 20:55	4° Z 52'01	2°11'42	retrograde	3535 Nov 18 08:15	6° Z 27'21	
max. Earth dist.	3529 Apr 24 21:09	4° Z 52'05	10.53200 AU	opposition	3536 Jan 24 09:21	2° Z 58'46	-0°11'54
morning rise	3529 May 12 02:43	6° Z 59'36		min. Earth dist.	3536 Jan 24 07:18	2° Z 59'11	8.08120 AU
retrograde	3529 Aug 26 04:09	14° Z 50'10			3536 Mar 08 02:05	30° R Z	
opposition	3529 Nov 03 20:05	11° Z 23'58	-2°42'17	direct	3536 Mar 31 07:04	29° Z 30'21	
min. Earth dist.	3529 Nov 03 19:42	11° Z 24'03	8.48218 AU		3536 Apr 23 10:26	0° Z	
direct	3530 Jan 10 08:41	8° Z 02'21		asc. node	3536 May 16 06:05	1° Z 22'44	
	3530 Apr 16 04:37	15° Z		evening set	3536 Jul 13 18:44	7° Z 39'13	
evening set	3530 Apr 20 22:26	15° Z 34'40					
				conjunction	3536 Jul 31 22:20	9° Z 59'11	0°06'32
conjunction	3530 May 08 03:59	17° Z 43'23	-2°09'22	minimum elong	3536 Jul 31 22:20	9° Z 59'11	0°06'32
minimum elong	3530 May 08 04:00	17° Z 43'23	2°09'21	behind sun begin	3536 Jul 31 15:27	9° Z 56'58	
max. Earth dist.	3530 May 08 03:48	17° Z 43'19	10.42987 AU	behind sun end	3536 Aug 01 05:14	10° Z 01'23	
morning rise	3530 May 25 13:58	19° Z 53'32		max. Earth dist.	3536 Aug 01 00:55	9° Z 59'59	10.08204 AU
retrograde	3530 Sep 09 00:57	27° Z 51'27		morning rise	3536 Aug 19 01:45	12° Z 19'07	
opposition	3530 Nov 17 04:58	24° Z 24'17	-2°35'31		3536 Sep 10 02:19	15° Z	
min. Earth dist.	3530 Nov 17 04:42	24° Z 24'20	8.38095 AU	retrograde	3536 Dec 01 14:26	20° Z 28'17	
direct	3531 Jan 23 07:36	21° Z 01'31		opposition	3537 Feb 06 09:55	17° Z 00'16	0°27'56
evening set	3531 May 04 10:37	28° Z 41'24		min. Earth dist.	3537 Feb 06 07:53	17° Z 00'41	8.08922 AU
	3531 May 14 21:45	0° II			3537 Mar 04 09:34	15° R Z	
				direct	3537 Apr 14 14:12	13° Z 31'12	
conjunction	3531 May 21 20:40	0° II 52'46	-2°00'17		3537 May 25 10:04	15° Z	
minimum elong	3531 May 21 20:42	0° II 52'46	2°00'17	evening set	3537 Jul 28 17:42	21° Z 41'40	
max. Earth dist.	3531 May 21 20:01	0° II 52'33	10.33135 AU				
morning rise	3531 Jun 08 11:10	3° II 05'32		conjunction	3537 Aug 15 20:50	24° Z 01'10	0°38'02
retrograde	3531 Sep 23 01:09	11° II 09'50		minimum elong	3537 Aug 15 20:48	24° Z 01'09	0°38'01
opposition	3531 Nov 30 18:28	7° II 41'53	-2°20'22	max. Earth dist.	3537 Aug 15 23:01	24° Z 01'52	10.10253 AU
min. Earth dist.	3531 Nov 30 18:29	7° II 41'53	8.28636 AU	morning rise	3537 Sep 02 22:38	26° Z 20'15	
direct	3532 Feb 05 15:32	4° II 17'53			3537 Oct 03 19:33	0° II	
evening set	3532 May 17 07:43	12° II 05'17		retrograde	3537 Dec 15 16:53	4° II 24'38	
				opposition	3538 Feb 20 09:02	0° II 57'26	1°05'54
conjunction	3532 Jun 03 22:35	14° II 19'18	-1°44'33	min. Earth dist.	3538 Feb 20 07:33	0° II 57'44	8.12200 AU

	3538 Mar 04 04:34	30° \mathbb{R} 8 \mathbb{Q}		direct	3544 Jul 19 07:09	16° \mathbb{M} 42'27	
direct	3538 Apr 28 22:05	27° \mathbb{Q} 28'01		evening set	3544 Nov 01 12:14	24° \mathbb{M} 19'26	
	3538 Jun 22 10:51	0° \mathbb{M}					
evening set	3538 Aug 12 14:43	5° \mathbb{M} 38'11		conjunction	3544 Nov 18 14:17	26° \mathbb{M} 23'40	2°04'44
				minimum elong	3544 Nov 18 14:18	26° \mathbb{M} 23'40	2°04'45
conjunction	3538 Aug 30 15:48	7° \mathbb{M} 56'25	1°07'07	max. Earth dist.	3544 Nov 18 13:58	26° \mathbb{M} 23'34	10.69225 AU
minimum elong	3538 Aug 30 15:45	7° \mathbb{M} 56'24	1°07'06	morning rise	3544 Dec 05 12:23	28° \mathbb{M} 26'42	
max. Earth dist.	3538 Aug 30 17:19	7° \mathbb{M} 56'54	10.14670 AU		3544 Dec 18 20:01	0° \mathbb{Z}	
morning rise	3538 Sep 17 14:35	10° \mathbb{M} 13'54		retrograde	3545 Mar 15 08:25	5° \mathbb{Z} 42'00	
retrograde	3538 Dec 29 14:14	18° \mathbb{M} 12'10		opposition	3545 May 22 18:56	2° \mathbb{Z} 22'50	2°26'59
opposition	3539 Mar 06 05:50	14° \mathbb{M} 45'59	1°39'37	min. Earth dist.	3545 May 22 19:04	2° \mathbb{Z} 22'48	8.74083 AU
min. Earth dist.	3539 Mar 06 04:36	14° \mathbb{M} 46'14	8.17732 AU		3545 Jun 26 10:44	30° \mathbb{R} \mathbb{M}	
direct	3539 May 13 05:45	11° \mathbb{M} 16'33		direct	3545 Aug 01 09:32	28° \mathbb{M} 58'53	
evening set	3539 Aug 27 06:57	19° \mathbb{M} 24'27			3545 Sep 05 21:05	0° \mathbb{Z}	
				evening set	3545 Nov 14 00:09	6° \mathbb{Z} 28'22	
conjunction	3539 Sep 14 04:47	21° \mathbb{M} 40'46	1°32'02				
minimum elong	3539 Sep 14 04:44	21° \mathbb{M} 40'45	1°32'01	conjunction	3545 Nov 30 23:23	8° \mathbb{Z} 30'41	1°53'00
max. Earth dist.	3539 Sep 14 05:57	21° \mathbb{M} 41'09	10.21171 AU	minimum elong	3545 Nov 30 23:25	8° \mathbb{Z} 30'42	1°53'00
morning rise	3539 Oct 01 23:31	23° \mathbb{M} 56'05		max. Earth dist.	3545 Nov 30 22:49	8° \mathbb{Z} 30'31	10.78486 AU
	3539 Nov 28 08:30	0° \mathbb{Z}		morning rise	3545 Dec 17 19:04	10° \mathbb{Z} 31'57	
retrograde	3540 Jan 12 04:02	1° \mathbb{Z} 47'20		retrograde	3546 Mar 27 12:23	17° \mathbb{Z} 42'03	
	3540 Feb 26 23:25	30° \mathbb{R} \mathbb{M}		opposition	3546 Jun 04 09:41	14° \mathbb{Z} 23'38	2°09'19
opposition	3540 Mar 18 23:10	28° \mathbb{M} 22'18	2°07'08	min. Earth dist.	3546 Jun 04 09:28	14° \mathbb{Z} 23'41	8.82790 AU
min. Earth dist.	3540 Mar 18 21:49	28° \mathbb{M} 22'35	8.25165 AU	direct	3546 Aug 14 05:47	11° \mathbb{Z} 00'57	
direct	3540 May 26 12:00	24° \mathbb{M} 53'12		evening set	3546 Nov 26 04:23	18° \mathbb{Z} 23'22	
	3540 Aug 15 17:40	0° \mathbb{Z}					
evening set	3540 Sep 09 16:29	2° \mathbb{Z} 57'06		conjunction	3546 Dec 13 01:28	20° \mathbb{Z} 24'06	1°36'32
				minimum elong	3546 Dec 13 01:30	20° \mathbb{Z} 24'07	1°36'32
conjunction	3540 Sep 27 10:24	5° \mathbb{Z} 11'05	1°51'28	max. Earth dist.	3546 Dec 13 01:22	20° \mathbb{Z} 24'04	10.86599 AU
minimum elong	3540 Sep 27 10:22	5° \mathbb{Z} 11'04	1°51'27	morning rise	3546 Dec 29 19:18	22° \mathbb{Z} 23'56	
max. Earth dist.	3540 Sep 27 11:29	5° \mathbb{Z} 11'26	10.29365 AU	retrograde	3547 Apr 08 14:47	29° \mathbb{Z} 30'01	
morning rise	3540 Oct 15 00:30	7° \mathbb{Z} 23'52		opposition	3547 Jun 16 20:57	26° \mathbb{Z} 12'09	1°46'29
retrograde	3541 Jan 24 12:03	15° \mathbb{Z} 07'34		min. Earth dist.	3547 Jun 16 20:52	26° \mathbb{Z} 12'10	8.90174 AU
opposition	3541 Apr 01 12:13	11° \mathbb{Z} 43'45	2°27'11	direct	3547 Aug 26 20:30	22° \mathbb{Z} 50'37	
min. Earth dist.	3541 Apr 01 10:30	11° \mathbb{Z} 44'05	8.34054 AU		3547 Dec 07 03:13	0° \mathbb{Z}	
direct	3541 Jun 09 13:10	8° \mathbb{Z} 15'17		evening set	3547 Dec 08 02:14	0° \mathbb{Z} 06'43	
evening set	3541 Sep 23 17:41	16° \mathbb{Z} 13'43					
				conjunction	3547 Dec 24 21:33	2° \mathbb{Z} 06'11	1°16'15
conjunction	3541 Oct 11 07:23	18° \mathbb{Z} 25'10	2°04'35	minimum elong	3547 Dec 24 21:35	2° \mathbb{Z} 06'12	1°16'14
minimum elong	3541 Oct 11 07:21	18° \mathbb{Z} 25'10	2°04'35	max. Earth dist.	3547 Dec 24 21:15	2° \mathbb{Z} 06'06	10.93225 AU
max. Earth dist.	3541 Oct 11 08:48	18° \mathbb{Z} 25'37	10.38776 AU	morning rise	3548 Jan 10 14:13	4° \mathbb{Z} 04'56	
morning rise	3541 Oct 28 16:41	20° \mathbb{Z} 35'17		retrograde	3548 Apr 19 13:45	11° \mathbb{Z} 08'15	
retrograde	3542 Feb 06 14:54	28° \mathbb{Z} 11'17		opposition	3548 Jun 28 05:27	7° \mathbb{Z} 50'42	1°19'36
opposition	3542 Apr 14 20:55	24° \mathbb{Z} 48'44	2°39'03	min. Earth dist.	3548 Jun 28 06:21	7° \mathbb{Z} 50'32	8.95920 AU
min. Earth dist.	3542 Apr 14 19:19	24° \mathbb{Z} 49'03	8.43898 AU	direct	3548 Sep 07 04:33	4° \mathbb{Z} 30'11	
direct	3542 Jun 23 08:26	21° \mathbb{Z} 21'12		evening set	3548 Dec 18 19:15	11° \mathbb{Z} 40'59	
evening set	3542 Oct 07 09:24	29° \mathbb{Z} 13'01					
	3542 Oct 13 18:42	0° \mathbb{M}		conjunction	3549 Jan 04 13:02	13° \mathbb{Z} 39'30	0°53'04
				minimum elong	3549 Jan 04 13:04	13° \mathbb{Z} 39'31	0°53'04
conjunction	3542 Oct 24 18:52	1° \mathbb{M} 21'54	2°11'04	max. Earth dist.	3549 Jan 04 11:20	13° \mathbb{Z} 39'00	10.98071 AU
minimum elong	3542 Oct 24 18:51	1° \mathbb{M} 21'54	2°11'05	morning rise	3549 Jan 21 05:08	15° \mathbb{Z} 37'32	
max. Earth dist.	3542 Oct 24 20:22	1° \mathbb{M} 22'23	10.48893 AU	retrograde	3549 May 01 10:11	22° \mathbb{Z} 39'32	
morning rise	3542 Nov 10 23:42	3° \mathbb{M} 29'26		opposition	3549 Jul 10 11:52	19° \mathbb{Z} 22'00	0°49'49
retrograde	3543 Feb 19 10:58	10° \mathbb{M} 57'56		min. Earth dist.	3549 Jul 10 13:35	19° \mathbb{Z} 21'41	8.99768 AU
opposition	3543 Apr 28 00:57	7° \mathbb{M} 36'38	2°42'41	direct	3549 Sep 19 10:02	16° \mathbb{Z} 02'18	
min. Earth dist.	3543 Apr 28 00:01	7° \mathbb{M} 36'49	8.54183 AU	evening set	3549 Dec 30 08:47	23° \mathbb{Z} 09'03	
direct	3543 Jul 06 22:11	4° \mathbb{M} 10'12					
evening set	3543 Oct 20 15:31	11° \mathbb{M} 54'44		conjunction	3550 Jan 16 01:34	25° \mathbb{Z} 06'58	0°27'55
				minimum elong	3550 Jan 16 01:35	25° \mathbb{Z} 06'58	0°27'56
conjunction	3543 Nov 06 21:02	14° \mathbb{M} 01'11	2°10'59	max. Earth dist.	3550 Jan 15 23:11	25° \mathbb{Z} 06'16	11.00903 AU
minimum elong	3543 Nov 06 21:02	14° \mathbb{M} 01'11	2°11'00	morning rise	3550 Feb 01 17:28	27° \mathbb{Z} 04'37	
max. Earth dist.	3543 Nov 06 21:48	14° \mathbb{M} 01'25	10.59207 AU		3550 Feb 28 10:55	0° \mathbb{Z}	
	3543 Nov 14 20:15	15° \mathbb{M}		retrograde	3550 May 13 09:12	4° \mathbb{Z} 06'50	
morning rise	3543 Nov 23 22:07	16° \mathbb{M} 06'20		opposition	3550 Jul 22 17:11	0° \mathbb{Z} 49'03	0°18'14
retrograde	3544 Mar 02 23:55	23° \mathbb{M} 27'49		min. Earth dist.	3550 Jul 22 18:53	0° \mathbb{Z} 48'44	9.01511 AU
opposition	3544 May 10 00:08	20° \mathbb{M} 07'41	2°38'25		3550 Aug 02 21:28	30° \mathbb{R} \mathbb{Z}	
min. Earth dist.	3544 May 10 00:04	20° \mathbb{M} 07'42	8.64406 AU	direct	3550 Oct 01 13:10	27° \mathbb{Z} 30'00	

	3550 Nov 27 06:25	0°♊	retrograde	3556 Jul 24 16:50	14°♏16'00	
evening set	3551 Jan 10 20:18	4°♊34'01	opposition	3556 Oct 03 03:50	10°♏52'11	-2°25'28
			min. Earth dist.	3556 Oct 03 04:39	10°♏52'01	8.70857 AU
conjunction	3551 Jan 27 12:34	6°♊31'43 0°01'47	direct	3556 Dec 10 17:40	7°♏32'11	
minimum elong	3551 Jan 27 12:34	6°♊31'43 0°01'47	evening set	3557 Mar 20 15:40	14°♏48'50	
behind sun begin	3551 Jan 27 05:35	6°♊29'40				
behind sun end	3551 Jan 27 19:32	6°♊33'45	conjunction	3557 Apr 06 12:34	16°♏52'04	-2°03'45
max. Earth dist.	3551 Jan 27 10:26	6°♊31'08 11.01557 AU	minimum elong	3557 Apr 06 12:32	16°♏52'04	2°03'44
morning rise	3551 Feb 13 04:31	8°♊29'21	max. Earth dist.	3557 Apr 06 10:53	16°♏51'34	10.65895 AU
desc. node	3551 Feb 21 04:37	9°♊24'16	morning rise	3557 Apr 23 13:28	18°♏56'33	
	3551 Apr 29 06:03	15°♊	retrograde	3557 Aug 06 20:08	26°♏36'15	
retrograde	3551 May 25 08:48	15°♊33'20	opposition	3557 Oct 16 01:18	23°♏11'07	-2°37'42
	3551 Jun 20 20:49	15°♊	min. Earth dist.	3557 Oct 16 02:06	23°♏10'57	8.60996 AU
opposition	3551 Aug 03 22:17	12°♊15'03 -0°14'01	direct	3557 Dec 23 04:33	19°♏50'15	
min. Earth dist.	3551 Aug 03 23:45	12°♊14'47 9.01063 AU	evening set	3558 Apr 02 06:35	27°♏13'06	
direct	3551 Oct 13 12:04	8°♊56'27				
	3552 Jan 13 16:43	15°♊	conjunction	3558 Apr 19 06:26	29°♏18'28	-2°10'38
evening set	3552 Jan 22 07:50	15°♊59'15	minimum elong	3558 Apr 19 06:25	29°♏18'28	2°10'37
			max. Earth dist.	3558 Apr 19 04:45	29°♏17'57	10.55760 AU
conjunction	3552 Feb 07 23:46	17°♊57'01 -0°24'33		3558 Apr 24 20:42	0°♏	
minimum elong	3552 Feb 07 23:45	17°♊57'01 0°24'33	morning rise	3558 May 06 10:45	1°♏25'12	
max. Earth dist.	3552 Feb 07 21:25	17°♊56'19 11.00031 AU	retrograde	3558 Aug 20 06:29	9°♏12'56	
morning rise	3552 Feb 24 16:08	19°♊54'58	opposition	3558 Oct 29 03:20	5°♏46'34	-2°42'45
retrograde	3552 Jun 05 11:38	27°♊02'10	min. Earth dist.	3558 Oct 29 04:15	5°♏46'23	8.50723 AU
opposition	3552 Aug 15 04:08	23°♊43'09 -0°45'49	direct	3559 Jan 04 20:26	2°♏24'42	
min. Earth dist.	3552 Aug 15 06:08	23°♊42'47 8.98498 AU	evening set	3559 Apr 15 05:50	9°♏54'29	
direct	3552 Oct 24 10:45	20°♊24'44				
evening set	3553 Feb 01 20:41	27°♊27'41	conjunction	3559 May 02 09:29	12°♏02'16	-2°11'18
			minimum elong	3559 May 02 09:30	12°♏02'16	2°11'18
conjunction	3553 Feb 18 12:31	29°♊25'53 -0°49'57	max. Earth dist.	3559 May 02 08:47	12°♏02'03	10.45449 AU
minimum elong	3553 Feb 18 12:29	29°♊25'52 0°49'57	morning rise	3559 May 19 17:41	14°♏11'29	
max. Earth dist.	3553 Feb 18 09:15	29°♊24'54 10.96456 AU		3559 May 26 09:48	15°♏	
	3553 Feb 23 07:13	0°♋	retrograde	3559 Sep 02 23:17	22°♏06'53	
morning rise	3553 Mar 07 05:48	1°♋24'30	opposition	3559 Nov 11 10:19	18°♏39'26	-2°39'49
retrograde	3553 Jun 17 17:14	8°♋36'13	min. Earth dist.	3559 Nov 11 10:33	18°♏39'23	8.40505 AU
opposition	3553 Aug 27 11:51	5°♋16'14 -1°16'01	direct	3560 Jan 17 18:23	15°♏16'29	
min. Earth dist.	3553 Aug 27 14:21	5°♋15'46 8.93974 AU	evening set	3560 Apr 27 13:51	22°♏53'38	
direct	3553 Nov 05 08:50	1°♋57'44				
evening set	3554 Feb 13 12:01	9°♋02'12	conjunction	3560 May 14 21:55	25°♏04'01	-2°05'20
			minimum elong	3560 May 14 21:57	25°♏04'02	2°05'20
conjunction	3554 Mar 02 04:16	11°♋01'08 -1°13'32	max. Earth dist.	3560 May 14 22:29	25°♏04'12	10.35456 AU
minimum elong	3554 Mar 02 04:14	11°♋01'07 1°13'32	morning rise	3560 Jun 01 10:21	27°♏15'49	
max. Earth dist.	3554 Mar 02 01:02	11°♋00'09 10.91005 AU		3560 Jun 24 12:54	0°♐	
morning rise	3554 Mar 18 22:49	13°♋00'44	retrograde	3560 Sep 15 21:44	5°♐18'07	
retrograde	3554 Jun 30 02:07	20°♋18'13	opposition	3560 Nov 23 22:07	1°♐49'46	-2°28'29
opposition	3554 Sep 08 21:54	16°♋57'01 -1°43'29	min. Earth dist.	3560 Nov 23 21:18	1°♐49'56	8.30858 AU
min. Earth dist.	3554 Sep 09 00:12	16°♋56'35 8.87687 AU		3560 Dec 18 01:26	30°♐	
direct	3554 Nov 17 10:14	13°♋38'13	direct	3561 Jan 29 23:09	28°♏25'43	
evening set	3555 Feb 25 07:30	20°♋45'32		3561 Mar 12 21:13	0°♐	
			evening set	3561 May 11 07:05	6°♐10'19	
conjunction	3555 Mar 14 00:48	22°♋45'34 -1°34'19				
minimum elong	3555 Mar 14 00:46	22°♋45'33 1°34'19	conjunction	3561 May 28 19:57	8°♐23'22	-1°52'37
max. Earth dist.	3555 Mar 13 22:43	22°♋44'56 10.83896 AU	minimum elong	3561 May 28 20:00	8°♐23'23	1°52'37
morning rise	3555 Mar 30 20:51	24°♋46'27	max. Earth dist.	3561 May 28 21:24	8°♐23'50	10.26317 AU
	3555 May 21 02:32	0°♑	morning rise	3561 Jun 15 12:50	10°♐37'44	
retrograde	3555 Jul 12 18:32	2°♑10'40	retrograde	3561 Sep 30 02:17	18°♐45'37	
	3555 Sep 05 06:25	30°♐	opposition	3561 Dec 07 14:18	15°♐16'40	-2°08'50
opposition	3555 Sep 21 10:51	28°♐48'11 -2°07'01	min. Earth dist.	3561 Dec 07 12:44	15°♐16'59	8.22317 AU
min. Earth dist.	3555 Sep 21 12:11	28°♐47'56 8.79879 AU	direct	3562 Feb 12 09:00	11°♐51'29	
direct	3555 Nov 29 13:19	25°♐28'52	evening set	3562 May 25 09:13	19°♐43'19	
	3556 Feb 13 17:54	0°♑				
evening set	3556 Mar 08 08:22	2°♑40'18	conjunction	3562 Jun 12 02:49	21°♐58'52	-1°33'27
			minimum elong	3562 Jun 12 02:52	21°♐58'53	1°33'28
conjunction	3556 Mar 25 03:11	4°♑41'46 -1°51'22	max. Earth dist.	3562 Jun 12 04:29	21°♐59'24	10.18552 AU
minimum elong	3556 Mar 25 03:09	4°♑41'45 1°51'22	morning rise	3562 Jun 29 23:59	24°♐15'35	
max. Earth dist.	3556 Mar 25 01:37	4°♑41'17 10.75408 AU		3562 Aug 21 10:55	0°♑	
morning rise	3556 Apr 11 01:17	6°♑44'17	retrograde	3562 Oct 14 10:40	2°♑27'21	

	3562 Dec 08 14:12	30° RII		max. Earth dist.	3568 Sep 07 05:49	15° M 49'30	10.18767 AU
opposition	3562 Dec 21 10:25	28° II 58'07 -1°41'32		morning rise	3568 Sep 24 23:06	18° M 04'46	
min. Earth dist.	3562 Dec 21 08:38	28° II 58'29 8.15386 AU		retrograde	3569 Jan 05 13:50	25° M 59'26	
direct	3563 Feb 26 01:28	25° II 31'51		opposition	3569 Mar 13 05:53	22° M 34'21	1°55'32
	3563 May 10 07:43	0° S		min. Earth dist.	3569 Mar 13 03:42	22° M 34'48	8.22458 AU
evening set	3563 Jun 08 19:20	3° S 30'16		direct	3569 May 20 11:31	19° M 05'38	
				evening set	3569 Sep 03 16:25	27° M 11'33	
conjunction	3563 Jun 26 17:08	5° S 47'57 -1°08'42					
minimum elong	3563 Jun 26 17:11	5° S 47'58 1°08'42		conjunction	3569 Sep 21 12:14	29° M 26'36	1°43'24
max. Earth dist.	3563 Jun 26 18:50	5° S 48'29 10.12628 AU		minimum elong	3569 Sep 21 12:11	29° M 26'35	1°43'23
morning rise	3563 Jul 14 17:51	8° S 06'33		max. Earth dist.	3569 Sep 21 14:12	29° M 27'13	10.26377 AU
retrograde	3563 Oct 28 20:36	16° S 20'14			3569 Sep 25 21:21	0° S	
opposition	3564 Jan 04 09:25	12° S 51'05 -1°07'54		morning rise	3569 Oct 09 04:18	1° S 40'30	
min. Earth dist.	3564 Jan 04 07:43	12° S 51'26 8.10508 AU		retrograde	3570 Jan 19 01:22	9° S 27'42	
direct	3564 Mar 11 00:37	9° S 23'51		opposition	3570 Mar 26 21:19	6° S 03'53	2°19'02
evening set	3564 Jun 22 12:03	17° S 27'50		min. Earth dist.	3570 Mar 26 20:25	6° S 04'03	8.30740 AU
				direct	3570 Jun 03 14:44	2° S 35'38	
conjunction	3564 Jul 10 13:11	19° S 47'02 -0°39'40		evening set	3570 Sep 17 22:02	10° S 36'48	
minimum elong	3564 Jul 10 13:13	19° S 47'03 0°39'41					
max. Earth dist.	3564 Jul 10 15:13	19° S 47'41 10.08938 AU		conjunction	3570 Oct 05 13:34	12° S 49'23	1°59'24
morning rise	3564 Jul 28 16:15	22° S 06'50		minimum elong	3570 Oct 05 13:31	12° S 49'23	1°59'24
	3564 Oct 22 23:32	0° N		max. Earth dist.	3570 Oct 05 13:55	12° S 49'30	10.35146 AU
retrograde	3564 Nov 11 05:40	0° N 20'22		morning rise	3570 Oct 23 01:00	15° S 00'42	
	3564 Nov 30 12:08	30° RS		retrograde	3571 Feb 01 06:47	22° S 40'22	
opposition	3565 Jan 17 10:12	26° S 51'35 -0°29'56		opposition	3571 Apr 09 08:33	19° S 17'47	2°34'35
min. Earth dist.	3565 Jan 17 08:18	26° S 51'59 8.08018 AU		min. Earth dist.	3571 Apr 09 08:28	19° S 17'48	8.39955 AU
direct	3565 Mar 25 05:12	23° S 23'35		direct	3571 Jun 17 13:40	15° S 50'17	
	3565 Jun 25 02:33	0° N		evening set	3571 Oct 01 18:31	23° S 45'30	
evening set	3565 Jul 07 09:23	1° N 31'40					
conjunction	3565 Jul 25 12:33	3° N 51'39 -0°08'09		conjunction	3571 Oct 19 05:45	25° S 55'34	2°08'51
minimum elong	3565 Jul 25 12:33	3° N 51'39 0°08'10		minimum elong	3571 Oct 19 05:44	25° S 55'34	2°08'51
behind sun begin	3565 Jul 25 06:04	3° N 49'35		max. Earth dist.	3571 Oct 19 05:04	25° S 55'22	10.44654 AU
behind sun end	3565 Jul 25 19:02	3° N 53'44		morning rise	3571 Nov 05 12:45	28° S 04'19	
max. Earth dist.	3565 Jul 25 15:03	3° N 52'27 10.07725 AU			3571 Nov 21 17:52	0° M	
morning rise	3565 Aug 12 16:24	6° N 11'50		retrograde	3572 Feb 14 05:12	5° M 36'33	
asc. node	3565 Oct 29 07:06	13° N 42'15		opposition	3572 Apr 21 15:09	2° M 15'07	2°41'52
retrograde	3565 Nov 25 13:20	14° N 23'08		min. Earth dist.	3572 Apr 21 15:05	2° M 15'08	8.49691 AU
opposition	3566 Jan 31 11:31	10° N 55'01 0°09'57			3572 May 23 00:03	30° RS	
min. Earth dist.	3566 Jan 31 09:10	10° N 55'29 8.08074 AU		direct	3572 Jun 30 07:55	28° S 48'32	
direct	3566 Apr 08 12:04	7° N 26'27			3572 Aug 07 06:03	0° M	
	3566 Jul 17 11:33	15° N		evening set	3572 Oct 14 05:39	6° M 36'55	
evening set	3566 Jul 22 08:57	15° N 36'54					
conjunction	3566 Aug 09 12:28	17° N 56'47 0°23'57		conjunction	3572 Oct 31 12:56	8° M 44'32	2°11'38
minimum elong	3566 Aug 09 12:27	17° N 56'47 0°23'56		minimum elong	3572 Oct 31 12:55	8° M 44'32	2°11'39
max. Earth dist.	3566 Aug 09 15:34	17° N 57'47 10.09056 AU		max. Earth dist.	3572 Oct 31 12:11	8° M 44'18	10.54491 AU
morning rise	3566 Aug 27 15:18	20° N 16'26		morning rise	3572 Nov 17 15:49	10° M 50'50	
retrograde	3566 Dec 09 18:39	28° N 23'37			3572 Dec 25 03:57	15° M	
opposition	3567 Feb 14 12:00	24° N 56'22 0°49'07		retrograde	3573 Feb 25 21:42	18° M 15'58	
min. Earth dist.	3567 Feb 14 09:02	24° N 56'59 8.10662 AU			3573 May 03 18:06	15° RM	
direct	3567 Apr 22 20:19	21° N 27'31		opposition	3573 May 04 16:59	14° M 55'33	2°41'02
evening set	3567 Aug 06 07:47	29° N 38'22		min. Earth dist.	3573 May 04 16:53	14° M 55'35	8.59523 AU
	3567 Aug 09 04:11	0° M		direct	3573 Jul 13 20:31	11° M 29'59	
conjunction	3567 Aug 24 10:02	1° M 57'17 0°54'23			3573 Sep 19 04:46	15° M	
minimum elong	3567 Aug 24 10:00	1° M 57'16 0°54'23		evening set	3573 Oct 27 07:15	19° M 10'59	
max. Earth dist.	3567 Aug 24 13:37	1° M 58'26 10.12833 AU					
morning rise	3567 Sep 11 10:17	4° M 15'36		conjunction	3573 Nov 13 10:59	21° M 16'20	2°08'03
retrograde	3567 Dec 23 19:31	12° M 17'06		minimum elong	3573 Nov 13 11:00	21° M 16'20	2°08'03
opposition	3568 Feb 28 10:30	8° M 50'52 1°25'02		max. Earth dist.	3573 Nov 13 10:31	21° M 16'11	10.64216 AU
min. Earth dist.	3568 Feb 28 07:30	8° M 51'29 8.15590 AU		morning rise	3573 Nov 30 10:20	23° M 20'24	
direct	3568 May 06 04:26	5° M 21'58			3574 Feb 11 03:11	0° S	
evening set	3568 Aug 20 02:59	13° M 31'13		retrograde	3574 Mar 10 10:26	0° S 39'03	
					3574 Apr 07 01:36	30° RM	
conjunction	3568 Sep 07 02:34	15° M 48'27 1°21'23		opposition	3574 May 17 14:30	27° M 19'30	2°32'40
minimum elong	3568 Sep 07 02:31	15° M 48'26 1°21'23		min. Earth dist.	3574 May 17 14:45	27° M 19'27	8.69015 AU
				direct	3574 Jul 27 01:09	23° M 54'59	
					3574 Oct 27 07:53	0° S	
				evening set	3574 Nov 08 23:34	1° S 28'25	

conjunction	3574 Nov 26 00:13	3°♊31'46	1°58'37	conjunction	3581 Feb 02 11:11	13°♊18'49	-0°13'25
minimum elong	3574 Nov 26 00:15	3°♊31'46	1°58'38	minimum elong	3581 Feb 02 11:11	13°♊18'48	0°13'25
max. Earth dist.	3574 Nov 25 23:36	3°♊31'34	10.73400 AU	behind sun begin	3581 Feb 02 07:06	13°♊17'37	
morning rise	3574 Dec 12 20:51	5°♊33'57		behind sun end	3581 Feb 02 15:15	13°♊20'00	
retrograde	3575 Mar 22 16:30	12°♊46'55		max. Earth dist.	3581 Feb 02 09:06	13°♊18'12	10.99356 AU
opposition	3575 May 30 07:43	9°♊28'03	2°17'36		3581 Feb 16 18:02	15°♊	
min. Earth dist.	3575 May 30 08:54	9°♊27'49	8.77759 AU	morning rise	3581 Feb 19 03:32	15°♊16'44	
direct	3575 Aug 09 00:16	6°♊04'34		retrograde	3581 May 31 14:28	22°♊22'40	
evening set	3575 Nov 21 07:44	13°♊30'45		opposition	3581 Aug 10 07:24	19°♊03'29	-0°32'23
				min. Earth dist.	3581 Aug 10 08:36	19°♊03'16	8.98543 AU
conjunction	3575 Dec 08 05:47	15°♊32'21	1°44'06	direct	3581 Oct 19 18:20	15°♊44'32	
minimum elong	3575 Dec 08 05:50	15°♊32'21	1°44'06	evening set	3582 Jan 28 07:11	22°♊47'31	
max. Earth dist.	3575 Dec 08 04:05	15°♊31'50	10.81649 AU				
morning rise	3575 Dec 25 00:33	17°♊32'59		conjunction	3582 Feb 13 23:07	24°♊45'34	-0°39'17
retrograde	3576 Apr 02 18:18	24°♊41'22		minimum elong	3582 Feb 13 23:05	24°♊45'34	0°39'17
opposition	3576 Jun 10 20:51	21°♊22'57	1°56'53	max. Earth dist.	3582 Feb 13 22:03	24°♊45'15	10.97235 AU
min. Earth dist.	3576 Jun 10 22:24	21°♊22'39	8.85385 AU	morning rise	3582 Mar 02 15:59	26°♊43'56	
direct	3576 Aug 20 18:56	18°♊00'27			3582 Apr 01 17:19	0°♊	
evening set	3576 Dec 02 08:48	25°♊20'00		retrograde	3582 Jun 12 19:31	3°♊53'39	
				opposition	3582 Aug 22 14:02	0°♊33'44	-1°03'24
conjunction	3576 Dec 19 04:51	27°♊20'12	1°25'21	min. Earth dist.	3582 Aug 22 14:23	0°♊33'40	8.95481 AU
minimum elong	3576 Dec 19 04:53	27°♊20'12	1°25'21		3582 Aug 30 04:27	30°♊	
max. Earth dist.	3576 Dec 19 02:51	27°♊19'36	10.88625 AU	direct	3582 Oct 31 16:31	27°♊15'03	
morning rise	3577 Jan 04 22:16	29°♊19'37			3582 Dec 29 16:19	0°♊	
	3577 Jan 10 17:15	0°♊		evening set	3583 Feb 08 21:09	4°♊18'44	
retrograde	3577 Apr 14 18:23	6°♊24'40					
opposition	3577 Jun 23 06:54	3°♊06'28	1°31'35	conjunction	3583 Feb 25 13:19	6°♊17'20	-1°03'44
min. Earth dist.	3577 Jun 23 08:01	3°♊06'16	8.91590 AU	minimum elong	3583 Feb 25 13:17	6°♊17'19	1°03'44
	3577 Aug 15 14:36	30°♊		max. Earth dist.	3583 Feb 25 12:39	6°♊17'08	10.93230 AU
direct	3577 Sep 02 07:20	29°♊44'56		morning rise	3583 Mar 14 07:08	8°♊16'28	
	3577 Sep 19 20:23	0°♊		retrograde	3583 Jun 25 03:39	15°♊31'13	
evening set	3577 Dec 14 04:00	6°♊58'40		opposition	3583 Sep 03 22:45	12°♊10'26	-1°32'07
				min. Earth dist.	3583 Sep 03 22:56	12°♊10'24	8.90607 AU
conjunction	3577 Dec 30 22:36	8°♊57'48	1°03'17	direct	3583 Nov 12 15:05	8°♊51'46	
minimum elong	3577 Dec 30 22:38	8°♊57'49	1°03'17	evening set	3584 Feb 20 14:40	15°♊57'34	
max. Earth dist.	3577 Dec 30 21:20	8°♊57'26	10.94051 AU				
morning rise	3578 Jan 16 15:01	10°♊56'20		conjunction	3584 Mar 08 07:21	17°♊57'02	-1°25'47
retrograde	3578 Apr 26 17:00	17°♊59'28		minimum elong	3584 Mar 08 07:18	17°♊57'01	1°25'48
opposition	3578 Jul 05 14:33	14°♊41'18	1°02'52	max. Earth dist.	3584 Mar 08 06:09	17°♊56'40	10.87493 AU
min. Earth dist.	3578 Jul 05 15:09	14°♊41'11	8.96139 AU	morning rise	3584 Mar 25 02:37	19°♊57'15	
direct	3578 Sep 14 14:51	11°♊20'37		retrograde	3584 Jul 06 16:56	27°♊18'08	
evening set	3578 Dec 25 19:09	18°♊29'41		opposition	3584 Sep 15 10:18	23°♊56'22	-1°57'24
				min. Earth dist.	3584 Sep 15 10:55	23°♊56'15	8.84113 AU
conjunction	3579 Jan 11 12:37	20°♊28'04	0°38'51	direct	3584 Nov 23 16:02	20°♊37'30	
minimum elong	3579 Jan 11 12:38	20°♊28'05	0°38'51	evening set	3585 Mar 03 12:54	27°♊46'42	
max. Earth dist.	3579 Jan 11 11:37	20°♊27'47	10.97727 AU				
morning rise	3579 Jan 28 04:34	22°♊26'04		conjunction	3585 Mar 20 06:44	29°♊47'22	-1°44'30
retrograde	3579 May 08 16:12	29°♊28'39		minimum elong	3585 Mar 20 06:42	29°♊47'21	1°44'30
opposition	3579 Jul 17 20:30	26°♊10'21	0°31'53	max. Earth dist.	3585 Mar 20 05:35	29°♊47'01	10.80261 AU
min. Earth dist.	3579 Jul 17 21:35	26°♊10'09	8.98874 AU		3585 Mar 22 00:31	0°♊	
direct	3579 Sep 26 17:47	22°♊50'24		morning rise	3585 Apr 06 03:55	1°♊49'02	
evening set	3580 Jan 06 07:45	29°♊56'04		retrograde	3585 Jul 19 10:53	9°♊16'54	
	3580 Jan 06 21:17	0°♊		opposition	3585 Sep 28 01:26	5°♊54'03	-2°18'04
conjunction	3580 Jan 23 00:17	1°♊54'02	0°13'00	min. Earth dist.	3585 Sep 28 01:56	5°♊53'57	8.76263 AU
minimum elong	3580 Jan 23 00:18	1°♊54'02	0°13'00	direct	3585 Dec 05 20:00	2°♊34'47	
behind sun begin	3580 Jan 22 19:58	1°♊52'46		evening set	3586 Mar 15 16:55	9°♊48'32	
behind sun end	3580 Jan 23 04:38	1°♊55'18					
max. Earth dist.	3580 Jan 22 22:28	1°♊53'30	10.99521 AU	conjunction	3586 Apr 01 12:45	11°♊50'45	-1°58'56
morning rise	3580 Feb 08 16:19	3°♊51'50		minimum elong	3586 Apr 01 12:43	11°♊50'45	1°58'55
retrograde	3580 May 19 13:37	10°♊55'20		max. Earth dist.	3586 Apr 01 12:39	11°♊50'44	10.71817 AU
desc. node	3580 Jul 26 04:06	7°♊49'37		morning rise	3586 Apr 18 12:18	13°♊54'09	
opposition	3580 Jul 29 01:50	7°♊36'42	-0°00'15	retrograde	3586 Aug 01 11:13	21°♊29'38	
min. Earth dist.	3580 Jul 29 03:23	7°♊36'25	8.99687 AU	opposition	3586 Oct 10 20:30	18°♊05'37	-2°33'01
direct	3580 Oct 07 17:47	4°♊17'20		min. Earth dist.	3586 Oct 10 20:16	18°♊05'39	8.67359 AU
evening set	3581 Jan 16 19:12	11°♊20'59		direct	3586 Dec 18 05:30	14°♊45'45	
				evening set	3587 Mar 28 04:09	22°♊05'02	

conjunction	3587 Apr 14 02:36	24° Υ 09'11	-2°08'13	conjunction	3593 Jul 04 06:17	13° \mathfrak{D} 45'44	-0°52'59
minimum elong	3587 Apr 14 02:35	24° Υ 09'11	2°08'12	minimum elong	3593 Jul 04 06:19	13° \mathfrak{D} 45'45	0°53'00
max. Earth dist.	3587 Apr 14 03:17	24° Υ 09'23	10.62492 AU	max. Earth dist.	3593 Jul 04 08:06	13° \mathfrak{D} 46'20	10.12183 AU
morning rise	3587 May 01 05:03	26° Υ 14'36		morning rise	3593 Jul 22 08:10	16° \mathfrak{D} 04'45	
	3587 Jun 03 19:01	0° \mathfrak{B}		retrograde	3593 Nov 05 02:41	24° \mathfrak{D} 17'26	
retrograde	3587 Aug 14 19:44	3° \mathfrak{B} 57'52		opposition	3594 Jan 11 11:45	20° \mathfrak{D} 48'39	-0°47'16
opposition	3587 Oct 23 19:52	0° \mathfrak{B} 32'42	-2°41'11	min. Earth dist.	3594 Jan 11 10:06	20° \mathfrak{D} 48'59	8.10455 AU
min. Earth dist.	3587 Oct 23 19:01	0° \mathfrak{B} 32'52	8.57751 AU	direct	3594 Mar 19 05:33	17° \mathfrak{D} 21'09	
	3587 Oct 30 21:19	30° \mathfrak{K} Υ		evening set	3594 Jul 01 01:01	25° \mathfrak{D} 26'21	
direct	3587 Dec 30 17:24	27° Υ 12'03					
	3588 Feb 26 10:59	0° \mathfrak{B}		conjunction	3594 Jul 19 03:25	27° \mathfrak{D} 45'49	-0°22'28
evening set	3588 Apr 08 23:13	4° \mathfrak{B} 37'40		minimum elong	3594 Jul 19 03:26	27° \mathfrak{D} 45'50	0°22'29
				max. Earth dist.	3594 Jul 19 05:14	27° \mathfrak{D} 46'24	10.09311 AU
conjunction	3588 Apr 26 00:56	6° \mathfrak{B} 44'00	-2°11'37		3594 Aug 05 13:02	0° \mathfrak{Q}	
minimum elong	3588 Apr 26 00:56	6° \mathfrak{B} 44'00	2°11'36	morning rise	3594 Aug 06 06:49	0° \mathfrak{Q} 05'38	
max. Earth dist.	3588 Apr 26 01:24	6° \mathfrak{B} 44'09	10.52669 AU	retrograde	3594 Nov 19 11:14	8° \mathfrak{Q} 17'09	
morning rise	3588 May 13 07:02	8° \mathfrak{B} 51'44		opposition	3595 Jan 25 12:01	4° \mathfrak{Q} 48'41	-0°08'06
	3588 Jul 12 15:31	15° \mathfrak{B}		min. Earth dist.	3595 Jan 25 10:29	4° \mathfrak{Q} 49'00	8.08798 AU
retrograde	3588 Aug 27 09:33	16° \mathfrak{B} 42'36		direct	3595 Apr 02 09:25	1° \mathfrak{Q} 20'18	
	3588 Oct 12 21:17	15° \mathfrak{K} \mathfrak{B}		asc. node	3595 Apr 12 11:20	1° \mathfrak{Q} 25'57	
opposition	3588 Nov 05 00:05	13° \mathfrak{B} 16'22	-2°41'45	evening set	3595 Jul 15 22:40	9° \mathfrak{Q} 28'49	
min. Earth dist.	3588 Nov 04 23:21	13° \mathfrak{B} 16'30	8.47824 AU				
direct	3589 Jan 11 11:10	9° \mathfrak{B} 54'42		conjunction	3595 Aug 03 02:06	11° \mathfrak{Q} 48'39	0°09'32
	3589 Apr 01 07:11	15° \mathfrak{B}		minimum elong	3595 Aug 03 02:05	11° \mathfrak{Q} 48'38	0°09'32
evening set	3589 Apr 22 02:35	17° \mathfrak{B} 27'16		behind sun begin	3595 Aug 02 20:02	11° \mathfrak{Q} 46'42	
				behind sun end	3595 Aug 03 08:09	11° \mathfrak{Q} 50'35	
conjunction	3589 May 09 08:18	19° \mathfrak{B} 36'04	-2°08'34	max. Earth dist.	3595 Aug 03 03:41	11° \mathfrak{Q} 49'08	10.08914 AU
minimum elong	3589 May 09 08:20	19° \mathfrak{B} 36'05	2°08'34	morning rise	3595 Aug 21 05:26	14° \mathfrak{Q} 08'25	
max. Earth dist.	3589 May 09 08:03	19° \mathfrak{B} 35'59	10.42742 AU		3595 Aug 28 02:03	15° \mathfrak{Q}	
morning rise	3589 May 26 18:39	21° \mathfrak{B} 46'19		retrograde	3595 Dec 03 17:17	22° \mathfrak{Q} 16'52	
retrograde	3589 Sep 10 04:22	29° \mathfrak{B} 44'17		opposition	3596 Feb 08 12:11	18° \mathfrak{Q} 48'59	0°31'34
opposition	3589 Nov 18 09:03	26° \mathfrak{B} 17'05	-2°34'07	min. Earth dist.	3596 Feb 08 10:59	18° \mathfrak{Q} 49'14	8.09659 AU
min. Earth dist.	3589 Nov 18 08:57	26° \mathfrak{B} 17'06	8.37988 AU	direct	3596 Apr 15 16:51	15° \mathfrak{Q} 19'57	
direct	3590 Jan 24 12:27	22° \mathfrak{B} 54'17		evening set	3596 Jul 29 21:06	23° \mathfrak{Q} 30'02	
	3590 Apr 30 23:36	0° \mathfrak{I}					
evening set	3590 May 05 14:56	0° \mathfrak{I} 34'13		conjunction	3596 Aug 16 23:58	25° \mathfrak{Q} 49'21	0°40'50
				minimum elong	3596 Aug 16 23:56	25° \mathfrak{Q} 49'21	0°40'49
conjunction	3590 May 23 01:17	2° \mathfrak{I} 45'40	-1°58'49	max. Earth dist.	3596 Aug 17 01:06	25° \mathfrak{Q} 49'43	10.11005 AU
minimum elong	3590 May 23 01:20	2° \mathfrak{I} 45'41	1°58'49	morning rise	3596 Sep 04 01:39	28° \mathfrak{Q} 08'16	
max. Earth dist.	3590 May 23 00:51	2° \mathfrak{I} 45'32	10.33160 AU		3596 Sep 19 04:28	0° \mathfrak{P}	
morning rise	3590 Jun 09 16:08	4° \mathfrak{I} 58'30		retrograde	3596 Dec 16 18:30	6° \mathfrak{P} 11'57	
retrograde	3590 Sep 24 04:46	13° \mathfrak{I} 02'36		opposition	3597 Feb 21 10:53	2° \mathfrak{P} 44'53	1°09'09
opposition	3590 Dec 01 22:23	9° \mathfrak{I} 34'40	-2°18'09	min. Earth dist.	3597 Feb 21 09:52	2° \mathfrak{P} 45'06	8.12965 AU
min. Earth dist.	3590 Dec 01 22:29	9° \mathfrak{I} 34'39	8.28770 AU		3597 Apr 01 05:07	30° \mathfrak{K} \mathfrak{Q}	
direct	3591 Feb 06 19:44	6° \mathfrak{I} 10'39		direct	3597 Apr 30 01:30	29° \mathfrak{Q} 15'31	
evening set	3591 May 19 12:09	13° \mathfrak{I} 57'59			3597 May 28 19:51	0° \mathfrak{P}	
				evening set	3597 Aug 13 17:31	7° \mathfrak{P} 25'16	
conjunction	3591 Jun 06 03:24	16° \mathfrak{I} 12'02	-1°42'29				
minimum elong	3591 Jun 06 03:27	16° \mathfrak{I} 12'03	1°42'30	conjunction	3597 Aug 31 18:23	9° \mathfrak{P} 43'18	1°09'32
max. Earth dist.	3591 Jun 06 03:36	16° \mathfrak{I} 12'06	10.24506 AU	minimum elong	3597 Aug 31 18:20	9° \mathfrak{P} 43'17	1°09'32
morning rise	3591 Jun 23 22:36	18° \mathfrak{I} 27'20		max. Earth dist.	3597 Aug 31 19:18	9° \mathfrak{P} 43'36	10.15427 AU
retrograde	3591 Oct 08 09:55	26° \mathfrak{I} 36'11		morning rise	3597 Sep 18 16:57	12° \mathfrak{P} 00'36	
opposition	3591 Dec 15 15:54	23° \mathfrak{I} 07'43	-1°54'13	retrograde	3597 Dec 30 14:07	19° \mathfrak{P} 58'14	
min. Earth dist.	3591 Dec 15 15:28	23° \mathfrak{I} 07'48	8.20773 AU	opposition	3598 Mar 07 07:09	16° \mathfrak{P} 32'09	1°42'19
direct	3592 Feb 20 09:23	19° \mathfrak{I} 42'29		min. Earth dist.	3598 Mar 07 05:52	16° \mathfrak{P} 32'25	8.18476 AU
evening set	3592 Jun 01 17:35	27° \mathfrak{I} 36'42		direct	3598 May 14 09:20	13° \mathfrak{P} 02'47	
				evening set	3598 Aug 28 09:13	21° \mathfrak{P} 10'17	
conjunction	3592 Jun 19 13:29	29° \mathfrak{I} 53'06	-1°20'10				
minimum elong	3592 Jun 19 13:32	29° \mathfrak{I} 53'07	1°20'11	conjunction	3598 Sep 15 06:52	23° \mathfrak{P} 26'24	1°33'57
max. Earth dist.	3592 Jun 19 14:47	29° \mathfrak{I} 53'31	10.17357 AU	minimum elong	3598 Sep 15 06:49	23° \mathfrak{P} 26'23	1°33'57
	3592 Jun 20 10:57	0° \mathfrak{D}		max. Earth dist.	3598 Sep 15 08:03	23° \mathfrak{P} 26'47	10.21884 AU
morning rise	3592 Jul 07 12:30	2° \mathfrak{D} 10'33		morning rise	3598 Oct 03 01:15	25° \mathfrak{P} 41'30	
retrograde	3592 Oct 21 17:45	10° \mathfrak{D} 22'21			3598 Nov 09 15:23	0° \mathfrak{D}	
opposition	3592 Dec 28 12:44	6° \mathfrak{D} 53'34	-1°23'22	retrograde	3599 Jan 13 04:31	3° \mathfrak{D} 32'13	
min. Earth dist.	3592 Dec 28 11:24	6° \mathfrak{D} 53'50	8.14533 AU	opposition	3599 Mar 21 00:06	0° \mathfrak{D} 07'15	2°09'10
direct	3593 Mar 05 05:05	3° \mathfrak{D} 27'09		min. Earth dist.	3599 Mar 20 22:28	0° \mathfrak{D} 07'35	8.25841 AU
evening set	3593 Jun 16 06:29	11° \mathfrak{D} 27'28			3599 Mar 22 12:01	30° \mathfrak{K} \mathfrak{P}	

direct	3599 May 28 13:24	26° <u>♄</u> 38'13	
	3599 Jul 31 23:29	0° <u>♄</u>	
evening set	3599 Sep 11 18:08	4° <u>♄</u> 41'42	
conjunction	3599 Sep 29 11:52	6° <u>♄</u> 55'31	1°52'49
minimum elong	3599 Sep 29 11:49	6° <u>♄</u> 55'30	1°52'48
max. Earth dist.	3599 Sep 29 13:20	6° <u>♄</u> 55'59	10.29991 AU
morning rise	3599 Oct 17 01:32	9° <u>♄</u> 08'06	
retrograde	3600 Jan 26 13:36	16° <u>♄</u> 51'21	
opposition	3600 Apr 02 12:55	13° <u>♄</u> 27'35	2°28'27
min. Earth dist.	3600 Apr 02 11:21	13° <u>♄</u> 27'54	8.34629 AU
direct	3600 Jun 10 13:18	9° <u>♄</u> 59'11	
evening set	3600 Sep 24 18:40	17° <u>♄</u> 57'12	
conjunction	3600 Oct 12 08:09	20° <u>♄</u> 08'31	2°05'19
minimum elong	3600 Oct 12 08:08	20° <u>♄</u> 08'31	2°05'19
max. Earth dist.	3600 Oct 12 09:35	20° <u>♄</u> 08'58	10.39284 AU
morning rise	3600 Oct 29 17:08	22° <u>♄</u> 18'30	
retrograde	3601 Feb 07 15:07	29° <u>♄</u> 54'07	
opposition	3601 Apr 15 21:22	26° <u>♄</u> 31'37	2°39'33
min. Earth dist.	3601 Apr 15 20:35	26° <u>♄</u> 31'46	8.44341 AU
direct	3601 Jun 24 09:04	23° <u>♄</u> 04'05	
	3601 Sep 30 17:04	0° <u>♄</u>	
evening set	3601 Oct 08 09:59	0° <u>♄</u> 55'36	
conjunction	3601 Oct 25 19:10	3° <u>♄</u> 04'22	2°11'10
minimum elong	3601 Oct 25 19:09	3° <u>♄</u> 04'22	2°11'10
max. Earth dist.	3601 Oct 25 19:45	3° <u>♄</u> 04'33	10.49256 AU
morning rise	3601 Nov 11 23:51	5° <u>♄</u> 11'48	