

evening set	3100 Jan 17 04:52	6° $\approx$ 25'20	conjunction	3105 Jul 30 13:53	7° $\Omega$ 47'26	0°17'11
max. Earth dist.	3100 Jan 28 08:51	9° $\approx$ 01'32 6.14113 AU	minimum elong	3105 Jul 30 13:52	7° $\Omega$ 47'25	0°17'10
conjunction	3100 Jan 29 22:30	9° $\approx$ 23'34 -0°18'59	max. Earth dist.	3105 Aug 01 07:56	8° $\Omega$ 11'04	6.23103 AU
minimum elong	3100 Jan 29 22:29	9° $\approx$ 23'33 0°18'58	morning rise	3105 Aug 13 05:57	10° $\Omega$ 51'13	
morning rise	3100 Feb 11 16:30	12° $\approx$ 22'19		3105 Sep 01 04:36	15° $\Omega$	
	3100 Feb 23 02:03	15° $\approx$	retrograde	3105 Dec 15 20:33	28° $\Omega$ 57'40	
	3100 May 18 15:42	0° $\text{X}$	opposition	3106 Feb 13 16:40	23° $\Omega$ 56'35	0°48'41
retrograde	3100 Jun 19 14:43	1° $\text{X}$ 34'30	min. Earth dist.	3106 Feb 12 21:42	24° $\Omega$ 02'55	4.30297 AU
	3100 Jul 21 14:56	30° $\text{R}$	direct	3106 Apr 15 03:26	18° $\Omega$ 54'40	
opposition	3100 Aug 19 02:45	26° $\approx$ 38'58 -0°53'15		3106 Jul 17 20:29	0° $\text{M}$	
min. Earth dist.	3100 Aug 19 21:35	26° $\approx$ 32'51 4.06871 AU	evening set	3106 Aug 19 20:35	6° $\text{M}$ 54'51	
direct	3100 Oct 18 02:09	21° $\approx$ 43'53	conjunction	3106 Sep 02 07:37	9° $\text{M}$ 51'08	0°46'36
	3101 Jan 01 19:08	0° $\text{X}$	minimum elong	3106 Sep 02 07:35	9° $\text{M}$ 51'07	0°46'37
evening set	3101 Feb 20 11:33	11° $\text{X}$ 00'36	max. Earth dist.	3106 Sep 02 22:31	9° $\text{M}$ 59'16	6.36680 AU
conjunction	3101 Mar 05 09:17	14° $\text{X}$ 06'23 -0°49'19	morning rise	3106 Sep 15 16:46	12° $\text{M}$ 46'15	
minimum elong	3101 Mar 05 09:16	14° $\text{X}$ 06'21 0°49'19	retrograde	3107 Jan 15 11:04	29° $\text{M}$ 58'49	
max. Earth dist.	3101 Mar 04 21:43	13° $\text{X}$ 59'25 6.00795 AU	opposition	3107 Mar 16 16:02	25° $\text{M}$ 01'23	1°21'26
morning rise	3101 Mar 18 09:05	17° $\text{X}$ 13'27	min. Earth dist.	3107 Mar 16 15:10	25° $\text{M}$ 01'40	4.41670 AU
	3101 May 15 20:46	0° $\text{Y}$	direct	3107 May 17 08:22	19° $\text{M}$ 58'39	
retrograde	3101 Jul 27 12:02	7° $\text{Y}$ 30'14		3107 Aug 15 01:05	0° $\Omega$	
opposition	3101 Sep 25 14:13	2° $\text{Y}$ 31'04 -1°28'16	evening set	3107 Sep 20 23:23	7° $\Omega$ 33'20	
min. Earth dist.	3101 Sep 25 09:15	2° $\text{Y}$ 32'43 3.96391 AU	conjunction	3107 Oct 04 03:20	10° $\Omega$ 23'22	1°01'40
	3101 Oct 15 13:18	30° $\text{R}$	minimum elong	3107 Oct 04 03:19	10° $\Omega$ 23'22	1°01'40
direct	3101 Nov 23 04:08	27° $\text{X}$ 37'22	max. Earth dist.	3107 Oct 03 14:38	10° $\Omega$ 16'31	6.44989 AU
	3101 Dec 31 06:13	0° $\text{Y}$	morning rise	3107 Oct 17 04:26	13° $\Omega$ 12'02	
evening set	3102 Mar 28 20:12	17° $\text{Y}$ 22'28	retrograde	3108 Feb 14 10:24	29° $\Omega$ 56'48	
conjunction	3102 Apr 11 01:00	20° $\text{Y}$ 34'31 -1°02'03	opposition	3108 Apr 14 23:46	25° $\Omega$ 02'35	1°31'03
minimum elong	3102 Apr 11 01:00	20° $\text{Y}$ 34'31 1°02'02	min. Earth dist.	3108 Apr 15 17:02	24° $\Omega$ 57'00	4.46522 AU
max. Earth dist.	3102 Apr 11 23:48	20° $\text{Y}$ 48'22 5.94125 AU	direct	3108 Jun 16 12:14	20° $\Omega$ 00'08	
morning rise	3102 Apr 24 08:47	23° $\text{Y}$ 48'13		3108 Sep 14 13:09	0° $\text{M}$	
	3102 May 20 18:00	0° $\text{X}$	evening set	3108 Oct 20 20:20	7° $\text{M}$ 26'08	
retrograde	3102 Sep 03 20:54	14° $\text{X}$ 33'29	max. Earth dist.	3108 Nov 01 04:25	9° $\text{M}$ 53'01	6.45966 AU
opposition	3102 Nov 02 13:58	9° $\text{X}$ 30'33 -1°29'00	conjunction	3108 Nov 02 17:54	10° $\text{M}$ 13'19	0°59'50
min. Earth dist.	3102 Nov 01 12:30	9° $\text{X}$ 39'10 3.94418 AU	minimum elong	3108 Nov 02 17:55	10° $\text{M}$ 13'20	0°59'50
direct	3102 Dec 30 11:06	4° $\text{X}$ 36'06	morning rise	3108 Nov 15 13:01	12° $\text{M}$ 59'19	
	3103 Mar 25 06:46	15° $\text{X}$		3108 Nov 24 22:49	15° $\text{M}$	
evening set	3103 May 05 10:43	24° $\text{X}$ 21'48	retrograde	3109 Mar 15 20:21	29° $\text{M}$ 45'20	
conjunction	3103 May 18 23:38	27° $\text{X}$ 36'18 -0°50'17	opposition	3109 May 15 15:09	24° $\text{M}$ 52'58	1°16'41
minimum elong	3103 May 18 23:40	27° $\text{X}$ 36'19 0°50'16	min. Earth dist.	3109 May 16 23:15	24° $\text{M}$ 42'42	4.43647 AU
max. Earth dist.	3103 May 21 02:31	28° $\text{X}$ 06'48 5.96986 AU	direct	3109 Jul 17 09:50	19° $\text{M}$ 51'33	
	3103 May 28 23:44	0° $\text{II}$		3109 Oct 15 14:00	0° $\text{X}$	
morning rise	3103 Jun 01 15:11	0° $\text{II}$ 52'04	evening set	3109 Nov 20 07:46	7° $\text{X}$ 27'12	
retrograde	3103 Oct 10 22:25	21° $\text{II}$ 12'06	max. Earth dist.	3109 Nov 30 23:29	9° $\text{X}$ 47'43	6.39396 AU
min. Earth dist.	3103 Dec 07 23:03	16° $\text{II}$ 19'21 4.01811 AU	conjunction	3109 Dec 03 01:37	10° $\text{X}$ 15'22	0°41'51
opposition	3103 Dec 09 10:40	16° $\text{II}$ 07'13 -0°54'13	minimum elong	3109 Dec 03 01:38	10° $\text{X}$ 15'23	0°41'51
direct	3104 Feb 05 13:06	11° $\text{II}$ 10'14	morning rise	3109 Dec 15 17:22	13° $\text{X}$ 02'46	
	3104 Jun 08 19:29	0° $\text{E}$		3110 Apr 02 08:05	0° $\text{Z}$	
evening set	3104 Jun 10 21:26	0° $\text{E}$ 28'52	retrograde	3110 Apr 16 13:16	0° $\text{Z}$ 18'55	
conjunction	3104 Jun 24 14:58	3° $\text{E}$ 40'21 -0°19'22		3110 Apr 30 19:21	30° $\text{R}$	
minimum elong	3104 Jun 24 15:00	3° $\text{E}$ 40'22 0°19'22	opposition	3110 Jun 16 11:44	25° $\text{X}$ 26'52	0°40'56
max. Earth dist.	3104 Jun 26 22:54	4° $\text{E}$ 12'52 6.08149 AU	min. Earth dist.	3110 Jun 18 00:54	25° $\text{X}$ 15'01	4.33732 AU
morning rise	3104 Jul 08 10:04	6° $\text{E}$ 52'16	direct	3110 Aug 17 18:06	20° $\text{X}$ 27'17	
retrograde	3104 Nov 13 12:38	26° $\text{E}$ 08'49		3110 Nov 11 11:26	0° $\text{Z}$	
min. Earth dist.	3105 Jan 10 19:03	21° $\text{E}$ 15'51 4.15447 AU	evening set	3110 Dec 21 09:10	8° $\text{Z}$ 29'54	
opposition	3105 Jan 12 03:46	21° $\text{E}$ 04'44 -0°01'13	max. Earth dist.	3110 Dec 31 23:26	10° $\text{Z}$ 53'54	6.26883 AU
asc. node	3105 Jan 21 01:20	19° $\text{E}$ 53'02	conjunction	3111 Jan 03 01:37	11° $\text{Z}$ 22'27	0°11'30
direct	3105 Mar 12 06:00	16° $\text{E}$ 04'48	minimum elong	3111 Jan 03 01:38	11° $\text{Z}$ 22'27	0°11'29
	3105 Jun 25 09:10	0° $\Omega$	behind sun begin	3111 Jan 02 19:49	11° $\text{Z}$ 19'10	
evening set	3105 Jul 16 21:12	4° $\Omega$ 43'03	behind sun end	3111 Jan 03 07:27	11° $\text{Z}$ 25'45	
			morning rise	3111 Jan 15 17:18	14° $\text{Z}$ 14'52	

	3111 Apr 10 03:01	0°♊		3116 Oct 24 19:26	0°♏
desc. node	3111 May 12 10:40	2°♊20'49	retrograde	3116 Nov 18 04:16	0°♏57'28
retrograde	3111 May 20 12:52	2°♊26'58	asc. node	3116 Dec 01 04:08	0°♏40'28
	3111 Jun 30 08:23	30°♋♂		3116 Dec 12 06:07	30°♋♂
opposition	3111 Jul 20 07:15	27°♌33'43 -0°09'09	opposition	3117 Jan 16 19:24	25°♍53'40 0°06'20
min. Earth dist.	3111 Jul 21 16:06	27°♌23'10 4.19348 AU	min. Earth dist.	3117 Jan 15 12:54	26°♍04'00 4.17823 AU
direct	3111 Sep 19 12:41	22°♌36'32	direct	3117 Mar 17 02:47	20°♍53'24
	3111 Dec 01 00:57	0°♊		3117 Jun 06 22:40	0°♏
evening set	3112 Jan 22 21:50	11°♊18'31	evening set	3117 Jul 21 16:59	9°♏24'54
max. Earth dist.	3112 Feb 03 04:20	13°♊57'00 6.11857 AU			
			conjunction	3117 Aug 04 09:01	12°♏28'01 0°21'54
conjunction	3112 Feb 04 15:52	14°♊17'53 -0°23'52	minimum elong	3117 Aug 04 08:59	12°♏28'00 0°21'54
minimum elong	3112 Feb 04 15:51	14°♊17'52 0°23'51	max. Earth dist.	3117 Aug 05 23:27	12°♏49'30 6.25367 AU
	3112 Feb 07 15:31	15°♊		3117 Aug 15 17:25	15°♏
morning rise	3112 Feb 17 10:36	17°♊17'54	morning rise	3117 Aug 18 00:19	15°♏30'28
	3112 Apr 17 07:15	0°♋		3117 Nov 02 05:40	0°♐
retrograde	3112 Jun 24 20:05	6°♋40'43	retrograde	3117 Dec 20 02:30	3°♐27'37
opposition	3112 Aug 24 07:38	1°♋44'44 -0°59'43		3118 Feb 06 05:49	30°♋♏
min. Earth dist.	3112 Aug 24 22:27	1°♋39'55 4.04885 AU	min. Earth dist.	3118 Feb 17 08:19	28°♏32'38 4.32278 AU
	3112 Sep 07 00:13	30°♋♊	opposition	3118 Feb 18 01:12	28°♏27'00 0°54'26
direct	3112 Oct 23 00:54	26°♋49'58	direct	3118 Apr 19 15:56	23°♏24'53
	3112 Dec 06 23:22	0°♋		3118 Jun 28 05:15	0°♐
evening set	3113 Feb 25 12:28	16°♋12'26	evening set	3118 Aug 24 09:19	11°♐20'22
conjunction	3113 Mar 10 11:03	19°♋19'16 -0°52'27	conjunction	3118 Sep 06 19:25	14°♐15'37 0°49'38
minimum elong	3113 Mar 10 11:01	19°♋19'15 0°52'28	minimum elong	3118 Sep 06 19:23	14°♐15'36 0°49'37
max. Earth dist.	3113 Mar 10 04:54	19°♋15'33 5.99279 AU	max. Earth dist.	3118 Sep 07 06:14	14°♐21'30 6.38236 AU
morning rise	3113 Mar 23 11:49	22°♋27'28	morning rise	3118 Sep 20 03:21	17°♐09'38
	3113 Apr 25 02:39	0°♑		3118 Nov 26 12:38	0°♑
retrograde	3113 Aug 01 23:34	12°♑51'22	retrograde	3119 Jan 19 15:17	4°♑16'46
opposition	3113 Sep 30 23:45	7°♑51'36 -1°30'42		3119 Mar 15 18:02	30°♋♐
min. Earth dist.	3113 Sep 30 15:43	7°♑54'17 3.95538 AU	opposition	3119 Mar 20 20:57	29°♐19'54 1°24'11
direct	3113 Nov 28 10:52	2°♑57'55	min. Earth dist.	3119 Mar 20 23:17	29°♐19'08 4.42711 AU
evening set	3114 Apr 03 02:56	22°♑44'44	direct	3119 May 21 17:18	24°♐17'10
				3119 Jul 25 22:53	0°♑
conjunction	3114 Apr 16 08:57	25°♑57'22 -1°01'52	evening set	3119 Sep 25 07:13	11°♑49'57
minimum elong	3114 Apr 16 08:57	25°♑57'22 1°01'53			
max. Earth dist.	3114 Apr 17 13:56	26°♑14'57 5.94028 AU	conjunction	3119 Oct 08 10:09	14°♑39'27 1°02'25
morning rise	3114 Apr 29 17:51	29°♑11'37	minimum elong	3119 Oct 08 10:09	14°♑39'27 1°02'26
	3114 May 03 02:23	0°♒	max. Earth dist.	3119 Oct 07 16:05	14°♑29'42 6.45427 AU
	3114 Jul 13 21:56	15°♒	morning rise	3119 Oct 21 10:28	17°♑27'37
retrograde	3114 Sep 09 05:37	19°♒55'49		3119 Dec 26 20:44	0°♓
	3114 Nov 06 23:16	15°♒♂	retrograde	3120 Feb 18 15:22	4°♓11'29
opposition	3114 Nov 07 21:33	14°♒52'28 -1°25'57		3120 Apr 13 16:54	30°♋♑
min. Earth dist.	3114 Nov 06 17:35	15°♒01'56 3.95122 AU	opposition	3120 Apr 19 04:56	29°♑17'36 1°30'28
direct	3115 Jan 04 17:58	9°♒57'46	min. Earth dist.	3120 Apr 20 01:01	29°♑11'07 4.46361 AU
	3115 Mar 02 06:19	15°♒	direct	3120 Jun 20 19:02	24°♑15'14
evening set	3115 May 10 18:36	29°♒40'03		3120 Aug 25 13:49	0°♓
	3115 May 12 04:10	0°♓	evening set	3120 Oct 25 02:05	11°♓42'21
			max. Earth dist.	3120 Nov 05 08:24	14°♓08'32 6.45223 AU
conjunction	3115 May 24 08:12	2°♓54'14 -0°46'48	conjunction	3120 Nov 06 23:12	14°♓29'36 0°58'13
minimum elong	3115 May 24 08:14	2°♓54'16 0°46'49	minimum elong	3120 Nov 06 23:13	14°♓29'36 0°58'13
max. Earth dist.	3115 May 26 12:15	3°♓25'19 5.98386 AU		3120 Nov 09 07:11	15°♓
morning rise	3115 Jun 07 00:40	6°♓09'41	morning rise	3120 Nov 19 17:33	17°♓15'40
retrograde	3115 Oct 15 20:59	26°♓21'08		3121 Jan 26 00:52	0°♈
min. Earth dist.	3115 Dec 12 22:19	21°♓28'34 4.03739 AU	retrograde	3121 Mar 20 03:47	4°♈05'07
opposition	3115 Dec 14 10:48	21°♓16'07 -0°47'20		3121 May 13 19:42	30°♋♓
direct	3116 Feb 10 15:57	16°♓18'39	opposition	3121 May 19 23:55	29°♓12'56 1°12'51
	3116 May 22 13:26	0°♉	min. Earth dist.	3121 May 21 08:43	29°♓02'28 4.42377 AU
evening set	3116 Jun 16 00:38	5°♉30'48	direct	3121 Jul 21 16:43	24°♓11'49
				3121 Sep 25 11:12	0°♈
conjunction	3116 Jun 29 18:26	8°♉41'19 -0°14'16	evening set	3121 Nov 24 15:14	11°♈51'14
minimum elong	3116 Jun 29 18:27	8°♉41'19 0°14'16	max. Earth dist.	3121 Dec 05 05:13	14°♈11'26 6.37697 AU
behind sun begin	3116 Jun 29 14:45	8°♉39'11			
behind sun end	3116 Jun 29 22:09	8°♉43'27			
max. Earth dist.	3116 Jul 02 01:52	9°♉13'23 6.10430 AU	conjunction	3121 Dec 07 08:38	14°♈39'56 0°38'11
morning rise	3116 Jul 13 13:16	11°♉52'04	minimum elong	3121 Dec 07 08:39	14°♈39'57 0°38'12

morning rise	3121 Dec 20 00:20	17°♌27'58		retrograde	3127 Oct 20 19:23	1°♏24'01	
	3122 Feb 21 23:26	0°♌			3127 Nov 19 00:08	30°♏II	
retrograde	3122 Apr 21 06:08	4°♌51'23		min. Earth dist.	3127 Dec 17 20:56	26°♏31'07	4.05579 AU
opposition	3122 Jun 21 03:02	29°♌59'18	0°34'30	opposition	3127 Dec 19 08:23	26°♏19'02	-0°40'14
	3122 Jun 21 00:51	30°♏♌		direct	3128 Feb 15 16:54	21°♏21'11	
min. Earth dist.	3122 Jun 22 16:54	29°♌47'13	4.31700 AU		3128 May 03 11:32	0°♏	
direct	3122 Aug 22 07:31	25°♌00'04		evening set	3128 Jun 21 01:38	10°♏27'38	
	3122 Oct 20 23:15	0°♌					
evening set	3122 Dec 25 21:00	13°♌08'21		conjunction	3128 Jul 04 19:28	13°♏37'15	-0°09'09
max. Earth dist.	3123 Jan 05 12:55	15°♌34'01	6.24700 AU	minimum elong	3128 Jul 04 19:29	13°♏37'16	0°09'09
				behind sun begin	3128 Jul 04 12:27	13°♏33'13	
conjunction	3123 Jan 07 13:37	16°♌01'51	0°06'35	behind sun end	3128 Jul 05 02:32	13°♏41'18	
minimum elong	3123 Jan 07 13:38	16°♌01'51	0°06'35	max. Earth dist.	3128 Jul 07 01:33	14°♏08'22	6.12470 AU
behind sun begin	3123 Jan 07 06:09	15°♌57'36		morning rise	3128 Jul 18 14:11	16°♏47'00	
behind sun end	3123 Jan 07 21:07	16°♌06'06			3128 Sep 21 05:16	0°♏	
morning rise	3123 Jan 20 05:32	18°♌55'17		asc. node	3128 Oct 11 11:45	2°♏56'54	
	3123 Mar 14 02:15	0°♌		retrograde	3128 Nov 22 15:53	5°♏42'30	
desc. node	3123 Mar 21 19:02	1°♌20'29		min. Earth dist.	3129 Jan 20 03:24	0°♏49'08	4.19876 AU
retrograde	3123 May 25 11:27	7°♌17'07		opposition	3129 Jan 21 09:04	0°♏39'05	0°13'44
opposition	3123 Jul 25 06:20	2°♌23'36	-0°16'42		3129 Jan 26 05:05	30°♏♏	
min. Earth dist.	3123 Jul 26 12:10	2°♌14'00	4.17185 AU	direct	3129 Mar 21 19:49	25°♏38'30	
	3123 Aug 13 16:43	30°♏♌			3129 May 15 03:35	0°♏	
direct	3123 Sep 24 05:58	27°♌26'52		evening set	3129 Jul 26 11:46	14°♏04'45	
	3123 Nov 04 04:08	0°♌			3129 Jul 30 15:26	15°♏	
	3124 Jan 22 07:51	15°♌					
evening set	3124 Jan 27 16:13	16°♌14'48		conjunction	3129 Aug 09 03:08	17°♏06'46	0°26'27
max. Earth dist.	3124 Feb 08 03:13	18°♌56'38	6.09903 AU	minimum elong	3129 Aug 09 03:06	17°♏06'46	0°26'28
				max. Earth dist.	3129 Aug 10 13:07	17°♏25'43	6.27275 AU
conjunction	3124 Feb 09 10:37	19°♌15'10	-0°28'37	morning rise	3129 Aug 22 17:34	20°♏08'03	
minimum elong	3124 Feb 09 10:36	19°♌15'09	0°28'37		3129 Oct 09 13:21	0°♏	
morning rise	3124 Feb 22 06:00	22°♌16'19		retrograde	3129 Dec 24 10:52	7°♏57'21	
	3124 Mar 27 11:33	0°♏		opposition	3130 Feb 22 09:28	2°♏57'16	0°59'51
retrograde	3124 Jun 30 04:10	11°♏48'36		min. Earth dist.	3130 Feb 21 20:00	3°♏01'45	4.33893 AU
opposition	3124 Aug 29 13:32	6°♏52'08	-1°05'45		3130 Mar 18 05:27	30°♏♏	
min. Earth dist.	3124 Aug 30 01:36	6°♏48'12	4.03312 AU	direct	3130 Apr 24 05:35	27°♏54'59	
direct	3124 Oct 28 03:15	1°♏57'37			3130 May 31 15:35	0°♏	
evening set	3125 Mar 02 13:34	21°♏24'07		evening set	3130 Aug 28 21:57	15°♏46'57	
conjunction	3125 Mar 15 13:04	24°♏31'49	-0°55'10	conjunction	3130 Sep 11 07:10	18°♏41'21	0°52'23
minimum elong	3125 Mar 15 13:03	24°♏31'48	0°55'09	minimum elong	3130 Sep 11 07:08	18°♏41'19	0°52'23
max. Earth dist.	3125 Mar 15 12:33	24°♏31'30	5.98230 AU	max. Earth dist.	3130 Sep 11 13:56	18°♏45'02	6.39428 AU
morning rise	3125 Mar 28 14:47	27°♏40'55		morning rise	3130 Sep 24 14:03	21°♏34'28	
	3125 Apr 07 08:18	0°♏			3130 Nov 04 19:14	0°♏	
retrograde	3125 Aug 07 08:40	18°♏09'38		retrograde	3131 Jan 23 19:12	8°♏37'26	
opposition	3125 Oct 06 07:45	13°♏09'22	-1°32'20	opposition	3131 Mar 25 02:46	3°♏40'59	1°26'30
min. Earth dist.	3125 Oct 05 20:23	13°♏13'09	3.95151 AU	min. Earth dist.	3131 Mar 25 07:07	3°♏39'34	4.43436 AU
direct	3125 Dec 03 15:05	8°♏15'44			3131 Apr 25 22:22	30°♏♏	
evening set	3126 Apr 08 08:32	28°♏02'47		direct	3131 May 26 01:30	28°♏38'14	
	3126 Apr 16 10:29	0°♏			3131 Jun 25 13:48	0°♏	
				evening set	3131 Sep 29 15:46	16°♏09'55	
conjunction	3126 Apr 21 15:27	1°♏15'45	-1°01'11				
minimum elong	3126 Apr 21 15:28	1°♏15'46	1°01'11	conjunction	3131 Oct 12 17:51	18°♏58'58	1°02'50
max. Earth dist.	3126 Apr 22 23:10	1°♏34'59	5.94306 AU	minimum elong	3131 Oct 12 17:51	18°♏58'58	1°02'50
morning rise	3126 May 05 01:36	4°♏30'24		max. Earth dist.	3131 Oct 11 21:06	18°♏47'46	6.45635 AU
	3126 Jun 20 09:50	15°♏		morning rise	3131 Oct 25 17:09	21°♏46'41	
retrograde	3126 Sep 14 09:52	25°♏12'05			3131 Dec 05 04:28	0°♏	
min. Earth dist.	3126 Nov 11 19:44	20°♏18'39	3.96039 AU	retrograde	3132 Feb 22 20:59	8°♏30'18	
opposition	3126 Nov 13 02:05	20°♏08'21	-1°22'14	opposition	3132 Apr 23 11:38	3°♏36'46	1°29'22
direct	3127 Jan 09 22:46	15°♏13'19		min. Earth dist.	3132 Apr 24 09:55	3°♏29'37	4.46062 AU
	3127 Apr 25 01:51	0°♏			3132 May 24 23:21	30°♏♏	
evening set	3127 May 15 23:50	4°♏51'57		direct	3132 Jun 25 03:20	28°♏34'35	
					3132 Jul 26 12:22	0°♏	
conjunction	3127 May 29 14:24	8°♏05'53	-0°43'01		3132 Oct 24 12:09	15°♏	
minimum elong	3127 May 29 14:27	8°♏05'54	0°43'01	evening set	3132 Oct 29 09:23	16°♏02'58	
max. Earth dist.	3127 May 31 20:37	8°♏38'07	5.99857 AU	max. Earth dist.	3132 Nov 09 11:37	18°♏27'20	6.44437 AU
morning rise	3127 Jun 12 07:22	11°♏20'53					
	3127 Sep 21 07:15	0°♏		conjunction	3132 Nov 11 05:44	18°♏50'15	0°56'16

minimum elong	3132 Nov 11 05:46	18°♄50'16	0°56'16		3138 Sep 06 16:07	0°♄	
morning rise	3132 Nov 23 23:43	21°♄36'27		retrograde	3138 Sep 19 11:28	0°♄16'13	
	3133 Jan 03 23:40	0°♄			3138 Oct 02 03:52	30°♄	
retrograde	3133 Mar 24 14:23	8°♄29'23		min. Earth dist.	3138 Nov 16 19:37	25°♄22'34	3.97018 AU
opposition	3133 May 24 10:29	3°♄37'17	1°08'33	opposition	3138 Nov 18 02:07	25°♄12'13	-1°18'03
min. Earth dist.	3133 May 25 20:26	3°♄26'27	4.41177 AU	direct	3139 Jan 14 23:59	20°♄16'52	
	3133 Jun 25 06:47	30°♄			3139 Apr 06 22:01	0°♄	
direct	3133 Jul 26 02:54	28°♄36'24		evening set	3139 May 21 00:59	9°♄51'59	
	3133 Aug 26 00:34	0°♄					
evening set	3133 Nov 28 23:39	16°♄19'01		conjunction	3139 Jun 03 16:15	13°♄05'36	-0°39'04
max. Earth dist.	3133 Dec 09 14:45	18°♄40'19	6.36196 AU	minimum elong	3139 Jun 03 16:17	13°♄05'38	0°39'04
				max. Earth dist.	3139 Jun 05 23:00	13°♄38'02	6.01222 AU
conjunction	3133 Dec 11 16:56	19°♄08'13	0°34'17	morning rise	3139 Jun 17 09:54	16°♄20'14	
minimum elong	3133 Dec 11 16:57	19°♄08'14	0°34'17		3139 Aug 21 02:28	0°♄	
morning rise	3133 Dec 24 08:21	21°♄56'47		retrograde	3139 Oct 25 11:44	6°♄15'39	
	3134 Jan 31 13:42	0°♄		min. Earth dist.	3139 Dec 22 13:49	1°♄22'59	4.07190 AU
retrograde	3134 Apr 25 21:16	9°♄26'41		opposition	3139 Dec 24 01:33	1°♄10'49	-0°33'11
opposition	3134 Jun 25 19:29	4°♄34'29	0°27'48		3140 Jan 01 19:45	30°♄	
min. Earth dist.	3134 Jun 27 07:57	4°♄22'51	4.30009 AU	direct	3140 Feb 20 11:32	26°♄12'36	
	3134 Aug 10 13:44	30°♄			3140 Apr 09 20:52	0°♄	
direct	3134 Aug 26 20:28	29°♄35'39		evening set	3140 Jun 25 23:11	15°♄14'39	
	3134 Sep 12 03:52	0°♄					
evening set	3134 Dec 30 09:10	17°♄48'05		conjunction	3140 Jul 09 17:00	18°♄23'30	-0°04'11
max. Earth dist.	3135 Jan 10 02:39	20°♄15'17	6.22960 AU	minimum elong	3140 Jul 09 17:01	18°♄23'30	0°04'12
				behind sun begin	3140 Jul 09 08:47	18°♄18'48	
conjunction	3135 Jan 12 01:42	20°♄42'16	0°01'38	behind sun end	3140 Jul 10 01:16	18°♄28'13	
minimum elong	3135 Jan 12 01:40	20°♄42'15	0°01'38	max. Earth dist.	3140 Jul 11 19:44	18°♄52'35	6.14198 AU
behind sun begin	3135 Jan 11 17:41	20°♄37'42		morning rise	3140 Jul 23 11:34	21°♄32'23	
behind sun end	3135 Jan 12 09:39	20°♄46'49		asc. node	3140 Aug 23 09:47	28°♄19'49	
morning rise	3135 Jan 24 17:55	23°♄36'32			3140 Aug 31 13:23	0°♄	
desc. node	3135 Jan 29 19:49	24°♄45'49		retrograde	3140 Nov 27 03:36	10°♄19'39	
	3135 Feb 22 15:12	0°♄		opposition	3141 Jan 25 20:15	5°♄16'39	0°20'45
retrograde	3135 May 30 11:28	12°♄06'34		min. Earth dist.	3141 Jan 24 17:21	5°♄25'45	4.21554 AU
opposition	3135 Jul 30 05:15	7°♄12'39	-0°24'03	direct	3141 Mar 26 11:54	0°♄15'48	
min. Earth dist.	3135 Jul 31 09:14	7°♄03'38	4.15518 AU		3141 Jul 14 11:11	15°♄	
direct	3135 Sep 29 01:50	2°♄16'14		evening set	3141 Jul 31 03:55	18°♄38'11	
	3136 Jan 05 11:17	15°♄					
evening set	3136 Feb 01 09:32	21°♄08'11		conjunction	3141 Aug 13 18:48	21°♄39'21	0°30'42
max. Earth dist.	3136 Feb 13 01:28	23°♄53'22	6.08466 AU	minimum elong	3141 Aug 13 18:47	21°♄39'20	0°30'42
				max. Earth dist.	3141 Aug 15 02:30	21°♄56'57	6.28788 AU
conjunction	3136 Feb 14 04:29	24°♄09'22	-0°33'04	morning rise	3141 Aug 27 08:22	24°♄39'37	
minimum elong	3136 Feb 14 04:27	24°♄09'21	0°33'05		3141 Sep 21 05:21	0°♄	
morning rise	3136 Feb 27 00:24	27°♄11'22		retrograde	3141 Dec 28 16:07	12°♄22'41	
	3136 Mar 10 01:42	0°♄		opposition	3142 Feb 26 16:21	7°♄23'09	1°04'45
retrograde	3136 Jul 05 08:24	16°♄50'50		min. Earth dist.	3142 Feb 26 04:13	7°♄27'10	4.35152 AU
opposition	3136 Sep 03 16:52	11°♄53'53	-1°11'06	direct	3142 Apr 28 15:08	2°♄20'48	
min. Earth dist.	3136 Sep 04 01:45	11°♄50'58	4.02261 AU	evening set	3142 Sep 02 09:25	20°♄10'23	
direct	3136 Nov 02 01:48	6°♄59'36					
evening set	3137 Mar 07 12:11	26°♄28'18		conjunction	3142 Sep 15 17:36	23°♄04'00	0°54'45
				minimum elong	3142 Sep 15 17:34	23°♄03'59	0°54'45
conjunction	3137 Mar 20 12:20	29°♄36'36	-0°57'21	max. Earth dist.	3142 Sep 15 19:59	23°♄05'18	6.40351 AU
minimum elong	3137 Mar 20 12:19	29°♄36'35	0°57'21	morning rise	3142 Sep 28 23:32	25°♄56'21	
max. Earth dist.	3137 Mar 20 14:59	29°♄38'12	5.97639 AU		3142 Oct 18 03:24	0°♄	
	3137 Mar 22 03:03	0°♄		retrograde	3143 Jan 28 00:49	12°♄56'02	
morning rise	3137 Apr 02 15:09	2°♄46'25		opposition	3143 Mar 29 08:12	8°♄00'06	1°28'16
retrograde	3137 Aug 12 12:20	23°♄18'04		min. Earth dist.	3143 Mar 29 15:39	7°♄57'40	4.43983 AU
opposition	3137 Oct 11 11:42	18°♄17'13	-1°33'08	direct	3143 May 30 10:44	2°♄57'24	
min. Earth dist.	3137 Oct 10 21:12	18°♄22'04	3.95099 AU	evening set	3143 Oct 03 23:33	20°♄28'18	
direct	3137 Dec 08 16:52	13°♄23'28		max. Earth dist.	3143 Oct 16 01:05	23°♄04'10	6.45757 AU
	3138 Mar 31 03:25	0°♄					
evening set	3138 Apr 13 09:58	3°♄09'42		conjunction	3143 Oct 17 00:50	23°♄16'59	1°02'52
				minimum elong	3143 Oct 17 00:50	23°♄16'59	1°02'52
conjunction	3138 Apr 26 18:05	6°♄22'57	-1°00'02	morning rise	3143 Oct 29 23:18	26°♄04'21	
minimum elong	3138 Apr 26 18:06	6°♄22'58	1°00'01		3143 Nov 17 14:12	0°♄	
max. Earth dist.	3138 Apr 28 06:21	6°♄44'54	5.94798 AU	retrograde	3144 Feb 27 01:50	12°♄47'55	
morning rise	3138 May 10 05:06	9°♄37'47		opposition	3144 Apr 27 18:03	7°♄54'37	1°27'46
	3138 Jun 02 02:00	15°♄		min. Earth dist.	3144 Apr 28 17:26	7°♄47'06	4.45766 AU

direct	3144 Jun 29 10:08	2°♄52'34		minimum elong	3150 May 02 00:00	11°♄38'04	0°58'23
	3144 Oct 08 02:25	15°♄		max. Earth dist.	3150 May 03 15:06	12°♄01'40	5.94959 AU
evening set	3144 Nov 02 15:27	20°♄21'52		morning rise	3150 May 15 12:17	14°♄53'20	
max. Earth dist.	3144 Nov 13 16:58	22°♄46'07	6.43733 AU		3150 May 15 23:24	15°♄	
					3150 Jul 25 21:15	0°♄	
conjunction	3144 Nov 15 11:18	23°♄09'12	0°54'00	retrograde	3150 Sep 24 14:09	5°♄29'15	
minimum elong	3144 Nov 15 11:20	23°♄09'13	0°54'01	min. Earth dist.	3150 Nov 21 20:01	0°♄36'06	3.97782 AU
morning rise	3144 Nov 28 04:39	25°♄55'28		opposition	3150 Nov 23 04:48	0°♄24'58	-1°13'09
	3144 Dec 17 07:48	0°♄			3150 Nov 26 06:22	30°♄♄	
retrograde	3145 Mar 28 23:08	12°♄51'38		direct	3151 Jan 20 01:43	25°♄29'16	
opposition	3145 May 28 20:19	7°♄59'36	1°03'52		3151 Mar 14 12:54	0°♄	
min. Earth dist.	3145 May 30 07:11	7°♄48'31	4.40073 AU	evening set	3151 May 26 06:11	15°♄01'44	
direct	3145 Jul 30 12:12	2°♄58'59					
evening set	3145 Dec 03 06:51	20°♄44'20		conjunction	3151 Jun 08 22:10	18°♄15'05	-0°34'41
max. Earth dist.	3145 Dec 13 19:57	23°♄05'06	6.34747 AU	minimum elong	3151 Jun 08 22:12	18°♄15'06	0°34'40
				max. Earth dist.	3151 Jun 11 04:57	18°♄47'26	6.02516 AU
conjunction	3145 Dec 15 23:43	23°♄33'59	0°30'11	morning rise	3151 Jun 22 16:23	21°♄29'20	
minimum elong	3145 Dec 15 23:44	23°♄33'59	0°30'11		3151 Jul 30 18:03	0°♄	
morning rise	3145 Dec 28 15:11	26°♄23'07		retrograde	3151 Oct 30 08:43	11°♄16'57	
	3146 Jan 14 03:30	0°♄		min. Earth dist.	3151 Dec 27 11:33	6°♄24'02	4.08863 AU
retrograde	3146 Apr 30 12:52	13°♄59'32		opposition	3151 Dec 28 22:17	6°♄12'12	-0°25'38
opposition	3146 Jun 30 10:44	9°♄07'09	0°20'57	direct	3152 Feb 25 12:35	1°♄13'34	
min. Earth dist.	3146 Jul 01 22:48	8°♄55'38	4.28268 AU	evening set	3152 Jul 01 00:23	20°♄10'43	
direct	3146 Aug 31 09:04	4°♄08'33		asc. node	3152 Jul 03 01:42	20°♄38'44	
desc. node	3146 Dec 10 00:34	16°♄54'59					
evening set	3147 Jan 03 20:03	22°♄25'35		conjunction	3152 Jul 14 18:16	23°♄18'41	0°01'07
max. Earth dist.	3147 Jan 14 16:25	24°♄55'00	6.21069 AU	minimum elong	3152 Jul 14 18:16	23°♄18'42	0°01'07
				behind sun begin	3152 Jul 14 09:53	23°♄13'56	
conjunction	3147 Jan 16 12:52	25°♄20'36	-0°03'26	behind sun end	3152 Jul 15 02:39	23°♄23'27	
minimum elong	3147 Jan 16 12:51	25°♄20'35	0°03'25	max. Earth dist.	3152 Jul 16 21:03	23°♄47'40	6.16141 AU
behind sun begin	3147 Jan 16 04:55	25°♄16'03		morning rise	3152 Jul 28 12:20	26°♄26'29	
behind sun end	3147 Jan 16 20:47	25°♄25'08			3152 Aug 13 11:18	0°♄	
morning rise	3147 Jan 29 05:16	28°♄15'45			3152 Nov 25 03:24	15°♄	
	3147 Feb 05 20:15	0°♄		retrograde	3152 Dec 01 16:25	15°♄04'13	
	3147 Apr 29 23:52	15°♄			3152 Dec 08 05:05	15°♄♄	
retrograde	3147 Jun 04 10:18	16°♄54'43		min. Earth dist.	3153 Jan 29 07:46	10°♄10'31	4.23611 AU
	3147 Jul 10 01:55	15°♄		opposition	3153 Jan 30 10:03	10°♄01'40	0°27'52
opposition	3147 Aug 04 03:09	12°♄00'30	-0°31'17	direct	3153 Mar 31 05:24	5°♄00'34	
min. Earth dist.	3147 Aug 05 05:17	11°♄52'04	4.13609 AU		3153 Jun 26 10:27	15°♄	
direct	3147 Oct 03 18:36	7°♄04'24		evening set	3153 Aug 04 22:52	23°♄17'29	
	3147 Dec 17 12:16	15°♄					
evening set	3148 Feb 06 02:41	26°♄01'37		conjunction	3153 Aug 18 12:46	26°♄17'25	0°34'53
				minimum elong	3153 Aug 18 12:44	26°♄17'24	0°34'52
conjunction	3148 Feb 18 22:00	29°♄03'46	-0°37'20	max. Earth dist.	3153 Aug 19 16:02	26°♄32'29	6.30814 AU
minimum elong	3148 Feb 18 21:58	29°♄03'45	0°37'20	morning rise	3153 Sep 01 01:26	29°♄16'25	
max. Earth dist.	3148 Feb 17 21:06	28°♄48'58	6.06693 AU		3153 Sep 04 09:07	0°♄	
	3148 Feb 22 20:38	0°♄		retrograde	3154 Jan 01 23:56	16°♄51'11	
morning rise	3148 Mar 02 18:49	2°♄06'54		opposition	3154 Mar 03 00:37	11°♄52'07	1°09'21
retrograde	3148 Jul 10 12:29	21°♄55'13		min. Earth dist.	3154 Mar 02 15:28	11°♄55'08	4.37011 AU
opposition	3148 Sep 08 20:32	16°♄57'42	-1°16'02	direct	3154 May 03 04:52	6°♄49'36	
min. Earth dist.	3148 Sep 09 02:05	16°♄55'52	4.00790 AU	evening set	3154 Sep 06 21:02	24°♄34'25	
direct	3148 Nov 07 00:54	12°♄03'32					
	3149 Mar 05 19:05	0°♄		conjunction	3154 Sep 20 04:19	27°♄27'01	0°56'52
evening set	3149 Mar 12 12:04	1°♄36'21		minimum elong	3154 Sep 20 04:18	27°♄27'01	0°56'52
				max. Earth dist.	3154 Sep 20 04:32	27°♄27'08	6.41905 AU
conjunction	3149 Mar 25 13:22	4°♄45'35	-0°59'10		3154 Oct 01 23:02	0°♄	
minimum elong	3149 Mar 25 13:21	4°♄45'34	0°59'10	morning rise	3154 Oct 03 08:57	0°♄18'16	
max. Earth dist.	3149 Mar 25 21:42	4°♄50'38	5.96618 AU	retrograde	3155 Feb 01 02:52	17°♄12'34	
morning rise	3149 Apr 07 17:06	7°♄56'19		opposition	3155 Apr 02 13:01	12°♄17'00	1°29'34
retrograde	3149 Aug 17 20:56	28°♄32'27		min. Earth dist.	3155 Apr 02 21:50	12°♄14'08	4.45143 AU
opposition	3149 Oct 16 17:24	23°♄31'08	-1°33'17	direct	3155 Jun 03 17:48	7°♄14'19	
min. Earth dist.	3149 Oct 16 01:11	23°♄36'34	3.94656 AU	evening set	3155 Oct 08 05:38	24°♄42'15	
direct	3149 Dec 13 21:03	18°♄37'15		max. Earth dist.	3155 Oct 20 02:42	27°♄15'38	6.46426 AU
	3150 Mar 13 04:37	0°♄					
evening set	3150 Apr 18 14:49	8°♄24'21		conjunction	3155 Oct 21 05:50	27°♄30'17	1°02'36
				minimum elong	3155 Oct 21 05:50	27°♄30'17	1°02'35
conjunction	3150 May 01 23:59	11°♄38'03	-0°58'23		3155 Nov 01 19:40	0°♄	

morning rise	3155 Nov 03 03:24	0°♄17'01			3161 Oct 13 03:16	30°♄♂	
	3156 Jan 25 23:22	15°♄		min. Earth dist.	3161 Oct 21 04:14	28°♄55'47	3.93913 AU
retrograde	3156 Mar 02 05:26	16°♄58'58		opposition	3161 Oct 22 00:26	28°♄48'59	-1°32'39
	3156 Apr 07 14:51	15°♄♄		direct	3161 Dec 19 00:03	23°♄55'02	
opposition	3156 May 01 22:21	12°♄05'56	1°25'43		3162 Feb 19 13:37	0°♄	
min. Earth dist.	3156 May 03 00:42	11°♄57'30	4.45893 AU	evening set	3162 Apr 23 21:59	13°♄44'13	
direct	3156 Jul 03 17:00	7°♄03'58			3162 Apr 29 04:00	15°♄	
	3156 Sep 20 08:25	15°♄					
evening set	3156 Nov 06 18:40	24°♄32'55		conjunction	3162 May 07 08:24	16°♄58'31	-0°56'13
max. Earth dist.	3156 Nov 17 16:12	26°♄55'13	6.43284 AU	minimum elong	3162 May 07 08:26	16°♄58'32	0°56'14
				max. Earth dist.	3162 May 09 03:23	17°♄24'27	5.94979 AU
conjunction	3156 Nov 19 13:54	27°♄20'10	0°51'32	morning rise	3162 May 20 21:52	20°♄14'19	
minimum elong	3156 Nov 19 13:56	27°♄20'11	0°51'32		3162 Jul 02 22:39	0°♄	
	3156 Dec 01 18:57	0°♄♂		retrograde	3162 Sep 29 19:49	10°♄♂47'58	
morning rise	3156 Dec 02 06:48	0°♄♂06'26		min. Earth dist.	3162 Nov 26 23:48	5°♄♂54'55	3.98542 AU
retrograde	3157 Apr 02 04:48	17°♄♂05'17		opposition	3162 Nov 28 09:40	5°♄♂43'23	-1°07'34
opposition	3157 Jun 02 02:59	12°♄♂13'15	0°58'58	direct	3163 Jan 25 08:04	0°♄♂47'19	
min. Earth dist.	3157 Jun 03 14:37	12°♄♂01'53	4.39060 AU	evening set	3163 May 31 13:48	20°♄♂16'54	
direct	3157 Aug 03 17:12	7°♄♂12'45					
evening set	3157 Dec 07 10:41	25°♄♂00'51		conjunction	3163 Jun 14 06:35	23°♄♂29'56	-0°29'57
max. Earth dist.	3157 Dec 18 00:05	27°♄♂22'14	6.33238 AU	minimum elong	3163 Jun 14 06:37	23°♄♂29'58	0°29'57
				max. Earth dist.	3163 Jun 16 16:25	24°♄♂03'56	6.03945 AU
conjunction	3157 Dec 20 03:28	27°♄♂51'01	0°26'04	morning rise	3163 Jun 28 01:07	26°♄♂43'40	
minimum elong	3157 Dec 20 03:30	27°♄♂51'02	0°26'04		3163 Jul 12 06:19	0°♄♂	
	3157 Dec 29 17:46	0°♄♂		retrograde	3163 Nov 04 07:03	16°♄♂22'25	
morning rise	3158 Jan 01 18:45	0°♄♂40'43		min. Earth dist.	3164 Jan 01 09:21	11°♄♂29'41	4.10768 AU
retrograde	3158 May 05 01:56	18°♄♂24'12		opposition	3164 Jan 02 20:19	11°♄♂17'48	-0°17'48
opposition	3158 Jul 04 23:08	13°♄♂31'43	0°14'10	direct	3164 Mar 01 13:47	6°♄♂18'46	
min. Earth dist.	3158 Jul 06 11:41	13°♄♂20'02	4.26329 AU	asc. node	3164 May 11 15:24	13°♄♂34'39	
direct	3158 Sep 04 18:10	8°♄♂33'24		evening set	3164 Jul 06 03:07	25°♄♂10'05	
desc. node	3158 Oct 21 21:41	11°♄♂49'18					
evening set	3159 Jan 08 04:30	26°♄♂56'00		conjunction	3164 Jul 19 20:34	28°♄♂16'55	0°06'23
max. Earth dist.	3159 Jan 19 00:30	29°♄♂26'01	6.18844 AU	minimum elong	3164 Jul 19 20:34	28°♄♂16'55	0°06'24
				behind sun begin	3164 Jul 19 12:43	28°♄♂12'29	
conjunction	3159 Jan 20 21:22	29°♄♂51'59	-0°08'12	behind sun end	3164 Jul 20 04:25	28°♄♂21'21	
minimum elong	3159 Jan 20 21:22	29°♄♂51'59	0°08'12	max. Earth dist.	3164 Jul 21 20:14	28°♄♂43'59	6.18321 AU
behind sun begin	3159 Jan 20 14:16	29°♄♂47'54			3164 Jul 27 10:18	0°♄♂	
behind sun end	3159 Jan 21 04:29	29°♄♂56'05		morning rise	3164 Aug 02 14:17	1°♄♂23'31	
	3159 Jan 21 11:14	0°♄♂			3164 Oct 09 23:15	15°♄♂	
morning rise	3159 Feb 02 14:24	2°♄♂48'18		retrograde	3164 Dec 06 05:52	19°♄♂50'59	
	3159 Apr 01 18:55	15°♄♂			3165 Feb 02 15:13	15°♄♂♄	
retrograde	3159 Jun 09 07:54	21°♄♂37'53		min. Earth dist.	3165 Feb 03 00:26	14°♄♂56'54	4.25823 AU
opposition	3159 Aug 08 23:14	16°♄♂43'16	-0°38'12	opposition	3165 Feb 04 00:36	14°♄♂48'46	0°34'50
min. Earth dist.	3159 Aug 09 23:14	16°♄♂35'30	4.11255 AU	direct	3165 Apr 05 01:02	9°♄♂47'20	
	3159 Aug 22 13:26	15°♄♂			3165 Jun 04 11:42	15°♄♂	
direct	3159 Oct 08 09:11	11°♄♂47'26		evening set	3165 Aug 09 17:45	27°♄♂58'18	
	3159 Nov 23 01:57	15°♄♂			3165 Aug 18 23:25	0°♄♂	
	3160 Feb 07 02:54	0°♄♂					
evening set	3160 Feb 10 18:57	0°♄♂52'00		conjunction	3165 Aug 23 06:56	0°♄♂57'01	0°38'53
				minimum elong	3165 Aug 23 06:54	0°♄♂57'00	0°38'53
conjunction	3160 Feb 23 15:08	3°♄♂55'28	-0°41'17	max. Earth dist.	3165 Aug 24 07:57	1°♄♂10'48	6.32871 AU
minimum elong	3160 Feb 23 15:06	3°♄♂55'27	0°41'16	morning rise	3165 Sep 05 18:21	3°♄♂54'40	
max. Earth dist.	3160 Feb 22 18:45	3°♄♂43'18	6.04433 AU	retrograde	3166 Jan 06 07:11	21°♄♂21'28	
morning rise	3160 Mar 07 12:41	6°♄♂59'58		opposition	3166 Mar 07 09:31	16°♄♂22'55	1°13'37
retrograde	3160 Jul 15 19:21	26°♄♂59'07		min. Earth dist.	3166 Mar 07 02:22	16°♄♂25'17	4.38745 AU
opposition	3160 Sep 14 00:03	22°♄♂01'11	-1°20'24	direct	3166 May 07 17:23	11°♄♂20'20	
min. Earth dist.	3160 Sep 14 03:37	22°♄♂00'01	3.98852 AU	evening set	3166 Sep 11 09:17	29°♄♂01'02	
direct	3160 Nov 11 23:49	17°♄♂07'14			3166 Sep 15 22:53	0°♄♂	
	3161 Feb 16 14:47	0°♄♂					
evening set	3161 Mar 17 13:16	6°♄♂46'15		conjunction	3166 Sep 24 15:19	1°♄♂52'39	0°58'42
				minimum elong	3166 Sep 24 15:18	1°♄♂52'38	0°58'41
conjunction	3161 Mar 30 15:36	9°♄♂56'40	-1°00'30	max. Earth dist.	3166 Sep 24 10:01	1°♄♂49'47	6.43170 AU
minimum elong	3161 Mar 30 15:36	9°♄♂56'40	1°00'30	morning rise	3166 Oct 07 18:59	4°♄♂42'59	
max. Earth dist.	3161 Mar 31 03:26	10°♄♂03'51	5.95181 AU	retrograde	3167 Feb 05 09:04	21°♄♂33'13	
morning rise	3161 Apr 12 20:49	13°♄♂08'43		opposition	3167 Apr 06 19:28	16°♄♂38'04	1°30'27
	3161 Jul 03 23:48	0°♄♂		min. Earth dist.	3167 Apr 07 07:53	16°♄♂34'03	4.45874 AU
retrograde	3161 Aug 23 05:20	3°♄♂50'48		direct	3167 Jun 08 03:49	11°♄♂35'23	

evening set	3167 Oct 12 13:18	29°♄01'53		conjunction	3173 Apr 04 22:28	15°♃18'09	-1°01'25
	3167 Oct 17 01:37	0°♄		minimum elong	3173 Apr 04 22:28	15°♃18'09	1°01'24
max. Earth dist.	3167 Oct 24 07:03	1°♄33'29	6.46562 AU	max. Earth dist.	3173 Apr 05 16:03	15°♃28'50	5.94554 AU
				morning rise	3173 Apr 18 04:45	18°♃30'59	
conjunction	3167 Oct 25 12:49	1°♄49'33	1°02'00		3173 Jun 08 06:56	0°♄	
minimum elong	3167 Oct 25 12:49	1°♄49'33	1°02'00	retrograde	3173 Aug 28 15:37	9°♄15'06	
morning rise	3167 Nov 07 09:26	4°♄35'55		min. Earth dist.	3173 Oct 26 11:08	4°♄20'23	3.94078 AU
	3167 Dec 30 03:42	15°♄		opposition	3173 Oct 27 09:47	4°♄12'44	-1°31'15
retrograde	3168 Mar 06 11:02	21°♄18'09			3173 Dec 04 07:03	30°♄	
opposition	3168 May 06 05:43	16°♄25'20	1°23'14	direct	3173 Dec 24 08:46	29°♃18'35	
min. Earth dist.	3168 May 07 09:08	16°♄16'33	4.45441 AU		3174 Jan 13 09:25	0°♄	
	3168 May 17 12:04	15°♄			3174 Apr 11 21:49	15°♄	
direct	3168 Jul 07 23:34	11°♄23'31		evening set	3174 Apr 29 06:36	19°♄06'06	
	3168 Aug 28 01:40	15°♄					
evening set	3168 Nov 11 01:12	28°♄53'53		conjunction	3174 May 12 18:10	22°♄20'27	-0°53'37
	3168 Nov 16 02:42	0°♄		minimum elong	3174 May 12 18:12	22°♄20'28	0°53'37
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				morning rise	3174 May 26 08:30	25°♄36'12	
conjunction	3168 Nov 23 19:52	1°♄41'19	0°48'42		3174 Jun 14 02:21	0°♄	
minimum elong	3168 Nov 23 19:54	1°♄41'20	0°48'41	retrograde	3174 Oct 04 23:59	16°♄03'19	
morning rise	3168 Dec 06 12:22	4°♄27'50		min. Earth dist.	3174 Dec 02 01:57	11°♄10'31	4.00154 AU
retrograde	3169 Apr 06 17:32	21°♄31'20		opposition	3174 Dec 03 13:07	10°♄58'33	-1°01'31
opposition	3169 Jun 06 14:54	16°♄39'21	0°53'33	direct	3175 Jan 30 13:12	6°♄02'05	
min. Earth dist.	3169 Jun 08 04:20	16°♄27'26	4.37528 AU	evening set	3175 Jun 05 19:33	25°♄25'50	
direct	3169 Aug 08 04:06	11°♄39'06					
evening set	3169 Dec 11 19:40	29°♄31'23		conjunction	3175 Jun 19 12:33	28°♄38'02	-0°25'06
	3169 Dec 13 22:55	0°♄		minimum elong	3175 Jun 19 12:34	28°♄38'03	0°25'06
max. Earth dist.	3169 Dec 22 07:34	1°♄52'35	6.31301 AU	max. Earth dist.	3175 Jun 21 21:11	29°♄11'08	6.06042 AU
					3175 Jun 25 08:50	0°♄	
conjunction	3169 Dec 24 12:17	2°♄22'14	0°21'34	morning rise	3175 Jul 03 07:25	1°♄50'51	
minimum elong	3169 Dec 24 12:18	2°♄22'15	0°21'35	retrograde	3175 Nov 09 00:05	21°♄18'42	
morning rise	3170 Jan 06 03:43	5°♄12'46		min. Earth dist.	3176 Jan 06 04:54	16°♄25'51	4.13112 AU
retrograde	3170 May 09 20:59	23°♄04'50		opposition	3176 Jan 07 15:03	16°♄14'14	-0°10'07
opposition	3170 Jul 09 17:56	18°♄12'06	0°06'53	direct	3176 Mar 06 12:47	11°♄14'45	
min. Earth dist.	3170 Jul 11 04:54	18°♄00'54	4.24110 AU	asc. node	3176 Mar 21 13:37	11°♄37'15	
desc. node	3170 Aug 31 04:56	13°♄21'57		evening set	3176 Jul 11 01:46	29°♄59'07	
direct	3170 Sep 09 07:52	13°♄14'05			3176 Jul 11 03:20	0°♄	
	3171 Jan 05 07:33	0°♄					
evening set	3171 Jan 12 19:15	1°♄42'59		conjunction	3176 Jul 24 18:56	3°♄04'44	0°11'24
max. Earth dist.	3171 Jan 23 19:15	4°♄16'02	6.16542 AU	minimum elong	3176 Jul 24 18:55	3°♄04'44	0°11'24
				behind sun begin	3176 Jul 24 12:58	3°♄01'23	
conjunction	3171 Jan 25 12:32	4°♄40'04	-0°13'13	behind sun end	3176 Jul 25 00:52	3°♄08'05	
minimum elong	3171 Jan 25 12:31	4°♄40'03	0°13'14	max. Earth dist.	3176 Jul 26 16:39	3°♄30'34	6.20717 AU
behind sun begin	3171 Jan 25 07:42	4°♄37'16		morning rise	3176 Aug 07 11:47	6°♄09'56	
behind sun end	3171 Jan 25 17:20	4°♄42'50			3176 Sep 18 03:20	15°♄	
morning rise	3171 Feb 07 05:53	7°♄37'31		retrograde	3176 Dec 10 16:16	24°♄27'05	
	3171 Mar 12 07:46	15°♄		opposition	3177 Feb 08 11:27	19°♄25'23	0°41'19
retrograde	3171 Jun 14 13:08	26°♄37'50		min. Earth dist.	3177 Feb 07 13:48	19°♄32'38	4.28052 AU
opposition	3171 Aug 14 02:18	21°♄42'52	-0°45'18		3177 Mar 21 06:59	15°♄	
min. Earth dist.	3171 Aug 15 00:39	21°♄35'38	4.09061 AU	direct	3177 Apr 09 16:46	14°♄23'45	
direct	3171 Oct 13 07:43	16°♄47'23			3177 Apr 29 07:10	15°♄	
	3172 Jan 20 22:06	0°♄			3177 Aug 02 20:59	0°♄	
evening set	3172 Feb 15 17:34	5°♄58'18		evening set	3177 Aug 14 09:00	2°♄29'08	
conjunction	3172 Feb 28 14:23	9°♄02'54	-0°45'09	conjunction	3177 Aug 27 21:08	5°♄26'40	0°42'31
minimum elong	3172 Feb 28 14:21	9°♄02'52	0°45'08	minimum elong	3177 Aug 27 21:06	5°♄26'38	0°42'31
max. Earth dist.	3172 Feb 27 21:16	8°♄52'39	6.02555 AU	max. Earth dist.	3177 Aug 28 16:45	5°♄37'25	6.34743 AU
morning rise	3172 Mar 12 13:01	12°♄08'40		morning rise	3177 Sep 10 07:37	8°♄23'07	
	3172 Jun 12 20:18	0°♄		retrograde	3178 Jan 10 11:46	25°♄43'07	
retrograde	3172 Jul 21 04:55	2°♄16'45		opposition	3178 Mar 11 15:24	20°♄45'04	1°17'20
	3172 Aug 28 18:30	30°♄		min. Earth dist.	3178 Mar 11 11:26	20°♄46'22	4.40158 AU
opposition	3172 Sep 19 09:01	27°♄18'17	-1°24'20	direct	3178 May 12 03:04	15°♄42'23	
min. Earth dist.	3172 Sep 19 07:54	27°♄18'39	3.97529 AU		3178 Aug 30 23:44	0°♄	
direct	3172 Nov 17 03:35	22°♄24'29		evening set	3178 Sep 15 18:27	3°♄20'15	
	3173 Jan 27 07:35	0°♄					
evening set	3173 Mar 22 19:02	12°♄06'56		conjunction	3178 Sep 28 23:41	6°♄11'11	1°00'10
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


























































































































max. Earth dist.	3178 Sep 28 15:25	6°♌06'43	6.44018 AU	direct	3184 Nov 22 09:36	27°♏42'18	
morning rise	3178 Oct 12 02:08	9°♌00'45			3184 Dec 29 18:38	0°♏	
retrograde	3179 Feb 09 12:26	25°♌48'36		evening set	3185 Mar 28 00:13	17°♏26'18	
opposition	3179 Apr 11 00:15	20°♌53'55	1°30'52				
min. Earth dist.	3179 Apr 11 14:43	20°♌49'15	4.46130 AU	conjunction	3185 Apr 10 04:47	20°♏38'06	-1°01'49
direct	3179 Jun 12 09:50	15°♌51'23		minimum elong	3185 Apr 10 04:47	20°♏38'06	1°01'49
	3179 Oct 01 04:42	0°♌		max. Earth dist.	3185 Apr 11 03:54	20°♏52'08	5.94400 AU
evening set	3179 Oct 16 19:36	3°♌18'01		morning rise	3185 Apr 23 12:12	23°♏51'30	
max. Earth dist.	3179 Oct 28 07:53	5°♌46'57	6.46196 AU		3185 May 19 15:55	0°♏	
				retrograde	3185 Sep 02 23:31	14°♏35'21	
conjunction	3179 Oct 29 18:11	6°♌05'30	1°01'06	opposition	3185 Nov 01 16:48	9°♏32'33	-1°29'04
minimum elong	3179 Oct 29 18:12	6°♌05'31	1°01'06	min. Earth dist.	3185 Oct 31 15:34	9°♏41'04	3.94633 AU
morning rise	3179 Nov 11 14:15	8°♌51'47		direct	3185 Dec 29 14:02	4°♏38'12	
	3179 Dec 11 02:34	15°♌			3186 Mar 24 06:47	15°♏	
retrograde	3180 Mar 10 19:36	25°♌36'10		evening set	3186 May 04 13:08	24°♏22'53	
opposition	3180 May 10 13:12	20°♌43'37	1°20'21				
min. Earth dist.	3180 May 11 19:26	20°♌33'56	4.44488 AU	conjunction	3186 May 18 01:29	27°♏37'06	-0°50'38
direct	3180 Jul 12 07:43	15°♌41'59		minimum elong	3186 May 18 01:32	27°♏37'07	0°50'37
	3180 Oct 31 03:46	0°♌		max. Earth dist.	3186 May 20 02:25	28°♏06'25	5.97098 AU
evening set	3180 Nov 15 07:52	3°♌15'26			3186 May 28 00:20	0°♏	
max. Earth dist.	3180 Nov 26 01:36	5°♌36'34	6.40805 AU	morning rise	3186 May 31 16:52	0°♏52'42	
				retrograde	3186 Oct 09 23:28	21°♏12'39	
conjunction	3180 Nov 28 02:16	6°♌03'18	0°45'36	min. Earth dist.	3186 Dec 07 01:36	16°♏20'00	4.01813 AU
minimum elong	3180 Nov 28 02:18	6°♌03'19	0°45'36	opposition	3186 Dec 08 13:36	16°♏07'44	-0°55'06
morning rise	3180 Dec 10 18:25	8°♌50'18		direct	3187 Feb 04 15:59	11°♏10'48	
retrograde	3181 Apr 11 05:53	26°♌00'02			3187 Jun 08 20:31	0°♏	
opposition	3181 Jun 11 03:53	21°♌08'04	0°47'49	evening set	3187 Jun 10 22:43	0°♏29'01	
min. Earth dist.	3181 Jun 12 16:42	20°♌56'20	4.35649 AU				
direct	3181 Aug 12 12:55	16°♌08'10		conjunction	3187 Jun 24 16:11	3°♏40'28	-0°20'09
	3181 Nov 27 14:47	0°♏		minimum elong	3187 Jun 24 16:13	3°♏40'28	0°20'09
evening set	3181 Dec 16 06:03	4°♏05'50		max. Earth dist.	3187 Jun 27 00:49	4°♏13'25	6.08047 AU
max. Earth dist.	3181 Dec 26 19:35	6°♏28'39	6.29166 AU	morning rise	3187 Jul 08 10:59	6°♏52'20	
				retrograde	3187 Nov 13 17:00	26°♏10'01	
conjunction	3181 Dec 28 22:37	6°♏57'32	0°16'55	min. Earth dist.	3188 Jan 10 23:21	21°♏16'46	4.15240 AU
minimum elong	3181 Dec 28 22:38	6°♏57'32	0°16'56	opposition	3188 Jan 12 07:31	21°♏05'51	-0°02'31
morning rise	3182 Jan 10 14:10	9°♏48'59		asc. node	3188 Jan 30 17:21	18°♏42'28	
retrograde	3182 May 14 20:09	27°♏50'28		direct	3188 Mar 11 09:40	16°♏06'01	
desc. node	3182 Jul 10 11:19	23°♏29'25			3188 Jun 24 08:27	0°♏	
opposition	3182 Jul 14 15:01	22°♏57'33	-0°00'33	evening set	3188 Jul 15 22:52	4°♏44'28	
min. Earth dist.	3182 Jul 16 01:30	22°♏46'30	4.21856 AU				
direct	3182 Sep 14 01:35	17°♏59'58		conjunction	3188 Jul 29 15:32	7°♏49'00	0°16'17
	3182 Dec 19 01:44	0°♏		minimum elong	3188 Jul 29 15:31	7°♏48'59	0°16'17
evening set	3183 Jan 17 11:45	6°♏35'07		max. Earth dist.	3188 Jul 31 09:45	8°♏12'43	6.22789 AU
max. Earth dist.	3183 Jan 28 14:21	9°♏10'27	6.14370 AU	morning rise	3188 Aug 12 07:50	10°♏53'00	
					3188 Aug 31 02:53	15°♏	
conjunction	3183 Jan 30 05:20	9°♏33'15	-0°18'13	retrograde	3188 Dec 14 23:47	29°♏01'11	
minimum elong	3183 Jan 30 05:19	9°♏33'14	0°18'12	opposition	3189 Feb 12 21:15	23°♏59'55	0°47'29
morning rise	3183 Feb 11 23:21	12°♏31'53		min. Earth dist.	3189 Feb 12 01:29	24°♏06'32	4.29910 AU
	3183 Feb 22 16:12	15°♏		direct	3189 Apr 14 06:22	18°♏58'02	
	3183 May 17 11:22	0°♏			3189 Jul 16 15:28	0°♏	
retrograde	3183 Jun 19 17:28	1°♏42'22		evening set	3189 Aug 18 23:27	6°♏59'05	
	3183 Jul 23 04:00	30°♏					
opposition	3183 Aug 19 06:48	26°♏46'57	-0°52'07	conjunction	3189 Sep 01 10:46	9°♏55'37	0°45'53
min. Earth dist.	3183 Aug 20 00:59	26°♏41'03	4.07174 AU	minimum elong	3189 Sep 01 10:44	9°♏55'36	0°45'53
direct	3183 Oct 18 06:14	21°♏51'50		max. Earth dist.	3189 Sep 02 02:35	10°♏04'16	6.36256 AU
	3184 Jan 01 09:08	0°♏		morning rise	3189 Sep 14 20:06	12°♏51'00	
evening set	3184 Feb 20 17:21	11°♏07'49			3190 Jan 07 05:12	0°♏	
				retrograde	3190 Jan 14 17:33	0°♏05'26	
conjunction	3184 Mar 04 14:54	14°♏13'22	-0°48'41		3190 Jan 22 05:02	30°♏	
minimum elong	3184 Mar 04 14:52	14°♏13'21	0°48'41	opposition	3190 Mar 15 21:46	25°♏07'54	1°20'39
max. Earth dist.	3184 Mar 04 03:26	14°♏06'29	6.01124 AU	min. Earth dist.	3190 Mar 15 20:46	25°♏08'14	4.41230 AU
morning rise	3184 Mar 17 14:22	17°♏20'10		direct	3190 May 16 13:28	20°♏05'12	
	3184 May 14 12:50	0°♏			3190 Aug 13 14:24	0°♏	
retrograde	3184 Jul 26 15:49	7°♏35'08		evening set	3190 Sep 20 04:06	7°♏41'01	
opposition	3184 Sep 24 17:39	2°♏36'03	-1°27'33				
min. Earth dist.	3184 Sep 24 13:44	2°♏37'21	3.96703 AU	conjunction	3190 Oct 03 08:18	10°♏31'21	1°01'18
	3184 Oct 15 10:51	30°♏		minimum elong	3190 Oct 03 08:17	10°♏31'20	1°01'18




































































































































































































max. Earth dist.	3190 Oct 02 18:52	10° $\Omega$ 24'06	6.44558 AU	minimum elong	3196 Mar 09 13:31	19° $\Upsilon$ 17'47	0°51'44
morning rise	3190 Oct 16 09:55	13° $\Omega$ 20'21		max. Earth dist.	3196 Mar 09 06:55	19° $\Upsilon$ 13'49	6.00193 AU
	3191 Feb 05 08:56	0° $\mathbb{M}$		morning rise	3196 Mar 22 13:53	22° $\Upsilon$ 25'24	
retrograde	3191 Feb 13 18:08	0° $\mathbb{M}$ 06'42			3196 Apr 24 10:04	0° $\Upsilon$	
	3191 Feb 22 02:18	30° $\mathbb{R}$ $\Omega$		retrograde	3196 Jul 31 21:44	12° $\Upsilon$ 45'03	
opposition	3191 Apr 15 06:21	25° $\Omega$ 12'21	1°30'48	opposition	3196 Sep 29 22:57	7° $\Upsilon$ 45'28	-1°29'54
min. Earth dist.	3191 Apr 15 23:31	25° $\Omega$ 06'48	4.46138 AU	min. Earth dist.	3196 Sep 29 15:44	7° $\Upsilon$ 47'52	3.96329 AU
direct	3191 Jun 16 18:00	20° $\Omega$ 09'51		direct	3196 Nov 27 10:56	2° $\Upsilon$ 51'49	
	3191 Sep 13 21:13	0° $\mathbb{M}$		evening set	3197 Apr 02 02:11	22° $\Upsilon$ 35'56	
evening set	3191 Oct 21 02:53	7° $\mathbb{M}$ 37'07					
max. Earth dist.	3191 Nov 01 13:25	10° $\mathbb{M}$ 05'18	6.45680 AU	conjunction	3197 Apr 15 07:35	25° $\Upsilon$ 48'04	-1°01'42
				minimum elong	3197 Apr 15 07:35	25° $\Upsilon$ 48'04	1°01'42
conjunction	3191 Nov 03 00:57	10° $\mathbb{M}$ 24'33	0°59'50	max. Earth dist.	3197 Apr 16 09:19	26° $\Upsilon$ 03'40	5.94587 AU
minimum elong	3191 Nov 03 00:58	10° $\mathbb{M}$ 24'34	0°59'50	morning rise	3197 Apr 28 16:09	29° $\Upsilon$ 01'53	
morning rise	3191 Nov 15 20:12	13° $\mathbb{M}$ 10'46			3197 May 02 17:04	0° $\mathcal{B}$	
	3191 Nov 24 08:24	15° $\mathbb{M}$			3197 Jul 13 23:36	15° $\mathcal{B}$	
retrograde	3192 Mar 15 03:06	29° $\mathbb{M}$ 57'36		retrograde	3197 Sep 08 01:26	19° $\mathcal{B}$ 44'11	
opposition	3192 May 14 22:14	25° $\mathbb{M}$ 05'14	1°16'58		3197 Nov 04 10:53	15° $\mathbb{R}$ $\mathcal{B}$	
min. Earth dist.	3192 May 16 05:07	24° $\mathbb{M}$ 55'22	4.43498 AU	opposition	3197 Nov 06 19:05	14° $\mathcal{B}$ 40'59	-1°26'14
direct	3192 Jul 16 15:27	20° $\mathbb{M}$ 03'54		min. Earth dist.	3197 Nov 05 15:43	14° $\mathcal{B}$ 50'15	3.95371 AU
	3192 Oct 13 18:59	0° $\mathcal{A}$		direct	3198 Jan 03 16:25	9° $\mathcal{B}$ 46'21	
evening set	3192 Nov 19 15:48	7° $\mathcal{A}$ 40'12			3198 Mar 02 08:35	15° $\mathcal{B}$	
max. Earth dist.	3192 Nov 30 07:45	10° $\mathcal{A}$ 00'53	6.39426 AU	evening set	3198 May 09 15:30	29° $\mathcal{B}$ 28'03	
					3198 May 11 21:15	0° $\mathbb{I}$	
conjunction	3192 Dec 02 09:41	10° $\mathcal{A}$ 28'26	0°42'13				
minimum elong	3192 Dec 02 09:42	10° $\mathcal{A}$ 28'27	0°42'13	conjunction	3198 May 23 04:55	2° $\mathbb{I}$ 42'09	-0°47'21
morning rise	3192 Dec 15 01:43	13° $\mathcal{A}$ 15'55		minimum elong	3198 May 23 04:57	2° $\mathbb{I}$ 42'10	0°47'21
	3193 Mar 28 10:21	0° $\mathcal{B}$		max. Earth dist.	3198 May 25 08:18	3° $\mathbb{I}$ 12'51	5.98322 AU
retrograde	3193 Apr 15 21:49	0° $\mathcal{B}$ 31'37		morning rise	3198 Jun 05 20:52	5° $\mathbb{I}$ 57'28	
	3193 May 04 07:36	30° $\mathbb{R}$ $\mathcal{A}$		retrograde	3198 Oct 14 20:44	26° $\mathbb{I}$ 10'24	
opposition	3193 Jun 15 18:46	25° $\mathcal{A}$ 39'38	0°41'42	min. Earth dist.	3198 Dec 11 22:29	21° $\mathbb{I}$ 17'27	4.03374 AU
min. Earth dist.	3193 Jun 17 08:16	25° $\mathcal{A}$ 27'41	4.33969 AU	opposition	3198 Dec 13 09:32	21° $\mathbb{I}$ 05'30	-0°48'34
direct	3193 Aug 17 02:31	20° $\mathcal{A}$ 40'04		direct	3199 Feb 09 14:39	16° $\mathbb{I}$ 08'13	
	3193 Nov 09 17:21	0° $\mathcal{B}$			3199 May 23 04:10	0° $\mathcal{E}$	
evening set	3193 Dec 20 17:08	8° $\mathcal{B}$ 42'04		evening set	3199 Jun 15 22:00	5° $\mathcal{E}$ 21'47	
max. Earth dist.	3193 Dec 31 08:07	11° $\mathcal{B}$ 06'19	6.27341 AU				
				conjunction	3199 Jun 29 15:41	8° $\mathcal{E}$ 32'34	-0°15'16
conjunction	3194 Jan 02 09:46	11° $\mathcal{B}$ 34'31	0°12'10	minimum elong	3199 Jun 29 15:42	8° $\mathcal{E}$ 32'34	0°15'15
minimum elong	3194 Jan 02 09:46	11° $\mathcal{B}$ 34'31	0°12'09	behind sun begin	3199 Jun 29 13:29	8° $\mathcal{E}$ 31'18	
behind sun begin	3194 Jan 02 04:18	11° $\mathcal{B}$ 31'26		behind sun end	3199 Jun 29 17:55	8° $\mathcal{E}$ 33'51	
behind sun end	3194 Jan 02 15:14	11° $\mathcal{B}$ 37'36		max. Earth dist.	3199 Jul 01 22:49	9° $\mathcal{E}$ 04'30	6.09800 AU
morning rise	3194 Jan 15 01:24	14° $\mathcal{B}$ 26'45		morning rise	3199 Jul 13 10:37	11° $\mathcal{E}$ 43'40	
	3194 Apr 07 23:36	0° $\approx$			3199 Oct 25 23:16	0° $\mathcal{Q}$	
retrograde	3194 May 19 16:20	2° $\approx$ 36'27		retrograde	3199 Nov 18 04:26	0° $\mathcal{Q}$ 52'36	
desc. node	3194 May 20 04:01	2° $\approx$ 36'26			3199 Dec 11 06:16	30° $\mathbb{R}$ $\mathcal{E}$	
	3194 Jun 30 23:44	30° $\mathbb{R}$ $\mathcal{B}$		asc. node	3199 Dec 12 10:42	29° $\mathcal{E}$ 54'34	
opposition	3194 Jul 19 12:23	27° $\mathcal{B}$ 43'16	-0°07'59	opposition	3200 Jan 16 20:29	25° $\mathcal{E}$ 48'47	0°04'48
min. Earth dist.	3194 Jul 20 20:00	27° $\mathcal{B}$ 33'08	4.20033 AU	min. Earth dist.	3200 Jan 15 13:01	25° $\mathcal{E}$ 59'27	4.17026 AU
direct	3194 Sep 18 17:52	22° $\mathcal{B}$ 46'06		direct	3200 Mar 16 01:17	20° $\mathcal{E}$ 48'40	
	3194 Nov 29 12:23	0° $\approx$			3200 Jun 06 05:34	0° $\mathcal{Q}$	
evening set	3195 Jan 22 04:12	11° $\approx$ 25'53		evening set	3200 Jul 20 16:58	9° $\mathcal{Q}$ 22'48	
max. Earth dist.	3195 Feb 02 10:53	14° $\approx$ 04'12	6.12709 AU				
				conjunction	3200 Aug 03 09:10	12° $\mathcal{Q}$ 26'23	0°20'54
conjunction	3195 Feb 03 22:01	14° $\approx$ 24'49	-0°23'01	minimum elong	3200 Aug 03 09:08	12° $\mathcal{Q}$ 26'22	0°20'54
minimum elong	3195 Feb 03 22:00	14° $\approx$ 24'48	0°23'01	max. Earth dist.	3200 Aug 04 23:27	12° $\mathcal{Q}$ 47'50	6.24480 AU
	3195 Feb 06 09:58	15° $\approx$			3200 Aug 14 19:55	15° $\mathcal{Q}$	
morning rise	3195 Feb 16 16:31	17° $\approx$ 24'22		morning rise	3200 Aug 17 00:44	15° $\mathcal{Q}$ 29'21	
	3195 Apr 17 02:18	0° $\mathcal{H}$			3200 Nov 01 02:57	0° $\mathbb{P}$	
retrograde	3195 Jun 24 22:26	6° $\mathcal{H}$ 43'06		retrograde	3200 Dec 19 08:17	3° $\mathbb{P}$ 30'21	
opposition	3195 Aug 24 10:02	1° $\mathcal{H}$ 47'13	-0°58'25		3201 Feb 05 18:15	30° $\mathbb{R}$ $\mathcal{Q}$	
min. Earth dist.	3195 Aug 25 01:55	1° $\mathcal{H}$ 42'03	4.05816 AU	opposition	3201 Feb 17 05:17	28° $\mathcal{Q}$ 29'39	0°53'10
	3195 Sep 07 10:54	30° $\mathbb{R}$ $\approx$		min. Earth dist.	3201 Feb 16 12:40	28° $\mathcal{Q}$ 35'12	4.31378 AU
direct	3195 Oct 23 06:31	26° $\approx$ 52'22		direct	3201 Apr 18 19:18	23° $\mathcal{Q}$ 27'38	
	3195 Dec 06 21:39	0° $\mathcal{H}$			3201 Jun 26 22:52	0° $\mathbb{P}$	
evening set	3196 Feb 25 15:13	16° $\mathcal{H}$ 11'30		evening set	3201 Aug 23 12:22	11° $\mathbb{P}$ 25'42	
conjunction	3196 Mar 09 13:33	19° $\mathcal{H}$ 17'48	-0°51'44	conjunction	3201 Sep 05 22:51	14° $\mathbb{P}$ 21'26	0°48'54

minimum elong	3201 Sep 05 22:49	14° $\mathbb{M}$ 21'25	0°48'53	evening set	3207 Jan 26 19:27	16° $\approx$ 14'49	
max. Earth dist.	3201 Sep 06 11:03	14° $\mathbb{M}$ 28'06	6.37396 AU	max. Earth dist.	3207 Feb 07 05:54	18° $\approx$ 55'57	6.10833 AU
morning rise	3201 Sep 19 07:12	17° $\mathbb{M}$ 15'58					
	3201 Nov 24 19:05	0° $\underline{\mathbf{A}}$		conjunction	3207 Feb 08 13:48	19° $\approx$ 14'44	-0°27'41
retrograde	3202 Jan 18 21:16	4° $\underline{\mathbf{A}}$ 26'07		minimum elong	3207 Feb 08 13:46	19° $\approx$ 14'43	0°27'40
	3202 Mar 16 04:42	30° $\mathbb{R}$ $\mathbb{M}$		morning rise	3207 Feb 21 08:50	22° $\approx$ 15'20	
opposition	3202 Mar 20 03:12	29° $\mathbb{M}$ 29'03	1°23'25		3207 Mar 27 18:04	0° $\mathbb{H}$	
min. Earth dist.	3202 Mar 20 03:58	29° $\mathbb{M}$ 28'48	4.42007 AU	retrograde	3207 Jun 30 02:07	11° $\mathbb{H}$ 43'10	
direct	3202 May 20 21:21	24° $\mathbb{M}$ 26'21		opposition	3207 Aug 29 12:30	6° $\mathbb{H}$ 46'50	-1°04'22
	3202 Jul 24 02:46	0° $\underline{\mathbf{A}}$		min. Earth dist.	3207 Aug 30 01:25	6° $\mathbb{H}$ 42'37	4.04165 AU
evening set	3202 Sep 24 12:57	12° $\underline{\mathbf{A}}$ 00'58		direct	3207 Oct 28 03:23	1° $\mathbb{H}$ 52'13	
				evening set	3208 Mar 01 13:33	21° $\mathbb{H}$ 15'56	
conjunction	3202 Oct 07 16:17	14° $\underline{\mathbf{A}}$ 50'49	1°02'03				
minimum elong	3202 Oct 07 16:17	14° $\underline{\mathbf{A}}$ 50'49	1°02'04	conjunction	3208 Mar 14 12:34	24° $\mathbb{H}$ 23'08	-0°54'27
max. Earth dist.	3202 Oct 07 00:25	14° $\underline{\mathbf{A}}$ 42'15	6.44923 AU	minimum elong	3208 Mar 14 12:32	24° $\mathbb{H}$ 23'07	0°54'26
morning rise	3202 Oct 20 16:53	17° $\underline{\mathbf{A}}$ 39'18		max. Earth dist.	3208 Mar 14 09:03	24° $\mathbb{H}$ 21'01	5.98904 AU
	3202 Dec 24 17:12	0° $\mathbb{M}$		morning rise	3208 Mar 27 14:01	27° $\mathbb{H}$ 31'46	
retrograde	3203 Feb 17 22:58	4° $\mathbb{M}$ 24'37			3208 Apr 06 23:22	0° $\mathbb{Y}$	
	3203 Apr 15 17:01	30° $\mathbb{R}$ $\underline{\mathbf{A}}$		retrograde	3208 Aug 06 03:58	17° $\mathbb{Y}$ 57'31	
opposition	3203 Apr 19 12:17	29° $\underline{\mathbf{A}}$ 30'38	1°30'13	opposition	3208 Oct 05 04:36	12° $\mathbb{Y}$ 57'21	-1°31'40
min. Earth dist.	3203 Apr 20 07:31	29° $\underline{\mathbf{A}}$ 24'26	4.46080 AU	min. Earth dist.	3208 Oct 04 18:14	13° $\mathbb{Y}$ 00'48	3.95550 AU
direct	3203 Jun 21 02:00	24° $\underline{\mathbf{A}}$ 28'17		direct	3208 Dec 02 13:29	8° $\mathbb{Y}$ 03'36	
	3203 Aug 24 10:53	0° $\mathbb{M}$		evening set	3209 Apr 07 05:56	27° $\mathbb{Y}$ 49'38	
evening set	3203 Oct 25 09:33	11° $\mathbb{M}$ 56'00			3209 Apr 16 05:40	0° $\mathbb{B}$	
max. Earth dist.	3203 Nov 05 15:56	14° $\mathbb{M}$ 22'16	6.45183 AU				
conjunction	3203 Nov 07 06:47	14° $\mathbb{M}$ 43'21	0°58'14	conjunction	3209 Apr 20 12:40	1° $\mathbb{B}$ 02'25	-1°01'07
minimum elong	3203 Nov 07 06:48	14° $\mathbb{M}$ 43'21	0°58'14	minimum elong	3209 Apr 20 12:41	1° $\mathbb{B}$ 02'26	1°01'06
	3203 Nov 08 13:29	15° $\mathbb{M}$		max. Earth dist.	3209 Apr 21 19:47	1° $\mathbb{B}$ 21'17	5.94400 AU
morning rise	3203 Nov 20 01:34	17° $\mathbb{M}$ 29'33		morning rise	3209 May 03 22:16	4° $\mathbb{B}$ 16'49	
	3204 Jan 24 18:48	0° $\mathbb{Z}$			3209 Jun 20 08:59	15° $\mathbb{B}$	
retrograde	3204 Mar 19 11:33	4° $\mathbb{Z}$ 18'41		retrograde	3209 Sep 13 08:14	24° $\mathbb{B}$ 58'42	
	3204 May 14 21:34	30° $\mathbb{R}$ $\mathbb{M}$		opposition	3209 Nov 11 23:27	19° $\mathbb{B}$ 55'09	-1°22'43
opposition	3204 May 19 07:04	29° $\mathbb{M}$ 26'23	1°13'09	min. Earth dist.	3209 Nov 10 19:08	20° $\mathbb{B}$ 04'44	3.95800 AU
min. Earth dist.	3204 May 20 15:22	29° $\mathbb{M}$ 16'04	4.42585 AU	direct	3210 Jan 08 20:53	15° $\mathbb{B}$ 00'12	
direct	3204 Jul 21 00:35	24° $\mathbb{M}$ 25'11			3210 Apr 24 20:36	0° $\mathbb{I}$	
	3204 Sep 23 09:22	0° $\mathbb{Z}$		evening set	3210 May 14 21:03	4° $\mathbb{I}$ 40'04	
evening set	3204 Nov 23 22:41	12° $\mathbb{Z}$ 03'47		conjunction	3210 May 28 11:18	7° $\mathbb{I}$ 54'07	-0°43'38
max. Earth dist.	3204 Dec 04 15:00	14° $\mathbb{Z}$ 25'05	6.38148 AU	minimum elong	3210 May 28 11:20	7° $\mathbb{I}$ 54'08	0°43'38
conjunction	3204 Dec 06 16:22	14° $\mathbb{Z}$ 52'24	0°38'36	max. Earth dist.	3210 May 30 16:14	8° $\mathbb{I}$ 25'38	5.99310 AU
minimum elong	3204 Dec 06 16:23	14° $\mathbb{Z}$ 52'25	0°38'36	morning rise	3210 Jun 11 04:12	11° $\mathbb{I}$ 09'20	
morning rise	3204 Dec 19 08:00	17° $\mathbb{Z}$ 40'15			3210 Sep 21 20:46	0° $\mathbb{E}$	
	3205 Feb 20 02:07	0° $\mathbb{B}$		retrograde	3210 Oct 19 18:44	1° $\mathbb{E}$ 15'41	
retrograde	3205 Apr 20 09:55	5° $\mathbb{B}$ 01'27			3210 Nov 16 11:30	30° $\mathbb{R}$ $\mathbb{I}$	
opposition	3205 Jun 20 08:19	0° $\mathbb{B}$ 09'21	0°35'22	min. Earth dist.	3210 Dec 16 20:05	26° $\mathbb{I}$ 23'07	4.04816 AU
	3205 Jun 21 13:39	30° $\mathbb{R}$ $\mathbb{Z}$		opposition	3210 Dec 18 08:17	26° $\mathbb{I}$ 10'47	-0°41'30
min. Earth dist.	3205 Jun 21 21:08	29° $\mathbb{Z}$ 57'37	4.32378 AU	direct	3211 Feb 14 14:22	21° $\mathbb{I}$ 13'07	
direct	3205 Aug 21 13:14	25° $\mathbb{Z}$ 10'03			3211 May 04 00:44	0° $\mathbb{E}$	
	3205 Oct 19 04:57	0° $\mathbb{B}$		evening set	3211 Jun 21 00:57	10° $\mathbb{E}$ 22'22	
evening set	3205 Dec 25 03:07	13° $\mathbb{B}$ 16'07		conjunction	3211 Jul 04 18:47	13° $\mathbb{E}$ 32'24	-0°10'06
max. Earth dist.	3206 Jan 04 18:28	15° $\mathbb{B}$ 41'13	6.25538 AU	minimum elong	3211 Jul 04 18:48	13° $\mathbb{E}$ 32'25	0°10'06
conjunction	3206 Jan 06 19:34	16° $\mathbb{B}$ 09'13	0°07'21	behind sun begin	3211 Jul 04 12:09	13° $\mathbb{E}$ 28'36	
minimum elong	3206 Jan 06 19:35	16° $\mathbb{B}$ 09'14	0°07'21	behind sun end	3211 Jul 05 01:27	13° $\mathbb{E}$ 36'14	
behind sun begin	3206 Jan 06 12:17	16° $\mathbb{B}$ 05'05		max. Earth dist.	3211 Jul 07 00:06	14° $\mathbb{E}$ 03'10	6.11586 AU
behind sun end	3206 Jan 07 02:53	16° $\mathbb{B}$ 13'23		morning rise	3211 Jul 18 13:38	16° $\mathbb{E}$ 42'38	
morning rise	3206 Jan 19 11:31	19° $\mathbb{B}$ 02'18			3211 Sep 21 10:38	0° $\mathbb{Q}$	
	3206 Mar 12 19:50	0° $\approx$		asc. node	3211 Oct 22 00:16	4° $\mathbb{Q}$ 05'33	
desc. node	3206 Mar 30 05:15	2° $\approx$ 53'12		retrograde	3211 Nov 22 20:45	5° $\mathbb{Q}$ 42'24	
retrograde	3206 May 24 14:01	7° $\approx$ 20'21		min. Earth dist.	3212 Jan 20 07:09	0° $\mathbb{Q}$ 48'53	4.18980 AU
opposition	3206 Jul 24 08:41	2° $\approx$ 26'49	-0°15'21	opposition	3212 Jan 21 12:33	0° $\mathbb{Q}$ 38'56	0°12'19
min. Earth dist.	3206 Jul 25 15:24	2° $\approx$ 16'57	4.18109 AU		3212 Jan 26 07:55	30° $\mathbb{R}$ $\mathbb{E}$	
	3206 Aug 13 06:50	30° $\mathbb{R}$ $\mathbb{B}$		direct	3212 Mar 20 22:38	25° $\mathbb{E}$ 38'31	
direct	3206 Sep 23 11:12	27° $\mathbb{B}$ 29'54			3212 May 14 03:33	0° $\mathbb{Q}$	
	3206 Nov 02 23:07	0° $\approx$		evening set	3212 Jul 25 14:07	14° $\mathbb{Q}$ 07'27	
	3207 Jan 21 10:50	15° $\approx$			3212 Jul 29 12:43	15° $\mathbb{Q}$	

conjunction	3212 Aug 08 05:49	17° $\Omega$ 09'57	0°25'33	conjunction	3218 Jan 11 02:18	20° $\mathfrak{Z}$ 35'45	0°02'39
minimum elong	3212 Aug 08 05:47	17° $\Omega$ 09'56	0°25'33	minimum elong	3218 Jan 11 02:17	20° $\mathfrak{Z}$ 35'44	0°02'39
max. Earth dist.	3212 Aug 09 18:38	17° $\Omega$ 30'29	6.26483 AU	behind sun begin	3218 Jan 10 18:19	20° $\mathfrak{Z}$ 31'12	
morning rise	3212 Aug 21 20:28	20° $\Omega$ 11'41		behind sun end	3218 Jan 11 10:15	20° $\mathfrak{Z}$ 40'16	
	3212 Oct 08 06:09	0° $\mathfrak{M}$		morning rise	3218 Jan 23 18:19	23° $\mathfrak{Z}$ 29'41	
retrograde	3212 Dec 23 16:08	8° $\mathfrak{M}$ 04'03		desc. node	3218 Feb 09 03:48	27° $\mathfrak{Z}$ 10'43	
opposition	3213 Feb 21 15:22	3° $\mathfrak{M}$ 03'51	0°58'41		3218 Feb 22 05:34	0° $\mathfrak{Z}$	
min. Earth dist.	3213 Feb 20 23:38	3° $\mathfrak{M}$ 09'05	4.33300 AU	retrograde	3218 May 29 08:12	11° $\mathfrak{Z}$ 57'04	
	3213 Mar 18 12:03	30° $\mathfrak{R}$ $\Omega$		opposition	3218 Jul 29 02:01	7° $\mathfrak{Z}$ 03'19	-0°22'26
direct	3213 Apr 23 08:57	28° $\Omega$ 01'44		min. Earth dist.	3218 Jul 30 07:37	6° $\mathfrak{Z}$ 53'48	4.15912 AU
	3213 May 29 17:30	0° $\mathfrak{M}$		direct	3218 Sep 27 23:24	2° $\mathfrak{Z}$ 06'43	
evening set	3213 Aug 28 02:37	15° $\mathfrak{M}$ 54'57			3219 Jan 05 04:25	15° $\mathfrak{Z}$	
				evening set	3219 Jan 31 08:51	20° $\mathfrak{Z}$ 58'19	
conjunction	3213 Sep 10 11:57	18° $\mathfrak{M}$ 49'33	0°51'42	max. Earth dist.	3219 Feb 11 20:52	23° $\mathfrak{Z}$ 41'13	6.08579 AU
minimum elong	3213 Sep 10 11:55	18° $\mathfrak{M}$ 49'32	0°51'42				
max. Earth dist.	3213 Sep 10 20:03	18° $\mathfrak{M}$ 53'57	6.39109 AU	conjunction	3219 Feb 13 03:33	23° $\mathfrak{Z}$ 59'23	-0°32'02
morning rise	3213 Sep 23 19:12	21° $\mathfrak{M}$ 42'55		minimum elong	3219 Feb 13 03:31	23° $\mathfrak{Z}$ 59'22	0°32'03
	3213 Nov 03 05:44	0° $\mathfrak{Z}$		morning rise	3219 Feb 25 23:28	27° $\mathfrak{Z}$ 01'18	
retrograde	3214 Jan 23 02:55	8° $\mathfrak{Z}$ 46'54			3219 Mar 10 18:11	0° $\mathfrak{H}$	
opposition	3214 Mar 24 09:33	3° $\mathfrak{Z}$ 50'20	1°25'45	retrograde	3219 Jul 05 04:46	16° $\mathfrak{H}$ 40'10	
min. Earth dist.	3214 Mar 24 13:24	3° $\mathfrak{Z}$ 49'04	4.43401 AU	opposition	3219 Sep 03 13:26	11° $\mathfrak{H}$ 43'21	-1°09'47
	3214 Apr 27 00:42	30° $\mathfrak{R}$ $\mathfrak{M}$		min. Earth dist.	3219 Sep 03 23:38	11° $\mathfrak{H}$ 40'01	4.02052 AU
direct	3214 May 25 08:40	28° $\mathfrak{M}$ 47'37		direct	3219 Nov 01 23:05	6° $\mathfrak{H}$ 48'55	
	3214 Jun 22 22:57	0° $\mathfrak{Z}$		evening set	3220 Mar 06 11:20	26° $\mathfrak{H}$ 19'24	
evening set	3214 Sep 28 21:00	16° $\mathfrak{Z}$ 18'43					
				conjunction	3220 Mar 19 11:34	29° $\mathfrak{H}$ 27'55	-0°56'43
conjunction	3214 Oct 11 23:21	19° $\mathfrak{Z}$ 07'47	1°02'30	minimum elong	3220 Mar 19 11:32	29° $\mathfrak{H}$ 27'54	0°56'43
minimum elong	3214 Oct 11 23:21	19° $\mathfrak{Z}$ 07'47	1°02'30	max. Earth dist.	3220 Mar 19 13:33	29° $\mathfrak{H}$ 29'07	5.97145 AU
max. Earth dist.	3214 Oct 11 04:10	18° $\mathfrak{Z}$ 57'27	6.45886 AU		3220 Mar 21 16:33	0° $\mathfrak{Y}$	
morning rise	3214 Oct 24 22:55	21° $\mathfrak{Z}$ 55'30		morning rise	3220 Apr 01 14:03	2° $\mathfrak{Y}$ 37'52	
	3214 Dec 03 16:11	0° $\mathfrak{M}$		retrograde	3220 Aug 11 13:35	23° $\mathfrak{Y}$ 11'41	
retrograde	3215 Feb 22 01:18	8° $\mathfrak{M}$ 38'03		opposition	3220 Oct 10 10:47	18° $\mathfrak{Y}$ 11'03	-1°32'42
opposition	3215 Apr 23 16:57	3° $\mathfrak{M}$ 44'21	1°29'09	min. Earth dist.	3220 Oct 09 22:13	18° $\mathfrak{Y}$ 15'15	3.94355 AU
min. Earth dist.	3215 Apr 24 13:46	3° $\mathfrak{M}$ 37'39	4.46564 AU	direct	3220 Dec 07 16:37	13° $\mathfrak{Y}$ 17'19	
	3215 May 26 15:25	30° $\mathfrak{R}$ $\mathfrak{Z}$			3221 Mar 30 09:58	0° $\mathfrak{Z}$	
direct	3215 Jun 25 08:13	28° $\mathfrak{Z}$ 42'05		evening set	3221 Apr 12 11:14	3° $\mathfrak{Z}$ 06'59	
	3215 Jul 25 07:12	0° $\mathfrak{M}$					
	3215 Oct 24 05:52	15° $\mathfrak{M}$		conjunction	3221 Apr 25 19:07	6° $\mathfrak{Z}$ 20'37	-1°00'00
evening set	3215 Oct 29 13:47	16° $\mathfrak{M}$ 08'32		minimum elong	3221 Apr 25 19:08	6° $\mathfrak{Z}$ 20'37	0°59'59
max. Earth dist.	3215 Nov 09 18:15	18° $\mathfrak{M}$ 33'49	6.45145 AU	max. Earth dist.	3221 Apr 27 05:45	6° $\mathfrak{Z}$ 41'36	5.93873 AU
				morning rise	3221 May 09 06:11	9° $\mathfrak{Z}$ 35'52	
conjunction	3215 Nov 11 10:22	18° $\mathfrak{M}$ 55'37	0°56'23		3221 Jun 01 05:03	15° $\mathfrak{Z}$	
minimum elong	3215 Nov 11 10:23	18° $\mathfrak{M}$ 55'37	0°56'23		3221 Sep 04 23:59	0° $\mathfrak{II}$	
morning rise	3215 Nov 24 04:20	21° $\mathfrak{M}$ 41'34		retrograde	3221 Sep 18 14:21	0° $\mathfrak{II}$ 18'20	
	3216 Jan 03 19:28	0° $\mathfrak{Z}$			3221 Oct 02 03:35	30° $\mathfrak{R}$ $\mathfrak{Z}$	
retrograde	3216 Mar 23 16:12	8° $\mathfrak{Z}$ 31'51		min. Earth dist.	3221 Nov 15 21:38	25° $\mathfrak{Z}$ 25'06	3.96023 AU
opposition	3216 May 23 13:07	3° $\mathfrak{Z}$ 39'42	1°09'02	opposition	3221 Nov 17 05:07	25° $\mathfrak{Z}$ 14'24	-1°18'28
min. Earth dist.	3216 May 24 23:05	3° $\mathfrak{Z}$ 28'53	4.42002 AU	direct	3222 Jan 14 00:47	20° $\mathfrak{Z}$ 19'09	
	3216 Jun 24 20:46	30° $\mathfrak{R}$ $\mathfrak{M}$			3222 Apr 05 17:23	0° $\mathfrak{II}$	
direct	3216 Jul 25 06:58	28° $\mathfrak{M}$ 38'43		evening set	3222 May 20 05:04	9° $\mathfrak{II}$ 57'57	
	3216 Aug 24 18:10	0° $\mathfrak{Z}$					
evening set	3216 Nov 28 02:14	16° $\mathfrak{Z}$ 18'45		conjunction	3222 Jun 02 20:13	13° $\mathfrak{II}$ 11'59	-0°39'30
max. Earth dist.	3216 Dec 08 15:14	18° $\mathfrak{Z}$ 38'40	6.37041 AU	minimum elong	3222 Jun 02 20:15	13° $\mathfrak{II}$ 12'01	0°39'30
				max. Earth dist.	3222 Jun 05 02:57	13° $\mathfrak{II}$ 44'30	6.00256 AU
conjunction	3216 Dec 10 19:25	19° $\mathfrak{Z}$ 07'37	0°34'54	morning rise	3222 Jun 16 13:49	16° $\mathfrak{II}$ 27'03	
minimum elong	3216 Dec 10 19:26	19° $\mathfrak{Z}$ 07'38	0°34'53		3222 Aug 19 10:04	0° $\mathfrak{Z}$	
morning rise	3216 Dec 23 11:01	21° $\mathfrak{Z}$ 55'53		retrograde	3222 Oct 24 19:28	6° $\mathfrak{Z}$ 26'32	
	3217 Jan 30 20:11	0° $\mathfrak{Z}$		min. Earth dist.	3222 Dec 21 20:51	1° $\mathfrak{Z}$ 33'47	4.06338 AU
retrograde	3217 Apr 24 20:48	9° $\mathfrak{Z}$ 22'36		opposition	3222 Dec 23 08:43	1° $\mathfrak{Z}$ 21'33	-0°34'01
opposition	3217 Jun 24 18:55	4° $\mathfrak{Z}$ 30'23	0°29'01		3223 Jan 02 11:14	30° $\mathfrak{R}$ $\mathfrak{II}$	
min. Earth dist.	3217 Jun 26 08:22	4° $\mathfrak{Z}$ 18'26	4.30780 AU	direct	3223 Feb 19 18:48	26° $\mathfrak{II}$ 23'24	
	3217 Aug 08 04:48	30° $\mathfrak{R}$ $\mathfrak{Z}$			3223 Apr 08 18:57	0° $\mathfrak{Z}$	
direct	3217 Aug 25 21:41	29° $\mathfrak{Z}$ 31'17		evening set	3223 Jun 26 05:36	15° $\mathfrak{Z}$ 27'44	
	3217 Sep 12 14:15	0° $\mathfrak{Z}$					
evening set	3217 Dec 29 09:35	17° $\mathfrak{Z}$ 41'47		conjunction	3223 Jul 09 23:36	18° $\mathfrak{Z}$ 36'55	-0°04'49
max. Earth dist.	3218 Jan 09 02:24	20° $\mathfrak{Z}$ 08'19	6.23576 AU	minimum elong	3223 Jul 09 23:37	18° $\mathfrak{Z}$ 36'55	0°04'49
				behind sun begin	3223 Jul 09 15:26	18° $\mathfrak{Z}$ 32'15	

behind sun end	3223 Jul 10 07:47	18°  41'35		evening set	3230 Jan 02 22:26	22°  22'50	
max. Earth dist.	3223 Jul 12 05:44	19°  07'59	6.13540 AU	max. Earth dist.	3230 Jan 13 15:22	24°  50'14	6.21325 AU
morning rise	3223 Jul 23 18:07	21°  46'05					
asc. node	3223 Aug 30 13:20	29°  58'58		conjunction	3230 Jan 15 15:08	25°  17'44	-0°02'29
	3223 Aug 30 15:22	0°  ♂		minimum elong	3230 Jan 15 15:08	25°  17'44	0°02'28
retrograde	3223 Nov 27 12:40	10°  ♂35'41		behind sun begin	3230 Jan 15 07:10	25°  ♂13'10	
min. Earth dist.	3224 Jan 25 00:38	5°  ♂42'18	4.21136 AU	behind sun end	3230 Jan 15 23:07	25°  ♂22'18	
opposition	3224 Jan 26 05:35	5°  ♂32'31	0°19'48	morning rise	3230 Jan 28 07:44	28°  ♂12'49	
direct	3224 Mar 25 19:32	0°  ♂31'44			3230 Feb 05 03:55	0°  ♂	
	3224 Jul 12 12:35	15°  ♂			3230 Apr 29 16:13	15°  ♂	
evening set	3224 Jul 30 11:53	18°  ♂54'33		retrograde	3230 Jun 03 10:15	16°  ♂50'37	
					3230 Jul 08 09:16	15°  ♂	
conjunction	3224 Aug 13 02:39	21°  ♂55'45	0°30'04	opposition	3230 Aug 03 02:38	11°  ♂56'29	-0°29'51
minimum elong	3224 Aug 13 02:37	21°  ♂55'44	0°30'03	min. Earth dist.	3230 Aug 04 05:47	11°  ♂47'43	4.13615 AU
max. Earth dist.	3224 Aug 14 10:55	22°  ♂13'40	6.28624 AU	direct	3230 Oct 02 18:35	7°  ♂00'12	
morning rise	3224 Aug 26 16:28	24°  ♂56'09			3230 Dec 16 21:43	15°  ♂	
	3224 Sep 19 05:30	0°  ♂		evening set	3231 Feb 05 04:51	25°  ♂58'30	
retrograde	3224 Dec 28 02:20	12°  ♂39'37		max. Earth dist.	3231 Feb 16 22:51	28°  ♂45'38	6.06463 AU
opposition	3225 Feb 26 02:07	7°  ♂39'51	1°03'53				
min. Earth dist.	3225 Feb 25 13:38	7°  ♂43'59	4.35232 AU	conjunction	3231 Feb 18 00:19	29°  ♂00'46	-0°36'27
direct	3225 Apr 28 01:24	2°  ♂37'28		minimum elong	3231 Feb 18 00:17	29°  ♂00'45	0°36'27
evening set	3225 Sep 01 17:00	20°  ♂25'50			3231 Feb 22 03:54	0°  ♂	
				morning rise	3231 Mar 02 20:53	2°  ♂03'56	
conjunction	3225 Sep 15 01:26	23°  ♂19'23	0°54'14	retrograde	3231 Jul 10 15:05	21°  ♂53'02	
minimum elong	3225 Sep 15 01:25	23°  ♂19'22	0°54'15	opposition	3231 Sep 08 21:16	16°  ♂55'46	-1°14'58
max. Earth dist.	3225 Sep 15 06:47	23°  ♂22'17	6.40665 AU	min. Earth dist.	3231 Sep 09 04:47	16°  ♂53'18	4.00345 AU
morning rise	3225 Sep 28 07:23	26°  ♂11'38		direct	3231 Nov 07 02:07	12°  ♂01'39	
	3225 Oct 16 06:18	0°  ♂			3232 Mar 04 21:41	0°  ♂	
retrograde	3226 Jan 27 07:25	13°  ♂10'09		evening set	3232 Mar 11 15:28	1°  ♂36'59	
opposition	3226 Mar 28 16:29	8°  ♂14'00	1°27'40				
min. Earth dist.	3226 Mar 28 22:06	8°  ♂12'10	4.44490 AU	conjunction	3232 Mar 24 16:33	4°  ♂46'27	-0°58'40
direct	3226 May 29 17:55	3°  ♂11'16		minimum elong	3232 Mar 24 16:32	4°  ♂46'26	0°58'40
evening set	3226 Oct 03 06:09	20°  ♂39'58		max. Earth dist.	3232 Mar 24 22:33	4°  ♂50'05	5.96017 AU
max. Earth dist.	3226 Oct 15 08:14	23°  ♂15'54	6.46417 AU	morning rise	3232 Apr 06 20:22	7°  ♂57'29	
				retrograde	3232 Aug 17 00:17	28°  ♂36'03	
conjunction	3226 Oct 16 07:27	23°  ♂28'25	1°02'38	opposition	3232 Oct 15 20:51	23°  ♂34'55	-1°33'00
minimum elong	3226 Oct 16 07:27	23°  ♂28'25	1°02'38	min. Earth dist.	3232 Oct 15 03:51	23°  ♂40'37	3.93986 AU
morning rise	3226 Oct 29 06:07	26°  ♂15'35		direct	3232 Dec 12 23:06	18°  ♂41'08	
	3226 Nov 15 23:55	0°  ♂			3233 Mar 11 23:01	0°  ♂	
retrograde	3227 Feb 26 08:05	12°  ♂56'55		evening set	3233 Apr 17 20:00	8°  ♂31'04	
opposition	3227 Apr 28 00:01	8°  ♂03'32	1°27'39				
min. Earth dist.	3227 Apr 29 00:01	7°  ♂55'50	4.46509 AU	conjunction	3233 May 01 05:04	11°  ♂45'03	-0°58'25
direct	3227 Jun 29 17:45	3°  ♂01'22		minimum elong	3233 May 01 05:05	11°  ♂45'04	0°58'25
	3227 Oct 07 17:33	15°  ♂		max. Earth dist.	3233 May 02 20:15	12°  ♂08'46	5.94306 AU
evening set	3227 Nov 02 20:27	20°  ♂28'12		morning rise	3233 May 14 17:10	15°  ♂00'35	
max. Earth dist.	3227 Nov 13 20:53	22°  ♂51'36	6.44491 AU		3233 May 14 16:12	15°  ♂	
					3233 Jul 24 04:47	0°  ♂	
conjunction	3227 Nov 15 16:25	23°  ♂15'17	0°54'11	retrograde	3233 Sep 23 21:07	5°  ♂39'16	
minimum elong	3227 Nov 15 16:26	23°  ♂15'18	0°54'12	min. Earth dist.	3233 Nov 21 02:53	0°  ♂46'04	3.97200 AU
morning rise	3227 Nov 28 09:55	26°  ♂01'18		opposition	3233 Nov 22 11:28	0°  ♂34'59	-1°13'33
	3227 Dec 17 02:45	0°  ♂			3233 Nov 26 18:34	30°  ♂	
retrograde	3228 Mar 28 01:37	12°  ♂54'51		direct	3234 Jan 19 08:43	25°  ♂39'23	
opposition	3228 May 27 23:24	8°  ♂02'44	1°04'26		3234 Mar 12 16:02	0°  ♂	
min. Earth dist.	3228 May 29 10:09	7°  ♂51'39	4.40792 AU	evening set	3234 May 25 12:35	15°  ♂13'29	
direct	3228 Jul 29 15:29	3°  ♂01'54					
evening set	3228 Dec 02 10:13	20°  ♂45'19		conjunction	3234 Jun 08 04:32	18°  ♂27'01	-0°35'07
max. Earth dist.	3228 Dec 12 23:41	23°  ♂06'00	6.35369 AU	minimum elong	3234 Jun 08 04:34	18°  ♂27'02	0°35'06
				max. Earth dist.	3234 Jun 10 14:07	19°  ♂01'03	6.02062 AU
conjunction	3228 Dec 15 03:16	23°  ♂34'45	0°30'49	morning rise	3234 Jun 21 22:31	21°  ♂41'24	
minimum elong	3228 Dec 15 03:18	23°  ♂34'46	0°30'49		3234 Jul 29 00:03	0°  ♂	
morning rise	3228 Dec 27 18:37	26°  ♂23'37		retrograde	3234 Oct 29 17:23	11°  ♂30'47	
	3229 Jan 13 06:42	0°  ♂		min. Earth dist.	3234 Dec 26 18:47	6°  ♂38'13	4.08557 AU
retrograde	3229 Apr 29 13:49	13°  ♂57'41		opposition	3234 Dec 28 06:48	6°  ♂25'57	-0°26'28
opposition	3229 Jun 29 11:24	9°  ♂05'22	0°22'09	direct	3235 Feb 24 20:00	1°  ♂27'26	
min. Earth dist.	3229 Jul 01 01:02	8°  ♂53'22	4.28738 AU	evening set	3235 Jul 01 07:21	20°  ♂24'48	
direct	3229 Aug 30 10:55	4°  ♂06'36		asc. node	3235 Jul 10 07:19	22°  ♂27'51	
desc. node	3229 Dec 19 09:29	19°  ♂06'32					

conjunction	3235 Jul 15 01:01	23° $\mathfrak{G}$ 32'47	0°00'27	morning rise	3241 Jan 01 03:32	0° $\mathfrak{Z}$ 55'32	
minimum elong	3235 Jul 15 01:00	23° $\mathfrak{G}$ 32'46	0°00'27	retrograde	3241 May 04 08:50	18° $\mathfrak{Z}$ 38'20	
behind sun begin	3235 Jul 14 16:38	23° $\mathfrak{G}$ 28'01		opposition	3241 Jul 04 06:01	13° $\mathfrak{Z}$ 45'50	0°15'04
behind sun end	3235 Jul 15 09:21	23° $\mathfrak{G}$ 37'31		min. Earth dist.	3241 Jul 05 17:58	13° $\mathfrak{Z}$ 34'20	4.26471 AU
max. Earth dist.	3235 Jul 17 03:35	24° $\mathfrak{G}$ 01'39	6.15955 AU	direct	3241 Sep 04 00:21	8° $\mathfrak{Z}$ 47'25	
morning rise	3235 Jul 28 19:14	26° $\mathfrak{G}$ 40'41		desc. node	3241 Oct 28 13:50	13° $\mathfrak{Z}$ 04'45	
	3235 Aug 12 16:05	0° $\mathfrak{Q}$		evening set	3242 Jan 07 13:01	27° $\mathfrak{Z}$ 09'59	
	3235 Nov 18 01:00	15° $\mathfrak{Q}$		max. Earth dist.	3242 Jan 18 10:12	29° $\mathfrak{Z}$ 40'34	6.19023 AU
retrograde	3235 Dec 02 00:58	15° $\mathfrak{Q}$ 19'18			3242 Jan 19 19:45	0° $\mathfrak{X}$	
	3235 Dec 15 22:56	15° $\mathfrak{R}$ $\mathfrak{Q}$					
opposition	3236 Jan 30 19:02	10° $\mathfrak{Q}$ 16'32	0°26'53	conjunction	3242 Jan 20 06:04	0° $\mathfrak{X}$ 05'57	-0°07'32
min. Earth dist.	3236 Jan 29 16:29	10° $\mathfrak{Q}$ 25'29	4.23510 AU	minimum elong	3242 Jan 20 06:03	0° $\mathfrak{X}$ 05'57	0°07'32
direct	3236 Mar 30 14:17	5° $\mathfrak{Q}$ 15'25		behind sun begin	3242 Jan 19 22:46	0° $\mathfrak{X}$ 01'45	
	3236 Jun 24 11:32	15° $\mathfrak{Q}$		behind sun end	3242 Jan 20 13:19	0° $\mathfrak{X}$ 10'08	
evening set	3236 Aug 04 05:42	23° $\mathfrak{Q}$ 31'59		morning rise	3242 Feb 01 22:54	3° $\mathfrak{X}$ 02'08	
					3242 Mar 30 20:48	15° $\mathfrak{X}$	
conjunction	3236 Aug 17 19:51	26° $\mathfrak{Q}$ 31'59	0°34'14	retrograde	3242 Jun 08 15:02	21° $\mathfrak{X}$ 50'26	
minimum elong	3236 Aug 17 19:49	26° $\mathfrak{Q}$ 31'58	0°34'13	opposition	3242 Aug 08 05:30	16° $\mathfrak{X}$ 55'57	-0°37'10
max. Earth dist.	3236 Aug 19 01:23	26° $\mathfrak{Q}$ 48'19	6.30779 AU	min. Earth dist.	3242 Aug 09 06:45	16° $\mathfrak{X}$ 47'47	4.11468 AU
morning rise	3236 Aug 31 08:29	29° $\mathfrak{Q}$ 31'01			3242 Aug 23 13:47	15° $\mathfrak{R}$ $\mathfrak{X}$	
	3236 Sep 02 13:26	0° $\mathfrak{R}$		direct	3242 Oct 07 16:58	12° $\mathfrak{X}$ 00'04	
retrograde	3237 Jan 01 08:25	17° $\mathfrak{R}$ 06'13			3242 Nov 20 19:18	15° $\mathfrak{X}$	
opposition	3237 Mar 02 09:27	12° $\mathfrak{R}$ 07'02	1°08'31		3243 Feb 05 14:07	0° $\mathfrak{X}$	
min. Earth dist.	3237 Mar 01 23:16	12° $\mathfrak{R}$ 10'25	4.37009 AU	evening set	3243 Feb 10 02:58	1° $\mathfrak{X}$ 04'14	
direct	3237 May 02 12:21	7° $\mathfrak{R}$ 04'36					
evening set	3237 Sep 06 04:05	24° $\mathfrak{R}$ 49'00		conjunction	3243 Feb 22 22:56	4° $\mathfrak{X}$ 07'32	-0°40'38
				minimum elong	3243 Feb 22 22:54	4° $\mathfrak{X}$ 07'31	0°40'37
conjunction	3237 Sep 19 11:22	27° $\mathfrak{R}$ 41'38	0°56'24	max. Earth dist.	3243 Feb 22 00:49	3° $\mathfrak{X}$ 54'20	6.04662 AU
minimum elong	3237 Sep 19 11:21	27° $\mathfrak{R}$ 41'37	0°56'24	morning rise	3243 Mar 07 20:29	7° $\mathfrak{X}$ 11'53	
max. Earth dist.	3237 Sep 19 10:43	27° $\mathfrak{R}$ 41'16	6.41917 AU	retrograde	3243 Jul 15 23:33	27° $\mathfrak{X}$ 09'28	
	3237 Sep 30 03:09	0° $\mathfrak{U}$		opposition	3243 Sep 14 05:40	22° $\mathfrak{X}$ 11'37	-1°19'35
morning rise	3237 Oct 02 16:24	0° $\mathfrak{U}$ 33'00		min. Earth dist.	3243 Sep 14 08:29	22° $\mathfrak{X}$ 10'41	3.99093 AU
retrograde	3238 Jan 31 12:35	17° $\mathfrak{U}$ 27'36		direct	3243 Nov 12 05:36	17° $\mathfrak{X}$ 17'37	
opposition	3238 Apr 01 21:35	12° $\mathfrak{U}$ 31'56	1°29'06		3244 Feb 16 03:52	0° $\mathfrak{Y}$	
min. Earth dist.	3238 Apr 02 07:00	12° $\mathfrak{U}$ 28'52	4.45161 AU	evening set	3244 Mar 16 19:57	6° $\mathfrak{Y}$ 55'52	
direct	3238 Jun 03 02:26	7° $\mathfrak{U}$ 29'12					
evening set	3238 Oct 07 12:59	24° $\mathfrak{U}$ 56'58		conjunction	3244 Mar 29 22:06	10° $\mathfrak{Y}$ 06'05	-1°00'08
max. Earth dist.	3238 Oct 19 11:29	27° $\mathfrak{U}$ 31'01	6.46452 AU	minimum elong	3244 Mar 29 22:05	10° $\mathfrak{Y}$ 06'04	1°00'08
				max. Earth dist.	3244 Mar 30 10:01	10° $\mathfrak{Y}$ 13'19	5.95418 AU
conjunction	3238 Oct 20 13:37	27° $\mathfrak{U}$ 45'08	1°02'26	morning rise	3244 Apr 12 02:54	13° $\mathfrak{Y}$ 17'51	
minimum elong	3238 Oct 20 13:37	27° $\mathfrak{U}$ 45'08	1°02'26		3244 Jul 02 06:16	0° $\mathfrak{Z}$	
	3238 Oct 30 23:49	0° $\mathfrak{M}$		retrograde	3244 Aug 22 10:20	3° $\mathfrak{Z}$ 58'42	
morning rise	3238 Nov 02 11:20	0° $\mathfrak{M}$ 31'57			3244 Oct 13 08:45	30° $\mathfrak{R}$ $\mathfrak{Y}$	
	3239 Jan 23 00:17	15° $\mathfrak{M}$		min. Earth dist.	3244 Oct 20 10:35	29° $\mathfrak{Y}$ 03'24	3.94107 AU
retrograde	3239 Mar 02 12:49	17° $\mathfrak{M}$ 13'57		opposition	3244 Oct 21 05:49	28° $\mathfrak{Y}$ 56'56	-1°32'28
	3239 Apr 10 07:58	15° $\mathfrak{R}$ $\mathfrak{M}$		direct	3244 Dec 18 07:13	24° $\mathfrak{Y}$ 02'58	
opposition	3239 May 02 06:11	12° $\mathfrak{M}$ 20'51	1°25'44		3245 Feb 18 02:14	0° $\mathfrak{Z}$	
min. Earth dist.	3239 May 03 07:27	12° $\mathfrak{M}$ 12'44	4.45933 AU	evening set	3245 Apr 23 03:12	13° $\mathfrak{Z}$ 51'16	
direct	3239 Jul 03 23:02	7° $\mathfrak{M}$ 18'51			3245 Apr 27 21:30	15° $\mathfrak{Z}$	
	3239 Sep 19 06:34	15° $\mathfrak{M}$					
evening set	3239 Nov 07 02:48	24° $\mathfrak{M}$ 47'51		conjunction	3245 May 06 13:23	17° $\mathfrak{Z}$ 05'22	-0°56'21
max. Earth dist.	3239 Nov 18 00:45	27° $\mathfrak{M}$ 10'21	6.43346 AU	minimum elong	3245 May 06 13:25	17° $\mathfrak{Z}$ 05'23	0°56'21
				max. Earth dist.	3245 May 08 09:06	17° $\mathfrak{Z}$ 31'44	5.95116 AU
conjunction	3239 Nov 19 22:11	27° $\mathfrak{M}$ 35'10	0°51'43	morning rise	3245 May 20 02:28	20° $\mathfrak{Z}$ 20'57	
minimum elong	3239 Nov 19 22:13	27° $\mathfrak{M}$ 35'11	0°51'43		3245 Jul 01 14:47	0° $\mathfrak{I}$	
	3239 Nov 30 23:43	0° $\mathfrak{Z}$		retrograde	3245 Sep 29 01:03	10° $\mathfrak{I}$ 54'05	
morning rise	3239 Dec 02 15:17	0° $\mathfrak{Z}$ 21'29		min. Earth dist.	3245 Nov 26 04:55	6° $\mathfrak{I}$ 01'09	3.98616 AU
retrograde	3240 Apr 01 13:56	17° $\mathfrak{Z}$ 20'01		opposition	3245 Nov 27 14:56	5° $\mathfrak{I}$ 49'35	-1°08'08
opposition	3240 Jun 01 10:32	12° $\mathfrak{Z}$ 28'02	0°59'29	direct	3246 Jan 24 13:10	0° $\mathfrak{I}$ 53'36	
min. Earth dist.	3240 Jun 02 23:07	12° $\mathfrak{Z}$ 16'23	4.39143 AU	evening set	3246 May 30 17:58	20° $\mathfrak{I}$ 22'34	
direct	3240 Aug 03 01:31	7° $\mathfrak{Z}$ 27'29					
evening set	3240 Dec 06 19:08	25° $\mathfrak{Z}$ 15'38		conjunction	3246 Jun 13 10:17	23° $\mathfrak{I}$ 35'26	-0°30'31
max. Earth dist.	3240 Dec 17 07:15	27° $\mathfrak{Z}$ 36'16	6.33343 AU	minimum elong	3246 Jun 13 10:19	23° $\mathfrak{I}$ 35'27	0°30'32
				max. Earth dist.	3246 Jun 15 18:40	24° $\mathfrak{I}$ 08'35	6.03926 AU
conjunction	3240 Dec 19 12:01	28° $\mathfrak{Z}$ 05'49	0°26'33	morning rise	3246 Jun 27 04:47	26° $\mathfrak{I}$ 49'06	
minimum elong	3240 Dec 19 12:03	28° $\mathfrak{Z}$ 05'50	0°26'33		3246 Jul 11 00:13	0° $\mathfrak{G}$	
	3240 Dec 28 00:00	0° $\mathfrak{Z}$		retrograde	3246 Nov 03 11:22	16° $\mathfrak{G}$ 28'30	

min. Earth dist.	3246 Dec 31 14:51	11°  35'46	4.10665 AU	evening set	3252 Dec 11 05:23	29°  48'35	
opposition	3247 Jan 02 02:01	11°  23'47	-0°18'53		3252 Dec 12 01:52	0° 	
direct	3247 Mar 01 19:15	6°  24'48		max. Earth dist.	3252 Dec 21 18:54	2°  10'36	6.31527 AU
asc. node	3247 May 20 07:01	15°  15'20					
evening set	3247 Jul 06 06:48	25°  16'01		conjunction	3252 Dec 23 22:05	2°  39'25	0°22'05
				minimum elong	3252 Dec 23 22:07	2°  39'26	0°22'06
conjunction	3247 Jul 20 00:23	28°  22'57	0°05'36	morning rise	3253 Jan 05 13:35	5°  29'53	
minimum elong	3247 Jul 20 00:23	28°  22'57	0°05'36	retrograde	3253 May 09 06:11	23°  20'41	
behind sun begin	3247 Jul 19 16:22	28°  18'25		opposition	3253 Jul 09 01:43	18°  28'04	0°07'49
behind sun end	3247 Jul 20 08:23	28°  27'29		min. Earth dist.	3253 Jul 10 13:19	18°  16'41	4.24539 AU
max. Earth dist.	3247 Jul 22 01:23	28°  50'48	6.18145 AU	desc. node	3253 Sep 06 23:54	13°  30'21	
	3247 Jul 27 03:19	0° 		direct	3253 Sep 08 17:21	13°  30'05	
morning rise	3247 Aug 02 17:57	1°  29'36			3254 Jan 03 14:19	0° 	
	3247 Oct 09 10:16	15° 		evening set	3254 Jan 12 04:12	1°  57'45	
retrograde	3247 Dec 06 12:52	19°  58'23		max. Earth dist.	3254 Jan 23 03:28	4°  30'12	6.17152 AU
min. Earth dist.	3248 Feb 03 06:46	15°  04'14	4.25580 AU				
	3248 Feb 03 19:22	15°  R 		conjunction	3254 Jan 24 21:24	4°  54'34	-0°12'30
opposition	3248 Feb 04 06:59	14°  56'06	0°33'42	minimum elong	3254 Jan 24 21:24	4°  54'34	0°12'31
direct	3248 Apr 04 06:41	9°  54'45		behind sun begin	3254 Jan 24 16:07	4°  51'31	
	3248 Jun 02 21:22	15° 		behind sun end	3254 Jan 25 02:41	4°  57'37	
evening set	3248 Aug 08 22:22	28°  06'09		morning rise	3254 Feb 06 14:47	7°  51'45	
	3248 Aug 17 13:33	0° 			3254 Mar 10 14:45	15° 	
conjunction	3248 Aug 22 11:34	1°  M  05'02	0°38'10	retrograde	3254 Jun 13 16:37	26°  48'56	
minimum elong	3248 Aug 22 11:32	1°  M  05'01	0°38'10	opposition	3254 Aug 13 07:45	21°  54'03	-0°44'08
max. Earth dist.	3248 Aug 23 11:59	1°  M  18'29	6.32557 AU	min. Earth dist.	3254 Aug 14 05:07	21°  54'08	4.09825 AU
morning rise	3248 Sep 04 23:22	4°  M  02'56		direct	3254 Oct 12 13:37	16°  58'33	
retrograde	3249 Jan 05 14:20	21°  M  31'21		evening set	3255 Jan 19 11:55	0° 	
opposition	3249 Mar 06 16:38	16°  M  32'38	1°12'46		3255 Feb 14 23:59	6°  M  06'51	
min. Earth dist.	3249 Mar 06 09:26	16°  M  35'01	4.38394 AU	conjunction	3255 Feb 27 20:34	9°  M  10'58	-0°44'26
direct	3249 May 06 23:25	11°  M  30'03		minimum elong	3255 Feb 27 20:32	9°  M  10'57	0°44'25
evening set	3249 Sep 10 15:04	29°  M  11'40		max. Earth dist.	3255 Feb 27 03:51	9°  M  00'58	6.03397 AU
	3249 Sep 14 08:56	0° 		morning rise	3255 Mar 12 18:47	12°  M  16'12	
conjunction	3249 Sep 23 21:33	2°  M  03'34	0°58'15		3255 Jun 12 09:16	0° 	
minimum elong	3249 Sep 23 21:31	2°  M  03'34	0°58'14	retrograde	3255 Jul 21 07:50	2°  M  20'15	
max. Earth dist.	3249 Sep 23 18:06	2°  M  01'43	6.42812 AU		3255 Aug 29 09:27	30°  R 	
morning rise	3249 Oct 07 01:21	4°  M  54'08		opposition	3255 Sep 19 11:48	27°  M  21'53	-1°23'24
retrograde	3250 Feb 04 16:50	21°  M  45'51		min. Earth dist.	3255 Sep 19 12:09	27°  M  21'46	3.98336 AU
opposition	3250 Apr 06 03:13	16°  M  50'39	1°30'04	direct	3255 Nov 17 09:20	22°  M  28'01	
min. Earth dist.	3250 Apr 06 14:38	16°  M  46'57	4.45533 AU	evening set	3256 Jan 27 06:26	0° 	
direct	3250 Jun 07 09:41	11°  M  48'02			3256 Mar 21 21:51	12°  M  07'33	
evening set	3250 Oct 11 20:54	29°  M  15'38		conjunction	3256 Apr 04 00:58	15°  M  18'17	-1°01'04
	3250 Oct 15 07:35	0° 		minimum elong	3256 Apr 04 00:57	15°  M  18'16	1°01'03
conjunction	3250 Oct 24 20:33	2°  M  03'31	1°01'53	max. Earth dist.	3256 Apr 04 17:44	15°  M  28'27	5.95236 AU
minimum elong	3250 Oct 24 20:34	2°  M  03'31	1°01'54	morning rise	3256 Apr 17 06:50	18°  M  07'36	
max. Earth dist.	3250 Oct 23 13:53	1°  M  46'57	6.46263 AU		3256 Jun 07 11:51	0° 	
morning rise	3250 Nov 06 17:40	4°  M  50'10		retrograde	3256 Aug 27 15:25	9°  M  11'48	
	3250 Dec 28 01:23	15°  M 		opposition	3256 Oct 26 10:20	4°  M  09'37	-1°31'08
retrograde	3251 Mar 06 21:42	21°  M  33'27		min. Earth dist.	3256 Oct 25 12:26	4°  M  17'00	3.94548 AU
opposition	3251 May 06 14:09	16°  M  40'39	1°23'20		3256 Dec 02 14:36	30°  R 	
min. Earth dist.	3251 May 07 18:11	16°  M  31'40	4.45210 AU	direct	3256 Dec 23 09:18	29°  M  15'32	
	3251 May 19 22:26	15°  R 			3257 Jan 13 05:32	0° 	
direct	3251 Jul 08 08:08	11°  M  38'49		evening set	3257 Apr 11 05:41	15°  M 	
	3251 Aug 26 09:53	15°  M 			3257 Apr 28 06:49	19°  M  01'32	
evening set	3251 Nov 11 10:10	29°  M  10'12		conjunction	3257 May 11 17:49	22°  M  15'35	-0°53'54
	3251 Nov 15 05:43	0° 		minimum elong	3257 May 11 17:51	22°  M  15'36	0°53'54
max. Earth dist.	3251 Nov 22 06:35	1°  M  32'17	6.42148 AU	max. Earth dist.	3257 May 13 14:26	22°  M  42'25	5.96111 AU
conjunction	3251 Nov 24 05:12	1°  M  37'49	0°48'55	morning rise	3257 May 25 07:56	25°  M  31'07	
minimum elong	3251 Nov 24 05:14	1°  M  37'50	0°48'55		3257 Jun 13 10:37	0° 	
morning rise	3251 Dec 06 21:52	4°  M  44'29		retrograde	3257 Oct 03 23:10	15°  M  58'15	
retrograde	3252 Apr 06 01:41	21°  M  38'11		min. Earth dist.	3257 Dec 01 02:51	11°  M  05'25	4.00046 AU
opposition	3252 Jun 05 23:20	16°  M  37'15	0°54'06	opposition	3257 Dec 02 13:35	10°  M  53'35	-1°02'23
min. Earth dist.	3252 Jun 07 11:19	16°  M  37'44'48	4.37564 AU	direct	3258 Jan 29 13:49	5°  M  57'12	
direct	3252 Aug 07 10:47	11°  M  37'56'04		evening set	3258 Jun 04 18:54	25°  M  21'28	

conjunction	3258 Jun 18 11:53	28° $\Pi$ 33'48	-0°25'54	retrograde	3264 Apr 10 14:44	26° $\text{X}$ 15'03	
minimum elong	3258 Jun 18 11:55	28° $\Pi$ 33'49	0°25'54	opposition	3264 Jun 10 11:44	21° $\text{X}$ 23'03	0°48'24
max. Earth dist.	3258 Jun 20 20:36	29° $\Pi$ 07'00	6.05673 AU	min. Earth dist.	3264 Jun 12 00:56	21° $\text{X}$ 11'12	4.36123 AU
	3258 Jun 24 15:11	0° $\text{E}$		direct	3264 Aug 11 22:40	16° $\text{X}$ 23'03	
morning rise	3258 Jul 02 06:28	1° $\text{E}$ 46'43			3264 Nov 25 21:26	0° $\text{Z}$	
retrograde	3258 Nov 08 03:48	21° $\text{E}$ 17'09		evening set	3264 Dec 15 14:19	4° $\text{Z}$ 19'07	
min. Earth dist.	3259 Jan 05 08:08	16° $\text{E}$ 24'03	4.12532 AU	max. Earth dist.	3264 Dec 26 04:15	6° $\text{Z}$ 41'57	6.29821 AU
opposition	3259 Jan 06 17:30	16° $\text{E}$ 12'42	-0°11'28				
direct	3259 Mar 06 14:21	11° $\text{E}$ 13'24		conjunction	3264 Dec 28 07:01	7° $\text{Z}$ 10'36	0°17'30
asc. node	3259 Mar 31 18:45	12° $\text{E}$ 15'24		minimum elong	3264 Dec 28 07:02	7° $\text{Z}$ 10'36	0°17'30
evening set	3259 Jul 11 02:54	29° $\text{E}$ 59'38		morning rise	3265 Jan 09 22:31	10° $\text{Z}$ 01'46	
	3259 Jul 11 03:32	0° $\text{O}$		retrograde	3265 May 13 23:26	28° $\text{Z}$ 00'12	
				opposition	3265 Jul 13 20:14	23° $\text{Z}$ 07'16	0°00'32
conjunction	3259 Jul 24 20:06	3° $\text{O}$ 05'38	0°10'28	min. Earth dist.	3265 Jul 15 05:46	22° $\text{Z}$ 56'32	4.22663 AU
minimum elong	3259 Jul 24 20:05	3° $\text{O}$ 05'38	0°10'28	desc. node	3265 Jul 17 21:21	22° $\text{Z}$ 36'14	
behind sun begin	3259 Jul 24 13:38	3° $\text{O}$ 02'00		direct	3265 Sep 13 07:09	18° $\text{Z}$ 09'35	
behind sun end	3259 Jul 25 02:32	3° $\text{O}$ 09'16			3265 Dec 17 17:07	0° $\approx$	
max. Earth dist.	3259 Jul 26 17:40	3° $\text{O}$ 31'24	6.19976 AU	evening set	3266 Jan 16 18:02	6° $\approx$ 42'11	
morning rise	3259 Aug 07 13:17	6° $\text{O}$ 11'16		max. Earth dist.	3266 Jan 27 20:20	9° $\approx$ 17'03	6.15245 AU
	3259 Sep 18 00:03	15° $\text{O}$					
retrograde	3259 Dec 10 20:13	24° $\text{O}$ 31'51		conjunction	3266 Jan 29 11:26	9° $\approx$ 39'52	-0°17'23
opposition	3260 Feb 08 16:14	19° $\text{O}$ 30'01	0°40'04	minimum elong	3266 Jan 29 11:25	9° $\approx$ 39'51	0°17'23
min. Earth dist.	3260 Feb 07 17:44	19° $\text{O}$ 37'34	4.27243 AU	morning rise	3266 Feb 11 05:13	12° $\approx$ 38'02	
	3260 Mar 21 18:31	15° $\text{R}$ 0			3266 Feb 21 11:51	15° $\approx$	
direct	3260 Apr 08 19:21	14° $\text{O}$ 28'25			3266 May 16 04:03	0° $\text{H}$	
	3260 Apr 27 01:52	15° $\text{O}$		retrograde	3266 Jun 18 19:54	1° $\text{H}$ 44'28	
	3260 Aug 01 12:06	0° $\text{P}$			3266 Jul 22 14:33	30° $\text{R}$ $\approx$	
evening set	3260 Aug 13 12:54	2° $\text{P}$ 36'14		opposition	3266 Aug 18 08:58	26° $\approx$ 49'09	-0°50'49
				min. Earth dist.	3266 Aug 19 04:47	26° $\approx$ 42'42	4.08027 AU
conjunction	3260 Aug 27 01:24	5° $\text{P}$ 34'13	0°41'45	direct	3266 Oct 17 11:41	21° $\approx$ 53'52	
minimum elong	3260 Aug 27 01:22	5° $\text{P}$ 34'12	0°41'46		3266 Dec 31 11:00	0° $\text{H}$	
max. Earth dist.	3260 Aug 27 22:18	5° $\text{P}$ 45'43	6.33949 AU	evening set	3267 Feb 19 20:24	11° $\text{H}$ 07'06	
morning rise	3260 Sep 09 12:07	8° $\text{P}$ 31'08					
retrograde	3261 Jan 09 20:05	25° $\text{P}$ 54'07		conjunction	3267 Mar 04 17:44	14° $\text{H}$ 12'12	-0°47'55
opposition	3261 Mar 10 22:40	20° $\text{P}$ 55'57	1°16'29	minimum elong	3267 Mar 04 17:42	14° $\text{H}$ 12'11	0°47'55
min. Earth dist.	3261 Mar 10 18:10	20° $\text{P}$ 57'26	4.39434 AU	max. Earth dist.	3267 Mar 04 04:54	14° $\text{H}$ 04'31	6.01871 AU
direct	3261 May 11 09:18	15° $\text{P}$ 53'21		morning rise	3267 Mar 17 16:51	17° $\text{H}$ 18'30	
	3261 Aug 29 05:57	0° $\text{Q}$			3267 May 14 21:41	0° $\text{Y}$	
evening set	3261 Sep 15 01:01	3° $\text{Q}$ 33'04		retrograde	3267 Jul 26 14:28	7° $\text{Y}$ 29'57	
				opposition	3267 Sep 24 17:15	2° $\text{Y}$ 31'03	-1°26'39
conjunction	3261 Sep 28 06:30	6° $\text{Q}$ 24'22	0°59'42	min. Earth dist.	3267 Sep 24 14:14	2° $\text{Y}$ 32'03	3.97267 AU
minimum elong	3261 Sep 28 06:28	6° $\text{Q}$ 24'21	0°59'42		3267 Oct 14 17:01	30° $\text{R}$ $\text{H}$	
max. Earth dist.	3261 Sep 27 22:18	6° $\text{Q}$ 19'56	6.43420 AU	direct	3267 Nov 22 09:49	27° $\text{H}$ 37'17	
morning rise	3261 Oct 11 09:28	9° $\text{Q}$ 14'20			3267 Dec 30 13:31	0° $\text{Y}$	
retrograde	3262 Feb 08 22:02	26° $\text{Q}$ 04'05		evening set	3268 Mar 27 00:31	17° $\text{Y}$ 19'38	
opposition	3262 Apr 10 08:57	21° $\text{Q}$ 09'12	1°30'29				
min. Earth dist.	3262 Apr 10 22:46	21° $\text{Q}$ 04'43	4.45706 AU	conjunction	3268 Apr 09 04:35	20° $\text{Y}$ 31'05	-1°01'32
direct	3262 Jun 11 17:46	16° $\text{Q}$ 06'36		minimum elong	3268 Apr 09 04:35	20° $\text{Y}$ 31'04	1°01'32
	3262 Sep 29 06:00	0° $\text{M}$		max. Earth dist.	3268 Apr 10 00:32	20° $\text{Y}$ 43'11	5.94704 AU
evening set	3262 Oct 16 04:02	3° $\text{M}$ 34'14		morning rise	3268 Apr 22 11:44	23° $\text{Y}$ 44'12	
max. Earth dist.	3262 Oct 27 19:26	6° $\text{M}$ 04'50	6.45991 AU		3268 May 19 04:36	0° $\text{B}$	
				retrograde	3268 Sep 01 21:14	14° $\text{B}$ 27'10	
conjunction	3262 Oct 29 03:05	6° $\text{M}$ 21'57	1°00'59	opposition	3268 Oct 31 15:50	9° $\text{B}$ 24'30	-1°29'09
minimum elong	3262 Oct 29 03:06	6° $\text{M}$ 21'58	1°00'59	min. Earth dist.	3268 Oct 30 15:26	9° $\text{B}$ 32'45	3.94621 AU
morning rise	3262 Nov 10 23:16	9° $\text{M}$ 08'23		direct	3268 Dec 28 13:55	4° $\text{B}$ 30'10	
	3262 Dec 09 01:57	15° $\text{M}$			3269 Mar 23 21:14	15° $\text{B}$	
retrograde	3263 Mar 11 03:33	25° $\text{M}$ 53'02		evening set	3269 May 03 12:16	24° $\text{B}$ 15'22	
opposition	3263 May 10 21:55	21° $\text{M}$ 00'23	1°20'26				
min. Earth dist.	3263 May 12 02:38	20° $\text{M}$ 51'12	4.44516 AU	conjunction	3269 May 17 00:30	27° $\text{B}$ 29'39	-0°51'00
direct	3263 Jul 12 15:25	15° $\text{M}$ 58'45		minimum elong	3269 May 17 00:32	27° $\text{B}$ 29'40	0°50'59
	3263 Oct 30 05:16	0° $\text{X}$		max. Earth dist.	3269 May 19 01:06	27° $\text{B}$ 58'48	5.96786 AU
evening set	3263 Nov 15 17:10	3° $\text{X}$ 31'58			3269 May 27 11:29	0° $\text{II}$	
max. Earth dist.	3263 Nov 26 11:14	5° $\text{X}$ 53'12	6.41065 AU	morning rise	3269 May 30 15:25	0° $\text{II}$ 45'15	
				retrograde	3269 Oct 09 01:52	21° $\text{II}$ 07'29	
conjunction	3263 Nov 28 11:35	6° $\text{X}$ 19'47	0°45'51	min. Earth dist.	3269 Dec 06 03:54	16° $\text{II}$ 14'32	4.01235 AU
minimum elong	3263 Nov 28 11:36	6° $\text{X}$ 19'47	0°45'50	opposition	3269 Dec 07 14:35	16° $\text{II}$ 02'43	-0°56'05
morning rise	3263 Dec 11 04:00	9° $\text{X}$ 06'44		direct	3270 Feb 03 16:45	11° $\text{II}$ 05'58	

	3270 Jun 08 01:28	0°☾	evening set	3275 Nov 19 20:46	7°♄47'02	
evening set	3270 Jun 09 23:10	0°☾26'29	max. Earth dist.	3275 Nov 30 14:06	10°♄08'07	6.40338 AU
conjunction	3270 Jun 23 16:29	3°☾38'16 -0°20'57	conjunction	3275 Dec 02 14:52	10°♄34'57	0°42'38
minimum elong	3270 Jun 23 16:31	3°☾38'17 0°20'57	minimum elong	3275 Dec 02 14:54	10°♄34'58	0°42'38
max. Earth dist.	3270 Jun 26 00:48	4°☾11'05 6.07262 AU	morning rise	3275 Dec 15 06:45	13°♄22'03	
morning rise	3270 Jul 07 11:25	6°☾50'33		3276 Mar 26 17:23	0°♄	
retrograde	3270 Nov 12 20:22	26°☾12'16	retrograde	3276 Apr 14 22:10	0°♄34'16	
min. Earth dist.	3271 Jan 10 02:11	21°☾19'26 4.14369 AU		3276 May 04 04:12	30°♄♄	
opposition	3271 Jan 11 11:35	21°☾08'06 -0°03'47	opposition	3276 Jun 14 20:53	25°♄42'14	0°42'37
asc. node	3271 Feb 08 06:13	17°☾43'48	min. Earth dist.	3276 Jun 16 10:12	25°♄30'21	4.34905 AU
direct	3271 Mar 11 11:01	16°☾08'29	direct	3276 Aug 16 05:37	20°♄42'30	
	3271 Jun 24 02:54	0°♄		3276 Nov 08 18:17	0°♄	
evening set	3271 Jul 16 02:08	4°♄49'51	evening set	3276 Dec 19 19:51	8°♄41'44	
			max. Earth dist.	3276 Dec 30 08:48	11°♄04'35	6.28191 AU
conjunction	3271 Jul 29 18:58	7°♄54'49 0°15'26	conjunction	3277 Jan 01 12:19	11°♄33'46	0°13'00
minimum elong	3271 Jul 29 18:57	7°♄54'49 0°15'25	minimum elong	3277 Jan 01 12:19	11°♄33'47	0°12'59
behind sun begin	3271 Jul 29 17:12	7°♄53'50	behind sun begin	3277 Jan 01 07:23	11°♄31'00	
behind sun end	3271 Jul 29 20:42	7°♄55'48	behind sun end	3277 Jan 01 17:15	11°♄36'34	
max. Earth dist.	3271 Jul 31 13:51	8°♄18'59 6.21941 AU	morning rise	3277 Jan 14 04:00	14°♄25'39	
morning rise	3271 Aug 12 11:28	10°♄59'19		3277 Apr 07 13:16	0°♄	
	3271 Aug 30 17:49	15°♄	retrograde	3277 May 18 15:56	2°♄31'57	
retrograde	3271 Dec 15 08:29	29°♄11'08	desc. node	3277 May 29 19:52	2°♄20'11	
min. Earth dist.	3272 Feb 12 08:25	24°♄16'31 4.29183 AU		3277 Jun 29 06:21	30°♄♄	
opposition	3272 Feb 13 04:25	24°♄09'50 0°46'22	opposition	3277 Jul 18 11:21	27°♄38'48	-0°06'31
direct	3272 Apr 13 12:47	19°♄08'08	min. Earth dist.	3277 Jul 19 21:03	27°♄27'59	4.20691 AU
	3272 Jul 14 22:23	0°♄	direct	3277 Sep 17 19:38	22°♄41'19	
evening set	3272 Aug 18 05:25	7°♄11'04		3277 Nov 29 00:46	0°♄	
conjunction	3272 Aug 31 16:59	10°♄07'56 0°45'13	evening set	3278 Jan 21 04:43	11°♄19'37	
minimum elong	3272 Aug 31 16:58	10°♄07'55 0°45'12	max. Earth dist.	3278 Feb 01 09:17	13°♄56'30	6.13107 AU
max. Earth dist.	3272 Sep 01 11:04	10°♄17'50 6.35735 AU	conjunction	3278 Feb 02 22:37	14°♄18'22	-0°22'00
morning rise	3272 Sep 14 02:38	13°♄03'41	minimum elong	3278 Feb 02 22:35	14°♄18'21	0°22'00
	3272 Dec 30 16:27	0°♄		3278 Feb 05 21:38	15°♄	
retrograde	3273 Jan 14 01:09	0°♄19'55	morning rise	3278 Feb 15 16:56	17°♄17'41	
	3273 Jan 28 09:43	30°♄♄		3278 Apr 16 19:21	0°♄	
opposition	3273 Mar 15 06:14	25°♄22'13 1°19'51	retrograde	3278 Jun 23 19:42	6°♄34'29	
min. Earth dist.	3273 Mar 15 03:11	25°♄23'14 4.40979 AU	opposition	3278 Aug 23 07:20	1°♄38'47	-0°57'00
direct	3273 May 15 20:16	20°♄19'37	min. Earth dist.	3278 Aug 24 00:43	1°♄33'08	4.05902 AU
	3273 Aug 11 14:45	0°♄		3278 Sep 05 04:44	30°♄♄	
evening set	3273 Sep 19 11:18	7°♄55'34	direct	3278 Oct 22 03:56	26°♄43'46	
conjunction	3273 Oct 02 15:45	10°♄45'58 1°00'53		3278 Dec 06 22:17	0°♄	
minimum elong	3273 Oct 02 15:44	10°♄45'57 1°00'53	evening set	3279 Feb 24 15:08	16°♄03'36	
max. Earth dist.	3273 Oct 02 05:05	10°♄40'13 6.44624 AU	conjunction	3279 Mar 09 13:12	19°♄09'55	-0°50'59
morning rise	3273 Oct 15 17:30	13°♄35'01	minimum elong	3279 Mar 09 13:10	19°♄09'54	0°50'58
	3274 Jan 29 03:57	0°♄	max. Earth dist.	3279 Mar 09 03:03	19°♄03'49	5.99945 AU
retrograde	3274 Feb 13 01:37	0°♄20'56	morning rise	3279 Mar 22 13:27	22°♄17'34	
	3274 Feb 27 21:58	30°♄♄		3279 Apr 24 23:17	0°♄	
opposition	3274 Apr 14 14:17	25°♄26'29 1°30'26	retrograde	3279 Jul 31 20:23	12°♄38'19	
min. Earth dist.	3274 Apr 15 06:25	25°♄21'17 4.46496 AU	opposition	3279 Sep 29 21:40	7°♄38'52	-1°29'13
direct	3274 Jun 16 02:21	20°♄24'02	min. Earth dist.	3279 Sep 29 15:42	7°♄40'51	3.95741 AU
	3274 Sep 12 00:05	0°♄	direct	3279 Nov 27 10:03	2°♄45'06	
evening set	3274 Oct 20 09:44	7°♄49'37	evening set	3280 Apr 01 03:11	22°♄32'14	
max. Earth dist.	3274 Oct 31 20:13	10°♄17'37 6.46291 AU	conjunction	3280 Apr 14 08:41	25°♄44'45	-1°01'30
conjunction	3274 Nov 02 07:49	10°♄36'53 0°59'48	minimum elong	3280 Apr 14 08:41	25°♄44'46	1°01'30
minimum elong	3274 Nov 02 07:50	10°♄36'53 0°59'47	max. Earth dist.	3280 Apr 15 10:26	26°♄00'24	5.93745 AU
morning rise	3274 Nov 15 03:23	13°♄22'56	morning rise	3280 Apr 27 16:58	28°♄58'53	
	3274 Nov 22 16:54	15°♄		3280 May 01 22:41	0°♄	
	3275 Mar 06 11:27	0°♄		3280 Jul 13 02:05	15°♄	
retrograde	3275 Mar 15 08:34	0°♄07'27	retrograde	3280 Sep 07 06:28	19°♄45'02	
	3275 Mar 24 05:15	30°♄♄		3280 Nov 03 16:22	15°♄♄	
opposition	3275 May 15 03:51	25°♄14'56 1°17'11	opposition	3280 Nov 05 21:45	14°♄41'57	-1°26'27
min. Earth dist.	3275 May 16 10:36	25°♄05'06 4.44298 AU	min. Earth dist.	3280 Nov 04 19:40	14°♄50'47	3.94352 AU
direct	3275 Jul 16 22:30	20°♄13'27	direct	3281 Jan 02 18:44	9°♄47'22	
	3275 Oct 13 07:37	0°♄				



	3281 Mar 01 06:25	15°♄		evening set	3286 Oct 24 17:01	12°♍08'58	
evening set	3281 May 08 19:38	29°♄33'07		max. Earth dist.	3286 Nov 05 01:03	14°♍35'47	6.46024 AU
	3281 May 10 16:42	0°♄					
conjunction	3281 May 22 08:52	2°♄47'41	-0°47'39	conjunction	3286 Nov 06 14:25	14°♍56'02	0°58'16
minimum elong	3281 May 22 08:54	2°♄47'43	0°47'39	minimum elong	3286 Nov 06 14:26	14°♍56'03	0°58'15
max. Earth dist.	3281 May 24 11:58	3°♄18'17	5.97223 AU	morning rise	3286 Nov 06 21:45	15°♍	
morning rise	3281 Jun 05 00:57	6°♄03'33			3286 Nov 19 09:10	17°♍41'55	
retrograde	3281 Oct 14 03:25	26°♄21'08		retrograde	3287 Jan 22 21:19	0°♄	
min. Earth dist.	3281 Dec 11 03:55	21°♄28'41	4.02323 AU		3287 Mar 19 16:35	4°♄28'15	
opposition	3281 Dec 12 16:36	21°♄16'10	-0°49'17	opposition	3287 May 16 09:22	30°♍	
direct	3282 Feb 08 19:08	16°♄18'59		min. Earth dist.	3287 May 19 12:53	29°♍35'57	1°13'27
	3282 May 21 11:06	0°♄		direct	3287 May 20 21:28	29°♍25'33	4.43455 AU
evening set	3282 Jun 15 05:12	5°♄35'52			3287 Jul 21 07:49	24°♍34'40	
					3287 Sep 22 17:33	0°♄	
conjunction	3282 Jun 28 22:53	8°♄47'03	-0°15'48	evening set	3287 Nov 24 04:17	12°♄10'42	
minimum elong	3282 Jun 28 22:54	8°♄47'04	0°15'47	max. Earth dist.	3287 Dec 04 18:13	14°♄30'28	6.38967 AU
max. Earth dist.	3282 Jul 01 06:48	9°♄19'32	6.08895 AU	conjunction	3287 Dec 06 21:52	14°♄58'59	0°39'03
morning rise	3282 Jul 12 17:53	11°♄58'35		minimum elong	3287 Dec 06 21:54	14°♄59'00	0°39'04
	3282 Oct 21 13:14	0°♄		morning rise	3287 Dec 19 13:42	17°♄46'34	
retrograde	3282 Nov 17 15:54	1°♄11'01			3288 Feb 19 19:23	0°♄	
	3282 Dec 14 12:24	30°♍		retrograde	3288 Apr 19 13:08	5°♄04'57	
asc. node	3282 Dec 17 20:50	29°♄41'51		opposition	3288 Jun 19 11:17	0°♄12'50	0°36'18
min. Earth dist.	3283 Jan 14 23:14	26°♄17'48	4.16329 AU	min. Earth dist.	3288 Jun 21 01:11	0°♄00'45	4.33077 AU
opposition	3283 Jan 16 07:04	26°♄07'00	0°03'59		3288 Jun 21 03:32	30°♍	
direct	3283 Mar 16 11:53	21°♄06'55		direct	3288 Aug 20 17:43	25°♄13'20	
	3283 Jun 04 23:03	0°♄			3288 Oct 18 01:26	0°♄	
evening set	3283 Jul 21 02:19	9°♄42'29		evening set	3288 Dec 24 06:46	13°♄17'44	
				max. Earth dist.	3289 Jan 03 21:32	15°♄42'15	6.26058 AU
conjunction	3283 Aug 03 18:42	12°♄46'19	0°20'20				
minimum elong	3283 Aug 03 18:41	12°♄46'18	0°20'21	conjunction	3289 Jan 05 23:26	16°♄10'40	0°08'09
max. Earth dist.	3283 Aug 05 12:19	13°♄09'39	6.24045 AU	minimum elong	3289 Jan 05 23:27	16°♄10'41	0°08'09
	3283 Aug 13 17:28	15°♄		behind sun begin	3289 Jan 05 16:21	16°♄06'40	
morning rise	3283 Aug 17 10:21	15°♄49'31		behind sun end	3289 Jan 06 06:32	16°♄14'42	
	3283 Oct 30 00:30	0°♄		morning rise	3289 Jan 18 15:13	19°♄03'30	
retrograde	3283 Dec 19 18:35	3°♄51'48			3289 Mar 11 22:34	0°♄	
	3284 Feb 09 00:13	30°♍		desc. node	3289 Apr 08 00:46	4°♄14'06	
opposition	3284 Feb 17 16:54	28°♄50'53	0°52'24	retrograde	3289 May 23 14:37	7°♄19'30	
min. Earth dist.	3284 Feb 16 21:56	28°♄57'13	4.31223 AU	opposition	3289 Jul 23 09:26	2°♄26'08	-0°14'00
direct	3284 Apr 18 05:17	23°♄48'55		min. Earth dist.	3289 Jul 24 17:30	2°♄15'50	4.18402 AU
	3284 Jun 24 06:28	0°♄			3289 Aug 12 05:01	30°♍	
evening set	3284 Aug 22 22:25	11°♄46'32		direct	3289 Sep 22 12:24	27°♄29'04	
					3289 Nov 02 04:20	0°♄	
conjunction	3284 Sep 05 08:53	14°♄42'14	0°48'25		3290 Jan 20 15:09	15°♄	
minimum elong	3284 Sep 05 08:51	14°♄42'13	0°48'24	evening set	3290 Jan 25 22:28	16°♄14'02	
max. Earth dist.	3284 Sep 05 22:10	14°♄49'29	6.37525 AU	max. Earth dist.	3290 Feb 06 05:28	18°♄53'10	6.10854 AU
morning rise	3284 Sep 18 17:25	17°♄36'45					
	3284 Nov 21 23:12	0°♄		conjunction	3290 Feb 07 16:39	19°♄13'54	-0°26'47
retrograde	3285 Jan 18 08:48	4°♄46'19		minimum elong	3290 Feb 07 16:37	19°♄13'53	0°26'47
	3285 Mar 18 05:05	30°♍		morning rise	3290 Feb 20 11:45	22°♄14'30	
opposition	3285 Mar 19 14:23	29°♄49'06	1°22'48		3290 Mar 26 22:24	0°♄	
min. Earth dist.	3285 Mar 19 14:53	29°♄48'56	4.42379 AU	retrograde	3290 Jun 29 03:26	11°♄42'14	
direct	3285 May 20 09:35	24°♄46'23		opposition	3290 Aug 28 13:13	6°♄46'04	-1°03'11
	3285 Jul 21 10:33	0°♄		min. Earth dist.	3290 Aug 29 03:27	6°♄41'25	4.03894 AU
evening set	3285 Sep 23 21:58	12°♄19'03		direct	3290 Oct 27 04:44	1°♄51'20	
max. Earth dist.	3285 Oct 06 10:52	15°♄00'51	6.45502 AU	evening set	3291 Mar 01 16:57	21°♄17'10	
conjunction	3285 Oct 07 01:27	15°♄08'43	1°01'45	conjunction	3291 Mar 14 16:05	24°♄24'38	-0°53'51
minimum elong	3285 Oct 07 01:27	15°♄08'43	1°01'45	minimum elong	3291 Mar 14 16:04	24°♄24'37	0°53'50
morning rise	3285 Oct 20 02:12	17°♄57'02		max. Earth dist.	3291 Mar 14 12:12	24°♄22'17	5.98397 AU
	3285 Dec 22 06:06	0°♄		morning rise	3291 Mar 27 17:16	27°♄33'26	
retrograde	3286 Feb 17 06:27	4°♄40'25			3291 Apr 06 23:30	0°♄	
	3286 Apr 17 02:35	30°♍		retrograde	3291 Aug 06 09:16	18°♄01'24	
opposition	3286 Apr 18 21:10	29°♄46'16	1°29'56	opposition	3291 Oct 05 07:57	13°♄01'29	-1°31'10
min. Earth dist.	3286 Apr 19 15:15	29°♄40'26	4.46816 AU	min. Earth dist.	3291 Oct 04 23:04	13°♄04'26	3.94869 AU
direct	3286 Jun 20 10:40	24°♄43'51		direct	3291 Dec 02 17:01	8°♄07'51	
	3286 Aug 22 04:53	0°♄		evening set	3292 Apr 06 11:20	27°♄57'02	

	3292 Apr 14 22:20	0°♄			3297 Jun 18 03:53	0°♄	
			evening set		3297 Sep 28 06:03	16°♄37'28	
conjunction	3292 Apr 19 17:51	1°♄10'09 -1°00'59					
minimum elong	3292 Apr 19 17:52	1°♄10'10 1°00'59	conjunction	3297 Oct 11 08:30	19°♄26'34 1°02'16		
max. Earth dist.	3292 Apr 20 23:34	1°♄28'11 5.93629 AU	minimum elong	3297 Oct 11 08:30	19°♄26'34 1°02'15		
morning rise	3292 May 03 03:33	4°♄24'55	max. Earth dist.	3297 Oct 10 13:15	19°♄16'11 6.45972 AU		
	3292 Jun 18 19:43	15°♄	morning rise	3297 Oct 24 08:22	22°♄14'21		
retrograde	3292 Sep 12 14:38	25°♄10'06		3297 Dec 01 09:46	0°♄		
min. Earth dist.	3292 Nov 10 00:36	20°♄16'38 3.95044 AU	retrograde	3298 Feb 21 12:04	8°♄56'44		
opposition	3292 Nov 11 06:10	20°♄06'37 -1°22'56	opposition	3298 Apr 23 02:39	4°♄02'58 1°29'01		
direct	3293 Jan 08 01:51	15°♄11'47	min. Earth dist.	3298 Apr 24 00:13	3°♄56'02 4.46656 AU		
	3293 Apr 23 04:02	0°♄		3298 May 29 21:50	30°♄		
evening set	3293 May 14 04:35	4°♄54'22	direct	3298 Jun 24 18:39	29°♄00'38		
				3298 Jul 20 18:53	0°♄		
conjunction	3293 May 27 18:44	8°♄08'41 -0°43'55		3298 Oct 22 04:54	15°♄		
minimum elong	3293 May 27 18:46	8°♄08'42 0°43'56	evening set	3298 Oct 28 23:07	16°♄26'49		
max. Earth dist.	3293 May 30 00:10	8°♄40'34 5.98648 AU	max. Earth dist.	3298 Nov 09 02:52	18°♄51'39 6.45232 AU		
morning rise	3293 Jun 10 11:29	11°♄24'09					
	3293 Sep 18 02:34	0°♄	conjunction	3298 Nov 10 19:57	19°♄13'57 0°56'27		
retrograde	3293 Oct 19 04:35	1°♄33'12	minimum elong	3298 Nov 10 19:58	19°♄13'58 0°56'27		
	3293 Nov 19 00:35	30°♄	morning rise	3298 Nov 23 14:12	21°♄59'58		
min. Earth dist.	3293 Dec 16 05:45	26°♄40'31 4.04291 AU		3299 Jan 01 14:21	0°♄		
opposition	3293 Dec 17 17:57	26°♄28'10 -0°42'10	retrograde	3299 Mar 24 01:14	8°♄49'53		
direct	3294 Feb 14 00:35	21°♄30'34	opposition	3299 May 23 22:04	3°♄57'41 1°09'21		
	3294 May 01 20:16	0°♄	min. Earth dist.	3299 May 25 07:35	3°♄46'59 4.42093 AU		
evening set	3294 Jun 20 09:33	10°♄40'52		3299 Jun 28 21:22	30°♄		
			direct	3299 Jul 25 15:06	28°♄56'34		
conjunction	3294 Jul 04 03:26	13°♄51'03 -0°10'38		3299 Aug 21 11:49	0°♄		
minimum elong	3294 Jul 04 03:26	13°♄51'03 0°10'38	evening set	3299 Nov 28 11:55	16°♄36'36		
behind sun begin	3294 Jul 03 21:03	13°♄47'23	max. Earth dist.	3299 Dec 09 02:15	18°♄57'09 6.37146 AU		
behind sun end	3294 Jul 04 09:50	13°♄54'44					
max. Earth dist.	3294 Jul 06 11:44	14°♄23'32 6.11226 AU	conjunction	3299 Dec 11 05:22	19°♄25'31 0°35'16		
morning rise	3294 Jul 17 22:10	17°♄01'23	minimum elong	3299 Dec 11 05:24	19°♄25'32 0°35'15		
	3294 Sep 18 20:52	0°♄	morning rise	3299 Dec 23 20:57	22°♄13'45		
asc. node	3294 Oct 27 11:38	4°♄58'01		3300 Jan 29 17:50	0°♄		
retrograde	3294 Nov 22 06:54	6°♄02'25	retrograde	3300 Apr 25 05:48	9°♄39'50		
opposition	3295 Jan 20 23:19	0°♄58'47 0°11'29	opposition	3300 Jun 25 03:24	4°♄47'40 0°29'44		
min. Earth dist.	3295 Jan 19 16:16	1°♄09'17 4.18778 AU	min. Earth dist.	3300 Jun 26 17:23	4°♄35'34 4.30903 AU		
	3295 Jan 28 06:18	30°♄		3300 Aug 15 01:58	30°♄		
direct	3295 Mar 21 08:06	25°♄58'23	direct	3300 Aug 26 06:33	29°♄48'31		
	3295 May 12 06:46	0°♄		3300 Sep 06 10:37	0°♄		
evening set	3295 Jul 25 23:08	14°♄27'06	evening set	3300 Dec 29 19:35	17°♄59'00		
	3295 Jul 28 10:23	15°♄	max. Earth dist.	3301 Jan 09 10:36	20°♄24'31 6.23711 AU		
conjunction	3295 Aug 08 14:42	17°♄29'36 0°24'57	conjunction	3301 Jan 11 12:13	20°♄52'55 0°03'13		
minimum elong	3295 Aug 08 14:41	17°♄29'35 0°24'57	minimum elong	3301 Jan 11 12:13	20°♄52'55 0°03'14		
max. Earth dist.	3295 Aug 10 03:11	17°♄49'57 6.26398 AU	behind sun begin	3301 Jan 11 04:17	20°♄48'24		
morning rise	3295 Aug 22 05:36	20°♄31'25	behind sun end	3301 Jan 11 20:09	20°♄57'26		
	3295 Oct 06 20:36	0°♄	morning rise	3301 Jan 24 04:29	23°♄46'52		
retrograde	3295 Dec 24 03:33	8°♄24'12	desc. node	3301 Feb 16 04:48	28°♄54'32		
min. Earth dist.	3296 Feb 21 10:51	3°♄28'55 4.33289 AU		3301 Feb 21 07:24	0°♄		
opposition	3296 Feb 22 02:14	3°♄23'48 0°57'53	retrograde	3301 May 29 16:27	12°♄13'18		
	3296 Mar 21 06:10	30°♄	opposition	3301 Jul 29 09:53	7°♄19'34 -0°21'30		
direct	3296 Apr 22 20:21	28°♄21'36	min. Earth dist.	3301 Jul 30 15:25	7°♄10'03 4.16058 AU		
	3296 May 25 19:52	0°♄	direct	3301 Sep 28 07:38	2°♄22'50		
evening set	3296 Aug 27 11:26	16°♄14'14		3302 Jan 04 08:17	15°♄		
			evening set	3302 Jan 31 18:28	21°♄14'24		
conjunction	3296 Sep 09 21:05	19°♄08'54 0°51'13	max. Earth dist.	3302 Feb 12 07:33	23°♄57'48 6.08742 AU		
minimum elong	3296 Sep 09 21:03	19°♄08'53 0°51'13					
max. Earth dist.	3296 Sep 10 07:09	19°♄14'23 6.39144 AU	conjunction	3302 Feb 13 13:19	24°♄15'25 -0°31'25		
morning rise	3296 Sep 23 04:22	22°♄02'17	minimum elong	3302 Feb 13 13:18	24°♄15'24 0°31'25		
	3296 Oct 31 22:09	0°♄	morning rise	3302 Feb 26 08:59	27°♄17'12		
retrograde	3297 Jan 22 12:04	9°♄06'19		3302 Mar 10 00:18	0°♄		
opposition	3297 Mar 23 19:46	4°♄09'36 1°25'12	retrograde	3302 Jul 05 13:04	16°♄54'49		
min. Earth dist.	3297 Mar 23 22:21	4°♄08'45 4.43466 AU	opposition	3302 Sep 03 20:58	11°♄58'09 -1°08'56		
	3297 Apr 30 14:09	30°♄	min. Earth dist.	3302 Sep 04 08:13	11°♄54'28 4.02228 AU		
direct	3297 May 24 17:16	29°♄06'52	direct	3302 Nov 02 07:39	7°♄03'43		

evening set	3303 Mar 07 20:18	26° $\text{H}$ 33'49	conjunction	3308 Sep 15 08:45	23° $\text{M}$ 33'54	0°53'44
			minimum elong	3308 Sep 15 08:43	23° $\text{M}$ 33'54	0°53'45
conjunction	3303 Mar 20 20:11	29° $\text{H}$ 42'09 -0°56'17	max. Earth dist.	3308 Sep 15 12:58	23° $\text{M}$ 36'12	6.40392 AU
minimum elong	3303 Mar 20 20:10	29° $\text{H}$ 42'08 0°56'17	morning rise	3308 Sep 28 15:08	26° $\text{M}$ 26'25	
max. Earth dist.	3303 Mar 20 20:21	29° $\text{H}$ 42'14 5.97316 AU		3308 Oct 15 09:17	0° $\text{L}$	
	3303 Mar 22 01:42	0° $\text{Y}$	retrograde	3309 Jan 27 18:05	13° $\text{L}$ 26'15	
morning rise	3303 Apr 02 22:37	2° $\text{Y}$ 51'58	opposition	3309 Mar 29 01:42	8° $\text{L}$ 30'01	1°27'10
retrograde	3303 Aug 12 19:24	23° $\text{Y}$ 24'37	min. Earth dist.	3309 Mar 29 07:57	8° $\text{L}$ 27'59	4.44203 AU
opposition	3303 Oct 11 18:00	18° $\text{Y}$ 24'05 -1°32'18	direct	3309 May 30 02:52	3° $\text{L}$ 27'17	
min. Earth dist.	3303 Oct 11 04:37	18° $\text{Y}$ 28'33 3.94514 AU	evening set	3309 Oct 03 14:28	20° $\text{L}$ 56'52	
direct	3303 Dec 08 23:38	13° $\text{Y}$ 30'23				
	3304 Mar 29 20:27	0° $\text{B}$	conjunction	3309 Oct 16 16:14	23° $\text{L}$ 45'36	1°02'26
evening set	3304 Apr 12 18:58	3° $\text{B}$ 19'30	minimum elong	3309 Oct 16 16:14	23° $\text{L}$ 45'35	1°02'25
			max. Earth dist.	3309 Oct 15 18:15	23° $\text{L}$ 33'44	6.46137 AU
conjunction	3304 Apr 26 02:38	6° $\text{B}$ 32'56 -0°59'58	morning rise	3309 Oct 29 15:05	26° $\text{L}$ 32'58	
minimum elong	3304 Apr 26 02:39	6° $\text{B}$ 32'57 0°59'57		3309 Nov 14 23:10	0° $\text{M}$	
max. Earth dist.	3304 Apr 27 13:06	6° $\text{B}$ 53'50 5.94013 AU	retrograde	3310 Feb 26 17:21	13° $\text{M}$ 15'24	
morning rise	3304 May 09 13:18	9° $\text{B}$ 47'58	opposition	3310 Apr 28 09:29	8° $\text{M}$ 21'59	1°27'35
	3304 May 31 15:03	15° $\text{B}$	min. Earth dist.	3310 Apr 29 08:15	8° $\text{M}$ 14'40	4.46265 AU
	3304 Sep 01 11:32	0° $\text{II}$	direct	3310 Jun 30 00:58	3° $\text{M}$ 19'50	
retrograde	3304 Sep 18 21:29	0° $\text{II}$ 29'56		3310 Oct 06 12:50	15° $\text{M}$	
	3304 Oct 06 04:32	30° $\text{R}$ 8	evening set	3310 Nov 03 06:26	20° $\text{M}$ 47'41	
min. Earth dist.	3304 Nov 16 05:54	25° $\text{B}$ 36'24 3.96111 AU	max. Earth dist.	3310 Nov 14 07:33	23° $\text{M}$ 11'30	6.44314 AU
opposition	3304 Nov 17 12:26	25° $\text{B}$ 26'02 -1°18'45				
direct	3305 Jan 14 09:28	20° $\text{B}$ 30'51	conjunction	3310 Nov 16 02:35	23° $\text{M}$ 34'56	0°54'17
	3305 Apr 05 02:05	0° $\text{II}$	minimum elong	3310 Nov 16 02:36	23° $\text{M}$ 34'57	0°54'18
evening set	3305 May 20 11:37	10° $\text{II}$ 09'06	morning rise	3310 Nov 28 20:20	26° $\text{M}$ 21'08	
				3310 Dec 15 22:55	0° $\text{J}$	
conjunction	3305 Jun 03 02:36	13° $\text{II}$ 23'01 -0°39'54	retrograde	3311 Mar 29 13:17	13° $\text{J}$ 15'10	
minimum elong	3305 Jun 03 02:38	13° $\text{II}$ 23'03 0°39'53	opposition	3311 May 29 09:14	8° $\text{J}$ 23'10	1°04'48
max. Earth dist.	3305 Jun 05 10:39	13° $\text{II}$ 56'18 6.00288 AU	min. Earth dist.	3311 May 30 20:36	8° $\text{J}$ 11'54	4.40707 AU
morning rise	3305 Jun 16 19:53	16° $\text{II}$ 37'57	direct	3311 Jul 31 01:46	3° $\text{J}$ 22'22	
	3305 Aug 18 15:04	0° $\text{E}$	evening set	3311 Dec 03 21:09	21° $\text{J}$ 06'24	
retrograde	3305 Oct 25 02:53	6° $\text{E}$ 37'40	max. Earth dist.	3311 Dec 14 10:03	23° $\text{J}$ 26'46	6.35407 AU
min. Earth dist.	3305 Dec 22 03:52	1° $\text{E}$ 45'09 4.06320 AU				
opposition	3305 Dec 23 16:18	1° $\text{E}$ 32'44 -0°34'51	conjunction	3311 Dec 16 14:20	23° $\text{J}$ 55'54	0°31'12
	3306 Jan 04 05:31	30° $\text{R}$ II	minimum elong	3311 Dec 16 14:21	23° $\text{J}$ 55'55	0°31'12
direct	3306 Feb 20 01:31	26° $\text{II}$ 34'45	morning rise	3311 Dec 29 05:55	26° $\text{J}$ 44'50	
	3306 Apr 07 17:34	0° $\text{E}$		3312 Jan 13 02:30	0° $\text{Z}$	
evening set	3306 Jun 26 11:36	15° $\text{E}$ 38'45	retrograde	3312 Apr 29 23:28	14° $\text{Z}$ 18'25	
			opposition	3312 Jun 29 20:59	9° $\text{Z}$ 26'09	0°22'52
conjunction	3306 Jul 10 05:18	18° $\text{E}$ 47'53 -0°05'29	min. Earth dist.	3312 Jul 01 09:28	9° $\text{Z}$ 14'30	4.28943 AU
minimum elong	3306 Jul 10 05:18	18° $\text{E}$ 47'53 0°05'29	direct	3312 Aug 30 19:36	4° $\text{Z}$ 27'23	
behind sun begin	3306 Jul 09 21:15	18° $\text{E}$ 43'17	desc. node	3312 Dec 26 09:32	20° $\text{Z}$ 54'40	
behind sun end	3306 Jul 10 13:21	18° $\text{E}$ 52'29	evening set	3313 Jan 03 09:17	22° $\text{Z}$ 43'12	
max. Earth dist.	3306 Jul 12 10:11	19° $\text{E}$ 18'15 6.13451 AU	max. Earth dist.	3313 Jan 14 04:16	25° $\text{Z}$ 11'37	6.21712 AU
morning rise	3306 Jul 23 23:56	21° $\text{E}$ 57'07				
	3306 Aug 29 23:04	0° $\text{L}$	conjunction	3313 Jan 16 02:09	25° $\text{Z}$ 38'01	-0°01'53
asc. node	3306 Sep 07 07:33	1° $\text{L}$ 39'31	minimum elong	3313 Jan 16 02:07	25° $\text{Z}$ 38'00	0°01'53
retrograde	3306 Nov 27 20:22	10° $\text{L}$ 47'45	behind sun begin	3313 Jan 15 18:08	25° $\text{Z}$ 33'25	
min. Earth dist.	3307 Jan 25 08:56	5° $\text{L}$ 54'11 4.20986 AU	behind sun end	3313 Jan 16 10:06	25° $\text{Z}$ 42'34	
opposition	3307 Jan 26 13:40	5° $\text{L}$ 44'28 0°18'47	morning rise	3313 Jan 28 18:31	28° $\text{Z}$ 32'53	
direct	3307 Mar 27 03:33	0° $\text{L}$ 43'44		3313 Feb 04 03:31	0° $\text{X}$	
	3307 Jul 12 20:10	15° $\text{L}$		3313 Apr 27 04:31	15° $\text{X}$	
evening set	3307 Jul 31 18:01	19° $\text{L}$ 06'43	retrograde	3313 Jun 03 19:09	17° $\text{X}$ 08'33	
				3313 Jul 11 15:39	15° $\text{R}$ ≈	
conjunction	3307 Aug 14 09:04	22° $\text{L}$ 08'05 0°29'22	opposition	3313 Aug 03 10:56	12° $\text{X}$ 14'32	-0°28'52
minimum elong	3307 Aug 14 09:02	22° $\text{L}$ 08'04 0°29'22	min. Earth dist.	3313 Aug 04 14:45	12° $\text{X}$ 05'34	4.14180 AU
max. Earth dist.	3307 Aug 15 19:05	22° $\text{L}$ 27'00 6.28426 AU	direct	3313 Oct 03 04:32	7° $\text{X}$ 18'14	
morning rise	3307 Aug 27 22:51	25° $\text{L}$ 08'37		3313 Dec 15 18:39	15° $\text{X}$	
	3307 Sep 19 11:46	0° $\text{M}$	evening set	3314 Feb 05 14:13	26° $\text{X}$ 14'38	
retrograde	3307 Dec 29 10:52	12° $\text{M}$ 53'20	max. Earth dist.	3314 Feb 17 06:36	29° $\text{X}$ 00'37	6.07148 AU
opposition	3308 Feb 27 10:35	7° $\text{M}$ 53'31 1°03'00				
min. Earth dist.	3308 Feb 26 21:21	7° $\text{M}$ 57'55 4.34994 AU	conjunction	3314 Feb 18 09:23	29° $\text{X}$ 16'31	-0°35'47
direct	3308 Apr 28 08:19	2° $\text{M}$ 51'14	minimum elong	3314 Feb 18 09:21	29° $\text{X}$ 16'30	0°35'47
evening set	3308 Sep 02 00:16	20° $\text{M}$ 40'11		3314 Feb 21 10:38	0° $\text{H}$	
			morning rise	3314 Mar 03 05:53	2° $\text{H}$ 19'19	

retrograde	3314 Jul 10 18:37	22° $\text{K}$ 04'47		min. Earth dist.	3320 Mar 02 06:56	12° $\text{P}$ 22'40	4.36286 AU
opposition	3314 Sep 09 02:58	17° $\text{K}$ 07'36 -1°14'01		direct	3320 May 02 18:52	7° $\text{P}$ 16'44	
min. Earth dist.	3314 Sep 09 09:48	17° $\text{K}$ 05'21 4.01093 AU		evening set	3320 Sep 06 11:14	25° $\text{P}$ 03'09	
direct	3314 Nov 07 08:54	12° $\text{K}$ 13'23					
	3315 Mar 05 12:32	0° $\text{Y}$		conjunction	3320 Sep 19 18:59	27° $\text{P}$ 56'11	0°55'53
evening set	3315 Mar 12 21:43	1° $\text{Y}$ 45'57		minimum elong	3320 Sep 19 18:58	27° $\text{P}$ 56'10	0°55'53
				max. Earth dist.	3320 Sep 19 20:47	27° $\text{P}$ 57'10	6.41280 AU
conjunction	3315 Mar 25 22:31	4° $\text{Y}$ 54'56 -0°58'12			3320 Sep 29 07:24	0° $\text{A}$	
minimum elong	3315 Mar 25 22:30	4° $\text{Y}$ 54'55 0°58'13		morning rise	3320 Oct 03 00:10	0° $\text{A}$ 47'54	
max. Earth dist.	3315 Mar 26 04:32	4° $\text{Y}$ 58'34 5.96743 AU		retrograde	3321 Jan 31 22:12	17° $\text{A}$ 44'39	
morning rise	3315 Apr 08 01:48	8° $\text{Y}$ 05'24		opposition	3321 Apr 02 07:10	12° $\text{A}$ 48'53	1°28'36
retrograde	3315 Aug 18 03:19	28° $\text{Y}$ 40'40		min. Earth dist.	3321 Apr 02 15:07	12° $\text{A}$ 46'17	4.44656 AU
min. Earth dist.	3315 Oct 16 09:03	23° $\text{Y}$ 44'43 3.94576 AU		direct	3321 Jun 03 10:05	7° $\text{A}$ 46'13	
opposition	3315 Oct 17 00:26	23° $\text{Y}$ 39'34 -1°32'36		evening set	3321 Oct 07 22:23	25° $\text{A}$ 15'16	
direct	3315 Dec 14 05:06	18° $\text{Y}$ 45'45					
	3316 Mar 11 20:52	0° $\text{B}$		conjunction	3321 Oct 20 23:08	28° $\text{A}$ 03'38	1°02'14
evening set	3316 Apr 17 23:06	8° $\text{B}$ 33'29		minimum elong	3321 Oct 20 23:08	28° $\text{A}$ 03'38	1°02'13
				max. Earth dist.	3321 Oct 19 20:52	27° $\text{A}$ 49'27	6.46120 AU
conjunction	3316 May 01 07:50	11° $\text{B}$ 47'05 -0°58'28			3321 Oct 29 22:53	0° $\text{M}$	
minimum elong	3316 May 01 07:51	11° $\text{B}$ 47'06 0°58'28		morning rise	3321 Nov 02 21:19	0° $\text{M}$ 50'44	
max. Earth dist.	3316 May 02 22:22	12° $\text{B}$ 10'23 5.94689 AU			3322 Jan 20 14:39	15° $\text{M}$	
morning rise	3316 May 14 19:32	15° $\text{B}$ 02'16		retrograde	3322 Mar 03 00:57	17° $\text{M}$ 33'35	
	3316 May 14 15:46	15° $\text{B}$			3322 Apr 13 17:54	15° $\text{R}$ $\text{M}$	
	3316 Jul 24 04:45	0° $\text{II}$		opposition	3322 May 02 16:30	12° $\text{M}$ 40'25	1°25'39
retrograde	3316 Sep 23 23:17	5° $\text{II}$ 39'42		min. Earth dist.	3322 May 03 17:52	12° $\text{M}$ 32'16	4.45794 AU
min. Earth dist.	3316 Nov 21 05:53	0° $\text{II}$ 46'29 3.97339 AU		direct	3322 Jul 04 09:43	7° $\text{M}$ 38'22	
opposition	3316 Nov 22 14:02	0° $\text{II}$ 35'34 -1°14'04			3322 Sep 17 19:24	15° $\text{M}$	
	3316 Nov 26 23:04	30° $\text{R}$ $\text{B}$		evening set	3322 Nov 07 13:10	25° $\text{M}$ 07'40	
direct	3317 Jan 19 11:06	25° $\text{B}$ 40'03		max. Earth dist.	3322 Nov 18 12:47	27° $\text{M}$ 30'59	6.43419 AU
	3317 Mar 12 17:24	0° $\text{II}$					
evening set	3317 May 25 14:21	15° $\text{II}$ 13'44		conjunction	3322 Nov 20 08:55	27° $\text{M}$ 55'04	0°51'49
				minimum elong	3322 Nov 20 08:56	27° $\text{M}$ 55'05	0°51'49
conjunction	3317 Jun 08 05:51	18° $\text{II}$ 27'10 -0°35'42			3322 Nov 29 21:55	0° $\text{A}$	
minimum elong	3317 Jun 08 05:53	18° $\text{II}$ 27'11 0°35'42		morning rise	3322 Dec 03 02:07	0° $\text{A}$ 41'26	
max. Earth dist.	3317 Jun 10 12:47	18° $\text{II}$ 59'38 6.01927 AU		retrograde	3323 Apr 02 22:38	17° $\text{A}$ 39'17	
morning rise	3317 Jun 21 23:46	21° $\text{II}$ 41'33		opposition	3323 Jun 02 20:07	12° $\text{A}$ 47'15	0°59'51
	3317 Jul 29 00:23	0° $\text{B}$		min. Earth dist.	3323 Jun 04 07:05	12° $\text{A}$ 36'07	4.39434 AU
retrograde	3317 Oct 29 20:09	11° $\text{B}$ 32'27		direct	3323 Aug 04 09:55	7° $\text{A}$ 46'41	
min. Earth dist.	3317 Dec 26 22:48	6° $\text{B}$ 39'44 4.08183 AU		evening set	3323 Dec 08 05:25	25° $\text{A}$ 33'56	
opposition	3317 Dec 28 10:25	6° $\text{B}$ 27'35 -0°27'36		max. Earth dist.	3323 Dec 18 18:57	27° $\text{A}$ 55'11	6.33838 AU
direct	3318 Feb 24 23:18	1° $\text{B}$ 29'08					
evening set	3318 Jul 01 09:36	20° $\text{B}$ 27'44		conjunction	3323 Dec 20 22:19	28° $\text{A}$ 23'56	0°26'58
				minimum elong	3323 Dec 20 22:21	28° $\text{A}$ 23'57	0°26'58
conjunction	3318 Jul 15 03:26	23° $\text{B}$ 36'01 -0°00'25			3323 Dec 28 02:03	0° $\text{B}$	
minimum elong	3318 Jul 15 03:25	23° $\text{B}$ 36'00 0°00'25		morning rise	3324 Jan 02 13:49	1° $\text{B}$ 13'27	
behind sun begin	3318 Jul 14 19:03	23° $\text{B}$ 31'15		retrograde	3324 May 04 17:39	18° $\text{B}$ 53'59	
behind sun end	3318 Jul 15 11:46	23° $\text{B}$ 40'45		opposition	3324 Jul 04 13:59	14° $\text{B}$ 01'33	0°15'53
max. Earth dist.	3318 Jul 17 07:04	24° $\text{B}$ 05'32 6.15401 AU		min. Earth dist.	3324 Jul 06 02:45	13° $\text{B}$ 49'49	4.27133 AU
asc. node	3318 Jul 19 13:47	24° $\text{B}$ 36'48		direct	3324 Sep 04 10:26	9° $\text{B}$ 03'05	
morning rise	3318 Jul 28 21:33	26° $\text{B}$ 44'10		desc. node	3324 Nov 05 02:43	14° $\text{B}$ 26'09	
	3318 Aug 12 11:43	0° $\text{O}$		evening set	3325 Jan 07 21:41	27° $\text{B}$ 23'34	
	3318 Nov 16 02:12	15° $\text{O}$		max. Earth dist.	3325 Jan 18 17:32	29° $\text{B}$ 53'09	6.19795 AU
retrograde	3318 Dec 02 07:54	15° $\text{O}$ 25'43			3325 Jan 19 05:24	0° $\text{A}$	
	3318 Dec 18 09:15	15° $\text{R}$ $\text{O}$					
min. Earth dist.	3319 Jan 29 22:15	10° $\text{O}$ 31'51 4.22841 AU		conjunction	3325 Jan 20 14:37	0° $\text{A}$ 19'11	-0°06'51
opposition	3319 Jan 31 00:50	10° $\text{O}$ 22'54 0°25'41		minimum elong	3325 Jan 20 14:36	0° $\text{A}$ 19'11	0°06'52
direct	3319 Mar 31 18:38	5° $\text{O}$ 21'54		behind sun begin	3325 Jan 20 07:09	0° $\text{A}$ 14'54	
	3319 Jun 25 00:18	15° $\text{O}$		behind sun end	3325 Jan 20 22:03	0° $\text{A}$ 23'27	
evening set	3319 Aug 05 10:22	23° $\text{O}$ 40'27		morning rise	3325 Feb 02 07:27	3° $\text{A}$ 15'01	
					3325 Mar 30 03:31	15° $\text{A}$	
conjunction	3319 Aug 19 00:36	26° $\text{O}$ 40'50 0°33'28		retrograde	3325 Jun 08 17:59	21° $\text{A}$ 59'44	
minimum elong	3319 Aug 19 00:34	26° $\text{O}$ 40'49 0°33'27		opposition	3325 Aug 08 10:24	17° $\text{A}$ 05'20	-0°36'01
max. Earth dist.	3319 Aug 20 05:43	26° $\text{O}$ 56'57 6.30045 AU		min. Earth dist.	3325 Aug 09 11:07	16° $\text{A}$ 57'21	4.12293 AU
morning rise	3319 Sep 01 13:42	29° $\text{O}$ 40'20			3325 Aug 25 03:07	15° $\text{R}$ $\text{A}$	
	3319 Sep 03 01:33	0° $\text{P}$		direct	3325 Oct 07 22:26	12° $\text{A}$ 09'21	
retrograde	3320 Jan 02 16:41	17° $\text{P}$ 18'32			3325 Nov 19 22:04	15° $\text{A}$	
opposition	3320 Mar 02 17:27	12° $\text{P}$ 19'11 1°07'37			3326 Feb 05 08:23	0° $\text{K}$	

evening set	3326 Feb 10 08:56	1° $\text{X}$ 10'57		conjunction	3331 Aug 23 18:40	1° $\text{M}$ 20'05	0°37'30
max. Earth dist.	3326 Feb 22 06:29	4° $\text{X}$ 00'33	6.05456 AU	minimum elong	3331 Aug 23 18:38	1° $\text{M}$ 20'03	0°37'30
				max. Earth dist.	3331 Aug 24 21:13	1° $\text{M}$ 34'43	6.31886 AU
conjunction	3326 Feb 23 04:43	4° $\text{X}$ 13'48	-0°39'53	morning rise	3331 Sep 06 06:38	4° $\text{M}$ 18'22	
minimum elong	3326 Feb 23 04:41	4° $\text{X}$ 13'47	0°39'53	retrograde	3332 Jan 07 00:56	21° $\text{M}$ 49'14	
morning rise	3326 Mar 08 01:51	7° $\text{X}$ 17'39		opposition	3332 Mar 07 02:27	16° $\text{M}$ 50'28	1°11'58
retrograde	3326 Jul 16 02:21	27° $\text{X}$ 11'36		min. Earth dist.	3332 Mar 06 18:10	16° $\text{M}$ 53'12	4.37943 AU
opposition	3326 Sep 14 08:02	22° $\text{X}$ 13'55	-1°18'34	direct	3332 May 07 08:21	11° $\text{M}$ 48'02	
min. Earth dist.	3326 Sep 14 12:50	22° $\text{X}$ 12'20	3.99755 AU	evening set	3332 Sep 10 23:52	29° $\text{M}$ 30'27	
direct	3326 Nov 12 10:54	17° $\text{X}$ 19'51			3332 Sep 13 06:49	0° $\text{L}$	
	3327 Feb 16 05:44	0° $\text{Y}$					
evening set	3327 Mar 17 22:51	6° $\text{Y}$ 56'01		conjunction	3332 Sep 24 06:28	2° $\text{L}$ 22'31	0°57'48
				minimum elong	3332 Sep 24 06:26	2° $\text{L}$ 22'30	0°57'47
conjunction	3327 Mar 31 00:40	10° $\text{Y}$ 05'52	-0°59'42	max. Earth dist.	3332 Sep 24 03:59	2° $\text{L}$ 21'10	6.42639 AU
minimum elong	3327 Mar 31 00:39	10° $\text{Y}$ 05'51	0°59'42	morning rise	3332 Oct 07 10:39	5° $\text{L}$ 13'16	
max. Earth dist.	3327 Mar 31 11:04	10° $\text{Y}$ 12'10	5.95881 AU	retrograde	3333 Feb 05 03:09	22° $\text{L}$ 05'22	
morning rise	3327 Apr 13 05:08	13° $\text{Y}$ 17'15		opposition	3333 Apr 06 13:23	17° $\text{L}$ 09'58	1°29'36
	3327 Jul 03 12:57	0° $\text{Z}$		min. Earth dist.	3333 Apr 06 23:40	17° $\text{L}$ 06'38	4.45662 AU
retrograde	3327 Aug 23 10:47	3° $\text{Z}$ 56'14		direct	3333 Jun 07 19:41	12° $\text{L}$ 07'20	
	3327 Oct 14 02:38	30° $\text{R}$ $\text{Y}$		evening set	3333 Oct 12 05:42	29° $\text{L}$ 33'52	
opposition	3327 Oct 22 06:48	28° $\text{Y}$ 54'41	-1°32'13		3333 Oct 14 06:31	0° $\text{M}$	
min. Earth dist.	3327 Oct 21 12:17	29° $\text{Y}$ 00'54	3.94315 AU	max. Earth dist.	3333 Oct 24 02:11	2° $\text{M}$ 06'50	6.46702 AU
direct	3327 Dec 19 07:45	24° $\text{Y}$ 00'48					
	3328 Feb 19 09:21	0° $\text{Z}$		conjunction	3333 Oct 25 05:42	2° $\text{M}$ 21'41	1°01'44
evening set	3328 Apr 23 04:29	13° $\text{Z}$ 48'46		minimum elong	3333 Oct 25 05:42	2° $\text{M}$ 21'41	1°01'45
	3328 Apr 28 02:54	15° $\text{Z}$		morning rise	3333 Nov 07 02:48	5° $\text{M}$ 08'11	
					3333 Dec 26 18:29	15° $\text{M}$	
conjunction	3328 May 06 14:12	17° $\text{Z}$ 02'43	-0°56'30	retrograde	3334 Mar 07 04:22	21° $\text{M}$ 49'41	
minimum elong	3328 May 06 14:13	17° $\text{Z}$ 02'44	0°56'30	opposition	3334 May 06 22:27	16° $\text{M}$ 56'43	1°23'19
max. Earth dist.	3328 May 08 06:40	17° $\text{Z}$ 27'10	5.95031 AU	min. Earth dist.	3334 May 08 00:54	16° $\text{M}$ 48'15	4.45914 AU
morning rise	3328 May 20 03:05	20° $\text{Z}$ 18'14			3334 May 22 12:52	15° $\text{R}$ $\text{M}$	
	3328 Jul 01 19:48	0° $\text{I}$		direct	3334 Jul 08 16:17	11° $\text{M}$ 54'52	
retrograde	3328 Sep 29 02:09	10° $\text{I}$ 52'33			3334 Aug 24 17:02	15° $\text{M}$	
min. Earth dist.	3328 Nov 26 07:20	5° $\text{I}$ 59'32	3.98237 AU	evening set	3334 Nov 11 17:48	29° $\text{M}$ 23'37	
opposition	3328 Nov 27 16:46	5° $\text{I}$ 48'10	-1°08'48		3334 Nov 14 12:53	0° $\text{X}$	
direct	3329 Jan 24 15:06	0° $\text{I}$ 52'17		max. Earth dist.	3334 Nov 22 14:01	1° $\text{X}$ 45'20	6.43050 AU
evening set	3329 May 30 19:28	20° $\text{I}$ 22'57					
				conjunction	3334 Nov 24 12:45	2° $\text{X}$ 10'52	0°49'09
conjunction	3329 Jun 13 11:49	23° $\text{I}$ 36'05	-0°31'10	minimum elong	3334 Nov 24 12:47	2° $\text{X}$ 10'53	0°49'09
minimum elong	3329 Jun 13 11:51	23° $\text{I}$ 36'06	0°31'10	morning rise	3334 Dec 07 05:35	4° $\text{X}$ 57'12	
max. Earth dist.	3329 Jun 15 20:33	24° $\text{I}$ 09'30	6.03311 AU	retrograde	3335 Apr 07 07:10	21° $\text{X}$ 57'28	
morning rise	3329 Jun 27 06:02	26° $\text{I}$ 49'59		opposition	3335 Jun 07 04:31	17° $\text{X}$ 05'26	0°54'44
	3329 Jul 10 23:27	0° $\text{O}$		min. Earth dist.	3335 Jun 08 17:30	16° $\text{X}$ 53'39	4.38568 AU
retrograde	3329 Nov 03 17:47	16° $\text{O}$ 32'53		direct	3335 Aug 08 18:42	12° $\text{X}$ 05'01	
min. Earth dist.	3329 Dec 31 20:06	11° $\text{O}$ 40'02	4.09889 AU	evening set	3335 Dec 12 10:21	29° $\text{X}$ 54'17	
opposition	3330 Jan 02 06:46	11° $\text{O}$ 28'14	-0°20'00		3335 Dec 12 20:38	0° $\text{Z}$	
direct	3330 Mar 01 22:46	6° $\text{O}$ 29'28		max. Earth dist.	3335 Dec 22 23:00	2° $\text{Z}$ 15'28	6.32532 AU
asc. node	3330 May 29 00:35	17° $\text{O}$ 03'03					
evening set	3330 Jul 06 10:41	25° $\text{O}$ 23'21		conjunction	3335 Dec 25 03:08	2° $\text{Z}$ 44'43	0°22'45
				minimum elong	3335 Dec 25 03:09	2° $\text{Z}$ 44'43	0°22'46
conjunction	3330 Jul 20 04:16	28° $\text{O}$ 30'44	0°04'49	morning rise	3336 Jan 06 18:31	5° $\text{Z}$ 34'43	
minimum elong	3330 Jul 20 04:14	28° $\text{O}$ 30'43	0°04'49	retrograde	3336 May 09 05:23	23° $\text{Z}$ 21'32	
behind sun begin	3330 Jul 19 20:05	28° $\text{O}$ 26'06		opposition	3336 Jul 09 03:01	18° $\text{Z}$ 28'51	0°09'03
behind sun end	3330 Jul 20 12:24	28° $\text{O}$ 35'20		min. Earth dist.	3336 Jul 10 14:43	18° $\text{Z}$ 17'27	4.25453 AU
max. Earth dist.	3330 Jul 22 05:29	28° $\text{O}$ 58'45	6.17284 AU	direct	3336 Sep 08 19:24	13° $\text{Z}$ 30'37	
	3330 Jul 26 17:15	0° $\text{Q}$		desc. node	3336 Sep 17 01:27	13° $\text{Z}$ 36'57	
morning rise	3330 Aug 02 22:08	1° $\text{Q}$ 37'53			3337 Jan 03 19:49	0° $\text{A}$	
	3330 Oct 08 12:34	15° $\text{Q}$		evening set	3337 Jan 12 06:33	1° $\text{A}$ 55'43	
retrograde	3330 Dec 06 19:48	20° $\text{Q}$ 10'32		max. Earth dist.	3337 Jan 23 04:08	4° $\text{A}$ 26'55	6.17868 AU
opposition	3331 Feb 04 14:40	15° $\text{Q}$ 08'09	0°32'37				
min. Earth dist.	3331 Feb 03 13:07	15° $\text{Q}$ 16'46	4.24758 AU	conjunction	3337 Jan 24 23:39	4° $\text{A}$ 52'10	-0°11'34
	3331 Feb 05 14:54	15° $\text{R}$ $\text{Q}$		minimum elong	3337 Jan 24 23:38	4° $\text{A}$ 52'10	0°11'34
direct	3331 Apr 05 11:59	10° $\text{Q}$ 06'58		behind sun begin	3337 Jan 24 17:50	4° $\text{A}$ 48'49	
	3331 Jun 02 17:59	15° $\text{Q}$		behind sun end	3337 Jan 25 05:26	4° $\text{A}$ 55'31	
evening set	3331 Aug 10 05:10	28° $\text{Q}$ 20'48		morning rise	3337 Feb 06 16:51	7° $\text{A}$ 48'58	
	3331 Aug 17 17:36	0° $\text{M}$			3337 Mar 10 23:29	15° $\text{A}$	
				retrograde	3337 Jun 13 16:21	26° $\text{A}$ 43'09	

opposition	3337 Aug 13 06:28	21° $\approx$ 48'21	-0°42'42			3343 Apr 01 18:15	15° $\approx$ 8 $\delta$	
min. Earth dist.	3337 Aug 14 06:38	21° $\approx$ 40'31	4.10242 AU	direct		3343 Apr 10 08:15	14° $\approx$ 52'51	
direct	3337 Oct 12 15:15	16° $\approx$ 52'34				3343 Apr 18 23:06	15° $\approx$	
	3338 Jan 20 00:09	0° $\approx$				3343 Aug 01 01:01	0° $\approx$	
evening set	3338 Feb 15 00:36	6° $\approx$ 00'17		evening set		3343 Aug 15 00:29	3° $\approx$ 01'13	
conjunction	3338 Feb 27 21:06	9° $\approx$ 04'19	-0°43'35	conjunction		3343 Aug 28 13:07	5° $\approx$ 59'19	0°41'18
minimum elong	3338 Feb 27 21:04	9° $\approx$ 04'18	0°43'35	minimum elong		3343 Aug 28 13:05	5° $\approx$ 59'18	0°41'18
max. Earth dist.	3338 Feb 27 01:25	8° $\approx$ 52'33	6.03467 AU	max. Earth dist.		3343 Aug 29 12:31	6° $\approx$ 12'11	6.33800 AU
morning rise	3338 Mar 12 19:10	12° $\approx$ 09'26		morning rise		3343 Sep 11 00:03	8° $\approx$ 56'22	
	3338 Jun 13 09:24	0° $\approx$		retrograde		3344 Jan 11 07:45	26° $\approx$ 19'38	
retrograde	3338 Jul 21 06:23	2° $\approx$ 13'05		opposition		3344 Mar 11 11:45	21° $\approx$ 21'16	1°15'53
	3338 Aug 28 06:38	30° $\approx$ 8 $\approx$		min. Earth dist.		3344 Mar 11 05:17	21° $\approx$ 23'25	4.39573 AU
opposition	3338 Sep 19 10:19	27° $\approx$ 14'54	-1°22'28	direct		3344 May 11 21:19	16° $\approx$ 18'43	
min. Earth dist.	3338 Sep 19 11:59	27° $\approx$ 14'21	3.98043 AU			3344 Aug 27 18:12	0° $\approx$	
direct	3338 Nov 17 07:19	22° $\approx$ 20'57		evening set		3344 Sep 15 12:22	3° $\approx$ 57'13	
	3339 Jan 27 20:06	0° $\approx$						
evening set	3339 Mar 22 22:50	12° $\approx$ 02'33		conjunction		3344 Sep 28 17:57	6° $\approx$ 48'23	0°59'22
				minimum elong		3344 Sep 28 17:56	6° $\approx$ 48'22	0°59'22
conjunction	3339 Apr 05 01:42	15° $\approx$ 13'29	-1°00'42	max. Earth dist.		3344 Sep 28 12:07	6° $\approx$ 45'14	6.43842 AU
minimum elong	3339 Apr 05 01:41	15° $\approx$ 13'29	1°00'42	morning rise		3344 Oct 11 20:57	9° $\approx$ 38'13	
max. Earth dist.	3339 Apr 05 15:21	15° $\approx$ 21'47	5.94604 AU	retrograde		3345 Feb 09 08:53	26° $\approx$ 26'29	
morning rise	3339 Apr 18 07:29	18° $\approx$ 26'03		opposition		3345 Apr 10 20:31	21° $\approx$ 31'31	1°30'07
	3339 Jun 08 18:57	0° $\approx$		min. Earth dist.		3345 Apr 11 09:37	21° $\approx$ 27'17	4.46353 AU
retrograde	3339 Aug 28 17:13	9° $\approx$ 10'21		direct		3345 Jun 12 06:06	16° $\approx$ 28'59	
opposition	3339 Oct 27 11:58	4° $\approx$ 08'17	-1°31'08			3345 Sep 28 00:23	0° $\approx$	
min. Earth dist.	3339 Oct 26 14:51	4° $\approx$ 15'23	3.93623 AU	evening set		3345 Oct 16 13:55	3° $\approx$ 54'05	
	3339 Dec 03 08:16	30° $\approx$ 8 $\approx$		max. Earth dist.		3345 Oct 28 04:50	6° $\approx$ 24'11	6.46805 AU
direct	3339 Dec 24 10:53	29° $\approx$ 14'11						
	3340 Jan 14 13:33	0° $\approx$		conjunction		3345 Oct 29 12:57	6° $\approx$ 41'31	1°00'54
	3340 Apr 11 05:38	15° $\approx$		minimum elong		3345 Oct 29 12:58	6° $\approx$ 41'31	1°00'54
evening set	3340 Apr 28 10:11	19° $\approx$ 04'14		morning rise		3345 Nov 11 09:24	9° $\approx$ 27'43	
						3345 Dec 07 22:43	15° $\approx$	
conjunction	3340 May 11 21:20	22° $\approx$ 18'50	-0°54'05	retrograde		3346 Mar 11 11:58	26° $\approx$ 09'41	
minimum elong	3340 May 11 21:22	22° $\approx$ 18'51	0°54'05	opposition		3346 May 11 06:34	21° $\approx$ 16'57	1°20'30
max. Earth dist.	3340 May 13 18:49	22° $\approx$ 46'16	5.95013 AU	min. Earth dist.		3346 May 12 11:23	21° $\approx$ 07'43	4.45430 AU
morning rise	3340 May 25 11:16	25° $\approx$ 34'51		direct		3346 Jul 13 01:18	16° $\approx$ 15'13	
	3340 Jun 13 06:13	0° $\approx$				3346 Oct 29 10:05	0° $\approx$	
retrograde	3340 Oct 04 07:46	16° $\approx$ 10'00		evening set		3346 Nov 16 00:49	3° $\approx$ 45'33	
min. Earth dist.	3340 Dec 01 09:47	11° $\approx$ 14'02	3.98885 AU	max. Earth dist.		3346 Nov 26 19:59	6° $\approx$ 07'01	6.42012 AU
opposition	3340 Dec 02 20:03	11° $\approx$ 02'22	-1°03'00					
direct	3341 Jan 29 19:15	6° $\approx$ 06'07		conjunction		3346 Nov 28 19:28	6° $\approx$ 33'03	0°46'08
evening set	3341 Jun 05 02:02	25° $\approx$ 13'43		minimum elong		3346 Nov 28 19:29	6° $\approx$ 33'04	0°46'08
				morning rise		3346 Dec 11 11:45	9° $\approx$ 19'38	
conjunction	3341 Jun 18 18:56	28° $\approx$ 14'21	-0°26'22	retrograde		3347 Apr 11 18:25	26° $\approx$ 24'42	
minimum elong	3341 Jun 18 18:57	28° $\approx$ 14'22	0°26'22	opposition		3347 Jun 11 16:55	21° $\approx$ 32'42	0°49'05
max. Earth dist.	3341 Jun 21 04:24	29° $\approx$ 12'05	6.04552 AU	min. Earth dist.		3347 Jun 13 06:03	21° $\approx$ 20'53	4.37031 AU
	3341 Jun 23 22:46	0° $\approx$		direct		3347 Aug 13 04:33	16° $\approx$ 32'37	
morning rise	3341 Jul 02 13:45	2° $\approx$ 00'52				3347 Nov 26 12:44	0° $\approx$	
retrograde	3341 Nov 08 13:39	21° $\approx$ 35'48		evening set		3347 Dec 16 19:53	4° $\approx$ 26'11	
min. Earth dist.	3342 Jan 05 16:42	16° $\approx$ 43'15	4.11571 AU	max. Earth dist.		3347 Dec 27 07:44	6° $\approx$ 47'36	6.30606 AU
opposition	3342 Jan 07 04:04	16° $\approx$ 31'13	-0°12'14					
direct	3342 Mar 06 22:28	11° $\approx$ 32'00		conjunction		3347 Dec 29 12:26	7° $\approx$ 17'19	0°18'11
asc. node	3342 Apr 06 18:57	13° $\approx$ 03'52		minimum elong		3347 Dec 29 12:27	7° $\approx$ 17'19	0°18'11
	3342 Jul 09 23:50	0° $\approx$		morning rise		3348 Jan 11 04:01	10° $\approx$ 08'10	
evening set	3342 Jul 11 12:59	0° $\approx$ 20'55		retrograde		3348 May 14 02:37	28° $\approx$ 03'46	
				opposition		3348 Jul 13 22:42	23° $\approx$ 10'55	0°01'44
conjunction	3342 Jul 25 06:20	3° $\approx$ 27'16	0°09'57	min. Earth dist.		3348 Jul 15 10:18	22° $\approx$ 59'31	4.23239 AU
minimum elong	3342 Jul 25 06:19	3° $\approx$ 27'16	0°09'57	desc. node		3348 Jul 27 06:10	21° $\approx$ 30'32	
behind sun begin	3342 Jul 24 23:37	3° $\approx$ 23'29		direct		3348 Sep 13 12:03	18° $\approx$ 13'00	
behind sun end	3342 Jul 25 13:00	3° $\approx$ 31'02				3348 Dec 17 15:53	0° $\approx$	
max. Earth dist.	3342 Jul 27 05:39	3° $\approx$ 54'06	6.19260 AU	evening set		3349 Jan 16 21:49	6° $\approx$ 44'27	
morning rise	3342 Aug 07 23:37	6° $\approx$ 33'17		max. Earth dist.		3349 Jan 27 22:05	9° $\approx$ 17'59	6.15564 AU
	3342 Sep 16 12:00	15° $\approx$						
retrograde	3342 Dec 11 10:18	24° $\approx$ 56'22		conjunction		3349 Jan 29 15:20	9° $\approx$ 42'02	-0°16'31
min. Earth dist.	3343 Feb 08 06:09	20° $\approx$ 02'08	4.26800 AU	minimum elong		3349 Jan 29 15:19	9° $\approx$ 42'01	0°16'31
opposition	3343 Feb 09 05:18	19° $\approx$ 54'21	0°39'21	morning rise		3349 Feb 11 09:00	12° $\approx$ 40'01	

	3349 Feb 21 12:16	15°♊	opposition	3355 Feb 13 16:36	24°♏33'05	0°45'36
	3349 May 16 03:06	0°♋	min. Earth dist.	3355 Feb 12 18:52	24°♏40'21	4.29097 AU
retrograde	3349 Jun 18 20:47	1°♋45'03	direct	3355 Apr 14 23:42	19°♏31'20	
	3349 Jul 22 18:33	30°♋		3355 Jul 14 10:31	0°♎	
opposition	3349 Aug 18 09:58	26°♋49'56 -0°49'34	evening set	3355 Aug 19 16:01	7°♎33'45	
min. Earth dist.	3349 Aug 19 07:00	26°♋43'07 4.08054 AU				
direct	3349 Oct 17 12:31	21°♋54'33	conjunction	3355 Sep 02 03:34	10°♎30'37	0°44'43
	3349 Dec 31 11:54	0°♋	minimum elong	3355 Sep 02 03:32	10°♎30'36	0°44'43
evening set	3350 Feb 20 00:04	11°♋08'49	max. Earth dist.	3355 Sep 02 21:35	10°♎40'29	6.35752 AU
			morning rise	3355 Sep 15 13:24	13°♎26'23	
conjunction	3350 Mar 04 21:13	14°♋13'59 -0°47'12		3355 Dec 25 09:09	0°♎	
minimum elong	3350 Mar 04 21:11	14°♋13'58 0°47'13	retrograde	3356 Jan 15 13:47	0°♎42'35	
max. Earth dist.	3350 Mar 04 05:20	14°♋04'27 6.01597 AU		3356 Feb 05 14:22	30°♋	
morning rise	3350 Mar 17 20:19	17°♋20'23	opposition	3356 Mar 15 18:10	25°♎44'45	1°19'15
	3350 May 14 19:27	0°♎	min. Earth dist.	3356 Mar 15 15:37	25°♎45'35	4.41052 AU
retrograde	3350 Jul 26 17:20	7°♎33'07	direct	3356 May 16 09:04	20°♎42'04	
opposition	3350 Sep 24 19:49	2°♎34'23 -1°25'57		3356 Aug 10 02:23	0°♎	
min. Earth dist.	3350 Sep 24 17:59	2°♎35'00 3.96706 AU	evening set	3356 Sep 19 21:43	8°♎17'19	
	3350 Oct 15 07:40	30°♋				
direct	3350 Nov 22 12:40	27°♋40'36	conjunction	3356 Oct 03 02:22	11°♎07'45	1°00'35
	3350 Dec 30 04:29	0°♎	minimum elong	3356 Oct 03 02:21	11°♎07'44	1°00'35
evening set	3351 Mar 28 05:22	17°♎25'54	max. Earth dist.	3356 Oct 02 16:08	11°♎02'14	6.44725 AU
			morning rise	3356 Oct 16 04:20	13°♎56'50	
conjunction	3351 Apr 10 09:33	20°♎37'43 -1°01'17		3357 Jan 23 05:29	0°♎	
minimum elong	3351 Apr 10 09:33	20°♎37'43 1°01'17	retrograde	3357 Feb 13 11:57	0°♎42'31	
max. Earth dist.	3351 Apr 11 05:53	20°♎50'05 5.93955 AU		3357 Mar 06 18:21	30°♋	
morning rise	3351 Apr 23 16:26	23°♎51'07	opposition	3357 Apr 15 01:26	25°♎47'54	1°30'10
	3351 May 19 19:44	0°♋	min. Earth dist.	3357 Apr 15 16:49	25°♎42'56	4.46616 AU
retrograde	3351 Sep 03 05:49	14°♋37'27	direct	3357 Jun 16 12:31	20°♎45'21	
opposition	3351 Nov 01 22:02	9°♋34'56 -1°29'12		3357 Sep 10 13:26	0°♎	
min. Earth dist.	3351 Oct 31 22:31	9°♋42'52 3.93783 AU	evening set	3357 Oct 20 20:14	8°♎10'30	
direct	3351 Dec 29 19:56	4°♋40'42	max. Earth dist.	3357 Nov 01 08:07	10°♎39'08	6.46426 AU
	3352 Mar 23 04:44	15°♋				
evening set	3352 May 03 19:52	24°♋29'12	conjunction	3357 Nov 02 18:35	10°♎57'47	0°59'45
			minimum elong	3357 Nov 02 18:36	10°♎57'48	0°59'45
conjunction	3352 May 17 07:53	27°♋43'49 -0°51'12	morning rise	3357 Nov 15 14:14	13°♎43'51	
minimum elong	3352 May 17 07:55	27°♋43'50 0°51'11		3357 Nov 21 12:36	15°♎	
max. Earth dist.	3352 May 19 08:12	28°♋12'52 5.95949 AU		3358 Feb 26 11:40	0°♋	
	3352 May 26 18:45	0°♎	retrograde	3358 Mar 15 18:57	0°♋27'54	
morning rise	3352 May 30 22:55	0°♎59'50		3358 Apr 02 01:49	30°♋	
retrograde	3352 Oct 09 10:38	21°♎25'25	opposition	3358 May 15 14:11	25°♎35'24	1°17'20
min. Earth dist.	3352 Dec 06 11:47	16°♎32'58 4.00500 AU	min. Earth dist.	3358 May 16 21:09	25°♎25'31	4.44435 AU
opposition	3352 Dec 08 00:08	16°♎20'35 -0°56'37	direct	3358 Jul 17 09:17	20°♎33'51	
direct	3353 Feb 04 00:15	11°♎23'54		3358 Oct 11 23:30	0°♋	
	3353 Jun 07 00:28	0°♎	evening set	3358 Nov 20 07:39	8°♋07'16	
evening set	3353 Jun 10 08:44	0°♎46'32	max. Earth dist.	3358 Nov 30 23:12	10°♋27'22	6.40463 AU
conjunction	3353 Jun 24 02:00	3°♎58'32 -0°21'24	conjunction	3358 Dec 03 01:46	10°♋55'11	0°42'53
minimum elong	3353 Jun 24 02:01	3°♎58'33 0°21'23	minimum elong	3358 Dec 03 01:48	10°♋55'12	0°42'54
max. Earth dist.	3353 Jun 26 11:07	4°♎31'53 6.06689 AU	morning rise	3358 Dec 15 17:59	13°♋42'19	
morning rise	3353 Jul 07 20:50	7°♎11'02		3359 Mar 23 04:09	0°♎	
retrograde	3353 Nov 13 08:40	26°♎34'50	retrograde	3359 Apr 16 08:47	0°♎53'58	
opposition	3354 Jan 11 23:28	21°♎30'26 -0°04'32		3359 May 10 14:08	30°♋	
min. Earth dist.	3354 Jan 10 13:59	21°♎41'49 4.13972 AU	opposition	3359 Jun 16 06:35	26°♋01'56	0°43'11
asc. node	3354 Feb 14 07:09	17°♎36'02	min. Earth dist.	3359 Jun 17 20:23	25°♋49'53	4.35020 AU
direct	3354 Mar 11 23:33	16°♎30'48	direct	3359 Aug 17 15:55	21°♋02'04	
	3354 Jun 22 18:58	0°♎		3359 Nov 08 11:52	0°♎	
evening set	3354 Jul 16 12:26	5°♎12'30	evening set	3359 Dec 21 06:45	9°♎01'24	
			max. Earth dist.	3359 Dec 31 20:28	11°♎24'34	6.28304 AU
conjunction	3354 Jul 30 05:22	8°♎17'35 0°14'54	conjunction	3360 Jan 02 23:29	11°♎53'28	0°13'29
minimum elong	3354 Jul 30 05:21	8°♎17'34 0°14'53	minimum elong	3360 Jan 02 23:30	11°♎53'29	0°13'29
behind sun begin	3354 Jul 30 02:31	8°♎15'59		3360 Jan 02 18:54	11°♎50'53	
behind sun end	3354 Jul 30 08:10	8°♎19'09	behind sun begin	3360 Jan 03 04:05	11°♎56'04	
max. Earth dist.	3354 Aug 01 02:48	8°♎43'11 6.21714 AU	behind sun end			
morning rise	3354 Aug 12 21:52	11°♎22'09	morning rise	3360 Jan 15 15:05	14°♎45'18	
	3354 Aug 29 09:46	15°♎		3360 Apr 05 08:30	0°♎	
retrograde	3354 Dec 15 19:13	29°♎34'38	retrograde	3360 May 19 00:54	2°♎50'49	

desc. node	3360 Jun 05 10:36	2° $\approx$ 22'35	min. Earth dist.	3366 Jan 15 07:39	26° $\approx$ 34'21	4.16260 AU
	3360 Jul 02 10:25	30° $\approx$ 3	opposition	3366 Jan 16 16:29	26° $\approx$ 23'13	0°03'04
opposition	3360 Jul 18 20:27	27° $\approx$ 57'46 -0°05'41	direct	3366 Mar 16 19:57	21° $\approx$ 23'17	
min. Earth dist.	3360 Jul 20 06:15	27° $\approx$ 46'57 4.20819 AU		3366 Jun 03 20:48	0° $\approx$	
direct	3360 Sep 18 04:36	23° $\approx$ 00'17	evening set	3366 Jul 21 10:00	9° $\approx$ 58'42	
	3360 Nov 27 17:13	0° $\approx$				
evening set	3361 Jan 21 15:41	11° $\approx$ 38'41	conjunction	3366 Aug 04 02:15	13° $\approx$ 02'33	0°19'42
max. Earth dist.	3361 Feb 01 18:42	14° $\approx$ 14'40 6.13233 AU	minimum elong	3366 Aug 04 02:14	13° $\approx$ 02'33	0°19'42
			max. Earth dist.	3366 Aug 05 18:45	13° $\approx$ 02'516	6.23931 AU
conjunction	3361 Feb 03 09:26	14° $\approx$ 37'22 -0°21'25		3366 Aug 12 19:54	15° $\approx$	
minimum elong	3361 Feb 03 09:25	14° $\approx$ 37'21 0°21'25	morning rise	3366 Aug 17 18:07	16° $\approx$ 05'52	
	3361 Feb 05 00:03	15° $\approx$		3366 Oct 28 09:30	0° $\approx$	
morning rise	3361 Feb 16 03:50	17° $\approx$ 36'38	retrograde	3366 Dec 20 05:13	4° $\approx$ 09'10	
	3361 Apr 15 11:52	0° $\approx$		3367 Feb 11 14:52	30° $\approx$ 8	
retrograde	3361 Jun 24 04:51	6° $\approx$ 52'33	min. Earth dist.	3367 Feb 17 08:29	29° $\approx$ 14'16	4.31066 AU
opposition	3361 Aug 23 16:03	1° $\approx$ 56'56 -0°56'09	opposition	3367 Feb 18 02:45	29° $\approx$ 08'10	0°51'31
min. Earth dist.	3361 Aug 24 09:47	1° $\approx$ 51'10 4.06019 AU	direct	3367 Apr 19 15:30	24° $\approx$ 06'13	
	3361 Sep 08 01:32	30° $\approx$		3367 Jun 23 20:26	0° $\approx$	
direct	3361 Oct 22 13:41	27° $\approx$ 01'51	evening set	3367 Aug 24 06:32	12° $\approx$ 04'04	
	3361 Dec 05 01:28	0° $\approx$				
evening set	3362 Feb 25 01:29	16° $\approx$ 21'45	conjunction	3367 Sep 06 17:20	14° $\approx$ 59'57	0°47'53
			minimum elong	3367 Sep 06 17:18	14° $\approx$ 59'56	0°47'52
conjunction	3362 Mar 09 23:36	19° $\approx$ 28'00 -0°50'30	max. Earth dist.	3367 Sep 07 08:18	15° $\approx$ 08'07	6.37335 AU
minimum elong	3362 Mar 09 23:34	19° $\approx$ 27'59 0°50'29	morning rise	3367 Sep 20 01:58	17° $\approx$ 54'38	
max. Earth dist.	3362 Mar 09 14:14	19° $\approx$ 22'22 6.00061 AU		3367 Nov 21 08:29	0° $\approx$	
morning rise	3362 Mar 22 23:32	22° $\approx$ 35'30	retrograde	3368 Jan 19 18:12	5° $\approx$ 05'13	
	3362 Apr 24 00:38	0° $\approx$	opposition	3368 Mar 20 00:27	0° $\approx$ 07'56	1°22'12
retrograde	3362 Aug 01 05:49	12° $\approx$ 55'20	min. Earth dist.	3368 Mar 19 23:49	0° $\approx$ 08'08	4.42165 AU
opposition	3362 Sep 30 06:22	7° $\approx$ 56'04 -1°28'41		3368 Mar 21 00:38	30° $\approx$ 8	
min. Earth dist.	3362 Sep 30 01:17	7° $\approx$ 57'45 3.95858 AU	direct	3368 May 20 17:42	25° $\approx$ 05'15	
direct	3362 Nov 27 19:32	3° $\approx$ 02'24		3368 Jul 19 17:13	0° $\approx$	
evening set	3363 Apr 02 12:47	22° $\approx$ 49'16	evening set	3368 Sep 24 07:11	12° $\approx$ 38'29	
conjunction	3363 Apr 15 17:52	26° $\approx$ 01'37 -1°01'20	conjunction	3368 Oct 07 10:48	15° $\approx$ 28'18	1°01'28
minimum elong	3363 Apr 15 17:52	26° $\approx$ 01'37 1°01'20	minimum elong	3368 Oct 07 10:48	15° $\approx$ 28'18	1°01'28
max. Earth dist.	3363 Apr 16 18:01	26° $\approx$ 16'17 5.93844 AU	max. Earth dist.	3368 Oct 06 19:57	15° $\approx$ 20'17	6.45283 AU
morning rise	3363 Apr 29 02:05	29° $\approx$ 15'37	morning rise	3368 Oct 20 11:53	18° $\approx$ 16'49	
	3363 May 02 03:52	0° $\approx$		3368 Dec 20 11:05	0° $\approx$	
	3363 Jul 12 17:11	15° $\approx$	retrograde	3369 Feb 17 18:25	5° $\approx$ 01'09	
retrograde	3363 Sep 08 13:45	20° $\approx$ 01'13	opposition	3369 Apr 19 07:45	0° $\approx$ 06'58	1°29'44
min. Earth dist.	3363 Nov 06 03:27	15° $\approx$ 07'21 3.94432 AU	min. Earth dist.	3369 Apr 20 02:29	0° $\approx$ 00'56	4.46599 AU
opposition	3363 Nov 07 06:26	14° $\approx$ 58'14 -1°26'30		3369 Apr 20 05:21	30° $\approx$ 8	
	3363 Nov 07 01:13	15° $\approx$ 8	direct	3369 Jun 20 21:34	25° $\approx$ 04'32	
direct	3364 Jan 04 03:01	10° $\approx$ 03'45		3369 Aug 20 07:32	0° $\approx$	
	3364 Feb 28 23:53	15° $\approx$	evening set	3369 Oct 25 03:22	12° $\approx$ 30'23	
evening set	3364 May 09 04:10	29° $\approx$ 49'09	max. Earth dist.	3369 Nov 05 11:07	14° $\approx$ 57'06	6.45825 AU
	3364 May 09 22:23	0° $\approx$		3369 Nov 05 16:29	15° $\approx$	
conjunction	3364 May 22 17:12	3° $\approx$ 03'35 -0°47'53	conjunction	3369 Nov 07 01:05	15° $\approx$ 17'39	0°58'16
minimum elong	3364 May 22 17:14	3° $\approx$ 03'36 0°47'54	minimum elong	3369 Nov 07 01:06	15° $\approx$ 17'40	0°58'15
max. Earth dist.	3364 May 24 20:04	3° $\approx$ 34'04 5.97279 AU	morning rise	3369 Nov 19 20:08	18° $\approx$ 03'44	
morning rise	3364 Jun 05 08:56	6° $\approx$ 19'18		3370 Jan 20 21:29	0° $\approx$	
retrograde	3364 Oct 14 12:26	26° $\approx$ 37'01	retrograde	3370 Mar 20 03:30	4° $\approx$ 50'42	
min. Earth dist.	3364 Dec 11 13:55	21° $\approx$ 44'18 4.02332 AU	opposition	3370 May 19 23:32	29° $\approx$ 58'21	1°13'39
opposition	3364 Dec 13 01:45	21° $\approx$ 32'05 -0°49'54		3370 May 19 18:22	30° $\approx$ 8	
direct	3365 Feb 09 05:21	16° $\approx$ 35'01	min. Earth dist.	3370 May 21 07:21	29° $\approx$ 48'11	4.43306 AU
	3365 May 20 14:18	0° $\approx$	direct	3370 Jul 21 17:08	24° $\approx$ 57'01	
evening set	3365 Jun 15 12:54	5° $\approx$ 51'31		3370 Sep 20 17:36	0° $\approx$	
			evening set	3370 Nov 24 15:49	12° $\approx$ 33'49	
conjunction	3365 Jun 29 06:30	9° $\approx$ 02'40 -0°16'20	max. Earth dist.	3370 Dec 05 07:36	14° $\approx$ 54'33	6.38903 AU
minimum elong	3365 Jun 29 06:31	9° $\approx$ 02'40 0°16'20				
max. Earth dist.	3365 Jul 01 16:02	9° $\approx$ 36'03 6.08860 AU	conjunction	3370 Dec 07 09:42	15° $\approx$ 22'14	0°39'19
morning rise	3365 Jul 13 01:18	12° $\approx$ 14'09	minimum elong	3370 Dec 07 09:44	15° $\approx$ 22'15	0°39'20
	3365 Oct 18 21:14	0° $\approx$	morning rise	3370 Dec 20 01:34	18° $\approx$ 09'53	
retrograde	3365 Nov 18 00:39	1° $\approx$ 27'14		3371 Feb 17 20:26	0° $\approx$	
	3365 Dec 17 21:54	30° $\approx$ 8	retrograde	3371 Apr 21 00:28	5° $\approx$ 28'11	
asc. node	3365 Dec 24 23:10	29° $\approx$ 16'42	opposition	3371 Jun 20 22:04	0° $\approx$ 36'11	0°36'52



min. Earth dist.	3371 Jun 22 11:58	0° $\text{♁}$ 24'06	4.33132 AU	direct	3377 Feb 14 04:22	21° $\text{♁}$ 35'11	
	3371 Jun 25 15:50	30° $\text{♁}$ 7			3377 May 01 14:22	0° $\text{♁}$	
direct	3371 Aug 22 04:38	25° $\text{♁}$ 36'42		evening set	3377 Jun 20 13:12	10° $\text{♁}$ 46'01	
	3371 Oct 16 22:02	0° $\text{♁}$					
evening set	3371 Dec 25 18:52	13° $\text{♁}$ 41'10		conjunction	3377 Jul 04 06:47	13° $\text{♁}$ 56'16	-0°11'21
max. Earth dist.	3372 Jan 05 08:42	16° $\text{♁}$ 05'09	6.26251 AU	minimum elong	3377 Jul 04 06:48	13° $\text{♁}$ 56'17	0°11'22
				behind sun begin	3377 Jul 04 00:47	13° $\text{♁}$ 52'49	
conjunction	3372 Jan 07 11:28	16° $\text{♁}$ 34'03	0°08'38	behind sun end	3377 Jul 04 12:48	13° $\text{♁}$ 59'44	
minimum elong	3372 Jan 07 11:28	16° $\text{♁}$ 34'03	0°08'38	max. Earth dist.	3377 Jul 06 13:04	14° $\text{♁}$ 27'38	6.10856 AU
behind sun begin	3372 Jan 07 04:31	16° $\text{♁}$ 30'07		morning rise	3377 Jul 18 01:38	17° $\text{♁}$ 06'48	
behind sun end	3372 Jan 07 18:25	16° $\text{♁}$ 38'00			3377 Sep 18 09:21	0° $\text{♁}$	
morning rise	3372 Jan 20 03:27	19° $\text{♁}$ 26'52		asc. node	3377 Nov 05 01:04	5° $\text{♁}$ 40'04	
	3372 Mar 10 08:17	0° $\text{♁}$		retrograde	3377 Nov 22 13:27	6° $\text{♁}$ 10'15	
desc. node	3372 Apr 14 11:39	5° $\text{♁}$ 20'09		min. Earth dist.	3378 Jan 19 23:16	1° $\text{♁}$ 16'53	4.18248 AU
retrograde	3372 May 24 01:03	7° $\text{♁}$ 41'37		opposition	3378 Jan 21 05:48	1° $\text{♁}$ 06'32	0°10'21
opposition	3372 Jul 23 19:37	2° $\text{♁}$ 48'17	-0°13'10		3378 Jan 29 12:02	30° $\text{♁}$ 7	
min. Earth dist.	3372 Jul 25 03:03	2° $\text{♁}$ 38'10	4.18754 AU	direct	3378 Mar 21 14:09	26° $\text{♁}$ 06'13	
	3372 Aug 16 01:04	30° $\text{♁}$ 7			3378 May 11 12:50	0° $\text{♁}$	
direct	3372 Sep 22 23:01	27° $\text{♁}$ 51'08		evening set	3378 Jul 26 04:05	14° $\text{♁}$ 36'34	
	3372 Oct 30 10:36	0° $\text{♁}$			3378 Jul 27 22:14	15° $\text{♁}$	
	3373 Jan 19 14:02	15° $\text{♁}$					
evening set	3373 Jan 26 09:45	16° $\text{♁}$ 34'59		conjunction	3378 Aug 08 19:59	17° $\text{♁}$ 39'27	0°24'13
max. Earth dist.	3373 Feb 06 18:27	19° $\text{♁}$ 14'54	6.11360 AU	minimum elong	3378 Aug 08 19:58	17° $\text{♁}$ 39'26	0°24'13
				max. Earth dist.	3378 Aug 10 10:17	18° $\text{♁}$ 00'51	6.25771 AU
conjunction	3373 Feb 08 04:01	19° $\text{♁}$ 34'39	-0°26'11	morning rise	3378 Aug 22 10:56	20° $\text{♁}$ 41'36	
minimum elong	3373 Feb 08 03:59	19° $\text{♁}$ 34'38	0°26'11		3378 Oct 06 02:28	0° $\text{♁}$	
morning rise	3373 Feb 20 22:49	22° $\text{♁}$ 34'55		retrograde	3378 Dec 24 12:26	8° $\text{♁}$ 37'16	
	3373 Mar 25 20:04	0° $\text{♁}$		opposition	3379 Feb 22 10:39	3° $\text{♁}$ 36'49	0°56'57
retrograde	3373 Jun 29 11:41	11° $\text{♁}$ 59'48		min. Earth dist.	3379 Feb 21 18:20	3° $\text{♁}$ 42'15	4.32630 AU
opposition	3373 Aug 28 21:37	7° $\text{♁}$ 03'44	-1°02'15		3379 Mar 24 21:43	30° $\text{♁}$ 7	
min. Earth dist.	3373 Aug 29 12:29	6° $\text{♁}$ 58'53	4.04526 AU	direct	3379 Apr 24 02:39	28° $\text{♁}$ 34'45	
direct	3373 Oct 27 14:36	2° $\text{♁}$ 08'58			3379 May 24 17:22	0° $\text{♁}$	
evening set	3374 Mar 02 02:05	21° $\text{♁}$ 32'25		evening set	3379 Aug 28 19:05	16° $\text{♁}$ 29'19	
conjunction	3374 Mar 15 00:47	24° $\text{♁}$ 39'24	-0°53'20	conjunction	3379 Sep 11 04:49	19° $\text{♁}$ 24'19	0°50'40
minimum elong	3374 Mar 15 00:45	24° $\text{♁}$ 39'23	0°53'19	minimum elong	3379 Sep 11 04:47	19° $\text{♁}$ 24'18	0°50'40
max. Earth dist.	3374 Mar 14 19:04	24° $\text{♁}$ 35'57	5.99073 AU	max. Earth dist.	3379 Sep 11 14:16	19° $\text{♁}$ 29'28	6.38505 AU
morning rise	3374 Mar 28 01:49	27° $\text{♁}$ 47'47		morning rise	3379 Sep 24 12:36	22° $\text{♁}$ 18'09	
	3374 Apr 06 08:00	0° $\text{♁}$			3379 Oct 31 19:39	0° $\text{♁}$	
retrograde	3374 Aug 06 13:09	18° $\text{♁}$ 12'16		retrograde	3380 Jan 23 23:55	9° $\text{♁}$ 24'35	
opposition	3374 Oct 05 14:01	13° $\text{♁}$ 12'24	-1°30'35	opposition	3380 Mar 24 06:04	4° $\text{♁}$ 27'46	1°24'37
min. Earth dist.	3374 Oct 05 04:37	13° $\text{♁}$ 15'32	3.95508 AU	min. Earth dist.	3380 Mar 24 08:49	4° $\text{♁}$ 26'52	4.42902 AU
direct	3374 Dec 02 23:56	8° $\text{♁}$ 18'42			3380 May 05 14:23	30° $\text{♁}$ 7	
evening set	3375 Apr 07 17:13	28° $\text{♁}$ 05'23		direct	3380 May 25 03:02	29° $\text{♁}$ 25'04	
	3375 Apr 15 14:45	0° $\text{♁}$			3380 Jun 13 19:13	0° $\text{♁}$	
				evening set	3380 Sep 28 15:43	16° $\text{♁}$ 57'14	
conjunction	3375 Apr 20 23:25	1° $\text{♁}$ 18'04	-1°00'52				
minimum elong	3375 Apr 20 23:26	1° $\text{♁}$ 18'04	1°00'51	conjunction	3380 Oct 11 18:37	19° $\text{♁}$ 46'39	1°01'58
max. Earth dist.	3375 Apr 22 04:33	1° $\text{♁}$ 35'44	5.94153 AU	minimum elong	3380 Oct 11 18:37	19° $\text{♁}$ 46'39	1°01'58
morning rise	3375 May 04 08:34	4° $\text{♁}$ 32'22		max. Earth dist.	3380 Oct 11 01:29	19° $\text{♁}$ 37'24	6.45538 AU
	3375 Jun 19 11:34	15° $\text{♁}$		morning rise	3380 Oct 24 18:39	22° $\text{♁}$ 34'42	
retrograde	3375 Sep 13 18:57	25° $\text{♁}$ 15'34			3380 Nov 30 00:16	0° $\text{♁}$	
min. Earth dist.	3375 Nov 11 06:59	20° $\text{♁}$ 21'36	3.95363 AU	retrograde	3381 Feb 21 22:46	9° $\text{♁}$ 18'28	
opposition	3375 Nov 12 10:55	20° $\text{♁}$ 12'08	-1°23'07	opposition	3381 Apr 23 13:46	4° $\text{♁}$ 24'38	1°28'48
direct	3376 Jan 09 08:25	15° $\text{♁}$ 17'19		min. Earth dist.	3381 Apr 24 09:30	4° $\text{♁}$ 18'16	4.46391 AU
	3376 Apr 23 00:05	0° $\text{♁}$			3381 Jun 04 16:40	30° $\text{♁}$ 7	
evening set	3376 May 14 08:20	4° $\text{♁}$ 58'41		direct	3381 Jun 25 03:30	29° $\text{♁}$ 22'21	
					3381 Jul 15 19:37	0° $\text{♁}$	
conjunction	3376 May 27 22:13	8° $\text{♁}$ 12'50	-0°44'19		3381 Oct 20 21:47	15° $\text{♁}$	
minimum elong	3376 May 27 22:16	8° $\text{♁}$ 12'51	0°44'19	evening set	3381 Oct 29 10:22	16° $\text{♁}$ 49'15	
max. Earth dist.	3376 May 30 03:38	8° $\text{♁}$ 44'41	5.98728 AU	max. Earth dist.	3381 Nov 09 15:27	19° $\text{♁}$ 14'50	6.45167 AU
morning rise	3376 Jun 10 14:39	11° $\text{♁}$ 28'08					
	3376 Sep 17 12:43	0° $\text{♁}$		conjunction	3381 Nov 11 07:21	19° $\text{♁}$ 36'31	0°56'26
retrograde	3376 Oct 19 09:15	1° $\text{♁}$ 37'35		minimum elong	3381 Nov 11 07:22	19° $\text{♁}$ 36'31	0°56'27
	3376 Nov 19 23:22	30° $\text{♁}$ 7		morning rise	3381 Nov 24 01:51	22° $\text{♁}$ 22'38	
min. Earth dist.	3376 Dec 16 10:31	26° $\text{♁}$ 45'00	4.04143 AU		3381 Dec 31 02:11	0° $\text{♁}$	
opposition	3376 Dec 17 22:46	26° $\text{♁}$ 32'40	-0°43'04	retrograde	3382 Mar 24 13:43	9° $\text{♁}$ 12'32	

opposition	3382 May 24 09:12	4° $\mathbb{A}$ 20'21	1°09'33			3388 Apr 04 01:00	0° $\mathbb{I}$
min. Earth dist.	3382 May 25 18:55	4° $\mathbb{A}$ 09'36	4.42228 AU	evening set		3388 May 19 14:15	10° $\mathbb{I}$ 11'35
	3382 Jul 04 17:55	30° $\mathbb{M}$					
direct	3382 Jul 26 03:01	29° $\mathbb{M}$ 19'15		conjunction		3388 Jun 02 04:53	13° $\mathbb{I}$ 25'35 -0°40'23
	3382 Aug 16 12:34	0° $\mathbb{A}$		minimum elong		3388 Jun 02 04:55	13° $\mathbb{I}$ 25'36 0°40'22
evening set	3382 Nov 28 23:29	16° $\mathbb{A}$ 58'54		max. Earth dist.		3388 Jun 04 10:12	13° $\mathbb{I}$ 57'17 5.99863 AU
max. Earth dist.	3382 Dec 09 13:34	19° $\mathbb{A}$ 19'14	6.37471 AU	morning rise		3388 Jun 15 22:09	16° $\mathbb{I}$ 40'41
						3388 Aug 17 08:36	0° $\mathbb{G}$
conjunction	3382 Dec 11 17:01	19° $\mathbb{A}$ 47'45	0°35'32	retrograde		3388 Oct 24 07:28	6° $\mathbb{G}$ 43'04
minimum elong	3382 Dec 11 17:03	19° $\mathbb{A}$ 47'45	0°35'32	min. Earth dist.		3388 Dec 21 09:07	1° $\mathbb{G}$ 50'26 4.05670 AU
morning rise	3382 Dec 24 08:47	22° $\mathbb{A}$ 35'55		opposition		3388 Dec 22 21:09	1° $\mathbb{G}$ 38'09 -0°35'50
	3383 Jan 28 09:13	0° $\mathbb{B}$				3389 Jan 04 03:12	30° $\mathbb{R}$ $\mathbb{I}$
retrograde	3383 Apr 25 15:06	10° $\mathbb{B}$ 00'26		direct		3389 Feb 19 05:57	26° $\mathbb{I}$ 40'14
opposition	3383 Jun 25 13:08	5° $\mathbb{B}$ 08'17	0°30'21			3389 Apr 06 04:08	0° $\mathbb{G}$
min. Earth dist.	3383 Jun 27 02:02	4° $\mathbb{B}$ 56'30	4.31413 AU	evening set		3389 Jun 25 15:41	15° $\mathbb{G}$ 46'34
direct	3383 Aug 26 15:57	0° $\mathbb{B}$ 09'05					
evening set	3383 Dec 30 06:03	18° $\mathbb{B}$ 18'03		conjunction		3389 Jul 09 09:36	18° $\mathbb{G}$ 56'07 -0°06'12
max. Earth dist.	3384 Jan 09 22:50	20° $\mathbb{B}$ 44'17	6.24373 AU	minimum elong		3389 Jul 09 09:36	18° $\mathbb{G}$ 56'07 0°06'12
				behind sun begin		3389 Jul 09 01:41	18° $\mathbb{G}$ 51'35
conjunction	3384 Jan 11 22:45	21° $\mathbb{B}$ 11'41	0°03'46	behind sun end		3389 Jul 09 17:31	19° $\mathbb{G}$ 00'39
minimum elong	3384 Jan 11 22:46	21° $\mathbb{B}$ 11'42	0°03'47	max. Earth dist.		3389 Jul 11 15:54	19° $\mathbb{G}$ 27'22 6.12663 AU
behind sun begin	3384 Jan 11 14:53	21° $\mathbb{B}$ 07'13		morning rise		3389 Jul 23 04:09	22° $\mathbb{G}$ 05'44
behind sun end	3384 Jan 12 06:39	21° $\mathbb{B}$ 16'11				3389 Aug 28 08:35	0° $\mathbb{Q}$
morning rise	3384 Jan 24 14:47	24° $\mathbb{B}$ 05'19		asc. node		3389 Sep 14 12:20	3° $\mathbb{Q}$ 20'10
	3384 Feb 20 07:56	0° $\mathbb{A}$		retrograde		3389 Nov 27 05:46	11° $\mathbb{Q}$ 00'07
desc. node	3384 Feb 23 02:16	0° $\mathbb{A}$ 35'00		opposition		3390 Jan 25 21:36	5° $\mathbb{Q}$ 56'50 0°17'44
retrograde	3384 May 29 00:26	12° $\mathbb{A}$ 28'45		min. Earth dist.		3390 Jan 24 16:28	6° $\mathbb{Q}$ 06'40 4.20153 AU
opposition	3384 Jul 28 17:21	7° $\mathbb{A}$ 35'08	-0°20'31	direct		3390 Mar 26 09:37	0° $\mathbb{Q}$ 56'16
min. Earth dist.	3384 Jul 29 23:52	7° $\mathbb{A}$ 25'19	4.16824 AU			3390 Jul 10 23:43	15° $\mathbb{Q}$
direct	3384 Sep 27 16:54	2° $\mathbb{A}$ 38'22		evening set		3390 Jul 31 01:08	19° $\mathbb{Q}$ 21'47
	3385 Jan 02 15:07	15° $\mathbb{A}$					
evening set	3385 Jan 31 02:44	21° $\mathbb{A}$ 27'29		conjunction		3390 Aug 13 16:15	22° $\mathbb{Q}$ 23'34 0°28'42
				minimum elong		3390 Aug 13 16:14	22° $\mathbb{Q}$ 23'33 0°28'42
conjunction	3385 Feb 12 21:18	24° $\mathbb{A}$ 28'05	-0°30'43	max. Earth dist.		3390 Aug 15 02:32	22° $\mathbb{Q}$ 42'39 6.27637 AU
minimum elong	3385 Feb 12 21:16	24° $\mathbb{A}$ 28'04	0°30'44	morning rise		3390 Aug 27 06:31	25° $\mathbb{Q}$ 24'35
max. Earth dist.	3385 Feb 11 13:31	24° $\mathbb{A}$ 09'18	6.09528 AU			3390 Sep 17 12:01	0° $\mathbb{R}$
morning rise	3385 Feb 25 16:55	27° $\mathbb{A}$ 29'28		retrograde		3390 Dec 28 21:25	13° $\mathbb{R}$ 12'23
	3385 Mar 08 11:19	0° $\mathbb{H}$		opposition		3391 Feb 26 21:00	8° $\mathbb{R}$ 12'24 1°02'11
retrograde	3385 Jul 04 15:31	17° $\mathbb{H}$ 03'23		min. Earth dist.		3391 Feb 26 06:51	8° $\mathbb{R}$ 17'07 4.34351 AU
opposition	3385 Sep 03 01:24	12° $\mathbb{H}$ 06'50	-1°07'54	direct		3391 Apr 28 17:12	3° $\mathbb{R}$ 10'12
min. Earth dist.	3385 Sep 03 12:31	12° $\mathbb{H}$ 03'11	4.02959 AU	evening set		3391 Sep 02 09:47	21° $\mathbb{R}$ 00'43
direct	3385 Nov 01 13:02	7° $\mathbb{H}$ 12'19					
evening set	3386 Mar 07 01:33	26° $\mathbb{H}$ 40'06		conjunction		3391 Sep 15 18:41	23° $\mathbb{R}$ 54'45 0°53'16
				minimum elong		3391 Sep 15 18:39	23° $\mathbb{R}$ 54'44 0°53'16
conjunction	3386 Mar 20 01:13	29° $\mathbb{H}$ 48'01	-0°55'45	max. Earth dist.		3391 Sep 16 02:15	23° $\mathbb{R}$ 58'52 6.39994 AU
minimum elong	3386 Mar 20 01:12	29° $\mathbb{H}$ 48'00	0°55'45	morning rise		3391 Sep 29 01:10	26° $\mathbb{R}$ 47'30
max. Earth dist.	3386 Mar 20 01:02	29° $\mathbb{H}$ 47'54	5.97919 AU			3391 Oct 14 02:48	0° $\mathbb{U}$
	3386 Mar 20 21:03	0° $\mathbb{Y}$		retrograde		3392 Jan 28 05:12	13° $\mathbb{U}$ 48'29
morning rise	3386 Apr 02 03:09	2° $\mathbb{Y}$ 57'21		opposition		3392 Mar 28 13:11	8° $\mathbb{U}$ 52'09 1°26'38
retrograde	3386 Aug 11 22:30	23° $\mathbb{Y}$ 27'26		min. Earth dist.		3392 Mar 28 17:24	8° $\mathbb{U}$ 50'46 4.44090 AU
opposition	3386 Oct 10 20:44	18° $\mathbb{Y}$ 27'03	-1°31'49	direct		3392 May 29 12:51	3° $\mathbb{U}$ 49'31
min. Earth dist.	3386 Oct 10 09:24	18° $\mathbb{Y}$ 30'50	3.94896 AU	evening set		3392 Oct 03 01:00	21° $\mathbb{U}$ 18'44
direct	3386 Dec 08 04:41	13° $\mathbb{Y}$ 33'19		max. Earth dist.		3392 Oct 15 05:23	23° $\mathbb{U}$ 55'55 6.46341 AU
	3387 Mar 29 20:13	0° $\mathbb{Z}$					
evening set	3387 Apr 12 21:52	3° $\mathbb{Z}$ 21'18		conjunction		3392 Oct 16 02:45	24° $\mathbb{U}$ 07'26 1°02'12
				minimum elong		3392 Oct 16 02:45	24° $\mathbb{U}$ 07'26 1°02'11
conjunction	3387 Apr 26 05:13	6° $\mathbb{Z}$ 34'32	-0°59'55	morning rise		3392 Oct 29 01:58	26° $\mathbb{U}$ 54'49
minimum elong	3387 Apr 26 05:14	6° $\mathbb{Z}$ 34'33	0°59'55			3392 Nov 12 16:08	0° $\mathbb{M}$
max. Earth dist.	3387 Apr 27 14:26	6° $\mathbb{Z}$ 54'40	5.94136 AU	retrograde		3393 Feb 26 04:56	13° $\mathbb{M}$ 36'15
morning rise	3387 May 09 15:35	9° $\mathbb{Z}$ 49'23		opposition		3393 Apr 27 20:12	8° $\mathbb{M}$ 42'40 1°27'26
	3387 May 31 14:55	15° $\mathbb{Z}$		min. Earth dist.		3393 Apr 28 18:39	8° $\mathbb{M}$ 35'27 4.46769 AU
	3387 Sep 01 03:51	0° $\mathbb{I}$		direct		3393 Jun 29 12:47	3° $\mathbb{M}$ 40'27
retrograde	3387 Sep 18 23:54	0° $\mathbb{I}$ 31'17				3393 Oct 04 07:46	15° $\mathbb{M}$
	3387 Oct 06 17:11	30° $\mathbb{R}$ $\mathbb{Z}$		evening set		3393 Nov 02 15:57	21° $\mathbb{M}$ 06'10
min. Earth dist.	3387 Nov 16 09:00	25° $\mathbb{Z}$ 37'47	3.95960 AU	max. Earth dist.		3393 Nov 13 18:58	23° $\mathbb{M}$ 30'42 6.45085 AU
opposition	3387 Nov 17 15:10	25° $\mathbb{Z}$ 27'34	-1°19'08				
direct	3388 Jan 14 11:14	20° $\mathbb{Z}$ 32'29		conjunction		3393 Nov 15 12:20	23° $\mathbb{M}$ 53'11 0°54'23

minimum elong	3393 Nov 15 12:22	23° $\mathbb{M}$ 53'12	0°54'23	min. Earth dist.	3399 Nov 21 10:58	0° $\mathbb{I}$ 51'53	3.96170 AU
morning rise	3393 Nov 28 06:06	26° $\mathbb{M}$ 39'05		opposition	3399 Nov 22 18:52	0° $\mathbb{I}$ 41'02	-1°14'35
	3393 Dec 13 23:13	0° $\mathbb{X}$			3399 Nov 27 20:01	30° $\mathbb{R}$ $\mathbb{B}$	
retrograde	3394 Mar 28 19:08	13° $\mathbb{X}$ 30'07		direct	3400 Jan 19 15:12	25° $\mathbb{B}$ 45'36	
opposition	3394 May 28 16:54	8° $\mathbb{X}$ 37'57	1°05'10		3400 Mar 12 04:47	0° $\mathbb{I}$	
min. Earth dist.	3394 May 30 02:49	8° $\mathbb{X}$ 27'08	4.41684 AU	evening set	3400 May 25 20:20	15° $\mathbb{I}$ 23'57	
direct	3394 Jul 30 09:15	3° $\mathbb{X}$ 37'01					
evening set	3394 Dec 03 04:31	21° $\mathbb{X}$ 17'45		conjunction	3400 Jun 08 12:03	18° $\mathbb{I}$ 38'00	-0°36'08
max. Earth dist.	3394 Dec 13 17:57	23° $\mathbb{X}$ 38'04	6.36498 AU	minimum elong	3400 Jun 08 12:05	18° $\mathbb{I}$ 38'02	0°36'08
				max. Earth dist.	3400 Jun 10 20:39	19° $\mathbb{I}$ 11'34	6.00702 AU
conjunction	3394 Dec 15 21:38	24° $\mathbb{X}$ 06'48	0°31'42	morning rise	3400 Jun 22 05:51	21° $\mathbb{I}$ 52'59	
minimum elong	3394 Dec 15 21:40	24° $\mathbb{X}$ 06'49	0°31'42		3400 Jul 28 05:58	0° $\mathbb{B}$	
morning rise	3394 Dec 28 13:09	26° $\mathbb{X}$ 55'16		retrograde	3400 Oct 30 07:59	11° $\mathbb{B}$ 49'10	
	3395 Jan 11 15:18	0° $\mathbb{B}$		min. Earth dist.	3400 Dec 27 08:10	6° $\mathbb{B}$ 56'33	4.07023 AU
retrograde	3395 Apr 30 03:37	14° $\mathbb{B}$ 24'37		opposition	3400 Dec 28 20:08	6° $\mathbb{B}$ 44'18	-0°28'22
opposition	3395 Jun 30 00:58	9° $\mathbb{B}$ 32'20	0°23'53	direct	3401 Feb 25 07:30	1° $\mathbb{B}$ 46'00	
min. Earth dist.	3395 Jul 01 15:04	9° $\mathbb{B}$ 20'11	4.30032 AU	evening set	3401 Jul 01 19:26	20° $\mathbb{B}$ 48'20	
direct	3395 Aug 31 02:30	4° $\mathbb{B}$ 33'21					
evening set	3396 Jan 03 13:29	22° $\mathbb{B}$ 45'48		conjunction	3401 Jul 15 13:13	23° $\mathbb{B}$ 57'05	-0°00'57
desc. node	3396 Jan 05 00:59	23° $\mathbb{B}$ 06'00		minimum elong	3401 Jul 15 13:13	23° $\mathbb{B}$ 57'05	0°00'57
max. Earth dist.	3396 Jan 14 05:38	25° $\mathbb{B}$ 12'16	6.22682 AU	behind sun begin	3401 Jul 15 04:50	23° $\mathbb{B}$ 52'18	
				behind sun end	3401 Jul 15 21:37	24° $\mathbb{B}$ 01'52	
conjunction	3396 Jan 16 06:13	25° $\mathbb{B}$ 40'08	-0°01'01	max. Earth dist.	3401 Jul 17 18:08	24° $\mathbb{B}$ 27'24	6.14396 AU
minimum elong	3396 Jan 16 06:12	25° $\mathbb{B}$ 40'08	0°01'01	asc. node	3401 Jul 25 13:09	26° $\mathbb{B}$ 14'17	
behind sun begin	3396 Jan 15 22:13	25° $\mathbb{B}$ 35'34		morning rise	3401 Jul 29 07:40	27° $\mathbb{B}$ 05'48	
behind sun end	3396 Jan 16 14:11	25° $\mathbb{B}$ 44'41			3401 Aug 11 05:49	0° $\mathbb{Q}$	
morning rise	3396 Jan 28 22:35	28° $\mathbb{B}$ 34'34			3401 Nov 09 22:06	15° $\mathbb{Q}$	
	3396 Feb 04 04:52	0° $\mathbb{Q}$		retrograde	3401 Dec 02 20:04	15° $\mathbb{Q}$ 51'04	
	3396 Apr 26 12:09	15° $\mathbb{Q}$			3401 Dec 25 14:43	15° $\mathbb{R}$ $\mathbb{Q}$	
retrograde	3396 Jun 02 17:31	17° $\mathbb{Q}$ 06'17		min. Earth dist.	3402 Jan 30 09:22	10° $\mathbb{Q}$ 57'41	4.22081 AU
	3396 Jul 10 07:01	15° $\mathbb{R}$ $\mathbb{Q}$		opposition	3402 Jan 31 13:52	10° $\mathbb{Q}$ 48'04	0°24'59
opposition	3396 Aug 02 11:08	12° $\mathbb{Q}$ 12'17	-0°27'28	direct	3402 Apr 01 05:37	5° $\mathbb{Q}$ 47'09	
min. Earth dist.	3396 Aug 03 15:33	12° $\mathbb{Q}$ 03'07	4.14931 AU		3402 Jun 23 05:29	15° $\mathbb{Q}$	
direct	3396 Oct 02 05:31	7° $\mathbb{Q}$ 15'45		evening set	3402 Aug 05 22:32	24° $\mathbb{Q}$ 07'30	
	3396 Dec 15 03:41	15° $\mathbb{Q}$					
evening set	3397 Feb 04 15:56	26° $\mathbb{Q}$ 10'19		conjunction	3402 Aug 19 13:00	27° $\mathbb{Q}$ 08'08	0°33'01
max. Earth dist.	3397 Feb 16 06:38	28° $\mathbb{Q}$ 55'05	6.07597 AU	minimum elong	3402 Aug 19 12:58	27° $\mathbb{Q}$ 08'07	0°33'00
				max. Earth dist.	3402 Aug 20 20:53	27° $\mathbb{Q}$ 25'49	6.29593 AU
conjunction	3397 Feb 17 11:03	29° $\mathbb{Q}$ 11'57	-0°34'54		3402 Sep 01 11:49	0° $\mathbb{P}$	
minimum elong	3397 Feb 17 11:01	29° $\mathbb{Q}$ 11'56	0°34'53	morning rise	3402 Sep 02 02:10	0° $\mathbb{P}$ 07'53	
	3397 Feb 20 20:01	0° $\mathbb{X}$		retrograde	3403 Jan 03 07:25	17° $\mathbb{P}$ 47'26	
morning rise	3397 Mar 02 07:13	2° $\mathbb{X}$ 14'26		opposition	3403 Mar 04 07:47	12° $\mathbb{P}$ 47'57	1°07'02
retrograde	3397 Jul 09 18:44	21° $\mathbb{X}$ 58'04		min. Earth dist.	3403 Mar 03 20:03	12° $\mathbb{P}$ 51'50	4.36142 AU
opposition	3397 Sep 08 01:42	17° $\mathbb{X}$ 01'04	-1°12'53	direct	3403 May 04 08:44	7° $\mathbb{P}$ 45'37	
min. Earth dist.	3397 Sep 08 11:35	16° $\mathbb{X}$ 57'49	4.01157 AU	evening set	3403 Sep 08 00:12	25° $\mathbb{P}$ 31'39	
direct	3397 Nov 06 09:58	12° $\mathbb{X}$ 06'41					
	3398 Mar 04 23:26	0° $\mathbb{Y}$		conjunction	3403 Sep 21 07:57	28° $\mathbb{P}$ 24'40	0°55'32
evening set	3398 Mar 11 22:32	1° $\mathbb{Y}$ 40'04		minimum elong	3403 Sep 21 07:56	28° $\mathbb{P}$ 24'39	0°55'32
				max. Earth dist.	3403 Sep 21 10:46	28° $\mathbb{P}$ 26'11	6.41439 AU
conjunction	3398 Mar 24 23:12	4° $\mathbb{Y}$ 49'08	-0°57'42		3403 Sep 28 15:55	0° $\mathbb{A}$	
minimum elong	3398 Mar 24 23:11	4° $\mathbb{Y}$ 49'08	0°57'42	morning rise	3403 Oct 04 13:25	1° $\mathbb{A}$ 16'23	
max. Earth dist.	3398 Mar 25 02:18	4° $\mathbb{Y}$ 51'01	5.96418 AU	retrograde	3404 Feb 02 11:25	18° $\mathbb{A}$ 12'24	
morning rise	3398 Apr 07 02:22	7° $\mathbb{Y}$ 59'42		opposition	3404 Apr 02 20:42	13° $\mathbb{A}$ 16'27	1°28'11
retrograde	3398 Aug 17 04:20	28° $\mathbb{Y}$ 36'38		min. Earth dist.	3404 Apr 03 03:40	13° $\mathbb{A}$ 14'10	4.45091 AU
min. Earth dist.	3398 Oct 15 10:19	23° $\mathbb{Y}$ 40'39	3.93891 AU	direct	3404 Jun 03 23:48	8° $\mathbb{A}$ 13'47	
opposition	3398 Oct 16 00:52	23° $\mathbb{Y}$ 35'47	-1°32'20	evening set	3404 Oct 08 10:14	25° $\mathbb{A}$ 40'51	
direct	3398 Dec 13 04:04	18° $\mathbb{Y}$ 42'00		max. Earth dist.	3404 Oct 20 11:45	28° $\mathbb{A}$ 16'22	6.46808 AU
	3399 Mar 12 02:02	0° $\mathbb{B}$					
evening set	3399 Apr 18 01:35	8° $\mathbb{B}$ 33'13		conjunction	3404 Oct 21 11:13	28° $\mathbb{A}$ 29'01	1°02'04
				minimum elong	3404 Oct 21 11:13	28° $\mathbb{A}$ 29'01	1°02'04
conjunction	3399 May 01 10:07	11° $\mathbb{B}$ 47'14	-0°58'31		3404 Oct 28 12:04	0° $\mathbb{M}$	
minimum elong	3399 May 01 10:08	11° $\mathbb{B}$ 47'15	0°58'32	morning rise	3404 Nov 03 09:18	1° $\mathbb{M}$ 15'50	
max. Earth dist.	3399 May 02 21:58	12° $\mathbb{B}$ 08'58	5.93716 AU		3405 Jan 17 21:18	15° $\mathbb{M}$	
morning rise	3399 May 14 21:50	15° $\mathbb{B}$ 02'52		retrograde	3405 Mar 03 10:18	17° $\mathbb{M}$ 56'18	
	3399 May 14 17:03	15° $\mathbb{B}$			3405 Apr 17 12:01	15° $\mathbb{R}$ $\mathbb{M}$	
	3399 Jul 23 23:19	0° $\mathbb{I}$		opposition	3405 May 03 03:30	13° $\mathbb{M}$ 03'03	1°25'34
retrograde	3399 Sep 24 04:30	5° $\mathbb{I}$ 45'07		min. Earth dist.	3405 May 04 03:38	12° $\mathbb{M}$ 55'18	4.46671 AU

direct	3405 Jul 04 20:41	8°♍01'00			3411 Apr 28 15:48	15°♎	
	3405 Sep 16 04:18	15°♍					
evening set	3405 Nov 07 23:09	25°♍27'19		conjunction	3411 May 07 20:41	17°♎13'34	-0°56'36
max. Earth dist.	3405 Nov 18 22:04	27°♍49'58	6.44413 AU	minimum elong	3411 May 07 20:43	17°♎13'35	0°56'36
				max. Earth dist.	3411 May 09 14:30	17°♎38'52	5.94133 AU
conjunction	3405 Nov 20 18:46	28°♍14'19	0°51'58	morning rise	3411 May 21 09:22	20°♎29'28	
minimum elong	3405 Nov 20 18:47	28°♍14'20	0°51'58		3411 Jul 02 02:11	0°♐	
	3405 Nov 28 20:56	0°♎		retrograde	3411 Sep 30 12:40	11°♐07'41	
morning rise	3405 Dec 03 12:09	1°♎00'20		min. Earth dist.	3411 Nov 27 16:11	6°♐14'37	3.97351 AU
retrograde	3406 Apr 03 06:47	17°♎54'45		opposition	3411 Nov 29 01:25	6°♐03'19	-1°09'16
opposition	3406 Jun 03 03:48	13°♎02'42	1°00'19	direct	3412 Jan 25 23:00	1°♐07'32	
min. Earth dist.	3406 Jun 04 15:59	12°♎51'10	4.40460 AU	evening set	3412 May 31 04:45	20°♐41'10	
direct	3406 Aug 04 20:01	8°♎01'58					
evening set	3406 Dec 08 12:46	25°♎46'07		conjunction	3412 Jun 13 20:56	23°♐54'38	-0°31'34
max. Earth dist.	3406 Dec 19 01:20	28°♎06'29	6.34812 AU	minimum elong	3412 Jun 13 20:58	23°♐54'39	0°31'34
				max. Earth dist.	3412 Jun 16 06:12	24°♐28'25	6.02517 AU
conjunction	3406 Dec 21 05:47	28°♎35'45	0°27'31	morning rise	3412 Jun 27 15:19	27°♐08'56	
minimum elong	3406 Dec 21 05:48	28°♎35'46	0°27'31		3412 Jul 09 22:49	0°♑	
	3406 Dec 27 12:44	0°♑		retrograde	3412 Nov 04 04:11	16°♑54'48	
morning rise	3407 Jan 02 21:10	1°♑24'51		min. Earth dist.	3413 Jan 01 05:52	12°♑02'25	4.09262 AU
retrograde	3407 May 05 19:52	19°♑01'46		opposition	3413 Jan 02 18:24	11°♑49'58	-0°20'43
opposition	3407 Jul 05 17:59	14°♑09'20	0°16'55	direct	3413 Mar 02 08:38	6°♑51'13	
min. Earth dist.	3407 Jul 07 06:51	13°♑57'33	4.27984 AU	asc. node	3413 Jun 04 00:08	18°♑33'46	
direct	3407 Sep 05 14:58	9°♑10'41		evening set	3413 Jul 06 21:31	25°♑46'27	
desc. node	3407 Nov 15 05:55	16°♑03'07					
evening set	3408 Jan 09 02:44	27°♑28'56		conjunction	3413 Jul 20 15:06	28°♑53'59	0°04'18
max. Earth dist.	3408 Jan 19 21:05	29°♑57'24	6.20442 AU	minimum elong	3413 Jul 20 15:06	28°♑53'58	0°04'18
	3408 Jan 20 01:35	0°♒		behind sun begin	3413 Jul 20 06:53	28°♑49'19	
				behind sun end	3413 Jul 20 23:19	28°♑58'38	
conjunction	3408 Jan 21 19:34	0°♒24'13	-0°06'02	max. Earth dist.	3413 Jul 22 17:45	29°♑22'50	6.16862 AU
minimum elong	3408 Jan 21 19:35	0°♒24'14	0°06'02		3413 Jul 25 11:01	0°♒	
behind sun begin	3408 Jan 21 11:58	0°♒19'52		morning rise	3413 Aug 03 08:58	2°♒01'19	
behind sun end	3408 Jan 22 03:11	0°♒28'35			3413 Oct 06 11:47	15°♒	
morning rise	3408 Feb 03 12:17	3°♒19'45		retrograde	3413 Dec 07 09:31	20°♒35'22	
	3408 Mar 30 00:04	15°♒		min. Earth dist.	3414 Feb 04 02:04	15°♒41'25	4.24518 AU
retrograde	3408 Jun 08 20:49	22°♒01'52		opposition	3414 Feb 05 03:49	15°♒32'45	0°31'52
opposition	3408 Aug 08 12:09	17°♒07'35	-0°34'43		3414 Feb 09 05:15	15°♒♎	
min. Earth dist.	3408 Aug 09 15:35	16°♒58'43	4.12652 AU	direct	3414 Apr 06 01:31	10°♒31'32	
	3408 Aug 25 12:21	15°♒♒			3414 May 31 12:42	15°♒	
direct	3408 Oct 08 02:54	12°♒11'22		evening set	3414 Aug 10 16:33	28°♒45'11	
	3408 Nov 19 19:10	15°♒			3414 Aug 16 08:40	0°♓	
	3409 Feb 05 09:12	0°♓					
evening set	3409 Feb 10 12:36	1°♓12'38		conjunction	3414 Aug 24 06:09	1°♓44'31	0°37'00
max. Earth dist.	3409 Feb 22 07:06	4°♓00'25	6.05494 AU	minimum elong	3414 Aug 24 06:07	1°♓44'30	0°37'00
				max. Earth dist.	3414 Aug 25 10:15	2°♓00'01	6.31796 AU
conjunction	3409 Feb 23 08:22	4°♓15'27	-0°39'06	morning rise	3414 Sep 06 18:17	4°♓42'53	
minimum elong	3409 Feb 23 08:20	4°♓15'26	0°39'05	retrograde	3415 Jan 07 12:22	22°♓13'59	
morning rise	3409 Mar 08 05:26	7°♓19'15		opposition	3415 Mar 08 15:18	17°♓14'58	1°11'19
retrograde	3409 Jul 16 04:06	27°♓12'55		min. Earth dist.	3415 Mar 08 05:45	17°♓18'07	4.37964 AU
opposition	3409 Sep 14 09:36	22°♓15'27	-1°17'39	direct	3415 May 08 20:11	12°♓12'28	
min. Earth dist.	3409 Sep 14 15:28	22°♓13'31	3.99465 AU	evening set	3415 Sep 12 11:16	29°♓54'16	
direct	3409 Nov 12 11:46	17°♓21'19			3415 Sep 12 21:57	0°♔	
	3410 Feb 16 04:35	0°♔					
evening set	3410 Mar 18 03:05	6°♔59'36		conjunction	3415 Sep 25 18:01	2°♔46'20	0°57'26
				minimum elong	3415 Sep 25 18:00	2°♔46'19	0°57'25
conjunction	3410 Mar 31 04:43	10°♔09'38	-0°59'19	max. Earth dist.	3415 Sep 25 16:38	2°♔45'35	6.42744 AU
minimum elong	3410 Mar 31 04:42	10°♔09'38	0°59'18	morning rise	3415 Oct 08 22:18	5°♔37'05	
max. Earth dist.	3410 Mar 31 12:30	10°♔14'22	5.95303 AU	retrograde	3416 Feb 06 15:21	22°♔28'56	
morning rise	3410 Apr 13 09:06	13°♔21'16		opposition	3416 Apr 07 01:41	17°♔33'27	1°29'13
	3410 Jul 03 00:47	0°♕		min. Earth dist.	3416 Apr 07 11:56	17°♔30'08	4.45807 AU
retrograde	3410 Aug 23 15:34	4°♕02'57		direct	3416 Jun 08 08:16	12°♔30'50	
	3410 Oct 15 04:12	30°♕♔		evening set	3416 Oct 12 16:57	29°♔56'40	
opposition	3410 Oct 22 11:20	29°♔01'32	-1°32'05		3416 Oct 12 23:10	0°♕	
min. Earth dist.	3410 Oct 21 17:34	29°♔07'30	3.93510 AU				
direct	3410 Dec 19 12:27	24°♔07'40		conjunction	3416 Oct 25 17:01	2°♕44'29	1°01'37
	3411 Feb 18 20:33	0°♕		minimum elong	3416 Oct 25 17:01	2°♕44'29	1°01'37
evening set	3411 Apr 24 10:51	13°♕59'10		max. Earth dist.	3416 Oct 24 12:26	2°♕29'04	6.46860 AU

morning rise	3416 Nov 07 14:28	5° $\mathbb{M}$ 31'02		opposition	3422 Oct 27 21:45	4° $\mathcal{B}$ 27'38	-1°30'59
	3416 Dec 25 02:23	15° $\mathbb{M}$		min. Earth dist.	3422 Oct 27 01:20	4° $\mathcal{B}$ 34'30	3.93679 AU
retrograde	3417 Mar 07 16:19	22° $\mathbb{M}$ 12'09			3422 Dec 08 21:58	30° $\mathbb{R}$ $\mathbb{Y}$	
opposition	3417 May 07 09:53	17° $\mathbb{M}$ 19'07	1°23'20	direct	3422 Dec 24 21:26	29° $\mathbb{Y}$ 33'39	
min. Earth dist.	3417 May 08 12:37	17° $\mathbb{M}$ 10'32	4.46075 AU		3423 Jan 09 20:20	0° $\mathcal{B}$	
	3417 May 26 05:41	15° $\mathbb{R}$ $\mathbb{M}$			3423 Apr 11 06:18	15° $\mathcal{B}$	
direct	3417 Jul 09 03:52	12° $\mathbb{M}$ 17'10		evening set	3423 Apr 29 19:59	19° $\mathcal{B}$ 23'25	
	3417 Aug 22 02:10	15° $\mathbb{M}$					
evening set	3417 Nov 12 05:02	29° $\mathbb{M}$ 45'36		conjunction	3423 May 13 06:42	22° $\mathcal{B}$ 37'51	-0°54'11
	3417 Nov 13 07:39	0° $\mathcal{A}$		minimum elong	3423 May 13 06:44	22° $\mathcal{B}$ 37'52	0°54'11
max. Earth dist.	3417 Nov 23 02:35	2° $\mathcal{A}$ 07'54	6.43208 AU	max. Earth dist.	3423 May 15 03:10	23° $\mathcal{B}$ 04'40	5.95044 AU
				morning rise	3423 May 26 20:33	25° $\mathcal{B}$ 53'47	
conjunction	3417 Nov 25 00:20	2° $\mathcal{A}$ 32'54	0°49'19		3423 Jun 13 06:32	0° $\mathbb{I}$	
minimum elong	3417 Nov 25 00:22	2° $\mathcal{A}$ 32'55	0°49'18	retrograde	3423 Oct 05 16:11	16° $\mathbb{I}$ 25'57	
morning rise	3417 Dec 07 17:10	5° $\mathcal{A}$ 19'13		min. Earth dist.	3423 Dec 02 18:44	11° $\mathbb{I}$ 33'21	3.98899 AU
retrograde	3418 Apr 07 17:01	22° $\mathcal{A}$ 18'54		opposition	3423 Dec 04 06:00	11° $\mathbb{I}$ 21'21	-1°03'26
opposition	3418 Jun 07 14:54	17° $\mathcal{A}$ 26'55	0°55'09	direct	3424 Jan 31 04:19	6° $\mathbb{I}$ 25'10	
min. Earth dist.	3418 Jun 09 03:26	17° $\mathcal{A}$ 15'17	4.38723 AU	evening set	3424 Jun 05 11:03	25° $\mathbb{I}$ 53'15	
direct	3418 Aug 09 04:36	12° $\mathcal{A}$ 26'30					
	3418 Dec 11 17:33	0° $\mathcal{Z}$		conjunction	3424 Jun 19 03:46	29° $\mathbb{I}$ 05'59	-0°26'48
evening set	3418 Dec 12 21:53	0° $\mathcal{Z}$ 15'43		minimum elong	3424 Jun 19 03:47	29° $\mathbb{I}$ 06'00	0°26'49
max. Earth dist.	3418 Dec 23 09:25	2° $\mathcal{Z}$ 36'17	6.32672 AU	max. Earth dist.	3424 Jun 21 13:04	29° $\mathbb{I}$ 39'39	6.04546 AU
					3424 Jun 22 23:45	0° $\mathcal{G}$	
conjunction	3418 Dec 25 14:39	3° $\mathcal{Z}$ 06'08	0°23'10	morning rise	3424 Jul 02 22:18	2° $\mathcal{G}$ 19'25	
minimum elong	3418 Dec 25 14:40	3° $\mathcal{Z}$ 06'09	0°23'10	retrograde	3424 Nov 09 00:09	21° $\mathcal{G}$ 54'50	
morning rise	3419 Jan 07 06:13	5° $\mathcal{Z}$ 56'09		min. Earth dist.	3425 Jan 06 03:50	17° $\mathcal{G}$ 02'00	4.11533 AU
retrograde	3419 May 10 16:42	23° $\mathcal{Z}$ 42'19		opposition	3425 Jan 07 14:30	16° $\mathcal{G}$ 50'12	-0°13'03
opposition	3419 Jul 10 13:02	18° $\mathcal{Z}$ 49'44	0°09'48	direct	3425 Mar 07 09:48	11° $\mathcal{G}$ 51'05	
min. Earth dist.	3419 Jul 12 01:49	18° $\mathcal{Z}$ 37'58	4.25571 AU	asc. node	3425 Apr 13 12:41	14° $\mathcal{G}$ 02'29	
direct	3419 Sep 10 06:50	13° $\mathcal{Z}$ 51'26			3425 Jul 08 23:06	0° $\mathcal{Q}$	
desc. node	3419 Sep 24 12:28	14° $\mathcal{Z}$ 10'23		evening set	3425 Jul 11 21:29	0° $\mathcal{Q}$ 39'37	
	3420 Jan 03 18:06	0° $\approx$					
evening set	3420 Jan 13 17:53	2° $\approx$ 16'40		conjunction	3425 Jul 25 14:49	3° $\mathcal{Q}$ 45'59	0°09'21
max. Earth dist.	3420 Jan 24 15:05	4° $\approx$ 47'36	6.17971 AU	minimum elong	3425 Jul 25 14:48	3° $\mathcal{Q}$ 45'59	0°09'20
				behind sun begin	3425 Jul 25 07:51	3° $\mathcal{Q}$ 42'03	
conjunction	3420 Jan 26 11:08	5° $\approx$ 13'09	-0°11'00	behind sun end	3425 Jul 25 21:45	3° $\mathcal{Q}$ 49'54	
minimum elong	3420 Jan 26 11:07	5° $\approx$ 13'08	0°11'01	max. Earth dist.	3425 Jul 27 15:37	4° $\mathcal{Q}$ 13'38	6.19188 AU
behind sun begin	3420 Jan 26 05:02	5° $\approx$ 09'38		morning rise	3425 Aug 08 08:04	6° $\mathcal{Q}$ 52'01	
behind sun end	3420 Jan 26 17:12	5° $\approx$ 16'38			3425 Sep 15 06:28	15° $\mathcal{Q}$	
morning rise	3420 Feb 08 04:17	8° $\approx$ 09'54		retrograde	3425 Dec 11 19:30	25° $\mathcal{Q}$ 15'51	
	3420 Mar 09 19:22	15° $\approx$		opposition	3426 Feb 09 15:49	20° $\mathcal{Q}$ 13'44	0°38'28
retrograde	3420 Jun 14 01:14	27° $\approx$ 03'19		min. Earth dist.	3426 Feb 08 15:26	20° $\mathcal{Q}$ 21'55	4.26707 AU
opposition	3420 Aug 13 15:55	22° $\approx$ 08'41	-0°41'51	direct	3426 Apr 10 17:19	15° $\mathcal{Q}$ 12'18	
min. Earth dist.	3420 Aug 14 15:50	22° $\approx$ 00'57	4.10345 AU		3426 Jul 30 21:30	0° $\mathbb{P}$	
direct	3420 Oct 13 00:19	17° $\approx$ 12'55		evening set	3426 Aug 15 09:17	3° $\mathbb{P}$ 20'32	
	3421 Jan 18 22:12	0° $\mathcal{H}$					
evening set	3421 Feb 15 11:54	6° $\mathcal{H}$ 20'49		conjunction	3426 Aug 28 21:56	6° $\mathbb{P}$ 18'42	0°40'44
max. Earth dist.	3421 Feb 27 11:28	9° $\mathcal{H}$ 12'21	6.03559 AU	minimum elong	3426 Aug 28 21:54	6° $\mathbb{P}$ 18'41	0°40'44
				max. Earth dist.	3426 Aug 29 20:45	6° $\mathbb{P}$ 31'15	6.33685 AU
conjunction	3421 Feb 28 08:13	9° $\mathcal{H}$ 24'46	-0°43'04	morning rise	3426 Sep 11 09:05	9° $\mathbb{P}$ 15'52	
minimum elong	3421 Feb 28 08:11	9° $\mathcal{H}$ 24'45	0°43'04	retrograde	3427 Jan 11 19:37	26° $\mathbb{P}$ 39'58	
morning rise	3421 Mar 13 06:12	12° $\mathcal{H}$ 29'48		opposition	3427 Mar 12 22:37	21° $\mathbb{P}$ 41'30	1°15'12
	3421 Jun 10 23:19	0° $\mathbb{Y}$		min. Earth dist.	3427 Mar 12 16:53	21° $\mathbb{P}$ 43'24	4.39430 AU
retrograde	3421 Jul 21 15:39	2° $\mathbb{Y}$ 32'47		direct	3427 May 13 08:46	16° $\mathbb{P}$ 38'55	
	3421 Aug 31 14:33	30° $\mathbb{R}$ $\mathcal{H}$			3427 Aug 27 12:04	0° $\mathcal{L}$	
opposition	3421 Sep 19 19:43	27° $\mathcal{H}$ 34'43	-1°21'50	evening set	3427 Sep 16 21:50	4° $\mathcal{L}$ 17'35	
min. Earth dist.	3421 Sep 19 21:51	27° $\mathcal{H}$ 34'01	3.98112 AU				
direct	3421 Nov 17 17:51	22° $\mathcal{H}$ 40'46		conjunction	3427 Sep 30 03:41	7° $\mathcal{L}$ 08'55	0°59'01
	3422 Jan 26 12:43	0° $\mathbb{Y}$		minimum elong	3427 Sep 30 03:40	7° $\mathcal{L}$ 08'54	0°59'01
evening set	3422 Mar 23 09:22	12° $\mathbb{Y}$ 22'26		max. Earth dist.	3427 Sep 29 22:15	7° $\mathcal{L}$ 05'59	6.43671 AU
				morning rise	3427 Oct 13 06:56	9° $\mathcal{L}$ 58'55	
conjunction	3422 Apr 05 12:11	15° $\mathbb{Y}$ 33'17	-1°00'26	retrograde	3428 Feb 10 19:11	26° $\mathcal{L}$ 47'57	
minimum elong	3422 Apr 05 12:10	15° $\mathbb{Y}$ 33'17	1°00'25	opposition	3428 Apr 11 07:26	21° $\mathcal{L}$ 52'51	1°29'47
max. Earth dist.	3422 Apr 06 02:49	15° $\mathbb{Y}$ 42'10	5.94664 AU	min. Earth dist.	3428 Apr 11 19:47	21° $\mathcal{L}$ 48'51	4.46172 AU
morning rise	3422 Apr 18 17:36	18° $\mathbb{Y}$ 45'42		direct	3428 Jun 12 15:40	16° $\mathcal{L}$ 50'15	
	3422 Jun 07 13:46	0° $\mathcal{B}$			3428 Sep 26 16:29	0° $\mathbb{M}$	
retrograde	3422 Aug 29 03:58	9° $\mathcal{B}$ 29'33		evening set	3428 Oct 17 00:26	4° $\mathbb{M}$ 15'53	

conjunction	3428 Oct 29 23:45	7°♍03'28	1°00'49	morning rise	3434 Apr 23 23:56	24°♊03'18	
minimum elong	3428 Oct 29 23:46	7°♍03'28	1°00'49		3434 May 19 06:31	0°♋	
max. Earth dist.	3428 Oct 28 16:49	6°♍46'46	6.46637 AU	retrograde	3434 Sep 03 09:49	14°♋47'01	
morning rise	3428 Nov 11 20:21	9°♍49'48		min. Earth dist.	3434 Nov 01 04:20	9°♋52'37	3.94230 AU
	3428 Dec 06 13:30	15°♍		opposition	3434 Nov 02 04:11	9°♋44'35	-1°29'08
retrograde	3429 Mar 11 23:25	26°♍32'20		direct	3434 Dec 30 02:26	4°♋50'21	
opposition	3429 May 11 17:41	21°♍39'34	1°20'36		3435 Mar 23 18:23	15°♋	
min. Earth dist.	3429 May 12 22:34	21°♍30'20	4.45284 AU	evening set	3435 May 05 01:23	24°♋37'12	
direct	3429 Jul 13 12:33	16°♍37'49					
	3429 Oct 28 01:03	0°♌		conjunction	3435 May 18 13:09	27°♋51'32	-0°51'25
evening set	3429 Nov 16 12:32	4°♌08'46		minimum elong	3435 May 18 13:11	27°♋51'33	0°51'24
max. Earth dist.	3429 Nov 27 06:23	6°♌29'36	6.41901 AU	max. Earth dist.	3435 May 20 12:31	28°♋20'01	5.96219 AU
					3435 May 27 11:06	0°♍	
conjunction	3429 Nov 29 07:16	6°♌56'23	0°46'19	morning rise	3435 Jun 01 03:43	1°♍07'15	
minimum elong	3429 Nov 29 07:17	6°♌56'24	0°46'19	retrograde	3435 Oct 10 16:34	21°♍32'26	
morning rise	3429 Dec 11 23:56	9°♌43'07		min. Earth dist.	3435 Dec 07 19:11	16°♍39'31	4.00543 AU
retrograde	3430 Apr 12 06:41	26°♌48'22		opposition	3435 Dec 09 05:56	16°♍27'40	-0°57'18
opposition	3430 Jun 12 04:11	21°♌56'23	0°49'32	direct	3436 Feb 05 07:12	11°♍31'06	
min. Earth dist.	3430 Jun 13 17:24	21°♌44'31	4.36982 AU		3436 Jun 06 16:52	0°♎	
direct	3430 Aug 13 16:03	16°♌56'12		evening set	3436 Jun 10 13:17	0°♎53'37	
	3430 Nov 25 03:37	0°♏					
evening set	3430 Dec 17 08:18	4°♏50'15		conjunction	3436 Jun 24 06:27	4°♎05'39	-0°22'01
max. Earth dist.	3430 Dec 27 21:40	7°♏12'27	6.30655 AU	minimum elong	3436 Jun 24 06:28	4°♎05'40	0°22'00
				max. Earth dist.	3436 Jun 26 16:03	4°♎39'18	6.06508 AU
conjunction	3430 Dec 30 01:09	7°♏41'27	0°18'36	morning rise	3436 Jul 08 01:08	7°♎18'12	
minimum elong	3430 Dec 30 01:10	7°♏41'28	0°18'36	retrograde	3436 Nov 13 15:07	26°♎43'38	
morning rise	3431 Jan 11 16:38	10°♏32'18		min. Earth dist.	3437 Jan 10 20:09	21°♎50'53	4.13612 AU
retrograde	3431 May 15 13:18	28°♏27'13		opposition	3437 Jan 12 06:13	21°♎39'18	-0°05'35
opposition	3431 Jul 15 09:42	23°♏34'28	0°02'29	asc. node	3437 Feb 22 10:22	17°♎11'33	
min. Earth dist.	3431 Jul 16 20:43	23°♏23'16	4.23430 AU	direct	3437 Mar 12 04:23	16°♎39'51	
desc. node	3431 Aug 03 11:17	21°♏13'49			3437 Jun 22 05:53	0°♏	
direct	3431 Sep 14 22:52	18°♏36'35		evening set	3437 Jul 16 17:53	5°♏22'46	
	3431 Dec 17 07:43	0°♐					
evening set	3432 Jan 18 10:19	7°♐07'36		conjunction	3437 Jul 30 10:44	8°♏28'04	0°14'10
max. Earth dist.	3432 Jan 29 10:01	9°♐40'45	6.15899 AU	minimum elong	3437 Jul 30 10:43	8°♏28'04	0°14'10
				behind sun begin	3437 Jul 30 06:56	8°♏25'56	
conjunction	3432 Jan 31 03:40	10°♐05'01	-0°15'58	behind sun end	3437 Jul 30 14:29	8°♏30'11	
minimum elong	3432 Jan 31 03:39	10°♐05'00	0°15'57	max. Earth dist.	3437 Aug 01 06:45	8°♏52'55	6.21209 AU
behind sun begin	3432 Jan 31 02:02	10°♐04'04		morning rise	3437 Aug 13 03:31	11°♏32'59	
behind sun end	3432 Jan 31 05:16	10°♐05'56			3437 Aug 28 18:48	15°♏	
morning rise	3432 Feb 12 21:24	13°♐02'52		retrograde	3437 Dec 16 05:05	29°♏48'10	
	3432 Feb 21 08:49	15°♐		min. Earth dist.	3438 Feb 13 04:14	24°♏53'37	4.28507 AU
	3432 May 13 05:09	0°♑		opposition	3438 Feb 14 01:16	24°♏46'34	0°44'37
retrograde	3432 Jun 19 06:55	2°♑05'57		direct	3438 Apr 15 08:08	19°♏44'54	
	3432 Jul 26 14:25	30°♑			3438 Jul 13 11:47	0°♒	
opposition	3432 Aug 18 19:55	27°♑10'52	-0°48'41	evening set	3438 Aug 19 23:25	7°♒49'08	
min. Earth dist.	3432 Aug 19 16:52	27°♑04'03	4.08521 AU				
direct	3432 Oct 17 23:58	22°♑15'23		conjunction	3438 Sep 02 11:24	10°♒46'25	0°44'08
	3432 Dec 30 04:39	0°♒		minimum elong	3438 Sep 02 11:22	10°♒46'24	0°44'07
evening set	3433 Feb 20 10:54	11°♒28'01		max. Earth dist.	3438 Sep 03 07:23	10°♒57'22	6.35140 AU
				morning rise	3438 Sep 15 21:26	13°♒42'33	
conjunction	3433 Mar 05 08:03	14°♒32'53	-0°46'40		3438 Dec 21 12:56	0°♓	
minimum elong	3433 Mar 05 08:01	14°♒32'52	0°46'41	retrograde	3439 Jan 15 23:46	1°♓01'16	
max. Earth dist.	3433 Mar 04 17:17	14°♒24'02	6.02168 AU		3439 Feb 10 08:18	30°♓	
morning rise	3433 Mar 18 06:46	17°♒38'53		opposition	3439 Mar 17 04:22	26°♓03'22	1°18'35
	3433 May 13 16:33	0°♔		min. Earth dist.	3439 Mar 17 00:22	26°♓04'41	4.40477 AU
retrograde	3433 Jul 27 01:13	7°♔48'29		direct	3439 May 17 16:49	21°♓00'47	
opposition	3433 Sep 25 03:50	2°♔49'53	-1°25'15		3439 Aug 09 17:17	0°♓	
min. Earth dist.	3433 Sep 25 02:46	2°♔50'14	3.97325 AU	evening set	3439 Sep 21 07:34	8°♓37'46	
	3433 Oct 18 00:25	30°♓					
direct	3433 Nov 22 22:00	27°♓56'05		conjunction	3439 Oct 04 12:23	11°♓28'30	1°00'14
	3433 Dec 28 09:20	0°♕		minimum elong	3439 Oct 04 12:22	11°♓28'29	1°00'14
evening set	3434 Mar 28 13:36	17°♕38'58		max. Earth dist.	3439 Oct 04 02:25	11°♓23'06	6.44240 AU
				morning rise	3439 Oct 17 14:45	14°♓17'55	
conjunction	3434 Apr 10 17:15	20°♕50'18	-1°01'01		3440 Jan 19 12:42	0°♖	
minimum elong	3434 Apr 10 17:14	20°♕50'18	1°01'01	retrograde	3440 Feb 15 01:09	1°♖05'17	
max. Earth dist.	3434 Apr 11 11:21	21°♕01'18	5.94528 AU		3440 Mar 12 11:19	30°♖	

opposition	3440 Apr 15 13:03	26°♌10'40	1°29'51		3445 Apr 23 14:43	0°♍
min. Earth dist.	3440 Apr 16 04:34	26°♌05'39	4.46257 AU	retrograde	3445 Aug 01 07:41	13°♍01'46
direct	3440 Jun 17 00:14	21°♌08'10		opposition	3445 Sep 30 10:13	8°♍02'36 -1°28'00
	3440 Sep 08 21:44	0°♍		min. Earth dist.	3445 Sep 30 05:12	8°♍04'16 3.96393 AU
evening set	3440 Oct 21 07:32	8°♍34'17		direct	3445 Nov 28 00:29	3°♍08'50
max. Earth dist.	3440 Nov 01 20:11	11°♍03'24	6.46224 AU	evening set	3446 Apr 02 17:06	22°♍53'59
conjunction	3440 Nov 03 06:11	11°♍21'47	0°59'40	conjunction	3446 Apr 15 21:57	26°♍06'01 -1°01'08
minimum elong	3440 Nov 03 06:12	11°♍21'48	0°59'39	minimum elong	3446 Apr 15 21:57	26°♍06'01 1°01'08
morning rise	3440 Nov 16 02:09	14°♍08'03		max. Earth dist.	3446 Apr 16 21:17	26°♍20'11 5.94170 AU
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	3441 Feb 20 10:55	0°♍			3446 May 02 00:45	0°♍
retrograde	3441 Mar 16 06:40	0°♍52'38			3446 Jul 12 12:02	15°♍
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evening set	3441 Nov 20 19:44	8°♍31'58			3447 Feb 28 20:11	15°♍
max. Earth dist.	3441 Dec 01 13:41	10°♍53'16	6.40648 AU	evening set	3447 May 10 07:15	29°♍52'13
					3447 May 10 20:18	0°♍
conjunction	3441 Dec 03 14:08	11°♍19'55	0°43'04	conjunction	3447 May 23 20:03	3°♍06'38 -0°48'13
minimum elong	3441 Dec 03 14:10	11°♍19'56	0°43'04	minimum elong	3447 May 23 20:05	3°♍06'40 0°48'14
morning rise	3441 Dec 16 06:21	14°♍07'01		max. Earth dist.	3447 May 25 22:25	3°♍36'50 5.97056 AU
	3442 Mar 18 16:39	0°♍		morning rise	3447 Jun 06 11:35	6°♍22'22
retrograde	3442 Apr 16 19:40	1°♍17'37		retrograde	3447 Oct 15 17:08	26°♍41'43
	3442 May 16 01:06	30°♍		min. Earth dist.	3447 Dec 12 18:30	21°♍49'05 4.01867 AU
opposition	3442 Jun 16 17:27	26°♍25'39	0°43'37	opposition	3447 Dec 14 06:23	21°♍36'52 -0°50'44
min. Earth dist.	3442 Jun 18 07:03	26°♍13'41	4.35400 AU	direct	3448 Feb 10 08:39	16°♍39'53
direct	3442 Aug 18 03:26	21°♍25'48			3448 May 20 07:24	0°♍
	3442 Nov 06 22:09	0°♍		evening set	3448 Jun 15 17:06	5°♍58'10
evening set	3442 Dec 21 18:25	9°♍23'59				
max. Earth dist.	3443 Jan 01 07:07	11°♍46'28	6.28847 AU	conjunction	3448 Jun 29 10:29	9°♍09'34 -0°17'00
conjunction	3443 Jan 03 11:02	12°♍15'50	0°13'56	minimum elong	3448 Jun 29 10:30	9°♍09'35 0°17'00
minimum elong	3443 Jan 03 11:02	12°♍15'51	0°13'55	max. Earth dist.	3448 Jul 01 18:05	9°♍41'54 6.08183 AU
behind sun begin	3443 Jan 03 06:48	12°♍13'27		morning rise	3448 Jul 13 05:26	12°♍21'24
behind sun end	3443 Jan 03 15:17	12°♍18'14			3448 Oct 17 08:42	0°♍
morning rise	3443 Jan 16 02:47	15°♍07'29		retrograde	3448 Nov 18 08:30	1°♍37'57
	3443 Apr 04 03:00	0°♍			3448 Dec 20 01:59	30°♍
retrograde	3443 May 20 09:53	3°♍10'32		asc. node	3449 Jan 01 23:02	28°♍32'59
desc. node	3443 Jun 12 23:35	2°♍19'08		opposition	3449 Jan 16 23:53	26°♍33'51 0°02'02
	3443 Jul 06 14:14	30°♍		min. Earth dist.	3449 Jan 15 15:27	26°♍44'52 4.15456 AU
opposition	3443 Jul 20 05:31	28°♍17'30	-0°04'51	direct	3449 Mar 17 02:49	21°♍33'59
min. Earth dist.	3443 Jul 21 14:59	28°♍06'46	4.21491 AU		3449 Jun 03 01:42	0°♍
direct	3443 Sep 19 14:34	23°♍19'53		evening set	3449 Jul 21 16:29	10°♍11'59
	3443 Nov 27 08:42	0°♍				
evening set	3444 Jan 23 01:21	11°♍56'07		conjunction	3449 Aug 04 09:05	13°♍16'19 0°19'01
max. Earth dist.	3444 Feb 03 05:31	14°♍32'27	6.13985 AU	minimum elong	3449 Aug 04 09:04	13°♍16'18 0°19'01
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conjunction	3444 Feb 04 19:10	14°♍54'29	-0°20'47		3449 Aug 12 01:43	15°♍
minimum elong	3444 Feb 04 19:09	14°♍54'28	0°20'47	morning rise	3449 Aug 18 01:00	16°♍20'04
	3444 Feb 05 04:37	15°♍			3449 Oct 26 21:08	0°♍
morning rise	3444 Feb 17 13:15	17°♍53'19		retrograde	3449 Dec 20 16:01	4°♍26'49
	3444 Apr 14 11:06	0°♍			3450 Feb 14 06:12	30°♍
retrograde	3444 Jun 24 10:56	7°♍05'41		opposition	3450 Feb 18 12:55	29°♍25'45 0°50'39
opposition	3444 Aug 23 22:25	2°♍10'10	-0°55'08	min. Earth dist.	3450 Feb 17 17:16	29°♍32'19 4.30302 AU
min. Earth dist.	3444 Aug 24 17:11	2°♍04'04	4.06788 AU	direct	3450 Apr 19 23:18	24°♍23'57
	3444 Sep 10 04:53	30°♍			3450 Jun 22 07:27	0°♍
direct	3444 Oct 22 21:31	27°♍15'01		evening set	3450 Aug 24 16:03	12°♍23'56
	3444 Dec 03 17:36	0°♍				
evening set	3445 Feb 25 08:38	16°♍32'21		conjunction	3450 Sep 07 02:56	15°♍20'08 0°47'22
				minimum elong	3450 Sep 07 02:54	15°♍20'07 0°47'21
conjunction	3445 Mar 10 06:19	19°♍38'08	-0°49'54	max. Earth dist.	3450 Sep 07 18:09	15°♍28'27 6.36727 AU
minimum elong	3445 Mar 10 06:17	19°♍38'07	0°49'54	morning rise	3450 Sep 20 12:03	18°♍15'13
max. Earth dist.	3445 Mar 09 18:21	19°♍30'57	6.00754 AU		3450 Nov 19 12:06	0°♍
morning rise	3445 Mar 23 06:07	22°♍45'13		retrograde	3451 Jan 20 07:28	5°♍27'54





























































































































opposition	3451 Mar 21 12:31	0°♏30'29	1°21'37	morning rise	3456 Feb 22 01:31	22°♊33'04
min. Earth dist.	3451 Mar 21 11:25	0°♏30'50	4.41789 AU		3456 Mar 26 03:38	0°♋
	3451 Mar 25 09:29	30°♋♏		retrograde	3456 Jun 29 09:18	11°♋54'37
direct	3451 May 22 05:24	25°♏27'52		opposition	3456 Aug 28 20:32	6°♋58'41 -1°00'58
	3451 Jul 18 14:09	0°♏		min. Earth dist.	3456 Aug 29 12:32	6°♋53'28 4.04990 AU
evening set	3451 Sep 25 18:18	13°♏01'44		direct	3456 Oct 27 14:17	2°♋03'44
				evening set	3457 Mar 02 02:54	21°♋26'35
conjunction	3451 Oct 08 22:18	15°♏51'42	1°01'10			
minimum elong	3451 Oct 08 22:17	15°♏51'42	1°01'10	conjunction	3457 Mar 15 01:32	24°♋33'29 -0°52'40
max. Earth dist.	3451 Oct 08 10:37	15°♏45'24	6.45206 AU	minimum elong	3457 Mar 15 01:30	24°♋33'28 0°52'40
morning rise	3451 Oct 21 23:27	18°♏40'19		max. Earth dist.	3457 Mar 14 18:09	24°♋29'01 5.99155 AU
	3451 Dec 19 10:55	0°♌		morning rise	3457 Mar 28 02:10	27°♋41'41
retrograde	3452 Feb 19 05:12	5°♌24'36			3457 Apr 06 18:45	0°♍
opposition	3452 Apr 19 19:40	0°♌30'18	1°29'29	retrograde	3457 Aug 06 14:08	18°♍06'10
min. Earth dist.	3452 Apr 20 12:02	0°♌25'02	4.46844 AU	opposition	3457 Oct 05 13:10	13°♍06'33 -1°30'02
	3452 Apr 23 17:45	30°♋♏		min. Earth dist.	3457 Oct 05 06:38	13°♍08'43 3.95163 AU
direct	3452 Jun 21 07:55	25°♏27'56		direct	3457 Dec 03 00:36	8°♍12'49
	3452 Aug 18 04:00	0°♌		evening set	3458 Apr 07 18:19	28°♍01'51
evening set	3452 Oct 25 14:32	12°♌52'29			3458 Apr 15 21:14	0°♎
	3452 Nov 04 11:10	15°♌				
max. Earth dist.	3452 Nov 05 23:59	15°♌19'56	6.46394 AU	conjunction	3458 Apr 21 00:21	1°♎14'49 -1°00'47
				minimum elong	3458 Apr 21 00:22	1°♎14'49 1°00'46
conjunction	3452 Nov 07 12:16	15°♌39'34	0°58'15	max. Earth dist.	3458 Apr 22 03:19	1°♎31'12 5.93428 AU
minimum elong	3452 Nov 07 12:17	15°♌39'34	0°58'15	morning rise	3458 May 04 09:25	4°♎29'25
morning rise	3452 Nov 20 07:28	18°♌25'28			3458 Jun 19 15:28	15°♎
	3453 Jan 19 03:47	0°♎		retrograde	3458 Sep 13 22:15	25°♎16'21
retrograde	3453 Mar 20 13:53	5°♎10'09		min. Earth dist.	3458 Nov 11 09:40	20°♎22'31 3.94342 AU
opposition	3453 May 20 09:32	0°♎17'46	1°13'51	opposition	3458 Nov 12 13:26	20°♎13'07 -1°23'30
min. Earth dist.	3453 May 21 17:23	0°♎07'36	4.44148 AU	direct	3459 Jan 09 08:32	15°♎18'27
	3453 May 22 17:12	30°♋♌			3459 Apr 23 20:03	0°♏
direct	3453 Jul 22 04:56	25°♌16'22		evening set	3459 May 15 12:30	5°♏04'17
	3453 Sep 19 02:17	0°♎				
evening set	3453 Nov 25 01:07	12°♎50'13		conjunction	3459 May 29 02:15	8°♏18'59 -0°44'43
max. Earth dist.	3453 Dec 05 16:30	15°♎10'24	6.39945 AU	minimum elong	3459 May 29 02:18	8°♏19'00 0°44'43
				max. Earth dist.	3459 May 31 05:38	8°♏49'43 5.97516 AU
conjunction	3453 Dec 07 19:00	15°♎38'14	0°39'41	morning rise	3459 Jun 11 18:49	11°♏34'55
minimum elong	3453 Dec 07 19:02	15°♎38'15	0°39'41		3459 Sep 16 21:24	0°♑
morning rise	3453 Dec 20 10:56	18°♎25'29		retrograde	3459 Oct 20 17:28	1°♑49'57
	3454 Feb 16 20:02	0°♑			3459 Nov 23 08:09	30°♋♏
retrograde	3454 Apr 21 05:22	5°♑39'47		min. Earth dist.	3459 Dec 17 17:56	26°♏57'25 4.02862 AU
opposition	3454 Jun 21 04:15	0°♑47'42	0°37'40	opposition	3459 Dec 19 06:16	26°♏45'01 -0°43'52
min. Earth dist.	3454 Jun 22 17:36	0°♑35'48	4.34286 AU	direct	3460 Feb 15 10:55	21°♏47'38
	3454 Jun 27 10:28	30°♋♎			3460 Apr 30 15:15	0°♑
direct	3454 Aug 22 11:37	25°♎48'03		evening set	3460 Jun 20 21:20	11°♑03'01
	3454 Oct 16 00:26	0°♑				
evening set	3454 Dec 26 01:04	13°♑48'52		conjunction	3460 Jul 04 15:13	14°♑13'55 -0°11'54
max. Earth dist.	3455 Jan 05 15:27	16°♑12'44	6.27408 AU	minimum elong	3460 Jul 04 15:14	14°♑13'56 0°11'55
				behind sun begin	3460 Jul 04 09:33	14°♑10'39
conjunction	3455 Jan 07 17:39	16°♑41'15	0°09'23	behind sun end	3460 Jul 04 20:56	14°♑17'13
minimum elong	3455 Jan 07 17:40	16°♑41'15	0°09'23	max. Earth dist.	3460 Jul 07 00:09	14°♑46'55 6.09647 AU
behind sun begin	3455 Jan 07 10:58	16°♑37'28		morning rise	3460 Jul 18 10:03	17°♑25'03
behind sun end	3455 Jan 08 00:22	16°♑45'03			3460 Sep 16 18:04	0°♒
morning rise	3455 Jan 20 09:20	19°♑33'29		asc. node	3460 Nov 11 09:24	6°♒19'41
	3455 Mar 11 03:34	0°♑		retrograde	3460 Nov 23 03:11	6°♒33'15
desc. node	3455 Apr 24 22:14	6°♑20'01		min. Earth dist.	3461 Jan 20 10:05	1°♒40'12 4.17212 AU
retrograde	3455 May 25 03:10	7°♑43'40		opposition	3461 Jan 21 17:49	1°♒29'27 0°09'35
opposition	3455 Jul 24 21:42	2°♑50'25	-0°11'51		3461 Feb 01 22:11	30°♋♑
min. Earth dist.	3455 Jul 26 07:07	2°♑39'41	4.19793 AU	direct	3461 Mar 22 00:09	26°♑29'16
	3455 Aug 17 11:27	30°♋♑			3461 May 09 03:22	0°♒
direct	3455 Sep 24 03:33	27°♑53'07		evening set	3461 Jul 26 15:43	15°♒02'29
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	3456 Jan 20 18:30	15°♑				
evening set	3456 Jan 27 12:45	16°♑33'58		conjunction	3461 Aug 09 07:38	18°♒05'45 0°23'43
max. Earth dist.	3456 Feb 07 17:27	19°♑11'17	6.12164 AU	minimum elong	3461 Aug 09 07:36	18°♒05'44 0°23'44
				max. Earth dist.	3461 Aug 10 23:09	18°♒27'51 6.24980 AU
conjunction	3456 Feb 09 06:44	19°♑33'11	-0°25'16	morning rise	3461 Aug 22 22:58	21°♒08'21
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





































































































































































































































































































retrograde	3461 Dec 25 02:36	9°♎06'37		retrograde	3467 May 30 01:04	12°♊32'15	
min. Earth dist.	3462 Feb 22 07:20	4°♎11'49	4.32136 AU	opposition	3467 Jul 29 19:47	7°♊38'39	-0°19'14
opposition	3462 Feb 23 01:02	4°♎05'55	0°56'20	min. Earth dist.	3467 Jul 31 02:50	7°♊28'39	4.17522 AU
	3462 Mar 31 07:21	30°♎♎		direct	3467 Sep 28 20:03	2°♊41'38	
direct	3462 Apr 24 15:52	29°♎03'51			3468 Jan 03 15:08	15°♊	
	3462 May 19 08:04	0°♎		evening set	3468 Feb 01 06:34	21°♊29'06	
evening set	3462 Aug 29 08:21	16°♎59'11		max. Earth dist.	3468 Feb 12 16:00	24°♊09'55	6.09942 AU
conjunction	3462 Sep 11 18:24	19°♎54'20	0°50'18	conjunction	3468 Feb 14 01:07	24°♊29'28	-0°29'53
minimum elong	3462 Sep 11 18:22	19°♎54'19	0°50'18	minimum elong	3468 Feb 14 01:05	24°♊29'27	0°29'53
max. Earth dist.	3462 Sep 12 07:27	20°♎01'28	6.38350 AU	morning rise	3468 Feb 26 20:27	27°♊30'34	
morning rise	3462 Sep 25 02:11	22°♎48'15			3468 Mar 08 13:16	0°♋	
	3462 Oct 29 18:48	0°♎		retrograde	3468 Jul 04 18:05	17°♋02'48	
retrograde	3463 Jan 24 13:43	9°♎54'50		opposition	3468 Sep 03 02:32	12°♋06'25	-1°06'47
opposition	3463 Mar 25 20:32	4°♎57'52	1°24'10	min. Earth dist.	3468 Sep 03 16:36	12°♋01'49	4.03021 AU
min. Earth dist.	3463 Mar 25 21:20	4°♎57'37	4.43065 AU	direct	3468 Nov 01 16:28	7°♋11'43	
	3463 May 19 11:46	30°♎♎		evening set	3469 Mar 07 04:47	26°♋40'17	
direct	3463 May 26 16:26	29°♎55'14		conjunction	3469 Mar 20 04:19	29°♋48'17	-0°55'13
	3463 Jun 02 22:32	0°♎		minimum elong	3469 Mar 20 04:17	29°♋48'16	0°55'13
evening set	3463 Sep 30 05:01	17°♎26'06		max. Earth dist.	3469 Mar 20 01:07	29°♋46'21	5.97627 AU
conjunction	3463 Oct 13 07:50	20°♎15'21	1°01'45		3469 Mar 20 23:41	0°♌	
minimum elong	3463 Oct 13 07:49	20°♎15'21	1°01'45	morning rise	3469 Apr 02 06:10	2°♌57'43	
max. Earth dist.	3463 Oct 12 15:02	20°♎06'18	6.46001 AU	retrograde	3469 Aug 12 01:18	23°♌29'11	
morning rise	3463 Oct 26 08:08	23°♎03'16		opposition	3469 Oct 10 23:17	18°♌29'01	-1°31'27
	3463 Nov 29 03:14	0°♌		min. Earth dist.	3469 Oct 10 12:32	18°♌32'36	3.94295 AU
retrograde	3464 Feb 23 12:23	9°♌45'14		direct	3469 Dec 08 05:52	13°♌35'20	
opposition	3464 Apr 24 02:45	4°♌51'15	1°28'37		3470 Mar 29 16:56	0°♍	
min. Earth dist.	3464 Apr 24 22:24	4°♌44'55	4.47105 AU	evening set	3470 Apr 13 02:37	3°♍26'26	
	3464 Jun 14 15:59	30°♌♌		conjunction	3470 Apr 26 09:46	6°♍40'00	-0°59'54
direct	3464 Jun 25 17:48	29°♌48'54		minimum elong	3470 Apr 26 09:47	6°♍40'00	0°59'54
	3464 Jul 06 20:43	0°♌		max. Earth dist.	3470 Apr 27 16:57	6°♍58'56	5.93311 AU
	3464 Oct 19 11:44	15°♌		morning rise	3470 May 09 20:05	9°♍55'13	
evening set	3464 Oct 29 21:45	17°♌13'03			3470 May 31 07:59	15°♍	
max. Earth dist.	3464 Nov 10 04:31	19°♌39'11	6.46081 AU		3470 Aug 29 20:41	0°♎	
conjunction	3464 Nov 11 18:55	20°♌00'00	0°56'29	retrograde	3470 Sep 19 06:41	0°♎41'05	
minimum elong	3464 Nov 11 18:57	20°♌00'00	0°56'30		3470 Oct 09 14:58	30°♎♎	
morning rise	3464 Nov 24 13:23	22°♌45'46		opposition	3470 Nov 17 21:44	25°♎37'25	-1°19'31
	3464 Dec 29 15:33	0°♎		min. Earth dist.	3470 Nov 16 15:44	25°♎47'36	3.95012 AU
retrograde	3465 Mar 24 21:28	9°♎32'25		direct	3471 Jan 14 17:35	20°♎42'24	
opposition	3465 May 24 18:48	4°♎40'07	1°09'49		3471 Apr 04 08:47	0°♎	
min. Earth dist.	3465 May 26 03:17	4°♎29'45	4.43276 AU	evening set	3471 May 20 21:42	10°♎25'09	
	3465 Jul 11 05:38	30°♎♌		conjunction	3471 Jun 03 12:30	13°♎39'37	-0°40'45
direct	3465 Jul 26 12:23	29°♎38'54		minimum elong	3471 Jun 03 12:32	13°♎39'38	0°40'45
	3465 Aug 10 22:19	0°♎		max. Earth dist.	3471 Jun 05 19:56	14°♎12'39	5.98927 AU
evening set	3465 Nov 29 08:31	17°♎15'09		morning rise	3471 Jun 17 05:36	16°♎55'08	
max. Earth dist.	3465 Dec 09 22:48	19°♎35'13	6.38571 AU		3471 Aug 17 03:24	0°♏	
conjunction	3465 Dec 12 02:00	20°♎03'32	0°35'57	retrograde	3471 Oct 25 19:29	7°♏01'28	
minimum elong	3465 Dec 12 02:02	20°♎03'33	0°35'57	min. Earth dist.	3471 Dec 22 19:07	2°♏08'56	4.04841 AU
morning rise	3465 Dec 24 17:42	22°♎51'15		opposition	3471 Dec 24 07:38	1°♏56'30	-0°36'34
	3466 Jan 27 13:32	0°♏			3472 Jan 07 23:23	30°♎♎	
retrograde	3466 Apr 25 21:14	10°♏11'43		direct	3472 Feb 20 15:23	26°♎58'42	
opposition	3466 Jun 25 18:59	5°♏19'35	0°31'13		3472 Apr 04 05:09	0°♏	
min. Earth dist.	3466 Jun 27 09:37	5°♏07'16	4.32469 AU	evening set	3472 Jun 26 01:49	16°♏07'24	
direct	3466 Aug 27 00:34	0°♏20'11		conjunction	3472 Jul 09 19:34	19°♏17'12	-0°06'44
evening set	3466 Dec 30 12:13	18°♏26'00		minimum elong	3472 Jul 09 19:35	19°♏17'13	0°06'44
max. Earth dist.	3467 Jan 10 02:06	20°♏50'19	6.25289 AU	behind sun begin	3472 Jul 09 11:47	19°♏12'44	
conjunction	3467 Jan 12 04:50	21°♏19'15	0°04'32	behind sun end	3472 Jul 10 03:23	19°♏21'41	
minimum elong	3467 Jan 12 04:50	21°♏19'15	0°04'33	max. Earth dist.	3472 Jul 12 02:50	19°♏49'03	6.11992 AU
behind sun begin	3467 Jan 11 21:01	21°♏14'49		morning rise	3472 Jul 23 14:21	22°♏27'10	
behind sun end	3467 Jan 12 12:39	21°♏23'41			3472 Aug 26 23:40	0°♐	
morning rise	3467 Jan 24 20:50	24°♏12'27		asc. node	3472 Sep 20 20:19	4°♐46'05	
	3467 Feb 20 01:58	0°♐		retrograde	3472 Nov 27 17:02	11°♐23'58	
desc. node	3467 Mar 04 05:34	2°♐30'31		min. Earth dist.	3473 Jan 25 03:27	6°♐30'52	4.19684 AU

opposition	3473 Jan 26 10:14	6°Ω20'27	0°16'56	morning rise	3479 Jan 29 09:57	28°Ξ55'59	
direct	3473 Mar 26 20:52	1°Ω19'54			3479 Feb 03 02:33	0°≈	
	3473 Jul 09 13:27	15°Ω			3479 Apr 24 20:54	15°≈	
evening set	3473 Jul 31 12:19	19°Ω46'05		retrograde	3479 Jun 04 04:26	17°≈26'57	
					3479 Jul 14 21:39	15°R≈	
conjunction	3473 Aug 14 03:36	22°Ω48'00	0°28'10	opposition	3479 Aug 03 20:45	12°≈33'06	-0°26'35
minimum elong	3473 Aug 14 03:34	22°Ω47'59	0°28'10	min. Earth dist.	3479 Aug 05 02:38	12°≈23'28	4.15033 AU
max. Earth dist.	3473 Aug 15 16:01	23°Ω08'17	6.27381 AU	direct	3479 Oct 03 16:56	7°≈36'31	
morning rise	3473 Aug 27 17:50	25°Ω49'09			3479 Dec 14 17:40	15°≈	
	3473 Sep 16 00:36	0°Π		evening set	3480 Feb 06 03:07	26°≈31'14	
retrograde	3473 Dec 29 10:56	13°Π37'45					
opposition	3474 Feb 27 10:14	8°Π37'36	1°01'29	conjunction	3480 Feb 18 22:14	29°≈32'50	-0°34'20
min. Earth dist.	3474 Feb 26 19:27	8°Π42'31	4.34261 AU	minimum elong	3480 Feb 18 22:12	29°≈32'49	0°34'19
direct	3474 Apr 29 06:08	3°Π35'24		max. Earth dist.	3480 Feb 17 16:32	29°≈15'14	6.07673 AU
evening set	3474 Sep 02 21:17	21°Π25'28			3480 Feb 20 20:03	0°✠	
				morning rise	3480 Mar 02 18:24	2°✠35'17	
conjunction	3474 Sep 16 06:13	24°Π19'31	0°52'50	retrograde	3480 Jul 10 03:35	22°✠18'08	
minimum elong	3474 Sep 16 06:11	24°Π19'30	0°52'51	opposition	3480 Sep 08 10:56	17°✠21'17	-1°12'08
max. Earth dist.	3474 Sep 16 13:48	24°Π23'38	6.40022 AU	min. Earth dist.	3480 Sep 08 20:29	17°✠18'09	4.01221 AU
morning rise	3474 Sep 29 13:01	27°Π12'20		direct	3480 Nov 06 18:41	12°✠26'54	
	3474 Oct 12 15:19	0°Ω			3481 Mar 03 23:56	0°Υ	
retrograde	3475 Jan 28 17:48	14°Ω13'18		evening set	3481 Mar 12 09:26	2°Υ00'29	
opposition	3475 Mar 30 01:51	9°Ω16'47	1°26'10				
min. Earth dist.	3475 Mar 30 05:47	9°Ω15'30	4.44197 AU	conjunction	3481 Mar 25 09:52	5°Υ09'26	-0°57'19
direct	3475 May 31 01:14	4°Ω14'06		minimum elong	3481 Mar 25 09:51	5°Υ09'26	0°57'20
evening set	3475 Oct 04 12:19	21°Ω42'41		max. Earth dist.	3481 Mar 25 12:03	5°Υ10'46	5.96463 AU
				morning rise	3481 Apr 07 12:51	8°Υ19'54	
conjunction	3475 Oct 17 14:23	24°Ω31'24	1°01'59	retrograde	3481 Aug 17 13:19	28°Υ56'25	
minimum elong	3475 Oct 17 14:23	24°Ω31'24	1°01'59	opposition	3481 Oct 16 10:29	23°Υ55'37	-1°32'02
max. Earth dist.	3475 Oct 16 18:50	24°Ω20'52	6.46506 AU	min. Earth dist.	3481 Oct 15 20:21	24°Υ00'21	3.93907 AU
morning rise	3475 Oct 30 13:36	27°Ω18'46		direct	3481 Dec 13 14:44	19°Υ01'52	
	3475 Nov 12 06:07	0°Π			3482 Mar 10 23:32	0°Ϣ	
retrograde	3476 Feb 27 15:54	13°Π59'48		evening set	3482 Apr 18 11:36	8°Ϣ53'00	
opposition	3476 Apr 28 07:56	9°Π06'10	1°27'19				
min. Earth dist.	3476 Apr 29 05:39	8°Π59'12	4.46961 AU	conjunction	3482 May 01 20:03	12°Ϣ06'57	-0°58'30
direct	3476 Jun 29 23:38	4°Π04'00		minimum elong	3482 May 01 20:04	12°Ϣ06'57	0°58'31
	3476 Oct 02 19:59	15°Π		max. Earth dist.	3482 May 03 09:22	12°Ϣ29'34	5.93724 AU
evening set	3476 Nov 03 03:20	21°Π29'09			3482 May 13 18:05	15°Ϣ	
max. Earth dist.	3476 Nov 14 05:20	23°Π53'06	6.45286 AU	morning rise	3482 May 15 07:22	15°Ϣ22'26	
					3482 Jul 22 10:48	0°Π	
conjunction	3476 Nov 15 23:44	24°Π16'08	0°54'27	retrograde	3482 Sep 24 15:34	6°Π04'38	
minimum elong	3476 Nov 15 23:45	24°Π16'09	0°54'28	min. Earth dist.	3482 Nov 21 21:31	1°Π11'19	3.96173 AU
morning rise	3476 Nov 28 17:49	27°Π02'04		opposition	3482 Nov 23 05:03	1°Π00'37	-1°14'51
	3476 Dec 12 15:14	0°✠			3482 Nov 30 16:50	30°RϢ	
retrograde	3477 Mar 29 07:29	13°✠52'30		direct	3483 Jan 20 01:45	26°Ϣ05'17	
opposition	3477 May 29 03:45	9°✠00'22	1°05'29		3483 Mar 10 10:43	0°Π	
min. Earth dist.	3477 May 30 14:47	8°✠49'11	4.41873 AU	evening set	3483 May 26 05:54	15°Π43'17	
direct	3477 Jul 30 21:04	3°✠59'21					
evening set	3477 Dec 03 15:48	21°✠39'52		conjunction	3483 Jun 08 21:13	18°Π57'12	-0°36'29
max. Earth dist.	3477 Dec 14 04:59	23°✠59'57	6.36665 AU	minimum elong	3483 Jun 08 21:15	18°Π57'14	0°36'29
				max. Earth dist.	3483 Jun 11 05:09	19°Π30'22	6.00682 AU
conjunction	3477 Dec 16 09:11	24°✠28'57	0°32'03	morning rise	3483 Jun 22 15:01	22°Π12'09	
minimum elong	3477 Dec 16 09:13	24°✠28'58	0°32'03		3483 Jul 27 02:49	0°ϣ	
morning rise	3477 Dec 29 00:46	27°✠17'23		retrograde	3483 Oct 30 16:34	12°ϣ08'37	
	3478 Jan 10 10:02	0°Ξ		min. Earth dist.	3483 Dec 27 17:31	7°ϣ16'18	4.06992 AU
retrograde	3478 Apr 30 12:52	14°Ξ46'01		opposition	3483 Dec 29 06:31	7°ϣ03'41	-0°29'05
opposition	3478 Jun 30 10:51	9°Ξ53'48	0°24'34	direct	3484 Feb 25 16:47	2°ϣ05'27	
min. Earth dist.	3478 Jul 02 00:19	9°Ξ41'50	4.30184 AU	evening set	3484 Jul 01 04:25	21°ϣ07'25	
direct	3478 Aug 31 11:35	4°Ξ54'47					
evening set	3479 Jan 04 00:52	23°Ξ07'17		conjunction	3484 Jul 14 22:08	24°ϣ16'07	-0°01'32
desc. node	3479 Jan 11 15:44	24°Ξ51'40		minimum elong	3484 Jul 14 22:09	24°ϣ16'07	0°01'32
max. Earth dist.	3479 Jan 14 17:02	25°Ξ33'43	6.22814 AU	behind sun begin	3484 Jul 14 13:46	24°ϣ11'20	
				behind sun end	3484 Jul 15 06:33	24°ϣ20'55	
conjunction	3479 Jan 16 17:36	26°Ξ01'35	-0°00'28	max. Earth dist.	3484 Jul 17 03:16	24°ϣ46'34	6.14356 AU
minimum elong	3479 Jan 16 17:36	26°Ξ01'35	0°00'27	morning rise	3484 Jul 28 16:27	27°ϣ24'48	
behind sun begin	3479 Jan 16 09:39	25°Ξ57'03		asc. node	3484 Jul 31 06:02	27°ϣ59'42	
behind sun end	3479 Jan 17 01:34	26°Ξ06'08			3484 Aug 09 04:24	0°Ω	

	3484 Nov 05 04:22	15°♈			3491 Jan 17 21:46	0°♏	
retrograde	3484 Dec 02 07:24	16°♈10'40		max. Earth dist.	3491 Jan 19 09:52	0°♏20'48	6.20615 AU
	3484 Dec 29 03:51	15°♏♈					
min. Earth dist.	3485 Jan 29 20:45	11°♈17'01	4.22025 AU	conjunction	3491 Jan 21 08:09	0°♏47'29	-0°05'30
opposition	3485 Jan 31 00:46	11°♈07'33	0°24'06	minimum elong	3491 Jan 21 08:08	0°♏47'28	0°05'31
direct	3485 Mar 31 17:01	6°♈06'42		behind sun begin	3491 Jan 21 00:26	0°♏43'03	
	3485 Jun 20 21:59	15°♈		behind sun end	3491 Jan 21 15:50	0°♏51'53	
evening set	3485 Aug 05 07:23	24°♈26'39		morning rise	3491 Feb 03 00:48	3°♏42'55	
					3491 Mar 28 09:54	15°♏	
conjunction	3485 Aug 18 21:55	27°♈27'21	0°32'26	retrograde	3491 Jun 09 06:16	22°♏23'50	
minimum elong	3485 Aug 18 21:54	27°♈27'20	0°32'25	opposition	3491 Aug 08 22:32	17°♏29'39	-0°33'52
max. Earth dist.	3485 Aug 20 06:36	27°♈45'27	6.29510 AU	min. Earth dist.	3491 Aug 10 01:02	17°♏21'06	4.12973 AU
	3485 Aug 30 09:52	0°♏			3491 Aug 29 04:36	15°♏	
morning rise	3485 Sep 01 11:16	0°♏27'11		direct	3491 Oct 08 12:59	12°♏33'29	
retrograde	3486 Jan 02 16:59	18°♏07'25			3491 Nov 17 06:29	15°♏	
opposition	3486 Mar 03 18:38	13°♏07'44	1°06'16		3492 Feb 04 08:29	0°♏	
min. Earth dist.	3486 Mar 03 05:58	13°♏11'57	4.36045 AU	evening set	3492 Feb 11 00:19	1°♏33'50	
direct	3486 May 03 18:22	8°♏05'23					
evening set	3486 Sep 07 09:37	25°♏51'23		conjunction	3492 Feb 23 19:52	4°♏36'24	-0°38'33
				minimum elong	3492 Feb 23 19:50	4°♏36'23	0°38'32
conjunction	3486 Sep 20 17:35	28°♏44'30	0°55'06	max. Earth dist.	3492 Feb 22 18:30	4°♏21'18	6.05939 AU
minimum elong	3486 Sep 20 17:34	28°♏44'29	0°55'06	morning rise	3492 Mar 07 16:49	7°♏39'56	
max. Earth dist.	3486 Sep 20 21:02	28°♏46'22	6.41334 AU	retrograde	3492 Jul 15 12:41	27°♏31'14	
	3486 Sep 26 12:49	0°♏		opposition	3492 Sep 13 18:37	22°♏33'49	-1°16'52
morning rise	3486 Oct 03 23:13	1°♏36'21		min. Earth dist.	3492 Sep 14 00:48	22°♏31'46	3.99992 AU
retrograde	3487 Feb 01 22:37	18°♏32'56		direct	3492 Nov 11 22:44	17°♏39'38	
opposition	3487 Apr 03 07:37	13°♏36'54	1°27'45		3493 Feb 14 07:35	0°♏	
min. Earth dist.	3487 Apr 03 14:46	13°♏34'34	4.44972 AU	evening set	3493 Mar 17 12:33	7°♏15'58	
direct	3487 Jun 04 10:47	8°♏34'14					
evening set	3487 Oct 08 20:29	26°♏01'31		conjunction	3493 Mar 30 14:02	10°♏25'40	-0°58'57
				minimum elong	3493 Mar 30 14:01	10°♏25'39	0°58'56
conjunction	3487 Oct 21 21:36	28°♏49'49	1°01'54	max. Earth dist.	3493 Mar 30 22:34	10°♏30'50	5.95861 AU
minimum elong	3487 Oct 21 21:36	28°♏49'49	1°01'54	morning rise	3493 Apr 12 17:57	13°♏36'51	
max. Earth dist.	3487 Oct 20 21:04	28°♏36'35	6.46672 AU		3493 Jun 30 19:35	0°♏	
	3487 Oct 27 07:53	0°♏		retrograde	3493 Aug 22 22:48	4°♏15'47	
morning rise	3487 Nov 03 20:06	1°♏36'49			3493 Oct 16 02:19	30°♏	
	3488 Jan 15 13:42	15°♏		opposition	3493 Oct 21 18:35	29°♏14'30	-1°31'47
retrograde	3488 Mar 02 22:02	18°♏17'50		min. Earth dist.	3493 Oct 21 01:44	29°♏20'09	3.94028 AU
	3488 Apr 19 23:04	15°♏		direct	3493 Dec 18 20:56	24°♏20'41	
opposition	3488 May 02 14:35	13°♏24'28	1°25'32		3494 Feb 16 23:51	0°♏	
min. Earth dist.	3488 May 03 14:51	13°♏16'40	4.46536 AU	evening set	3494 Apr 23 17:42	14°♏10'11	
direct	3488 Jul 04 07:28	8°♏22'20			3494 Apr 27 04:26	15°♏	
	3488 Sep 13 11:44	15°♏					
evening set	3488 Nov 07 10:11	25°♏49'10		conjunction	3494 May 07 02:59	17°♏24'11	-0°56'40
max. Earth dist.	3488 Nov 18 10:49	28°♏12'43	6.44296 AU	minimum elong	3494 May 07 03:00	17°♏24'12	0°56'40
				max. Earth dist.	3494 May 08 18:38	17°♏48'10	5.94520 AU
conjunction	3488 Nov 20 06:13	28°♏36'21	0°52'05	morning rise	3494 May 20 15:28	20°♏39'46	
minimum elong	3488 Nov 20 06:15	28°♏36'22	0°52'05		3494 Jun 30 13:19	0°♏	
	3488 Nov 26 15:47	0°♏		retrograde	3494 Sep 29 17:05	11°♏16'44	
morning rise	3488 Dec 02 23:40	1°♏22'28		min. Earth dist.	3494 Nov 26 22:04	6°♏23'51	3.97559 AU
retrograde	3489 Apr 02 17:21	18°♏17'12		opposition	3494 Nov 28 07:34	6°♏12'28	-1°09'43
opposition	3489 Jun 02 14:44	13°♏25'09	1°00'40	direct	3495 Jan 25 04:55	1°♏16'45	
min. Earth dist.	3489 Jun 04 02:10	13°♏13'51	4.40386 AU	evening set	3495 May 31 09:50	20°♏49'43	
direct	3489 Aug 04 06:09	8°♏24'26					
evening set	3489 Dec 08 00:55	26°♏09'11		conjunction	3495 Jun 14 01:50	24°♏03'05	-0°32'05
max. Earth dist.	3489 Dec 18 12:53	28°♏29'15	6.34794 AU	minimum elong	3495 Jun 14 01:52	24°♏03'06	0°32'05
				max. Earth dist.	3495 Jun 16 10:11	24°♏36'21	6.02525 AU
conjunction	3489 Dec 20 17:57	28°♏58'52	0°27'52	morning rise	3495 Jun 27 19:55	27°♏17'17	
minimum elong	3489 Dec 20 17:59	28°♏58'53	0°27'53		3495 Jul 09 12:51	0°♏	
	3489 Dec 25 07:28	0°♏		retrograde	3495 Nov 04 11:26	17°♏04'07	
morning rise	3490 Jan 02 09:36	1°♏48'04		min. Earth dist.	3496 Jan 01 13:59	12°♏11'20	4.09064 AU
retrograde	3490 May 05 08:18	19°♏24'47		opposition	3496 Jan 03 01:09	11°♏59'21	-0°21'41
opposition	3490 Jul 05 05:00	14°♏32'26	0°17'36	direct	3496 Mar 01 15:54	7°♏00'45	
min. Earth dist.	3490 Jul 06 18:30	14°♏20'27	4.28047 AU	asc. node	3496 Jun 11 00:50	20°♏22'47	
direct	3490 Sep 05 03:11	9°♏33'45		evening set	3496 Jul 06 02:43	25°♏56'39	
desc. node	3490 Nov 20 13:12	17°♏29'17					
evening set	3491 Jan 08 15:08	27°♏52'11		conjunction	3496 Jul 19 20:20	29°♏04'21	0°03'35

minimum elong	3496 Jul 19 20:20	29°  04'21	0°03'35	retrograde	3502 May 11 01:29	24°  03'41	
behind sun begin	3496 Jul 19 12:02	28°  59'39		opposition	3502 Jul 10 22:47	19°  11'09	0°10'31
behind sun end	3496 Jul 20 04:38	29°  09'04		min. Earth dist.	3502 Jul 12 10:58	18°  59'35	4.26148 AU
max. Earth dist.	3496 Jul 21 23:40	29°  33'37	6.16483 AU	direct	3502 Sep 10 17:02	14°  12'49	
	3496 Jul 23 21:58	0°  Ω		desc. node	3502 Oct 01 00:21	14°  35'50	
morning rise	3496 Aug 02 14:15	2°  Ω11'54			3503 Jan 02 17:39	0°  ≈	
	3496 Oct 04 13:01	15°  Ω		evening set	3503 Jan 14 04:38	2°  ≈36'10	
retrograde	3496 Dec 06 16:49	20°  Ω48'14		max. Earth dist.	3503 Jan 25 00:56	5°  ≈06'24	6.18665 AU
min. Earth dist.	3497 Feb 03 09:07	15°  Ω54'37	4.24025 AU				
opposition	3497 Feb 04 11:52	15°  Ω45'36	0°30'51	conjunction	3503 Jan 26 21:39	5°  ≈32'17	-0°10'25
	3497 Feb 10 03:58	15°  κΩ		minimum elong	3503 Jan 26 21:39	5°  ≈32'17	0°10'26
direct	3497 Apr 05 07:21	10°  Ω44'33		behind sun begin	3503 Jan 26 15:19	5°  ≈28'38	
	3497 May 29 06:56	15°  Ω		behind sun end	3503 Jan 27 03:58	5°  ≈35'56	
evening set	3497 Aug 09 23:24	28°  Ω59'44		morning rise	3503 Feb 08 14:48	8°  ≈28'44	
	3497 Aug 14 12:59	0°  ♄			3503 Mar 09 19:43	15°  ≈	
conjunction	3497 Aug 23 13:07	1°  ♄59'23	0°36'21	retrograde	3503 Jun 15 08:45	27°  ≈18'52	
minimum elong	3497 Aug 23 13:05	1°  ♄59'22	0°36'21	opposition	3503 Aug 14 23:22	22°  ≈24'15	-0°40'52
max. Earth dist.	3497 Aug 24 16:38	2°  ♄14'35	6.31241 AU	min. Earth dist.	3503 Aug 15 23:44	22°  ≈16'21	4.11094 AU
morning rise	3497 Sep 06 01:34	4°  ♄58'07		direct	3503 Oct 14 09:47	17°  ≈28'19	
retrograde	3498 Jan 06 23:49	22°  ♄31'44			3504 Jan 19 05:37	0°  ♄	
opposition	3498 Mar 08 01:11	17°  ♄32'40	1°10'33	evening set	3504 Feb 16 20:02	6°  ♄33'41	
min. Earth dist.	3498 Mar 07 16:12	17°  ♄35'38	4.37395 AU	conjunction	3504 Feb 29 16:18	9°  ♄37'14	-0°42'26
direct	3498 May 08 06:00	12°  ♄30'14		minimum elong	3504 Feb 29 16:16	9°  ♄37'13	0°42'27
	3498 Sep 10 18:46	0°  ♄		max. Earth dist.	3504 Feb 28 19:46	9°  ♄24'59	6.04301 AU
evening set	3498 Sep 11 20:15	0°  ♄13'41		morning rise	3504 Mar 13 13:54	12°  ♄41'48	
conjunction	3498 Sep 25 03:22	3°  ♄06'07	0°57'01		3504 Jun 09 22:54	0°  ♄	
minimum elong	3498 Sep 25 03:21	3°  ♄06'06	0°57'00	retrograde	3504 Jul 21 19:59	2°  ♄41'05	
max. Earth dist.	3498 Sep 25 03:01	3°  ♄05'55	6.42211 AU		3504 Sep 02 00:07	30°  ♄	
morning rise	3498 Oct 08 07:59	5°  ♄57'13		opposition	3504 Sep 20 00:24	27°  ♄43'09	-1°21'00
retrograde	3499 Feb 06 02:04	22°  ♄51'00		min. Earth dist.	3504 Sep 20 03:45	27°  ♄42'03	3.98773 AU
opposition	3499 Apr 07 12:47	17°  ♄55'25	1°28'49	direct	3504 Nov 17 23:49	22°  ♄49'08	
min. Earth dist.	3499 Apr 07 21:48	17°  ♄52'29	4.45362 AU		3505 Jan 26 02:58	0°  ♄	
direct	3499 Jun 08 17:33	12°  ♄52'48		evening set	3505 Mar 23 14:47	12°  ♄28'34	
	3499 Oct 11 14:35	0°  ♄		conjunction	3505 Apr 05 17:05	15°  ♄38'59	-1°00'06
evening set	3499 Oct 13 03:53	0°  ♄19'55		minimum elong	3505 Apr 05 17:05	15°  ♄38'59	1°00'05
max. Earth dist.	3499 Oct 25 01:31	2°  ♄53'32	6.46558 AU	max. Earth dist.	3505 Apr 06 04:36	15°  ♄45'59	5.95156 AU
conjunction	3499 Oct 26 04:14	3°  ♄07'57	1°01'27	morning rise	3505 Apr 18 22:18	18°  ♄51'02	
minimum elong	3499 Oct 26 04:15	3°  ♄07'58	1°01'27		3505 Jun 07 09:09	0°  ♄	
morning rise	3499 Nov 08 01:52	5°  ♄54'42		retrograde	3505 Aug 29 05:22	9°  ♄32'44	
	3499 Dec 23 07:45	15°  ♄		min. Earth dist.	3505 Oct 27 04:41	4°  ♄37'43	3.93934 AU
retrograde	3500 Mar 08 04:25	22°  ♄36'41		opposition	3505 Oct 28 00:58	4°  ♄30'54	-1°30'51
opposition	3500 May 07 21:41	17°  ♄43'38	1°23'17		3505 Dec 10 03:09	30°  ♄	
min. Earth dist.	3500 May 08 23:53	17°  ♄35'14	4.45936 AU	direct	3505 Dec 25 01:07	29°  ♄36'52	
	3500 May 30 10:10	15°  κ♄			3506 Jan 08 23:55	0°  ♄	
direct	3500 Jul 09 15:50	12°  ♄41'43		evening set	3506 Apr 11 05:23	15°  ♄	
	3500 Aug 18 22:46	15°  ♄			3506 Apr 29 23:13	19°  ♄25'54	
	3500 Nov 11 21:44	0°  ♄		conjunction	3506 May 13 09:44	22°  ♄40'12	-0°54'23
evening set	3500 Nov 12 17:07	0°  ♄10'29		minimum elong	3506 May 13 09:46	22°  ♄40'13	0°54'22
max. Earth dist.	3500 Nov 23 14:08	2°  ♄32'32	6.43247 AU	max. Earth dist.	3506 May 15 05:09	23°  ♄06'24	5.95045 AU
conjunction	3500 Nov 25 12:30	2°  ♄57'50	0°49'25	morning rise	3506 May 26 23:07	25°  ♄55'58	
minimum elong	3500 Nov 25 12:31	2°  ♄57'51	0°49'24		3506 Jun 13 05:15	0°  ♄	
morning rise	3500 Dec 08 05:41	5°  ♄44'14		retrograde	3506 Oct 05 20:46	16°  ♄28'51	
retrograde	3501 Apr 08 04:54	22°  ♄43'25		min. Earth dist.	3506 Dec 03 00:30	11°  ♄35'43	3.98625 AU
opposition	3501 Jun 08 02:15	17°  ♄51'24	0°55'29	opposition	3506 Dec 04 10:01	11°  ♄24'18	-1°04'06
min. Earth dist.	3501 Jun 09 14:26	17°  ♄39'52	4.38948 AU	direct	3507 Jan 31 09:10	6°  ♄28'11	
direct	3501 Aug 09 16:33	12°  ♄50'53		evening set	3507 Jun 06 14:29	25°  ♄57'23	
	3501 Dec 10 10:38	0°  ♄		conjunction	3507 Jun 20 07:07	29°  ♄10'20	-0°27'25
evening set	3501 Dec 13 09:50	0°  ♄39'25		minimum elong	3507 Jun 20 07:08	29°  ♄10'21	0°27'25
max. Earth dist.	3501 Dec 23 23:14	3°  ♄00'49	6.33079 AU	max. Earth dist.	3507 Jun 22 16:37	29°  ♄44'08	6.04023 AU
conjunction	3501 Dec 26 02:51	3°  ♄29'44	0°23'32		3507 Jun 23 19:37	0°  ♄	
minimum elong	3501 Dec 26 02:52	3°  ♄29'45	0°23'32	morning rise	3507 Jul 04 01:35	2°  ♄23'59	
morning rise	3502 Jan 07 18:18	6°  ♄19'35		retrograde	3507 Nov 10 06:17	22°  ♄02'15	
				min. Earth dist.	3508 Jan 07 09:19	17°  ♄09'39	4.10835 AU

opposition	3508 Jan 08 20:35	16°  57'40	-0°14'05	minimum elong	3513 Dec 30 08:49	7°  53'28	0°19'13
direct	3508 Mar 07 13:43	11°  58'40		morning rise	3514 Jan 12 00:21	10°  43'48	
asc. node	3508 Apr 21 15:45	15°  08'25		retrograde	3514 May 15 16:19	28°  33'57	
	3508 Jul 08 10:55	0°  ♂		opposition	3514 Jul 15 13:27	23°  41'12	0°03'39
evening set	3508 Jul 12 03:04	0°  ♂49'39		min. Earth dist.	3514 Jul 17 01:02	23°  29'49	4.24650 AU
				desc. node	3514 Aug 12 22:34	20°  22'29	
conjunction	3508 Jul 25 20:20	3°  ♂56'23	0°08'38	direct	3514 Sep 15 04:38	18°  43'06	
minimum elong	3508 Jul 25 20:20	3°  ♂56'23	0°08'38		3514 Dec 17 04:16	0°  ♂	
behind sun begin	3508 Jul 25 13:08	3°  ♂52'19		evening set	3515 Jan 18 14:22	7°  ♂10'22	
behind sun end	3508 Jul 26 03:33	4°  ♂00'28		max. Earth dist.	3515 Jan 29 13:40	9°  ♂42'50	6.16996 AU
max. Earth dist.	3508 Jul 27 19:59	4°  ♂23'26	6.18374 AU				
morning rise	3508 Aug 08 13:52	7°  ♂02'54		conjunction	3515 Jan 31 07:43	10°  ♂07'17	-0°15'04
	3508 Sep 14 12:33	15°  ♂		minimum elong	3515 Jan 31 07:42	10°  ♂07'16	0°15'03
retrograde	3508 Dec 12 06:03	25°  ♂30'24		behind sun begin	3515 Jan 31 04:33	10°  ♂05'27	
min. Earth dist.	3509 Feb 09 01:01	20°  ♂36'17	4.25871 AU	behind sun end	3515 Jan 31 10:50	10°  ♂09'05	
opposition	3509 Feb 10 00:59	20°  ♂28'13	0°37'32	morning rise	3515 Feb 13 01:03	13°  ♂04'32	
direct	3509 Apr 11 02:00	15°  ♂26'53			3515 Feb 21 10:04	15°  ♂	
	3509 Jul 29 22:12	0°  ♂			3515 May 14 13:54	0°  ♂	
evening set	3509 Aug 15 17:31	3°  ♂37'40		retrograde	3515 Jun 20 06:29	2°  ♂03'07	
					3515 Jul 27 03:36	30°  ♂	
conjunction	3509 Aug 29 06:35	6°  ♂36'19	0°40'09	opposition	3515 Aug 19 19:41	27°  ♂08'11	-0°47'17
minimum elong	3509 Aug 29 06:33	6°  ♂36'18	0°40'10	min. Earth dist.	3515 Aug 20 18:46	27°  ♂00'42	4.09378 AU
max. Earth dist.	3509 Aug 30 08:07	6°  ♂50'22	6.32923 AU	direct	3515 Oct 19 01:25	22°  ♂12'34	
morning rise	3509 Sep 11 17:55	9°  ♂33'55			3515 Dec 31 14:11	0°  ♂	
retrograde	3510 Jan 12 06:42	27°  ♂00'53		evening set	3516 Feb 21 11:55	11°  ♂22'58	
opposition	3510 Mar 13 09:57	22°  ♂02'22	1°14'33				
min. Earth dist.	3510 Mar 13 02:11	22°  ♂04'55	4.38834 AU	conjunction	3516 Mar 05 08:41	14°  ♂27'28	-0°45'53
direct	3510 May 13 17:33	16°  ♂59'56		minimum elong	3516 Mar 05 08:39	14°  ♂27'27	0°45'53
	3510 Aug 26 03:14	0°  ♂		max. Earth dist.	3516 Mar 04 13:41	14°  ♂16'06	6.02678 AU
evening set	3510 Sep 17 08:46	4°  ♂40'11		morning rise	3516 Mar 18 07:18	17°  ♂33'10	
					3516 May 14 06:50	0°  ♂	
conjunction	3510 Sep 30 14:44	7°  ♂31'44	0°58'40	retrograde	3516 Jul 26 21:55	7°  ♂40'48	
minimum elong	3510 Sep 30 14:43	7°  ♂31'43	0°58'40	opposition	3516 Sep 25 01:46	2°  ♂42'23	-1°24'23
max. Earth dist.	3510 Sep 30 10:27	7°  ♂29'25	6.43329 AU	min. Earth dist.	3516 Sep 25 01:56	2°  ♂42'20	3.97407 AU
morning rise	3510 Oct 13 18:20	10°  ♂22'00			3516 Oct 16 19:06	30°  ♂	
retrograde	3511 Feb 11 08:46	27°  ♂12'02		direct	3516 Nov 22 20:41	27°  ♂48'28	
opposition	3511 Apr 12 19:50	22°  ♂16'55	1°29'28		3516 Dec 29 11:07	0°  ♂	
min. Earth dist.	3511 Apr 13 07:40	22°  ♂13'05	4.46124 AU	evening set	3517 Mar 28 13:19	17°  ♂32'07	
direct	3511 Jun 14 04:34	17°  ♂14'25					
	3511 Sep 26 04:48	0°  ♂		conjunction	3517 Apr 10 16:53	20°  ♂43'33	-1°00'45
evening set	3511 Oct 18 12:04	4°  ♂39'45		minimum elong	3517 Apr 10 16:52	20°  ♂43'33	1°00'45
max. Earth dist.	3511 Oct 30 06:11	7°  ♂11'28	6.46914 AU	max. Earth dist.	3517 Apr 11 09:21	20°  ♂53'34	5.94191 AU
				morning rise	3517 Apr 23 23:09	23°  ♂56'34	
conjunction	3511 Oct 31 11:35	7°  ♂27'19	1°00'43		3517 May 19 16:47	0°  ♂	
minimum elong	3511 Oct 31 11:36	7°  ♂27'19	1°00'43	retrograde	3517 Sep 03 11:36	14°  ♂42'28	
morning rise	3511 Nov 13 08:21	10°  ♂13'37		min. Earth dist.	3517 Nov 01 06:48	9°  ♂47'28	3.93485 AU
	3511 Dec 06 02:55	15°  ♂		opposition	3517 Nov 02 04:16	9°  ♂40'13	-1°29'18
retrograde	3512 Mar 12 09:44	26°  ♂54'56		direct	3517 Dec 30 03:06	4°  ♂46'03	
opposition	3512 May 12 04:56	22°  ♂02'06	1°20'39		3518 Mar 24 00:09	15°  ♂	
min. Earth dist.	3512 May 13 07:56	21°  ♂53'27	4.45886 AU	evening set	3518 May 05 02:51	24°  ♂36'26	
direct	3512 Jul 13 23:13	17°  ♂00'21					
	3512 Oct 26 19:16	0°  ♂		conjunction	3518 May 18 14:31	27°  ♂51'15	-0°51'45
evening set	3512 Nov 16 23:01	4°  ♂29'04		minimum elong	3518 May 18 14:33	27°  ♂51'16	0°51'45
max. Earth dist.	3512 Nov 27 19:31	6°  ♂51'01	6.42797 AU	max. Earth dist.	3518 May 20 13:03	28°  ♂19'17	5.95158 AU
					3518 May 27 12:27	0°  ♂	
conjunction	3512 Nov 29 17:53	7°  ♂16'23	0°46'34	morning rise	3518 Jun 01 05:06	1°  ♂07'29	
minimum elong	3512 Nov 29 17:55	7°  ♂16'24	0°46'34	retrograde	3518 Oct 10 21:53	21°  ♂37'49	
morning rise	3512 Dec 12 10:27	10°  ♂02'46		min. Earth dist.	3518 Dec 07 23:13	16°  ♂45'10	3.99299 AU
retrograde	3513 Apr 12 13:48	27°  ♂04'36		opposition	3518 Dec 09 10:31	16°  ♂33'08	-0°58'08
opposition	3513 Jun 12 12:17	22°  ♂12'38	0°50'08	direct	3519 Feb 05 09:16	11°  ♂36'42	
min. Earth dist.	3513 Jun 14 01:20	22°  ♂00'50	4.38098 AU		3519 Jun 07 04:49	0°  ♂	
direct	3513 Aug 14 01:51	17°  ♂12'25		evening set	3519 Jun 11 18:47	1°  ♂03'56	
	3513 Nov 24 09:57	0°  ♂					
evening set	3513 Dec 17 16:11	5°  ♂02'48		conjunction	3519 Jun 25 11:54	4°  ♂16'35	-0°22'38
max. Earth dist.	3513 Dec 28 03:52	7°  ♂23'43	6.31882 AU	minimum elong	3519 Jun 25 11:55	4°  ♂16'36	0°22'37
				max. Earth dist.	3519 Jun 27 20:36	4°  ♂49'48	6.05196 AU
conjunction	3513 Dec 30 08:48	7°  ♂53'28	0°19'13	morning rise	3519 Jul 09 06:51	7°  ♂29'51	

retrograde	3519 Nov 15 01:45	27°  00'49		morning rise	3524 Dec 16 16:26	14°  25'00	
min. Earth dist.	3520 Jan 12 05:30	22°  08'03	4.12356 AU		3525 Mar 16 08:12	0° 	
opposition	3520 Jan 13 15:51	21°  56'21	-0°06'30	retrograde	3525 Apr 17 01:37	1°  31'38	
asc. node	3520 Mar 01 12:56	17°  09'12			3525 May 18 23:14	30°  R 	
direct	3520 Mar 12 13:15	16°  56'57		opposition	3525 Jun 17 00:39	26°  39'35	0°44'20
	3520 Jun 21 01:30	0° 		min. Earth dist.	3525 Jun 18 13:49	26°  27'44	4.36553 AU
evening set	3520 Jul 17 03:17	5°  43'41		direct	3525 Aug 18 11:19	21°  39'32	
					3525 Nov 06 04:06	0° 	
conjunction	3520 Jul 30 20:30	8°  49'35	0°13'35	evening set	3525 Dec 22 01:29	9°  34'09	
minimum elong	3520 Jul 30 20:29	8°  49'34	0°13'35	max. Earth dist.	3526 Jan 01 14:39	11°  356'28	6.29969 AU
behind sun begin	3520 Jul 30 16:07	8°  47'07					
behind sun end	3520 Jul 31 00:51	8°  52'02		conjunction	3526 Jan 03 18:08	12°  325'32	0°14'37
max. Earth dist.	3520 Aug 01 20:01	9°  16'27	6.20132 AU	minimum elong	3526 Jan 03 18:09	12°  325'32	0°14'36
morning rise	3520 Aug 13 13:20	11°  55'01		behind sun begin	3526 Jan 03 14:33	12°  323'31	
	3520 Aug 27 11:23	15° 		behind sun end	3526 Jan 03 21:44	12°  327'33	
	3520 Dec 04 19:31	0°  R 		morning rise	3526 Jan 16 09:37	15°  316'38	
retrograde	3520 Dec 16 18:47	0°  R  13'59			3526 Apr 03 13:50	0° 	
	3520 Dec 28 15:55	30°  R 		retrograde	3526 May 20 13:08	3°  315'22	
opposition	3521 Feb 14 14:22	25°  12'12	0°43'54	desc. node	3526 Jun 22 09:12	1°  337'51	
min. Earth dist.	3521 Feb 13 15:18	25°  19'56	4.27687 AU		3526 Jul 07 09:41	30°  R 	
direct	3521 Apr 15 18:57	20°  10'37		opposition	3526 Jul 20 08:50	28°  322'26	-0°03'37
	3521 Jul 11 16:20	0° 		min. Earth dist.	3526 Jul 21 20:12	28°  311'06	4.22481 AU
evening set	3521 Aug 20 11:45	8°  R  16'39		direct	3526 Sep 19 20:12	23°  324'39	
					3526 Nov 27 05:04	0° 	
conjunction	3521 Sep 02 23:45	11°  R  14'11	0°43'41	evening set	3527 Jan 23 05:30	11°  3358'03	
minimum elong	3521 Sep 02 23:43	11°  R  14'10	0°43'41	max. Earth dist.	3527 Feb 03 05:48	14°  3331'55	6.14746 AU
max. Earth dist.	3521 Sep 03 20:43	11°  R  25'41	6.34630 AU				
morning rise	3521 Sep 16 10:11	14°  R  10'39		conjunction	3527 Feb 04 23:02	14°  3356'00	-0°19'54
	3521 Dec 16 10:25	0° 		minimum elong	3527 Feb 04 23:01	14°  3355'59	0°19'54
retrograde	3522 Jan 16 14:56	1°  30'44			3527 Feb 05 05:54	15° 	
	3522 Feb 16 15:12	30°  R 		morning rise	3527 Feb 17 17:07	17°  3354'28	
opposition	3522 Mar 17 18:50	26°  R  32'35	1°18'04		3527 Apr 15 15:11	0° 	
min. Earth dist.	3522 Mar 17 14:05	26°  R  34'09	4.40290 AU	retrograde	3527 Jun 25 10:13	7°  3303'46	
direct	3522 May 18 07:14	21°  R  29'58		opposition	3527 Aug 24 22:55	2°  3308'22	-0°53'50
	3522 Aug 07 14:58	0° 		min. Earth dist.	3527 Aug 25 18:43	2°  3301'55	4.07234 AU
evening set	3522 Sep 21 20:39	9°  306'39			3527 Sep 10 23:38	30°  R 	
				direct	3527 Oct 23 22:48	27°  3313'01	
conjunction	3522 Oct 05 01:47	11°  3057'24	0°59'57		3527 Dec 05 02:22	0° 	
minimum elong	3522 Oct 05 01:46	11°  3057'23	0°59'58	evening set	3528 Feb 26 10:53	16°  33029'45	
max. Earth dist.	3522 Oct 04 19:10	11°  3053'49	6.44394 AU				
morning rise	3522 Oct 18 04:10	14°  3046'47		conjunction	3528 Mar 10 08:33	19°  33035'26	-0°49'13
	3523 Jan 14 17:22	0°  R 		minimum elong	3528 Mar 10 08:32	19°  33035'25	0°49'12
retrograde	3523 Feb 15 13:12	1°  R  33'14		max. Earth dist.	3528 Mar 09 19:15	19°  33027'26	6.00851 AU
	3523 Mar 19 09:24	30°  R 		morning rise	3528 Mar 23 07:59	22°  33042'21	
opposition	3523 Apr 17 02:37	26°  3038'26	1°29'35		3528 Apr 23 21:45	0° 	
min. Earth dist.	3523 Apr 17 15:51	26°  3034'09	4.46719 AU	retrograde	3528 Aug 01 10:07	12°  33058'45	
direct	3523 Jun 18 12:34	21°  3035'56		opposition	3528 Sep 30 10:45	7°  33059'50	-1°27'20
	3523 Sep 07 23:39	0°  R 		min. Earth dist.	3528 Sep 30 08:31	8°  33000'35	3.96108 AU
evening set	3523 Oct 22 19:50	8°  R  59'55		direct	3528 Nov 28 02:28	3°  33006'03	
max. Earth dist.	3523 Nov 03 09:41	11°  R  29'26	6.46968 AU	evening set	3529 Apr 02 19:42	22°  33053'19	
conjunction	3523 Nov 04 18:26	11°  R  47'08	0°59'38	conjunction	3529 Apr 16 00:23	26°  33005'35	-1°00'58
minimum elong	3523 Nov 04 18:27	11°  R  47'08	0°59'37	minimum elong	3529 Apr 16 00:23	26°  33005'35	1°00'58
morning rise	3523 Nov 17 14:30	14°  R  33'07		max. Earth dist.	3529 Apr 16 21:27	26°  33018'24	5.93552 AU
	3523 Nov 19 16:41	15°  R 		morning rise	3529 Apr 29 08:00	29°  33019'30	
	3524 Feb 17 03:07	0°  R 			3529 May 02 03:14	0° 	
retrograde	3524 Mar 16 18:02	1°  R  314'58			3529 Jul 12 10:04	15°  R 	
	3524 Apr 14 08:30	30°  R 		retrograde	3529 Sep 08 21:25	20°  R 	07'11
opposition	3524 May 16 13:08	26°  R  22'19	1°17'31	opposition	3529 Nov 07 13:23	15°  R 	04'31
min. Earth dist.	3524 May 17 18:57	26°  R  12'47	4.45375 AU	min. Earth dist.	3529 Nov 06 12:13	15°  R 	13'01
direct	3524 Jul 18 08:51	21°  R  20'41			3529 Nov 08 02:47	15°  R 	
	3524 Oct 08 21:01	0°  R 		direct	3530 Jan 04 09:15	10°  R 	10'12
evening set	3524 Nov 21 05:45	8°  R  350'48			3530 Feb 28 13:27	15°  R 	
max. Earth dist.	3524 Dec 01 23:08	11°  R  311'26	6.41741 AU	evening set	3530 May 10 12:16	29°  R 	59'20
					3530 May 10 13:23	0° 	
conjunction	3524 Dec 04 00:09	11°  R  38'19	0°43'22	conjunction	3530 May 24 00:54	3°  R 	14'11
minimum elong	3524 Dec 04 00:10	11°  R  38'20	0°43'23				-0°48'34

minimum elong	3530 May 24 00:56	3° $\Pi$ 14'12	0°48'35	minimum elong	3535 Nov 08 23:17	16° $\mathbb{M}$ 02'00	0°58'15
max. Earth dist.	3530 May 26 01:47	3° $\Pi$ 43'34	5.96082 AU	morning rise	3535 Nov 21 18:32	18° $\mathbb{M}$ 47'52	
morning rise	3530 Jun 06 16:28	6° $\Pi$ 30'23			3536 Jan 18 07:22	0° $\mathbb{A}$	
retrograde	3530 Oct 16 01:20	26° $\Pi$ 54'19		retrograde	3536 Mar 20 23:30	5° $\mathbb{A}$ 31'53	
min. Earth dist.	3530 Dec 13 02:09	22° $\Pi$ 01'47	4.00885 AU	opposition	3536 May 20 19:51	0° $\mathbb{A}$ 39'25	1°14'03
opposition	3530 Dec 14 14:16	21° $\Pi$ 49'27	-0°51'31	min. Earth dist.	3536 May 22 02:47	0° $\mathbb{A}$ 29'32	4.44374 AU
direct	3531 Feb 10 15:59	16° $\Pi$ 52'35			3536 May 25 23:35	30° $\mathbb{R}$ $\mathbb{M}$	
	3531 May 20 11:30	0° $\mathbb{E}$		direct	3536 Jul 22 13:46	25° $\mathbb{M}$ 37'58	
evening set	3531 Jun 17 01:06	6° $\mathbb{E}$ 14'12			3536 Sep 17 01:43	0° $\mathbb{A}$	
				evening set	3536 Nov 25 11:46	13° $\mathbb{A}$ 11'20	
conjunction	3531 Jun 30 18:41	9° $\mathbb{E}$ 26'03	-0°17'35	max. Earth dist.	3536 Dec 06 03:23	15° $\mathbb{A}$ 31'34	6.40168 AU
minimum elong	3531 Jun 30 18:43	9° $\mathbb{E}$ 26'04	0°17'35				
max. Earth dist.	3531 Jul 03 05:06	10° $\mathbb{E}$ 00'06	6.07310 AU	conjunction	3536 Dec 08 05:46	15° $\mathbb{A}$ 59'19	0°39'59
morning rise	3531 Jul 14 13:31	12° $\mathbb{E}$ 38'17		minimum elong	3536 Dec 08 05:47	15° $\mathbb{A}$ 59'20	0°39'59
	3531 Oct 15 13:18	0° $\mathbb{Q}$		morning rise	3536 Dec 20 21:49	18° $\mathbb{A}$ 46'32	
retrograde	3531 Nov 19 20:49	1° $\mathbb{Q}$ 58'16			3537 Feb 15 04:48	0° $\mathbb{B}$	
	3531 Dec 24 20:28	30° $\mathbb{R}$ $\mathbb{E}$		retrograde	3537 Apr 21 16:13	5° $\mathbb{B}$ 59'57	
asc. node	3532 Jan 10 00:42	28° $\mathbb{E}$ 02'10		opposition	3537 Jun 21 13:40	1° $\mathbb{B}$ 07'56	0°38'18
min. Earth dist.	3532 Jan 17 01:24	27° $\mathbb{E}$ 05'29	4.14759 AU	min. Earth dist.	3537 Jun 23 04:23	0° $\mathbb{B}$ 55'36	4.34487 AU
opposition	3532 Jan 18 10:59	26° $\mathbb{E}$ 54'05	0°01'08		3537 Jun 30 12:30	30° $\mathbb{R}$ $\mathbb{A}$	
direct	3532 Mar 17 12:28	21° $\mathbb{E}$ 54'21		direct	3537 Aug 22 22:14	26° $\mathbb{A}$ 08'11	
	3532 Jun 01 14:27	0° $\mathbb{Q}$			3537 Oct 14 01:37	0° $\mathbb{B}$	
evening set	3532 Jul 22 02:42	10° $\mathbb{Q}$ 33'58		evening set	3537 Dec 26 11:39	14° $\mathbb{B}$ 08'49	
				max. Earth dist.	3538 Jan 06 00:11	16° $\mathbb{B}$ 31'36	6.27571 AU
conjunction	3532 Aug 04 19:11	13° $\mathbb{Q}$ 38'30	0°18'25				
minimum elong	3532 Aug 04 19:10	13° $\mathbb{Q}$ 38'29	0°18'25	conjunction	3538 Jan 08 04:19	17° $\mathbb{B}$ 01'11	0°09'55
max. Earth dist.	3532 Aug 06 14:47	14° $\mathbb{Q}$ 03'01	6.22601 AU	minimum elong	3538 Jan 08 04:19	17° $\mathbb{B}$ 01'11	0°09'56
	3532 Aug 10 20:10	15° $\mathbb{Q}$		behind sun begin	3538 Jan 07 21:49	16° $\mathbb{B}$ 57'30	
morning rise	3532 Aug 18 11:24	16° $\mathbb{Q}$ 42'32		behind sun end	3538 Jan 08 10:50	17° $\mathbb{B}$ 04'51	
	3532 Oct 24 18:03	0° $\mathbb{R}$		morning rise	3538 Jan 20 20:09	19° $\mathbb{B}$ 53'23	
retrograde	3532 Dec 21 03:57	4° $\mathbb{R}$ 50'59			3538 Mar 09 19:56	0° $\mathbb{A}$	
	3533 Feb 17 18:28	30° $\mathbb{R}$ $\mathbb{Q}$		desc. node	3538 May 02 00:12	7° $\mathbb{A}$ 11'28	
min. Earth dist.	3533 Feb 18 04:47	29° $\mathbb{Q}$ 56'33	4.30011 AU	retrograde	3538 May 25 10:57	8° $\mathbb{A}$ 02'37	
opposition	3533 Feb 19 01:25	29° $\mathbb{Q}$ 49'38	0°49'51	opposition	3538 Jul 25 06:16	3° $\mathbb{A}$ 09'24	-0°10'57
direct	3533 Apr 20 10:59	24° $\mathbb{Q}$ 47'48		min. Earth dist.	3538 Jul 26 15:17	2° $\mathbb{A}$ 58'48	4.19925 AU
	3533 Jun 20 05:45	0° $\mathbb{R}$			3538 Aug 20 22:52	30° $\mathbb{R}$ $\mathbb{B}$	
evening set	3533 Aug 25 02:47	12° $\mathbb{R}$ 47'54		direct	3538 Sep 24 11:45	28° $\mathbb{B}$ 12'00	
					3538 Oct 28 18:40	0° $\mathbb{A}$	
conjunction	3533 Sep 07 13:58	15° $\mathbb{R}$ 44'13	0°46'52		3539 Jan 19 19:46	15° $\mathbb{A}$	
minimum elong	3533 Sep 07 13:56	15° $\mathbb{R}$ 44'12	0°46'51	evening set	3539 Jan 27 23:09	16° $\mathbb{A}$ 52'58	
max. Earth dist.	3533 Sep 08 07:55	15° $\mathbb{R}$ 54'02	6.36628 AU	max. Earth dist.	3539 Feb 08 04:24	19° $\mathbb{A}$ 30'32	6.12265 AU
morning rise	3533 Sep 20 23:05	18° $\mathbb{R}$ 39'22					
	3533 Nov 17 11:39	0° $\mathbb{Q}$		conjunction	3539 Feb 09 17:12	19° $\mathbb{A}$ 52'09	-0°24'39
retrograde	3534 Jan 20 19:16	5° $\mathbb{Q}$ 52'19		minimum elong	3539 Feb 09 17:11	19° $\mathbb{A}$ 52'08	0°24'39
opposition	3534 Mar 22 00:46	0° $\mathbb{Q}$ 54'44	1°21'02	morning rise	3539 Feb 22 11:48	22° $\mathbb{A}$ 51'56	
min. Earth dist.	3534 Mar 21 22:27	0° $\mathbb{Q}$ 55'30	4.41828 AU		3539 Mar 26 02:43	0° $\mathbb{H}$	
	3534 Mar 29 00:32	30° $\mathbb{R}$ $\mathbb{R}$		retrograde	3539 Jun 30 19:06	12° $\mathbb{H}$ 12'41	
direct	3534 May 22 16:23	25° $\mathbb{R}$ 52'07		opposition	3539 Aug 30 05:03	7° $\mathbb{H}$ 16'52	-1°00'05
	3534 Jul 16 05:47	0° $\mathbb{Q}$		min. Earth dist.	3539 Aug 30 22:37	7° $\mathbb{H}$ 11'09	4.05057 AU
evening set	3534 Sep 26 05:19	13° $\mathbb{Q}$ 25'22		direct	3539 Oct 29 00:49	2° $\mathbb{H}$ 21'52	
				evening set	3540 Mar 02 13:03	21° $\mathbb{H}$ 44'52	
conjunction	3534 Oct 09 09:18	16° $\mathbb{Q}$ 15'20	1°00'53				
minimum elong	3534 Oct 09 09:17	16° $\mathbb{Q}$ 15'20	1°00'53	conjunction	3540 Mar 15 11:33	24° $\mathbb{H}$ 51'42	-0°52'12
max. Earth dist.	3534 Oct 08 20:48	16° $\mathbb{Q}$ 08'36	6.45336 AU	minimum elong	3540 Mar 15 11:31	24° $\mathbb{H}$ 51'41	0°52'11
morning rise	3534 Oct 22 10:49	19° $\mathbb{Q}$ 03'59		max. Earth dist.	3540 Mar 15 02:41	24° $\mathbb{H}$ 46'21	5.99184 AU
	3534 Dec 17 12:20	0° $\mathbb{M}$		morning rise	3540 Mar 28 12:09	27° $\mathbb{H}$ 59'52	
retrograde	3535 Feb 19 18:04	5° $\mathbb{M}$ 47'53			3540 Apr 05 21:51	0° $\mathbb{Y}$	
opposition	3535 Apr 21 07:13	0° $\mathbb{M}$ 53'29	1°29'15	retrograde	3540 Aug 06 21:58	18° $\mathbb{Y}$ 23'43	
min. Earth dist.	3535 Apr 22 00:12	0° $\mathbb{M}$ 48'00	4.47026 AU	opposition	3540 Oct 05 21:44	13° $\mathbb{Y}$ 24'13	-1°29'33
	3535 Apr 28 05:38	30° $\mathbb{R}$ $\mathbb{Q}$		min. Earth dist.	3540 Oct 05 14:45	13° $\mathbb{Y}$ 26'32	3.95170 AU
direct	3535 Jun 22 20:01	25° $\mathbb{Q}$ 51'01		direct	3540 Dec 03 08:29	8° $\mathbb{Y}$ 30'30	
	3535 Aug 16 22:24	0° $\mathbb{M}$		evening set	3541 Apr 08 04:01	28° $\mathbb{Y}$ 19'41	
evening set	3535 Oct 27 01:12	13° $\mathbb{M}$ 14'54			3541 Apr 15 01:35	0° $\mathbb{B}$	
	3535 Nov 04 04:34	15° $\mathbb{M}$					
max. Earth dist.	3535 Nov 07 11:49	15° $\mathbb{M}$ 42'49	6.46604 AU	conjunction	3541 Apr 21 09:46	1° $\mathbb{B}$ 32'32	-1°00'39
				minimum elong	3541 Apr 21 09:47	1° $\mathbb{B}$ 32'32	1°00'38
conjunction	3535 Nov 08 23:16	16° $\mathbb{M}$ 01'59	0°58'15	max. Earth dist.	3541 Apr 22 11:50	1° $\mathbb{B}$ 48'22	5.93414 AU

morning rise	3541 May 04 18:36	4°♄47'02			3546 Nov 27 21:59	0°♄	
	3541 Jun 18 14:18	15°♄		retrograde	3547 Feb 23 22:14	10°♄04'33	
retrograde	3541 Sep 14 06:37	25°♄33'55		opposition	3547 Apr 25 12:59	5°♄10'32	1°28'28
opposition	3541 Nov 12 22:42	20°♄30'42	-1°23'37	min. Earth dist.	3547 Apr 26 08:00	5°♄04'24	4.47015 AU
min. Earth dist.	3541 Nov 11 19:13	20°♄40'01	3.94303 AU	direct	3547 Jun 27 02:53	0°♄08'12	
direct	3542 Jan 09 19:07	15°♄36'03			3547 Oct 19 08:21	15°♄	
	3542 Apr 22 22:24	0°♄		evening set	3547 Oct 31 07:56	17°♄32'44	
evening set	3542 May 15 21:28	5°♄21'46		max. Earth dist.	3547 Nov 11 13:41	19°♄58'23	6.45991 AU
conjunction	3542 May 29 11:10	8°♄36'25	-0°44'59	conjunction	3547 Nov 13 05:10	20°♄19'46	0°56'32
minimum elong	3542 May 29 11:12	8°♄36'27	0°44'59	minimum elong	3547 Nov 13 05:11	20°♄19'47	0°56'33
max. Earth dist.	3542 May 31 16:15	9°♄08'11	5.97476 AU	morning rise	3547 Nov 26 00:01	23°♄05'43	
morning rise	3542 Jun 12 03:22	11°♄52'15			3547 Dec 29 08:49	0°♄	
	3542 Sep 14 13:03	0°♄		retrograde	3548 Mar 25 09:32	9°♄52'43	
retrograde	3542 Oct 21 03:56	2°♄07'36		opposition	3548 May 25 05:07	5°♄00'26	1°10'06
	3542 Nov 26 12:02	30°♄		min. Earth dist.	3548 May 26 14:32	4°♄49'45	4.43194 AU
min. Earth dist.	3542 Dec 18 03:52	27°♄15'03	4.02823 AU		3548 Jul 23 22:36	30°♄	
opposition	3542 Dec 19 16:13	27°♄02'40	-0°44'31	direct	3548 Jul 26 23:12	29°♄59'10	
direct	3543 Feb 15 20:45	22°♄05'22			3548 Jul 30 00:01	0°♄	
	3543 Apr 30 11:25	0°♄		evening set	3548 Nov 29 19:27	17°♄36'03	
evening set	3543 Jun 22 06:04	11°♄20'25		max. Earth dist.	3548 Dec 10 10:00	19°♄56'14	6.38512 AU
conjunction	3543 Jul 05 23:39	14°♄31'15	-0°12'27	conjunction	3548 Dec 12 13:15	20°♄24'35	0°36'17
minimum elong	3543 Jul 05 23:40	14°♄31'16	0°12'28	minimum elong	3548 Dec 12 13:17	20°♄24'36	0°36'16
behind sun begin	3543 Jul 05 18:21	14°♄28'12		morning rise	3548 Dec 25 05:04	23°♄12'23	
behind sun end	3543 Jul 06 04:59	14°♄34'20			3549 Jan 26 06:18	0°♄	
max. Earth dist.	3543 Jul 08 08:05	15°♄03'57	6.09591 AU	retrograde	3549 Apr 26 06:56	10°♄32'52	
morning rise	3543 Jul 19 18:35	17°♄42'25		opposition	3549 Jun 26 04:57	5°♄40'48	0°31'52
	3543 Sep 16 10:47	0°♄		min. Earth dist.	3549 Jun 27 18:35	5°♄28'48	4.32468 AU
asc. node	3543 Nov 19 09:05	6°♄48'31		direct	3549 Aug 27 09:19	0°♄41'27	
retrograde	3543 Nov 24 11:38	6°♄51'08		evening set	3549 Dec 30 23:55	18°♄47'50	
min. Earth dist.	3544 Jan 21 19:28	1°♄58'16	4.17153 AU	max. Earth dist.	3550 Jan 10 14:28	21°♄12'29	6.25367 AU
opposition	3544 Jan 23 04:02	1°♄47'13	0°08'40				
	3544 Feb 05 16:23	30°♄		conjunction	3550 Jan 12 16:35	21°♄41'05	0°05'04
direct	3544 Mar 22 09:33	26°♄47'05		minimum elong	3550 Jan 12 16:35	21°♄41'05	0°05'04
	3544 May 07 07:33	0°♄		behind sun begin	3550 Jan 12 08:51	21°♄36'42	
	3544 Jul 25 12:11	15°♄		behind sun end	3550 Jan 13 00:20	21°♄45'29	
evening set	3544 Jul 27 00:05	15°♄19'57		morning rise	3550 Jan 25 08:37	24°♄34'17	
					3550 Feb 18 20:48	0°♄	
conjunction	3544 Aug 09 16:06	18°♄23'15	0°23'05	desc. node	3550 Mar 10 22:49	4°♄05'32	
minimum elong	3544 Aug 09 16:05	18°♄23'14	0°23'05	retrograde	3550 May 30 12:26	12°♄53'27	
max. Earth dist.	3544 Aug 11 08:38	18°♄45'56	6.24927 AU	opposition	3550 Jul 30 05:46	8°♄00'01	-0°18'22
morning rise	3544 Aug 23 07:22	21°♄25'53		min. Earth dist.	3550 Jul 31 13:44	7°♄49'44	4.17699 AU
	3544 Oct 03 00:10	0°♄		direct	3550 Sep 29 07:34	3°♄03'03	
retrograde	3544 Dec 25 13:26	9°♄24'46			3551 Jan 02 10:45	15°♄	
opposition	3545 Feb 23 11:32	4°♄23'58	0°55'28	evening set	3551 Feb 01 17:57	21°♄50'14	
min. Earth dist.	3545 Feb 22 17:46	4°♄29'54	4.32078 AU	max. Earth dist.	3551 Feb 13 02:46	24°♄30'38	6.10230 AU
	3545 Apr 05 02:05	30°♄					
direct	3545 Apr 25 02:03	29°♄21'59		conjunction	3551 Feb 14 12:27	24°♄50'29	-0°29'17
	3545 May 15 06:53	0°♄		minimum elong	3551 Feb 14 12:25	24°♄50'28	0°29'17
evening set	3545 Aug 29 17:03	17°♄17'02		morning rise	3551 Feb 27 07:45	27°♄51'27	
					3551 Mar 08 12:26	0°♄	
conjunction	3545 Sep 12 03:10	20°♄12'16	0°49'47	retrograde	3551 Jul 06 01:48	17°♄21'53	
minimum elong	3545 Sep 12 03:08	20°♄12'15	0°49'47	opposition	3551 Sep 04 11:27	12°♄25'38	-1°05'55
max. Earth dist.	3545 Sep 12 15:44	20°♄19'07	6.38276 AU	min. Earth dist.	3551 Sep 05 00:35	12°♄21'21	4.03433 AU
morning rise	3545 Sep 25 11:19	23°♄06'20		direct	3551 Nov 03 01:21	7°♄30'59	
	3545 Oct 28 14:45	0°♄		evening set	3552 Mar 07 14:49	26°♄58'11	
retrograde	3546 Jan 25 00:06	10°♄13'30					
opposition	3546 Mar 26 06:53	5°♄16'23	1°23'35	conjunction	3552 Mar 20 14:04	0°♄05'51	-0°54'45
min. Earth dist.	3546 Mar 26 07:35	5°♄16'09	4.42980 AU	minimum elong	3552 Mar 20 14:02	0°♄05'50	0°54'45
direct	3546 May 27 02:09	0°♄13'42		max. Earth dist.	3552 Mar 20 10:34	0°♄03'44	5.98120 AU
evening set	3546 Sep 30 14:16	17°♄44'42			3552 Mar 20 04:23	0°♄	
				morning rise	3552 Apr 02 15:37	3°♄14'55	
conjunction	3546 Oct 13 17:29	20°♄34'05	1°01'30	retrograde	3552 Aug 12 07:50	23°♄43'50	
minimum elong	3546 Oct 13 17:28	20°♄34'05	1°01'29	opposition	3552 Oct 11 06:41	18°♄43'44	-1°30'58
max. Earth dist.	3546 Oct 13 02:12	20°♄25'52	6.45916 AU	min. Earth dist.	3552 Oct 10 20:35	18°♄47'07	3.94797 AU
morning rise	3546 Oct 26 17:51	23°♄22'07		direct	3552 Dec 08 15:10	13°♄50'02	



	3553 Mar 29 02:23	0°♄	conjunction	3558 Oct 18 00:23	24°♄52'04	1°01'46
evening set	3553 Apr 13 09:58	3°♄39'10	minimum elong	3558 Oct 18 00:22	24°♄52'03	1°01'45
			morning rise	3558 Oct 31 00:01	27°♄39'43	
conjunction	3553 Apr 26 16:54	6°♄52'23 -0°59'50		3558 Nov 11 00:16	0°♄	
minimum elong	3553 Apr 26 16:55	6°♄52'23 0°59'49	retrograde	3559 Feb 28 03:32	14°♄21'57	
max. Earth dist.	3553 Apr 28 00:48	7°♄11'45 5.93763 AU	opposition	3559 Apr 29 18:58	9°♄28'12	1°27'12
morning rise	3553 May 10 02:41	10°♄07'10	min. Earth dist.	3559 Apr 30 16:15	9°♄21'21	4.46698 AU
	3553 May 30 18:20	15°♄	direct	3559 Jul 01 10:13	4°♄25'58	
	3553 Aug 27 15:15	0°♄		3559 Oct 02 08:38	15°♄	
retrograde	3553 Sep 19 13:19	0°♄51'09	evening set	3559 Nov 04 14:26	21°♄51'49	
	3553 Oct 12 06:05	30°♄♄	max. Earth dist.	3559 Nov 15 19:05	24°♄17'10	6.45191 AU
min. Earth dist.	3553 Nov 16 22:47	25°♄57'30 3.95348 AU				
opposition	3553 Nov 18 03:57	25°♄47'37 -1°19'45	conjunction	3559 Nov 17 11:13	24°♄38'58	0°54'30
direct	3554 Jan 15 00:35	20°♄52'42	minimum elong	3559 Nov 17 11:15	24°♄38'58	0°54'31
	3554 Apr 03 19:44	0°♄	morning rise	3559 Nov 30 05:20	27°♄24'59	
evening set	3554 May 21 02:56	10°♄34'04		3559 Dec 12 07:24	0°♄♄	
			retrograde	3560 Mar 29 17:42	14°♄♄15'22	
conjunction	3554 Jun 03 17:14	13°♄48'17 -0°41'10	opposition	3560 May 29 14:40	9°♄♄23'11	1°05'44
minimum elong	3554 Jun 03 17:16	13°♄48'19 0°41'10	min. Earth dist.	3560 May 31 00:25	9°♄♄12'26	4.41968 AU
max. Earth dist.	3554 Jun 05 22:43	14°♄20'09 5.99079 AU	direct	3560 Jul 31 07:32	4°♄♄22'11	
morning rise	3554 Jun 17 10:14	17°♄03'40	evening set	3560 Dec 04 03:28	22°♄♄02'22	
	3554 Aug 16 13:18	0°♄♄	max. Earth dist.	3560 Dec 14 16:34	24°♄♄22'21	6.36946 AU
retrograde	3554 Oct 25 23:54	7°♄♄10'06				
min. Earth dist.	3554 Dec 23 00:47	2°♄♄17'43 4.04800 AU	conjunction	3560 Dec 16 20:50	24°♄♄51'22	0°32'22
opposition	3554 Dec 24 13:38	2°♄♄05'09 -0°37'27	minimum elong	3560 Dec 16 20:51	24°♄♄51'23	0°32'22
	3555 Jan 09 09:48	30°♄♄♄	morning rise	3560 Dec 29 12:38	27°♄♄39'45	
direct	3555 Feb 20 20:19	27°♄♄07'27		3561 Jan 09 04:44	0°♄♄	
	3555 Apr 04 07:32	0°♄♄	retrograde	3561 Apr 30 23:34	15°♄♄06'54	
evening set	3555 Jun 27 06:29	16°♄♄16'16	opposition	3561 Jun 30 20:46	10°♄♄14'40	0°25'13
			min. Earth dist.	3561 Jul 02 10:42	10°♄♄02'34	4.30633 AU
conjunction	3555 Jul 11 00:12	19°♄♄26'09 -0°07'26	direct	3561 Aug 31 23:21	5°♄♄15'33	
minimum elong	3555 Jul 11 00:12	19°♄♄26'09 0°07'26	evening set	3562 Jan 04 11:35	23°♄♄26'38	
behind sun begin	3555 Jul 10 16:36	19°♄♄21'47	max. Earth dist.	3562 Jan 15 04:03	25°♄♄53'01	6.23407 AU
behind sun end	3555 Jul 11 07:49	19°♄♄30'32				
max. Earth dist.	3555 Jul 13 06:57	19°♄♄57'44 6.11770 AU	conjunction	3562 Jan 17 04:26	26°♄♄20'43	0°00'07
morning rise	3555 Jul 24 18:47	22°♄♄36'10	minimum elong	3562 Jan 17 04:25	26°♄♄20'43	0°00'07
	3555 Aug 27 10:11	0°♄♄	behind sun begin	3562 Jan 16 20:38	26°♄♄16'17	
asc. node	3555 Sep 30 01:30	6°♄♄16'34	behind sun end	3562 Jan 17 12:12	26°♄♄25'09	
retrograde	3555 Nov 29 01:07	11°♄♄34'45	desc. node	3562 Jan 18 09:34	26°♄♄37'25	
min. Earth dist.	3556 Jan 26 11:33	6°♄♄41'20 4.19308 AU	morning rise	3562 Jan 29 20:38	29°♄♄14'49	
opposition	3556 Jan 27 17:26	6°♄♄31'13 0°15'52		3562 Feb 02 04:06	0°♄♄	
direct	3556 Mar 27 03:58	1°♄♄30'48		3562 Apr 22 22:18	15°♄♄	
	3556 Jul 08 20:59	15°♄♄	retrograde	3562 Jun 04 10:33	17°♄♄42'51	
evening set	3556 Jul 31 18:00	19°♄♄58'04		3562 Jul 17 13:55	15°♄♄	
			opposition	3562 Aug 04 04:25	12°♄♄49'02	-0°25'38
conjunction	3556 Aug 14 09:23	23°♄♄00'16 0°27'28	min. Earth dist.	3562 Aug 05 09:34	12°♄♄39'39	4.15746 AU
minimum elong	3556 Aug 14 09:21	23°♄♄00'15 0°27'27	direct	3562 Oct 04 01:02	7°♄♄52'24	
max. Earth dist.	3556 Aug 15 22:15	23°♄♄20'48 6.26886 AU		3562 Dec 13 18:05	15°♄♄	
morning rise	3556 Aug 27 23:52	26°♄♄01'43	evening set	3563 Feb 06 11:49	26°♄♄44'46	
	3556 Sep 15 06:28	0°♄♄♄	max. Earth dist.	3563 Feb 18 00:26	29°♄♄28'02	6.08436 AU
retrograde	3556 Dec 29 18:47	13°♄♄52'42				
opposition	3557 Feb 27 18:53	8°♄♄52'25 1°00'36	conjunction	3563 Feb 19 06:39	29°♄♄45'56	-0°33'41
min. Earth dist.	3557 Feb 27 03:10	8°♄♄57'39 4.33718 AU	minimum elong	3563 Feb 19 06:37	29°♄♄45'55	0°33'40
direct	3557 Apr 29 12:53	3°♄♄50'17		3563 Feb 20 06:25	0°♄♄	
evening set	3557 Sep 03 04:56	21°♄♄41'54	morning rise	3563 Mar 04 02:37	2°♄♄47'56	
			retrograde	3563 Jul 11 08:18	22°♄♄27'11	
conjunction	3557 Sep 16 14:10	24°♄♄36'16 0°52'20	opposition	3563 Sep 09 16:03	17°♄♄30'23	-1°11'11
minimum elong	3557 Sep 16 14:08	24°♄♄36'15 0°52'21	min. Earth dist.	3563 Sep 10 02:38	17°♄♄26'54	4.01947 AU
max. Earth dist.	3557 Sep 16 22:41	24°♄♄40'54 6.39491 AU	direct	3563 Nov 08 02:19	12°♄♄35'52	
morning rise	3557 Sep 29 21:12	27°♄♄29'25		3564 Mar 03 18:26	0°♄♄	
	3557 Oct 11 14:52	0°♄♄	evening set	3564 Mar 12 15:05	2°♄♄06'59	
retrograde	3558 Jan 29 04:41	14°♄♄32'25				
opposition	3558 Mar 30 12:00	9°♄♄35'50 1°25'39	conjunction	3564 Mar 25 15:21	5°♄♄15'32	-0°56'52
min. Earth dist.	3558 Mar 30 15:48	9°♄♄34'35 4.43716 AU	minimum elong	3564 Mar 25 15:20	5°♄♄15'32	0°56'52
direct	3558 May 31 11:00	4°♄♄33'11	max. Earth dist.	3564 Mar 25 17:10	5°♄♄16'38	5.97086 AU
evening set	3558 Oct 04 22:07	22°♄♄03'06	morning rise	3564 Apr 07 17:53	8°♄♄25'32	
max. Earth dist.	3558 Oct 17 04:33	24°♄♄41'22 6.46112 AU	retrograde	3564 Aug 17 16:18	28°♄♄59'08	

opposition	3564 Oct 16 13:33	23° $\Upsilon$ 58'32	-1°31'39	direct	3570 Jun 04 20:23	8° $\Omega$ 56'55	
min. Earth dist.	3564 Oct 16 00:44	24° $\Upsilon$ 02'49	3.94354 AU	evening set	3570 Oct 09 07:33	26° $\Omega$ 24'57	
direct	3564 Dec 13 18:50	19° $\Upsilon$ 04'48		max. Earth dist.	3570 Oct 21 11:08	29° $\Omega$ 01'37	6.46650 AU
	3565 Mar 10 23:25	0° $\mathcal{B}$					
evening set	3565 Apr 18 14:50	8° $\mathcal{B}$ 54'30		conjunction	3570 Oct 22 08:55	29° $\Omega$ 13'22	1°01'44
				minimum elong	3570 Oct 22 08:55	29° $\Omega$ 13'22	1°01'44
conjunction	3565 May 01 22:44	12° $\mathcal{B}$ 08'07	-0°58'33		3570 Oct 25 23:24	0° $\mathcal{M}$	
minimum elong	3565 May 01 22:45	12° $\mathcal{B}$ 08'08	0°58'33	morning rise	3570 Nov 04 07:33	2° $\mathcal{M}$ 00'28	
max. Earth dist.	3565 May 03 08:59	12° $\mathcal{B}$ 28'53	5.93927 AU		3571 Jan 13 02:59	15° $\mathcal{M}$	
	3565 May 13 18:59	15° $\mathcal{B}$		retrograde	3571 Mar 04 09:27	18° $\mathcal{M}$ 41'19	
morning rise	3565 May 15 09:50	15° $\mathcal{B}$ 23'22			3571 Apr 24 15:08	15° $\mathcal{R}$ $\mathcal{M}$	
	3565 Jul 22 11:21	0° $\mathcal{I}$		opposition	3571 May 04 02:08	13° $\mathcal{M}$ 47'57	1°25'30
retrograde	3565 Sep 24 16:48	6° $\mathcal{I}$ 05'13		min. Earth dist.	3571 May 05 01:13	13° $\mathcal{M}$ 40'32	4.46847 AU
min. Earth dist.	3565 Nov 22 00:24	1° $\mathcal{I}$ 11'59	3.96106 AU	direct	3571 Jul 05 19:39	8° $\mathcal{M}$ 45'57	
opposition	3565 Nov 23 07:50	1° $\mathcal{I}$ 01'18	-1°15'20		3571 Sep 12 14:49	15° $\mathcal{M}$	
	3565 Nov 30 21:54	30° $\mathcal{R}$ $\mathcal{B}$		evening set	3571 Nov 08 21:04	26° $\mathcal{M}$ 11'23	
direct	3566 Jan 20 04:18	26° $\mathcal{B}$ 06'01		max. Earth dist.	3571 Nov 19 21:56	28° $\mathcal{M}$ 34'54	6.44936 AU
	3566 Mar 10 11:31	0° $\mathcal{I}$					
evening set	3566 May 26 08:10	15° $\mathcal{I}$ 44'29		conjunction	3571 Nov 21 17:04	28° $\mathcal{M}$ 58'21	0°52'14
				minimum elong	3571 Nov 21 17:06	28° $\mathcal{M}$ 58'22	0°52'14
conjunction	3566 Jun 08 23:22	18° $\mathcal{I}$ 58'29	-0°37'02		3571 Nov 26 10:27	0° $\mathcal{J}$	
minimum elong	3566 Jun 08 23:24	18° $\mathcal{I}$ 58'30	0°37'02	morning rise	3571 Dec 04 10:46	1° $\mathcal{J}$ 44'17	
max. Earth dist.	3566 Jun 11 06:28	19° $\mathcal{I}$ 31'12	6.00361 AU	retrograde	3572 Apr 03 02:25	18° $\mathcal{J}$ 36'32	
morning rise	3566 Jun 22 16:52	22° $\mathcal{I}$ 13'29		opposition	3572 Jun 03 00:06	13° $\mathcal{J}$ 44'25	1°01'07
	3566 Jul 27 01:18	0° $\mathcal{E}$		min. Earth dist.	3572 Jun 04 10:48	13° $\mathcal{J}$ 33'21	4.41318 AU
retrograde	3566 Oct 30 22:13	12° $\mathcal{E}$ 12'17		direct	3572 Aug 04 16:52	8° $\mathcal{J}$ 43'37	
min. Earth dist.	3566 Dec 27 23:32	7° $\mathcal{E}$ 19'32	4.06437 AU	evening set	3572 Dec 08 09:38	26° $\mathcal{J}$ 25'09	
opposition	3566 Dec 29 11:08	7° $\mathcal{E}$ 07'24	-0°30'08	max. Earth dist.	3572 Dec 18 23:28	28° $\mathcal{J}$ 45'51	6.35952 AU
direct	3567 Feb 25 21:32	2° $\mathcal{E}$ 09'17					
evening set	3567 Jul 02 08:08	21° $\mathcal{E}$ 13'18		conjunction	3572 Dec 21 02:48	29° $\mathcal{J}$ 14'25	0°28'24
				minimum elong	3572 Dec 21 02:50	29° $\mathcal{J}$ 14'26	0°28'24
conjunction	3567 Jul 16 01:57	24° $\mathcal{E}$ 22'23	-0°02'19		3572 Dec 24 12:40	0° $\mathcal{Z}$	
minimum elong	3567 Jul 16 01:55	24° $\mathcal{E}$ 22'23	0°02'18	morning rise	3573 Jan 02 18:13	2° $\mathcal{Z}$ 03'06	
behind sun begin	3567 Jul 15 17:32	24° $\mathcal{E}$ 17'35		retrograde	3573 May 05 11:27	19° $\mathcal{Z}$ 35'13	
behind sun end	3567 Jul 16 10:18	24° $\mathcal{E}$ 27'10		opposition	3573 Jul 05 10:05	14° $\mathcal{Z}$ 42'53	0°18'39
max. Earth dist.	3567 Jul 18 07:40	24° $\mathcal{E}$ 53'13	6.13618 AU	min. Earth dist.	3573 Jul 06 23:19	14° $\mathcal{Z}$ 31'01	4.29342 AU
morning rise	3567 Jul 29 20:20	27° $\mathcal{E}$ 31'28		direct	3573 Sep 05 09:46	9° $\mathcal{Z}$ 44'06	
asc. node	3567 Aug 09 19:44	29° $\mathcal{E}$ 59'58		desc. node	3573 Nov 30 06:23	19° $\mathcal{Z}$ 26'16	
	3567 Aug 09 19:48	0° $\mathcal{Q}$		evening set	3574 Jan 08 20:26	27° $\mathcal{Z}$ 58'19	
	3567 Nov 04 13:36	15° $\mathcal{Q}$			3574 Jan 17 16:58	0° $\approx$	
retrograde	3567 Dec 03 14:15	16° $\mathcal{Q}$ 20'54		max. Earth dist.	3574 Jan 19 13:15	0° $\approx$ 25'27	6.21909 AU
	3568 Jan 01 10:05	15° $\mathcal{R}$ $\mathcal{Q}$					
min. Earth dist.	3568 Jan 31 02:48	11° $\mathcal{Q}$ 27'38	4.21196 AU	conjunction	3574 Jan 21 13:07	0° $\approx$ 52'59	-0°04'39
opposition	3568 Feb 01 07:59	11° $\mathcal{Q}$ 17'47	0°23'02	minimum elong	3574 Jan 21 13:07	0° $\approx$ 52'58	0°04'39
direct	3568 Mar 31 21:27	6° $\mathcal{Q}$ 17'06		behind sun begin	3574 Jan 21 05:18	0° $\approx$ 48'30	
	3568 Jun 20 03:05	15° $\mathcal{Q}$		behind sun end	3574 Jan 21 20:55	0° $\approx$ 57'26	
evening set	3568 Aug 05 13:47	24° $\mathcal{Q}$ 39'44		morning rise	3574 Feb 03 05:41	3° $\approx$ 47'48	
					3574 Mar 28 08:39	15° $\approx$	
conjunction	3568 Aug 19 04:27	27° $\mathcal{Q}$ 40'53	0°31'45	retrograde	3574 Jun 09 06:40	22° $\approx$ 23'28	
minimum elong	3568 Aug 19 04:26	27° $\mathcal{Q}$ 40'52	0°31'45	opposition	3574 Aug 08 23:10	17° $\approx$ 29'20	-0°32'26
max. Earth dist.	3568 Aug 20 13:02	27° $\mathcal{Q}$ 58'59	6.28676 AU	min. Earth dist.	3574 Aug 10 03:16	17° $\approx$ 20'15	4.14124 AU
	3568 Aug 29 15:22	0° $\mathcal{M}$			3574 Aug 29 04:28	15° $\mathcal{R}$ $\approx$	
morning rise	3568 Sep 01 18:07	0° $\mathcal{M}$ 41'13		direct	3574 Oct 08 16:33	12° $\approx$ 32'54	
retrograde	3569 Jan 03 04:46	18° $\mathcal{M}$ 24'55			3574 Nov 17 12:26	15° $\approx$	
opposition	3569 Mar 04 04:42	13° $\mathcal{M}$ 25'13	1°05'29		3575 Feb 04 16:27	0° $\mathcal{H}$	
min. Earth dist.	3569 Mar 03 16:07	13° $\mathcal{M}$ 29'24	4.35288 AU	evening set	3575 Feb 11 01:28	1° $\mathcal{H}$ 29'42	
direct	3569 May 04 03:59	8° $\mathcal{M}$ 23'01					
evening set	3569 Sep 07 18:50	26° $\mathcal{M}$ 11'12		conjunction	3575 Feb 23 20:56	4° $\mathcal{H}$ 31'47	-0°37'38
				minimum elong	3575 Feb 23 20:54	4° $\mathcal{H}$ 31'46	0°37'38
conjunction	3569 Sep 21 03:10	29° $\mathcal{M}$ 04'42	0°54'40	max. Earth dist.	3575 Feb 22 18:03	4° $\mathcal{H}$ 15'50	6.06838 AU
minimum elong	3569 Sep 21 03:09	29° $\mathcal{M}$ 04'42	0°54'40	morning rise	3575 Mar 08 17:29	7° $\mathcal{H}$ 34'46	
max. Earth dist.	3569 Sep 21 08:40	29° $\mathcal{M}$ 07'41	6.40745 AU	retrograde	3575 Jul 16 09:46	27° $\mathcal{H}$ 22'17	
	3569 Sep 25 09:01	0° $\mathcal{A}$		opposition	3575 Sep 14 15:59	22° $\mathcal{H}$ 25'03	-1°15'43
morning rise	3569 Oct 04 09:07	1° $\mathcal{A}$ 56'56		min. Earth dist.	3575 Sep 15 00:22	22° $\mathcal{H}$ 22'18	4.00531 AU
retrograde	3570 Feb 02 09:36	18° $\mathcal{A}$ 55'34		direct	3575 Nov 12 21:05	17° $\mathcal{H}$ 30'44	
opposition	3570 Apr 03 19:08	13° $\mathcal{A}$ 59'28	1°27'19		3576 Feb 16 00:08	0° $\mathcal{Y}$	
min. Earth dist.	3570 Apr 04 00:19	13° $\mathcal{A}$ 57'46	4.44629 AU	evening set	3576 Mar 17 11:21	7° $\mathcal{Y}$ 06'00	

conjunction	3576 Mar 30 12:24	10° $\Upsilon$ 15'28	-0°58'29	max. Earth dist.	3581 Sep 25 16:45	3° $\Omega$ 32'56	6.42018 AU
minimum elong	3576 Mar 30 12:23	10° $\Upsilon$ 15'27	0°58'28	morning rise	3581 Oct 08 20:30	6° $\Omega$ 23'34	
max. Earth dist.	3576 Mar 30 16:22	10° $\Upsilon$ 17'52	5.95970 AU	retrograde	3582 Feb 06 16:18	23° $\Omega$ 17'35	
morning rise	3576 Apr 12 16:11	13° $\Upsilon$ 26'30		opposition	3582 Apr 08 02:11	18° $\Omega$ 21'51	1°28'27
	3576 Jul 01 21:23	0° $\mathcal{B}$		min. Earth dist.	3582 Apr 08 10:36	18° $\Omega$ 19'06	4.45504 AU
retrograde	3576 Aug 22 19:23	4° $\mathcal{B}$ 05'24		direct	3582 Jun 09 07:47	13° $\Omega$ 19'14	
	3576 Oct 14 16:56	30° $\mathcal{R}\Upsilon$			3582 Oct 10 03:14	0° $\mathcal{M}$	
opposition	3576 Oct 21 15:55	29° $\Upsilon$ 04'19	-1°31'39	evening set	3582 Oct 13 15:59	0° $\mathcal{M}$ 45'10	
min. Earth dist.	3576 Oct 21 00:06	29° $\Upsilon$ 09'37	3.93675 AU				
direct	3576 Dec 18 18:24	24° $\Upsilon$ 10'26		conjunction	3582 Oct 26 16:31	3° $\mathcal{M}$ 33'05	1°01'20
	3577 Feb 17 20:40	0° $\mathcal{B}$		minimum elong	3582 Oct 26 16:32	3° $\mathcal{M}$ 33'06	1°01'21
evening set	3577 Apr 23 16:32	14° $\mathcal{B}$ 02'11		max. Earth dist.	3582 Oct 25 15:26	3° $\mathcal{M}$ 19'34	6.47020 AU
	3577 Apr 27 16:23	15° $\mathcal{B}$		morning rise	3582 Nov 08 14:17	6° $\mathcal{M}$ 19'42	
					3582 Dec 21 14:25	15° $\mathcal{M}$	
conjunction	3577 May 07 01:46	17° $\mathcal{B}$ 16'29	-0°56'53	retrograde	3583 Mar 08 14:42	22° $\mathcal{M}$ 59'49	
minimum elong	3577 May 07 01:48	17° $\mathcal{B}$ 16'30	0°56'53	opposition	3583 May 08 09:13	18° $\mathcal{M}$ 06'37	1°23'18
max. Earth dist.	3577 May 08 16:05	17° $\mathcal{B}$ 39'42	5.93768 AU	min. Earth dist.	3583 May 09 09:42	17° $\mathcal{M}$ 58'46	4.46683 AU
morning rise	3577 May 20 13:54	20° $\mathcal{B}$ 32'19			3583 Jun 03 14:52	15° $\mathcal{R}\mathcal{M}$	
	3577 Jun 30 23:37	0° $\mathcal{I}$		direct	3583 Jul 10 02:58	13° $\mathcal{M}$ 04'40	
retrograde	3577 Sep 29 20:06	11° $\mathcal{I}$ 13'25			3583 Aug 15 19:53	15° $\mathcal{M}$	
min. Earth dist.	3577 Nov 27 01:04	6° $\mathcal{I}$ 20'02	3.96481 AU		3583 Nov 10 18:37	0° $\mathcal{J}$	
opposition	3577 Nov 28 08:47	6° $\mathcal{I}$ 09'14	-1°10'32	evening set	3583 Nov 13 03:34	0° $\mathcal{J}$ 30'41	
direct	3578 Jan 25 05:48	1° $\mathcal{I}$ 13'37		max. Earth dist.	3583 Nov 24 02:55	2° $\mathcal{J}$ 53'38	6.44236 AU
evening set	3578 May 31 11:46	20° $\mathcal{I}$ 50'54					
				conjunction	3583 Nov 25 23:03	3° $\mathcal{J}$ 17'41	0°49'38
conjunction	3578 Jun 14 03:49	24° $\mathcal{I}$ 04'53	-0°32'45	minimum elong	3583 Nov 25 23:05	3° $\mathcal{J}$ 17'42	0°49'38
minimum elong	3578 Jun 14 03:51	24° $\mathcal{I}$ 04'55	0°32'46	morning rise	3583 Dec 08 16:08	6° $\mathcal{J}$ 03'41	
max. Earth dist.	3578 Jun 16 12:41	24° $\mathcal{I}$ 38'33	6.01239 AU	retrograde	3584 Apr 07 12:04	22° $\mathcal{J}$ 59'17	
morning rise	3578 Jun 27 22:02	27° $\mathcal{I}$ 19'45		opposition	3584 Jun 07 10:27	18° $\mathcal{J}$ 07'15	0°56'02
	3578 Jul 09 09:43	0° $\mathcal{E}$		min. Earth dist.	3584 Jun 08 22:37	17° $\mathcal{J}$ 55'44	4.40100 AU
retrograde	3578 Nov 04 18:15	17° $\mathcal{E}$ 12'20		direct	3584 Aug 09 02:24	13° $\mathcal{J}$ 06'42	
min. Earth dist.	3579 Jan 01 18:54	12° $\mathcal{E}$ 19'55	4.07722 AU		3584 Dec 08 20:10	0° $\mathcal{Z}$	
opposition	3579 Jan 03 07:19	12° $\mathcal{E}$ 07'31	-0°22'47	evening set	3584 Dec 12 17:35	0° $\mathcal{Z}$ 51'33	
direct	3579 Mar 02 19:10	7° $\mathcal{E}$ 09'01		max. Earth dist.	3584 Dec 23 05:09	3° $\mathcal{Z}$ 11'35	6.34295 AU
asc. node	3579 Jun 20 05:05	22° $\mathcal{E}$ 18'02					
evening set	3579 Jul 07 09:15	26° $\mathcal{E}$ 09'26		conjunction	3584 Dec 25 10:25	3° $\mathcal{Z}$ 41'21	0°24'08
				minimum elong	3584 Dec 25 10:26	3° $\mathcal{Z}$ 41'21	0°24'09
conjunction	3579 Jul 21 02:57	29° $\mathcal{E}$ 17'46	0°02'52	morning rise	3585 Jan 07 01:58	6° $\mathcal{Z}$ 30'42	
minimum elong	3579 Jul 21 02:56	29° $\mathcal{E}$ 17'46	0°02'52	retrograde	3585 May 10 04:53	24° $\mathcal{Z}$ 10'17	
behind sun begin	3579 Jul 20 18:35	29° $\mathcal{E}$ 13'00		opposition	3585 Jul 10 02:43	19° $\mathcal{Z}$ 17'46	0°11'41
behind sun end	3579 Jul 21 11:17	29° $\mathcal{E}$ 22'31		min. Earth dist.	3585 Jul 11 15:36	19° $\mathcal{Z}$ 05'59	4.27328 AU
max. Earth dist.	3579 Jul 23 06:17	29° $\mathcal{E}$ 47'08	6.15201 AU	direct	3585 Sep 09 22:56	14° $\mathcal{Z}$ 19'14	
	3579 Jul 24 04:47	0° $\mathcal{O}$		desc. node	3585 Oct 09 21:06	15° $\mathcal{Z}$ 40'36	
morning rise	3579 Aug 03 21:10	2° $\mathcal{O}$ 26'00			3586 Jan 01 16:05	0° $\mathcal{A}$	
	3579 Oct 04 04:43	15° $\mathcal{O}$		evening set	3586 Jan 13 08:55	2° $\mathcal{A}$ 39'06	
retrograde	3579 Dec 08 05:00	21° $\mathcal{O}$ 07'13		max. Earth dist.	3586 Jan 24 04:49	5° $\mathcal{A}$ 08'41	6.19713 AU
opposition	3580 Feb 05 22:33	16° $\mathcal{O}$ 04'23	0°29'56				
min. Earth dist.	3580 Feb 04 19:31	16° $\mathcal{O}$ 13'30	4.22909 AU	conjunction	3586 Jan 26 01:59	5° $\mathcal{A}$ 34'46	-0°09'31
	3580 Feb 13 23:01	15° $\mathcal{R}\mathcal{O}$		minimum elong	3586 Jan 26 01:58	5° $\mathcal{A}$ 34'46	0°09'31
direct	3580 Apr 05 17:30	11° $\mathcal{O}$ 03'21		behind sun begin	3586 Jan 25 19:17	5° $\mathcal{A}$ 30'56	
	3580 May 27 09:32	15° $\mathcal{O}$		behind sun end	3586 Jan 26 08:38	5° $\mathcal{A}$ 38'36	
evening set	3580 Aug 10 09:25	29° $\mathcal{O}$ 21'30		morning rise	3586 Feb 07 18:46	8° $\mathcal{A}$ 30'39	
	3580 Aug 13 07:19	0° $\mathcal{M}$			3586 Mar 08 21:44	15° $\mathcal{A}$	
				retrograde	3586 Jun 14 08:43	27° $\mathcal{A}$ 16'35	
conjunction	3580 Aug 23 23:31	2° $\mathcal{M}$ 21'38	0°35'48	opposition	3586 Aug 13 23:32	22° $\mathcal{A}$ 22'09	-0°39'26
minimum elong	3580 Aug 23 23:29	2° $\mathcal{M}$ 21'37	0°35'48	min. Earth dist.	3586 Aug 15 01:52	22° $\mathcal{A}$ 13'38	4.11914 AU
max. Earth dist.	3580 Aug 25 06:47	2° $\mathcal{M}$ 38'57	6.30384 AU	direct	3586 Oct 13 11:31	17° $\mathcal{A}$ 26'06	
morning rise	3580 Sep 06 12:07	5° $\mathcal{M}$ 20'49			3587 Jan 18 14:05	0° $\mathcal{H}$	
retrograde	3581 Jan 07 12:14	22° $\mathcal{M}$ 57'05		evening set	3587 Feb 15 21:36	6° $\mathcal{H}$ 29'26	
opposition	3581 Mar 08 14:09	17° $\mathcal{M}$ 57'48	1°09'55				
min. Earth dist.	3581 Mar 08 02:40	18° $\mathcal{M}$ 01'36	4.36851 AU	conjunction	3587 Feb 28 17:32	9° $\mathcal{H}$ 32'39	-0°41'35
direct	3581 May 08 16:40	12° $\mathcal{M}$ 55'25		minimum elong	3587 Feb 28 17:30	9° $\mathcal{H}$ 32'38	0°41'35
	3581 Sep 09 06:18	0° $\mathcal{A}$		max. Earth dist.	3587 Feb 27 17:02	9° $\mathcal{H}$ 18'02	6.04805 AU
evening set	3581 Sep 12 08:23	0° $\mathcal{A}$ 39'44		morning rise	3587 Mar 13 15:05	12° $\mathcal{H}$ 36'56	
					3587 Jun 10 19:57	0° $\mathcal{Y}$	
conjunction	3581 Sep 25 15:35	3° $\mathcal{A}$ 32'17	0°56'39	retrograde	3587 Jul 21 17:32	2° $\mathcal{Y}$ 34'18	
minimum elong	3581 Sep 25 15:33	3° $\mathcal{A}$ 32'17	0°56'39		3587 Aug 31 23:28	30° $\mathcal{R}\mathcal{H}$	

opposition	3587 Sep 19 22:51	27° $\text{K}$ 36'34	-1°20'01	evening set	3593 Sep 16 18:26	5° $\text{Q}$ 01'26	
min. Earth dist.	3587 Sep 20 03:26	27° $\text{K}$ 35'03	3.98885 AU				
direct	3587 Nov 17 22:56	22° $\text{K}$ 42'27		conjunction	3593 Sep 30 00:46	7° $\text{Q}$ 53'03	0°58'16
	3588 Jan 26 16:52	0° $\text{Y}$		minimum elong	3593 Sep 30 00:45	7° $\text{Q}$ 53'03	0°58'16
evening set	3588 Mar 22 15:10	12° $\text{Y}$ 22'38		max. Earth dist.	3593 Sep 29 22:48	7° $\text{Q}$ 51'59	6.43367 AU
				morning rise	3593 Oct 13 04:25	10° $\text{Q}$ 43'20	
conjunction	3588 Apr 04 17:27	15° $\text{Y}$ 33'09	-0°59'44	retrograde	3594 Feb 10 18:13	27° $\text{Q}$ 33'07	
minimum elong	3588 Apr 04 17:26	15° $\text{Y}$ 33'08	0°59'43	opposition	3594 Apr 12 06:21	22° $\text{Q}$ 37'48	1°29'05
max. Earth dist.	3588 Apr 05 03:44	15° $\text{Y}$ 39'24	5.94890 AU	min. Earth dist.	3594 Apr 12 16:43	22° $\text{Q}$ 34'26	4.46268 AU
morning rise	3588 Apr 17 22:16	18° $\text{Y}$ 45'12		direct	3594 Jun 13 13:26	17° $\text{Q}$ 35'13	
	3588 Jun 06 19:14	0° $\text{Z}$			3594 Sep 23 22:30	0° $\text{M}$	
retrograde	3588 Aug 28 07:38	9° $\text{Z}$ 28'39		evening set	3594 Oct 17 21:51	4° $\text{M}$ 59'47	
min. Earth dist.	3588 Oct 26 07:15	4° $\text{Z}$ 33'10	3.93311 AU				
opposition	3588 Oct 27 01:16	4° $\text{Z}$ 27'07	-1°30'52	conjunction	3594 Oct 30 21:26	7° $\text{M}$ 47'19	1°00'38
	3588 Dec 07 22:50	30° $\text{K}$ $\text{Y}$		minimum elong	3594 Oct 30 21:27	7° $\text{M}$ 47'19	1°00'37
direct	3588 Dec 24 02:04	29° $\text{Y}$ 33'12		max. Earth dist.	3594 Oct 29 15:57	7° $\text{M}$ 31'24	6.47130 AU
	3589 Jan 09 03:39	0° $\text{Z}$		morning rise	3594 Nov 12 18:27	10° $\text{M}$ 33'35	
	3589 Apr 10 09:03	15° $\text{Z}$			3594 Dec 03 22:03	15° $\text{M}$	
evening set	3589 Apr 29 01:05	19° $\text{Z}$ 25'26		retrograde	3595 Mar 12 20:35	27° $\text{M}$ 14'08	
				opposition	3595 May 12 14:35	22° $\text{M}$ 21'13	1°20'44
conjunction	3589 May 12 11:25	22° $\text{Z}$ 40'06	-0°54'39	min. Earth dist.	3595 May 13 18:27	22° $\text{M}$ 12'18	4.46133 AU
minimum elong	3589 May 12 11:27	22° $\text{Z}$ 40'07	0°54'38	direct	3595 Jul 14 09:51	17° $\text{M}$ 19'21	
max. Earth dist.	3589 May 14 05:50	23° $\text{Z}$ 05'44	5.94162 AU		3595 Oct 25 16:35	0° $\text{J}$	
morning rise	3589 May 26 00:48	25° $\text{Z}$ 56'17		evening set	3595 Nov 17 08:24	4° $\text{J}$ 47'19	
	3589 Jun 12 05:20	0° $\text{I}$		max. Earth dist.	3595 Nov 28 04:03	7° $\text{J}$ 08'42	6.43046 AU
retrograde	3589 Oct 05 01:20	16° $\text{I}$ 33'32					
min. Earth dist.	3589 Dec 02 03:57	11° $\text{I}$ 40'50	3.97620 AU	conjunction	3595 Nov 30 03:27	7° $\text{J}$ 34'35	0°46'48
opposition	3589 Dec 03 14:19	11° $\text{I}$ 29'08	-1°04'54	minimum elong	3595 Nov 30 03:28	7° $\text{J}$ 34'36	0°46'49
direct	3590 Jan 30 10:59	6° $\text{I}$ 33'14		morning rise	3595 Dec 12 20:14	10° $\text{J}$ 20'56	
evening set	3590 Jun 05 19:31	26° $\text{I}$ 06'15		retrograde	3596 Apr 11 22:05	27° $\text{J}$ 21'47	
				opposition	3596 Jun 11 20:37	22° $\text{J}$ 29'45	0°50'43
conjunction	3590 Jun 19 12:02	29° $\text{I}$ 19'39	-0°28'03	min. Earth dist.	3596 Jun 13 09:18	22° $\text{J}$ 18'03	4.38340 AU
minimum elong	3590 Jun 19 12:04	29° $\text{I}$ 19'40	0°28'03	direct	3596 Aug 13 09:32	17° $\text{J}$ 29'21	
max. Earth dist.	3590 Jun 21 20:56	29° $\text{I}$ 53'11	6.03014 AU		3596 Nov 22 11:09	0° $\text{Z}$	
	3590 Jun 22 08:30	0° $\text{E}$		evening set	3596 Dec 17 01:27	5° $\text{Z}$ 19'21	
morning rise	3590 Jul 03 06:39	2° $\text{E}$ 33'50		max. Earth dist.	3596 Dec 27 14:04	7° $\text{Z}$ 40'39	6.32101 AU
retrograde	3590 Nov 09 15:15	22° $\text{E}$ 16'28					
min. Earth dist.	3591 Jan 06 17:23	17° $\text{E}$ 23'53	4.09919 AU	conjunction	3596 Dec 29 18:17	8° $\text{Z}$ 09'58	0°19'46
opposition	3591 Jan 08 04:57	17° $\text{E}$ 11'46	-0°15'08	minimum elong	3596 Dec 29 18:18	8° $\text{Z}$ 09'59	0°19'45
direct	3591 Mar 07 21:50	12° $\text{E}$ 12'51		morning rise	3597 Jan 11 09:45	11° $\text{Z}$ 00'13	
asc. node	3591 Apr 29 18:34	16° $\text{E}$ 28'59		retrograde	3597 May 15 00:33	28° $\text{Z}$ 49'12	
	3591 Jul 07 13:03	0° $\text{Q}$		opposition	3597 Jul 14 20:45	23° $\text{Z}$ 56'33	0°04'37
evening set	3591 Jul 12 10:50	1° $\text{Q}$ 06'26		min. Earth dist.	3597 Jul 16 09:34	23° $\text{Z}$ 44'47	4.24838 AU
				desc. node	3597 Aug 19 18:19	19° $\text{Z}$ 59'07	
conjunction	3591 Jul 26 04:24	4° $\text{Q}$ 13'35	0°07'56	direct	3597 Sep 14 12:54	18° $\text{Z}$ 58'21	
minimum elong	3591 Jul 26 04:23	4° $\text{Q}$ 13'34	0°07'55		3597 Dec 15 07:52	0° $\text{X}$	
behind sun begin	3591 Jul 25 20:56	4° $\text{Q}$ 09'21		evening set	3598 Jan 17 23:31	7° $\text{X}$ 25'31	
behind sun end	3591 Jul 26 11:50	4° $\text{Q}$ 17'47		max. Earth dist.	3598 Jan 28 20:22	9° $\text{X}$ 56'34	6.17132 AU
max. Earth dist.	3591 Jul 28 07:22	4° $\text{Q}$ 42'34	6.17640 AU				
morning rise	3591 Aug 08 21:53	7° $\text{Q}$ 20'26		conjunction	3598 Jan 30 16:44	10° $\text{X}$ 22'21	-0°14'23
	3591 Sep 13 08:23	15° $\text{Q}$		minimum elong	3598 Jan 30 16:43	10° $\text{X}$ 22'20	0°14'22
retrograde	3591 Dec 12 17:06	25° $\text{Q}$ 50'32		behind sun begin	3598 Jan 30 12:50	10° $\text{X}$ 20'06	
min. Earth dist.	3592 Feb 09 09:56	20° $\text{Q}$ 56'51	4.25352 AU	behind sun end	3598 Jan 30 20:36	10° $\text{X}$ 24'35	
opposition	3592 Feb 10 11:44	20° $\text{Q}$ 48'11	0°36'34	morning rise	3598 Feb 12 10:13	13° $\text{X}$ 19'34	
direct	3592 Apr 10 10:57	15° $\text{Q}$ 46'54			3598 Feb 19 16:54	15° $\text{X}$	
	3592 Jul 27 16:27	0° $\text{M}$			3598 May 11 18:27	0° $\text{K}$	
evening set	3592 Aug 15 02:55	3° $\text{M}$ 58'27		retrograde	3598 Jun 19 12:36	2° $\text{K}$ 17'11	
					3598 Jul 28 15:18	30° $\text{R}$ $\text{X}$	
conjunction	3592 Aug 28 15:56	6° $\text{M}$ 57'14	0°39'33	opposition	3598 Aug 19 02:31	27° $\text{X}$ 22'18	-0°46'16
minimum elong	3592 Aug 28 15:54	6° $\text{M}$ 57'13	0°39'33	min. Earth dist.	3598 Aug 20 01:30	27° $\text{X}$ 14'51	4.09462 AU
max. Earth dist.	3592 Aug 29 17:50	7° $\text{M}$ 11'30	6.32620 AU	direct	3598 Oct 18 08:27	22° $\text{X}$ 26'34	
morning rise	3592 Sep 11 03:37	9° $\text{M}$ 55'02			3598 Dec 29 16:39	0° $\text{K}$	
retrograde	3593 Jan 11 18:37	27° $\text{M}$ 22'54		evening set	3599 Feb 20 20:37	11° $\text{K}$ 37'10	
opposition	3593 Mar 12 21:21	22° $\text{M}$ 24'06	1°13'49				
min. Earth dist.	3593 Mar 12 13:22	22° $\text{M}$ 26'45	4.38718 AU	conjunction	3599 Mar 05 17:27	14° $\text{K}$ 41'39	-0°45'17
direct	3593 May 13 05:02	17° $\text{M}$ 21'34		minimum elong	3599 Mar 05 17:25	14° $\text{K}$ 41'38	0°45'17
	3593 Aug 23 18:57	0° $\text{Q}$		max. Earth dist.	3599 Mar 04 23:06	14° $\text{K}$ 30'40	6.02721 AU

morning rise	3599 Mar 18 15:46	17° $\Upsilon$ 47'14
	3599 May 13 09:19	0° $\Upsilon$
retrograde	3599 Jul 27 06:28	7° $\Upsilon$ 54'16
opposition	3599 Sep 25 08:53	2° $\Upsilon$ 56'00 -1°23'42
min. Earth dist.	3599 Sep 25 10:33	2° $\Upsilon$ 55'27 3.97405 AU
	3599 Oct 19 04:57	30° $\Upsilon$
direct	3599 Nov 23 05:26	28° $\Upsilon$ 02'03
	3599 Dec 27 19:01	0° $\Upsilon$
evening set	3600 Mar 27 21:48	17° $\Upsilon$ 46'01
conjunction	3600 Apr 10 01:05	20° $\Upsilon$ 57'21 -1°00'29
minimum elong	3600 Apr 10 01:05	20° $\Upsilon$ 57'21 1°00'30
max. Earth dist.	3600 Apr 10 16:26	21° $\Upsilon$ 06'41 5.94144 AU
morning rise	3600 Apr 23 07:15	24° $\Upsilon$ 10'19
	3600 May 18 00:34	0° $\Upsilon$
retrograde	3600 Sep 02 18:21	14° $\Upsilon$ 56'05
opposition	3600 Nov 01 11:50	9° $\Upsilon$ 53'58 -1°29'14
min. Earth dist.	3600 Oct 31 13:36	10° $\Upsilon$ 01'27 3.93419 AU
direct	3600 Dec 29 09:39	4° $\Upsilon$ 59'52
	3601 Mar 22 05:40	15° $\Upsilon$
evening set	3601 May 04 10:53	24° $\Upsilon$ 50'29
conjunction	3601 May 17 22:12	28° $\Upsilon$ 05'11 -0°51'55
minimum elong	3601 May 17 22:14	28° $\Upsilon$ 05'12 0°51'55
max. Earth dist.	3601 May 19 19:40	28° $\Upsilon$ 32'36 5.95079 AU
	3601 May 25 20:49	0° $\Upsilon$
morning rise	3601 May 31 12:33	1° $\Upsilon$ 21'20
retrograde	3601 Oct 10 05:42	21° $\Upsilon$ 52'13
min. Earth dist.	3601 Dec 07 07:57	16° $\Upsilon$ 59'30 3.99207 AU
opposition	3601 Dec 08 19:06	16° $\Upsilon$ 47'31 -0°58'43