

retrograde	3600 Jan 26 13:36	16° $\underline{\text{U}}$ 51'21			3606 May 18 10:59	30° R Z	
opposition	3600 Apr 02 12:55	13° $\underline{\text{U}}$ 27'35	2°28'27	opposition	3606 Jun 17 21:20	27° Z 53'56	1°43'47
min. Earth dist.	3600 Apr 02 11:21	13° $\underline{\text{U}}$ 27'54	8.34629 AU	min. Earth dist.	3606 Jun 17 21:54	27° Z 53'49	8.89774 AU
direct	3600 Jun 10 13:18	9° $\underline{\text{U}}$ 59'11		direct	3606 Aug 27 18:44	24° Z 32'23	
evening set	3600 Sep 24 18:40	17° $\underline{\text{U}}$ 57'12			3606 Nov 23 02:40	0° Z	
				evening set	3606 Dec 09 01:41	1° Z 48'37	
conjunction	3600 Oct 12 08:09	20° $\underline{\text{U}}$ 08'31	2°05'19				
minimum elong	3600 Oct 12 08:08	20° $\underline{\text{U}}$ 08'31	2°05'19	conjunction	3606 Dec 25 20:53	3° Z 48'09	1°13'53
max. Earth dist.	3600 Oct 12 09:35	20° $\underline{\text{U}}$ 08'58	10.39284 AU	minimum elong	3606 Dec 25 20:55	3° Z 48'10	1°13'52
morning rise	3600 Oct 29 17:08	22° $\underline{\text{U}}$ 18'30		max. Earth dist.	3606 Dec 25 19:50	3° Z 47'50	10.92760 AU
retrograde	3601 Feb 07 15:07	29° $\underline{\text{U}}$ 54'07		morning rise	3607 Jan 11 13:43	5° Z 47'00	
opposition	3601 Apr 15 21:22	26° $\underline{\text{U}}$ 31'37	2°39'33	retrograde	3607 Apr 21 12:54	12° Z 50'42	
min. Earth dist.	3601 Apr 15 20:35	26° $\underline{\text{U}}$ 31'46	8.44341 AU	opposition	3607 Jun 30 06:08	9° Z 33'05	1°16'32
direct	3601 Jun 24 09:04	23° $\underline{\text{U}}$ 04'05		min. Earth dist.	3607 Jun 30 07:23	9° Z 32'51	8.95397 AU
	3601 Sep 30 17:04	0° M		direct	3607 Sep 09 05:20	6° Z 12'32	
evening set	3601 Oct 08 09:59	0° M 55'36		evening set	3607 Dec 20 18:52	13° Z 23'35	
conjunction	3601 Oct 25 19:10	3° M 04'22	2°11'10	conjunction	3608 Jan 06 12:41	15° Z 22'11	0°50'26
minimum elong	3601 Oct 25 19:09	3° M 04'22	2°11'10	minimum elong	3608 Jan 06 12:43	15° Z 22'12	0°50'26
max. Earth dist.	3601 Oct 25 19:45	3° M 04'33	10.49256 AU	max. Earth dist.	3608 Jan 06 10:52	15° Z 21'39	10.97506 AU
morning rise	3601 Nov 11 23:51	5° M 11'48		morning rise	3608 Jan 23 04:56	17° Z 20'19	
retrograde	3602 Feb 20 10:00	12° M 40'02		retrograde	3608 May 02 11:40	24° Z 22'47	
opposition	3602 Apr 29 01:09	9° M 18'46	2°42'25	opposition	3608 Jul 11 12:45	21° Z 05'10	0°46'29
min. Earth dist.	3602 Apr 29 01:04	9° M 18'47	8.54471 AU	min. Earth dist.	3608 Jul 11 13:52	21° Z 04'58	8.99167 AU
direct	3602 Jul 07 23:35	5° M 52'19		direct	3608 Sep 20 11:40	17° Z 45'28	
evening set	3602 Oct 21 15:38	13° M 36'38		evening set	3608 Dec 31 08:40	24° Z 52'28	
	3602 Nov 02 01:12	15° M					
conjunction	3602 Nov 07 20:54	15° M 43'00	2°10'28	conjunction	3609 Jan 17 01:36	26° Z 50'29	0°25'08
minimum elong	3602 Nov 07 20:54	15° M 43'00	2°10'29	minimum elong	3609 Jan 17 01:37	26° Z 50'29	0°25'08
max. Earth dist.	3602 Nov 07 20:33	15° M 42'53	10.59409 AU	max. Earth dist.	3609 Jan 17 00:10	26° Z 50'04	11.00286 AU
morning rise	3602 Nov 24 21:57	17° M 48'05		morning rise	3609 Feb 02 17:30	28° Z 48'15	
retrograde	3603 Mar 04 23:34	25° M 09'27			3609 Feb 13 05:21	0° \approx	
opposition	3603 May 12 00:17	21° M 49'18	2°37'25	retrograde	3609 May 14 10:18	5° \approx 50'57	
min. Earth dist.	3603 May 12 00:18	21° M 49'17	8.64525 AU	opposition	3609 Jul 23 18:27	2° \approx 33'04	0°14'46
direct	3603 Jul 21 07:25	18° M 24'05		min. Earth dist.	3609 Jul 23 19:23	2° \approx 32'54	9.00883 AU
evening set	3603 Nov 03 11:48	26° M 00'52		direct	3609 Sep 01 05:27	30° R Z	
					3609 Oct 02 13:00	29° Z 14'02	
conjunction	3603 Nov 20 13:48	28° M 05'05	2°03'40		3609 Nov 02 07:44	0° \approx	
minimum elong	3603 Nov 20 13:49	28° M 05'06	2°03'40	evening set	3610 Jan 11 20:37	6° \approx 18'19	
max. Earth dist.	3603 Nov 20 13:13	28° M 04'55	10.69257 AU	desc. node	3610 Jan 12 12:07	6° \approx 22'49	
	3603 Dec 06 08:43	0° Z		conjunction	3610 Jan 28 12:54	8° \approx 16'05	-0°01'10
morning rise	3603 Dec 07 11:51	0° Z 08'07		minimum elong	3610 Jan 28 12:54	8° \approx 16'05	0°01'09
retrograde	3604 Mar 16 07:33	7° Z 23'25		behind sun begin	3610 Jan 28 05:56	8° \approx 14'03	
opposition	3604 May 23 18:58	4° Z 04'13	2°25'20	behind sun end	3610 Jan 28 19:53	8° \approx 18'08	
min. Earth dist.	3604 May 23 18:38	4° Z 04'17	8.74022 AU	max. Earth dist.	3610 Jan 28 11:19	8° \approx 15'41	11.00927 AU
direct	3604 Aug 02 10:06	0° Z 40'16		morning rise	3610 Feb 14 04:52	10° \approx 13'49	
evening set	3604 Nov 14 23:31	8° Z 09'40			3610 Apr 02 04:07	15° \approx	
				retrograde	3610 May 26 11:13	17° \approx 18'20	
conjunction	3604 Dec 01 22:50	10° Z 12'00	1°51'25		3610 Jul 22 05:55	15° R \approx	
minimum elong	3604 Dec 01 22:52	10° Z 12'01	1°51'24	opposition	3610 Aug 05 00:03	13° \approx 59'58	-0°17'29
max. Earth dist.	3604 Dec 01 22:47	10° Z 11'59	10.78340 AU	min. Earth dist.	3610 Aug 05 01:32	13° \approx 59'41	9.00431 AU
morning rise	3604 Dec 18 18:24	12° Z 13'17		direct	3610 Oct 14 13:10	10° \approx 41'20	
retrograde	3605 Mar 28 13:04	19° Z 23'32			3610 Dec 29 11:13	15° \approx	
opposition	3605 Jun 05 09:45	16° Z 05'05	2°07'06	evening set	3611 Jan 23 08:35	17° \approx 44'25	
min. Earth dist.	3605 Jun 05 09:35	16° Z 05'07	8.82551 AU				
direct	3605 Aug 15 06:08	12° Z 42'24		conjunction	3611 Feb 09 00:26	19° \approx 42'16	-0°27'21
evening set	3605 Nov 27 03:46	20° Z 04'50		minimum elong	3611 Feb 09 00:25	19° \approx 42'16	0°27'20
				max. Earth dist.	3611 Feb 08 21:39	19° \approx 41'27	10.99397 AU
conjunction	3605 Dec 14 00:50	22° Z 05'37	1°34'31	morning rise	3611 Feb 25 16:59	21° \approx 40'20	
minimum elong	3605 Dec 14 00:52	22° Z 05'38	1°34'30	retrograde	3611 Jun 07 13:37	28° \approx 48'04	
max. Earth dist.	3605 Dec 14 00:42	22° Z 05'35	10.86280 AU	opposition	3611 Aug 17 06:18	25° \approx 28'59	-0°49'09
morning rise	3605 Dec 30 18:40	24° Z 05'30		min. Earth dist.	3611 Aug 17 08:43	25° \approx 28'32	8.97861 AU
	3606 Mar 02 17:16	0° Z		direct	3611 Oct 26 11:23	22° \approx 10'33	
retrograde	3606 Apr 09 15:07	1° Z 11'49		evening set	3612 Feb 03 21:51	29° \approx 13'51	

	3612 Feb 10 11:04	0°♄		minimum elong	3618 May 03 14:07	13°♄55'00 2°10'49
				max. Earth dist.	3618 May 03 14:27	13°♄55'06 10.45079 AU
conjunction	3612 Feb 20 13:43	1°♄12'07 -0°52'34			3618 May 12 06:14	15°♄
minimum elong	3612 Feb 20 13:41	1°♄12'07 0°52'34		morning rise	3618 May 20 22:28	16°♄04'18
max. Earth dist.	3612 Feb 20 10:31	1°♄11'10 10.95809 AU		retrograde	3618 Sep 04 03:50	23°♄59'58
morning rise	3612 Mar 08 07:08	3°♄10'51		opposition	3618 Nov 12 14:44	20°♄32'27 -2°38'47
retrograde	3612 Jun 18 18:33	10°♄23'11		min. Earth dist.	3618 Nov 12 14:07	20°♄32'34 8.40203 AU
opposition	3612 Aug 28 14:18	7°♄03'06 -1°19'05		direct	3619 Jan 18 23:07	17°♄09'29
min. Earth dist.	3612 Aug 28 16:34	7°♄02'41 8.93324 AU		evening set	3619 Apr 29 18:38	24°♄46'50
direct	3612 Nov 06 11:18	3°♄44'36				
evening set	3613 Feb 14 13:39	10°♄49'28		conjunction	3619 May 17 03:00	26°♄57'20 -2°04'09
				minimum elong	3619 May 17 03:02	26°♄57'21 2°04'09
conjunction	3613 Mar 03 06:04	12°♄48'30 -1°15'52		max. Earth dist.	3619 May 17 03:52	26°♄57'37 10.35221 AU
minimum elong	3613 Mar 03 06:01	12°♄48'29 1°15'52		morning rise	3619 Jun 03 15:40	29°♄09'14
max. Earth dist.	3613 Mar 03 03:46	12°♄47'49 10.90342 AU			3619 Jun 10 13:39	0°♄
morning rise	3613 Mar 20 00:35	14°♄48'12		retrograde	3619 Sep 18 03:46	7°♄11'35
retrograde	3613 Jul 01 06:31	22°♄06'19		opposition	3619 Nov 26 02:27	3°♄43'13 -2°26'36
opposition	3613 Sep 10 00:45	18°♄45'03 -1°46'08		min. Earth dist.	3619 Nov 26 01:17	3°♄43'27 8.30695 AU
min. Earth dist.	3613 Sep 10 02:10	18°♄44'47 8.87026 AU		direct	3620 Feb 01 02:06	0°♄19'07
direct	3613 Nov 18 12:43	15°♄26'16		evening set	3620 May 12 12:07	8°♄03'51
evening set	3614 Feb 26 09:44	22°♄33'58				
				conjunction	3620 May 30 01:10	10°♄16'58 -1°50'47
conjunction	3614 Mar 15 03:08	24°♄34'07 -1°36'16		minimum elong	3620 May 30 01:13	10°♄16'59 1°50'48
minimum elong	3614 Mar 15 03:05	24°♄34'06 1°36'16		max. Earth dist.	3620 May 30 02:09	10°♄17'17 10.26232 AU
max. Earth dist.	3614 Mar 15 01:34	24°♄33'38 10.83232 AU		morning rise	3620 Jun 16 18:22	12°♄31'25
morning rise	3614 Mar 31 23:14	26°♄35'07		retrograde	3620 Oct 01 08:08	20°♄39'09
	3614 May 01 22:50	0°♄		opposition	3620 Dec 08 18:38	17°♄10'12 -2°06'12
retrograde	3614 Jul 13 22:51	3°♄59'57		min. Earth dist.	3620 Dec 08 17:20	17°♄10'28 8.22306 AU
opposition	3614 Sep 22 14:14	0°♄37'24 -2°09'08		direct	3621 Feb 13 12:50	13°♄44'56
min. Earth dist.	3614 Sep 22 15:07	0°♄37'14 8.79232 AU		evening set	3621 May 26 14:13	21°♄36'49
	3614 Sep 30 21:05	30°♄				
direct	3614 Nov 30 14:35	27°♄18'05		conjunction	3621 Jun 13 08:00	23°♄52'25 -1°31'04
	3615 Jan 27 02:58	0°♄		minimum elong	3621 Jun 13 08:04	23°♄52'26 1°31'05
evening set	3615 Mar 10 11:12	4°♄29'56		max. Earth dist.	3621 Jun 13 08:59	23°♄52'43 10.18623 AU
				morning rise	3621 Jul 01 05:30	26°♄09'10
conjunction	3615 Mar 27 06:03	6°♄31'30 -1°52'49			3621 Aug 03 00:38	0°♄
minimum elong	3615 Mar 27 06:01	6°♄31'29 1°52'49		retrograde	3621 Oct 15 14:41	4°♄20'37
max. Earth dist.	3615 Mar 27 04:07	6°♄30'55 10.74777 AU		opposition	3621 Dec 22 14:32	0°♄51'24 -1°38'16
morning rise	3615 Apr 13 04:24	8°♄34'09		min. Earth dist.	3621 Dec 22 13:21	0°♄51'39 8.15526 AU
retrograde	3615 Jul 26 20:32	16°♄06'25			3622 Jan 02 05:12	30°♄
opposition	3615 Oct 05 07:38	12°♄42'33 -2°26'55		direct	3622 Feb 27 06:48	27°♄25'03
min. Earth dist.	3615 Oct 05 08:43	12°♄42'20 8.70254 AU			3622 Apr 22 13:08	0°♄
direct	3615 Dec 12 20:59	9°♄22'31		evening set	3622 Jun 10 00:20	5°♄23'26
evening set	3616 Mar 21 19:04	16°♄39'35				
				conjunction	3622 Jun 27 22:22	7°♄41'07 -1°05'54
conjunction	3616 Apr 07 16:06	18°♄42'57 -2°04'37		minimum elong	3622 Jun 27 22:25	7°♄41'08 1°05'54
minimum elong	3616 Apr 07 16:04	18°♄42'57 2°04'36		max. Earth dist.	3622 Jun 27 23:44	7°♄41'33 10.12844 AU
max. Earth dist.	3616 Apr 07 14:13	18°♄42'23 10.65324 AU		morning rise	3622 Jul 15 23:18	9°♄59'42
morning rise	3616 Apr 24 17:16	20°♄47'34		retrograde	3622 Oct 29 23:06	18°♄12'55
retrograde	3616 Aug 08 00:46	28°♄27'43		opposition	3623 Jan 05 13:06	14°♄43'47 -1°04'14
opposition	3616 Oct 17 05:22	25°♄02'33 -2°38'23		min. Earth dist.	3623 Jan 05 11:38	14°♄44'05 8.10784 AU
min. Earth dist.	3616 Oct 17 06:26	25°♄02'21 8.60466 AU		direct	3623 Mar 13 05:58	11°♄16'29
direct	3616 Dec 24 07:53	21°♄41'39		evening set	3623 Jun 24 16:51	19°♄20'18
evening set	3617 Apr 03 10:26	29°♄04'52				
	3617 Apr 10 22:56	0°♄		conjunction	3623 Jul 12 18:12	21°♄39'29 -0°36'37
				minimum elong	3623 Jul 12 18:14	21°♄39'30 0°36'38
conjunction	3617 Apr 20 10:34	1°♄10'21 -2°10'50		max. Earth dist.	3623 Jul 12 20:27	21°♄40'13 10.09274 AU
minimum elong	3617 Apr 20 10:33	1°♄10'21 2°10'50		morning rise	3623 Jul 30 21:17	23°♄59'13
max. Earth dist.	3617 Apr 20 09:37	1°♄10'04 10.55275 AU			3623 Sep 24 00:47	0°♄
morning rise	3617 May 07 15:04	3°♄17'13		retrograde	3623 Nov 13 08:24	2°♄12'12
retrograde	3617 Aug 21 10:44	11°♄05'19			3624 Jan 03 16:12	30°♄
opposition	3617 Oct 30 07:40	7°♄38'54 -2°42'35		opposition	3624 Jan 19 13:30	28°♄43'27 -0°26'05
min. Earth dist.	3617 Oct 30 08:08	7°♄38'48 8.50296 AU		min. Earth dist.	3624 Jan 19 11:17	28°♄43'54 8.08402 AU
direct	3618 Jan 06 00:43	4°♄17'00		direct	3624 Mar 26 08:45	25°♄15'24
evening set	3618 Apr 16 10:05	11°♄47'05			3624 Jun 10 07:35	0°♄
				evening set	3624 Jul 08 13:47	3°♄23'13
conjunction	3618 May 03 14:06	13°♄55'00 -2°10'49				

conjunction	3624 Jul 26 17:03	5°Ω43'08	-0°05'05	direct	3630 Jun 18 16:31	17°♌35'08	
minimum elong	3624 Jul 26 17:04	5°Ω43'08	0°05'05	evening set	3630 Oct 02 19:38	25°♌29'47	
behind sun begin	3624 Jul 26 09:56	5°Ω40'51					
behind sun end	3624 Jul 27 00:11	5°Ω45'25		conjunction	3630 Oct 20 06:41	27°♌39'40	2°09'14
max. Earth dist.	3624 Jul 26 20:09	5°Ω44'06	10.08154 AU	minimum elong	3630 Oct 20 06:40	27°♌39'40	2°09'14
morning rise	3624 Aug 13 20:44	8°Ω03'11		max. Earth dist.	3630 Oct 20 06:16	27°♌39'33	10.45375 AU
asc. node	3624 Sep 24 00:47	12°Ω47'49		morning rise	3630 Nov 06 13:21	29°♌48'14	
	3624 Oct 20 17:12	15°Ω			3630 Nov 08 03:57	0°♍	
retrograde	3624 Nov 26 17:04	16°Ω13'55		retrograde	3631 Feb 15 04:56	7°♍19'58	
	3625 Jan 02 23:41	15°♌		opposition	3631 Apr 23 15:42	3°♍58'34	2°41'56
opposition	3625 Feb 01 14:23	12°Ω45'49	0°13'45	min. Earth dist.	3631 Apr 23 15:22	3°♍58'38	8.50357 AU
min. Earth dist.	3625 Feb 01 11:34	12°Ω46'24	8.08540 AU	direct	3631 Jul 02 09:42	0°♍32'03	
direct	3625 Apr 09 15:13	9°Ω17'14		evening set	3631 Oct 16 06:05	8°♍19'54	
	3625 Jul 03 10:21	15°Ω					
evening set	3625 Jul 23 13:00	17°Ω27'23		conjunction	3631 Nov 02 13:14	10°♍27'23	2°11'23
				minimum elong	3631 Nov 02 13:14	10°♍27'23	2°11'24
conjunction	3625 Aug 10 16:31	19°Ω47'09	0°26'54	max. Earth dist.	3631 Nov 02 12:55	10°♍27'17	10.55085 AU
minimum elong	3625 Aug 10 16:30	19°Ω47'09	0°26'54	morning rise	3631 Nov 19 15:49	12°♍33'32	
max. Earth dist.	3625 Aug 10 20:04	19°Ω48'18	10.09555 AU		3631 Dec 10 15:12	15°♍	
morning rise	3625 Aug 28 19:06	22°Ω06'40		retrograde	3632 Feb 27 23:00	19°♍58'18	
	3625 Nov 25 12:15	0°♎		opposition	3632 May 05 17:19	16°♍37'56	2°40'20
retrograde	3625 Dec 10 21:42	0°♎13'15		min. Earth dist.	3632 May 05 17:42	16°♍37'52	8.60031 AU
	3625 Dec 26 07:22	30°♌			3632 May 27 16:34	15°♌	
opposition	3626 Feb 15 14:26	26°Ω46'03	0°52'38	direct	3632 Jul 14 19:35	13°♍12'25	
min. Earth dist.	3626 Feb 15 11:29	26°Ω46'40	8.11187 AU		3632 Aug 31 01:16	15°♍	
direct	3626 Apr 23 23:28	23°Ω17'12		evening set	3632 Oct 28 07:14	20°♍53'01	
	3626 Jul 26 15:50	0°♎					
evening set	3626 Aug 07 11:29	1°♎27'46		conjunction	3632 Nov 14 10:49	22°♍58'17	2°07'12
				minimum elong	3632 Nov 14 10:50	22°♍58'18	2°07'13
conjunction	3626 Aug 25 13:33	3°♎46'32	0°57'02	max. Earth dist.	3632 Nov 14 09:55	22°♍58'01	10.64625 AU
minimum elong	3626 Aug 25 13:31	3°♎46'31	0°57'02	morning rise	3632 Dec 01 10:03	25°♍02'18	
max. Earth dist.	3626 Aug 25 17:02	3°♎47'39	10.13380 AU		3633 Jan 17 12:08	0°♎	
morning rise	3626 Sep 12 13:31	6°♎04'41		retrograde	3633 Mar 11 09:33	2°♎20'42	
retrograde	3626 Dec 24 21:24	14°♎05'36			3633 May 05 15:31	30°♌	
opposition	3627 Mar 01 12:41	10°♎39'29	1°28'03	opposition	3633 May 18 14:42	29°♍01'13	2°31'16
min. Earth dist.	3627 Mar 01 10:15	10°♎39'58	8.16161 AU	min. Earth dist.	3633 May 18 15:59	29°♍00'58	8.69320 AU
direct	3627 May 08 07:33	7°♎10'35		direct	3633 Jul 28 01:13	25°♍36'44	
evening set	3627 Aug 22 06:11	15°♎19'32			3633 Oct 12 17:29	0°♎	
				evening set	3633 Nov 09 23:22	3°♎09'58	
conjunction	3627 Sep 09 05:24	17°♎36'36	1°23'35				
minimum elong	3627 Sep 09 05:21	17°♎36'35	1°23'35	conjunction	3633 Nov 26 23:50	5°♎13'15	1°57'14
max. Earth dist.	3627 Sep 09 08:02	17°♎37'26	10.19362 AU	minimum elong	3633 Nov 26 23:51	5°♎13'16	1°57'14
morning rise	3627 Sep 27 01:40	19°♎52'44		max. Earth dist.	3633 Nov 26 21:57	5°♎12'41	10.73589 AU
retrograde	3628 Jan 07 15:16	27°♎46'52		morning rise	3633 Dec 13 20:30	7°♎15'25	
opposition	3628 Mar 14 07:45	24°♎21'53	1°57'55	retrograde	3634 Mar 23 15:39	14°♎28'22	
min. Earth dist.	3628 Mar 14 06:09	24°♎22'13	8.23096 AU	opposition	3634 May 31 07:56	11°♎09'32	2°15'36
direct	3628 May 21 13:37	20°♎53'12		min. Earth dist.	3634 May 31 09:39	11°♎09'13	8.77831 AU
evening set	3628 Sep 04 18:59	28°♎58'44		direct	3634 Aug 10 01:35	7°♎46'06	
	3628 Sep 12 22:24	0°♏		evening set	3634 Nov 22 07:22	15°♎12'13	
conjunction	3628 Sep 22 14:26	1°♏13'35	1°45'03	conjunction	3634 Dec 09 05:22	17°♎13'50	1°42'14
minimum elong	3628 Sep 22 14:23	1°♏13'34	1°45'02	minimum elong	3634 Dec 09 05:24	17°♎13'51	1°42'15
max. Earth dist.	3628 Sep 22 15:42	1°♏13'59	10.27056 AU	max. Earth dist.	3634 Dec 09 03:02	17°♎13'08	10.81602 AU
morning rise	3628 Oct 10 06:18	3°♏27'17		morning rise	3634 Dec 26 00:10	19°♎14'29	
retrograde	3629 Jan 20 02:32	11°♏13'55		retrograde	3635 Apr 04 18:43	26°♎23'02	
opposition	3629 Mar 27 22:44	7°♏50'09	2°20'41	opposition	3635 Jun 12 21:16	23°♎04'37	1°54'20
min. Earth dist.	3629 Mar 27 21:57	7°♏50'19	8.31468 AU	min. Earth dist.	3635 Jun 12 22:34	23°♎04'22	8.85214 AU
direct	3629 Jun 04 17:03	4°♏21'56		direct	3635 Aug 22 19:15	19°♎42'11	
evening set	3629 Sep 18 23:53	12°♏22'35		evening set	3635 Dec 04 08:20	27°♎01'46	
conjunction	3629 Oct 06 15:08	14°♏34'58	2°00'26	conjunction	3635 Dec 21 04:31	29°♎02'02	1°23'06
minimum elong	3629 Oct 06 15:05	14°♏34'58	2°00'26	minimum elong	3635 Dec 21 04:34	29°♎02'03	1°23'05
max. Earth dist.	3629 Oct 06 15:07	14°♏34'58	10.35898 AU	max. Earth dist.	3635 Dec 21 02:50	29°♎01'32	10.88332 AU
morning rise	3629 Oct 24 02:20	16°♏46'06			3635 Dec 29 06:05	0°♏	
retrograde	3630 Feb 02 06:09	24°♏25'09		morning rise	3636 Jan 06 21:55	1°♏01'32	
opposition	3630 Apr 10 09:27	21°♏02'36	2°35'27	retrograde	3636 Apr 15 19:17	8°♏06'55	
min. Earth dist.	3630 Apr 10 08:59	21°♏02'41	8.40706 AU	opposition	3636 Jun 24 07:35	4°♏48'42	1°28'37


























































































































min. Earth dist.	3636 Jun 24 08:33	4°♂48'32	8.91166 AU	morning rise	3642 Mar 15 09:56	10°♂06'33	
direct	3636 Sep 03 07:47	1°♂27'12		retrograde	3642 Jun 26 08:59	17°♂22'19	
evening set	3636 Dec 15 03:51	8°♂41'09		opposition	3642 Sep 05 03:02	14°♂01'22	-1°35'08
				min. Earth dist.	3642 Sep 05 03:39	14°♂01'15	8.89212 AU
conjunction	3636 Dec 31 22:31	10°♂40'23	1°00'43	direct	3642 Nov 13 18:00	10°♂42'34	
minimum elong	3636 Dec 31 22:33	10°♂40'23	1°00'43	evening set	3643 Feb 21 18:05	17°♂49'10	
max. Earth dist.	3636 Dec 31 21:16	10°♂40'00	10.93507 AU				
morning rise	3637 Jan 17 14:58	12°♂39'01		conjunction	3643 Mar 10 10:50	19°♂48'49	-1°28'02
retrograde	3637 Apr 27 19:02	19°♂42'36		minimum elong	3643 Mar 10 10:48	19°♂48'49	1°28'02
opposition	3637 Jul 06 15:39	16°♂24'25	0°59'35	max. Earth dist.	3643 Mar 10 09:30	19°♂48'25	10.86084 AU
min. Earth dist.	3637 Jul 06 16:55	16°♂24'11	8.95474 AU	morning rise	3643 Mar 27 06:21	21°♂49'17	
direct	3637 Sep 15 14:46	13°♂03'44		retrograde	3643 Jul 08 21:07	29°♂11'11	
evening set	3637 Dec 26 19:24	20°♂13'09		opposition	3643 Sep 17 15:08	25°♂49'14	-1°59'55
				min. Earth dist.	3643 Sep 17 15:46	25°♂49'07	8.82705 AU
conjunction	3638 Jan 12 12:48	22°♂11'39	0°36'04	direct	3643 Nov 25 19:44	22°♂30'14	
minimum elong	3638 Jan 12 12:50	22°♂11'40	0°36'04	evening set	3644 Mar 04 17:05	29°♂40'16	
max. Earth dist.	3638 Jan 12 10:52	22°♂11'05	10.96953 AU		3644 Mar 07 11:30	0°♀	
morning rise	3638 Jan 29 04:56	24°♂09'48					
	3638 Apr 01 00:25	0°♂		conjunction	3644 Mar 21 11:10	1°♀41'09	-1°46'17
retrograde	3638 May 09 16:35	1°♂13'00		minimum elong	3644 Mar 21 11:08	1°♀41'08	1°46'17
	3638 Jun 18 09:48	30°♂		max. Earth dist.	3644 Mar 21 10:54	1°♀41'04	10.78857 AU
opposition	3638 Jul 18 22:14	27°♂54'38	0°28'23	morning rise	3644 Apr 07 08:28	3°♀43'02	
min. Earth dist.	3638 Jul 18 24:00	27°♂54'18	8.97997 AU	retrograde	3644 Jul 20 16:29	11°♀11'57	
direct	3638 Sep 27 17:54	24°♂34'39		opposition	3644 Sep 29 06:50	7°♀48'53	-2°19'58
	3638 Dec 23 11:34	0°♂		min. Earth dist.	3644 Sep 29 06:32	7°♀48'56	8.74885 AU
evening set	3639 Jan 07 08:20	1°♂40'48		direct	3644 Dec 07 01:45	4°♀29'30	
				evening set	3645 Mar 16 21:55	11°♀44'02	
conjunction	3639 Jan 24 00:54	3°♂38'53	0°10'06				
minimum elong	3639 Jan 24 00:54	3°♂38'53	0°10'07	conjunction	3645 Apr 02 17:59	13°♀46'30	-2°00'09
behind sun begin	3639 Jan 23 19:16	3°♂37'13		minimum elong	3645 Apr 02 17:57	13°♀46'30	2°00'08
behind sun end	3639 Jan 24 06:33	3°♂40'32		max. Earth dist.	3645 Apr 02 18:46	13°♀46'45	10.70469 AU
max. Earth dist.	3639 Jan 23 22:40	3°♂38'14	10.98548 AU	morning rise	3645 Apr 19 17:39	15°♀50'08	
morning rise	3639 Feb 09 17:06	5°♂36'51		retrograde	3645 Aug 02 19:47	23°♀26'34	
retrograde	3639 May 21 16:08	12°♂41'09		opposition	3645 Oct 12 02:34	20°♀02'22	-2°34'09
desc. node	3639 Jun 16 13:53	12°♂09'07		min. Earth dist.	3645 Oct 12 01:28	20°♀02'35	8.66071 AU
opposition	3639 Jul 31 04:04	9°♂22'23	-0°03'50	direct	3645 Dec 19 09:38	16°♀42'24	
min. Earth dist.	3639 Jul 31 05:29	9°♂22'08	8.98626 AU	evening set	3646 Mar 29 10:01	24°♀02'27	
direct	3639 Oct 09 20:39	6°♂02'58					
evening set	3640 Jan 18 20:22	13°♂07'10		conjunction	3646 Apr 15 08:40	26°♀06'49	-2°08'46
	3640 Feb 03 19:05	15°♂		minimum elong	3646 Apr 15 08:39	26°♀06'48	2°08'46
				max. Earth dist.	3646 Apr 15 09:30	26°♀07'04	10.61277 AU
conjunction	3640 Feb 04 12:32	15°♂05'11	-0°16'20	morning rise	3646 May 02 11:27	28°♀12'29	
minimum elong	3640 Feb 04 12:31	15°♂05'11	0°16'19		3646 May 17 17:30	0°♂	
max. Earth dist.	3640 Feb 04 11:04	15°♂04'45	10.98211 AU	retrograde	3646 Aug 16 03:16	5°♂56'33	
morning rise	3640 Feb 21 04:54	17°♂03'17		opposition	3646 Oct 25 02:34	2°♂31'16	-2°41'27
retrograde	3640 Jun 01 18:10	24°♂10'05		min. Earth dist.	3646 Oct 25 01:28	2°♂31'29	8.56633 AU
opposition	3640 Aug 11 10:06	20°♂50'45	-0°35'55		3646 Nov 30 21:54	30°♂♀	
min. Earth dist.	3640 Aug 11 10:39	20°♂50'39	8.97325 AU	direct	3646 Dec 31 22:26	29°♀10'29	
direct	3640 Oct 20 19:42	17°♂31'45			3647 Jan 31 12:23	0°♂	
evening set	3641 Jan 29 09:04	24°♂35'23		evening set	3647 Apr 11 05:55	6°♂36'50	
conjunction	3641 Feb 15 01:05	26°♂33'36	-0°42'05	conjunction	3647 Apr 28 07:53	8°♂43'24	-2°11'26
minimum elong	3641 Feb 15 01:03	26°♂33'36	0°42'06	minimum elong	3647 Apr 28 07:53	8°♂43'24	2°11'25
max. Earth dist.	3641 Feb 15 00:20	26°♂33'23	10.95951 AU	max. Earth dist.	3647 Apr 28 08:13	8°♂43'30	10.51669 AU
morning rise	3641 Mar 03 18:00	28°♂32'10		morning rise	3647 May 15 14:25	10°♂51'21	
	3641 Mar 16 14:26	0°♂			3647 Jun 21 14:50	15°♂	
retrograde	3641 Jun 13 23:11	5°♂42'51		retrograde	3647 Aug 29 16:32	18°♂42'50	
opposition	3641 Aug 23 17:33	2°♂22'46	-1°06'44	opposition	3647 Nov 07 07:16	15°♂16'31	-2°41'04
min. Earth dist.	3641 Aug 23 17:49	2°♂22'43	8.94148 AU	min. Earth dist.	3647 Nov 07 06:39	15°♂16'38	8.46964 AU
	3641 Sep 28 10:04	30°♂			3647 Nov 10 19:23	15°♂	
direct	3641 Nov 01 18:26	29°♂03'59		direct	3648 Jan 13 18:25	11°♂54'44	
	3641 Dec 05 09:29	0°♂			3648 Mar 14 06:03	15°♂	
evening set	3642 Feb 09 23:47	6°♂08'25		evening set	3648 Apr 23 09:57	19°♂27'52	
conjunction	3642 Feb 26 15:55	8°♂07'12	-1°06'19	conjunction	3648 May 10 16:02	21°♂36'52	-2°07'37
minimum elong	3642 Feb 26 15:53	8°♂07'11	1°06'19	minimum elong	3648 May 10 16:04	21°♂36'53	2°07'37
max. Earth dist.	3642 Feb 26 14:45	8°♂06'51	10.91857 AU	max. Earth dist.	3648 May 10 16:29	21°♂37'01	10.42043 AU

morning rise	3648 May 28 02:45	23°♄47'18	max. Earth dist.	3654 Aug 04 10:56	13°♄48'04	10.09757 AU
	3648 Jul 27 10:10	0°♄		3654 Aug 13 18:02	15°♄	
retrograde	3648 Sep 11 12:04	1°♄45'37	morning rise	3654 Aug 22 13:14	16°♄07'22	
	3648 Oct 28 08:19	30°♄♄	retrograde	3654 Dec 04 22:22	24°♄14'57	
opposition	3648 Nov 19 16:31	28°♄18'21 -2°32'29	opposition	3655 Feb 09 18:12	20°♄47'15	0°35'39
min. Earth dist.	3648 Nov 19 16:05	28°♄18'26 8.37462 AU	min. Earth dist.	3655 Feb 09 17:12	20°♄47'27	8.10573 AU
direct	3649 Jan 25 19:49	24°♄55'27	direct	3655 Apr 18 01:02	17°♄18'18	
	3649 Apr 15 02:41	0°♄	evening set	3655 Aug 01 04:32	25°♄27'54	
evening set	3649 May 06 22:46	2°♄35'43				
conjunction	3649 May 24 09:35	4°♄47'18 -1°57'08	conjunction	3655 Aug 19 07:14	27°♄47'00	0°43'57
minimum elong	3649 May 24 09:38	4°♄47'19 1°57'08	minimum elong	3655 Aug 19 07:12	27°♄46'59	0°43'57
max. Earth dist.	3649 May 24 10:28	4°♄47'34 10.32804 AU	max. Earth dist.	3655 Aug 19 08:13	27°♄47'19	10.11974 AU
morning rise	3649 Jun 11 00:42	7°♄00'16		3655 Sep 05 14:41	0°♄	
retrograde	3649 Sep 25 13:03	15°♄04'25	morning rise	3655 Sep 06 08:38	0°♄05'40	
opposition	3649 Dec 03 05:56	11°♄36'26 -2°15'37	retrograde	3655 Dec 18 22:42	8°♄08'31	
min. Earth dist.	3649 Dec 03 05:12	11°♄36'35 8.28575 AU	opposition	3656 Feb 23 16:20	4°♄41'36	1°12'47
direct	3650 Feb 08 03:22	8°♄12'22	min. Earth dist.	3656 Feb 23 14:59	4°♄41'53	8.13980 AU
evening set	3650 May 20 20:22	15°♄59'49	direct	3656 May 01 08:29	1°♄12'21	
			evening set	3656 Aug 15 00:09	9°♄21'30	
conjunction	3650 Jun 07 12:04	18°♄13'58 -1°40'07	conjunction	3656 Sep 02 00:49	11°♄39'18	1°12'13
minimum elong	3650 Jun 07 12:07	18°♄13'59 1°40'08	minimum elong	3656 Sep 02 00:46	11°♄39'17	1°12'13
max. Earth dist.	3650 Jun 07 13:24	18°♄14'24 10.24458 AU	max. Earth dist.	3656 Sep 02 02:10	11°♄39'44	10.16470 AU
morning rise	3650 Jun 25 07:28	20°♄29'20	morning rise	3656 Sep 19 22:59	13°♄56'19	
retrograde	3650 Oct 09 17:43	28°♄37'59	retrograde	3656 Dec 31 18:56	21°♄53'08	
opposition	3650 Dec 16 23:22	25°♄09'30 -1°50'55	opposition	3657 Mar 08 12:01	18°♄27'12	1°45'17
min. Earth dist.	3650 Dec 16 22:05	25°♄09'46 8.20862 AU	min. Earth dist.	3657 Mar 08 10:23	18°♄27'32	8.19534 AU
direct	3651 Feb 21 17:17	21°♄44'15	direct	3657 May 15 14:21	14°♄57'57	
evening set	3651 Jun 04 02:07	29°♄38'28	evening set	3657 Aug 29 15:11	23°♄04'48	
	3651 Jun 06 22:26	0°♄				
conjunction	3651 Jun 21 22:18	1°♄54'55 -1°17'16	conjunction	3657 Sep 16 12:35	25°♄20'41	1°36'04
minimum elong	3651 Jun 21 22:21	1°♄54'56 1°17'17	minimum elong	3657 Sep 16 12:32	25°♄20'40	1°36'04
max. Earth dist.	3651 Jun 21 23:59	1°♄55'28 10.17574 AU	max. Earth dist.	3657 Sep 16 14:09	25°♄21'11	10.22938 AU
morning rise	3651 Jul 09 21:27	4°♄12'21	morning rise	3657 Oct 04 06:29	27°♄35'31	
retrograde	3651 Oct 24 01:33	12°♄23'44		3657 Oct 24 06:32	0°♄	
opposition	3651 Dec 30 20:00	8°♄55'01 -1°19'29	retrograde	3658 Jan 14 09:39	5°♄25'25	
min. Earth dist.	3651 Dec 30 18:23	8°♄55'20 8.14870 AU	opposition	3658 Mar 22 04:21	2°♄00'36	2°11'22
direct	3652 Mar 06 12:15	5°♄28'36	min. Earth dist.	3658 Mar 22 03:01	2°♄00'52	8.26879 AU
evening set	3652 Jun 17 15:01	13°♄28'45		3658 Apr 17 18:39	30°♄♄	
			direct	3658 May 29 17:44	28°♄31'40	
conjunction	3652 Jul 05 14:53	15°♄47'00 -0°49'42		3658 Jul 10 08:44	0°♄	
minimum elong	3652 Jul 05 14:55	15°♄47'01 0°49'43	evening set	3658 Sep 12 23:19	6°♄34'31	
max. Earth dist.	3652 Jul 05 16:22	15°♄47'29 10.12639 AU				
morning rise	3652 Jul 23 16:53	18°♄05'57	conjunction	3658 Sep 30 16:41	8°♄48'05	1°54'16
retrograde	3652 Nov 06 10:33	26°♄18'02	minimum elong	3658 Sep 30 16:39	8°♄48'04	1°54'16
opposition	3653 Jan 12 18:46	22°♄49'22 -0°43'02	max. Earth dist.	3658 Sep 30 17:56	8°♄48'29	10.30993 AU
min. Earth dist.	3653 Jan 12 17:27	22°♄49'38 8.11020 AU	morning rise	3658 Oct 18 05:56	11°♄00'26	
direct	3653 Mar 20 12:11	19°♄21'53	retrograde	3659 Jan 27 16:40	18°♄42'55	
evening set	3653 Jul 02 09:18	27°♄26'48	opposition	3659 Apr 04 16:46	15°♄19'18	2°29'48
			min. Earth dist.	3659 Apr 04 16:05	15°♄19'26	8.35589 AU
conjunction	3653 Jul 20 11:40	29°♄46'10 -0°19'02	direct	3659 Jun 12 18:13	11°♄50'58	
minimum elong	3653 Jul 20 11:41	29°♄46'10 0°19'03	evening set	3659 Sep 26 22:52	19°♄48'22	
max. Earth dist.	3653 Jul 20 12:47	29°♄46'31 10.09981 AU				
	3653 Jul 22 06:30	0°♄	conjunction	3659 Oct 14 11:56	21°♄59'27	2°06'04
morning rise	3653 Aug 07 15:08	2°♄05'52	minimum elong	3659 Oct 14 11:54	21°♄59'26	2°06'04
retrograde	3653 Nov 20 18:33	10°♄16'38	max. Earth dist.	3659 Oct 14 12:23	21°♄59'35	10.40180 AU
opposition	3654 Jan 26 18:37	6°♄48'19 -0°03'49	morning rise	3659 Oct 31 20:39	24°♄09'12	
min. Earth dist.	3654 Jan 26 17:36	6°♄48'31 8.09561 AU		3659 Dec 27 05:13	0°♄	
asc. node	3654 Mar 04 02:46	4°♄10'42	retrograde	3660 Feb 09 17:26	1°♄44'11	
direct	3654 Apr 03 17:11	3°♄19'57		3660 Mar 26 09:31	30°♄♄	
evening set	3654 Jul 17 06:41	11°♄28'07	opposition	3660 Apr 17 00:41	28°♄21'48	2°40'02
			min. Earth dist.	3660 Apr 17 00:44	28°♄21'47	8.45174 AU
conjunction	3654 Aug 04 10:00	13°♄47'46 0°12'55	direct	3660 Jun 25 13:26	24°♄54'19	
minimum elong	3654 Aug 04 09:59	13°♄47'45 0°12'55		3660 Sep 15 20:33	0°♄	
behind sun begin	3654 Aug 04 05:37	13°♄46'22	evening set	3660 Oct 09 13:19	2°♄45'15	
behind sun end	3654 Aug 04 14:21	13°♄49'09				
			conjunction	3660 Oct 26 22:10	4°♄53'50	2°11'14

minimum elong	3660 Oct 26 22:09	4°♌53'50	2°11'14	morning rise	3667 Jan 24 06:28	19°♊07'34	
max. Earth dist.	3660 Oct 26 21:32	4°♌53'39	10.50002 AU	retrograde	3667 May 04 14:22	26°♊10'30	
morning rise	3660 Nov 13 02:43	7°♌01'06		opposition	3667 Jul 13 15:34	22°♊52'47	0°42'55
retrograde	3661 Feb 21 12:05	14°♌28'48		min. Earth dist.	3667 Jul 13 16:06	22°♊52'41	8.98518 AU
opposition	3661 Apr 30 03:53	11°♌07'35	2°42'04	direct	3667 Sep 22 13:19	19°♊33'04	
min. Earth dist.	3661 Apr 30 03:59	11°♌07'34	8.55128 AU	evening set	3668 Jan 02 10:24	26°♊40'19	
direct	3661 Jul 09 02:57	7°♌41'11					
	3661 Oct 19 06:48	15°♌		conjunction	3668 Jan 19 03:25	28°♊38'27	0°22'08
evening set	3661 Oct 22 18:12	15°♌24'59		minimum elong	3668 Jan 19 03:26	28°♊38'27	0°22'09
				max. Earth dist.	3668 Jan 19 02:26	28°♊38'09	10.99576 AU
conjunction	3661 Nov 08 23:18	17°♌31'13	2°09'52		3668 Jan 30 15:00	0°♊	
minimum elong	3661 Nov 08 23:18	17°♌31'13	2°09'53	morning rise	3668 Feb 04 19:21	0°♊36'19	
max. Earth dist.	3661 Nov 08 22:33	17°♌30'59	10.59963 AU	retrograde	3668 May 15 14:18	7°♊39'36	
morning rise	3661 Nov 26 00:11	19°♌36'11		opposition	3668 Jul 24 21:42	4°♊21'37	0°11'03
retrograde	3662 Mar 06 00:35	26°♌57'12		min. Earth dist.	3668 Jul 24 22:46	4°♊21'26	9.00128 AU
opposition	3662 May 13 02:41	23°♌37'03	2°36'18	direct	3668 Oct 03 15:42	1°♊02'32	
min. Earth dist.	3662 May 13 02:28	23°♌37'05	8.64964 AU	desc. node	3668 Dec 01 02:29	3°♊41'27	
direct	3662 Jul 22 11:19	20°♌11'52		evening set	3669 Jan 12 22:52	8°♊07'10	
evening set	3662 Nov 04 13:42	27°♌48'14					
				conjunction	3669 Jan 29 15:05	10°♊05'02	-0°04'14
conjunction	3662 Nov 21 15:39	29°♌52'22	2°02'28	minimum elong	3669 Jan 29 15:05	10°♊05'02	0°04'14
minimum elong	3662 Nov 21 15:40	29°♌52'22	2°02'28	behind sun begin	3669 Jan 29 08:12	10°♊03'02	
max. Earth dist.	3662 Nov 21 15:23	29°♌52'17	10.69583 AU	behind sun end	3669 Jan 29 21:58	10°♊07'03	
	3662 Nov 22 16:40	0°♊		max. Earth dist.	3669 Jan 29 13:06	10°♊04'30	11.00144 AU
morning rise	3662 Dec 08 13:29	1°♊55'19		morning rise	3669 Feb 15 07:13	12°♊02'54	
retrograde	3663 Mar 18 10:23	9°♊10'27			3669 Mar 14 06:30	15°♊	
opposition	3663 May 25 21:16	5°♊51'13	2°23'31	retrograde	3669 May 27 14:32	19°♊08'00	
min. Earth dist.	3663 May 25 21:05	5°♊51'15	8.74227 AU	opposition	3669 Aug 06 03:49	15°♊49'32	-0°21'12
direct	3663 Aug 04 12:32	2°♊27'18		min. Earth dist.	3669 Aug 06 05:44	15°♊49'11	8.99630 AU
evening set	3663 Nov 17 01:02	9°♊56'23			3669 Aug 17 10:23	15°♊	
				direct	3669 Oct 15 15:06	12°♊30'52	
conjunction	3663 Dec 04 00:18	11°♊58'43	1°49'41		3669 Dec 10 23:21	15°♊	
minimum elong	3663 Dec 04 00:20	11°♊58'43	1°49'41	evening set	3670 Jan 24 11:16	19°♊34'20	
max. Earth dist.	3663 Dec 04 00:07	11°♊58'39	10.78429 AU				
morning rise	3663 Dec 20 19:48	13°♊59'58		conjunction	3670 Feb 10 03:06	21°♊32'18	-0°30'20
retrograde	3664 Mar 29 15:16	21°♊10'09		minimum elong	3670 Feb 10 03:05	21°♊32'17	0°30'19
opposition	3664 Jun 06 11:57	17°♊51'41	2°04'41	max. Earth dist.	3670 Feb 10 00:13	21°♊31'26	10.98576 AU
min. Earth dist.	3664 Jun 06 12:40	17°♊51'33	8.82519 AU	morning rise	3670 Feb 26 19:47	23°♊30'30	
direct	3664 Aug 16 06:53	14°♊28'59			3670 May 11 10:40	0°♊	
evening set	3664 Nov 28 05:08	21°♊51'18		retrograde	3670 Jun 08 16:47	0°♊38'56	
					3670 Jul 07 10:46	30°♊	
conjunction	3664 Dec 15 02:05	23°♊52'05	1°32'20	opposition	3670 Aug 18 10:36	27°♊19'43	-0°52'43
minimum elong	3664 Dec 15 02:08	23°♊52'06	1°32'19	min. Earth dist.	3670 Aug 18 12:46	27°♊19'19	8.97024 AU
max. Earth dist.	3664 Dec 15 00:55	23°♊51'44	10.86132 AU	direct	3670 Oct 27 15:29	24°♊01'14	
morning rise	3664 Dec 31 20:02	25°♊52'01			3671 Jan 26 14:32	0°♊	
	3665 Feb 08 15:31	0°♊		evening set	3671 Feb 05 00:59	1°♊05'00	
retrograde	3665 Apr 10 15:27	2°♊58'27					
	3665 Jun 14 15:23	30°♊		conjunction	3671 Feb 21 17:00	3°♊03'24	-0°55'22
opposition	3665 Jun 18 23:36	29°♊40'31	1°40'53	minimum elong	3671 Feb 21 16:58	3°♊03'24	0°55'23
min. Earth dist.	3665 Jun 19 00:51	29°♊40'17	8.89508 AU	max. Earth dist.	3671 Feb 21 14:42	3°♊02'43	10.94947 AU
direct	3665 Aug 28 21:33	26°♊18'56		morning rise	3671 Mar 10 10:27	5°♊02'16	
	3665 Nov 06 23:22	0°♊		retrograde	3671 Jun 21 00:53	12°♊15'22	
evening set	3665 Dec 10 03:01	3°♊35'13		opposition	3671 Aug 30 19:03	8°♊55'11	-1°22'22
				min. Earth dist.	3671 Aug 30 20:29	8°♊54'55	8.92446 AU
conjunction	3665 Dec 26 22:10	5°♊34'47	1°11'20	direct	3671 Nov 08 15:53	5°♊36'40	
minimum elong	3665 Dec 26 22:12	5°♊34'48	1°11'19	evening set	3672 Feb 16 17:35	12°♊42'03	
max. Earth dist.	3665 Dec 26 20:30	5°♊34'17	10.92386 AU				
morning rise	3666 Jan 12 15:06	7°♊33'42		conjunction	3672 Mar 04 10:05	14°♊41'14	-1°18'22
retrograde	3666 Apr 22 15:36	14°♊37'43		minimum elong	3672 Mar 04 10:03	14°♊41'13	1°18'22
opposition	3666 Jul 01 08:37	11°♊20'01	1°13'14	max. Earth dist.	3672 Mar 04 08:22	14°♊40'43	10.89440 AU
min. Earth dist.	3666 Jul 01 09:37	11°♊19'50	8.94917 AU	morning rise	3672 Mar 21 04:39	16°♊41'05	
direct	3666 Sep 10 08:15	7°♊59'28		retrograde	3672 Jul 02 12:30	24°♊00'00	
evening set	3666 Dec 21 20:16	15°♊10'38		opposition	3672 Sep 11 06:04	20°♊38'40	-1°48'58
				min. Earth dist.	3672 Sep 11 07:02	20°♊38'29	8.86121 AU
conjunction	3667 Jan 07 14:12	17°♊09'20	0°47'36	direct	3672 Nov 19 15:47	17°♊19'52	
minimum elong	3667 Jan 07 14:14	17°♊09'21	0°47'37	evening set	3673 Feb 27 14:25	24°♊28'11	
max. Earth dist.	3667 Jan 07 13:00	17°♊08'59	10.96938 AU				

conjunction	3673 Mar 16 07:49	26° K 28'28	-1°38'20	conjunction	3679 Jun 01 09:48	12° II 19'08	-1°48'43
minimum elong	3673 Mar 16 07:47	26° K 28'27	1°38'20	minimum elong	3679 Jun 01 09:51	12° II 19'09	1°48'44
max. Earth dist.	3673 Mar 16 05:53	26° K 27'53	10.82323 AU	max. Earth dist.	3679 Jun 01 10:24	12° II 19'19	10.26057 AU
morning rise	3673 Apr 02 04:08	28° K 29'39		morning rise	3679 Jun 19 03:25	14° II 33'41	
	3673 Apr 15 04:57	0° Y		retrograde	3679 Oct 03 15:11	22° II 41'18	
retrograde	3673 Jul 15 05:19	5° Y 55'17		opposition	3679 Dec 11 02:17	19° II 12'23	-2°03'14
opposition	3673 Sep 23 20:20	2° Y 32'41	-2°11'23	min. Earth dist.	3679 Dec 11 01:21	19° II 12'34	8.22225 AU
min. Earth dist.	3673 Sep 23 21:27	2° Y 32'28	8.78336 AU	direct	3680 Feb 15 21:32	15° II 47'03	
	3673 Nov 01 03:20	30° K K		evening set	3680 May 27 22:37	23° II 39'01	
direct	3673 Dec 01 19:33	29° K 13'22					
	3673 Dec 31 23:00	0° Y		conjunction	3680 Jun 14 16:44	25° II 54'41	-1°28'24
evening set	3674 Mar 11 16:33	6° Y 25'48		minimum elong	3680 Jun 14 16:47	25° II 54'42	1°28'25
				max. Earth dist.	3680 Jun 14 17:54	25° II 55'03	10.18647 AU
conjunction	3674 Mar 28 11:30	8° Y 27'32	-1°54'21	morning rise	3680 Jul 02 14:31	28° II 11'29	
minimum elong	3674 Mar 28 11:28	8° Y 27'32	1°54'21		3680 Jul 17 08:37	0° G	
max. Earth dist.	3674 Mar 28 09:25	8° Y 26'54	10.73901 AU	retrograde	3680 Oct 16 21:43	6° G 22'38	
morning rise	3674 Apr 14 10:09	10° Y 30'23		opposition	3680 Dec 23 21:58	2° G 53'26	-1°34'38
retrograde	3674 Jul 28 03:45	18° Y 03'26		min. Earth dist.	3680 Dec 23 20:43	2° G 53'41	8.15644 AU
opposition	3674 Oct 06 14:17	14° Y 39'31	-2°28'26		3681 Feb 04 02:46	30° K II	
min. Earth dist.	3674 Oct 06 15:33	14° Y 39'16	8.69409 AU	direct	3681 Feb 28 14:49	29° II 27'01	
direct	3674 Dec 14 02:29	11° Y 19'28			3681 Mar 24 22:56	0° G	
evening set	3675 Mar 24 01:11	18° Y 37'08		evening set	3681 Jun 11 08:42	7° G 25'18	
conjunction	3675 Apr 09 22:31	20° Y 40'40	-2°05'30	conjunction	3681 Jun 29 07:05	9° G 43'01	-1°02'47
minimum elong	3675 Apr 09 22:29	20° Y 40'40	2°05'30	minimum elong	3681 Jun 29 07:08	9° G 43'02	1°02'48
max. Earth dist.	3675 Apr 09 21:22	20° Y 40'19	10.64515 AU	max. Earth dist.	3681 Jun 29 09:10	9° G 43'41	10.13058 AU
morning rise	3675 Apr 26 23:53	22° Y 45'28		morning rise	3681 Jul 17 08:08	12° G 01'35	
	3675 Jul 18 09:44	0° G		retrograde	3681 Oct 31 06:36	20° G 14'20	
retrograde	3675 Aug 10 07:26	0° G 26'19		opposition	3682 Jan 06 20:08	16° G 45'11	-1°00'10
	3675 Sep 02 10:12	30° K Y		min. Earth dist.	3682 Jan 06 18:09	16° G 45'35	8.11081 AU
opposition	3675 Oct 19 12:19	27° Y 01'05	-2°39'04	direct	3682 Mar 14 13:13	13° G 17'49	
min. Earth dist.	3675 Oct 19 12:52	27° Y 00'59	8.59708 AU	evening set	3682 Jun 26 01:08	21° G 21'26	
direct	3675 Dec 26 14:46	23° Y 40'10					
	3676 Mar 26 19:19	0° G		conjunction	3682 Jul 14 02:43	23° G 40'34	-0°33'15
evening set	3676 Apr 04 17:15	1° G 03'58		minimum elong	3682 Jul 14 02:44	23° G 40'35	0°33'16
				max. Earth dist.	3682 Jul 14 05:38	23° G 41'31	10.09648 AU
conjunction	3676 Apr 21 17:44	3° G 09'38	-2°11'00	morning rise	3682 Aug 01 05:45	26° G 00'14	
minimum elong	3676 Apr 21 17:44	3° G 09'38	2°11'00		3682 Sep 04 03:46	0° Q	
max. Earth dist.	3676 Apr 21 17:49	3° G 09'40	10.54570 AU	retrograde	3682 Nov 14 15:53	4° Q 12'35	
morning rise	3676 May 08 22:24	5° G 16'39		opposition	3683 Jan 20 20:05	0° Q 43'49	-0°21'49
retrograde	3676 Aug 22 19:08	13° G 05'20		min. Earth dist.	3683 Jan 20 17:27	0° Q 44'21	8.08841 AU
opposition	3676 Oct 31 14:59	9° G 38'52	-2°42'20		3683 Jan 29 18:47	30° K G	
min. Earth dist.	3676 Oct 31 14:31	9° G 38'57	8.49661 AU	direct	3683 Mar 28 16:07	27° G 15'43	
direct	3677 Jan 07 07:35	6° G 16'58			3683 May 23 20:38	0° Q	
evening set	3677 Apr 17 17:28	13° G 47'29		evening set	3683 Jul 10 21:45	5° Q 23'14	
	3677 Apr 27 11:54	15° G					
				conjunction	3683 Jul 29 01:03	7° Q 43'02	-0°01'39
conjunction	3677 May 04 21:46	15° G 55'34	-2°10'14	minimum elong	3683 Jul 29 01:01	7° Q 43'02	0°01'40
minimum elong	3677 May 04 21:47	15° G 55'35	2°10'13	behind sun begin	3683 Jul 28 17:40	7° Q 40'40	
max. Earth dist.	3677 May 04 22:30	15° G 55'48	10.44519 AU	behind sun end	3683 Jul 29 08:23	7° Q 45'23	
morning rise	3677 May 22 06:26	18° G 05'03		max. Earth dist.	3683 Jul 29 04:22	7° Q 44'03	10.08651 AU
retrograde	3677 Sep 05 13:30	26° G 01'05		morning rise	3683 Aug 16 04:31	10° Q 02'57	
opposition	3677 Nov 13 22:20	22° G 33'33	-2°37'35	asc. node	3683 Aug 17 00:28	10° Q 09'16	
min. Earth dist.	3677 Nov 13 21:16	22° G 33'46	8.39730 AU		3683 Sep 28 12:36	15° Q	
direct	3678 Jan 20 04:56	19° G 10'33		retrograde	3683 Nov 28 23:09	18° Q 12'58	
evening set	3678 May 01 02:35	26° G 48'16			3684 Jan 31 19:06	15° K Q	
				opposition	3684 Feb 03 20:32	14° Q 44'53	0°17'55
conjunction	3678 May 18 11:14	28° G 58'54	-2°02'48	min. Earth dist.	3684 Feb 03 17:48	14° Q 45'27	8.09089 AU
minimum elong	3678 May 18 11:16	28° G 58'55	2°02'48	direct	3684 Apr 10 22:13	11° Q 16'16	
max. Earth dist.	3678 May 18 11:45	28° G 59'04	10.34846 AU		3684 Jun 16 15:57	15° Q	
	3678 May 26 12:57	0° II		evening set	3684 Jul 24 20:28	19° Q 26'02	
morning rise	3678 Jun 05 00:20	1° II 10'58					
retrograde	3678 Sep 19 12:42	9° II 13'26		conjunction	3684 Aug 11 23:46	21° Q 45'39	0°30'09
opposition	3678 Nov 27 10:08	5° II 45'04	-2°24'29	minimum elong	3684 Aug 11 23:45	21° Q 45'38	0°30'08
min. Earth dist.	3678 Nov 27 09:13	5° II 45'15	8.30414 AU	max. Earth dist.	3684 Aug 12 02:58	21° Q 46'40	10.10147 AU
direct	3679 Feb 02 09:24	2° II 20'54		morning rise	3684 Aug 30 02:08	24° Q 04'58	
evening set	3679 May 14 20:26	10° II 05'54			3684 Oct 23 08:47	0° K Q	

retrograde	3684 Dec 12 03:12	2° \mathbb{M} 10'50	min. Earth dist.	3691 May 07 21:47	18° \mathbb{M} 26'41	8.60707 AU
	3685 Jan 31 22:51	30° \mathbb{R} 8	direct	3691 Jul 16 23:27	15° \mathbb{M} 01'28	
opposition	3685 Feb 16 20:06	28° \mathbb{O} 43'42 0°56'28	evening set	3691 Oct 30 10:00	22° \mathbb{M} 41'35	
min. Earth dist.	3685 Feb 16 17:49	28° \mathbb{O} 44'10 8.11817 AU				
direct	3685 Apr 25 05:27	25° \mathbb{O} 14'47	conjunction	3691 Nov 16 13:18	24° \mathbb{M} 46'43 2°06'14	
	3685 Jul 11 01:38	0° \mathbb{M}	minimum elong	3691 Nov 16 13:19	24° \mathbb{M} 46'43 2°06'15	
evening set	3685 Aug 08 18:24	3° \mathbb{M} 24'57	max. Earth dist.	3691 Nov 16 11:19	24° \mathbb{M} 46'06 10.65211 AU	
			morning rise	3691 Dec 03 12:29	26° \mathbb{M} 50'37	
conjunction	3685 Aug 26 20:08	5° \mathbb{M} 43'32 0°59'56		3691 Dec 31 10:54	0° \mathbb{X}	
minimum elong	3685 Aug 26 20:05	5° \mathbb{M} 43'31 0°59'55	retrograde	3692 Mar 12 11:38	4° \mathbb{X} 08'43	
max. Earth dist.	3685 Aug 26 22:37	5° \mathbb{M} 44'20 10.14035 AU	opposition	3692 May 19 17:37	0° \mathbb{X} 49'18 2°29'42	
morning rise	3685 Sep 13 19:53	8° \mathbb{M} 01'28	min. Earth dist.	3692 May 19 19:23	0° \mathbb{X} 48'58 8.69809 AU	
retrograde	3685 Dec 26 02:33	16° \mathbb{M} 01'41		3692 May 30 13:20	30° \mathbb{R} \mathbb{M}	
opposition	3686 Mar 02 17:50	12° \mathbb{M} 35'38 1°31'20	direct	3692 Jul 29 05:06	27° \mathbb{M} 24'54	
min. Earth dist.	3686 Mar 02 16:09	12° \mathbb{M} 35'59 8.16841 AU		3692 Sep 24 17:28	0° \mathbb{X}	
direct	3686 May 09 13:19	9° \mathbb{M} 06'44	evening set	3692 Nov 11 01:41	4° \mathbb{X} 57'48	
evening set	3686 Aug 23 12:33	17° \mathbb{M} 15'17				
			conjunction	3692 Nov 28 02:01	7° \mathbb{X} 01'01 1°55'41	
conjunction	3686 Sep 10 11:22	19° \mathbb{M} 32'08 1°25'58	minimum elong	3692 Nov 28 02:03	7° \mathbb{X} 01'02 1°55'41	
minimum elong	3686 Sep 10 11:19	19° \mathbb{M} 32'07 1°25'58	max. Earth dist.	3692 Nov 27 23:24	7° \mathbb{X} 00'14 10.73968 AU	
max. Earth dist.	3686 Sep 10 13:03	19° \mathbb{M} 32'40 10.20055 AU	morning rise	3692 Dec 14 22:41	9° \mathbb{X} 03'08	
morning rise	3686 Sep 28 07:22	21° \mathbb{M} 48'04	retrograde	3693 Mar 24 17:52	16° \mathbb{X} 15'58	
retrograde	3687 Jan 08 19:25	29° \mathbb{M} 41'32	opposition	3693 Jun 01 10:38	12° \mathbb{X} 57'11 2°13'22	
opposition	3687 Mar 16 12:29	26° \mathbb{M} 16'39 2°00'29	min. Earth dist.	3693 Jun 01 12:08	12° \mathbb{X} 56'54 8.78090 AU	
min. Earth dist.	3687 Mar 16 10:58	26° \mathbb{M} 16'57 8.23815 AU	direct	3693 Aug 11 04:25	9° \mathbb{X} 33'51	
direct	3687 May 23 20:02	22° \mathbb{M} 48'00	evening set	3693 Nov 23 09:23	16° \mathbb{X} 59'46	
	3687 Aug 30 19:53	0° \mathbb{O}				
evening set	3687 Sep 07 00:37	0° \mathbb{O} 53'05	conjunction	3693 Dec 10 07:26	19° \mathbb{X} 01'23 1°40'11	
			minimum elong	3693 Dec 10 07:28	19° \mathbb{X} 01'23 1°40'11	
conjunction	3687 Sep 24 19:44	3° \mathbb{O} 07'43 1°46'49	max. Earth dist.	3693 Dec 10 05:20	19° \mathbb{X} 00'45 10.81742 AU	
minimum elong	3687 Sep 24 19:41	3° \mathbb{O} 07'42 1°46'49	morning rise	3693 Dec 27 02:07	21° \mathbb{X} 02'02	
max. Earth dist.	3687 Sep 24 20:54	3° \mathbb{O} 08'05 10.27797 AU	retrograde	3694 Apr 05 21:18	28° \mathbb{X} 10'40	
morning rise	3687 Oct 12 11:16	5° \mathbb{O} 21'13	opposition	3694 Jun 14 00:09	24° \mathbb{X} 52'18 1°51'33	
retrograde	3688 Jan 22 05:06	13° \mathbb{O} 07'14	min. Earth dist.	3694 Jun 14 01:18	24° \mathbb{X} 52'05 8.85221 AU	
opposition	3688 Mar 29 03:03	9° \mathbb{O} 43'33 2°22'26	direct	3694 Aug 23 22:13	21° \mathbb{X} 29'58	
min. Earth dist.	3688 Mar 29 01:42	9° \mathbb{O} 43'49 8.32247 AU	evening set	3694 Dec 05 10:15	28° \mathbb{X} 49'30	
direct	3688 Jun 05 23:33	6° \mathbb{O} 15'24		3694 Dec 15 08:10	0° \mathbb{Z}	
evening set	3688 Sep 20 04:46	14° \mathbb{O} 15'29				
			conjunction	3694 Dec 22 06:28	0° \mathbb{Z} 49'48 1°20'38	
conjunction	3688 Oct 07 19:47	16° \mathbb{O} 27'39 2°01'31	minimum elong	3694 Dec 22 06:30	0° \mathbb{Z} 49'49 1°20'37	
minimum elong	3688 Oct 07 19:45	16° \mathbb{O} 27'38 2°01'31	max. Earth dist.	3694 Dec 22 04:52	0° \mathbb{Z} 49'20 10.88216 AU	
max. Earth dist.	3688 Oct 07 20:25	16° \mathbb{O} 27'51 10.36710 AU	morning rise	3695 Jan 07 23:48	2° \mathbb{Z} 49'19	
morning rise	3688 Oct 25 06:36	18° \mathbb{O} 38'33	retrograde	3695 Apr 17 23:25	9° \mathbb{Z} 54'59	
retrograde	3689 Feb 03 09:56	26° \mathbb{O} 16'58	opposition	3695 Jun 26 10:45	6° \mathbb{Z} 36'49 1°25'24	
opposition	3689 Apr 11 13:19	22° \mathbb{O} 54'28 2°36'20	min. Earth dist.	3695 Jun 26 12:19	6° \mathbb{Z} 36'31 8.90922 AU	
min. Earth dist.	3689 Apr 11 12:27	22° \mathbb{O} 54'38 8.41538 AU	direct	3695 Sep 05 09:37	3° \mathbb{Z} 15'23	
direct	3689 Jun 19 20:51	19° \mathbb{O} 27'03	evening set	3695 Dec 17 05:58	10° \mathbb{Z} 29'26	
evening set	3689 Oct 03 23:51	27° \mathbb{O} 21'03				
			conjunction	3696 Jan 03 00:35	12° \mathbb{Z} 28'44 0°57'56	
conjunction	3689 Oct 21 10:40	29° \mathbb{O} 30'45 2°09'37	minimum elong	3696 Jan 03 00:37	12° \mathbb{Z} 28'44 0°57'55	
minimum elong	3689 Oct 21 10:39	29° \mathbb{O} 30'44 2°09'37	max. Earth dist.	3696 Jan 02 22:25	12° \mathbb{Z} 28'05 10.93141 AU	
max. Earth dist.	3689 Oct 21 10:49	29° \mathbb{O} 30'47 10.46203 AU	morning rise	3696 Jan 19 17:10	14° \mathbb{Z} 27'28	
	3689 Oct 25 08:28	0° \mathbb{M}	retrograde	3696 Apr 28 21:10	21° \mathbb{Z} 31'27	
morning rise	3689 Nov 07 16:55	1° \mathbb{M} 39'05	opposition	3696 Jul 07 19:02	18° \mathbb{Z} 13'16 0°56'02	
retrograde	3690 Feb 16 08:51	9° \mathbb{M} 10'11	min. Earth dist.	3696 Jul 07 21:11	18° \mathbb{Z} 12'52 8.94985 AU	
opposition	3690 Apr 24 19:10	5° \mathbb{M} 48'51 2°41'56	direct	3696 Sep 16 16:53	14° \mathbb{Z} 52'36	
min. Earth dist.	3690 Apr 24 19:16	5° \mathbb{M} 48'50 8.51155 AU	evening set	3696 Dec 27 21:47	22° \mathbb{Z} 02'18	
direct	3690 Jul 03 12:38	2° \mathbb{M} 22'23				
evening set	3690 Oct 17 09:36	10° \mathbb{M} 09'38	conjunction	3697 Jan 13 15:10	24° \mathbb{Z} 00'54 0°33'03	
			minimum elong	3697 Jan 13 15:11	24° \mathbb{Z} 00'54 0°33'04	
conjunction	3690 Nov 03 16:27	12° \mathbb{M} 16'57 2°11'04	max. Earth dist.	3697 Jan 13 12:29	24° \mathbb{Z} 00'06 10.96346 AU	
minimum elong	3690 Nov 03 16:27	12° \mathbb{M} 16'57 2°11'05	morning rise	3697 Jan 30 07:27	25° \mathbb{Z} 59'09	
max. Earth dist.	3690 Nov 03 15:44	12° \mathbb{M} 16'44 10.55828 AU		3697 Mar 09 06:34	0° \mathbb{Z}	
morning rise	3690 Nov 20 18:46	14° \mathbb{M} 22'56	retrograde	3697 May 10 20:10	3° \mathbb{Z} 02'57	
	3690 Nov 25 22:14	15° \mathbb{M}		3697 Jul 16 14:26	30° \mathbb{R} \mathbb{Z}	
retrograde	3691 Mar 01 00:50	21° \mathbb{M} 47'12	opposition	3697 Jul 20 02:02	29° \mathbb{Z} 44'31 0°24'38	
opposition	3691 May 07 20:33	18° \mathbb{M} 26'55 2°39'31	min. Earth dist.	3697 Jul 20 03:49	29° \mathbb{Z} 44'11 8.97270 AU	

direct	3697 Sep 28 22:29	26°  24'31	opposition	3703 Oct 02 14:17	9°  48'39 -2°21'56
	3697 Dec 06 18:28	0° 	min. Earth dist.	3703 Oct 02 13:20	9°  48'50 8.73418 AU
evening set	3698 Jan 08 11:01	3°  31'03	direct	3703 Dec 10 07:20	6°  29'07
			evening set	3704 Mar 19 05:00	13°  44'30
conjunction	3698 Jan 25 03:42	5°  29'16 0°07'00	conjunction	3704 Apr 05 01:13	15°  47'12 -2°01'23
minimum elong	3698 Jan 25 03:42	5°  29'16 0°07'01	minimum elong	3704 Apr 05 01:11	15°  47'11 2°01'23
behind sun begin	3698 Jan 24 21:13	5°  27'22	max. Earth dist.	3704 Apr 05 01:52	15°  47'24 10.69007 AU
behind sun end	3698 Jan 25 10:10	5°  31'10	morning rise	3704 Apr 22 01:11	17°  51'05
max. Earth dist.	3698 Jan 25 01:52	5°  28'45 10.97711 AU	retrograde	3704 Aug 05 04:29	25°  28'32
morning rise	3698 Feb 10 19:54	7°  27'22	opposition	3704 Oct 14 10:47	22°  04'07 -2°35'18
desc. node	3698 May 04 04:19	14°  15'07	min. Earth dist.	3704 Oct 14 09:41	22°  04'20 8.64638 AU
retrograde	3698 May 22 21:11	14°  32'23	direct	3704 Dec 21 16:03	18°  43'59
opposition	3698 Aug 01 08:23	11°  13'31 -0°07'39	evening set	3705 Mar 31 17:58	26°  04'53
min. Earth dist.	3698 Aug 01 09:17	11°  13'21 8.97683 AU			
direct	3698 Oct 10 23:45	7°  54'05	conjunction	3705 Apr 17 16:49	28°  09'30 -2°09'18
evening set	3699 Jan 19 23:36	14°  58'45	minimum elong	3705 Apr 17 16:49	28°  09'30 2°09'18
	3699 Jan 20 03:54	15° 	max. Earth dist.	3705 Apr 17 17:20	28°  09'40 10.59890 AU
conjunction	3699 Feb 05 15:52	16°  56'55 -0°19'26		3705 May 02 17:00	0° 
minimum elong	3699 Feb 05 15:51	16°  56'54 0°19'25	morning rise	3705 May 04 20:02	0°  15'27
max. Earth dist.	3699 Feb 05 14:47	16°  56'36 10.97172 AU	retrograde	3705 Aug 18 12:31	8°  00'28
morning rise	3699 Feb 22 08:17	18°  55'11	opposition	3705 Oct 27 11:35	4°  34'59 -2°41'40
retrograde	3699 Jun 03 23:26	26°  02'48	min. Earth dist.	3705 Oct 27 10:42	4°  35'09 8.55310 AU
opposition	3699 Aug 13 14:56	22°  43'20 -0°39'40	direct	3706 Jan 03 07:04	1°  14'02
min. Earth dist.	3699 Aug 13 15:30	22°  43'13 8.96200 AU	evening set	3706 Apr 13 14:42	8°  41'11
direct	3699 Oct 22 23:18	19°  24'15			
evening set	3700 Jan 31 12:59	26°  28'29	conjunction	3706 Apr 30 17:04	10°  48'01 -2°11'10
conjunction	3700 Feb 17 04:58	28°  26'53 -0°45'04	minimum elong	3706 Apr 30 17:05	10°  48'02 2°11'10
minimum elong	3700 Feb 17 04:57	28°  26'53 0°45'04	max. Earth dist.	3706 Apr 30 17:54	10°  48'17 10.50434 AU
max. Earth dist.	3700 Feb 17 03:35	28°  26'29 10.94745 AU	morning rise	3706 May 18 00:02	12°  56'16
	3700 Mar 02 06:34	0° 		3706 Jun 04 10:38	15° 
morning rise	3700 Mar 05 22:05	0°  25'38	retrograde	3706 Sep 01 02:59	20°  48'33
retrograde	3700 Jun 16 05:31	7°  37'12	opposition	3706 Nov 09 16:50	17°  22'04 -2°40'17
opposition	3700 Aug 25 23:00	4°  16'59 -1°10'16	min. Earth dist.	3706 Nov 09 15:57	17°  22'15 8.45836 AU
min. Earth dist.	3700 Aug 25 23:57	4°  16'48 8.92874 AU		3706 Dec 13 03:11	15° 
direct	3700 Nov 03 22:42	0°  58'04	direct	3707 Jan 16 03:12	14°  00'09
evening set	3701 Feb 12 04:21	8°  03'12		3707 Feb 18 13:39	15° 
conjunction	3701 Feb 28 20:30	10°  02'09 -1°09'03	evening set	3707 Apr 26 19:42	21°  34'02
minimum elong	3701 Feb 28 20:28	10°  02'09 1°09'03	conjunction	3707 May 14 02:18	23°  43'17 -2°06'33
max. Earth dist.	3701 Feb 28 18:54	10°  01'41 10.90523 AU	minimum elong	3707 May 14 02:19	23°  43'17 2°06'33
morning rise	3701 Mar 17 14:43	12°  01'44	max. Earth dist.	3707 May 14 04:02	23°  43'50 10.41043 AU
retrograde	3701 Jun 28 13:54	19°  18'29	morning rise	3707 May 31 13:20	25°  53'57
opposition	3701 Sep 07 09:10	15°  57'19 -1°38'17		3707 Jul 06 16:16	0° 
min. Earth dist.	3701 Sep 07 09:58	15°  57'10 8.87832 AU	retrograde	3707 Sep 14 22:40	3°  52'50
direct	3701 Nov 15 22:42	12°  38'23	opposition	3707 Nov 23 02:26	0°  25'27 -2°30'41
evening set	3702 Feb 23 23:19	19°  45'45	min. Earth dist.	3707 Nov 23 01:01	0°  25'44 8.36619 AU
conjunction	3702 Mar 12 16:17	21°  45'37 -1°30'23		3707 Nov 28 10:54	30° 
minimum elong	3702 Mar 12 16:15	21°  45'37 1°30'23	direct	3708 Jan 29 05:37	27°  02'28
max. Earth dist.	3702 Mar 12 15:37	21°  45'25 10.84662 AU	evening set	3708 Mar 28 00:40	0° 
morning rise	3702 Mar 29 11:54	23°  46'18		3708 May 09 09:19	4°  43'17
	3702 Jun 03 08:07	0° 	conjunction	3708 May 26 20:35	6°  55'04 -1°55'15
retrograde	3702 Jul 11 04:35	1°  09'16	minimum elong	3708 May 26 20:37	6°  55'05 1°55'16
	3702 Aug 18 19:04	30° 	max. Earth dist.	3708 May 26 22:41	6°  55'45 10.32127 AU
opposition	3702 Sep 19 21:55	27°  47'04 -2°02'33	morning rise	3708 Jun 13 11:58	9°  08'13
min. Earth dist.	3702 Sep 19 21:55	27°  47'04 8.81262 AU	retrograde	3708 Sep 27 23:39	17°  12'39
direct	3702 Nov 28 02:49	24°  27'55	opposition	3708 Dec 05 16:09	13°  44'35 -2°12'50
	3703 Feb 21 17:48	0° 	min. Earth dist.	3708 Dec 05 14:26	13°  44'56 8.28069 AU
evening set	3703 Mar 07 23:10	1°  09'38'45	direct	3709 Feb 10 13:35	10°  20'26
conjunction	3703 Mar 24 17:31	3°  39'53 -1°48'08	evening set	3709 May 23 07:25	18°  08'14
minimum elong	3703 Mar 24 17:29	3°  39'52 1°48'08	conjunction	3709 Jun 09 23:28	20°  22'32 -1°37'32
max. Earth dist.	3703 Mar 24 17:59	3°  40'01 10.77389 AU	minimum elong	3709 Jun 09 23:31	20°  22'33 1°37'33
morning rise	3703 Apr 10 14:58	5°  42'00	max. Earth dist.	3709 Jun 10 01:16	20°  23'07 10.24115 AU
retrograde	3703 Jul 24 02:03	13°  09'11'57	morning rise	3709 Jun 27 19:11	22°  38'03
				3709 Sep 12 09:59	0°

retrograde	3709 Oct 12 05:35	0°♊46'41		morning rise	3715 Sep 23 08:36	16°♎01'15	
	3709 Nov 11 02:54	30°♎II		retrograde	3716 Jan 04 03:51	23°♎57'15	
opposition	3709 Dec 19 09:42	27°♎II18'12	-1°47'19	opposition	3716 Mar 10 20:32	20°♎31'30	1°48'33
min. Earth dist.	3709 Dec 19 08:05	27°♎II18'32	8.20669 AU	min. Earth dist.	3716 Mar 10 19:02	20°♎31'48	8.20594 AU
direct	3710 Feb 24 02:24	23°♎II52'53		direct	3716 May 17 23:36	17°♎02'23	
	3710 May 22 23:30	0°♊		evening set	3716 Sep 01 00:47	25°♎08'37	
evening set	3710 Jun 06 13:42	1°♊47'19					
				conjunction	3716 Sep 18 21:48	27°♎24'14	1°38'23
conjunction	3710 Jun 24 10:06	4°♊03'52	-1°14'05	minimum elong	3716 Sep 18 21:45	27°♎24'13	1°38'22
minimum elong	3710 Jun 24 10:09	4°♊03'53	1°14'06	max. Earth dist.	3716 Sep 18 23:11	27°♎24'40	10.24032 AU
max. Earth dist.	3710 Jun 24 11:22	4°♊04'16	10.17528 AU	morning rise	3716 Oct 06 15:16	29°♎38'47	
morning rise	3710 Jul 12 09:35	6°♊21'23			3716 Oct 09 11:36	0°♊	
retrograde	3710 Oct 26 13:23	14°♊32'29		retrograde	3717 Jan 16 16:39	7°♊27'50	
opposition	3711 Jan 02 06:15	11°♊03'51	-1°15'15	opposition	3717 Mar 24 12:16	4°♊03'12	2°13'45
min. Earth dist.	3711 Jan 02 05:00	11°♊04'06	8.14957 AU	min. Earth dist.	3717 Mar 24 11:37	4°♊03'20	8.27997 AU
direct	3711 Mar 09 22:18	7°♊37'23		direct	3717 Jun 01 03:03	0°♊34'22	
evening set	3711 Jun 21 02:47	15°♊37'40		evening set	3717 Sep 15 08:04	8°♊36'33	
conjunction	3711 Jul 09 02:46	17°♊55'56	-0°46'07	conjunction	3717 Oct 03 00:57	10°♊49'50	1°55'50
minimum elong	3711 Jul 09 02:48	17°♊55'56	0°46'08	minimum elong	3717 Oct 03 00:55	10°♊49'50	1°55'50
max. Earth dist.	3711 Jul 09 03:40	17°♊56'13	10.12862 AU	max. Earth dist.	3717 Oct 03 01:19	10°♊49'57	10.32109 AU
morning rise	3711 Jul 27 04:59	20°♊14'53		morning rise	3717 Oct 20 13:51	13°♊01'54	
retrograde	3711 Nov 09 21:02	28°♊26'31		retrograde	3718 Jan 29 23:28	20°♊43'33	
opposition	3712 Jan 16 04:56	24°♊57'59	-0°38'26	opposition	3718 Apr 07 00:05	17°♊20'06	2°31'15
min. Earth dist.	3712 Jan 16 03:59	24°♊58'10	8.11369 AU	min. Earth dist.	3718 Apr 07 00:03	17°♊20'07	8.36696 AU
direct	3712 Mar 22 23:44	21°♊30'30		direct	3718 Jun 15 02:16	13°♊51'52	
evening set	3712 Jul 04 20:55	29°♊35'23		evening set	3718 Sep 29 06:37	21°♊48'32	
	3712 Jul 08 02:34	0°♊					
				conjunction	3718 Oct 16 19:13	23°♊59'21	2°06'52
conjunction	3712 Jul 22 23:21	1°♊54'41	-0°15'16	minimum elong	3718 Oct 16 19:11	23°♊59'20	2°06'53
minimum elong	3712 Jul 22 23:22	1°♊54'41	0°15'17	max. Earth dist.	3718 Oct 16 18:46	23°♊59'12	10.41254 AU
behind sun begin	3712 Jul 22 21:31	1°♊54'06		morning rise	3718 Nov 03 03:38	26°♊08'51	
behind sun end	3712 Jul 23 01:14	1°♊55'17			3718 Dec 07 01:25	0°♊	
max. Earth dist.	3712 Jul 23 00:22	1°♊55'00	10.10453 AU	retrograde	3719 Feb 11 23:01	3°♊43'04	
morning rise	3712 Aug 10 02:52	4°♊14'19		opposition	3719 Apr 20 07:24	0°♊20'46	2°40'31
retrograde	3712 Nov 23 03:17	12°♊24'30		min. Earth dist.	3719 Apr 20 07:28	0°♊20'45	8.46209 AU
asc. node	3713 Jan 20 20:10	9°♊37'13			3719 Apr 24 16:49	30°♎♊	
opposition	3713 Jan 29 04:28	8°♊56'20	0°00'53	direct	3719 Jun 28 21:24	26°♊53'23	
min. Earth dist.	3713 Jan 29 03:21	8°♊56'34	8.10147 AU		3719 Aug 30 14:07	0°♊	
direct	3713 Apr 06 04:48	5°♊28'03		evening set	3719 Oct 12 19:59	4°♊43'32	
evening set	3713 Jul 19 18:08	13°♊36'00					
	3713 Jul 30 17:22	15°♊		conjunction	3719 Oct 30 04:33	6°♊51'54	2°11'16
				minimum elong	3719 Oct 30 04:32	6°♊51'54	2°11'16
conjunction	3713 Aug 06 21:28	15°♊55'31	0°16'37	max. Earth dist.	3719 Oct 30 03:45	6°♊51'39	10.50979 AU
minimum elong	3713 Aug 06 21:27	15°♊55'31	0°16'37	morning rise	3719 Nov 16 08:48	8°♊58'56	
max. Earth dist.	3713 Aug 06 22:46	15°♊55'57	10.10450 AU		3720 Jan 15 05:18	15°♊	
morning rise	3713 Aug 25 00:32	18°♊14'58		retrograde	3720 Feb 24 16:30	16°♊25'58	
retrograde	3713 Dec 07 07:24	26°♊21'53			3720 Apr 06 04:49	15°♎♊	
opposition	3714 Feb 12 03:35	22°♊54'20	0°40'07	opposition	3720 May 02 09:58	13°♊04'47	2°41'37
min. Earth dist.	3714 Feb 12 02:05	22°♊54'38	8.11363 AU	min. Earth dist.	3720 May 02 09:43	13°♊04'50	8.56033 AU
direct	3714 Apr 20 10:49	19°♊25'28		direct	3720 Jul 11 10:57	9°♊38'28	
evening set	3714 Aug 03 15:38	27°♊34'43			3720 Oct 04 15:40	15°♊	
				evening set	3720 Oct 24 23:59	17°♊21'31	
conjunction	3714 Aug 21 18:13	29°♊53'39	0°47'22	conjunction	3720 Nov 11 04:56	19°♊27'34	2°09'11
minimum elong	3714 Aug 21 18:11	29°♊53'38	0°47'22	minimum elong	3720 Nov 11 04:57	19°♊27'34	2°09'12
max. Earth dist.	3714 Aug 21 19:53	29°♊54'11	10.12848 AU	max. Earth dist.	3720 Nov 11 04:34	19°♊27'27	10.60786 AU
	3714 Aug 22 13:57	0°♎		morning rise	3720 Nov 28 05:30	21°♊32'21	
morning rise	3714 Sep 08 19:13	2°♎12'05		retrograde	3721 Mar 08 06:36	28°♊52'48	
retrograde	3714 Dec 21 08:33	10°♎14'09		opposition	3721 May 15 08:17	25°♊32'39	2°35'01
opposition	3715 Feb 26 01:20	6°♎47'25	1°16'45	min. Earth dist.	3721 May 15 08:17	25°♊32'40	8.65690 AU
min. Earth dist.	3715 Feb 25 23:31	6°♎47'48	8.14928 AU	direct	3721 Jul 24 17:27	22°♊07'31	
direct	3715 May 04 17:37	3°♎18'17		evening set	3721 Nov 06 18:49	29°♊43'13	
evening set	3715 Aug 18 10:33	11°♎26'56			3721 Nov 09 02:54	0°♎♊	
conjunction	3715 Sep 05 10:56	13°♎44'30	1°15'10	conjunction	3721 Nov 23 20:35	1°♎47'14	2°01'07
minimum elong	3715 Sep 05 10:53	13°♎44'29	1°15'10	minimum elong	3721 Nov 23 20:37	1°♎47'14	2°01'08
max. Earth dist.	3715 Sep 05 12:50	13°♎45'06	10.17478 AU				

max. Earth dist.	3721 Nov 23 20:14	1° \mathbb{A} 47'07	10.70208 AU	max. Earth dist.	3728 Feb 01 16:45	11° \approx 57'58	10.99439 AU
morning rise	3721 Dec 10 18:11	3° \mathbb{A} 50'02		morning rise	3728 Feb 18 11:30	13° \approx 56'39	
retrograde	3722 Mar 20 15:00	11° \mathbb{A} 04'42			3728 Feb 27 16:57	15° \approx	
opposition	3722 May 28 02:34	7° \mathbb{A} 45'29	2°21'30	retrograde	3728 May 29 19:12	21° \approx 02'21	
min. Earth dist.	3722 May 28 03:16	7° \mathbb{A} 45'21	8.74743 AU	opposition	3728 Aug 08 09:32	17° \approx 43'46	-0°25'07
direct	3722 Aug 06 16:49	4° \mathbb{A} 21'34		min. Earth dist.	3728 Aug 08 11:27	17° \approx 43'25	8.98867 AU
evening set	3722 Nov 19 05:32	11° \mathbb{A} 50'08			3728 Sep 20 19:28	15° \mathbb{R} \approx	
				direct	3728 Oct 17 20:51	14° \approx 25'04	
conjunction	3722 Dec 06 04:35	13° \mathbb{A} 52'21	1°47'45		3728 Nov 13 12:31	15° \approx	
minimum elong	3722 Dec 06 04:37	13° \mathbb{A} 52'22	1°47'46	evening set	3729 Jan 26 15:48	21° \approx 28'55	
max. Earth dist.	3722 Dec 06 03:25	13° \mathbb{A} 52'00	10.78833 AU				
morning rise	3722 Dec 23 00:04	15° \mathbb{A} 53'32		conjunction	3729 Feb 12 07:45	23° \approx 27'00	-0°33'29
retrograde	3723 Apr 01 18:10	23° \mathbb{A} 03'27		minimum elong	3729 Feb 12 07:43	23° \approx 26'59	0°33'29
opposition	3723 Jun 09 16:59	19° \mathbb{A} 44'57	2°02'01	max. Earth dist.	3729 Feb 12 05:30	23° \approx 26'20	10.97757 AU
min. Earth dist.	3723 Jun 09 18:26	19° \mathbb{A} 44'41	8.82808 AU	morning rise	3729 Mar 01 00:28	25° \approx 25'19	
direct	3723 Aug 19 12:53	16° \mathbb{A} 22'13			3729 Apr 14 09:16	0° \mathbb{H}	
evening set	3723 Dec 01 09:05	23° \mathbb{A} 44'10		retrograde	3729 Jun 11 00:05	2° \mathbb{H} 34'28	
					3729 Aug 10 12:53	30° \mathbb{R} \approx	
conjunction	3723 Dec 18 05:56	25° \mathbb{A} 44'54	1°29'56	opposition	3729 Aug 20 16:49	29° \approx 15'08	-0°56'28
minimum elong	3723 Dec 18 05:58	25° \mathbb{A} 44'55	1°29'56	min. Earth dist.	3729 Aug 20 18:14	29° \approx 14'52	8.96153 AU
max. Earth dist.	3723 Dec 18 03:56	25° \mathbb{A} 44'18	10.86299 AU	direct	3729 Oct 29 21:16	25° \approx 56'39	
morning rise	3724 Jan 03 23:57	27° \mathbb{A} 44'48			3730 Jan 10 19:40	0° \mathbb{H}	
	3724 Jan 23 22:16	0° \mathbb{B}		evening set	3730 Feb 07 06:03	3° \mathbb{H} 00'51	
retrograde	3724 Apr 12 20:00	4° \mathbb{B} 51'10					
opposition	3724 Jun 21 04:21	1° \mathbb{B} 33'08	1°37'42	conjunction	3730 Feb 23 22:10	4° \mathbb{H} 59'24	-0°58'18
min. Earth dist.	3724 Jun 21 05:33	1° \mathbb{B} 32'55	8.89547 AU	minimum elong	3730 Feb 23 22:08	4° \mathbb{H} 59'24	0°58'19
	3724 Jul 12 17:40	30° \mathbb{R} \mathbb{A}		max. Earth dist.	3730 Feb 23 20:30	4° \mathbb{H} 58'54	10.94016 AU
direct	3724 Aug 31 03:31	28° \mathbb{A} 11'32		morning rise	3730 Mar 12 15:39	6° \mathbb{H} 58'26	
	3724 Oct 18 01:38	0° \mathbb{B}		retrograde	3730 Jun 23 08:10	14° \mathbb{H} 12'22	
evening set	3724 Dec 12 06:41	5° \mathbb{B} 27'35		opposition	3730 Sep 02 01:54	10° \mathbb{H} 52'05	-1°25'47
				min. Earth dist.	3730 Sep 02 02:58	10° \mathbb{H} 51'53	8.91465 AU
conjunction	3724 Dec 29 01:55	7° \mathbb{B} 27'11	1°08'33	direct	3730 Nov 10 20:31	7° \mathbb{H} 33'34	
minimum elong	3724 Dec 29 01:57	7° \mathbb{B} 27'11	1°08'33	evening set	3731 Feb 18 23:30	14° \mathbb{H} 39'34	
max. Earth dist.	3724 Dec 29 00:25	7° \mathbb{B} 26'44	10.92299 AU				
morning rise	3725 Jan 14 18:49	9° \mathbb{B} 26'06		conjunction	3731 Mar 07 16:01	16° \mathbb{H} 38'54	-1°20'58
retrograde	3725 Apr 24 19:47	16° \mathbb{B} 30'13		minimum elong	3731 Mar 07 15:58	16° \mathbb{H} 38'53	1°20'58
opposition	3725 Jul 03 13:22	13° \mathbb{B} 12'26	1°09'40	max. Earth dist.	3731 Mar 07 13:51	16° \mathbb{H} 38'15	10.88406 AU
min. Earth dist.	3725 Jul 03 14:03	13° \mathbb{B} 12'18	8.94698 AU	morning rise	3731 Mar 24 10:46	18° \mathbb{H} 38'56	
direct	3725 Sep 12 12:27	9° \mathbb{B} 51'51		retrograde	3731 Jul 05 20:50	25° \mathbb{H} 58'46	
evening set	3725 Dec 23 23:55	17° \mathbb{B} 02'59		opposition	3731 Sep 14 13:28	22° \mathbb{H} 37'22	-1°51'55
				min. Earth dist.	3731 Sep 14 14:53	22° \mathbb{H} 37'07	8.85047 AU
conjunction	3726 Jan 09 17:54	19° \mathbb{B} 01'43	0°44'34	direct	3731 Nov 22 22:06	19° \mathbb{H} 18'33	
minimum elong	3726 Jan 09 17:56	19° \mathbb{B} 01'44	0°44'35	evening set	3732 Mar 01 21:09	26° \mathbb{H} 27'37	
max. Earth dist.	3726 Jan 09 16:59	19° \mathbb{B} 01'27	10.96600 AU				
morning rise	3726 Jan 26 10:07	21° \mathbb{B} 00'00		conjunction	3732 Mar 18 14:36	28° \mathbb{H} 28'05	-1°40'28
retrograde	3726 May 06 19:50	28° \mathbb{B} 03'15		minimum elong	3732 Mar 18 14:34	28° \mathbb{H} 28'05	1°40'29
opposition	3726 Jul 15 20:40	24° \mathbb{B} 45'26	0°39'05	max. Earth dist.	3732 Mar 18 12:09	28° \mathbb{H} 27'21	10.81211 AU
min. Earth dist.	3726 Jul 15 21:29	24° \mathbb{B} 45'17	8.98065 AU		3732 Mar 31 07:58	0° \mathbb{Y}	
direct	3726 Sep 24 17:53	21° \mathbb{B} 25'42		morning rise	3732 Apr 04 11:10	0° \mathbb{Y} 29'29	
evening set	3727 Jan 04 14:11	28° \mathbb{B} 33'04		retrograde	3732 Jul 17 13:55	7° \mathbb{Y} 56'07	
	3727 Jan 16 21:49	0° \approx		opposition	3732 Sep 26 04:27	4° \mathbb{Y} 33'28	-2°13'42
conjunction	3727 Jan 21 07:08	0° \approx 31'16	0°18'57	min. Earth dist.	3732 Sep 26 05:57	4° \mathbb{Y} 33'11	8.77199 AU
minimum elong	3727 Jan 21 07:09	0° \approx 31'16	0°18'57	direct	3732 Dec 04 02:01	1° \mathbb{Y} 14'07	
max. Earth dist.	3727 Jan 21 05:34	0° \approx 30'48	10.99025 AU	evening set	3733 Mar 14 00:03	8° \mathbb{Y} 27'23	
morning rise	3727 Feb 06 23:14	2° \approx 29'15					
retrograde	3727 May 18 19:22	9° \approx 32'58		conjunction	3733 Mar 30 19:15	10° \mathbb{Y} 29'20	-1°55'54
opposition	3727 Jul 28 03:09	6° \approx 14'55	0°07'06	minimum elong	3733 Mar 30 19:13	10° \mathbb{Y} 29'19	1°55'54
min. Earth dist.	3727 Jul 28 04:49	6° \approx 14'36	8.99494 AU	max. Earth dist.	3733 Mar 30 17:41	10° \mathbb{Y} 28'51	10.72746 AU
direct	3727 Oct 06 19:34	2° \approx 55'48		morning rise	3733 Apr 16 18:04	12° \mathbb{Y} 32'24	
desc. node	3727 Oct 19 02:37	3° \approx 03'12		retrograde	3733 Jul 30 12:25	20° \mathbb{Y} 06'30	
evening set	3728 Jan 16 03:01	10° \approx 00'42		opposition	3733 Oct 08 23:07	16° \mathbb{Y} 42'30	-2°29'59
				min. Earth dist.	3733 Oct 08 23:58	16° \mathbb{Y} 42'21	8.68254 AU
conjunction	3728 Feb 01 19:12	11° \approx 58'40	-0°07'27	direct	3733 Dec 16 10:54	13° \mathbb{Y} 22'27	
minimum elong	3728 Feb 01 19:12	11° \approx 58'40	0°07'27	evening set	3734 Mar 26 09:39	20° \mathbb{Y} 40'57	
behind sun begin	3728 Feb 01 12:49	11° \approx 56'47					
behind sun end	3728 Feb 02 01:35	12° \approx 00'32		conjunction	3734 Apr 12 07:20	22° \mathbb{Y} 44'45	-2°06'23
				minimum elong	3734 Apr 12 07:19	22° \mathbb{Y} 44'44	2°06'22

max. Earth dist.	3734 Apr 12 07:05	22° Υ 44'40	10.63367 AU	minimum elong	3740 Jul 01 20:06	11° \mathfrak{D} 55'13	0°59'18
morning rise	3734 Apr 29 08:55	24° Υ 49'47		max. Earth dist.	3740 Jul 01 23:02	11° \mathfrak{D} 56'10	10.13023 AU
	3734 Jun 17 07:21	0° \mathfrak{B}		morning rise	3740 Jul 19 21:12	14° \mathfrak{D} 13'49	
retrograde	3734 Aug 12 18:40	2° \mathfrak{B} 31'37		retrograde	3740 Nov 02 18:21	22° \mathfrak{D} 26'13	
	3734 Oct 10 05:15	30° \mathfrak{R} Υ		opposition	3741 Jan 09 07:19	18° \mathfrak{D} 57'02	-0°55'35
opposition	3734 Oct 21 21:46	29° Υ 06'19	-2°39'42	min. Earth dist.	3741 Jan 09 04:44	18° \mathfrak{D} 57'34	8.11178 AU
min. Earth dist.	3734 Oct 21 21:34	29° Υ 06'21	8.58588 AU	direct	3741 Mar 17 01:05	15° \mathfrak{D} 29'35	
direct	3734 Dec 28 23:28	25° Υ 45'23		evening set	3741 Jun 28 13:48	23° \mathfrak{D} 33'08	
	3735 Mar 11 10:58	0° \mathfrak{B}					
evening set	3735 Apr 08 02:45	3° \mathfrak{B} 09'59		conjunction	3741 Jul 16 15:31	25° \mathfrak{D} 52'16	-0°29'28
				minimum elong	3741 Jul 16 15:33	25° \mathfrak{D} 52'16	0°29'29
conjunction	3735 Apr 25 03:34	5° \mathfrak{B} 15'55	-2°11'06	max. Earth dist.	3741 Jul 16 18:42	25° \mathfrak{D} 53'17	10.09873 AU
minimum elong	3735 Apr 25 03:34	5° \mathfrak{B} 15'55	2°11'06	morning rise	3741 Aug 03 18:35	28° \mathfrak{D} 11'52	
max. Earth dist.	3735 Apr 25 03:52	5° \mathfrak{B} 16'01	10.53484 AU		3741 Aug 18 08:47	0° \mathfrak{Q}	
morning rise	3735 May 12 08:35	7° \mathfrak{B} 23'12		retrograde	3741 Nov 17 02:50	6° \mathfrak{Q} 23'38	
	3735 Aug 10 11:59	15° \mathfrak{B}		opposition	3742 Jan 23 06:57	2° \mathfrak{Q} 54'52	-0°17'02
retrograde	3735 Aug 26 07:50	15° \mathfrak{B} 12'43		min. Earth dist.	3742 Jan 23 04:21	2° \mathfrak{Q} 55'24	8.09187 AU
	3735 Sep 11 02:31	15° \mathfrak{R} \mathfrak{B}			3742 Mar 06 12:39	30° \mathfrak{R} \mathfrak{D}	
opposition	3735 Nov 04 01:07	11° \mathfrak{B} 46'12	-2°41'59	direct	3742 Mar 31 03:35	29° \mathfrak{D} 26'39	
min. Earth dist.	3735 Nov 04 00:19	11° \mathfrak{B} 46'21	8.48629 AU		3742 Apr 24 17:21	0° \mathfrak{Q}	
direct	3736 Jan 10 15:11	8° \mathfrak{B} 24'15		asc. node	3742 Jul 05 00:36	6° \mathfrak{Q} 30'56	
	3736 Apr 12 12:25	15° \mathfrak{B}		evening set	3742 Jul 13 10:20	7° \mathfrak{Q} 33'57	
evening set	3736 Apr 20 03:53	15° \mathfrak{B} 55'34					
				conjunction	3742 Jul 31 13:30	9° \mathfrak{Q} 53'39	0°02'17
conjunction	3736 May 07 08:29	18° \mathfrak{B} 03'53	-2°09'30	minimum elong	3742 Jul 31 13:30	9° \mathfrak{Q} 53'39	0°02'17
minimum elong	3736 May 07 08:30	18° \mathfrak{B} 03'53	2°09'30	behind sun begin	3742 Jul 31 06:08	9° \mathfrak{Q} 51'18	
max. Earth dist.	3736 May 07 08:47	18° \mathfrak{B} 03'58	10.43559 AU	behind sun end	3742 Jul 31 20:51	9° \mathfrak{Q} 56'00	
morning rise	3736 May 24 17:37	20° \mathfrak{B} 13'38		max. Earth dist.	3742 Jul 31 16:21	9° \mathfrak{Q} 54'31	10.09110 AU
retrograde	3736 Sep 08 01:02	28° \mathfrak{B} 10'19		morning rise	3742 Aug 18 16:54	12° \mathfrak{Q} 13'26	
opposition	3736 Nov 16 09:06	24° \mathfrak{B} 42'45	-2°36'11		3742 Sep 10 13:50	15° \mathfrak{Q}	
min. Earth dist.	3736 Nov 16 08:17	24° \mathfrak{B} 42'55	8.38851 AU	retrograde	3742 Dec 01 09:45	20° \mathfrak{Q} 22'41	
direct	3737 Jan 22 15:03	21° \mathfrak{B} 19'40		opposition	3743 Feb 06 06:56	16° \mathfrak{Q} 54'38	0°22'36
evening set	3737 May 03 13:46	28° \mathfrak{B} 58'05		min. Earth dist.	3743 Feb 06 04:43	16° \mathfrak{Q} 55'05	8.09654 AU
	3737 May 11 20:17	0° \mathfrak{I}			3743 Mar 02 21:58	15° \mathfrak{R} \mathfrak{Q}	
				direct	3743 Apr 14 08:51	13° \mathfrak{Q} 25'54	
conjunction	3737 May 20 22:48	1° \mathfrak{I} 08'57	-2°01'15		3743 May 26 10:41	15° \mathfrak{Q}	
minimum elong	3737 May 20 22:50	1° \mathfrak{I} 08'58	2°01'15	evening set	3743 Jul 28 08:30	21° \mathfrak{Q} 35'18	
max. Earth dist.	3737 May 20 23:12	1° \mathfrak{I} 09'05	10.34072 AU				
morning rise	3737 Jun 07 12:25	3° \mathfrak{I} 21'14		conjunction	3743 Aug 15 11:32	23° \mathfrak{Q} 54'44	0°33'47
retrograde	3737 Sep 21 23:34	11° \mathfrak{I} 24'09		minimum elong	3743 Aug 15 11:31	23° \mathfrak{Q} 54'43	0°33'46
opposition	3737 Nov 29 21:20	7° \mathfrak{I} 55'45	-2°22'04	max. Earth dist.	3743 Aug 15 13:57	23° \mathfrak{Q} 55'30	10.10806 AU
min. Earth dist.	3737 Nov 29 20:40	7° \mathfrak{I} 55'54	8.29745 AU	morning rise	3743 Sep 02 13:44	26° \mathfrak{Q} 13'52	
direct	3738 Feb 04 21:08	4° \mathfrak{I} 31'29			3743 Oct 04 10:44	0° \mathfrak{P}	
evening set	3738 May 17 08:18	12° \mathfrak{I} 17'01		retrograde	3743 Dec 15 13:16	4° \mathfrak{P} 18'52	
				opposition	3744 Feb 20 05:58	0° \mathfrak{P} 51'45	1°00'45
conjunction	3738 Jun 03 22:10	14° \mathfrak{I} 30'28	-1°46'23	min. Earth dist.	3744 Feb 20 04:08	0° \mathfrak{P} 52'08	8.12567 AU
minimum elong	3738 Jun 03 22:13	14° \mathfrak{I} 30'29	1°46'24		3744 Mar 01 20:56	30° \mathfrak{R} \mathfrak{Q}	
max. Earth dist.	3738 Jun 03 23:19	14° \mathfrak{I} 30'50	10.25510 AU	direct	3744 Apr 27 16:46	27° \mathfrak{Q} 22'47	
morning rise	3738 Jun 21 16:13	16° \mathfrak{I} 45'13			3744 Jun 22 03:54	0° \mathfrak{P}	
retrograde	3738 Oct 06 03:08	24° \mathfrak{I} 53'01		evening set	3744 Aug 11 05:38	5° \mathfrak{P} 32'27	
opposition	3738 Dec 13 13:37	21° \mathfrak{I} 24'03	-1°59'54				
min. Earth dist.	3738 Dec 13 12:26	21° \mathfrak{I} 24'17	8.21799 AU	conjunction	3744 Aug 29 07:04	7° \mathfrak{P} 50'47	1°03'09
direct	3739 Feb 18 08:33	17° \mathfrak{I} 58'37		minimum elong	3744 Aug 29 07:01	7° \mathfrak{P} 50'47	1°03'09
evening set	3739 May 31 11:00	25° \mathfrak{I} 50'56		max. Earth dist.	3744 Aug 29 08:59	7° \mathfrak{P} 51'24	10.14856 AU
				morning rise	3744 Sep 16 06:34	10° \mathfrak{P} 08'30	
conjunction	3739 Jun 18 05:36	28° \mathfrak{I} 06'45	-1°25'24	retrograde	3744 Dec 28 10:33	18° \mathfrak{P} 07'49	
minimum elong	3739 Jun 18 05:39	28° \mathfrak{I} 06'46	1°25'25	opposition	3745 Mar 05 03:02	14° \mathfrak{P} 41'50	1°34'59
max. Earth dist.	3739 Jun 18 07:46	28° \mathfrak{I} 07'27	10.18349 AU	min. Earth dist.	3745 Mar 05 01:18	14° \mathfrak{P} 42'11	8.17728 AU
	3739 Jul 03 00:25	0° \mathfrak{D}		direct	3745 May 12 00:57	11° \mathfrak{P} 12'54	
morning rise	3739 Jul 06 03:36	0° \mathfrak{D} 23'41		evening set	3745 Aug 25 23:03	19° \mathfrak{P} 20'53	
retrograde	3739 Oct 20 10:09	8° \mathfrak{D} 34'44					
opposition	3739 Dec 27 09:17	5° \mathfrak{D} 05'30	-1°30'34	conjunction	3745 Sep 12 21:35	21° \mathfrak{P} 37'28	1°28'36
min. Earth dist.	3739 Dec 27 07:18	5° \mathfrak{D} 05'54	8.15476 AU	minimum elong	3745 Sep 12 21:32	21° \mathfrak{P} 37'27	1°28'36
direct	3740 Mar 03 02:24	1° \mathfrak{D} 38'59		max. Earth dist.	3745 Sep 12 23:15	21° \mathfrak{P} 38'00	10.20989 AU
evening set	3740 Jun 13 21:20	9° \mathfrak{D} 37'25		morning rise	3745 Sep 30 17:10	23° \mathfrak{P} 53'07	
					3745 Nov 27 15:30	0° \mathfrak{L}	
conjunction	3740 Jul 01 20:03	11° \mathfrak{D} 55'12	-0°59'16	retrograde	3746 Jan 11 02:27	1° \mathfrak{L} 45'43	

	3746 Feb 25 13:10	30° $\mathbb{R}\mathbb{M}$	opposition	3752 Jun 03 15:53	14° \mathbb{X} 51'07	2°10'56
opposition	3746 Mar 18 21:00	28° \mathbb{M} 20'55 2°03'18	min. Earth dist.	3752 Jun 03 17:17	14° \mathbb{X} 50'51	8.78756 AU
min. Earth dist.	3746 Mar 18 19:00	28° \mathbb{M} 21'19 8.24794 AU	direct	3752 Aug 13 10:28	11° \mathbb{X} 27'56	
direct	3746 May 26 06:33	24° \mathbb{M} 52'20	evening set	3752 Nov 25 13:43	18° \mathbb{X} 53'23	
	3746 Aug 15 13:17	0° \mathbb{L}				
evening set	3746 Sep 09 10:15	2° \mathbb{L} 56'46	conjunction	3752 Dec 12 11:43	20° \mathbb{X} 54'55	1°37'58
			minimum elong	3752 Dec 12 11:45	20° \mathbb{X} 54'56	1°37'58
conjunction	3746 Sep 27 05:04	5° \mathbb{L} 11'08 1°48'44	max. Earth dist.	3752 Dec 12 09:41	20° \mathbb{X} 54'18	10.82269 AU
minimum elong	3746 Sep 27 05:01	5° \mathbb{L} 11'07 1°48'44	morning rise	3752 Dec 29 06:16	22° \mathbb{X} 55'29	
max. Earth dist.	3746 Sep 27 06:51	5° \mathbb{L} 11'42 10.28815 AU		3753 Mar 30 07:44	0° \mathbb{Z}	
morning rise	3746 Oct 14 20:05	7° \mathbb{L} 24'20	retrograde	3753 Apr 08 03:08	0° \mathbb{Z} 03'58	
retrograde	3747 Jan 24 13:17	15° \mathbb{L} 09'33		3753 Apr 16 21:59	30° $\mathbb{R}\mathbb{X}$	
opposition	3747 Apr 01 11:07	11° \mathbb{L} 45'57 2°24'19	opposition	3753 Jun 16 05:20	26° \mathbb{X} 45'42	1°48'33
min. Earth dist.	3747 Apr 01 09:21	11° \mathbb{L} 46'18 8.33306 AU	min. Earth dist.	3753 Jun 16 07:13	26° \mathbb{X} 45'21	8.85595 AU
direct	3747 Jun 09 07:35	8° \mathbb{L} 17'55	direct	3753 Aug 26 02:34	23° \mathbb{X} 23'30	
evening set	3747 Sep 23 13:21	16° \mathbb{L} 17'13		3753 Dec 01 11:08	0° \mathbb{Z}	
			evening set	3753 Dec 07 14:23	0° \mathbb{Z} 42'46	
conjunction	3747 Oct 11 04:02	18° \mathbb{L} 29'08 2°02'40				
minimum elong	3747 Oct 11 04:00	18° \mathbb{L} 29'08 2°02'40	conjunction	3753 Dec 24 10:26	2° \mathbb{Z} 43'02	1°17'59
max. Earth dist.	3747 Oct 11 05:24	18° \mathbb{L} 29'34 10.37814 AU	minimum elong	3753 Dec 24 10:28	2° \mathbb{Z} 43'03	1°17'58
morning rise	3747 Oct 28 14:22	20° \mathbb{L} 39'45	max. Earth dist.	3753 Dec 24 07:55	2° \mathbb{Z} 42'17	10.88441 AU
retrograde	3748 Feb 06 17:30	28° \mathbb{L} 17'20	morning rise	3754 Jan 10 03:47	4° \mathbb{Z} 42'33	
opposition	3748 Apr 13 20:51	24° \mathbb{L} 54'57 2°37'14	retrograde	3754 Apr 20 02:57	11° \mathbb{Z} 48'16	
min. Earth dist.	3748 Apr 13 20:07	24° \mathbb{L} 55'05 8.42686 AU	opposition	3754 Jun 28 16:01	8° \mathbb{Z} 30'10	1°21'56
direct	3748 Jun 22 04:26	21° \mathbb{L} 27'38	min. Earth dist.	3754 Jun 28 18:32	8° \mathbb{Z} 29'42	8.90991 AU
evening set	3748 Oct 06 07:31	29° \mathbb{L} 20'47	direct	3754 Sep 07 13:43	5° \mathbb{Z} 08'49	
	3748 Oct 11 15:23	0° \mathbb{M}	evening set	3754 Dec 19 10:00	12° \mathbb{Z} 22'49	
conjunction	3748 Oct 23 17:57	1° \mathbb{M} 30'12 2°09'59	conjunction	3755 Jan 05 04:31	14° \mathbb{Z} 22'07	0°54'58
minimum elong	3748 Oct 23 17:56	1° \mathbb{M} 30'12 2°09'59	minimum elong	3755 Jan 05 04:33	14° \mathbb{Z} 22'08	0°54'58
max. Earth dist.	3748 Oct 23 18:01	1° \mathbb{M} 30'13 10.47380 AU	max. Earth dist.	3755 Jan 05 01:22	14° \mathbb{Z} 21'11	10.93057 AU
morning rise	3748 Nov 09 23:51	3° \mathbb{M} 38'17	morning rise	3755 Jan 21 21:15	16° \mathbb{Z} 20'54	
retrograde	3749 Feb 18 14:08	11° \mathbb{M} 08'30	retrograde	3755 May 02 02:17	23° \mathbb{Z} 25'11	
opposition	3749 Apr 27 01:59	7° \mathbb{M} 47'17 2°41'53	opposition	3755 Jul 11 00:20	20° \mathbb{Z} 07'00	0°52'15
min. Earth dist.	3749 Apr 27 02:47	7° \mathbb{M} 47'08 8.52339 AU	min. Earth dist.	3755 Jul 11 02:48	20° \mathbb{Z} 06'33	8.94741 AU
direct	3749 Jul 05 20:46	4° \mathbb{M} 20'54	direct	3755 Sep 19 23:07	16° \mathbb{Z} 46'23	
evening set	3749 Oct 19 16:14	12° \mathbb{M} 07'17	evening set	3755 Dec 31 01:52	23° \mathbb{Z} 56'12	
conjunction	3749 Nov 05 22:40	14° \mathbb{M} 14'20 2°10'41	conjunction	3756 Jan 16 19:20	25° \mathbb{Z} 54'52	0°29'53
minimum elong	3749 Nov 05 22:40	14° \mathbb{M} 14'20 2°10'42	minimum elong	3756 Jan 16 19:21	25° \mathbb{Z} 54'52	0°29'53
max. Earth dist.	3749 Nov 05 21:00	14° \mathbb{M} 13'49 10.56982 AU	max. Earth dist.	3756 Jan 16 16:39	25° \mathbb{Z} 54'04	10.95945 AU
	3749 Nov 12 02:41	15° \mathbb{M}	morning rise	3756 Feb 02 11:39	27° \mathbb{Z} 53'12	
morning rise	3749 Nov 23 00:48	16° \mathbb{M} 20'06		3756 Feb 21 07:09	0° \mathbb{X}	
retrograde	3750 Mar 03 05:44	23° \mathbb{M} 43'36	retrograde	3756 May 13 02:14	4° \mathbb{X} 57'27	
opposition	3750 May 10 02:47	20° \mathbb{M} 23'26 2°38'35	opposition	3756 Jul 22 07:31	1° \mathbb{X} 38'59	0°20'40
min. Earth dist.	3750 May 10 04:20	20° \mathbb{M} 23'08 8.61807 AU	min. Earth dist.	3756 Jul 22 09:02	1° \mathbb{X} 38'42	8.96708 AU
direct	3750 Jul 19 07:01	16° \mathbb{M} 58'06		3756 Aug 14 13:38	30° $\mathbb{R}\mathbb{Z}$	
evening set	3750 Nov 01 15:33	24° \mathbb{M} 37'24	direct	3756 Oct 01 03:11	28° \mathbb{Z} 19'01	
				3756 Nov 16 03:37	0° \mathbb{X}	
conjunction	3750 Nov 18 18:36	26° \mathbb{M} 42'20 2°05'09	evening set	3757 Jan 10 15:26	5° \mathbb{X} 25'49	
minimum elong	3750 Nov 18 18:37	26° \mathbb{M} 42'20 2°05'09				
max. Earth dist.	3750 Nov 18 16:02	26° \mathbb{M} 41'33 10.66230 AU	conjunction	3757 Jan 27 08:12	7° \mathbb{X} 24'08	0°03'44
morning rise	3750 Dec 05 17:38	28° \mathbb{M} 46'04	minimum elong	3757 Jan 27 08:12	7° \mathbb{X} 24'08	0°03'45
	3750 Dec 16 04:37	0° \mathbb{X}	behind sun begin	3757 Jan 27 01:17	7° \mathbb{X} 22'06	
retrograde	3751 Mar 15 16:07	6° \mathbb{X} 03'36	behind sun end	3757 Jan 27 15:06	7° \mathbb{X} 26'10	
opposition	3751 May 22 23:18	2° \mathbb{X} 44'17 2°27'57	max. Earth dist.	3757 Jan 27 06:37	7° \mathbb{X} 23'43	10.96997 AU
min. Earth dist.	3751 May 23 00:49	2° \mathbb{X} 43'59 8.70726 AU	morning rise	3757 Feb 13 00:23	9° \mathbb{X} 22'22	
	3751 Jul 03 16:51	30° $\mathbb{R}\mathbb{M}$	desc. node	3757 Mar 20 14:01	13° \mathbb{X} 09'59	
direct	3751 Aug 01 11:15	29° \mathbb{M} 20'02		3757 Apr 12 09:14	15° \mathbb{X}	
	3751 Aug 29 23:43	0° \mathbb{X}	retrograde	3757 May 25 03:09	16° \mathbb{X} 28'02	
evening set	3751 Nov 14 06:26	6° \mathbb{X} 52'15		3757 Jul 08 03:25	15° $\mathbb{R}\mathbb{X}$	
conjunction	3751 Dec 01 06:43	8° \mathbb{X} 55'20 1°53'59	opposition	3757 Aug 03 14:24	13° \mathbb{X} 09'04	-0°11'40
minimum elong	3751 Dec 01 06:45	8° \mathbb{X} 55'21 1°53'59	min. Earth dist.	3757 Aug 03 15:29	13° \mathbb{X} 08'52	8.96824 AU
max. Earth dist.	3751 Dec 01 04:17	8° \mathbb{X} 54'36 10.74770 AU	direct	3757 Oct 13 04:32	9° \mathbb{X} 49'36	
morning rise	3751 Dec 18 03:12	10° \mathbb{X} 57'20		3758 Jan 05 05:37	15° \mathbb{X}	
retrograde	3752 Mar 26 22:44	18° \mathbb{X} 09'48	evening set	3758 Jan 22 04:33	16° \mathbb{X} 54'43	

conjunction	3758 Feb 07 20:45	18° \approx 53'00 -0°22'41	max. Earth dist.	3764 Apr 19 04:08	0° \approx 17'51 10.58249 AU
minimum elong	3758 Feb 07 20:44	18° \approx 53'00 0°22'41	morning rise	3764 May 06 06:58	2° \approx 23'53
max. Earth dist.	3758 Feb 07 19:02	18° \approx 52'30 10.96179 AU	retrograde	3764 Aug 20 00:39	10° \approx 8'10'01
morning rise	3758 Feb 24 13:18	20° \approx 51'26	opposition	3764 Oct 28 22:49	6° \approx 44'20 -2°41'48
retrograde	3758 Jun 06 06:58	27° \approx 59'51	min. Earth dist.	3764 Oct 28 21:46	6° \approx 44'32 8.53723 AU
opposition	3758 Aug 15 21:37	24° \approx 40'15 -0°43'36	direct	3765 Jan 04 17:06	3° \approx 23'11
min. Earth dist.	3758 Aug 15 22:57	24° \approx 40'01 8.95088 AU	evening set	3765 Apr 15 01:54	10° \approx 51'21
direct	3758 Oct 25 04:31	21° \approx 21'05			
evening set	3759 Feb 02 18:29	28° \approx 25'54	conjunction	3765 May 02 04:47	12° \approx 58'31 -2°10'49
	3759 Feb 16 00:31	0° \approx	minimum elong	3765 May 02 04:48	12° \approx 58'31 2°10'49
			max. Earth dist.	3765 May 02 06:44	12° \approx 59'07 10.48919 AU
conjunction	3759 Feb 19 10:29	0° \approx 24'28 -0°48'11		3765 May 18 12:57	15° \approx
minimum elong	3759 Feb 19 10:27	0° \approx 24'28 0°48'11	morning rise	3765 May 19 12:05	15° \approx 07'04
max. Earth dist.	3759 Feb 19 08:20	0° \approx 23'50 10.93519 AU	retrograde	3765 Sep 02 15:24	23° \approx 00'23
morning rise	3759 Mar 08 03:49	2° \approx 23'26	opposition	3765 Nov 11 04:48	19° \approx 33'43 -2°39'21
retrograde	3759 Jun 18 11:45	9° \approx 35'56	min. Earth dist.	3765 Nov 11 03:01	19° \approx 34'04 8.44421 AU
opposition	3759 Aug 28 06:15	6° \approx 15'31 -1°13'57	direct	3766 Jan 17 14:57	16° \approx 11'39
min. Earth dist.	3759 Aug 28 07:38	6° \approx 15'16 8.91549 AU	evening set	3766 Apr 28 08:07	23° \approx 46'29
direct	3759 Nov 06 04:38	2° \approx 56'28			
evening set	3760 Feb 14 10:35	10° \approx 02'21	conjunction	3766 May 15 15:14	25° \approx 56'04 -2°05'19
			minimum elong	3766 May 15 15:16	25° \approx 56'05 2°05'19
conjunction	3760 Mar 02 02:53	12° \approx 01'30 -1°11'53	max. Earth dist.	3766 May 15 18:02	25° \approx 56'57 10.39752 AU
minimum elong	3760 Mar 02 02:51	12° \approx 01'30 1°11'53	morning rise	3766 Jun 02 02:40	28° \approx 07'02
max. Earth dist.	3760 Mar 02 01:35	12° \approx 01'07 10.89100 AU		3766 Jun 17 19:29	0° \approx
morning rise	3760 Mar 18 21:12	14° \approx 01'17	retrograde	3766 Sep 16 12:33	6° \approx 06'43
retrograde	3760 Jun 29 22:09	21° \approx 19'07	opposition	3766 Nov 24 14:57	2° \approx 39'13 -2°28'39
opposition	3760 Sep 08 17:02	17° \approx 57'43 -1°41'34	min. Earth dist.	3766 Nov 24 12:34	2° \approx 39'41 8.35481 AU
min. Earth dist.	3760 Sep 08 17:26	17° \approx 57'39 8.86332 AU		3767 Jan 02 00:09	30° \approx 8
direct	3760 Nov 17 07:05	14° \approx 38'38	direct	3767 Jan 30 17:19	29° \approx 16'06
evening set	3761 Feb 25 06:25	21° \approx 46'49		3767 Feb 28 02:13	0° \approx
			evening set	3767 May 11 22:47	6° \approx 05'44
conjunction	3761 Mar 13 23:35	23° \approx 46'56 -1°32'49			
minimum elong	3761 Mar 13 23:32	23° \approx 46'56 1°32'49	conjunction	3767 May 29 10:29	9° \approx 09'49 -1°53'10
max. Earth dist.	3761 Mar 13 23:31	23° \approx 46'55 10.83087 AU	minimum elong	3767 May 29 10:32	9° \approx 09'50 1°53'11
morning rise	3761 Mar 30 19:16	25° \approx 47'52	max. Earth dist.	3767 May 29 13:02	9° \approx 10'38 10.31170 AU
	3761 May 09 00:17	0° \approx	morning rise	3767 Jun 16 02:19	11° \approx 23'14
retrograde	3761 Jul 12 15:20	3° \approx 11'58	retrograde	3767 Sep 30 14:51	19° \approx 28'08
	3761 Sep 18 23:17	30° \approx 8	opposition	3767 Dec 08 05:15	16° \approx 00'00 -2°09'47
opposition	3761 Sep 21 06:41	29° \approx 49'32 -2°05'16	min. Earth dist.	3767 Dec 08 03:04	16° \approx 00'26 8.27307 AU
min. Earth dist.	3761 Sep 21 06:07	29° \approx 49'38 8.79640 AU	direct	3768 Feb 13 01:02	12° \approx 35'44
direct	3761 Nov 29 09:27	26° \approx 30'13	evening set	3768 May 24 21:36	20° \approx 24'07
	3762 Feb 03 13:59	0° \approx			
evening set	3762 Mar 09 07:15	3° \approx 41'57	conjunction	3768 Jun 11 13:59	22° \approx 38'37 -1°34'41
			minimum elong	3768 Jun 11 14:02	22° \approx 38'38 1°34'41
conjunction	3762 Mar 26 01:44	5° \approx 43'20 -1°50'02	max. Earth dist.	3768 Jun 11 15:44	22° \approx 39'11 10.23558 AU
minimum elong	3762 Mar 26 01:42	5° \approx 43'19 1°50'02	morning rise	3768 Jun 29 10:10	24° \approx 15'42'20
max. Earth dist.	3762 Mar 26 02:03	5° \approx 43'25 10.75725 AU		3768 Aug 13 23:25	0° \approx
morning rise	3762 Apr 11 23:27	7° \approx 45'44	retrograde	3768 Oct 13 20:28	3° \approx 03'05
retrograde	3762 Jul 25 12:10	15° \approx 16'52		3768 Dec 15 17:32	30° \approx 8
opposition	3762 Oct 03 23:55	11° \approx 53'20 -2°23'55	opposition	3768 Dec 20 23:05	29° \approx 34'36 -1°43'22
min. Earth dist.	3762 Oct 03 23:03	11° \approx 53'30 8.71737 AU	min. Earth dist.	3768 Dec 20 21:35	29° \approx 34'54 8.20299 AU
direct	3762 Dec 11 15:09	8° \approx 33'35	direct	3769 Feb 25 15:51	26° \approx 09'11
evening set	3763 Mar 21 14:13	15° \approx 49'58		3769 May 04 04:53	0° \approx
			evening set	3769 Jun 08 04:21	4° \approx 04'01
conjunction	3763 Apr 07 10:36	17° \approx 52'58 -2°02'38			
minimum elong	3763 Apr 07 10:35	17° \approx 52'57 2°02'38	conjunction	3769 Jun 26 01:06	6° \approx 20'40 -1°10'37
max. Earth dist.	3763 Apr 07 10:39	17° \approx 52'58 10.67319 AU	minimum elong	3769 Jun 26 01:09	6° \approx 20'41 1°10'38
morning rise	3763 Apr 24 10:58	19° \approx 57'09	max. Earth dist.	3769 Jun 26 02:16	6° \approx 21'02 10.17346 AU
retrograde	3763 Aug 07 15:14	27° \approx 35'45	morning rise	3769 Jul 14 00:59	8° \approx 38'18
opposition	3763 Oct 16 21:11	24° \approx 11'07 -2°36'25	retrograde	3769 Oct 28 02:35	16° \approx 49'14
min. Earth dist.	3763 Oct 16 20:31	24° \approx 11'15 8.62965 AU	opposition	3770 Jan 03 19:37	13° \approx 20'40 -1°10'38
direct	3763 Dec 24 01:51	20° \approx 50'45	min. Earth dist.	3770 Jan 03 18:33	13° \approx 20'53 8.14939 AU
evening set	3764 Apr 02 04:11	28° \approx 12'42	direct	3770 Mar 11 12:57	9° \approx 54'10
	3764 Apr 16 18:22	0° \approx	evening set	3770 Jun 22 17:44	17° \approx 54'39
conjunction	3764 Apr 19 03:23	0° \approx 17'37 -2°09'47	conjunction	3770 Jul 10 18:02	20° \approx 12'58 -0°42'14
minimum elong	3764 Apr 19 03:22	0° \approx 17'37 2°09'47	minimum elong	3770 Jul 10 18:04	20° \approx 12'59 0°42'15

max. Earth dist.	3770 Jul 10 19:11	20°☾13'20	10.13005 AU	conjunction	3776 Oct 04 12:19	12°♊59'25	1°57'28
morning rise	3770 Jul 28 20:26	22°☾31'56		minimum elong	3776 Oct 04 12:17	12°♊59'24	1°57'28
	3770 Oct 14 04:09	0°♊		max. Earth dist.	3776 Oct 04 11:57	12°♊59'18	10.33331 AU
retrograde	3770 Nov 11 09:46	0°♊43'10		morning rise	3776 Oct 22 00:52	15°♊11'11	
	3770 Dec 09 18:40	30°♋☾		retrograde	3777 Jan 31 08:31	22°♊51'55	
opposition	3771 Jan 17 18:08	27°☾14'45	-0°33'26	opposition	3777 Apr 08 10:21	19°♊28'36	2°32'43
min. Earth dist.	3771 Jan 17 16:55	27°☾15'01	8.11657 AU	min. Earth dist.	3777 Apr 08 10:15	19°♊28'37	8.37919 AU
direct	3771 Mar 25 13:54	23°☾47'18		direct	3777 Jun 16 14:26	16°♊00'29	
	3771 Jun 22 07:44	0°♊		evening set	3777 Sep 30 17:27	23°♊56'20	
evening set	3771 Jul 07 11:51	1°♊52'11					
conjunction	3771 Jul 25 14:27	4°♊11'27	-0°11'13	conjunction	3777 Oct 18 05:40	26°♊06'51	2°07'40
minimum elong	3771 Jul 25 14:27	4°♊11'27	0°11'14	minimum elong	3777 Oct 18 05:39	26°♊06'50	2°07'40
behind sun begin	3771 Jul 25 09:07	4°♊09'45		max. Earth dist.	3777 Oct 18 05:09	26°♊06'41	10.42455 AU
behind sun end	3771 Jul 25 19:47	4°♊13'09		morning rise	3777 Nov 04 13:41	28°♊16'05	
max. Earth dist.	3771 Jul 25 16:12	4°♊12'00	10.10882 AU		3777 Nov 19 01:28	0°♊	
morning rise	3771 Aug 12 17:52	6°♊30'59		retrograde	3778 Feb 13 07:07	5°♊49'25	
retrograde	3771 Nov 25 16:35	14°♊40'39		opposition	3778 Apr 21 17:02	2°♊27'14	2°40'57
asc. node	3771 Dec 06 01:38	14°♊34'40		min. Earth dist.	3778 Apr 21 16:43	2°♊27'17	8.47373 AU
opposition	3772 Jan 31 17:25	11°♊12'36	0°05'55		3778 May 26 10:59	30°♋♊	
min. Earth dist.	3772 Jan 31 15:37	11°♊12'58	8.10708 AU	direct	3778 Jun 30 09:10	28°♊59'57	
direct	3772 Apr 07 17:49	7°♊44'23			3778 Aug 03 23:13	0°♊	
	3772 Jul 14 10:01	15°♊		evening set	3778 Oct 14 05:43	6°♊49'14	
evening set	3772 Jul 21 08:51	15°♊52'08					
conjunction	3772 Aug 08 12:11	18°♊11'33	0°20'36	conjunction	3778 Oct 31 14:00	8°♊57'20	2°11'14
minimum elong	3772 Aug 08 12:10	18°♊11'33	0°20'35	minimum elong	3778 Oct 31 14:00	8°♊57'19	2°11'14
max. Earth dist.	3772 Aug 08 14:20	18°♊12'14	10.11135 AU	max. Earth dist.	3778 Oct 31 13:43	8°♊57'14	10.52094 AU
morning rise	3772 Aug 26 14:59	20°♊30'50		morning rise	3778 Nov 17 17:49	11°♊04'06	
retrograde	3772 Dec 08 21:12	28°♊37'02			3778 Dec 22 21:37	15°♊	
opposition	3773 Feb 13 16:07	25°♊09'39	0°44'54	retrograde	3779 Feb 26 01:45	18°♊30'22	
min. Earth dist.	3773 Feb 13 14:11	25°♊10'03	8.12161 AU	opposition	3779 May 04 19:06	15°♊09'15	2°41'04
direct	3773 Apr 21 23:48	21°♊40'53		min. Earth dist.	3779 May 04 18:58	15°♊09'17	8.57086 AU
evening set	3773 Aug 05 05:59	29°♊49'47			3779 May 06 18:34	15°♋♊	
	3773 Aug 06 14:23	0°♋		direct	3779 Jul 13 20:21	11°♊43'00	
conjunction	3773 Aug 23 08:22	2°♋08'31	0°51'02		3779 Sep 16 20:01	15°♊	
minimum elong	3773 Aug 23 08:20	2°♋08'30	0°51'01	evening set	3779 Oct 27 08:39	19°♊25'10	
max. Earth dist.	3773 Aug 23 10:25	2°♋09'10	10.13745 AU	conjunction	3779 Nov 13 13:22	21°♊31'01	2°08'22
morning rise	3773 Sep 10 08:59	4°♋26'43		minimum elong	3779 Nov 13 13:23	21°♊31'01	2°08'23
retrograde	3773 Dec 22 20:44	12°♋27'58		max. Earth dist.	3779 Nov 13 13:03	21°♊30'55	10.61765 AU
opposition	3774 Feb 27 13:25	9°♋01'25	1°20'58	morning rise	3779 Nov 30 13:38	23°♊35'35	
min. Earth dist.	3774 Feb 27 11:48	9°♋01'45	8.15915 AU		3780 Feb 06 01:22	0°♋	
direct	3774 May 06 06:46	5°♋32'23		retrograde	3780 Mar 09 14:33	0°♋55'20	
evening set	3774 Aug 20 00:20	13°♋40'34			3780 Apr 11 16:17	30°♋♊	
conjunction	3774 Sep 07 00:17	15°♋57'51	1°18'17	opposition	3780 May 16 16:55	27°♊35'14	2°33'33
minimum elong	3774 Sep 07 00:14	15°♋57'50	1°18'17	min. Earth dist.	3780 May 16 17:39	27°♊35'06	8.66585 AU
max. Earth dist.	3774 Sep 07 01:52	15°♋58'22	10.18536 AU	direct	3780 Jul 26 01:30	24°♊10'08	
morning rise	3774 Sep 24 21:30	18°♋14'19			3780 Oct 24 00:41	0°♋	
retrograde	3775 Jan 05 14:55	26°♋09'25		evening set	3780 Nov 08 02:43	1°♋45'03	
opposition	3775 Mar 13 08:09	22°♋43'53	1°51'59	conjunction	3780 Nov 25 04:12	3°♋48'53	1°59'36
min. Earth dist.	3775 Mar 13 07:18	22°♋44'04	8.21721 AU	minimum elong	3780 Nov 25 04:13	3°♋48'53	1°59'36
direct	3775 May 20 12:10	19°♋14'52		max. Earth dist.	3780 Nov 25 02:56	3°♋48'30	10.71008 AU
evening set	3775 Sep 03 13:39	27°♋20'29		morning rise	3780 Dec 12 01:41	5°♋51'33	
conjunction	3775 Sep 21 10:08	29°♋35'48	1°40'48	retrograde	3781 Mar 21 21:00	13°♋05'39	
minimum elong	3775 Sep 21 10:05	29°♋35'47	1°40'48	opposition	3781 May 29 10:41	9°♋46'27	2°19'14
max. Earth dist.	3775 Sep 21 10:41	29°♋35'58	10.25202 AU	min. Earth dist.	3781 May 29 12:04	9°♋46'11	8.75441 AU
	3775 Sep 24 14:17	0°♊		direct	3781 Aug 08 02:31	6°♋22'32	
morning rise	3775 Oct 09 03:12	1°♊50'02		evening set	3781 Nov 20 12:40	13°♋50'26	
retrograde	3776 Jan 19 03:08	9°♊38'10		conjunction	3781 Dec 07 11:29	15°♋52'31	1°45'38
opposition	3776 Mar 25 23:14	6°♊13'43	2°16'15	minimum elong	3781 Dec 07 11:31	15°♋52'32	1°45'38
min. Earth dist.	3776 Mar 25 23:04	6°♊13'45	8.29208 AU	max. Earth dist.	3781 Dec 07 09:27	15°♋51'54	10.79423 AU
direct	3776 Jun 02 14:52	2°♊45'00		morning rise	3781 Dec 24 06:57	17°♋53'36	
evening set	3776 Sep 16 19:54	10°♊46'26		retrograde	3782 Apr 03 01:09	25°♋03'09	
				opposition	3782 Jun 11 00:48	21°♋44'37	1°59'05
				min. Earth dist.	3782 Jun 11 02:08	21°♋44'22	8.83280 AU
				direct	3782 Aug 20 21:35	18°♋21'54	

evening set	3782 Dec 02 15:30	25° \mathbb{A} 43'17		retrograde	3788 Jun 12 08:36	4° \mathbb{H} 35'18
				opposition	3788 Aug 22 01:07	1° \mathbb{H} 15'52 -1°00'25
conjunction	3782 Dec 19 12:20	27° \mathbb{A} 43'58 1°27'19		min. Earth dist.	3788 Aug 22 02:07	1° \mathbb{H} 15'41 8.95403 AU
minimum elong	3782 Dec 19 12:22	27° \mathbb{A} 43'58 1°27'19			3788 Sep 08 12:36	30° \mathbb{R} \approx
max. Earth dist.	3782 Dec 19 10:30	27° \mathbb{A} 43'25 10.86654 AU		direct	3788 Oct 31 03:45	27° \approx 57'23
morning rise	3783 Jan 05 06:17	29° \mathbb{A} 43'47			3788 Dec 20 15:20	0° \mathbb{H}
	3783 Jan 07 13:40	0° \mathbb{B}		evening set	3789 Feb 08 13:14	5° \mathbb{H} 02'01
retrograde	3783 Apr 15 02:35	6° \mathbb{B} 49'59				
opposition	3783 Jun 23 11:54	3° \mathbb{B} 31'54 1°34'14		conjunction	3789 Feb 25 05:18	7° \mathbb{H} 00'40 -1°01'23
min. Earth dist.	3783 Jun 23 12:41	3° \mathbb{B} 31'45 8.89771 AU		minimum elong	3789 Feb 25 05:16	7° \mathbb{H} 00'40 1°01'23
direct	3783 Sep 02 10:57	0° \mathbb{B} 10'19		max. Earth dist.	3789 Feb 25 03:24	7° \mathbb{H} 00'06 10.93211 AU
evening set	3783 Dec 14 12:48	7° \mathbb{B} 25'59		morning rise	3789 Mar 13 22:53	8° \mathbb{H} 59'49
				retrograde	3789 Jun 24 17:32	16° \mathbb{H} 14'31
conjunction	3783 Dec 31 08:04	9° \mathbb{B} 25'33 1°05'33		opposition	3789 Sep 03 10:45	12° \mathbb{H} 54'10 -1°29'22
minimum elong	3783 Dec 31 08:06	9° \mathbb{B} 25'33 1°05'33		min. Earth dist.	3789 Sep 03 12:12	12° \mathbb{H} 53'54 8.90611 AU
max. Earth dist.	3783 Dec 31 06:54	9° \mathbb{B} 25'12 10.92399 AU		direct	3789 Nov 12 04:17	9° \mathbb{H} 35'38
morning rise	3784 Jan 17 00:53	11° \mathbb{B} 24'27		evening set	3790 Feb 20 07:16	16° \mathbb{H} 42'10
retrograde	3784 Apr 26 03:33	18° \mathbb{B} 28'35				
opposition	3784 Jul 04 20:46	15° \mathbb{B} 10'44 1°05'49		conjunction	3790 Mar 08 23:46	18° \mathbb{H} 41'39 -1°23'40
min. Earth dist.	3784 Jul 04 21:45	15° \mathbb{B} 10'33 8.94665 AU		minimum elong	3790 Mar 08 23:44	18° \mathbb{H} 41'38 1°23'40
direct	3784 Sep 13 19:50	11° \mathbb{B} 50'10		max. Earth dist.	3790 Mar 08 21:05	18° \mathbb{H} 40'50 10.87500 AU
evening set	3784 Dec 25 05:59	19° \mathbb{B} 01'07		morning rise	3790 Mar 25 18:46	20° \mathbb{H} 41'52
				retrograde	3790 Jul 07 06:24	28° \mathbb{H} 02'33
conjunction	3785 Jan 10 23:53	20° \mathbb{B} 59'52 0°41'18		opposition	3790 Sep 15 22:50	24° \mathbb{H} 41'05 -1°54'58
minimum elong	3785 Jan 10 23:54	20° \mathbb{B} 59'53 0°41'18		min. Earth dist.	3790 Sep 16 00:41	24° \mathbb{H} 40'45 8.84094 AU
max. Earth dist.	3785 Jan 10 22:22	20° \mathbb{B} 59'25 10.96446 AU		direct	3790 Nov 24 05:40	21° \mathbb{H} 22'16
morning rise	3785 Jan 27 16:09	22° \mathbb{B} 58'11		evening set	3791 Mar 04 05:35	28° \mathbb{H} 31'59
	3785 May 02 09:32	0° \approx			3791 Mar 16 11:21	0° \mathbb{Y}
retrograde	3785 May 08 02:38	0° \approx 01'37				
	3785 May 13 19:58	30° \mathbb{R} \mathbb{B}		conjunction	3791 Mar 20 23:14	0° \mathbb{Y} 32'38 -1°42'40
opposition	3785 Jul 17 04:16	26° \mathbb{B} 43'46 0°34'59		minimum elong	3791 Mar 20 23:12	0° \mathbb{Y} 32'37 1°42'40
min. Earth dist.	3785 Jul 17 05:51	26° \mathbb{B} 43'28 8.97792 AU		max. Earth dist.	3791 Mar 20 21:05	0° \mathbb{Y} 31'59 10.80207 AU
direct	3785 Sep 25 23:51	23° \mathbb{B} 24'01		morning rise	3791 Apr 06 19:59	2° \mathbb{Y} 34'14
	3786 Jan 01 07:21	0° \approx		retrograde	3791 Jul 19 23:29	10° \mathbb{Y} 01'48
evening set	3786 Jan 05 20:14	0° \approx 31'24		opposition	3791 Sep 28 14:19	6° \mathbb{Y} 39'05 -2°16'03
				min. Earth dist.	3791 Sep 28 15:36	6° \mathbb{Y} 38'50 8.76157 AU
conjunction	3786 Jan 22 13:06	2° \approx 29'38 0°15'32		direct	3791 Dec 06 11:44	3° \mathbb{Y} 19'43
minimum elong	3786 Jan 22 13:06	2° \approx 29'38 0°15'33		evening set	3792 Mar 15 09:20	10° \mathbb{Y} 33'44
behind sun begin	3786 Jan 22 10:59	2° \approx 29'01				
behind sun end	3786 Jan 22 15:13	2° \approx 30'16		conjunction	3792 Apr 01 04:48	12° \mathbb{Y} 35'55 -1°57'29
max. Earth dist.	3786 Jan 22 10:48	2° \approx 28'58 10.98645 AU		minimum elong	3792 Apr 01 04:46	12° \mathbb{Y} 35'54 1°57'29
morning rise	3786 Feb 08 05:20	4° \approx 27'41		max. Earth dist.	3792 Apr 01 04:01	12° \mathbb{Y} 35'41 10.71663 AU
retrograde	3786 May 20 01:34	11° \approx 31'51		morning rise	3792 Apr 18 03:45	14° \mathbb{Y} 39'11
opposition	3786 Jul 29 10:56	8° \approx 13'43 0°02'54		retrograde	3792 Aug 01 00:47	22° \mathbb{Y} 14'17
min. Earth dist.	3786 Jul 29 12:43	8° \approx 13'23 8.99014 AU		opposition	3792 Oct 10 09:39	18° \mathbb{Y} 50'13 -2°31'30
desc. node	3786 Sep 01 06:26	5° \approx 57'32		min. Earth dist.	3792 Oct 10 09:47	18° \mathbb{Y} 50'11 8.67152 AU
direct	3786 Oct 08 03:19	4° \approx 54'35		direct	3792 Dec 17 20:29	15° \mathbb{Y} 30'09
evening set	3787 Jan 17 09:17	11° \approx 59'41		evening set	3793 Mar 27 19:52	22° \mathbb{Y} 49'26
conjunction	3787 Feb 03 01:34	13° \approx 57'44 -0°10'53		conjunction	3793 Apr 13 17:49	24° \mathbb{Y} 53'27 -2°07'13
minimum elong	3787 Feb 03 01:33	13° \approx 57'44 0°10'52		minimum elong	3793 Apr 13 17:48	24° \mathbb{Y} 53'27 2°07'13
behind sun begin	3787 Feb 02 20:11	13° \approx 56'10		max. Earth dist.	3793 Apr 13 17:40	24° \mathbb{Y} 53'25 10.62250 AU
behind sun end	3787 Feb 03 06:54	13° \approx 59'18		morning rise	3793 Apr 30 19:41	26° \mathbb{Y} 58'45
max. Earth dist.	3787 Feb 02 23:30	13° \approx 57'08 10.98875 AU			3793 May 27 06:09	0° \mathbb{B}
	3787 Feb 11 19:30	15° \approx		retrograde	3793 Aug 14 08:11	4° \mathbb{B} 41'32
morning rise	3787 Feb 19 17:54	15° \approx 55'49		opposition	3793 Oct 23 09:05	1° \mathbb{B} 16'09 -2°40'17
retrograde	3787 Jun 01 04:10	23° \approx 02'05		min. Earth dist.	3793 Oct 23 08:39	1° \mathbb{B} 16'14 8.57479 AU
opposition	3787 Aug 10 17:26	19° \approx 43'25 -0°29'17			3793 Nov 09 04:02	30° \mathbb{R} \mathbb{Y}
min. Earth dist.	3787 Aug 10 18:43	19° \approx 43'11 8.98232 AU		direct	3793 Dec 30 08:03	27° \mathbb{Y} 55'11
direct	3787 Oct 20 04:46	16° \approx 24'43			3794 Feb 17 16:30	0° \mathbb{B}
evening set	3788 Jan 28 22:27	23° \approx 28'52		evening set	3794 Apr 09 13:59	5° \mathbb{B} 20'36
conjunction	3788 Feb 14 14:30	25° \approx 27'03 -0°36'48		conjunction	3794 Apr 26 15:03	7° \mathbb{B} 26'47 -2°11'08
minimum elong	3788 Feb 14 14:29	25° \approx 27'03 0°36'48		minimum elong	3794 Apr 26 15:04	7° \mathbb{B} 26'47 2°11'08
max. Earth dist.	3788 Feb 14 12:58	25° \approx 26'36 10.97060 AU		max. Earth dist.	3794 Apr 26 14:50	7° \mathbb{B} 26'43 10.52396 AU
morning rise	3788 Mar 02 07:12	27° \approx 25'30		morning rise	3794 May 13 20:34	9° \mathbb{B} 34'21
	3788 Mar 25 11:41	0° \mathbb{H}			3794 Jul 04 01:27	15° \mathbb{B}

retrograde	3794 Aug 27 20:10	17°♄24'41		retrograde	3800 Nov 19 17:09	8°♄40'31	
	3794 Oct 23 04:32	15°♄		opposition	3801 Jan 25 20:15	5°♄11'46	-0°11'58
opposition	3794 Nov 05 13:05	13°♄58'07	-2°41'31	min. Earth dist.	3801 Jan 25 18:10	5°♄12'11	8.09364 AU
min. Earth dist.	3794 Nov 05 12:40	13°♄58'12	8.47572 AU	direct	3801 Apr 02 17:10	1°♄43'24	
direct	3795 Jan 12 02:38	10°♄36'04		asc. node	3801 May 20 04:16	3°♄42'41	
	3795 Mar 26 15:05	15°♄		evening set	3801 Jul 16 01:32	9°♄50'41	
evening set	3795 Apr 22 16:05	18°♄08'13					
				conjunction	3801 Aug 03 04:40	12°♄10'18	0°06'21
conjunction	3795 May 09 21:03	20°♄16'48	-2°08'40	minimum elong	3801 Aug 03 04:39	12°♄10'18	0°06'21
minimum elong	3795 May 09 21:05	20°♄16'48	2°08'40	behind sun begin	3801 Aug 02 21:43	12°♄08'05	
max. Earth dist.	3795 May 09 21:06	20°♄16'49	10.42552 AU	behind sun end	3801 Aug 03 11:34	12°♄12'31	
morning rise	3795 May 27 06:41	22°♄26'48		max. Earth dist.	3801 Aug 03 06:46	12°♄10'57	10.09410 AU
	3795 Aug 19 21:59	0°♄		morning rise	3801 Aug 21 08:04	14°♄30'00	
retrograde	3795 Sep 10 14:02	0°♄24'11			3801 Aug 25 07:28	15°♄	
	3795 Oct 02 08:01	30°♄		retrograde	3801 Dec 03 22:49	22°♄38'34	
opposition	3795 Nov 18 21:36	26°♄56'34	-2°34'38	opposition	3802 Feb 08 19:50	19°♄10'33	0°27'34
min. Earth dist.	3795 Nov 18 21:07	26°♄56'40	8.37902 AU	min. Earth dist.	3802 Feb 08 17:58	19°♄10'56	8.10071 AU
direct	3796 Jan 25 03:21	23°♄33'23		direct	3802 Apr 16 23:41	15°♄41'43	
	3796 Apr 25 04:43	0°♄		evening set	3802 Jul 30 23:19	23°♄50'56	
evening set	3796 May 05 02:47	1°♄12'31					
				conjunction	3802 Aug 18 02:13	26°♄10'11	0°37'37
conjunction	3796 May 22 12:20	3°♄23'39	-1°59'33	minimum elong	3802 Aug 18 02:11	26°♄10'11	0°37'37
minimum elong	3796 May 22 12:23	3°♄23'40	1°59'33	max. Earth dist.	3802 Aug 18 04:18	26°♄10'51	10.11327 AU
max. Earth dist.	3796 May 22 13:17	3°♄23'57	10.33203 AU	morning rise	3802 Sep 05 04:12	28°♄29'09	
morning rise	3796 Jun 09 02:22	5°♄36'12			3802 Sep 17 09:39	0°♄	
retrograde	3796 Sep 23 13:38	13°♄39'37		retrograde	3802 Dec 18 00:15	6°♄33'23	
opposition	3796 Dec 01 10:18	10°♄11'10	-2°19'27	opposition	3803 Feb 22 18:27	3°♄06'19	1°05'17
min. Earth dist.	3796 Dec 01 09:19	10°♄11'22	8.28963 AU	min. Earth dist.	3803 Feb 22 16:23	3°♄06'45	8.13189 AU
direct	3797 Feb 06 09:34	6°♄46'47			3803 Apr 10 20:10	30°♄	
evening set	3797 May 18 22:05	14°♄32'55		direct	3803 May 01 07:33	29°♄37'18	
					3803 May 21 16:37	0°♄	
conjunction	3797 Jun 05 12:32	16°♄46'36	-1°43'52	evening set	3803 Aug 14 19:41	7°♄46'34	
minimum elong	3797 Jun 05 12:35	16°♄46'37	1°43'52				
max. Earth dist.	3797 Jun 05 14:39	16°♄47'16	10.24830 AU	conjunction	3803 Sep 01 20:54	10°♄04'43	1°06'32
morning rise	3797 Jun 23 06:55	19°♄01'34		minimum elong	3803 Sep 01 20:52	10°♄04'42	1°06'32
retrograde	3797 Oct 07 17:33	27°♄09'38		max. Earth dist.	3803 Sep 01 23:09	10°♄05'26	10.15563 AU
opposition	3797 Dec 15 02:51	23°♄40'37	-1°56'19	morning rise	3803 Sep 19 20:01	12°♄22'11	
min. Earth dist.	3797 Dec 15 00:58	23°♄40'59	8.21225 AU	retrograde	3803 Dec 31 21:43	20°♄20'44	
direct	3798 Feb 19 22:00	20°♄15'04		opposition	3804 Mar 07 14:58	16°♄54'47	1°38'49
evening set	3798 Jun 02 01:37	28°♄07'52		min. Earth dist.	3804 Mar 07 12:38	16°♄55'15	8.18514 AU
	3798 Jun 16 18:14	0°♄		direct	3804 May 14 13:48	13°♄25'53	
				evening set	3804 Aug 28 12:22	21°♄33'20	
conjunction	3798 Jun 19 20:41	0°♄23'52	-1°22'11				
minimum elong	3798 Jun 19 20:44	0°♄23'53	1°22'11	conjunction	3804 Sep 15 10:39	23°♄49'41	1°31'21
max. Earth dist.	3798 Jun 19 23:26	0°♄24'45	10.17892 AU	minimum elong	3804 Sep 15 10:36	23°♄49'40	1°31'21
morning rise	3798 Jul 07 18:56	2°♄40'56		max. Earth dist.	3804 Sep 15 13:01	23°♄50'27	10.21843 AU
retrograde	3798 Oct 22 00:08	10°♄52'00		morning rise	3804 Oct 03 05:43	26°♄05'04	
opposition	3798 Dec 28 22:36	7°♄22'43	-1°26'13		3804 Nov 05 22:55	0°♄	
min. Earth dist.	3798 Dec 28 20:10	7°♄23'13	8.15139 AU	retrograde	3805 Jan 13 14:18	3°♄56'52	
direct	3799 Mar 05 15:55	3°♄56'06		opposition	3805 Mar 21 08:20	0°♄32'09	2°06'15
evening set	3799 Jun 16 12:26	11°♄54'51		min. Earth dist.	3805 Mar 21 06:04	0°♄32'36	8.25706 AU
					3805 Mar 28 00:10	30°♄	
conjunction	3799 Jul 04 11:25	14°♄12'45	-0°55'32	direct	3805 May 28 17:57	27°♄03'37	
minimum elong	3799 Jul 04 11:27	14°♄12'46	0°55'33		3805 Jul 27 14:46	0°♄	
max. Earth dist.	3799 Jul 04 14:21	14°♄13'41	10.12814 AU	evening set	3805 Sep 11 22:46	5°♄07'27	
morning rise	3799 Jul 22 12:45	16°♄31'25					
retrograde	3799 Nov 05 08:51	24°♄43'34		conjunction	3805 Sep 29 17:13	7°♄21'34	1°50'44
opposition	3800 Jan 11 20:45	21°♄14'23	-0°50'43	minimum elong	3805 Sep 29 17:10	7°♄21'33	1°50'44
min. Earth dist.	3800 Jan 11 18:15	21°♄14'54	8.11097 AU	max. Earth dist.	3805 Sep 29 19:29	7°♄22'17	10.29776 AU
direct	3800 Mar 19 14:04	17°♄46'47		morning rise	3805 Oct 17 07:42	9°♄34'30	
evening set	3800 Jul 01 05:01	25°♄50'28		retrograde	3806 Jan 27 00:10	17°♄18'55	
				opposition	3806 Apr 03 22:02	13°♄55'27	2°26'15
conjunction	3800 Jul 19 06:49	28°♄09'38	-0°25'26	min. Earth dist.	3806 Apr 03 20:33	13°♄55'45	8.34317 AU
minimum elong	3800 Jul 19 06:50	28°♄09'38	0°25'27	direct	3806 Jun 11 19:07	10°♄27'31	
max. Earth dist.	3800 Jul 19 09:24	28°♄10'28	10.09924 AU	evening set	3806 Sep 26 00:55	18°♄26'10	
	3800 Aug 02 13:58	0°♄					
morning rise	3800 Aug 06 10:01	0°♄29'13		conjunction	3806 Oct 13 15:07	20°♄37'48	2°03'50

minimum elong	3806 Oct 13 15:05	20° Ω 37'48	2°03'51	conjunction	3812 Dec 26 16:35	4° \mathfrak{Z} 42'05	1°15'08
max. Earth dist.	3806 Oct 13 16:24	20° Ω 38'12	10.38872 AU	minimum elong	3812 Dec 26 16:38	4° \mathfrak{Z} 42'06	1°15'08
morning rise	3806 Oct 31 01:00	22° Ω 48'10		max. Earth dist.	3812 Dec 26 12:59	4° \mathfrak{Z} 41'01	10.88994 AU
	3807 Jan 18 16:42	0° \mathbb{M}		morning rise	3813 Jan 12 10:01	6° \mathfrak{Z} 41'33	
retrograde	3807 Feb 09 02:31	0° \mathbb{M} 24'58		retrograde	3813 Apr 22 09:15	13° \mathfrak{Z} 47'08	
	3807 Mar 02 15:42	30° \mathfrak{R} Ω		opposition	3813 Jun 30 23:23	10° \mathfrak{Z} 29'05	1°18'14
opposition	3807 Apr 17 07:15	27° Ω 02'44	2°38'08	min. Earth dist.	3813 Jul 01 02:11	10° \mathfrak{Z} 28'34	8.91397 AU
min. Earth dist.	3807 Apr 17 06:56	27° Ω 02'48	8.43803 AU	direct	3813 Sep 09 22:33	7° \mathfrak{Z} 07'50	
direct	3807 Jun 25 16:15	23° Ω 35'32		evening set	3813 Dec 21 15:59	14° \mathfrak{Z} 21'30	
	3807 Sep 27 11:29	0° \mathbb{M}					
evening set	3807 Oct 09 18:02	1° \mathbb{M} 27'54		conjunction	3814 Jan 07 10:29	16° \mathfrak{Z} 20'47	0°51'48
				minimum elong	3814 Jan 07 10:31	16° \mathfrak{Z} 20'47	0°51'49
conjunction	3807 Oct 27 04:00	3° \mathbb{M} 37'03	2°10'19	max. Earth dist.	3814 Jan 07 07:15	16° \mathfrak{Z} 19'49	10.93315 AU
minimum elong	3807 Oct 27 03:59	3° \mathbb{M} 37'02	2°10'19	morning rise	3814 Jan 24 03:12	18° \mathfrak{Z} 19'32	
max. Earth dist.	3807 Oct 27 03:35	3° \mathbb{M} 36'55	10.48551 AU	retrograde	3814 May 04 09:38	25° \mathfrak{Z} 23'53	
morning rise	3807 Nov 13 09:39	5° \mathbb{M} 44'52		opposition	3814 Jul 13 07:44	22° \mathfrak{Z} 05'42	0°48'15
retrograde	3808 Feb 21 22:55	13° \mathbb{M} 14'16		min. Earth dist.	3814 Jul 13 09:52	22° \mathfrak{Z} 05'18	8.94839 AU
opposition	3808 Apr 29 11:40	9° \mathbb{M} 53'11	2°41'45	direct	3814 Sep 22 05:48	18° \mathfrak{Z} 45'11	
min. Earth dist.	3808 Apr 29 12:28	9° \mathbb{M} 53'01	8.53556 AU	evening set	3815 Jan 02 07:43	25° \mathfrak{Z} 54'49	
direct	3808 Jul 08 07:24	6° \mathbb{M} 26'55					
evening set	3808 Oct 22 01:39	14° \mathbb{M} 12'23		conjunction	3815 Jan 19 01:16	27° \mathfrak{Z} 53'30	0°26'32
	3808 Oct 28 14:21	15° \mathbb{M}		minimum elong	3815 Jan 19 01:17	27° \mathfrak{Z} 53'30	0°26'32
				max. Earth dist.	3815 Jan 18 22:54	27° \mathfrak{Z} 52'48	10.95884 AU
conjunction	3808 Nov 08 07:45	16° \mathbb{M} 19'11	2°10'13	morning rise	3815 Feb 04 17:33	29° \mathfrak{Z} 51'52	
minimum elong	3808 Nov 08 07:46	16° \mathbb{M} 19'11	2°10'13		3815 Feb 05 21:31	0° \approx	
max. Earth dist.	3808 Nov 08 05:51	16° \mathbb{M} 18'36	10.58220 AU	retrograde	3815 May 16 09:33	6° \approx 56'23	
morning rise	3808 Nov 25 09:40	18° \mathbb{M} 24'42		opposition	3815 Jul 25 15:02	3° \approx 37'52	0°16'30
retrograde	3809 Mar 05 13:13	25° \mathbb{M} 47'22		min. Earth dist.	3815 Jul 25 16:41	3° \approx 37'33	8.96482 AU
opposition	3809 May 12 11:44	22° \mathbb{M} 27'18	2°37'29	direct	3815 Oct 04 09:55	0° \approx 17'56	
min. Earth dist.	3809 May 12 12:49	22° \mathbb{M} 27'06	8.63029 AU	evening set	3816 Jan 13 21:33	7° \approx 24'46	
direct	3809 Jul 21 17:10	19° \mathbb{M} 02'07					
evening set	3809 Nov 03 23:54	26° \mathbb{M} 40'29		conjunction	3816 Jan 30 14:15	9° \approx 23'08	0°00'15
				minimum elong	3816 Jan 30 14:15	9° \approx 23'08	0°00'15
conjunction	3809 Nov 21 02:45	28° \mathbb{M} 45'12	2°03'56	behind sun begin	3816 Jan 30 07:19	9° \approx 21'06	
minimum elong	3809 Nov 21 02:46	28° \mathbb{M} 45'12	2°03'56	behind sun end	3816 Jan 30 21:11	9° \approx 25'10	
max. Earth dist.	3809 Nov 21 00:38	28° \mathbb{M} 44'33	10.67415 AU	max. Earth dist.	3816 Jan 30 12:02	9° \approx 22'33	10.96609 AU
	3809 Dec 01 07:55	0° \mathfrak{X}		desc. node	3816 Feb 03 01:15	9° \approx 47'50	
morning rise	3809 Dec 08 01:29	0° \mathfrak{X} 48'42		morning rise	3816 Feb 16 06:31	11° \approx 21'26	
retrograde	3810 Mar 17 23:28	8° \mathfrak{X} 05'33			3816 Mar 21 05:01	15° \approx	
opposition	3810 May 25 07:41	4° \mathfrak{X} 46'20	2°26'01	retrograde	3816 May 27 11:31	18° \approx 27'32	
min. Earth dist.	3810 May 25 08:55	4° \mathfrak{X} 46'06	8.71840 AU	opposition	3816 Aug 05 22:11	15° \approx 08'30	-0°15'51
direct	3810 Aug 03 21:06	1° \mathfrak{X} 22'15		min. Earth dist.	3816 Aug 06 00:08	15° \approx 08'08	8.96279 AU
evening set	3810 Nov 16 13:51	8° \mathfrak{X} 53'37			3816 Aug 07 19:58	15° \mathfrak{R} \approx	
				direct	3816 Oct 15 11:31	11° \approx 49'00	
conjunction	3810 Dec 03 14:00	10° \mathfrak{X} 56'31	1°52'07		3816 Dec 18 17:02	15° \approx	
minimum elong	3810 Dec 03 14:02	10° \mathfrak{X} 56'32	1°52'07	evening set	3817 Jan 24 10:59	18° \approx 54'20	
max. Earth dist.	3810 Dec 03 11:58	10° \mathfrak{X} 55'54	10.75803 AU				
morning rise	3810 Dec 20 10:14	12° \mathfrak{X} 58'20		conjunction	3817 Feb 10 03:06	20° \approx 52'43	-0°26'03
retrograde	3811 Mar 30 07:06	20° \mathfrak{X} 10'16		minimum elong	3817 Feb 10 03:05	20° \approx 52'43	0°26'03
opposition	3811 Jun 06 23:48	16° \mathfrak{X} 51'42	2°08'16	max. Earth dist.	3817 Feb 10 00:23	20° \approx 51'54	10.95481 AU
min. Earth dist.	3811 Jun 07 01:43	16° \mathfrak{X} 51'20	8.79685 AU	morning rise	3817 Feb 26 19:49	22° \approx 51'16	
direct	3811 Aug 16 17:20	13° \mathfrak{X} 28'40			3817 Jun 06 00:17	0° \mathfrak{H}	
evening set	3811 Nov 28 20:29	20° \mathfrak{X} 53'24		retrograde	3817 Jun 08 13:35	0° \mathfrak{H} 00'19	
					3817 Jun 11 03:12	30° \mathfrak{R} \approx	
conjunction	3811 Dec 15 18:17	22° \mathfrak{X} 54'49	1°35'33	opposition	3817 Aug 18 05:52	26° \approx 40'35	-0°47'39
minimum elong	3811 Dec 15 18:20	22° \mathfrak{X} 54'50	1°35'33	min. Earth dist.	3817 Aug 18 07:49	26° \approx 40'13	8.94244 AU
max. Earth dist.	3811 Dec 15 15:36	22° \mathfrak{X} 54'01	10.83085 AU	direct	3817 Oct 27 11:24	23° \approx 21'20	
morning rise	3812 Jan 01 12:48	24° \mathfrak{X} 55'17			3818 Feb 01 05:49	0° \mathfrak{H}	
	3812 Feb 20 07:58	0° \mathfrak{Z}		evening set	3818 Feb 05 01:16	0° \mathfrak{H} 26'34	
retrograde	3812 Apr 10 08:54	2° \mathfrak{Z} 03'23					
	3812 Jun 01 12:44	30° \mathfrak{R} \mathfrak{X}		conjunction	3818 Feb 21 17:20	2° \mathfrak{H} 25'15	-0°51'22
opposition	3812 Jun 18 12:55	28° \mathfrak{X} 45'14	1°45'17	minimum elong	3818 Feb 21 17:19	2° \mathfrak{H} 25'15	0°51'23
min. Earth dist.	3812 Jun 18 15:44	28° \mathfrak{X} 44'42	8.86284 AU	max. Earth dist.	3818 Feb 21 15:11	2° \mathfrak{H} 24'36	10.92531 AU
direct	3812 Aug 28 09:34	25° \mathfrak{X} 23'08		morning rise	3818 Mar 10 10:46	4° \mathfrak{H} 24'21	
	3812 Nov 15 16:10	0° \mathfrak{Z}		retrograde	3818 Jun 20 20:39	11° \mathfrak{H} 37'42	
evening set	3812 Dec 09 20:43	2° \mathfrak{Z} 41'55		opposition	3818 Aug 30 14:55	8° \mathfrak{H} 17'06	-1°17'43
				min. Earth dist.	3818 Aug 30 16:05	8° \mathfrak{H} 16'53	8.90430 AU

direct	3818 Nov 08 13:40	4° X 57'56	conjunction	3825 May 18 05:37	28° B 12'45 -2°03'57
evening set	3819 Feb 16 18:06	12° X 04'23	minimum elong	3825 May 18 05:39	28° B 12'46 2°03'57
			max. Earth dist.	3825 May 18 08:29	28° B 13'40 10.38144 AU
conjunction	3819 Mar 05 10:34	14° X 03'44 -1°14'46		3825 Jun 01 11:39	0° II
minimum elong	3819 Mar 05 10:32	14° X 03'43 1°14'46	morning rise	3825 Jun 04 17:35	0° II 24'07
max. Earth dist.	3819 Mar 05 09:43	14° X 03'28 10.87846 AU	retrograde	3825 Sep 19 05:29	8° II 24'50
morning rise	3819 Mar 22 04:55	16° X 03'41	opposition	3825 Nov 27 05:10	4° II 57'14 -2°26'26
retrograde	3819 Jul 03 08:56	23° X 22'29	min. Earth dist.	3825 Nov 27 02:34	4° II 57'45 8.33987 AU
opposition	3819 Sep 12 02:11	20° X 00'53 -1°44'53	direct	3826 Feb 02 05:27	1° II 33'58
min. Earth dist.	3819 Sep 12 02:14	20° X 00'52 8.84965 AU	evening set	3826 May 14 13:59	9° II 16'45
direct	3819 Nov 20 14:41	16° X 41'40			
evening set	3820 Feb 28 14:47	23° X 50'36	conjunction	3826 Jun 01 02:09	11° II 29'11 -1°50'55
			minimum elong	3826 Jun 01 02:12	11° II 29'12 1°50'55
conjunction	3820 Mar 16 08:01	25° X 50'55 -1°35'16	max. Earth dist.	3826 Jun 01 04:30	11° II 29'56 10.29830 AU
minimum elong	3820 Mar 16 07:59	25° X 50'55 1°35'16	morning rise	3826 Jun 18 18:37	13° II 42'57
max. Earth dist.	3820 Mar 16 07:34	25° X 50'47 10.81609 AU	retrograde	3826 Oct 03 07:12	21° II 48'37
morning rise	3820 Apr 02 03:52	27° X 52'05	opposition	3826 Dec 10 20:14	18° II 20'27 -2°06'29
	3820 Apr 20 20:00	0° Y	min. Earth dist.	3826 Dec 10 18:11	18° II 20'52 8.26142 AU
retrograde	3820 Jul 15 01:27	5° Y 17'17	direct	3827 Feb 15 15:48	14° II 56'03
opposition	3820 Sep 23 16:39	1° Y 54'38 -2°07'59	evening set	3827 May 28 13:50	22° II 45'24
min. Earth dist.	3820 Sep 23 16:23	1° Y 54'41 8.78072 AU			
	3820 Oct 20 13:46	30° R X	conjunction	3827 Jun 15 06:41	25° II 00'11 -1°31'37
direct	3820 Dec 01 17:35	28° X 35'09	minimum elong	3827 Jun 15 06:44	25° II 00'12 1°31'38
	3821 Jan 11 17:39	0° Y	max. Earth dist.	3827 Jun 15 08:43	25° II 00'50 10.22600 AU
evening set	3821 Mar 11 16:30	5° Y 47'47	morning rise	3827 Jul 03 03:23	27° II 16'09
				3827 Jul 25 21:34	0° B
conjunction	3821 Mar 28 11:04	7° Y 49'25 -1°51'55	retrograde	3827 Oct 17 11:40	5° B 25'20
minimum elong	3821 Mar 28 11:02	7° Y 49'25 1°51'55	opposition	3827 Dec 24 14:35	1° B 56'49 -1°39'08
max. Earth dist.	3821 Mar 28 10:34	7° Y 49'16 10.74079 AU	min. Earth dist.	3827 Dec 24 12:58	1° B 57'09 8.19548 AU
morning rise	3821 Apr 14 09:07	9° Y 52'06		3828 Jan 19 03:30	30° R II
retrograde	3821 Jul 27 23:48	17° Y 24'26	direct	3828 Feb 29 08:11	28° II 31'18
opposition	3821 Oct 06 10:45	14° Y 00'41 -2°25'53		3828 Apr 09 20:09	0° B
min. Earth dist.	3821 Oct 06 10:32	14° Y 00'43 8.70031 AU	evening set	3828 Jun 10 21:20	6° B 26'47
direct	3821 Dec 14 00:50	10° Y 40'44			
evening set	3822 Mar 24 00:30	17° Y 58'09	conjunction	3828 Jun 28 18:33	8° B 43'40 -1°06'54
			minimum elong	3828 Jun 28 18:36	8° B 43'41 1°06'55
conjunction	3822 Apr 09 21:12	20° Y 01'27 -2°03'50	max. Earth dist.	3828 Jun 28 20:31	8° B 44'18 10.16802 AU
minimum elong	3822 Apr 09 21:11	20° Y 01'26 2°03'49	morning rise	3828 Jul 16 18:45	11° B 01'28
max. Earth dist.	3822 Apr 09 21:09	20° Y 01'26 10.65568 AU	retrograde	3828 Oct 30 18:45	19° B 12'30
morning rise	3822 Apr 26 21:55	22° Y 05'58	opposition	3829 Jan 06 11:21	15° B 43'57 -1°05'43
retrograde	3822 Aug 10 03:28	29° Y 45'48	min. Earth dist.	3829 Jan 06 09:44	15° B 44'16 8.14587 AU
opposition	3822 Oct 19 08:44	26° Y 20'57 -2°37'29	direct	3829 Mar 14 04:31	12° B 17'23
min. Earth dist.	3822 Oct 19 08:14	26° Y 21'03 8.61186 AU	evening set	3829 Jun 25 11:18	20° B 18'18
direct	3822 Dec 26 12:16	23° Y 00'22			
	3823 Apr 02 09:44	0° B	conjunction	3829 Jul 13 11:59	22° B 36'44 -0°38'05
evening set	3823 Apr 05 15:36	0° B 23'28	minimum elong	3829 Jul 13 12:00	22° B 36'45 0°38'06
			max. Earth dist.	3829 Jul 13 14:11	22° B 37'27 10.12838 AU
conjunction	3823 Apr 22 15:17	2° B 28'44 -2°10'11	morning rise	3829 Jul 31 14:28	24° B 55'46
minimum elong	3823 Apr 22 15:16	2° B 28'44 2°10'11		3829 Sep 14 08:49	0° Q
max. Earth dist.	3823 Apr 22 16:43	2° B 29'11 10.56454 AU	retrograde	3829 Nov 14 02:56	3° Q 06'51
morning rise	3823 May 09 19:10	4° B 35'21		3830 Jan 16 00:44	30° R B
retrograde	3823 Aug 23 13:29	12° B 22'45	opposition	3830 Jan 20 09:54	29° B 38'29 -0°28'08
opposition	3823 Nov 01 11:13	8° B 56'50 -2°41'50	min. Earth dist.	3830 Jan 20 07:54	29° B 38'54 8.11664 AU
min. Earth dist.	3823 Nov 01 09:36	8° B 57'09 8.51938 AU	direct	3830 Mar 28 05:43	26° B 11'01
direct	3824 Jan 08 05:18	5° B 35'31		3830 Jun 03 14:21	0° Q
evening set	3824 Apr 17 14:31	13° B 04'52	evening set	3830 Jul 10 05:48	4° Q 16'08
	3824 May 03 02:10	15° B			
conjunction	3824 May 04 17:53	15° B 12'24 -2°10'22	conjunction	3830 Jul 28 08:33	6° Q 35'24 -0°06'55
minimum elong	3824 May 04 17:54	15° B 12'25 2°10'21	minimum elong	3830 Jul 28 08:33	6° Q 35'24 0°06'55
max. Earth dist.	3824 May 04 20:29	15° B 13'13 10.47164 AU	behind sun begin	3830 Jul 28 01:45	6° Q 33'14
morning rise	3824 May 22 01:33	17° B 21'19	behind sun end	3830 Jul 28 15:21	6° Q 37'35
retrograde	3824 Sep 05 06:56	25° B 15'51	max. Earth dist.	3830 Jul 28 11:11	6° Q 36'14 10.11056 AU
opposition	3824 Nov 13 18:08	21° B 49'00 -2°38'16	morning rise	3830 Aug 15 11:50	8° Q 54'54
min. Earth dist.	3824 Nov 13 15:40	21° B 49'29 8.42724 AU		3830 Oct 10 18:40	15° Q
direct	3825 Jan 20 02:36	18° B 26'47	asc. node	3830 Oct 18 05:47	15° Q 33'46
evening set	3825 Apr 30 22:02	26° B 02'47	retrograde	3830 Nov 28 09:24	17° Q 04'08
				3831 Jan 16 20:52	15° R Q



























































































































opposition	3831 Feb 03 09:06	13° Ω 36'13	0°11'17	min. Earth dist.	3837 Apr 24 05:16	4° \mathbb{M} 40'40	8.48771 AU
min. Earth dist.	3831 Feb 03 06:49	13° Ω 36'41	8.11046 AU	direct	3837 Jul 02 21:43	1° \mathbb{M} 13'27	
direct	3831 Apr 11 10:12	10° Ω 08'01		evening set	3837 Oct 16 18:23	9° \mathbb{M} 01'40	
	3831 Jun 27 20:26	15° Ω					
evening set	3831 Jul 25 02:47	18° Ω 15'48		conjunction	3837 Nov 03 02:19	11° \mathbb{M} 09'29	2°11'06
				minimum elong	3837 Nov 03 02:18	11° \mathbb{M} 09'29	2°11'07
conjunction	3831 Aug 12 06:00	20° Ω 35'06	0°24'49	max. Earth dist.	3837 Nov 03 02:12	11° \mathbb{M} 09'27	10.53471 AU
minimum elong	3831 Aug 12 05:59	20° Ω 35'05	0°24'48	morning rise	3837 Nov 20 05:40	13° \mathbb{M} 15'57	
max. Earth dist.	3831 Aug 12 08:30	20° Ω 35'54	10.11628 AU		3837 Dec 04 21:58	15° \mathbb{M}	
morning rise	3831 Aug 30 08:31	22° Ω 54'14		retrograde	3838 Feb 28 12:45	20° \mathbb{M} 41'13	
	3831 Nov 09 09:14	0° \mathbb{M}		opposition	3838 May 07 07:04	17° \mathbb{M} 20'13	2°40'21
retrograde	3831 Dec 12 12:47	0° \mathbb{M} 59'50		min. Earth dist.	3838 May 07 07:34	17° \mathbb{M} 20'07	8.58427 AU
	3832 Jan 14 21:24	30° \mathbb{R} Ω			3838 Jun 09 09:59	15° \mathbb{R} \mathbb{M}	
opposition	3832 Feb 17 07:39	27° Ω 32'36	0°49'57	direct	3838 Jul 16 08:33	13° \mathbb{M} 54'04	
min. Earth dist.	3832 Feb 17 05:48	27° Ω 32'58	8.12810 AU		3838 Aug 21 23:22	15° \mathbb{M}	
direct	3832 Apr 24 16:17	24° Ω 03'52		evening set	3838 Oct 29 20:03	21° \mathbb{M} 35'09	
	3832 Jul 20 20:49	0° \mathbb{M}					
evening set	3832 Aug 07 23:35	2° \mathbb{M} 12'34		conjunction	3838 Nov 16 00:21	23° \mathbb{M} 40'44	2°07'25
				minimum elong	3838 Nov 16 00:22	23° \mathbb{M} 40'44	2°07'26
conjunction	3832 Aug 26 01:39	4° \mathbb{M} 31'05	0°54'53	max. Earth dist.	3838 Nov 15 23:21	23° \mathbb{M} 40'25	10.63053 AU
minimum elong	3832 Aug 26 01:37	4° \mathbb{M} 31'05	0°54'53	morning rise	3838 Dec 03 00:24	25° \mathbb{M} 45'03	
max. Earth dist.	3832 Aug 26 03:24	4° \mathbb{M} 31'39	10.14532 AU		3839 Jan 11 00:05	0° \mathbb{Z}	
morning rise	3832 Sep 13 01:56	6° \mathbb{M} 49'04		retrograde	3839 Mar 12 23:24	3° \mathbb{Z} 03'55	
retrograde	3832 Dec 25 11:54	14° \mathbb{M} 49'31			3839 May 16 16:22	30° \mathbb{R} \mathbb{M}	
opposition	3833 Mar 02 04:35	11° \mathbb{M} 23'10	1°25'26	opposition	3839 May 20 04:09	29° \mathbb{M} 43'54	2°31'53
min. Earth dist.	3833 Mar 02 03:25	11° \mathbb{M} 23'24	8.16838 AU	min. Earth dist.	3839 May 20 05:29	29° \mathbb{M} 43'38	8.67809 AU
direct	3833 May 08 22:21	7° \mathbb{M} 54'11		direct	3839 Jul 29 14:29	26° \mathbb{M} 18'51	
evening set	3833 Aug 22 17:26	16° \mathbb{M} 01'56			3839 Oct 07 04:30	0° \mathbb{Z}	
				evening set	3839 Nov 11 13:00	3° \mathbb{Z} 52'46	
conjunction	3833 Sep 09 16:54	18° \mathbb{M} 18'58	1°21'34				
minimum elong	3833 Sep 09 16:51	18° \mathbb{M} 18'57	1°21'34	conjunction	3839 Nov 28 14:11	5° \mathbb{Z} 56'22	1°57'56
max. Earth dist.	3833 Sep 09 17:48	18° \mathbb{M} 19'15	10.19570 AU	minimum elong	3839 Nov 28 14:12	5° \mathbb{Z} 56'22	1°57'55
morning rise	3833 Sep 27 13:44	20° \mathbb{M} 35'08		max. Earth dist.	3839 Nov 28 12:04	5° \mathbb{Z} 55'43	10.72151 AU
retrograde	3834 Jan 08 05:31	28° \mathbb{M} 29'18		morning rise	3839 Dec 15 11:35	7° \mathbb{Z} 58'49	
opposition	3834 Mar 15 22:46	25° \mathbb{M} 03'58	1°55'35	retrograde	3840 Mar 24 06:22	15° \mathbb{Z} 12'11	
min. Earth dist.	3834 Mar 15 22:10	25° \mathbb{M} 04'05	8.22865 AU	opposition	3840 May 31 21:06	11° \mathbb{Z} 53'00	2°16'44
direct	3834 May 23 04:05	21° \mathbb{M} 35'02		min. Earth dist.	3840 May 31 22:27	11° \mathbb{Z} 52'44	8.76488 AU
evening set	3834 Sep 06 05:50	29° \mathbb{M} 40'00		direct	3840 Aug 10 14:08	8° \mathbb{Z} 29'09	
	3834 Sep 08 21:58	0° \mathbb{Z}		evening set	3840 Nov 22 21:56	15° \mathbb{Z} 56'09	
conjunction	3834 Sep 24 01:48	1° \mathbb{Z} 55'00	1°43'19	conjunction	3840 Dec 09 20:39	17° \mathbb{Z} 58'04	1°43'20
minimum elong	3834 Sep 24 01:45	1° \mathbb{Z} 55'00	1°43'19	minimum elong	3840 Dec 09 20:41	17° \mathbb{Z} 58'04	1°43'20
max. Earth dist.	3834 Sep 24 01:56	1° \mathbb{Z} 55'03	10.26428 AU	max. Earth dist.	3840 Dec 09 18:37	17° \mathbb{Z} 57'27	10.80365 AU
morning rise	3834 Oct 11 18:25	4° \mathbb{Z} 08'56		morning rise	3840 Dec 26 15:59	19° \mathbb{Z} 58'58	
retrograde	3835 Jan 21 15:49	11° \mathbb{Z} 56'03		retrograde	3841 Apr 05 09:43	27° \mathbb{Z} 07'58	
opposition	3835 Mar 29 13:14	8° \mathbb{Z} 31'47	2°18'49	opposition	3841 Jun 13 10:42	23° \mathbb{Z} 49'25	1°55'56
min. Earth dist.	3835 Mar 29 12:44	8° \mathbb{Z} 31'53	8.30512 AU	min. Earth dist.	3841 Jun 13 11:39	23° \mathbb{Z} 49'14	8.84096 AU
direct	3835 Jun 06 07:12	5° \mathbb{Z} 03'11		direct	3841 Aug 23 08:07	20° \mathbb{Z} 26'47	
evening set	3835 Sep 20 10:50	13° \mathbb{Z} 03'46		evening set	3841 Dec 04 23:56	27° \mathbb{Z} 47'23	
conjunction	3835 Oct 08 02:52	15° \mathbb{Z} 16'25	1°59'08	conjunction	3841 Dec 21 20:44	29° \mathbb{Z} 47'56	1°24'31
minimum elong	3835 Oct 08 02:49	15° \mathbb{Z} 16'24	1°59'08	minimum elong	3841 Dec 21 20:46	29° \mathbb{Z} 47'57	1°24'31
max. Earth dist.	3835 Oct 08 02:45	15° \mathbb{Z} 16'23	10.34686 AU	max. Earth dist.	3841 Dec 21 19:20	29° \mathbb{Z} 47'31	10.87348 AU
morning rise	3835 Oct 25 14:55	17° \mathbb{Z} 27'51			3841 Dec 23 12:56	0° \mathbb{Z}	
retrograde	3836 Feb 03 20:11	25° \mathbb{Z} 07'34		morning rise	3842 Jan 07 14:31	1° \mathbb{Z} 47'38	
opposition	3836 Apr 10 23:38	21° \mathbb{Z} 44'24	2°34'10	retrograde	3842 Apr 17 11:56	8° \mathbb{Z} 53'30	
min. Earth dist.	3836 Apr 10 23:00	21° \mathbb{Z} 44'31	8.39309 AU	opposition	3842 Jun 25 21:28	5° \mathbb{Z} 35'24	1°30'33
direct	3836 Jun 19 05:52	18° \mathbb{Z} 16'25		min. Earth dist.	3842 Jun 25 22:30	5° \mathbb{Z} 35'12	8.90326 AU
evening set	3836 Oct 03 07:17	26° \mathbb{Z} 11'16		direct	3842 Sep 04 20:43	2° \mathbb{Z} 13'52	
				evening set	3842 Dec 16 20:44	9° \mathbb{Z} 28'57	
conjunction	3836 Oct 20 19:11	28° \mathbb{Z} 21'28	2°08'25				
minimum elong	3836 Oct 20 19:10	28° \mathbb{Z} 21'28	2°08'26	conjunction	3843 Jan 02 15:54	11° \mathbb{Z} 28'26	1°02'23
max. Earth dist.	3836 Oct 20 19:15	28° \mathbb{Z} 21'30	10.43860 AU	minimum elong	3843 Jan 02 15:56	11° \mathbb{Z} 28'27	1°02'23
	3836 Nov 02 23:48	0° \mathbb{M}		max. Earth dist.	3843 Jan 02 14:15	11° \mathbb{Z} 27'57	10.92820 AU
morning rise	3836 Nov 07 02:39	0° \mathbb{M} 30'21		morning rise	3843 Jan 19 08:43	13° \mathbb{Z} 27'17	
retrograde	3837 Feb 15 20:06	8° \mathbb{M} 02'41		retrograde	3843 Apr 29 11:58	20° \mathbb{Z} 31'15	
opposition	3837 Apr 24 05:34	4° \mathbb{M} 40'37	2°41'18	opposition	3843 Jul 08 06:00	17° \mathbb{Z} 13'23	1°01'45

min. Earth dist.	3843 Jul 08 07:50	17° S 13'02	8.94944 AU	morning rise	3849 Mar 28 03:53	22° K 48'06	
direct	3843 Sep 17 03:44	13° S 52'50			3849 Jun 25 17:00	0° Y	
evening set	3843 Dec 28 13:36	21° S 03'27		retrograde	3849 Jul 09 16:12	0° Y 09'41	
					3849 Jul 23 19:18	30° R K	
conjunction	3844 Jan 14 07:23	23° S 02'09	0°37'53	opposition	3849 Sep 18 09:31	26° K 48'07	-1°58'02
minimum elong	3844 Jan 14 07:24	23° S 02'10	0°37'54	min. Earth dist.	3849 Sep 18 11:09	26° K 47'48	8.83121 AU
max. Earth dist.	3844 Jan 14 04:53	23° S 01'25	10.96584 AU	direct	3849 Nov 26 16:02	23° K 29'16	
morning rise	3844 Jan 30 23:47	25° S 00'28			3850 Mar 01 00:18	0° Y	
	3844 Mar 20 13:56	0° \approx		evening set	3850 Mar 06 15:11	0° Y 39'37	
retrograde	3844 May 10 10:07	2° \approx 03'59					
	3844 Jul 02 12:23	30° R S		conjunction	3850 Mar 23 09:04	2° Y 40'28	-1°44'52
opposition	3844 Jul 19 13:21	28° S 46'05	0°30'42	minimum elong	3850 Mar 23 09:02	2° Y 40'27	1°44'52
min. Earth dist.	3844 Jul 19 15:24	28° S 45'42	8.97783 AU	max. Earth dist.	3850 Mar 23 07:36	2° Y 40'01	10.79160 AU
direct	3844 Sep 28 09:23	25° S 26'21		morning rise	3850 Apr 09 05:55	4° Y 42'15	
	3844 Dec 16 01:07	0° \approx		retrograde	3850 Jul 22 12:53	12° Y 10'49	
evening set	3845 Jan 08 03:42	2° \approx 33'37		opposition	3850 Oct 01 01:32	8° Y 47'59	-2°18'24
				min. Earth dist.	3850 Oct 01 02:13	8° Y 47'52	8.75055 AU
conjunction	3845 Jan 24 20:33	4° \approx 31'52	0°12'00	direct	3850 Dec 08 22:01	5° Y 28'37	
minimum elong	3845 Jan 24 20:34	4° \approx 31'52	0°12'01	evening set	3851 Mar 18 19:57	12° Y 43'23	
behind sun begin	3845 Jan 24 15:42	4° \approx 30'27					
behind sun end	3845 Jan 25 01:25	4° \approx 33'18		conjunction	3851 Apr 04 15:38	14° Y 45'47	-1°59'01
max. Earth dist.	3845 Jan 24 18:11	4° \approx 31'11	10.98497 AU	minimum elong	3851 Apr 04 15:36	14° Y 45'46	1°59'01
morning rise	3845 Feb 10 12:49	6° \approx 29'57		max. Earth dist.	3851 Apr 04 14:52	14° Y 45'33	10.70501 AU
retrograde	3845 May 22 11:06	13° \approx 34'26		morning rise	3851 Apr 21 14:47	16° Y 49'18	
desc. node	3845 Jul 14 20:22	11° \approx 29'50		retrograde	3851 Aug 04 14:26	24° Y 25'23	
opposition	3845 Jul 31 20:04	10° \approx 16'13	-0°01'27	opposition	3851 Oct 13 21:33	21° Y 01'15	-2°32'59
min. Earth dist.	3845 Jul 31 21:27	10° \approx 15'58	8.98728 AU	min. Earth dist.	3851 Oct 13 21:33	21° Y 01'15	8.65955 AU
direct	3845 Oct 10 12:34	6° \approx 57'08		direct	3851 Dec 21 05:46	17° Y 41'08	
evening set	3846 Jan 19 16:48	14° \approx 02'17		evening set	3852 Mar 30 07:31	25° Y 01'18	
	3846 Jan 27 21:36	15° \approx					
conjunction	3846 Feb 05 09:10	16° \approx 00'23	-0°14'24	conjunction	3852 Apr 16 05:38	27° Y 05'33	-2°08'00
minimum elong	3846 Feb 05 09:09	16° \approx 00'23	0°14'24	minimum elong	3852 Apr 16 05:37	27° Y 05'33	2°08'00
behind sun begin	3846 Feb 05 05:48	15° \approx 59'24		max. Earth dist.	3852 Apr 16 04:47	27° Y 05'18	10.61029 AU
behind sun end	3846 Feb 05 12:30	16° \approx 01'22		morning rise	3852 May 03 07:53	29° Y 11'07	
max. Earth dist.	3846 Feb 05 07:45	15° \approx 59'59	10.98465 AU		3852 May 10 03:34	0° S	
morning rise	3846 Feb 22 01:29	17° \approx 58'33		retrograde	3852 Aug 16 21:12	6° S 54'55	
retrograde	3846 Jun 03 13:21	25° \approx 05'20		opposition	3852 Oct 25 21:52	3° S 29'28	-2°40'46
opposition	3846 Aug 13 02:49	21° \approx 46'35	-0°33'33	min. Earth dist.	3852 Oct 25 21:52	3° S 29'28	8.56250 AU
min. Earth dist.	3846 Aug 13 03:46	21° \approx 46'24	8.97712 AU	direct	3853 Jan 01 19:54	0° S 08'24	
direct	3846 Oct 22 12:18	18° \approx 27'55		evening set	3853 Apr 12 02:34	7° S 34'44	
evening set	3847 Jan 31 06:21	25° \approx 32'18					
conjunction	3847 Feb 16 22:23	27° \approx 30'35	-0°40'12	conjunction	3853 Apr 29 04:00	9° S 41'12	-2°11'04
minimum elong	3847 Feb 16 22:22	27° \approx 30'34	0°40'12	minimum elong	3853 Apr 29 04:00	9° S 41'12	2°11'04
max. Earth dist.	3847 Feb 16 20:43	27° \approx 30'05	10.96444 AU	max. Earth dist.	3853 Apr 29 03:30	9° S 41'02	10.51180 AU
morning rise	3847 Mar 05 15:12	29° \approx 29'07		morning rise	3853 May 16 09:59	11° S 49'03	
	3847 Mar 10 01:53	0° K			3853 Jun 13 00:55	15° S	
retrograde	3847 Jun 15 19:07	6° K 39'34		retrograde	3853 Aug 30 10:25	19° S 40'21	
opposition	3847 Aug 25 10:50	3° K 20'04	-1°04'27	opposition	3853 Nov 08 02:37	16° S 13'42	-2°40'55
min. Earth dist.	3847 Aug 25 12:14	3° K 19'49	8.94710 AU	min. Earth dist.	3853 Nov 08 02:32	16° S 13'43	8.46379 AU
direct	3847 Nov 03 12:33	0° K 01'35			3853 Nov 24 02:30	15° R S	
evening set	3848 Feb 11 21:38	7° K 06'35		direct	3854 Jan 14 15:34	12° S 51'33	
					3854 Mar 05 09:06	15° S	
conjunction	3848 Feb 28 13:37	9° K 05'21	-1°04'31	evening set	3854 Apr 25 05:50	20° S 24'35	
minimum elong	3848 Feb 28 13:36	9° K 05'20	1°04'32				
max. Earth dist.	3848 Feb 28 11:03	9° K 04'35	10.92443 AU	conjunction	3854 May 12 11:20	22° S 33'28	-2°07'42
morning rise	3848 Mar 16 07:25	11° K 04'38		minimum elong	3854 May 12 11:22	22° S 33'28	2°07'42
retrograde	3848 Jun 27 03:29	18° K 20'04		max. Earth dist.	3854 May 12 11:53	22° S 33'38	10.41404 AU
opposition	3848 Sep 05 20:54	14° K 59'38	-1°33'00	morning rise	3854 May 29 21:23	24° S 43'47	
min. Earth dist.	3848 Sep 05 22:53	14° K 59'16	8.89777 AU		3854 Jul 17 11:16	0° II	
direct	3848 Nov 14 12:41	11° K 41'04		retrograde	3854 Sep 13 05:24	2° II 41'57	
evening set	3849 Feb 22 16:10	18° K 48'07			3854 Nov 11 19:23	30° R S	
conjunction	3849 Mar 11 08:46	20° K 47'44	-1°26'24	opposition	3854 Nov 21 11:38	29° S 14'15	-2°32'54
minimum elong	3849 Mar 11 08:44	20° K 47'43	1°26'24	min. Earth dist.	3854 Nov 21 10:53	29° S 14'24	8.36812 AU
max. Earth dist.	3849 Mar 11 06:15	20° K 46'58	10.86591 AU	direct	3855 Jan 27 16:37	25° S 50'58	
					3855 Apr 08 11:00	0° II	
				evening set	3855 May 08 17:34	3° II 30'57	

conjunction	3855 May 26 03:43	5° Π 42'23	-1°57'40	minimum elong	3861 Aug 19 19:07	28° Ω 30'55	0°41'36
minimum elong	3855 May 26 03:45	5° Π 42'24	1°57'41	max. Earth dist.	3861 Aug 19 21:44	28° Ω 31'46	10.11879 AU
max. Earth dist.	3855 May 26 05:35	5° Π 42'58	10.32188 AU		3861 Aug 31 08:17	0° Π	
morning rise	3855 Jun 12 18:06	7° Π 55'11		morning rise	3861 Sep 06 20:48	0° Π 49'41	
retrograde	3855 Sep 27 05:12	15° Π 59'13		retrograde	3861 Dec 19 14:34	8° Π 53'10	
opposition	3855 Dec 05 00:56	12° Π 30'41	-2°16'37	opposition	3862 Feb 24 08:56	5° Π 26'09	1°09'57
min. Earth dist.	3855 Dec 04 23:10	12° Π 31'03	8.28039 AU	min. Earth dist.	3862 Feb 24 06:20	5° Π 26'41	8.13849 AU
direct	3856 Feb 10 00:07	9° Π 06'13		direct	3862 May 02 22:32	1° Π 57'07	
evening set	3856 May 21 13:47	16° Π 53'05		evening set	3862 Aug 16 12:04	10° Π 05'59	
conjunction	3856 Jun 08 04:44	19° Π 07'02	-1°41'09	conjunction	3862 Sep 03 13:02	12° Π 23'55	1°10'02
minimum elong	3856 Jun 08 04:47	19° Π 07'03	1°41'09	minimum elong	3862 Sep 03 12:59	12° Π 23'54	1°10'02
max. Earth dist.	3856 Jun 08 07:24	19° Π 07'52	10.24015 AU	max. Earth dist.	3862 Sep 03 15:57	12° Π 24'51	10.16317 AU
morning rise	3856 Jun 25 23:29	21° Π 22'13		morning rise	3862 Sep 21 11:37	14° Π 41'07	
retrograde	3856 Oct 10 09:41	29° Π 30'40		retrograde	3863 Jan 02 12:32	22° Π 38'50	
opposition	3856 Dec 17 17:57	26° Π 01'36	-1°52'30	opposition	3863 Mar 10 04:55	19° Π 12'58	1°42'45
min. Earth dist.	3856 Dec 17 15:35	26° Π 02'05	8.20527 AU	min. Earth dist.	3863 Mar 10 02:22	19° Π 13'29	8.19356 AU
direct	3857 Feb 22 12:41	22° Π 35'57		direct	3863 May 17 04:16	15° Π 44'04	
	3857 May 31 20:18	0° Ξ		evening set	3863 Aug 31 03:53	23° Π 51'00	
evening set	3857 Jun 04 18:13	0° Ξ 29'20		conjunction	3863 Sep 18 01:46	26° Π 07'06	1°34'10
conjunction	3857 Jun 22 13:39	2° Ξ 45'32	-1°18'45	minimum elong	3863 Sep 18 01:43	26° Π 07'05	1°34'10
minimum elong	3857 Jun 22 13:42	2° Ξ 45'33	1°18'46	max. Earth dist.	3863 Sep 18 04:29	26° Π 07'58	10.22755 AU
max. Earth dist.	3857 Jun 22 16:15	2° Ξ 46'22	10.17331 AU	morning rise	3863 Oct 05 20:19	28° Π 22'12	
morning rise	3857 Jul 10 12:19	5° Ξ 02'47			3863 Oct 19 04:35	0° Ω	
retrograde	3857 Oct 24 17:12	13° Ξ 13'55		retrograde	3864 Jan 16 03:21	6° Ω 13'07	
opposition	3857 Dec 31 13:56	9° Ξ 44'38	-1°21'36	opposition	3864 Mar 22 21:43	2° Ω 48'31	2°09'14
min. Earth dist.	3857 Dec 31 11:39	9° Ξ 45'06	8.14713 AU	min. Earth dist.	3864 Mar 22 19:51	2° Ω 48'54	8.26684 AU
direct	3858 Mar 08 06:15	6° Ξ 17'52			3864 May 02 15:39	30° \mathbb{R} Π	
evening set	3858 Jun 19 05:38	14° Ξ 17'04		direct	3864 May 30 08:35	29° Π 20'01	
conjunction	3858 Jul 07 04:51	16° Ξ 35'05	-0°51'35		3864 Jun 27 00:12	0° Ω	
minimum elong	3858 Jul 07 04:53	16° Ξ 35'06	0°51'36	evening set	3864 Sep 13 13:22	7° Ω 23'16	
max. Earth dist.	3858 Jul 07 07:13	16° Ξ 35'51	10.12538 AU	conjunction	3864 Oct 01 07:19	9° Ω 37'06	1°52'44
morning rise	3858 Jul 25 06:30	18° Ξ 53'52		minimum elong	3864 Oct 01 07:16	9° Ω 37'05	1°52'44
retrograde	3858 Nov 08 01:42	27° Ξ 05'48		max. Earth dist.	3864 Oct 01 09:11	9° Ω 37'41	10.30800 AU
opposition	3859 Jan 14 12:13	23° Ξ 36'38	-0°45'35	morning rise	3864 Oct 18 21:21	11° Ω 49'44	
min. Earth dist.	3859 Jan 14 10:08	23° Ξ 37'04	8.10964 AU	retrograde	3865 Jan 28 11:49	19° Ω 33'17	
direct	3859 Mar 22 06:13	20° Ξ 08'55		opposition	3865 Apr 05 10:47	16° Ω 09'59	2°28'11
evening set	3859 Jul 03 22:22	28° Ξ 12'50		min. Earth dist.	3865 Apr 05 09:58	16° Ω 10'09	8.35387 AU
	3859 Jul 17 21:09	0° Ω		direct	3865 Jun 13 09:21	12° Ω 42'07	
conjunction	3859 Jul 22 00:17	0° Ω 32'01	-0°21'13	evening set	3865 Sep 27 14:31	20° Ω 40'06	
minimum elong	3859 Jul 22 00:18	0° Ω 32'01	0°21'13	conjunction	3865 Oct 15 04:11	22° Ω 51'27	2°04'58
max. Earth dist.	3859 Jul 22 02:30	0° Ω 32'43	10.09942 AU	minimum elong	3865 Oct 15 04:09	22° Ω 51'27	2°04'59
morning rise	3859 Aug 09 03:37	2° Ω 51'37		max. Earth dist.	3865 Oct 15 04:42	22° Ω 51'37	10.39973 AU
retrograde	3859 Nov 22 08:11	11° Ω 02'28		morning rise	3865 Nov 01 13:43	25° Ω 01'31	
opposition	3860 Jan 28 11:34	7° Ω 33'45	-0°06'38		3865 Dec 17 04:52	0° \mathbb{M}	
min. Earth dist.	3860 Jan 28 09:39	7° Ω 34'08	8.09527 AU	retrograde	3866 Feb 10 14:01	2° \mathbb{M} 37'30	
asc. node	3860 Apr 01 00:37	4° Ω 05'56			3866 Apr 09 07:51	30° \mathbb{R} Ω	
direct	3860 Apr 04 10:25	4° Ω 05'17		opposition	3866 Apr 18 19:27	29° Ω 15'25	2°38'57
evening set	3860 Jul 17 18:49	12° Ω 12'35		min. Earth dist.	3866 Apr 18 19:11	29° Ω 15'28	8.44945 AU
conjunction	3860 Aug 04 21:59	14° Ω 32'08	0°10'35	direct	3866 Jun 27 05:14	25° Ω 48'22	
minimum elong	3860 Aug 04 21:58	14° Ω 32'08	0°10'34		3866 Sep 08 23:48	0° \mathbb{M}	
behind sun begin	3860 Aug 04 16:20	14° Ω 30'20		evening set	3866 Oct 11 06:29	3° \mathbb{M} 39'57	
behind sun end	3860 Aug 05 03:37	14° Ω 33'56		conjunction	3866 Oct 28 16:02	5° \mathbb{M} 48'49	2°10'33
max. Earth dist.	3860 Aug 05 00:11	14° Ω 32'50	10.09713 AU	minimum elong	3866 Oct 28 16:02	5° \mathbb{M} 48'49	2°10'34
	3860 Aug 08 12:16	15° Ω		max. Earth dist.	3866 Oct 28 15:31	5° \mathbb{M} 48'40	10.49730 AU
morning rise	3860 Aug 23 01:19	16° Ω 51'43		morning rise	3866 Nov 14 21:21	7° \mathbb{M} 56'23	
retrograde	3860 Dec 05 12:43	24° Ω 59'41			3867 Feb 01 20:33	15° \mathbb{M}	
opposition	3861 Feb 10 10:45	21° Ω 31'42	0°32'43	retrograde	3867 Feb 23 08:46	15° \mathbb{M} 24'58	
min. Earth dist.	3861 Feb 10 08:34	21° Ω 32'08	8.10505 AU		3867 Mar 17 03:07	15° \mathbb{R} \mathbb{M}	
direct	3861 Apr 18 16:26	18° Ω 02'47		opposition	3867 May 01 23:13	12° \mathbb{M} 04'00	2°41'30
evening set	3861 Aug 01 16:19	26° Ω 11'48		min. Earth dist.	3867 May 01 23:20	12° \mathbb{M} 03'59	8.54775 AU
conjunction	3861 Aug 19 19:09	28° Ω 30'56	0°41'36	direct	3867 Jul 10 20:38	8° \mathbb{M} 37'54	
					3867 Oct 12 22:08	15° \mathbb{M}	

evening set	3867 Oct 24 12:55	16° \mathbb{M} 22'27		minimum elong	3874 Jan 20 08:34	29° \mathfrak{Z} 55'31	0°23'03
				max. Earth dist.	3874 Jan 20 05:51	29° \mathfrak{Z} 54'43	10.96028 AU
conjunction	3867 Nov 10 18:48	18° \mathbb{M} 28'59	2°09'37		3874 Jan 20 23:40	0° \approx	
minimum elong	3867 Nov 10 18:48	18° \mathbb{M} 28'59	2°09'38	morning rise	3874 Feb 06 00:51	1° \approx 53'52	
max. Earth dist.	3867 Nov 10 17:37	18° \mathbb{M} 28'37	10.59473 AU	retrograde	3874 May 17 18:53	8° \approx 58'31	
morning rise	3867 Nov 27 20:22	20° \mathbb{M} 34'15		opposition	3874 Jul 27 00:05	5° \approx 40'01	0°12'10
retrograde	3868 Mar 06 23:07	27° \mathbb{M} 56'06		min. Earth dist.	3874 Jul 27 02:31	5° \approx 39'34	8.96475 AU
opposition	3868 May 13 22:37	24° \mathbb{M} 36'08	2°36'14	direct	3874 Oct 05 17:54	2° \approx 20'07	
min. Earth dist.	3868 May 13 23:10	24° \mathbb{M} 36'01	8.64288 AU	desc. node	3874 Dec 15 22:34	6° \approx 09'35	
direct	3868 Jul 23 05:35	21° \mathbb{M} 11'05		evening set	3875 Jan 15 05:01	9° \approx 26'50	
evening set	3868 Nov 05 10:11	28° \mathbb{M} 48'28					
	3868 Nov 15 07:17	0° \mathfrak{A}		conjunction	3875 Jan 31 21:35	11° \approx 25'14	-0°03'22
				minimum elong	3875 Jan 31 21:36	11° \approx 25'14	0°03'22
conjunction	3868 Nov 22 12:50	0° \mathfrak{A} 52'56	2°02'35	behind sun begin	3875 Jan 31 14:40	11° \approx 23'11	
minimum elong	3868 Nov 22 12:51	0° \mathfrak{A} 52'56	2°02'35	behind sun end	3875 Feb 01 04:33	11° \approx 27'16	
max. Earth dist.	3868 Nov 22 11:22	0° \mathfrak{A} 52'29	10.68662 AU	max. Earth dist.	3875 Jan 31 18:18	11° \approx 24'18	10.96452 AU
morning rise	3868 Dec 09 11:14	2° \mathfrak{A} 56'11		morning rise	3875 Feb 17 14:02	13° \approx 23'35	
retrograde	3869 Mar 19 09:57	10° \mathfrak{A} 12'15			3875 Mar 03 17:45	15° \approx	
opposition	3869 May 26 17:58	6° \mathfrak{A} 53'08	2°23'53	retrograde	3875 May 29 19:04	20° \approx 29'59	
min. Earth dist.	3869 May 26 19:32	6° \mathfrak{A} 52'50	8.73041 AU	opposition	3875 Aug 08 07:16	17° \approx 10'54	-0°20'10
direct	3869 Aug 05 07:00	3° \mathfrak{A} 29'12		min. Earth dist.	3875 Aug 08 09:57	17° \approx 10'24	8.95972 AU
evening set	3869 Nov 17 23:12	10° \mathfrak{A} 59'37			3875 Sep 09 08:55	15° \mathbb{R} \approx	
				direct	3875 Oct 17 19:28	13° \approx 51'23	
conjunction	3869 Dec 04 23:04	13° \mathfrak{A} 02'19	1°50'05		3875 Nov 24 09:16	15° \approx	
minimum elong	3869 Dec 04 23:06	13° \mathfrak{A} 02'20	1°50'06	evening set	3876 Jan 26 18:37	20° \approx 56'51	
max. Earth dist.	3869 Dec 04 20:39	13° \mathfrak{A} 01'35	10.76942 AU				
morning rise	3869 Dec 21 19:09	15° \mathfrak{A} 03'57		conjunction	3876 Feb 12 10:46	22° \approx 55'16	-0°29'31
retrograde	3870 Mar 31 14:50	22° \mathfrak{A} 15'13		minimum elong	3876 Feb 12 10:44	22° \approx 55'16	0°29'31
opposition	3870 Jun 08 09:40	18° \mathfrak{A} 56'45	2°05'24	max. Earth dist.	3876 Feb 12 07:48	22° \approx 54'23	10.95024 AU
min. Earth dist.	3870 Jun 08 12:17	18° \mathfrak{A} 56'16	8.80743 AU	morning rise	3876 Feb 29 03:34	24° \approx 53'53	
direct	3870 Aug 18 03:04	15° \mathfrak{A} 33'51			3876 Apr 19 21:29	0° \mathfrak{H}	
evening set	3870 Nov 30 04:56	22° \mathfrak{A} 57'47		retrograde	3876 Jun 09 22:54	2° \mathfrak{H} 03'29	
					3876 Aug 02 01:57	30° \mathbb{R} \approx	
conjunction	3870 Dec 17 02:31	24° \mathfrak{A} 59'01	1°32'58	opposition	3876 Aug 19 15:14	28° \approx 43'38	-0°51'47
minimum elong	3870 Dec 17 02:33	24° \mathfrak{A} 59'02	1°32'58	min. Earth dist.	3876 Aug 19 17:04	28° \approx 43'17	8.93641 AU
max. Earth dist.	3870 Dec 16 22:56	24° \mathfrak{A} 57'57	10.84044 AU	direct	3876 Oct 28 21:33	25° \approx 24'21	
morning rise	3871 Jan 02 21:03	26° \mathfrak{A} 59'21			3877 Jan 15 00:46	0° \mathfrak{H}	
	3871 Jan 29 23:23	0° \mathfrak{Z}		evening set	3877 Feb 06 09:13	2° \mathfrak{H} 29'50	
retrograde	3871 Apr 12 16:57	4° \mathfrak{Z} 07'01					
opposition	3871 Jun 20 22:15	0° \mathfrak{Z} 48'56	1°41'50	conjunction	3877 Feb 23 01:25	4° \mathfrak{H} 28'38	-0°54'37
min. Earth dist.	3871 Jun 21 01:17	0° \mathfrak{Z} 48'21	8.87131 AU	minimum elong	3877 Feb 23 01:23	4° \mathfrak{H} 28'38	0°54'37
	3871 Jul 01 21:23	30° \mathbb{R} \mathfrak{A}		max. Earth dist.	3877 Feb 22 23:43	4° \mathfrak{H} 28'08	10.91785 AU
direct	3871 Aug 30 20:22	27° \mathfrak{A} 26'57		morning rise	3877 Mar 11 18:50	6° \mathfrak{H} 27'51	
	3871 Oct 27 06:10	0° \mathfrak{Z}		retrograde	3877 Jun 22 07:29	13° \mathfrak{H} 41'55	
evening set	3871 Dec 12 04:35	4° \mathfrak{Z} 45'05		opposition	3877 Sep 01 00:43	10° \mathfrak{H} 21'09	-1°21'31
				min. Earth dist.	3877 Sep 01 01:30	10° \mathfrak{H} 21'00	8.89552 AU
conjunction	3871 Dec 29 00:24	6° \mathfrak{Z} 45'09	1°12'08	direct	3877 Nov 09 21:50	7° \mathfrak{H} 01'57	
minimum elong	3871 Dec 29 00:26	6° \mathfrak{Z} 45'10	1°12'07	evening set	3878 Feb 18 02:40	14° \mathfrak{H} 08'49	
max. Earth dist.	3871 Dec 28 20:35	6° \mathfrak{Z} 44'01	10.89716 AU				
morning rise	3872 Jan 14 17:47	8° \mathfrak{Z} 44'30		conjunction	3878 Mar 06 19:12	16° \mathfrak{H} 08'19	-1°17'40
retrograde	3872 Apr 23 17:58	15° \mathfrak{Z} 49'49		minimum elong	3878 Mar 06 19:10	16° \mathfrak{H} 08'18	1°17'40
opposition	3872 Jul 02 08:19	12° \mathfrak{Z} 31'49	1°14'20	max. Earth dist.	3878 Mar 06 18:08	16° \mathfrak{H} 07'59	10.86841 AU
min. Earth dist.	3872 Jul 02 10:45	12° \mathfrak{Z} 31'22	8.91980 AU	morning rise	3878 Mar 23 13:40	18° \mathfrak{H} 08'26	
direct	3872 Sep 11 07:32	9° \mathfrak{Z} 10'43		retrograde	3878 Jul 04 19:25	25° \mathfrak{H} 28'04	
evening set	3872 Dec 22 23:29	16° \mathfrak{Z} 23'53		opposition	3878 Sep 13 12:27	22° \mathfrak{H} 06'19	-1°48'12
				min. Earth dist.	3878 Sep 13 12:50	22° \mathfrak{H} 06'14	8.83847 AU
conjunction	3873 Jan 08 18:01	18° \mathfrak{Z} 23'06	0°48'29	direct	3878 Nov 21 23:17	18° \mathfrak{H} 46'59	
minimum elong	3873 Jan 08 18:03	18° \mathfrak{Z} 23'07	0°48'30	evening set	3879 Mar 02 00:05	25° \mathfrak{H} 56'34	
max. Earth dist.	3873 Jan 08 15:09	18° \mathfrak{Z} 22'15	10.93758 AU				
morning rise	3873 Jan 25 10:37	20° \mathfrak{Z} 21'48		conjunction	3879 Mar 18 17:21	27° \mathfrak{H} 57'04	-1°37'42
retrograde	3873 May 05 18:00	27° \mathfrak{Z} 26'06		minimum elong	3879 Mar 18 17:19	27° \mathfrak{H} 57'04	1°37'42
opposition	3873 Jul 14 16:41	24° \mathfrak{Z} 07'57	0°44'03	max. Earth dist.	3879 Mar 18 15:59	27° \mathfrak{H} 56'39	10.80382 AU
min. Earth dist.	3873 Jul 14 18:48	24° \mathfrak{Z} 07'33	8.95130 AU	morning rise	3879 Apr 04 13:29	29° \mathfrak{H} 58'26	
direct	3873 Sep 23 14:16	20° \mathfrak{Z} 47'32			3879 Apr 04 18:46	0° \mathfrak{Y}	
evening set	3874 Jan 03 15:03	27° \mathfrak{Z} 56'51		retrograde	3879 Jul 17 13:03	7° \mathfrak{Y} 24'37	
				opposition	3879 Sep 26 03:31	4° \mathfrak{Y} 01'47	-2°10'40
conjunction	3874 Jan 20 08:33	29° \mathfrak{Z} 55'31	0°23'02	min. Earth dist.	3879 Sep 26 04:01	4° \mathfrak{Y} 01'41	8.76751 AU

direct	3879 Dec 04 03:30	0°♈42'10	conjunction	3886 Jun 16 23:50	27°♊22'46	-1°28'28
evening set	3880 Mar 13 02:31	7°♈55'35	minimum elong	3886 Jun 16 23:53	27°♊22'47	1°28'28
			max. Earth dist.	3886 Jun 17 02:47	27°♊23'43	10.21565 AU
conjunction	3880 Mar 29 21:15	9°♈57'27 -1°53'46	morning rise	3886 Jul 04 20:55	29°♊39'02	
minimum elong	3880 Mar 29 21:13	9°♈57'26 1°53'45		3886 Jul 07 16:13	0°♊	
max. Earth dist.	3880 Mar 29 20:27	9°♈57'12 10.72672 AU	retrograde	3886 Oct 19 04:28	7°♊48'42	
morning rise	3880 Apr 15 19:34	12°♈00'23	opposition	3886 Dec 26 06:19	4°♊20'08	-1°34'48
retrograde	3880 Jul 29 11:14	19°♈33'49	min. Earth dist.	3886 Dec 26 04:02	4°♊20'36	8.18702 AU
opposition	3880 Oct 07 22:17	16°♈09'52 -2°27'46	direct	3887 Mar 02 23:32	0°♊54'30	
min. Earth dist.	3880 Oct 07 22:19	16°♈09'51 8.68553 AU	evening set	3887 Jun 13 14:46	8°♊50'43	
direct	3880 Dec 15 11:04	12°♈49'45				
evening set	3881 Mar 25 11:23	20°♈08'06	conjunction	3887 Jul 01 12:27	11°♊07'48	-1°03'07
			minimum elong	3887 Jul 01 12:30	11°♊07'49	1°03'08
conjunction	3881 Apr 11 08:27	22°♈11'40 -2°04'57	max. Earth dist.	3887 Jul 01 15:38	11°♊08'49	10.16154 AU
minimum elong	3881 Apr 11 08:26	22°♈11'40 2°04'57	morning rise	3887 Jul 19 12:51	13°♊25'47	
max. Earth dist.	3881 Apr 11 09:02	22°♈11'51 10.64028 AU	retrograde	3887 Nov 02 12:25	21°♊36'58	
morning rise	3881 Apr 28 09:24	24°♈16'28	opposition	3888 Jan 09 03:25	18°♊08'23	-1°00'43
	3881 Jun 23 07:51	0°♊	min. Earth dist.	3888 Jan 09 00:57	18°♊08'53	8.14131 AU
retrograde	3881 Aug 11 16:06	1°♊57'29	direct	3888 Mar 15 20:43	14°♊41'43	
	3881 Oct 01 08:13	30°♊	evening set	3888 Jun 27 05:18	22°♊43'07	
opposition	3881 Oct 20 20:56	28°♈32'25 -2°38'25				
min. Earth dist.	3881 Oct 20 19:57	28°♈32'36 8.59605 AU	conjunction	3888 Jul 15 06:16	25°♊01'41	-0°33'53
direct	3881 Dec 28 00:15	25°♈11'41	minimum elong	3888 Jul 15 06:18	25°♊01'41	0°33'54
	3882 Mar 15 18:48	0°♊	max. Earth dist.	3888 Jul 15 09:18	25°♊02'39	10.12562 AU
evening set	3882 Apr 07 03:32	2°♊35'47	morning rise	3888 Aug 02 08:50	27°♊20'47	
				3888 Aug 24 05:46	0°♊	
conjunction	3882 Apr 24 03:39	4°♊41'23 -2°10'30	retrograde	3888 Nov 15 20:03	5°♊31'44	
minimum elong	3882 Apr 24 03:38	4°♊41'23 2°10'30	opposition	3889 Jan 22 02:08	2°♊03'24	-0°22'46
max. Earth dist.	3882 Apr 24 05:30	4°♊41'58 10.54839 AU	min. Earth dist.	3889 Jan 21 23:40	2°♊03'55	8.11554 AU
morning rise	3882 May 11 07:51	6°♊48'19		3889 Feb 17 23:36	30°♊	
retrograde	3882 Aug 25 04:35	14°♊36'53	direct	3889 Mar 29 22:25	28°♊35'52	
opposition	3882 Nov 03 00:07	11°♊10'46 -2°41'44		3889 May 08 10:35	0°♊	
min. Earth dist.	3882 Nov 02 22:03	11°♊11'10 8.50312 AU	evening set	3889 Jul 12 00:18	6°♊41'18	
direct	3883 Jan 09 16:37	7°♊49'17				
	3883 Apr 17 10:59	15°♊	conjunction	3889 Jul 30 03:07	9°♊00'36	-0°02'34
evening set	3883 Apr 20 03:39	15°♊19'43	minimum elong	3889 Jul 30 03:06	9°♊00'36	0°02'35
			behind sun begin	3889 Jul 29 19:45	8°♊58'15	
conjunction	3883 May 07 07:23	17°♊27'36 -2°09'48	behind sun end	3889 Jul 30 10:26	9°♊02'56	
minimum elong	3883 May 07 07:24	17°♊27'36 2°09'48	max. Earth dist.	3889 Jul 30 05:47	9°♊01'25	10.11104 AU
max. Earth dist.	3883 May 07 09:38	17°♊28'18 10.45544 AU	morning rise	3889 Aug 17 06:19	11°♊20'03	
morning rise	3883 May 24 15:31	19°♊36'53	asc. node	3889 Aug 29 01:40	12°♊47'53	
retrograde	3883 Sep 07 23:00	27°♊32'30		3889 Sep 17 03:58	15°♊	
opposition	3883 Nov 16 07:54	24°♊05'30 -2°37'03	retrograde	3889 Nov 30 02:13	19°♊28'56	
min. Earth dist.	3883 Nov 16 05:30	24°♊05'59 8.41131 AU	opposition	3890 Feb 05 01:18	16°♊01'07	0°16'40
direct	3884 Jan 22 14:07	20°♊43'06	min. Earth dist.	3890 Feb 04 23:14	16°♊01'33	8.11246 AU
evening set	3884 May 02 12:17	28°♊20'15		3890 Feb 17 15:36	15°♊	
	3884 May 15 19:20	0°♊	direct	3890 Apr 13 02:39	12°♊32'53	
				3890 Jun 05 08:12	15°♊	
conjunction	3884 May 19 20:16	0°♊30'34 -2°02'29	evening set	3890 Jul 26 21:23	20°♊40'47	
minimum elong	3884 May 19 20:19	0°♊30'35 2°02'29				
max. Earth dist.	3884 May 19 22:37	0°♊31'18 10.36612 AU	conjunction	3890 Aug 14 00:23	23°♊00'01	0°29'03
morning rise	3884 Jun 06 08:50	2°♊42'18	minimum elong	3890 Aug 14 00:22	23°♊00'00	0°29'02
retrograde	3884 Sep 20 20:43	10°♊44'01	max. Earth dist.	3890 Aug 14 02:21	23°♊00'39	10.11971 AU
opposition	3884 Nov 28 19:48	7°♊16'18 -2°24'05	morning rise	3890 Sep 01 02:44	25°♊19'01	
min. Earth dist.	3884 Nov 28 17:34	7°♊16'45 8.32531 AU		3890 Oct 11 22:10	0°♊	
direct	3885 Feb 03 19:53	3°♊52'51	retrograde	3890 Dec 14 05:29	3°♊24'06	
evening set	3885 May 16 05:22	11°♊36'45	opposition	3891 Feb 18 23:50	29°♊57'00	0°55'01
				3891 Feb 18 09:11	30°♊	
conjunction	3885 Jun 02 18:05	13°♊49'32 -1°48'33	min. Earth dist.	3891 Feb 18 22:27	29°♊57'17	8.13296 AU
minimum elong	3885 Jun 02 18:08	13°♊49'33 1°48'34	direct	3891 Apr 27 08:46	26°♊28'17	
max. Earth dist.	3885 Jun 02 20:31	13°♊50'19 10.28490 AU		3891 Jul 01 12:08	0°♊	
morning rise	3885 Jun 20 11:07	16°♊03'39	evening set	3891 Aug 10 17:52	4°♊36'53	
retrograde	3885 Oct 04 22:50	24°♊10'08				
opposition	3885 Dec 12 11:32	20°♊41'54 -2°03'04	conjunction	3891 Aug 28 19:35	6°♊55'14	0°58'44
min. Earth dist.	3885 Dec 12 09:28	20°♊42'19 8.24936 AU	minimum elong	3891 Aug 28 19:32	6°♊55'13	0°58'44
direct	3886 Feb 17 07:12	17°♊17'21	max. Earth dist.	3891 Aug 28 20:43	6°♊55'36	10.15147 AU
evening set	3886 May 30 06:25	25°♊07'40	morning rise	3891 Sep 15 19:36	9°♊13'02	

retrograde	3891 Dec 28 04:00	17°  12'49		opposition	3898 May 21 16:50	1°  56'08	2°30'03
opposition	3892 Mar 03 20:31	13°  46'36	1°29'51	min. Earth dist.	3898 May 21 17:59	1°  55'55	8.69027 AU
min. Earth dist.	3892 Mar 03 19:30	13°  46'49	8.17582 AU		3898 Jun 17 12:30	30°  11	
direct	3892 May 10 15:48	10°  17'41		direct	3898 Jul 31 04:19	28°  11'31'13	
evening set	3892 Aug 24 11:16	18°  25'08			3898 Sep 12 01:43	0° 	
				evening set	3898 Nov 13 00:42	6°  10'04'09	
conjunction	3892 Sep 11 10:22	20°  14'55	1°24'48				
minimum elong	3892 Sep 11 10:19	20°  14'54	1°24'48	conjunction	3898 Nov 30 01:41	8°  10'07'31	1°56'06
max. Earth dist.	3892 Sep 11 11:01	20°  14'07	10.20425 AU	minimum elong	3898 Nov 30 01:43	8°  10'07'31	1°56'06
morning rise	3892 Sep 29 06:48	22°  15'51		max. Earth dist.	3898 Nov 29 23:43	8°  10'06'55	10.73319 AU
	3892 Dec 10 05:58	0° 		morning rise	3898 Dec 16 22:54	10°  10'09'45	
retrograde	3893 Jan 09 19:35	0°  51'14		retrograde	3899 Mar 26 16:44	17°  12'22'24	
	3893 Feb 09 16:35	30°  18		opposition	3899 Jun 03 09:01	14°  10'03'16	2°14'05
opposition	3893 Mar 17 14:14	27°  16'03	1°59'07	min. Earth dist.	3899 Jun 03 09:53	14°  10'03'06	8.77583 AU
min. Earth dist.	3893 Mar 17 13:16	27°  16'15	8.23825 AU	direct	3899 Aug 13 02:59	10°  10'39'32	
direct	3893 May 24 21:59	23°  17'13		evening set	3899 Nov 25 08:39	18°  10'05'37	
	3893 Aug 22 03:54	0° 					
evening set	3893 Sep 07 23:00	2°  01'42		conjunction	3899 Dec 12 07:18	20°  10'07'20	1°40'54
				minimum elong	3899 Dec 12 07:20	20°  10'07'21	1°40'53
conjunction	3893 Sep 25 18:36	4°  16'25	1°45'47	max. Earth dist.	3899 Dec 12 05:49	20°  10'06'54	10.81386 AU
minimum elong	3893 Sep 25 18:33	4°  16'24	1°45'47	morning rise	3899 Dec 29 02:24	22°  10'08'05	
max. Earth dist.	3893 Sep 25 19:07	4°  16'34	10.27476 AU	retrograde	3900 Apr 07 21:11	29°  10'16'28	
morning rise	3893 Oct 13 10:40	6°  13'00'02		opposition	3900 Jun 15 22:03	25°  10'57'58	1°52'35
retrograde	3894 Jan 23 06:05	14°  16'19		min. Earth dist.	3900 Jun 15 23:05	25°  10'57'46	8.85020 AU
opposition	3894 Mar 31 04:21	10°  15'21'12	2°21'18	direct	3900 Aug 25 20:04	22°  10'35'25	
min. Earth dist.	3894 Mar 31 03:12	10°  15'22'26	8.31636 AU	evening set	3900 Dec 07 09:56	29°  10'55'13	
direct	3894 Jun 07 23:40	7°  12'34'45			3900 Dec 08 02:14	0° 	
evening set	3894 Sep 22 03:00	15°  12'23'36					
				conjunction	3900 Dec 24 06:34	1°  10'55'37	1°21'35
conjunction	3894 Oct 09 18:38	17°  12'35'58	2°00'43	minimum elong	3900 Dec 24 06:36	1°  10'55'38	1°21'34
minimum elong	3894 Oct 09 18:36	17°  12'35'58	2°00'43	max. Earth dist.	3900 Dec 24 05:01	1°  10'55'09	10.88177 AU
max. Earth dist.	3894 Oct 09 19:22	17°  12'36'12	10.35875 AU	morning rise	3901 Jan 10 00:14	3°  10'55'12	
morning rise	3894 Oct 27 06:05	19°  12'47'05		retrograde	3901 Apr 19 21:49	11°  10'30'35	
retrograde	3895 Feb 05 11:09	27°  12'25'55		opposition	3901 Jun 28 08:25	7°  10'34'21'31	1°26'41
opposition	3895 Apr 13 14:14	24°  12'02'54	2°35'32	min. Earth dist.	3901 Jun 28 10:11	7°  10'34'21'11	8.91048 AU
min. Earth dist.	3895 Apr 13 13:29	24°  12'03'03	8.40547 AU	direct	3901 Sep 07 06:34	4°  10'21'03	
direct	3895 Jun 21 20:23	20°  12'35'05		evening set	3901 Dec 19 06:04	11°  10'35'28	
evening set	3895 Oct 05 22:26	28°  12'29'04					
	3895 Oct 18 04:53	0° 		conjunction	3902 Jan 05 01:01	13°  10'33'45'50	0°59'05
				minimum elong	3902 Jan 05 01:03	13°  10'33'45'51	0°59'05
conjunction	3895 Oct 23 09:55	0°  10'38'59	2°09'05	max. Earth dist.	3902 Jan 04 22:29	13°  10'33'45'05	10.93434 AU
minimum elong	3895 Oct 23 09:54	0°  10'38'59	2°09'06	morning rise	3902 Jan 21 17:55	15°  10'33'36	
max. Earth dist.	3895 Oct 23 10:18	0°  10'39'06	10.45133 AU	retrograde	3902 May 01 20:06	22°  10'33'7'19	
morning rise	3895 Nov 09 16:54	2°  10'47'34		opposition	3902 Jul 10 16:32	19°  10'31'9'26	0°57'32
retrograde	3896 Feb 18 09:13	10°  10'18'57		min. Earth dist.	3902 Jul 10 18:47	19°  10'31'19'01	8.95442 AU
opposition	3896 Apr 25 19:32	6°  10'57'03	2°41'31	direct	3902 Sep 19 14:48	15°  10'31'58'55	
min. Earth dist.	3896 Apr 25 19:45	6°  10'57'01	8.50065 AU	evening set	3902 Dec 30 22:20	23°  10'31'09'03	
direct	3896 Jul 04 12:22	3°  10'30'02					
evening set	3896 Oct 18 08:28	11°  10'17'20		conjunction	3903 Jan 16 16:05	25°  10'30'07'41	0°34'21
				minimum elong	3903 Jan 16 16:06	25°  10'30'07'41	0°34'22
conjunction	3896 Nov 04 15:56	13°  10'24'50	2°10'52	max. Earth dist.	3903 Jan 16 13:23	25°  10'30'06'53	10.96960 AU
minimum elong	3896 Nov 04 15:56	13°  10'24'50	2°10'52	morning rise	3903 Feb 02 08:33	27°  10'30'05'57	
max. Earth dist.	3896 Nov 04 15:18	13°  10'24'39	10.54768 AU		3903 Feb 28 18:01	0° 	
	3896 Nov 17 12:55	15°  10'18		retrograde	3903 May 13 20:25	4°  10'09'24	
morning rise	3896 Nov 21 18:59	15°  10'18'31'03		opposition	3903 Jul 22 23:29	0°  10'08'51'27	0°26'17
retrograde	3897 Mar 02 00:22	22°  10'55'24		min. Earth dist.	3903 Jul 23 01:14	0°  10'08'51'07	8.98029 AU
opposition	3897 May 08 20:25	19°  10'18'34'33	2°39'30		3903 Aug 03 16:15	30°  10'08'18'33	
min. Earth dist.	3897 May 08 21:26	19°  10'18'34'21	8.59712 AU	direct	3903 Oct 01 20:12	27°  10'08'31'46	
direct	3897 Jul 17 23:38	16°  10'18'08'31			3903 Nov 27 04:44	0° 	
evening set	3897 Oct 31 08:57	23°  10'18'48'38		evening set	3904 Jan 11 12:09	4°  10'08'38'41	
conjunction	3897 Nov 17 12:50	25°  10'53'57	2°06'21	conjunction	3904 Jan 28 05:05	6°  10'36'56	0°08'23
minimum elong	3897 Nov 17 12:51	25°  10'53'57	2°06'21	minimum elong	3904 Jan 28 05:05	6°  10'36'55	0°08'24
max. Earth dist.	3897 Nov 17 11:10	25°  10'53'26	10.64311 AU	behind sun begin	3904 Jan 27 22:56	6°  10'35'07	
morning rise	3897 Dec 04 12:41	27°  10'58'01		behind sun end	3904 Jan 28 11:15	6°  10'38'44	
	3897 Dec 22 00:45	0° 		max. Earth dist.	3904 Jan 28 03:13	6°  10'36'23	10.98611 AU
retrograde	3898 Mar 14 10:50	5°  10'16'04		morning rise	3904 Feb 13 21:17	8°  10'34'59	

	3904 Apr 26 11:01	15°♊	morning rise	3910 Apr 24 01:57	18°♏59'13
retrograde	3904 May 24 20:37	15°♊39'35	retrograde	3910 Aug 07 02:38	26°♏36'10
desc. node	3904 May 26 09:02	15°♊39'28	opposition	3910 Oct 16 09:29	23°♏11'57 -2°34'20
	3904 Jun 22 17:41	15°♋	min. Earth dist.	3910 Oct 16 10:08	23°♏11'49 8.64919 AU
opposition	3904 Aug 03 06:04	12°♊21'19 -0°05'54	direct	3910 Dec 23 16:52	19°♏51'46
min. Earth dist.	3904 Aug 03 07:09	12°♊21'06 8.98713 AU	evening set	3911 Apr 02 19:05	27°♏12'41
direct	3904 Oct 12 21:23	9°♊02'16			
	3905 Jan 12 05:58	15°♊	conjunction	3911 Apr 19 17:27	29°♏17'11 -2°08'40
evening set	3905 Jan 22 01:14	16°♊07'17	minimum elong	3911 Apr 19 17:27	29°♏17'11 2°08'40
			max. Earth dist.	3911 Apr 19 16:01	29°♏16'44 10.59940 AU
conjunction	3905 Feb 07 17:34	18°♊05'23 -0°17'59		3911 Apr 25 12:22	0°♌
minimum elong	3905 Feb 07 17:33	18°♊05'23 0°17'59	morning rise	3911 May 06 20:07	1°♌22'59
max. Earth dist.	3905 Feb 07 16:03	18°♊04'57 10.98326 AU	retrograde	3911 Aug 20 10:42	9°♌07'41
morning rise	3905 Feb 24 09:54	20°♊03'34	opposition	3911 Oct 29 10:30	5°♌42'10 -2°41'07
retrograde	3905 Jun 05 23:41	27°♊10'40	min. Earth dist.	3911 Oct 29 11:03	5°♌42'04 8.55116 AU
opposition	3905 Aug 15 13:01	23°♊51'51 -0°37'52	direct	3912 Jan 05 07:41	2°♌21'02
min. Earth dist.	3905 Aug 15 14:22	23°♊51'36 8.97463 AU	evening set	3912 Apr 14 15:00	9°♌48'11
direct	3905 Oct 24 21:54	20°♊33'12			
evening set	3906 Feb 02 14:54	27°♊37'37	conjunction	3912 May 01 16:53	11°♌54'55 -2°10'53
			minimum elong	3912 May 01 16:54	11°♌54'56 2°10'53
conjunction	3906 Feb 19 06:51	29°♊35'56 -0°43'37	max. Earth dist.	3912 May 01 16:44	11°♌54'52 10.50020 AU
minimum elong	3906 Feb 19 06:49	29°♊35'55 0°43'38	morning rise	3912 May 18 23:14	14°♌03'04
max. Earth dist.	3906 Feb 19 04:29	29°♊35'13 10.96095 AU		3912 May 26 20:15	15°♌
	3906 Feb 22 15:40	0°♎	retrograde	3912 Sep 02 00:41	21°♌55'17
morning rise	3906 Mar 07 23:51	1°♎34'33	opposition	3912 Nov 10 15:55	18°♌28'33 -2°40'11
retrograde	3906 Jun 18 05:00	8°♎45'26	min. Earth dist.	3912 Nov 10 15:40	18°♌28'36 8.45206 AU
opposition	3906 Aug 27 21:13	5°♎25'52 -1°08'29	direct	3913 Jan 17 04:00	15°♌06'20
min. Earth dist.	3906 Aug 27 23:08	5°♎25'31 8.94277 AU	evening set	3913 Apr 27 19:22	22°♌40'15
direct	3906 Nov 05 21:15	2°♎07'22			
evening set	3907 Feb 14 06:29	9°♎12'33	conjunction	3913 May 15 01:27	24°♌49'26 -2°06'37
			minimum elong	3913 May 15 01:29	24°♌49'27 2°06'38
conjunction	3907 Mar 02 22:31	11°♎11'22 -1°07'38	max. Earth dist.	3913 May 15 02:38	24°♌49'49 10.40236 AU
minimum elong	3907 Mar 02 22:29	11°♎11'22 1°07'39	morning rise	3913 Jun 01 11:53	27°♌00'03
max. Earth dist.	3907 Mar 02 19:55	11°♎10'36 10.91930 AU		3913 Jun 27 02:25	0°♐
morning rise	3907 Mar 19 16:26	13°♎10'45	retrograde	3913 Sep 15 20:10	4°♐59'04
retrograde	3907 Jun 30 12:55	20°♎26'45	opposition	3913 Nov 24 01:33	1°♐31'18 -2°31'03
opposition	3907 Sep 09 07:22	17°♎06'12 -1°36'35	min. Earth dist.	3913 Nov 24 00:16	1°♐31'33 8.35664 AU
min. Earth dist.	3907 Sep 09 09:15	17°♎05'50 8.89195 AU		3913 Dec 13 21:33	30°♑
direct	3907 Nov 17 23:13	13°♎47'36	direct	3914 Jan 30 06:18	28°♑07'55
evening set	3908 Feb 26 01:25	20°♎54'57		3914 Mar 17 06:23	0°♐
			evening set	3914 May 11 08:17	5°♐48'49
conjunction	3908 Mar 13 18:10	22°♎54'41 -1°29'05			
minimum elong	3908 Mar 13 18:08	22°♎54'40 1°29'05	conjunction	3914 May 28 18:57	8°♐00'34 -1°55'43
max. Earth dist.	3908 Mar 13 16:22	22°♎54'08 10.85928 AU	minimum elong	3914 May 28 19:00	8°♐00'35 1°55'43
morning rise	3908 Mar 30 13:19	24°♎55'09	max. Earth dist.	3914 May 28 20:59	8°♐01'13 10.31081 AU
	3908 May 19 02:17	0°♑	morning rise	3914 Jun 15 09:47	10°♐13'41
retrograde	3908 Jul 12 04:28	2°♑17'25	retrograde	3914 Sep 29 21:51	18°♐18'25
	3908 Sep 06 08:49	30°♑	opposition	3914 Dec 07 15:31	14°♐49'51 -2°13'40
opposition	3908 Sep 20 20:24	28°♑55'43 -2°01'01	min. Earth dist.	3914 Dec 07 13:30	14°♐50'15 8.26984 AU
min. Earth dist.	3908 Sep 20 21:25	28°♑55'32 8.82384 AU	direct	3915 Feb 12 13:14	11°♐25'17
direct	3908 Nov 29 02:31	25°♑36'51	evening set	3915 May 25 05:32	19°♐13'01
	3909 Feb 12 05:23	0°♑			
evening set	3909 Mar 09 01:01	2°♑47'37	conjunction	3915 Jun 11 20:55	21°♐27'15 -1°38'21
			minimum elong	3915 Jun 11 20:58	21°♐27'16 1°38'22
conjunction	3909 Mar 25 19:02	4°♑48'36 -1°47'00	max. Earth dist.	3915 Jun 11 23:09	21°♐27'58 10.23041 AU
minimum elong	3909 Mar 25 19:00	4°♑48'35 1°46'59	morning rise	3915 Jun 29 16:10	23°♐42'44
max. Earth dist.	3909 Mar 25 17:40	4°♑48'11 10.78336 AU		3915 Aug 28 07:22	0°♑
morning rise	3909 Apr 11 16:01	6°♑50'33	retrograde	3915 Oct 14 03:13	1°♑51'44
retrograde	3909 Jul 25 01:22	14°♑19'54		3915 Nov 30 13:21	30°♑
opposition	3909 Oct 03 12:57	10°♑56'58 -2°20'38	opposition	3915 Dec 21 09:12	28°♐22'38 -1°48'35
min. Earth dist.	3909 Oct 03 13:34	10°♑56'51 8.74157 AU	min. Earth dist.	3915 Dec 21 07:05	28°♐23'04 8.19640 AU
direct	3909 Dec 11 06:46	7°♑37'34	direct	3916 Feb 26 02:38	24°♐56'52
evening set	3910 Mar 21 06:40	14°♑52'56		3916 May 14 17:29	0°♑
			evening set	3916 Jun 07 10:53	2°♑51'04
conjunction	3910 Apr 07 02:28	16°♑55'30 -2°00'28			
minimum elong	3910 Apr 07 02:26	16°♑55'30 2°00'28	conjunction	3916 Jun 25 06:43	5°♑07'31 -1°15'15
max. Earth dist.	3910 Apr 07 00:52	16°♑55'01 10.69530 AU	minimum elong	3916 Jun 25 06:46	5°♑07'32 1°15'16

max. Earth dist.	3916 Jun 25 08:44	5°♄08'10	10.16561 AU		3922 Oct 02 19:23	0°♄	
morning rise	3916 Jul 13 05:52	7°♄25'01		morning rise	3922 Oct 08 12:14	0°♄42'57	
retrograde	3916 Oct 27 10:15	15°♄36'27		retrograde	3923 Jan 18 17:31	8°♄33'05	
opposition	3917 Jan 03 05:38	12°♄07'10	-1°16'54	opposition	3923 Mar 26 12:30	5°♄08'35	2°12'11
min. Earth dist.	3917 Jan 03 03:49	12°♄07'33	8.14057 AU	min. Earth dist.	3923 Mar 26 11:05	5°♄08'52	8.27563 AU
direct	3917 Mar 10 22:26	8°♄40'17		direct	3923 Jun 03 00:15	1°♄40'06	
evening set	3917 Jun 21 23:06	16°♄40'11		evening set	3923 Sep 17 05:18	9°♄42'46	
conjunction	3917 Jul 09 22:40	18°♄58'22	-0°47'34	conjunction	3923 Oct 04 22:43	11°♄56'19	1°54'42
minimum elong	3917 Jul 09 22:42	18°♄58'23	0°47'35	minimum elong	3923 Oct 04 22:40	11°♄56'18	1°54'43
max. Earth dist.	3917 Jul 10 00:48	18°♄59'04	10.12018 AU	max. Earth dist.	3923 Oct 04 23:56	11°♄56'42	10.31756 AU
morning rise	3917 Jul 28 00:38	21°♄17'19		morning rise	3923 Oct 22 12:21	14°♄08'41	
retrograde	3917 Nov 10 17:17	29°♄29'19		retrograde	3924 Feb 01 01:18	21°♄51'23	
opposition	3918 Jan 17 04:09	26°♄00'11	-0°40'22	opposition	3924 Apr 08 00:57	18°♄28'11	2°30'02
min. Earth dist.	3918 Jan 17 02:13	26°♄00'35	8.10575 AU	min. Earth dist.	3924 Apr 08 00:07	18°♄28'21	8.36418 AU
direct	3918 Mar 24 23:29	22°♄32'22		direct	3924 Jun 16 00:45	15°♄00'23	
	3918 Jul 01 19:11	0°♄		evening set	3924 Sep 30 05:30	22°♄57'39	
evening set	3918 Jul 06 16:21	0°♄36'46		conjunction	3924 Oct 17 18:42	25°♄08'44	2°06'02
conjunction	3918 Jul 24 18:29	2°♄56'03	-0°16'56	minimum elong	3924 Oct 17 18:40	25°♄08'43	2°06'03
minimum elong	3918 Jul 24 18:29	2°♄56'03	0°16'57	max. Earth dist.	3924 Oct 17 19:03	25°♄08'50	10.41061 AU
max. Earth dist.	3918 Jul 24 21:03	2°♄56'52	10.09695 AU	morning rise	3924 Nov 04 03:49	27°♄18'31	
morning rise	3918 Aug 11 21:51	5°♄15'41			3924 Nov 27 02:00	0°♄	
retrograde	3918 Nov 25 00:06	13°♄26'25		retrograde	3925 Feb 13 01:51	4°♄53'38	
opposition	3919 Jan 31 03:34	9°♄57'42	-0°01'15	opposition	3925 Apr 21 08:57	1°♄31'40	2°39'40
min. Earth dist.	3919 Jan 31 01:11	9°♄58'12	8.09424 AU	min. Earth dist.	3925 Apr 21 08:05	1°♄31'50	8.46084 AU
asc. node	3919 Feb 12 04:44	8°♄59'00			3925 May 11 10:57	30°♄	
direct	3919 Apr 08 02:55	6°♄29'11		direct	3925 Jun 29 20:56	28°♄04'44	
evening set	3919 Jul 21 12:55	14°♄36'43			3925 Aug 17 08:25	0°♄	
	3919 Jul 24 14:23	15°♄		evening set	3925 Oct 13 20:22	5°♄55'29	
conjunction	3919 Aug 08 16:09	16°♄56'17	0°14'52	conjunction	3925 Oct 31 05:35	8°♄04'05	2°10'43
minimum elong	3919 Aug 08 16:09	16°♄56'16	0°14'51	minimum elong	3925 Oct 31 05:35	8°♄04'04	2°10'44
behind sun begin	3919 Aug 08 13:36	16°♄55'27		max. Earth dist.	3925 Oct 31 05:47	8°♄04'08	10.50923 AU
behind sun end	3919 Aug 08 18:42	16°♄57'05		morning rise	3925 Nov 17 10:26	10°♄11'22	
max. Earth dist.	3919 Aug 08 19:14	16°♄57'16	10.09752 AU		3925 Dec 31 21:32	15°♄	
morning rise	3919 Aug 26 19:17	19°♄15'48		retrograde	3926 Feb 25 20:51	17°♄39'07	
retrograde	3919 Dec 09 05:28	27°♄23'25			3926 Apr 25 12:41	15°♄	
opposition	3920 Feb 14 02:38	23°♄55'27	0°37'56	opposition	3926 May 04 12:14	14°♄18'16	2°41'07
min. Earth dist.	3920 Feb 13 23:46	23°♄56'02	8.10688 AU	min. Earth dist.	3926 May 04 11:40	14°♄18'22	8.56016 AU
direct	3920 Apr 21 08:26	20°♄26'29		direct	3926 Jul 13 11:08	10°♄52'18	
evening set	3920 Aug 04 10:18	28°♄35'31			3926 Sep 25 00:59	15°♄	
	3920 Aug 15 11:33	0°♄		evening set	3926 Oct 27 01:36	18°♄35'52	
conjunction	3920 Aug 22 13:02	0°♄54'32	0°45'38	conjunction	3926 Nov 13 07:13	20°♄42'09	2°08'55
minimum elong	3920 Aug 22 13:00	0°♄54'32	0°45'37	minimum elong	3926 Nov 13 07:13	20°♄42'09	2°08'55
max. Earth dist.	3920 Aug 22 16:25	0°♄55'38	10.12196 AU	max. Earth dist.	3926 Nov 13 07:02	20°♄42'06	10.60772 AU
morning rise	3920 Sep 09 14:18	3°♄13'09		morning rise	3926 Nov 30 08:22	22°♄47'07	
retrograde	3920 Dec 22 07:07	11°♄16'05			3927 Feb 26 03:31	0°♄	
opposition	3921 Feb 27 00:33	7°♄49'06	1°14'40	retrograde	3927 Mar 10 11:36	0°♄08'05	
min. Earth dist.	3921 Feb 26 21:43	7°♄49'41	8.14297 AU		3927 Mar 22 19:27	30°♄	
direct	3921 May 05 14:55	4°♄20'02		opposition	3927 May 17 10:59	26°♄48'13	2°34'51
evening set	3921 Aug 19 05:44	12°♄28'44		min. Earth dist.	3927 May 17 11:28	26°♄48'08	8.65632 AU
				direct	3927 Jul 26 17:27	23°♄23'19	
conjunction	3921 Sep 06 06:21	14°♄46'27	1°13'33		3927 Oct 31 11:24	0°♄	
minimum elong	3921 Sep 06 06:18	14°♄46'26	1°13'33	evening set	3927 Nov 08 21:49	0°♄59'35	
max. Earth dist.	3921 Sep 06 09:29	14°♄47'28	10.16881 AU	conjunction	3927 Nov 26 00:10	3°♄03'48	2°01'06
morning rise	3921 Sep 24 04:27	17°♄03'26		minimum elong	3927 Nov 26 00:11	3°♄03'49	2°01'06
retrograde	3922 Jan 05 03:16	25°♄00'27		max. Earth dist.	3927 Nov 25 22:49	3°♄03'23	10.70040 AU
opposition	3922 Mar 12 20:11	21°♄34'39	1°46'41	morning rise	3927 Dec 12 22:20	5°♄06'48	
min. Earth dist.	3922 Mar 12 17:56	21°♄35'07	8.20037 AU	retrograde	3928 Mar 21 19:28	12°♄21'54	
direct	3922 May 19 20:55	18°♄05'45		opposition	3928 May 29 05:33	9°♄02'54	2°21'37
evening set	3922 Sep 02 20:49	26°♄12'17		min. Earth dist.	3928 May 29 07:37	9°♄02'30	8.74423 AU
conjunction	3922 Sep 20 18:10	28°♄28'07	1°36'58	direct	3928 Aug 07 19:01	5°♄39'04	
minimum elong	3922 Sep 20 18:07	28°♄28'06	1°36'58	evening set	3928 Nov 20 09:45	13°♄08'24	
max. Earth dist.	3922 Sep 20 20:30	28°♄28'52	10.23534 AU				

conjunction	3928 Dec 07 09:17	15° \nearrow 10'51	1°47'57	conjunction	3935 Feb 14 18:30	24° \approx 57'46	-0°32'55
minimum elong	3928 Dec 07 09:19	15° \nearrow 10'51	1°47'57	minimum elong	3935 Feb 14 18:29	24° \approx 57'46	0°32'55
max. Earth dist.	3928 Dec 07 06:11	15° \nearrow 09'54	10.78304 AU	max. Earth dist.	3935 Feb 14 15:52	24° \approx 56'59	10.94898 AU
morning rise	3928 Dec 24 05:18	17° \nearrow 12'15		morning rise	3935 Mar 03 11:17	26° \approx 56'25	
retrograde	3929 Apr 02 23:50	24° \nearrow 22'42			3935 Mar 31 08:25	0° \mathcal{H}	
opposition	3929 Jun 10 20:34	21° \nearrow 04'19	2°02'23	retrograde	3935 Jun 13 08:58	4° \mathcal{H} 06'21	
min. Earth dist.	3929 Jun 10 23:15	21° \nearrow 03'48	8.82054 AU	opposition	3935 Aug 23 00:24	0° \mathcal{H} 46'27	-0°55'50
direct	3929 Aug 20 16:01	17° \nearrow 41'32		min. Earth dist.	3935 Aug 23 02:01	0° \mathcal{H} 46'09	8.93352 AU
evening set	3929 Dec 02 14:20	25° \nearrow 04'26			3935 Sep 02 12:16	30° $\mathcal{R}\approx$	
				direct	3935 Nov 01 05:46	27° \approx 27'12	
conjunction	3929 Dec 19 11:45	27° \nearrow 05'27	1°30'18		3935 Dec 27 21:41	0° \mathcal{H}	
minimum elong	3929 Dec 19 11:47	27° \nearrow 05'28	1°30'17	evening set	3936 Feb 09 17:08	4° \mathcal{H} 32'49	
max. Earth dist.	3929 Dec 19 08:06	27° \nearrow 04'21	10.85288 AU				
morning rise	3930 Jan 05 06:12	29° \nearrow 05'36		conjunction	3936 Feb 26 09:20	6° \mathcal{H} 31'40	-0°57'47
	3930 Jan 13 01:24	0° \mathcal{B}		minimum elong	3936 Feb 26 09:19	6° \mathcal{H} 31'40	0°57'48
retrograde	3930 Apr 15 02:15	6° \mathcal{B} 12'36		max. Earth dist.	3936 Feb 26 07:27	6° \mathcal{H} 31'06	10.91333 AU
opposition	3930 Jun 23 08:30	2° \mathcal{B} 54'34	1°38'15	morning rise	3936 Mar 14 02:47	8° \mathcal{H} 30'58	
min. Earth dist.	3930 Jun 23 11:01	2° \mathcal{B} 54'06	8.88280 AU	retrograde	3936 Jun 24 17:03	15° \mathcal{H} 45'34	
	3930 Aug 09 09:57	30° $\mathcal{R}\nearrow$		opposition	3936 Sep 03 10:12	12° \mathcal{H} 24'44	-1°25'13
direct	3930 Sep 02 06:49	29° \nearrow 32'46		min. Earth dist.	3936 Sep 03 11:23	12° \mathcal{H} 24'31	8.88950 AU
	3930 Sep 25 21:52	0° \mathcal{B}		direct	3936 Nov 12 05:55	9° \mathcal{H} 05'31	
evening set	3930 Dec 14 13:12	6° \mathcal{B} 49'59		evening set	3937 Feb 20 11:00	16° \mathcal{H} 12'44	
conjunction	3930 Dec 31 09:00	8° \mathcal{B} 49'54	1°09'02	conjunction	3937 Mar 09 03:28	18° \mathcal{H} 12'19	-1°20'29
minimum elong	3930 Dec 31 09:02	8° \mathcal{B} 49'54	1°09'02	minimum elong	3937 Mar 09 03:26	18° \mathcal{H} 12'18	1°20'29
max. Earth dist.	3930 Dec 31 05:44	8° \mathcal{B} 48'55	10.90764 AU	max. Earth dist.	3937 Mar 09 01:24	18° \mathcal{H} 11'42	10.86093 AU
morning rise	3931 Jan 17 02:15	10° \mathcal{B} 49'06		morning rise	3937 Mar 25 22:10	20° \mathcal{H} 12'35	
retrograde	3931 Apr 27 02:45	17° \mathcal{B} 53'55		retrograde	3937 Jul 07 05:56	27° \mathcal{H} 32'56	
opposition	3931 Jul 05 17:59	14° \mathcal{B} 35'59	1°10'21	opposition	3937 Sep 15 22:23	24° \mathcal{H} 11'05	-1°51'23
min. Earth dist.	3931 Jul 05 20:18	14° \mathcal{B} 35'33	8.92902 AU	min. Earth dist.	3937 Sep 15 23:41	24° \mathcal{H} 10'50	8.82967 AU
direct	3931 Sep 14 17:17	11° \mathcal{B} 15'01		direct	3937 Nov 24 07:55	20° \mathcal{H} 51'40	
evening set	3931 Dec 26 07:38	18° \mathcal{B} 27'30		evening set	3938 Mar 04 08:55	28° \mathcal{H} 01'47	
					3938 Mar 20 18:13	0° \mathcal{Y}	
conjunction	3932 Jan 12 02:05	20° \mathcal{B} 26'36	0°45'08	conjunction	3938 Mar 21 02:18	0° \mathcal{Y} 02'27	-1°40'01
minimum elong	3932 Jan 12 02:07	20° \mathcal{B} 26'36	0°45'08	minimum elong	3938 Mar 21 02:16	0° \mathcal{Y} 02'26	1°40'01
max. Earth dist.	3932 Jan 11 23:03	20° \mathcal{B} 25'41	10.94550 AU	max. Earth dist.	3938 Mar 21 00:22	0° \mathcal{Y} 01'52	10.79372 AU
morning rise	3932 Jan 28 18:37	22° \mathcal{B} 25'11		morning rise	3938 Apr 06 22:41	2° \mathcal{Y} 04'00	
retrograde	3932 May 08 03:34	29° \mathcal{B} 29'11		retrograde	3938 Jul 19 23:02	9° \mathcal{Y} 31'03	
opposition	3932 Jul 17 02:09	26° \mathcal{B} 11'06	0°39'49	opposition	3938 Sep 28 13:50	6° \mathcal{Y} 08'05	-2°13'12
min. Earth dist.	3932 Jul 17 04:57	26° \mathcal{B} 10'35	8.95779 AU	min. Earth dist.	3938 Sep 28 14:49	6° \mathcal{Y} 07'54	8.75622 AU
direct	3932 Sep 25 23:21	22° \mathcal{B} 50'49		direct	3938 Dec 06 12:39	2° \mathcal{Y} 48'21	
evening set	3933 Jan 05 22:54	29° \mathcal{B} 59'38		evening set	3939 Mar 16 12:03	10° \mathcal{Y} 02'30	
	3933 Jan 06 00:10	0° \approx					
conjunction	3933 Jan 22 16:12	1° \approx 58'12	0°19'32	conjunction	3939 Apr 02 07:05	12° \mathcal{Y} 04'35	-1°55'29
minimum elong	3933 Jan 22 16:13	1° \approx 58'12	0°19'33	minimum elong	3939 Apr 02 07:03	12° \mathcal{Y} 04'34	1°55'28
max. Earth dist.	3933 Jan 22 12:31	1° \approx 57'07	10.96533 AU	max. Earth dist.	3939 Apr 02 06:35	12° \mathcal{Y} 04'26	10.71426 AU
morning rise	3933 Feb 08 08:35	3° \approx 56'31		morning rise	3939 Apr 19 05:32	14° \mathcal{Y} 07'44	
retrograde	3933 May 20 02:17	11° \approx 01'06		retrograde	3939 Aug 01 22:25	21° \mathcal{Y} 42'12	
opposition	3933 Jul 29 09:25	7° \approx 42'37	0°07'51	opposition	3939 Oct 11 09:07	18° \mathcal{Y} 18'03	-2°29'30
min. Earth dist.	3933 Jul 29 12:36	7° \approx 42'01	8.96827 AU	min. Earth dist.	3939 Oct 11 08:54	18° \mathcal{Y} 18'05	8.67212 AU
direct	3933 Oct 08 02:15	4° \approx 22'49		direct	3939 Dec 18 22:10	14° \mathcal{Y} 57'49	
desc. node	3933 Oct 28 21:23	4° \approx 43'59		evening set	3940 Mar 27 21:47	22° \mathcal{Y} 17'00	
evening set	3934 Jan 17 12:38	11° \approx 29'15					
				conjunction	3940 Apr 13 19:11	24° \mathcal{Y} 20'52	-2°05'58
conjunction	3934 Feb 03 05:13	13° \approx 27'36	-0°06'53	minimum elong	3940 Apr 13 19:09	24° \mathcal{Y} 20'52	2°05'58
minimum elong	3934 Feb 03 05:12	13° \approx 27'36	0°06'52	max. Earth dist.	3940 Apr 13 20:00	24° \mathcal{Y} 21'07	10.62596 AU
behind sun begin	3934 Feb 02 22:41	13° \approx 25'41		morning rise	3940 Apr 30 20:21	26° \mathcal{Y} 25'56	
behind sun end	3934 Feb 03 11:42	13° \approx 29'31			3940 Jun 01 13:26	0° \mathcal{B}	
max. Earth dist.	3934 Feb 03 01:24	13° \approx 26'30	10.96651 AU	retrograde	3940 Aug 14 06:14	4° \mathcal{B} 08'03	
	3934 Feb 16 05:01	15° \approx		opposition	3940 Oct 23 08:34	0° \mathcal{B} 42'47	-2°39'14
morning rise	3934 Feb 19 21:43	15° \approx 25'56		min. Earth dist.	3940 Oct 23 07:16	0° \mathcal{B} 43'03	8.58106 AU
retrograde	3934 Jun 01 03:47	22° \approx 32'30			3940 Nov 01 15:20	30° $\mathcal{R}\mathcal{Y}$	
opposition	3934 Aug 10 16:25	19° \approx 13'24	-0°24'26	direct	3940 Dec 30 09:49	27° \mathcal{Y} 21'55	
min. Earth dist.	3934 Aug 10 19:09	19° \approx 12'53	8.96010 AU		3941 Feb 24 08:22	0° \mathcal{B}	
direct	3934 Oct 20 05:22	15° \approx 53'56		evening set	3941 Apr 09 14:59	4° \mathcal{B} 46'58	
evening set	3935 Jan 29 02:15	22° \approx 59'19					

conjunction	3941 Apr 26 15:24	6° 8 52'53 -2°10'43	max. Earth dist.	3947 Jul 19 03:27	27° 5 26'56 10.12155 AU
minimum elong	3941 Apr 26 15:24	6° 8 52'53 2°10'43	morning rise	3947 Aug 06 02:59	29° 5 45'07
max. Earth dist.	3941 Apr 26 16:43	6° 8 53'17 10.53286 AU		3947 Aug 08 02:18	0° Q
morning rise	3941 May 13 20:03	9° 8 00'09	retrograde	3947 Nov 19 13:08	7° Q 56'00
	3941 Jul 11 08:33	15° 8	opposition	3948 Jan 25 18:15	4° Q 27'40 -0°17'26
retrograde	3941 Aug 27 18:49	16° 8 49'49	min. Earth dist.	3948 Jan 25 15:53	4° Q 28'10 8.11336 AU
	3941 Oct 15 02:47	15° 8 8	direct	3948 Apr 01 13:55	1° Q 00'02
opposition	3941 Nov 05 12:34	13° 8 23'32 -2°41'31	asc. node	3948 Jul 11 06:18	8° Q 39'20
min. Earth dist.	3941 Nov 05 10:47	13° 8 23'53 8.48723 AU	evening set	3948 Jul 14 18:34	9° Q 05'48
direct	3942 Jan 12 02:59	10° 8 01'50			
	3942 Mar 31 22:34	15° 8	conjunction	3948 Aug 01 21:20	11° Q 25'07 0°01'52
evening set	3942 Apr 22 16:16	17° 8 33'23	minimum elong	3948 Aug 01 21:21	11° Q 25'07 0°01'51
			behind sun begin	3948 Aug 01 13:59	11° Q 22'46
conjunction	3942 May 09 20:22	19° 8 41'36 -2°09'08	behind sun end	3948 Aug 02 04:42	11° Q 27'28
minimum elong	3942 May 09 20:23	19° 8 41'36 2°09'08	max. Earth dist.	3948 Aug 01 23:34	11° Q 25'47 10.11063 AU
max. Earth dist.	3942 May 09 21:47	19° 8 42'02 10.43942 AU	morning rise	3948 Aug 20 00:37	13° Q 44'35
morning rise	3942 May 27 05:04	21° 8 51'14		3948 Aug 30 03:09	15° Q
retrograde	3942 Sep 10 12:24	29° 8 47'56	retrograde	3948 Dec 02 19:30	21° Q 53'08
opposition	3942 Nov 18 21:06	26° 8 20'46 -2°35'44	opposition	3949 Feb 07 17:26	18° Q 25'23 0°21'59
min. Earth dist.	3942 Nov 18 19:20	26° 8 21'07 8.39530 AU	min. Earth dist.	3949 Feb 07 15:47	18° Q 25'44 8.11369 AU
direct	3943 Jan 25 03:14	22° 8 58'09		3949 Apr 08 14:06	15° R Q
	3943 May 01 03:13	0° II	direct	3949 Apr 15 19:19	14° Q 57'05
evening set	3943 May 06 01:59	0° II 36'26		3949 Apr 23 01:12	15° Q
			evening set	3949 Jul 29 15:47	23° Q 05'09
conjunction	3943 May 23 10:29	2° II 47'08 -2°00'55			
minimum elong	3943 May 23 10:32	2° II 47'09 2°00'56	conjunction	3949 Aug 16 18:38	25° Q 24'18 0°33'12
max. Earth dist.	3943 May 23 12:39	2° II 47'49 10.35045 AU	minimum elong	3949 Aug 16 18:37	25° Q 24'17 0°33'12
morning rise	3943 Jun 09 23:35	4° II 59'14	max. Earth dist.	3949 Aug 16 20:06	25° Q 24'46 10.12245 AU
retrograde	3943 Sep 24 11:31	13° II 01'58	morning rise	3949 Sep 03 20:51	27° Q 43'13
opposition	3943 Dec 02 09:50	9° II 34'06 -2°21'39		3949 Sep 22 12:53	0° np
min. Earth dist.	3943 Dec 02 07:46	9° II 34'31 8.31013 AU	retrograde	3949 Dec 16 21:31	5° np 47'47
direct	3944 Feb 07 09:15	6° II 10'28	opposition	3950 Feb 21 15:55	2° np 20'48 0°59'58
evening set	3944 May 18 20:08	13° II 55'28	min. Earth dist.	3950 Feb 21 14:34	2° np 21'05 8.13714 AU
				3950 Mar 25 04:49	30° R Q
conjunction	3944 Jun 05 09:29	16° II 08'38 -1°46'08	direct	3950 Apr 30 02:43	28° Q 52'05
minimum elong	3944 Jun 05 09:32	16° II 08'39 1°46'08		3950 Jun 04 19:05	0° np
max. Earth dist.	3944 Jun 05 12:41	16° II 09'39 10.27056 AU	evening set	3950 Aug 13 11:58	7° np 00'38
morning rise	3944 Jun 23 02:59	18° II 23'07			
retrograde	3944 Oct 07 15:14	26° II 30'28	conjunction	3950 Aug 31 13:25	9° np 18'49 1°02'30
opposition	3944 Dec 15 02:18	23° II 02'06 -1°59'35	minimum elong	3950 Aug 31 13:22	9° np 18'48 1°02'29
min. Earth dist.	3944 Dec 14 23:39	23° II 02'38 8.23607 AU	max. Earth dist.	3950 Aug 31 14:37	9° np 19'12 10.15693 AU
direct	3945 Feb 19 21:12	19° II 37'24	morning rise	3950 Sep 18 13:05	11° np 36'26
evening set	3945 Jun 01 22:31	27° II 28'46	retrograde	3950 Dec 30 18:35	19° np 35'37
			opposition	3951 Mar 07 12:21	16° np 09'33 1°34'09
conjunction	3945 Jun 19 16:32	29° II 44'13 -1°25'16	min. Earth dist.	3951 Mar 07 10:50	16° np 09'52 8.18256 AU
minimum elong	3945 Jun 19 16:35	29° II 44'14 1°25'16	direct	3951 May 14 09:48	12° np 40'42
max. Earth dist.	3945 Jun 19 20:36	29° II 45'31 10.20379 AU	evening set	3951 Aug 28 04:53	20° np 47'52
	3945 Jun 21 17:49	0° 5			
morning rise	3945 Jul 07 13:58	2° 5 00'46	conjunction	3951 Sep 15 03:42	23° np 04'27 1°27'56
retrograde	3945 Oct 21 21:20	10° 5 11'03	minimum elong	3951 Sep 15 03:39	23° np 04'26 1°27'56
opposition	3945 Dec 28 21:38	6° 5 42'25 -1°30'26	max. Earth dist.	3951 Sep 15 04:57	23° np 04'51 10.21207 AU
min. Earth dist.	3945 Dec 28 18:25	6° 5 43'04 8.17686 AU	morning rise	3951 Oct 02 23:38	25° np 20'07
direct	3946 Mar 05 14:46	3° 5 16'39		3951 Nov 13 03:41	0° 5
evening set	3946 Jun 16 07:56	11° 5 13'44	retrograde	3952 Jan 13 10:47	3° 5 12'50
				3952 Mar 17 17:20	30° R np
conjunction	3946 Jul 04 06:03	13° 5 31'04 -0°59'19	opposition	3952 Mar 20 05:41	29° np 47'48 2°02'31
minimum elong	3946 Jul 04 06:05	13° 5 31'04 0°59'19	min. Earth dist.	3952 Mar 20 04:08	29° np 48'07 8.24709 AU
max. Earth dist.	3946 Jul 04 10:03	13° 5 32'21 10.15337 AU	direct	3952 May 27 13:55	26° np 19'05
morning rise	3946 Jul 22 06:41	15° 5 49'14		3952 Aug 03 03:17	0° 5
retrograde	3946 Nov 05 05:03	24° 5 00'41	evening set	3952 Sep 10 15:59	4° 5 23'05
opposition	3947 Jan 11 19:16	20° 5 32'03 -0°55'42			
min. Earth dist.	3947 Jan 11 16:13	20° 5 32'40 8.13520 AU	conjunction	3952 Sep 28 11:14	6° 5 37'34 1°48'08
direct	3947 Mar 19 12:40	17° 5 05'16	minimum elong	3952 Sep 28 11:11	6° 5 37'33 1°48'08
evening set	3947 Jun 30 23:07	25° 5 07'14	max. Earth dist.	3952 Sep 28 12:30	6° 5 37'58 10.28446 AU
			morning rise	3952 Oct 16 02:42	8° 5 50'54
conjunction	3947 Jul 19 00:16	27° 5 25'55 -0°29'42	retrograde	3953 Jan 25 21:57	16° 5 36'25
minimum elong	3947 Jul 19 00:17	27° 5 25'55 0°29'43	opposition	3953 Apr 02 19:28	13° 5 12'29 2°23'39

min. Earth dist.	3953 Apr 02 18:13	13° <u>♂</u> 12'44	8.32680 AU		3959 Nov 21 12:27	0° <u>♂</u>	
direct	3953 Jun 10 14:46	9° <u>♂</u> 44'11		evening set	3959 Dec 09 20:24	2° <u>♂</u> 04'27	
evening set	3953 Sep 24 19:12	17° <u>♂</u> 43'25					
				conjunction	3959 Dec 26 16:48	4° <u>♂</u> 04'42	1°18'33
conjunction	3953 Oct 12 10:22	19° <u>♂</u> 55'31	2°02'10	minimum elong	3959 Dec 26 16:50	4° <u>♂</u> 04'43	1°18'33
minimum elong	3953 Oct 12 10:20	19° <u>♂</u> 55'30	2°02'11	max. Earth dist.	3959 Dec 26 14:28	4° <u>♂</u> 04'00	10.89001 AU
max. Earth dist.	3953 Oct 12 11:23	19° <u>♂</u> 55'51	10.36978 AU	morning rise	3960 Jan 12 10:28	6° <u>♂</u> 04'10	
morning rise	3953 Oct 29 21:14	22° <u>♂</u> 06'20		retrograde	3960 Apr 21 06:54	13° <u>♂</u> 09'06	
retrograde	3954 Feb 08 01:12	29° <u>♂</u> 44'22		opposition	3960 Jun 29 19:46	9° <u>♂</u> 51'03	1°22'44
opposition	3954 Apr 16 04:59	26° <u>♂</u> 21'34	2°36'45	min. Earth dist.	3960 Jun 29 21:58	9° <u>♂</u> 50'38	8.91782 AU
min. Earth dist.	3954 Apr 16 04:39	26° <u>♂</u> 21'37	8.41702 AU	direct	3960 Sep 08 18:53	6° <u>♂</u> 29'38	
direct	3954 Jun 24 12:04	22° <u>♂</u> 53'53		evening set	3960 Dec 20 15:48	13° <u>♂</u> 43'24	
	3954 Oct 02 01:31	0° <u>♂</u>					
evening set	3954 Oct 08 13:37	0° <u>♂</u> 47'09		conjunction	3961 Jan 06 10:38	15° <u>♂</u> 42'39	0°55'43
				minimum elong	3961 Jan 06 10:40	15° <u>♂</u> 42'39	0°55'43
conjunction	3954 Oct 26 00:35	2° <u>♂</u> 56'46	2°09'38	max. Earth dist.	3961 Jan 06 07:46	15° <u>♂</u> 41'48	10.94074 AU
minimum elong	3954 Oct 26 00:34	2° <u>♂</u> 56'46	2°09'38	morning rise	3961 Jan 23 03:32	17° <u>♂</u> 41'19	
max. Earth dist.	3954 Oct 26 00:34	2° <u>♂</u> 56'46	10.46324 AU	retrograde	3961 May 03 06:39	24° <u>♂</u> 44'45	
morning rise	3954 Nov 12 07:11	5° <u>♂</u> 05'05		opposition	3961 Jul 12 03:30	21° <u>♂</u> 26'50	0°53'16
retrograde	3955 Feb 20 21:49	12° <u>♂</u> 35'40		min. Earth dist.	3961 Jul 12 05:21	21° <u>♂</u> 26'30	8.95977 AU
opposition	3955 Apr 29 09:43	9° <u>♂</u> 13'57	2°41'36	direct	3961 Sep 21 02:51	18° <u>♂</u> 06'23	
min. Earth dist.	3955 Apr 29 10:21	9° <u>♂</u> 13'50	8.51281 AU	evening set	3962 Jan 01 07:26	25° <u>♂</u> 15'56	
direct	3955 Jul 08 04:09	5° <u>♂</u> 47'05					
evening set	3955 Oct 21 22:38	13° <u>♂</u> 33'34		conjunction	3962 Jan 18 01:13	27° <u>♂</u> 14'30	0°30'47
	3955 Nov 02 17:25	15° <u>♂</u>		minimum elong	3962 Jan 18 01:14	27° <u>♂</u> 14'30	0°30'47
				max. Earth dist.	3962 Jan 17 23:07	27° <u>♂</u> 13'52	10.97391 AU
conjunction	3955 Nov 08 05:39	15° <u>♂</u> 40'49	2°10'31	morning rise	3962 Feb 03 17:36	29° <u>♂</u> 12'42	
minimum elong	3955 Nov 08 05:39	15° <u>♂</u> 40'49	2°10'31		3962 Feb 10 14:06	0° <u>♂</u>	
max. Earth dist.	3955 Nov 08 04:23	15° <u>♂</u> 40'25	10.55989 AU	retrograde	3962 May 15 06:06	6° <u>♂</u> 16'01	
morning rise	3955 Nov 25 08:27	17° <u>♂</u> 46'46		opposition	3962 Jul 24 10:07	2° <u>♂</u> 58'00	0°21'51
retrograde	3956 Mar 04 12:57	25° <u>♂</u> 10'20		min. Earth dist.	3962 Jul 24 11:24	2° <u>♂</u> 57'46	8.98347 AU
opposition	3956 May 11 09:57	21° <u>♂</u> 49'38	2°38'30		3962 Sep 11 23:52	30° <u>♂</u>	
min. Earth dist.	3956 May 11 10:50	21° <u>♂</u> 49'28	8.60923 AU	direct	3962 Oct 03 05:53	29° <u>♂</u> 38'22	
direct	3956 Jul 20 13:56	18° <u>♂</u> 23'45			3962 Oct 24 06:32	0° <u>♂</u>	
evening set	3956 Nov 02 22:04	26° <u>♂</u> 03'00		evening set	3963 Jan 12 21:03	6° <u>♂</u> 44'53	
conjunction	3956 Nov 20 01:41	28° <u>♂</u> 08'04	2°05'09	conjunction	3963 Jan 29 13:57	8° <u>♂</u> 43'04	0°04'46
minimum elong	3956 Nov 20 01:42	28° <u>♂</u> 08'04	2°05'10	minimum elong	3963 Jan 29 13:58	8° <u>♂</u> 43'04	0°04'46
max. Earth dist.	3956 Nov 20 00:05	28° <u>♂</u> 07'35	10.65500 AU	behind sun begin	3963 Jan 29 07:08	8° <u>♂</u> 41'04	
	3956 Dec 05 09:32	0° <u>♂</u>		behind sun end	3963 Jan 29 20:47	8° <u>♂</u> 45'04	
morning rise	3956 Dec 07 01:14	0° <u>♂</u> 11'55		max. Earth dist.	3963 Jan 29 12:14	8° <u>♂</u> 42'36	10.98817 AU
retrograde	3957 Mar 16 22:13	7° <u>♂</u> 29'14		morning rise	3963 Feb 15 06:07	10° <u>♂</u> 41'06	
opposition	3957 May 24 05:47	4° <u>♂</u> 09'24	2°28'06		3963 Mar 28 16:39	15° <u>♂</u>	
min. Earth dist.	3957 May 24 06:21	4° <u>♂</u> 09'18	8.70174 AU	desc. node	3963 Apr 06 16:39	15° <u>♂</u> 44'09	
direct	3957 Aug 02 18:40	0° <u>♂</u> 44'39		retrograde	3963 May 27 07:11	17° <u>♂</u> 45'43	
evening set	3957 Nov 15 12:48	8° <u>♂</u> 16'40			3963 Jul 29 07:30	15° <u>♂</u>	
				opposition	3963 Aug 05 16:28	14° <u>♂</u> 27'23	-0°10'20
conjunction	3957 Dec 02 13:37	10° <u>♂</u> 19'50	1°54'11	min. Earth dist.	3963 Aug 05 17:54	14° <u>♂</u> 27'07	8.98808 AU
minimum elong	3957 Dec 02 13:39	10° <u>♂</u> 19'50	1°54'11	direct	3963 Oct 15 07:30	11° <u>♂</u> 08'21	
max. Earth dist.	3957 Dec 02 12:24	10° <u>♂</u> 19'28	10.74424 AU		3963 Dec 25 19:09	15° <u>♂</u>	
morning rise	3957 Dec 19 10:31	12° <u>♂</u> 21'52		evening set	3964 Jan 24 10:04	18° <u>♂</u> 13'08	
retrograde	3958 Mar 29 04:54	19° <u>♂</u> 33'53					
opposition	3958 Jun 05 21:30	16° <u>♂</u> 14'49	2°11'18	conjunction	3964 Feb 10 02:15	20° <u>♂</u> 11'14	-0°21'34
min. Earth dist.	3958 Jun 05 22:16	16° <u>♂</u> 14'40	8.78627 AU	minimum elong	3964 Feb 10 02:15	20° <u>♂</u> 11'14	0°21'34
direct	3958 Aug 15 16:16	12° <u>♂</u> 51'13		max. Earth dist.	3964 Feb 09 23:57	20° <u>♂</u> 10'33	10.98316 AU
evening set	3958 Nov 27 19:49	20° <u>♂</u> 16'24		morning rise	3964 Feb 26 18:43	22° <u>♂</u> 09'25	
				retrograde	3964 Jun 07 09:28	29° <u>♂</u> 16'41	
conjunction	3958 Dec 14 18:17	22° <u>♂</u> 17'57	1°38'21	opposition	3964 Aug 16 23:30	25° <u>♂</u> 57'48	-0°42'10
minimum elong	3958 Dec 14 18:19	22° <u>♂</u> 17'58	1°38'21	min. Earth dist.	3964 Aug 17 01:28	25° <u>♂</u> 57'26	8.97354 AU
max. Earth dist.	3958 Dec 14 16:55	22° <u>♂</u> 17'32	10.82367 AU	direct	3964 Oct 26 07:02	22° <u>♂</u> 39'09	
morning rise	3958 Dec 31 13:14	24° <u>♂</u> 18'32		evening set	3965 Feb 03 23:41	29° <u>♂</u> 43'29	
	3959 Feb 27 18:55	0° <u>♂</u>			3965 Feb 06 08:12	0° <u>♂</u>	
retrograde	3959 Apr 10 08:16	1° <u>♂</u> 26'21					
	3959 May 23 01:01	30° <u>♂</u>		conjunction	3965 Feb 20 15:36	1° <u>♂</u> 41'48	-0°47'00
opposition	3959 Jun 18 09:58	28° <u>♂</u> 07'54	1°49'08	minimum elong	3965 Feb 20 15:34	1° <u>♂</u> 41'48	0°47'01
min. Earth dist.	3959 Jun 18 11:35	28° <u>♂</u> 07'36	8.85926 AU	max. Earth dist.	3965 Feb 20 13:02	1° <u>♂</u> 41'03	10.95895 AU
direct	3959 Aug 28 06:46	24° <u>♂</u> 45'27		morning rise	3965 Mar 09 08:42	3° <u>♂</u> 40'28	

retrograde	3965 Jun 19 13:49	10° ✕ 51'43	min. Earth dist.	3971 Nov 13 03:30	20° 8 41'25	8.44343 AU
opposition	3965 Aug 29 07:44	7° ✕ 32'02 -1°12'27	direct	3972 Jan 19 16:02	17° 8 19'02	
min. Earth dist.	3965 Aug 29 09:31	7° ✕ 31'42 8.93999 AU	evening set	3972 Apr 29 08:04	24° 8 53'39	
direct	3965 Nov 07 07:43	4° ✕ 13'31				
evening set	3966 Feb 15 15:29	11° ✕ 18'46	conjunction	3972 May 16 14:35	27° 8 03'06 -2°05'29	
			minimum elong	3972 May 16 14:37	27° 8 03'07 2°05'29	
conjunction	3966 Mar 04 07:39	13° ✕ 17'39 -1°10'42	max. Earth dist.	3972 May 16 15:46	27° 8 03'28 10.39370 AU	
minimum elong	3966 Mar 04 07:37	13° ✕ 17'38 1°10'42	morning rise	3972 Jun 03 01:26	29° 8 13'58	
max. Earth dist.	3966 Mar 04 05:48	13° ✕ 17'05 10.91583 AU		3972 Jun 09 08:22	0° Π	
morning rise	3966 Mar 21 01:35	15° ✕ 17'05	retrograde	3972 Sep 17 11:26	7° Π 13'39	
retrograde	3966 Jul 02 00:45	22° ✕ 33'30	opposition	3972 Nov 25 14:31	3° Π 45'51 -2°29'06	
opposition	3966 Sep 10 17:52	19° ✕ 12'50 -1°40'05	min. Earth dist.	3972 Nov 25 13:07	3° Π 46'08 8.34805 AU	
min. Earth dist.	3966 Sep 10 19:04	19° ✕ 12'37 8.88797 AU	direct	3973 Jan 31 17:18	0° Π 22'26	
direct	3966 Nov 19 09:33	15° ✕ 54'14	evening set	3973 May 12 21:58	8° Π 04'04	
evening set	3967 Feb 27 10:48	23° ✕ 01'44				
			conjunction	3973 May 30 09:03	10° Π 16'05 -1°53'42	
conjunction	3967 Mar 16 03:39	25° ✕ 01'31 -1°31'41	minimum elong	3973 May 30 09:06	10° Π 16'06 1°53'43	
minimum elong	3967 Mar 16 03:37	25° ✕ 01'31 1°31'41	max. Earth dist.	3973 May 30 10:23	10° Π 16'31 10.30251 AU	
max. Earth dist.	3967 Mar 16 02:14	25° ✕ 01'06 10.85473 AU	morning rise	3973 Jun 17 00:26	12° Π 29'29	
morning rise	3967 Apr 01 22:51	27° ✕ 02'05	retrograde	3973 Oct 01 13:34	20° Π 34'45	
	3967 Apr 28 13:23	0° Υ	opposition	3973 Dec 09 05:02	17° Π 06'12 -2°10'42	
retrograde	3967 Jul 14 15:53	4° Υ 24'48	min. Earth dist.	3973 Dec 09 03:30	17° Π 06'30 8.26185 AU	
opposition	3967 Sep 23 07:09	1° Υ 03'01 -2°03'53	direct	3974 Feb 14 01:37	13° Π 41'32	
min. Earth dist.	3967 Sep 23 07:57	1° Υ 02'52 8.81881 AU	evening set	3974 May 26 20:08	21° Π 30'03	
	3967 Oct 07 11:32	30° ℞ ℥				
direct	3967 Dec 01 11:14	27° ✕ 44'07	conjunction	3974 Jun 13 11:54	23° Π 44'32 -1°35'34	
	3968 Jan 23 00:24	0° Υ	minimum elong	3974 Jun 13 11:58	23° Π 44'33 1°35'35	
evening set	3968 Mar 10 10:51	4° Υ 55'10	max. Earth dist.	3974 Jun 13 13:22	23° Π 45'00 10.22301 AU	
			morning rise	3974 Jul 01 07:40	26° Π 00'16	
conjunction	3968 Mar 27 04:53	6° Υ 56'14 -1°49'01		3974 Aug 04 16:06	0° ☾	
minimum elong	3968 Mar 27 04:50	6° Υ 56'13 1°49'01	retrograde	3974 Oct 15 17:43	4° ☾ 09'39	
max. Earth dist.	3968 Mar 27 02:54	6° Υ 55'38 10.77776 AU	opposition	3974 Dec 22 23:09	0° ☾ 40'36 -1°44'41	
morning rise	3968 Apr 13 02:05	8° Υ 58'17	min. Earth dist.	3974 Dec 22 21:39	0° ☾ 40'54 8.18960 AU	
retrograde	3968 Jul 26 12:15	16° Υ 28'12		3974 Dec 31 08:16	30° ℞ Π	
opposition	3968 Oct 05 00:05	13° Υ 05'12 -2°22'44	direct	3975 Feb 27 17:11	27° Π 14'45	
min. Earth dist.	3968 Oct 05 01:13	13° Υ 04'59 8.73544 AU		3975 Apr 24 22:29	0° ☾	
direct	3968 Dec 12 17:11	9° Υ 45'45	evening set	3975 Jun 10 02:11	5° ☾ 09'39	
evening set	3969 Mar 22 17:01	17° Υ 01'32				
			conjunction	3975 Jun 27 22:26	7° ☾ 26'19 -1°11'49	
conjunction	3969 Apr 08 12:58	19° Υ 04'15 -2°01'49	minimum elong	3975 Jun 27 22:29	7° ☾ 26'20 1°11'50	
minimum elong	3969 Apr 08 12:57	19° Υ 04'14 2°01'48	max. Earth dist.	3975 Jun 28 00:19	7° ☾ 26'56 10.15965 AU	
max. Earth dist.	3969 Apr 08 10:51	19° Υ 03'35 10.68863 AU	morning rise	3975 Jul 15 21:57	9° ☾ 44'01	
morning rise	3969 Apr 25 12:48	21° Υ 08'08	retrograde	3975 Oct 30 00:20	17° ☾ 55'42	
retrograde	3969 Aug 08 14:55	28° Υ 45'42	opposition	3976 Jan 05 19:55	14° ☾ 26'28 -1°12'18	
opposition	3969 Oct 17 20:57	25° Υ 21'25 -2°35'32	min. Earth dist.	3976 Jan 05 18:13	14° ☾ 26'49 8.13548 AU	
min. Earth dist.	3969 Oct 17 22:09	25° Υ 21'11 8.64201 AU	direct	3976 Mar 12 13:32	10° ☾ 59'30	
direct	3969 Dec 25 03:16	22° Υ 01'11	evening set	3976 Jun 23 14:59	18° ☾ 59'58	
evening set	3970 Apr 04 06:06	29° Υ 22'39				
	3970 Apr 09 09:03	0° 8	conjunction	3976 Jul 11 14:57	21° ☾ 18'20 -0°43'40	
			minimum elong	3976 Jul 11 14:59	21° ☾ 18'21 0°43'41	
conjunction	3970 Apr 21 04:51	1° 8 27'21 -2°09'14	max. Earth dist.	3976 Jul 11 17:34	21° ☾ 19'11 10.11609 AU	
minimum elong	3970 Apr 21 04:50	1° 8 27'20 2°09'14	morning rise	3976 Jul 29 17:07	23° ☾ 37'24	
max. Earth dist.	3970 Apr 21 03:40	1° 8 26'59 10.59172 AU		3976 Sep 27 15:58	0° ♁	
morning rise	3970 May 08 07:48	3° 8 33'20	retrograde	3976 Nov 12 08:20	1° ♁ 49'29	
retrograde	3970 Aug 21 22:51	11° 8 18'43		3976 Dec 28 16:28	30° ℞ ☾	
opposition	3970 Oct 30 22:20	7° 8 53'10 -2°41'19	opposition	3977 Jan 18 18:35	28° ☾ 20'22 -0°35'20	
min. Earth dist.	3970 Oct 30 22:50	7° 8 53'04 8.54307 AU	min. Earth dist.	3977 Jan 18 16:15	28° ☾ 20'51 8.10268 AU	
direct	3971 Jan 06 19:02	4° 8 31'59	direct	3977 Mar 26 13:45	24° ☾ 52'29	
evening set	3971 Apr 17 02:48	11° 8 59'48		3977 Jun 13 21:33	0° ♁	
			evening set	3977 Jul 08 08:49	2° ♁ 57'20	
conjunction	3971 May 04 05:08	14° 8 06'46 -2°10'37				
minimum elong	3971 May 04 05:09	14° 8 06'46 2°10'37	conjunction	3977 Jul 26 11:12	5° ♁ 16'42 -0°12'48	
max. Earth dist.	3971 May 04 05:33	14° 8 06'54 10.49176 AU	minimum elong	3977 Jul 26 11:13	5° ♁ 16'42 0°12'48	
	3971 May 11 08:02	15° 8	behind sun begin	3977 Jul 26 06:47	5° ♁ 15'17	
morning rise	3971 May 21 11:45	16° 8 15'07	behind sun end	3977 Jul 26 15:39	5° ♁ 18'07	
retrograde	3971 Sep 04 13:50	24° 8 08'03	max. Earth dist.	3977 Jul 26 14:27	5° ♁ 17'44 10.09492 AU	
opposition	3971 Nov 13 04:16	20° 8 41'16 -2°39'19	morning rise	3977 Aug 13 14:30	7° ♁ 36'23	

	3977 Oct 28 07:14	15°♈		retrograde	3984 Feb 15 13:49	7°♐07'46	
retrograde	3977 Nov 26 16:10	15°♈46'58		opposition	3984 Apr 22 21:40	3°♐45'51	2°40'14
asc. node	3977 Dec 26 04:41	14°♈59'49		min. Earth dist.	3984 Apr 22 20:17	3°♐46'07	8.46968 AU
	3977 Dec 26 03:16	15°♏♈		direct	3984 Jul 01 10:53	0°♐19'00	
opposition	3978 Feb 01 18:01	12°♈18'18	0°03'55	evening set	3984 Oct 15 09:22	8°♐09'03	
min. Earth dist.	3978 Feb 01 15:09	12°♈18'53	8.09330 AU				
direct	3978 Apr 09 17:36	8°♈49'42		conjunction	3984 Nov 01 18:18	10°♐17'25	2°10'45
	3978 Jul 07 07:48	15°♈		minimum elong	3984 Nov 01 18:18	10°♐17'25	2°10'45
evening set	3978 Jul 23 05:35	16°♈57'31		max. Earth dist.	3984 Nov 01 19:21	10°♐17'45	10.51850 AU
				morning rise	3984 Nov 18 22:42	12°♐24'28	
conjunction	3978 Aug 10 08:50	19°♈17'05	0°18'58		3984 Dec 11 05:33	15°♐	
minimum elong	3978 Aug 10 08:49	19°♈17'04	0°18'57	retrograde	3985 Feb 27 09:39	19°♐51'32	
max. Earth dist.	3978 Aug 10 12:24	19°♈18'13	10.09765 AU	opposition	3985 May 06 00:40	16°♐30'46	2°40'36
morning rise	3978 Aug 28 11:43	21°♈36'33		min. Earth dist.	3985 May 06 00:06	16°♐30'53	8.56979 AU
retrograde	3978 Dec 10 20:43	29°♈43'51			3985 May 26 03:59	15°♏♐	
opposition	3979 Feb 15 17:07	26°♈15'55	0°42'55	direct	3985 Jul 14 22:49	13°♐04'55	
min. Earth dist.	3979 Feb 15 14:09	26°♈16'32	8.10814 AU		3985 Sep 01 18:51	15°♐	
direct	3979 Apr 23 23:44	22°♈46'54		evening set	3985 Oct 28 13:41	20°♐47'41	
	3979 Jul 30 15:13	0°♏♐					
evening set	3979 Aug 07 02:51	0°♏56'01		conjunction	3985 Nov 14 18:56	22°♐53'45	2°08'06
				minimum elong	3985 Nov 14 18:57	22°♐53'45	2°08'07
conjunction	3979 Aug 25 05:21	3°♏14'57	0°49'27	max. Earth dist.	3985 Nov 14 19:04	22°♐53'47	10.61785 AU
minimum elong	3979 Aug 25 05:19	3°♏14'56	0°49'27	morning rise	3985 Dec 01 19:47	24°♐58'32	
max. Earth dist.	3979 Aug 25 08:41	3°♏16'01	10.12425 AU		3986 Jan 18 11:48	0°♏♐	
morning rise	3979 Sep 12 06:19	5°♏33'25		retrograde	3986 Mar 11 21:45	2°♏18'47	
retrograde	3979 Dec 24 21:22	13°♏35'54			3986 May 05 13:07	30°♏♐	
opposition	3980 Feb 29 14:54	10°♏08'58	1°19'08	opposition	3986 May 18 23:01	28°♐59'01	2°33'21
min. Earth dist.	3980 Feb 29 12:31	10°♏09'28	8.14633 AU	min. Earth dist.	3986 May 18 23:44	28°♐58'53	8.66696 AU
direct	3980 May 07 06:14	6°♏39'49		direct	3986 Jul 28 06:12	25°♐34'13	
evening set	3980 Aug 20 22:02	14°♏48'25			3986 Oct 13 06:10	0°♏♐	
				evening set	3986 Nov 10 09:00	3°♏09'36	
conjunction	3980 Sep 07 22:15	17°♏05'59	1°16'52				
minimum elong	3980 Sep 07 22:13	17°♏05'58	1°16'52	conjunction	3986 Nov 27 10:59	5°♏13'35	1°59'32
max. Earth dist.	3980 Sep 08 00:44	17°♏06'47	10.17307 AU	minimum elong	3986 Nov 27 11:01	5°♏13'36	1°59'32
morning rise	3980 Sep 25 20:01	19°♏22'47		max. Earth dist.	3986 Nov 27 09:22	5°♏13'06	10.71161 AU
retrograde	3981 Jan 06 17:04	27°♏19'11		morning rise	3986 Dec 14 09:03	7°♏16'24	
opposition	3981 Mar 14 10:13	23°♏53'27	1°50'23	retrograde	3987 Mar 24 05:03	14°♏30'46	
min. Earth dist.	3981 Mar 14 08:30	23°♏53'48	8.20559 AU	opposition	3987 May 31 16:54	11°♏11'50	2°19'15
direct	3981 May 21 11:37	20°♏24'30		min. Earth dist.	3987 May 31 18:47	11°♏11'28	8.75583 AU
evening set	3981 Sep 04 12:31	28°♏30'45		direct	3987 Aug 10 08:06	7°♏48'06	
	3981 Sep 16 07:41	0°♏♐		evening set	3987 Nov 22 19:58	15°♏16'28	
conjunction	3981 Sep 22 09:23	0°♏46'23	1°39'35	conjunction	3987 Dec 09 19:18	17°♏18'42	1°45'44
minimum elong	3981 Sep 22 09:20	0°♏46'22	1°39'36	minimum elong	3987 Dec 09 19:20	17°♏18'43	1°45'44
max. Earth dist.	3981 Sep 22 11:01	0°♏46'54	10.24131 AU	max. Earth dist.	3987 Dec 09 16:20	17°♏17'48	10.79488 AU
morning rise	3981 Oct 10 03:06	3°♏00'59		morning rise	3987 Dec 26 15:13	19°♏19'54	
retrograde	3982 Jan 20 06:49	10°♏50'27		retrograde	3988 Apr 04 09:31	26°♏29'37	
opposition	3982 Mar 28 02:13	7°♏26'00	2°14'56	opposition	3988 Jun 12 07:17	23°♏11'18	1°59'19
min. Earth dist.	3982 Mar 28 00:48	7°♏26'18	8.28240 AU	min. Earth dist.	3988 Jun 12 09:16	23°♏10'56	8.83224 AU
direct	3982 Jun 04 15:25	3°♏57'31		direct	3988 Aug 22 03:26	19°♏48'41	
evening set	3982 Sep 18 20:02	11°♏59'42		evening set	3988 Dec 03 23:40	27°♏10'36	
conjunction	3982 Oct 06 13:02	14°♏13'01	1°56'30	conjunction	3988 Dec 20 20:59	29°♏11'26	1°27'34
minimum elong	3982 Oct 06 12:59	14°♏13'01	1°56'31	minimum elong	3988 Dec 20 21:02	29°♏11'27	1°27'34
max. Earth dist.	3982 Oct 06 14:09	14°♏13'23	10.32494 AU	max. Earth dist.	3988 Dec 20 18:09	29°♏10'35	10.86436 AU
morning rise	3982 Oct 24 02:16	16°♏25'10			3988 Dec 27 14:47	0°♏♐	
retrograde	3983 Feb 02 12:49	24°♏07'11		morning rise	3989 Jan 06 15:14	1°♏11'24	
opposition	3983 Apr 10 14:12	20°♏44'02	2°31'42	retrograde	3989 Apr 16 11:28	8°♏17'48	
min. Earth dist.	3983 Apr 10 12:44	20°♏44'19	8.37213 AU	opposition	3989 Jun 24 18:43	4°♏59'50	1°34'38
direct	3983 Jun 18 16:13	17°♏16'16		min. Earth dist.	3989 Jun 24 20:45	4°♏59'27	8.89374 AU
evening set	3983 Oct 02 19:21	25°♏12'56		direct	3989 Sep 03 17:36	1°♏38'12	
				evening set	3989 Dec 15 21:50	8°♏54'33	
conjunction	3983 Oct 20 08:16	27°♏23'46	2°06'57				
minimum elong	3983 Oct 20 08:14	27°♏23'46	2°06'57	conjunction	3990 Jan 01 17:32	10°♏54'18	1°05'55
max. Earth dist.	3983 Oct 20 09:16	27°♏24'05	10.41906 AU	minimum elong	3990 Jan 01 17:34	10°♏54'18	1°05'55
morning rise	3983 Nov 06 16:55	29°♏33'19		max. Earth dist.	3990 Jan 01 14:40	10°♏53'27	10.91800 AU
	3983 Nov 10 08:25	0°♐		morning rise	3990 Jan 18 10:39	12°♏53'21	

retrograde	3990 Apr 28 12:26	19° S 57'41		conjunction	3996 Mar 10 11:01	20° K 14'44	-1°23'10
opposition	3990 Jul 07 03:44	16° S 39'52	1°06'20	minimum elong	3996 Mar 10 10:58	20° K 14'43	1°23'10
min. Earth dist.	3990 Jul 07 06:27	16° S 39'21	8.93861 AU	max. Earth dist.	3996 Mar 10 08:15	20° K 13'54	10.85752 AU
direct	3990 Sep 16 02:24	13° S 19'03		morning rise	3996 Mar 27 05:51	22° K 15'04	
evening set	3990 Dec 27 15:45	20° S 30'49		retrograde	3996 Jul 08 13:46	29° K 35'53	
				opposition	3996 Sep 17 07:22	26° K 13'57	-1°54'24
conjunction	3991 Jan 13 10:01	22° S 29'47	0°41'45	min. Earth dist.	3996 Sep 17 09:08	26° K 13'37	8.82506 AU
minimum elong	3991 Jan 13 10:02	22° S 29'47	0°41'46	direct	3996 Nov 25 15:54	22° K 54'31	
max. Earth dist.	3991 Jan 13 06:15	22° S 28'39	10.95425 AU	evening set	3997 Mar 05 16:42	0° Y 04'54	
morning rise	3991 Jan 30 02:36	24° S 28'16			3997 Mar 05 00:10	0° Y	
	3991 Mar 27 23:50	0° \approx					
retrograde	3991 May 10 10:55	1° \approx 31'56		conjunction	3997 Mar 22 10:16	2° Y 05'39	-1°42'12
	3991 Jun 24 08:05	30° R S		minimum elong	3997 Mar 22 10:13	2° Y 05'38	1°42'12
opposition	3991 Jul 19 11:27	28° S 13'57	0°35'35	max. Earth dist.	3997 Mar 22 08:38	2° Y 05'09	10.78787 AU
min. Earth dist.	3991 Jul 19 14:55	28° S 13'18	8.96556 AU	morning rise	3997 Apr 08 06:43	4° Y 07'18	
direct	3991 Sep 28 07:49	24° S 53'48		retrograde	3997 Jul 21 08:07	11° Y 34'58	
	3991 Dec 21 03:52	0° \approx		opposition	3997 Sep 29 22:58	8° Y 11'52	-2°15'32
evening set	3992 Jan 08 06:36	2° \approx 02'06		min. Earth dist.	3997 Sep 29 23:42	8° Y 11'43	8.74924 AU
				direct	3997 Dec 07 22:14	4° Y 52'04	
conjunction	3992 Jan 24 23:48	4° \approx 00'33	0°16'03	evening set	3998 Mar 17 20:26	12° Y 06'37	
minimum elong	3992 Jan 24 23:48	4° \approx 00'33	0°16'04				
behind sun begin	3992 Jan 24 22:42	4° \approx 00'14		conjunction	3998 Apr 03 15:40	14° Y 08'51	-1°57'03
behind sun end	3992 Jan 25 00:55	4° \approx 00'53		minimum elong	3998 Apr 03 15:38	14° Y 08'51	1°57'03
max. Earth dist.	3992 Jan 24 19:37	3° \approx 59'19	10.97204 AU	max. Earth dist.	3998 Apr 03 15:20	14° Y 08'45	10.70609 AU
morning rise	3992 Feb 10 16:13	5° \approx 58'47		morning rise	3998 Apr 20 14:14	16° Y 12'09	
retrograde	3992 May 21 10:42	13° \approx 03'14		retrograde	3998 Aug 03 10:02	23° Y 47'17	
opposition	3992 Jul 30 18:24	9° \approx 44'49	0°03'33	opposition	3998 Oct 12 18:27	20° Y 23'00	-2°31'02
min. Earth dist.	3992 Jul 30 21:31	9° \approx 44'14	8.97382 AU	min. Earth dist.	3998 Oct 12 18:04	20° Y 23'05	8.66293 AU
desc. node	3992 Sep 10 07:13	7° \approx 05'28		direct	3998 Dec 20 06:01	17° Y 02'41	
direct	3992 Oct 09 12:26	6° \approx 25'09		evening set	3999 Mar 30 06:49	24° Y 22'26	
evening set	3993 Jan 18 20:00	13° \approx 31'12					
	3993 Jan 31 09:28	15° \approx		conjunction	3999 Apr 16 04:22	26° Y 26'27	-2°06'50
				minimum elong	3999 Apr 16 04:21	26° Y 26'27	2°06'50
conjunction	3993 Feb 04 12:35	15° \approx 29'30	-0°10'21	max. Earth dist.	3999 Apr 16 04:28	26° Y 26'29	10.61579 AU
minimum elong	3993 Feb 04 12:35	15° \approx 29'30	0°10'20	morning rise	3999 May 03 05:49	28° Y 31'44	
behind sun begin	3993 Feb 04 07:01	15° \approx 27'51			3999 May 15 16:39	0° S	
behind sun end	3993 Feb 04 18:09	15° \approx 31'08		retrograde	3999 Aug 16 16:50	6° S 14'36	
max. Earth dist.	3993 Feb 04 09:16	15° \approx 28'31	10.97085 AU	opposition	3999 Oct 25 18:27	2° S 49'11	-2°39'52
morning rise	3993 Feb 21 05:02	17° \approx 27'46		min. Earth dist.	3999 Oct 25 17:36	2° S 49'21	8.57003 AU
retrograde	3993 Jun 02 12:53	24° \approx 34'22			3999 Dec 08 01:03	30° R Y	
opposition	3993 Aug 12 01:14	21° \approx 15'17	-0°28'37	direct	4000 Jan 01 17:58	29° Y 28'09	
min. Earth dist.	3993 Aug 12 03:30	21° \approx 14'52	8.96318 AU		4000 Jan 26 05:39	0° S	
direct	3993 Oct 21 13:12	17° \approx 55'57		evening set	4000 Apr 11 00:40	6° S 53'55	
evening set	3994 Jan 30 09:30	25° \approx 01'05					
				conjunction	4000 Apr 28 01:18	9° S 00'04	-2°10'49
conjunction	3994 Feb 16 01:46	26° \approx 59'31	-0°36'15	minimum elong	4000 Apr 28 01:18	9° S 00'04	2°10'48
minimum elong	3994 Feb 16 01:44	26° \approx 59'30	0°36'16	max. Earth dist.	4000 Apr 28 01:34	9° S 00'09	10.52112 AU
max. Earth dist.	3994 Feb 15 23:16	26° \approx 58'46	10.95074 AU	morning rise	4000 May 15 06:24	11° S 07'35	
morning rise	3994 Mar 04 18:31	28° \approx 58'09			4000 Jun 18 13:56	15° S	
	3994 Mar 13 17:50	0° K		retrograde	4000 Aug 29 05:13	18° S 58'03	
retrograde	3994 Jun 14 17:25	6° K 08'16		opposition	4000 Nov 06 23:01	15° S 31'37	-2°41'10
opposition	3994 Aug 24 09:09	2° K 48'22	-0°59'47	min. Earth dist.	4000 Nov 06 22:05	15° S 31'48	8.47484 AU
min. Earth dist.	3994 Aug 24 11:00	2° K 48'01	8.93399 AU		4000 Nov 13 16:52	15° R S	
	3994 Oct 08 08:15	30° R \approx		direct	4001 Jan 13 13:19	12° S 09'43	
direct	3994 Nov 02 13:20	29° \approx 29'11			4001 Mar 12 09:10	15° S	
	3994 Nov 27 10:07	0° K		evening set	4001 Apr 24 02:48	19° S 42'05	
evening set	3995 Feb 11 00:33	6° K 34'45					
				conjunction	4001 May 11 07:21	21° S 50'36	-2°08'24
conjunction	3995 Feb 27 16:39	8° K 33'37	-1°00'52	minimum elong	4001 May 11 07:22	21° S 50'36	2°08'24
minimum elong	3995 Feb 27 16:37	8° K 33'36	1°00'52	max. Earth dist.	4001 May 11 08:21	21° S 50'55	10.42661 AU
max. Earth dist.	3995 Feb 27 13:51	8° K 32'47	10.91246 AU	morning rise	4001 May 28 16:31	24° S 00'32	
morning rise	3995 Mar 16 10:13	10° K 32'56			4001 Jul 25 02:47	0° II	
retrograde	3995 Jun 27 02:27	17° K 47'50		retrograde	4001 Sep 12 00:02	1° II 58'02	
opposition	3995 Sep 05 18:59	14° K 26'59	-1°28'46		4001 Oct 31 21:19	30° R S	
min. Earth dist.	3995 Sep 05 21:00	14° K 26'36	8.88737 AU	opposition	4001 Nov 20 07:59	28° S 30'43	-2°34'21
direct	3995 Nov 14 13:57	11° K 07'46		min. Earth dist.	4001 Nov 20 06:41	28° S 30'58	8.38210 AU
evening set	3996 Feb 22 18:33	18° K 15'06		direct	4002 Jan 26 13:46	25° S 07'52	

	4002 Apr 14 00:24	0°♊	evening set	4008 Jul 31 07:58	25°♏24'27	
evening set	4002 May 07 13:27	2°♊47'05				
conjunction	4002 May 24 22:33	4°♊58'06 -1°59'21	conjunction	4008 Aug 18 10:48	27°♏43'35 0°37'08	
minimum elong	4002 May 24 22:36	4°♊58'07 1°59'22	minimum elong	4008 Aug 18 10:46	27°♏43'34 0°37'07	
max. Earth dist.	4002 May 25 01:02	4°♊58'53 10.33710 AU	max. Earth dist.	4008 Aug 18 12:30	27°♏44'08 10.12265 AU	
morning rise	4002 Jun 11 12:03	7°♊10'32	morning rise	4008 Sep 05 12:50	0°♐02'26	
retrograde	4002 Sep 26 00:25	15°♊14'03		4008 Sep 05 05:06	0°♐	
opposition	4002 Dec 03 21:22	11°♊46'02 -2°19'15	retrograde	4008 Dec 18 11:06	8°♐06'47	
min. Earth dist.	4002 Dec 03 19:02	11°♊46'29 8.29675 AU	opposition	4009 Feb 23 06:04	4°♐39'54 1°04'38	
direct	4003 Feb 08 20:18	8°♊22'12	min. Earth dist.	4009 Feb 23 04:15	4°♐40'16 8.13860 AU	
evening set	4003 May 21 08:37	16°♊08'10	direct	4009 May 01 17:56	1°♐11'12	
			evening set	4009 Aug 15 04:13	9°♐19'53	
conjunction	4003 Jun 07 22:32	18°♊21'41 -1°43'46	conjunction	4009 Sep 02 05:30	11°♐38'00 1°06'01	
minimum elong	4003 Jun 07 22:35	18°♊21'42 1°43'46	minimum elong	4009 Sep 02 05:27	11°♐37'59 1°06'01	
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morning rise	4003 Jun 25 16:23	20°♊36'28	morning rise	4009 Sep 20 04:44	13°♐55'27	
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min. Earth dist.	4003 Dec 17 11:21	25°♊16'44 8.22340 AU	min. Earth dist.	4010 Mar 09 00:23	18°♐28'49 8.18626 AU	
direct	4004 Feb 22 09:16	21°♊51'13	direct	4010 May 15 23:53	14°♐59'37	
evening set	4004 Jun 03 12:08	29°♊43'35	evening set	4010 Aug 29 20:51	23°♐06'45	
	4004 Jun 05 16:20	0°♑				
conjunction	4004 Jun 21 06:39	1°♑59'21 -1°22'11	conjunction	4010 Sep 16 19:22	25°♐23'11 1°30'51	
minimum elong	4004 Jun 21 06:42	1°♑59'22 1°22'12	minimum elong	4010 Sep 16 19:19	25°♐23'10 1°30'51	
max. Earth dist.	4004 Jun 21 10:55	2°♑00'43 10.19195 AU	max. Earth dist.	4010 Sep 16 21:28	25°♐23'51 10.21679 AU	
morning rise	4004 Jul 09 04:29	4°♑16'12	morning rise	4010 Oct 04 14:45	27°♐38'40	
retrograde	4004 Oct 23 11:47	12°♑27'07		4010 Oct 24 03:04	0°♑	
opposition	4004 Dec 30 10:36	8°♑58'25 -1°26'15	retrograde	4011 Jan 15 01:58	5°♑30'59	
min. Earth dist.	4004 Dec 30 07:09	8°♑59'07 8.16603 AU	opposition	4011 Mar 22 19:48	2°♑06'05 2°05'40	
direct	4005 Mar 07 02:50	5°♑32'29	min. Earth dist.	4011 Mar 22 18:06	2°♑06'26 8.25284 AU	
evening set	4005 Jun 17 22:43	13°♑30'30	direct	4011 Apr 19 19:11	30°♑	
				4011 May 30 03:56	28°♐37'29	
conjunction	4005 Jul 05 21:09	15°♑48'06 -0°55'40		4011 Jul 09 05:55	0°♑	
minimum elong	4005 Jul 05 21:12	15°♑48'07 0°55'41	evening set	4011 Sep 13 07:33	6°♑41'18	
max. Earth dist.	4005 Jul 06 00:57	15°♑49'19 10.14399 AU	conjunction	4011 Oct 01 02:23	8°♑55'35 1°50'17	
morning rise	4005 Jul 23 22:09	18°♑06'32	minimum elong	4011 Oct 01 02:20	8°♑55'34 1°50'17	
retrograde	4005 Nov 06 20:25	26°♑18'21	max. Earth dist.	4011 Oct 01 03:55	8°♑56'04 10.29109 AU	
opposition	4006 Jan 13 08:53	22°♑49'41 -0°50'56	morning rise	4011 Oct 18 17:22	11°♑08'43	
min. Earth dist.	4006 Jan 13 06:01	22°♑50'17 8.12743 AU	retrograde	4012 Jan 28 11:21	18°♑53'44	
direct	4006 Mar 21 01:25	19°♑22'45	opposition	4012 Apr 04 09:25	15°♑29'59 2°25'46	
evening set	4006 Jul 02 14:40	27°♑25'27	min. Earth dist.	4012 Apr 04 08:34	15°♑30'09 8.33432 AU	
			direct	4012 Jun 12 05:46	12°♑01'48	
conjunction	4006 Jul 20 15:58	29°♑44'17 -0°25'43	evening set	4012 Sep 26 10:17	20°♑00'42	
minimum elong	4006 Jul 20 15:59	29°♑44'18 0°25'44				
max. Earth dist.	4006 Jul 20 18:48	29°♑45'12 10.11559 AU	conjunction	4012 Oct 14 00:55	22°♑12'34 2°03'28	
	4006 Jul 22 16:40	0°♒	minimum elong	4012 Oct 14 00:53	22°♑12'33 2°03'29	
morning rise	4006 Aug 07 18:54	2°♒03'38	max. Earth dist.	4012 Oct 14 01:30	22°♑12'45 10.37800 AU	
retrograde	4006 Nov 21 04:26	10°♒14'36	morning rise	4012 Oct 31 11:23	24°♑23'10	
opposition	4007 Jan 27 08:16	6°♒46'17 -0°12'22		4012 Dec 23 13:41	0°♓	
min. Earth dist.	4007 Jan 27 06:11	6°♒46'43 8.10914 AU	retrograde	4013 Feb 09 14:05	2°♓00'38	
direct	4007 Apr 04 04:37	3°♒18'31		4013 Mar 31 00:37	30°♑♐	
asc. node	4007 May 26 01:22	5°♒39'30	opposition	4013 Apr 17 18:39	28°♑38'01 2°37'46	
evening set	4007 Jul 17 10:32	11°♒24'48	min. Earth dist.	4013 Apr 17 18:40	28°♑38'01 8.42595 AU	
			direct	4013 Jun 26 02:46	25°♑10'29	
conjunction	4007 Aug 04 13:22	13°♒44'10 0°05'57		4013 Sep 13 18:29	0°♓	
minimum elong	4007 Aug 04 13:22	13°♒44'10 0°05'56	evening set	4013 Oct 10 03:54	3°♓03'14	
behind sun begin	4007 Aug 04 06:22	13°♒41'56				
behind sun end	4007 Aug 04 20:21	13°♒46'24	conjunction	4013 Oct 27 14:22	5°♓12'38 2°10'02	
max. Earth dist.	4007 Aug 04 15:25	13°♒44'48 10.10803 AU	minimum elong	4013 Oct 27 14:22	5°♓12'38 2°10'03	
	4007 Aug 14 08:47	15°♒	max. Earth dist.	4013 Oct 27 13:49	5°♓12'28 10.47271 AU	
morning rise	4007 Aug 22 16:41	16°♒03'41	morning rise	4013 Nov 13 20:39	7°♓20'43	
retrograde	4007 Dec 05 09:18	24°♒12'07	retrograde	4014 Feb 22 10:21	14°♓50'42	
opposition	4008 Feb 10 07:35	20°♒44'25 0°27'00	opposition	4014 Apr 30 23:04	11°♓29'09 2°41'31	
min. Earth dist.	4008 Feb 10 05:54	20°♒44'46 8.11257 AU	min. Earth dist.	4014 Apr 30 23:21	11°♓29'05 8.52276 AU	
direct	4008 Apr 17 11:09	17°♒16'03	direct	4014 Jul 09 18:17	8°♓02'27	





























































































































	4014 Oct 16 18:21	15°♄		conjunction	4021 Jan 19 09:42	29°♄19'40	0°27'16
evening set	4014 Oct 23 11:52	15°♄48'14		minimum elong	4021 Jan 19 09:43	29°♄19'40	0°27'16
				max. Earth dist.	4021 Jan 19 08:04	29°♄19'11	10.97984 AU
conjunction	4014 Nov 09 18:36	17°♄55'16	2°10'02		4021 Jan 25 01:30	0°♄	
minimum elong	4014 Nov 09 18:36	17°♄55'16	2°10'03	morning rise	4021 Feb 05 01:59	1°♄17'45	
max. Earth dist.	4014 Nov 09 17:36	17°♄54'58	10.57020 AU	retrograde	4021 May 16 15:37	8°♄20'49	
morning rise	4014 Nov 26 21:07	20°♄01'02		opposition	4021 Jul 25 20:11	5°♄02'45	0°17'30
retrograde	4015 Mar 07 00:13	27°♄23'58		min. Earth dist.	4021 Jul 25 21:37	5°♄02'29	8.98849 AU
opposition	4015 May 13 22:48	24°♄03'23	2°37'23	direct	4021 Oct 04 16:00	1°♄43'09	
min. Earth dist.	4015 May 13 22:58	24°♄03'21	8.61969 AU	evening set	4022 Jan 14 05:17	8°♄49'06	
direct	4015 Jul 23 04:25	20°♄37'41					
evening set	4015 Nov 05 10:27	28°♄16'08		conjunction	4022 Jan 30 22:01	10°♄47'11	0°01'11
	4015 Nov 19 17:12	0°♄		minimum elong	4022 Jan 30 22:02	10°♄47'12	0°01'11
				behind sun begin	4022 Jan 30 15:03	10°♄45'09	
conjunction	4015 Nov 22 13:53	0°♄21'00	2°03'53	behind sun end	4022 Jan 31 05:01	10°♄49'14	
minimum elong	4015 Nov 22 13:54	0°♄21'00	2°03'53	max. Earth dist.	4022 Jan 30 19:44	10°♄46'34	10.99231 AU
max. Earth dist.	4015 Nov 22 13:08	0°♄20'46	10.66558 AU	morning rise	4022 Feb 16 14:17	12°♄45'10	
morning rise	4015 Dec 09 13:07	2°♄24'38		desc. node	4022 Feb 16 05:37	12°♄42'39	
retrograde	4016 Mar 18 10:45	9°♄41'19			4022 Mar 08 17:37	15°♄	
opposition	4016 May 25 18:08	6°♄21'36	2°26'03	retrograde	4022 May 28 15:53	19°♄49'36	
min. Earth dist.	4016 May 25 18:27	6°♄21'32	8.71220 AU	opposition	4022 Aug 07 02:07	16°♄31'13	-0°14'39
direct	4016 Aug 04 07:37	2°♄57'00		min. Earth dist.	4022 Aug 07 04:11	16°♄30'50	8.99128 AU
evening set	4016 Nov 17 00:19	10°♄28'09			4022 Aug 28 10:18	15°♄	
				direct	4022 Oct 16 15:59	13°♄12'11	
conjunction	4016 Dec 04 00:56	12°♄31'08	1°52'12		4022 Dec 03 05:59	15°♄	
minimum elong	4016 Dec 04 00:58	12°♄31'08	1°52'12	evening set	4023 Jan 25 18:01	20°♄16'35	
max. Earth dist.	4016 Dec 04 00:08	12°♄30'53	10.75460 AU				
morning rise	4016 Dec 20 21:35	14°♄32'58		conjunction	4023 Feb 11 10:07	22°♄14'36	-0°25'02
retrograde	4017 Mar 30 16:17	21°♄44'21		minimum elong	4023 Feb 11 10:06	22°♄14'36	0°25'01
opposition	4017 Jun 07 09:31	18°♄25'22	2°08'27	max. Earth dist.	4023 Feb 11 07:18	22°♄13'47	10.98540 AU
min. Earth dist.	4017 Jun 07 10:41	18°♄25'09	8.79637 AU	morning rise	4023 Feb 28 02:40	24°♄12'46	
direct	4017 Aug 17 03:23	15°♄01'53			4023 Apr 29 22:06	0°♄	
evening set	4017 Nov 29 06:25	22°♄26'11		retrograde	4023 Jun 09 17:00	1°♄20'02	
					4023 Jul 21 15:52	30°♄	
conjunction	4017 Dec 16 04:37	24°♄27'33	1°35'47	opposition	4023 Aug 19 08:52	28°♄01'04	-0°46'17
minimum elong	4017 Dec 16 04:39	24°♄27'34	1°35'46	min. Earth dist.	4023 Aug 19 10:55	28°♄00'41	8.97480 AU
max. Earth dist.	4017 Dec 16 02:47	24°♄27'00	10.83348 AU	direct	4023 Oct 28 16:43	24°♄42'24	
morning rise	4018 Jan 01 23:31	26°♄27'59			4024 Jan 21 15:03	0°♄	
	4018 Feb 03 07:58	0°♄		evening set	4024 Feb 06 07:28	1°♄46'32	
retrograde	4018 Apr 11 16:52	3°♄35'14					
opposition	4018 Jun 19 21:26	0°♄16'48	1°45'40	conjunction	4024 Feb 22 23:25	3°♄44'49	-0°50'15
min. Earth dist.	4018 Jun 19 23:19	0°♄16'27	8.86865 AU	minimum elong	4024 Feb 22 23:23	3°♄44'48	0°50'15
	4018 Jun 23 14:47	30°♄		max. Earth dist.	4024 Feb 22 21:24	3°♄44'13	10.95925 AU
direct	4018 Aug 29 19:08	26°♄54'25		morning rise	4024 Mar 10 16:29	5°♄43'27	
	4018 Nov 01 12:09	0°♄		retrograde	4024 Jun 20 23:45	12°♄54'52	
evening set	4018 Dec 11 06:12	4°♄12'36		opposition	4024 Aug 30 16:58	9°♄35'06	-1°16'14
				min. Earth dist.	4024 Aug 30 18:08	9°♄34'53	8.93944 AU
conjunction	4018 Dec 28 02:25	6°♄12'41	1°15'32	direct	4024 Nov 08 17:24	6°♄16'36	
minimum elong	4018 Dec 28 02:28	6°♄12'41	1°15'31	evening set	4025 Feb 16 23:19	13°♄21'45	
max. Earth dist.	4018 Dec 27 23:47	6°♄11'53	10.89892 AU				
morning rise	4019 Jan 13 20:07	8°♄12'00		conjunction	4025 Mar 05 15:33	15°♄20'38	-1°13'35
retrograde	4019 Apr 23 17:05	15°♄16'27		minimum elong	4025 Mar 05 15:31	15°♄20'38	1°13'36
opposition	4019 Jul 02 06:33	11°♄58'23	1°18'48	max. Earth dist.	4025 Mar 05 14:12	15°♄20'14	10.91448 AU
min. Earth dist.	4019 Jul 02 08:20	11°♄58'03	8.92607 AU	morning rise	4025 Mar 22 09:28	17°♄20'06	
direct	4019 Sep 11 06:56	8°♄37'02		retrograde	4025 Jul 03 10:08	24°♄36'47	
evening set	4019 Dec 23 00:54	15°♄50'01		opposition	4025 Sep 12 03:06	21°♄16'03	-1°43'22
				min. Earth dist.	4025 Sep 12 04:00	21°♄15'53	8.88602 AU
conjunction	4020 Jan 08 19:42	17°♄49'08	0°52'22	direct	4025 Nov 20 16:49	17°♄57'27	
minimum elong	4020 Jan 08 19:44	17°♄49'08	0°52'22	evening set	4026 Feb 28 18:54	25°♄05'00	
max. Earth dist.	4020 Jan 08 17:27	17°♄48'28	10.94833 AU				
morning rise	4020 Jan 25 12:30	19°♄47'40		conjunction	4026 Mar 17 11:44	27°♄04'49	-1°34'07
retrograde	4020 May 04 15:56	26°♄50'43		minimum elong	4026 Mar 17 11:41	27°♄04'48	1°34'07
opposition	4020 Jul 13 13:53	23°♄32'45	0°49'02	max. Earth dist.	4026 Mar 17 09:51	27°♄04'15	10.85222 AU
min. Earth dist.	4020 Jul 13 15:05	23°♄32'32	8.96651 AU	morning rise	4026 Apr 03 07:06	29°♄05'26	
direct	4020 Sep 22 12:51	20°♄12'22			4026 Apr 11 02:35	0°♄	
evening set	4021 Jan 02 15:58	27°♄21'12		retrograde	4026 Jul 16 01:10	6°♄28'28	
				opposition	4026 Sep 24 16:27	3°♄06'38	-2°06'32

min. Earth dist.	4026 Sep 24 17:46	3°♄06'23	8.81586 AU	min. Earth dist.	4032 Dec 10 15:36	19°♄17'59	8.25455 AU
	4026 Nov 17 06:41	30°♄		direct	4033 Feb 15 13:33	15°♄53'06	
direct	4026 Dec 02 19:50	29°♄47'42		evening set	4033 May 28 08:37	23°♄42'21	
	4026 Dec 18 06:39	0°♄					
evening set	4027 Mar 12 19:14	6°♄58'56		conjunction	4033 Jun 15 00:53	25°♄57'05	-1°32'50
				minimum elong	4033 Jun 15 00:56	25°♄57'06	1°32'50
conjunction	4027 Mar 29 13:16	9°♄00'03	-1°50'53	max. Earth dist.	4033 Jun 15 02:11	25°♄57'30	10.21610 AU
minimum elong	4027 Mar 29 13:14	9°♄00'02	1°50'52	morning rise	4033 Jul 02 21:03	28°♄13'02	
max. Earth dist.	4027 Mar 29 10:43	8°♄59'16	10.77429 AU		4033 Jul 17 10:52	0°♄	
morning rise	4027 Apr 15 10:42	11°♄02'11		retrograde	4033 Oct 17 06:05	6°♄22'49	
retrograde	4027 Jul 28 21:55	18°♄32'30		opposition	4033 Dec 24 10:55	2°♄53'49	-1°40'54
opposition	4027 Oct 07 09:32	15°♄09'27	-2°24'37	min. Earth dist.	4033 Dec 24 09:36	2°♄54'05	8.18311 AU
min. Earth dist.	4027 Oct 07 11:14	15°♄09'08	8.73143 AU		4034 Feb 05 00:12	30°♄	
direct	4027 Dec 15 01:50	11°♄49'59		direct	4034 Mar 01 04:48	29°♄27'54	
evening set	4028 Mar 24 01:43	19°♄06'04			4034 Mar 25 05:21	0°♄	
				evening set	4034 Jun 11 15:27	7°♄23'30	
conjunction	4028 Apr 09 21:53	21°♄08'53	-2°03'00				
minimum elong	4028 Apr 09 21:52	21°♄08'52	2°02'59	conjunction	4034 Jun 29 12:10	9°♄40'24	-1°08'28
max. Earth dist.	4028 Apr 09 20:02	21°♄08'19	10.68400 AU	minimum elong	4034 Jun 29 12:13	9°♄40'25	1°08'29
morning rise	4028 Apr 26 21:53	23°♄12'53		max. Earth dist.	4034 Jun 29 14:33	9°♄41'10	10.15379 AU
	4028 Jul 08 21:14	0°♄		morning rise	4034 Jul 17 11:56	11°♄58'16	
retrograde	4028 Aug 10 00:13	0°♄50'58		retrograde	4034 Oct 31 13:55	20°♄10'14	
	4028 Sep 11 12:56	30°♄		opposition	4035 Jan 07 08:05	16°♄41'01	-1°07'51
opposition	4028 Oct 19 06:39	27°♄26'39	-2°36'32	min. Earth dist.	4035 Jan 07 05:56	16°♄41'28	8.13031 AU
min. Earth dist.	4028 Oct 19 07:45	27°♄26'27	8.63681 AU	direct	4035 Mar 15 01:19	13°♄14'01	
direct	4028 Dec 26 12:42	24°♄06'26		evening set	4035 Jun 26 04:52	21°♄15'04	
	4029 Mar 24 04:57	0°♄					
evening set	4029 Apr 05 15:20	1°♄28'19		conjunction	4035 Jul 14 05:12	23°♄33'36	-0°39'54
				minimum elong	4035 Jul 14 05:14	23°♄33'36	0°39'55
conjunction	4029 Apr 22 14:27	3°♄33'11	-2°09'40	max. Earth dist.	4035 Jul 14 08:30	23°♄34'39	10.11177 AU
minimum elong	4029 Apr 22 14:27	3°♄33'11	2°09'40	morning rise	4035 Aug 01 07:28	25°♄52'47	
max. Earth dist.	4029 Apr 22 13:46	3°♄32'58	10.58588 AU		4035 Sep 05 11:21	0°♄	
morning rise	4029 May 09 17:36	5°♄39'20		retrograde	4035 Nov 14 22:22	4°♄04'58	
retrograde	4029 Aug 23 10:02	13°♄25'19		opposition	4036 Jan 21 07:02	0°♄35'53	-0°30'29
opposition	4029 Nov 01 08:19	9°♄59'44	-2°41'22	min. Earth dist.	4036 Jan 21 04:14	0°♄36'27	8.09924 AU
min. Earth dist.	4029 Nov 01 08:24	9°♄59'43	8.53670 AU		4036 Jan 28 14:34	30°♄	
direct	4030 Jan 08 04:31	6°♄38'34		direct	4036 Mar 28 02:24	27°♄07'56	
evening set	4030 Apr 18 12:51	14°♄06'55			4036 May 24 15:34	0°♄	
	4030 Apr 25 17:22	15°♄		evening set	4036 Jul 09 23:21	5°♄13'17	
conjunction	4030 May 05 15:30	16°♄14'06	-2°10'14				
minimum elong	4030 May 05 15:31	16°♄14'06	2°10'14	conjunction	4036 Jul 28 01:54	7°♄32'43	-0°08'51
max. Earth dist.	4030 May 05 15:41	16°♄14'09	10.48489 AU	minimum elong	4036 Jul 28 01:54	7°♄32'43	0°08'51
morning rise	4030 May 22 22:25	18°♄22'39		behind sun begin	4036 Jul 27 19:37	7°♄30'43	
retrograde	4030 Sep 06 02:39	26°♄16'11		behind sun end	4036 Jul 28 08:11	7°♄34'44	
opposition	4030 Nov 14 14:40	22°♄49'25	-2°38'21	max. Earth dist.	4036 Jul 28 05:22	7°♄33'49	10.09247 AU
min. Earth dist.	4030 Nov 14 13:55	22°♄49'34	8.43618 AU	morning rise	4036 Aug 15 05:11	9°♄52'27	
direct	4031 Jan 21 00:24	19°♄27'10			4036 Sep 29 10:23	15°♄	
evening set	4031 May 01 18:53	27°♄02'27		asc. node	4036 Nov 10 09:16	17°♄45'19	
				retrograde	4036 Nov 28 05:25	18°♄02'56	
conjunction	4031 May 19 01:42	29°♄12'07	-2°04'16		4037 Jan 29 01:34	15°♄	
minimum elong	4031 May 19 01:44	29°♄12'08	2°04'17	opposition	4037 Feb 03 06:37	14°♄34'18	0°08'51
max. Earth dist.	4031 May 19 01:58	29°♄12'12	10.38626 AU	min. Earth dist.	4037 Feb 03 03:49	14°♄34'52	8.09185 AU
	4031 May 25 09:54	0°♄		direct	4037 Apr 11 06:43	11°♄05'38	
morning rise	4031 Jun 05 13:00	1°♄23'13			4037 Jun 18 15:26	15°♄	
retrograde	4031 Sep 20 00:02	9°♄23'29		evening set	4037 Jul 24 20:28	19°♄13'47	
opposition	4031 Nov 28 01:31	5°♄55'44	-2°27'07				
min. Earth dist.	4031 Nov 28 00:41	5°♄55'54	8.34047 AU	conjunction	4037 Aug 11 23:37	21°♄33'20	0°22'52
direct	4032 Feb 03 03:14	2°♄32'16		minimum elong	4037 Aug 11 23:36	21°♄33'19	0°22'52
evening set	4032 May 14 09:32	10°♄14'38		max. Earth dist.	4037 Aug 12 02:48	21°♄34'21	10.09723 AU
				morning rise	4037 Aug 30 02:22	23°♄52'46	
conjunction	4032 May 31 21:01	12°♄26'54	-1°51'42		4037 Oct 25 20:27	0°♄	
minimum elong	4032 May 31 21:04	12°♄26'55	1°51'43	retrograde	4037 Dec 12 09:56	1°♄59'48	
max. Earth dist.	4032 May 31 21:36	12°♄27'05	10.29507 AU		4038 Jan 29 18:54	30°♄	
morning rise	4032 Jun 18 12:55	14°♄40'32		opposition	4038 Feb 17 05:52	28°♄31'55	0°47'38
retrograde	4032 Oct 03 01:03	22°♄46'19		min. Earth dist.	4038 Feb 17 03:25	28°♄32'25	8.10878 AU
opposition	4032 Dec 10 16:30	19°♄17'48	-2°07'45	direct	4038 Apr 25 12:28	25°♄02'48	
					4038 Jul 13 00:03	0°♄	

evening set	4038 Aug 08 17:34	3° \mathbb{M} 12'01		max. Earth dist.	4044 Nov 16 04:50	25° \mathbb{M} 01'22	10.62635 AU
				morning rise	4044 Dec 03 05:51	27° \mathbb{M} 06'04	
conjunction	4038 Aug 26 19:47	5° \mathbb{M} 30'52	0°53'04		4044 Dec 28 15:46	0° \mathbb{M}	
minimum elong	4038 Aug 26 19:45	5° \mathbb{M} 30'52	0°53'03	retrograde	4045 Mar 13 06:55	4° \mathbb{M} 25'46	
max. Earth dist.	4038 Aug 26 22:23	5° \mathbb{M} 31'42	10.12587 AU	opposition	4045 May 20 09:31	1° \mathbb{M} 06'05	2°31'47
morning rise	4038 Sep 13 20:34	7° \mathbb{M} 49'14		min. Earth dist.	4045 May 20 10:09	1° \mathbb{M} 05'58	8.67576 AU
retrograde	4038 Dec 26 10:25	15° \mathbb{M} 51'18			4045 Jun 03 23:23	30° \mathbb{R} \mathbb{M}	
opposition	4039 Mar 03 03:34	12° \mathbb{M} 24'24	1°23'20	direct	4045 Jul 29 18:04	27° \mathbb{M} 41'24	
min. Earth dist.	4039 Mar 03 01:39	12° \mathbb{M} 24'48	8.14901 AU		4045 Sep 21 21:06	0° \mathbb{M}	
direct	4039 May 09 19:33	8° \mathbb{M} 55'10		evening set	4045 Nov 11 18:44	5° \mathbb{M} 16'04	
evening set	4039 Aug 23 12:25	17° \mathbb{M} 03'41					
				conjunction	4045 Nov 28 20:29	7° \mathbb{M} 19'53	1°57'56
conjunction	4039 Sep 10 12:18	19° \mathbb{M} 21'06	1°19'57	minimum elong	4045 Nov 28 20:30	7° \mathbb{M} 19'53	1°57'56
minimum elong	4039 Sep 10 12:15	19° \mathbb{M} 21'05	1°19'57	max. Earth dist.	4045 Nov 28 19:01	7° \mathbb{M} 19'26	10.72082 AU
max. Earth dist.	4039 Sep 10 14:08	19° \mathbb{M} 21'41	10.17664 AU	morning rise	4045 Dec 15 18:25	9° \mathbb{M} 22'31	
morning rise	4039 Sep 28 09:48	21° \mathbb{M} 37'44		retrograde	4046 Mar 25 13:58	16° \mathbb{M} 36'20	
retrograde	4040 Jan 09 04:53	29° \mathbb{M} 33'35		opposition	4046 Jun 02 02:56	13° \mathbb{M} 17'28	2°16'52
opposition	4040 Mar 15 22:31	26° \mathbb{M} 07'52	1°53'49	min. Earth dist.	4046 Jun 02 03:54	13° \mathbb{M} 17'17	8.76538 AU
min. Earth dist.	4040 Mar 15 20:45	26° \mathbb{M} 08'14	8.21006 AU	direct	4046 Aug 11 18:38	9° \mathbb{M} 53'53	
direct	4040 May 23 01:54	22° \mathbb{M} 38'51		evening set	4046 Nov 24 04:51	17° \mathbb{M} 21'26	
	4040 Aug 31 01:01	0° \mathbb{M}					
evening set	4040 Sep 06 02:19	0° \mathbb{M} 44'51		conjunction	4046 Dec 11 04:07	19° \mathbb{M} 23'30	1°43'32
				minimum elong	4046 Dec 11 04:10	19° \mathbb{M} 23'31	1°43'32
conjunction	4040 Sep 23 22:53	3° \mathbb{M} 00'16	1°42'00	max. Earth dist.	4046 Dec 11 02:11	19° \mathbb{M} 22'55	10.80480 AU
minimum elong	4040 Sep 23 22:50	3° \mathbb{M} 00'15	1°42'00	morning rise	4046 Dec 27 23:51	21° \mathbb{M} 24'33	
max. Earth dist.	4040 Sep 24 00:29	3° \mathbb{M} 00'47	10.24650 AU	retrograde	4047 Apr 06 17:58	28° \mathbb{M} 33'42	
morning rise	4040 Oct 11 16:12	5° \mathbb{M} 14'41		opposition	4047 Jun 14 16:46	25° \mathbb{M} 15'26	1°56'16
retrograde	4041 Jan 21 17:06	13° \mathbb{M} 03'32		min. Earth dist.	4047 Jun 14 18:05	25° \mathbb{M} 15'12	8.84223 AU
opposition	4041 Mar 29 14:13	9° \mathbb{M} 39'06	2°17'26	direct	4047 Aug 24 13:39	21° \mathbb{M} 52'58	
min. Earth dist.	4041 Mar 29 12:14	9° \mathbb{M} 39'30	8.28826 AU	evening set	4047 Dec 06 07:53	29° \mathbb{M} 14'05	
direct	4041 Jun 06 05:47	6° \mathbb{M} 10'36			4047 Dec 12 19:16	0° \mathbb{M}	
evening set	4041 Sep 20 09:03	14° \mathbb{M} 12'20					
				conjunction	4047 Dec 23 05:07	1° \mathbb{M} 14'45	1°24'52
conjunction	4041 Oct 08 01:44	16° \mathbb{M} 25'27	1°58'07	minimum elong	4047 Dec 23 05:09	1° \mathbb{M} 14'45	1°24'52
minimum elong	4041 Oct 08 01:42	16° \mathbb{M} 25'26	1°58'08	max. Earth dist.	4047 Dec 23 02:58	1° \mathbb{M} 14'06	10.87431 AU
max. Earth dist.	4041 Oct 08 03:31	16° \mathbb{M} 26'01	10.33137 AU	morning rise	4048 Jan 08 23:11	3° \mathbb{M} 14'33	
morning rise	4041 Oct 25 14:28	18° \mathbb{M} 37'21		retrograde	4048 Apr 17 20:43	10° \mathbb{M} 20'26	
retrograde	4042 Feb 04 00:19	26° \mathbb{M} 18'46		opposition	4048 Jun 26 03:47	7° \mathbb{M} 02'34	1°31'04
opposition	4042 Apr 12 01:50	22° \mathbb{M} 55'37	2°33'10	min. Earth dist.	4048 Jun 26 06:01	7° \mathbb{M} 02'09	8.90340 AU
min. Earth dist.	4042 Apr 11 23:52	22° \mathbb{M} 56'01	8.37905 AU	direct	4048 Sep 05 02:16	3° \mathbb{M} 41'06	
direct	4042 Jun 20 04:14	19° \mathbb{M} 27'53		evening set	4048 Dec 17 05:26	10° \mathbb{M} 56'41	
evening set	4042 Oct 04 07:31	27° \mathbb{M} 23'58					
				conjunction	4049 Jan 03 00:55	12° \mathbb{M} 56'17	1°02'52
conjunction	4042 Oct 21 20:07	29° \mathbb{M} 34'36	2°07'43	minimum elong	4049 Jan 03 00:57	12° \mathbb{M} 56'18	1°02'52
minimum elong	4042 Oct 21 20:06	29° \mathbb{M} 34'36	2°07'44	max. Earth dist.	4049 Jan 02 21:42	12° \mathbb{M} 55'20	10.92729 AU
max. Earth dist.	4042 Oct 21 21:52	29° \mathbb{M} 35'09	10.42641 AU	morning rise	4049 Jan 19 18:02	14° \mathbb{M} 55'14	
	4042 Oct 25 05:18	0° \mathbb{M}		retrograde	4049 Apr 29 19:09	21° \mathbb{M} 59'10	
morning rise	4042 Nov 08 04:18	1° \mathbb{M} 43'55		opposition	4049 Jul 08 12:30	18° \mathbb{M} 41'26	1°02'25
retrograde	4043 Feb 17 01:22	9° \mathbb{M} 17'44		min. Earth dist.	4049 Jul 08 15:40	18° \mathbb{M} 40'51	8.94739 AU
opposition	4043 Apr 25 08:54	5° \mathbb{M} 55'52	2°40'38	direct	4049 Sep 17 10:20	15° \mathbb{M} 20'47	
min. Earth dist.	4043 Apr 25 07:39	5° \mathbb{M} 56'06	8.47737 AU	evening set	4049 Dec 28 22:44	22° \mathbb{M} 31'56	
direct	4043 Jul 03 21:46	2° \mathbb{M} 29'03					
evening set	4043 Oct 17 20:46	10° \mathbb{M} 18'28		conjunction	4050 Jan 14 16:52	24° \mathbb{M} 30'45	0°38'28
				minimum elong	4050 Jan 14 16:53	24° \mathbb{M} 30'46	0°38'29
conjunction	4043 Nov 04 05:20	12° \mathbb{M} 26'39	2°10'40	max. Earth dist.	4050 Jan 14 12:41	24° \mathbb{M} 29'31	10.96241 AU
minimum elong	4043 Nov 04 05:20	12° \mathbb{M} 26'39	2°10'41	morning rise	4050 Jan 31 09:32	26° \mathbb{M} 29'09	
max. Earth dist.	4043 Nov 04 06:26	12° \mathbb{M} 26'59	10.52647 AU		4050 Mar 04 23:39	0° \mathbb{M}	
morning rise	4043 Nov 21 09:25	14° \mathbb{M} 33'30		retrograde	4050 May 11 18:10	3° \mathbb{M} 32'35	
	4043 Nov 25 01:15	15° \mathbb{M}		opposition	4050 Jul 20 19:45	0° \mathbb{M} 14'41	0°31'29
retrograde	4044 Feb 29 19:01	21° \mathbb{M} 59'57		min. Earth dist.	4050 Jul 20 23:03	0° \mathbb{M} 14'04	8.97298 AU
opposition	4044 May 07 11:32	18° \mathbb{M} 39'16	2°39'59		4050 Jul 24 02:55	30° \mathbb{R} \mathbb{M}	
min. Earth dist.	4044 May 07 11:27	18° \mathbb{M} 39'17	8.57802 AU	direct	4050 Sep 29 17:16	26° \mathbb{M} 54'41	
direct	4044 Jul 16 10:40	15° \mathbb{M} 13'29			4050 Dec 02 05:48	0° \mathbb{M}	
evening set	4044 Oct 30 00:19	22° \mathbb{M} 55'37		evening set	4051 Jan 09 13:14	4° \mathbb{M} 02'29	
conjunction	4044 Nov 16 05:10	25° \mathbb{M} 01'28	2°07'13	conjunction	4051 Jan 26 06:26	6° \mathbb{M} 00'52	0°12'40
minimum elong	4044 Nov 16 05:11	25° \mathbb{M} 01'28	2°07'14	minimum elong	4051 Jan 26 06:26	6° \mathbb{M} 00'52	0°12'41

behind sun begin	4051 Jan 26 01:55	5° \approx 59'32	direct	4056 Dec 09 04:39	6° Υ 52'51
behind sun end	4051 Jan 26 10:57	6° \approx 02'11	evening set	4057 Mar 19 03:34	14° Υ 07'37
max. Earth dist.	4051 Jan 26 02:43	5° \approx 59'46 10.97861 AU			
morning rise	4051 Feb 11 22:47	7° \approx 59'01	conjunction	4057 Apr 04 22:54	16° Υ 09'56 -1°58'28
	4051 May 15 13:59	15° \approx	minimum elong	4057 Apr 04 22:52	16° Υ 09'55 1°58'27
retrograde	4051 May 23 18:56	15° \approx 03'21	max. Earth dist.	4057 Apr 04 22:01	16° Υ 09'39 10.70095 AU
	4051 Jun 01 00:00	15° \approx	morning rise	4057 Apr 21 21:40	18° Υ 13'21
desc. node	4051 Jul 26 05:48	12° \approx 15'21	retrograde	4057 Aug 04 18:15	25° Υ 48'54
opposition	4051 Aug 02 02:21	11° \approx 44'59 -0°00'35	opposition	4057 Oct 14 02:26	22° Υ 24'30 -2°32'23
min. Earth dist.	4051 Aug 02 04:53	11° \approx 44'31 8.97945 AU	min. Earth dist.	4057 Oct 14 02:29	22° Υ 24'30 8.65701 AU
direct	4051 Oct 11 19:56	8° \approx 25'30	direct	4057 Dec 21 12:26	19° Υ 04'04
	4052 Jan 16 14:33	15° \approx	evening set	4058 Mar 31 14:24	26° Υ 24'11
evening set	4052 Jan 21 02:27	15° \approx 31'09			
			conjunction	4058 Apr 17 12:04	28° Υ 28'20 -2°07'34
conjunction	4052 Feb 06 19:02	17° \approx 29'23 -0°13'41	minimum elong	4058 Apr 17 12:04	28° Υ 28'20 2°07'34
minimum elong	4052 Feb 06 19:02	17° \approx 29'23 0°13'41	max. Earth dist.	4058 Apr 17 11:11	28° Υ 28'04 10.60913 AU
behind sun begin	4052 Feb 06 15:08	17° \approx 28'14		4058 Apr 29 22:34	0° \approx
behind sun end	4052 Feb 06 22:56	17° \approx 30'31	morning rise	4058 May 04 13:52	0° \approx 33'46
max. Earth dist.	4052 Feb 06 16:07	17° \approx 28'32 10.97550 AU	retrograde	4058 Aug 18 00:54	8° \approx 17'06
morning rise	4052 Feb 23 11:24	19° \approx 27'37	opposition	4058 Oct 27 02:40	4° \approx 51'34 -2°40'20
retrograde	4052 Jun 03 20:35	26° \approx 34'14	min. Earth dist.	4058 Oct 27 02:39	4° \approx 51'34 8.56267 AU
opposition	4052 Aug 13 09:12	23° \approx 15'11 -0°32'39	direct	4059 Jan 03 02:22	1° \approx 30'23
min. Earth dist.	4052 Aug 13 11:24	23° \approx 14'47 8.96683 AU	evening set	4059 Apr 13 08:38	8° \approx 56'35
direct	4052 Oct 22 20:14	19° \approx 55'59			
evening set	4053 Jan 31 15:52	27° \approx 00'52	conjunction	4059 Apr 30 09:35	11° \approx 02'55 -2°10'48
			minimum elong	4059 Apr 30 09:35	11° \approx 02'55 2°10'48
conjunction	4053 Feb 17 08:00	28° \approx 59'14 -0°39'27	max. Earth dist.	4059 Apr 30 09:31	11° \approx 02'53 10.51319 AU
minimum elong	4053 Feb 17 07:59	28° \approx 59'14 0°39'28	morning rise	4059 May 17 15:00	13° \approx 10'36
max. Earth dist.	4053 Feb 17 04:56	28° \approx 58'19 10.95338 AU		4059 Jun 01 23:38	15° \approx
	4053 Feb 25 20:14	0° \approx	retrograde	4059 Aug 31 14:26	21° \approx 01'36
morning rise	4053 Mar 06 00:51	0° \approx 57'51	opposition	4059 Nov 09 07:32	17° \approx 35'01 -2°40'42
retrograde	4053 Jun 16 01:33	8° \approx 08'06	min. Earth dist.	4059 Nov 09 07:01	17° \approx 35'07 8.46636 AU
opposition	4053 Aug 25 17:05	4° \approx 48'13 -1°03'32		4059 Dec 16 20:45	15° \approx
min. Earth dist.	4053 Aug 25 19:37	4° \approx 47'45 8.93564 AU	direct	4060 Jan 15 21:15	14° \approx 12'57
direct	4053 Nov 03 20:23	1° \approx 29'07		4060 Feb 14 11:31	15° \approx
evening set	4054 Feb 12 07:01	8° \approx 34'33	evening set	4060 Apr 25 11:20	21° \approx 45'50
conjunction	4054 Feb 28 23:02	10° \approx 33'23 -1°03'46	conjunction	4060 May 12 16:21	23° \approx 54'34 -2°07'37
minimum elong	4054 Feb 28 23:00	10° \approx 33'23 1°03'47	minimum elong	4060 May 12 16:23	23° \approx 54'34 2°07'37
max. Earth dist.	4054 Feb 28 19:34	10° \approx 32'21 10.91309 AU	max. Earth dist.	4060 May 12 17:49	23° \approx 55'01 10.41773 AU
morning rise	4054 Mar 17 16:44	12° \approx 32'44	morning rise	4060 May 30 01:49	26° \approx 04'43
retrograde	4054 Jun 28 08:39	19° \approx 47'50		4060 Jul 03 10:43	0° \approx
opposition	4054 Sep 07 02:43	16° \approx 26'57 -1°32'06	retrograde	4060 Sep 13 09:27	4° \approx 02'45
min. Earth dist.	4054 Sep 07 05:11	16° \approx 26'29 8.88700 AU	opposition	4060 Nov 21 16:48	0° \approx 35'16 -2°32'55
direct	4054 Nov 15 20:39	13° \approx 07'46	min. Earth dist.	4060 Nov 21 15:15	0° \approx 35'34 8.37288 AU
evening set	4055 Feb 24 01:04	20° \approx 15'07		4060 Nov 29 03:29	30° \approx
			direct	4061 Jan 27 22:28	27° \approx 12'15
conjunction	4055 Mar 12 17:37	22° \approx 14'46 -1°25'41		4061 Mar 25 23:18	0° \approx
minimum elong	4055 Mar 12 17:35	22° \approx 14'45 1°25'41	evening set	4061 May 08 22:45	4° \approx 52'05
max. Earth dist.	4055 Mar 12 15:08	22° \approx 14'01 10.85610 AU			
morning rise	4055 Mar 29 12:28	24° \approx 15'07	conjunction	4061 May 26 08:21	7° \approx 03'21 -1°57'48
	4055 May 27 01:26	0° \approx	minimum elong	4061 May 26 08:24	7° \approx 03'22 1°57'48
retrograde	4055 Jul 10 21:38	1° \approx 36'16	max. Earth dist.	4061 May 26 11:08	7° \approx 04'14 10.32766 AU
	4055 Aug 25 23:34	30° \approx	morning rise	4061 Jun 12 22:09	9° \approx 16'00
opposition	4055 Sep 19 15:06	28° \approx 14'15 -1°57'12	retrograde	4061 Sep 27 10:13	17° \approx 20'02
min. Earth dist.	4055 Sep 19 16:34	28° \approx 13'58 8.82267 AU	opposition	4061 Dec 05 06:33	13° \approx 51'52 -2°16'52
direct	4055 Nov 28 00:34	24° \approx 54'49	min. Earth dist.	4061 Dec 05 03:54	13° \approx 52'24 8.28717 AU
	4056 Feb 17 17:41	0° \approx	direct	4062 Feb 10 05:28	10° \approx 27'52
evening set	4056 Mar 06 23:25	2° \approx 05'17	evening set	4062 May 22 18:43	18° \approx 14'32
conjunction	4056 Mar 23 17:06	4° \approx 06'07 -1°44'13	conjunction	4062 Jun 09 09:00	20° \approx 28'18 -1°41'28
minimum elong	4056 Mar 23 17:04	4° \approx 06'06 1°44'13	minimum elong	4062 Jun 09 09:04	20° \approx 28'19 1°41'29
max. Earth dist.	4056 Mar 23 15:55	4° \approx 05'45 10.78447 AU	max. Earth dist.	4062 Jun 09 12:27	20° \approx 29'24 10.24796 AU
morning rise	4056 Apr 09 13:34	6° \approx 07'50	morning rise	4062 Jun 27 03:13	22° \approx 43'19
retrograde	4056 Jul 22 17:36	13° \approx 35'54		4062 Sep 10 03:06	0° \approx
opposition	4056 Oct 01 06:50	10° \approx 12'41 -2°17'40	retrograde	4062 Oct 11 15:54	0° \approx 51'56
min. Earth dist.	4056 Oct 01 07:13	10° \approx 12'37 8.74497 AU		4062 Nov 12 07:32	30° \approx

opposition	4062 Dec 19 00:13	27° Π 23'20	-1°52'59	opposition	4069 Mar 10 13:26	20° Π 39'19	1°41'46
min. Earth dist.	4062 Dec 18 21:08	27° Π 23'57	8.21411 AU	min. Earth dist.	4069 Mar 10 11:27	20° Π 39'43	8.18947 AU
direct	4063 Feb 23 17:24	23° Π 58'18		direct	4069 May 17 11:18	17° Π 10'35	
	4063 May 21 19:03	0° \mathfrak{C}		evening set	4069 Aug 31 09:37	25° Π 17'47	
evening set	4063 Jun 05 23:00	1° \mathfrak{C} 51'23					
conjunction	4063 Jun 23 17:49	4° \mathfrak{C} 07'24	-1°19'15	conjunction	4069 Sep 18 07:45	27° Π 34'04	1°33'26
minimum elong	4063 Jun 23 17:52	4° \mathfrak{C} 07'25	1°19'16	minimum elong	4069 Sep 18 07:42	27° Π 34'03	1°33'26
max. Earth dist.	4063 Jun 23 21:21	4° \mathfrak{C} 08'32	10.18318 AU	max. Earth dist.	4069 Sep 18 09:42	27° Π 34'42	10.22060 AU
morning rise	4063 Jul 11 16:04	6° \mathfrak{C} 24'30		morning rise	4069 Oct 06 02:43	29° Π 49'25	
retrograde	4063 Oct 25 23:57	14° \mathfrak{C} 35'50			4069 Oct 07 12:40	0° \mathfrak{A}	
opposition	4064 Jan 01 20:48	11° \mathfrak{C} 07'05	-1°22'18	retrograde	4070 Jan 16 12:38	7° \mathfrak{A} 41'24	
min. Earth dist.	4064 Jan 01 17:53	11° \mathfrak{C} 07'40	8.15789 AU	opposition	4070 Mar 24 06:49	4° \mathfrak{A} 16'40	2°08'26
direct	4064 Mar 08 12:21	7° \mathfrak{C} 41'00		min. Earth dist.	4070 Mar 24 05:40	4° \mathfrak{A} 16'54	8.25732 AU
evening set	4064 Jun 19 10:23	15° \mathfrak{C} 39'47		direct	4070 May 31 15:56	0° \mathfrak{A} 48'08	
				evening set	4070 Sep 14 19:51	8° \mathfrak{A} 51'53	
conjunction	4064 Jul 07 09:05	17° \mathfrak{C} 57'35	-0°52'15	conjunction	4070 Oct 02 14:13	11° \mathfrak{A} 06'00	1°52'08
minimum elong	4064 Jul 07 09:07	17° \mathfrak{C} 57'36	0°52'16	minimum elong	4070 Oct 02 14:10	11° \mathfrak{A} 05'59	1°52'09
max. Earth dist.	4064 Jul 07 12:15	17° \mathfrak{C} 58'36	10.13684 AU	max. Earth dist.	4070 Oct 02 15:06	11° \mathfrak{A} 06'17	10.29605 AU
morning rise	4064 Jul 25 10:27	20° \mathfrak{C} 16'13		morning rise	4070 Oct 20 04:52	13° \mathfrak{A} 18'58	
retrograde	4064 Nov 08 07:47	28° \mathfrak{C} 28'19		retrograde	4071 Jan 29 22:03	21° \mathfrak{A} 03'39	
opposition	4065 Jan 14 19:30	24° \mathfrak{C} 59'40	-0°46'29	opposition	4071 Apr 06 20:21	17° \mathfrak{A} 40'04	2°27'35
min. Earth dist.	4065 Jan 14 17:01	25° \mathfrak{C} 00'11	8.12143 AU	min. Earth dist.	4071 Apr 06 19:53	17° \mathfrak{A} 40'09	8.33983 AU
direct	4065 Mar 22 12:57	21° \mathfrak{C} 32'38		direct	4071 Jun 14 17:01	14° \mathfrak{A} 11'59	
evening set	4065 Jul 04 03:05	29° \mathfrak{C} 35'59		evening set	4071 Sep 28 22:08	22° \mathfrak{A} 10'41	
	4065 Jul 07 06:51	0° \mathfrak{Q}					
conjunction	4065 Jul 22 04:34	1° \mathfrak{Q} 54'57	-0°22'01	conjunction	4071 Oct 16 12:21	24° \mathfrak{A} 22'23	2°04'31
minimum elong	4065 Jul 22 04:35	1° \mathfrak{Q} 54'58	0°22'01	minimum elong	4071 Oct 16 12:20	24° \mathfrak{A} 22'23	2°04'32
max. Earth dist.	4065 Jul 22 07:28	1° \mathfrak{Q} 55'53	10.11102 AU	max. Earth dist.	4071 Oct 16 12:18	24° \mathfrak{A} 22'22	10.38389 AU
morning rise	4065 Aug 09 07:38	4° \mathfrak{Q} 14'24		morning rise	4071 Nov 02 22:33	26° \mathfrak{A} 32'50	
retrograde	4065 Nov 22 14:38	12° \mathfrak{Q} 25'26			4071 Dec 02 20:24	0° \mathfrak{M}	
opposition	4066 Jan 28 19:06	8° \mathfrak{Q} 57'09	-0°07'41	retrograde	4072 Feb 12 00:15	4° \mathfrak{M} 09'54	
min. Earth dist.	4066 Jan 28 16:48	8° \mathfrak{Q} 57'37	8.10609 AU	opposition	4072 Apr 19 05:20	0° \mathfrak{M} 47'26	2°38'33
direct	4066 Apr 05 17:00	5° \mathfrak{Q} 29'18		min. Earth dist.	4072 Apr 19 05:09	0° \mathfrak{M} 47'28	8.43223 AU
asc. node	4066 Apr 12 14:18	5° \mathfrak{Q} 31'59			4072 Apr 29 07:01	30° \mathfrak{R} \mathfrak{A}	
evening set	4066 Jul 18 23:17	13° \mathfrak{Q} 36'00		direct	4072 Jun 27 14:18	27° \mathfrak{A} 20'02	
	4066 Jul 29 22:27	15° \mathfrak{Q}			4072 Aug 24 04:24	0° \mathfrak{M}	
conjunction	4066 Aug 06 02:13	15° \mathfrak{Q} 55'25	0°09'42	conjunction	4072 Oct 11 15:09	5° \mathfrak{M} 12'28	
minimum elong	4066 Aug 06 02:12	15° \mathfrak{Q} 55'25	0°09'41				
behind sun begin	4066 Aug 05 20:13	15° \mathfrak{Q} 53'30		conjunction	4072 Oct 29 01:21	7° \mathfrak{M} 21'42	2°10'16
behind sun end	4066 Aug 06 08:12	15° \mathfrak{Q} 57'20		minimum elong	4072 Oct 29 01:20	7° \mathfrak{M} 21'42	2°10'17
max. Earth dist.	4066 Aug 06 04:51	15° \mathfrak{Q} 56'15	10.10642 AU	max. Earth dist.	4072 Oct 29 00:53	7° \mathfrak{M} 21'34	10.47928 AU
morning rise	4066 Aug 24 05:25	18° \mathfrak{Q} 14'55		morning rise	4072 Nov 15 07:18	9° \mathfrak{M} 29'39	
retrograde	4066 Dec 06 20:04	26° \mathfrak{Q} 23'15			4073 Jan 06 21:20	15° \mathfrak{M}	
opposition	4067 Feb 11 18:31	22° \mathfrak{Q} 55'35	0°31'36	retrograde	4073 Feb 23 19:40	16° \mathfrak{M} 59'14	
min. Earth dist.	4067 Feb 11 16:16	22° \mathfrak{Q} 56'03	8.11227 AU		4073 Apr 14 09:23	15° \mathfrak{R} \mathfrak{M}	
direct	4067 Apr 19 22:11	19° \mathfrak{Q} 27'12		opposition	4073 May 02 09:40	13° \mathfrak{M} 37'48	2°41'17
evening set	4067 Aug 02 20:49	27° \mathfrak{Q} 35'49		min. Earth dist.	4073 May 02 09:13	13° \mathfrak{M} 37'53	8.52952 AU
				direct	4073 Jul 11 06:25	10° \mathfrak{M} 11'16	
conjunction	4067 Aug 20 23:38	29° \mathfrak{Q} 54'56	0°40'42		4073 Sep 29 06:34	15° \mathfrak{M}	
minimum elong	4067 Aug 20 23:36	29° \mathfrak{Q} 54'55	0°40'42	evening set	4073 Oct 24 22:23	17° \mathfrak{M} 56'36	
max. Earth dist.	4067 Aug 21 02:06	29° \mathfrak{Q} 55'44	10.12341 AU				
	4067 Aug 21 15:22	0° \mathfrak{M}		conjunction	4073 Nov 11 04:56	20° \mathfrak{M} 03'28	2°09'27
morning rise	4067 Sep 08 01:23	2° \mathfrak{M} 13'43		minimum elong	4073 Nov 11 04:57	20° \mathfrak{M} 03'28	2°09'28
retrograde	4067 Dec 20 23:21	10° \mathfrak{M} 17'51		max. Earth dist.	4073 Nov 11 04:50	20° \mathfrak{M} 03'26	10.57718 AU
opposition	4068 Feb 25 17:00	6° \mathfrak{M} 51'02	1°08'51	morning rise	4073 Nov 28 07:06	22° \mathfrak{M} 09'04	
min. Earth dist.	4068 Feb 25 14:43	6° \mathfrak{M} 51'30	8.14030 AU	retrograde	4074 Mar 08 10:47	29° \mathfrak{M} 31'38	
direct	4068 May 03 04:43	3° \mathfrak{M} 22'20		opposition	4074 May 15 09:14	26° \mathfrak{M} 11'09	2°36'11
evening set	4068 Aug 16 17:09	11° \mathfrak{M} 31'11		min. Earth dist.	4074 May 15 09:05	26° \mathfrak{M} 11'10	8.62672 AU
				direct	4074 Jul 24 15:19	22° \mathfrak{M} 45'35	
conjunction	4068 Sep 03 18:15	13° \mathfrak{M} 49'13	1°09'11		4074 Nov 03 13:31	0° \mathfrak{X}	
minimum elong	4068 Sep 03 18:12	13° \mathfrak{M} 49'12	1°09'11	evening set	4074 Nov 06 20:23	0° \mathfrak{X} 23'29	
max. Earth dist.	4068 Sep 03 20:39	13° \mathfrak{M} 49'59	10.16197 AU				
morning rise	4068 Sep 21 17:04	16° \mathfrak{M} 06'33		conjunction	4074 Nov 23 23:39	2° \mathfrak{X} 28'13	2°02'33
retrograde	4069 Jan 02 21:04	24° \mathfrak{M} 05'08		minimum elong	4074 Nov 23 23:40	2° \mathfrak{X} 28'13	2°02'33
				max. Earth dist.	4074 Nov 23 23:24	2° \mathfrak{X} 28'08	10.67271 AU
				morning rise	4074 Dec 10 22:38	4° \mathfrak{X} 31'42	

retrograde	4075 Mar 20 20:37	11°  47'57			4081 Feb 19 22:42	15° 
opposition	4075 May 28 04:17	8°  28'19	2°23'59	retrograde	4081 May 29 21:59	21°  50'00
min. Earth dist.	4075 May 28 04:59	8°  28'11	8.71928 AU	opposition	4081 Aug 08 10:24	18°  31'31 -0°18'47
direct	4075 Aug 06 16:29	5°  03'49		min. Earth dist.	4081 Aug 08 12:26	18°  31'08 8.99441 AU
evening set	4075 Nov 19 09:43	12°  34'22		direct	4081 Oct 18 00:28	15°  12'29
				evening set	4082 Jan 27 00:33	22°  16'30
conjunction	4075 Dec 06 10:04	14°  37'13	1°50'12	conjunction	4082 Feb 12 16:41	24°  14'29 -0°28'20
minimum elong	4075 Dec 06 10:06	14°  37'13	1°50'12	minimum elong	4082 Feb 12 16:40	24°  14'28 0°28'20
max. Earth dist.	4075 Dec 06 08:54	14°  36'51	10.76164 AU	max. Earth dist.	4082 Feb 12 14:26	24°  13'48 10.98794 AU
morning rise	4075 Dec 23 06:39	16°  38'57		morning rise	4082 Mar 01 09:15	26°  12'35
retrograde	4076 Mar 31 23:59	23°  49'54			4082 Apr 05 22:57	0° 
opposition	4076 Jun 08 19:26	20°  30'58	2°05'39	retrograde	4082 Jun 11 01:20	3°  19'51
min. Earth dist.	4076 Jun 08 20:54	20°  30'41	8.80326 AU	opposition	4082 Aug 20 16:46	0°  00'48 -0°50'12
direct	4076 Aug 18 14:18	17°  07'33			4082 Aug 20 21:04	30°  R 
evening set	4076 Nov 30 15:09	24°  31'13		min. Earth dist.	4082 Aug 20 18:08	0°  00'33 8.97676 AU
				direct	4082 Oct 30 01:01	26°  42'09
conjunction	4076 Dec 17 13:07	26°  32'27	1°33'15		4083 Jan 03 07:38	0° 
minimum elong	4076 Dec 17 13:10	26°  32'27	1°33'14	evening set	4083 Feb 07 13:53	3°  45'59
max. Earth dist.	4076 Dec 17 10:59	26°  31'48	10.84023 AU			
morning rise	4077 Jan 03 08:02	28°  32'45		conjunction	4083 Feb 24 05:53	5°  44'15 -0°53'19
	4077 Jan 15 23:01	0° 		minimum elong	4083 Feb 24 05:51	5°  44'15 0°53'19
retrograde	4077 Apr 13 01:37	5°  39'38		max. Earth dist.	4083 Feb 24 04:34	5°  43'52 10.96056 AU
opposition	4077 Jun 21 07:00	2°  21'12	1°42'16	morning rise	4083 Mar 12 22:53	7°  42'52
min. Earth dist.	4077 Jun 21 08:24	2°  20'57	8.87514 AU	retrograde	4083 Jun 23 07:28	14°  54'22
	4077 Jul 26 00:22	30°  R 		opposition	4083 Sep 02 00:45	11°  34'32 -1°19'47
direct	4077 Aug 31 06:14	28°  58'53		min. Earth dist.	4083 Sep 02 01:30	11°  34'23 8.94024 AU
	4077 Oct 05 21:04	0° 		direct	4083 Nov 10 23:42	8°  16'04
evening set	4077 Dec 12 14:16	6°  31'24		evening set	4084 Feb 19 05:47	15°  42'04
conjunction	4077 Dec 29 10:29	8°  31'22	1°12'34	conjunction	4084 Mar 06 21:55	17°  19'56 -1°16'18
minimum elong	4077 Dec 29 10:31	8°  31'22	1°12'34	minimum elong	4084 Mar 06 21:53	17°  19'55 1°16'18
max. Earth dist.	4077 Dec 29 08:31	8°  15'47	10.90519 AU	max. Earth dist.	4084 Mar 06 20:21	17°  19'27 10.91479 AU
morning rise	4078 Jan 15 04:06	10°  31'53		morning rise	4084 Mar 23 15:56	19°  19'23
retrograde	4078 Apr 25 01:10	17°  31'41		retrograde	4084 Jul 04 17:50	26°  36'16
opposition	4078 Jul 03 15:40	14°  30'34	1°14'59	opposition	4084 Sep 13 10:57	23°  15'28 -1°46'25
min. Earth dist.	4078 Jul 03 16:42	14°  30'22	8.93196 AU	min. Earth dist.	4084 Sep 13 12:07	23°  15'15 8.88603 AU
direct	4078 Sep 12 15:47	10°  34'07		direct	4084 Nov 22 00:06	19°  56'54
evening set	4078 Dec 24 08:30	17°  35'23		evening set	4085 Mar 02 01:23	27°  04'23
conjunction	4079 Jan 10 03:19	19°  35'13	0°49'07	conjunction	4085 Mar 18 18:10	29°  04'12 -1°36'21
minimum elong	4079 Jan 10 03:20	19°  35'13	0°49'08	minimum elong	4085 Mar 18 18:08	29°  04'12 1°36'22
max. Earth dist.	4079 Jan 10 01:48	19°  35'11	10.95386 AU	max. Earth dist.	4085 Mar 18 15:56	29°  03'32 10.85198 AU
morning rise	4079 Jan 26 20:00	21°  35'05			4085 Mar 26 11:47	0° 
retrograde	4079 May 07 00:30	28°  35'50		morning rise	4085 Apr 04 13:45	1°  04'51
opposition	4079 Jul 15 22:41	25°  34'50	0°44'57	retrograde	4085 Jul 17 08:40	8°  28'06
min. Earth dist.	4079 Jul 15 23:51	25°  34'37	8.97157 AU	opposition	4085 Sep 26 00:11	5°  06'13 -2°08'57
direct	4079 Sep 24 21:49	22°  31'42		min. Earth dist.	4085 Sep 26 01:50	5°  05'55 8.81551 AU
evening set	4080 Jan 04 23:14	29°  32'45		direct	4085 Dec 04 02:29	1°  47'18
	4080 Jan 10 06:43	0° 		evening set	4086 Mar 14 01:52	8°  58'32
conjunction	4080 Jan 21 16:48	1°  21'07	0°23'52	conjunction	4086 Mar 30 20:02	10°  59'40 -1°52'33
minimum elong	4080 Jan 21 16:49	1°  21'07	0°23'53	minimum elong	4086 Mar 30 20:00	10°  59'40 1°52'33
max. Earth dist.	4080 Jan 21 14:56	1°  20'33	10.98445 AU	max. Earth dist.	4086 Mar 30 17:56	10°  59'02 10.77374 AU
morning rise	4080 Feb 07 09:07	3°  19'08		morning rise	4086 Apr 16 17:34	13°  01'50
retrograde	4080 May 17 23:21	10°  21'58		retrograde	4086 Jul 30 04:33	20°  03'22
opposition	4080 Jul 27 04:46	7°  03'51	0°13'18	opposition	4086 Oct 08 17:03	17°  09'17 -2°26'17
min. Earth dist.	4080 Jul 27 06:41	7°  03'30	8.99263 AU	min. Earth dist.	4086 Oct 08 18:30	17°  09'00 8.73073 AU
direct	4080 Oct 05 23:44	3°  44'15		direct	4086 Dec 16 09:32	13°  49'50
desc. node	4080 Dec 30 12:13	9°  01'39		evening set	4087 Mar 26 08:30	21°  05'59
evening set	4081 Jan 15 12:09	10°  49'44				
conjunction	4081 Feb 01 04:47	12°  47'44	-0°02'20	conjunction	4087 Apr 12 04:53	23°  08'51 -2°04'01
minimum elong	4081 Feb 01 04:46	12°  47'44	0°02'19	minimum elong	4087 Apr 12 04:52	23°  08'51 2°04'01
behind sun begin	4081 Jan 31 21:47	12°  45'41		max. Earth dist.	4087 Apr 12 03:45	23°  08'30 10.68292 AU
behind sun end	4081 Feb 01 11:45	12°  49'46		morning rise	4087 Apr 29 04:56	25°  09'53
max. Earth dist.	4081 Feb 01 02:05	12°  46'59	10.99596 AU		4087 Jun 12 23:14	0° 
morning rise	4081 Feb 17 21:07	14°  45'39		retrograde	4087 Aug 12 08:35	2°  51'15

	4087 Oct 14 09:24	30° κ Υ		opposition	4094 Jan 08 16:46	18° \mathfrak{D} 46'48	-1°03'45
opposition	4087 Oct 21 14:11	29° Υ 26'55	-2°37'22	min. Earth dist.	4094 Jan 08 14:23	18° \mathfrak{D} 47'17	8.12650 AU
min. Earth dist.	4087 Oct 21 14:43	29° Υ 26'48	8.63540 AU	direct	4094 Mar 16 10:12	15° \mathfrak{D} 19'45	
direct	4087 Dec 28 20:12	26° Υ 06'44		evening set	4094 Jun 27 15:08	23° \mathfrak{D} 21'17	
	4088 Mar 07 02:32	0° \mathfrak{B}					
evening set	4088 Apr 06 22:25	3° \mathfrak{B} 28'44		conjunction	4094 Jul 15 15:39	25° \mathfrak{D} 39'56	-0°36'27
				minimum elong	4094 Jul 15 15:41	25° \mathfrak{D} 39'57	0°36'28
conjunction	4088 Apr 23 21:43	5° \mathfrak{B} 33'41	-2°09'58	max. Earth dist.	4094 Jul 15 18:43	25° \mathfrak{D} 40'55	10.10831 AU
minimum elong	4088 Apr 23 21:42	5° \mathfrak{B} 33'41	2°09'58	morning rise	4094 Aug 02 18:01	27° \mathfrak{D} 59'12	
max. Earth dist.	4088 Apr 23 20:55	5° \mathfrak{B} 33'26	10.58402 AU		4094 Aug 19 02:52	0° \mathfrak{Q}	
morning rise	4088 May 11 01:03	7° \mathfrak{B} 39'56		retrograde	4094 Nov 16 08:06	6° \mathfrak{Q} 11'28	
	4088 Aug 01 23:23	15° \mathfrak{B}		opposition	4095 Jan 22 16:02	2° \mathfrak{Q} 42'25	-0°26'04
retrograde	4088 Aug 24 19:47	15° \mathfrak{B} 26'11		min. Earth dist.	4095 Jan 22 13:32	2° \mathfrak{Q} 42'56	8.09617 AU
	4088 Sep 16 16:28	15° \mathfrak{R} \mathfrak{B}			4095 Mar 01 13:44	30° \mathfrak{R} \mathfrak{D}	
opposition	4088 Nov 02 15:57	12° \mathfrak{B} 00'38	-2°41'17	direct	4095 Mar 30 11:17	29° \mathfrak{D} 14'24	
min. Earth dist.	4088 Nov 02 16:01	12° \mathfrak{B} 00'37	8.53440 AU		4095 Apr 28 05:59	0° \mathfrak{Q}	
direct	4089 Jan 09 09:50	8° \mathfrak{B} 39'29		evening set	4095 Jul 12 10:05	7° \mathfrak{Q} 20'11	
	4089 Apr 10 09:53	15° \mathfrak{B}					
evening set	4089 Apr 19 20:26	16° \mathfrak{B} 08'07		conjunction	4095 Jul 30 12:40	9° \mathfrak{Q} 39'42	-0°05'16
				minimum elong	4095 Jul 30 12:40	9° \mathfrak{Q} 39'42	0°05'16
conjunction	4089 May 06 23:16	18° \mathfrak{B} 15'24	-2°09'47	behind sun begin	4095 Jul 30 05:33	9° \mathfrak{Q} 37'26	
minimum elong	4089 May 06 23:17	18° \mathfrak{B} 15'24	2°09'47	behind sun end	4095 Jul 30 19:46	9° \mathfrak{Q} 41'58	
max. Earth dist.	4089 May 06 22:25	18° \mathfrak{B} 15'08	10.48217 AU	max. Earth dist.	4095 Jul 30 15:22	9° \mathfrak{Q} 40'32	10.08993 AU
morning rise	4089 May 24 06:34	20° \mathfrak{B} 24'05		morning rise	4095 Aug 17 16:01	11° \mathfrak{Q} 59'28	
retrograde	4089 Sep 07 10:47	28° \mathfrak{B} 17'52			4095 Sep 11 13:53	15° \mathfrak{Q}	
opposition	4089 Nov 15 22:22	24° \mathfrak{B} 51'10	-2°37'20	asc. node	4095 Sep 30 17:30	17° \mathfrak{Q} 00'31	
min. Earth dist.	4089 Nov 15 22:22	24° \mathfrak{B} 51'10	8.43301 AU	retrograde	4095 Nov 30 15:32	20° \mathfrak{Q} 09'55	
direct	4090 Jan 22 07:38	21° \mathfrak{B} 28'54		opposition	4096 Feb 05 15:50	16° \mathfrak{Q} 41'20	0°13'20
evening set	4090 May 03 02:53	29° \mathfrak{B} 04'34		min. Earth dist.	4096 Feb 05 13:45	16° \mathfrak{Q} 41'45	8.08984 AU
	4090 May 10 13:21	0° \mathfrak{I}			4096 Feb 27 02:13	15° \mathfrak{R} \mathfrak{Q}	
				direct	4096 Apr 12 15:32	13° \mathfrak{Q} 12'34	
conjunction	4090 May 20 10:00	1° \mathfrak{I} 14'24	-2°03'04		4096 May 27 15:38	15° \mathfrak{Q}	
minimum elong	4090 May 20 10:02	1° \mathfrak{I} 14'24	2°03'05	evening set	4096 Jul 26 07:34	21° \mathfrak{Q} 21'04	
max. Earth dist.	4090 May 20 09:24	1° \mathfrak{I} 14'12	10.38279 AU				
morning rise	4090 Jun 06 21:43	3° \mathfrak{I} 25'38		conjunction	4096 Aug 13 10:37	23° \mathfrak{Q} 40'38	0°26'24
retrograde	4090 Sep 21 07:39	11° \mathfrak{I} 26'11		minimum elong	4096 Aug 13 10:35	23° \mathfrak{Q} 40'38	0°26'23
opposition	4090 Nov 29 09:28	7° \mathfrak{I} 58'29	-2°25'11	max. Earth dist.	4096 Aug 13 12:51	23° \mathfrak{Q} 41'21	10.09578 AU
min. Earth dist.	4090 Nov 29 09:24	7° \mathfrak{I} 58'30	8.33665 AU	morning rise	4096 Aug 31 13:21	26° \mathfrak{Q} 00'05	
direct	4091 Feb 04 11:43	4° \mathfrak{I} 35'00			4096 Oct 04 13:12	0° \mathfrak{P}	
evening set	4091 May 16 17:56	12° \mathfrak{I} 17'47		retrograde	4096 Dec 13 20:11	4° \mathfrak{P} 06'57	
				opposition	4097 Feb 18 15:14	0° \mathfrak{P} 39'06	0°51'53
conjunction	4091 Jun 03 05:51	14° \mathfrak{I} 30'14	-1°49'46	min. Earth dist.	4097 Feb 18 13:22	0° \mathfrak{P} 39'29	8.10793 AU
minimum elong	4091 Jun 03 05:54	14° \mathfrak{I} 30'14	1°49'46		4097 Feb 26 14:26	30° \mathfrak{R} \mathfrak{Q}	
max. Earth dist.	4091 Jun 03 06:22	14° \mathfrak{I} 30'23	10.29110 AU	direct	4097 Apr 26 22:48	27° \mathfrak{Q} 09'54	
morning rise	4091 Jun 20 22:05	16° \mathfrak{I} 44'02			4097 Jun 23 15:39	0° \mathfrak{P}	
retrograde	4091 Oct 05 09:51	24° \mathfrak{I} 50'06		evening set	4097 Aug 10 04:45	5° \mathfrak{P} 19'23	
opposition	4091 Dec 13 00:40	21° \mathfrak{I} 21'37	-2°04'57				
min. Earth dist.	4091 Dec 12 23:56	21° \mathfrak{I} 21'46	8.25039 AU	conjunction	4097 Aug 28 06:45	7° \mathfrak{P} 38'10	0°56'19
direct	4092 Feb 17 21:17	17° \mathfrak{I} 56'53		minimum elong	4097 Aug 28 06:43	7° \mathfrak{P} 38'09	0°56'18
evening set	4092 May 29 17:40	25° \mathfrak{I} 46'36		max. Earth dist.	4097 Aug 28 08:46	7° \mathfrak{P} 38'49	10.12558 AU
				morning rise	4097 Sep 15 07:20	9° \mathfrak{P} 56'29	
conjunction	4092 Jun 16 10:26	28° \mathfrak{I} 01'31	-1°30'15	retrograde	4097 Dec 27 19:00	17° \mathfrak{P} 58'19	
minimum elong	4092 Jun 16 10:29	28° \mathfrak{I} 01'32	1°30'15	opposition	4098 Mar 04 12:57	14° \mathfrak{P} 31'26	1°27'06
max. Earth dist.	4092 Jun 16 12:07	28° \mathfrak{I} 02'03	10.21195 AU	min. Earth dist.	4098 Mar 04 11:00	14° \mathfrak{P} 31'50	8.14937 AU
	4092 Jul 01 22:39	0° \mathfrak{D}		direct	4098 May 11 06:56	11° \mathfrak{P} 02'07	
morning rise	4092 Jul 04 06:51	0° \mathfrak{D} 17'38		evening set	4098 Aug 24 23:24	19° \mathfrak{P} 10'44	
retrograde	4092 Oct 18 15:56	8° \mathfrak{D} 27'38					
opposition	4092 Dec 25 19:16	4° \mathfrak{D} 58'39	-1°37'21	conjunction	4098 Sep 11 23:05	21° \mathfrak{P} 28'03	1°22'43
min. Earth dist.	4092 Dec 25 17:40	4° \mathfrak{D} 58'59	8.17895 AU	minimum elong	4098 Sep 11 23:02	21° \mathfrak{P} 28'02	1°22'43
direct	4093 Mar 02 13:04	1° \mathfrak{D} 32'43		max. Earth dist.	4098 Sep 12 01:03	21° \mathfrak{P} 28'41	10.17755 AU
evening set	4093 Jun 13 01:12	9° \mathfrak{D} 28'48		morning rise	4098 Sep 29 20:14	23° \mathfrak{P} 44'34	
					4098 Nov 28 08:42	0° \mathfrak{D}	
conjunction	4093 Jun 30 22:19	11° \mathfrak{D} 45'52	-1°05'22	retrograde	4099 Jan 10 13:11	1° \mathfrak{D} 40'10	
minimum elong	4093 Jun 30 22:21	11° \mathfrak{D} 45'53	1°05'23		4099 Feb 23 13:54	30° \mathfrak{R} \mathfrak{P}	
max. Earth dist.	4093 Jul 01 00:57	11° \mathfrak{D} 46'43	10.14980 AU	opposition	4099 Mar 18 07:50	28° \mathfrak{P} 14'26	1°56'52
morning rise	4093 Jul 18 22:14	14° \mathfrak{D} 03'52		min. Earth dist.	4099 Mar 18 05:31	28° \mathfrak{P} 14'55	8.21158 AU
retrograde	4093 Nov 01 23:36	22° \mathfrak{D} 15'58		direct	4099 May 25 12:41	24° \mathfrak{P} 45'22	

	4099 Aug 15 13:53	0°♏	
evening set	4099 Sep 08 13:02	2°♏51'18	
conjunction	4099 Sep 26 09:23	5°♏06'37	1°44'08
minimum elong	4099 Sep 26 09:20	5°♏06'36	1°44'08
max. Earth dist.	4099 Sep 26 11:40	5°♏07'20	10.24854 AU
morning rise	4099 Oct 14 02:15	7°♏20'52	
retrograde	4100 Jan 24 02:39	15°♏09'25	
opposition	4100 Mar 31 23:24	11°♏44'57	2°19'37
min. Earth dist.	4100 Mar 31 21:05	11°♏45'25	8.29080 AU
direct	4100 Jun 08 14:50	8°♏16'26	
evening set	4100 Sep 22 19:25	16°♏17'59	
conjunction	4100 Oct 10 11:48	18°♏30'58	1°59'31
minimum elong	4100 Oct 10 11:46	18°♏30'57	1°59'31
max. Earth dist.	4100 Oct 10 14:10	18°♏31'42	10.33436 AU
morning rise	4100 Oct 28 00:03	20°♏42'42	
retrograde	4101 Feb 06 09:56	28°♏23'45	
opposition	4101 Apr 14 10:57	25°♏00'37	2°34'24
min. Earth dist.	4101 Apr 14 09:13	25°♏00'58	8.38251 AU
direct	4101 Jun 22 13:14	21°♏32'52	
evening set	4101 Oct 06 17:19	29°♏28'41	
	4101 Oct 10 23:08	0°♎	
conjunction	4101 Oct 24 05:32	1°♎39'10	2°08'19
minimum elong	4101 Oct 24 05:31	1°♎39'10	2°08'20
max. Earth dist.	4101 Oct 24 07:17	1°♎39'43	10.43028 AU
morning rise	4101 Nov 10 13:22	3°♎48'21	