

morning rise	7100 Jan 15 11:39	11° $\overline{3}$ 10'48	retrograde	7105 May 10 10:14	7° \approx 51'19
retrograde	7100 Apr 17 01:07	14° $\overline{3}$ 32'05	opposition	7105 Jul 23 23:52	5° \approx 50'20 -0°19'34
opposition	7100 Jun 29 23:17	12° $\overline{3}$ 29'56 0°03'02	min. Earth dist.	7105 Jul 24 05:10	5° \approx 49'46 17.64597 AU
min. Earth dist.	7100 Jun 30 09:55	12° $\overline{3}$ 28'47 17.40178 AU	direct	7105 Oct 08 21:48	3° \approx 46'07
direct	7100 Sep 14 13:10	10° $\overline{3}$ 24'12	evening set	7106 Jan 11 21:35	7° \approx 10'36
evening set	7100 Dec 19 01:01	13° $\overline{3}$ 52'20			
conjunction	7101 Jan 04 07:48	14° $\overline{3}$ 53'14 0°00'37	conjunction	7106 Jan 27 23:15	8° \approx 10'04 -0°19'32
minimum elong	7101 Jan 04 07:47	14° $\overline{3}$ 53'14 0°00'42	minimum elong	7106 Jan 27 23:15	8° \approx 10'04 0°19'29
behind sun begin	7101 Jan 04 01:08	14° $\overline{3}$ 52'12	max. Earth dist.	7106 Jan 27 17:58	8° \approx 09'15 19.67560 AU
behind sun end	7101 Jan 04 14:27	14° $\overline{3}$ 54'15	morning rise	7106 Feb 12 22:11	9° \approx 09'07
max. Earth dist.	7101 Jan 03 19:57	14° $\overline{3}$ 51'23 19.42063 AU	retrograde	7106 May 15 07:03	12° \approx 26'59
morning rise	7101 Jan 20 11:17	15° $\overline{3}$ 53'38	opposition	7106 Jul 28 22:48	10° \approx 26'14 -0°23'46
desc. node	7101 Feb 25 16:18	17° $\overline{3}$ 53'09	min. Earth dist.	7106 Jul 29 02:01	10° \approx 25'54 17.70551 AU
retrograde	7101 Apr 21 22:04	19° $\overline{3}$ 14'25	direct	7106 Oct 13 23:24	8° \approx 22'22
opposition	7101 Jul 04 23:55	17° $\overline{3}$ 12'27 -0°01'37	evening set	7107 Jan 16 18:23	11° \approx 45'53
min. Earth dist.	7101 Jul 05 10:10	17° $\overline{3}$ 11'21 17.44103 AU	conjunction	7107 Feb 01 19:12	12° \approx 45'02 -0°23'14
direct	7101 Sep 19 13:59	15° $\overline{3}$ 06'56	minimum elong	7107 Feb 01 19:12	12° \approx 45'02 0°23'10
evening set	7101 Dec 24 01:53	18° $\overline{3}$ 34'31	max. Earth dist.	7107 Feb 01 16:09	12° \approx 44'34 19.73614 AU
conjunction	7102 Jan 09 07:41	19° $\overline{3}$ 35'09 -0°03'39	morning rise	7107 Feb 17 17:06	13° \approx 43'47
minimum elong	7102 Jan 09 07:40	19° $\overline{3}$ 35'09 0°03'34		7107 Mar 11 21:34	15° \approx
behind sun begin	7102 Jan 09 01:04	19° $\overline{3}$ 34'08	retrograde	7107 May 20 00:58	17° \approx 00'59
behind sun end	7102 Jan 09 14:17	19° $\overline{3}$ 36'09	opposition	7107 Aug 02 21:36	15° \approx 00'27 -0°27'46
max. Earth dist.	7102 Jan 08 21:05	19° $\overline{3}$ 33'30 19.46280 AU	min. Earth dist.	7107 Aug 03 00:32	15° \approx 00'09 17.76696 AU
morning rise	7102 Jan 25 10:16	20° $\overline{3}$ 35'19	direct	7107 Aug 03 01:56	15° \approx
retrograde	7102 Apr 26 21:34	23° $\overline{3}$ 55'33		7107 Oct 18 22:26	12° \approx 56'55
opposition	7102 Jul 10 00:14	21° $\overline{3}$ 53'49 -0°06'14	evening set	7107 Dec 29 07:53	15° \approx
min. Earth dist.	7102 Jul 10 08:13	21° $\overline{3}$ 52'58 17.48573 AU		7108 Jan 21 14:13	16° \approx 19'24
direct	7102 Sep 24 17:59	19° $\overline{3}$ 48'36	conjunction	7108 Feb 06 13:56	17° \approx 18'14 -0°26'45
evening set	7102 Dec 29 02:00	23° $\overline{3}$ 15'31	minimum elong	7108 Feb 06 13:56	17° \approx 18'14 0°26'43
conjunction	7103 Jan 14 06:48	24° $\overline{3}$ 15'53 -0°07'44	max. Earth dist.	7108 Feb 06 11:06	17° \approx 17'48 19.79839 AU
minimum elong	7103 Jan 14 06:48	24° $\overline{3}$ 15'53 0°07'41	morning rise	7108 Feb 22 11:13	18° \approx 16'41
behind sun begin	7103 Jan 14 00:46	24° $\overline{3}$ 14'58	retrograde	7108 May 23 20:23	21° \approx 33'13
behind sun end	7103 Jan 14 12:49	24° $\overline{3}$ 16'48	opposition	7108 Aug 06 19:40	19° \approx 32'51 -0°31'35
max. Earth dist.	7103 Jan 13 22:07	24° $\overline{3}$ 14'32 19.51002 AU	min. Earth dist.	7108 Aug 06 20:38	19° \approx 32'45 17.82986 AU
morning rise	7103 Jan 30 08:20	25° $\overline{3}$ 15'47	direct	7108 Oct 22 21:40	17° \approx 29'38
retrograde	7103 May 01 17:20	28° $\overline{3}$ 35'28	evening set	7109 Jan 25 09:04	20° \approx 51'02
opposition	7103 Jul 15 00:30	26° $\overline{3}$ 34'00 -0°10'47	conjunction	7109 Feb 10 08:02	21° \approx 49'32 -0°30'06
min. Earth dist.	7103 Jul 15 08:13	26° $\overline{3}$ 33'10 17.53530 AU	minimum elong	7109 Feb 10 08:02	21° \approx 49'32 0°30'02
direct	7103 Sep 29 18:22	24° $\overline{3}$ 29'05	max. Earth dist.	7109 Feb 10 07:29	21° \approx 49'27 19.86176 AU
evening set	7104 Jan 03 01:24	27° $\overline{3}$ 55'17	morning rise	7109 Feb 26 04:25	22° \approx 47'42
conjunction	7104 Jan 19 05:05	28° $\overline{3}$ 55'21 -0°11'46	retrograde	7109 May 28 13:13	26° \approx 03'29
minimum elong	7104 Jan 19 05:05	28° $\overline{3}$ 55'21 0°11'41	opposition	7109 Aug 11 17:05	24° \approx 03'18 -0°35'11
behind sun begin	7104 Jan 19 00:22	28° $\overline{3}$ 54'38	min. Earth dist.	7109 Aug 11 17:37	24° \approx 03'15 17.89365 AU
behind sun end	7104 Jan 19 09:48	28° $\overline{3}$ 56'04	direct	7109 Oct 27 19:31	22° \approx 00'24
max. Earth dist.	7104 Jan 18 21:16	28° $\overline{3}$ 54'09 19.56183 AU	evening set	7110 Jan 30 03:04	25° \approx 20'39
morning rise	7104 Feb 04 05:47	29° $\overline{3}$ 54'59	conjunction	7110 Feb 15 01:01	26° \approx 18'50 -0°33'14
retrograde	7104 Feb 05 14:48	0° \approx	minimum elong	7110 Feb 15 01:01	26° \approx 18'50 0°33'11
opposition	7104 May 05 15:41	3° \approx 14'06	max. Earth dist.	7110 Feb 15 00:32	26° \approx 18'46 19.92598 AU
min. Earth dist.	7104 Jul 19 00:16	1° \approx 12'52 -0°15'14	morning rise	7110 Mar 02 20:52	27° \approx 16'42
direct	7104 Jul 19 05:43	1° \approx 12'17 17.58901 AU		7110 Apr 28 17:37	0° \approx
evening set	7104 Aug 18 12:56	30° \approx	retrograde	7110 Jun 02 07:19	0° \approx 31'46
conjunction	7104 Oct 03 21:50	29° $\overline{3}$ 08'19		7110 Jul 07 20:32	30° \approx
minimum elong	7104 Nov 17 19:52	0° \approx	opposition	7110 Aug 16 13:54	28° \approx 31'42 -0°38'32
behind sun begin	7105 Jan 06 23:47	2° \approx 33'41	min. Earth dist.	7110 Aug 16 12:41	28° \approx 31'49 17.95826 AU
behind sun end			direct	7110 Nov 01 16:55	26° \approx 29'04
max. Earth dist.	7105 Jan 23 02:35	3° \approx 33'28 -0°15'43	evening set	7111 Feb 03 19:44	29° \approx 48'09
morning rise	7105 Jan 23 02:35	3° \approx 33'28 0°15'39		7111 Feb 07 02:44	0° \approx
retrograde	7105 Jan 23 01:00	3° \approx 33'13	conjunction	7111 Feb 19 17:02	0° \approx 46'01 -0°36'08
opposition	7105 Jan 23 04:09	3° \approx 33'42	minimum elong	7111 Feb 19 17:02	0° \approx 46'01 0°36'06
min. Earth dist.	7105 Jan 22 20:55	3° \approx 32'36 19.61723 AU	max. Earth dist.	7111 Feb 19 19:02	0° \approx 46'19 19.99088 AU
direct	7105 Feb 08 02:16	4° \approx 32'48			

morning rise	7111 Mar 07 12:05	1° $\mathbf{\text{H}}$ 43'34			7118 Mar 04 09:08	0° $\mathbf{\text{Y}}$
retrograde	7111 Jun 06 22:47	4° $\mathbf{\text{H}}$ 57'54		evening set	7118 Mar 05 14:31	0° $\mathbf{\text{Y}}$ 04'16
opposition	7111 Aug 21 10:09	2° $\mathbf{\text{H}}$ 57'57 -0°41'38				
min. Earth dist.	7111 Aug 21 08:03	2° $\mathbf{\text{H}}$ 58'10 18.02349 AU		conjunction	7118 Mar 21 07:30	1° $\mathbf{\text{Y}}$ 00'03 -0°49'24
direct	7111 Nov 06 13:45	0° $\mathbf{\text{H}}$ 55'38		minimum elong	7118 Mar 21 07:29	1° $\mathbf{\text{Y}}$ 00'03 0°49'24
evening set	7112 Feb 08 11:34	4° $\mathbf{\text{H}}$ 13'30		max. Earth dist.	7118 Mar 21 18:14	1° $\mathbf{\text{Y}}$ 01'39 20.46194 AU
				morning rise	7118 Apr 06 00:01	1° $\mathbf{\text{Y}}$ 55'47
conjunction	7112 Feb 24 07:56	5° $\mathbf{\text{H}}$ 11'01 -0°38'49		retrograde	7118 Jul 06 23:14	5° $\mathbf{\text{Y}}$ 05'42
minimum elong	7112 Feb 24 07:56	5° $\mathbf{\text{H}}$ 11'01 0°38'47		opposition	7118 Sep 21 12:00	3° $\mathbf{\text{Y}}$ 06'45 -0°55'14
max. Earth dist.	7112 Feb 24 10:18	5° $\mathbf{\text{H}}$ 11'23 20.05656 AU		min. Earth dist.	7118 Sep 21 00:49	3° $\mathbf{\text{Y}}$ 07'53 18.49478 AU
morning rise	7112 Mar 11 02:34	6° $\mathbf{\text{H}}$ 08'17		direct	7118 Dec 07 14:10	1° $\mathbf{\text{Y}}$ 07'02
retrograde	7112 Jun 10 15:14	9° $\mathbf{\text{H}}$ 21'54		evening set	7119 Mar 10 00:06	4° $\mathbf{\text{Y}}$ 16'55
opposition	7112 Aug 25 05:31	7° $\mathbf{\text{H}}$ 22'02 -0°44'27				
min. Earth dist.	7112 Aug 25 01:43	7° $\mathbf{\text{H}}$ 22'25 18.08973 AU		conjunction	7119 Mar 25 16:52	5° $\mathbf{\text{Y}}$ 12'28 -0°50'14
direct	7112 Nov 10 09:34	5° $\mathbf{\text{H}}$ 20'00		minimum elong	7119 Mar 25 16:52	5° $\mathbf{\text{Y}}$ 12'28 0°50'14
evening set	7113 Feb 12 02:11	8° $\mathbf{\text{H}}$ 36'40		max. Earth dist.	7119 Mar 26 05:26	5° $\mathbf{\text{Y}}$ 14'20 20.52686 AU
				morning rise	7119 Apr 10 09:08	6° $\mathbf{\text{Y}}$ 07'58
conjunction	7113 Feb 27 22:00	9° $\mathbf{\text{H}}$ 33'53 -0°41'14		retrograde	7119 Jul 11 11:34	9° $\mathbf{\text{Y}}$ 17'23
minimum elong	7113 Feb 27 22:00	9° $\mathbf{\text{H}}$ 33'53 0°41'13		opposition	7119 Sep 26 02:56	7° $\mathbf{\text{Y}}$ 18'36 -0°55'59
max. Earth dist.	7113 Feb 28 02:56	9° $\mathbf{\text{H}}$ 34'38 20.12319 AU		min. Earth dist.	7119 Sep 25 14:21	7° $\mathbf{\text{Y}}$ 19'52 18.55848 AU
morning rise	7113 Mar 15 15:59	10° $\mathbf{\text{H}}$ 30'52		direct	7119 Dec 12 05:06	5° $\mathbf{\text{Y}}$ 19'17
retrograde	7113 Jun 15 05:19	13° $\mathbf{\text{H}}$ 43'46		evening set	7120 Mar 13 09:17	8° $\mathbf{\text{Y}}$ 28'07
opposition	7113 Aug 30 00:16	11° $\mathbf{\text{H}}$ 44'00 -0°47'00				
min. Earth dist.	7113 Aug 29 19:10	11° $\mathbf{\text{H}}$ 44'32 18.15677 AU		conjunction	7120 Mar 29 01:38	9° $\mathbf{\text{Y}}$ 23'26 -0°50'47
direct	7113 Nov 15 04:51	9° $\mathbf{\text{H}}$ 42'19		minimum elong	7120 Mar 29 01:38	9° $\mathbf{\text{Y}}$ 23'26 0°50'48
evening set	7114 Feb 16 16:03	12° $\mathbf{\text{H}}$ 57'47		max. Earth dist.	7120 Mar 29 14:20	9° $\mathbf{\text{Y}}$ 25'19 20.58919 AU
				morning rise	7120 Apr 13 17:59	10° $\mathbf{\text{Y}}$ 18'45
conjunction	7114 Mar 04 11:01	13° $\mathbf{\text{H}}$ 54'41 -0°43'24		retrograde	7120 Jul 14 21:46	13° $\mathbf{\text{Y}}$ 27'41
minimum elong	7114 Mar 04 11:01	13° $\mathbf{\text{H}}$ 54'41 0°43'23		opposition	7120 Sep 29 17:13	11° $\mathbf{\text{Y}}$ 29'01 -0°56'26
max. Earth dist.	7114 Mar 04 16:25	13° $\mathbf{\text{H}}$ 55'30 20.19066 AU		min. Earth dist.	7120 Sep 29 04:33	11° $\mathbf{\text{Y}}$ 30'18 18.61946 AU
morning rise	7114 Mar 20 04:40	14° $\mathbf{\text{H}}$ 51'23		direct	7120 Dec 15 17:24	9° $\mathbf{\text{Y}}$ 30'03
retrograde	7114 Jun 19 20:09	18° $\mathbf{\text{H}}$ 03'38		evening set	7121 Mar 17 17:43	12° $\mathbf{\text{Y}}$ 37'54
opposition	7114 Sep 03 18:18	16° $\mathbf{\text{H}}$ 04'00 -0°49'14				
min. Earth dist.	7114 Sep 03 11:40	16° $\mathbf{\text{H}}$ 04'41 18.22474 AU		conjunction	7121 Apr 02 10:00	13° $\mathbf{\text{Y}}$ 33'00 -0°51'05
direct	7114 Nov 19 22:41	14° $\mathbf{\text{H}}$ 02'40		minimum elong	7121 Apr 02 10:00	13° $\mathbf{\text{Y}}$ 33'00 0°51'05
evening set	7115 Feb 21 04:51	17° $\mathbf{\text{H}}$ 16'58		max. Earth dist.	7121 Apr 03 00:01	13° $\mathbf{\text{Y}}$ 35'04 20.64846 AU
				morning rise	7121 Apr 18 02:15	14° $\mathbf{\text{Y}}$ 28'08
conjunction	7115 Mar 08 23:22	18° $\mathbf{\text{H}}$ 13'35 -0°45'18		retrograde	7121 Jul 19 09:09	17° $\mathbf{\text{Y}}$ 36'36
minimum elong	7115 Mar 08 23:22	18° $\mathbf{\text{H}}$ 13'35 0°45'18		opposition	7121 Oct 04 06:53	15° $\mathbf{\text{Y}}$ 38'03 -0°56'35
max. Earth dist.	7115 Mar 09 07:13	18° $\mathbf{\text{H}}$ 14'46 20.25890 AU		min. Earth dist.	7121 Oct 03 16:58	15° $\mathbf{\text{Y}}$ 39'27 18.67685 AU
morning rise	7115 Mar 24 16:29	19° $\mathbf{\text{H}}$ 10'01		direct	7121 Dec 20 07:13	13° $\mathbf{\text{Y}}$ 39'24
retrograde	7115 Jun 24 09:19	22° $\mathbf{\text{H}}$ 21'38		evening set	7122 Mar 22 01:37	16° $\mathbf{\text{Y}}$ 46'16
opposition	7115 Sep 08 11:43	20° $\mathbf{\text{H}}$ 22'09 -0°51'11				
min. Earth dist.	7115 Sep 08 03:34	20° $\mathbf{\text{H}}$ 22'59 18.29309 AU		conjunction	7122 Apr 06 17:37	17° $\mathbf{\text{Y}}$ 41'10 -0°51'06
direct	7115 Nov 24 16:16	18° $\mathbf{\text{H}}$ 21'14		minimum elong	7122 Apr 06 17:37	17° $\mathbf{\text{Y}}$ 41'10 0°51'08
evening set	7116 Feb 25 16:49	21° $\mathbf{\text{H}}$ 34'22		max. Earth dist.	7122 Apr 07 07:33	17° $\mathbf{\text{Y}}$ 43'13 20.70388 AU
				morning rise	7122 Apr 22 10:01	18° $\mathbf{\text{Y}}$ 36'08
conjunction	7116 Mar 12 10:41	22° $\mathbf{\text{H}}$ 30'42 -0°46'56		retrograde	7122 Jul 23 18:05	21° $\mathbf{\text{Y}}$ 44'10
minimum elong	7116 Mar 12 10:40	22° $\mathbf{\text{H}}$ 30'42 0°46'55		opposition	7122 Oct 08 20:09	19° $\mathbf{\text{Y}}$ 45'41 -0°56'27
max. Earth dist.	7116 Mar 12 19:00	22° $\mathbf{\text{H}}$ 31'57 20.32729 AU		min. Earth dist.	7122 Oct 08 06:24	19° $\mathbf{\text{Y}}$ 47'04 18.73041 AU
morning rise	7116 Mar 28 03:39	23° $\mathbf{\text{H}}$ 26'53		direct	7122 Dec 24 18:09	17° $\mathbf{\text{Y}}$ 47'18
retrograde	7116 Jun 27 22:45	26° $\mathbf{\text{H}}$ 37'54		evening set	7123 Mar 26 08:49	20° $\mathbf{\text{Y}}$ 53'13
opposition	7116 Sep 12 04:28	24° $\mathbf{\text{H}}$ 38'36 -0°52'50				
min. Earth dist.	7116 Sep 11 19:15	24° $\mathbf{\text{H}}$ 39'32 18.36142 AU		conjunction	7123 Apr 11 00:53	21° $\mathbf{\text{Y}}$ 47'56 -0°50'51
direct	7116 Nov 28 08:02	22° $\mathbf{\text{H}}$ 38'05		minimum elong	7123 Apr 11 00:53	21° $\mathbf{\text{Y}}$ 47'56 0°50'53
evening set	7117 Mar 01 03:57	25° $\mathbf{\text{H}}$ 50'06		max. Earth dist.	7123 Apr 11 15:55	21° $\mathbf{\text{Y}}$ 50'09 20.75544 AU
				morning rise	7123 Apr 26 17:21	22° $\mathbf{\text{Y}}$ 42'45
conjunction	7117 Mar 16 21:29	26° $\mathbf{\text{H}}$ 46'10 -0°48'18		retrograde	7123 Jul 28 04:13	25° $\mathbf{\text{Y}}$ 50'21
minimum elong	7117 Mar 16 21:29	26° $\mathbf{\text{H}}$ 46'10 0°48'18		opposition	7123 Oct 13 08:36	23° $\mathbf{\text{Y}}$ 51'54 -0°56'01
max. Earth dist.	7117 Mar 17 07:55	26° $\mathbf{\text{H}}$ 47'43 20.39524 AU		min. Earth dist.	7123 Oct 12 17:32	23° $\mathbf{\text{Y}}$ 53'24 18.77989 AU
morning rise	7117 Apr 01 14:04	27° $\mathbf{\text{H}}$ 42'06		direct	7123 Dec 29 06:21	21° $\mathbf{\text{Y}}$ 53'45
	7117 May 17 20:08	0° $\mathbf{\text{Y}}$		evening set	7124 Mar 29 15:25	24° $\mathbf{\text{Y}}$ 58'43
retrograde	7117 Jul 02 11:22	0° $\mathbf{\text{Y}}$ 52'33				
	7117 Aug 18 21:56	30° $\mathbf{\text{R}}$ $\mathbf{\text{H}}$		conjunction	7124 Apr 14 07:24	25° $\mathbf{\text{Y}}$ 53'17 -0°50'21
opposition	7117 Sep 16 20:24	28° $\mathbf{\text{H}}$ 53'26 -0°54'11		minimum elong	7124 Apr 14 07:24	25° $\mathbf{\text{Y}}$ 53'17 0°50'24
min. Earth dist.	7117 Sep 16 09:47	28° $\mathbf{\text{H}}$ 54'31 18.42879 AU		max. Earth dist.	7124 Apr 14 22:25	25° $\mathbf{\text{Y}}$ 55'29 20.80292 AU
direct	7117 Dec 03 00:03	26° $\mathbf{\text{H}}$ 53'19		morning rise	7124 Apr 30 00:13	26° $\mathbf{\text{Y}}$ 47'58

retrograde	7124 Jul 31 12:16	29° Υ 55'10	direct	7131 Jan 26 16:04	20° Θ 05'11
opposition	7124 Oct 16 20:32	27° Υ 56'42 -0°55'19	evening set	7131 Apr 27 01:21	23° Θ 05'19
min. Earth dist.	7124 Oct 16 05:49	27° Υ 58'10 18.82554 AU			
direct	7125 Jan 01 15:59	25° Υ 58'45	conjunction	7131 May 12 19:04	23° Θ 59'14 -0°40'12
evening set	7125 Apr 02 21:24	29° Υ 02'50	minimum elong	7131 May 12 19:05	23° Θ 59'14 0°40'17
			max. Earth dist.	7131 May 13 14:10	24° Θ 01'59 21.04252 AU
conjunction	7125 Apr 18 13:33	29° Υ 57'15 -0°49'36	morning rise	7131 May 28 14:48	24° Θ 53'27
minimum elong	7125 Apr 18 13:33	29° Υ 57'15 0°49'38	retrograde	7131 Aug 29 21:01	27° Θ 59'00
max. Earth dist.	7125 Apr 19 05:40	29° Υ 59'35 20.84674 AU	opposition	7131 Nov 15 17:04	26° Θ 00'32 -0°43'10
	7125 Apr 19 08:28	0° Θ	min. Earth dist.	7131 Nov 14 22:30	26° Θ 02'23 19.05329 AU
morning rise	7125 May 04 06:31	0° Θ 51'48	direct	7132 Jan 30 23:58	24° Θ 03'50
retrograde	7125 Aug 04 21:12	3° Θ 58'36	evening set	7132 Apr 30 05:27	27° Θ 03'34
opposition	7125 Oct 21 07:38	2° Θ 00'08 -0°54'19			
min. Earth dist.	7125 Oct 20 15:27	2° Θ 01'45 18.86758 AU	conjunction	7132 May 15 23:32	27° Θ 57'28 -0°37'55
direct	7126 Jan 06 02:33	0° Θ 02'21	minimum elong	7132 May 15 23:32	27° Θ 57'28 0°38'00
evening set	7126 Apr 07 03:00	3° Θ 05'37	max. Earth dist.	7132 May 16 18:14	28° Θ 00'08 21.06238 AU
			morning rise	7132 May 31 19:58	28° Θ 51'41
conjunction	7126 Apr 22 19:07	3° Θ 59'54 -0°48'35		7132 Jun 22 06:00	0° Π
minimum elong	7126 Apr 22 19:08	3° Θ 59'54 0°48'38	retrograde	7132 Sep 02 04:10	1° Π 57'12
max. Earth dist.	7126 Apr 23 11:24	4° Θ 02'15 20.88716 AU	min. Earth dist.	7132 Nov 18 08:10	0° Π 00'29 19.07090 AU
morning rise	7126 May 08 12:31	4° Θ 54'21		7132 Nov 18 12:59	30° \mathcal{R} Θ
retrograde	7126 Aug 09 04:44	8° Θ 00'50	opposition	7132 Nov 19 01:33	29° Θ 58'45 -0°40'32
opposition	7126 Oct 25 18:28	6° Θ 02'19 -0°53'04	direct	7133 Feb 03 04:50	28° Θ 02'11
min. Earth dist.	7126 Oct 25 02:33	6° Θ 03'55 18.90659 AU		7133 Apr 15 04:00	0° Π
direct	7127 Jan 10 10:31	4° Θ 04'44	evening set	7133 May 04 09:28	1° Π 01'34
evening set	7127 Apr 11 07:54	7° Θ 07'13			
			conjunction	7133 May 20 04:08	1° Π 55'28 -0°35'28
conjunction	7127 Apr 27 00:20	8° Θ 01'23 -0°47'21	minimum elong	7133 May 20 04:08	1° Π 55'28 0°35'32
minimum elong	7127 Apr 27 00:20	8° Θ 01'23 0°47'24	max. Earth dist.	7133 May 20 23:04	1° Π 58'11 21.07759 AU
max. Earth dist.	7127 Apr 27 17:47	8° Θ 03'55 20.92468 AU	morning rise	7133 Jun 05 01:06	2° Π 49'43
morning rise	7127 May 12 18:01	8° Θ 55'45	retrograde	7133 Sep 06 12:44	5° Π 55'13
retrograde	7127 Aug 13 13:25	12° Θ 01'57	opposition	7133 Nov 23 09:36	3° Π 56'47 -0°37'43
min. Earth dist.	7127 Oct 29 11:07	10° Θ 05'11 18.94258 AU	min. Earth dist.	7133 Nov 22 15:29	3° Π 58'35 19.08350 AU
opposition	7127 Oct 30 04:35	10° Θ 03'26 -0°51'33	direct	7134 Feb 07 12:09	2° Π 00'19
direct	7128 Jan 14 20:00	8° Θ 06'01	evening set	7134 May 08 13:42	4° Π 59'26
evening set	7128 Apr 14 12:43	11° Θ 07'50			
			conjunction	7134 May 24 08:48	5° Π 53'21 -0°32'50
conjunction	7128 Apr 30 05:17	12° Θ 01'54 -0°45'53	minimum elong	7134 May 24 08:48	5° Π 53'21 0°32'55
minimum elong	7128 Apr 30 05:17	12° Θ 01'54 0°45'55	max. Earth dist.	7134 May 25 02:58	5° Π 55'57 21.08751 AU
max. Earth dist.	7128 Apr 30 22:49	12° Θ 04'26 20.95911 AU	morning rise	7134 Jun 09 06:31	6° Π 47'39
morning rise	7128 May 15 23:29	12° Θ 56'13	retrograde	7134 Sep 10 20:07	9° Π 53'12
	7128 Jun 26 21:54	15° Θ	opposition	7134 Nov 27 17:44	7° Π 54'43 -0°34'44
retrograde	7128 Aug 16 20:29	16° Θ 02'10	min. Earth dist.	7134 Nov 27 01:04	7° Π 56'23 19.09072 AU
	7128 Oct 09 01:43	15° \mathcal{R} Θ	direct	7135 Feb 11 16:58	5° Π 58'19
opposition	7128 Nov 02 14:14	14° Θ 03'39 -0°49'48	evening set	7135 May 12 17:50	8° Π 57'13
min. Earth dist.	7128 Nov 01 21:18	14° Θ 05'20 18.97554 AU			
direct	7129 Jan 18 02:11	12° Θ 06'25	conjunction	7135 May 28 13:40	9° Π 51'11 -0°30'03
	7129 Apr 16 10:51	15° Θ	minimum elong	7135 May 28 13:40	9° Π 51'11 0°30'07
evening set	7129 Apr 18 17:06	15° Θ 07'36	max. Earth dist.	7135 May 29 07:40	9° Π 53'45 21.09194 AU
			morning rise	7135 Jun 13 12:04	10° Π 45'31
conjunction	7129 May 04 10:05	16° Θ 01'36 -0°44'11	retrograde	7135 Sep 15 04:48	13° Π 51'09
minimum elong	7129 May 04 10:05	16° Θ 01'36 0°44'15	min. Earth dist.	7135 Dec 01 08:21	11° Π 54'19 19.09215 AU
max. Earth dist.	7129 May 05 04:31	16° Θ 04'16 20.99050 AU	opposition	7135 Dec 02 01:30	11° Π 52'36 -0°31'34
morning rise	7129 May 20 04:41	16° Θ 55'52	direct	7136 Feb 15 23:39	9° Π 56'13
retrograde	7129 Aug 21 05:17	20° Θ 01'37	evening set	7136 May 15 22:18	12° Π 54'58
opposition	7129 Nov 06 23:27	18° Θ 03'08 -0°47'48			
min. Earth dist.	7129 Nov 06 05:10	18° Θ 04'57 19.00516 AU	conjunction	7136 May 31 18:40	13° Π 48'58 -0°27'08
direct	7130 Jan 22 10:48	16° Θ 06'05	minimum elong	7136 May 31 18:40	13° Π 48'58 0°27'13
evening set	7130 Apr 22 21:17	19° Θ 06'43	max. Earth dist.	7136 Jun 01 11:37	13° Π 51'23 21.09042 AU
			morning rise	7136 Jun 16 17:52	14° Π 43'23
conjunction	7130 May 08 14:30	20° Θ 00'39 -0°42'18	retrograde	7136 Sep 18 11:43	17° Π 49'06
minimum elong	7130 May 08 14:30	20° Θ 00'39 0°42'21	opposition	7136 Dec 05 09:07	15° Π 50'27 -0°28'16
max. Earth dist.	7130 May 09 08:55	20° Θ 03'19 21.01834 AU	min. Earth dist.	7136 Dec 04 17:39	15° Π 52'00 19.08779 AU
morning rise	7130 May 24 09:43	20° Θ 54'53	direct	7137 Feb 19 04:36	13° Π 54'02
retrograde	7130 Aug 25 12:13	24° Θ 00'32	evening set	7137 May 20 02:40	16° Π 52'40
opposition	7130 Nov 11 08:34	22° Θ 02'03 -0°45'35			
min. Earth dist.	7130 Nov 10 15:02	22° Θ 03'48 19.03122 AU	conjunction	7137 Jun 04 23:49	17° Π 46'45 -0°24'04

minimum elong	7137 Jun 04 23:49	17° Π 46'45	0°24'08	conjunction	7143 Jun 29 11:59	11° \mathfrak{C} 39'23	-0°03'49
max. Earth dist.	7137 Jun 05 16:34	17° Π 49'09	21.08345 AU	minimum elong	7143 Jun 29 11:59	11° \mathfrak{C} 39'23	0°03'54
morning rise	7137 Jun 20 23:45	18° Π 41'15		behind sun begin	7143 Jun 29 05:26	11° \mathfrak{C} 38'28	
retrograde	7137 Sep 22 20:52	21° Π 47'06		behind sun end	7143 Jun 29 18:33	11° \mathfrak{C} 40'18	
opposition	7137 Dec 09 16:33	19° Π 48'18	-0°24'49	max. Earth dist.	7143 Jun 30 01:34	11° \mathfrak{C} 41'19	20.95220 AU
min. Earth dist.	7137 Dec 09 00:34	19° Π 49'54	19.07812 AU	morning rise	7143 Jul 15 16:56	12° \mathfrak{C} 34'43	
direct	7138 Feb 23 10:50	17° Π 51'49		retrograde	7143 Oct 18 01:00	15° \mathfrak{C} 42'19	
evening set	7138 May 24 07:10	20° Π 50'25		opposition	7144 Jan 03 12:21	13° \mathfrak{C} 42'42	-0°02'09
				min. Earth dist.	7144 Jan 02 23:47	13° \mathfrak{C} 43'59	18.93560 AU
conjunction	7138 Jun 09 04:55	21° Π 44'35	-0°20'54	direct	7144 Mar 18 19:56	11° \mathfrak{C} 45'34	
minimum elong	7138 Jun 09 04:55	21° Π 44'35	0°20'59	evening set	7144 Jun 16 17:07	14° \mathfrak{C} 45'33	
max. Earth dist.	7138 Jun 09 20:53	21° Π 46'52	21.07132 AU				
morning rise	7138 Jun 25 05:43	22° Π 39'12		conjunction	7144 Jul 02 19:37	15° \mathfrak{C} 40'37	-0°00'11
retrograde	7138 Sep 27 03:29	25° Π 45'13		minimum elong	7144 Jul 02 19:38	15° \mathfrak{C} 40'37	0°00'15
min. Earth dist.	7138 Dec 13 09:35	23° Π 47'43	19.06374 AU	behind sun begin	7144 Jul 02 13:02	15° \mathfrak{C} 39'41	
opposition	7138 Dec 14 00:01	23° Π 46'16	-0°21'15	behind sun end	7144 Jul 03 02:13	15° \mathfrak{C} 41'32	
direct	7139 Feb 27 15:42	21° Π 49'41		max. Earth dist.	7144 Jul 03 08:10	15° \mathfrak{C} 42'24	20.91809 AU
evening set	7139 May 28 11:53	24° Π 48'18		morning rise	7144 Jul 19 01:25	16° \mathfrak{C} 36'08	
				asc. node	7144 Jul 21 02:24	16° \mathfrak{C} 42'59	
conjunction	7139 Jun 13 10:29	25° Π 42'35	-0°17'37	retrograde	7144 Oct 21 09:39	19° \mathfrak{C} 44'12	
minimum elong	7139 Jun 13 10:29	25° Π 42'35	0°17'42	opposition	7145 Jan 06 20:03	17° \mathfrak{C} 44'29	0°01'49
max. Earth dist.	7139 Jun 14 02:20	25° Π 44'51	21.05488 AU	min. Earth dist.	7145 Jan 06 09:18	17° \mathfrak{C} 45'34	18.89979 AU
morning rise	7139 Jun 29 12:03	26° Π 37'18		direct	7145 Mar 23 00:25	15° \mathfrak{C} 47'13	
retrograde	7139 Oct 01 13:27	29° Π 43'32		evening set	7145 Jun 21 00:33	18° \mathfrak{C} 47'42	
opposition	7139 Dec 18 07:04	27° Π 44'26	-0°17'34				
min. Earth dist.	7139 Dec 17 16:08	27° Π 45'56	19.04522 AU	conjunction	7145 Jul 07 03:59	19° \mathfrak{C} 42'58	0°03'29
direct	7140 Mar 02 21:50	25° Π 47'45		minimum elong	7145 Jul 07 03:58	19° \mathfrak{C} 42'58	0°03'24
evening set	7140 May 31 17:00	28° Π 46'30		behind sun begin	7145 Jul 06 21:21	19° \mathfrak{C} 42'02	
				behind sun end	7145 Jul 07 10:34	19° \mathfrak{C} 43'53	
conjunction	7140 Jun 16 16:15	29° Π 40'54	-0°14'16	max. Earth dist.	7145 Jul 07 15:46	19° \mathfrak{C} 44'39	20.88068 AU
minimum elong	7140 Jun 16 16:15	29° Π 40'54	0°14'20	morning rise	7145 Jul 23 10:34	20° \mathfrak{C} 38'42	
behind sun begin	7140 Jun 16 13:11	29° Π 40'28		retrograde	7145 Oct 25 21:07	23° \mathfrak{C} 47'15	
behind sun end	7140 Jun 16 19:20	29° Π 41'20		opposition	7146 Jan 11 04:00	21° \mathfrak{C} 47'26	0°05'47
max. Earth dist.	7140 Jun 17 07:17	29° Π 43'02	21.03437 AU	min. Earth dist.	7146 Jan 10 17:15	21° \mathfrak{C} 48'32	18.86053 AU
	7140 Jun 22 05:48	0° \mathfrak{C}		direct	7146 Mar 27 07:50	19° \mathfrak{C} 50'02	
morning rise	7140 Jul 02 18:42	0° \mathfrak{C} 35'45		evening set	7146 Jun 25 08:41	22° \mathfrak{C} 51'04	
retrograde	7140 Oct 04 20:11	3° \mathfrak{C} 42'15					
opposition	7140 Dec 21 14:20	1° \mathfrak{C} 43'00	-0°13'48	conjunction	7146 Jul 11 12:53	23° \mathfrak{C} 46'33	0°07'03
min. Earth dist.	7140 Dec 21 00:56	1° \mathfrak{C} 44'21	19.02289 AU	minimum elong	7146 Jul 11 12:53	23° \mathfrak{C} 46'33	0°06'59
	7141 Feb 11 15:20	30° \mathfrak{R} Π		behind sun begin	7146 Jul 11 06:43	23° \mathfrak{C} 45'41	
direct	7141 Mar 07 01:57	29° Π 46'13		behind sun end	7146 Jul 11 19:03	23° \mathfrak{C} 47'25	
	7141 Mar 30 07:38	0° \mathfrak{C}		max. Earth dist.	7146 Jul 11 23:29	23° \mathfrak{C} 48'04	20.83948 AU
evening set	7141 Jun 04 22:13	2° \mathfrak{C} 45'09		morning rise	7146 Jul 27 20:21	24° \mathfrak{C} 42'30	
				retrograde	7146 Oct 30 07:07	27° \mathfrak{C} 51'36	
conjunction	7141 Jun 20 22:19	3° \mathfrak{C} 39'41	-0°10'50	opposition	7147 Jan 15 12:25	25° \mathfrak{C} 51'40	0°09'45
minimum elong	7141 Jun 20 22:20	3° \mathfrak{C} 39'41	0°10'55	min. Earth dist.	7147 Jan 15 03:44	25° \mathfrak{C} 52'33	18.81736 AU
behind sun begin	7141 Jun 20 17:19	3° \mathfrak{C} 38'59		direct	7147 Mar 31 13:40	23° \mathfrak{C} 54'06	
behind sun end	7141 Jun 21 03:21	3° \mathfrak{C} 40'23		evening set	7147 Jun 29 17:41	26° \mathfrak{C} 55'46	
max. Earth dist.	7141 Jun 21 13:11	3° \mathfrak{C} 41'48	21.01034 AU				
morning rise	7141 Jul 07 01:32	4° \mathfrak{C} 34'41		conjunction	7147 Jul 15 22:48	27° \mathfrak{C} 51'29	0°10'36
retrograde	7141 Oct 09 06:35	7° \mathfrak{C} 41'30		minimum elong	7147 Jul 15 22:48	27° \mathfrak{C} 51'29	0°10'32
opposition	7141 Dec 25 21:31	5° \mathfrak{C} 42'07	-0°09'58	behind sun begin	7147 Jul 15 17:37	27° \mathfrak{C} 50'45	
min. Earth dist.	7141 Dec 25 07:37	5° \mathfrak{C} 43'32	18.99709 AU	behind sun end	7147 Jul 16 03:58	27° \mathfrak{C} 52'13	
direct	7142 Mar 11 08:47	3° \mathfrak{C} 45'13		max. Earth dist.	7147 Jul 16 08:06	27° \mathfrak{C} 52'49	20.79433 AU
evening set	7142 Jun 09 04:03	6° \mathfrak{C} 44'25		morning rise	7147 Aug 01 07:04	28° \mathfrak{C} 47'39	
					7147 Aug 23 22:23	0° \mathfrak{Q}	
conjunction	7142 Jun 25 04:53	7° \mathfrak{C} 39'08	-0°07'21	retrograde	7147 Nov 03 19:09	1° \mathfrak{Q} 57'18	
minimum elong	7142 Jun 25 04:53	7° \mathfrak{C} 39'08	0°07'25		7148 Jan 18 17:52	30° \mathfrak{R} \mathfrak{C}	
behind sun begin	7142 Jun 24 22:49	7° \mathfrak{C} 38'17		opposition	7148 Jan 19 20:53	29° \mathfrak{C} 57'14	0°13'41
behind sun end	7142 Jun 25 10:56	7° \mathfrak{C} 39'58		min. Earth dist.	7148 Jan 19 12:39	29° \mathfrak{C} 58'05	18.77004 AU
max. Earth dist.	7142 Jun 25 18:53	7° \mathfrak{C} 41'07	20.98285 AU	direct	7148 Apr 03 21:33	27° \mathfrak{C} 59'26	
morning rise	7142 Jul 11 08:59	8° \mathfrak{C} 34'18			7148 Jun 14 00:33	0° \mathfrak{Q}	
retrograde	7142 Oct 13 14:11	11° \mathfrak{C} 41'29		evening set	7148 Jul 03 03:31	1° \mathfrak{Q} 01'48	
opposition	7142 Dec 30 04:56	9° \mathfrak{C} 41'58	-0°06'05				
min. Earth dist.	7142 Dec 29 16:38	9° \mathfrak{C} 43'13	18.96799 AU	conjunction	7148 Jul 19 09:26	1° \mathfrak{Q} 57'45	0°14'08
direct	7143 Mar 15 12:32	7° \mathfrak{C} 44'57		minimum elong	7148 Jul 19 09:26	1° \mathfrak{Q} 57'45	0°14'04
evening set	7143 Jun 13 10:13	10° \mathfrak{C} 44'30		behind sun begin	7148 Jul 19 06:11	1° \mathfrak{Q} 57'18	

behind sun end	7148 Jul 19 12:40	1°Ω58'12		retrograde	7154 Dec 03 15:41	1°♐15'53	
max. Earth dist.	7148 Jul 19 17:10	1°Ω58'51	20.74473 AU		7155 Jan 30 06:30	30°♐Ω	
morning rise	7148 Aug 04 18:27	2°Ω54'09		opposition	7155 Feb 17 20:07	29°Ω14'18	0°38'48
retrograde	7148 Nov 07 06:11	6°Ω04'21		min. Earth dist.	7155 Feb 17 21:11	29°Ω14'11	18.34487 AU
opposition	7149 Jan 23 06:00	4°Ω04'07	0°17'35	direct	7155 May 03 13:37	27°Ω14'07	
min. Earth dist.	7149 Jan 22 23:57	4°Ω04'45	18.71827 AU		7155 Jul 27 05:38	0°♐	
direct	7149 Apr 08 04:32	2°Ω06'04		evening set	7155 Aug 02 21:06	0°♐22'38	
evening set	7149 Jul 07 13:50	5°Ω09'09					
conjunction	7149 Jul 23 20:37	6°Ω05'21	0°17'37	conjunction	7155 Aug 19 08:39	1°♐20'29	0°36'21
minimum elong	7149 Jul 23 20:37	6°Ω05'21	0°17'34	minimum elong	7155 Aug 19 08:39	1°♐20'29	0°36'18
max. Earth dist.	7149 Jul 24 02:49	6°Ω06'14	20.69098 AU	max. Earth dist.	7155 Aug 19 06:31	1°♐20'10	20.31168 AU
morning rise	7149 Aug 09 06:27	7°Ω01'58		morning rise	7155 Sep 04 22:32	2°♐18'41	
retrograde	7149 Nov 11 19:09	10°Ω12'46		retrograde	7155 Dec 08 08:10	5°♐33'18	
opposition	7150 Jan 27 15:22	8°Ω12'19	0°21'24	opposition	7156 Feb 22 08:01	3°♐31'32	0°41'47
min. Earth dist.	7150 Jan 27 09:48	8°Ω12'54	18.66247 AU	min. Earth dist.	7156 Feb 22 09:42	3°♐31'21	18.27825 AU
direct	7150 Apr 12 13:37	6°Ω13'57		direct	7156 May 07 01:22	1°♐31'00	
evening set	7150 Jul 12 01:06	9°Ω17'48		evening set	7156 Aug 06 13:20	4°♐40'37	
conjunction	7150 Jul 28 08:44	10°Ω14'15	0°21'02	conjunction	7156 Aug 23 01:40	5°♐38'46	0°38'55
minimum elong	7150 Jul 28 08:44	10°Ω14'15	0°20'57	minimum elong	7156 Aug 23 01:40	5°♐38'46	0°38'54
max. Earth dist.	7150 Jul 28 13:33	10°Ω14'57	20.63328 AU	max. Earth dist.	7156 Aug 22 22:59	5°♐38'23	20.24496 AU
morning rise	7150 Aug 13 19:18	11°Ω11'08		morning rise	7156 Sep 08 15:55	6°♐37'15	
retrograde	7150 Nov 16 06:56	14°Ω22'30		retrograde	7156 Dec 12 00:25	9°♐52'34	
opposition	7151 Feb 01 01:05	12°Ω21'50	0°25'09	opposition	7157 Feb 25 20:45	7°♐50'40	0°44'32
min. Earth dist.	7151 Jan 31 21:38	12°Ω22'12	18.60310 AU	min. Earth dist.	7157 Feb 25 23:47	7°♐50'20	18.21166 AU
direct	7151 Apr 16 21:28	10°Ω23'07		direct	7157 May 11 13:00	5°♐49'49	
evening set	7151 Jul 16 13:04	13°Ω27'47		evening set	7157 Aug 11 06:25	9°♐00'33	
conjunction	7151 Aug 01 21:34	14°Ω24'31	0°24'21	conjunction	7157 Aug 27 19:20	9°♐59'01	0°41'18
minimum elong	7151 Aug 01 21:34	14°Ω24'31	0°24'18	minimum elong	7157 Aug 27 19:20	9°♐59'01	0°41'15
max. Earth dist.	7151 Aug 02 00:44	14°Ω24'58	20.57254 AU	max. Earth dist.	7157 Aug 27 14:40	9°♐58'19	20.17864 AU
morning rise	7151 Aug 12 01:47	15°Ω		morning rise	7157 Sep 13 10:13	10°♐57'47	
retrograde	7151 Aug 18 08:55	15°Ω21'39		retrograde	7157 Dec 16 18:29	14°♐13'51	
opposition	7151 Nov 20 21:13	18°Ω33'37		opposition	7158 Mar 02 10:05	12°♐11'48	0°47'04
min. Earth dist.	7152 Feb 05 11:07	16°Ω32'42	0°28'47	min. Earth dist.	7158 Mar 02 13:54	12°♐11'23	18.14556 AU
direct	7152 Feb 05 08:12	16°Ω33'00	18.54101 AU	direct	7158 May 16 01:53	10°♐10'38	
evening set	7152 Mar 18 23:32	15°♐Ω		evening set	7158 Aug 16 00:39	13°♐22'34	
conjunction	7152 Aug 05 11:06	18°Ω36'10	0°27'34	conjunction	7158 Sep 01 14:19	14°♐21'20	0°43'27
minimum elong	7152 Aug 05 11:06	18°Ω36'10	0°27'31	minimum elong	7158 Sep 01 14:19	14°♐21'20	0°43'25
max. Earth dist.	7152 Aug 05 13:13	18°Ω36'28	20.50920 AU	max. Earth dist.	7158 Sep 01 09:13	14°♐20'35	20.11265 AU
morning rise	7152 Aug 21 23:02	19°Ω33'33		morning rise	7158 Sep 18 05:28	15°♐20'23	
retrograde	7152 Nov 24 09:55	22°Ω46'09		retrograde	7158 Dec 21 12:44	18°♐37'10	
opposition	7153 Feb 08 21:39	20°Ω45'00	0°32'17	opposition	7159 Mar 06 23:59	16°♐35'02	0°49'21
min. Earth dist.	7153 Feb 08 20:35	20°Ω45'07	18.47675 AU	min. Earth dist.	7159 Mar 07 05:12	16°♐34'29	18.07976 AU
direct	7153 Apr 24 16:28	18°Ω45'33		direct	7159 May 20 15:02	14°♐33'35	
evening set	7153 Jul 24 15:21	21°Ω52'02		evening set	7159 Aug 20 20:04	17°♐46'44	
conjunction	7153 Aug 10 01:25	22°Ω49'18	0°30'39	conjunction	7159 Sep 06 10:10	18°♐45'49	0°45'22
minimum elong	7153 Aug 10 01:24	22°Ω49'18	0°30'37	minimum elong	7159 Sep 06 10:10	18°♐45'49	0°45'21
max. Earth dist.	7153 Aug 10 01:54	22°Ω49'22	20.44430 AU	max. Earth dist.	7159 Sep 06 02:37	18°♐44'41	20.04707 AU
morning rise	7153 Aug 26 14:05	23°Ω46'57		morning rise	7159 Sep 23 01:49	19°♐45'08	
retrograde	7153 Nov 29 01:20	27°Ω00'12		retrograde	7159 Dec 26 08:04	23°♐02'40	
opposition	7154 Feb 13 08:34	24°Ω58'50	0°35'38	opposition	7160 Mar 10 14:42	21°♐00'26	0°51'21
min. Earth dist.	7154 Feb 13 08:00	24°Ω58'53	18.41127 AU	min. Earth dist.	7160 Mar 10 21:08	20°♐59'45	18.01435 AU
direct	7154 Apr 29 03:19	22°Ω59'00		direct	7160 May 24 05:39	18°♐58'40	
evening set	7154 Jul 29 05:42	26°Ω06'28		evening set	7160 Aug 24 16:17	22°♐13'04	
conjunction	7154 Aug 14 16:36	27°Ω04'02	0°33'35	conjunction	7160 Sep 10 07:01	23°♐12'27	0°47'01
minimum elong	7154 Aug 14 16:35	27°Ω04'02	0°33'33	minimum elong	7160 Sep 10 07:01	23°♐12'27	0°47'01
max. Earth dist.	7154 Aug 14 16:19	27°Ω04'00	20.37822 AU	max. Earth dist.	7160 Sep 09 23:01	23°♐11'15	19.98159 AU
morning rise	7154 Aug 31 05:48	28°Ω01'58		morning rise	7160 Sep 26 22:45	24°♐12'02	
retrograde	7154 Oct 08 16:56	0°♐		retrograde	7160 Dec 30 03:47	27°♐30'17	
opposition				opposition	7161 Mar 15 06:11	25°♐27'57	0°53'04
min. Earth dist.				min. Earth dist.	7161 Mar 15 13:51	25°♐27'08	17.94894 AU
direct				direct	7161 May 28 20:42	23°♐25'53	
evening set				evening set	7161 Aug 29 13:43	26°♐41'30	

conjunction	7161 Sep 15 04:46	27° 0 41'10	0°48'25	retrograde	7168 Feb 01 07:09	29° 0 33'46	
minimum elong	7161 Sep 15 04:46	27° 0 41'10	0°48'25	opposition	7168 Apr 15 13:08	27° 0 30'26	0°55'40
max. Earth dist.	7161 Sep 14 18:01	27° 0 39'33	19.91628 AU	min. Earth dist.	7168 Apr 16 04:14	27° 0 28'47	17.52635 AU
morning rise	7161 Oct 01 20:54	28° 0 41'01		direct	7168 Jun 29 13:40	25° 0 25'45	
	7161 Oct 25 13:29	0° 0		evening set	7168 Oct 01 17:38	28° 0 49'14	
retrograde	7162 Jan 03 23:47	1° 0 59'58					
	7162 Mar 18 23:00	30° 0 41'00		conjunction	7168 Oct 18 10:18	29° 0 50'36	0°49'31
opposition	7162 Mar 19 22:20	29° 0 57'29	0°54'29	minimum elong	7168 Oct 18 10:18	29° 0 50'36	0°49'33
min. Earth dist.	7162 Mar 20 07:31	29° 0 56'30	17.88382 AU	max. Earth dist.	7168 Oct 17 16:49	29° 0 47'54	19.50186 AU
direct	7162 Jun 02 13:44	27° 0 55'04			7168 Oct 20 23:07	0° 0	
	7162 Aug 13 02:49	0° 0		morning rise	7168 Nov 04 01:57	0° 0 51'53	
evening set	7162 Sep 03 11:56	1° 0 11'54		retrograde	7169 Feb 05 07:43	4° 0 14'22	
				opposition	7169 Apr 20 09:44	2° 0 10'57	0°54'34
conjunction	7162 Sep 20 03:36	2° 0 11'52	0°49'31	min. Earth dist.	7169 Apr 21 00:17	2° 0 09'21	17.47911 AU
minimum elong	7162 Sep 20 03:36	2° 0 11'52	0°49'31	direct	7169 Jul 04 13:06	0° 0 05'58	
max. Earth dist.	7162 Sep 19 16:24	2° 0 10'10	19.85124 AU	evening set	7169 Oct 06 20:52	3° 0 13'02	
morning rise	7162 Oct 06 19:44	3° 0 11'57					
retrograde	7163 Jan 08 20:09	6° 0 31'32		conjunction	7169 Oct 23 13:23	4° 0 13'57	0°48'21
opposition	7163 Mar 24 15:14	4° 0 28'55	0°55'34	minimum elong	7169 Oct 23 13:23	4° 0 13'57	0°48'23
min. Earth dist.	7163 Mar 25 01:22	4° 0 27'50	17.81902 AU	max. Earth dist.	7169 Oct 22 19:03	4° 0 12'06	19.45715 AU
direct	7163 Jun 07 07:10	2° 0 26'09		morning rise	7169 Nov 09 04:43	5° 0 13'32	
evening set	7163 Sep 08 11:12	5° 0 44'09		retrograde	7170 Feb 10 06:03	8° 0 15'61	
				opposition	7170 Apr 25 06:58	6° 0 15'24	0°53'06
conjunction	7163 Sep 25 03:01	6° 0 44'23	0°50'20	min. Earth dist.	7170 Apr 25 22:47	6° 0 15'00	17.43719 AU
minimum elong	7163 Sep 25 03:01	6° 0 44'23	0°50'21	direct	7170 Jul 09 10:52	4° 0 14'28	
max. Earth dist.	7163 Sep 24 13:10	6° 0 42'17	19.78690 AU	evening set	7170 Oct 12 00:34	8° 0 12'50	
morning rise	7163 Oct 11 19:23	7° 0 44'43					
retrograde	7164 Jan 13 16:28	11° 0 04'53		conjunction	7170 Oct 28 16:59	9° 0 14'32	0°46'51
opposition	7164 Mar 28 08:44	9° 0 02'07	0°56'19	minimum elong	7170 Oct 28 16:59	9° 0 14'32	0°46'54
min. Earth dist.	7164 Mar 28 20:28	9° 0 00'51	17.75538 AU	max. Earth dist.	7170 Oct 27 22:34	9° 0 11'40	19.41804 AU
direct	7164 Jun 11 02:19	6° 0 58'57		morning rise	7170 Nov 14 07:55	10° 0 16'04	
evening set	7164 Sep 12 11:03	10° 0 18'08		retrograde	7171 Feb 15 07:46	13° 0 13'91	
				opposition	7171 Apr 30 04:45	11° 0 13'54	0°51'16
conjunction	7164 Sep 29 03:20	11° 0 18'38	0°50'50	min. Earth dist.	7171 Apr 30 19:46	11° 0 13'05	17.40083 AU
minimum elong	7164 Sep 29 03:20	11° 0 18'38	0°50'51	direct	7171 Jul 14 11:31	9° 0 13'18	
max. Earth dist.	7164 Sep 28 13:21	11° 0 16'30	19.72403 AU	evening set	7171 Oct 17 04:43	12° 0 15'63	
morning rise	7164 Oct 15 19:34	12° 0 19'11					
retrograde	7165 Jan 17 13:44	15° 0 39'54		conjunction	7171 Nov 02 20:52	13° 0 15'82	0°45'02
opposition	7165 Apr 02 02:54	13° 0 36'59	0°56'42	minimum elong	7171 Nov 02 20:52	13° 0 15'82	0°45'06
min. Earth dist.	7165 Apr 02 15:02	13° 0 35'40	17.69350 AU	max. Earth dist.	7171 Nov 02 02:19	13° 0 15'55	19.38445 AU
direct	7165 Jun 15 22:12	11° 0 33'25		morning rise	7171 Nov 19 11:13	14° 0 15'59	
evening set	7165 Sep 17 11:42	14° 0 53'43			7171 Nov 19 11:27	15° 0	
max. Earth dist.	7165 Oct 03 11:55	15° 0 52'00	19.66335 AU	retrograde	7172 Feb 20 07:00	18° 0 12'31	
				opposition	7172 May 04 03:15	16° 0 12'57	0°49'05
conjunction	7165 Oct 04 04:04	15° 0 54'28	0°51'00	min. Earth dist.	7172 May 04 19:26	16° 0 12'11	17.37009 AU
minimum elong	7165 Oct 04 04:04	15° 0 54'28	0°51'01		7172 Jun 06 02:37	15° 0 12	
morning rise	7165 Oct 20 20:25	16° 0 55'13		direct	7172 Jul 18 10:33	14° 0 14'22	
retrograde	7166 Jan 22 10:38	20° 0 16'27			7172 Aug 29 02:22	15° 0	
opposition	7166 Apr 06 21:45	18° 0 13'23	0°56'44	evening set	7172 Oct 21 09:17	17° 0 14'24	
min. Earth dist.	7166 Apr 07 11:27	18° 0 11'53	17.63427 AU	max. Earth dist.	7172 Nov 06 06:07	18° 0 14'02	19.35654 AU
direct	7166 Jun 20 18:42	16° 0 09'25					
evening set	7166 Sep 22 13:03	19° 0 30'49		conjunction	7172 Nov 07 01:04	18° 0 14'31	0°42'54
				minimum elong	7172 Nov 07 01:04	18° 0 14'31	0°42'58
conjunction	7166 Oct 09 05:43	20° 0 31'48	0°50'50	morning rise	7172 Nov 23 14:59	19° 0 14'50	
minimum elong	7166 Oct 09 05:43	20° 0 31'48	0°50'53	retrograde	7173 Feb 24 09:08	23° 0 10'83	
max. Earth dist.	7166 Oct 08 13:36	20° 0 29'20	19.60564 AU	opposition	7173 May 09 02:06	21° 0 10'51	0°46'33
morning rise	7166 Oct 25 21:50	21° 0 32'45		min. Earth dist.	7173 May 09 17:32	21° 0 10'36	17.34482 AU
retrograde	7167 Jan 27 09:26	24° 0 54'26		direct	7173 Jul 23 12:12	18° 0 15'36	
opposition	7167 Apr 11 17:00	22° 0 51'13	0°56'23	evening set	7173 Oct 26 14:08	22° 0 12'70	
min. Earth dist.	7167 Apr 12 06:42	22° 0 49'44	17.57826 AU	max. Earth dist.	7173 Nov 11 11:03	23° 0 12'67	19.33375 AU
direct	7167 Jun 25 16:32	20° 0 46'53					
evening set	7167 Sep 27 15:13	24° 0 09'21		conjunction	7173 Nov 12 05:37	23° 0 12'29	0°40'28
				minimum elong	7173 Nov 12 05:37	23° 0 12'29	0°40'33
conjunction	7167 Oct 14 07:49	25° 0 10'32	0°50'21	morning rise	7173 Nov 28 18:49	24° 0 13'04	
minimum elong	7167 Oct 14 07:49	25° 0 10'32	0°50'22	retrograde	7174 Mar 01 09:03	27° 0 15'46	
max. Earth dist.	7167 Oct 13 14:06	25° 0 07'49	19.55151 AU	opposition	7174 May 14 01:42	25° 0 15'36	0°43'41
morning rise	7167 Oct 30 23:47	26° 0 11'40		min. Earth dist.	7174 May 14 18:16	25° 0 14'49	17.32450 AU

direct	7174 Jul 28 12:41	23° \mathbb{M} 45'49		minimum elong	7180 Dec 16 11:04	27° \mathbb{X} 01'47	0°16'47
evening set	7174 Oct 31 19:25	27° \mathbb{M} 14'10		max. Earth dist.	7180 Dec 15 17:40	26° \mathbb{X} 59'04	19.31007 AU
				morning rise	7181 Jan 01 18:37	28° \mathbb{X} 03'02	
conjunction	7174 Nov 17 10:17	28° \mathbb{M} 16'13	0°37'46		7181 Feb 05 20:38	0° \mathbb{Z}	
minimum elong	7174 Nov 17 10:17	28° \mathbb{M} 16'13	0°37'50	retrograde	7181 Apr 03 12:05	1° \mathbb{Z} 25'42	
max. Earth dist.	7174 Nov 16 14:48	28° \mathbb{M} 13'10	19.31588 AU		7181 Jun 01 21:53	30° \mathbb{R} \mathbb{X}	
morning rise	7174 Dec 03 22:55	29° \mathbb{M} 17'57		opposition	7181 Jun 16 06:36	29° \mathbb{X} 23'08	0°16'24
	7174 Dec 15 16:02	0° \mathbb{X}		min. Earth dist.	7181 Jun 16 21:07	29° \mathbb{X} 21'33	17.31841 AU
retrograde	7175 Mar 06 11:01	2° \mathbb{X} 41'44		direct	7181 Aug 31 13:28	27° \mathbb{X} 17'01	
opposition	7175 May 19 01:34	0° \mathbb{X} 38'39	0°40'31		7181 Nov 22 05:32	0° \mathbb{Z}	
min. Earth dist.	7175 May 19 17:29	0° \mathbb{X} 36'54	17.30899 AU	evening set	7181 Dec 05 03:55	0° \mathbb{Z} 46'24	
	7175 Jun 03 00:19	30° \mathbb{R} \mathbb{M}					
direct	7175 Aug 02 15:40	28° \mathbb{M} 32'47		conjunction	7181 Dec 21 13:46	1° \mathbb{Z} 47'56	0°12'39
	7175 Sep 30 05:07	0° \mathbb{X}		minimum elong	7181 Dec 21 13:46	1° \mathbb{Z} 47'56	0°12'44
evening set	7175 Nov 06 00:40	2° \mathbb{X} 01'38		behind sun begin	7181 Dec 21 09:36	1° \mathbb{Z} 47'18	
				behind sun end	7181 Dec 21 17:57	1° \mathbb{Z} 48'35	
conjunction	7175 Nov 22 15:07	3° \mathbb{X} 03'43	0°34'47	max. Earth dist.	7181 Dec 20 22:17	1° \mathbb{Z} 45'30	19.32792 AU
minimum elong	7175 Nov 22 15:07	3° \mathbb{X} 03'43	0°34'51	morning rise	7182 Jan 06 20:18	2° \mathbb{Z} 49'01	
max. Earth dist.	7175 Nov 21 20:30	3° \mathbb{X} 00'47	19.30265 AU	retrograde	7182 Apr 08 12:13	6° \mathbb{Z} 11'16	
morning rise	7175 Dec 09 02:50	4° \mathbb{X} 05'25		opposition	7182 Jun 21 07:39	4° \mathbb{Z} 08'48	0°11'49
retrograde	7176 Mar 10 10:59	7° \mathbb{X} 29'11		min. Earth dist.	7182 Jun 21 20:50	4° \mathbb{Z} 07'22	17.33913 AU
opposition	7176 May 23 02:03	5° \mathbb{X} 26'12	0°37'03	direct	7182 Sep 05 16:46	2° \mathbb{Z} 02'46	
min. Earth dist.	7176 May 23 18:40	5° \mathbb{X} 24'23	17.29809 AU	evening set	7182 Dec 10 06:56	5° \mathbb{Z} 31'50	
direct	7176 Aug 06 18:00	3° \mathbb{X} 20'16					
evening set	7176 Nov 10 05:52	6° \mathbb{X} 49'30		conjunction	7182 Dec 26 15:42	6° \mathbb{Z} 33'11	0°08'32
				minimum elong	7182 Dec 26 15:42	6° \mathbb{Z} 33'11	0°08'36
conjunction	7176 Nov 26 19:32	7° \mathbb{X} 51'33	0°31'33	behind sun begin	7182 Dec 26 09:53	6° \mathbb{Z} 32'17	
minimum elong	7176 Nov 26 19:33	7° \mathbb{X} 51'33	0°31'38	behind sun end	7182 Dec 26 21:32	6° \mathbb{Z} 34'04	
max. Earth dist.	7176 Nov 25 23:58	7° \mathbb{X} 48'28	19.29418 AU	max. Earth dist.	7182 Dec 26 00:46	6° \mathbb{Z} 30'50	19.35174 AU
morning rise	7176 Dec 13 06:40	8° \mathbb{X} 53'14		morning rise	7183 Jan 11 21:16	7° \mathbb{Z} 34'03	
retrograde	7177 Mar 15 11:57	12° \mathbb{X} 16'56		retrograde	7183 Apr 13 11:31	10° \mathbb{Z} 55'52	
opposition	7177 May 28 02:41	10° \mathbb{X} 14'01	0°33'20	opposition	7183 Jun 26 08:40	8° \mathbb{Z} 53'32	0°07'11
min. Earth dist.	7177 May 28 18:39	10° \mathbb{X} 12'16	17.29198 AU	min. Earth dist.	7183 Jun 26 21:12	8° \mathbb{Z} 52'11	17.36617 AU
direct	7177 Aug 11 21:57	8° \mathbb{X} 08'01		direct	7183 Sep 10 19:22	6° \mathbb{Z} 47'36	
evening set	7177 Nov 15 10:58	11° \mathbb{X} 37'31		evening set	7183 Dec 15 09:12	10° \mathbb{Z} 16'17	
max. Earth dist.	7177 Dec 01 05:52	12° \mathbb{X} 36'40	19.29044 AU				
				conjunction	7183 Dec 31 17:04	11° \mathbb{Z} 17'25	0°04'22
conjunction	7177 Dec 02 00:08	12° \mathbb{X} 39'32	0°28'06	minimum elong	7183 Dec 31 17:04	11° \mathbb{Z} 17'25	0°04'28
minimum elong	7177 Dec 02 00:08	12° \mathbb{X} 39'32	0°28'10	behind sun begin	7183 Dec 31 10:31	11° \mathbb{Z} 16'25	
morning rise	7177 Dec 18 10:15	13° \mathbb{X} 41'08		behind sun end	7183 Dec 31 23:37	11° \mathbb{Z} 18'26	
retrograde	7178 Mar 20 11:57	17° \mathbb{X} 04'40		max. Earth dist.	7183 Dec 31 03:59	11° \mathbb{Z} 15'23	19.38197 AU
opposition	7178 Jun 02 03:29	15° \mathbb{X} 01'51	0°29'22	morning rise	7184 Jan 16 21:38	12° \mathbb{Z} 18'05	
min. Earth dist.	7178 Jun 02 19:41	15° \mathbb{X} 00'05	17.29061 AU	retrograde	7184 Apr 17 10:54	15° \mathbb{Z} 39'26	
direct	7178 Aug 17 01:56	12° \mathbb{X} 55'48		opposition	7184 Jun 30 09:27	13° \mathbb{Z} 37'16	0°02'31
evening set	7178 Nov 20 16:00	16° \mathbb{X} 25'27		min. Earth dist.	7184 Jun 30 20:01	13° \mathbb{Z} 36'08	17.39936 AU
max. Earth dist.	7178 Dec 06 09:13	17° \mathbb{X} 24'23	19.29167 AU	direct	7184 Sep 14 22:21	11° \mathbb{Z} 31'32	
				evening set	7184 Dec 19 10:47	14° \mathbb{Z} 59'44	
conjunction	7178 Dec 07 04:15	17° \mathbb{X} 27'23	0°24'28				
minimum elong	7178 Dec 07 04:15	17° \mathbb{X} 27'23	0°24'33	conjunction	7185 Jan 04 17:39	16° \mathbb{Z} 00'38	0°00'07
morning rise	7178 Dec 23 13:39	18° \mathbb{X} 28'54		minimum elong	7185 Jan 04 17:40	16° \mathbb{Z} 00'38	0°00'12
retrograde	7179 Mar 25 12:09	21° \mathbb{X} 52'12		behind sun begin	7185 Jan 04 11:03	15° \mathbb{Z} 59'38	
opposition	7179 Jun 07 04:30	19° \mathbb{X} 49'28	0°25'12	behind sun end	7185 Jan 05 00:16	16° \mathbb{Z} 01'39	
min. Earth dist.	7179 Jun 07 20:08	19° \mathbb{X} 47'46	17.29444 AU	max. Earth dist.	7185 Jan 04 05:44	15° \mathbb{Z} 58'47	19.41818 AU
direct	7179 Aug 22 06:09	17° \mathbb{X} 43'22		desc. node	7185 Jan 14 22:20	16° \mathbb{Z} 38'58	
evening set	7179 Nov 25 20:21	21° \mathbb{X} 13'03		morning rise	7185 Jan 20 21:16	17° \mathbb{Z} 01'04	
				retrograde	7185 Apr 22 09:02	20° \mathbb{Z} 21'55	
conjunction	7179 Dec 12 07:57	22° \mathbb{X} 14'53	0°20'39	opposition	7185 Jul 05 10:10	18° \mathbb{Z} 19'58	-0°02'09
minimum elong	7179 Dec 12 07:57	22° \mathbb{X} 14'53	0°20'44	min. Earth dist.	7185 Jul 05 20:19	18° \mathbb{Z} 18'53	17.43843 AU
max. Earth dist.	7179 Dec 11 14:43	22° \mathbb{X} 12'10	19.29813 AU	direct	7185 Sep 20 00:17	16° \mathbb{Z} 14'28	
morning rise	7179 Dec 28 16:18	23° \mathbb{X} 16'16		evening set	7185 Dec 24 11:47	19° \mathbb{Z} 42'06	
retrograde	7180 Mar 29 12:18	26° \mathbb{X} 39'17					
opposition	7180 Jun 11 05:39	24° \mathbb{X} 36'38	0°20'52	conjunction	7186 Jan 09 17:38	20° \mathbb{Z} 42'46	-0°04'08
min. Earth dist.	7180 Jun 11 20:40	24° \mathbb{X} 34'59	17.30352 AU	minimum elong	7186 Jan 09 17:39	20° \mathbb{Z} 42'46	0°04'03
direct	7180 Aug 26 10:14	22° \mathbb{X} 30'32		behind sun begin	7186 Jan 09 11:04	20° \mathbb{Z} 41'45	
evening set	7180 Nov 30 00:28	26° \mathbb{X} 00'06		behind sun end	7186 Jan 10 00:13	20° \mathbb{Z} 43'46	
				max. Earth dist.	7186 Jan 09 07:08	20° \mathbb{Z} 41'08	19.45997 AU
conjunction	7180 Dec 16 11:04	27° \mathbb{X} 01'48	0°16'42	morning rise	7186 Jan 25 20:19	21° \mathbb{Z} 42'57	

retrograde	7186 Apr 27 07:32	25° \mathfrak{Z} 03'16	morning rise	7192 Feb 22 22:06	19° \approx 24'50
opposition	7186 Jul 10 10:29	23° \mathfrak{Z} 01'33 -0°06'47	retrograde	7192 May 24 07:16	22° \approx 41'25
min. Earth dist.	7186 Jul 10 18:34	23° \mathfrak{Z} 00'41 17.48255 AU	opposition	7192 Aug 07 06:11	20° \approx 40'56 -0°32'09
direct	7186 Sep 25 03:31	20° \mathfrak{Z} 56'20	min. Earth dist.	7192 Aug 07 07:30	20° \approx 40'48 17.81674 AU
evening set	7186 Dec 29 12:05	24° \mathfrak{Z} 23'19	direct	7192 Oct 23 08:46	18° \approx 37'34
			evening set	7193 Jan 25 19:48	21° \approx 59'03
conjunction	7187 Jan 14 16:56	25° \mathfrak{Z} 23'43 -0°08'14			
minimum elong	7187 Jan 14 16:56	25° \mathfrak{Z} 23'43 0°08'09	conjunction	7193 Feb 10 18:53	22° \approx 57'36 -0°30'35
behind sun begin	7187 Jan 14 11:01	25° \mathfrak{Z} 22'49	minimum elong	7193 Feb 10 18:53	22° \approx 57'36 0°30'33
behind sun end	7187 Jan 14 22:51	25° \mathfrak{Z} 24'37	max. Earth dist.	7193 Feb 10 17:50	22° \approx 57'26 19.84785 AU
max. Earth dist.	7187 Jan 14 08:00	25° \mathfrak{Z} 22'20 19.50640 AU	morning rise	7193 Feb 26 15:21	23° \approx 55'48
morning rise	7187 Jan 30 18:34	26° \mathfrak{Z} 23'38	retrograde	7193 May 28 23:57	27° \approx 11'40
retrograde	7187 May 02 04:13	29° \mathfrak{Z} 43'24	opposition	7193 Aug 12 03:45	25° \approx 11'20 -0°35'44
opposition	7187 Jul 15 10:51	27° \mathfrak{Z} 41'55 -0°11'20	min. Earth dist.	7193 Aug 12 04:41	25° \approx 11'14 17.87907 AU
min. Earth dist.	7187 Jul 15 18:45	27° \mathfrak{Z} 41'05 17.53114 AU	direct	7193 Oct 28 06:38	23° \approx 08'16
direct	7187 Sep 30 05:03	25° \mathfrak{Z} 37'00	evening set	7194 Jan 30 13:47	26° \approx 28'38
evening set	7188 Jan 03 11:28	29° \mathfrak{Z} 03'15			
	7188 Jan 18 17:45	0° \approx	conjunction	7194 Feb 15 11:49	27° \approx 26'51 -0°33'42
conjunction	7188 Jan 19 15:15	0° \approx 03'21 -0°12'16	minimum elong	7194 Feb 15 11:49	27° \approx 26'50 0°33'40
minimum elong	7188 Jan 19 15:15	0° \approx 03'21 0°12'13	max. Earth dist.	7194 Feb 15 11:05	27° \approx 26'44 19.91087 AU
behind sun begin	7188 Jan 19 10:47	0° \approx 02'40	morning rise	7194 Mar 03 07:45	28° \approx 24'44
behind sun end	7188 Jan 19 19:43	0° \approx 04'02		7194 Mar 31 23:37	0° \mathfrak{H}
max. Earth dist.	7188 Jan 19 07:16	0° \approx 02'07 19.55696 AU	retrograde	7194 Jun 02 17:34	1° \mathfrak{H} 39'54
morning rise	7188 Feb 04 16:02	1° \approx 03'00		7194 Aug 08 20:32	30° \mathfrak{R} \approx
retrograde	7188 May 06 01:49	4° \approx 22'12	opposition	7194 Aug 17 00:33	29° \approx 39'41 -0°39'04
opposition	7188 Jul 19 10:44	2° \approx 20'56 -0°15'48	min. Earth dist.	7194 Aug 16 23:27	29° \approx 39'48 17.94281 AU
min. Earth dist.	7188 Jul 19 16:27	2° \approx 20'20 17.58337 AU	direct	7194 Nov 02 04:18	27° \approx 36'55
direct	7188 Oct 04 07:43	0° \approx 16'20		7195 Jan 19 00:28	0° \mathfrak{H}
evening set	7189 Jan 07 10:09	3° \approx 41'46	evening set	7195 Feb 04 06:33	0° \mathfrak{H} 56'07
conjunction	7189 Jan 23 13:00	4° \approx 41'34 -0°16'13	conjunction	7195 Feb 20 03:56	1° \mathfrak{H} 54'02 -0°36'36
minimum elong	7189 Jan 23 13:00	4° \approx 41'34 0°16'09	minimum elong	7195 Feb 20 03:56	1° \mathfrak{H} 54'02 0°36'34
max. Earth dist.	7189 Jan 23 06:50	4° \approx 40'37 19.61073 AU	max. Earth dist.	7195 Feb 20 05:52	1° \mathfrak{H} 54'19 19.97530 AU
morning rise	7189 Feb 08 12:46	5° \approx 40'57	morning rise	7195 Mar 07 23:04	2° \mathfrak{H} 51'37
retrograde	7189 May 10 21:13	8° \approx 59'31	retrograde	7195 Jun 07 09:22	6° \mathfrak{H} 06'05
opposition	7189 Jul 24 10:16	6° \approx 58'28 -0°20'09	opposition	7195 Aug 21 20:50	4° \mathfrak{H} 05'59 -0°42'08
min. Earth dist.	7189 Jul 24 15:58	6° \approx 57'52 17.63859 AU	min. Earth dist.	7195 Aug 21 18:50	4° \mathfrak{H} 06'12 18.00801 AU
direct	7189 Oct 09 08:08	4° \approx 54'11	direct	7195 Nov 07 00:44	2° \mathfrak{H} 03'33
evening set	7190 Jan 12 08:06	8° \approx 18'44	evening set	7196 Feb 08 22:20	5° \mathfrak{H} 21'34
conjunction	7190 Jan 28 09:51	9° \approx 18'13 -0°20'03	conjunction	7196 Feb 24 18:46	6° \mathfrak{H} 19'08 -0°39'15
minimum elong	7190 Jan 28 09:50	9° \approx 18'13 0°19'59	minimum elong	7196 Feb 24 18:46	6° \mathfrak{H} 19'08 0°39'13
max. Earth dist.	7190 Jan 28 04:06	9° \approx 17'21 19.66725 AU	max. Earth dist.	7196 Feb 24 21:15	6° \mathfrak{H} 19'31 20.04132 AU
morning rise	7190 Feb 13 08:50	10° \approx 17'18	morning rise	7196 Mar 11 13:30	7° \mathfrak{H} 16'28
retrograde	7190 May 15 17:51	13° \approx 35'14	retrograde	7196 Jun 11 01:29	10° \mathfrak{H} 30'14
opposition	7190 Jul 29 09:24	11° \approx 34'24 -0°24'20	opposition	7196 Aug 25 16:18	8° \mathfrak{H} 30'16 -0°44'56
min. Earth dist.	7190 Jul 29 12:57	11° \approx 34'01 17.69620 AU	min. Earth dist.	7196 Aug 25 12:16	8° \mathfrak{H} 30'41 18.07490 AU
direct	7190 Oct 14 09:45	9° \approx 30'25	direct	7196 Nov 10 19:44	6° \mathfrak{H} 28'10
evening set	7191 Jan 17 04:55	12° \approx 54'00	evening set	7197 Feb 12 13:07	9° \mathfrak{H} 45'01
conjunction	7191 Feb 02 05:48	13° \approx 53'11 -0°23'44	conjunction	7197 Feb 28 09:01	10° \mathfrak{H} 42'18 -0°41'39
minimum elong	7191 Feb 02 05:47	13° \approx 53'11 0°23'41	minimum elong	7197 Feb 28 09:01	10° \mathfrak{H} 42'18 0°41'37
max. Earth dist.	7191 Feb 02 02:10	13° \approx 52'38 19.72579 AU	max. Earth dist.	7197 Feb 28 14:09	10° \mathfrak{H} 43'04 20.10888 AU
morning rise	7191 Feb 18 03:46	14° \approx 51'58	morning rise	7197 Mar 16 03:02	11° \mathfrak{H} 39'19
	7191 Feb 20 09:03	15° \approx	retrograde	7197 Jun 15 16:28	14° \mathfrak{H} 52'25
retrograde	7191 May 20 11:55	18° \approx 09'14	opposition	7197 Aug 30 11:03	12° \mathfrak{H} 52'37 -0°47'26
opposition	7191 Aug 03 08:13	16° \approx 08'36 -0°28'20	min. Earth dist.	7197 Aug 30 05:51	12° \mathfrak{H} 53'09 18.14310 AU
min. Earth dist.	7191 Aug 03 11:34	16° \approx 08'14 17.75565 AU	direct	7197 Nov 15 15:09	10° \mathfrak{H} 50'54
	7191 Sep 01 03:40	15° \mathfrak{R} \approx	evening set	7198 Feb 17 03:09	14° \mathfrak{H} 06'36
direct	7191 Oct 19 08:58	14° \approx 04'56			
	7191 Dec 04 23:27	15° \approx	conjunction	7198 Mar 04 22:12	15° \mathfrak{H} 03'34 -0°43'47
evening set	7192 Jan 22 00:57	17° \approx 27'29	minimum elong	7198 Mar 04 22:12	15° \mathfrak{H} 03'34 0°43'47
			max. Earth dist.	7198 Mar 05 03:49	15° \mathfrak{H} 04'25 20.17770 AU
conjunction	7192 Feb 07 00:45	18° \approx 26'21 -0°27'16	morning rise	7198 Mar 20 15:56	16° \mathfrak{H} 00'20
minimum elong	7192 Feb 07 00:45	18° \approx 26'21 0°27'11	retrograde	7198 Jun 20 07:21	19° \mathfrak{H} 12'47
max. Earth dist.	7192 Feb 06 21:23	18° \approx 25'50 19.78613 AU	opposition	7198 Sep 04 05:15	17° \mathfrak{H} 13'10 -0°49'39
			min. Earth dist.	7198 Sep 03 22:20	17° \mathfrak{H} 13'53 18.21244 AU

direct	7198 Nov 20 08:06	15° H 11'51	minimum elong	7205 Apr 02 22:29	14° Y 45'55	0°51'18
evening set	7199 Feb 21 15:59	18° H 26'24	max. Earth dist.	7205 Apr 03 12:13	14° Y 47'57	20.63867 AU
			morning rise	7205 Apr 18 14:43	15° Y 41'05	
conjunction	7199 Mar 09 10:36	19° H 23'04 -0°45'40	retrograde	7205 Jul 19 20:56	18° Y 49'39	
minimum elong	7199 Mar 09 10:36	19° H 23'04 0°45'39	opposition	7205 Oct 04 19:01	16° Y 51'03	-0°56'47
max. Earth dist.	7199 Mar 09 18:48	19° H 24'19 20.24727 AU	min. Earth dist.	7205 Oct 04 05:18	16° Y 52'26	18.66674 AU
morning rise	7199 Mar 25 03:47	20° H 19'34	direct	7205 Dec 20 19:24	14° Y 52'20	
retrograde	7199 Jun 24 21:31	23° H 31'25	evening set	7206 Mar 22 14:12	17° Y 59'17	
opposition	7199 Sep 08 22:52	21° H 31'59 -0°51'35				
min. Earth dist.	7199 Sep 08 14:40	21° H 32'49 18.28203 AU	conjunction	7206 Apr 07 06:15	18° Y 54'13	-0°51'15
direct	7199 Nov 25 02:34	19° H 31'06	minimum elong	7206 Apr 07 06:15	18° Y 54'13	0°51'16
evening set	7200 Feb 26 04:16	22° H 44'30	max. Earth dist.	7206 Apr 07 19:47	18° Y 56'13	20.69351 AU
			morning rise	7206 Apr 22 22:43	19° Y 49'13	
conjunction	7200 Mar 12 22:12	23° H 40'53 -0°47'17	retrograde	7206 Jul 24 06:48	22° Y 57'18	
minimum elong	7200 Mar 12 22:12	23° H 40'53 0°47'16	opposition	7206 Oct 09 08:21	20° Y 58'44	-0°56'36
max. Earth dist.	7200 Mar 13 06:43	23° H 42'10 20.31679 AU	min. Earth dist.	7206 Oct 08 18:39	21° Y 00'06	18.71979 AU
morning rise	7200 Mar 28 15:14	24° H 37'08	direct	7206 Dec 25 06:24	19° Y 00'15	
retrograde	7200 Jun 28 11:02	27° H 48'23	evening set	7207 Mar 26 21:17	22° Y 06'12	
opposition	7200 Sep 12 15:39	25° H 49'08 -0°53'12				
min. Earth dist.	7200 Sep 12 06:19	25° H 50'05 18.35139 AU	conjunction	7207 Apr 11 13:26	23° Y 00'58	-0°50'58
direct	7200 Nov 28 18:00	23° H 48'39	minimum elong	7207 Apr 11 13:26	23° Y 00'58	0°51'01
evening set	7201 Mar 01 15:37	27° H 00'57	max. Earth dist.	7207 Apr 12 04:24	23° Y 03'09	20.74471 AU
			morning rise	7207 Apr 27 05:57	23° Y 55'48	
conjunction	7201 Mar 17 09:14	27° H 57'04 -0°48'37	retrograde	7207 Jul 28 16:19	27° Y 03'25	
minimum elong	7201 Mar 17 09:14	27° H 57'04 0°48'37	opposition	7207 Oct 13 20:51	25° Y 04'51	-0°56'07
max. Earth dist.	7201 Mar 17 19:53	27° H 58'39 20.38560 AU	min. Earth dist.	7207 Oct 13 05:54	25° Y 06'21	18.76911 AU
morning rise	7201 Apr 02 01:52	28° H 53'04	direct	7207 Dec 29 19:01	23° Y 06'35	
	7201 Apr 22 02:52	0° Y	evening set	7208 Mar 30 04:01	26° Y 11'36	
retrograde	7201 Jul 02 23:48	2° Y 03'44				
opposition	7201 Sep 17 07:57	0° Y 04'40 -0°54'31	conjunction	7208 Apr 14 20:01	27° Y 06'11	-0°50'25
min. Earth dist.	7201 Sep 16 21:25	0° Y 05'44 18.41945 AU	minimum elong	7208 Apr 14 20:01	27° Y 06'11	0°50'27
	7201 Sep 19 05:48	30° R H	max. Earth dist.	7208 Apr 15 10:58	27° Y 08'22	20.79231 AU
direct	7201 Dec 03 11:16	28° H 04'37	morning rise	7208 Apr 30 12:52	28° Y 00'53	
	7202 Feb 11 02:13	0° Y		7208 Jun 08 23:41	0° B	
evening set	7202 Mar 06 02:20	1° Y 15'47	retrograde	7208 Aug 01 00:42	1° B 08'05	
				7208 Sep 25 16:05	30° R Y	
conjunction	7202 Mar 21 19:21	2° Y 11'38 -0°49'41	opposition	7208 Oct 17 08:40	29° Y 09'30	-0°55'22
minimum elong	7202 Mar 21 19:21	2° Y 11'38 0°49'42	min. Earth dist.	7208 Oct 16 17:53	29° Y 10'59	18.81525 AU
max. Earth dist.	7202 Mar 22 06:07	2° Y 13'14 20.45280 AU	direct	7209 Jan 02 04:15	27° Y 11'25	
morning rise	7202 Apr 06 11:55	3° Y 07'24		7209 Mar 29 19:41	0° B	
retrograde	7202 Jul 07 12:19	6° Y 17'32	evening set	7209 Apr 03 10:03	0° B 15'34	
opposition	7202 Sep 21 23:44	4° Y 18'37 -0°55'32				
min. Earth dist.	7202 Sep 21 12:29	4° Y 19'45 18.48577 AU	conjunction	7209 Apr 19 02:13	1° B 10'00	-0°49'37
direct	7202 Dec 08 01:18	2° Y 18'56	minimum elong	7209 Apr 19 02:14	1° B 10'00	0°49'40
evening set	7203 Mar 10 12:15	5° Y 29'02	max. Earth dist.	7209 Apr 19 18:36	1° B 12'23	20.83692 AU
			morning rise	7209 May 04 19:12	2° B 04'34	
conjunction	7203 Mar 26 05:04	6° Y 24'37 -0°50'29	retrograde	7209 Aug 05 09:50	5° B 11'23	
minimum elong	7203 Mar 26 05:04	6° Y 24'37 0°50'30	opposition	7209 Oct 21 19:55	3° B 12'49	-0°54'20
max. Earth dist.	7203 Mar 26 17:35	6° Y 26'29 20.51787 AU	min. Earth dist.	7209 Oct 21 03:39	3° B 14'26	18.85836 AU
morning rise	7203 Apr 10 21:21	7° Y 20'10	direct	7210 Jan 06 15:21	1° B 14'57	
retrograde	7203 Jul 11 23:31	10° Y 29'46	evening set	7210 Apr 07 15:37	4° B 18'16	
opposition	7203 Sep 26 14:46	8° Y 30'59 -0°56'15				
min. Earth dist.	7203 Sep 26 02:23	8° Y 32'15 18.54945 AU	conjunction	7210 Apr 23 07:45	5° B 12'34	-0°48'35
direct	7203 Dec 12 16:54	6° Y 31'40	minimum elong	7210 Apr 23 07:45	5° B 12'34	0°48'38
evening set	7204 Mar 13 21:34	9° Y 40'41	max. Earth dist.	7210 Apr 24 00:15	5° B 14'58	20.87859 AU
			morning rise	7210 May 09 01:09	6° B 07'02	
conjunction	7204 Mar 29 13:58	10° Y 36'03 -0°51'01	retrograde	7210 Aug 09 17:26	9° B 13'33	
minimum elong	7204 Mar 29 13:58	10° Y 36'03 0°51'01	opposition	7210 Oct 26 06:48	7° B 14'59	-0°53'02
max. Earth dist.	7204 Mar 30 02:21	10° Y 37'53 20.57999 AU	min. Earth dist.	7210 Oct 25 14:41	7° B 16'36	18.89875 AU
morning rise	7204 Apr 14 06:22	11° Y 31'24	direct	7211 Jan 10 23:15	5° B 17'20	
retrograde	7204 Jul 15 10:54	14° Y 40'29	evening set	7211 Apr 11 20:43	8° B 19'54	
opposition	7204 Sep 30 05:17	12° Y 41'48 -0°56'40				
min. Earth dist.	7204 Sep 29 16:41	12° Y 43'04 18.61001 AU	conjunction	7211 Apr 27 13:10	9° B 14'06	-0°47'18
direct	7204 Dec 16 05:25	10° Y 42'48	minimum elong	7211 Apr 27 13:10	9° B 14'06	0°47'21
evening set	7205 Mar 18 06:09	13° Y 50'46	max. Earth dist.	7211 Apr 28 06:58	9° B 16'40	20.91757 AU
			morning rise	7211 May 13 06:51	10° B 08'29	
conjunction	7205 Apr 02 22:29	14° Y 45'55 -0°51'16	retrograde	7211 Aug 14 02:20	13° B 14'43	

opposition	7211 Oct 30 16:54	11°♄16'11	-0°51'29	min. Earth dist.	7217 Nov 23 05:05	5°♄13'56	19.07938 AU
min. Earth dist.	7211 Oct 29 23:21	11°♄17'57	18.93620 AU	direct	7218 Feb 08 01:08	3°♄15'44	
direct	7212 Jan 15 08:32	9°♄18'45		evening set	7218 May 09 03:29	6°♄15'01	
evening set	7212 Apr 15 01:37	12°♄20'40					
				conjunction	7218 May 24 22:36	7°♄08'57	-0°32'31
conjunction	7212 Apr 30 18:12	13°♄14'46	-0°45'47	minimum elong	7218 May 24 22:36	7°♄08'57	0°32'35
minimum elong	7212 Apr 30 18:12	13°♄14'46	0°45'52	max. Earth dist.	7218 May 25 16:18	7°♄11'29	21.08286 AU
max. Earth dist.	7212 May 01 11:52	13°♄17'19	20.95343 AU	morning rise	7218 Jun 09 20:20	8°♄03'16	
morning rise	7212 May 16 12:26	14°♄09'06		retrograde	7218 Sep 11 09:36	11°♄08'57	
	7212 Jun 01 01:49	15°♄		opposition	7218 Nov 28 07:14	9°♄10'31	-0°34'21
retrograde	7212 Aug 17 09:34	17°♄15'08		min. Earth dist.	7218 Nov 27 14:51	9°♄12'09	19.08547 AU
min. Earth dist.	7212 Nov 02 09:42	15°♄18'20	18.97049 AU	direct	7219 Feb 12 05:50	7°♄14'08	
opposition	7212 Nov 03 02:47	15°♄16'38	-0°49'41	evening set	7219 May 13 07:46	10°♄13'09	
	7212 Nov 10 01:53	15°♄					
direct	7213 Jan 18 15:22	13°♄19'25		conjunction	7219 May 29 03:37	11°♄07'08	-0°29'42
	7213 Mar 24 15:53	15°♄		minimum elong	7219 May 29 03:37	11°♄07'08	0°29'47
evening set	7213 Apr 19 06:03	16°♄20'44		max. Earth dist.	7219 May 29 21:20	11°♄09'40	21.08613 AU
				morning rise	7219 Jun 14 02:00	12°♄01'30	
conjunction	7213 May 04 23:03	17°♄14'45	-0°44'04	retrograde	7219 Sep 15 18:51	15°♄07'12	
minimum elong	7213 May 04 23:03	17°♄14'45	0°44'07	opposition	7219 Dec 02 14:54	13°♄08'40	-0°31'09
max. Earth dist.	7213 May 05 17:43	17°♄17'27	20.98600 AU	min. Earth dist.	7219 Dec 01 22:05	13°♄10'21	19.08579 AU
morning rise	7213 May 20 17:38	18°♄09'02		direct	7220 Feb 16 13:15	11°♄12'16	
retrograde	7213 Aug 21 18:16	21°♄14'54		evening set	7220 May 16 12:11	14°♄11'06	
opposition	7213 Nov 07 12:08	19°♄16'28	-0°47'39				
min. Earth dist.	7213 Nov 06 17:47	19°♄18'18	19.00114 AU	conjunction	7220 Jun 01 08:33	15°♄05'08	-0°26'44
direct	7214 Jan 22 23:18	17°♄19'28		minimum elong	7220 Jun 01 08:33	15°♄05'08	0°26'49
evening set	7214 Apr 23 10:30	20°♄20'14		max. Earth dist.	7220 Jun 02 01:15	15°♄07'31	21.08370 AU
				morning rise	7220 Jun 17 07:47	15°♄59'34	
conjunction	7214 May 09 03:44	21°♄14'13	-0°42'08	retrograde	7220 Sep 19 01:28	19°♄05'20	
minimum elong	7214 May 09 03:44	21°♄14'13	0°42'13	opposition	7220 Dec 05 22:38	17°♄06'39	-0°27'48
max. Earth dist.	7214 May 09 22:06	21°♄16'51	21.01475 AU	min. Earth dist.	7220 Dec 05 07:22	17°♄08'11	19.08078 AU
morning rise	7214 May 24 22:57	22°♄08'28		direct	7221 Feb 19 17:30	15°♄10'11	
retrograde	7214 Aug 26 01:32	25°♄14'14		evening set	7221 May 20 16:24	18°♄08'54	
opposition	7214 Nov 11 21:23	23°♄15'50	-0°45'23				
min. Earth dist.	7214 Nov 11 03:49	23°♄17'35	19.02794 AU	conjunction	7221 Jun 05 13:32	19°♄02'59	-0°23'38
direct	7215 Jan 27 05:18	21°♄19'02		minimum elong	7221 Jun 05 13:33	19°♄02'59	0°23'44
evening set	7215 Apr 27 14:39	24°♄19'20		max. Earth dist.	7221 Jun 06 06:23	19°♄05'24	21.07632 AU
				morning rise	7221 Jun 21 13:27	19°♄57'30	
conjunction	7215 May 13 08:25	25°♄13'17	-0°40'00	retrograde	7221 Sep 23 10:07	23°♄03'23	
minimum elong	7215 May 13 08:25	25°♄13'17	0°40'04	opposition	7221 Dec 10 06:03	21°♄04'32	-0°24'19
max. Earth dist.	7215 May 14 03:28	25°♄16'01	21.03942 AU	min. Earth dist.	7221 Dec 09 14:09	21°♄06'08	19.07104 AU
morning rise	7215 May 29 04:08	26°♄07'31		direct	7222 Feb 24 00:59	19°♄07'59	
retrograde	7215 Aug 30 10:27	29°♄13'12		evening set	7222 May 24 20:59	22°♄06'38	
min. Earth dist.	7215 Nov 15 11:38	27°♄16'41	19.05022 AU				
opposition	7215 Nov 16 06:07	27°♄14'51	-0°42'55	conjunction	7222 Jun 09 18:43	23°♄00'49	-0°20'26
direct	7216 Jan 31 12:36	25°♄18'13		minimum elong	7222 Jun 09 18:43	23°♄00'49	0°20'31
evening set	7216 Apr 30 19:00	28°♄18'07		max. Earth dist.	7222 Jun 10 10:42	23°♄03'06	21.06441 AU
				morning rise	7222 Jun 25 19:30	23°♄55'26	
conjunction	7216 May 16 13:05	29°♄12'03	-0°37'41	retrograde	7222 Sep 27 17:27	27°♄01'28	
minimum elong	7216 May 16 13:05	29°♄12'03	0°37'45	opposition	7222 Dec 14 13:25	25°♄02'27	-0°20'43
max. Earth dist.	7216 May 17 07:27	29°♄14'41	21.05922 AU	min. Earth dist.	7222 Dec 13 22:59	25°♄03'55	19.05716 AU
	7216 May 30 12:40	0°♄		direct	7223 Feb 28 05:02	23°♄05'48	
morning rise	7216 Jun 01 09:30	0°♄06'18		evening set	7223 May 29 01:37	26°♄04'28	
retrograde	7216 Sep 02 17:31	3°♄11'57					
opposition	7216 Nov 19 14:39	1°♄13'36	-0°40'15	conjunction	7223 Jun 14 00:13	26°♄58'45	-0°17'08
min. Earth dist.	7216 Nov 18 21:27	1°♄15'19	19.06754 AU	minimum elong	7223 Jun 14 00:13	26°♄58'45	0°17'13
	7216 Dec 22 21:20	30°♄		max. Earth dist.	7223 Jun 14 16:16	27°♄01'03	21.04866 AU
direct	7217 Feb 03 17:50	29°♄17'06		morning rise	7223 Jun 30 01:45	27°♄53'29	
	7217 Mar 17 07:01	0°♄			7223 Aug 12 16:04	0°♄	
evening set	7217 May 04 23:14	2°♄16'40		retrograde	7223 Oct 02 02:05	0°♄59'43	
					7223 Nov 23 01:27	30°♄	
conjunction	7217 May 20 17:55	3°♄10'36	-0°35'11	opposition	7223 Dec 18 20:33	29°♄00'34	-0°17'01
minimum elong	7217 May 20 17:55	3°♄10'36	0°35'16	min. Earth dist.	7223 Dec 18 05:30	29°♄02'05	19.03946 AU
max. Earth dist.	7217 May 21 12:33	3°♄13'16	21.07391 AU	direct	7224 Mar 03 11:51	27°♄03'48	
morning rise	7217 Jun 05 14:52	4°♄04'52			7224 May 31 12:12	0°♄	
retrograde	7217 Sep 07 02:50	7°♄10'31		evening set	7224 Jun 01 06:42	0°♄02'35	
opposition	7217 Nov 23 22:57	5°♄12'09	-0°37'24				

conjunction	7224 Jun 17 05:55	0°☿56'59 -0°13'45	retrograde	7229 Oct 26 11:13	25°♄03'05	
minimum elong	7224 Jun 17 05:55	0°☿56'59 0°13'49	opposition	7230 Jan 11 17:43	23°♄03'15	0°06'28
behind sun begin	7224 Jun 17 02:26	0°☿56'30	min. Earth dist.	7230 Jan 11 07:05	23°♄04'21	18.85864 AU
behind sun end	7224 Jun 17 09:24	0°☿57'28	direct	7230 Mar 27 21:24	21°♄05'50	
max. Earth dist.	7224 Jun 17 21:00	0°☿59'08 21.02908 AU	evening set	7230 Jun 25 22:47	24°♄06'55	
morning rise	7224 Jul 03 08:19	1°♄51'51				
retrograde	7224 Oct 05 09:50	4°♄58'20	conjunction	7230 Jul 12 02:56	25°♄02'24	0°07'41
opposition	7224 Dec 22 03:47	2°♄59'02 -0°13'13	minimum elong	7230 Jul 12 02:55	25°♄02'24	0°07'35
min. Earth dist.	7224 Dec 21 14:14	3°♄00'24 19.01816 AU	behind sun begin	7230 Jul 11 20:53	25°♄01'33	
direct	7225 Mar 07 16:08	1°♄02'11	behind sun end	7230 Jul 12 08:58	25°♄03'15	
evening set	7225 Jun 05 11:59	4°♄01'08	max. Earth dist.	7230 Jul 12 13:12	25°♄03'52	20.83724 AU
			morning rise	7230 Jul 28 10:19	25°♄58'21	
conjunction	7225 Jun 21 12:05	4°♄55'41 -0°10'17	retrograde	7230 Oct 30 20:48	29°♄07'26	
minimum elong	7225 Jun 21 12:05	4°♄55'41 0°10'22	opposition	7231 Jan 16 02:05	27°♄07'30	0°10'27
behind sun begin	7225 Jun 21 06:51	4°♄54'57	min. Earth dist.	7231 Jan 15 17:43	27°♄08'21	18.81468 AU
behind sun end	7225 Jun 21 17:18	4°♄56'25	direct	7231 Apr 01 02:45	25°♄09'53	
max. Earth dist.	7225 Jun 22 03:07	4°♄57'50 21.00616 AU	evening set	7231 Jun 30 07:48	28°♄11'36	
morning rise	7225 Jul 07 15:14	5°♄50'41				
retrograde	7225 Oct 09 19:15	8°♄57'30	conjunction	7231 Jul 16 12:53	29°♄07'18	0°11'14
opposition	7225 Dec 26 11:00	6°♄58'04 -0°09'22	minimum elong	7231 Jul 16 12:53	29°♄07'18	0°11'10
min. Earth dist.	7225 Dec 25 20:53	6°♄59'30 18.99346 AU	behind sun begin	7231 Jul 16 07:58	29°♄06'37	
direct	7226 Mar 11 22:14	5°♄01'07	behind sun end	7231 Jul 16 17:49	29°♄08'00	
evening set	7226 Jun 09 17:44	8°♄00'20	max. Earth dist.	7231 Jul 16 21:55	29°♄08'36	20.79107 AU
				7231 Jul 31 20:24	0°♄	
conjunction	7226 Jun 25 18:32	8°♄55'02 -0°06'47	morning rise	7231 Aug 01 21:05	0°♄03'29	
minimum elong	7226 Jun 25 18:32	8°♄55'02 0°06'52	retrograde	7231 Nov 04 09:51	3°♄13'07	
behind sun begin	7226 Jun 25 12:22	8°♄54'10	opposition	7232 Jan 20 10:44	1°♄13'01	0°14'23
behind sun end	7226 Jun 26 00:42	8°♄55'53	min. Earth dist.	7232 Jan 20 02:45	1°♄13'50	18.76614 AU
max. Earth dist.	7226 Jun 26 08:35	8°♄57'02 20.97973 AU		7232 Feb 21 09:45	30°♄	
morning rise	7226 Jul 11 22:38	9°♄50'12	direct	7232 Apr 04 11:33	29°♄15'10	
retrograde	7226 Oct 14 03:29	12°♄57'23		7232 May 16 09:36	0°♄	
opposition	7226 Dec 30 18:30	10°♄57'51 -0°05'27	evening set	7232 Jul 03 17:32	2°♄17'33	
min. Earth dist.	7226 Dec 30 06:02	10°♄59'06 18.96531 AU				
direct	7227 Mar 16 03:01	9°♄00'47	conjunction	7232 Jul 19 23:23	3°♄13'31	0°14'47
evening set	7227 Jun 14 00:01	12°♄00'21	minimum elong	7232 Jul 19 23:23	3°♄13'31	0°14'43
			behind sun begin	7232 Jul 19 20:43	3°♄13'08	
conjunction	7227 Jun 30 01:47	12°♄55'14 -0°03'14	behind sun end	7232 Jul 20 02:02	3°♄13'53	
minimum elong	7227 Jun 30 01:46	12°♄55'14 0°03'19	max. Earth dist.	7232 Jul 20 06:44	3°♄14'34	20.74021 AU
behind sun begin	7227 Jun 29 19:10	12°♄54'18	morning rise	7232 Aug 05 08:21	4°♄09'55	
behind sun end	7227 Jun 30 08:21	12°♄56'09	retrograde	7232 Nov 07 19:49	7°♄20'07	
max. Earth dist.	7227 Jun 30 15:28	12°♄57'11 20.94992 AU	opposition	7233 Jan 23 19:49	5°♄19'50	0°18'17
morning rise	7227 Jul 16 06:38	13°♄50'34	min. Earth dist.	7233 Jan 23 14:03	5°♄20'25	18.71318 AU
retrograde	7227 Oct 18 14:11	16°♄58'09	direct	7233 Apr 08 18:00	3°♄21'42	
opposition	7228 Jan 04 01:49	14°♄58'31 -0°01'30	evening set	7233 Jul 08 03:52	6°♄24'48	
min. Earth dist.	7228 Jan 03 13:09	14°♄59'49 18.93362 AU				
direct	7228 Mar 19 09:10	13°♄01'21	conjunction	7233 Jul 24 10:38	7°♄21'00	0°18'16
asc. node	7228 May 21 06:30	14°♄37'02	minimum elong	7233 Jul 24 10:38	7°♄21'00	0°18'11
evening set	7228 Jun 17 07:00	16°♄01'22	max. Earth dist.	7233 Jul 24 16:42	7°♄21'52	20.68545 AU
			morning rise	7233 Aug 09 20:24	8°♄17'39	
conjunction	7228 Jul 03 09:27	16°♄56'25 0°00'26	retrograde	7233 Nov 12 09:24	11°♄28'26	
minimum elong	7228 Jul 03 09:27	16°♄56'25 0°00'20	opposition	7234 Jan 28 05:03	9°♄27'55	0°22'07
behind sun begin	7228 Jul 03 02:50	16°♄55'30	min. Earth dist.	7234 Jan 27 23:40	9°♄28'29	18.65659 AU
behind sun end	7228 Jul 03 16:04	16°♄57'21	direct	7234 Apr 13 03:42	7°♄29'28	
max. Earth dist.	7228 Jul 03 21:56	16°♄58'12 20.91635 AU	evening set	7234 Jul 12 14:57	10°♄33'21	
morning rise	7228 Jul 19 15:12	17°♄51'58				
retrograde	7228 Oct 21 23:04	21°♄00'00	conjunction	7234 Jul 28 22:33	11°♄29'48	0°21'40
opposition	7229 Jan 07 09:41	19°♄00'18 0°02'29	minimum elong	7234 Jul 28 22:33	11°♄29'48	0°21'37
min. Earth dist.	7229 Jan 06 22:58	19°♄01'23 18.89815 AU	max. Earth dist.	7234 Jul 29 03:12	11°♄30'29	20.62721 AU
direct	7229 Mar 23 14:09	17°♄03'01	morning rise	7234 Aug 14 09:05	12°♄26'42	
evening set	7229 Jun 21 14:24	20°♄03'31		7234 Oct 08 11:42	15°♄	
			retrograde	7234 Nov 16 20:27	15°♄38'05	
conjunction	7229 Jul 07 17:46	20°♄58'47 0°04'06		7234 Dec 26 22:23	15°♄	
minimum elong	7229 Jul 07 17:47	20°♄58'47 0°04'01	opposition	7235 Feb 01 14:47	13°♄37'20	0°25'51
behind sun begin	7229 Jul 07 11:13	20°♄57'52	min. Earth dist.	7235 Feb 01 11:29	13°♄37'41	18.59694 AU
behind sun end	7229 Jul 08 00:20	20°♄59'42	direct	7235 Apr 17 11:25	11°♄38'33	
max. Earth dist.	7229 Jul 08 05:37	21°♄00'28 20.87899 AU	evening set	7235 Jul 17 02:50	14°♄43'15	
morning rise	7229 Jul 24 00:19	21°♄54'31		7235 Jul 21 23:57	15°♄	

conjunction	7235 Aug 02 11:17	15°♏39'59	0°24'59	retrograde	7241 Dec 17 08:37	15°♐29'59	
minimum elong	7235 Aug 02 11:17	15°♏39'59	0°24'55	opposition	7242 Mar 02 23:41	13°♐27'58	0°47'36
max. Earth dist.	7235 Aug 02 14:34	15°♏40'27	20.56641 AU	min. Earth dist.	7242 Mar 03 03:12	13°♐27'36	18.14649 AU
morning rise	7235 Aug 18 22:33	16°♏37'07		direct	7242 May 16 15:28	11°♐26'52	
retrograde	7235 Nov 21 10:31	19°♏49'07		evening set	7242 Aug 16 14:16	14°♐38'50	
opposition	7236 Feb 06 00:39	17°♏48'09	0°29'28				
min. Earth dist.	7236 Feb 05 21:41	17°♏48'27	18.53506 AU	conjunction	7242 Sep 02 03:51	15°♐37'37	0°43'55
direct	7236 Apr 20 21:36	15°♏49'00		minimum elong	7242 Sep 02 03:51	15°♐37'37	0°43'53
evening set	7236 Jul 20 15:30	18°♏54'36		max. Earth dist.	7242 Sep 01 22:54	15°♐36'52	20.11395 AU
				morning rise	7242 Sep 18 18:57	16°♐36'39	
conjunction	7236 Aug 06 00:44	19°♏51'36	0°28'11	retrograde	7242 Dec 22 02:21	19°♐53'29	
minimum elong	7236 Aug 06 00:44	19°♏51'36	0°28'08	opposition	7243 Mar 07 13:46	17°♐51'23	0°49'51
max. Earth dist.	7236 Aug 06 02:54	19°♏51'55	20.50355 AU	min. Earth dist.	7243 Mar 07 18:56	17°♐50'50	18.08133 AU
morning rise	7236 Aug 22 12:38	20°♏49'00		direct	7243 May 21 04:31	15°♐49'59	
retrograde	7236 Nov 24 23:08	24°♏01'38		evening set	7243 Aug 21 09:44	19°♐03'09	
opposition	7237 Feb 09 11:12	22°♏00'27	0°32'57				
min. Earth dist.	7237 Feb 09 10:01	22°♏00'34	18.47152 AU	conjunction	7243 Sep 06 23:44	20°♐02'12	0°45'48
direct	7237 Apr 25 06:17	20°♏00'58		minimum elong	7243 Sep 06 23:44	20°♐02'12	0°45'48
evening set	7237 Jul 25 04:50	23°♏07'29		max. Earth dist.	7243 Sep 06 16:21	20°♐01'06	20.04871 AU
				morning rise	7243 Sep 23 15:18	21°♐01'31	
conjunction	7237 Aug 10 14:51	24°♏04'46	0°31'15	retrograde	7243 Dec 26 21:54	24°♐19'04	
minimum elong	7237 Aug 10 14:51	24°♏04'46	0°31'12	opposition	7244 Mar 11 04:30	22°♐16'51	0°51'49
max. Earth dist.	7237 Aug 10 15:39	24°♏04'53	20.43952 AU	min. Earth dist.	7244 Mar 11 10:50	22°♐16'10	18.01600 AU
morning rise	7237 Aug 27 03:29	25°♏02'26		direct	7244 May 24 19:38	20°♐15'06	
retrograde	7237 Nov 29 14:33	28°♏15'45		evening set	7244 Aug 25 06:05	23°♐29'28	
opposition	7238 Feb 13 22:08	26°♏14'20	0°36'16				
min. Earth dist.	7238 Feb 13 21:14	26°♏14'26	18.40704 AU	conjunction	7244 Sep 10 20:45	24°♐28'50	0°47'26
direct	7238 Apr 29 17:21	24°♏14'30		minimum elong	7244 Sep 10 20:44	24°♐28'50	0°47'26
evening set	7238 Jul 29 19:14	27°♏22'01		max. Earth dist.	7244 Sep 10 12:42	24°♐27'38	19.98313 AU
				morning rise	7244 Sep 27 12:24	25°♐28'24	
conjunction	7238 Aug 15 06:03	28°♏19'36	0°34'09	retrograde	7244 Dec 30 17:02	28°♐46'38	
minimum elong	7238 Aug 15 06:03	28°♏19'36	0°34'06	opposition	7245 Mar 15 20:03	26°♐44'17	0°53'30
max. Earth dist.	7238 Aug 15 05:56	28°♏19'35	20.37458 AU	min. Earth dist.	7245 Mar 16 03:47	26°♐43'27	17.95035 AU
morning rise	7238 Aug 31 19:13	29°♏17'32		direct	7245 May 29 11:12	24°♐42'12	
	7238 Sep 13 11:20	0°♐		evening set	7245 Aug 30 03:23	27°♐57'45	
retrograde	7238 Dec 04 04:40	2°♐31'30					
opposition	7239 Feb 18 09:35	0°♐29'55	0°39'25	conjunction	7245 Sep 15 18:24	28°♐57'24	0°48'48
min. Earth dist.	7239 Feb 18 10:22	0°♐29'50	18.34190 AU	minimum elong	7245 Sep 15 18:24	28°♐57'24	0°48'47
	7239 Mar 02 08:37	30°♐		max. Earth dist.	7245 Sep 15 07:42	28°♐55'47	19.91752 AU
direct	7239 May 04 02:55	28°♏29'45		morning rise	7245 Oct 02 10:29	29°♐57'14	
	7239 Jul 03 08:42	0°♐			7245 Oct 03 05:23	0°♐	
evening set	7239 Aug 03 10:34	1°♐38'19		retrograde	7246 Jan 04 12:58	3°♐16'07	
				opposition	7246 Mar 20 12:15	1°♐13'35	0°54'53
conjunction	7239 Aug 19 22:05	2°♐36'11	0°36'54	min. Earth dist.	7246 Mar 20 21:21	1°♐12'37	17.88487 AU
minimum elong	7239 Aug 19 22:05	2°♐36'11	0°36'51		7246 Apr 20 02:12	30°♐	
max. Earth dist.	7239 Aug 19 20:18	2°♐35'55	20.30940 AU	direct	7246 Jun 03 03:49	29°♐11'07	
morning rise	7239 Sep 05 11:54	3°♐34'23			7246 Jul 16 11:25	0°♐	
retrograde	7239 Dec 08 21:58	6°♐49'04		evening set	7246 Sep 04 01:37	2°♐27'51	
opposition	7240 Feb 22 21:37	4°♐47'19	0°42'22				
min. Earth dist.	7240 Feb 22 22:49	4°♐47'11	18.27669 AU	conjunction	7246 Sep 20 17:13	3°♐27'48	0°49'52
direct	7240 May 07 15:04	2°♐46'49		minimum elong	7246 Sep 20 17:13	3°♐27'48	0°49'53
evening set	7240 Aug 07 02:41	5°♐56'28		max. Earth dist.	7246 Sep 20 06:04	3°♐26'07	19.85217 AU
				morning rise	7246 Oct 07 09:18	4°♐27'52	
conjunction	7240 Aug 23 14:57	6°♐54'38	0°39'27	retrograde	7247 Jan 09 09:32	7°♐47'21	
minimum elong	7240 Aug 23 14:56	6°♐54'38	0°39'24	opposition	7247 Mar 25 04:59	5°♐44'41	0°55'55
max. Earth dist.	7240 Aug 23 12:33	6°♐54'17	20.24409 AU	min. Earth dist.	7247 Mar 25 15:11	5°♐43'35	17.81989 AU
morning rise	7240 Sep 09 05:09	7°♐53'07		direct	7247 Jun 07 21:55	3°♐41'50	
retrograde	7240 Dec 12 13:50	11°♐08'31		evening set	7247 Sep 09 00:48	6°♐59'44	
opposition	7241 Feb 26 10:24	9°♐06'38	0°45'06				
min. Earth dist.	7241 Feb 26 13:08	9°♐06'21	18.21146 AU	conjunction	7247 Sep 25 16:35	7°♐59'57	0°50'38
direct	7241 May 12 02:01	7°♐05'50		minimum elong	7247 Sep 25 16:34	7°♐59'57	0°50'38
evening set	7241 Aug 11 19:58	10°♐16'38		max. Earth dist.	7247 Sep 25 02:53	7°♐57'52	19.78783 AU
				morning rise	7247 Oct 12 08:54	9°♐00'15	
conjunction	7241 Aug 28 08:49	11°♐15'05	0°41'47	retrograde	7248 Jan 14 05:39	12°♐20'20	
minimum elong	7241 Aug 28 08:49	11°♐15'05	0°41'46	opposition	7248 Mar 28 22:29	10°♐17'29	0°56'37
max. Earth dist.	7241 Aug 28 04:30	11°♐14'27	20.17905 AU	min. Earth dist.	7248 Mar 29 10:04	10°♐16'14	17.75641 AU
morning rise	7241 Sep 13 23:38	12°♐13'51		direct	7248 Jun 11 15:56	8°♐14'15	

evening set	7248 Sep 13 00:24	11° <u>♂</u> 33'18		max. Earth dist.	7254 Oct 28 12:01	10° <u>♂</u> 26'17	19.42527 AU
				morning rise	7254 Nov 14 20:58	11° <u>♂</u> 30'36	
conjunction	7248 Sep 29 16:39	12° <u>♂</u> 33'47	0°51'05	retrograde	7255 Feb 15 21:02	14° <u>♂</u> 53'45	
minimum elong	7248 Sep 29 16:39	12° <u>♂</u> 33'47	0°51'06	opposition	7255 Apr 30 18:12	12° <u>♂</u> 50'29	0°51'13
max. Earth dist.	7248 Sep 29 02:59	12° <u>♂</u> 31'42	19.72524 AU	min. Earth dist.	7255 May 01 09:01	12° <u>♂</u> 48'51	17.40839 AU
morning rise	7248 Oct 16 08:51	13° <u>♂</u> 34'18		direct	7255 Jul 15 00:46	10° <u>♂</u> 45'12	
retrograde	7249 Jan 18 03:27	16° <u>♂</u> 54'56		evening set	7255 Oct 17 17:55	14° <u>♂</u> 11'28	
opposition	7249 Apr 02 16:35	14° <u>♂</u> 51'56	0°56'58		7255 Oct 30 20:45	15° <u>♂</u>	
min. Earth dist.	7249 Apr 03 04:41	14° <u>♂</u> 50'38	17.69494 AU				
direct	7249 Jun 16 12:11	12° <u>♂</u> 48'20		conjunction	7255 Nov 03 10:02	15° <u>♂</u> 13'17	0°44'58
evening set	7249 Sep 18 01:05	16° <u>♂</u> 08'31		minimum elong	7255 Nov 03 10:03	15° <u>♂</u> 13'17	0°45'02
				max. Earth dist.	7255 Nov 02 15:34	15° <u>♂</u> 10'25	19.39224 AU
conjunction	7249 Oct 04 17:23	17° <u>♂</u> 09'14	0°51'12	morning rise	7255 Nov 20 00:25	16° <u>♂</u> 14'54	
minimum elong	7249 Oct 04 17:23	17° <u>♂</u> 09'14	0°51'14	retrograde	7256 Feb 20 21:06	19° <u>♂</u> 38'19	
max. Earth dist.	7249 Oct 04 01:32	17° <u>♂</u> 06'49	19.66511 AU	opposition	7256 May 04 16:48	17° <u>♂</u> 35'07	0°48'59
morning rise	7249 Oct 21 09:42	18° <u>♂</u> 09'58		min. Earth dist.	7256 May 05 08:55	17° <u>♂</u> 33'21	17.37793 AU
retrograde	7250 Jan 22 23:56	21° <u>♂</u> 31'07		direct	7256 Jul 18 23:19	15° <u>♂</u> 29'42	
opposition	7250 Apr 07 11:14	19° <u>♂</u> 27'59	0°56'56	evening set	7256 Oct 21 22:26	18° <u>♂</u> 56'45	
min. Earth dist.	7250 Apr 08 00:45	19° <u>♂</u> 26'31	17.63642 AU				
direct	7250 Jun 21 07:47	17° <u>♂</u> 23'59		conjunction	7256 Nov 07 14:14	19° <u>♂</u> 58'41	0°42'48
evening set	7250 Sep 23 02:20	20° <u>♂</u> 45'18		minimum elong	7256 Nov 07 14:14	19° <u>♂</u> 58'41	0°42'52
				max. Earth dist.	7256 Nov 06 19:23	19° <u>♂</u> 55'44	19.36423 AU
conjunction	7250 Oct 09 18:57	21° <u>♂</u> 46'15	0°51'00	morning rise	7256 Nov 24 04:10	21° <u>♂</u> 00'22	
minimum elong	7250 Oct 09 18:57	21° <u>♂</u> 46'15	0°51'01	retrograde	7257 Feb 24 23:14	24° <u>♂</u> 24'00	
max. Earth dist.	7250 Oct 09 03:16	21° <u>♂</u> 43'51	19.60821 AU	opposition	7257 May 09 15:47	22° <u>♂</u> 20'51	0°46'24
morning rise	7250 Oct 26 11:01	22° <u>♂</u> 47'10		min. Earth dist.	7257 May 10 07:14	22° <u>♂</u> 19'10	17.35219 AU
retrograde	7251 Jan 27 22:50	26° <u>♂</u> 08'48		direct	7257 Jul 24 01:27	20° <u>♂</u> 15'19	
opposition	7251 Apr 12 06:32	24° <u>♂</u> 05'33	0°56'32	evening set	7257 Oct 27 03:28	23° <u>♂</u> 43'03	
min. Earth dist.	7251 Apr 12 20:03	24° <u>♂</u> 04'05	17.58135 AU				
direct	7251 Jun 26 06:01	22° <u>♂</u> 01'14		conjunction	7257 Nov 12 18:56	24° <u>♂</u> 45'04	0°40'19
evening set	7251 Sep 28 04:18	25° <u>♂</u> 23'37		minimum elong	7257 Nov 12 18:56	24° <u>♂</u> 45'04	0°40'23
				max. Earth dist.	7257 Nov 12 00:06	24° <u>♂</u> 42'07	19.34068 AU
conjunction	7251 Oct 14 20:48	26° <u>♂</u> 24'46	0°50'27	morning rise	7257 Nov 29 08:07	25° <u>♂</u> 46'47	
minimum elong	7251 Oct 14 20:48	26° <u>♂</u> 24'46	0°50'30	retrograde	7258 Mar 01 23:15	29° <u>♂</u> 10'31	
max. Earth dist.	7251 Oct 14 03:30	26° <u>♂</u> 22'07	19.55512 AU	opposition	7258 May 14 15:21	27° <u>♂</u> 07'28	0°43'29
morning rise	7251 Oct 31 12:45	27° <u>♂</u> 25'52		min. Earth dist.	7258 May 15 08:03	27° <u>♂</u> 05'38	17.33092 AU
	7251 Dec 21 10:48	0° <u>♂</u>		direct	7258 Jul 29 01:32	25° <u>♂</u> 01'47	
retrograde	7252 Feb 01 20:13	0° <u>♂</u> 47'57		evening set	7258 Nov 01 08:46	28° <u>♂</u> 30'08	
	7252 Mar 16 03:06	30° <u>♂</u> 4					
opposition	7252 Apr 16 02:36	28° <u>♂</u> 44'38	0°55'46	conjunction	7258 Nov 17 23:39	29° <u>♂</u> 32'11	0°37'34
min. Earth dist.	7252 Apr 16 17:20	28° <u>♂</u> 43'01	17.53060 AU	minimum elong	7258 Nov 17 23:39	29° <u>♂</u> 32'11	0°37'38
direct	7252 Jun 30 02:57	26° <u>♂</u> 39'59		max. Earth dist.	7258 Nov 17 03:57	29° <u>♂</u> 29'05	19.32171 AU
	7252 Oct 01 08:01	0° <u>♂</u>			7258 Nov 25 09:17	0° <u>♂</u>	
evening set	7252 Oct 02 06:45	0° <u>♂</u> 03'25		morning rise	7258 Dec 04 12:18	0° <u>♂</u> 33'54	
				retrograde	7259 Mar 07 00:44	3° <u>♂</u> 57'42	
conjunction	7252 Oct 18 23:24	1° <u>♂</u> 04'46	0°49'35	opposition	7259 May 19 15:20	1° <u>♂</u> 54'40	0°40'16
minimum elong	7252 Oct 18 23:24	1° <u>♂</u> 04'46	0°49'37	min. Earth dist.	7259 May 20 07:17	1° <u>♂</u> 52'56	17.31418 AU
max. Earth dist.	7252 Oct 18 06:22	1° <u>♂</u> 02'09	19.50673 AU		7259 Jul 13 18:21	30° <u>♂</u> 1	
morning rise	7252 Nov 04 15:00	2° <u>♂</u> 06'02		direct	7259 Aug 03 05:18	29° <u>♂</u> 48'53	
retrograde	7253 Feb 05 20:26	5° <u>♂</u> 28'30			7259 Aug 23 13:04	0° <u>♂</u>	
opposition	7253 Apr 20 23:07	3° <u>♂</u> 25'09	0°54'37	evening set	7259 Nov 06 13:53	3° <u>♂</u> 17'42	
min. Earth dist.	7253 Apr 21 13:20	3° <u>♂</u> 23'36	17.48466 AU	max. Earth dist.	7259 Nov 22 09:24	4° <u>♂</u> 16'47	19.30718 AU
direct	7253 Jul 05 02:22	1° <u>♂</u> 20'16					
evening set	7253 Oct 07 09:56	4° <u>♂</u> 44'41		conjunction	7259 Nov 23 04:19	4° <u>♂</u> 19'45	0°34'32
max. Earth dist.	7253 Oct 23 08:22	5° <u>♂</u> 43'25	19.46334 AU	minimum elong	7259 Nov 23 04:19	4° <u>♂</u> 19'45	0°34'37
				morning rise	7259 Dec 09 16:04	5° <u>♂</u> 21'28	
conjunction	7253 Oct 24 02:26	5° <u>♂</u> 46'13	0°48'22	retrograde	7260 Mar 11 00:33	8° <u>♂</u> 45'13	
minimum elong	7253 Oct 24 02:27	5° <u>♂</u> 46'13	0°48'25	opposition	7260 May 23 15:47	6° <u>♂</u> 42'16	0°36'45
morning rise	7253 Nov 09 17:46	6° <u>♂</u> 47'37		min. Earth dist.	7260 May 24 08:32	6° <u>♂</u> 40'26	17.30198 AU
retrograde	7254 Feb 10 19:33	10° <u>♂</u> 10'28		direct	7260 Aug 07 07:12	4° <u>♂</u> 36'22	
opposition	7254 Apr 25 20:28	8° <u>♂</u> 07'07	0°53'06	evening set	7260 Nov 10 19:10	8° <u>♂</u> 05'31	
min. Earth dist.	7254 Apr 26 11:56	8° <u>♂</u> 05'26	17.44394 AU				
direct	7254 Jul 10 00:15	6° <u>♂</u> 02'01		conjunction	7260 Nov 27 08:51	9° <u>♂</u> 07'33	0°31'16
evening set	7254 Oct 12 13:39	9° <u>♂</u> 27'23		minimum elong	7260 Nov 27 08:51	9° <u>♂</u> 07'33	0°31'20
				max. Earth dist.	7260 Nov 26 13:03	9° <u>♂</u> 04'27	19.29747 AU
conjunction	7254 Oct 29 06:03	10° <u>♂</u> 29'05	0°46'50	morning rise	7260 Dec 13 20:00	10° <u>♂</u> 09'13	
minimum elong	7254 Oct 29 06:03	10° <u>♂</u> 29'05	0°46'53	retrograde	7261 Mar 16 01:26	13° <u>♂</u> 32'53	

opposition	7261 May 28 16:14	11° \mathring{A} 29'57	0°32'59	opposition	7267 Jun 26 22:00	10° \mathring{S} 07'32	0°06'37
min. Earth dist.	7261 May 29 08:15	11° \mathring{A} 28'12	17.29472 AU	min. Earth dist.	7267 Jun 27 10:10	10° \mathring{S} 06'13	17.36951 AU
direct	7261 Aug 12 12:06	9° \mathring{A} 23'57		direct	7267 Sep 11 08:24	8° \mathring{S} 01'37	
evening set	7261 Nov 16 00:13	12° \mathring{A} 53'22		evening set	7267 Dec 15 22:02	11° \mathring{S} 30'14	
conjunction	7261 Dec 02 13:25	13° \mathring{A} 55'21	0°27'46	conjunction	7268 Jan 01 05:59	12° \mathring{S} 31'22	0°03'51
minimum elong	7261 Dec 02 13:25	13° \mathring{A} 55'21	0°27'52	minimum elong	7268 Jan 01 05:59	12° \mathring{S} 31'22	0°03'56
max. Earth dist.	7261 Dec 01 18:57	13° \mathring{A} 52'27	19.29270 AU	behind sun begin	7267 Dec 31 23:23	12° \mathring{S} 30'21	
morning rise	7261 Dec 18 23:34	14° \mathring{A} 56'57		behind sun end	7268 Jan 01 12:35	12° \mathring{S} 32'22	
retrograde	7262 Mar 21 01:08	18° \mathring{A} 20'24		max. Earth dist.	7267 Dec 31 17:14	12° \mathring{S} 29'22	19.38576 AU
opposition	7262 Jun 02 17:07	16° \mathring{A} 17'33	0°28'59	morning rise	7268 Jan 17 10:36	13° \mathring{S} 32'01	
min. Earth dist.	7262 Jun 03 09:25	16° \mathring{A} 15'46	17.29245 AU	retrograde	7268 Apr 18 00:25	16° \mathring{S} 53'21	
direct	7262 Aug 17 15:16	14° \mathring{A} 11'28		opposition	7268 Jun 30 22:48	14° \mathring{S} 51'13	0°01'55
evening set	7262 Nov 21 05:07	17° \mathring{A} 41'00		min. Earth dist.	7268 Jul 01 09:16	14° \mathring{S} 50'06	17.40342 AU
conjunction	7262 Dec 07 17:22	18° \mathring{A} 42'54	0°24'05	direct	7268 Sep 15 12:06	12° \mathring{S} 45'33	
minimum elong	7262 Dec 07 17:22	18° \mathring{A} 42'54	0°24'10	desc. node	7268 Nov 28 14:13	14° \mathring{S} 58'59	
max. Earth dist.	7262 Dec 06 22:16	18° \mathring{A} 39'54	19.29319 AU	evening set	7268 Dec 19 23:49	16° \mathring{S} 13'42	
morning rise	7262 Dec 24 02:48	19° \mathring{A} 44'24		conjunction	7269 Jan 05 06:43	17° \mathring{S} 14'37	-0°00'27
retrograde	7263 Mar 26 01:31	23° \mathring{A} 07'38		minimum elong	7269 Jan 05 06:42	17° \mathring{S} 14'37	0°00'21
opposition	7263 Jun 07 18:01	21° \mathring{A} 04'49	0°24'46	behind sun begin	7269 Jan 05 00:04	17° \mathring{S} 13'36	
min. Earth dist.	7263 Jun 08 09:31	21° \mathring{A} 03'08	17.29573 AU	behind sun end	7269 Jan 05 13:21	17° \mathring{S} 15'38	
direct	7263 Aug 22 19:53	18° \mathring{A} 58'40		max. Earth dist.	7269 Jan 04 18:50	17° \mathring{S} 12'46	19.42248 AU
evening set	7263 Nov 26 09:27	22° \mathring{A} 28'13		morning rise	7269 Jan 21 10:23	18° \mathring{S} 15'03	
conjunction	7263 Dec 12 21:05	23° \mathring{A} 30'01	0°20'14	retrograde	7269 Apr 22 21:56	21° \mathring{S} 35'54	
minimum elong	7263 Dec 12 21:05	23° \mathring{A} 30'01	0°20'20	opposition	7269 Jul 05 23:23	19° \mathring{S} 34'01	-0°02'46
max. Earth dist.	7263 Dec 12 03:53	23° \mathring{A} 27'19	19.29932 AU	min. Earth dist.	7269 Jul 06 09:33	19° \mathring{S} 32'55	17.44278 AU
morning rise	7263 Dec 29 05:28	24° \mathring{A} 31'23		direct	7269 Sep 20 12:53	17° \mathring{S} 28'35	
retrograde	7264 Mar 30 01:26	27° \mathring{A} 54'18		evening set	7269 Dec 25 00:55	20° \mathring{S} 56'13	
opposition	7264 Jun 11 19:02	25° \mathring{A} 51'34	0°20'23	conjunction	7270 Jan 10 06:50	21° \mathring{S} 56'53	-0°04'41
min. Earth dist.	7264 Jun 12 10:01	25° \mathring{A} 49'56	17.30474 AU	minimum elong	7270 Jan 10 06:49	21° \mathring{S} 56'53	0°04'36
direct	7264 Aug 26 23:31	23° \mathring{A} 45'24		behind sun begin	7270 Jan 10 00:18	21° \mathring{S} 55'53	
evening set	7264 Nov 30 13:26	27° \mathring{A} 14'50		behind sun end	7270 Jan 10 13:21	21° \mathring{S} 57'53	
max. Earth dist.	7264 Dec 16 06:45	28° \mathring{A} 13'47	19.31143 AU	max. Earth dist.	7270 Jan 09 20:24	21° \mathring{S} 55'16	19.46427 AU
conjunction	7264 Dec 17 00:04	28° \mathring{A} 16'30	0°16'15	morning rise	7270 Jan 26 09:32	22° \mathring{S} 57'04	
minimum elong	7264 Dec 17 00:04	28° \mathring{A} 16'30	0°16'21	retrograde	7270 Apr 27 21:46	26° \mathring{S} 17'24	
morning rise	7265 Jan 02 07:41	29° \mathring{A} 17'44		opposition	7270 Jul 10 23:51	24° \mathring{S} 15'46	-0°07'25
	7265 Jan 14 01:13	0° \mathring{S}		min. Earth dist.	7270 Jul 11 08:08	24° \mathring{S} 14'53	17.48665 AU
retrograde	7265 Apr 04 01:02	2° \mathring{S} 40'18		direct	7270 Sep 25 16:34	22° \mathring{S} 10'38	
opposition	7265 Jun 16 20:03	0° \mathring{S} 37'39	0°15'53	evening set	7270 Dec 30 01:12	25° \mathring{S} 37'37	
min. Earth dist.	7265 Jun 17 10:13	0° \mathring{S} 36'07	17.32000 AU	conjunction	7271 Jan 15 06:04	26° \mathring{S} 38'01	-0°08'49
	7265 Jul 01 11:44	30° \mathring{R} \mathring{A}		minimum elong	7271 Jan 15 06:04	26° \mathring{S} 38'01	0°08'44
direct	7265 Sep 01 02:51	28° \mathring{A} 31'29		behind sun begin	7271 Jan 15 00:18	26° \mathring{S} 37'08	
	7265 Oct 30 06:53	0° \mathring{S}		behind sun end	7271 Jan 15 11:50	26° \mathring{S} 38'54	
evening set	7265 Dec 05 16:52	2° \mathring{S} 00'45		max. Earth dist.	7271 Jan 14 20:57	26° \mathring{S} 36'36	19.51016 AU
max. Earth dist.	7265 Dec 21 11:31	2° \mathring{S} 59'53	19.32983 AU	morning rise	7271 Jan 31 07:45	27° \mathring{S} 37'57	
conjunction	7265 Dec 22 02:45	3° \mathring{S} 02'16	0°12'10		7271 Mar 17 10:53	0° $\mathring{\approx}$	
minimum elong	7265 Dec 22 02:44	3° \mathring{S} 02'16	0°12'15	retrograde	7271 May 02 17:58	0° $\mathring{\approx}$ 57'45	
behind sun begin	7265 Dec 21 22:18	3° \mathring{S} 01'35			7271 Jun 19 20:11	30° \mathring{R} \mathring{S}	
behind sun end	7265 Dec 22 07:11	3° \mathring{S} 02'57		opposition	7271 Jul 16 00:14	28° \mathring{S} 56'20	-0°11'59
morning rise	7266 Jan 07 09:16	4° \mathring{S} 03'19		min. Earth dist.	7271 Jul 16 08:21	28° \mathring{S} 55'28	17.53450 AU
retrograde	7266 Apr 09 01:11	7° \mathring{S} 25'30		direct	7271 Sep 30 17:06	26° \mathring{S} 51'29	
opposition	7266 Jun 21 20:59	5° \mathring{S} 22'59	0°11'17		7271 Dec 30 03:06	0° $\mathring{\approx}$	
min. Earth dist.	7266 Jun 22 09:55	5° \mathring{S} 21'35	17.34149 AU	evening set	7272 Jan 04 00:46	0° $\mathring{\approx}$ 17'46	
direct	7266 Sep 06 06:41	3° \mathring{S} 16'55		conjunction	7272 Jan 20 04:36	1° $\mathring{\approx}$ 17'52	-0°12'52
evening set	7266 Dec 10 19:55	6° \mathring{S} 45'54		minimum elong	7272 Jan 20 04:35	1° $\mathring{\approx}$ 17'52	0°12'47
conjunction	7266 Dec 27 04:43	7° \mathring{S} 47'14	0°08'02	behind sun begin	7272 Jan 20 00:25	1° $\mathring{\approx}$ 17'14	
minimum elong	7266 Dec 27 04:42	7° \mathring{S} 47'14	0°08'07	behind sun end	7272 Jan 20 08:45	1° $\mathring{\approx}$ 18'30	
behind sun begin	7266 Dec 26 22:45	7° \mathring{S} 46'19		max. Earth dist.	7272 Jan 19 20:27	1° $\mathring{\approx}$ 16'37	19.55978 AU
behind sun end	7266 Dec 27 10:39	7° \mathring{S} 48'09		morning rise	7272 Feb 05 05:24	2° $\mathring{\approx}$ 17'32	
max. Earth dist.	7266 Dec 26 13:56	7° \mathring{S} 44'55	19.35462 AU	retrograde	7272 May 06 16:13	5° $\mathring{\approx}$ 36'45	
morning rise	7267 Jan 12 10:20	8° \mathring{S} 48'06		opposition	7272 Jul 20 00:00	3° $\mathring{\approx}$ 35'33	-0°16'28
retrograde	7267 Apr 13 23:54	12° \mathring{S} 09'52		min. Earth dist.	7272 Jul 20 06:05	3° $\mathring{\approx}$ 34'54	17.58562 AU
				direct	7272 Oct 04 20:45	1° $\mathring{\approx}$ 31'00	

evening set	7273 Jan 07 23:28	4° \approx 56'27	minimum elong	7279 Feb 20 16:38	3° \approx 08'18 0°37'05
			max. Earth dist.	7279 Feb 20 18:43	3° \approx 08'37 19.97133 AU
conjunction	7273 Jan 24 02:21	5° \approx 56'16 -0°16'49	morning rise	7279 Mar 08 11:49	4° \approx 05'54
minimum elong	7273 Jan 24 02:21	5° \approx 56'16 0°16'46	retrograde	7279 Jun 07 21:34	7° \approx 20'19
max. Earth dist.	7273 Jan 23 19:47	5° \approx 55'16 19.61228 AU	opposition	7279 Aug 22 09:37	5° \approx 20'09 -0°42'43
morning rise	7273 Feb 09 02:10	6° \approx 55'39	min. Earth dist.	7279 Aug 22 07:28	5° \approx 20'22 18.00436 AU
retrograde	7273 May 11 10:51	10° \approx 14'15	direct	7279 Nov 07 13:22	3° \approx 17'37
opposition	7273 Jul 24 23:39	8° \approx 13'15 -0°20'49	evening set	7280 Feb 09 11:05	6° \approx 35'36
min. Earth dist.	7273 Jul 25 05:41	8° \approx 12'36 17.63944 AU			
direct	7273 Oct 09 20:50	6° \approx 08'59	conjunction	7280 Feb 25 07:35	7° \approx 33'11 -0°39'45
evening set	7274 Jan 12 21:21	9° \approx 33'34	minimum elong	7280 Feb 25 07:34	7° \approx 33'11 0°39'43
			max. Earth dist.	7280 Feb 25 10:11	7° \approx 33'35 20.03804 AU
conjunction	7274 Jan 28 23:08	10° \approx 33'04 -0°20'40	morning rise	7280 Mar 12 02:21	8° \approx 30'30
minimum elong	7274 Jan 28 23:08	10° \approx 33'04 0°20'36	retrograde	7280 Jun 11 14:25	11° \approx 44'15
max. Earth dist.	7274 Jan 28 17:09	10° \approx 32'09 19.66730 AU	opposition	7280 Aug 26 04:52	9° \approx 44'13 -0°45'29
morning rise	7274 Feb 13 22:10	11° \approx 32'09	min. Earth dist.	7280 Aug 26 00:33	9° \approx 44'40 18.07205 AU
retrograde	7274 May 16 07:32	14° \approx 50'06	direct	7280 Nov 11 09:14	7° \approx 42'02
opposition	7274 Jul 29 22:40	12° \approx 49'17 -0°25'00	evening set	7281 Feb 13 01:52	10° \approx 58'54
min. Earth dist.	7274 Jul 30 02:33	12° \approx 48'52 17.69549 AU			
direct	7274 Oct 14 23:14	10° \approx 45'18	conjunction	7281 Feb 28 21:49	11° \approx 56'10 -0°42'08
evening set	7275 Jan 17 18:11	14° \approx 08'54	minimum elong	7281 Feb 28 21:49	11° \approx 56'10 0°42'06
	7275 Jan 31 14:49	15° \approx	max. Earth dist.	7281 Mar 01 03:04	11° \approx 56'58 20.10647 AU
conjunction	7275 Feb 02 19:07	15° \approx 08'06 -0°24'21	morning rise	7281 Mar 16 15:54	12° \approx 53'12
minimum elong	7275 Feb 02 19:07	15° \approx 08'06 0°24'17	retrograde	7281 Jun 16 04:43	16° \approx 06'16
max. Earth dist.	7275 Feb 02 15:07	15° \approx 07'29 19.72434 AU	opposition	7281 Aug 30 23:44	14° \approx 06'26 -0°47'57
morning rise	7275 Feb 18 17:10	16° \approx 06'54	min. Earth dist.	7281 Aug 30 18:26	14° \approx 06'59 18.14106 AU
retrograde	7275 May 21 01:01	19° \approx 24'10	direct	7281 Nov 16 03:31	12° \approx 04'41
opposition	7275 Aug 03 21:22	17° \approx 23'30 -0°29'00	evening set	7282 Feb 17 15:50	15° \approx 20'22
min. Earth dist.	7275 Aug 04 01:04	17° \approx 23'07 17.75352 AU			
direct	7275 Oct 19 22:16	15° \approx 19'48	conjunction	7282 Mar 05 10:56	16° \approx 17'20 -0°44'14
evening set	7276 Jan 22 13:59	18° \approx 42'22	minimum elong	7282 Mar 05 10:56	16° \approx 17'20 0°44'13
conjunction	7276 Feb 07 13:53	19° \approx 41'14 -0°27'51	max. Earth dist.	7282 Mar 05 16:36	16° \approx 18'11 20.17599 AU
minimum elong	7276 Feb 07 13:53	19° \approx 41'14 0°27'48	morning rise	7282 Mar 21 04:43	17° \approx 14'06
max. Earth dist.	7276 Feb 07 10:21	19° \approx 40'42 19.78336 AU	retrograde	7282 Jun 20 20:12	20° \approx 26'33
morning rise	7276 Feb 23 11:20	20° \approx 39'44	opposition	7282 Sep 04 17:56	18° \approx 26'53 -0°50'08
retrograde	7276 May 24 20:07	23° \approx 56'19	min. Earth dist.	7282 Sep 04 10:50	18° \approx 27'37 18.21095 AU
opposition	7276 Aug 07 19:18	21° \approx 55'46 -0°32'48	direct	7282 Nov 20 21:47	16° \approx 25'33
min. Earth dist.	7276 Aug 07 20:48	21° \approx 55'37 17.81338 AU	evening set	7283 Feb 22 04:49	19° \approx 40'06
direct	7276 Oct 23 22:20	19° \approx 52'20	conjunction	7283 Mar 09 23:30	20° \approx 36'47 -0°46'05
evening set	7277 Jan 26 08:46	23° \approx 13'48	minimum elong	7283 Mar 09 23:30	20° \approx 36'47 0°46'05
conjunction	7277 Feb 11 07:54	24° \approx 12'21 -0°31'10	max. Earth dist.	7283 Mar 10 07:40	20° \approx 38'00 20.24594 AU
minimum elong	7277 Feb 11 07:54	24° \approx 12'21 0°31'07	morning rise	7283 Mar 25 16:44	21° \approx 33'16
max. Earth dist.	7277 Feb 11 06:42	24° \approx 12'10 19.84405 AU	retrograde	7283 Jun 25 09:43	24° \approx 45'06
morning rise	7277 Feb 27 04:26	25° \approx 10'33	opposition	7283 Sep 09 11:29	22° \approx 45'39 -0°52'02
retrograde	7277 May 29 12:24	28° \approx 26'24	min. Earth dist.	7283 Sep 09 03:26	22° \approx 46'29 18.28080 AU
opposition	7277 Aug 12 16:39	26° \approx 25'59 -0°36'22	direct	7283 Nov 25 14:48	20° \approx 44'45
min. Earth dist.	7277 Aug 12 17:45	26° \approx 25'52 17.87499 AU	evening set	7284 Feb 26 17:08	23° \approx 58'10
direct	7277 Oct 28 19:44	24° \approx 22'49	conjunction	7284 Mar 13 11:07	24° \approx 54'33 -0°47'40
evening set	7278 Jan 31 02:38	27° \approx 43'09	minimum elong	7284 Mar 13 11:07	24° \approx 54'33 0°47'40
conjunction	7278 Feb 16 00:45	28° \approx 41'22 -0°34'16	max. Earth dist.	7284 Mar 13 19:27	24° \approx 55'48 20.31552 AU
minimum elong	7278 Feb 16 00:45	28° \approx 41'22 0°34'14	morning rise	7284 Mar 29 04:12	25° \approx 50'48
max. Earth dist.	7278 Feb 16 00:04	28° \approx 41'16 19.90668 AU	retrograde	7284 Jun 28 23:43	29° \approx 02'03
morning rise	7278 Mar 03 20:45	29° \approx 39'17	opposition	7284 Sep 13 04:26	27° \approx 02'47 -0°53'37
	7278 Mar 09 16:32	0° \approx	min. Earth dist.	7284 Sep 12 19:08	27° \approx 03'44 18.34999 AU
retrograde	7278 Jun 03 06:23	2° \approx 54'25	direct	7284 Nov 29 07:09	25° \approx 02'17
opposition	7278 Aug 17 13:25	0° \approx 54'05 -0°39'40	evening set	7285 Mar 02 04:35	28° \approx 14'36
min. Earth dist.	7278 Aug 17 12:09	0° \approx 54'13 17.93867 AU	conjunction	7285 Mar 17 22:13	29° \approx 10'43 -0°48'59
	7278 Sep 08 22:47	30° \approx	minimum elong	7285 Mar 17 22:13	29° \approx 10'43 0°49'00
direct	7278 Nov 02 17:34	28° \approx 51'13	max. Earth dist.	7285 Mar 18 08:41	29° \approx 12'17 20.38397 AU
	7278 Dec 25 04:57	0° \approx	morning rise	7285 Mar 31 17:02	0° \approx
evening set	7279 Feb 04 19:13	2° \approx 10'23	retrograde	7285 Apr 02 14:51	0° \approx 06'43
conjunction	7279 Feb 20 16:38	3° \approx 08'18 -0°37'08	opposition	7285 Jul 03 12:33	3° \approx 17'24
			min. Earth dist.	7285 Sep 17 20:46	1° \approx 18'19 -0°54'54
				7285 Sep 17 10:31	1° \approx 19'22 18.41756 AU

	7285 Oct 22 19:31	30° \mathbb{R} \mathbb{H}	max. Earth dist.	7292 Apr 16 00:11	28° \mathbb{Y} 22'08	20.78790 AU
direct	7285 Dec 03 23:18	29° \mathbb{H} 18'14	morning rise	7292 May 01 01:59	29° \mathbb{Y} 14'39	
	7286 Jan 13 18:57	0° \mathbb{Y}		7292 May 14 17:20	0° \mathbb{B}	
evening set	7286 Mar 06 15:29	2° \mathbb{Y} 29'27	retrograde	7292 Aug 01 14:00	2° \mathbb{B} 21'53	
			opposition	7292 Oct 17 21:19	0° \mathbb{B} 23'17	-0°55'27
conjunction	7286 Mar 22 08:31	3° \mathbb{Y} 25'18 -0°50'01	min. Earth dist.	7292 Oct 17 06:14	0° \mathbb{B} 24'47	18.81151 AU
minimum elong	7286 Mar 22 08:31	3° \mathbb{Y} 25'18 0°50'02		7292 Oct 27 15:01	30° \mathbb{R} \mathbb{Y}	
max. Earth dist.	7286 Mar 22 18:58	3° \mathbb{Y} 26'51 20.45056 AU	direct	7293 Jan 02 17:25	28° \mathbb{Y} 25'11	
morning rise	7286 Apr 07 01:07	4° \mathbb{Y} 21'05		7293 Mar 06 14:38	0° \mathbb{B}	
retrograde	7286 Jul 08 00:58	7° \mathbb{Y} 31'13	evening set	7293 Apr 03 23:01	1° \mathbb{B} 29'24	
opposition	7286 Sep 22 12:36	5° \mathbb{Y} 32'17 -0°55'53				
min. Earth dist.	7286 Sep 22 01:33	5° \mathbb{Y} 33'25 18.48314 AU	conjunction	7293 Apr 19 15:13	2° \mathbb{B} 23'51	-0°49'41
direct	7286 Dec 08 13:58	3° \mathbb{Y} 32'35	minimum elong	7293 Apr 19 15:13	2° \mathbb{B} 23'51	0°49'44
evening set	7287 Mar 11 01:22	6° \mathbb{Y} 42'42	max. Earth dist.	7293 Apr 20 07:52	2° \mathbb{B} 26'17	20.83389 AU
			morning rise	7293 May 05 08:11	3° \mathbb{B} 18'27	
conjunction	7287 Mar 26 18:14	7° \mathbb{Y} 38'19 -0°50'47	retrograde	7293 Aug 05 22:30	6° \mathbb{B} 25'18	
minimum elong	7287 Mar 26 18:14	7° \mathbb{Y} 38'19 0°50'48	opposition	7293 Oct 22 08:34	4° \mathbb{B} 26'45	-0°54'23
max. Earth dist.	7287 Mar 27 06:31	7° \mathbb{Y} 40'09 20.51474 AU	min. Earth dist.	7293 Oct 21 16:01	4° \mathbb{B} 28'25	18.85613 AU
morning rise	7287 Apr 11 10:33	8° \mathbb{Y} 33'53	direct	7294 Jan 07 04:05	2° \mathbb{B} 28'54	
retrograde	7287 Jul 12 13:16	11° \mathbb{Y} 43'29	evening set	7294 Apr 08 04:41	5° \mathbb{B} 32'19	
opposition	7287 Sep 27 03:44	9° \mathbb{Y} 44'42 -0°56'34				
min. Earth dist.	7287 Sep 26 15:44	9° \mathbb{Y} 45'54 18.54581 AU	conjunction	7294 Apr 23 20:51	6° \mathbb{B} 26'38	-0°48'36
direct	7287 Dec 13 05:12	7° \mathbb{Y} 45'21	minimum elong	7294 Apr 23 20:51	6° \mathbb{B} 26'38	0°48'39
evening set	7288 Mar 14 10:50	10° \mathbb{Y} 54'24	max. Earth dist.	7294 Apr 24 13:26	6° \mathbb{B} 29'02	20.87718 AU
			morning rise	7294 May 09 14:16	7° \mathbb{B} 21'07	
conjunction	7288 Mar 30 03:17	11° \mathbb{Y} 49'47 -0°51'16	retrograde	7294 Aug 10 06:48	10° \mathbb{B} 27'41	
minimum elong	7288 Mar 30 03:16	11° \mathbb{Y} 49'47 0°51'18	opposition	7294 Oct 26 19:26	8° \mathbb{B} 29'09	-0°53'02
max. Earth dist.	7288 Mar 30 15:17	11° \mathbb{Y} 51'33 20.57582 AU	min. Earth dist.	7294 Oct 26 02:56	8° \mathbb{B} 30'48	18.89813 AU
morning rise	7288 Apr 14 19:41	12° \mathbb{Y} 45'09	direct	7295 Jan 11 11:48	6° \mathbb{B} 31'33	
retrograde	7288 Jul 15 23:43	15° \mathbb{Y} 54'14	evening set	7295 Apr 12 09:43	9° \mathbb{B} 34'12	
opposition	7288 Sep 30 18:06	13° \mathbb{Y} 55'32 -0°56'56				
min. Earth dist.	7288 Sep 30 05:47	13° \mathbb{Y} 56'46 18.60534 AU	conjunction	7295 Apr 28 02:14	10° \mathbb{B} 28'25	-0°47'17
direct	7288 Dec 16 18:08	11° \mathbb{Y} 56'29	minimum elong	7295 Apr 28 02:14	10° \mathbb{B} 28'25	0°47'21
evening set	7289 Mar 18 19:26	15° \mathbb{Y} 04'30	max. Earth dist.	7295 Apr 28 20:12	10° \mathbb{B} 31'01	20.91767 AU
			morning rise	7295 May 13 19:56	11° \mathbb{B} 22'49	
conjunction	7289 Apr 03 11:50	15° \mathbb{Y} 59'40 -0°51'29	retrograde	7295 Aug 14 15:11	14° \mathbb{B} 29'06	
minimum elong	7289 Apr 03 11:49	15° \mathbb{Y} 59'40 0°51'30	min. Earth dist.	7295 Oct 30 11:55	12° \mathbb{B} 32'25	18.93691 AU
max. Earth dist.	7289 Apr 04 01:24	16° \mathbb{Y} 01'40 20.63362 AU	opposition	7295 Oct 31 05:40	12° \mathbb{B} 30'39	-0°51'26
morning rise	7289 Apr 19 04:06	16° \mathbb{Y} 54'50	direct	7296 Jan 15 21:20	10° \mathbb{B} 33'16	
retrograde	7289 Jul 20 10:45	20° \mathbb{Y} 03'25	evening set	7296 Apr 15 14:42	13° \mathbb{B} 35'15	
opposition	7289 Oct 05 07:54	18° \mathbb{Y} 04'46 -0°57'00				
min. Earth dist.	7289 Oct 04 18:31	18° \mathbb{Y} 06'07 18.66136 AU	conjunction	7296 May 01 07:18	14° \mathbb{B} 29'22	-0°45'44
direct	7289 Dec 21 08:22	16° \mathbb{Y} 06'00	minimum elong	7296 May 01 07:18	14° \mathbb{B} 29'22	0°45'47
evening set	7290 Mar 23 03:18	19° \mathbb{Y} 13'00	max. Earth dist.	7296 May 02 00:59	14° \mathbb{B} 31'55	20.95471 AU
				7296 May 10 03:17	15° \mathbb{B}	
conjunction	7290 Apr 07 19:24	20° \mathbb{Y} 07'57 -0°51'26	morning rise	7296 May 17 01:32	15° \mathbb{B} 23'42	
minimum elong	7290 Apr 07 19:24	20° \mathbb{Y} 07'57 0°51'28	retrograde	7296 Aug 17 22:57	18° \mathbb{B} 29'47	
max. Earth dist.	7290 Apr 08 08:52	20° \mathbb{Y} 09'56 20.68799 AU	opposition	7296 Nov 03 15:32	16° \mathbb{B} 31'22	-0°49'36
morning rise	7290 Apr 23 11:54	21° \mathbb{Y} 02'58	min. Earth dist.	7296 Nov 02 22:17	16° \mathbb{B} 33'05	18.97221 AU
retrograde	7290 Jul 24 19:57	24° \mathbb{Y} 11'04		7296 Dec 17 08:36	15° \mathbb{R} \mathbb{B}	
opposition	7290 Oct 09 21:08	22° \mathbb{Y} 12'26 -0°56'47	direct	7297 Jan 19 03:30	14° \mathbb{B} 34'13	
min. Earth dist.	7290 Oct 09 07:30	22° \mathbb{Y} 13'48 18.71426 AU		7297 Feb 20 04:35	15° \mathbb{B}	
direct	7290 Dec 25 19:33	20° \mathbb{Y} 13'54	evening set	7297 Apr 19 19:18	17° \mathbb{B} 35'36	
evening set	7291 Mar 27 10:26	23° \mathbb{Y} 19'55				
			conjunction	7297 May 05 12:19	18° \mathbb{B} 29'38	-0°43'58
conjunction	7291 Apr 12 02:37	24° \mathbb{Y} 14'41 -0°51'06	minimum elong	7297 May 05 12:19	18° \mathbb{B} 29'38	0°44'03
minimum elong	7291 Apr 12 02:37	24° \mathbb{Y} 14'41 0°51'08	max. Earth dist.	7297 May 06 07:06	18° \mathbb{B} 32'21	20.98811 AU
max. Earth dist.	7291 Apr 12 17:44	24° \mathbb{Y} 16'54 20.73937 AU	morning rise	7297 May 21 06:54	19° \mathbb{B} 23'55	
morning rise	7291 Apr 27 19:09	25° \mathbb{Y} 09'32	retrograde	7297 Aug 22 07:34	22° \mathbb{B} 29'49	
retrograde	7291 Jul 29 05:23	28° \mathbb{Y} 17'10	min. Earth dist.	7297 Nov 07 06:45	20° \mathbb{B} 33'17	19.00349 AU
opposition	7291 Oct 14 09:26	26° \mathbb{Y} 18'34 -0°56'16	opposition	7297 Nov 08 01:03	20° \mathbb{B} 31'28	-0°47'31
min. Earth dist.	7291 Oct 13 18:32	26° \mathbb{Y} 20'03 18.76418 AU	direct	7298 Jan 23 12:22	18° \mathbb{B} 34'32	
direct	7291 Dec 30 07:58	24° \mathbb{Y} 20'15	evening set	7298 Apr 23 23:46	21° \mathbb{B} 35'22	
evening set	7292 Mar 30 17:05	27° \mathbb{Y} 25'20				
			conjunction	7298 May 09 17:00	22° \mathbb{B} 29'20	-0°42'00
conjunction	7292 Apr 15 09:07	28° \mathbb{Y} 19'56 -0°50'31	minimum elong	7298 May 09 17:00	22° \mathbb{B} 29'20	0°42'04
minimum elong	7292 Apr 15 09:07	28° \mathbb{Y} 19'56 0°50'34	max. Earth dist.	7298 May 10 11:18	22° \mathbb{B} 31'58	21.01722 AU

morning rise	7298 May 25 12:14	23° ♄ 23'36	direct	7305 Feb 21 07:58	16° ♄ 24'51
retrograde	7298 Aug 26 15:12	26° ♄ 29'23	evening set	7305 May 22 06:01	19° ♄ 23'33
opposition	7298 Nov 12 10:24	24° ♄ 31'03 -0°45'14			
min. Earth dist.	7298 Nov 11 16:59	24° ♄ 32'47 19.03038 AU	conjunction	7305 Jun 07 03:09	20° ♄ 17'39 -0°23'16
direct	7299 Jan 27 17:51	22° ♄ 34'18	minimum elong	7305 Jun 07 03:09	20° ♄ 17'39 0°23'21
evening set	7299 Apr 28 04:09	25° ♄ 34'39	max. Earth dist.	7305 Jun 07 20:01	20° ♄ 20'03 21.07410 AU
			morning rise	7305 Jun 23 03:01	21° ♄ 12'09
conjunction	7299 May 13 21:55	26° ♄ 28'36 -0°39'50	retrograde	7305 Sep 24 23:02	24° ♄ 18'00
minimum elong	7299 May 13 21:55	26° ♄ 28'36 0°39'55	opposition	7305 Dec 11 19:17	22° ♄ 19'07 -0°23'53
max. Earth dist.	7299 May 14 16:54	26° ♄ 31'20 21.04169 AU	min. Earth dist.	7305 Dec 11 03:17	22° ♄ 20'44 19.06910 AU
morning rise	7299 May 29 17:36	27° ♄ 22'50	direct	7306 Feb 25 14:17	20° ♄ 22'31
	7299 Jul 27 16:59	0° ♄	evening set	7306 May 26 10:31	23° ♄ 21'11
retrograde	7299 Aug 30 23:50	0° ♄ 28'31			
	7299 Oct 05 02:46	30° ♄	conjunction	7306 Jun 11 08:14	24° ♄ 15'22 -0°20'02
opposition	7299 Nov 16 19:06	28° ♄ 30'13 -0°42'43	minimum elong	7306 Jun 11 08:14	24° ♄ 15'22 0°20'07
min. Earth dist.	7299 Nov 16 01:01	28° ♄ 32'01 19.05222 AU	max. Earth dist.	7306 Jun 12 00:11	24° ♄ 17'38 21.06280 AU
direct	7300 Feb 01 01:58	26° ♄ 33'37	morning rise	7306 Jun 27 09:00	25° ♄ 09'59
evening set	7300 May 02 08:38	29° ♄ 33'33	retrograde	7306 Sep 29 05:50	28° ♄ 16'01
	7300 May 10 03:18	0° ♄	opposition	7306 Dec 16 02:41	26° ♄ 17'00 -0°20'15
			min. Earth dist.	7306 Dec 15 12:04	26° ♄ 18'28 19.05596 AU
conjunction	7300 May 18 02:42	0° ♄ 27'29 -0°37'29	direct	7307 Mar 01 18:32	24° ♄ 20'21
minimum elong	7300 May 18 02:42	0° ♄ 27'29 0°37'33	evening set	7307 May 30 15:13	27° ♄ 19'03
max. Earth dist.	7300 May 18 20:43	0° ♄ 30'04 21.06081 AU			
morning rise	7300 Jun 02 23:07	1° ♄ 21'44	conjunction	7307 Jun 15 13:47	28° ♄ 13'20 -0°16'42
retrograde	7300 Sep 04 07:19	4° ♄ 27'22	minimum elong	7307 Jun 15 13:47	28° ♄ 13'20 0°16'47
min. Earth dist.	7300 Nov 20 11:02	2° ♄ 30'43 19.06862 AU	max. Earth dist.	7307 Jun 16 05:59	28° ♄ 15'39 21.04788 AU
opposition	7300 Nov 21 03:52	2° ♄ 29'02 -0°40'01	morning rise	7307 Jul 01 15:15	29° ♄ 08'04
direct	7301 Feb 05 07:25	0° ♄ 32'32		7307 Jul 17 17:10	0° ♄
evening set	7301 May 06 12:50	3° ♄ 32'06	retrograde	7307 Oct 03 15:45	2° ♄ 14'19
			opposition	7307 Dec 20 09:42	0° ♄ 15'12 -0°16'31
conjunction	7301 May 22 07:32	4° ♄ 26'02 -0°34'57	min. Earth dist.	7307 Dec 19 18:30	0° ♄ 16'44 19.03916 AU
minimum elong	7301 May 22 07:32	4° ♄ 26'02 0°35'02		7307 Dec 26 17:16	30° ♄
max. Earth dist.	7301 May 23 01:52	4° ♄ 28'39 21.07435 AU	direct	7308 Mar 05 00:46	28° ♄ 18'28
morning rise	7301 Jun 07 04:27	5° ♄ 20'18		7308 May 09 04:41	0° ♄
retrograde	7301 Sep 08 15:47	8° ♄ 25'54	evening set	7308 Jun 02 20:21	1° ♄ 17'19
opposition	7301 Nov 25 12:16	6° ♄ 27'31 -0°37'07			
min. Earth dist.	7301 Nov 24 18:49	6° ♄ 29'16 19.07917 AU	conjunction	7308 Jun 18 19:32	2° ♄ 11'44 -0°13'17
direct	7302 Feb 09 14:58	4° ♄ 31'05	minimum elong	7308 Jun 18 19:32	2° ♄ 11'44 0°13'23
evening set	7302 May 10 17:14	7° ♄ 30'20	behind sun begin	7308 Jun 18 15:45	2° ♄ 11'12
			behind sun end	7308 Jun 18 23:19	2° ♄ 12'16
conjunction	7302 May 26 12:21	8° ♄ 24'16 -0°32'14	max. Earth dist.	7308 Jun 19 10:42	2° ♄ 13'54 21.02930 AU
minimum elong	7302 May 26 12:21	8° ♄ 24'16 0°32'20	morning rise	7308 Jul 04 21:55	3° ♄ 06'36
max. Earth dist.	7302 May 27 05:34	8° ♄ 26'44 21.08204 AU	retrograde	7308 Oct 06 22:55	6° ♄ 13'08
morning rise	7302 Jun 11 10:05	9° ♄ 18'35	opposition	7308 Dec 23 17:05	4° ♄ 13'55 -0°12'42
retrograde	7302 Sep 12 22:59	12° ♄ 24'12	min. Earth dist.	7308 Dec 23 03:22	4° ♄ 15'18 19.01886 AU
opposition	7302 Nov 29 20:28	10° ♄ 25'43 -0°34'02	direct	7309 Mar 09 04:26	2° ♄ 17'07
min. Earth dist.	7302 Nov 29 04:26	10° ♄ 27'19 19.08408 AU	evening set	7309 Jun 07 01:34	5° ♄ 16'10
direct	7303 Feb 13 20:17	8° ♄ 29'16			
evening set	7303 May 14 21:24	11° ♄ 28'16	conjunction	7309 Jun 23 01:39	6° ♄ 10'43 -0°09'49
			minimum elong	7309 Jun 23 01:39	6° ♄ 10'43 0°09'54
conjunction	7303 May 30 17:17	12° ♄ 22'14 -0°29'23	behind sun begin	7309 Jun 22 20:16	6° ♄ 09'58
minimum elong	7303 May 30 17:17	12° ♄ 22'15 0°29'28	behind sun end	7309 Jun 23 07:02	6° ♄ 11'28
max. Earth dist.	7303 May 31 10:45	12° ♄ 24'44 21.08429 AU	max. Earth dist.	7309 Jun 23 16:58	6° ♄ 12'54 21.00732 AU
morning rise	7303 Jun 15 15:40	13° ♄ 16'36	morning rise	7309 Jul 09 04:46	7° ♄ 05'44
retrograde	7303 Sep 17 07:19	16° ♄ 22'14	retrograde	7309 Oct 11 09:29	10° ♄ 12'36
min. Earth dist.	7303 Dec 03 11:37	14° ♄ 25'18 19.08361 AU	min. Earth dist.	7309 Dec 27 10:12	8° ♄ 14'43 18.99501 AU
opposition	7303 Dec 04 04:14	14° ♄ 23'38 -0°30'48	opposition	7309 Dec 28 00:24	8° ♄ 13'17 -0°08'49
direct	7304 Feb 18 03:05	12° ♄ 27'09	direct	7310 Mar 13 11:21	6° ♄ 16'25
evening set	7304 May 18 01:44	15° ♄ 25'58	evening set	7310 Jun 11 07:32	9° ♄ 15'45
conjunction	7304 Jun 02 22:05	16° ♄ 19'59 -0°26'23	conjunction	7310 Jun 27 08:18	10° ♄ 10'28 -0°06'17
minimum elong	7304 Jun 02 22:05	16° ♄ 19'59 0°26'29	minimum elong	7310 Jun 27 08:18	10° ♄ 10'28 0°06'22
max. Earth dist.	7304 Jun 03 14:32	16° ♄ 22'20 21.08135 AU	behind sun begin	7310 Jun 27 02:02	10° ♄ 09'35
morning rise	7304 Jun 18 21:18	17° ♄ 14'25	behind sun end	7310 Jun 27 14:33	10° ♄ 11'20
retrograde	7304 Sep 20 14:04	20° ♄ 20'08	max. Earth dist.	7310 Jun 27 22:25	10° ♄ 12'28 20.98166 AU
opposition	7304 Dec 07 11:53	18° ♄ 21'23 -0°27'24	morning rise	7310 Jul 13 12:22	11° ♄ 05'38
min. Earth dist.	7304 Dec 06 20:37	18° ♄ 22'55 19.07843 AU	retrograde	7310 Oct 15 17:46	14° ♄ 12'54

opposition	7311 Jan 01 07:53	12°☿13'29 -0°04'53	evening set	7316 Jul 05 07:35	3°♊34'32	
min. Earth dist.	7310 Dec 31 19:29	12°☿14'45 18.96751 AU				
direct	7311 Mar 17 15:03	10°☿16'32	conjunction	7316 Jul 21 13:24	4°♊30'28 0°15'22	
evening set	7311 Jun 15 13:54	13°☿16'13	minimum elong	7316 Jul 21 13:23	4°♊30'28 0°15'17	
			behind sun begin	7316 Jul 21 11:27	4°♊30'12	
conjunction	7311 Jul 01 15:37	14°☿11'06 -0°02'43	behind sun end	7316 Jul 21 15:20	4°♊30'44	
minimum elong	7311 Jul 01 15:37	14°☿11'06 0°02'49	max. Earth dist.	7316 Jul 21 20:24	4°♊31'28 20.73901 AU	
behind sun begin	7311 Jul 01 09:00	14°☿10'11	morning rise	7316 Aug 06 22:20	5°♊26'52	
behind sun end	7311 Jul 01 22:14	14°☿12'02	retrograde	7316 Nov 09 09:36	8°♊37'00	
max. Earth dist.	7311 Jul 02 05:27	14°☿13'05 20.95231 AU	opposition	7317 Jan 25 09:35	6°♊36'39 0°18'57	
morning rise	7311 Jul 17 20:26	15°☿06'28	min. Earth dist.	7317 Jan 25 03:55	6°♊37'14 18.71172 AU	
retrograde	7311 Oct 20 04:34	18°☿14'08	direct	7317 Apr 10 08:39	4°♊38'27	
opposition	7312 Jan 05 15:27	16°☿14'38 -0°00'54	evening set	7317 Jul 09 17:41	7°♊41'29	
min. Earth dist.	7312 Jan 05 02:55	16°☿15'55 18.93607 AU				
direct	7312 Mar 20 22:33	14°☿17'35	conjunction	7317 Jul 26 00:26	8°♊37'40 0°18'51	
asc. node	7312 Mar 28 16:54	14°☿19'09	minimum elong	7317 Jul 26 00:25	8°♊37'40 0°18'47	
evening set	7312 Jun 18 20:56	17°☿17'42	max. Earth dist.	7317 Jul 26 06:31	8°♊38'33 20.68390 AU	
			morning rise	7317 Aug 11 10:09	9°♊34'18	
conjunction	7312 Jul 04 23:18	18°☿12'46 0°01'00	retrograde	7317 Nov 13 22:17	12°♊45'00	
minimum elong	7312 Jul 04 23:19	18°☿12'46 0°00'55	opposition	7318 Jan 29 18:46	10°♊44'24 0°22'46	
behind sun begin	7312 Jul 04 16:41	18°☿11'51	min. Earth dist.	7318 Jan 29 13:17	10°♊44'58 18.65504 AU	
behind sun end	7312 Jul 05 05:58	18°☿13'42	direct	7318 Apr 14 17:45	8°♊45'51	
max. Earth dist.	7312 Jul 05 11:38	18°☿14'31 20.91872 AU	evening set	7318 Jul 14 04:45	11°♊49'39	
morning rise	7312 Jul 21 05:02	19°☿08'18				
retrograde	7312 Oct 23 13:58	22°☿16'27	conjunction	7318 Jul 30 12:17	12°♊46'05 0°22'15	
opposition	7313 Jan 08 23:26	20°☿16'51 0°03'06	minimum elong	7318 Jul 30 12:17	12°♊46'05 0°22'10	
min. Earth dist.	7313 Jan 08 12:57	20°☿17'55 18.90034 AU	max. Earth dist.	7318 Jul 30 16:55	12°♊46'45 20.62581 AU	
direct	7313 Mar 25 03:17	18°☿19'40	morning rise	7318 Aug 15 22:46	13°♊42'57	
evening set	7313 Jun 23 04:34	21°☿20'15		7318 Sep 08 23:55	15°♊	
			retrograde	7318 Nov 18 09:37	16°♊54'13	
conjunction	7313 Jul 09 07:54	22°☿15'32 0°04'39		7319 Jan 31 12:33	15°♊	
minimum elong	7313 Jul 09 07:54	22°☿15'32 0°04'34	opposition	7319 Feb 03 04:17	14°♊53'23 0°26'29	
behind sun begin	7313 Jul 09 01:23	22°☿14'37	min. Earth dist.	7319 Feb 03 00:52	14°♊53'45 18.59583 AU	
behind sun end	7313 Jul 09 14:25	22°☿16'27	direct	7319 Apr 19 01:21	12°♊54'30	
max. Earth dist.	7313 Jul 09 19:30	22°☿17'11 20.88081 AU		7319 Jun 30 14:19	15°♊	
morning rise	7313 Jul 25 14:22	23°☿11'16	evening set	7319 Jul 18 16:29	15°♊59'06	
retrograde	7313 Oct 28 01:15	26°☿19'54				
opposition	7314 Jan 13 07:30	24°☿20'09 0°07'06	conjunction	7319 Aug 04 00:53	16°♊55'49 0°25'33	
min. Earth dist.	7314 Jan 12 21:10	24°☿21'13 18.86004 AU	minimum elong	7319 Aug 04 00:53	16°♊55'49 0°25'30	
direct	7314 Mar 29 11:01	22°☿22'47	max. Earth dist.	7319 Aug 04 04:29	16°♊56'20 20.56567 AU	
evening set	7314 Jun 27 12:57	25°☿23'55	morning rise	7319 Aug 20 12:04	17°♊52'55	
			retrograde	7319 Nov 22 23:48	21°♊04'48	
conjunction	7314 Jul 13 17:03	26°☿19'24 0°08'15	opposition	7320 Feb 07 14:10	19°♊03'44 0°30'05	
minimum elong	7314 Jul 13 17:03	26°☿19'24 0°08'11	min. Earth dist.	7320 Feb 07 10:54	19°♊04'05 18.53481 AU	
behind sun begin	7314 Jul 13 11:09	26°☿18'35	direct	7320 Apr 22 11:22	17°♊04'31	
behind sun end	7314 Jul 13 22:57	26°☿20'14	evening set	7320 Jul 22 04:55	20°♊10'00	
max. Earth dist.	7314 Jul 14 02:48	26°☿20'48 20.83808 AU				
morning rise	7314 Jul 30 00:25	27°☿15'22	conjunction	7320 Aug 07 14:04	21°♊06'58 0°28'44	
	7314 Sep 30 19:09	0°♊	minimum elong	7320 Aug 07 14:03	21°♊06'58 0°28'40	
retrograde	7314 Nov 01 11:22	0°♊24'29	max. Earth dist.	7320 Aug 07 16:29	21°♊07'19 20.50381 AU	
	7314 Dec 03 12:55	30°♊☿	morning rise	7320 Aug 24 01:54	22°♊04'21	
opposition	7315 Jan 17 16:01	28°☿24'34 0°11'05	retrograde	7320 Nov 26 12:11	25°♊16'52	
min. Earth dist.	7315 Jan 17 07:57	28°☿25'24 18.81492 AU	opposition	7321 Feb 11 00:42	23°♊15'36 0°33'33	
direct	7315 Apr 02 17:16	26°☿26'58	min. Earth dist.	7321 Feb 10 23:14	23°♊15'45 18.47241 AU	
evening set	7315 Jul 01 21:55	29°☿28'41	direct	7321 Apr 26 19:50	21°♊16'02	
	7315 Jul 11 01:53	0°♊	evening set	7321 Jul 26 18:15	24°♊22'27	
conjunction	7315 Jul 18 02:58	0°♊24'24 0°11'50	conjunction	7321 Aug 12 04:13	25°♊19'43 0°31'47	
minimum elong	7315 Jul 18 02:58	0°♊24'24 0°11'45	minimum elong	7321 Aug 12 04:13	25°♊19'43 0°31'43	
behind sun begin	7315 Jul 17 22:18	0°♊23'44	max. Earth dist.	7321 Aug 12 05:28	25°♊19'54 20.44102 AU	
behind sun end	7315 Jul 18 07:38	0°♊25'03	morning rise	7321 Aug 28 16:45	26°♊17'21	
max. Earth dist.	7315 Jul 18 11:40	0°♊25'38 20.79072 AU	retrograde	7321 Dec 01 03:49	29°♊30'33	
morning rise	7315 Aug 03 11:04	1°♊20'33	opposition	7322 Feb 15 11:27	27°♊29'05 0°36'51	
retrograde	7315 Nov 05 23:00	4°♊30'11	min. Earth dist.	7322 Feb 15 10:13	27°♊29'13 18.40925 AU	
opposition	7316 Jan 22 00:31	2°♊30'04 0°15'03	direct	7322 May 01 06:48	25°♊29'12	
min. Earth dist.	7316 Jan 21 16:44	2°♊30'52 18.76527 AU	evening set	7322 Jul 31 08:33	28°♊36'38	
direct	7316 Apr 06 01:28	0°♊32'10				

conjunction	7322 Aug 16 19:17	29° Ω 34'11	0°34'40		7328 Dec 26 14:41	0° $\underline{\Omega}$	
minimum elong	7322 Aug 16 19:17	29° Ω 34'11	0°34'37	retrograde	7329 Jan 01 05:54	0° $\underline{\Omega}$ 00'50	
max. Earth dist.	7322 Aug 16 19:28	29° Ω 34'12	20.37746 AU		7329 Jan 06 20:32	30° \mathbb{R} \mathbb{M}	
	7322 Aug 24 03:10	0° \mathbb{M}		opposition	7329 Mar 17 09:18	27° \mathbb{M} 58'29	0°53'52
morning rise	7322 Sep 02 08:23	0° \mathbb{M} 32'05		min. Earth dist.	7329 Mar 17 17:12	27° \mathbb{M} 57'38	17.95403 AU
retrograde	7322 Dec 05 17:48	3° \mathbb{M} 45'59		direct	7329 May 31 00:04	25° \mathbb{M} 56'26	
opposition	7323 Feb 19 22:59	1° \mathbb{M} 44'22	0°39'58	evening set	7329 Aug 31 16:26	29° \mathbb{M} 11'54	
min. Earth dist.	7323 Feb 19 23:33	1° \mathbb{M} 44'19	18.34547 AU		7329 Sep 14 02:51	0° $\underline{\Omega}$	
	7323 Apr 11 00:06	30° \mathbb{R} Ω					
direct	7323 May 05 16:34	29° Ω 44'12		conjunction	7329 Sep 17 07:23	0° $\underline{\Omega}$ 11'32	0°49'06
	7323 May 30 02:51	0° \mathbb{M}		minimum elong	7329 Sep 17 07:23	0° $\underline{\Omega}$ 11'32	0°49'06
evening set	7323 Aug 04 23:45	2° \mathbb{M} 52'41		max. Earth dist.	7329 Sep 16 20:33	0° $\underline{\Omega}$ 09'54	19.92087 AU
				morning rise	7329 Oct 03 23:25	1° $\underline{\Omega}$ 11'21	
conjunction	7323 Aug 21 11:12	3° \mathbb{M} 50'31	0°37'23	retrograde	7330 Jan 06 02:21	4° $\underline{\Omega}$ 30'12	
minimum elong	7323 Aug 21 11:11	3° \mathbb{M} 50'31	0°37'20	opposition	7330 Mar 22 01:15	2° $\underline{\Omega}$ 27'40	0°55'12
max. Earth dist.	7323 Aug 21 09:54	3° \mathbb{M} 50'20	20.31358 AU	min. Earth dist.	7330 Mar 22 10:18	2° $\underline{\Omega}$ 26'42	17.88795 AU
morning rise	7323 Sep 07 00:54	4° \mathbb{M} 48'42		direct	7330 Jun 04 17:24	0° $\underline{\Omega}$ 25'12	
retrograde	7323 Dec 10 10:43	8° \mathbb{M} 03'19		evening set	7330 Sep 05 14:28	3° $\underline{\Omega}$ 41'52	
opposition	7324 Feb 24 10:55	6° \mathbb{M} 01'35	0°42'54				
min. Earth dist.	7324 Feb 24 11:51	6° \mathbb{M} 01'29	18.28143 AU	conjunction	7330 Sep 22 06:00	4° $\underline{\Omega}$ 41'47	0°50'08
direct	7324 May 09 04:38	4° \mathbb{M} 01'07		minimum elong	7330 Sep 22 06:00	4° $\underline{\Omega}$ 41'47	0°50'08
evening set	7324 Aug 08 15:57	7° \mathbb{M} 10'43		max. Earth dist.	7330 Sep 21 18:48	4° $\underline{\Omega}$ 40'06	19.85512 AU
				morning rise	7330 Oct 08 22:02	5° $\underline{\Omega}$ 41'51	
conjunction	7324 Aug 25 04:07	8° \mathbb{M} 08'51	0°39'54	retrograde	7331 Jan 10 21:58	9° $\underline{\Omega}$ 01'16	
minimum elong	7324 Aug 25 04:07	8° \mathbb{M} 08'51	0°39'53	opposition	7331 Mar 26 17:57	6° $\underline{\Omega}$ 58'35	0°56'12
max. Earth dist.	7324 Aug 25 01:56	8° \mathbb{M} 08'32	20.24932 AU	min. Earth dist.	7331 Mar 27 04:08	6° $\underline{\Omega}$ 57'29	17.82281 AU
morning rise	7324 Sep 10 18:16	9° \mathbb{M} 07'19		direct	7331 Jun 09 10:00	4° $\underline{\Omega}$ 55'45	
retrograde	7324 Dec 14 02:41	12° \mathbb{M} 22'40		evening set	7331 Sep 10 13:20	8° $\underline{\Omega}$ 13'33	
opposition	7325 Feb 27 23:39	10° \mathbb{M} 20'50	0°45'36				
min. Earth dist.	7325 Feb 28 02:23	10° \mathbb{M} 20'33	18.21705 AU	conjunction	7331 Sep 27 05:03	9° $\underline{\Omega}$ 13'44	0°50'51
direct	7325 May 13 15:46	8° \mathbb{M} 20'06		minimum elong	7331 Sep 27 05:02	9° $\underline{\Omega}$ 13'44	0°50'53
evening set	7325 Aug 13 09:11	11° \mathbb{M} 30'51		max. Earth dist.	7331 Sep 26 15:30	9° $\underline{\Omega}$ 11'41	19.79084 AU
				morning rise	7331 Oct 13 21:19	10° $\underline{\Omega}$ 14'01	
conjunction	7325 Aug 29 21:59	12° \mathbb{M} 29'18	0°42'14	retrograde	7332 Jan 15 18:45	13° $\underline{\Omega}$ 34'02	
minimum elong	7325 Aug 29 21:59	12° \mathbb{M} 29'18	0°42'12	opposition	7332 Mar 30 11:16	11° $\underline{\Omega}$ 31'10	0°56'51
max. Earth dist.	7325 Aug 29 17:53	12° \mathbb{M} 28'41	20.18483 AU	min. Earth dist.	7332 Mar 30 22:33	11° $\underline{\Omega}$ 29'57	17.75963 AU
morning rise	7325 Sep 15 12:43	13° \mathbb{M} 28'02		direct	7332 Jun 13 05:19	9° $\underline{\Omega}$ 27'55	
retrograde	7325 Dec 18 21:18	16° \mathbb{M} 44'09		evening set	7332 Sep 14 12:52	12° $\underline{\Omega}$ 46'52	
opposition	7326 Mar 04 12:59	14° \mathbb{M} 42'12	0°48'04				
min. Earth dist.	7326 Mar 04 16:30	14° \mathbb{M} 41'50	18.15227 AU	conjunction	7332 Oct 01 05:03	13° $\underline{\Omega}$ 47'19	0°51'16
direct	7326 May 18 05:18	12° \mathbb{M} 41'10		minimum elong	7332 Oct 01 05:03	13° $\underline{\Omega}$ 47'19	0°51'17
evening set	7326 Aug 18 03:36	15° \mathbb{M} 53'06		max. Earth dist.	7332 Sep 30 15:38	13° $\underline{\Omega}$ 45'16	19.72879 AU
				morning rise	7332 Oct 17 21:12	14° $\underline{\Omega}$ 47'49	
conjunction	7326 Sep 03 17:04	16° \mathbb{M} 51'51	0°44'19	retrograde	7333 Jan 19 15:09	18° $\underline{\Omega}$ 08'22	
minimum elong	7326 Sep 03 17:04	16° \mathbb{M} 51'51	0°44'19	opposition	7333 Apr 04 05:09	16° $\underline{\Omega}$ 05'20	0°57'08
max. Earth dist.	7326 Sep 03 11:57	16° \mathbb{M} 51'06	20.11956 AU	min. Earth dist.	7333 Apr 04 17:00	16° $\underline{\Omega}$ 04'03	17.69897 AU
morning rise	7326 Sep 20 08:04	17° \mathbb{M} 50'52		direct	7333 Jun 18 00:22	14° $\underline{\Omega}$ 01'43	
retrograde	7326 Dec 23 14:59	21° \mathbb{M} 07'42		evening set	7333 Sep 19 13:20	17° $\underline{\Omega}$ 21'47	
opposition	7327 Mar 09 03:01	19° \mathbb{M} 05'39	0°50'17				
min. Earth dist.	7327 Mar 09 08:24	19° \mathbb{M} 05'05	18.08669 AU	conjunction	7333 Oct 06 05:35	18° $\underline{\Omega}$ 22'28	0°51'21
direct	7327 May 22 18:08	17° \mathbb{M} 04'18		minimum elong	7333 Oct 06 05:35	18° $\underline{\Omega}$ 22'28	0°51'23
evening set	7327 Aug 22 23:02	20° \mathbb{M} 17'26		max. Earth dist.	7333 Oct 05 14:04	18° $\underline{\Omega}$ 20'06	19.66970 AU
				morning rise	7333 Oct 22 21:53	19° $\underline{\Omega}$ 23'11	
conjunction	7327 Sep 08 12:59	21° \mathbb{M} 16'29	0°46'11	retrograde	7334 Jan 24 12:19	22° $\underline{\Omega}$ 44'14	
minimum elong	7327 Sep 08 12:59	21° \mathbb{M} 16'29	0°46'10	opposition	7334 Apr 08 23:47	20° $\underline{\Omega}$ 41'04	0°57'04
max. Earth dist.	7327 Sep 08 05:24	21° \mathbb{M} 15'21	20.05369 AU	min. Earth dist.	7334 Apr 09 12:46	20° $\underline{\Omega}$ 39'39	17.64169 AU
morning rise	7327 Sep 25 04:27	22° \mathbb{M} 15'46		direct	7334 Jun 22 20:56	18° $\underline{\Omega}$ 37'04	
retrograde	7327 Dec 28 10:54	25° \mathbb{M} 33'18		evening set	7334 Sep 24 14:24	21° $\underline{\Omega}$ 58'14	
opposition	7328 Mar 12 17:48	23° \mathbb{M} 31'07	0°52'14				
min. Earth dist.	7328 Mar 13 00:09	23° \mathbb{M} 30'26	18.02056 AU	conjunction	7334 Oct 11 06:57	22° $\underline{\Omega}$ 59'09	0°51'06
direct	7328 May 26 09:24	21° \mathbb{M} 29'25		minimum elong	7334 Oct 11 06:57	22° $\underline{\Omega}$ 59'09	0°51'08
evening set	7328 Aug 26 19:09	24° \mathbb{M} 43'44		max. Earth dist.	7334 Oct 10 15:46	22° $\underline{\Omega}$ 56'49	19.61420 AU
				morning rise	7334 Oct 27 22:57	24° $\underline{\Omega}$ 00'02	
conjunction	7328 Sep 12 09:44	25° \mathbb{M} 43'04	0°47'47	retrograde	7335 Jan 29 10:24	27° $\underline{\Omega}$ 21'33	
minimum elong	7328 Sep 12 09:44	25° \mathbb{M} 43'04	0°47'46	opposition	7335 Apr 13 18:56	25° $\underline{\Omega}$ 18'18	0°56'37
max. Earth dist.	7328 Sep 12 01:26	25° \mathbb{M} 41'50	19.98724 AU	min. Earth dist.	7335 Apr 14 07:58	25° $\underline{\Omega}$ 16'53	17.58820 AU
morning rise	7328 Sep 29 01:22	26° \mathbb{M} 42'38		direct	7335 Jun 27 18:11	23° $\underline{\Omega}$ 13'59	

evening set	7335 Sep 29 16:16	26° <u>♄</u> 36'13		max. Earth dist.	7341 Nov 13 11:25	25° <u>♄</u> 52'57	19.35164 AU
conjunction	7335 Oct 16 08:44	27° <u>♄</u> 37'20	0°50'31	conjunction	7341 Nov 14 06:30	25° <u>♄</u> 55'56	0°40'09
minimum elong	7335 Oct 16 08:44	27° <u>♄</u> 37'20	0°50'33	minimum elong	7341 Nov 14 06:30	25° <u>♄</u> 55'56	0°40'14
max. Earth dist.	7335 Oct 15 15:54	27° <u>♄</u> 34'45	19.56291 AU	morning rise	7341 Nov 30 19:42	26° <u>♄</u> 57'37	
morning rise	7335 Nov 02 00:40	28° <u>♄</u> 38'24			7342 Feb 03 19:12	0° <u>♄</u>	
	7335 Nov 26 00:23	0° <u>♄</u>		retrograde	7342 Mar 03 10:36	0° <u>♄</u> 21'13	
retrograde	7336 Feb 03 08:22	2° <u>♄</u> 00'21			7342 Mar 31 10:06	30° <u>♄</u>	
	7336 Apr 16 11:50	30° <u>♄</u>		opposition	7342 May 16 03:24	28° <u>♄</u> 18'11	0°43'17
opposition	7336 Apr 17 14:56	29° <u>♄</u> 57'03	0°55'48	min. Earth dist.	7342 May 16 20:20	28° <u>♄</u> 16'19	17.34124 AU
min. Earth dist.	7336 Apr 18 05:02	29° <u>♄</u> 55'30	17.53934 AU	direct	7342 Jul 30 14:19	26° <u>♄</u> 12'33	
direct	7336 Jul 01 15:21	27° <u>♄</u> 52'27		evening set	7342 Nov 02 20:13	29° <u>♄</u> 40'42	
	7336 Sep 11 16:11	0° <u>♄</u>			7342 Nov 08 01:40	0° <u>♄</u>	
evening set	7336 Oct 03 18:29	1° <u>♄</u> 15'42					
				conjunction	7342 Nov 19 11:04	0° <u>♄</u> 42'42	0°37'22
conjunction	7336 Oct 20 11:08	2° <u>♄</u> 17'01	0°49'35	minimum elong	7342 Nov 19 11:05	0° <u>♄</u> 42'42	0°37'26
minimum elong	7336 Oct 20 11:08	2° <u>♄</u> 17'01	0°49'39	max. Earth dist.	7342 Nov 18 15:19	0° <u>♄</u> 39'36	19.33130 AU
max. Earth dist.	7336 Oct 19 18:45	2° <u>♄</u> 14'29	19.51640 AU	morning rise	7342 Dec 05 23:42	1° <u>♄</u> 44'24	
morning rise	7336 Nov 06 02:44	3° <u>♄</u> 18'14		retrograde	7343 Mar 08 12:29	5° <u>♄</u> 08'03	
retrograde	7337 Feb 07 08:35	6° <u>♄</u> 40'36		opposition	7343 May 21 03:14	3° <u>♄</u> 05'04	0°40'01
opposition	7337 Apr 22 11:26	4° <u>♄</u> 37'16	0°54'37	min. Earth dist.	7343 May 21 19:22	3° <u>♄</u> 03'18	17.32305 AU
min. Earth dist.	7337 Apr 23 01:14	4° <u>♄</u> 35'46	17.49515 AU	direct	7343 Aug 04 17:11	0° <u>♄</u> 59'18	
direct	7337 Jul 06 14:16	2° <u>♄</u> 32'27		evening set	7343 Nov 08 01:20	4° <u>♄</u> 27'56	
evening set	7337 Oct 08 21:41	5° <u>♄</u> 56'42					
				conjunction	7343 Nov 24 15:46	5° <u>♄</u> 29'58	0°34'18
conjunction	7337 Oct 25 14:09	6° <u>♄</u> 58'11	0°48'21	minimum elong	7343 Nov 24 15:46	5° <u>♄</u> 29'58	0°34'23
minimum elong	7337 Oct 25 14:09	6° <u>♄</u> 58'11	0°48'24	max. Earth dist.	7343 Nov 23 20:38	5° <u>♄</u> 26'58	19.31537 AU
max. Earth dist.	7337 Oct 24 20:29	6° <u>♄</u> 55'27	19.47461 AU	morning rise	7343 Dec 11 03:32	6° <u>♄</u> 31'39	
morning rise	7337 Nov 11 05:29	7° <u>♄</u> 59'33		retrograde	7344 Mar 12 12:17	9° <u>♄</u> 55'17	
retrograde	7338 Feb 12 07:21	11° <u>♄</u> 22'16		opposition	7344 May 25 03:31	7° <u>♄</u> 52'20	0°36'29
opposition	7338 Apr 27 08:37	9° <u>♄</u> 18'59	0°53'03	min. Earth dist.	7344 May 25 20:34	7° <u>♄</u> 50'28	17.30951 AU
min. Earth dist.	7338 Apr 27 23:46	9° <u>♄</u> 17'20	17.45579 AU	direct	7344 Aug 08 19:08	5° <u>♄</u> 46'28	
direct	7338 Jul 11 12:11	7° <u>♄</u> 13'58		evening set	7344 Nov 12 06:26	9° <u>♄</u> 15'28	
evening set	7338 Oct 14 01:21	10° <u>♄</u> 39'10					
				conjunction	7344 Nov 28 20:10	10° <u>♄</u> 17'29	0°31'00
conjunction	7338 Oct 30 17:44	11° <u>♄</u> 40'49	0°46'46	minimum elong	7344 Nov 28 20:10	10° <u>♄</u> 17'29	0°31'06
minimum elong	7338 Oct 30 17:44	11° <u>♄</u> 40'49	0°46'50	max. Earth dist.	7344 Nov 28 00:17	10° <u>♄</u> 14'22	19.30438 AU
max. Earth dist.	7338 Oct 30 00:09	11° <u>♄</u> 38'05	19.43757 AU	morning rise	7344 Dec 15 07:22	11° <u>♄</u> 19'08	
morning rise	7338 Nov 16 08:37	12° <u>♄</u> 42'17		retrograde	7345 Mar 17 13:15	14° <u>♄</u> 42'41	
	7338 Dec 29 18:22	15° <u>♄</u>		opposition	7345 May 30 03:55	12° <u>♄</u> 39'46	0°32'40
retrograde	7339 Feb 17 09:02	16° <u>♄</u> 05'19		min. Earth dist.	7345 May 30 20:04	12° <u>♄</u> 38'01	17.30101 AU
	7339 Apr 09 07:16	15° <u>♄</u>		direct	7345 Aug 13 22:56	10° <u>♄</u> 33'47	
opposition	7339 May 02 06:23	14° <u>♄</u> 02'06	0°51'08	evening set	7345 Nov 17 11:22	14° <u>♄</u> 03'04	
min. Earth dist.	7339 May 02 21:06	14° <u>♄</u> 00'29	17.42090 AU	max. Earth dist.	7345 Dec 03 06:02	15° <u>♄</u> 02'08	19.29847 AU
direct	7339 Jul 16 12:39	11° <u>♄</u> 56'56					
	7339 Oct 12 20:09	15° <u>♄</u>		conjunction	7345 Dec 04 00:35	15° <u>♄</u> 05'03	0°27'29
evening set	7339 Oct 19 05:28	15° <u>♄</u> 22'59		minimum elong	7345 Dec 04 00:35	15° <u>♄</u> 05'03	0°27'34
				morning rise	7345 Dec 20 10:46	16° <u>♄</u> 06'37	
conjunction	7339 Nov 04 21:32	16° <u>♄</u> 24'46	0°44'52	retrograde	7346 Mar 22 12:50	19° <u>♄</u> 30'00	
minimum elong	7339 Nov 04 21:32	16° <u>♄</u> 24'46	0°44'57	opposition	7346 Jun 04 04:36	17° <u>♄</u> 27'09	0°28'38
max. Earth dist.	7339 Nov 04 03:10	16° <u>♄</u> 21'54	19.40477 AU	min. Earth dist.	7346 Jun 04 21:05	17° <u>♄</u> 25'21	17.29780 AU
morning rise	7339 Nov 21 11:55	17° <u>♄</u> 26'20		direct	7346 Aug 19 02:39	15° <u>♄</u> 21'05	
retrograde	7340 Feb 22 08:32	20° <u>♄</u> 49'38		evening set	7346 Nov 22 16:09	18° <u>♄</u> 50'31	
opposition	7340 May 06 04:58	18° <u>♄</u> 46'29	0°48'51	max. Earth dist.	7346 Dec 08 09:24	19° <u>♄</u> 49'25	19.29823 AU
min. Earth dist.	7340 May 06 21:06	18° <u>♄</u> 44'43	17.39029 AU				
direct	7340 Jul 20 11:57	16° <u>♄</u> 41'08		conjunction	7346 Dec 09 04:27	19° <u>♄</u> 52'25	0°23'46
evening set	7340 Oct 23 10:05	20° <u>♄</u> 08'00		minimum elong	7346 Dec 09 04:27	19° <u>♄</u> 52'25	0°23'52
max. Earth dist.	7340 Nov 08 07:04	21° <u>♄</u> 06'57	19.37623 AU	morning rise	7346 Dec 25 13:56	20° <u>♄</u> 53'54	
				retrograde	7347 Mar 27 12:48	24° <u>♄</u> 17'04	
conjunction	7340 Nov 09 01:51	21° <u>♄</u> 09'52	0°42'40	opposition	7347 Jun 09 05:25	22° <u>♄</u> 14'16	0°24'24
minimum elong	7340 Nov 09 01:51	21° <u>♄</u> 09'52	0°42'44	min. Earth dist.	7347 Jun 09 20:49	22° <u>♄</u> 12'36	17.30055 AU
morning rise	7340 Nov 25 15:45	22° <u>♄</u> 11'31		direct	7347 Aug 24 06:51	20° <u>♄</u> 08'09	
retrograde	7341 Feb 26 10:35	25° <u>♄</u> 35'00		evening set	7347 Nov 27 20:15	23° <u>♄</u> 37'37	
opposition	7341 May 11 03:47	23° <u>♄</u> 31'54	0°46'14				
min. Earth dist.	7341 May 11 19:24	23° <u>♄</u> 30'12	17.36373 AU	conjunction	7347 Dec 14 07:55	24° <u>♄</u> 39'25	0°19'54
direct	7341 Jul 25 13:39	21° <u>♄</u> 26'25		minimum elong	7347 Dec 14 07:55	24° <u>♄</u> 39'25	0°19'59
evening set	7341 Oct 28 15:05	24° <u>♄</u> 53'58		max. Earth dist.	7347 Dec 13 14:55	24° <u>♄</u> 36'45	19.30401 AU

morning rise	7347 Dec 30 16:22	25° 7 40'46	evening set	7353 Dec 26 12:05	22° 3 06'59
retrograde	7348 Mar 31 12:24	29° 7 03'40			
opposition	7348 Jun 13 06:24	27° 7 00'58 0°20'00	conjunction	7354 Jan 11 18:03	23° 3 07'39 -0°05'08
min. Earth dist.	7348 Jun 13 21:21	26° 7 59'20 17.30943 AU	minimum elong	7354 Jan 11 18:03	23° 3 07'39 0°05'03
direct	7348 Aug 28 10:45	24° 7 54'51	behind sun begin	7354 Jan 11 11:35	23° 3 06'39
evening set	7348 Dec 02 00:17	28° 7 24'15	behind sun end	7354 Jan 12 00:32	23° 3 08'38
			max. Earth dist.	7354 Jan 11 07:28	23° 3 06'00 19.46784 AU
conjunction	7348 Dec 18 10:57	29° 7 25'55 0°15'54	morning rise	7354 Jan 27 20:48	24° 3 07'51
minimum elong	7348 Dec 18 10:57	29° 7 25'55 0°15'59	retrograde	7354 Apr 29 09:02	27° 3 28'13
max. Earth dist.	7348 Dec 17 17:48	29° 7 23'13 19.31618 AU	opposition	7354 Jul 12 11:19	25° 3 26'39 -0°07'55
	7348 Dec 27 11:46	0° 3	min. Earth dist.	7354 Jul 12 19:51	25° 3 25'44 17.48953 AU
morning rise	7349 Jan 03 18:37	0° 3 27'08	direct	7354 Sep 27 03:26	23° 3 21'34
retrograde	7349 Apr 05 12:12	3° 3 49'42	evening set	7354 Dec 31 12:34	26° 3 48'35
opposition	7349 Jun 18 07:14	1° 3 47'07 0°15'28			
min. Earth dist.	7349 Jun 18 21:09	1° 3 45'36 17.32490 AU	conjunction	7355 Jan 16 17:28	27° 3 48'58 -0°09'16
	7349 Aug 06 12:05	30° 8 7	minimum elong	7355 Jan 16 17:29	27° 3 48'58 0°09'11
direct	7349 Sep 02 14:10	29° 7 41'02	behind sun begin	7355 Jan 16 11:50	27° 3 48'07
	7349 Sep 29 07:02	0° 3	behind sun end	7355 Jan 16 23:07	27° 3 49'50
evening set	7349 Dec 07 03:44	3° 3 10'18	max. Earth dist.	7355 Jan 16 07:52	27° 3 47'29 19.51223 AU
			morning rise	7355 Feb 01 19:14	28° 3 48'54
conjunction	7349 Dec 23 13:40	4° 3 11'48 0°11'48		7355 Feb 22 03:54	0° 3
minimum elong	7349 Dec 23 13:40	4° 3 11'48 0°11'54	retrograde	7355 May 04 05:55	2° 3 08'44
behind sun begin	7349 Dec 23 09:03	4° 3 11'06	opposition	7355 Jul 17 11:45	0° 3 07'21 -0°12'31
behind sun end	7349 Dec 23 18:17	4° 3 12'31	min. Earth dist.	7355 Jul 17 20:06	0° 3 06'27 17.53576 AU
max. Earth dist.	7349 Dec 22 22:41	4° 3 09'27 19.33493 AU		7355 Jul 20 08:33	30° 8 7
morning rise	7350 Jan 08 20:14	5° 3 12'52	direct	7355 Oct 02 04:58	28° 3 02'31
retrograde	7350 Apr 10 12:08	8° 3 35'04		7355 Dec 10 13:16	0° 3
opposition	7350 Jun 23 08:16	6° 3 32'39 0°10'51	evening set	7356 Jan 05 12:06	1° 3 28'47
min. Earth dist.	7350 Jun 23 21:07	6° 3 31'16 17.34676 AU			
direct	7350 Sep 07 17:08	4° 3 26'43	conjunction	7356 Jan 21 16:01	2° 3 28'54 -0°13'20
evening set	7350 Dec 12 06:43	7° 3 55'42	minimum elong	7356 Jan 21 16:01	2° 3 28'54 0°13'16
			behind sun begin	7356 Jan 21 12:09	2° 3 28'18
conjunction	7350 Dec 28 15:33	8° 3 57'02 0°07'38	behind sun end	7356 Jan 21 19:54	2° 3 29'29
minimum elong	7350 Dec 28 15:33	8° 3 57'02 0°07'43	max. Earth dist.	7356 Jan 21 07:31	2° 3 27'35 19.56008 AU
behind sun begin	7350 Dec 28 09:30	8° 3 56'06	morning rise	7356 Feb 06 16:55	3° 3 28'34
behind sun end	7350 Dec 28 21:35	8° 3 57'58	retrograde	7356 May 08 03:34	6° 3 47'47
max. Earth dist.	7350 Dec 28 00:52	8° 3 54'44 19.36001 AU	opposition	7356 Jul 21 11:39	4° 3 46'34 -0°17'00
morning rise	7351 Jan 13 21:15	9° 3 57'54	min. Earth dist.	7356 Jul 21 18:04	4° 3 45'54 17.58495 AU
retrograde	7351 Apr 15 11:59	13° 3 19'44	direct	7356 Oct 06 07:55	2° 3 42'00
opposition	7351 Jun 28 09:15	11° 3 17'30 0°06'10	evening set	7357 Jan 09 10:56	6° 3 07'27
min. Earth dist.	7351 Jun 28 21:16	11° 3 16'12 17.37490 AU			
direct	7351 Sep 12 19:39	9° 3 11'43	conjunction	7357 Jan 25 13:52	7° 3 07'16 -0°17'18
evening set	7351 Dec 17 09:03	12° 3 40'22	minimum elong	7357 Jan 25 13:52	7° 3 07'16 0°17'14
			max. Earth dist.	7357 Jan 25 06:42	7° 3 06'10 19.61059 AU
conjunction	7352 Jan 02 17:03	13° 3 41'30 0°03'26	morning rise	7357 Feb 10 13:45	8° 3 06'39
minimum elong	7352 Jan 02 17:03	13° 3 41'30 0°03'33	retrograde	7357 May 12 22:44	11° 3 25'15
behind sun begin	7352 Jan 02 10:25	13° 3 40'29	opposition	7357 Jul 26 11:15	9° 3 24'12 -0°21'21
behind sun end	7352 Jan 02 23:41	13° 3 42'31	min. Earth dist.	7357 Jul 26 17:38	9° 3 23'32 17.63679 AU
max. Earth dist.	7352 Jan 02 04:23	13° 3 39'32 19.39106 AU	direct	7357 Oct 11 08:34	7° 3 19'53
morning rise	7352 Jan 18 21:44	14° 3 42'11	evening set	7358 Jan 14 08:53	10° 3 44'26
retrograde	7352 Apr 19 11:33	18° 3 03'33			
opposition	7352 Jul 02 09:59	16° 3 01'33 0°01'27	conjunction	7358 Jan 30 10:46	11° 3 43'57 -0°21'09
min. Earth dist.	7352 Jul 02 20:37	16° 3 00'24 17.40850 AU	minimum elong	7358 Jan 30 10:46	11° 3 43'57 0°21'05
direct	7352 Sep 16 22:11	13° 3 55'59	max. Earth dist.	7358 Jan 30 04:22	11° 3 42'58 19.66372 AU
desc. node	7352 Oct 23 12:30	14° 3 30'54	morning rise	7358 Feb 15 09:52	12° 3 43'02
evening set	7352 Dec 21 10:57	17° 3 24'11		7358 Mar 30 21:26	15° 3
			retrograde	7358 May 17 19:16	16° 3 00'59
conjunction	7353 Jan 06 17:53	18° 3 25'06 -0°00'53		7358 Jul 06 16:55	15° 3 8
minimum elong	7353 Jan 06 17:54	18° 3 25'06 0°00'48	opposition	7358 Jul 31 10:21	14° 3 00'04 -0°25'33
behind sun begin	7353 Jan 06 11:13	18° 3 24'05	min. Earth dist.	7358 Jul 31 14:32	13° 3 59'38 17.69101 AU
behind sun end	7353 Jan 07 00:34	18° 3 26'07	direct	7358 Oct 16 10:35	11° 3 56'01
max. Earth dist.	7353 Jan 06 05:45	18° 3 23'13 19.42719 AU		7359 Jan 13 18:50	15° 3
morning rise	7353 Jan 22 21:39	19° 3 25'33	evening set	7359 Jan 19 05:38	15° 3 19'35
retrograde	7353 Apr 24 10:22	22° 3 46'27			
opposition	7353 Jul 07 10:47	20° 3 44'39 -0°03'15	conjunction	7359 Feb 04 06:38	16° 3 18'47 -0°24'50
min. Earth dist.	7353 Jul 07 21:03	20° 3 43'33 17.44700 AU	minimum elong	7359 Feb 04 06:38	16° 3 18'47 0°24'46
direct	7353 Sep 22 00:12	18° 3 39'19	max. Earth dist.	7359 Feb 04 02:11	16° 3 18'06 19.71907 AU

morning rise	7359 Feb 20 04:47	17° \approx 17'35	conjunction	7366 Mar 06 22:55	17° \times 28'28 -0°44'36
retrograde	7359 May 22 12:52	20° \approx 34'51	minimum elong	7366 Mar 06 22:55	17° \times 28'28 0°44'36
opposition	7359 Aug 05 09:02	18° \approx 34'05 -0°29'33	max. Earth dist.	7366 Mar 07 04:34	17° \times 29'19 20.17001 AU
min. Earth dist.	7359 Aug 05 13:02	18° \approx 33'39 17.74752 AU	morning rise	7366 Mar 22 16:46	18° \times 25'16
direct	7359 Oct 21 09:47	16° \approx 30'16	retrograde	7366 Jun 22 08:20	21° \times 37'53
evening set	7360 Jan 24 01:32	19° \approx 52'48	opposition	7366 Sep 06 05:44	19° \times 38'16 -0°50'32
			min. Earth dist.	7366 Sep 05 22:42	19° \times 39'00 18.20486 AU
conjunction	7360 Feb 09 01:31	20° \approx 51'41 -0°28'20	direct	7366 Nov 22 08:11	17° \times 36'58
minimum elong	7360 Feb 09 01:31	20° \approx 51'41 0°28'16	evening set	7367 Feb 23 16:48	20° \times 51'42
max. Earth dist.	7360 Feb 08 21:45	20° \approx 51'07 19.77678 AU			
morning rise	7360 Feb 24 23:02	21° \approx 50'12	conjunction	7367 Mar 11 11:32	21° \times 48'25 -0°46'26
retrograde	7360 May 26 07:59	25° \approx 06'46	minimum elong	7367 Mar 11 11:32	21° \times 48'25 0°46'25
opposition	7360 Aug 09 06:47	23° \approx 06'06 -0°33'20	max. Earth dist.	7367 Mar 11 19:38	21° \times 49'39 20.23965 AU
min. Earth dist.	7360 Aug 09 08:29	23° \approx 05'55 17.80637 AU	morning rise	7367 Mar 27 04:50	22° \times 44'58
direct	7360 Oct 25 10:03	21° \approx 02'32	retrograde	7367 Jun 26 22:05	25° \times 56'57
evening set	7361 Jan 27 20:20	24° \approx 24'01	opposition	7367 Sep 10 23:27	23° \times 57'34 -0°52'24
			min. Earth dist.	7367 Sep 10 15:41	23° \times 58'21 18.27421 AU
conjunction	7361 Feb 12 19:32	25° \approx 22'35 -0°31'38	direct	7367 Nov 27 02:17	21° \times 56'41
minimum elong	7361 Feb 12 19:32	25° \approx 22'35 0°31'35	evening set	7368 Feb 28 05:22	25° \times 10'17
max. Earth dist.	7361 Feb 12 18:10	25° \approx 22'22 19.83677 AU			
morning rise	7361 Feb 28 16:08	26° \approx 20'48	conjunction	7368 Mar 14 23:23	26° \times 06'43 -0°47'59
retrograde	7361 May 31 00:02	29° \approx 36'39	minimum elong	7368 Mar 14 23:23	26° \times 06'43 0°48'00
opposition	7361 Aug 14 04:16	27° \approx 36'07 -0°36'53	max. Earth dist.	7368 Mar 15 07:28	26° \times 07'56 20.30854 AU
min. Earth dist.	7361 Aug 14 05:27	27° \approx 35'59 17.86764 AU	morning rise	7368 Mar 30 16:30	27° \times 03'00
direct	7361 Oct 30 07:40	25° \approx 32'51		7368 Jun 06 22:33	0° Ψ
evening set	7362 Feb 01 14:08	28° \approx 53'13	retrograde	7368 Jun 30 12:33	0° Ψ 14'24
				7368 Jul 24 10:45	30° \times 8'8
conjunction	7362 Feb 17 12:17	29° \approx 51'27 -0°34'43	opposition	7368 Sep 14 16:20	28° \times 15'11 -0°53'57
minimum elong	7362 Feb 17 12:17	29° \approx 51'27 0°34'40	min. Earth dist.	7368 Sep 14 07:16	28° \times 16'07 18.34257 AU
max. Earth dist.	7362 Feb 17 11:42	29° \approx 51'22 19.89934 AU	direct	7368 Nov 30 18:15	26° \times 14'42
	7362 Feb 19 19:54	0° \times	evening set	7369 Mar 03 16:58	29° \times 27'12
morning rise	7362 Mar 05 08:20	0° \times 49'23		7369 Mar 12 22:46	0° Ψ
retrograde	7362 Jun 04 17:52	4° \times 04'34			
opposition	7362 Aug 19 01:00	2° \times 04'10 -0°40'10	conjunction	7369 Mar 19 10:40	0° Ψ 23'21 -0°49'16
min. Earth dist.	7362 Aug 18 23:38	2° \times 04'18 17.93150 AU	minimum elong	7369 Mar 19 10:40	0° Ψ 23'21 0°49'16
direct	7362 Nov 04 05:26	0° \times 01'14	max. Earth dist.	7369 Mar 19 20:51	0° Ψ 24'52 20.37602 AU
evening set	7363 Feb 06 06:52	3° \times 20'28	morning rise	7369 Apr 04 03:20	1° Ψ 19'24
			retrograde	7369 Jul 05 00:59	4° Ψ 30'12
conjunction	7363 Feb 22 04:21	4° \times 18'24 -0°37'34	opposition	7369 Sep 19 08:51	2° Ψ 31'09 -0°55'12
minimum elong	7363 Feb 22 04:21	4° \times 18'24 0°37'32	min. Earth dist.	7369 Sep 18 23:02	2° Ψ 32'09 18.40906 AU
max. Earth dist.	7363 Feb 22 06:28	4° \times 18'44 19.96438 AU	direct	7369 Dec 05 11:17	0° Ψ 31'03
morning rise	7363 Mar 09 23:35	5° \times 16'02	evening set	7370 Mar 08 03:53	3° Ψ 42'25
retrograde	7363 Jun 09 09:11	8° \times 30'32			
opposition	7363 Aug 23 21:07	6° \times 30'19 -0°43'11	conjunction	7370 Mar 23 20:59	4° Ψ 38'18 -0°50'17
min. Earth dist.	7363 Aug 23 19:00	6° \times 30'32 17.99772 AU	minimum elong	7370 Mar 23 20:59	4° Ψ 38'18 0°50'17
direct	7363 Nov 09 01:14	4° \times 27'46	max. Earth dist.	7370 Mar 24 07:00	4° Ψ 39'48 20.44140 AU
evening set	7364 Feb 10 22:44	7° \times 45'53	morning rise	7370 Apr 08 13:37	5° Ψ 34'07
			retrograde	7370 Jul 09 14:15	8° Ψ 44'23
conjunction	7364 Feb 26 19:19	8° \times 43'30 -0°40'10	opposition	7370 Sep 24 00:44	6° Ψ 45'25 -0°56'09
minimum elong	7364 Feb 26 19:19	8° \times 43'30 0°40'08	min. Earth dist.	7370 Sep 23 13:57	6° Ψ 46'31 18.47332 AU
max. Earth dist.	7364 Feb 26 22:00	8° \times 43'54 20.03167 AU	direct	7370 Dec 10 02:04	4° Ψ 45'40
morning rise	7364 Mar 13 14:10	9° \times 40'51	evening set	7371 Mar 12 13:57	7° Ψ 55'55
retrograde	7364 Jun 13 01:51	12° \times 54'42			
opposition	7364 Aug 27 16:32	10° \times 54'41 -0°45'56	conjunction	7371 Mar 28 06:53	8° Ψ 51'34 -0°51'00
min. Earth dist.	7364 Aug 27 12:09	10° \times 55'08 18.06586 AU	minimum elong	7371 Mar 28 06:52	8° Ψ 51'34 0°51'01
direct	7364 Nov 12 20:15	8° \times 52'31	max. Earth dist.	7371 Mar 28 18:43	8° Ψ 53'20 20.50422 AU
evening set	7365 Feb 14 13:35	12° \times 09'31	morning rise	7371 Apr 12 23:14	9° Ψ 47'10
			retrograde	7371 Jul 14 00:56	12° Ψ 56'51
conjunction	7365 Mar 02 09:36	13° \times 06'50 -0°42'31	opposition	7371 Sep 28 15:45	10° Ψ 58'00 -0°56'47
minimum elong	7365 Mar 02 09:36	13° \times 06'50 0°42'30	min. Earth dist.	7371 Sep 28 04:12	10° Ψ 59'10 18.53465 AU
max. Earth dist.	7365 Mar 02 14:54	13° \times 07'38 20.10042 AU	direct	7371 Dec 14 17:37	8° Ψ 58'33
morning rise	7365 Mar 18 03:44	14° \times 03'54	evening set	7372 Mar 15 23:24	12° Ψ 07'43
retrograde	7365 Jun 17 16:33	17° \times 17'07			
opposition	7365 Sep 01 11:26	15° \times 17'19 -0°48'23	conjunction	7372 Mar 31 15:55	13° Ψ 03'07 -0°51'27
min. Earth dist.	7365 Sep 01 06:17	15° \times 17'51 18.13507 AU	minimum elong	7372 Mar 31 15:55	13° Ψ 03'07 0°51'28
direct	7365 Nov 17 15:08	13° \times 15'36	max. Earth dist.	7372 Apr 01 03:26	13° Ψ 04'50 20.56410 AU
evening set	7366 Feb 19 03:46	16° \times 31'28	morning rise	7372 Apr 16 08:24	13° Ψ 58'31

retrograde	7372 Jul 17 12:38	17°♊07'39	evening set	7379 Apr 13 22:29	10°♏46'58
opposition	7372 Oct 02 06:15	15°♊08'50 -0°57'07			
min. Earth dist.	7372 Oct 01 18:06	15°♊10'04 18.59312 AU	conjunction	7379 Apr 29 15:02	11°♏41'11 -0°47'12
direct	7372 Dec 18 06:48	13°♊09'39	minimum elong	7379 Apr 29 15:02	11°♏41'11 0°47'15
evening set	7373 Mar 20 07:51	16°♊17'44	max. Earth dist.	7379 Apr 30 09:21	11°♏43'51 20.91141 AU
			morning rise	7379 May 15 08:44	12°♏35'37
conjunction	7373 Apr 05 00:19	17°♊12'56 -0°51'38		7379 Jul 05 15:49	15°♏
minimum elong	7373 Apr 05 00:18	17°♊12'56 0°51'41	retrograde	7379 Aug 16 04:25	15°♏41'57
max. Earth dist.	7373 Apr 05 13:41	17°♊14'54 20.62107 AU		7379 Sep 28 01:04	15°♏♏
morning rise	7373 Apr 20 16:38	18°♊08'08	opposition	7379 Nov 01 18:01	13°♏43'30 -0°51'19
retrograde	7373 Jul 21 22:06	21°♊16'44	min. Earth dist.	7379 Nov 01 00:14	13°♏45'16 18.93131 AU
opposition	7373 Oct 06 20:03	19°♊17'57 -0°57'09	direct	7380 Jan 17 09:41	11°♏46'07
min. Earth dist.	7373 Oct 06 06:50	19°♊19'17 18.64865 AU	evening set	7380 Apr 17 03:37	14°♏48'13
direct	7373 Dec 22 20:43	17°♊19'01		7380 Apr 20 14:35	15°♏
evening set	7374 Mar 24 15:47	20°♊26'04			
			conjunction	7380 May 02 20:14	15°♏42'21 -0°45'37
conjunction	7374 Apr 09 07:56	21°♊21'02 -0°51'32	minimum elong	7380 May 02 20:14	15°♏42'21 0°45'41
minimum elong	7374 Apr 09 07:56	21°♊21'02 0°51'34	max. Earth dist.	7380 May 03 14:05	15°♏44'56 20.94976 AU
max. Earth dist.	7374 Apr 09 21:17	21°♊23'00 20.67534 AU	morning rise	7380 May 18 14:30	16°♏36'43
morning rise	7374 Apr 25 00:30	22°♊16'05	retrograde	7380 Aug 19 12:14	19°♏42'52
retrograde	7374 Jul 26 08:07	25°♊24'11	min. Earth dist.	7380 Nov 04 10:45	17°♏46'13 18.96780 AU
opposition	7374 Oct 11 09:14	23°♊25'24 -0°56'52	opposition	7380 Nov 05 04:07	17°♏44'29 -0°49'27
min. Earth dist.	7374 Oct 10 19:27	23°♊26'48 18.70187 AU	direct	7381 Jan 20 16:45	15°♏47'21
direct	7374 Dec 27 08:02	21°♊26'43	evening set	7381 Apr 21 08:14	18°♏48'51
evening set	7375 Mar 28 22:50	24°♊32'46			
			conjunction	7381 May 07 01:17	19°♏42'55 -0°43'49
conjunction	7375 Apr 13 15:05	25°♊27'33 -0°51'10	minimum elong	7381 May 07 01:17	19°♏42'55 0°43'53
minimum elong	7375 Apr 13 15:05	25°♊27'34 0°51'14	max. Earth dist.	7381 May 07 20:15	19°♏45'39 20.98415 AU
max. Earth dist.	7375 Apr 14 06:21	25°♊29'48 20.72736 AU	morning rise	7381 May 22 19:51	20°♏37'13
morning rise	7375 Apr 29 07:39	26°♊22'26	retrograde	7381 Aug 23 20:52	23°♏43'12
retrograde	7375 Jul 30 17:24	29°♊30'05	opposition	7381 Nov 09 13:47	21°♏44'54 -0°47'20
opposition	7375 Oct 15 21:39	27°♊31'20 -0°56'19	min. Earth dist.	7381 Nov 08 19:30	21°♏46'43 18.99990 AU
min. Earth dist.	7375 Oct 15 06:37	27°♊32'51 18.75271 AU	direct	7382 Jan 25 01:00	19°♏48'00
direct	7375 Dec 31 20:11	25°♊32'54	evening set	7382 Apr 25 13:00	22°♏48'57
evening set	7376 Apr 01 05:34	28°♊38'01			
			conjunction	7382 May 11 06:13	23°♏42'57 -0°41'49
conjunction	7376 Apr 16 21:36	29°♊32'38 -0°50'33	minimum elong	7382 May 11 06:13	23°♏42'57 0°41'54
minimum elong	7376 Apr 16 21:36	29°♊32'38 0°50'35	max. Earth dist.	7382 May 12 00:24	23°♏45'35 21.01390 AU
max. Earth dist.	7376 Apr 17 12:50	29°♊34'52 20.77707 AU	morning rise	7382 May 27 01:27	24°♏37'14
	7376 Apr 24 16:50	0°♏	retrograde	7382 Aug 28 04:35	27°♏43'06
morning rise	7376 May 02 14:29	0°♏27'23	opposition	7382 Nov 13 23:08	25°♏44'50 -0°45'00
retrograde	7376 Aug 03 02:06	3°♏34'38	min. Earth dist.	7382 Nov 13 05:44	25°♏46'34 19.02725 AU
opposition	7376 Oct 19 09:30	1°♏35'56 -0°55'28	direct	7383 Jan 29 07:16	23°♏48'06
min. Earth dist.	7376 Oct 18 18:06	1°♏37'29 18.80142 AU	evening set	7383 Apr 29 17:28	26°♏48'35
	7376 Dec 04 20:08	30°♏♊			
direct	7377 Jan 04 05:37	29°♊37'44	conjunction	7383 May 15 11:15	27°♏42'34 -0°39'37
	7377 Feb 02 22:39	0°♏	minimum elong	7383 May 15 11:15	27°♏42'34 0°39'41
evening set	7377 Apr 05 11:36	2°♏42'01	max. Earth dist.	7383 May 16 06:05	27°♏45'16 21.03858 AU
			morning rise	7383 May 31 06:55	28°♏36'49
conjunction	7377 Apr 21 03:51	3°♏36'29 -0°49'40		7383 Jun 26 18:17	0°♏
minimum elong	7377 Apr 21 03:51	3°♏36'29 0°49'43	retrograde	7383 Sep 01 13:01	1°♏42'35
max. Earth dist.	7377 Apr 21 20:51	3°♏38'58 20.82459 AU		7383 Nov 11 18:14	30°♏♏
morning rise	7377 May 06 20:50	4°♏31'06	opposition	7383 Nov 18 08:04	29°♏44'20 -0°42'27
retrograde	7377 Aug 07 11:24	7°♏38'00	min. Earth dist.	7383 Nov 17 14:05	29°♏46'07 19.04907 AU
opposition	7377 Oct 23 20:52	5°♏39'22 -0°54'21	direct	7384 Feb 02 15:04	27°♏47'45
min. Earth dist.	7377 Oct 23 04:09	5°♏41'03 18.84762 AU		7384 Apr 18 05:20	0°♏
direct	7378 Jan 08 16:21	3°♏41'28	evening set	7384 May 02 21:59	0°♏47'48
evening set	7378 Apr 09 17:15	6°♏44'56			
			conjunction	7384 May 18 16:03	1°♏41'44 -0°37'13
conjunction	7378 Apr 25 09:27	7°♏39'17 -0°48'33	minimum elong	7384 May 18 16:03	1°♏41'44 0°37'18
minimum elong	7378 Apr 25 09:27	7°♏39'17 0°48'36	max. Earth dist.	7384 May 19 09:44	1°♏44'17 21.05752 AU
max. Earth dist.	7378 Apr 26 02:20	7°♏41'44 20.86947 AU	morning rise	7384 Jun 03 12:26	2°♏36'01
morning rise	7378 May 11 02:55	8°♏33'48	retrograde	7384 Sep 04 20:21	5°♏41'42
retrograde	7378 Aug 11 19:30	11°♏40'24	opposition	7384 Nov 21 16:51	3°♏43'25 -0°39'42
opposition	7378 Oct 28 07:49	9°♏41'51 -0°52'58	min. Earth dist.	7384 Nov 21 00:02	3°♏45'05 19.06517 AU
min. Earth dist.	7378 Oct 27 15:05	9°♏43'31 18.89115 AU	direct	7385 Feb 05 20:30	1°♏46'55
direct	7379 Jan 13 00:22	7°♏44'12	evening set	7385 May 07 02:17	4°♏46'34

conjunction	7385 May 22 20:59	5°II40'31 -0°34'39	min. Earth dist.	7391 Dec 20 07:11	1°☾31'31 19.04201 AU
minimum elong	7385 May 22 20:59	5°II40'31 0°34'44		7392 Feb 01 10:34	30°☿II
max. Earth dist.	7385 May 23 15:09	5°II43'07 21.07079 AU	direct	7392 Mar 05 13:40	29°II33'16
morning rise	7385 Jun 07 17:53	6°II34'48		7392 Apr 07 00:19	0°☾
retrograde	7385 Sep 09 04:46	9°II40'26	evening set	7392 Jun 03 09:27	2°☾32'07
min. Earth dist.	7385 Nov 25 07:51	7°II43'48 19.07553 AU			
opposition	7385 Nov 26 01:11	7°II42'04 -0°36'46	conjunction	7392 Jun 19 08:36	3°☾26'31 -0°12'50
direct	7386 Feb 10 04:17	5°II45'36	minimum elong	7392 Jun 19 08:36	3°☾26'31 0°12'56
evening set	7386 May 11 06:30	8°II44'55	behind sun begin	7392 Jun 19 04:32	3°☾25'57
			behind sun end	7392 Jun 19 12:39	3°☾27'05
conjunction	7386 May 27 01:38	9°II38'53 -0°31'55	max. Earth dist.	7392 Jun 19 23:52	3°☾28'42 21.03277 AU
minimum elong	7386 May 27 01:38	9°II38'53 0°32'00	morning rise	7392 Jul 05 10:57	4°☾21'22
max. Earth dist.	7386 May 27 18:44	9°II41'19 21.07846 AU	retrograde	7392 Oct 07 12:21	7°☾27'53
morning rise	7386 Jun 11 23:23	10°II33'12	opposition	7392 Dec 24 06:03	5°☾28'43 -0°12'11
retrograde	7386 Sep 13 11:39	13°II38'49	min. Earth dist.	7392 Dec 23 16:08	5°☾30'07 19.02288 AU
opposition	7386 Nov 30 09:21	11°II40'20 -0°33'40	direct	7393 Mar 09 18:03	3°☾31'58
min. Earth dist.	7386 Nov 29 17:17	11°II41'56 19.08062 AU	evening set	7393 Jun 07 14:50	6°☾31'00
direct	7387 Feb 14 08:47	9°II43'52			
evening set	7387 May 15 10:40	12°II42'54	conjunction	7393 Jun 23 14:54	7°☾25'33 -0°09'20
			minimum elong	7393 Jun 23 14:54	7°☾25'33 0°09'26
conjunction	7387 May 31 06:32	13°II36'53 -0°29'02	behind sun begin	7393 Jun 23 09:23	7°☾24'47
minimum elong	7387 May 31 06:32	13°II36'53 0°29'08	behind sun end	7393 Jun 23 20:26	7°☾26'20
max. Earth dist.	7387 Jun 01 00:10	13°II39'25 21.08113 AU	max. Earth dist.	7393 Jun 24 06:21	7°☾27'46 21.01181 AU
morning rise	7387 Jun 16 04:52	14°II31'15	morning rise	7393 Jul 09 17:59	8°☾20'33
retrograde	7387 Sep 17 19:58	17°II36'53	retrograde	7393 Oct 11 22:05	11°☾27'24
opposition	7387 Dec 04 16:55	15°II38'17 -0°30'23	opposition	7393 Dec 28 13:23	9°☾28'09 -0°08'17
min. Earth dist.	7387 Dec 04 00:18	15°II39'56 19.08088 AU	min. Earth dist.	7393 Dec 27 23:07	9°☾29'35 18.99986 AU
direct	7388 Feb 18 16:13	13°II41'46	direct	7394 Mar 14 00:11	7°☾31'20
evening set	7388 May 18 14:59	16°II40'37	evening set	7394 Jun 11 20:51	10°☾30'39
conjunction	7388 Jun 03 11:18	17°II34'39 -0°26'01	conjunction	7394 Jun 27 21:35	11°☾25'21 -0°05'48
minimum elong	7388 Jun 03 11:18	17°II34'39 0°26'05	minimum elong	7394 Jun 27 21:35	11°☾25'21 0°05'54
max. Earth dist.	7388 Jun 04 03:56	17°II37'02 21.07919 AU	behind sun begin	7394 Jun 27 15:15	11°☾24'28
morning rise	7388 Jun 19 10:29	18°II29'05	behind sun end	7394 Jun 28 03:55	11°☾26'14
retrograde	7388 Sep 21 03:01	21°II34'48	max. Earth dist.	7394 Jun 28 11:34	11°☾27'20 20.98673 AU
min. Earth dist.	7388 Dec 07 09:10	19°II37'36 19.07693 AU	morning rise	7394 Jul 14 01:38	12°☾20'31
opposition	7388 Dec 08 00:37	19°II36'03 -0°26'59	retrograde	7394 Oct 16 06:43	15°☾27'45
direct	7389 Feb 21 20:18	17°II39'30	opposition	7395 Jan 01 21:03	13°☾28'24 -0°04'20
evening set	7389 May 22 19:06	20°II38'14	min. Earth dist.	7395 Jan 01 08:39	13°☾29'39 18.97265 AU
			direct	7395 Mar 18 04:58	11°☾31'30
conjunction	7389 Jun 07 16:13	21°II32'19 -0°22'52	evening set	7395 Jun 16 03:21	14°☾31'10
minimum elong	7389 Jun 07 16:14	21°II32'19 0°22'58			
max. Earth dist.	7389 Jun 08 09:28	21°II34'47 21.07329 AU	conjunction	7395 Jul 02 05:01	15°☾26'03 -0°02'12
morning rise	7389 Jun 23 16:03	22°II26'50	minimum elong	7395 Jul 02 05:00	15°☾26'03 0°02'17
retrograde	7389 Sep 25 11:28	25°II32'40	behind sun begin	7395 Jul 01 22:22	15°☾25'07
opposition	7389 Dec 12 08:02	23°II33'48 -0°23'26	behind sun end	7395 Jul 02 11:38	15°☾26'58
min. Earth dist.	7389 Dec 11 15:52	23°II35'25 19.06902 AU	max. Earth dist.	7395 Jul 02 18:43	15°☾28'00 20.95732 AU
direct	7390 Feb 26 03:16	21°II37'13	morning rise	7395 Jul 18 09:44	16°☾21'23
evening set	7390 May 26 23:42	24°II35'54	retrograde	7395 Oct 20 17:48	19°☾29'02
			opposition	7396 Jan 06 04:37	17°☾29'35 -0°00'20
conjunction	7390 Jun 11 21:23	25°II30'05 -0°19'37	min. Earth dist.	7396 Jan 05 16:15	17°☾30'51 18.94084 AU
minimum elong	7390 Jun 11 21:23	25°II30'05 0°19'42	asc. node	7396 Feb 05 14:25	16°☾20'23
max. Earth dist.	7390 Jun 12 13:32	25°II32'23 21.06348 AU	direct	7396 Mar 21 11:35	15°☾32'34
morning rise	7390 Jun 27 22:08	26°II24'41	evening set	7396 Jun 19 10:34	18°☾32'41
retrograde	7390 Sep 29 19:18	29°II30'42			
opposition	7390 Dec 16 15:21	27°II31'43 -0°19'47	conjunction	7396 Jul 05 12:54	19°☾27'44 0°01'32
min. Earth dist.	7390 Dec 16 00:33	27°II33'12 19.05741 AU	minimum elong	7396 Jul 05 12:54	19°☾27'44 0°01'26
direct	7391 Mar 02 07:19	25°II35'04	behind sun begin	7396 Jul 05 06:15	19°☾26'48
evening set	7391 May 31 04:23	28°II33'48	behind sun end	7396 Jul 05 19:32	19°☾28'39
			max. Earth dist.	7396 Jul 06 00:49	19°☾29'26 20.92309 AU
conjunction	7391 Jun 16 02:57	29°II28'05 -0°16'15	morning rise	7396 Jul 21 18:33	20°☾23'15
minimum elong	7391 Jun 16 02:57	29°II28'05 0°16'22	retrograde	7396 Oct 24 02:46	23°☾31'22
max. Earth dist.	7391 Jun 16 19:26	29°II30'26 21.05005 AU	opposition	7397 Jan 09 12:44	21°☾31'48 0°03'41
	7391 Jun 25 10:22	0°☾	min. Earth dist.	7397 Jan 09 02:30	21°☾32'50 18.90418 AU
morning rise	7391 Jul 02 04:23	0°☾22'49	direct	7397 Mar 25 16:40	19°☾34'37
retrograde	7391 Oct 04 04:01	3°☾29'02	evening set	7397 Jun 23 18:09	22°☾35'11
opposition	7391 Dec 20 22:34	1°☾29'58 -0°16'01			

conjunction	7397 Jul 09 21:27	23°☾30'27	0°05'12	opposition	7403 Feb 04 17:24	16°♈07'36	0°27'06
minimum elong	7397 Jul 09 21:28	23°☾30'27	0°05'07	min. Earth dist.	7403 Feb 04 13:58	16°♈07'58	18.59576 AU
behind sun begin	7397 Jul 09 15:00	23°☾29'33			7403 Mar 05 14:03	15°♈♈	
behind sun end	7397 Jul 10 03:55	23°☾31'21		direct	7403 Apr 20 14:23	14°♈08'44	
max. Earth dist.	7397 Jul 10 08:46	23°☾32'04	20.88399 AU		7403 Jun 04 10:42	15°♈	
morning rise	7397 Jul 26 03:52	24°☾26'10		evening set	7403 Jul 20 05:33	17°♈13'21	
retrograde	7397 Oct 28 14:59	27°☾34'45					
opposition	7398 Jan 13 20:54	25°☾35'01	0°07'42	conjunction	7403 Aug 05 13:52	18°♈10'03	0°26'06
min. Earth dist.	7398 Jan 13 10:52	25°☾36'02	18.86247 AU	minimum elong	7403 Aug 05 13:52	18°♈10'03	0°26'02
direct	7398 Mar 30 00:31	23°☾37'38		max. Earth dist.	7403 Aug 05 17:41	18°♈10'36	20.56581 AU
evening set	7398 Jun 28 02:36	26°☾38'44		morning rise	7403 Aug 22 00:57	19°♈07'09	
				retrograde	7403 Nov 24 12:46	22°♈19'04	
conjunction	7398 Jul 14 06:39	27°☾34'12	0°08'48	opposition	7404 Feb 09 03:12	20°♈18'01	0°30'42
minimum elong	7398 Jul 14 06:39	27°☾34'12	0°08'43	min. Earth dist.	7404 Feb 08 23:46	20°♈18'23	18.53529 AU
behind sun begin	7398 Jul 14 00:53	27°☾33'24		direct	7404 Apr 24 00:27	18°♈18'49	
behind sun end	7398 Jul 14 12:24	27°☾35'01		evening set	7404 Jul 23 18:04	21°♈24'20	
max. Earth dist.	7398 Jul 14 15:57	27°☾35'32	20.83983 AU				
morning rise	7398 Jul 30 13:58	28°☾30'08		conjunction	7404 Aug 09 03:07	22°♈21'18	0°29'16
	7398 Aug 28 08:40	0°♈		minimum elong	7404 Aug 09 03:07	22°♈21'18	0°29'13
retrograde	7398 Nov 02 00:15	1°♈39'12		max. Earth dist.	7404 Aug 09 05:33	22°♈21'39	20.50464 AU
	7399 Jan 09 17:30	30°♈☾		morning rise	7404 Aug 25 14:53	23°♈18'41	
opposition	7399 Jan 18 05:16	29°☾39'16	0°11'42	retrograde	7404 Nov 28 01:24	26°♈31'14	
min. Earth dist.	7399 Jan 17 21:32	29°☾40'04	18.81599 AU	opposition	7405 Feb 12 13:41	24°♈30'00	0°34'08
direct	7399 Apr 03 05:58	27°☾41'38		min. Earth dist.	7405 Feb 12 12:06	24°♈30'10	18.47365 AU
	7399 Jun 19 06:38	0°♈		direct	7405 Apr 28 08:58	22°♈30'30	
evening set	7399 Jul 02 11:28	0°♈43'19		evening set	7405 Jul 28 07:18	25°♈36'57	
conjunction	7399 Jul 18 16:29	1°♈39'00	0°12'23	conjunction	7405 Aug 13 17:13	26°♈34'13	0°32'18
minimum elong	7399 Jul 18 16:29	1°♈39'00	0°12'18	minimum elong	7405 Aug 13 17:13	26°♈34'13	0°32'15
behind sun begin	7399 Jul 18 12:06	1°♈38'23		max. Earth dist.	7405 Aug 13 18:40	26°♈34'25	20.44263 AU
behind sun end	7399 Jul 18 20:52	1°♈39'37		morning rise	7405 Aug 30 05:41	27°♈31'51	
max. Earth dist.	7399 Jul 19 01:03	1°♈40'14	20.79127 AU		7405 Oct 20 23:39	0°♈	
morning rise	7399 Aug 04 00:32	2°♈35'10		retrograde	7405 Dec 02 16:40	0°♈45'06	
retrograde	7399 Nov 06 12:51	5°♈44'43			7406 Jan 15 03:41	30°♈♈	
opposition	7400 Jan 22 13:50	3°♈44'35	0°15'40	opposition	7406 Feb 17 00:33	28°♈43'42	0°37'25
min. Earth dist.	7400 Jan 22 06:15	3°♈45'21	18.76537 AU	min. Earth dist.	7406 Feb 16 23:04	28°♈43'51	18.41118 AU
direct	7400 Apr 07 15:04	1°♈46'39		direct	7406 May 02 19:57	26°♈43'53	
evening set	7400 Jul 06 20:54	4°♈48'58		evening set	7406 Aug 01 21:40	29°♈51'22	
					7406 Aug 04 09:45	0°♈	
conjunction	7400 Jul 23 02:39	5°♈44'54	0°15'56				
minimum elong	7400 Jul 23 02:39	5°♈44'54	0°15'51	conjunction	7406 Aug 18 08:19	0°♈48'54	0°35'10
behind sun begin	7400 Jul 23 01:58	5°♈44'48		minimum elong	7406 Aug 18 08:18	0°♈48'54	0°35'08
behind sun end	7400 Jul 23 03:19	5°♈45'00		max. Earth dist.	7406 Aug 18 08:28	0°♈48'56	20.37969 AU
max. Earth dist.	7400 Jul 23 09:32	5°♈45'53	20.73882 AU	morning rise	7406 Sep 03 21:21	1°♈46'49	
morning rise	7400 Aug 08 11:33	6°♈41'17		retrograde	7406 Dec 07 06:50	5°♈00'45	
retrograde	7400 Nov 10 22:44	9°♈51'24		opposition	7407 Feb 21 12:00	2°♈59'13	0°40'32
opposition	7401 Jan 26 22:49	7°♈51'01	0°19'34	min. Earth dist.	7407 Feb 21 12:29	2°♈59'10	18.34791 AU
min. Earth dist.	7401 Jan 26 17:19	7°♈51'35	18.71133 AU	direct	7407 May 07 05:28	0°♈59'07	
direct	7401 Apr 11 21:17	5°♈52'47		evening set	7407 Aug 06 12:56	4°♈07'40	
evening set	7401 Jul 11 07:01	8°♈55'47					
				conjunction	7407 Aug 23 00:18	5°♈05'30	0°37'52
conjunction	7401 Jul 27 13:42	9°♈51'58	0°19'25	minimum elong	7407 Aug 23 00:18	5°♈05'30	0°37'50
minimum elong	7401 Jul 27 13:42	9°♈51'58	0°19'20	max. Earth dist.	7407 Aug 22 23:06	5°♈05'19	20.31619 AU
max. Earth dist.	7401 Jul 27 19:54	9°♈52'51	20.68343 AU	morning rise	7407 Sep 08 13:57	6°♈03'41	
morning rise	7401 Aug 12 23:21	10°♈48'35		retrograde	7407 Dec 12 00:07	9°♈18'21	
retrograde	7401 Nov 15 11:53	13°♈59'16		opposition	7408 Feb 26 00:03	7°♈16'41	0°43'26
opposition	7402 Jan 31 07:50	11°♈58'39	0°23'23	min. Earth dist.	7408 Feb 26 00:54	7°♈16'36	18.28403 AU
min. Earth dist.	7402 Jan 31 02:24	11°♈59'12	18.65463 AU	direct	7408 May 10 17:42	5°♈16'18	
direct	7402 Apr 16 07:00	10°♈00'05		evening set	7408 Aug 10 05:06	8°♈25'56	
evening set	7402 Jul 15 18:00	13°♈03'53					
				conjunction	7408 Aug 26 17:11	9°♈24'04	0°40'23
conjunction	7402 Aug 01 01:26	14°♈00'19	0°22'48	minimum elong	7408 Aug 26 17:11	9°♈24'04	0°40'20
minimum elong	7402 Aug 01 01:26	14°♈00'19	0°22'45	max. Earth dist.	7408 Aug 26 14:50	9°♈23'44	20.25177 AU
max. Earth dist.	7402 Aug 01 06:03	14°♈00'58	20.62551 AU	morning rise	7408 Sep 12 07:17	10°♈22'32	
morning rise	7402 Aug 17 11:52	14°♈57'10		retrograde	7408 Dec 15 15:58	13°♈37'56	
	7402 Aug 18 07:51	15°♈		opposition	7409 Mar 01 12:54	11°♈36'09	0°46'07
retrograde	7402 Nov 19 22:55	18°♈08'27		min. Earth dist.	7409 Mar 01 15:49	11°♈35'51	18.21916 AU

direct	7409 May 15 04:45	9° \mathring{M} 35'28		minimum elong	7415 Sep 28 17:46	10° \mathring{Q} 27'19	0°51'07
evening set	7409 Aug 14 22:30	12° \mathring{M} 46'14		max. Earth dist.	7415 Sep 28 04:24	10° \mathring{Q} 25'18	19.78613 AU
				morning rise	7415 Oct 15 10:01	11° \mathring{Q} 27'36	
conjunction	7409 Aug 31 11:13	13° \mathring{M} 44'40	0°42'41	retrograde	7416 Jan 17 06:38	14° \mathring{Q} 47'34	
minimum elong	7409 Aug 31 11:13	13° \mathring{M} 44'40	0°42'39	opposition	7416 Apr 01 00:13	12° \mathring{Q} 44'34	0°57'06
max. Earth dist.	7409 Aug 31 06:56	13° \mathring{M} 44'02	20.18644 AU	min. Earth dist.	7416 Apr 01 11:20	12° \mathring{Q} 43'22	17.75499 AU
morning rise	7409 Sep 17 01:52	14° \mathring{M} 43'24		direct	7416 Jun 14 18:17	10° \mathring{Q} 41'12	
retrograde	7409 Dec 20 10:45	17° \mathring{M} 59'32		evening set	7416 Sep 16 01:25	14° \mathring{Q} 00'04	
opposition	7410 Mar 06 02:12	15° \mathring{M} 57'36	0°48'34				
min. Earth dist.	7410 Mar 06 05:54	15° \mathring{M} 57'12	18.15328 AU	conjunction	7416 Oct 02 17:34	15° \mathring{Q} 00'31	0°51'28
direct	7410 May 19 18:29	13° \mathring{M} 56'34		minimum elong	7416 Oct 02 17:34	15° \mathring{Q} 00'31	0°51'29
evening set	7410 Aug 19 16:55	17° \mathring{M} 08'30		max. Earth dist.	7416 Oct 02 04:24	14° \mathring{Q} 58'30	19.72426 AU
				morning rise	7416 Oct 19 09:42	16° \mathring{Q} 01'01	
conjunction	7410 Sep 05 06:19	18° \mathring{M} 07'14	0°44'45	retrograde	7417 Jan 21 04:14	19° \mathring{Q} 21'32	
minimum elong	7410 Sep 05 06:19	18° \mathring{M} 07'14	0°44'43	opposition	7417 Apr 05 18:09	17° \mathring{Q} 18'24	0°57'20
max. Earth dist.	7410 Sep 05 00:45	18° \mathring{M} 06'25	20.11984 AU	min. Earth dist.	7417 Apr 06 05:54	17° \mathring{Q} 17'07	17.69468 AU
morning rise	7410 Sep 21 21:15	19° \mathring{M} 06'15		direct	7417 Jun 19 13:41	15° \mathring{Q} 14'41	
retrograde	7410 Dec 25 04:14	22° \mathring{M} 23'03		evening set	7417 Sep 21 01:51	18° \mathring{Q} 34'42	
opposition	7411 Mar 10 16:23	20° \mathring{M} 20'59	0°50'45				
min. Earth dist.	7411 Mar 10 22:05	20° \mathring{M} 20'22	18.08619 AU	conjunction	7417 Oct 07 18:03	19° \mathring{Q} 35'23	0°51'30
direct	7411 May 24 07:40	18° \mathring{M} 19'35		minimum elong	7417 Oct 07 18:03	19° \mathring{Q} 35'23	0°51'32
evening set	7411 Aug 24 12:09	21° \mathring{M} 32'40		max. Earth dist.	7417 Oct 07 02:50	19° \mathring{Q} 33'03	19.66571 AU
				morning rise	7417 Oct 24 10:19	20° \mathring{Q} 36'06	
conjunction	7411 Sep 10 02:03	22° \mathring{M} 31'42	0°46'35	retrograde	7418 Jan 26 00:53	23° \mathring{Q} 57'09	
minimum elong	7411 Sep 10 02:02	22° \mathring{M} 31'42	0°46'34	opposition	7418 Apr 10 12:37	21° \mathring{Q} 53'55	0°57'13
max. Earth dist.	7411 Sep 09 18:16	22° \mathring{M} 30'32	20.05240 AU	min. Earth dist.	7418 Apr 11 01:17	21° \mathring{Q} 52'32	17.63811 AU
morning rise	7411 Sep 26 17:27	23° \mathring{M} 30'58		direct	7418 Jun 24 09:13	19° \mathring{Q} 49'52	
retrograde	7411 Dec 29 23:36	26° \mathring{M} 48'28		evening set	7418 Sep 26 02:50	23° \mathring{Q} 11'01	
opposition	7412 Mar 14 07:07	24° \mathring{M} 46'12	0°52'39				
min. Earth dist.	7412 Mar 14 13:39	24° \mathring{M} 45'30	18.01850 AU	conjunction	7418 Oct 12 19:22	24° \mathring{Q} 11'56	0°51'12
direct	7412 May 27 23:03	22° \mathring{M} 44'25		minimum elong	7418 Oct 12 19:22	24° \mathring{Q} 11'56	0°51'14
evening set	7412 Aug 28 08:19	25° \mathring{M} 58'39		max. Earth dist.	7418 Oct 12 04:35	24° \mathring{Q} 09'40	19.61109 AU
				morning rise	7418 Oct 29 11:21	25° \mathring{Q} 12'50	
conjunction	7412 Sep 13 22:50	26° \mathring{M} 57'59	0°48'09	retrograde	7419 Jan 30 23:34	28° \mathring{Q} 34'23	
minimum elong	7412 Sep 13 22:50	26° \mathring{M} 57'59	0°48'08	opposition	7419 Apr 15 07:53	26° \mathring{Q} 31'07	0°56'43
max. Earth dist.	7412 Sep 13 14:16	26° \mathring{M} 56'42	19.98451 AU	min. Earth dist.	7419 Apr 15 20:39	26° \mathring{Q} 29'43	17.58561 AU
morning rise	7412 Sep 30 14:25	27° \mathring{M} 57'31		direct	7419 Jun 29 06:32	24° \mathring{Q} 26'49	
	7412 Nov 08 17:49	0° \mathring{Q}		evening set	7419 Oct 01 04:34	27° \mathring{Q} 49'02	
retrograde	7413 Jan 02 18:20	1° \mathring{Q} 15'40					
	7413 Feb 28 06:29	30° \mathring{R} \mathring{M}		conjunction	7419 Oct 17 21:00	28° \mathring{Q} 50'11	0°50'34
opposition	7413 Mar 18 22:28	29° \mathring{M} 13'12	0°54'15	minimum elong	7419 Oct 17 21:00	28° \mathring{Q} 50'11	0°50'38
min. Earth dist.	7413 Mar 19 06:40	29° \mathring{M} 12'19	17.95071 AU	max. Earth dist.	7419 Oct 17 04:33	28° \mathring{Q} 47'39	19.56085 AU
direct	7413 Jun 01 14:20	27° \mathring{M} 11'02		morning rise	7419 Nov 03 12:57	29° \mathring{Q} 51'15	
	7413 Aug 25 14:45	0° \mathring{Q}			7419 Nov 05 23:25	0° \mathring{M}	
evening set	7413 Sep 02 05:26	0° \mathring{Q} 26'25		retrograde	7420 Feb 04 21:11	3° \mathring{M} 13'18	
				opposition	7420 Apr 19 03:52	1° \mathring{M} 10'00	0°55'51
conjunction	7413 Sep 18 20:21	1° \mathring{Q} 26'02	0°49'26	min. Earth dist.	7420 Apr 19 17:37	1° \mathring{M} 08'30	17.53773 AU
minimum elong	7413 Sep 18 20:21	1° \mathring{Q} 26'02	0°49'26		7420 May 17 13:15	30° \mathring{R} \mathring{Q}	
max. Earth dist.	7413 Sep 18 09:28	1° \mathring{Q} 24'24	19.91707 AU	direct	7420 Jul 03 03:37	29° \mathring{Q} 05'28	
morning rise	7413 Oct 05 12:21	2° \mathring{Q} 25'50			7420 Aug 17 20:11	0° \mathring{M}	
retrograde	7414 Jan 07 14:16	5° \mathring{Q} 44'36		evening set	7420 Oct 05 06:59	2° \mathring{M} 28'46	
opposition	7414 Mar 23 14:25	3° \mathring{Q} 41'57	0°55'32				
min. Earth dist.	7414 Mar 23 23:31	3° \mathring{Q} 40'58	17.88374 AU	conjunction	7420 Oct 21 23:36	3° \mathring{M} 30'06	0°49'37
direct	7414 Jun 06 07:01	1° \mathring{Q} 39'22		minimum elong	7420 Oct 21 23:36	3° \mathring{M} 30'06	0°49'39
evening set	7414 Sep 07 03:19	4° \mathring{Q} 55'55		max. Earth dist.	7420 Oct 21 07:35	3° \mathring{M} 27'38	19.51524 AU
				morning rise	7420 Nov 07 15:11	4° \mathring{M} 31'21	
conjunction	7414 Sep 23 18:47	5° \mathring{Q} 55'50	0°50'25	retrograde	7421 Feb 08 21:19	7° \mathring{M} 53'49	
minimum elong	7414 Sep 23 18:47	5° \mathring{Q} 55'50	0°50'26	opposition	7421 Apr 24 00:19	5° \mathring{M} 50'33	0°54'37
max. Earth dist.	7414 Sep 23 07:36	5° \mathring{Q} 54'08	19.85061 AU	min. Earth dist.	7421 Apr 24 13:58	5° \mathring{M} 49'04	17.49430 AU
morning rise	7414 Oct 10 10:46	6° \mathring{Q} 55'52		direct	7421 Jul 08 02:43	3° \mathring{M} 45'50	
retrograde	7415 Jan 12 10:23	10° \mathring{Q} 15'14		evening set	7421 Oct 10 10:18	7° \mathring{M} 10'10	
opposition	7415 Mar 28 06:59	8° \mathring{Q} 12'25	0°56'29	max. Earth dist.	7421 Oct 26 09:10	8° \mathring{M} 08'57	19.47399 AU
min. Earth dist.	7415 Mar 28 17:16	8° \mathring{Q} 11'18	17.81814 AU				
direct	7415 Jun 11 00:26	6° \mathring{Q} 09'26		conjunction	7421 Oct 27 02:43	8° \mathring{M} 11'40	0°48'19
evening set	7415 Sep 12 02:06	9° \mathring{Q} 27'09		minimum elong	7421 Oct 27 02:43	8° \mathring{M} 11'40	0°48'23
				morning rise	7421 Nov 12 18:04	9° \mathring{M} 13'03	
conjunction	7415 Sep 28 17:46	10° \mathring{Q} 27'19	0°51'06	retrograde	7422 Feb 13 20:24	12° \mathring{M} 35'54	

opposition	7422 Apr 28 21:40	10° \mathbb{M} 32'42	0°53'00	min. Earth dist.	7428 May 27 09:34	9° \mathbb{A} 05'19	17.30735 AU
min. Earth dist.	7422 Apr 29 12:40	10° \mathbb{M} 31'04	17.45525 AU	direct	7428 Aug 10 07:58	7° \mathbb{A} 01'13	
direct	7422 Jul 13 00:59	8° \mathbb{M} 27'47		evening set	7428 Nov 13 19:10	10° \mathbb{A} 30'10	
evening set	7422 Oct 15 14:01	11° \mathbb{M} 53'04					
				conjunction	7428 Nov 30 08:55	11° \mathbb{A} 32'11	0°30'41
conjunction	7422 Nov 01 06:21	12° \mathbb{M} 54'44	0°46'42	minimum elong	7428 Nov 30 08:56	11° \mathbb{A} 32'11	0°30'46
minimum elong	7422 Nov 01 06:21	12° \mathbb{M} 54'44	0°46'47	max. Earth dist.	7428 Nov 29 13:14	11° \mathbb{A} 29'05	19.30245 AU
max. Earth dist.	7422 Oct 31 12:55	12° \mathbb{M} 52'02	19.43694 AU	morning rise	7428 Dec 16 20:09	12° \mathbb{A} 33'49	
morning rise	7422 Nov 17 21:12	13° \mathbb{M} 56'14		retrograde	7429 Mar 19 02:04	15° \mathbb{A} 57'19	
	7422 Dec 06 03:03	15° \mathbb{M}		opposition	7429 May 31 16:55	13° \mathbb{A} 54'20	0°32'18
retrograde	7423 Feb 18 21:55	17° \mathbb{M} 19'24		min. Earth dist.	7429 Jun 01 08:47	13° \mathbb{A} 52'36	17.29936 AU
opposition	7423 May 03 19:32	15° \mathbb{M} 16'16	0°51'02	direct	7429 Aug 15 12:53	11° \mathbb{A} 48'16	
min. Earth dist.	7423 May 04 10:13	15° \mathbb{M} 14'39	17.42016 AU	evening set	7429 Nov 19 00:02	15° \mathbb{A} 17'28	
	7423 May 10 00:32	15° \mathbb{R} \mathbb{M}					
direct	7423 Jul 18 01:40	13° \mathbb{M} 11'10		conjunction	7429 Dec 05 13:15	16° \mathbb{A} 19'26	0°27'08
	7423 Sep 21 23:15	15° \mathbb{M}		minimum elong	7429 Dec 05 13:15	16° \mathbb{A} 19'26	0°27'14
evening set	7423 Oct 20 18:22	16° \mathbb{M} 37'19		max. Earth dist.	7429 Dec 04 18:56	16° \mathbb{A} 16'33	19.29723 AU
				morning rise	7429 Dec 21 23:29	17° \mathbb{A} 21'00	
conjunction	7423 Nov 06 10:24	17° \mathbb{M} 39'07	0°44'46	retrograde	7430 Mar 24 01:05	20° \mathbb{A} 44'19	
minimum elong	7423 Nov 06 10:24	17° \mathbb{M} 39'07	0°44'50	opposition	7430 Jun 05 17:38	18° \mathbb{A} 41'23	0°28'14
max. Earth dist.	7423 Nov 05 15:51	17° \mathbb{M} 36'13	19.40380 AU	min. Earth dist.	7430 Jun 06 09:51	18° \mathbb{A} 39'36	17.29705 AU
morning rise	7423 Nov 23 00:47	18° \mathbb{M} 40'42		direct	7430 Aug 20 15:14	16° \mathbb{A} 35'14	
retrograde	7424 Feb 23 21:49	22° \mathbb{M} 04'07		evening set	7430 Nov 24 04:35	20° \mathbb{A} 04'33	
opposition	7424 May 07 18:07	20° \mathbb{M} 01'01	0°48'43				
min. Earth dist.	7424 May 08 10:13	19° \mathbb{M} 59'15	17.38910 AU	conjunction	7430 Dec 10 16:54	21° \mathbb{A} 06'26	0°23'23
direct	7424 Jul 22 00:37	17° \mathbb{M} 55'44		minimum elong	7430 Dec 10 16:54	21° \mathbb{A} 06'26	0°23'29
evening set	7424 Oct 24 22:58	21° \mathbb{M} 22'39		max. Earth dist.	7430 Dec 09 22:17	21° \mathbb{A} 03'31	19.29803 AU
				morning rise	7430 Dec 27 02:26	22° \mathbb{A} 07'54	
conjunction	7424 Nov 10 14:46	22° \mathbb{M} 24'33	0°42'31	retrograde	7431 Mar 29 01:49	25° \mathbb{A} 31'01	
minimum elong	7424 Nov 10 14:46	22° \mathbb{M} 24'33	0°42'36	opposition	7431 Jun 10 18:23	23° \mathbb{A} 28'08	0°23'58
max. Earth dist.	7424 Nov 09 19:57	22° \mathbb{M} 21'37	19.37475 AU	min. Earth dist.	7431 Jun 11 09:19	23° \mathbb{A} 26'30	17.30100 AU
morning rise	7424 Nov 27 04:40	23° \mathbb{M} 26'13		direct	7431 Aug 25 20:08	21° \mathbb{A} 21'57	
retrograde	7425 Feb 28 00:11	26° \mathbb{M} 49'47		evening set	7431 Nov 29 08:47	24° \mathbb{A} 51'19	
opposition	7425 May 12 17:06	24° \mathbb{M} 46'43	0°46'02				
min. Earth dist.	7425 May 13 08:39	24° \mathbb{M} 45'01	17.36196 AU	conjunction	7431 Dec 15 20:28	25° \mathbb{A} 53'06	0°19'29
direct	7425 Jul 27 03:00	22° \mathbb{M} 41'15		minimum elong	7431 Dec 15 20:28	25° \mathbb{A} 53'06	0°19'35
evening set	7425 Oct 30 04:00	26° \mathbb{M} 08'51		max. Earth dist.	7431 Dec 15 03:52	25° \mathbb{A} 50'30	19.30516 AU
				morning rise	7432 Jan 01 04:57	26° \mathbb{A} 54'27	
conjunction	7425 Nov 15 19:24	27° \mathbb{M} 10'49	0°39'58		7432 Mar 08 06:11	0° \mathbb{B}	
minimum elong	7425 Nov 15 19:24	27° \mathbb{M} 10'49	0°40'02	retrograde	7432 Apr 02 01:05	0° \mathbb{B} 17'16	
max. Earth dist.	7425 Nov 15 00:09	27° \mathbb{M} 07'48	19.34962 AU		7432 Apr 27 05:38	30° \mathbb{R} \mathbb{A}	
morning rise	7425 Dec 02 08:37	28° \mathbb{M} 12'31		opposition	7432 Jun 14 19:14	28° \mathbb{A} 14'31	0°19'32
	7426 Jan 03 08:45	0° \mathbb{A}		min. Earth dist.	7432 Jun 15 09:53	28° \mathbb{A} 12'56	17.31134 AU
retrograde	7426 Mar 04 23:45	1° \mathbb{A} 36'10		direct	7432 Aug 29 22:59	26° \mathbb{A} 08'23	
	7426 May 07 08:56	30° \mathbb{R} \mathbb{M}		evening set	7432 Dec 03 12:47	29° \mathbb{A} 37'42	
opposition	7426 May 17 16:37	29° \mathbb{M} 33'08	0°43'03		7432 Dec 09 12:56	0° \mathbb{B}	
min. Earth dist.	7426 May 18 09:29	29° \mathbb{M} 31'17	17.33904 AU				
direct	7426 Aug 01 02:54	27° \mathbb{M} 27'30		conjunction	7432 Dec 19 23:29	0° \mathbb{B} 39'21	0°15'28
	7426 Oct 19 16:15	0° \mathbb{A}		minimum elong	7432 Dec 19 23:29	0° \mathbb{B} 39'21	0°15'34
evening set	7426 Nov 04 09:07	0° \mathbb{A} 55'39		behind sun begin	7432 Dec 19 22:01	0° \mathbb{B} 39'07	
max. Earth dist.	7426 Nov 20 04:18	1° \mathbb{A} 54'35	19.32903 AU	behind sun end	7432 Dec 20 00:58	0° \mathbb{B} 39'34	
				max. Earth dist.	7432 Dec 19 06:40	0° \mathbb{B} 36'42	19.31884 AU
conjunction	7426 Nov 21 00:00	1° \mathbb{A} 57'40	0°37'08	morning rise	7433 Jan 05 07:13	1° \mathbb{B} 40'34	
minimum elong	7426 Nov 21 00:00	1° \mathbb{A} 57'40	0°37'13	retrograde	7433 Apr 07 01:15	5° \mathbb{B} 03'05	
morning rise	7426 Dec 07 12:39	2° \mathbb{A} 59'22		opposition	7433 Jun 19 20:10	3° \mathbb{B} 00'30	0°14'59
retrograde	7427 Mar 10 01:39	6° \mathbb{A} 23'03		min. Earth dist.	7433 Jun 20 09:38	2° \mathbb{B} 59'02	17.32823 AU
opposition	7427 May 22 16:26	4° \mathbb{A} 20'01	0°39'44	direct	7433 Sep 04 02:42	0° \mathbb{B} 54'27	
min. Earth dist.	7427 May 23 08:24	4° \mathbb{A} 18'16	17.32073 AU	evening set	7433 Dec 08 16:12	4° \mathbb{B} 23'38	
direct	7427 Aug 06 06:38	2° \mathbb{A} 14'13		max. Earth dist.	7433 Dec 24 11:32	5° \mathbb{B} 22'51	19.33887 AU
evening set	7427 Nov 09 14:03	5° \mathbb{A} 42'49					
max. Earth dist.	7427 Nov 25 09:23	6° \mathbb{A} 41'51	19.31312 AU	conjunction	7433 Dec 25 02:10	5° \mathbb{B} 25'08	0°11'21
				minimum elong	7433 Dec 25 02:09	5° \mathbb{B} 25'08	0°11'26
conjunction	7427 Nov 26 04:31	6° \mathbb{A} 44'51	0°34'02	behind sun begin	7433 Dec 24 21:19	5° \mathbb{B} 24'24	
minimum elong	7427 Nov 26 04:31	6° \mathbb{A} 44'51	0°34'07	behind sun end	7433 Dec 25 06:59	5° \mathbb{B} 25'53	
morning rise	7427 Dec 12 16:21	7° \mathbb{A} 46'32		morning rise	7434 Jan 10 08:46	6° \mathbb{B} 26'11	
retrograde	7428 Mar 14 00:57	11° \mathbb{A} 10'10		retrograde	7434 Apr 12 01:07	9° \mathbb{B} 48'22	
opposition	7428 May 26 16:42	9° \mathbb{A} 07'10	0°36'09	opposition	7434 Jun 24 21:12	7° \mathbb{B} 46'00	0°10'20

min. Earth dist.	7434 Jun 25 09:53	7°344'37	17.35115 AU	conjunction	7440 Jan 23 05:12	3°43'17	-0°13'52
direct	7434 Sep 09 05:56	5°340'07		minimum elong	7440 Jan 23 05:11	3°43'16	0°13'47
evening set	7434 Dec 13 19:19	9°309'04		behind sun begin	7440 Jan 23 01:39	3°42'44	
				behind sun end	7440 Jan 23 08:43	3°43'49	
conjunction	7434 Dec 30 04:12	10°310'24	0°07'10	max. Earth dist.	7440 Jan 22 20:31	3°41'56	19.56141 AU
minimum elong	7434 Dec 30 04:11	10°310'24	0°07'17	morning rise	7440 Feb 08 06:06	4°42'57	
behind sun begin	7434 Dec 29 22:03	10°309'27		retrograde	7440 May 09 17:34	8°02'13	
behind sun end	7434 Dec 30 10:20	10°311'20		opposition	7440 Jul 23 00:50	6°01'04	-0°17'36
max. Earth dist.	7434 Dec 29 13:40	10°308'07	19.36477 AU	min. Earth dist.	7440 Jul 23 07:35	6°00'21	17.58564 AU
morning rise	7435 Jan 15 09:58	11°311'16		direct	7440 Oct 07 20:44	3°56'32	
retrograde	7435 Apr 17 00:34	14°333'05		evening set	7441 Jan 11 00:07	7°22'02	
opposition	7435 Jun 29 22:11	12°330'56	0°05'38				
min. Earth dist.	7435 Jun 30 10:03	12°329'39	17.37983 AU	conjunction	7441 Jan 27 03:06	8°21'52	-0°17'51
direct	7435 Sep 14 08:11	10°325'14		minimum elong	7441 Jan 27 03:06	8°21'52	0°17'46
evening set	7435 Dec 18 21:40	13°353'52		max. Earth dist.	7441 Jan 26 19:37	8°20'43	19.61070 AU
				morning rise	7441 Feb 12 03:03	9°21'16	
conjunction	7436 Jan 04 05:45	14°355'00	0°02'57	retrograde	7441 May 14 12:30	12°39'55	
minimum elong	7436 Jan 04 05:44	14°355'00	0°03'02	opposition	7441 Jul 28 00:31	10°38'53	-0°21'57
behind sun begin	7436 Jan 03 23:05	14°353'59		min. Earth dist.	7441 Jul 28 07:07	10°38'11	17.63635 AU
behind sun end	7436 Jan 04 12:23	14°356'01		direct	7441 Oct 12 21:04	8°34'35	
max. Earth dist.	7436 Jan 03 17:12	14°353'03	19.39600 AU	evening set	7442 Jan 15 21:56	11°59'11	
morning rise	7436 Jan 20 10:28	15°355'40					
retrograde	7436 Apr 21 00:53	19°317'04		conjunction	7442 Jan 31 23:53	12°58'42	-0°21'41
opposition	7436 Jul 03 23:07	17°315'08	0°00'54	minimum elong	7442 Jan 31 23:53	12°58'42	0°21'36
min. Earth dist.	7436 Jul 04 09:53	17°313'59	17.41329 AU	max. Earth dist.	7442 Jan 31 17:29	12°57'43	19.66281 AU
desc. node	7436 Sep 12 01:05	15°310'46		morning rise	7442 Feb 16 23:02	13°57'49	
direct	7436 Sep 18 11:34	15°309'40			7442 Mar 06 18:08	15°	
evening set	7436 Dec 22 23:45	18°337'53		retrograde	7442 May 19 08:50	17°15'48	
				opposition	7442 Aug 01 23:33	15°14'54	-0°26'09
conjunction	7437 Jan 08 06:42	19°338'47	-0°01'24	min. Earth dist.	7442 Aug 02 03:54	15°14'26	17.68972 AU
minimum elong	7437 Jan 08 06:42	19°338'47	0°01'19		7442 Aug 07 20:55	15°R	
behind sun begin	7437 Jan 08 00:01	19°337'46		direct	7442 Oct 17 23:46	13°10'50	
behind sun end	7437 Jan 08 13:22	19°339'48			7442 Dec 23 17:55	15°	
max. Earth dist.	7437 Jan 07 18:26	19°336'52	19.43170 AU	evening set	7443 Jan 20 18:46	16°34'26	
morning rise	7437 Jan 24 10:30	20°339'14					
retrograde	7437 Apr 25 23:05	24°300'10		conjunction	7443 Feb 05 19:49	17°33'39	-0°25'22
opposition	7437 Jul 08 23:55	21°358'27	-0°03'49	minimum elong	7443 Feb 05 19:49	17°33'39	0°25'17
min. Earth dist.	7437 Jul 09 10:17	21°357'21	17.45116 AU	max. Earth dist.	7443 Feb 05 15:18	17°32'57	19.71753 AU
direct	7437 Sep 23 12:55	19°353'12		morning rise	7443 Feb 21 18:02	18°32'28	
evening set	7437 Dec 28 01:02	23°320'54		retrograde	7443 May 24 02:08	21°49'45	
				opposition	7443 Aug 06 22:05	19°48'58	-0°30'08
conjunction	7438 Jan 13 07:03	24°321'33	-0°05'39	min. Earth dist.	7443 Aug 07 02:09	19°48'32	17.74592 AU
minimum elong	7438 Jan 13 07:03	24°321'33	0°05'33	direct	7443 Oct 22 22:54	17°45'08	
behind sun begin	7438 Jan 13 00:38	24°320'34		evening set	7444 Jan 25 14:34	21°07'42	
behind sun end	7438 Jan 13 13:27	24°322'32					
max. Earth dist.	7438 Jan 12 20:24	24°319'54	19.47154 AU	conjunction	7444 Feb 10 14:37	22°06'36	-0°28'51
morning rise	7438 Jan 29 09:49	25°321'45		minimum elong	7444 Feb 10 14:37	22°06'36	0°28'48
retrograde	7438 Apr 30 22:52	28°342'11		max. Earth dist.	7444 Feb 10 11:03	22°06'03	19.77521 AU
opposition	7438 Jul 14 00:35	26°340'41	-0°08'30	morning rise	7444 Feb 26 12:11	23°05'07	
min. Earth dist.	7438 Jul 14 09:24	26°339'44	17.49273 AU	retrograde	7444 May 27 20:55	26°21'42	
direct	7438 Sep 28 16:18	24°335'40		opposition	7444 Aug 10 19:56	24°21'02	-0°33'54
evening set	7439 Jan 02 01:30	28°302'42		min. Earth dist.	7444 Aug 10 21:28	24°20'52	17.80500 AU
				direct	7444 Oct 26 23:21	22°17'28	
conjunction	7439 Jan 18 06:27	29°303'07	-0°09'48	evening set	7445 Jan 29 09:21	25°38'57	
minimum elong	7439 Jan 18 06:26	29°303'07	0°09'43				
behind sun begin	7439 Jan 18 00:58	29°302'17		conjunction	7445 Feb 14 08:33	26°37'32	-0°32'08
behind sun end	7439 Jan 18 11:55	29°303'57		minimum elong	7445 Feb 14 08:33	26°37'32	0°32'05
max. Earth dist.	7439 Jan 17 20:33	29°301'35	19.51484 AU	max. Earth dist.	7445 Feb 14 07:22	26°37'21	19.83568 AU
	7439 Feb 02 12:17	0°		morning rise	7445 Mar 02 05:12	27°35'45	
morning rise	7439 Feb 03 08:16	0°03'03			7445 Apr 18 09:22	0°H	
retrograde	7439 May 05 19:35	3°22'56		retrograde	7445 Jun 01 13:11	0°H51'38	
opposition	7439 Jul 19 01:03	1°21'37	-0°13'06		7445 Jul 17 12:35	30°R	
min. Earth dist.	7439 Jul 19 09:37	1°20'42	17.53773 AU	opposition	7445 Aug 15 17:22	28°51'06	-0°37'26
	7439 Aug 22 19:44	30°R3		min. Earth dist.	7445 Aug 15 18:18	28°51'00	17.86700 AU
direct	7439 Oct 03 17:16	29°316'50		direct	7445 Oct 31 20:29	26°47'51	
	7439 Nov 13 16:43	0°			7446 Jan 31 19:58	0°H	
evening set	7440 Jan 07 01:13	2°43'09		evening set	7446 Feb 03 03:14	0°H08'14	

conjunction	7446 Feb 19 01:27	1°♄06'29 -0°35'12	opposition	7452 Sep 16 05:46	29°♄30'34 -0°54'20
minimum elong	7446 Feb 19 01:26	1°♄06'29 0°35'10	min. Earth dist.	7452 Sep 15 20:59	29°♄31'28 18.34231 AU
max. Earth dist.	7446 Feb 19 01:05	1°♄06'26 19.89920 AU	direct	7452 Dec 02 08:12	27°♄30'03
morning rise	7446 Mar 06 21:31	2°♄04'25		7453 Feb 20 19:42	0°♄
retrograde	7446 Jun 06 07:10	5°♄19'37	evening set	7453 Mar 05 06:34	0°♄42'32
opposition	7446 Aug 20 14:04	3°♄19'14 -0°40'42			
min. Earth dist.	7446 Aug 20 12:22	3°♄19'25 17.93188 AU	conjunction	7453 Mar 21 00:18	1°♄38'42 -0°49'35
direct	7446 Nov 05 18:31	1°♄16'20	minimum elong	7453 Mar 21 00:18	1°♄38'41 0°49'36
evening set	7447 Feb 07 19:55	4°♄35'36	max. Earth dist.	7453 Mar 21 10:06	1°♄40'10 20.37507 AU
			morning rise	7453 Apr 05 16:59	2°♄34'44
conjunction	7447 Feb 23 17:28	5°♄33'32 -0°38'02	retrograde	7453 Jul 06 14:17	5°♄45'31
minimum elong	7447 Feb 23 17:27	5°♄33'32 0°37'59	opposition	7453 Sep 20 22:19	3°♄46'25 -0°55'33
max. Earth dist.	7447 Feb 23 19:41	5°♄33'53 19.96524 AU	min. Earth dist.	7453 Sep 20 12:58	3°♄47'22 18.40742 AU
morning rise	7447 Mar 11 12:46	6°♄31'11	direct	7453 Dec 07 00:27	1°♄46'16
retrograde	7447 Jun 10 22:29	9°♄45'42	evening set	7454 Mar 09 17:35	4°♄57'37
opposition	7447 Aug 25 10:16	7°♄45'31 -0°43'42			
min. Earth dist.	7447 Aug 25 07:58	7°♄45'46 17.99895 AU	conjunction	7454 Mar 25 10:44	5°♄53'30 -0°50'34
direct	7447 Nov 10 13:41	5°♄43'00	minimum elong	7454 Mar 25 10:44	5°♄53'30 0°50'34
evening set	7448 Feb 12 11:55	9°♄01'09	max. Earth dist.	7454 Mar 25 20:19	5°♄54'56 20.43905 AU
			morning rise	7454 Apr 10 03:25	6°♄49'20
conjunction	7448 Feb 28 08:33	9°♄58'46 -0°40'37	retrograde	7454 Jul 11 02:52	9°♄59'33
minimum elong	7448 Feb 28 08:33	9°♄58'46 0°40'35	opposition	7454 Sep 25 14:06	8°♄00'32 -0°56'27
max. Earth dist.	7448 Feb 28 11:17	9°♄59'11 20.03322 AU	min. Earth dist.	7454 Sep 25 03:39	8°♄01'36 18.47028 AU
morning rise	7448 Mar 15 03:26	10°♄56'07	direct	7454 Dec 11 15:21	6°♄00'42
retrograde	7448 Jun 14 15:36	14°♄09'59	evening set	7455 Mar 14 03:32	9°♄10'56
opposition	7448 Aug 29 05:36	12°♄10'00 -0°46'25			
min. Earth dist.	7448 Aug 29 01:05	12°♄10'28 18.06759 AU	conjunction	7455 Mar 29 20:33	10°♄06'35 -0°51'15
direct	7448 Nov 14 09:53	10°♄07'53	minimum elong	7455 Mar 29 20:33	10°♄06'35 0°51'16
evening set	7449 Feb 16 02:56	13°♄24'54	max. Earth dist.	7455 Mar 30 08:04	10°♄08'18 20.50054 AU
			morning rise	7455 Apr 14 12:57	11°♄02'11
conjunction	7449 Mar 03 22:59	14°♄22'13 -0°42'57	retrograde	7455 Jul 15 14:34	14°♄11'50
minimum elong	7449 Mar 03 22:59	14°♄22'13 0°42'55	opposition	7455 Sep 30 05:11	12°♄12'53 -0°57'02
max. Earth dist.	7449 Mar 04 04:13	14°♄23'01 20.10229 AU	min. Earth dist.	7455 Sep 29 18:02	12°♄14'01 18.53040 AU
morning rise	7449 Mar 19 17:10	15°♄19'18	direct	7455 Dec 16 06:43	10°♄13'21
retrograde	7449 Jun 19 06:03	18°♄32'30	evening set	7456 Mar 17 12:54	13°♄22'29
opposition	7449 Sep 03 00:40	16°♄32'44 -0°48'51			
min. Earth dist.	7449 Sep 02 19:37	16°♄33'16 18.13695 AU	conjunction	7456 Apr 02 05:27	14°♄17'54 -0°51'40
direct	7449 Nov 19 03:47	14°♄31'03	minimum elong	7456 Apr 02 05:27	14°♄17'54 0°51'42
evening set	7450 Feb 20 17:04	17°♄46'55	max. Earth dist.	7456 Apr 02 16:48	14°♄19'35 20.55943 AU
			morning rise	7456 Apr 17 21:58	15°♄13'18
conjunction	7450 Mar 08 12:17	18°♄43'55 -0°45'01	retrograde	7456 Jul 19 01:18	18°♄22'24
minimum elong	7450 Mar 08 12:17	18°♄43'55 0°44'59	opposition	7456 Oct 03 19:30	16°♄23'30 -0°57'20
max. Earth dist.	7450 Mar 08 17:49	18°♄44'45 20.17177 AU	min. Earth dist.	7456 Oct 03 07:28	16°♄24'43 18.58818 AU
morning rise	7450 Mar 24 06:10	19°♄40'43	direct	7456 Dec 19 19:52	14°♄24'14
retrograde	7450 Jun 23 21:50	22°♄53'19	evening set	7457 Mar 21 21:19	17°♄32'19
opposition	7450 Sep 07 19:01	20°♄53'44 -0°50'58			
min. Earth dist.	7450 Sep 07 12:05	20°♄54'27 18.20640 AU	conjunction	7457 Apr 06 13:49	18°♄27'30 -0°51'48
direct	7450 Nov 23 22:31	18°♄52'27	minimum elong	7457 Apr 06 13:49	18°♄27'30 0°51'49
evening set	7451 Feb 25 06:20	22°♄07'11	max. Earth dist.	7457 Apr 07 03:16	18°♄29'30 20.61606 AU
			morning rise	7457 Apr 22 06:10	19°♄22'43
conjunction	7451 Mar 13 01:06	23°♄03'54 -0°46'49	retrograde	7457 Jul 23 11:46	22°♄31'18
minimum elong	7451 Mar 13 01:06	23°♄03'54 0°46'49	opposition	7457 Oct 08 09:15	20°♄32'26 -0°57'18
max. Earth dist.	7451 Mar 13 08:56	23°♄05'05 20.24085 AU	min. Earth dist.	7457 Oct 07 20:08	20°♄33'46 18.64378 AU
morning rise	7451 Mar 28 18:26	24°♄00'26	direct	7457 Dec 24 10:00	18°♄33'26
retrograde	7451 Jun 28 11:22	27°♄12'24	evening set	7458 Mar 26 05:05	21°♄40'29
opposition	7451 Sep 12 12:41	25°♄13'01 -0°52'48			
min. Earth dist.	7451 Sep 12 05:19	25°♄13'46 18.27503 AU	conjunction	7458 Apr 10 21:16	22°♄35'29 -0°51'39
direct	7451 Nov 28 15:21	23°♄12'07	minimum elong	7458 Apr 10 21:16	22°♄35'29 0°51'42
evening set	7452 Feb 29 18:58	26°♄25'43	max. Earth dist.	7458 Apr 11 10:44	22°♄37'28 20.67071 AU
			morning rise	7458 Apr 26 13:52	23°♄30'31
conjunction	7452 Mar 16 13:02	27°♄22'09 -0°48'21	retrograde	7458 Jul 27 21:37	26°♄38'38
minimum elong	7452 Mar 16 13:02	27°♄22'09 0°48'20	opposition	7458 Oct 12 22:20	24°♄39'49 -0°56'59
max. Earth dist.	7452 Mar 16 20:46	27°♄23'19 20.30885 AU	min. Earth dist.	7458 Oct 12 08:22	24°♄41'13 18.69761 AU
morning rise	7452 Apr 01 06:11	28°♄18'26	direct	7458 Dec 28 21:05	22°♄41'05
	7452 May 02 20:16	0°♄	evening set	7459 Mar 30 12:11	25°♄47'11
retrograde	7452 Jul 02 01:34	1°♄29'49			
	7452 Sep 04 02:27	30°♄	conjunction	7459 Apr 15 04:27	26°♄41'59 -0°51'15

minimum elong	7459 Apr 15 04:27	26° Υ 41'59	0°51'17	max. Earth dist.	7465 May 09 09:40	21° C 01'20	20.98341 AU
max. Earth dist.	7459 Apr 15 19:53	26° Υ 44'15	20.72352 AU	morning rise	7465 May 24 09:25	21° C 52'56	
morning rise	7459 Apr 30 21:01	27° Υ 36'52		retrograde	7465 Aug 25 10:08	24° C 58'56	
	7459 Jun 19 19:10	0° C		min. Earth dist.	7465 Nov 10 08:55	23° C 02'25	18.99890 AU
retrograde	7459 Aug 01 06:39	0° C 44'32		opposition	7465 Nov 11 02:51	23° C 00'38	-0°47'08
	7459 Sep 14 05:01	30° K Υ		direct	7466 Jan 26 14:25	21° C 03'44	
opposition	7459 Oct 17 10:33	28° Υ 45'48	-0°56'22	evening set	7466 Apr 27 02:34	24° C 04'43	
min. Earth dist.	7459 Oct 16 19:27	28° Υ 47'19	18.74940 AU				
direct	7460 Jan 02 09:24	26° Υ 47'21		conjunction	7466 May 12 19:48	24° C 58'44	-0°41'37
evening set	7460 Apr 02 18:53	29° Υ 52'33		minimum elong	7466 May 12 19:48	24° C 58'44	0°41'41
	7460 Apr 04 22:56	0° C		max. Earth dist.	7466 May 13 13:39	25° C 01'18	21.01251 AU
				morning rise	7466 May 28 15:03	25° C 53'01	
conjunction	7460 Apr 18 10:58	0° C 47'11	-0°50'35	retrograde	7466 Aug 29 18:00	28° C 58'52	
minimum elong	7460 Apr 18 10:58	0° C 47'11	0°50'38	opposition	7466 Nov 15 12:18	27° C 00'35	-0°44'46
max. Earth dist.	7460 Apr 19 02:15	0° C 49'25	20.77429 AU	min. Earth dist.	7466 Nov 14 19:11	27° C 02'17	19.02540 AU
morning rise	7460 May 04 03:52	1° C 41'56		direct	7467 Jan 30 20:25	25° C 03'49	
retrograde	7460 Aug 04 16:15	4° C 49'14		evening set	7467 May 01 07:06	28° C 04'18	
opposition	7460 Oct 20 22:28	2° C 50'33	-0°55'29				
min. Earth dist.	7460 Oct 20 06:50	2° C 52'07	18.79914 AU	conjunction	7467 May 17 00:54	28° C 58'16	-0°39'23
direct	7461 Jan 05 18:45	0° C 52'23		minimum elong	7467 May 17 00:54	28° C 58'16	0°39'28
evening set	7461 Apr 07 00:48	3° C 56'45		max. Earth dist.	7467 May 17 19:27	29° C 00'56	21.03622 AU
				morning rise	7467 Jun 01 20:32	29° C 52'32	
conjunction	7461 Apr 22 17:05	4° C 51'14	-0°49'40		7467 Jun 04 01:58	0° II	
minimum elong	7461 Apr 22 17:05	4° C 51'14	0°49'43	retrograde	7467 Sep 03 02:07	2° II 58'14	
max. Earth dist.	7461 Apr 23 10:12	4° C 53'44	20.82278 AU	opposition	7467 Nov 19 21:08	0° II 59'56	-0°42'10
morning rise	7461 May 08 10:05	5° C 45'52		min. Earth dist.	7467 Nov 19 03:34	1° II 01'41	19.04621 AU
retrograde	7461 Aug 09 00:25	8° C 52'49			7467 Dec 16 04:25	30° K C	
opposition	7461 Oct 25 09:51	6° C 54'15	-0°54'19	direct	7468 Feb 04 04:43	29° C 03'16	
min. Earth dist.	7461 Oct 24 17:04	6° C 55'55	18.84622 AU		7468 Mar 23 03:43	0° II	
direct	7462 Jan 10 05:26	4° C 56'22		evening set	7468 May 04 11:37	2° II 03'18	
evening set	7462 Apr 11 06:35	7° C 59'56					
				conjunction	7468 May 20 05:42	2° II 57'14	-0°36'57
conjunction	7462 Apr 26 22:49	8° C 54'18	-0°48'30	minimum elong	7468 May 20 05:42	2° II 57'14	0°37'02
minimum elong	7462 Apr 26 22:49	8° C 54'18	0°48'34	max. Earth dist.	7468 May 20 23:05	2° II 59'44	21.05430 AU
max. Earth dist.	7462 Apr 27 15:38	8° C 56'44	20.86843 AU	morning rise	7468 Jun 05 02:06	3° II 51'30	
morning rise	7462 May 12 16:18	9° C 48'49		retrograde	7468 Sep 06 09:29	6° II 57'07	
retrograde	7462 Aug 13 09:28	12° C 55'29		opposition	7468 Nov 23 05:56	4° II 58'44	-0°39'23
opposition	7462 Oct 29 20:41	10° C 56'59	-0°52'53	min. Earth dist.	7468 Nov 22 13:21	5° II 00'23	19.06162 AU
min. Earth dist.	7462 Oct 29 03:51	10° C 58'40	18.89039 AU	direct	7469 Feb 07 10:37	3° II 02'07	
direct	7463 Jan 14 13:16	8° C 59'23		evening set	7469 May 08 15:41	6° II 01'43	
evening set	7463 Apr 15 11:50	12° C 02'13					
				conjunction	7469 May 24 10:26	6° II 55'40	-0°34'21
conjunction	7463 May 01 04:25	12° C 56'29	-0°47'06	minimum elong	7469 May 24 10:26	6° II 55'40	0°34'27
minimum elong	7463 May 01 04:25	12° C 56'29	0°47'11	max. Earth dist.	7469 May 25 04:35	6° II 58'16	21.06712 AU
max. Earth dist.	7463 May 01 22:42	12° C 59'08	20.91085 AU	morning rise	7469 Jun 09 07:21	7° II 49'56	
morning rise	7463 May 16 22:08	13° C 50'55		retrograde	7469 Sep 10 17:24	10° II 55'29	
	7463 Jun 07 08:29	15° C		opposition	7469 Nov 27 14:14	8° II 57'00	-0°36'25
retrograde	7463 Aug 17 17:31	16° C 57'18		min. Earth dist.	7469 Nov 26 21:04	8° II 58'43	19.07185 AU
	7463 Nov 02 20:05	15° K C		direct	7470 Feb 11 17:58	7° II 00'25	
opposition	7463 Nov 03 07:04	14° C 58'54	-0°51'13	evening set	7470 May 12 19:56	9° II 59'40	
min. Earth dist.	7463 Nov 02 13:23	15° C 00'40	18.93085 AU				
direct	7464 Jan 18 22:49	13° C 01'34		conjunction	7470 May 28 15:04	10° II 53'37	-0°31'35
	7464 Mar 29 23:15	15° C		minimum elong	7470 May 28 15:04	10° II 53'37	0°31'41
evening set	7464 Apr 18 17:00	16° C 03'44		max. Earth dist.	7470 May 29 08:10	10° II 56'04	21.07502 AU
				morning rise	7470 Jun 13 12:50	11° II 47'55	
conjunction	7464 May 04 09:37	16° C 57'53	-0°45'29	retrograde	7470 Sep 15 00:23	14° II 53'26	
minimum elong	7464 May 04 09:37	16° C 57'53	0°45'34	opposition	7470 Dec 01 22:12	12° II 54'51	-0°33'16
max. Earth dist.	7464 May 05 03:17	17° C 00'26	20.94930 AU	min. Earth dist.	7470 Dec 01 06:02	12° II 56'28	19.07759 AU
morning rise	7464 May 20 03:52	17° C 52'15		direct	7471 Feb 15 23:17	10° II 58'15	
retrograde	7464 Aug 21 01:48	20° C 58'26		evening set	7471 May 16 24:00	13° II 57'15	
opposition	7464 Nov 06 17:11	19° C 00'06	-0°49'17				
min. Earth dist.	7464 Nov 05 23:53	19° C 01'49	18.96725 AU	conjunction	7471 Jun 01 19:52	14° II 51'14	-0°28'40
direct	7465 Jan 22 05:26	17° C 02'59		minimum elong	7471 Jun 01 19:52	14° II 51'14	0°28'46
evening set	7465 Apr 22 21:48	20° C 04'33		max. Earth dist.	7471 Jun 02 13:43	14° II 53'47	21.07863 AU
				morning rise	7471 Jun 17 18:11	15° II 45'35	
conjunction	7465 May 08 14:51	20° C 58'37	-0°43'39	retrograde	7471 Sep 19 08:22	18° II 51'07	
minimum elong	7465 May 08 14:51	20° C 58'37	0°43'45	opposition	7471 Dec 06 05:52	16° II 52'26	-0°29'59

min. Earth dist.	7471 Dec 05 13:01	16° Π 54'08	19.07910 AU	retrograde	7477 Oct 13 11:37	12° \mathcal{E} 41'45	
direct	7472 Feb 20 05:44	14° Π 55'51		opposition	7477 Dec 30 02:27	10° \mathcal{E} 42'39	-0°07'45
evening set	7472 May 20 04:09	17° Π 54'40		min. Earth dist.	7477 Dec 29 12:14	10° \mathcal{E} 44'05	19.00715 AU
				direct	7478 Mar 15 12:58	8° \mathcal{E} 45'58	
conjunction	7472 Jun 05 00:27	18° Π 48'41	-0°25'37	evening set	7478 Jun 13 10:18	11° \mathcal{E} 45'20	
minimum elong	7472 Jun 05 00:27	18° Π 48'41	0°25'44				
max. Earth dist.	7472 Jun 05 17:18	18° Π 51'05	21.07819 AU	conjunction	7478 Jun 29 10:58	12° \mathcal{E} 40'02	-0°05'18
morning rise	7472 Jun 20 23:37	19° Π 43'06		minimum elong	7478 Jun 29 10:58	12° \mathcal{E} 40'02	0°05'24
retrograde	7472 Sep 22 15:25	22° Π 48'45		behind sun begin	7478 Jun 29 04:34	12° \mathcal{E} 39'09	
opposition	7472 Dec 09 13:34	20° Π 49'57	-0°26'32	behind sun end	7478 Jun 29 17:22	12° \mathcal{E} 40'56	
min. Earth dist.	7472 Dec 08 21:41	20° Π 51'33	19.07682 AU	max. Earth dist.	7478 Jun 30 00:55	12° \mathcal{E} 42'01	20.99419 AU
direct	7473 Feb 23 10:19	18° Π 53'22		morning rise	7478 Jul 15 14:57	13° \mathcal{E} 35'11	
evening set	7473 May 24 08:22	21° Π 52'04		retrograde	7478 Oct 17 20:35	16° \mathcal{E} 42'27	
				opposition	7479 Jan 03 10:03	14° \mathcal{E} 43'15	-0°03'46
conjunction	7473 Jun 09 05:29	22° Π 46'10	-0°22'27	min. Earth dist.	7479 Jan 02 21:51	14° \mathcal{E} 44'29	18.98013 AU
minimum elong	7473 Jun 09 05:29	22° Π 46'10	0°22'33	direct	7479 Mar 19 17:02	12° \mathcal{E} 46'28	
max. Earth dist.	7473 Jun 09 23:02	22° Π 48'40	21.07407 AU	evening set	7479 Jun 17 16:53	15° \mathcal{E} 46'12	
morning rise	7473 Jun 25 05:16	23° Π 40'39					
retrograde	7473 Sep 27 00:09	26° Π 46'26		conjunction	7479 Jul 03 18:29	16° \mathcal{E} 41'04	-0°01'41
opposition	7473 Dec 13 20:53	24° Π 47'35	-0°22'58	minimum elong	7479 Jul 03 18:29	16° \mathcal{E} 41'04	0°01'47
min. Earth dist.	7473 Dec 13 04:22	24° Π 49'14	19.07077 AU	behind sun begin	7479 Jul 03 11:51	16° \mathcal{E} 40'09	
direct	7474 Feb 27 16:30	22° Π 50'59		behind sun end	7479 Jul 04 01:07	16° \mathcal{E} 42'00	
evening set	7474 May 28 12:53	25° Π 49'40		max. Earth dist.	7479 Jul 04 08:06	16° \mathcal{E} 43'01	20.96465 AU
				morning rise	7479 Jul 19 23:08	17° \mathcal{E} 36'24	
conjunction	7474 Jun 13 10:34	26° Π 43'51	-0°19'11	retrograde	7479 Oct 22 07:08	20° \mathcal{E} 44'04	
minimum elong	7474 Jun 13 10:34	26° Π 43'51	0°19'17	asc. node	7479 Dec 16 17:27	19° \mathcal{E} 36'27	
max. Earth dist.	7474 Jun 14 02:57	26° Π 46'11	21.06616 AU	opposition	7480 Jan 07 17:47	18° \mathcal{E} 44'45	0°00'14
morning rise	7474 Jun 29 11:18	27° Π 38'27		min. Earth dist.	7480 Jan 07 05:41	18° \mathcal{E} 45'59	18.94790 AU
	7474 Aug 19 03:27	0° \mathcal{E}		direct	7480 Mar 23 00:29	16° \mathcal{E} 47'51	
retrograde	7474 Oct 01 07:33	0° \mathcal{E} 44'26		evening set	7480 Jun 20 24:00	19° \mathcal{E} 47'58	
	7474 Nov 14 16:47	30° \mathcal{R} Π					
opposition	7474 Dec 18 04:19	28° Π 45'30	-0°19'17	conjunction	7480 Jul 07 02:17	20° \mathcal{E} 43'01	0°02'04
min. Earth dist.	7474 Dec 17 13:05	28° Π 47'02	19.06098 AU	minimum elong	7480 Jul 07 02:16	20° \mathcal{E} 43'01	0°01'59
direct	7475 Mar 03 20:13	26° Π 48'54		behind sun begin	7480 Jul 06 19:37	20° \mathcal{E} 42'05	
evening set	7475 Jun 01 17:33	29° Π 47'39		behind sun end	7480 Jul 07 08:55	20° \mathcal{E} 43'56	
	7475 Jun 05 09:44	0° \mathcal{E}		max. Earth dist.	7480 Jul 07 13:50	20° \mathcal{E} 44'40	20.92977 AU
conjunction	7475 Jun 17 16:05	0° \mathcal{E} 41'56	-0°15'49	morning rise	7480 Jul 23 07:52	21° \mathcal{E} 38'31	
minimum elong	7475 Jun 17 16:05	0° \mathcal{E} 41'56	0°15'54	retrograde	7480 Oct 25 17:03	24° \mathcal{E} 46'38	
behind sun begin	7475 Jun 17 15:06	0° \mathcal{E} 41'47		opposition	7481 Jan 11 01:56	22° \mathcal{E} 47'09	0°04'16
behind sun end	7475 Jun 17 17:04	0° \mathcal{E} 42'04		min. Earth dist.	7481 Jan 10 15:57	22° \mathcal{E} 48'10	18.91042 AU
max. Earth dist.	7475 Jun 18 08:58	0° \mathcal{E} 44'20	21.05445 AU	direct	7481 Mar 27 05:44	20° \mathcal{E} 50'02	
morning rise	7475 Jul 03 17:27	1° \mathcal{E} 36'38		evening set	7481 Jun 25 07:39	23° \mathcal{E} 50'37	
retrograde	7475 Oct 05 17:13	4° \mathcal{E} 42'52					
opposition	7475 Dec 22 11:30	2° \mathcal{E} 43'53	-0°15'31	conjunction	7481 Jul 11 10:55	24° \mathcal{E} 45'51	0°05'43
min. Earth dist.	7475 Dec 21 19:51	2° \mathcal{E} 45'27	19.04719 AU	minimum elong	7481 Jul 11 10:55	24° \mathcal{E} 45'51	0°05'37
direct	7476 Mar 07 02:36	0° \mathcal{E} 47'16		behind sun begin	7481 Jul 11 04:32	24° \mathcal{E} 44'58	
evening set	7476 Jun 04 22:45	3° \mathcal{E} 46'09		behind sun end	7481 Jul 11 17:19	24° \mathcal{E} 46'45	
				max. Earth dist.	7481 Jul 11 21:58	24° \mathcal{E} 47'26	20.88982 AU
conjunction	7476 Jun 20 21:51	4° \mathcal{E} 40'33	-0°12'22	morning rise	7481 Jul 27 17:15	25° \mathcal{E} 41'34	
minimum elong	7476 Jun 20 21:51	4° \mathcal{E} 40'33	0°12'28	retrograde	7481 Oct 30 03:44	28° \mathcal{E} 50'05	
behind sun begin	7476 Jun 20 17:32	4° \mathcal{E} 39'57		opposition	7482 Jan 15 09:56	26° \mathcal{E} 50'25	0°08'18
behind sun end	7476 Jun 21 02:10	4° \mathcal{E} 41'09		min. Earth dist.	7482 Jan 15 00:08	26° \mathcal{E} 51'25	18.86794 AU
max. Earth dist.	7476 Jun 21 13:22	4° \mathcal{E} 42'46	21.03870 AU	direct	7482 Mar 31 13:30	24° \mathcal{E} 53'04	
morning rise	7476 Jul 07 00:10	5° \mathcal{E} 35'24		evening set	7482 Jun 29 15:58	27° \mathcal{E} 54'08	
retrograde	7476 Oct 09 01:10	8° \mathcal{E} 41'56					
opposition	7476 Dec 25 19:02	6° \mathcal{E} 42'53	-0°11'40	conjunction	7482 Jul 15 19:57	28° \mathcal{E} 49'35	0°09'20
min. Earth dist.	7476 Dec 25 04:56	6° \mathcal{E} 44'19	19.02941 AU	minimum elong	7482 Jul 15 19:57	28° \mathcal{E} 49'35	0°09'15
direct	7477 Mar 11 06:03	4° \mathcal{E} 46'15		behind sun begin	7482 Jul 15 14:21	28° \mathcal{E} 48'47	
evening set	7477 Jun 09 04:06	7° \mathcal{E} 45'21		behind sun end	7482 Jul 16 01:34	28° \mathcal{E} 50'22	
				max. Earth dist.	7482 Jul 16 04:58	28° \mathcal{E} 50'51	20.84507 AU
conjunction	7477 Jun 25 04:09	8° \mathcal{E} 39'53	-0°08'51	morning rise	7482 Aug 01 03:14	29° \mathcal{E} 45'30	
minimum elong	7477 Jun 25 04:09	8° \mathcal{E} 39'53	0°08'57		7482 Aug 05 11:21	0° \mathcal{Q}	
behind sun begin	7477 Jun 24 22:28	8° \mathcal{E} 39'06		retrograde	7482 Nov 03 13:47	2° \mathcal{Q} 54'29	
behind sun end	7477 Jun 25 09:49	8° \mathcal{E} 40'40		opposition	7483 Jan 19 18:21	0° \mathcal{Q} 54'34	0°12'18
max. Earth dist.	7477 Jun 25 19:53	8° \mathcal{E} 42'08	21.01881 AU	min. Earth dist.	7483 Jan 19 10:41	0° \mathcal{Q} 55'22	18.82109 AU
morning rise	7477 Jul 11 07:10	9° \mathcal{E} 34'53			7483 Feb 11 21:04	30° \mathcal{R} \mathcal{E}	
				direct	7483 Apr 04 19:53	28° \mathcal{E} 56'57	

	7483 May 25 01:35	0°♈	conjunction	7489 Aug 14 06:03	27°♈47'48	0°32'46
evening set	7483 Jul 04 00:38	1°♈58'33	minimum elong	7489 Aug 14 06:03	27°♈47'47	0°32'43
			max. Earth dist.	7489 Aug 14 07:53	27°♈48'04	20.45355 AU
conjunction	7483 Jul 20 05:35	2°♈54'14 0°12'55	morning rise	7489 Aug 30 18:25	28°♈45'23	
minimum elong	7483 Jul 20 05:35	2°♈54'14 0°12'50		7489 Sep 22 18:37	0°♐	
behind sun begin	7483 Jul 20 01:29	2°♈53'39	retrograde	7489 Dec 03 06:01	1°♐58'31	
behind sun end	7483 Jul 20 09:41	2°♈54'48		7490 Feb 16 10:34	30°♐♈	
max. Earth dist.	7483 Jul 20 14:11	2°♈55'27 20.79635 AU	opposition	7490 Feb 17 13:18	29°♈57'12	0°37'56
morning rise	7483 Aug 05 13:33	3°♈50'21	min. Earth dist.	7490 Feb 17 11:41	29°♈57'22	18.42254 AU
retrograde	7483 Nov 08 01:07	6°♈59'50	direct	7490 May 03 08:35	27°♈57'29	
opposition	7484 Jan 24 02:47	4°♈59'41 0°16'15		7490 Jul 13 15:54	0°♐	
min. Earth dist.	7484 Jan 23 19:08	5°♈00'28 18.77057 AU	evening set	7490 Aug 02 10:33	1°♐04'51	
direct	7484 Apr 08 04:02	3°♈01'45				
evening set	7484 Jul 07 10:07	6°♈03'59	conjunction	7490 Aug 18 21:07	2°♐02'21	0°35'37
			minimum elong	7490 Aug 18 21:07	2°♐02'21	0°35'34
conjunction	7484 Jul 23 15:46	6°♈59'53 0°16'28	max. Earth dist.	7490 Aug 18 21:25	2°♐02'24	20.39144 AU
minimum elong	7484 Jul 23 15:46	6°♈59'53 0°16'23	morning rise	7490 Sep 04 10:06	3°♐00'14	
max. Earth dist.	7484 Jul 23 22:38	7°♈00'52 20.74427 AU	retrograde	7490 Dec 07 19:50	6°♐14'05	
morning rise	7484 Aug 09 00:36	7°♈56'14	opposition	7491 Feb 22 00:54	4°♐12'38	0°41'01
retrograde	7484 Nov 11 11:30	11°♈06'14	min. Earth dist.	7491 Feb 22 01:26	4°♐12'35	18.35988 AU
opposition	7485 Jan 27 11:40	9°♈05'50 0°20'09	direct	7491 May 07 18:03	2°♐12'39	
min. Earth dist.	7485 Jan 27 06:01	9°♈06'25 18.71716 AU	evening set	7491 Aug 07 01:43	5°♐21'05	
direct	7485 Apr 12 11:03	7°♈07'36				
evening set	7485 Jul 11 20:04	10°♈10'31	conjunction	7491 Aug 23 13:01	6°♐18'53	0°38'18
			minimum elong	7491 Aug 23 13:01	6°♐18'53	0°38'16
conjunction	7485 Jul 28 02:43	11°♈06'39 0°19'56	max. Earth dist.	7491 Aug 23 12:01	6°♐18'44	20.32819 AU
minimum elong	7485 Jul 28 02:43	11°♈06'39 0°19'52	morning rise	7491 Sep 09 02:33	7°♐17'01	
max. Earth dist.	7485 Jul 28 09:09	11°♈07'35 20.68966 AU	retrograde	7491 Dec 12 13:04	10°♐31'37	
morning rise	7485 Aug 13 12:16	12°♈03'14	opposition	7492 Feb 26 12:58	8°♐30'03	0°43'54
	7485 Oct 23 10:06	15°♈	min. Earth dist.	7492 Feb 26 13:56	8°♐29'57	18.29592 AU
retrograde	7485 Nov 16 00:14	15°♈13'47	direct	7492 May 11 06:41	6°♐29'46	
	7485 Dec 09 16:59	15°♐♈	evening set	7492 Aug 10 18:04	9°♐39'19	
opposition	7486 Jan 31 20:43	13°♈13'10 0°23'57				
min. Earth dist.	7486 Jan 31 15:00	13°♈13'45 18.66136 AU	conjunction	7492 Aug 27 06:02	10°♐37'25	0°40'47
direct	7486 Apr 16 19:59	11°♈14'37	minimum elong	7492 Aug 27 06:02	10°♐37'25	0°40'46
evening set	7486 Jul 16 07:01	14°♈18'17	max. Earth dist.	7492 Aug 27 03:28	10°♐37'02	20.26337 AU
	7486 Jul 28 09:18	15°♈	morning rise	7492 Sep 12 20:03	11°♐35'50	
			retrograde	7492 Dec 16 04:35	14°♐51'10	
conjunction	7486 Aug 01 14:21	15°♈14'41 0°23'19	opposition	7493 Mar 02 01:46	12°♐49'27	0°46'33
minimum elong	7486 Aug 01 14:21	15°♈14'41 0°23'15	min. Earth dist.	7493 Mar 02 04:59	12°♐49'07	18.23039 AU
max. Earth dist.	7486 Aug 01 19:07	15°♈15'22 20.63277 AU	direct	7493 May 15 17:54	10°♐48'51	
morning rise	7486 Aug 18 00:41	16°♈11'30	evening set	7493 Aug 15 11:23	13°♐59'32	
retrograde	7486 Nov 20 11:23	19°♈22'39				
opposition	7487 Feb 05 06:10	17°♈21'49 0°27'40	conjunction	7493 Sep 01 00:02	14°♐57'56	0°43'04
min. Earth dist.	7487 Feb 05 02:27	17°♈22'12 18.60362 AU	minimum elong	7493 Sep 01 00:02	14°♐57'56	0°43'02
direct	7487 Apr 21 03:16	15°♈22'57	max. Earth dist.	7493 Aug 31 19:34	14°♐57'16	20.19711 AU
evening set	7487 Jul 20 18:32	18°♈27'27	morning rise	7493 Sep 17 14:36	15°♐56'37	
			retrograde	7493 Dec 20 23:08	19°♐12'40	
conjunction	7487 Aug 06 02:48	19°♈24'07 0°26'36	opposition	7494 Mar 06 15:08	17°♐10'48	0°48'59
minimum elong	7487 Aug 06 02:47	19°♈24'07 0°26'32	min. Earth dist.	7494 Mar 06 18:59	17°♐10'23	18.16338 AU
max. Earth dist.	7487 Aug 06 06:59	19°♈24'43 20.57431 AU	direct	7494 May 20 08:07	15°♐09'50	
morning rise	7487 Aug 22 13:47	20°♈21'11	evening set	7494 Aug 20 05:38	18°♐21'39	
retrograde	7487 Nov 25 01:43	23°♈32'57				
opposition	7488 Feb 09 16:02	21°♈31'56 0°31'14	conjunction	7494 Sep 05 18:55	19°♐20'21	0°45'07
min. Earth dist.	7488 Feb 09 12:15	21°♈32'20 18.54443 AU	minimum elong	7494 Sep 05 18:55	19°♐20'21	0°45'06
direct	7488 Apr 24 13:17	19°♈32'46	max. Earth dist.	7494 Sep 05 13:01	19°♐19'28	20.12933 AU
evening set	7488 Jul 24 06:53	22°♈38'09	morning rise	7494 Sep 22 09:47	20°♐19'19	
			retrograde	7494 Dec 25 15:55	23°♐36'02	
conjunction	7488 Aug 09 15:52	23°♈35'05 0°29'45	opposition	7495 Mar 11 05:09	21°♐33'59	0°51'08
minimum elong	7488 Aug 09 15:51	23°♈35'05 0°29'41	min. Earth dist.	7495 Mar 11 11:03	21°♐33'22	18.09514 AU
max. Earth dist.	7488 Aug 09 18:34	23°♈35'29 20.51443 AU	direct	7495 May 24 20:52	19°♐32'39	
morning rise	7488 Aug 26 03:36	24°♈32'25	evening set	7495 Aug 25 00:45	22°♐45'36	
retrograde	7488 Nov 28 14:05	27°♈44'52				
opposition	7489 Feb 13 02:34	25°♈43'41 0°34'40	conjunction	7495 Sep 10 14:34	23°♐44'36	0°46'55
min. Earth dist.	7489 Feb 13 00:45	25°♈43'52 18.48401 AU	minimum elong	7495 Sep 10 14:34	23°♐44'36	0°46'54
direct	7489 Apr 28 21:19	23°♈44'14	max. Earth dist.	7495 Sep 10 06:39	23°♐43'25	20.06090 AU
evening set	7489 Jul 28 20:11	26°♈50'35	morning rise	7495 Sep 27 05:54	24°♐43'50	

retrograde	7495 Dec 30 11:47	28° <u>01</u> '14	evening set	7502 Sep 27 13:55	24° <u>21</u> '48	
opposition	7496 Mar 14 19:42	25° <u>58</u> '59 0°53'00				
min. Earth dist.	7496 Mar 15 02:14	25° <u>58</u> '17 18.02660 AU	conjunction	7502 Oct 14 06:22	25° <u>22</u> '41 0°51'14	
direct	7496 May 28 12:31	23° <u>57</u> '14	minimum elong	7502 Oct 14 06:22	25° <u>22</u> '41 0°51'18	
evening set	7496 Aug 28 20:37	27° <u>11</u> '20	max. Earth dist.	7502 Oct 13 15:55	25° <u>20</u> '28 19.62128 AU	
			morning rise	7502 Oct 30 22:18	26° <u>23</u> '32	
conjunction	7496 Sep 14 11:04	28° <u>10</u> '37 0°48'26	retrograde	7503 Feb 01 10:17	29° <u>44</u> '59	
minimum elong	7496 Sep 14 11:04	28° <u>10</u> '37 0°48'26	opposition	7503 Apr 16 19:25	27° <u>41</u> '44 0°56'44	
max. Earth dist.	7496 Sep 14 02:19	28° <u>09</u> '19 19.99232 AU	min. Earth dist.	7503 Apr 17 08:00	27° <u>40</u> '22 17.59611 AU	
morning rise	7496 Oct 01 02:37	29° <u>10</u> '08	direct	7503 Jun 30 17:52	25° <u>37</u> '30	
	7496 Oct 15 18:02	0° <u>2</u>	evening set	7503 Oct 02 15:40	28° <u>59</u> '34	
retrograde	7497 Jan 03 05:53	2° <u>28</u> '09				
opposition	7497 Mar 19 10:57	0° <u>25</u> '43 0°54'33	conjunction	7503 Oct 19 08:02	0° <u>00</u> '39 0°50'34	
min. Earth dist.	7497 Mar 19 19:11	0° <u>24</u> '50 17.95829 AU	minimum elong	7503 Oct 19 08:02	0° <u>00</u> '39 0°50'37	
	7497 Mar 29 12:19	30° <u>8</u> <u>10</u>	max. Earth dist.	7503 Oct 18 15:46	29° <u>58</u> '09 19.57160 AU	
direct	7497 Jun 02 02:41	28° <u>23</u> '34		7503 Oct 19 03:48	0° <u>0</u>	
	7497 Aug 03 06:00	0° <u>2</u>	morning rise	7503 Nov 04 23:57	1° <u>01</u> '42	
evening set	7497 Sep 02 17:33	1° <u>38</u> '49	retrograde	7504 Feb 06 08:39	4° <u>23</u> '37	
			opposition	7504 Apr 20 15:13	2° <u>20</u> '22 0°55'50	
conjunction	7497 Sep 19 08:24	2° <u>38</u> '24 0°49'41	min. Earth dist.	7504 Apr 21 04:50	2° <u>18</u> '53 17.54856 AU	
minimum elong	7497 Sep 19 08:24	2° <u>38</u> '24 0°49'42	direct	7504 Jul 04 15:06	0° <u>15</u> '53	
max. Earth dist.	7497 Sep 18 21:33	2° <u>36</u> '46 19.92454 AU	evening set	7504 Oct 06 17:59	3° <u>39</u> '02	
morning rise	7497 Oct 06 00:19	3° <u>38</u> '09				
retrograde	7498 Jan 08 02:35	6° <u>56</u> '49	conjunction	7504 Oct 23 10:34	4° <u>40</u> '19 0°49'34	
opposition	7498 Mar 24 02:35	4° <u>54</u> '10 0°55'48	minimum elong	7504 Oct 23 10:34	4° <u>40</u> '19 0°49'39	
min. Earth dist.	7498 Mar 24 11:30	4° <u>53</u> '12 17.89119 AU	max. Earth dist.	7504 Oct 22 18:40	4° <u>37</u> '52 19.52597 AU	
direct	7498 Jun 06 19:55	2° <u>51</u> '36	morning rise	7504 Nov 09 02:07	5° <u>41</u> '31	
evening set	7498 Sep 07 15:14	6° <u>08</u> '01	retrograde	7505 Feb 10 08:29	9° <u>03</u> '52	
			opposition	7505 Apr 25 11:44	7° <u>00</u> '38 0°54'33	
conjunction	7498 Sep 24 06:37	7° <u>07</u> '53 0°50'38	min. Earth dist.	7505 Apr 26 01:32	6° <u>59</u> '08 17.50474 AU	
minimum elong	7498 Sep 24 06:37	7° <u>07</u> '53 0°50'38	direct	7505 Jul 09 13:49	4° <u>55</u> '58	
max. Earth dist.	7498 Sep 23 19:28	7° <u>06</u> '12 19.85814 AU	evening set	7505 Oct 11 21:16	8° <u>20</u> '07	
morning rise	7498 Oct 10 22:32	8° <u>07</u> '53				
retrograde	7499 Jan 12 21:40	11° <u>27</u> '08	conjunction	7505 Oct 28 13:36	9° <u>21</u> '34 0°48'15	
opposition	7499 Mar 28 19:04	9° <u>24</u> '19 0°56'42	minimum elong	7505 Oct 28 13:36	9° <u>21</u> '34 0°48'19	
min. Earth dist.	7499 Mar 29 05:13	9° <u>23</u> '13 17.82583 AU	max. Earth dist.	7505 Oct 27 19:54	9° <u>18</u> '50 19.48396 AU	
direct	7499 Jun 11 11:46	7° <u>21</u> '21	morning rise	7505 Nov 14 04:55	10° <u>22</u> '55	
evening set	7499 Sep 12 13:39	10° <u>38</u> '55	retrograde	7506 Feb 15 07:32	13° <u>45</u> '38	
			opposition	7506 Apr 30 08:57	11° <u>42</u> '26 0°52'54	
conjunction	7499 Sep 29 05:14	11° <u>39</u> '02 0°51'16	min. Earth dist.	7506 May 01 00:07	11° <u>40</u> '47 17.46464 AU	
minimum elong	7499 Sep 29 05:14	11° <u>39</u> '02 0°51'17	direct	7506 Jul 14 12:16	9° <u>37</u> '32	
max. Earth dist.	7499 Sep 28 16:09	11° <u>37</u> '03 19.79404 AU	evening set	7506 Oct 17 00:55	13° <u>02</u> '38	
morning rise	7499 Oct 15 21:26	12° <u>39</u> '17				
retrograde	7500 Jan 17 18:58	15° <u>59</u> '08	conjunction	7506 Nov 02 17:14	14° <u>04</u> '15 0°46'35	
opposition	7500 Apr 02 12:09	13° <u>56</u> '08 0°57'15	minimum elong	7506 Nov 02 17:15	14° <u>04</u> '15 0°46'40	
min. Earth dist.	7500 Apr 02 22:54	13° <u>54</u> '58 17.76318 AU	max. Earth dist.	7506 Nov 01 23:41	14° <u>01</u> '32 19.44563 AU	
direct	7500 Jun 16 06:47	11° <u>52</u> '47		7506 Nov 17 18:26	15° <u>0</u>	
evening set	7500 Sep 17 12:55	15° <u>11</u> '30	morning rise	7506 Nov 19 08:04	15° <u>05</u> '43	
			retrograde	7507 Feb 20 08:43	18° <u>28</u> '44	
conjunction	7500 Oct 04 04:58	16° <u>11</u> '54 0°51'35	opposition	7507 May 05 06:47	16° <u>25</u> '34 0°50'53	
minimum elong	7500 Oct 04 04:58	16° <u>11</u> '54 0°51'36	min. Earth dist.	7507 May 05 21:45	16° <u>23</u> '55 17.42807 AU	
max. Earth dist.	7500 Oct 03 16:02	16° <u>09</u> '56 19.73279 AU		7507 Jun 10 05:17	15° <u>8</u> <u>10</u>	
morning rise	7500 Oct 20 21:02	17° <u>12</u> '21	direct	7507 Jul 19 12:50	14° <u>20</u> '28	
retrograde	7501 Jan 22 14:53	20° <u>32</u> '45		7507 Aug 27 04:08	15° <u>0</u>	
opposition	7501 Apr 07 05:50	18° <u>29</u> '38 0°57'27	evening set	7507 Oct 22 05:01	17° <u>46</u> '24	
min. Earth dist.	7501 Apr 07 17:22	18° <u>28</u> '23 17.70363 AU				
direct	7501 Jun 21 00:56	16° <u>25</u> '57	conjunction	7507 Nov 07 21:02	18° <u>48</u> '09 0°44'37	
evening set	7501 Sep 22 13:09	19° <u>45</u> '48	minimum elong	7507 Nov 07 21:02	18° <u>48</u> '09 0°44'42	
			max. Earth dist.	7507 Nov 07 02:10	18° <u>45</u> '13 19.41088 AU	
conjunction	7501 Oct 09 05:18	20° <u>46</u> '26 0°51'35	morning rise	7507 Nov 24 11:28	19° <u>49</u> '43	
minimum elong	7501 Oct 09 05:18	20° <u>46</u> '26 0°51'37	retrograde	7508 Feb 25 08:12	23° <u>12</u> '59	
max. Earth dist.	7501 Oct 08 14:23	20° <u>44</u> '09 19.67509 AU	opposition	7508 May 09 05:17	21° <u>09</u> '49 0°48'31	
morning rise	7501 Oct 25 21:30	21° <u>47</u> '07	min. Earth dist.	7508 May 09 21:38	21° <u>08</u> '02 17.39529 AU	
retrograde	7502 Jan 27 12:37	25° <u>08</u> '02	direct	7508 Jul 23 12:29	19° <u>04</u> '30	
opposition	7502 Apr 12 00:17	23° <u>04</u> '49 0°57'16	evening set	7508 Oct 26 09:33	22° <u>31</u> '13	
min. Earth dist.	7502 Apr 12 12:32	23° <u>03</u> '30 17.64791 AU	max. Earth dist.	7508 Nov 11 06:23	23° <u>30</u> '07 19.38009 AU	
direct	7502 Jun 25 21:14	21° <u>00</u> '50				

conjunction	7508 Nov 12 01:21	23° \mathbb{M} 33'05	0°42'20	opposition	7515 Jun 12 04:29	24° \mathbb{X} 34'29	0°23'33
minimum elong	7508 Nov 12 01:22	23° \mathbb{M} 33'05	0°42'24	min. Earth dist.	7515 Jun 12 18:57	24° \mathbb{X} 32'55	17.30361 AU
morning rise	7508 Nov 28 15:15	24° \mathbb{M} 34'42		direct	7515 Aug 27 05:10	22° \mathbb{X} 28'22	
retrograde	7509 Mar 01 09:49	27° \mathbb{M} 58'07		evening set	7515 Nov 30 18:17	25° \mathbb{X} 57'43	
opposition	7509 May 14 04:00	25° \mathbb{M} 54'59	0°45'49				
min. Earth dist.	7509 May 14 19:50	25° \mathbb{M} 53'15	17.36647 AU	conjunction	7515 Dec 17 06:02	26° \mathbb{X} 59'30	0°19'07
direct	7509 Jul 28 14:16	23° \mathbb{M} 49'29		minimum elong	7515 Dec 17 06:02	26° \mathbb{X} 59'30	0°19'13
evening set	7509 Oct 31 14:25	27° \mathbb{M} 16'52		max. Earth dist.	7515 Dec 16 13:47	26° \mathbb{X} 56'57	19.30831 AU
max. Earth dist.	7509 Nov 16 10:17	28° \mathbb{M} 15'46	19.35342 AU	morning rise	7516 Jan 02 14:35	28° \mathbb{X} 00'51	
					7516 Feb 07 11:58	0° \mathbb{B}	
conjunction	7509 Nov 17 05:49	28° \mathbb{M} 18'49	0°39'44	retrograde	7516 Apr 03 11:23	1° \mathbb{B} 23'43	
minimum elong	7509 Nov 17 05:49	28° \mathbb{M} 18'49	0°39'50		7516 Jun 01 00:55	30° \mathbb{R} \mathbb{X}	
morning rise	7509 Dec 03 19:04	29° \mathbb{M} 20'29		opposition	7516 Jun 16 05:23	29° \mathbb{X} 21'02	0°19'07
	7509 Dec 14 19:48	0° \mathbb{X}		min. Earth dist.	7516 Jun 16 19:43	29° \mathbb{X} 19'28	17.31499 AU
retrograde	7510 Mar 06 09:48	2° \mathbb{X} 44'00		direct	7516 Aug 31 08:40	27° \mathbb{X} 14'59	
opposition	7510 May 19 03:26	0° \mathbb{X} 40'53	0°42'47		7516 Nov 22 14:08	0° \mathbb{B}	
min. Earth dist.	7510 May 19 20:30	0° \mathbb{X} 39'01	17.34215 AU	evening set	7516 Dec 04 22:20	0° \mathbb{B} 44'19	
	7510 Jun 03 23:40	30° \mathbb{R} \mathbb{M}					
direct	7510 Aug 02 14:55	28° \mathbb{M} 35'11		conjunction	7516 Dec 21 09:05	1° \mathbb{B} 45'58	0°15'05
	7510 Sep 29 07:19	0° \mathbb{X}		minimum elong	7516 Dec 21 09:05	1° \mathbb{B} 45'58	0°15'11
evening set	7510 Nov 05 19:11	2° \mathbb{X} 03'10		behind sun begin	7516 Dec 21 06:58	1° \mathbb{B} 45'38	
				behind sun end	7516 Dec 21 11:12	1° \mathbb{B} 46'17	
conjunction	7510 Nov 22 10:07	3° \mathbb{X} 05'09	0°36'52	max. Earth dist.	7516 Dec 20 16:37	1° \mathbb{B} 43'23	19.32299 AU
minimum elong	7510 Nov 22 10:07	3° \mathbb{X} 05'09	0°36'58	morning rise	7517 Jan 06 16:53	2° \mathbb{B} 47'11	
max. Earth dist.	7510 Nov 21 14:30	3° \mathbb{X} 02'05	19.33156 AU	retrograde	7517 Apr 08 11:23	6° \mathbb{B} 09'46	
morning rise	7510 Dec 08 22:48	4° \mathbb{X} 06'50		opposition	7517 Jun 21 06:12	4° \mathbb{B} 07'16	0°14'32
retrograde	7511 Mar 11 11:24	7° \mathbb{X} 30'24		min. Earth dist.	7517 Jun 21 19:18	4° \mathbb{B} 05'51	17.33273 AU
opposition	7511 May 24 03:05	5° \mathbb{X} 27'18	0°39'26	direct	7517 Sep 05 12:25	2° \mathbb{B} 01'20	
min. Earth dist.	7511 May 24 19:09	5° \mathbb{X} 25'32	17.32275 AU	evening set	7517 Dec 10 01:51	5° \mathbb{B} 30'34	
direct	7511 Aug 07 17:31	3° \mathbb{X} 21'27					
evening set	7511 Nov 11 00:04	6° \mathbb{X} 49'53		conjunction	7517 Dec 26 11:53	6° \mathbb{B} 32'04	0°10'57
				minimum elong	7517 Dec 26 11:53	6° \mathbb{B} 32'04	0°11'04
conjunction	7511 Nov 27 14:32	7° \mathbb{X} 51'54	0°33'45	behind sun begin	7517 Dec 26 06:53	6° \mathbb{B} 31'18	
minimum elong	7511 Nov 27 14:33	7° \mathbb{X} 51'54	0°33'50	behind sun end	7517 Dec 26 16:52	6° \mathbb{B} 32'50	
max. Earth dist.	7511 Nov 26 19:23	7° \mathbb{X} 48'54	19.31477 AU	max. Earth dist.	7517 Dec 25 21:32	6° \mathbb{B} 29'49	19.34367 AU
morning rise	7511 Dec 14 02:26	8° \mathbb{X} 53'34		morning rise	7518 Jan 11 18:33	7° \mathbb{B} 33'07	
retrograde	7512 Mar 15 11:11	12° \mathbb{X} 17'06		retrograde	7518 Apr 13 11:10	10° \mathbb{B} 55'22	
opposition	7512 May 28 03:03	10° \mathbb{X} 14'02	0°35'49	opposition	7518 Jun 26 07:19	8° \mathbb{B} 53'06	0°09'53
min. Earth dist.	7512 May 28 20:01	10° \mathbb{X} 12'10	17.30876 AU	min. Earth dist.	7518 Jun 26 19:56	8° \mathbb{B} 51'44	17.35609 AU
direct	7512 Aug 11 18:56	8° \mathbb{X} 08'02		direct	7518 Sep 10 15:24	6° \mathbb{B} 47'20	
evening set	7512 Nov 15 04:58	11° \mathbb{X} 36'52		evening set	7518 Dec 15 04:56	10° \mathbb{B} 16'19	
conjunction	7512 Dec 01 18:47	12° \mathbb{X} 38'51	0°30'22	conjunction	7518 Dec 31 13:52	11° \mathbb{B} 17'38	0°06'46
minimum elong	7512 Dec 01 18:47	12° \mathbb{X} 38'51	0°30'29	minimum elong	7518 Dec 31 13:52	11° \mathbb{B} 17'38	0°06'51
max. Earth dist.	7512 Nov 30 23:23	12° \mathbb{X} 35'49	19.30372 AU	behind sun begin	7518 Dec 31 07:38	11° \mathbb{B} 16'41	
morning rise	7512 Dec 18 06:04	13° \mathbb{X} 40'30		behind sun end	7518 Dec 31 20:05	11° \mathbb{B} 18'36	
retrograde	7513 Mar 20 12:13	17° \mathbb{X} 03'56		max. Earth dist.	7518 Dec 30 23:24	11° \mathbb{B} 15'23	19.36971 AU
opposition	7513 Jun 02 03:16	15° \mathbb{X} 00'54	0°31'57	morning rise	7519 Jan 16 19:44	12° \mathbb{B} 18'31	
min. Earth dist.	7513 Jun 02 18:58	14° \mathbb{X} 59'11	17.30063 AU	retrograde	7519 Apr 18 11:14	15° \mathbb{B} 40'24	
direct	7513 Aug 16 22:24	12° \mathbb{X} 54'48		opposition	7519 Jul 01 08:20	13° \mathbb{B} 38'19	0°05'10
evening set	7513 Nov 20 09:38	16° \mathbb{X} 23'54		min. Earth dist.	7519 Jul 01 20:06	13° \mathbb{B} 37'03	17.38461 AU
				direct	7519 Sep 15 18:19	11° \mathbb{B} 32'43	
conjunction	7513 Dec 06 22:52	17° \mathbb{X} 25'52	0°26'48	evening set	7519 Dec 20 07:30	15° \mathbb{B} 01'22	
minimum elong	7513 Dec 06 22:52	17° \mathbb{X} 25'52	0°26'53				
max. Earth dist.	7513 Dec 06 04:51	17° \mathbb{X} 23'02	19.29861 AU	conjunction	7520 Jan 05 15:38	16° \mathbb{B} 02'30	0°02'31
morning rise	7513 Dec 23 09:08	18° \mathbb{X} 27'25		minimum elong	7520 Jan 05 15:38	16° \mathbb{B} 02'30	0°02'38
retrograde	7514 Mar 25 11:43	21° \mathbb{X} 50'43		behind sun begin	7520 Jan 05 08:57	16° \mathbb{B} 01'29	
opposition	7514 Jun 07 03:52	19° \mathbb{X} 47'45	0°27'51	behind sun end	7520 Jan 05 22:18	16° \mathbb{B} 03'31	
min. Earth dist.	7514 Jun 07 19:51	19° \mathbb{X} 46'01	17.29874 AU	max. Earth dist.	7520 Jan 05 03:04	16° \mathbb{B} 00'32	19.40048 AU
direct	7514 Aug 22 01:19	17° \mathbb{X} 41'37		morning rise	7520 Jan 21 20:24	17° \mathbb{B} 03'10	
evening set	7514 Nov 25 14:11	21° \mathbb{X} 10'53		retrograde	7520 Apr 22 10:46	20° \mathbb{B} 24'35	
max. Earth dist.	7514 Dec 11 08:20	22° \mathbb{X} 09'54	19.30012 AU	opposition	7520 Jul 05 09:12	18° \mathbb{B} 22'44	0°00'25
				min. Earth dist.	7520 Jul 05 20:10	18° \mathbb{B} 21'33	17.41740 AU
conjunction	7514 Dec 12 02:32	22° \mathbb{X} 12'46	0°23'02	desc. node	7520 Aug 06 18:18	17° \mathbb{B} 05'11	
minimum elong	7514 Dec 12 02:32	22° \mathbb{X} 12'46	0°23'09	direct	7520 Sep 19 20:57	16° \mathbb{B} 17'19	
morning rise	7514 Dec 28 12:07	23° \mathbb{X} 14'14		evening set	7520 Dec 24 09:41	19° \mathbb{B} 45'31	
retrograde	7515 Mar 30 11:47	26° \mathbb{X} 37'21					

conjunction	7521 Jan 09 16:40	20°346'25 -0°01'51		7526 Sep 07 11:35	15°R
minimum elong	7521 Jan 09 16:41	20°346'25 0°01'45	direct	7526 Oct 19 09:26	14°17'23
behind sun begin	7521 Jan 09 10:00	20°345'24		7526 Nov 29 03:28	15°
behind sun end	7521 Jan 09 23:21	20°347'27	evening set	7527 Jan 22 04:34	17°40'57
max. Earth dist.	7521 Jan 09 04:05	20°344'28 19.43531 AU			
morning rise	7521 Jan 25 20:34	21°346'52	conjunction	7527 Feb 07 05:42	18°40'10 -0°25'47
retrograde	7521 Apr 27 09:52	25°307'48	minimum elong	7527 Feb 07 05:42	18°40'10 0°25'43
opposition	7521 Jul 10 10:06	23°306'07 -0°04'19	max. Earth dist.	7527 Feb 07 00:59	18°39'27 19.71390 AU
min. Earth dist.	7521 Jul 10 20:33	23°305'00 17.45420 AU	morning rise	7527 Feb 23 04:02	19°39'00
direct	7521 Sep 24 23:14	21°300'54	retrograde	7527 May 25 12:17	22°56'15
evening set	7521 Dec 29 10:54	24°328'33	opposition	7527 Aug 08 08:03	20°55'23 -0°30'36
			min. Earth dist.	7527 Aug 08 12:07	20°54'57 17.74223 AU
conjunction	7522 Jan 14 16:59	25°329'13 -0°06'05	direct	7527 Oct 24 08:17	18°51'29
minimum elong	7522 Jan 14 16:59	25°329'13 0°06'00	evening set	7528 Jan 27 00:28	22°14'02
behind sun begin	7522 Jan 14 10:38	25°328'14			
behind sun end	7522 Jan 14 23:20	25°330'11	conjunction	7528 Feb 12 00:35	23°12'57 -0°29'16
max. Earth dist.	7522 Jan 14 06:06	25°327'31 19.47389 AU	minimum elong	7528 Feb 12 00:35	23°12'57 0°29'12
morning rise	7522 Jan 30 19:48	26°329'25	max. Earth dist.	7528 Feb 11 21:04	23°12'24 19.77155 AU
retrograde	7522 May 02 08:34	29°349'49	morning rise	7528 Feb 27 22:12	24°11'29
opposition	7522 Jul 15 10:46	27°348'18 -0°09'00	retrograde	7528 May 29 07:37	27°28'04
min. Earth dist.	7522 Jul 15 19:50	27°347'20 17.49436 AU	opposition	7528 Aug 12 05:50	25°27'21 -0°34'21
direct	7522 Sep 30 02:23	25°343'17	min. Earth dist.	7528 Aug 12 07:19	25°27'11 17.80151 AU
evening set	7523 Jan 03 11:31	29°310'17	direct	7528 Oct 28 08:53	23°23'45
	7523 Jan 16 20:19	0°	evening set	7529 Jan 30 19:22	26°45'18
conjunction	7523 Jan 19 16:31	0°10'41 -0°10'15	conjunction	7529 Feb 15 18:38	27°43'53 -0°32'32
minimum elong	7523 Jan 19 16:31	0°10'41 0°10'08	minimum elong	7529 Feb 15 18:38	27°43'53 0°32'29
behind sun begin	7523 Jan 19 11:11	0°09'52	max. Earth dist.	7529 Feb 15 17:23	27°43'42 19.83243 AU
behind sun end	7523 Jan 19 21:51	0°11'30	morning rise	7529 Mar 03 15:22	28°42'07
max. Earth dist.	7523 Jan 19 06:06	0°09'04 19.51571 AU		7529 Mar 26 11:56	0°
morning rise	7523 Feb 04 18:26	1°10'37	retrograde	7529 Jun 02 23:41	1°58'04
retrograde	7523 May 07 05:35	4°30'27		7529 Aug 16 03:46	30°R
opposition	7523 Jul 20 11:03	2°29'06 -0°13'36	opposition	7529 Aug 17 03:23	29°57'32 -0°37'52
min. Earth dist.	7523 Jul 20 19:50	2°28'09 17.53785 AU	min. Earth dist.	7529 Aug 17 04:17	29°57'26 17.86399 AU
direct	7523 Oct 05 03:48	0°24'16	direct	7529 Nov 02 06:02	27°54'18
evening set	7524 Jan 08 11:12	3°50'32		7530 Jan 13 14:31	0°
conjunction	7524 Jan 24 15:17	4°50'39 -0°14'19	evening set	7530 Feb 04 13:12	1°14'47
minimum elong	7524 Jan 24 15:17	4°50'39 0°14'14	conjunction	7530 Feb 20 11:32	2°13'03 -0°35'35
behind sun begin	7524 Jan 24 12:06	4°50'10	minimum elong	7530 Feb 20 11:31	2°13'03 0°35'32
behind sun end	7524 Jan 24 18:28	4°51'08	max. Earth dist.	7530 Feb 20 11:18	2°13'01 19.89639 AU
max. Earth dist.	7524 Jan 24 06:17	4°49'16 19.56075 AU	morning rise	7530 Mar 08 07:41	3°11'00
morning rise	7524 Feb 09 16:16	5°50'20	retrograde	7530 Jun 07 18:05	6°26'19
retrograde	7524 May 11 03:19	9°09'33	opposition	7530 Aug 22 00:11	4°25'59 -0°41'07
opposition	7524 Jul 24 10:56	7°08'19 -0°18'06	min. Earth dist.	7530 Aug 21 22:30	4°26'09 17.92916 AU
min. Earth dist.	7524 Jul 24 17:59	7°07'34 17.58424 AU	direct	7530 Nov 07 04:17	2°23'08
direct	7524 Oct 09 06:52	5°03'43	evening set	7531 Feb 09 06:10	5°42'33
evening set	7525 Jan 12 10:03	8°29'08			
conjunction	7525 Jan 28 13:05	9°28'58 -0°18'17	conjunction	7531 Feb 25 03:48	6°40'31 -0°38'24
minimum elong	7525 Jan 28 13:05	9°28'58 0°18'12	minimum elong	7531 Feb 25 03:48	6°40'31 0°38'22
max. Earth dist.	7525 Jan 28 05:10	9°27'45 19.60863 AU	max. Earth dist.	7531 Feb 25 05:58	6°40'51 19.96259 AU
morning rise	7525 Feb 13 13:07	10°28'22	morning rise	7531 Mar 12 23:11	7°38'11
retrograde	7525 May 15 22:20	13°46'57	retrograde	7531 Jun 12 09:16	10°52'51
opposition	7525 Jul 29 10:31	11°45'51 -0°22'27	opposition	7531 Aug 26 20:24	8°52'44 -0°44'06
min. Earth dist.	7525 Jul 29 17:17	11°45'08 17.63370 AU	min. Earth dist.	7531 Aug 26 18:21	8°52'57 17.99625 AU
direct	7525 Oct 14 07:22	9°41'27	direct	7531 Nov 11 23:53	6°50'19
evening set	7526 Jan 17 07:52	13°05'59	evening set	7532 Feb 13 22:22	10°08'38
conjunction	7526 Feb 02 09:56	14°05'31 -0°22'07	conjunction	7532 Feb 29 19:06	11°06'17 -0°40'58
minimum elong	7526 Feb 02 09:56	14°05'31 0°22'03	minimum elong	7532 Feb 29 19:06	11°06'17 0°40'56
max. Earth dist.	7526 Feb 02 03:23	14°04'30 19.65970 AU	max. Earth dist.	7532 Feb 29 21:49	11°06'42 20.03038 AU
	7526 Feb 17 02:43	15°	morning rise	7532 Mar 16 14:03	12°03'41
morning rise	7526 Feb 18 09:09	15°04'37	retrograde	7532 Jun 16 02:29	15°17'43
retrograde	7526 May 20 18:53	18°22'33	opposition	7532 Aug 30 16:03	13°17'50 -0°46'48
opposition	7526 Aug 03 09:29	16°21'33 -0°26'38	min. Earth dist.	7532 Aug 30 11:45	13°18'16 18.06450 AU
min. Earth dist.	7526 Aug 03 13:59	16°21'04 17.68630 AU	direct	7532 Nov 15 19:41	11°15'48
			evening set	7533 Feb 17 13:31	14°33'01

conjunction	7533 Mar 05 09:38	15° H 30'23	-0°43'17	retrograde	7539 Jul 17 01:26	15° Y 23'04	
minimum elong	7533 Mar 05 09:38	15° H 30'23	0°43'15	opposition	7539 Oct 01 16:22	13° Y 24'03	-0°57'13
max. Earth dist.	7533 Mar 05 14:42	15° H 31'09	20.09882 AU	min. Earth dist.	7539 Oct 01 05:32	13° Y 25'09	18.51845 AU
morning rise	7533 Mar 21 03:52	16° H 27'29		direct	7539 Dec 17 18:00	11° Y 24'25	
retrograde	7533 Jun 20 17:01	19° H 40'53		evening set	7540 Mar 19 00:34	14° Y 33'39	
opposition	7533 Sep 04 11:19	17° H 41'13	-0°49'12				
min. Earth dist.	7533 Sep 04 06:38	17° H 41'42	18.13306 AU	conjunction	7540 Apr 03 17:10	15° Y 29'06	-0°51'48
direct	7533 Nov 20 14:18	15° H 39'37		minimum elong	7540 Apr 03 17:10	15° Y 29'06	0°51'50
evening set	7534 Feb 22 04:00	18° H 55'42		max. Earth dist.	7540 Apr 04 04:22	15° Y 30'46	20.54737 AU
				morning rise	7540 Apr 19 09:44	16° Y 24'32	
conjunction	7534 Mar 09 23:17	19° H 52'45	-0°45'20	retrograde	7540 Jul 20 13:15	19° Y 33'42	
minimum elong	7534 Mar 09 23:17	19° H 52'45	0°45'19	opposition	7540 Oct 05 06:50	17° Y 34'42	-0°57'28
max. Earth dist.	7534 Mar 10 04:34	19° H 53'33	20.16734 AU	min. Earth dist.	7540 Oct 04 18:43	17° Y 35'56	18.57618 AU
morning rise	7534 Mar 25 17:13	20° H 49'36		direct	7540 Dec 21 07:47	15° Y 35'19	
retrograde	7534 Jun 25 09:16	24° H 02'23		evening set	7541 Mar 23 08:57	18° Y 43'29	
opposition	7534 Sep 09 05:45	22° H 02'53	-0°51'19				
min. Earth dist.	7534 Sep 08 23:08	22° H 03'34	18.20139 AU	conjunction	7541 Apr 08 01:29	19° Y 38'43	-0°51'53
direct	7534 Nov 25 08:06	20° H 01'40		minimum elong	7541 Apr 08 01:29	19° Y 38'43	0°51'56
evening set	7535 Feb 26 17:26	23° H 16'37		max. Earth dist.	7541 Apr 08 14:57	19° Y 40'43	20.60424 AU
				morning rise	7541 Apr 23 17:51	20° Y 33'57	
conjunction	7535 Mar 14 12:17	24° H 13'23	-0°47'07	retrograde	7541 Jul 24 22:39	23° Y 42'36	
minimum elong	7535 Mar 14 12:17	24° H 13'23	0°47'06	opposition	7541 Oct 09 20:37	21° Y 43'39	-0°57'24
max. Earth dist.	7535 Mar 14 19:42	24° H 14'30	20.23512 AU	min. Earth dist.	7541 Oct 09 07:31	21° Y 44'58	18.63229 AU
morning rise	7535 Mar 30 05:40	25° H 09'58		direct	7541 Dec 25 21:07	19° Y 44'32	
retrograde	7535 Jun 29 22:37	28° H 22'07		evening set	7542 Mar 27 16:54	22° Y 51'42	
opposition	7535 Sep 13 23:42	26° H 22'48	-0°53'07				
min. Earth dist.	7535 Sep 13 16:46	26° H 23'30	18.26856 AU	conjunction	7542 Apr 12 09:07	23° Y 46'43	-0°51'43
direct	7535 Nov 30 01:51	24° H 21'58		minimum elong	7542 Apr 12 09:07	23° Y 46'43	0°51'44
evening set	7536 Mar 02 06:15	27° H 35'46		max. Earth dist.	7542 Apr 12 22:35	23° Y 48'42	20.65963 AU
				morning rise	7542 Apr 28 01:44	24° Y 41'47	
conjunction	7536 Mar 18 00:22	28° H 32'14	-0°48'37	retrograde	7542 Jul 29 09:01	27° Y 49'57	
minimum elong	7536 Mar 18 00:22	28° H 32'14	0°48'37	opposition	7542 Oct 14 09:37	25° Y 51'03	-0°57'02
max. Earth dist.	7536 Mar 18 07:39	28° H 33'20	20.30153 AU	min. Earth dist.	7542 Oct 13 19:30	25° Y 52'29	18.68700 AU
morning rise	7536 Apr 02 17:33	29° H 28'34		direct	7542 Dec 30 08:41	23° Y 52'13	
	7536 Apr 11 19:35	0° Y		evening set	7543 Apr 01 00:04	26° Y 58'26	
retrograde	7536 Jul 03 13:41	2° Y 40'07					
opposition	7536 Sep 17 16:52	0° Y 40'55	-0°54'37	conjunction	7543 Apr 16 16:23	27° Y 53'16	-0°51'16
min. Earth dist.	7536 Sep 17 08:22	0° Y 41'47	18.33415 AU	minimum elong	7543 Apr 16 16:23	27° Y 53'16	0°51'19
	7536 Oct 04 17:39	30° R H		max. Earth dist.	7543 Apr 17 07:54	27° Y 55'33	20.71338 AU
direct	7536 Dec 03 18:39	28° H 40'24		morning rise	7543 May 02 08:58	28° Y 48'11	
	7537 Jan 29 19:39	0° Y			7543 May 24 10:43	0° B	
evening set	7537 Mar 06 18:05	1° Y 53'04		retrograde	7543 Aug 02 18:25	1° B 55'55	
					7543 Oct 17 17:22	30° R Y	
conjunction	7537 Mar 22 11:53	2° Y 49'16	-0°49'50	opposition	7543 Oct 18 22:05	29° Y 57'07	-0°56'22
minimum elong	7537 Mar 22 11:52	2° Y 49'16	0°49'50	min. Earth dist.	7543 Oct 18 07:00	29° Y 58'38	18.73970 AU
max. Earth dist.	7537 Mar 22 21:10	2° Y 50'40	20.36608 AU	direct	7544 Jan 03 20:20	27° Y 58'35	
morning rise	7537 Apr 07 04:37	3° Y 45'22			7544 Mar 15 17:25	0° B	
retrograde	7537 Jul 08 01:40	6° Y 56'17		evening set	7544 Apr 04 06:47	1° B 03'54	
opposition	7537 Sep 22 09:33	4° Y 57'11	-0°55'48				
min. Earth dist.	7537 Sep 22 00:36	4° Y 58'06	18.39766 AU	conjunction	7544 Apr 19 22:53	1° B 58'34	-0°50'33
direct	7537 Dec 08 11:15	2° Y 57'01		minimum elong	7544 Apr 19 22:53	1° B 58'34	0°50'36
evening set	7538 Mar 11 05:04	6° Y 08'30		max. Earth dist.	7544 Apr 20 14:16	2° B 00'49	20.76502 AU
				morning rise	7544 May 05 15:49	2° B 53'20	
conjunction	7538 Mar 26 22:18	7° Y 04'26	-0°50'46	retrograde	7544 Aug 06 03:39	6° B 00'42	
minimum elong	7538 Mar 26 22:18	7° Y 04'26	0°50'47	opposition	7544 Oct 22 10:05	4° B 01'59	-0°55'26
max. Earth dist.	7538 Mar 27 07:28	7° Y 05'48	20.42857 AU	min. Earth dist.	7544 Oct 21 18:20	4° B 03'34	18.79022 AU
morning rise	7538 Apr 11 15:03	8° Y 00'18		direct	7545 Jan 07 06:11	2° B 03'46	
retrograde	7538 Jul 12 15:11	11° Y 10'38		evening set	7545 Apr 08 12:56	5° B 08'14	
opposition	7538 Sep 27 01:23	9° Y 11'34	-0°56'40				
min. Earth dist.	7538 Sep 26 15:08	9° Y 12'36	18.45913 AU	conjunction	7545 Apr 24 05:16	6° B 02'46	-0°49'36
direct	7538 Dec 13 02:55	7° Y 11'39		minimum elong	7545 Apr 24 05:16	6° B 02'46	0°49'40
evening set	7539 Mar 15 15:09	10° Y 22'01		max. Earth dist.	7545 Apr 24 22:29	6° B 05'16	20.81419 AU
				morning rise	7545 May 09 22:17	6° B 57'25	
conjunction	7539 Mar 31 08:13	11° Y 17'43	-0°51'26	retrograde	7545 Aug 10 13:05	10° B 04'26	
minimum elong	7539 Mar 31 08:13	11° Y 17'43	0°51'27	opposition	7545 Oct 26 21:33	8° B 05'50	-0°54'14
max. Earth dist.	7539 Mar 31 19:26	11° Y 19'23	20.48892 AU	min. Earth dist.	7545 Oct 26 04:57	8° B 07'30	18.83788 AU
morning rise	7539 Apr 16 00:40	12° Y 13'21		direct	7546 Jan 11 16:44	6° B 07'55	

evening set	7546 Apr 12 18:47	9°♄11'36	conjunction	7552 May 21 18:22	4°♄10'10 -0°36'37
			minimum elong	7552 May 21 18:22	4°♄10'10 0°36'44
conjunction	7546 Apr 28 11:04	10°♄06'00 -0°48'24	max. Earth dist.	7552 May 22 11:33	4°♄12'38 21.04302 AU
minimum elong	7546 Apr 28 11:04	10°♄06'00 0°48'28	morning rise	7552 Jun 06 14:47	5°♄04'28
max. Earth dist.	7546 Apr 29 03:52	10°♄08'26 20.86028 AU	retrograde	7552 Sep 07 21:58	8°♄10'09
morning rise	7546 May 14 04:35	11°♄00'33	opposition	7552 Nov 24 18:17	6°♄11'41 -0°39'00
retrograde	7546 Aug 14 21:41	14°♄07'18	min. Earth dist.	7552 Nov 24 01:38	6°♄13'21 19.05034 AU
opposition	7546 Oct 31 08:36	12°♄08'47 -0°52'45	direct	7553 Feb 08 23:12	4°♄15'00
min. Earth dist.	7546 Oct 30 15:50	12°♄10'27 18.88229 AU	evening set	7553 May 10 04:23	7°♄14'42
direct	7547 Jan 16 01:09	10°♄11'09			
evening set	7547 Apr 17 00:14	13°♄14'07	conjunction	7553 May 25 23:09	8°♄08'40 -0°33'59
			minimum elong	7553 May 25 23:09	8°♄08'40 0°34'05
conjunction	7547 May 02 16:50	14°♄08'24 -0°46'58	max. Earth dist.	7553 May 26 17:22	8°♄11'17 21.05604 AU
minimum elong	7547 May 02 16:50	14°♄08'24 0°47'02	morning rise	7553 Jun 10 20:03	9°♄02'58
max. Earth dist.	7547 May 03 11:03	14°♄11'02 20.90272 AU	retrograde	7553 Sep 12 05:24	12°♄08'35
	7547 May 17 14:21	15°♄	min. Earth dist.	7553 Nov 28 09:14	10°♄11'46 19.06117 AU
morning rise	7547 May 18 10:32	15°♄02'52	opposition	7553 Nov 29 02:28	10°♄10'02 -0°36'00
retrograde	7547 Aug 19 06:28	18°♄09'21	direct	7554 Feb 13 06:51	8°♄13'22
opposition	7547 Nov 04 19:03	16°♄10'56 -0°51'02	evening set	7554 May 14 08:33	11°♄12'45
min. Earth dist.	7547 Nov 04 01:41	16°♄12'40 18.92262 AU			
	7547 Dec 06 13:12	15°♄	conjunction	7554 May 30 03:42	12°♄06'43 -0°31'11
direct	7548 Jan 20 10:46	14°♄13'34	minimum elong	7554 May 30 03:42	12°♄06'43 0°31'18
	7548 Mar 03 15:45	15°♄	max. Earth dist.	7554 May 30 20:57	12°♄09'11 21.06485 AU
evening set	7548 Apr 20 05:37	17°♄15'53	morning rise	7554 Jun 15 01:27	13°♄01'03
			retrograde	7554 Sep 16 12:38	16°♄06'38
conjunction	7548 May 05 22:15	18°♄10'03 -0°45'19	opposition	7554 Dec 03 10:31	14°♄08'00 -0°32'49
minimum elong	7548 May 05 22:15	18°♄10'03 0°45'24	min. Earth dist.	7554 Dec 02 18:04	14°♄09'38 19.06808 AU
max. Earth dist.	7548 May 06 15:40	18°♄12'35 20.94090 AU	direct	7555 Feb 17 11:08	12°♄11'21
morning rise	7548 May 21 16:30	19°♄04'27	evening set	7555 May 18 12:34	15°♄10'27
retrograde	7548 Aug 22 14:54	22°♄10'44			
opposition	7548 Nov 08 05:21	20°♄12'23 -0°49'04	conjunction	7555 Jun 03 08:25	16°♄04'27 -0°28'15
min. Earth dist.	7548 Nov 07 12:14	20°♄14'05 18.95859 AU	minimum elong	7555 Jun 03 08:25	16°♄04'27 0°28'21
direct	7549 Jan 23 18:14	18°♄15'15	max. Earth dist.	7555 Jun 04 02:39	16°♄07'03 21.06983 AU
evening set	7549 Apr 24 10:27	21°♄16'56	morning rise	7555 Jun 19 06:41	16°♄58'49
			retrograde	7555 Sep 20 20:21	20°♄04'26
conjunction	7549 May 10 03:32	22°♄11'03 -0°43'26	opposition	7555 Dec 07 18:08	18°♄05'43 -0°29'30
minimum elong	7549 May 10 03:32	22°♄11'03 0°43'30	min. Earth dist.	7555 Dec 07 01:04	18°♄07'26 19.07113 AU
max. Earth dist.	7549 May 10 22:03	22°♄13'43 20.97436 AU	direct	7556 Feb 21 18:16	16°♄09'06
morning rise	7549 May 25 22:07	23°♄05'23	evening set	7556 May 21 16:49	19°♄08'01
retrograde	7549 Aug 26 23:01	26°♄11'29			
opposition	7549 Nov 12 15:10	24°♄13'10 -0°46'53	conjunction	7556 Jun 06 13:06	20°♄02'03 -0°25'11
min. Earth dist.	7549 Nov 11 21:35	24°♄14'55 18.98940 AU	minimum elong	7556 Jun 06 13:06	20°♄02'03 0°25'16
direct	7550 Jan 28 02:56	22°♄16'13	max. Earth dist.	7556 Jun 07 06:16	20°♄04'30 21.07111 AU
evening set	7550 Apr 28 15:24	25°♄17'21	morning rise	7556 Jun 22 12:15	20°♄56'29
			retrograde	7556 Sep 24 03:58	24°♄02'12
conjunction	7550 May 14 08:40	26°♄11'23 -0°41'21	min. Earth dist.	7556 Dec 10 09:38	22°♄05'02 19.07066 AU
minimum elong	7550 May 14 08:40	26°♄11'23 0°41'27	opposition	7556 Dec 11 01:50	22°♄03'24 -0°26'02
max. Earth dist.	7550 May 15 02:02	26°♄13'53 21.00255 AU	direct	7557 Feb 24 22:18	20°♄06'47
morning rise	7550 May 30 03:55	27°♄05'42	evening set	7557 May 25 20:56	23°♄05'35
	7550 Aug 09 13:03	0°♄			
retrograde	7550 Aug 31 07:04	0°♄11'38	conjunction	7557 Jun 10 18:03	23°♄59'42 -0°21'59
	7550 Sep 22 09:07	30°♄	minimum elong	7557 Jun 10 18:04	23°♄59'42 0°22'06
min. Earth dist.	7550 Nov 16 07:37	28°♄14'59 19.01496 AU	max. Earth dist.	7557 Jun 11 12:03	24°♄02'16 21.06881 AU
opposition	7550 Nov 17 00:31	28°♄13'18 -0°44'27	morning rise	7557 Jun 26 17:50	24°♄54'13
direct	7551 Feb 01 09:35	26°♄16'29	retrograde	7557 Sep 28 12:16	28°♄00'03
evening set	7551 May 02 19:55	29°♄17'06	opposition	7557 Dec 15 09:14	26°♄01'12 -0°22'26
	7551 May 15 08:44	0°♄	min. Earth dist.	7557 Dec 14 16:31	26°♄02'52 19.06638 AU
			direct	7558 Mar 01 04:41	24°♄04'36
conjunction	7551 May 18 13:46	0°♄11'06 -0°39'05	evening set	7558 May 30 01:35	27°♄03'22
minimum elong	7551 May 18 13:46	0°♄11'06 0°39'10			
max. Earth dist.	7551 May 19 07:58	0°♄13'43 21.02540 AU	conjunction	7558 Jun 14 23:13	27°♄57'33 -0°18'41
morning rise	7551 Jun 03 09:25	1°♄05'23	minimum elong	7558 Jun 14 23:14	27°♄57'33 0°18'47
retrograde	7551 Sep 04 14:31	4°♄11'11	max. Earth dist.	7558 Jun 15 15:52	27°♄59'55 21.06265 AU
opposition	7551 Nov 21 09:30	2°♄12'49 -0°41'50	morning rise	7558 Jun 30 23:55	28°♄52'10
min. Earth dist.	7551 Nov 20 16:09	2°♄14'32 19.03506 AU		7558 Jul 22 08:04	0°♄
direct	7552 Feb 05 17:40	0°♄16'04	retrograde	7558 Oct 02 20:28	1°♄58'11
evening set	7552 May 06 00:15	3°♄16'12	opposition	7558 Dec 19 16:34	29°♄59'16 -0°18'45

min. Earth dist.	7558 Dec 19 01:06	0°☾00'49	19.05829 AU	conjunction	7564 Jul 08 15:18	21°☾56'36	0°02'39
	7558 Dec 19 09:19	30°☿II		minimum elong	7564 Jul 08 15:18	21°☾56'36	0°02'32
direct	7559 Mar 05 08:57	28°II02'40		behind sun begin	7564 Jul 08 08:40	21°☾55'41	
	7559 May 15 00:20	0°☾		behind sun end	7564 Jul 08 21:56	21°☾57'32	
evening set	7559 Jun 03 06:19	1°☾01'29		max. Earth dist.	7564 Jul 09 02:44	21°☾58'14	20.93056 AU
				morning rise	7564 Jul 24 20:52	22°☾52'06	
conjunction	7559 Jun 19 04:50	1°☾55'47	-0°15'18	retrograde	7564 Oct 27 04:25	26°☾00'06	
minimum elong	7559 Jun 19 04:50	1°☾55'47	0°15'25	opposition	7565 Jan 12 14:33	24°☾00'34	0°04'54
behind sun begin	7559 Jun 19 02:54	1°☾55'30		min. Earth dist.	7565 Jan 12 04:33	24°☾01'35	18.91126 AU
behind sun end	7559 Jun 19 06:45	1°☾56'03		direct	7565 Mar 28 18:47	22°☾03'23	
max. Earth dist.	7559 Jun 19 22:00	1°☾58'13	21.05257 AU	evening set	7565 Jun 26 20:32	25°☾03'52	
morning rise	7559 Jul 05 06:10	2°☾50'30					
retrograde	7559 Oct 07 05:19	5°☾56'44		conjunction	7565 Jul 12 23:47	25°☾59'05	0°06'18
opposition	7559 Dec 23 23:56	3°☾57'47	-0°14'57	minimum elong	7565 Jul 12 23:47	25°☾59'05	0°06'12
min. Earth dist.	7559 Dec 23 08:08	3°☾59'22	19.04602 AU	behind sun begin	7565 Jul 12 17:29	25°☾58'13	
direct	7560 Mar 08 14:53	2°☾01'11		behind sun end	7565 Jul 13 06:05	25°☾59'58	
evening set	7560 Jun 06 11:30	5°☾00'07		max. Earth dist.	7565 Jul 13 10:59	26°☾00'41	20.89082 AU
				morning rise	7565 Jul 29 06:04	26°☾54'46	
conjunction	7560 Jun 22 10:34	5°☾54'31	-0°11'51		7565 Oct 20 05:38	0°♂	
minimum elong	7560 Jun 22 10:34	5°☾54'31	0°11'57	retrograde	7565 Oct 31 16:12	0°♂03'11	
behind sun begin	7560 Jun 22 06:00	5°☾53'53			7565 Nov 12 01:00	30°☿☾	
behind sun end	7560 Jun 22 15:08	5°☾55'09		opposition	7566 Jan 16 22:33	28°☾03'27	0°08'56
max. Earth dist.	7560 Jun 23 02:12	5°☾56'45	21.03817 AU	min. Earth dist.	7566 Jan 16 12:41	28°☾04'28	18.86919 AU
morning rise	7560 Jul 08 12:52	6°☾49'22		direct	7566 Apr 02 02:43	26°☾06'02	
retrograde	7560 Oct 10 14:04	9°☾55'54		evening set	7566 Jul 01 04:45	29°☾07'01	
opposition	7560 Dec 27 07:32	7°☾56'53	-0°11'05		7566 Jul 16 15:40	0°♂	
min. Earth dist.	7560 Dec 26 17:17	7°☾58'19	19.02939 AU				
direct	7561 Mar 12 19:30	6°☾00'15		conjunction	7566 Jul 17 08:40	0°♂02'26	0°09'55
evening set	7561 Jun 10 17:06	8°☾59'22		minimum elong	7566 Jul 17 08:40	0°♂02'26	0°09'49
				behind sun begin	7566 Jul 17 03:14	0°♂01'41	
conjunction	7561 Jun 26 17:05	9°☾53'55	-0°08'19	behind sun end	7566 Jul 17 14:05	0°♂03'12	
minimum elong	7561 Jun 26 17:05	9°☾53'55	0°08'26	max. Earth dist.	7566 Jul 17 17:51	0°♂03'45	20.84669 AU
behind sun begin	7561 Jun 26 11:17	9°☾53'06		morning rise	7566 Aug 02 15:52	0°♂58'19	
behind sun end	7561 Jun 26 22:54	9°☾54'43		retrograde	7566 Nov 05 01:22	4°♂07'12	
max. Earth dist.	7561 Jun 27 08:52	9°☾56'10	21.01917 AU	opposition	7567 Jan 21 06:46	2°♂07'15	0°12'56
morning rise	7561 Jul 12 20:03	10°☾48'54		min. Earth dist.	7567 Jan 20 22:57	2°♂08'03	18.82322 AU
retrograde	7561 Oct 14 23:53	13°☾55'45		direct	7567 Apr 06 07:59	0°♂09'34	
opposition	7561 Dec 31 14:56	11°☾56'40	-0°07'08	evening set	7567 Jul 05 13:20	3°♂11'07	
min. Earth dist.	7561 Dec 31 00:44	11°☾58'06	19.00783 AU				
direct	7562 Mar 17 01:44	9°☾59'57		conjunction	7567 Jul 21 18:13	4°♂06'45	0°13'29
evening set	7562 Jun 14 23:23	12°☾59'21		minimum elong	7567 Jul 21 18:14	4°♂06'45	0°13'25
				behind sun begin	7567 Jul 21 14:29	4°♂06'14	
conjunction	7562 Jun 30 24:00	13°☾54'02	-0°04'45	behind sun end	7567 Jul 21 21:58	4°♂07'17	
minimum elong	7562 Jun 30 24:00	13°☾54'02	0°04'52	max. Earth dist.	7567 Jul 22 03:13	4°♂08'02	20.79906 AU
behind sun begin	7562 Jun 30 17:32	13°☾53'08		morning rise	7567 Aug 07 02:07	5°♂02'51	
behind sun end	7562 Jul 01 06:27	13°☾54'56		retrograde	7567 Nov 09 13:35	8°♂12'14	
max. Earth dist.	7562 Jul 01 13:45	13°☾56'00	20.99501 AU	opposition	7568 Jan 25 15:10	6°♂12'04	0°16'53
morning rise	7562 Jul 17 03:55	14°☾49'11		min. Earth dist.	7568 Jan 25 07:18	6°♂12'53	18.77398 AU
retrograde	7562 Oct 19 08:44	17°☾56'24		direct	7568 Apr 09 16:43	4°♂14'08	
opposition	7563 Jan 04 22:44	15°☾57'11	-0°03'09	evening set	7568 Jul 08 22:35	7°♂16'18	
min. Earth dist.	7563 Jan 04 10:30	15°☾58'26	18.98101 AU				
direct	7563 Mar 21 06:37	14°☾00'22		conjunction	7568 Jul 25 04:11	8°♂12'10	0°17'01
evening set	7563 Jun 19 05:53	17°☾00'05		minimum elong	7568 Jul 25 04:11	8°♂12'10	0°16'57
				max. Earth dist.	7568 Jul 25 11:21	8°♂13'12	20.74838 AU
conjunction	7563 Jul 05 07:27	17°☾54'56	-0°01'06	morning rise	7568 Aug 10 12:58	9°♂08'30	
minimum elong	7563 Jul 05 07:27	17°☾54'56	0°01'12	retrograde	7568 Nov 12 23:59	12°♂18'26	
behind sun begin	7563 Jul 05 00:49	17°☾54'00		opposition	7569 Jan 29 00:02	10°♂18'03	0°20'46
behind sun end	7563 Jul 05 14:04	17°☾55'51		min. Earth dist.	7569 Jan 28 18:06	10°♂18'40	18.72203 AU
max. Earth dist.	7563 Jul 05 20:59	17°☾56'52	20.96547 AU	direct	7569 Apr 13 22:42	8°♂19'50	
morning rise	7563 Jul 21 12:01	18°☾50'14		evening set	7569 Jul 13 08:32	11°♂22'42	
asc. node	7563 Oct 21 08:16	21°☾57'41					
retrograde	7563 Oct 23 19:37	21°☾57'50		conjunction	7569 Jul 29 15:07	12°♂18'49	0°20'29
opposition	7564 Jan 09 06:30	19°☾58'29	0°00'52	minimum elong	7569 Jul 29 15:07	12°♂18'49	0°20'24
min. Earth dist.	7564 Jan 08 18:25	19°☾59'43	18.94867 AU	max. Earth dist.	7569 Jul 29 21:57	12°♂19'48	20.69527 AU
direct	7564 Mar 24 13:45	18°☾01'31		morning rise	7569 Aug 15 00:35	13°♂15'23	
evening set	7564 Jun 22 13:04	21°☾01'35			7569 Sep 18 00:20	15°♂	
				retrograde	7569 Nov 17 12:47	16°♂25'53	

	7570 Jan 19 04:20	15° κ 8 Ω	direct	7576 May 12 18:59	7° η 43'17	
opposition	7570 Feb 02 08:54	14° Ω 25'20 0°24'34	evening set	7576 Aug 12 06:28	10° η 52'46	
min. Earth dist.	7570 Feb 02 02:56	14° Ω 25'56 18.66778 AU				
direct	7570 Apr 18 07:59	12° Ω 26'50	conjunction	7576 Aug 28 18:21	11° η 50'50 0°41'15	
	7570 Jul 08 15:54	15° Ω	minimum elong	7576 Aug 28 18:20	11° η 50'50 0°41'12	
evening set	7570 Jul 17 19:23	15° Ω 30'29	max. Earth dist.	7576 Aug 28 15:21	11° η 50'24 20.27247 AU	
			morning rise	7576 Sep 14 08:18	12° η 49'14	
conjunction	7570 Aug 03 02:39	16° Ω 26'51 0°23'51	retrograde	7576 Dec 17 16:59	16° η 04'30	
minimum elong	7570 Aug 03 02:39	16° Ω 26'51 0°23'47	opposition	7577 Mar 03 14:15	14° η 02'52 0°47'03	
max. Earth dist.	7570 Aug 03 07:38	16° Ω 27'34 20.63996 AU	min. Earth dist.	7577 Mar 03 17:40	14° η 02'30 18.23879 AU	
morning rise	7570 Aug 19 12:56	17° Ω 23'40	direct	7577 May 17 06:22	12° η 02'19	
retrograde	7570 Nov 22 00:23	20° Ω 34'47	evening set	7577 Aug 16 23:46	15° η 12'53	
opposition	7571 Feb 06 18:29	18° Ω 34'02 0°28'15				
min. Earth dist.	7571 Feb 06 14:28	18° Ω 34'27 18.61159 AU	conjunction	7577 Sep 02 12:21	16° η 11'15 0°43'30	
direct	7571 Apr 22 15:09	16° Ω 35'17	minimum elong	7577 Sep 02 12:20	16° η 11'15 0°43'29	
evening set	7571 Jul 22 06:43	19° Ω 39'45	max. Earth dist.	7577 Sep 02 07:38	16° η 10'33 20.20483 AU	
			morning rise	7577 Sep 19 02:47	17° η 09'55	
conjunction	7571 Aug 07 14:54	20° Ω 36'24 0°27'07	retrograde	7577 Dec 22 11:14	20° η 25'51	
minimum elong	7571 Aug 07 14:54	20° Ω 36'24 0°27'02	opposition	7578 Mar 08 03:25	18° η 24'00 0°49'26	
max. Earth dist.	7571 Aug 07 19:29	20° Ω 37'04 20.58297 AU	min. Earth dist.	7578 Mar 08 07:26	18° η 23'35 18.17041 AU	
morning rise	7571 Aug 24 01:49	21° Ω 33'27	direct	7578 May 21 20:29	16° η 23'03	
retrograde	7571 Nov 26 14:11	24° Ω 45'14	evening set	7578 Aug 21 17:56	19° η 34'44	
opposition	7572 Feb 11 04:22	22° Ω 44'20 0°31'48				
min. Earth dist.	7572 Feb 11 00:17	22° Ω 44'46 18.55374 AU	conjunction	7578 Sep 07 07:08	20° η 33'24 0°45'31	
direct	7572 Apr 26 00:58	20° Ω 45'19	minimum elong	7578 Sep 07 07:07	20° η 33'24 0°45'29	
evening set	7572 Jul 25 19:11	23° Ω 50'42	max. Earth dist.	7578 Sep 07 00:55	20° η 32'29 20.13584 AU	
			morning rise	7578 Sep 23 21:56	21° η 32'20	
conjunction	7572 Aug 11 04:05	24° Ω 47'37 0°30'16	retrograde	7578 Dec 27 04:03	24° η 48'55	
minimum elong	7572 Aug 11 04:05	24° Ω 47'37 0°30'12	opposition	7579 Mar 12 17:26	22° η 46'52 0°51'33	
max. Earth dist.	7572 Aug 11 06:55	24° Ω 48'01 20.52432 AU	min. Earth dist.	7579 Mar 12 23:33	22° η 46'13 18.10114 AU	
morning rise	7572 Aug 27 15:45	25° Ω 44'56	direct	7579 May 26 09:33	20° η 45'30	
retrograde	7572 Nov 30 03:08	28° Ω 57'23	evening set	7579 Aug 26 12:46	23° η 58'18	
opposition	7573 Feb 14 14:50	26° Ω 56'21 0°35'13				
min. Earth dist.	7573 Feb 14 12:51	26° Ω 56'33 18.49438 AU	conjunction	7579 Sep 12 02:32	24° η 57'15 0°47'17	
direct	7573 Apr 30 09:35	24° Ω 57'04	minimum elong	7579 Sep 12 02:32	24° η 57'15 0°47'16	
evening set	7573 Jul 30 08:29	28° Ω 03'24	max. Earth dist.	7579 Sep 11 18:41	24° η 56'04 20.06653 AU	
			morning rise	7579 Sep 28 17:48	25° η 56'27	
conjunction	7573 Aug 15 18:16	29° Ω 00'36 0°33'16	retrograde	7579 Dec 31 23:07	29° η 13'42	
minimum elong	7573 Aug 15 18:16	29° Ω 00'36 0°33'12	opposition	7580 Mar 16 07:54	27° η 11'24 0°53'23	
max. Earth dist.	7573 Aug 15 20:18	29° Ω 00'54 20.46422 AU	min. Earth dist.	7580 Mar 16 14:29	27° η 10'42 18.03191 AU	
morning rise	7573 Sep 01 06:33	29° Ω 58'11	direct	7580 May 30 00:59	25° η 09'37	
	7573 Sep 01 19:17	0° η	evening set	7580 Aug 30 08:38	28° η 23'33	
retrograde	7573 Dec 04 18:19	3° η 11'20				
opposition	7574 Feb 19 01:41	1° η 10'10 0°38'28	conjunction	7580 Sep 15 23:00	29° η 22'48 0°48'46	
min. Earth dist.	7574 Feb 18 23:58	1° η 10'21 18.43338 AU	minimum elong	7580 Sep 15 23:00	29° η 22'48 0°48'46	
	7574 Mar 20 22:02	30° κ 8 Ω	max. Earth dist.	7580 Sep 15 14:14	29° η 21'29 19.99744 AU	
direct	7574 May 04 20:30	29° Ω 10'37		7580 Sep 26 07:40	0° Ω	
	7574 Jun 17 15:53	0° η	morning rise	7580 Oct 02 14:29	0° Ω 22'15	
evening set	7574 Aug 03 22:53	2° η 17'59	retrograde	7581 Jan 04 17:19	3° Ω 40'08	
			opposition	7581 Mar 20 22:57	1° Ω 37'38 0°54'54	
conjunction	7574 Aug 20 09:18	3° η 15'28 0°36'06	min. Earth dist.	7581 Mar 21 07:20	1° Ω 36'44 17.96332 AU	
minimum elong	7574 Aug 20 09:18	3° η 15'28 0°36'04		7581 May 03 21:59	30° κ η	
max. Earth dist.	7574 Aug 20 09:29	3° η 15'30 20.40222 AU	direct	7581 Jun 03 15:45	29° η 35'26	
morning rise	7574 Sep 05 22:11	4° η 13'19		7581 Jul 04 02:05	0° Ω	
retrograde	7574 Dec 09 08:34	7° η 27'11	evening set	7581 Sep 04 05:24	2° Ω 50'31	
opposition	7575 Feb 23 13:17	5° η 25'53 0°41'33				
min. Earth dist.	7575 Feb 23 13:53	5° η 25'49 18.37048 AU	conjunction	7581 Sep 20 20:11	3° Ω 50'03 0°49'59	
direct	7575 May 09 06:24	3° η 26'02	minimum elong	7581 Sep 20 20:11	3° Ω 50'03 0°49'59	
evening set	7575 Aug 08 14:11	6° η 34'27	max. Earth dist.	7581 Sep 20 09:36	3° Ω 48'27 19.92955 AU	
			morning rise	7581 Oct 07 12:03	4° Ω 49'46	
conjunction	7575 Aug 25 01:23	7° η 32'14 0°38'46	retrograde	7582 Jan 09 13:13	8° Ω 08'17	
minimum elong	7575 Aug 25 01:23	7° η 32'14 0°38'44	opposition	7582 Mar 25 14:37	6° Ω 05'34 0°56'06	
max. Earth dist.	7575 Aug 25 00:16	7° η 32'04 20.33841 AU	min. Earth dist.	7582 Mar 25 23:25	6° Ω 04'37 17.89627 AU	
morning rise	7575 Sep 10 14:48	8° η 30'21	direct	7582 Jun 08 08:26	4° Ω 02'57	
retrograde	7575 Dec 14 01:31	11° η 44'55	evening set	7582 Sep 09 02:51	7° Ω 19'12	
opposition	7576 Feb 28 01:22	9° η 43'28 0°44'24				
min. Earth dist.	7576 Feb 28 02:26	9° η 43'21 18.30566 AU	conjunction	7582 Sep 25 18:07	8° Ω 19'01 0°50'53	

minimum elong	7582 Sep 25 18:07	8° <u>♄</u> 19'01	0°50'55	opposition	7589 Apr 25 23:31	8° <u>♄</u> 11'19	0°54'32
max. Earth dist.	7582 Sep 25 07:12	8° <u>♄</u> 17'22	19.86334 AU	min. Earth dist.	7589 Apr 26 13:35	8° <u>♄</u> 09'46	17.51075 AU
morning rise	7582 Oct 12 09:59	9° <u>♄</u> 18'59		direct	7589 Jul 10 00:58	6° <u>♄</u> 06'44	
retrograde	7583 Jan 14 08:52	12° <u>♄</u> 38'07		evening set	7589 Oct 12 08:44	9° <u>♄</u> 30'51	
opposition	7583 Mar 30 07:01	10° <u>♄</u> 35'15	0°56'58	max. Earth dist.	7589 Oct 28 06:57	10° <u>♄</u> 29'31	19.48925 AU
min. Earth dist.	7583 Mar 30 17:05	10° <u>♄</u> 34'09	17.83128 AU				
direct	7583 Jun 13 00:56	8° <u>♄</u> 32'16		conjunction	7589 Oct 29 01:02	10° <u>♄</u> 32'19	0°48'13
evening set	7583 Sep 14 01:15	11° <u>♄</u> 49'40		minimum elong	7589 Oct 29 01:02	10° <u>♄</u> 32'19	0°48'17
				morning rise	7589 Nov 14 16:21	11° <u>♄</u> 33'39	
conjunction	7583 Sep 30 16:47	12° <u>♄</u> 49'45	0°51'29	retrograde	7590 Feb 15 19:10	14° <u>♄</u> 56'23	
minimum elong	7583 Sep 30 16:47	12° <u>♄</u> 49'45	0°51'30	opposition	7590 Apr 30 20:49	12° <u>♄</u> 53'15	0°52'50
max. Earth dist.	7583 Sep 30 04:01	12° <u>♄</u> 47'49	19.79976 AU	min. Earth dist.	7590 May 01 12:05	12° <u>♄</u> 51'35	17.46914 AU
morning rise	7583 Oct 17 08:55	13° <u>♄</u> 49'58		direct	7590 Jul 15 00:02	10° <u>♄</u> 48'25	
retrograde	7584 Jan 19 05:33	17° <u>♄</u> 09'42		evening set	7590 Oct 17 12:08	14° <u>♄</u> 13'28	
opposition	7584 Apr 02 23:58	15° <u>♄</u> 06'41	0°57'28		7590 Oct 30 03:15	15° <u>♄</u>	
min. Earth dist.	7584 Apr 03 10:26	15° <u>♄</u> 05'33	17.76927 AU	max. Earth dist.	7590 Nov 02 10:38	15° <u>♄</u> 12'19	19.44927 AU
direct	7584 Jun 16 18:45	13° <u>♄</u> 03'21					
evening set	7584 Sep 18 00:24	16° <u>♄</u> 21'56		conjunction	7590 Nov 03 04:27	15° <u>♄</u> 15'05	0°46'31
				minimum elong	7590 Nov 03 04:27	15° <u>♄</u> 15'05	0°46'35
conjunction	7584 Oct 04 16:24	17° <u>♄</u> 22'18	0°51'45	morning rise	7590 Nov 19 19:16	16° <u>♄</u> 16'32	
minimum elong	7584 Oct 04 16:24	17° <u>♄</u> 22'18	0°51'48	retrograde	7591 Feb 20 19:58	19° <u>♄</u> 39'35	
max. Earth dist.	7584 Oct 04 03:42	17° <u>♄</u> 20'22	19.73923 AU	opposition	7591 May 05 18:35	17° <u>♄</u> 36'26	0°50'46
morning rise	7584 Oct 21 08:27	18° <u>♄</u> 22'44		min. Earth dist.	7591 May 06 09:46	17° <u>♄</u> 34'46	17.43085 AU
retrograde	7585 Jan 23 02:56	21° <u>♄</u> 43'02		direct	7591 Jul 20 00:37	15° <u>♄</u> 31'22	
opposition	7585 Apr 07 17:43	19° <u>♄</u> 39'57	0°57'37	evening set	7591 Oct 22 16:16	18° <u>♄</u> 57'16	
min. Earth dist.	7585 Apr 08 05:05	19° <u>♄</u> 38'43	17.71042 AU				
direct	7585 Jun 21 13:00	17° <u>♄</u> 36'19		conjunction	7591 Nov 08 08:16	19° <u>♄</u> 59'00	0°44'29
evening set	7585 Sep 23 00:35	20° <u>♄</u> 56'04		minimum elong	7591 Nov 08 08:16	19° <u>♄</u> 59'00	0°44'34
				max. Earth dist.	7591 Nov 07 12:58	19° <u>♄</u> 56'00	19.41282 AU
conjunction	7585 Oct 09 16:39	21° <u>♄</u> 56'41	0°51'43	morning rise	7591 Nov 24 22:43	21° <u>♄</u> 00'33	
minimum elong	7585 Oct 09 16:39	21° <u>♄</u> 56'41	0°51'45	retrograde	7592 Feb 25 19:21	24° <u>♄</u> 23'49	
max. Earth dist.	7585 Oct 09 02:00	21° <u>♄</u> 54'27	19.68221 AU	opposition	7592 May 09 16:52	22° <u>♄</u> 20'39	0°48'21
morning rise	7585 Oct 26 08:49	22° <u>♄</u> 57'20		min. Earth dist.	7592 May 10 09:21	22° <u>♄</u> 18'51	17.39644 AU
retrograde	7586 Jan 28 00:13	26° <u>♄</u> 18'13		direct	7592 Jul 24 00:07	20° <u>♄</u> 15'21	
opposition	7586 Apr 12 12:04	24° <u>♄</u> 15'04	0°57'24	evening set	7592 Oct 26 20:40	23° <u>♄</u> 42'00	
min. Earth dist.	7586 Apr 13 00:03	24° <u>♄</u> 13'46	17.65528 AU				
direct	7586 Jun 26 08:32	22° <u>♄</u> 11'10		conjunction	7592 Nov 12 12:29	24° <u>♄</u> 43'51	0°42'09
evening set	7586 Sep 28 01:23	25° <u>♄</u> 32'05		minimum elong	7592 Nov 12 12:29	24° <u>♄</u> 43'51	0°42'15
				max. Earth dist.	7592 Nov 11 17:20	24° <u>♄</u> 40'52	19.38050 AU
conjunction	7586 Oct 14 17:48	26° <u>♄</u> 32'56	0°51'20	morning rise	7592 Nov 29 02:24	25° <u>♄</u> 45'28	
minimum elong	7586 Oct 14 17:48	26° <u>♄</u> 32'56	0°51'23	retrograde	7593 Mar 01 21:20	29° <u>♄</u> 08'53	
max. Earth dist.	7586 Oct 14 03:30	26° <u>♄</u> 30'45	19.62883 AU	opposition	7593 May 14 15:36	27° <u>♄</u> 05'43	0°45'36
morning rise	7586 Oct 31 09:41	27° <u>♄</u> 33'47		min. Earth dist.	7593 May 15 07:33	27° <u>♄</u> 03'58	17.36620 AU
	7586 Dec 18 02:04	0° <u>♄</u>		direct	7593 Jul 29 02:13	25° <u>♄</u> 00'10	
retrograde	7587 Feb 01 22:45	0° <u>♄</u> 55'12		evening set	7593 Nov 01 01:20	28° <u>♄</u> 27'30	
	7587 Mar 20 17:21	30° <u>♄</u>					
opposition	7587 Apr 17 07:13	28° <u>♄</u> 52'03	0°56'49	conjunction	7593 Nov 17 16:42	29° <u>♄</u> 29'25	0°39'32
min. Earth dist.	7587 Apr 17 19:49	28° <u>♄</u> 50'41	17.60369 AU	minimum elong	7593 Nov 17 16:42	29° <u>♄</u> 29'25	0°39'37
direct	7587 Jul 01 04:40	26° <u>♄</u> 47'56		max. Earth dist.	7593 Nov 16 20:56	29° <u>♄</u> 26'20	19.35256 AU
	7587 Sep 30 08:16	0° <u>♄</u>			7593 Nov 25 20:30	0° <u>♄</u>	
evening set	7587 Oct 03 03:02	0° <u>♄</u> 09'57		morning rise	7593 Dec 04 05:59	0° <u>♄</u> 31'05	
				retrograde	7594 Mar 06 20:29	3° <u>♄</u> 54'35	
conjunction	7587 Oct 19 19:23	1° <u>♄</u> 11'02	0°50'38	opposition	7594 May 19 14:52	1° <u>♄</u> 51'24	0°42'31
minimum elong	7587 Oct 19 19:23	1° <u>♄</u> 11'02	0°50'42	min. Earth dist.	7594 May 20 07:55	1° <u>♄</u> 49'32	17.34079 AU
max. Earth dist.	7587 Oct 19 03:07	1° <u>♄</u> 08'32	19.57905 AU		7594 Jul 10 20:15	30° <u>♄</u>	
morning rise	7587 Nov 05 11:18	2° <u>♄</u> 12'04		direct	7594 Aug 03 01:59	29° <u>♄</u> 45'39	
retrograde	7588 Feb 06 20:50	5° <u>♄</u> 34'00		evening set	7594 Aug 26 05:30	0° <u>♄</u>	
opposition	7588 Apr 21 03:05	3° <u>♄</u> 30'51	0°55'52		7594 Nov 06 06:03	3° <u>♄</u> 13'32	
min. Earth dist.	7588 Apr 21 16:42	3° <u>♄</u> 29'22	17.55567 AU				
direct	7588 Jul 05 02:17	1° <u>♄</u> 26'29		conjunction	7594 Nov 22 21:00	4° <u>♄</u> 15'30	0°36'37
evening set	7588 Oct 07 05:28	4° <u>♄</u> 49'36		minimum elong	7594 Nov 22 21:00	4° <u>♄</u> 15'30	0°36'43
				max. Earth dist.	7594 Nov 22 01:24	4° <u>♄</u> 12'26	19.32981 AU
conjunction	7588 Oct 23 22:00	5° <u>♄</u> 50'53	0°49'35	morning rise	7594 Dec 09 09:42	5° <u>♄</u> 17'11	
minimum elong	7588 Oct 23 22:00	5° <u>♄</u> 50'53	0°49'38	retrograde	7595 Mar 11 22:36	8° <u>♄</u> 40'43	
max. Earth dist.	7588 Oct 23 05:57	5° <u>♄</u> 48'25	19.53257 AU	opposition	7595 May 24 14:19	6° <u>♄</u> 37'31	0°39'08
morning rise	7588 Nov 09 13:31	6° <u>♄</u> 52'05		min. Earth dist.	7595 May 25 06:21	6° <u>♄</u> 35'45	17.32072 AU
retrograde	7589 Feb 10 20:21	10° <u>♄</u> 14'26		direct	7595 Aug 08 05:16	4° <u>♄</u> 31'34	

evening set	7595 Nov 11 10:46	7°♏59'55		conjunction	7601 Dec 26 22:31	7°♏40'56	0°10'30
max. Earth dist.	7595 Nov 27 06:00	8°♏58'54	19.31256 AU	minimum elong	7601 Dec 26 22:31	7°♏40'56	0°10'36
				behind sun begin	7601 Dec 26 17:20	7°♏40'08	
conjunction	7595 Nov 28 01:15	9°♏01'55	0°33'27	behind sun end	7601 Dec 27 03:42	7°♏41'44	
minimum elong	7595 Nov 28 01:15	9°♏01'55	0°33'33	max. Earth dist.	7601 Dec 26 08:12	7°♏38'41	19.34282 AU
morning rise	7595 Dec 14 13:12	10°♏03'35		morning rise	7602 Jan 12 05:15	8°♏42'00	
retrograde	7596 Mar 15 21:30	13°♏27'04					
opposition	7596 May 28 14:17	11°♏23'53	0°35'28				
min. Earth dist.	7596 May 29 07:07	11°♏22'03	17.30647 AU				
direct	7596 Aug 12 06:00	9°♏17'48					
evening set	7596 Nov 15 15:35	12°♏46'31					
max. Earth dist.	7596 Dec 01 10:12	13°♏45'30	19.30144 AU				
conjunction	7596 Dec 02 05:24	13°♏48'31	0°30'03				
minimum elong	7596 Dec 02 05:24	13°♏48'31	0°30'09				
morning rise	7596 Dec 18 16:41	14°♏50'08					
retrograde	7597 Mar 20 23:00	18°♏13'32					
opposition	7597 Jun 02 14:20	16°♏10'23	0°31'34				
min. Earth dist.	7597 Jun 03 05:46	16°♏08'42	17.29851 AU				
direct	7597 Aug 17 10:20	14°♏04'13					
evening set	7597 Nov 20 20:13	17°♏33'13					
conjunction	7597 Dec 07 09:27	18°♏35'10	0°26'26				
minimum elong	7597 Dec 07 09:27	18°♏35'10	0°26'33				
max. Earth dist.	7597 Dec 06 15:32	18°♏32'21	19.29675 AU				
morning rise	7597 Dec 23 19:47	19°♏36'43					
retrograde	7598 Mar 25 21:48	22°♏59'59					
opposition	7598 Jun 07 14:55	20°♏56'56	0°27'26				
min. Earth dist.	7598 Jun 08 06:39	20°♏55'13	17.29720 AU				
direct	7598 Aug 22 11:48	18°♏50'44					
evening set	7598 Nov 26 00:35	22°♏19'56					
conjunction	7598 Dec 12 13:00	23°♏21'48	0°22'39				
minimum elong	7598 Dec 12 13:00	23°♏21'48	0°22'45				
max. Earth dist.	7598 Dec 11 19:05	23°♏18'59	19.29893 AU				
morning rise	7598 Dec 28 22:39	24°♏23'17					
retrograde	7599 Mar 30 23:10	27°♏46'22					
opposition	7599 Jun 12 15:31	25°♏43'28	0°23'07				
min. Earth dist.	7599 Jun 13 05:42	25°♏41'55	17.30265 AU				
direct	7599 Aug 27 16:31	23°♏37'18					
evening set	7599 Dec 01 04:48	27°♏06'36					
conjunction	7599 Dec 17 16:36	28°♏08'23	0°18'43				
minimum elong	7599 Dec 17 16:36	28°♏08'23	0°18'50				
max. Earth dist.	7599 Dec 17 00:30	28°♏05'52	19.30762 AU				
morning rise	7600 Jan 03 01:13	29°♏09'45					
	7600 Jan 17 02:15	0°♏					
retrograde	7600 Apr 03 22:08	2°♏32'36					
opposition	7600 Jun 16 16:18	0°♏29'54	0°18'39				
min. Earth dist.	7600 Jun 17 06:39	0°♏28'20	17.31442 AU				
	7600 Jun 28 05:26	30°♏					
direct	7600 Aug 31 18:43	28°♏23'50					
	7600 Nov 01 14:51	0°♏					
evening set	7600 Dec 05 08:57	1°♏53'09					
conjunction	7600 Dec 21 19:45	2°♏54'49	0°14'39				
minimum elong	7600 Dec 21 19:45	2°♏54'49	0°14'46				
behind sun begin	7600 Dec 21 17:08	2°♏54'25					
behind sun end	7600 Dec 21 22:22	2°♏55'13					
max. Earth dist.	7600 Dec 21 03:24	2°♏52'15	19.32248 AU				
morning rise	7601 Jan 07 03:37	3°♏56'02					
retrograde	7601 Apr 08 23:01	7°♏18'38					
opposition	7601 Jun 21 17:16	5°♏16'08	0°14'03				
min. Earth dist.	7601 Jun 22 06:21	5°♏14'43	17.33210 AU				
direct	7601 Sep 05 23:02	3°♏10'12					
evening set	7601 Dec 10 12:28	6°♏39'25					