

opposition	600 Jan 05 j 03:35	17°☾07'39 -0°19'01	conjunction	605 Jul 20 j 14:49	29°☾19'52 0°05'35
min. Earth dist.	600 Jan 05 j 11:28	17°☾07'05 29.01444 AU	minimum elong	605 Jul 20 j 14:49	29°☾19'52 0°05'35
direct	600 Mar 24 j 08:16	15°☾42'29	behind sun begin	605 Jul 20 j 08:30	29°☾19'18
evening set	600 Jun 22 j 11:33	17°☾38'11	behind sun end	605 Jul 20 j 21:09	29°☾20'25
			max. Earth dist.	605 Jul 20 j 00:08	29°☾18'31 31.06887 AU
conjunction	600 Jul 08 j 19:45	18°☾14'14 -0°15'42	morning rise	605 Aug 05 j 19:17	29°☾55'37
minimum elong	600 Jul 08 j 19:45	18°☾14'14 0°15'42		605 Aug 07 j 20:02	0°♂
behind sun begin	600 Jul 08 j 19:08	18°☾14'11	retrograde	605 Nov 01 j 11:11	1°♂48'51
behind sun end	600 Jul 08 j 20:22	18°☾14'18	opposition	606 Jan 17 j 17:24	0°♂26'00 0°08'07
max. Earth dist.	600 Jul 08 j 10:33	18°☾13'24 31.02017 AU	min. Earth dist.	606 Jan 18 j 06:21	0°♂25'05 29.07260 AU
morning rise	600 Jul 25 j 01:54	18°☾50'09		606 Feb 02 j 09:13	30°☾☾
retrograde	600 Oct 21 j 04:27	20°☾43'59	direct	606 Apr 07 j 09:51	29°☾00'45
opposition	601 Jan 06 j 13:49	19°☾20'45 -0°14'31		606 Jun 08 j 11:00	0°♂
min. Earth dist.	601 Jan 06 j 22:55	19°☾20'07 29.02602 AU	evening set	606 Jul 06 j 21:24	0°♂56'44
direct	601 Mar 26 j 21:40	17°☾55'37	max. Earth dist.	606 Jul 22 j 11:51	1°♂31'11 31.07609 AU
evening set	601 Jun 25 j 01:20	19°☾51'23			
			conjunction	606 Jul 23 j 03:58	1°♂32'40 0°09'47
conjunction	601 Jul 11 j 09:12	20°☾27'25 -0°11'29	minimum elong	606 Jul 23 j 03:58	1°♂32'40 0°09'47
minimum elong	601 Jul 11 j 09:12	20°☾27'25 0°11'29	behind sun begin	606 Jul 22 j 22:37	1°♂32'11
behind sun begin	601 Jul 11 j 04:31	20°☾27'01	behind sun end	606 Jul 23 j 09:19	1°♂33'08
behind sun end	601 Jul 11 j 13:53	20°☾27'50	morning rise	606 Aug 08 j 08:02	2°♂08'23
max. Earth dist.	601 Jul 10 j 21:56	20°☾26'24 31.03170 AU	retrograde	606 Nov 03 j 21:12	4°♂01'29
morning rise	601 Jul 27 j 15:14	21°☾03'19	opposition	607 Jan 20 j 03:45	2°♂38'40 0°12'37
retrograde	601 Oct 23 j 17:14	22°☾57'02	min. Earth dist.	607 Jan 20 j 17:57	2°♂37'40 29.07982 AU
opposition	602 Jan 09 j 00:05	21°☾33'54 -0°10'00	direct	607 Apr 09 j 20:30	1°♂13'23
min. Earth dist.	602 Jan 09 j 09:22	21°☾33'15 29.03728 AU	evening set	607 Jul 09 j 10:32	3°♂09'23
direct	602 Mar 29 j 10:08	20°☾08'46			
evening set	602 Jun 27 j 15:04	22°☾04'36	conjunction	607 Jul 25 j 16:52	3°♂45'17 0°13'58
			minimum elong	607 Jul 25 j 16:52	3°♂45'17 0°13'58
conjunction	602 Jul 13 j 22:49	22°☾40'38 -0°07'16	behind sun begin	607 Jul 25 j 13:40	3°♂45'00
minimum elong	602 Jul 13 j 22:50	22°☾40'38 0°07'15	behind sun end	607 Jul 25 j 20:03	3°♂45'34
behind sun begin	602 Jul 13 j 16:48	22°☾40'06	max. Earth dist.	607 Jul 25 j 00:59	3°♂43'49 31.08328 AU
behind sun end	602 Jul 14 j 04:52	22°☾41'10	morning rise	607 Aug 10 j 20:24	4°♂20'57
max. Earth dist.	602 Jul 13 j 11:20	22°☾39'35 31.04244 AU	retrograde	607 Nov 06 j 06:56	6°♂13'56
morning rise	602 Jul 30 j 04:20	23°☾16'29	opposition	608 Jan 22 j 14:01	4°♂51'09 0°17'06
retrograde	602 Oct 26 j 03:22	25°☾10'06	min. Earth dist.	608 Jan 23 j 04:32	4°♂50'07 29.08708 AU
opposition	603 Jan 11 j 10:29	23°☾47'04 -0°05'28	direct	608 Apr 11 j 09:05	3°♂25'49
min. Earth dist.	603 Jan 11 j 21:39	23°☾46'16 29.04756 AU	evening set	608 Jul 10 j 23:46	5°♂21'51
direct	603 Mar 31 j 22:00	22°☾21'55			
evening set	603 Jun 30 j 04:51	24°☾17'48	conjunction	608 Jul 27 j 05:35	5°♂57'42 0°18'08
			minimum elong	608 Jul 27 j 05:35	5°♂57'42 0°18'08
conjunction	603 Jul 16 j 12:16	24°☾53'49 -0°03'02	max. Earth dist.	608 Jul 26 j 12:13	5°♂56'05 31.09082 AU
minimum elong	603 Jul 16 j 12:16	24°☾53'49 0°03'02	morning rise	608 Aug 12 j 08:47	6°♂33'20
behind sun begin	603 Jul 16 j 05:42	24°☾53'14	retrograde	608 Nov 07 j 18:20	8°♂26'12
behind sun end	603 Jul 16 j 18:50	24°☾54'23	opposition	609 Jan 24 j 00:09	7°♂03'26 0°21'33
max. Earth dist.	603 Jul 15 j 23:07	24°☾52'36 31.05227 AU	min. Earth dist.	609 Jan 24 j 15:00	7°♂02'24 29.09513 AU
morning rise	603 Aug 01 j 17:32	25°☾29'38	direct	609 Apr 13 j 20:02	5°♂38'04
retrograde	603 Oct 28 j 15:21	27°☾23'07	evening set	609 Jul 13 j 12:45	7°♂34'08
opposition	604 Jan 13 j 20:50	26°☾00'09 -0°00'56			
min. Earth dist.	604 Jan 14 j 07:55	25°☾59'22 29.05683 AU	conjunction	609 Jul 29 j 18:22	8°♂09'57 0°22'17
asc. node	604 Mar 29 j 03:36	24°☾35'17	minimum elong	609 Jul 29 j 18:22	8°♂09'57 0°22'17
direct	604 Apr 02 j 10:32	24°☾34'59	max. Earth dist.	609 Jul 29 j 01:45	8°♂08'25 31.09927 AU
evening set	604 Jul 01 j 18:19	26°☾30'55	morning rise	609 Aug 14 j 20:57	8°♂45'32
max. Earth dist.	604 Jul 17 j 11:39	27°☾05'38 31.06096 AU	retrograde	609 Nov 10 j 04:54	10°♂38'19
			opposition	610 Jan 26 j 10:29	9°♂15'36 0°25'57
conjunction	604 Jul 18 j 01:33	27°☾06'54 0°01'20	min. Earth dist.	610 Jan 27 j 02:06	9°♂14'30 29.10412 AU
minimum elong	604 Jul 18 j 01:32	27°☾06'54 0°01'20	direct	610 Apr 16 j 09:58	7°♂50'13
behind sun begin	604 Jul 17 j 18:56	27°☾06'19	evening set	610 Jul 16 j 01:52	9°♂46'19
behind sun end	604 Jul 18 j 08:07	27°☾07'29			
morning rise	604 Aug 03 j 06:21	27°☾42'41	conjunction	610 Aug 01 j 06:54	10°♂22'06 0°26'23
retrograde	604 Oct 30 j 01:31	29°☾36'04	minimum elong	610 Aug 01 j 06:53	10°♂22'06 0°26'24
opposition	605 Jan 15 j 07:16	28°☾13'09 0°03'36	max. Earth dist.	610 Jul 31 j 12:50	10°♂20'26 31.10891 AU
min. Earth dist.	605 Jan 15 j 20:12	28°☾12'14 29.06512 AU	morning rise	610 Aug 17 j 09:07	10°♂57'38
direct	605 Apr 04 j 20:36	26°☾47'57	retrograde	610 Nov 12 j 16:42	12°♂50'20
evening set	605 Jul 04 j 07:52	28°☾43'55	opposition	611 Jan 28 j 20:42	11°♂27'40 0°30'20

min. Earth dist.	611 Jan 29 j 11:47	11°Ω26'37	29.11443 AU	evening set	617 Jul 31 j 19:47	25°Ω11'28	
direct	611 Apr 18 j 22:21	10°Ω02'18					
evening set	611 Jul 18 j 14:46	11°Ω58'27		conjunction	617 Aug 16 j 21:24	25°Ω46'59	0°53'44
				minimum elong	617 Aug 16 j 21:24	25°Ω46'59	0°53'44
conjunction	611 Aug 03 j 19:30	12°Ω34'12	0°30'28	max. Earth dist.	617 Aug 15 j 23:19	25°Ω44'56	31.18325 AU
minimum elong	611 Aug 03 j 19:30	12°Ω34'12	0°30'27	morning rise	617 Sep 01 j 19:46	26°Ω22'12	
max. Earth dist.	611 Aug 03 j 02:00	12°Ω32'35	31.11976 AU	retrograde	617 Nov 27 j 17:02	28°Ω14'27	
morning rise	611 Aug 19 j 21:04	13°Ω09'41		opposition	618 Feb 12 j 22:02	26°Ω52'16	0°59'19
	611 Nov 03 j 12:53	15°Ω		min. Earth dist.	618 Feb 13 j 17:28	26°Ω50'55	29.18746 AU
retrograde	611 Nov 15 j 02:50	15°Ω02'19		direct	618 May 04 j 07:52	25°Ω27'00	
	611 Nov 26 j 16:54	15°κΩ		evening set	618 Aug 03 j 08:18	27°Ω23'21	
opposition	612 Jan 31 j 07:07	13°Ω39'45	0°34'39				
min. Earth dist.	612 Jan 31 j 23:28	13°Ω38'36	29.12583 AU	conjunction	618 Aug 19 j 09:33	27°Ω58'49	0°57'22
direct	612 Apr 20 j 10:04	12°Ω14'25		minimum elong	618 Aug 19 j 09:32	27°Ω58'49	0°57'22
evening set	612 Jul 20 j 03:34	14°Ω10'36		max. Earth dist.	618 Aug 18 j 12:02	27°Ω56'49	31.19035 AU
				morning rise	618 Sep 04 j 07:07	28°Ω33'59	
conjunction	612 Aug 05 j 07:47	14°Ω46'19	0°34'29		618 Oct 21 j 18:34	0°൬	
minimum elong	612 Aug 05 j 07:47	14°Ω46'19	0°34'29	retrograde	618 Nov 30 j 02:34	0°൬26'10	
max. Earth dist.	612 Aug 04 j 13:19	14°Ω44'36	31.13160 AU		619 Jan 09 j 10:02	30°κΩ	
	612 Aug 11 j 11:18	15°Ω		opposition	619 Feb 15 j 08:44	29°Ω03'59	1°03'09
morning rise	612 Aug 21 j 08:59	15°Ω21'46		min. Earth dist.	619 Feb 16 j 05:11	29°Ω02'34	29.19412 AU
retrograde	612 Nov 16 j 15:02	17°Ω14'19		direct	619 May 06 j 21:12	27°Ω38'43	
opposition	613 Feb 01 j 17:23	15°Ω51'51	0°38'56	evening set	619 Aug 05 j 20:52	29°Ω35'03	
min. Earth dist.	613 Feb 02 j 09:16	15°Ω50'44	29.13782 AU		619 Aug 17 j 04:38	0°൬	
	613 Mar 06 j 23:22	15°κΩ					
direct	613 Apr 22 j 22:56	14°Ω26'33		conjunction	619 Aug 21 j 21:22	0°൬10'28	1°00'54
	613 Jun 07 j 21:17	15°Ω		minimum elong	619 Aug 21 j 21:22	0°൬10'28	1°00'54
evening set	613 Jul 22 j 16:30	16°Ω22'48		max. Earth dist.	619 Aug 20 j 22:23	0°൬08'20	31.19676 AU
				morning rise	619 Sep 06 j 18:32	0°൬45'36	
conjunction	613 Aug 07 j 20:18	16°Ω58'29	0°38'28	retrograde	619 Dec 02 j 13:59	2°൬37'42	
minimum elong	613 Aug 07 j 20:17	16°Ω58'29	0°38'27	opposition	620 Feb 17 j 19:16	1°൬15'31	1°06'53
max. Earth dist.	613 Aug 07 j 01:34	16°Ω56'45	31.14352 AU	min. Earth dist.	620 Feb 18 j 15:14	1°൬14'08	29.20042 AU
morning rise	613 Aug 23 j 20:51	17°Ω33'53			620 Apr 13 j 13:05	30°κΩ	
retrograde	613 Nov 19 j 01:18	19°Ω26'24		direct	620 May 08 j 09:21	29°Ω50'13	
opposition	614 Feb 04 j 03:48	18°Ω04'00	0°43'09		620 Jun 02 j 00:58	0°൬	
min. Earth dist.	614 Feb 04 j 21:16	18°Ω02'47	29.14971 AU	evening set	620 Aug 07 j 09:00	1°൬46'34	
direct	614 Apr 25 j 09:28	16°Ω38'45		max. Earth dist.	620 Aug 22 j 10:44	2°൬19'51	31.20287 AU
evening set	614 Jul 25 j 05:26	18°Ω35'03					
				conjunction	620 Aug 23 j 09:07	2°൬21'56	1°04'21
conjunction	614 Aug 10 j 08:43	19°Ω10'41	0°42'23	minimum elong	620 Aug 23 j 09:07	2°൬21'56	1°04'22
minimum elong	614 Aug 10 j 08:43	19°Ω10'41	0°42'23	morning rise	620 Sep 08 j 05:33	2°൬57'00	
max. Earth dist.	614 Aug 09 j 13:28	19°Ω08'54	31.15509 AU	retrograde	620 Dec 03 j 23:39	4°൬49'02	
morning rise	614 Aug 26 j 08:44	19°Ω46'03		opposition	621 Feb 19 j 05:58	3°൬26'52	1°10'31
retrograde	614 Nov 21 j 10:47	21°Ω38'29		min. Earth dist.	621 Feb 20 j 03:11	3°൬25'24	29.20664 AU
opposition	615 Feb 06 j 14:18	20°Ω16'11	0°47'18	direct	621 May 10 j 21:45	2°൬01'33	
min. Earth dist.	615 Feb 07 j 07:36	20°Ω14'58	29.16083 AU	evening set	621 Aug 09 j 21:17	3°൬57'53	
direct	615 Apr 27 j 22:26	18°Ω50'56					
evening set	615 Jul 27 j 18:13	20°Ω47'16		conjunction	621 Aug 25 j 20:42	4°൬33'12	1°07'42
				minimum elong	621 Aug 25 j 20:41	4°൬33'12	1°07'42
conjunction	615 Aug 12 j 20:55	21°Ω22'52	0°46'14	max. Earth dist.	621 Aug 24 j 21:35	4°൬31'04	31.20927 AU
minimum elong	615 Aug 12 j 20:54	21°Ω22'52	0°46'14	morning rise	621 Sep 10 j 16:38	5°൬08'13	
max. Earth dist.	615 Aug 12 j 00:27	21°Ω20'58	31.16562 AU	retrograde	621 Dec 06 j 11:11	7°൬00'13	
morning rise	615 Aug 28 j 20:22	21°Ω58'11		opposition	622 Feb 21 j 16:29	5°൬38'04	1°14'03
retrograde	615 Nov 23 j 20:45	23°Ω50'34		min. Earth dist.	622 Feb 22 j 12:49	5°൬36'39	29.21336 AU
opposition	616 Feb 09 j 00:57	22°Ω28'19	0°51'23	direct	622 May 13 j 11:14	4°൬12'45	
min. Earth dist.	616 Feb 09 j 19:22	22°Ω27'02	29.17095 AU	evening set	622 Aug 12 j 09:24	6°൬09'06	
direct	616 Apr 29 j 08:30	21°Ω03'05		max. Earth dist.	622 Aug 27 j 09:26	6°൬42'15	31.21631 AU
evening set	616 Jul 29 j 06:56	22°Ω59'25					
				conjunction	622 Aug 28 j 08:16	6°൬44'22	1°10'58
conjunction	616 Aug 14 j 09:14	23°Ω34'59	0°50'01	minimum elong	622 Aug 28 j 08:15	6°൬44'22	1°10'58
minimum elong	616 Aug 14 j 09:14	23°Ω34'59	0°50'01	morning rise	622 Sep 13 j 03:28	7°൬19'20	
max. Earth dist.	616 Aug 13 j 12:52	23°Ω33'05	31.17508 AU	retrograde	622 Dec 08 j 21:07	9°൬11'18	
morning rise	616 Aug 30 j 08:03	24°Ω10'15		opposition	623 Feb 24 j 03:19	7°൬49'11	1°17'28
retrograde	616 Nov 25 j 06:09	26°Ω02'34		min. Earth dist.	623 Feb 25 j 00:31	7°൬47'43	29.22102 AU
opposition	617 Feb 10 j 11:26	24°Ω40'21	0°55'24	direct	623 May 15 j 22:20	6°൬23'54	
min. Earth dist.	617 Feb 11 j 06:26	24°Ω39'02	29.17974 AU	evening set	623 Aug 14 j 21:15	8°൬20'15	
direct	617 May 01 j 20:36	23°Ω15'07					

conjunction	623 Aug 30 j 19:32	8° <u>0</u> 55'29	1°14'07	direct	630 May 31 j 06:50	21° <u>0</u> 43'36	
minimum elong	623 Aug 30 j 19:31	8° <u>0</u> 55'29	1°14'06	evening set	630 Aug 30 j 07:51	23° <u>0</u> 40'04	
max. Earth dist.	623 Aug 29 j 20:58	8° <u>0</u> 53'23	31.22447 AU	max. Earth dist.	630 Sep 14 j 01:26	24° <u>0</u> 12'43	31.27531 AU
morning rise	623 Sep 15 j 14:10	9° <u>0</u> 30'25					
retrograde	623 Dec 11 j 06:17	11° <u>0</u> 22'21		conjunction	630 Sep 15 j 01:50	24° <u>0</u> 15'00	1°32'54
opposition	624 Feb 26 j 14:01	10° <u>0</u> 00'18	1°20'47	minimum elong	630 Sep 15 j 01:49	24° <u>0</u> 15'00	1°32'55
min. Earth dist.	624 Feb 27 j 10:25	9° <u>0</u> 58'54	29.22956 AU	morning rise	630 Sep 30 j 16:17	24° <u>0</u> 49'38	
direct	624 May 17 j 11:08	8° <u>0</u> 35'04		retrograde	630 Dec 26 j 07:33	26° <u>0</u> 41'39	
evening set	624 Aug 16 j 09:13	10° <u>0</u> 31'27		opposition	631 Mar 13 j 19:01	25° <u>0</u> 19'51	1°40'24
max. Earth dist.	624 Aug 31 j 07:44	11° <u>0</u> 04'30	31.23334 AU	min. Earth dist.	631 Mar 14 j 17:03	25° <u>0</u> 18'20	29.27782 AU
				direct	631 Jun 02 j 20:56	23° <u>0</u> 54'53	
				evening set	631 Sep 01 j 19:08	25° <u>0</u> 51'18	
conjunction	624 Sep 01 j 06:51	11° <u>0</u> 06'39	1°17'09				
minimum elong	624 Sep 01 j 06:51	11° <u>0</u> 06'39	1°17'10				
morning rise	624 Sep 17 j 00:55	11° <u>0</u> 41'32		conjunction	631 Sep 17 j 12:35	26° <u>0</u> 26'12	1°35'05
retrograde	624 Dec 12 j 16:14	13° <u>0</u> 33'29		minimum elong	631 Sep 17 j 12:34	26° <u>0</u> 26'12	1°35'04
opposition	625 Feb 28 j 00:40	12° <u>0</u> 11'30	1°23'58	max. Earth dist.	631 Sep 16 j 12:20	26° <u>0</u> 23'56	31.27794 AU
min. Earth dist.	625 Feb 28 j 21:39	12° <u>0</u> 10'03	29.23879 AU	morning rise	631 Oct 03 j 02:24	27° <u>0</u> 00'47	
direct	625 May 19 j 20:42	10° <u>0</u> 46'19		retrograde	631 Dec 28 j 17:26	28° <u>0</u> 52'48	
evening set	625 Aug 18 j 21:06	12° <u>0</u> 42'45		opposition	632 Mar 15 j 06:16	27° <u>0</u> 30'58	1°42'39
				min. Earth dist.	632 Mar 16 j 05:20	27° <u>0</u> 29'23	29.28012 AU
conjunction	625 Sep 03 j 18:14	13° <u>0</u> 17'54	1°20'05	direct	632 Jun 04 j 08:52	26° <u>0</u> 05'59	
minimum elong	625 Sep 03 j 18:14	13° <u>0</u> 17'54	1°20'05	evening set	632 Sep 03 j 06:24	28° <u>0</u> 02'22	
max. Earth dist.	625 Sep 02 j 19:49	13° <u>0</u> 15'49	31.24260 AU				
morning rise	625 Sep 19 j 11:37	13° <u>0</u> 52'45		conjunction	632 Sep 18 j 23:16	28° <u>0</u> 37'12	1°37'07
retrograde	625 Dec 15 j 01:37	15° <u>0</u> 44'43		minimum elong	632 Sep 18 j 23:16	28° <u>0</u> 37'12	1°37'07
opposition	626 Mar 02 j 11:35	14° <u>0</u> 22'49	1°27'02	max. Earth dist.	632 Sep 17 j 23:18	28° <u>0</u> 34'58	31.27991 AU
min. Earth dist.	626 Mar 03 j 08:44	14° <u>0</u> 21'21	29.24789 AU	morning rise	632 Oct 04 j 12:34	29° <u>0</u> 11'45	
direct	626 May 22 j 08:13	12° <u>0</u> 57'42			632 Oct 28 j 02:55	0° <u>0</u> 00'00	
evening set	626 Aug 21 j 09:01	14° <u>0</u> 54'09		retrograde	632 Dec 30 j 02:21	1° <u>0</u> 03'44	
max. Earth dist.	626 Sep 05 j 05:48	15° <u>0</u> 27'04	31.25142 AU		633 Mar 06 j 15:06	30° <u>0</u> 00'00	
				opposition	633 Mar 17 j 17:17	29° <u>0</u> 41'53	1°44'45
conjunction	626 Sep 06 j 05:22	15° <u>0</u> 29'16	1°22'54	min. Earth dist.	633 Mar 18 j 15:37	29° <u>0</u> 40'21	29.28182 AU
minimum elong	626 Sep 06 j 05:22	15° <u>0</u> 29'16	1°22'55	direct	633 Jun 06 j 22:21	28° <u>0</u> 16'53	
morning rise	626 Sep 21 j 22:15	16° <u>0</u> 04'05			633 Aug 30 j 14:28	0° <u>0</u> 00'00	
retrograde	626 Dec 17 j 12:27	17° <u>0</u> 56'04		evening set	633 Sep 05 j 17:37	0° <u>0</u> 13'12	
opposition	627 Mar 04 j 22:32	16° <u>0</u> 34'13	1°29'59	max. Earth dist.	633 Sep 20 j 09:28	0° <u>0</u> 45'44	31.28155 AU
min. Earth dist.	627 Mar 05 j 19:42	16° <u>0</u> 32'46	29.25647 AU				
direct	627 May 24 j 18:52	15° <u>0</u> 09'10		conjunction	633 Sep 21 j 09:50	0° <u>0</u> 48'00	1°39'00
evening set	627 Aug 23 j 20:46	17° <u>0</u> 05'38		minimum elong	633 Sep 21 j 09:50	0° <u>0</u> 48'00	1°39'00
				morning rise	633 Oct 06 j 22:36	1° <u>0</u> 22'31	
conjunction	627 Sep 08 j 16:40	17° <u>0</u> 40'43	1°25'35	retrograde	634 Jan 01 j 12:21	3° <u>0</u> 14'29	
minimum elong	627 Sep 08 j 16:40	17° <u>0</u> 40'43	1°25'35	opposition	634 Mar 20 j 04:34	1° <u>0</u> 52'35	1°46'42
max. Earth dist.	627 Sep 07 j 17:58	17° <u>0</u> 38'36	31.25940 AU	min. Earth dist.	634 Mar 21 j 03:02	1° <u>0</u> 51'03	29.28374 AU
morning rise	627 Sep 24 j 08:46	18° <u>0</u> 15'29		direct	634 Jun 09 j 09:31	0° <u>0</u> 27'34	
retrograde	627 Dec 19 j 22:02	20° <u>0</u> 07'29		evening set	634 Sep 08 j 04:29	2° <u>0</u> 23'50	
opposition	628 Mar 06 j 09:38	18° <u>0</u> 45'41	1°32'47				
min. Earth dist.	628 Mar 07 j 07:41	18° <u>0</u> 44'10	29.26391 AU	conjunction	634 Sep 23 j 20:13	2° <u>0</u> 58'36	1°40'46
direct	628 May 26 j 07:02	17° <u>0</u> 20'41		minimum elong	634 Sep 23 j 20:12	2° <u>0</u> 58'36	1°40'46
evening set	628 Aug 25 j 08:33	19° <u>0</u> 17'09		max. Earth dist.	634 Sep 22 j 21:08	2° <u>0</u> 56'26	31.28367 AU
max. Earth dist.	628 Sep 09 j 03:37	19° <u>0</u> 49'56	31.26617 AU	morning rise	634 Oct 09 j 08:19	3° <u>0</u> 33'04	
				retrograde	635 Jan 03 j 20:52	5° <u>0</u> 25'02	
conjunction	628 Sep 10 j 03:43	19° <u>0</u> 52'11	1°28'09	opposition	635 Mar 22 j 15:55	4° <u>0</u> 03'07	1°48'30
minimum elong	628 Sep 10 j 03:42	19° <u>0</u> 52'11	1°28'10	min. Earth dist.	635 Mar 23 j 13:56	4° <u>0</u> 01'37	29.28620 AU
morning rise	628 Sep 25 j 19:24	20° <u>0</u> 26'55		direct	635 Jun 11 j 22:08	2° <u>0</u> 38'07	
retrograde	628 Dec 21 j 09:33	22° <u>0</u> 18'56		evening set	635 Sep 10 j 15:28	4° <u>0</u> 34'20	
opposition	629 Mar 08 j 20:39	20° <u>0</u> 57'09	1°35'28	max. Earth dist.	635 Sep 25 j 06:52	5° <u>0</u> 06'51	31.28663 AU
min. Earth dist.	629 Mar 09 j 18:10	20° <u>0</u> 55'40	29.27000 AU				
direct	629 May 28 j 18:13	19° <u>0</u> 32'10		conjunction	635 Sep 26 j 06:28	5° <u>0</u> 09'03	1°42'22
evening set	629 Aug 27 j 20:12	21° <u>0</u> 28'39		minimum elong	635 Sep 26 j 06:28	5° <u>0</u> 09'03	1°42'22
				morning rise	635 Oct 11 j 18:12	5° <u>0</u> 43'29	
conjunction	629 Sep 12 j 14:53	22° <u>0</u> 03'38	1°30'36	retrograde	636 Jan 06 j 06:52	7° <u>0</u> 35'29	
minimum elong	629 Sep 12 j 14:53	22° <u>0</u> 03'38	1°30'35	opposition	636 Mar 24 j 03:07	6° <u>0</u> 13'34	1°50'08
max. Earth dist.	629 Sep 11 j 15:16	22° <u>0</u> 01'26	31.27139 AU	min. Earth dist.	636 Mar 25 j 00:23	6° <u>0</u> 12'06	29.28977 AU
morning rise	629 Sep 28 j 05:48	22° <u>0</u> 38'19		direct	636 Jun 13 j 08:29	4° <u>0</u> 48'36	
retrograde	629 Dec 23 j 19:35	24° <u>0</u> 30'21		evening set	636 Sep 12 j 02:09	6° <u>0</u> 44'47	
opposition	630 Mar 11 j 07:50	23° <u>0</u> 08'34	1°38'00				
min. Earth dist.	630 Mar 12 j 06:40	23° <u>0</u> 07'00	29.27456 AU	conjunction	636 Sep 27 j 16:48	7° <u>0</u> 19'28	1°43'50

minimum elong	636 Sep 27 j 16:48	7° <u>♂</u> 19'28	1°43'50	evening set	643 Sep 28 j 04:25	21° <u>♂</u> 59'42	
max. Earth dist.	636 Sep 26 j 18:45	7° <u>♂</u> 17'25	31.29059 AU				
morning rise	636 Oct 13 j 03:52	7° <u>♂</u> 53'52		conjunction	643 Oct 13 j 15:26	22° <u>♂</u> 34'11	1°49'47
retrograde	637 Jan 07 j 15:40	9° <u>♂</u> 45'55		minimum elong	643 Oct 13 j 15:26	22° <u>♂</u> 34'11	1°49'46
opposition	637 Mar 26 j 14:31	8° <u>♂</u> 24'00	1°51'37	max. Earth dist.	643 Oct 12 j 19:00	22° <u>♂</u> 32'16	31.30958 AU
min. Earth dist.	637 Mar 27 j 12:02	8° <u>♂</u> 22'32	29.29403 AU	morning rise	643 Oct 28 j 23:21	23° <u>♂</u> 08'25	
direct	637 Jun 15 j 19:46	6° <u>♂</u> 59'06		retrograde	644 Jan 23 j 17:22	25° <u>♂</u> 00'53	
evening set	637 Sep 14 j 13:00	8° <u>♂</u> 55'16		opposition	644 Apr 11 j 00:05	23° <u>♂</u> 39'01	1°57'24
max. Earth dist.	637 Sep 29 j 04:17	9° <u>♂</u> 27'48	31.29516 AU	min. Earth dist.	644 Apr 11 j 20:06	23° <u>♂</u> 37'39	29.31015 AU
				direct	644 Jul 01 j 08:09	22° <u>♂</u> 14'28	
conjunction	637 Sep 30 j 02:54	9° <u>♂</u> 29'55	1°45'08	evening set	644 Sep 29 j 14:46	24° <u>♂</u> 10'25	
minimum elong	637 Sep 30 j 02:54	9° <u>♂</u> 29'55	1°45'08	max. Earth dist.	644 Oct 14 j 04:04	24° <u>♂</u> 42'53	31.30797 AU
morning rise	637 Oct 15 j 13:38	10° <u>♂</u> 04'18					
retrograde	638 Jan 10 j 03:03	11° <u>♂</u> 56'24		conjunction	644 Oct 15 j 01:12	24° <u>♂</u> 44'52	1°50'01
opposition	638 Mar 29 j 01:51	10° <u>♂</u> 34'31	1°52'56	minimum elong	644 Oct 15 j 01:12	24° <u>♂</u> 44'52	1°50'02
min. Earth dist.	638 Mar 29 j 22:09	10° <u>♂</u> 33'07	29.29873 AU	morning rise	644 Oct 30 j 08:56	25° <u>♂</u> 19'05	
direct	638 Jun 18 j 06:10	9° <u>♂</u> 09'40		retrograde	645 Jan 25 j 03:20	27° <u>♂</u> 11'36	
evening set	638 Sep 16 j 23:39	11° <u>♂</u> 05'50		opposition	645 Apr 13 j 11:52	25° <u>♂</u> 49'40	1°57'34
				min. Earth dist.	645 Apr 14 j 07:13	25° <u>♂</u> 48'22	29.30822 AU
conjunction	638 Oct 02 j 13:09	11° <u>♂</u> 40'27	1°46'18	direct	645 Jul 03 j 18:58	24° <u>♂</u> 25'08	
minimum elong	638 Oct 02 j 13:09	11° <u>♂</u> 40'27	1°46'18	evening set	645 Oct 02 j 00:48	26° <u>♂</u> 21'00	
max. Earth dist.	638 Oct 01 j 15:37	11° <u>♂</u> 38'26	31.29979 AU				
morning rise	638 Oct 17 j 23:15	12° <u>♂</u> 14'48		conjunction	645 Oct 17 j 10:57	26° <u>♂</u> 55'26	1°50'05
retrograde	639 Jan 12 j 13:17	14° <u>♂</u> 06'59		minimum elong	645 Oct 17 j 10:57	26° <u>♂</u> 55'26	1°50'05
opposition	639 Mar 31 j 13:30	12° <u>♂</u> 45'07	1°54'05	max. Earth dist.	645 Oct 16 j 15:27	26° <u>♂</u> 53'36	31.30577 AU
min. Earth dist.	639 Apr 01 j 10:36	12° <u>♂</u> 43'41	29.30328 AU	morning rise	645 Nov 01 j 18:10	27° <u>♂</u> 29'37	
direct	639 Jun 20 j 17:56	11° <u>♂</u> 20'21		retrograde	646 Jan 27 j 11:43	29° <u>♂</u> 22'11	
evening set	639 Sep 19 j 10:15	13° <u>♂</u> 16'30		opposition	646 Apr 15 j 23:50	28° <u>♂</u> 00'13	1°57'35
				min. Earth dist.	646 Apr 16 j 19:17	27° <u>♂</u> 58'53	29.30596 AU
conjunction	639 Oct 04 j 23:08	13° <u>♂</u> 51'05	1°47'18	direct	646 Jul 06 j 06:23	26° <u>♂</u> 35'41	
minimum elong	639 Oct 04 j 23:08	13° <u>♂</u> 51'05	1°47'17	evening set	646 Oct 04 j 10:52	28° <u>♂</u> 31'28	
max. Earth dist.	639 Oct 04 j 01:25	13° <u>♂</u> 49'03	31.30409 AU				
morning rise	639 Oct 20 j 08:52	14° <u>♂</u> 25'24		conjunction	646 Oct 19 j 20:27	29° <u>♂</u> 05'52	1°50'01
retrograde	640 Jan 15 j 01:16	16° <u>♂</u> 17'39		minimum elong	646 Oct 19 j 20:27	29° <u>♂</u> 05'52	1°50'01
opposition	640 Apr 02 j 01:02	14° <u>♂</u> 55'49	1°55'05	max. Earth dist.	646 Oct 19 j 00:45	29° <u>♂</u> 04'01	31.30375 AU
min. Earth dist.	640 Apr 02 j 21:02	14° <u>♂</u> 54'27	29.30713 AU	morning rise	646 Nov 04 j 03:29	29° <u>♂</u> 40'03	
direct	640 Jun 22 j 06:57	13° <u>♂</u> 31'07			646 Nov 13 j 10:03	0° <u>♂</u>	
evening set	640 Sep 20 j 20:54	15° <u>♂</u> 27'15		retrograde	647 Jan 29 j 22:46	1° <u>♂</u> 32'40	
max. Earth dist.	640 Oct 05 j 11:49	15° <u>♂</u> 59'48	31.30734 AU	opposition	647 Apr 18 j 11:40	0° <u>♂</u> 10'38	1°57'25
				min. Earth dist.	647 Apr 19 j 05:24	0° <u>♂</u> 09'26	29.30427 AU
conjunction	640 Oct 06 j 09:18	16° <u>♂</u> 01'49	1°48'09		647 Apr 25 j 00:34	30° <u>♂</u>	
minimum elong	640 Oct 06 j 09:18	16° <u>♂</u> 01'49	1°48'09	direct	647 Jul 08 j 16:35	28° <u>♂</u> 46'07	
morning rise	640 Oct 21 j 18:32	16° <u>♂</u> 36'07			647 Sep 16 j 17:22	0° <u>♂</u>	
retrograde	641 Jan 16 j 11:52	18° <u>♂</u> 28'26		evening set	647 Oct 06 j 20:36	0° <u>♂</u> 41'51	
opposition	641 Apr 04 j 12:41	17° <u>♂</u> 06'36	1°55'55	max. Earth dist.	647 Oct 21 j 11:41	1° <u>♂</u> 14'30	31.30239 AU
min. Earth dist.	641 Apr 05 j 09:32	17° <u>♂</u> 05'11	29.30990 AU				
direct	641 Jun 24 j 18:12	15° <u>♂</u> 41'57		conjunction	647 Oct 22 j 05:55	1° <u>♂</u> 16'13	1°49'47
evening set	641 Sep 23 j 07:33	17° <u>♂</u> 38'05		minimum elong	647 Oct 22 j 05:55	1° <u>♂</u> 16'13	1°49'46
				morning rise	647 Nov 06 j 12:32	1° <u>♂</u> 50'23	
conjunction	641 Oct 08 j 19:28	18° <u>♂</u> 12'36	1°48'51	retrograde	648 Feb 01 j 08:42	3° <u>♂</u> 43'05	
minimum elong	641 Oct 08 j 19:28	18° <u>♂</u> 12'36	1°48'50	opposition	648 Apr 19 j 23:42	2° <u>♂</u> 21'00	1°57'05
max. Earth dist.	641 Oct 07 j 22:26	18° <u>♂</u> 10'38	31.30948 AU	min. Earth dist.	648 Apr 20 j 17:39	2° <u>♂</u> 19'47	29.30341 AU
morning rise	641 Oct 24 j 04:14	18° <u>♂</u> 46'52		direct	648 Jul 10 j 04:16	0° <u>♂</u> 56'32	
retrograde	642 Jan 18 j 21:40	20° <u>♂</u> 39'15		evening set	648 Oct 08 j 06:29	2° <u>♂</u> 52'12	
opposition	642 Apr 07 j 00:28	19° <u>♂</u> 17'25	1°56'34				
min. Earth dist.	642 Apr 07 j 20:29	19° <u>♂</u> 16'04	29.31126 AU	conjunction	648 Oct 23 j 15:22	3° <u>♂</u> 26'33	1°49'23
direct	642 Jun 27 j 07:41	17° <u>♂</u> 52'50		minimum elong	648 Oct 23 j 15:22	3° <u>♂</u> 26'33	1°49'23
evening set	642 Sep 25 j 18:03	19° <u>♂</u> 48'54		max. Earth dist.	648 Oct 22 j 21:37	3° <u>♂</u> 24'52	31.30211 AU
max. Earth dist.	642 Oct 10 j 07:50	20° <u>♂</u> 21'23	31.31013 AU	morning rise	648 Nov 07 j 21:46	4° <u>♂</u> 00'42	
				retrograde	649 Feb 02 j 20:31	5° <u>♂</u> 53'28	
conjunction	642 Oct 11 j 05:23	20° <u>♂</u> 23'24	1°49'24	opposition	649 Apr 22 j 11:30	4° <u>♂</u> 31'23	1°56'35
minimum elong	642 Oct 11 j 05:23	20° <u>♂</u> 23'24	1°49'24	min. Earth dist.	649 Apr 23 j 03:40	4° <u>♂</u> 30'17	29.30348 AU
morning rise	642 Oct 26 j 13:48	20° <u>♂</u> 57'39		direct	649 Jul 12 j 16:17	3° <u>♂</u> 06'58	
retrograde	643 Jan 21 j 08:29	22° <u>♂</u> 50'05		evening set	649 Oct 10 j 16:19	5° <u>♂</u> 02'36	
opposition	643 Apr 09 j 12:21	21° <u>♂</u> 28'15	1°57'04	max. Earth dist.	649 Oct 25 j 07:52	5° <u>♂</u> 35'20	31.30260 AU
min. Earth dist.	643 Apr 10 j 08:32	21° <u>♂</u> 26'52	29.31136 AU				
direct	643 Jun 29 j 19:10	20° <u>♂</u> 03'41		conjunction	649 Oct 26 j 00:50	5° <u>♂</u> 36'55	1°48'50

minimum elong	649 Oct 26 j 00:50	5°M.36'55	1°48'50	min. Earth dist.	656 May 08 j 14:08	19°M.45'44	29.29751 AU
morning rise	649 Nov 10 j 06:57	6°M.11'04		direct	656 Jul 28 j 02:32	18°M.22'35	
retrograde	650 Feb 05 j 07:30	8°M.03'56		evening set	656 Oct 25 j 12:17	20°M.17'45	
opposition	650 Apr 24 j 23:41	6°M.41'51	1°55'54				
min. Earth dist.	650 Apr 25 j 16:00	6°M.40'45	29.30433 AU	conjunction	656 Nov 09 j 18:53	20°M.52'00	1°40'40
direct	650 Jul 15 j 02:36	5°M.17'31		minimum elong	656 Nov 09 j 18:53	20°M.52'00	1°40'40
evening set	650 Oct 13 j 01:57	7°M.13'05		max. Earth dist.	656 Nov 09 j 05:57	20°M.50'47	31.29380 AU
				morning rise	656 Nov 24 j 23:44	21°M.26'09	
conjunction	650 Oct 28 j 10:11	7°M.47'24	1°48'08	retrograde	657 Feb 20 j 08:47	23°M.19'39	
minimum elong	650 Oct 28 j 10:11	7°M.47'24	1°48'08	opposition	657 May 10 j 14:17	21°M.57'23	1°46'38
max. Earth dist.	650 Oct 27 j 18:29	7°M.45'56	31.30369 AU	min. Earth dist.	657 May 11 j 03:13	21°M.56'30	29.29190 AU
morning rise	650 Nov 12 j 16:01	8°M.21'32		direct	657 Jul 30 j 13:58	20°M.33'24	
retrograde	651 Feb 07 j 18:01	10°M.14'31		evening set	657 Oct 27 j 21:51	22°M.28'28	
opposition	651 Apr 27 j 11:50	8°M.52'25	1°55'04				
min. Earth dist.	651 Apr 28 j 02:48	8°M.51'25	29.30532 AU	conjunction	657 Nov 12 j 04:12	23°M.02'43	1°38'55
direct	651 Jul 17 j 16:06	7°M.28'11		minimum elong	657 Nov 12 j 04:13	23°M.02'43	1°38'54
evening set	651 Oct 15 j 11:46	9°M.23'42		max. Earth dist.	657 Nov 11 j 15:48	23°M.01'33	31.28788 AU
				morning rise	657 Nov 27 j 09:02	23°M.36'51	
conjunction	651 Oct 30 j 19:34	9°M.58'00	1°47'16	retrograde	658 Feb 22 j 20:22	25°M.30'26	
minimum elong	651 Oct 30 j 19:35	9°M.58'00	1°47'16	opposition	658 May 13 j 02:48	24°M.08'05	1°44'41
max. Earth dist.	651 Oct 30 j 03:44	9°M.56'31	31.30461 AU	min. Earth dist.	658 May 13 j 14:01	24°M.07'19	29.28557 AU
morning rise	651 Nov 15 j 01:18	10°M.32'08		direct	658 Aug 02 j 01:50	22°M.44'07	
retrograde	652 Feb 10 j 06:07	12°M.25'12		evening set	658 Oct 30 j 07:10	24°M.39'05	
opposition	652 Apr 28 j 23:57	11°M.03'07	1°54'04				
min. Earth dist.	652 Apr 29 j 14:44	11°M.02'07	29.30610 AU	conjunction	658 Nov 14 j 13:20	25°M.13'19	1°37'01
direct	652 Jul 19 j 03:36	9°M.38'57		minimum elong	658 Nov 14 j 13:20	25°M.13'19	1°37'01
evening set	652 Oct 16 j 21:28	11°M.34'26		max. Earth dist.	658 Nov 14 j 01:37	25°M.12'13	31.28143 AU
				morning rise	658 Nov 29 j 18:07	25°M.47'27	
conjunction	652 Nov 01 j 05:08	12°M.08'43	1°46'15	retrograde	659 Feb 25 j 07:30	27°M.41'08	
minimum elong	652 Nov 01 j 05:08	12°M.08'43	1°46'15	opposition	659 May 15 j 15:27	26°M.18'41	1°42'35
max. Earth dist.	652 Oct 31 j 14:44	12°M.07'22	31.30501 AU	min. Earth dist.	659 May 16 j 02:43	26°M.17'56	29.27923 AU
morning rise	652 Nov 16 j 10:31	12°M.42'51		direct	659 Aug 04 j 12:10	24°M.54'44	
retrograde	653 Feb 11 j 15:34	14°M.36'01		evening set	659 Nov 01 j 16:30	26°M.49'37	
opposition	653 May 01 j 12:19	13°M.13'55	1°52'54				
min. Earth dist.	653 May 02 j 02:43	13°M.12'57	29.30591 AU	conjunction	659 Nov 16 j 22:34	27°M.23'51	1°34'59
direct	653 Jul 21 j 16:34	11°M.49'49		minimum elong	659 Nov 16 j 22:35	27°M.23'51	1°34'58
evening set	653 Oct 19 j 07:18	13°M.45'14		max. Earth dist.	659 Nov 16 j 12:24	27°M.22'53	31.27534 AU
				morning rise	659 Dec 02 j 03:15	27°M.58'00	
conjunction	653 Nov 03 j 14:28	14°M.19'31	1°45'04	retrograde	660 Feb 27 j 18:12	29°M.51'45	
minimum elong	653 Nov 03 j 14:28	14°M.19'31	1°45'04	opposition	660 May 17 j 03:48	28°M.29'15	1°40'20
max. Earth dist.	653 Nov 02 j 23:33	14°M.18'07	31.30431 AU	min. Earth dist.	660 May 17 j 13:24	28°M.28'36	29.27335 AU
morning rise	653 Nov 18 j 19:49	14°M.53'39		direct	660 Aug 06 j 01:35	27°M.05'19	
	653 Nov 21 j 17:28	15°M.		evening set	660 Nov 03 j 01:55	29°M.00'08	
retrograde	654 Feb 14 j 02:20	16°M.46'54					
opposition	654 May 04 j 00:46	15°M.24'48	1°51'34	conjunction	660 Nov 18 j 07:43	29°M.34'22	1°32'49
min. Earth dist.	654 May 04 j 14:19	15°M.23'53	29.30460 AU	minimum elong	660 Nov 18 j 07:43	29°M.34'22	1°32'50
	654 May 19 j 13:00	15°R.M.		max. Earth dist.	660 Nov 17 j 21:38	29°M.33'25	31.26990 AU
direct	654 Jul 24 j 03:35	14°M.00'45			660 Nov 29 j 16:21	0°♂	
	654 Sep 24 j 00:20	15°M.		morning rise	660 Dec 03 j 12:29	0°♂08'32	
evening set	654 Oct 21 j 16:59	15°M.56'05		retrograde	661 Mar 01 j 06:51	2°♂02'23	
max. Earth dist.	654 Nov 05 j 10:36	16°M.29'06	31.30226 AU	opposition	661 May 19 j 16:25	0°♂39'50	1°37'57
				min. Earth dist.	661 May 20 j 01:15	0°♂39'15	29.26838 AU
conjunction	654 Nov 06 j 00:04	16°M.30'22	1°43'45		661 Jun 14 j 06:49	30°R.M.	
minimum elong	654 Nov 06 j 00:04	16°M.30'22	1°43'46	direct	661 Aug 08 j 12:54	29°M.15'58	
morning rise	654 Nov 21 j 05:05	17°M.04'30			661 Sep 30 j 05:02	0°♂	
retrograde	655 Feb 16 j 11:24	18°M.57'51		evening set	661 Nov 05 j 11:00	1°♂10'43	
opposition	655 May 06 j 13:19	17°M.35'42	1°50'04				
min. Earth dist.	655 May 07 j 03:08	17°M.34'46	29.30179 AU	conjunction	661 Nov 20 j 16:50	1°♂44'58	1°30'31
direct	655 Jul 26 j 15:29	16°M.11'42		minimum elong	661 Nov 20 j 16:50	1°♂44'58	1°30'30
evening set	655 Oct 24 j 02:41	18°M.06'57		max. Earth dist.	661 Nov 20 j 08:49	1°♂44'12	31.26536 AU
				morning rise	661 Dec 05 j 21:26	2°♂19'08	
conjunction	655 Nov 08 j 09:25	18°M.41'13	1°42'17	retrograde	662 Mar 03 j 16:41	4°♂13'07	
minimum elong	655 Nov 08 j 09:25	18°M.41'13	1°42'16	opposition	662 May 22 j 05:06	2°♂50'33	1°35'25
max. Earth dist.	655 Nov 07 j 19:32	18°M.39'54	31.29881 AU	min. Earth dist.	662 May 22 j 12:55	2°♂50'01	29.26407 AU
morning rise	655 Nov 23 j 14:29	19°M.15'21		direct	662 Aug 11 j 01:31	1°♂26'45	
retrograde	656 Feb 18 j 22:55	21°M.08'47		evening set	662 Nov 07 j 20:20	3°♂21'27	
opposition	656 May 08 j 01:44	19°M.46'34	1°48'25				

conjunction	662 Nov 23 j 01:54	3°♂55'42	1°28'04	direct	669 Aug 26 j 08:17	16°♂46'16	
minimum elong	662 Nov 23 j 01:55	3°♂55'42	1°28'05	evening set	669 Nov 22 j 13:37	18°♂40'29	
max. Earth dist.	662 Nov 22 j 17:52	3°♂54'56	31.26148 AU				
morning rise	662 Dec 08 j 06:43	4°♂29'53		conjunction	669 Dec 07 j 19:00	19°♂14'47	1°07'37
retrograde	663 Mar 06 j 04:06	6°♂24'00		minimum elong	669 Dec 07 j 19:00	19°♂14'47	1°07'37
opposition	663 May 24 j 17:43	5°♂01'25	1°32'44	max. Earth dist.	669 Dec 07 j 15:46	19°♂14'29	31.21803 AU
min. Earth dist.	663 May 25 j 00:15	5°♂00'58	29.26039 AU	morning rise	669 Dec 23 j 00:29	19°♂49'07	
direct	663 Aug 13 j 12:22	3°♂37'42		retrograde	670 Mar 21 j 13:14	21°♂44'06	
evening set	663 Nov 10 j 05:27	5°♂32'20		opposition	670 Jun 09 j 12:15	20°♂21'08	1°10'28
				min. Earth dist.	670 Jun 09 j 14:21	20°♂21'00	29.21322 AU
conjunction	663 Nov 25 j 11:07	6°♂06'36	1°25'30	direct	670 Aug 28 j 19:27	18°♂57'41	
minimum elong	663 Nov 25 j 11:07	6°♂06'36	1°25'30	evening set	670 Nov 24 j 22:48	20°♂51'48	
max. Earth dist.	663 Nov 25 j 04:57	6°♂06'01	31.25782 AU				
morning rise	663 Dec 10 j 15:50	6°♂40'49		conjunction	670 Dec 10 j 04:24	21°♂26'07	1°04'17
retrograde	664 Mar 07 j 13:50	8°♂35'04		minimum elong	670 Dec 10 j 04:24	21°♂26'07	1°04'18
opposition	664 May 26 j 06:31	7°♂12'28	1°29'56	max. Earth dist.	670 Dec 10 j 03:04	21°♂25'59	31.20751 AU
min. Earth dist.	664 May 26 j 12:56	7°♂12'02	29.25658 AU	morning rise	670 Dec 25 j 09:54	22°♂00'28	
direct	664 Aug 15 j 00:15	5°♂48'50		retrograde	671 Mar 23 j 23:09	23°♂55'31	
evening set	664 Nov 11 j 14:47	7°♂43'26		opposition	671 Jun 12 j 01:09	22°♂32'27	1°06'51
				min. Earth dist.	671 Jun 12 j 02:22	22°♂32'22	29.20253 AU
conjunction	664 Nov 26 j 20:14	8°♂17'42	1°22'49	direct	671 Aug 31 j 08:09	21°♂08'58	
minimum elong	664 Nov 26 j 20:15	8°♂17'42	1°22'49	evening set	671 Nov 27 j 08:04	23°♂02'58	
max. Earth dist.	664 Nov 26 j 14:07	8°♂17'07	31.25393 AU				
morning rise	664 Dec 12 j 01:07	8°♂51'56		conjunction	671 Dec 12 j 13:34	23°♂37'18	1°00'51
retrograde	665 Mar 10 j 01:55	10°♂46'19		minimum elong	671 Dec 12 j 13:34	23°♂37'18	1°00'50
opposition	665 May 28 j 19:14	9°♂23'43	1°26'59	max. Earth dist.	671 Dec 12 j 12:15	23°♂37'10	31.19701 AU
min. Earth dist.	665 May 28 j 23:59	9°♂23'23	29.25232 AU	morning rise	671 Dec 27 j 19:26	24°♂11'40	
direct	665 Aug 17 j 11:10	8°♂00'09		retrograde	672 Mar 25 j 11:22	26°♂06'48	
evening set	665 Nov 14 j 00:07	9°♂54'41		opposition	672 Jun 13 j 14:03	24°♂43'38	1°03'08
				min. Earth dist.	672 Jun 13 j 13:52	24°♂43'39	29.19228 AU
conjunction	665 Nov 29 j 05:35	10°♂28'58	1°20'00	direct	672 Sep 01 j 19:59	23°♂20'09	
minimum elong	665 Nov 29 j 05:35	10°♂28'58	1°19'59	evening set	672 Nov 28 j 17:10	25°♂14'03	
max. Earth dist.	665 Nov 29 j 00:32	10°♂28'29	31.24925 AU				
morning rise	665 Dec 14 j 10:27	11°♂03'13		conjunction	672 Dec 13 j 22:50	25°♂48'24	0°57'19
retrograde	666 Mar 12 j 12:13	12°♂57'45		minimum elong	672 Dec 13 j 22:50	25°♂48'24	0°57'19
opposition	666 May 31 j 08:19	11°♂35'07	1°23'55	max. Earth dist.	672 Dec 13 j 23:31	25°♂48'28	31.18705 AU
min. Earth dist.	666 May 31 j 13:23	11°♂34'46	29.24717 AU	morning rise	672 Dec 29 j 04:43	26°♂22'48	
direct	666 Aug 19 j 21:54	10°♂11'37		retrograde	673 Mar 27 j 21:38	28°♂18'02	
evening set	666 Nov 16 j 09:25	12°♂06'05		opposition	673 Jun 16 j 03:02	26°♂54'46	0°59'19
				min. Earth dist.	673 Jun 16 j 02:23	26°♂54'49	29.18276 AU
conjunction	666 Dec 01 j 14:51	12°♂40'22	1°17'04	direct	673 Sep 04 j 08:41	25°♂31'18	
minimum elong	666 Dec 01 j 14:51	12°♂40'22	1°17'04	evening set	673 Dec 01 j 02:25	27°♂25'08	
max. Earth dist.	666 Dec 01 j 10:27	12°♂39'57	31.24361 AU				
morning rise	666 Dec 16 j 19:51	13°♂14'38		conjunction	673 Dec 16 j 08:04	27°♂59'29	0°53'43
retrograde	667 Mar 15 j 00:09	15°♂09'19		minimum elong	673 Dec 16 j 08:04	27°♂59'29	0°53'42
opposition	667 Jun 02 j 21:14	13°♂46'37	1°20'43	max. Earth dist.	673 Dec 16 j 09:16	27°♂59'36	31.17820 AU
min. Earth dist.	667 Jun 03 j 00:43	13°♂46'23	29.24074 AU	morning rise	673 Dec 31 j 14:16	28°♂33'54	
direct	667 Aug 22 j 08:49	12°♂23'10			674 Feb 15 j 22:54	0°♂	
evening set	667 Nov 18 j 18:55	14°♂17'34		retrograde	674 Mar 30 j 09:44	0°♂29'16	
					674 May 13 j 10:03	30°♂	
conjunction	667 Dec 04 j 00:17	14°♂51'51	1°14'01	opposition	674 Jun 18 j 15:57	29°♂05'56	0°55'25
minimum elong	667 Dec 04 j 00:17	14°♂51'51	1°14'00	min. Earth dist.	674 Jun 18 j 13:09	29°♂06'07	29.17439 AU
max. Earth dist.	667 Dec 03 j 20:03	14°♂51'27	31.23644 AU	direct	674 Sep 06 j 19:54	27°♂42'30	
morning rise	667 Dec 19 j 05:26	15°♂26'09		evening set	674 Dec 03 j 11:31	29°♂36'15	
retrograde	668 Mar 16 j 12:02	17°♂20'56			674 Dec 14 j 01:10	0°♂	
opposition	668 Jun 04 j 10:10	15°♂58'11	1°17'24				
min. Earth dist.	668 Jun 04 j 14:03	15°♂57'55	29.23286 AU	conjunction	674 Dec 18 j 17:20	0°♂10'38	0°50'02
direct	668 Aug 23 j 18:38	14°♂34'44		minimum elong	674 Dec 18 j 17:20	0°♂10'38	0°50'02
evening set	668 Nov 20 j 04:18	16°♂29'03		max. Earth dist.	674 Dec 18 j 19:52	0°♂10'52	31.17027 AU
				morning rise	675 Jan 02 j 23:44	0°♂45'05	
conjunction	668 Dec 05 j 09:48	17°♂03'21	1°10'52	retrograde	675 Apr 01 j 19:54	2°♂40'34	
minimum elong	668 Dec 05 j 09:48	17°♂03'21	1°10'53	opposition	675 Jun 21 j 05:01	1°♂17'12	0°51'26
max. Earth dist.	668 Dec 05 j 06:48	17°♂03'04	31.22790 AU	min. Earth dist.	675 Jun 21 j 02:09	1°♂17'23	29.16688 AU
morning rise	668 Dec 20 j 14:59	17°♂37'40			675 Aug 20 j 16:32	30°♂	
retrograde	669 Mar 18 j 23:46	19°♂32'33		direct	675 Sep 09 j 06:36	29°♂53'49	
opposition	669 Jun 06 j 23:10	18°♂09'42	1°13'59		675 Sep 28 j 12:03	0°♂	
min. Earth dist.	669 Jun 07 j 01:43	18°♂09'32	29.22349 AU	evening set	675 Dec 05 j 20:47	1°♂47'31	

conjunction	675 Dec 21 j 02:44	2°32'54	0°46'16	direct	682 Sep 24 j 13:54	15°31'45	
minimum elong	675 Dec 21 j 02:44	2°32'54	0°46'15	evening set	682 Dec 20 j 15:27	17°31'09	
max. Earth dist.	675 Dec 21 j 06:25	2°32'215	31.16320 AU				
morning rise	676 Jan 05 j 09:22	2°35'23		conjunction	683 Jan 04 j 22:30	17°34'541	0°18'17
retrograde	676 Apr 03 j 07:41	4°35'01		minimum elong	683 Jan 04 j 22:30	17°34'541	0°18'17
opposition	676 Jun 22 j 17:46	3°32'8'36	0°47'23	max. Earth dist.	683 Jan 05 j 06:53	17°34'6'29	31.10284 AU
min. Earth dist.	676 Jun 22 j 12:58	3°32'8'56	29.15994 AU	morning rise	683 Jan 20 j 07:13	18°32'0'24	
direct	676 Sep 10 j 17:18	2°30'5'17		retrograde	683 Apr 20 j 00:23	20°31'6'58	
evening set	676 Dec 07 j 06:10	3°35'8'57		opposition	683 Jul 09 j 13:49	18°35'3'10	0°17'16
				min. Earth dist.	683 Jul 09 j 04:09	18°35'3'49	29.09703 AU
conjunction	676 Dec 22 j 12:08	4°33'3'22	0°42'26	direct	683 Sep 27 j 01:41	17°33'0'02	
minimum elong	676 Dec 22 j 12:08	4°33'3'22	0°42'26	evening set	683 Dec 23 j 01:07	19°32'3'21	
max. Earth dist.	676 Dec 22 j 16:18	4°33'3'45	31.15641 AU				
morning rise	677 Jan 06 j 19:05	5°30'7'52		conjunction	684 Jan 07 j 08:21	19°35'7'55	0°14'08
retrograde	677 Apr 05 j 20:09	7°30'3'40		minimum elong	684 Jan 07 j 08:21	19°35'7'55	0°14'07
opposition	677 Jun 25 j 06:56	5°34'0'13	0°43'14	behind sun begin	684 Jan 07 j 05:04	19°35'7'37	
min. Earth dist.	677 Jun 25 j 02:12	5°34'0'33	29.15325 AU	behind sun end	684 Jan 07 j 11:38	19°35'8'12	
direct	677 Sep 13 j 02:41	4°31'6'58		max. Earth dist.	684 Jan 07 j 17:41	19°35'8'47	31.09114 AU
evening set	677 Dec 09 j 15:25	6°31'0'35		morning rise	684 Jan 22 j 17:21	20°32'3'39	
				retrograde	684 Apr 21 j 10:20	22°32'9'19	
conjunction	677 Dec 24 j 21:39	6°34'5'01	0°38'32	opposition	684 Jul 11 j 02:52	21°30'5'24	0°12'49
minimum elong	677 Dec 24 j 21:39	6°34'5'01	0°38'31	min. Earth dist.	684 Jul 10 j 17:20	21°30'6'03	29.08554 AU
max. Earth dist.	677 Dec 25 j 03:30	6°34'5'34	31.14969 AU	direct	684 Sep 28 j 13:05	19°34'2'16	
morning rise	678 Jan 09 j 04:44	7°31'9'34		evening set	684 Dec 24 j 10:46	21°33'5'31	
retrograde	678 Apr 08 j 08:32	9°31'5'31					
opposition	678 Jun 27 j 20:02	7°35'2'03	0°39'02	conjunction	685 Jan 08 j 18:15	22°31'0'06	0°09'58
min. Earth dist.	678 Jun 27 j 13:49	7°35'2'28	29.14623 AU	minimum elong	685 Jan 08 j 18:15	22°31'0'06	0°09'58
direct	678 Sep 15 j 15:03	6°32'8'50		behind sun begin	685 Jan 08 j 13:02	22°30'9'37	
evening set	678 Dec 12 j 01:01	8°32'2'27		behind sun end	685 Jan 08 j 23:28	22°31'0'34	
				max. Earth dist.	685 Jan 09 j 04:50	22°31'1'05	31.08005 AU
conjunction	678 Dec 27 j 07:14	8°35'6'54	0°34'34	morning rise	685 Jan 24 j 03:31	22°34'4'52	
minimum elong	678 Dec 27 j 07:14	8°35'6'54	0°34'35	retrograde	685 Apr 23 j 22:16	24°34'1'38	
max. Earth dist.	678 Dec 27 j 12:47	8°35'7'25	31.14240 AU	opposition	685 Jul 13 j 15:53	23°31'7'38	0°08'20
morning rise	679 Jan 11 j 14:46	9°33'1'29		min. Earth dist.	685 Jul 13 j 04:17	23°31'8'26	29.07485 AU
retrograde	679 Apr 10 j 22:55	11°32'7'34		direct	685 Oct 01 j 00:29	21°35'4'29	
opposition	679 Jun 30 j 09:06	10°30'4'04	0°34'46	evening set	685 Dec 26 j 20:25	23°34'7'41	
min. Earth dist.	679 Jun 30 j 02:37	10°30'4'30	29.13862 AU				
direct	679 Sep 18 j 00:58	8°34'0'54		conjunction	686 Jan 11 j 04:02	24°32'2'17	0°05'48
evening set	679 Dec 14 j 10:33	10°33'4'29		minimum elong	686 Jan 11 j 04:01	24°32'2'17	0°05'47
				behind sun begin	686 Jan 10 j 21:52	24°32'1'44	
conjunction	679 Dec 29 j 17:06	11°30'8'58	0°30'33	behind sun end	686 Jan 11 j 10:09	24°32'2'51	
minimum elong	679 Dec 29 j 17:06	11°30'8'58	0°30'33	max. Earth dist.	686 Jan 11 j 15:07	24°32'3'19	31.06983 AU
max. Earth dist.	679 Dec 30 j 00:14	11°30'9'38	31.13421 AU	morning rise	686 Jan 26 j 13:44	24°35'7'05	
morning rise	680 Jan 14 j 00:44	11°34'3'35		retrograde	686 Apr 26 j 10:21	26°35'3'59	
retrograde	680 Apr 12 j 10:10	13°33'9'49		opposition	686 Jul 16 j 05:03	25°32'9'54	0°03'51
opposition	680 Jul 01 j 22:17	12°31'6'16	0°30'27	min. Earth dist.	686 Jul 15 j 17:23	25°30'4'42	29.06530 AU
min. Earth dist.	680 Jul 01 j 15:11	12°31'6'44	29.12976 AU	direct	686 Oct 03 j 10:13	24°30'6'46	
direct	680 Sep 19 j 13:04	10°35'3'08		evening set	686 Dec 29 j 06:06	25°35'9'55	
evening set	680 Dec 15 j 20:14	12°34'6'40					
				conjunction	687 Jan 13 j 14:06	26°34'3'32	0°01'34
conjunction	680 Dec 31 j 02:47	13°32'1'10	0°26'30	minimum elong	687 Jan 13 j 14:06	26°34'3'32	0°01'35
minimum elong	680 Dec 31 j 02:47	13°32'1'10	0°26'30	behind sun begin	687 Jan 13 j 07:42	26°33'3'58	
max. Earth dist.	680 Dec 31 j 09:32	13°32'1'48	31.12481 AU	behind sun end	687 Jan 13 j 20:31	26°33'5'07	
morning rise	681 Jan 15 j 10:52	13°35'5'49		max. Earth dist.	687 Jan 14 j 03:04	26°33'5'45	31.06084 AU
retrograde	681 Apr 15 j 00:02	15°32'5'10		morning rise	687 Jan 29 j 00:02	27°30'9'22	
opposition	681 Jul 04 j 11:30	14°32'8'33	0°26'05	retrograde	687 Apr 28 j 22:07	29°30'6'23	
min. Earth dist.	681 Jul 04 j 03:29	14°32'9'05	29.11974 AU	desc. node	687 May 26 j 04:27	28°35'4'48	
direct	681 Sep 22 j 00:59	13°30'5'26		opposition	687 Jul 18 j 17:52	27°34'2'15	-0°00'39
evening set	681 Dec 18 j 05:51	14°35'8'54		min. Earth dist.	687 Jul 18 j 04:32	27°34'3'10	29.05680 AU
				direct	687 Oct 05 j 21:56	26°31'9'09	
conjunction	682 Jan 02 j 12:44	15°33'3'26	0°22'24	evening set	687 Dec 31 j 16:00	28°31'2'16	
minimum elong	682 Jan 02 j 12:44	15°33'3'26	0°22'24				
max. Earth dist.	682 Jan 02 j 20:54	15°33'4'12	31.11418 AU	conjunction	688 Jan 16 j 00:06	28°34'6'55	-0°02'46
morning rise	682 Jan 17 j 21:00	16°30'8'07		minimum elong	688 Jan 16 j 00:05	28°34'6'55	0°02'46
retrograde	682 Apr 17 j 11:51	18°30'4'35		behind sun begin	688 Jan 15 j 17:42	28°34'6'20	
opposition	682 Jul 07 j 00:45	16°34'0'52	0°21'42	behind sun end	688 Jan 16 j 06:29	28°34'7'29	
min. Earth dist.	682 Jul 06 j 16:45	16°34'1'24	29.10862 AU	max. Earth dist.	688 Jan 16 j 12:54	28°34'8'07	31.05287 AU

morning rise	688 Jan 31 j 10:32	29° $\overline{32}$ 1'46		minimum elong	694 Jan 28 j 15:01	12° $\overline{04}$ 39	0°27'47
	688 Feb 18 j 11:15	0° $\overline{00}$		max. Earth dist.	694 Jan 29 j 08:05	12° $\overline{06}$ 16	31.00661 AU
retrograde	688 Apr 30 j 12:08	1° $\overline{18}$ 55		morning rise	694 Feb 13 j 03:32	12° $\overline{39}$ 43	
	688 Jul 17 j 01:40	30° $\overline{R3}$		retrograde	694 May 14 j 19:03	14° $\overline{37}$ 36	
opposition	688 Jul 20 j 06:56	29° $\overline{35}$ 445	-0°05'10	opposition	694 Aug 03 j 13:35	13° $\overline{13}$ 08	-0°31'54
min. Earth dist.	688 Jul 19 j 17:06	29° $\overline{35}$ 5'41	29.04934 AU	min. Earth dist.	694 Aug 02 j 20:09	13° $\overline{14}$ 20	29.00153 AU
direct	688 Oct 07 j 06:50	28° $\overline{31}$ 40		direct	694 Oct 21 j 05:40	11° $\overline{50}$ 11	
	688 Dec 21 j 14:28	0° $\overline{00}$		evening set	695 Jan 15 j 15:52	13° $\overline{43}$ 09	
evening set	689 Jan 02 j 01:43	0° $\overline{24}$ 46					
				conjunction	695 Jan 31 j 01:54	14° $\overline{17}$ 59	-0°31'51
conjunction	689 Jan 17 j 10:13	0° $\overline{59}$ 26	-0°06'58	minimum elong	695 Jan 31 j 01:53	14° $\overline{17}$ 59	0°31'50
minimum elong	689 Jan 17 j 10:12	0° $\overline{59}$ 26	0°06'57	max. Earth dist.	695 Jan 31 j 18:41	14° $\overline{19}$ 34	30.99582 AU
behind sun begin	689 Jan 17 j 04:15	0° $\overline{58}$ 54		morning rise	695 Feb 15 j 14:55	14° $\overline{53}$ 05	
behind sun end	689 Jan 17 j 16:10	0° $\overline{59}$ 58			695 Feb 18 j 18:16	15° $\overline{00}$	
max. Earth dist.	689 Jan 18 j 01:00	1° $\overline{00}$ 49	31.04569 AU	retrograde	695 May 17 j 06:55	16° $\overline{51}$ 02	
morning rise	689 Feb 01 j 20:50	1° $\overline{34}$ 20		min. Earth dist.	695 Aug 05 j 09:49	15° $\overline{27}$ 38	28.99045 AU
retrograde	689 May 03 j 00:01	3° $\overline{31}$ 37		opposition	695 Aug 06 j 02:35	15° $\overline{26}$ 29	-0°36'14
opposition	689 Jul 22 j 20:02	2° $\overline{07}$ 24	-0°09'40		695 Aug 22 j 11:30	15° $\overline{R00}$	
min. Earth dist.	689 Jul 22 j 05:18	2° $\overline{08}$ 24	29.04237 AU	direct	695 Oct 23 j 15:58	14° $\overline{03}$ 30	
direct	689 Oct 09 j 18:36	0° $\overline{44}$ 22			695 Dec 21 j 09:38	15° $\overline{00}$	
evening set	690 Jan 04 j 11:50	2° $\overline{37}$ 27		evening set	696 Jan 18 j 02:22	15° $\overline{56}$ 26	
conjunction	690 Jan 19 j 20:25	3° $\overline{12}$ 08	-0°11'09	conjunction	696 Feb 02 j 12:51	16° $\overline{31}$ 16	-0°35'53
minimum elong	690 Jan 19 j 20:26	3° $\overline{12}$ 08	0°11'10	minimum elong	696 Feb 02 j 12:51	16° $\overline{31}$ 16	0°35'53
behind sun begin	690 Jan 19 j 15:37	3° $\overline{11}$ 42		max. Earth dist.	696 Feb 03 j 07:04	16° $\overline{33}$ 00	30.98451 AU
behind sun end	690 Jan 20 j 01:14	3° $\overline{12}$ 35		morning rise	696 Feb 18 j 02:07	17° $\overline{06}$ 24	
max. Earth dist.	690 Jan 20 j 11:05	3° $\overline{13}$ 31	31.03897 AU	retrograde	696 May 18 j 18:27	19° $\overline{04}$ 26	
morning rise	690 Feb 04 j 07:34	3° $\overline{47}$ 04		opposition	696 Aug 07 j 15:29	17° $\overline{39}$ 48	-0°40'31
retrograde	690 May 05 j 15:11	5° $\overline{44}$ 29		min. Earth dist.	696 Aug 06 j 21:28	17° $\overline{41}$ 02	28.97907 AU
opposition	690 Jul 25 j 09:06	4° $\overline{20}$ 15	-0°14'10	direct	696 Oct 25 j 04:04	16° $\overline{16}$ 46	
min. Earth dist.	690 Jul 24 j 17:28	4° $\overline{21}$ 19	29.03575 AU	evening set	697 Jan 19 j 12:56	18° $\overline{09}$ 41	
direct	690 Oct 12 j 05:44	2° $\overline{57}$ 15					
evening set	691 Jan 06 j 21:56	4° $\overline{50}$ 19		conjunction	697 Feb 03 j 23:33	18° $\overline{44}$ 32	-0°39'51
				minimum elong	697 Feb 03 j 23:33	18° $\overline{44}$ 32	0°39'51
conjunction	691 Jan 22 j 06:55	5° $\overline{25}$ 03	-0°15'21	max. Earth dist.	697 Feb 04 j 17:22	18° $\overline{46}$ 13	30.97324 AU
minimum elong	691 Jan 22 j 06:54	5° $\overline{25}$ 03	0°15'20	morning rise	697 Feb 19 j 13:22	19° $\overline{19}$ 41	
behind sun begin	691 Jan 22 j 04:46	5° $\overline{24}$ 51		retrograde	697 May 21 j 07:58	21° $\overline{17}$ 49	
behind sun end	691 Jan 22 j 09:03	5° $\overline{25}$ 14		min. Earth dist.	697 Aug 09 j 10:17	19° $\overline{54}$ 21	28.96821 AU
max. Earth dist.	691 Jan 22 j 22:57	5° $\overline{26}$ 33	31.03213 AU	opposition	697 Aug 10 j 04:31	19° $\overline{53}$ 05	-0°44'44
morning rise	691 Feb 06 j 18:19	6° $\overline{00}$ 01		direct	697 Oct 27 j 13:18	18° $\overline{30}$ 02	
retrograde	691 May 08 j 03:56	7° $\overline{57}$ 34		evening set	698 Jan 21 j 23:32	20° $\overline{22}$ 55	
opposition	691 Jul 27 j 22:15	6° $\overline{33}$ 17	-0°18'38				
min. Earth dist.	691 Jul 27 j 06:47	6° $\overline{34}$ 20	29.02868 AU	conjunction	698 Feb 06 j 10:37	20° $\overline{57}$ 48	-0°43'46
direct	691 Oct 14 j 17:54	5° $\overline{10}$ 19		minimum elong	698 Feb 06 j 10:37	20° $\overline{57}$ 48	0°43'46
evening set	692 Jan 09 j 08:18	7° $\overline{03}$ 23		max. Earth dist.	698 Feb 07 j 06:13	20° $\overline{59}$ 39	30.96269 AU
				morning rise	698 Feb 22 j 00:40	21° $\overline{32}$ 59	
conjunction	692 Jan 24 j 17:28	7° $\overline{38}$ 07	-0°19'31	retrograde	698 May 23 j 19:56	23° $\overline{31}$ 12	
minimum elong	692 Jan 24 j 17:28	7° $\overline{38}$ 07	0°19'32	opposition	698 Aug 12 j 17:18	22° $\overline{06}$ 24	-0°48'53
max. Earth dist.	692 Jan 25 j 09:29	7° $\overline{39}$ 38	31.02473 AU	min. Earth dist.	698 Aug 11 j 22:16	22° $\overline{07}$ 43	28.95817 AU
morning rise	692 Feb 09 j 05:16	8° $\overline{13}$ 07		direct	698 Oct 30 j 01:04	20° $\overline{43}$ 20	
retrograde	692 May 09 j 17:44	10° $\overline{10}$ 48		evening set	699 Jan 24 j 10:18	22° $\overline{36}$ 13	
opposition	692 Jul 29 j 11:15	8° $\overline{46}$ 28	-0°23'06				
min. Earth dist.	692 Jul 28 j 18:32	8° $\overline{47}$ 37	29.02082 AU	conjunction	699 Feb 08 j 21:37	23° $\overline{11}$ 07	-0°47'37
direct	692 Oct 16 j 05:29	7° $\overline{23}$ 31		minimum elong	699 Feb 08 j 21:36	23° $\overline{11}$ 07	0°47'36
evening set	693 Jan 10 j 18:48	9° $\overline{16}$ 35		max. Earth dist.	699 Feb 09 j 16:58	23° $\overline{12}$ 57	30.95322 AU
				morning rise	699 Feb 24 j 12:13	23° $\overline{46}$ 20	
conjunction	693 Jan 26 j 04:14	9° $\overline{51}$ 21	-0°23'40	retrograde	699 May 26 j 11:05	25° $\overline{44}$ 39	
minimum elong	693 Jan 26 j 04:14	9° $\overline{51}$ 21	0°23'39	min. Earth dist.	699 Aug 14 j 10:12	24° $\overline{21}$ 10	28.94935 AU
max. Earth dist.	693 Jan 26 j 20:37	9° $\overline{52}$ 54	31.01621 AU	opposition	699 Aug 15 j 06:07	24° $\overline{19}$ 48	-0°52'58
morning rise	693 Feb 10 j 16:24	10° $\overline{26}$ 23		direct	699 Nov 01 j 11:57	22° $\overline{56}$ 43	
retrograde	693 May 12 j 05:44	12° $\overline{24}$ 10		evening set	700 Jan 26 j 21:02	24° $\overline{49}$ 37	
min. Earth dist.	693 Jul 31 j 08:26	11° $\overline{00}$ 53	29.01178 AU				
opposition	693 Aug 01 j 00:31	10° $\overline{59}$ 47	-0°27'31	conjunction	700 Feb 11 j 08:44	25° $\overline{24}$ 33	-0°51'24
direct	693 Oct 18 j 17:19	9° $\overline{36}$ 51		minimum elong	700 Feb 11 j 08:44	25° $\overline{24}$ 33	0°51'25
evening set	694 Jan 13 j 05:12	11° $\overline{29}$ 51		max. Earth dist.	700 Feb 12 j 05:33	25° $\overline{26}$ 32	30.94480 AU
				morning rise	700 Feb 26 j 23:37	25° $\overline{59}$ 48	
conjunction	694 Jan 28 j 15:01	12° $\overline{04}$ 39	-0°27'47	retrograde	700 May 27 j 23:41	27° $\overline{58}$ 14	

opposition	700 Aug 16 j 18:55	26° \approx 33'20	-0°56'59	direct	706 Nov 16 j 19:15	8° \times 35'25	
min. Earth dist.	700 Aug 15 j 22:58	26° \approx 34'42	28.94152 AU	evening set	707 Feb 11 j 04:08	10° \times 28'26	
direct	700 Nov 02 j 23:34	25° \approx 10'16					
evening set	701 Jan 28 j 07:55	27° \approx 03'11		conjunction	707 Feb 26 j 18:25	11° \times 03'34	-1°15'29
				minimum elong	707 Feb 26 j 18:25	11° \times 03'34	1°15'29
conjunction	701 Feb 12 j 19:56	27° \approx 38'09	-0°55'07	max. Earth dist.	707 Feb 27 j 17:14	11° \times 05'44	30.89564 AU
minimum elong	701 Feb 12 j 19:56	27° \approx 38'09	0°55'06	morning rise	707 Mar 14 j 12:06	11° \times 39'02	
max. Earth dist.	701 Feb 13 j 16:58	27° \approx 40'08	30.93758 AU	retrograde	707 Jun 13 j 20:06	13° \times 38'03	
morning rise	701 Feb 28 j 11:16	28° \approx 13'26		opposition	707 Sep 02 j 12:14	12° \times 12'56	-1°22'22
	701 May 03 j 09:15	0° \times		min. Earth dist.	707 Sep 01 j 14:47	12° \times 14'25	28.89168 AU
retrograde	701 May 30 j 14:21	0° \times 11'57		direct	707 Nov 19 j 07:46	10° \times 49'52	
	701 Jun 27 j 03:34	30° \times		evening set	708 Feb 13 j 15:49	12° \times 42'52	
min. Earth dist.	701 Aug 18 j 10:20	28° \approx 48'31	28.93479 AU				
opposition	701 Aug 19 j 07:42	28° \approx 47'03	-1°00'54	conjunction	708 Feb 29 j 06:21	13° \times 18'01	-1°18'31
direct	701 Nov 05 j 10:50	27° \approx 24'00		minimum elong	708 Feb 29 j 06:21	13° \times 18'01	1°18'32
evening set	702 Jan 30 j 18:52	29° \approx 16'57		max. Earth dist.	708 Mar 01 j 04:19	13° \times 20'05	30.88613 AU
				morning rise	708 Mar 16 j 00:34	13° \times 53'30	
conjunction	702 Feb 15 j 07:14	29° \approx 51'56	-0°58'44	retrograde	708 Jun 15 j 09:57	15° \times 52'32	
minimum elong	702 Feb 15 j 07:13	29° \approx 51'56	0°58'45	min. Earth dist.	708 Sep 03 j 03:06	14° \times 28'50	28.88211 AU
max. Earth dist.	702 Feb 16 j 04:50	29° \approx 53'59	30.93110 AU	opposition	708 Sep 04 j 00:48	14° \times 27'20	-1°25'33
	702 Feb 18 j 20:21	0° \times		direct	708 Nov 20 j 18:26	13° \times 04'11	
morning rise	702 Mar 02 j 23:00	0° \times 27'15		evening set	709 Feb 15 j 03:29	14° \times 57'11	
retrograde	702 Jun 02 j 03:39	2° \times 25'53					
opposition	702 Aug 21 j 20:36	1° \times 00'57	-1°04'44	conjunction	709 Mar 02 j 18:29	15° \times 32'21	-1°21'26
min. Earth dist.	702 Aug 20 j 23:48	1° \times 02'23	28.92864 AU	minimum elong	709 Mar 02 j 18:29	15° \times 32'21	1°21'25
	702 Oct 02 j 01:42	30° \times		max. Earth dist.	709 Mar 03 j 17:28	15° \times 34'32	30.87649 AU
direct	702 Nov 07 j 22:49	29° \approx 37'58		morning rise	709 Mar 18 j 13:02	16° \times 07'52	
	702 Dec 13 j 19:02	0° \times		retrograde	709 Jun 17 j 21:51	18° \times 06'55	
evening set	703 Feb 02 j 06:03	1° \times 30'55		opposition	709 Sep 06 j 13:18	16° \times 41'37	-1°28'36
				min. Earth dist.	709 Sep 05 j 15:59	16° \times 43'06	28.87275 AU
conjunction	703 Feb 17 j 18:50	2° \times 05'57	-1°02'17	direct	709 Nov 23 j 05:47	15° \times 18'25	
minimum elong	703 Feb 17 j 18:50	2° \times 05'57	1°02'16	evening set	710 Feb 17 j 15:13	17° \times 11'24	
max. Earth dist.	703 Feb 18 j 17:09	2° \times 08'04	30.92512 AU				
morning rise	703 Mar 05 j 10:56	2° \times 41'18		conjunction	710 Mar 05 j 06:37	17° \times 46'36	-1°24'13
retrograde	703 Jun 04 j 18:25	4° \times 40'02		minimum elong	710 Mar 05 j 06:37	17° \times 46'36	1°24'13
min. Earth dist.	703 Aug 23 j 11:09	3° \times 16'36	28.92266 AU	max. Earth dist.	710 Mar 06 j 05:28	17° \times 48'45	30.86754 AU
opposition	703 Aug 24 j 09:09	3° \times 15'05	-1°08'29	morning rise	710 Mar 21 j 01:39	18° \times 22'08	
direct	703 Nov 10 j 11:17	1° \times 52'07		retrograde	710 Jun 20 j 12:31	20° \times 21'11	
evening set	704 Feb 04 j 17:28	3° \times 45'06		min. Earth dist.	710 Sep 08 j 03:18	18° \times 57'22	28.86430 AU
				opposition	710 Sep 09 j 01:38	18° \times 55'49	-1°31'31
conjunction	704 Feb 20 j 06:28	4° \times 20'10	-1°05'44	direct	710 Nov 25 j 17:34	17° \times 32'33	
minimum elong	704 Feb 20 j 06:28	4° \times 20'10	1°05'45	evening set	711 Feb 20 j 03:07	19° \times 25'33	
max. Earth dist.	704 Feb 21 j 04:23	4° \times 22'14	30.91893 AU				
morning rise	704 Mar 06 j 23:04	4° \times 55'33		conjunction	711 Mar 07 j 18:51	20° \times 00'46	-1°26'52
retrograde	704 Jun 06 j 06:28	6° \times 54'23		minimum elong	711 Mar 07 j 18:51	20° \times 00'46	1°26'52
opposition	704 Aug 25 j 22:03	5° \times 29'25	-1°12'07	max. Earth dist.	711 Mar 08 j 18:02	20° \times 02'57	30.85948 AU
min. Earth dist.	704 Aug 25 j 00:57	5° \times 30'53	28.91635 AU	morning rise	711 Mar 23 j 14:17	20° \times 36'20	
direct	704 Nov 11 j 21:32	4° \times 06'28		retrograde	711 Jun 23 j 01:40	22° \times 35'24	
evening set	705 Feb 06 j 04:47	5° \times 59'29		opposition	711 Sep 11 j 13:54	21° \times 09'58	-1°34'17
				min. Earth dist.	711 Sep 10 j 16:13	21° \times 11'29	28.85699 AU
conjunction	705 Feb 21 j 18:17	6° \times 34'33	-1°09'06	direct	711 Nov 28 j 05:39	19° \times 46'40	
minimum elong	705 Feb 21 j 18:17	6° \times 34'33	1°09'05	evening set	712 Feb 22 j 14:57	21° \times 39'40	
max. Earth dist.	705 Feb 22 j 17:15	6° \times 36'44	30.91220 AU				
morning rise	705 Mar 09 j 11:08	7° \times 09'58		conjunction	712 Mar 09 j 07:11	22° \times 14'55	-1°29'24
retrograde	705 Jun 08 j 18:43	9° \times 08'53		minimum elong	712 Mar 09 j 07:11	22° \times 14'55	1°29'24
opposition	705 Aug 28 j 10:50	7° \times 43'54	-1°15'39	max. Earth dist.	712 Mar 10 j 07:00	22° \times 17'10	30.85291 AU
min. Earth dist.	705 Aug 27 j 12:58	7° \times 45'25	28.90914 AU	morning rise	712 Mar 25 j 02:57	22° \times 50'30	
direct	705 Nov 14 j 09:49	6° \times 20'55		retrograde	712 Jun 24 j 16:07	24° \times 49'36	
evening set	706 Feb 08 j 16:30	8° \times 13'57		min. Earth dist.	712 Sep 12 j 03:05	23° \times 25'45	28.85115 AU
				opposition	712 Sep 13 j 02:07	23° \times 24'08	-1°36'55
conjunction	706 Feb 24 j 06:14	8° \times 49'03	-1°12'21	direct	712 Nov 29 j 18:23	22° \times 00'48	
minimum elong	706 Feb 24 j 06:14	8° \times 49'03	1°12'21	evening set	713 Feb 24 j 02:51	23° \times 53'51	
max. Earth dist.	706 Feb 25 j 04:04	8° \times 51'07	30.90444 AU				
morning rise	706 Mar 11 j 23:40	9° \times 24'30		conjunction	713 Mar 11 j 19:22	24° \times 29'07	-1°31'48
retrograde	706 Jun 11 j 08:30	11° \times 23'28		minimum elong	713 Mar 11 j 19:22	24° \times 29'07	1°31'47
opposition	706 Aug 30 j 23:34	9° \times 58'26	-1°19'04	max. Earth dist.	713 Mar 12 j 18:57	24° \times 31'21	30.84771 AU
min. Earth dist.	706 Aug 30 j 02:17	9° \times 59'54	28.90094 AU	morning rise	713 Mar 27 j 15:41	25° \times 04'45	

retrograde	713 Jun 27 j 04:49	27° ✕ 03'52		evening set	720 Mar 11 j 18:18	9° ° 37'42	
opposition	713 Sep 15 j 14:29	25° ✕ 38'24	-1°39'25				
min. Earth dist.	713 Sep 14 j 16:13	25° ✕ 39'57	28.84675 AU	conjunction	720 Mar 27 j 13:55	10° ° 13'11	-1°44'31
direct	713 Dec 02 j 04:48	24° ✕ 15'04		minimum elong	720 Mar 27 j 13:55	10° ° 13'11	1°44'31
evening set	714 Feb 26 j 14:51	26° ✕ 08'09		max. Earth dist.	720 Mar 28 j 12:36	10° ° 15'19	30.82599 AU
				morning rise	720 Apr 12 j 13:03	10° ° 49'00	
conjunction	714 Mar 14 j 07:59	26° ✕ 43'27	-1°34'04	retrograde	720 Jul 13 j 01:56	12° ° 48'15	
minimum elong	714 Mar 14 j 07:59	26° ✕ 43'27	1°34'04	min. Earth dist.	720 Sep 30 j 07:02	11° ° 24'16	28.82489 AU
max. Earth dist.	714 Mar 15 j 08:44	26° ✕ 45'47	30.84395 AU	opposition	720 Oct 01 j 03:27	11° ° 22'50	-1°52'26
morning rise	714 Mar 30 j 04:34	27° ✕ 19'06		direct	720 Dec 17 j 11:43	9° ° 59'25	
retrograde	714 Jun 29 j 18:06	29° ✕ 18'15		evening set	721 Mar 14 j 06:57	11° ° 52'52	
min. Earth dist.	714 Sep 17 j 03:25	27° ✕ 54'25	28.84353 AU				
opposition	714 Sep 18 j 02:32	27° ✕ 52'48	-1°41'45	conjunction	721 Mar 30 j 03:07	12° ° 28'22	-1°45'43
direct	714 Dec 04 j 17:07	26° ✕ 29'29		minimum elong	721 Mar 30 j 03:07	12° ° 28'22	1°45'42
evening set	715 Mar 01 j 03:11	28° ✕ 22'37		max. Earth dist.	721 Mar 31 j 01:45	12° ° 30'30	30.82133 AU
				morning rise	721 Apr 15 j 02:38	13° ° 04'12	
conjunction	715 Mar 16 j 20:34	28° ✕ 57'57	-1°36'11	retrograde	721 Jul 15 j 16:08	15° ° 03'24	
minimum elong	715 Mar 16 j 20:34	28° ✕ 57'57	1°36'10	opposition	721 Oct 03 j 15:19	13° ° 37'57	-1°53'38
max. Earth dist.	715 Mar 17 j 20:19	29° ✕ 00'12	30.84120 AU	min. Earth dist.	721 Oct 02 j 18:11	13° ° 39'26	28.82021 AU
morning rise	715 Apr 01 j 17:45	29° ✕ 33'38		direct	721 Dec 20 j 00:57	12° ° 14'28	
	715 Apr 14 j 00:22	0° °		evening set	722 Mar 16 j 19:55	14° ° 07'56	
retrograde	715 Jul 02 j 08:07	1° ° 32'50					
opposition	715 Sep 20 j 14:47	0° ° 07'24	-1°43'56	conjunction	722 Apr 01 j 16:25	14° ° 43'28	-1°46'45
min. Earth dist.	715 Sep 19 j 16:15	0° ° 08'59	28.84122 AU	minimum elong	722 Apr 01 j 16:25	14° ° 43'28	1°46'45
	715 Sep 25 j 00:48	30° ° ✕		max. Earth dist.	722 Apr 02 j 14:16	14° ° 45'31	30.81676 AU
direct	715 Dec 07 j 02:35	28° ✕ 44'06		morning rise	722 Apr 17 j 16:27	15° ° 19'19	
	716 Feb 13 j 22:36	0° °		retrograde	722 Jul 18 j 05:12	17° ° 18'28	
evening set	716 Mar 02 j 15:23	0° ° 37'18		min. Earth dist.	722 Oct 05 j 07:15	15° ° 54'23	28.81605 AU
				opposition	722 Oct 06 j 03:06	15° ° 52'59	-1°54'39
conjunction	716 Mar 18 j 09:19	1° ° 12'40	-1°38'09	direct	722 Dec 22 j 11:59	14° ° 29'26	
minimum elong	716 Mar 18 j 09:19	1° ° 12'40	1°38'09	evening set	723 Mar 19 j 08:45	16° ° 22'55	
max. Earth dist.	716 Mar 19 j 10:09	1° ° 15'00	30.83900 AU				
morning rise	716 Apr 03 j 06:43	1° ° 48'23		conjunction	723 Apr 04 j 05:52	16° ° 58'28	-1°47'38
retrograde	716 Jul 03 j 19:52	3° ° 47'37		minimum elong	723 Apr 04 j 05:52	16° ° 58'28	1°47'37
min. Earth dist.	716 Sep 21 j 04:21	2° ° 23'49	28.83908 AU	max. Earth dist.	723 Apr 05 j 04:26	17° ° 00'36	30.81303 AU
opposition	716 Sep 22 j 02:57	2° ° 22'13	-1°45'58	morning rise	723 Apr 20 j 06:09	17° ° 34'21	
direct	716 Dec 08 j 14:37	0° ° 58'57		retrograde	723 Jul 20 j 19:26	19° ° 33'25	
evening set	717 Mar 05 j 04:00	2° ° 52'13		opposition	723 Oct 08 j 14:45	18° ° 07'55	-1°55'30
				min. Earth dist.	723 Oct 07 j 18:17	18° ° 09'22	28.81281 AU
conjunction	717 Mar 20 j 22:14	3° ° 27'36	-1°39'58	direct	723 Dec 25 j 01:35	16° ° 44'20	
minimum elong	717 Mar 20 j 22:14	3° ° 27'36	1°39'58	evening set	724 Mar 20 j 21:38	18° ° 37'50	
max. Earth dist.	717 Mar 21 j 21:50	3° ° 29'50	30.83685 AU				
morning rise	717 Apr 05 j 20:11	4° ° 03'21		conjunction	724 Apr 05 j 19:00	19° ° 13'25	-1°48'21
retrograde	717 Jul 06 j 09:56	6° ° 02'38		minimum elong	724 Apr 05 j 19:00	19° ° 13'25	1°48'21
opposition	717 Sep 24 j 15:08	4° ° 37'15	-1°47'49	max. Earth dist.	724 Apr 06 j 16:27	19° ° 15'26	30.81039 AU
min. Earth dist.	717 Sep 23 j 16:45	4° ° 38'49	28.83681 AU	morning rise	724 Apr 21 j 19:50	19° ° 49'19	
direct	717 Dec 11 j 00:37	3° ° 13'58		retrograde	724 Jul 22 j 08:39	21° ° 48'21	
evening set	718 Mar 07 j 16:40	5° ° 07'18		min. Earth dist.	724 Oct 09 j 06:41	20° ° 24'13	28.81095 AU
				opposition	724 Oct 10 j 02:32	20° ° 22'49	-1°56'11
conjunction	718 Mar 23 j 11:27	5° ° 42'43	-1°41'38	direct	724 Dec 26 j 12:18	18° ° 59'11	
minimum elong	718 Mar 23 j 11:26	5° ° 42'43	1°41'38	evening set	725 Mar 23 j 10:33	20° ° 52'43	
max. Earth dist.	718 Mar 24 j 11:28	5° ° 44'59	30.83408 AU				
morning rise	718 Apr 08 j 09:43	6° ° 18'29		conjunction	725 Apr 08 j 08:33	21° ° 28'20	-1°48'54
retrograde	718 Jul 08 j 22:16	8° ° 17'47		minimum elong	725 Apr 08 j 08:33	21° ° 28'20	1°48'54
min. Earth dist.	718 Sep 26 j 05:56	6° ° 53'55	28.83359 AU	max. Earth dist.	725 Apr 09 j 06:57	21° ° 30'26	30.80921 AU
opposition	718 Sep 27 j 03:21	6° ° 52'25	-1°49'32	morning rise	725 Apr 24 j 09:37	22° ° 04'15	
direct	718 Dec 13 j 11:25	5° ° 29'07		retrograde	725 Jul 24 j 20:08	24° ° 03'13	
evening set	719 Mar 10 j 05:29	7° ° 22'30		opposition	725 Oct 12 j 14:04	22° ° 37'43	-1°56'41
				min. Earth dist.	725 Oct 11 j 18:06	22° ° 39'07	28.81048 AU
conjunction	719 Mar 26 j 00:41	7° ° 57'57	-1°43'09	direct	725 Dec 29 j 00:39	21° ° 14'03	
minimum elong	719 Mar 26 j 00:40	7° ° 57'57	1°43'08	evening set	726 Mar 25 j 23:40	23° ° 07'38	
max. Earth dist.	719 Mar 26 j 23:39	8° ° 00'07	30.83047 AU				
morning rise	719 Apr 10 j 23:24	8° ° 33'44		conjunction	726 Apr 10 j 22:02	23° ° 43'15	-1°49'17
retrograde	719 Jul 11 j 12:50	10° ° 33'01		minimum elong	726 Apr 10 j 22:02	23° ° 43'15	1°49'17
opposition	719 Sep 29 j 15:20	9° ° 07'38	-1°51'04	max. Earth dist.	726 Apr 11 j 19:10	23° ° 45'15	30.80954 AU
min. Earth dist.	719 Sep 28 j 17:39	9° ° 09'10	28.82955 AU	morning rise	726 Apr 26 j 23:40	24° ° 19'12	
direct	719 Dec 15 j 23:18	7° ° 44'17		retrograde	726 Jul 27 j 09:45	26° ° 18'06	

min. Earth dist.	726 Oct 14 j 05:47	24° Υ 54'03	28.81150 AU	conjunction	733 Apr 26 j 23:44	9° \mathcal{B} 30'07	-1°47'14
opposition	726 Oct 15 j 01:39	24° Υ 52'38	-1°57'00	minimum elong	733 Apr 26 j 23:44	9° \mathcal{B} 30'07	1°47'15
direct	726 Dec 31 j 10:45	23° Υ 28'57		max. Earth dist.	733 Apr 27 j 16:13	9° \mathcal{B} 31'40	30.82159 AU
evening set	727 Mar 28 j 12:49	25° Υ 22'35		morning rise	733 May 13 j 03:58	10° \mathcal{B} 06'12	
				retrograde	733 Aug 12 j 06:13	12° \mathcal{B} 04'35	
conjunction	727 Apr 13 j 11:43	25° Υ 58'15	-1°49'30	opposition	733 Oct 30 j 10:00	10° \mathcal{B} 39'22	-1°54'11
minimum elong	727 Apr 13 j 11:42	25° Υ 58'15	1°49'29	min. Earth dist.	733 Oct 29 j 19:15	10° \mathcal{B} 40'25	28.82266 AU
max. Earth dist.	727 Apr 14 j 09:31	26° Υ 00'18	30.81108 AU	direct	734 Jan 15 j 21:39	9° \mathcal{B} 15'27	
morning rise	727 Apr 29 j 13:35	26° Υ 34'13		evening set	734 Apr 13 j 11:52	11° \mathcal{B} 09'29	
retrograde	727 Jul 29 j 21:34	28° Υ 33'04					
opposition	727 Oct 17 j 13:11	27° Υ 07'39	-1°57'08	conjunction	734 Apr 29 j 14:02	11° \mathcal{B} 45'21	-1°46'17
min. Earth dist.	727 Oct 16 j 18:08	27° Υ 09'00	28.81354 AU	minimum elong	734 Apr 29 j 14:03	11° \mathcal{B} 45'21	1°46'18
direct	728 Jan 02 j 21:16	25° Υ 43'58		max. Earth dist.	734 Apr 30 j 06:49	11° \mathcal{B} 46'55	30.82135 AU
evening set	728 Mar 30 j 02:06	27° Υ 37'40		morning rise	734 May 15 j 18:27	12° \mathcal{B} 21'26	
				retrograde	734 Aug 14 j 18:22	14° \mathcal{B} 19'41	
conjunction	728 Apr 15 j 01:24	28° Υ 13'21	-1°49'32	opposition	734 Nov 01 j 21:12	12° \mathcal{B} 54'30	-1°53'04
minimum elong	728 Apr 15 j 01:24	28° Υ 13'21	1°49'33	min. Earth dist.	734 Nov 01 j 06:51	12° \mathcal{B} 55'31	28.82234 AU
max. Earth dist.	728 Apr 15 j 22:15	28° Υ 15'19	30.81367 AU	direct	735 Jan 18 j 10:45	11° \mathcal{B} 30'31	
morning rise	728 May 01 j 03:44	28° Υ 49'21		evening set	735 Apr 16 j 01:37	13° \mathcal{B} 24'35	
	728 Jun 06 j 03:33	0° \mathcal{B}					
retrograde	728 Jul 31 j 11:06	0° \mathcal{B} 48'09		conjunction	735 May 02 j 04:03	14° \mathcal{B} 00'27	-1°45'11
	728 Sep 26 j 06:58	30° $\mathcal{R}\Upsilon$		minimum elong	735 May 02 j 04:03	14° \mathcal{B} 00'27	1°45'10
min. Earth dist.	728 Oct 18 j 05:23	29° Υ 24'09	28.81639 AU	max. Earth dist.	735 May 02 j 19:03	14° \mathcal{B} 01'52	30.82128 AU
opposition	728 Oct 19 j 00:40	29° Υ 22'48	-1°57'05	morning rise	735 May 18 j 08:56	14° \mathcal{B} 36'34	
direct	729 Jan 04 j 08:44	27° Υ 59'06			735 May 29 j 07:58	15° \mathcal{B}	
evening set	729 Apr 01 j 15:28	29° Υ 52'52		retrograde	735 Aug 17 j 08:00	16° \mathcal{B} 34'41	
	729 Apr 04 j 21:05	0° \mathcal{B}		opposition	735 Nov 04 j 08:18	15° \mathcal{B} 09'30	-1°51'48
				min. Earth dist.	735 Nov 03 j 18:24	15° \mathcal{B} 10'29	28.82261 AU
conjunction	729 Apr 17 j 15:14	0° \mathcal{B} 28'35	-1°49'25		735 Nov 09 j 22:42	15° $\mathcal{R}\mathcal{B}$	
minimum elong	729 Apr 17 j 15:14	0° \mathcal{B} 28'35	1°49'24	direct	736 Jan 20 j 21:39	13° \mathcal{B} 45'27	
max. Earth dist.	729 Apr 18 j 11:47	0° \mathcal{B} 30'31	30.81653 AU		736 Mar 29 j 15:10	15° \mathcal{B}	
morning rise	729 May 03 j 17:56	1° \mathcal{B} 04'36		evening set	736 Apr 17 j 15:14	15° \mathcal{B} 39'33	
retrograde	729 Aug 02 j 23:20	3° \mathcal{B} 03'22					
opposition	729 Oct 21 j 12:17	1° \mathcal{B} 38'03	-1°56'52	conjunction	736 May 03 j 18:13	16° \mathcal{B} 15'28	-1°43'54
min. Earth dist.	729 Oct 20 j 18:36	1° \mathcal{B} 39'18	28.81917 AU	minimum elong	736 May 03 j 18:13	16° \mathcal{B} 15'28	1°43'54
direct	730 Jan 06 j 20:05	0° \mathcal{B} 14'21		max. Earth dist.	736 May 04 j 09:41	16° \mathcal{B} 16'55	30.82192 AU
evening set	730 Apr 04 j 05:05	2° \mathcal{B} 08'12		morning rise	736 May 19 j 23:16	16° \mathcal{B} 51'35	
				retrograde	736 Aug 18 j 19:06	18° \mathcal{B} 49'35	
conjunction	730 Apr 20 j 05:23	2° \mathcal{B} 43'57	-1°49'07	opposition	736 Nov 05 j 19:22	17° \mathcal{B} 24'25	-1°50'21
minimum elong	730 Apr 20 j 05:23	2° \mathcal{B} 43'57	1°49'07	min. Earth dist.	736 Nov 05 j 06:25	17° \mathcal{B} 25'20	28.82373 AU
max. Earth dist.	730 Apr 21 j 01:09	2° \mathcal{B} 45'48	30.81914 AU	direct	737 Jan 22 j 08:44	16° \mathcal{B} 00'19	
morning rise	730 May 06 j 08:25	3° \mathcal{B} 19'58		evening set	737 Apr 20 j 04:53	17° \mathcal{B} 54'28	
retrograde	730 Aug 05 j 13:36	5° \mathcal{B} 18'40					
opposition	730 Oct 23 j 23:38	3° \mathcal{B} 53'25	-1°56'27	conjunction	737 May 06 j 08:15	18° \mathcal{B} 30'23	-1°42'29
min. Earth dist.	730 Oct 23 j 05:45	3° \mathcal{B} 54'41	28.82134 AU	minimum elong	737 May 06 j 08:15	18° \mathcal{B} 30'23	1°42'28
direct	731 Jan 09 j 08:42	2° \mathcal{B} 29'40		max. Earth dist.	737 May 06 j 22:29	18° \mathcal{B} 31'43	30.82375 AU
evening set	731 Apr 06 j 18:53	4° \mathcal{B} 23'36		morning rise	737 May 22 j 13:45	19° \mathcal{B} 06'32	
				retrograde	737 Aug 21 j 07:33	21° \mathcal{B} 04'24	
conjunction	731 Apr 22 j 19:30	4° \mathcal{B} 59'22	-1°48'39	opposition	737 Nov 08 j 06:21	19° \mathcal{B} 39'17	-1°48'45
minimum elong	731 Apr 22 j 19:30	4° \mathcal{B} 59'22	1°48'39	min. Earth dist.	737 Nov 07 j 17:09	19° \mathcal{B} 40'13	28.82616 AU
max. Earth dist.	731 Apr 23 j 13:53	5° \mathcal{B} 01'05	30.82080 AU	direct	738 Jan 24 j 20:26	18° \mathcal{B} 15'07	
morning rise	731 May 08 j 22:58	5° \mathcal{B} 35'25		evening set	738 Apr 22 j 18:40	20° \mathcal{B} 09'20	
retrograde	731 Aug 08 j 02:53	7° \mathcal{B} 34'01					
opposition	731 Oct 26 j 11:16	6° \mathcal{B} 08'48	-1°55'52	conjunction	738 May 08 j 22:27	20° \mathcal{B} 45'16	-1°40'54
min. Earth dist.	731 Oct 25 j 19:10	6° \mathcal{B} 09'56	28.82255 AU	minimum elong	738 May 08 j 22:28	20° \mathcal{B} 45'16	1°40'53
direct	732 Jan 11 j 20:05	4° \mathcal{B} 45'01		max. Earth dist.	738 May 09 j 12:33	20° \mathcal{B} 46'36	30.82678 AU
evening set	732 Apr 08 j 08:22	6° \mathcal{B} 38'59		morning rise	738 May 25 j 04:10	21° \mathcal{B} 21'25	
				retrograde	738 Aug 23 j 18:32	23° \mathcal{B} 19'11	
conjunction	732 Apr 24 j 09:36	7° \mathcal{B} 14'47	-1°48'02	opposition	738 Nov 10 j 17:18	21° \mathcal{B} 54'07	-1°46'58
minimum elong	732 Apr 24 j 09:37	7° \mathcal{B} 14'47	1°48'02	min. Earth dist.	738 Nov 10 j 05:28	21° \mathcal{B} 54'58	28.82988 AU
max. Earth dist.	732 Apr 25 j 03:57	7° \mathcal{B} 16'30	30.82159 AU	direct	739 Jan 27 j 07:11	20° \mathcal{B} 29'56	
morning rise	732 May 10 j 13:19	7° \mathcal{B} 50'50		evening set	739 Apr 25 j 08:24	22° \mathcal{B} 24'13	
retrograde	732 Aug 09 j 17:04	9° \mathcal{B} 49'20					
opposition	732 Oct 27 j 22:41	8° \mathcal{B} 24'08	-1°55'07	conjunction	739 May 11 j 12:38	23° \mathcal{B} 00'11	-1°39'09
min. Earth dist.	732 Oct 27 j 06:35	8° \mathcal{B} 25'16	28.82281 AU	minimum elong	739 May 11 j 12:38	23° \mathcal{B} 00'11	1°39'09
direct	733 Jan 13 j 10:14	7° \mathcal{B} 00'17		max. Earth dist.	739 May 12 j 02:05	23° \mathcal{B} 01'26	30.83133 AU
evening set	733 Apr 10 j 22:11	8° \mathcal{B} 54'17		morning rise	739 May 27 j 18:38	23° \mathcal{B} 36'20	

retrograde	739 Aug 26 j 07:57	25° 8 33'59		min. Earth dist.	745 Nov 25 j 15:14	7° II 39'36	28.86784 AU
opposition	739 Nov 13 j 04:12	24° 8 09'00	-1°45'01	direct	746 Feb 11 j 21:13	6° II 14'44	
min. Earth dist.	739 Nov 12 j 15:48	24° 8 09'53	28.83498 AU	evening set	746 May 11 j 10:37	8° II 09'26	
direct	740 Jan 29 j 18:51	22° 8 44'47					
evening set	740 Apr 26 j 22:07	24° 8 39'09		conjunction	746 May 27 j 17:14	8° II 45'32	-1°22'54
				minimum elong	746 May 27 j 17:15	8° II 45'32	1°22'54
conjunction	740 May 13 j 02:39	25° 8 15'08	-1°37'16	max. Earth dist.	746 May 27 j 23:22	8° II 46'07	30.86904 AU
minimum elong	740 May 13 j 02:39	25° 8 15'08	1°37'16	morning rise	746 Jun 13 j 00:48	9° II 21'45	
max. Earth dist.	740 May 13 j 15:14	25° 8 16'19	30.83700 AU	retrograde	746 Sep 11 j 01:04	11° II 18'24	
morning rise	740 May 29 j 08:58	25° 8 51'19		opposition	746 Nov 28 j 07:53	9° II 53'50	-1°27'08
retrograde	740 Aug 27 j 20:12	27° 8 48'52		min. Earth dist.	746 Nov 28 j 01:59	9° II 54'15	28.87143 AU
opposition	740 Nov 14 j 15:13	26° 8 23'57	-1°42'55	direct	747 Feb 14 j 09:16	8° II 29'19	
min. Earth dist.	740 Nov 14 j 04:24	26° 8 24'43	28.84110 AU	evening set	747 May 14 j 00:39	10° II 24'03	
direct	741 Jan 31 j 06:08	24° 8 59'45					
evening set	741 Apr 29 j 11:59	26° 8 54'11		conjunction	747 May 30 j 07:36	11° II 00'10	-1°20'04
				minimum elong	747 May 30 j 07:36	11° II 00'10	1°20'04
conjunction	741 May 15 j 17:02	27° 8 30'12	-1°35'13	max. Earth dist.	747 May 30 j 13:22	11° II 00'42	30.87262 AU
minimum elong	741 May 15 j 17:02	27° 8 30'12	1°35'13	morning rise	747 Jun 15 j 15:13	11° II 36'22	
max. Earth dist.	741 May 16 j 05:32	27° 8 31'22	30.84350 AU	retrograde	747 Sep 13 j 11:39	13° II 32'50	
morning rise	741 May 31 j 23:31	28° 8 06'23		opposition	747 Nov 30 j 18:34	12° II 08'18	-1°24'01
	741 Aug 15 j 08:22	0° II		min. Earth dist.	747 Nov 30 j 14:19	12° II 08'36	28.87516 AU
retrograde	741 Aug 30 j 09:49	0° II 03'49		direct	748 Feb 16 j 20:07	10° II 43'42	
	741 Sep 14 j 13:34	30° 8		evening set	748 May 15 j 14:27	12° II 38'27	
opposition	741 Nov 17 j 01:55	28° 8 39'00	-1°40'39				
min. Earth dist.	741 Nov 16 j 15:15	28° 8 39'45	28.84759 AU	conjunction	748 May 31 j 21:42	13° II 14'34	-1°17'06
direct	742 Feb 02 j 20:01	27° 8 14'47		minimum elong	748 May 31 j 21:42	13° II 14'34	1°17'05
evening set	742 May 02 j 02:12	29° 8 09'18		max. Earth dist.	748 Jun 01 j 02:28	13° II 15'01	30.87674 AU
				morning rise	748 Jun 17 j 05:31	13° II 50'46	
conjunction	742 May 18 j 07:27	29° 8 45'21	-1°33'01	retrograde	748 Sep 14 j 23:41	15° II 47'03	
minimum elong	742 May 18 j 07:27	29° 8 45'21	1°33'01	opposition	748 Dec 02 j 05:02	14° II 22'33	-1°20'48
max. Earth dist.	742 May 18 j 18:00	29° 8 46'20	30.84997 AU	min. Earth dist.	748 Dec 02 j 00:27	14° II 22'52	28.87955 AU
	742 May 24 j 20:35	0° II		direct	749 Feb 18 j 08:09	12° II 57'52	
morning rise	742 Jun 03 j 14:17	0° II 21'32		evening set	749 May 18 j 04:29	14° II 52'39	
retrograde	742 Sep 01 j 22:57	2° II 18'51					
opposition	742 Nov 19 j 12:53	0° II 54'07	-1°38'14	conjunction	749 Jun 03 j 11:55	15° II 28'46	-1°14'01
min. Earth dist.	742 Nov 19 j 03:43	0° II 54'46	28.85390 AU	minimum elong	749 Jun 03 j 11:56	15° II 28'46	1°14'02
	742 Dec 24 j 01:15	30° 8		max. Earth dist.	749 Jun 03 j 15:44	15° II 29'07	30.88159 AU
direct	743 Feb 05 j 07:20	29° 8 29'52		morning rise	749 Jun 19 j 19:51	16° II 04'58	
	743 Mar 19 j 20:56	0° II		retrograde	749 Sep 17 j 10:07	18° II 01'05	
evening set	743 May 04 j 16:10	1° II 24'28		opposition	749 Dec 04 j 15:29	16° II 36'37	-1°17'27
				min. Earth dist.	749 Dec 04 j 12:30	16° II 36'50	28.88501 AU
conjunction	743 May 20 j 21:55	2° II 00'32	-1°30'41	direct	750 Feb 20 j 19:29	15° II 11'52	
minimum elong	743 May 20 j 21:55	2° II 00'32	1°30'41	evening set	750 May 20 j 18:24	17° II 06'42	
max. Earth dist.	743 May 21 j 08:24	2° II 01'30	30.85591 AU				
morning rise	743 Jun 06 j 04:46	2° II 36'44		conjunction	750 Jun 06 j 02:10	17° II 42'50	-1°10'50
retrograde	743 Sep 04 j 11:50	4° II 33'54		minimum elong	750 Jun 06 j 02:10	17° II 42'50	1°10'50
opposition	743 Nov 21 j 23:44	3° II 09'14	-1°35'40	max. Earth dist.	750 Jun 06 j 05:51	17° II 43'10	30.88776 AU
min. Earth dist.	743 Nov 21 j 15:17	3° II 09'50	28.85932 AU	morning rise	750 Jun 22 j 10:05	18° II 19'01	
direct	744 Feb 07 j 20:43	1° II 44'57		retrograde	750 Sep 19 j 22:06	20° II 14'58	
evening set	744 May 06 j 06:23	3° II 39'36		opposition	750 Dec 07 j 01:54	18° II 50'34	-1°13'59
				min. Earth dist.	750 Dec 06 j 22:42	18° II 50'47	28.89177 AU
conjunction	744 May 22 j 12:19	4° II 15'41	-1°28'13	direct	751 Feb 23 j 08:48	17° II 25'46	
minimum elong	744 May 22 j 12:19	4° II 15'41	1°28'13	evening set	751 May 23 j 08:17	19° II 20'40	
max. Earth dist.	744 May 22 j 20:27	4° II 16'26	30.86101 AU				
morning rise	744 Jun 07 j 19:33	4° II 51'53		conjunction	751 Jun 08 j 16:05	19° II 56'48	-1°07'33
retrograde	744 Sep 06 j 02:05	6° II 48'54		minimum elong	751 Jun 08 j 16:05	19° II 56'48	1°07'34
opposition	744 Nov 23 j 10:32	5° II 24'16	-1°32'57	max. Earth dist.	751 Jun 08 j 18:21	19° II 57'00	30.89529 AU
min. Earth dist.	744 Nov 23 j 02:58	5° II 24'49	28.86401 AU	morning rise	751 Jun 25 j 00:09	20° II 32'58	
direct	745 Feb 09 j 08:49	3° II 59'56		retrograde	751 Sep 22 j 10:18	22° II 28'48	
evening set	745 May 08 j 20:26	5° II 54'36		opposition	751 Dec 09 j 12:23	21° II 04'28	-1°10'25
				min. Earth dist.	751 Dec 09 j 10:13	21° II 04'37	28.90010 AU
conjunction	745 May 25 j 02:51	6° II 30'42	-1°25'38	direct	752 Feb 25 j 19:38	19° II 39'39	
minimum elong	745 May 25 j 02:51	6° II 30'42	1°25'38	evening set	752 May 24 j 22:05	21° II 34'37	
max. Earth dist.	745 May 25 j 10:53	6° II 31'27	30.86529 AU				
morning rise	745 Jun 10 j 10:08	7° II 06'54		conjunction	752 Jun 10 j 06:15	22° II 10'46	-1°04'09
retrograde	745 Sep 08 j 12:40	9° II 03'45		minimum elong	752 Jun 10 j 06:15	22° II 10'46	1°04'10
opposition	745 Nov 25 j 21:21	7° II 39'09	-1°30'06	max. Earth dist.	752 Jun 10 j 08:52	22° II 11'00	30.90438 AU

morning rise	752 Jun 26 j 14:13	22° Π 46'56	direct	759 Mar 13 j 06:48	5° \mathfrak{D} 18'12
retrograde	752 Sep 23 j 22:37	24° Π 42'37	evening set	759 Jun 11 j 00:16	7° \mathfrak{D} 13'38
opposition	752 Dec 10 j 22:41	23° Π 18'23 -1°06'44			
min. Earth dist.	752 Dec 10 j 20:57	23° Π 18'31 28.90968 AU	conjunction	759 Jun 27 j 08:56	7° \mathfrak{D} 49'47 -0°38'01
direct	753 Feb 27 j 08:46	21° Π 53'35	minimum elong	759 Jun 27 j 08:56	7° \mathfrak{D} 49'47 0°38'01
evening set	753 May 27 j 12:08	23° Π 48'38	max. Earth dist.	759 Jun 27 j 03:46	7° \mathfrak{D} 49'18 30.96913 AU
			morning rise	759 Jul 13 j 16:29	8° \mathfrak{D} 25'51
conjunction	753 Jun 12 j 20:18	24° Π 24'48 -1°00'40	retrograde	759 Oct 10 j 07:41	10° \mathfrak{D} 20'33
minimum elong	753 Jun 12 j 20:18	24° Π 24'48 1°00'40	opposition	759 Dec 26 j 23:29	8° \mathfrak{D} 56'56 -0°38'31
max. Earth dist.	753 Jun 12 j 20:57	24° Π 24'51 30.91456 AU	min. Earth dist.	759 Dec 27 j 04:06	8° \mathfrak{D} 56'37 28.97277 AU
morning rise	753 Jun 29 j 04:28	25° Π 00'57	direct	760 Mar 14 j 19:38	7° \mathfrak{D} 31'58
retrograde	753 Sep 26 j 12:36	26° Π 56'31	evening set	760 Jun 12 j 14:13	9° \mathfrak{D} 27'25
opposition	753 Dec 13 j 09:04	25° Π 32'24 -1°02'57			
min. Earth dist.	753 Dec 13 j 07:57	25° Π 32'29 28.92017 AU	conjunction	760 Jun 28 j 22:45	10° \mathfrak{D} 03'33 -0°34'01
direct	754 Mar 01 j 20:44	24° Π 07'37	minimum elong	760 Jun 28 j 22:45	10° \mathfrak{D} 03'34 0°34'01
evening set	754 May 30 j 02:08	26° Π 02'46	max. Earth dist.	760 Jun 28 j 15:57	10° \mathfrak{D} 02'56 30.97626 AU
			morning rise	760 Jul 15 j 06:13	10° \mathfrak{D} 39'37
conjunction	754 Jun 15 j 10:33	26° Π 38'56 -0°57'05	retrograde	760 Oct 11 j 18:51	12° \mathfrak{D} 34'08
minimum elong	754 Jun 15 j 10:33	26° Π 38'56 0°57'04	opposition	760 Dec 28 j 09:40	11° \mathfrak{D} 10'34 -0°34'13
max. Earth dist.	754 Jun 15 j 11:19	26° Π 39'00 30.92514 AU	min. Earth dist.	760 Dec 28 j 15:37	11° \mathfrak{D} 10'08 28.98009 AU
morning rise	754 Jul 01 j 18:30	27° Π 15'05	direct	761 Mar 17 j 06:14	9° \mathfrak{D} 45'31
retrograde	754 Sep 28 j 23:22	29° Π 10'32	evening set	761 Jun 15 j 03:59	11° \mathfrak{D} 41'01
opposition	754 Dec 15 j 19:29	27° Π 46'32 -0°59'04			
min. Earth dist.	754 Dec 15 j 19:50	27° Π 46'31 28.93067 AU	conjunction	761 Jul 01 j 12:38	12° \mathfrak{D} 17'08 -0°29'59
direct	755 Mar 04 j 08:56	26° Π 21'46	minimum elong	761 Jul 01 j 12:38	12° \mathfrak{D} 17'08 0°29'59
evening set	755 Jun 01 j 16:15	28° Π 16'59	max. Earth dist.	761 Jul 01 j 05:59	12° \mathfrak{D} 16'31 30.98377 AU
			morning rise	761 Jul 17 j 19:48	12° \mathfrak{D} 53'09
conjunction	755 Jun 18 j 00:39	28° Π 53'09 -0°53'24	retrograde	761 Oct 14 j 05:53	14° \mathfrak{D} 47'30
minimum elong	755 Jun 18 j 00:39	28° Π 53'09 0°53'25	opposition	761 Dec 30 j 19:55	13° \mathfrak{D} 23'58 -0°29'53
max. Earth dist.	755 Jun 17 j 23:24	28° Π 53'03 30.93557 AU	min. Earth dist.	761 Dec 31 j 02:21	13° \mathfrak{D} 23'31 28.98780 AU
morning rise	755 Jul 04 j 08:42	29° Π 29'18	direct	762 Mar 19 j 20:15	11° \mathfrak{D} 58'52
	755 Jul 18 j 23:15	0° \mathfrak{D}	evening set	762 Jun 17 j 17:48	13° \mathfrak{D} 54'24
retrograde	755 Oct 01 j 12:27	1° \mathfrak{D} 24'37			
opposition	755 Dec 18 j 05:53	0° \mathfrak{D} 00'44 -0°55'06	conjunction	762 Jul 04 j 02:10	14° \mathfrak{D} 30'30 -0°25'54
min. Earth dist.	755 Dec 18 j 06:29	0° \mathfrak{D} 00'42 28.94079 AU	minimum elong	762 Jul 04 j 02:10	14° \mathfrak{D} 30'30 0°25'54
	755 Dec 18 j 16:20	30° $\mathfrak{R}\Pi$	max. Earth dist.	762 Jul 03 j 17:42	14° \mathfrak{D} 29'43 30.99194 AU
direct	756 Mar 05 j 20:44	28° Π 35'58	morning rise	762 Jul 20 j 09:15	15° \mathfrak{D} 06'29
	756 May 19 j 08:09	0° \mathfrak{D}	retrograde	762 Oct 16 j 18:26	17° \mathfrak{D} 00'41
evening set	756 Jun 03 j 06:12	0° \mathfrak{D} 31'15	opposition	763 Jan 02 j 06:06	15° \mathfrak{D} 37'12 -0°25'30
			min. Earth dist.	763 Jan 02 j 12:50	15° \mathfrak{D} 36'43 28.99658 AU
conjunction	756 Jun 19 j 14:46	1° \mathfrak{D} 07'26 -0°49'40	direct	763 Mar 22 j 08:52	14° \mathfrak{D} 12'03
minimum elong	756 Jun 19 j 14:47	1° \mathfrak{D} 07'26 0°49'39	evening set	763 Jun 20 j 07:23	16° \mathfrak{D} 07'37
max. Earth dist.	756 Jun 19 j 13:02	1° \mathfrak{D} 07'16 30.94521 AU			
morning rise	756 Jul 05 j 22:39	1° \mathfrak{D} 43'34	conjunction	763 Jul 06 j 15:49	16° \mathfrak{D} 43'42 -0°21'47
retrograde	756 Oct 02 j 23:34	3° \mathfrak{D} 38'45	minimum elong	763 Jul 06 j 15:49	16° \mathfrak{D} 43'42 0°21'48
opposition	756 Dec 19 j 16:28	2° \mathfrak{D} 14'57 -0°51'03	max. Earth dist.	763 Jul 06 j 07:50	16° \mathfrak{D} 42'58 31.00127 AU
min. Earth dist.	756 Dec 19 j 19:01	2° \mathfrak{D} 14'46 28.94994 AU	morning rise	763 Jul 22 j 22:28	17° \mathfrak{D} 19'39
direct	757 Mar 08 j 07:29	0° \mathfrak{D} 50'09	retrograde	763 Oct 19 j 04:34	19° \mathfrak{D} 13'43
evening set	757 Jun 05 j 20:21	2° \mathfrak{D} 45'30	opposition	764 Jan 04 j 16:22	17° \mathfrak{D} 50'17 -0°21'05
			min. Earth dist.	764 Jan 05 j 00:07	17° \mathfrak{D} 49'44 29.00652 AU
conjunction	757 Jun 22 j 04:57	3° \mathfrak{D} 21'40 -0°45'50	direct	764 Mar 23 j 21:13	16° \mathfrak{D} 25'07
minimum elong	757 Jun 22 j 04:57	3° \mathfrak{D} 21'40 0°45'51	evening set	764 Jun 21 j 20:59	18° \mathfrak{D} 20'43
max. Earth dist.	757 Jun 22 j 01:35	3° \mathfrak{D} 21'21 30.95398 AU			
morning rise	757 Jul 08 j 12:49	3° \mathfrak{D} 57'48	conjunction	764 Jul 08 j 05:11	18° \mathfrak{D} 56'47 -0°17'39
retrograde	757 Oct 05 j 11:08	5° \mathfrak{D} 52'48	minimum elong	764 Jul 08 j 05:11	18° \mathfrak{D} 56'47 0°17'38
opposition	757 Dec 22 j 02:43	4° \mathfrak{D} 29'06 -0°46'56	max. Earth dist.	764 Jul 07 j 19:39	18° \mathfrak{D} 55'55 31.01197 AU
min. Earth dist.	757 Dec 22 j 05:19	4° \mathfrak{D} 28'55 28.95815 AU	morning rise	764 Jul 24 j 11:46	19° \mathfrak{D} 32'43
direct	758 Mar 10 j 19:23	3° \mathfrak{D} 04'15	retrograde	764 Oct 20 j 17:35	21° \mathfrak{D} 26'38
evening set	758 Jun 08 j 10:28	4° \mathfrak{D} 59'38	opposition	765 Jan 06 j 02:32	20° \mathfrak{D} 03'18 -0°16'38
			min. Earth dist.	765 Jan 06 j 10:04	20° \mathfrak{D} 02'46 29.01778 AU
conjunction	758 Jun 24 j 19:04	5° \mathfrak{D} 35'48 -0°41'57	direct	765 Mar 26 j 09:41	18° \mathfrak{D} 38'08
minimum elong	758 Jun 24 j 19:04	5° \mathfrak{D} 35'48 0°41'57	evening set	765 Jun 24 j 10:39	20° \mathfrak{D} 33'47
max. Earth dist.	758 Jun 24 j 14:26	5° \mathfrak{D} 35'22 30.96178 AU			
morning rise	758 Jul 11 j 02:47	6° \mathfrak{D} 11'55	conjunction	765 Jul 10 j 18:46	21° \mathfrak{D} 09'51 -0°13'29
retrograde	758 Oct 07 j 20:44	8° \mathfrak{D} 06'46	minimum elong	765 Jul 10 j 18:47	21° \mathfrak{D} 09'51 0°13'29
opposition	758 Dec 24 j 13:12	6° \mathfrak{D} 43'06 -0°42'45	behind sun begin	765 Jul 10 j 15:14	21° \mathfrak{D} 09'32
min. Earth dist.	758 Dec 24 j 17:42	6° \mathfrak{D} 42'47 28.96566 AU	behind sun end	765 Jul 10 j 22:19	21° \mathfrak{D} 10'10

max. Earth dist.	765 Jul 10 j 09:22	21°08'59	31.02367 AU	morning rise	770 Aug 07 j 18:02	2°05'04	
morning rise	765 Jul 27 j 00:56	21°04'45		retrograde	770 Nov 03 j 09:35	4°04'19	
retrograde	765 Oct 23 j 04:21	23°03'33		opposition	771 Jan 19 j 16:33	3°02'31	0°10'20
opposition	766 Jan 08 j 12:47	22°01'19	-0°12'09	min. Earth dist.	771 Jan 20 j 05:41	3°02'36	29.08340 AU
min. Earth dist.	766 Jan 08 j 21:56	22°01'54	29.02986 AU	direct	771 Apr 09 j 08:01	1°05'21	
direct	766 Mar 28 j 21:00	20°05'10		evening set	771 Jul 08 j 20:24	3°05'20	
evening set	766 Jun 27 j 00:22	22°04'53		max. Earth dist.	771 Jul 24 j 10:43	4°02'46	31.08721 AU
conjunction	766 Jul 13 j 08:14	23°02'56	-0°09'18	conjunction	771 Jul 25 j 02:50	4°02'15	0°11'49
minimum elong	766 Jul 13 j 08:14	23°02'56	0°09'17	minimum elong	771 Jul 25 j 02:50	4°02'15	0°11'49
behind sun begin	766 Jul 13 j 02:43	23°02'26		behind sun begin	771 Jul 24 j 22:18	4°02'51	
behind sun end	766 Jul 13 j 13:45	23°02'25		behind sun end	771 Jul 25 j 07:22	4°02'39	
max. Earth dist.	766 Jul 12 j 21:37	23°02'57	31.03606 AU	morning rise	771 Aug 10 j 06:52	5°03'57	
morning rise	766 Jul 29 j 14:10	23°05'48		retrograde	771 Nov 05 j 21:38	6°05'05	
retrograde	766 Oct 25 j 15:50	25°05'29		opposition	772 Jan 22 j 02:50	5°03'48	0°14'47
opposition	767 Jan 10 j 23:02	24°02'22	-0°07'40	min. Earth dist.	772 Jan 22 j 16:30	5°03'32	29.09110 AU
min. Earth dist.	767 Jan 11 j 07:55	24°02'44	29.04223 AU	direct	772 Apr 10 j 20:14	4°09'05	
direct	767 Mar 31 j 09:12	23°04'14		evening set	772 Jul 10 j 09:37	6°05'07	
evening set	767 Jun 29 j 13:54	25°00'02		conjunction	772 Jul 26 j 15:56	6°04'00	0°15'59
conjunction	767 Jul 15 j 21:32	25°03'03	-0°05'06	minimum elong	772 Jul 26 j 15:56	6°04'00	0°15'59
minimum elong	767 Jul 15 j 21:33	25°03'03	0°05'07	max. Earth dist.	772 Jul 26 j 00:03	6°03'32	31.09450 AU
behind sun begin	767 Jul 15 j 15:09	25°03'29		morning rise	772 Aug 11 j 19:23	7°01'39	
behind sun end	767 Jul 16 j 03:57	25°03'37		retrograde	772 Nov 07 j 07:25	9°09'40	
max. Earth dist.	767 Jul 15 j 10:05	25°03'50	31.04823 AU	opposition	773 Jan 23 j 13:12	7°04'56	0°19'13
morning rise	767 Aug 01 j 03:05	26°01'54		min. Earth dist.	773 Jan 24 j 04:13	7°04'53	29.09809 AU
retrograde	767 Oct 28 j 01:41	28°05'29		direct	773 Apr 13 j 08:50	6°02'14	
opposition	768 Jan 13 j 09:28	26°04'27	-0°03'10	evening set	773 Jul 12 j 23:00	8°01'43	
min. Earth dist.	768 Jan 13 j 20:08	26°04'42	29.05421 AU	max. Earth dist.	773 Jul 28 j 11:12	8°05'56	31.10140 AU
direct	768 Apr 01 j 19:44	25°01'20		conjunction	773 Jul 29 j 04:46	8°05'34	0°20'06
evening set	768 Jul 01 j 03:33	27°01'31		minimum elong	773 Jul 29 j 04:46	8°05'34	0°20'06
conjunction	768 Jul 17 j 11:01	27°04'11	-0°00'51	morning rise	773 Aug 14 j 07:55	9°02'10	
minimum elong	768 Jul 17 j 11:01	27°04'11	0°00'51	retrograde	773 Nov 09 j 19:54	11°02'20	
behind sun begin	768 Jul 17 j 04:26	27°04'36		opposition	774 Jan 25 j 23:24	9°05'22	0°23'37
behind sun end	768 Jul 17 j 17:35	27°04'46		min. Earth dist.	774 Jan 26 j 14:13	9°05'19	29.10503 AU
max. Earth dist.	768 Jul 16 j 22:50	27°04'04	31.05978 AU	direct	774 Apr 15 j 22:05	8°03'40	
morning rise	768 Aug 02 j 16:11	28°02'50		evening set	774 Jul 15 j 12:07	10°03'08	
asc. node	768 Sep 26 j 22:33	0°00'30		conjunction	774 Jul 31 j 17:36	11°05'56	0°24'12
	768 Sep 26 j 11:34	0°00'		minimum elong	774 Jul 31 j 17:36	11°05'56	0°24'13
retrograde	768 Oct 29 j 12:32	0°01'18		max. Earth dist.	774 Jul 31 j 00:21	11°04'21	31.10840 AU
	768 Dec 02 j 00:46	30°00'00		morning rise	774 Aug 16 j 20:07	11°04'13	
opposition	769 Jan 14 j 19:41	28°05'53	0°01'21	retrograde	774 Nov 12 j 06:12	13°03'48	
min. Earth dist.	769 Jan 15 j 06:41	28°05'46	29.06514 AU	opposition	775 Jan 28 j 09:50	12°01'13	0°27'59
direct	769 Apr 04 j 07:53	27°03'02		min. Earth dist.	775 Jan 29 j 02:01	12°01'02	29.11239 AU
evening set	769 Jul 03 j 17:21	29°02'20		direct	775 Apr 18 j 10:16	10°04'18	
	769 Jul 18 j 23:35	0°00'		evening set	775 Jul 18 j 01:00	12°04'23	
max. Earth dist.	769 Jul 19 j 10:28	0°01'01	31.07008 AU	max. Earth dist.	775 Aug 02 j 11:58	13°01'29	31.11619 AU
conjunction	769 Jul 20 j 00:27	0°02'18	0°03'28	conjunction	775 Aug 03 j 06:00	13°01'18	0°28'16
minimum elong	769 Jul 20 j 00:26	0°02'18	0°03'27	minimum elong	775 Aug 03 j 06:00	13°01'18	0°28'15
behind sun begin	769 Jul 19 j 17:54	0°01'43		morning rise	775 Aug 19 j 08:08	13°05'34	
behind sun end	769 Jul 20 j 06:59	0°02'53			775 Sep 22 j 09:58	15°00'	
morning rise	769 Aug 05 j 05:16	0°03'05		retrograde	775 Nov 14 j 16:44	15°04'21	
retrograde	769 Oct 31 j 23:22	2°03'12			776 Jan 08 j 11:43	15°00'00	
opposition	770 Jan 17 j 06:09	1°08'35	0°05'51	opposition	776 Jan 30 j 20:05	14°02'34	0°32'18
min. Earth dist.	770 Jan 17 j 18:32	1°07'43	29.07493 AU	min. Earth dist.	776 Jan 31 j 11:32	14°02'23	29.12064 AU
	770 Mar 05 j 14:24	30°00'00		direct	776 Apr 19 j 23:03	12°05'23	
direct	770 Apr 06 j 18:20	29°04'32		evening set	776 Jul 19 j 13:58	14°05'30	
	770 May 08 j 18:09	0°00'			776 Jul 22 j 02:33	15°00'	
evening set	770 Jul 06 j 06:50	1°03'39		conjunction	776 Aug 04 j 18:34	15°03'15	0°32'17
conjunction	770 Jul 22 j 13:44	2°01'52	0°07'39	minimum elong	776 Aug 04 j 18:34	15°03'15	0°32'17
minimum elong	770 Jul 22 j 13:44	2°01'52	0°07'40	max. Earth dist.	776 Aug 04 j 00:14	15°02'33	31.12491 AU
behind sun begin	770 Jul 22 j 07:48	2°01'48		morning rise	776 Aug 20 j 20:07	16°05'44	
behind sun end	770 Jul 22 j 19:41	2°01'52		retrograde	776 Nov 16 j 02:01	17°05'19	
max. Earth dist.	770 Jul 21 j 23:42	2°01'43	31.07919 AU				

opposition	777 Feb 01 j 06:23	16°Ω35'46	0°36'34	max. Earth dist.	783 Aug 20 j 10:47	0°η52'42	31.19257 AU
min. Earth dist.	777 Feb 01 j 23:01	16°Ω34'36	29.13006 AU				
direct	777 Apr 22 j 09:30	15°Ω10'26		conjunction	783 Aug 21 j 08:26	0°η54'42	0°58'43
evening set	777 Jul 22 j 02:52	17°Ω06'35		minimum elong	783 Aug 21 j 08:25	0°η54'42	0°58'42
				morning rise	783 Sep 06 j 05:58	1°η29'52	
conjunction	777 Aug 07 j 07:04	17°Ω42'17	0°36'15	retrograde	783 Dec 02 j 03:27	3°η22'05	
minimum elong	777 Aug 07 j 07:04	17°Ω42'17	0°36'14	opposition	784 Feb 17 j 08:01	1°η59'55	1°04'33
max. Earth dist.	777 Aug 06 j 12:41	17°Ω40'35	31.13490 AU	min. Earth dist.	784 Feb 18 j 04:35	1°η58'29	29.19637 AU
morning rise	777 Aug 23 j 08:06	18°Ω17'44		direct	784 May 07 j 20:52	0°η34'41	
retrograde	777 Nov 18 j 12:20	20°Ω10'15		evening set	784 Aug 06 j 19:52	2°η31'03	
opposition	778 Feb 03 j 16:44	18°Ω47'47	0°40'47				
min. Earth dist.	778 Feb 04 j 09:03	18°Ω46'38	29.14042 AU	conjunction	784 Aug 22 j 20:22	3°η06'27	1°02'11
direct	778 Apr 24 j 21:01	17°Ω22'28		minimum elong	784 Aug 22 j 20:21	3°η06'27	1°02'11
evening set	778 Jul 24 j 15:42	19°Ω18'41		max. Earth dist.	784 Aug 21 j 21:41	3°η04'21	31.19881 AU
				morning rise	784 Sep 07 j 17:25	3°η41'34	
conjunction	778 Aug 09 j 19:19	19°Ω54'21	0°40'09	retrograde	784 Dec 03 j 14:03	5°η33'42	
minimum elong	778 Aug 09 j 19:19	19°Ω54'21	0°40'10	opposition	785 Feb 18 j 18:27	4°η11'33	1°08'12
max. Earth dist.	778 Aug 09 j 00:00	19°Ω52'33	31.14559 AU	min. Earth dist.	785 Feb 19 j 14:32	4°η10'09	29.20215 AU
morning rise	778 Aug 25 j 19:50	20°Ω29'45		direct	785 May 10 j 10:12	2°η46'16	
retrograde	778 Nov 20 j 22:21	22°Ω22'14		evening set	785 Aug 09 j 08:15	4°η42'38	
opposition	779 Feb 06 j 03:09	20°Ω59'50	0°44'56	max. Earth dist.	785 Aug 24 j 09:10	5°η15'52	31.20419 AU
min. Earth dist.	779 Feb 06 j 20:16	20°Ω58'38	29.15147 AU				
direct	779 Apr 27 j 06:59	19°Ω34'34		conjunction	785 Aug 25 j 08:13	5°η18'00	1°05'33
evening set	779 Jul 27 j 04:27	21°Ω30'49		minimum elong	785 Aug 25 j 08:13	5°η18'00	1°05'33
				morning rise	785 Sep 10 j 04:36	5°η53'04	
conjunction	779 Aug 12 j 07:42	22°Ω06'27	0°44'01	retrograde	785 Dec 05 j 23:41	7°η45'07	
minimum elong	779 Aug 12 j 07:42	22°Ω06'27	0°44'00	opposition	786 Feb 21 j 05:11	6°η22'58	1°11'45
max. Earth dist.	779 Aug 11 j 12:52	22°Ω04'42	31.15664 AU	min. Earth dist.	786 Feb 22 j 02:28	6°η21'29	29.20746 AU
morning rise	779 Aug 28 j 07:34	22°Ω41'48		direct	786 May 12 j 21:37	4°η57'40	
retrograde	779 Nov 23 j 07:39	24°Ω34'14		evening set	786 Aug 11 j 20:19	6°η54'00	
opposition	780 Feb 08 j 13:32	23°Ω11'56	0°49'01				
min. Earth dist.	780 Feb 09 j 07:12	23°Ω10'42	29.16236 AU	conjunction	786 Aug 27 j 19:43	7°η29'19	1°08'50
direct	780 Apr 28 j 19:35	21°Ω46'41		minimum elong	786 Aug 27 j 19:43	7°η29'19	1°08'50
evening set	780 Jul 28 j 17:20	23°Ω43'00		max. Earth dist.	786 Aug 26 j 20:50	7°η27'11	31.20941 AU
				morning rise	786 Sep 12 j 15:31	8°η04'20	
conjunction	780 Aug 13 j 19:56	24°Ω18'35	0°47'48	retrograde	786 Dec 08 j 09:16	9°η56'19	
minimum elong	780 Aug 13 j 19:56	24°Ω18'35	0°47'49	opposition	787 Feb 23 j 15:49	8°η34'10	1°15'12
max. Earth dist.	780 Aug 12 j 23:21	24°Ω16'41	31.16723 AU	min. Earth dist.	787 Feb 24 j 12:39	8°η32'43	29.21272 AU
morning rise	780 Aug 29 j 19:24	24°Ω53'54		direct	787 May 15 j 10:21	7°η08'51	
retrograde	780 Nov 24 j 19:21	26°Ω46'18		evening set	787 Aug 14 j 08:23	9°η05'09	
opposition	781 Feb 10 j 00:03	25°Ω24'02	0°53'01	max. Earth dist.	787 Aug 29 j 07:34	9°η38'14	31.21484 AU
min. Earth dist.	781 Feb 10 j 17:59	25°Ω22'47	29.17264 AU				
direct	781 May 01 j 06:37	23°Ω58'49		conjunction	787 Aug 30 j 07:07	9°η40'25	1°12'00
evening set	781 Jul 31 j 06:04	25°Ω55'10		minimum elong	787 Aug 30 j 07:07	9°η40'25	1°11'59
				morning rise	787 Sep 15 j 02:22	10°η15'24	
conjunction	781 Aug 16 j 08:18	26°Ω30'43	0°51'31	retrograde	787 Dec 10 j 18:37	12°η07'20	
minimum elong	781 Aug 16 j 08:17	26°Ω30'43	0°51'31	opposition	788 Feb 26 j 02:22	10°η45'11	1°18'32
max. Earth dist.	781 Aug 15 j 12:05	26°Ω28'50	31.17685 AU	min. Earth dist.	788 Feb 26 j 23:35	10°η43'43	29.21868 AU
morning rise	781 Sep 01 j 06:59	27°Ω05'59		direct	788 May 16 j 20:43	9°η19'51	
retrograde	781 Nov 27 j 05:00	28°Ω58'19		evening set	788 Aug 15 j 20:15	11°η16'09	
opposition	782 Feb 12 j 10:42	27°Ω36'07	0°56'57				
min. Earth dist.	782 Feb 13 j 05:58	27°Ω34'47	29.18170 AU	conjunction	788 Aug 31 j 18:32	11°η51'23	1°15'04
direct	782 May 03 j 18:39	26°Ω10'54		minimum elong	788 Aug 31 j 18:32	11°η51'23	1°15'04
evening set	782 Aug 02 j 18:53	28°Ω07'16		max. Earth dist.	788 Aug 30 j 19:59	11°η49'17	31.22118 AU
				morning rise	788 Sep 16 j 13:05	12°η26'18	
conjunction	782 Aug 18 j 20:24	28°Ω42'46	0°55'09	retrograde	788 Dec 12 j 03:05	14°η18'13	
minimum elong	782 Aug 18 j 20:24	28°Ω42'46	0°55'10	opposition	789 Feb 27 j 13:07	12°η56'05	1°21'45
max. Earth dist.	782 Aug 17 j 22:32	28°Ω40'44	31.18534 AU	min. Earth dist.	789 Feb 28 j 10:17	12°η54'37	29.22549 AU
morning rise	782 Sep 03 j 18:40	29°Ω17'59		direct	789 May 19 j 08:58	11°η30'46	
	782 Sep 24 j 04:14	0°η		evening set	789 Aug 18 j 08:12	13°η27'05	
retrograde	782 Nov 29 j 17:28	1°η10'16		max. Earth dist.	789 Sep 02 j 06:10	14°η00'05	31.22855 AU
	783 Feb 07 j 17:32	30°η					
opposition	783 Feb 14 j 21:18	29°Ω48'05	1°00'48	conjunction	789 Sep 03 j 05:42	14°η02'16	1°18'02
min. Earth dist.	783 Feb 15 j 16:18	29°Ω46'46	29.18964 AU	minimum elong	789 Sep 03 j 05:42	14°η02'16	1°18'01
direct	783 May 06 j 08:14	28°Ω22'52		morning rise	789 Sep 18 j 23:45	14°η37'09	
	783 Jul 27 j 06:14	0°η		retrograde	789 Dec 14 j 14:09	16°η29'03	
evening set	783 Aug 05 j 07:18	0°η19'15		opposition	790 Mar 01 j 23:49	15°η06'58	1°24'52

min. Earth dist.	790 Mar 02 j 20:25	15° 10 05'33	29.23351 AU	morning rise	796 Oct 04 j 00:50	29° 10 55'02	
direct	790 May 21 j 19:03	13° 10 41'42			796 Oct 06 j 07:40	0° 0	
evening set	790 Aug 20 j 19:53	15° 10 38'03		retrograde	796 Dec 29 j 15:20	1° 0 47'04	
				opposition	797 Mar 17 j 04:58	0° 0 25'17	1°42'54
conjunction	790 Sep 05 j 16:58	16° 10 13'11	1°20'52	min. Earth dist.	797 Mar 18 j 03:17	0° 0 23'45	29.28344 AU
minimum elong	790 Sep 05 j 16:58	16° 10 13'11	1°20'53		797 Apr 01 j 18:54	30° 0 1'10	
max. Earth dist.	790 Sep 04 j 18:37	16° 10 11'06	31.23699 AU	direct	797 Jun 06 j 07:38	29° 10 00'21	
morning rise	790 Sep 21 j 10:15	16° 10 48'01			797 Aug 07 j 21:58	0° 0	
retrograde	790 Dec 16 j 23:34	18° 10 39'57		evening set	797 Sep 05 j 04:54	0° 0 56'45	
opposition	791 Mar 04 j 10:41	17° 10 17'55	1°27'50				
min. Earth dist.	791 Mar 05 j 08:00	17° 10 16'27	29.24231 AU	conjunction	797 Sep 20 j 21:46	1° 0 31'36	1°37'18
direct	791 May 24 j 06:19	15° 10 52'43		minimum elong	797 Sep 20 j 21:46	1° 0 31'36	1°37'18
evening set	791 Aug 23 j 07:34	17° 10 49'06		max. Earth dist.	797 Sep 19 j 22:26	1° 0 29'25	31.28378 AU
max. Earth dist.	791 Sep 07 j 04:39	18° 10 22'01	31.24604 AU	morning rise	797 Oct 06 j 10:56	2° 0 06'09	
				retrograde	797 Dec 31 j 23:10	3° 0 58'10	
conjunction	791 Sep 08 j 03:55	18° 10 24'11	1°23'36	opposition	798 Mar 19 j 16:16	2° 0 36'23	1°44'54
minimum elong	791 Sep 08 j 03:54	18° 10 24'11	1°23'36	min. Earth dist.	798 Mar 20 j 14:44	2° 0 34'50	29.28615 AU
morning rise	791 Sep 23 j 20:47	18° 10 58'59		direct	798 Jun 08 j 20:09	1° 0 11'27	
retrograde	791 Dec 19 j 11:56	20° 10 50'56		evening set	798 Sep 07 j 16:11	3° 0 07'47	
opposition	792 Mar 05 j 21:28	19° 10 28'59	1°30'41	max. Earth dist.	798 Sep 22 j 07:58	3° 0 40'19	31.28618 AU
min. Earth dist.	792 Mar 06 j 18:01	19° 10 27'34	29.25141 AU				
direct	792 May 25 j 19:02	18° 10 03'51		conjunction	798 Sep 23 j 08:19	3° 0 42'35	1°39'07
evening set	792 Aug 24 j 19:15	20° 10 00'16		minimum elong	798 Sep 23 j 08:19	3° 0 42'35	1°39'08
				morning rise	798 Oct 08 j 21:06	4° 0 17'06	
conjunction	792 Sep 09 j 15:07	20° 10 35'19	1°26'12	retrograde	799 Jan 03 j 09:57	6° 0 09'07	
minimum elong	792 Sep 09 j 15:06	20° 10 35'19	1°26'13	opposition	799 Mar 22 j 03:26	4° 0 47'17	1°46'46
max. Earth dist.	792 Sep 08 j 16:30	20° 10 33'13	31.25489 AU	min. Earth dist.	799 Mar 23 j 01:21	4° 0 45'47	29.28844 AU
morning rise	792 Sep 25 j 07:13	21° 10 10'05		direct	799 Jun 11 j 06:11	3° 0 22'21	
retrograde	792 Dec 20 j 22:19	23° 10 02'04		evening set	799 Sep 10 j 03:02	5° 0 18'37	
opposition	793 Mar 08 j 08:25	21° 10 40'10	1°33'24				
min. Earth dist.	793 Mar 09 j 06:15	21° 10 38'40	29.26007 AU	conjunction	799 Sep 25 j 18:48	5° 0 53'23	1°40'47
direct	793 May 28 j 06:53	20° 10 15'06		minimum elong	799 Sep 25 j 18:47	5° 0 53'23	1°40'47
evening set	793 Aug 27 j 07:01	22° 10 11'33		max. Earth dist.	799 Sep 24 j 19:44	5° 0 51'14	31.28829 AU
max. Earth dist.	793 Sep 11 j 02:57	22° 10 44'24	31.26316 AU	morning rise	799 Oct 11 j 06:55	6° 0 27'52	
				retrograde	800 Jan 05 j 18:27	8° 0 19'53	
conjunction	793 Sep 12 j 02:10	22° 10 46'34	1°28'41	opposition	800 Mar 23 j 14:47	6° 0 58'01	1°48'28
minimum elong	793 Sep 12 j 02:10	22° 10 46'34	1°28'41	min. Earth dist.	800 Mar 24 j 13:14	6° 0 56'29	29.29060 AU
morning rise	793 Sep 27 j 17:46	23° 10 21'17		direct	800 Jun 12 j 18:09	5° 0 33'04	
retrograde	793 Dec 23 j 09:19	25° 10 13'17		evening set	800 Sep 11 j 14:03	7° 0 29'18	
opposition	794 Mar 10 j 19:28	23° 10 51'27	1°35'59	max. Earth dist.	800 Sep 26 j 05:28	8° 0 01'48	31.29067 AU
min. Earth dist.	794 Mar 11 j 16:30	23° 10 50'00	29.26783 AU				
direct	794 May 30 j 19:50	22° 10 26'26		conjunction	800 Sep 27 j 05:04	8° 0 04'01	1°42'18
evening set	794 Aug 29 j 18:32	24° 10 22'53		minimum elong	800 Sep 27 j 05:04	8° 0 04'01	1°42'18
				morning rise	800 Oct 12 j 16:48	8° 0 38'27	
conjunction	794 Sep 14 j 13:05	24° 10 57'52	1°31'03	retrograde	801 Jan 07 j 05:44	10° 0 30'29	
minimum elong	794 Sep 14 j 13:05	24° 10 57'52	1°31'03	opposition	801 Mar 26 j 01:58	9° 0 08'35	1°50'01
max. Earth dist.	794 Sep 13 j 13:41	24° 10 55'41	31.27023 AU	min. Earth dist.	801 Mar 26 j 23:07	9° 0 07'08	29.29334 AU
morning rise	794 Sep 30 j 04:02	25° 10 32'32		direct	801 Jun 15 j 06:21	7° 0 43'39	
retrograde	794 Dec 25 j 19:49	27° 10 24'34		evening set	801 Sep 14 j 00:51	9° 0 39'50	
opposition	795 Mar 13 j 06:42	26° 10 02'46	1°38'26				
min. Earth dist.	795 Mar 14 j 04:48	26° 10 01'15	29.27441 AU	conjunction	801 Sep 29 j 15:25	10° 0 14'31	1°43'41
direct	795 Jun 02 j 07:31	24° 10 37'48		minimum elong	801 Sep 29 j 15:25	10° 0 14'31	1°43'40
evening set	795 Sep 01 j 06:04	26° 10 34'15		max. Earth dist.	801 Sep 28 j 17:00	10° 0 12'25	31.29375 AU
max. Earth dist.	795 Sep 16 j 00:45	27° 10 07'00	31.27611 AU	morning rise	801 Oct 15 j 02:30	10° 0 48'55	
				retrograde	802 Jan 09 j 15:38	12° 0 40'59	
conjunction	795 Sep 17 j 00:04	27° 10 09'11	1°33'16	opposition	802 Mar 28 j 13:29	11° 0 19'04	1°51'25
minimum elong	795 Sep 17 j 00:04	27° 10 09'11	1°33'15	min. Earth dist.	802 Mar 29 j 11:09	11° 0 17'35	29.29694 AU
morning rise	795 Oct 02 j 14:27	27° 10 43'49		direct	802 Jun 17 j 17:20	9° 0 54'11	
retrograde	795 Dec 28 j 05:52	29° 10 35'50		evening set	802 Sep 16 j 11:28	11° 0 50'20	
opposition	796 Mar 14 j 17:43	28° 10 14'04	1°40'44	max. Earth dist.	802 Oct 01 j 03:16	12° 0 22'54	31.29784 AU
min. Earth dist.	796 Mar 15 j 15:34	28° 10 12'34	29.27954 AU				
direct	796 Jun 03 j 20:45	26° 10 49'07		conjunction	802 Oct 02 j 01:26	12° 0 24'58	1°44'54
evening set	796 Sep 02 j 17:39	28° 10 45'33		minimum elong	802 Oct 02 j 01:26	12° 0 24'58	1°44'55
max. Earth dist.	796 Sep 17 j 10:44	29° 10 18'11	31.28053 AU	morning rise	802 Oct 17 j 12:08	12° 0 59'21	
				retrograde	803 Jan 12 j 02:34	14° 0 51'27	
conjunction	796 Sep 18 j 10:59	29° 10 20'27	1°35'21	opposition	803 Mar 31 j 00:50	13° 0 29'33	1°52'39
minimum elong	796 Sep 18 j 10:59	29° 10 20'27	1°35'22	min. Earth dist.	803 Mar 31 j 21:03	13° 0 28'10	29.30130 AU

direct	803 Jun 20 j 06:10	12° <u>0</u> 4'43			810 Jan 07 j 07:01	0° <u>0</u>	
evening set	803 Sep 18 j 22:08	14° <u>0</u> 0'51		retrograde	810 Jan 27 j 02:26	0° <u>0</u> 06'42	
					810 Feb 16 j 05:47	30° <u>0</u>	
conjunction	803 Oct 04 j 11:36	14° <u>0</u> 35'28	1°45'59	opposition	810 Apr 15 j 11:03	28° <u>0</u> 44'50	1°56'39
minimum elong	803 Oct 04 j 11:36	14° <u>0</u> 35'28	1°45'59	min. Earth dist.	810 Apr 16 j 05:59	28° <u>0</u> 43'33	29.31584 AU
max. Earth dist.	803 Oct 03 j 13:45	14° <u>0</u> 33'25	31.30241 AU	direct	810 Jul 05 j 16:07	27° <u>0</u> 20'22	
morning rise	803 Oct 19 j 21:48	15° <u>0</u> 09'49		evening set	810 Oct 03 j 23:26	29° <u>0</u> 16'15	
retrograde	804 Jan 14 j 13:36	17° <u>0</u> 01'58					
opposition	804 Apr 01 j 12:14	15° <u>0</u> 40'06	1°53'43	conjunction	810 Oct 19 j 09:36	29° <u>0</u> 50'40	1°49'11
min. Earth dist.	804 Apr 02 j 08:59	15° <u>0</u> 38'41	29.30608 AU	minimum elong	810 Oct 19 j 09:36	29° <u>0</u> 50'40	1°49'11
direct	804 Jun 21 j 17:46	14° <u>0</u> 15'20		max. Earth dist.	810 Oct 18 j 13:44	29° <u>0</u> 48'48	31.31323 AU
evening set	804 Sep 20 j 08:46	16° <u>0</u> 11'27			810 Oct 23 j 12:59	0° <u>0</u>	
				morning rise	810 Nov 03 j 16:55	0° <u>0</u> 24'52	
conjunction	804 Oct 05 j 21:45	16° <u>0</u> 46'02	1°46'54	retrograde	811 Jan 29 j 12:31	2° <u>0</u> 17'29	
minimum elong	804 Oct 05 j 21:45	16° <u>0</u> 46'02	1°46'55	opposition	811 Apr 17 j 23:05	0° <u>0</u> 55'33	1°56'34
max. Earth dist.	804 Oct 05 j 00:40	16° <u>0</u> 44'04	31.30716 AU	min. Earth dist.	811 Apr 18 j 18:45	0° <u>0</u> 54'13	29.31301 AU
morning rise	804 Oct 21 j 07:28	17° <u>0</u> 20'21			811 May 25 j 03:41	30° <u>0</u>	
retrograde	805 Jan 15 j 23:51	19° <u>0</u> 12'34		direct	811 Jul 08 j 02:47	29° <u>0</u> 31'06	
opposition	805 Apr 03 j 23:50	17° <u>0</u> 50'44	1°54'37		811 Aug 19 j 21:48	0° <u>0</u>	
min. Earth dist.	805 Apr 04 j 19:51	17° <u>0</u> 49'22	29.31054 AU	evening set	811 Oct 06 j 09:34	1° <u>0</u> 26'54	
direct	805 Jun 24 j 07:10	16° <u>0</u> 26'03					
evening set	805 Sep 22 j 19:22	18° <u>0</u> 22'09		conjunction	811 Oct 21 j 19:17	2° <u>0</u> 01'18	1°49'01
max. Earth dist.	805 Oct 07 j 10:11	18° <u>0</u> 54'41	31.31128 AU	minimum elong	811 Oct 21 j 19:17	2° <u>0</u> 01'18	1°49'01
				max. Earth dist.	811 Oct 20 j 23:43	1° <u>0</u> 59'28	31.31016 AU
conjunction	805 Oct 08 j 07:43	18° <u>0</u> 56'42	1°47'40	morning rise	811 Nov 06 j 02:21	2° <u>0</u> 35'29	
minimum elong	805 Oct 08 j 07:43	18° <u>0</u> 56'42	1°47'40	retrograde	812 Jan 31 j 23:16	4° <u>0</u> 28'08	
morning rise	805 Oct 23 j 17:02	19° <u>0</u> 31'00		opposition	812 Apr 19 j 10:49	3° <u>0</u> 06'09	1°56'19
retrograde	806 Jan 18 j 10:09	21° <u>0</u> 23'18		min. Earth dist.	812 Apr 20 j 05:00	3° <u>0</u> 04'55	29.30970 AU
opposition	806 Apr 06 j 11:36	20° <u>0</u> 01'28	1°55'21	direct	812 Jul 09 j 15:54	1° <u>0</u> 41'42	
min. Earth dist.	806 Apr 07 j 07:40	20° <u>0</u> 00'06	29.31435 AU	evening set	812 Oct 07 j 19:35	3° <u>0</u> 37'26	
direct	806 Jun 26 j 17:45	18° <u>0</u> 36'52		max. Earth dist.	812 Oct 22 j 09:46	4° <u>0</u> 10'01	31.30684 AU
evening set	806 Sep 25 j 05:53	20° <u>0</u> 32'56					
				conjunction	812 Oct 23 j 04:54	4° <u>0</u> 11'48	1°48'42
conjunction	806 Oct 10 j 17:53	21° <u>0</u> 07'28	1°48'17	minimum elong	812 Oct 23 j 04:54	4° <u>0</u> 11'48	1°48'43
minimum elong	806 Oct 10 j 17:53	21° <u>0</u> 07'28	1°48'17	morning rise	812 Nov 07 j 11:39	4° <u>0</u> 45'59	
max. Earth dist.	806 Oct 09 j 21:34	21° <u>0</u> 05'33	31.31451 AU	retrograde	813 Feb 02 j 10:46	6° <u>0</u> 38'42	
morning rise	806 Oct 26 j 02:39	21° <u>0</u> 41'44		opposition	813 Apr 21 j 22:56	5° <u>0</u> 16'39	1°55'54
retrograde	807 Jan 20 j 18:43	23° <u>0</u> 34'06		min. Earth dist.	813 Apr 22 j 17:11	5° <u>0</u> 15'24	29.30667 AU
opposition	807 Apr 08 j 23:22	22° <u>0</u> 12'17	1°55'55	direct	813 Jul 12 j 03:59	3° <u>0</u> 52'13	
min. Earth dist.	807 Apr 09 j 19:28	22° <u>0</u> 10'55	29.31692 AU	evening set	813 Oct 10 j 05:21	5° <u>0</u> 47'52	
direct	807 Jun 29 j 06:14	20° <u>0</u> 47'44					
evening set	807 Sep 27 j 16:27	22° <u>0</u> 43'46		conjunction	813 Oct 25 j 14:20	6° <u>0</u> 22'13	1°48'14
max. Earth dist.	807 Oct 12 j 06:32	23° <u>0</u> 16'17	31.31640 AU	minimum elong	813 Oct 25 j 14:20	6° <u>0</u> 22'13	1°48'14
				max. Earth dist.	813 Oct 24 j 20:37	6° <u>0</u> 20'34	31.30416 AU
conjunction	807 Oct 13 j 03:49	23° <u>0</u> 18'16	1°48'44	morning rise	813 Nov 09 j 20:44	6° <u>0</u> 56'23	
minimum elong	807 Oct 13 j 03:49	23° <u>0</u> 18'16	1°48'44	retrograde	814 Feb 04 j 20:58	8° <u>0</u> 49'10	
morning rise	807 Oct 28 j 12:22	23° <u>0</u> 52'32		opposition	814 Apr 24 j 11:00	7° <u>0</u> 27'05	1°55'19
retrograde	808 Jan 23 j 06:05	25° <u>0</u> 44'58		min. Earth dist.	814 Apr 25 j 03:51	7° <u>0</u> 25'56	29.30430 AU
opposition	808 Apr 10 j 11:10	24° <u>0</u> 23'09	1°56'20	direct	814 Jul 14 j 17:39	6° <u>0</u> 02'41	
min. Earth dist.	808 Apr 11 j 06:37	24° <u>0</u> 21'50	29.31810 AU	evening set	814 Oct 12 j 15:14	7° <u>0</u> 58'17	
direct	808 Jun 30 j 16:29	22° <u>0</u> 58'38					
evening set	808 Sep 29 j 02:52	24° <u>0</u> 54'38		conjunction	814 Oct 27 j 23:45	8° <u>0</u> 32'37	1°47'37
				minimum elong	814 Oct 27 j 23:45	8° <u>0</u> 32'37	1°47'37
conjunction	808 Oct 14 j 13:56	25° <u>0</u> 29'07	1°49'03	max. Earth dist.	814 Oct 27 j 06:04	8° <u>0</u> 30'57	31.30230 AU
minimum elong	808 Oct 14 j 13:56	25° <u>0</u> 29'07	1°49'03	morning rise	814 Nov 12 j 06:00	9° <u>0</u> 06'46	
max. Earth dist.	808 Oct 13 j 17:44	25° <u>0</u> 27'13	31.31672 AU	retrograde	815 Feb 07 j 07:18	10° <u>0</u> 59'38	
morning rise	808 Oct 29 j 21:53	26° <u>0</u> 03'21		opposition	815 Apr 26 j 22:57	9° <u>0</u> 37'31	1°54'34
retrograde	809 Jan 24 j 14:55	27° <u>0</u> 55'51		min. Earth dist.	815 Apr 27 j 15:13	9° <u>0</u> 36'25	29.30298 AU
opposition	809 Apr 12 j 23:08	26° <u>0</u> 34'01	1°56'34	direct	815 Jul 17 j 04:03	8° <u>0</u> 13'11	
min. Earth dist.	809 Apr 13 j 19:16	26° <u>0</u> 32'39	29.31762 AU	evening set	815 Oct 15 j 00:52	10° <u>0</u> 08'43	
direct	809 Jul 03 j 04:27	25° <u>0</u> 09'33					
evening set	809 Oct 01 j 13:21	27° <u>0</u> 05'29		conjunction	815 Oct 30 j 09:14	10° <u>0</u> 43'03	1°46'50
				minimum elong	815 Oct 30 j 09:14	10° <u>0</u> 43'03	1°46'50
conjunction	809 Oct 16 j 23:49	27° <u>0</u> 39'56	1°49'11	max. Earth dist.	815 Oct 29 j 17:24	10° <u>0</u> 41'34	31.30136 AU
minimum elong	809 Oct 16 j 23:49	27° <u>0</u> 39'56	1°49'11	morning rise	815 Nov 14 j 15:08	11° <u>0</u> 17'11	
max. Earth dist.	809 Oct 16 j 02:59	27° <u>0</u> 37'58	31.31563 AU	retrograde	816 Feb 09 j 15:56	13° <u>0</u> 10'08	
morning rise	809 Nov 01 j 07:34	28° <u>0</u> 14'09		opposition	816 Apr 28 j 11:05	11° <u>0</u> 48'02	1°53'39

min. Earth dist.	816 Apr 29 j 02:45	11° \mathcal{M} 46'58	29.30220 AU	evening set	822 Oct 29 j 20:25	25° \mathcal{M} 24'00	
direct	816 Jul 18 j 17:10	10° \mathcal{M} 23'46					
evening set	816 Oct 16 j 10:39	12° \mathcal{M} 19'15		conjunction	822 Nov 14 j 02:57	25° \mathcal{M} 58'16	1°37'10
				minimum elong	822 Nov 14 j 02:58	25° \mathcal{M} 58'16	1°37'10
conjunction	816 Oct 31 j 18:30	12° \mathcal{M} 53'34	1°45'54	max. Earth dist.	822 Nov 13 j 15:00	25° \mathcal{M} 57'08	31.28408 AU
minimum elong	816 Oct 31 j 18:31	12° \mathcal{M} 53'34	1°45'54	morning rise	822 Nov 29 j 07:50	26° \mathcal{M} 32'25	
max. Earth dist.	816 Oct 31 j 02:22	12° \mathcal{M} 52'03	31.30085 AU	retrograde	823 Feb 24 j 20:16	28° \mathcal{M} 26'02	
morning rise	816 Nov 16 j 00:20	13° \mathcal{M} 27'43		opposition	823 May 15 j 01:49	27° \mathcal{M} 03'40	1°42'47
	817 Jan 06 j 22:37	15° \mathcal{M}		min. Earth dist.	823 May 15 j 13:20	27° \mathcal{M} 02'53	29.28164 AU
retrograde	817 Feb 11 j 03:44	15° \mathcal{M} 20'46		direct	823 Aug 04 j 01:20	25° \mathcal{M} 39'42	
	817 Mar 19 j 09:33	15° $\mathcal{R}\mathcal{M}$		evening set	823 Nov 01 j 05:58	27° \mathcal{M} 34'42	
opposition	817 Apr 30 j 23:12	13° \mathcal{M} 58'39	1°52'34				
min. Earth dist.	817 May 01 j 13:37	13° \mathcal{M} 57'40	29.30176 AU	conjunction	823 Nov 16 j 12:12	28° \mathcal{M} 08'57	1°35'13
direct	817 Jul 21 j 03:40	12° \mathcal{M} 34'27		minimum elong	823 Nov 16 j 12:12	28° \mathcal{M} 08'57	1°35'13
evening set	817 Oct 18 j 20:16	14° \mathcal{M} 29'54		max. Earth dist.	823 Nov 15 j 23:59	28° \mathcal{M} 07'48	31.27730 AU
	817 Nov 01 j 07:24	15° \mathcal{M}		morning rise	823 Dec 01 j 17:10	28° \mathcal{M} 43'06	
					824 Jan 10 j 21:34	0° \mathcal{Z}	
conjunction	817 Nov 03 j 03:59	15° \mathcal{M} 04'12	1°44'49	retrograde	824 Feb 27 j 07:30	0° \mathcal{Z} 36'47	
minimum elong	817 Nov 03 j 03:59	15° \mathcal{M} 04'12	1°44'49		824 Apr 16 j 18:27	30° $\mathcal{R}\mathcal{M}$	
max. Earth dist.	817 Nov 02 j 13:28	15° \mathcal{M} 02'50	31.30034 AU	opposition	824 May 16 j 14:22	29° \mathcal{M} 14'20	1°40'37
morning rise	817 Nov 18 j 09:27	15° \mathcal{M} 38'21		min. Earth dist.	824 May 17 j 01:24	29° \mathcal{M} 13'36	29.27461 AU
retrograde	818 Feb 13 j 12:26	17° \mathcal{M} 31'30		direct	824 Aug 05 j 12:27	27° \mathcal{M} 50'23	
opposition	818 May 03 j 11:35	16° \mathcal{M} 09'23	1°51'20	evening set	824 Nov 02 j 15:11	29° \mathcal{M} 45'16	
min. Earth dist.	818 May 04 j 02:13	16° \mathcal{M} 08'23	29.30104 AU		824 Nov 09 j 06:08	0° \mathcal{Z}	
	818 Jun 22 j 16:30	15° $\mathcal{R}\mathcal{M}$					
direct	818 Jul 23 j 15:17	14° \mathcal{M} 45'16		conjunction	824 Nov 17 j 21:24	0° \mathcal{Z} 19'31	1°33'07
	818 Aug 22 j 19:34	15° \mathcal{M}		minimum elong	824 Nov 17 j 21:25	0° \mathcal{Z} 19'31	1°33'08
evening set	818 Oct 21 j 05:55	16° \mathcal{M} 40'38		max. Earth dist.	824 Nov 17 j 11:10	0° \mathcal{Z} 18'33	31.27015 AU
				morning rise	824 Dec 03 j 02:09	0° \mathcal{Z} 53'40	
conjunction	818 Nov 05 j 13:14	17° \mathcal{M} 14'56	1°43'34	retrograde	825 Feb 28 j 16:42	2° \mathcal{Z} 47'26	
minimum elong	818 Nov 05 j 13:15	17° \mathcal{M} 14'56	1°43'34	opposition	825 May 19 j 03:00	1° \mathcal{Z} 24'54	1°38'20
max. Earth dist.	818 Nov 04 j 22:37	17° \mathcal{M} 13'33	31.29943 AU	min. Earth dist.	825 May 19 j 13:16	1° \mathcal{Z} 24'12	29.26746 AU
morning rise	818 Nov 20 j 18:42	17° \mathcal{M} 49'05		direct	825 Aug 08 j 02:14	0° \mathcal{Z} 00'57	
retrograde	819 Feb 15 j 23:43	19° \mathcal{M} 42'21		evening set	825 Nov 05 j 00:33	1° \mathcal{Z} 55'44	
opposition	819 May 05 j 23:51	18° \mathcal{M} 20'12	1°49'55				
min. Earth dist.	819 May 06 j 13:02	18° \mathcal{M} 19'19	29.29967 AU	conjunction	825 Nov 20 j 06:28	2° \mathcal{Z} 29'59	1°30'55
direct	819 Jul 26 j 01:56	16° \mathcal{M} 56'08		minimum elong	825 Nov 20 j 06:28	2° \mathcal{Z} 29'59	1°30'54
evening set	819 Oct 23 j 15:35	18° \mathcal{M} 51'28		max. Earth dist.	825 Nov 19 j 20:12	2° \mathcal{Z} 29'01	31.26337 AU
				morning rise	825 Dec 05 j 11:22	3° \mathcal{Z} 04'09	
conjunction	819 Nov 07 j 22:43	19° \mathcal{M} 25'45	1°42'11	retrograde	826 Mar 03 j 04:41	4° \mathcal{Z} 58'00	
minimum elong	819 Nov 07 j 22:43	19° \mathcal{M} 25'45	1°42'10	opposition	826 May 21 j 15:32	3° \mathcal{Z} 35'24	1°35'53
max. Earth dist.	819 Nov 07 j 09:01	19° \mathcal{M} 24'28	31.29747 AU	min. Earth dist.	826 May 22 j 00:08	3° \mathcal{Z} 34'49	29.26111 AU
morning rise	819 Nov 23 j 03:55	19° \mathcal{M} 59'54		direct	826 Aug 10 j 13:15	2° \mathcal{Z} 11'28	
retrograde	820 Feb 18 j 10:06	21° \mathcal{M} 53'16		evening set	826 Nov 07 j 09:38	4° \mathcal{Z} 06'10	
opposition	820 May 07 j 12:14	20° \mathcal{M} 31'06	1°48'22				
min. Earth dist.	820 May 08 j 02:04	20° \mathcal{M} 30'10	29.29714 AU	conjunction	826 Nov 22 j 15:36	4° \mathcal{Z} 40'25	1°28'34
direct	820 Jul 27 j 11:42	19° \mathcal{M} 07'05		minimum elong	826 Nov 22 j 15:36	4° \mathcal{Z} 40'26	1°28'34
evening set	820 Oct 25 j 01:19	21° \mathcal{M} 02'20		max. Earth dist.	826 Nov 22 j 07:15	4° \mathcal{Z} 39'38	31.25744 AU
				morning rise	826 Dec 07 j 20:21	5° \mathcal{Z} 14'37	
conjunction	820 Nov 09 j 08:11	21° \mathcal{M} 36'37	1°40'39	retrograde	827 Mar 05 j 13:28	7° \mathcal{Z} 08'34	
minimum elong	820 Nov 09 j 08:11	21° \mathcal{M} 36'37	1°40'39	opposition	827 May 24 j 04:12	5° \mathcal{Z} 45'55	1°33'19
max. Earth dist.	820 Nov 08 j 18:54	21° \mathcal{M} 35'22	31.29439 AU	min. Earth dist.	827 May 24 j 12:30	5° \mathcal{Z} 45'21	29.25562 AU
morning rise	820 Nov 24 j 13:17	22° \mathcal{M} 10'46		direct	827 Aug 13 j 00:59	4° \mathcal{Z} 22'03	
retrograde	821 Feb 19 j 21:36	24° \mathcal{M} 04'13		evening set	827 Nov 09 j 18:55	6° \mathcal{Z} 16'41	
opposition	821 May 10 j 00:45	22° \mathcal{M} 42'00	1°46'39				
min. Earth dist.	821 May 10 j 13:03	22° \mathcal{M} 41'11	29.29327 AU	conjunction	827 Nov 25 j 00:39	6° \mathcal{Z} 50'56	1°26'05
direct	821 Jul 30 j 00:40	21° \mathcal{M} 18'01		minimum elong	827 Nov 25 j 00:40	6° \mathcal{Z} 50'56	1°26'05
evening set	821 Oct 27 j 10:54	23° \mathcal{M} 13'12		max. Earth dist.	827 Nov 24 j 16:45	6° \mathcal{Z} 50'11	31.25258 AU
				morning rise	827 Dec 10 j 05:33	7° \mathcal{Z} 25'08	
conjunction	821 Nov 11 j 17:30	23° \mathcal{M} 47'28	1°38'59	retrograde	828 Mar 07 j 00:44	9° \mathcal{Z} 19'12	
minimum elong	821 Nov 11 j 17:30	23° \mathcal{M} 47'28	1°38'58	opposition	828 May 25 j 16:38	7° \mathcal{Z} 56'32	1°30'36
max. Earth dist.	821 Nov 11 j 04:20	23° \mathcal{M} 46'14	31.28983 AU	min. Earth dist.	828 May 25 j 22:57	7° \mathcal{Z} 56'07	29.25112 AU
morning rise	821 Nov 26 j 22:32	24° \mathcal{M} 21'37		direct	828 Aug 14 j 11:27	6° \mathcal{Z} 32'44	
retrograde	822 Feb 22 j 09:48	26° \mathcal{M} 15'10		evening set	828 Nov 11 j 04:08	8° \mathcal{Z} 27'19	
opposition	822 May 12 j 13:25	24° \mathcal{M} 52'53	1°44'47				
min. Earth dist.	822 May 13 j 01:58	24° \mathcal{M} 52'02	29.28808 AU	conjunction	828 Nov 26 j 09:50	9° \mathcal{Z} 01'35	1°23'29
direct	822 Aug 01 j 12:01	23° \mathcal{M} 28'55		minimum elong	828 Nov 26 j 09:50	9° \mathcal{Z} 01'35	1°23'29

max. Earth dist.	828 Nov 26 j 03:16	9°♏00'58	31.24847 AU	conjunction	835 Dec 12 j 03:02	24°♏20'53	1°02'03
morning rise	828 Dec 11 j 14:42	9°♏35'48		minimum elong	835 Dec 12 j 03:03	24°♏20'53	1°02'02
retrograde	829 Mar 09 j 11:38	11°♏30'01		max. Earth dist.	835 Dec 12 j 01:41	24°♏20'46	31.20850 AU
opposition	829 May 28 j 05:30	10°♏07'20	1°27'45	morning rise	835 Dec 27 j 08:40	24°♏55'16	
min. Earth dist.	829 May 28 j 11:51	10°♏06'54	29.24730 AU	retrograde	836 Mar 24 j 21:54	26°♏50'22	
direct	829 Aug 16 j 20:42	8°♏43'37		opposition	836 Jun 12 j 23:58	25°♏27'22	1°04'27
evening set	829 Nov 13 j 13:15	10°♏38'08		min. Earth dist.	836 Jun 13 j 01:22	25°♏27'17	29.20389 AU
				direct	836 Sep 01 j 07:57	24°♏03'59	
conjunction	829 Nov 28 j 18:54	11°♏12'25	1°20'45	evening set	836 Nov 28 j 06:44	25°♏58'02	
minimum elong	829 Nov 28 j 18:54	11°♏12'25	1°20'45				
max. Earth dist.	829 Nov 28 j 13:27	11°♏11'54	31.24495 AU	conjunction	836 Dec 13 j 12:22	26°♏32'23	0°58'35
morning rise	829 Dec 13 j 23:50	11°♏46'39		minimum elong	836 Dec 13 j 12:22	26°♏32'23	0°58'35
retrograde	830 Mar 11 j 23:35	13°♏41'01		max. Earth dist.	836 Dec 13 j 11:23	26°♏32'18	31.19859 AU
opposition	830 May 30 j 18:14	12°♏18'20	1°24'46	morning rise	836 Dec 28 j 18:17	27°♏06'47	
min. Earth dist.	830 May 30 j 22:41	12°♏18'02	29.24369 AU	retrograde	837 Mar 27 j 09:11	29°♏01'58	
direct	830 Aug 19 j 08:53	10°♏54'41		opposition	837 Jun 15 j 12:57	27°♏38'52	1°00'42
evening set	830 Nov 15 j 22:34	12°♏49'11		min. Earth dist.	837 Jun 15 j 12:29	27°♏38'54	29.19377 AU
				direct	837 Sep 03 j 19:42	26°♏15'27	
conjunction	830 Dec 01 j 04:07	13°♏23'28	1°17'54	evening set	837 Nov 30 j 15:54	28°♏09'25	
minimum elong	830 Dec 01 j 04:07	13°♏23'28	1°17'55				
max. Earth dist.	830 Nov 30 j 22:59	13°♏22'59	31.24127 AU	conjunction	837 Dec 15 j 21:37	28°♏43'46	0°55'03
morning rise	830 Dec 16 j 09:12	13°♏57'43		minimum elong	837 Dec 15 j 21:37	28°♏43'46	0°55'02
retrograde	831 Mar 14 j 12:48	15°♏52'14		max. Earth dist.	837 Dec 15 j 21:50	28°♏43'48	31.18846 AU
opposition	831 Jun 02 j 06:59	14°♏29'32	1°21'40	morning rise	837 Dec 31 j 03:43	29°♏18'11	
min. Earth dist.	831 Jun 02 j 11:31	14°♏29'13	29.23986 AU		838 Jan 20 j 01:06	0°♏	
direct	831 Aug 21 j 18:50	13°♏05'58		retrograde	838 Mar 29 j 19:54	1°♏13'29	
evening set	831 Nov 18 j 07:52	15°♏00'25			838 Jun 12 j 01:43	30°♏♏	
				opposition	838 Jun 18 j 02:05	29°♏50'16	0°56'53
conjunction	831 Dec 03 j 13:29	15°♏34'43	1°14'57	min. Earth dist.	838 Jun 18 j 01:40	29°♏50'18	29.18388 AU
minimum elong	831 Dec 03 j 13:29	15°♏34'43	1°14'56	direct	838 Sep 06 j 06:12	28°♏26'51	
max. Earth dist.	831 Dec 03 j 09:50	15°♏34'22	31.23714 AU		838 Nov 23 j 11:38	0°♏	
morning rise	831 Dec 18 j 18:33	16°♏09'00		evening set	838 Dec 03 j 01:11	0°♏20'43	
retrograde	832 Mar 16 j 00:14	18°♏03'39					
opposition	832 Jun 03 j 19:53	16°♏40'56	1°18'26	conjunction	838 Dec 18 j 07:01	0°♏55'05	0°51'26
min. Earth dist.	832 Jun 03 j 23:13	16°♏40'42	29.23516 AU	minimum elong	838 Dec 18 j 07:02	0°♏55'05	0°51'26
direct	832 Aug 23 j 07:06	15°♏17'26		max. Earth dist.	838 Dec 18 j 08:32	0°♏55'13	31.17896 AU
evening set	832 Nov 19 j 17:16	17°♏11'51		morning rise	839 Jan 02 j 13:17	1°♏29'31	
				retrograde	839 Apr 01 j 07:05	3°♏24'54	
conjunction	832 Dec 04 j 22:41	17°♏46'09	1°11'52	opposition	839 Jun 20 j 14:50	2°♏01'37	0°52'58
minimum elong	832 Dec 04 j 22:41	17°♏46'09	1°11'52	min. Earth dist.	839 Jun 20 j 12:19	2°♏01'47	29.17471 AU
max. Earth dist.	832 Dec 04 j 18:46	17°♏45'47	31.23196 AU	direct	839 Sep 08 j 18:10	0°♏38'12	
morning rise	832 Dec 20 j 03:59	18°♏20'27		evening set	839 Dec 05 j 10:31	2°♏32'00	
retrograde	833 Mar 18 j 12:56	20°♏15'15					
opposition	833 Jun 06 j 08:57	18°♏52'29	1°15'06	conjunction	839 Dec 20 j 16:21	3°♏06'22	0°47'44
min. Earth dist.	833 Jun 06 j 11:51	18°♏52'17	29.22942 AU	minimum elong	839 Dec 20 j 16:21	3°♏06'22	0°47'44
direct	833 Aug 25 j 18:00	17°♏29'03		max. Earth dist.	839 Dec 20 j 18:16	3°♏06'33	31.17024 AU
evening set	833 Nov 22 j 02:38	19°♏23'23		morning rise	840 Jan 04 j 22:55	3°♏40'50	
				retrograde	840 Apr 02 j 19:41	5°♏36'21	
conjunction	833 Dec 07 j 08:14	19°♏57'42	1°08'41	opposition	840 Jun 22 j 03:55	4°♏12'59	0°48'59
minimum elong	833 Dec 07 j 08:14	19°♏57'42	1°08'42	min. Earth dist.	840 Jun 22 j 01:04	4°♏13'11	29.16651 AU
max. Earth dist.	833 Dec 07 j 05:57	19°♏57'29	31.22553 AU	direct	840 Sep 10 j 03:34	2°♏49'37	
morning rise	833 Dec 22 j 13:29	20°♏32'02		evening set	840 Dec 06 j 19:38	4°♏43'20	
retrograde	834 Mar 20 j 23:59	22°♏26'56					
opposition	834 Jun 08 j 21:58	21°♏04'07	1°11'39	conjunction	840 Dec 22 j 01:43	5°♏17'44	0°43'58
min. Earth dist.	834 Jun 09 j 00:26	21°♏03'57	29.22220 AU	minimum elong	840 Dec 22 j 01:43	5°♏17'44	0°43'58
direct	834 Aug 28 j 07:57	19°♏40'43		max. Earth dist.	840 Dec 22 j 05:38	5°♏18'06	31.16253 AU
evening set	834 Nov 24 j 12:04	21°♏34'59		morning rise	841 Jan 06 j 08:23	5°♏52'13	
				retrograde	841 Apr 05 j 07:09	7°♏47'51	
conjunction	834 Dec 09 j 17:33	22°♏09'19	1°05'25	opposition	841 Jun 24 j 16:58	6°♏24'27	0°44'55
minimum elong	834 Dec 09 j 17:34	22°♏09'19	1°05'25	min. Earth dist.	841 Jun 24 j 12:27	6°♏24'45	29.15907 AU
max. Earth dist.	834 Dec 09 j 14:49	22°♏09'03	31.21771 AU	direct	841 Sep 12 j 15:18	5°♏01'07	
morning rise	834 Dec 24 j 23:10	22°♏43'40		evening set	841 Dec 09 j 05:03	6°♏54'47	
retrograde	835 Mar 23 j 13:01	24°♏38'40					
opposition	835 Jun 11 j 10:56	23°♏15'46	1°08'06	conjunction	841 Dec 24 j 11:05	7°♏29'12	0°40'07
min. Earth dist.	835 Jun 11 j 12:14	23°♏15'41	29.21365 AU	minimum elong	841 Dec 24 j 11:05	7°♏29'12	0°40'08
direct	835 Aug 30 j 19:25	21°♏52'23		max. Earth dist.	841 Dec 24 j 15:04	7°♏29'34	31.15549 AU
evening set	835 Nov 26 j 21:23	23°♏46'33		morning rise	842 Jan 08 j 18:11	8°♏03'43	

retrograde	842 Apr 07 j 20:48	9°35'30		conjunction	849 Jan 08 j 07:41	22°35'11	0°11'52
opposition	842 Jun 27 j 06:00	8°36'03	0°40'46	minimum elong	849 Jan 08 j 07:40	22°35'11	0°11'53
min. Earth dist.	842 Jun 27 j 00:47	8°36'24	29.15232 AU	behind sun begin	849 Jan 08 j 03:09	22°35'46	
direct	842 Sep 15 j 01:38	7°31'24		behind sun end	849 Jan 08 j 12:11	22°35'35	
evening set	842 Dec 11 j 14:19	9°30'24		max. Earth dist.	849 Jan 08 j 16:24	22°35'00	31.09326 AU
				morning rise	849 Jan 23 j 16:47	23°32'56	
conjunction	842 Dec 26 j 20:41	9°34'51	0°36'13	retrograde	849 Apr 23 j 09:51	25°32'39	
minimum elong	842 Dec 26 j 20:41	9°34'51	0°36'13	opposition	849 Jul 13 j 02:23	24°30'48	0°10'24
max. Earth dist.	842 Dec 27 j 02:38	9°34'24	31.14881 AU	min. Earth dist.	849 Jul 12 j 16:57	24°30'26	29.08710 AU
morning rise	843 Jan 11 j 03:54	10°31'52		direct	849 Sep 30 j 09:51	22°33'42	
retrograde	843 Apr 10 j 08:53	12°31'19		evening set	849 Dec 26 j 10:07	24°33'59	
opposition	843 Jun 29 j 19:06	10°34'50	0°36'34				
min. Earth dist.	843 Jun 29 j 13:13	10°34'14	29.14553 AU	conjunction	850 Jan 10 j 17:43	25°30'35	0°07'44
direct	843 Sep 17 j 14:31	9°32'37		minimum elong	850 Jan 10 j 17:43	25°30'35	0°07'44
evening set	843 Dec 13 j 23:51	11°31'13		behind sun begin	850 Jan 10 j 11:55	25°30'03	
				behind sun end	850 Jan 10 j 23:31	25°30'06	
conjunction	843 Dec 29 j 06:11	11°32'41	0°32'16	max. Earth dist.	850 Jan 11 j 04:13	25°30'34	31.08084 AU
minimum elong	843 Dec 29 j 06:11	11°32'41	0°32'15	morning rise	850 Jan 26 j 03:02	25°34'21	
max. Earth dist.	843 Dec 29 j 11:59	11°33'13	31.14198 AU	retrograde	850 Apr 25 j 21:21	27°33'11	
morning rise	844 Jan 13 j 13:47	12°32'16		opposition	850 Jul 15 j 15:20	26°34'13	0°05'57
retrograde	844 Apr 11 j 22:41	14°32'20		min. Earth dist.	850 Jul 15 j 04:29	26°34'57	29.07472 AU
opposition	844 Jul 01 j 08:12	12°35'50	0°32'18	direct	850 Oct 02 j 21:28	24°35'05	
min. Earth dist.	844 Jul 01 j 01:02	13°30'19	29.13848 AU	evening set	850 Dec 28 j 19:58	26°34'19	
direct	844 Sep 19 j 01:20	11°33'40					
evening set	844 Dec 15 j 09:26	13°30'14		conjunction	851 Jan 13 j 03:39	27°31'56	0°03'35
				minimum elong	851 Jan 13 j 03:38	27°31'56	0°03'35
conjunction	844 Dec 30 j 16:00	14°30'43	0°28'15	behind sun begin	851 Jan 12 j 21:17	27°31'82	
minimum elong	844 Dec 30 j 16:00	14°30'43	0°28'15	behind sun end	851 Jan 13 j 09:59	27°31'30	
max. Earth dist.	844 Dec 30 j 23:10	14°30'52	31.13453 AU	max. Earth dist.	851 Jan 13 j 14:02	27°31'54	31.06871 AU
morning rise	845 Jan 14 j 23:46	14°33'21		morning rise	851 Jan 28 j 13:27	27°35'44	
retrograde	845 Apr 14 j 09:28	16°33'34		retrograde	851 Apr 28 j 11:11	29°35'40	
opposition	845 Jul 03 j 21:31	15°31'01	0°28'00	opposition	851 Jul 18 j 04:23	28°32'36	0°01'30
min. Earth dist.	845 Jul 03 j 14:29	15°31'30	29.13060 AU	min. Earth dist.	851 Jul 17 j 16:54	28°32'23	29.06305 AU
direct	845 Sep 21 j 13:35	13°34'55		direct	851 Oct 05 j 07:59	27°30'28	
evening set	845 Dec 17 j 19:05	15°34'26		desc. node	851 Nov 18 j 09:33	27°33'44	
				evening set	851 Dec 31 j 05:36	28°35'39	
conjunction	846 Jan 02 j 01:48	16°31'57	0°24'12				
minimum elong	846 Jan 02 j 01:48	16°31'57	0°24'12	conjunction	852 Jan 15 j 13:38	29°33'17	-0°00'41
max. Earth dist.	846 Jan 02 j 09:12	16°31'38	31.12620 AU	minimum elong	852 Jan 15 j 13:38	29°33'17	0°00'42
morning rise	846 Jan 17 j 09:55	16°35'36		behind sun begin	852 Jan 15 j 07:14	29°33'42	
retrograde	846 Apr 16 j 22:20	18°34'58		behind sun end	852 Jan 15 j 20:01	29°33'51	
opposition	846 Jul 06 j 10:43	17°32'42	0°23'38	max. Earth dist.	852 Jan 16 j 02:05	29°33'27	31.05742 AU
min. Earth dist.	846 Jul 06 j 02:11	17°32'57	29.12158 AU		852 Jan 28 j 05:44	0°	
direct	846 Sep 24 j 01:28	16°30'18		morning rise	852 Jan 30 j 23:35	0°06'07	
evening set	846 Dec 20 j 04:56	17°35'47		retrograde	852 Apr 29 j 23:42	2°03'09	
				opposition	852 Jul 19 j 17:25	0°39'01	-0°02'58
conjunction	847 Jan 04 j 11:49	18°32'19	0°20'07	min. Earth dist.	852 Jul 19 j 05:01	0°39'51	29.05229 AU
minimum elong	847 Jan 04 j 11:49	18°32'19	0°20'07		852 Aug 13 j 12:36	30°30'	
max. Earth dist.	847 Jan 04 j 19:42	18°33'03	31.11641 AU	direct	852 Oct 06 j 20:31	29°31'52	
morning rise	847 Jan 19 j 20:14	19°34'00			852 Nov 27 j 14:34	0°	
retrograde	847 Apr 19 j 09:51	21°30'30		evening set	853 Jan 01 j 15:30	1°09'01	
opposition	847 Jul 08 j 23:55	19°36'50	0°19'15				
min. Earth dist.	847 Jul 08 j 15:59	19°37'22	29.11113 AU	conjunction	853 Jan 16 j 23:39	1°43'40	-0°04'54
direct	847 Sep 26 j 12:09	18°31'34		minimum elong	853 Jan 16 j 23:39	1°43'40	0°04'54
evening set	847 Dec 22 j 14:43	20°30'12		behind sun begin	853 Jan 16 j 17:24	1°43'07	
				behind sun end	853 Jan 17 j 05:54	1°44'14	
conjunction	848 Jan 06 j 21:52	20°34'45	0°16'00	max. Earth dist.	853 Jan 17 j 12:11	1°44'51	31.04735 AU
minimum elong	848 Jan 06 j 21:52	20°34'45	0°16'00	morning rise	853 Feb 01 j 10:06	2°18'33	
behind sun begin	848 Jan 06 j 20:44	20°34'39		retrograde	853 May 02 j 13:34	4°15'42	
behind sun end	848 Jan 06 j 23:00	20°34'51		opposition	853 Jul 22 j 06:26	2°51'30	-0°07'26
max. Earth dist.	848 Jan 07 j 06:38	20°34'34	31.10539 AU	min. Earth dist.	853 Jul 21 j 16:33	2°52'26	29.04286 AU
morning rise	848 Jan 22 j 06:32	21°31'28		direct	853 Oct 09 j 06:44	1°28'22	
retrograde	848 Apr 20 j 21:24	23°31'04		evening set	854 Jan 04 j 01:18	3°21'29	
opposition	848 Jul 10 j 13:05	21°34'20	0°14'50				
min. Earth dist.	848 Jul 10 j 03:33	21°34'59	29.09944 AU	conjunction	854 Jan 19 j 09:48	3°56'10	-0°09'03
direct	848 Sep 28 j 00:24	20°32'15		minimum elong	854 Jan 19 j 09:48	3°56'10	0°09'04
evening set	848 Dec 24 j 00:26	22°31'37		behind sun begin	854 Jan 19 j 04:18	3°55'40	

behind sun end	854 Jan 19 j 15:17	3° \approx 56'40		minimum elong	860 Feb 02 j 01:08	17° \approx 14'25	0°33'38
max. Earth dist.	854 Jan 19 j 23:55	3° \approx 57'30	31.03835 AU	max. Earth dist.	860 Feb 02 j 17:59	17° \approx 16'00	30.98954 AU
morning rise	854 Feb 03 j 20:32	4° \approx 31'04		morning rise	860 Feb 17 j 14:11	17° \approx 49'31	
retrograde	854 May 05 j 01:23	6° \approx 28'21		retrograde	860 May 18 j 06:03	19° \approx 47'32	
opposition	854 Jul 24 j 19:30	5° \approx 04'06	-0°11'53	min. Earth dist.	860 Aug 06 j 08:30	18° \approx 24'10	28.98462 AU
min. Earth dist.	854 Jul 24 j 05:27	5° \approx 05'03	29.03435 AU	opposition	860 Aug 07 j 01:51	18° \approx 22'58	-0°38'06
direct	854 Oct 11 j 19:13	3° \approx 41'00		direct	860 Oct 24 j 13:57	16° \approx 59'58	
evening set	855 Jan 06 j 11:19	5° \approx 34'06		evening set	861 Jan 19 j 01:42	18° \approx 52'57	
conjunction	855 Jan 21 j 20:03	6° \approx 08'48	-0°13'12	conjunction	861 Feb 03 j 12:11	19° \approx 27'48	-0°37'36
minimum elong	855 Jan 21 j 20:03	6° \approx 08'48	0°13'12	minimum elong	861 Feb 03 j 12:10	19° \approx 27'48	0°37'36
behind sun begin	855 Jan 21 j 16:12	6° \approx 08'27		max. Earth dist.	861 Feb 04 j 06:28	19° \approx 29'32	30.97892 AU
behind sun end	855 Jan 21 j 23:54	6° \approx 09'09		morning rise	861 Feb 19 j 01:28	20° \approx 02'56	
max. Earth dist.	855 Jan 22 j 10:44	6° \approx 10'11	31.03035 AU	retrograde	861 May 20 j 18:22	22° \approx 01'01	
morning rise	855 Feb 06 j 07:11	6° \approx 43'45		opposition	861 Aug 09 j 14:52	20° \approx 36'22	-0°42'19
retrograde	855 May 07 j 15:33	8° \approx 41'09		min. Earth dist.	861 Aug 08 j 21:13	20° \approx 37'34	28.97366 AU
opposition	855 Jul 27 j 08:20	7° \approx 16'51	-0°16'20	direct	861 Oct 27 j 02:00	19° \approx 13'19	
min. Earth dist.	855 Jul 26 j 16:37	7° \approx 17'55	29.02665 AU	evening set	862 Jan 21 j 12:21	21° \approx 06'16	
direct	855 Oct 14 j 07:24	5° \approx 53'47		conjunction	862 Feb 05 j 23:04	21° \approx 41'08	-0°41'31
evening set	856 Jan 08 j 21:28	7° \approx 46'53		minimum elong	862 Feb 05 j 23:04	21° \approx 41'08	0°41'31
conjunction	856 Jan 24 j 06:25	8° \approx 21'37	-0°17'21	max. Earth dist.	862 Feb 06 j 16:58	21° \approx 42'50	30.96786 AU
minimum elong	856 Jan 24 j 06:24	8° \approx 21'37	0°17'21	morning rise	862 Feb 21 j 12:54	22° \approx 16'17	
max. Earth dist.	856 Jan 24 j 21:50	8° \approx 23'04	31.02280 AU	retrograde	862 May 23 j 08:34	24° \approx 14'27	
morning rise	856 Feb 08 j 17:55	8° \approx 56'35		min. Earth dist.	862 Aug 11 j 09:15	22° \approx 50'58	28.96264 AU
retrograde	856 May 09 j 03:35	10° \approx 54'08		opposition	862 Aug 12 j 03:47	22° \approx 49'42	-0°46'28
opposition	856 Jul 28 j 21:32	9° \approx 29'47	-0°20'45	direct	862 Oct 29 j 12:31	21° \approx 26'37	
min. Earth dist.	856 Jul 28 j 06:12	9° \approx 30'50	29.01931 AU	evening set	863 Jan 23 j 23:02	23° \approx 19'32	
direct	856 Oct 15 j 18:14	8° \approx 06'46		conjunction	863 Feb 08 j 10:06	23° \approx 54'25	-0°45'22
evening set	857 Jan 10 j 07:33	9° \approx 59'50		minimum elong	863 Feb 08 j 10:06	23° \approx 54'25	0°45'22
conjunction	857 Jan 25 j 16:51	10° \approx 34'35	-0°21'28	max. Earth dist.	863 Feb 09 j 05:10	23° \approx 56'14	30.95681 AU
minimum elong	857 Jan 25 j 16:51	10° \approx 34'35	0°21'28	morning rise	863 Feb 24 j 00:13	24° \approx 29'37	
max. Earth dist.	857 Jan 26 j 09:25	10° \approx 36'10	31.01551 AU	retrograde	863 May 25 j 20:59	26° \approx 27'50	
morning rise	857 Feb 10 j 04:38	11° \approx 09'36		opposition	863 Aug 14 j 16:36	25° \approx 03'00	-0°50'34
retrograde	857 May 11 j 15:26	13° \approx 07'16		min. Earth dist.	863 Aug 13 j 22:10	25° \approx 04'16	28.95196 AU
opposition	857 Jul 31 j 10:34	11° \approx 42'54	-0°25'09	direct	863 Nov 01 j 01:06	23° \approx 39'53	
min. Earth dist.	857 Jul 30 j 17:42	11° \approx 44'03	29.01187 AU	evening set	864 Jan 26 j 09:46	25° \approx 32'47	
direct	857 Oct 18 j 06:12	10° \approx 19'55		conjunction	864 Feb 10 j 21:08	26° \approx 07'42	-0°49'09
evening set	858 Jan 12 j 18:03	12° \approx 12'58		minimum elong	864 Feb 10 j 21:08	26° \approx 07'42	0°49'09
conjunction	858 Jan 28 j 03:30	12° \approx 47'45	-0°25'34	max. Earth dist.	864 Feb 11 j 16:40	26° \approx 09'33	30.94665 AU
minimum elong	858 Jan 28 j 03:29	12° \approx 47'45	0°25'33	morning rise	864 Feb 26 j 11:40	26° \approx 42'55	
max. Earth dist.	858 Jan 28 j 19:45	12° \approx 49'17	31.00774 AU	retrograde	864 May 27 j 11:48	28° \approx 41'13	
morning rise	858 Feb 12 j 15:47	13° \approx 22'48		min. Earth dist.	864 Aug 15 j 09:19	27° \approx 17'41	28.94239 AU
retrograde	858 Apr 08 j 11:12	15° \approx		opposition	864 Aug 16 j 05:22	27° \approx 16'19	-0°54'34
retrograde	858 May 14 j 04:09	15° \approx 20'36		direct	864 Nov 02 j 13:26	25° \approx 53'11	
retrograde	858 Jun 19 j 20:07	15° \approx		evening set	865 Jan 27 j 20:30	27° \approx 46'04	
opposition	858 Aug 02 j 23:38	13° \approx 56'11	-0°29'31	conjunction	865 Feb 12 j 08:09	28° \approx 21'01	-0°52'52
min. Earth dist.	858 Aug 02 j 07:16	13° \approx 57'18	29.00386 AU	minimum elong	865 Feb 12 j 08:08	28° \approx 21'01	0°52'52
direct	858 Oct 20 j 15:42	12° \approx 33'12		max. Earth dist.	865 Feb 13 j 04:21	28° \approx 22'56	30.93756 AU
evening set	859 Jan 15 j 04:31	14° \approx 26'15		morning rise	865 Feb 27 j 23:07	28° \approx 56'16	
conjunction	859 Jan 30 j 14:25	15° \approx 01'03	-0°29'37	retrograde	865 Mar 31 j 15:28	0° \approx	
minimum elong	859 Jan 30 j 14:25	15° \approx 01'03	0°29'37	retrograde	865 May 29 j 24:00	0° \approx 54'40	
max. Earth dist.	859 Jan 30 j 03:18	15° \approx		retrograde	865 Jul 31 j 00:32	30° \approx	
max. Earth dist.	859 Jan 31 j 07:57	15° \approx 02'42	30.99921 AU	opposition	865 Aug 18 j 18:15	29° \approx 29'42	-0°58'30
morning rise	859 Feb 15 j 02:55	15° \approx 36'07		min. Earth dist.	865 Aug 17 j 22:36	29° \approx 31'03	28.93405 AU
retrograde	859 May 16 j 16:22	17° \approx 34'02		direct	865 Nov 05 j 00:27	28° \approx 06'35	
opposition	859 Aug 05 j 12:41	16° \approx 09'33	-0°33'50	evening set	866 Jan 30 j 07:21	29° \approx 59'28	
min. Earth dist.	859 Aug 04 j 19:20	16° \approx 10'45	28.99474 AU	evening set	866 Jan 30 j 13:06	0° \approx	
direct	859 Sep 24 j 12:20	15° \approx		conjunction	866 Feb 14 j 19:28	0° \approx 34'26	-0°56'30
direct	859 Oct 23 j 03:38	14° \approx 46'35		minimum elong	866 Feb 14 j 19:28	0° \approx 34'26	0°56'29
evening set	859 Nov 20 j 03:00	15° \approx		max. Earth dist.	866 Feb 15 j 16:49	0° \approx 36'27	30.92987 AU
evening set	860 Jan 17 j 15:07	16° \approx 39'36		morning rise	866 Mar 02 j 10:44	1° \approx 09'43	
conjunction	860 Feb 02 j 01:08	17° \approx 14'25	-0°33'38	retrograde	866 Jun 01 j 12:33	3° \approx 08'12	

min. Earth dist.	866 Aug 20 j 09:32	1° ✕ 44'41	28.92698 AU	max. Earth dist.	873 Mar 03 j 04:25	16° ✕ 16'04	30.88914 AU
opposition	866 Aug 21 j 06:45	1° ✕ 43'13	-1°02'21	morning rise	873 Mar 17 j 23:53	16° ✕ 49'25	
direct	866 Nov 07 j 12:28	0° ✕ 20'07		retrograde	873 Jun 17 j 11:19	18° ✕ 48'31	
evening set	867 Feb 01 j 18:23	2° ✕ 13'02		opposition	873 Sep 05 j 23:52	17° ✕ 23'23	-1°26'25
				min. Earth dist.	873 Sep 05 j 01:35	17° ✕ 24'55	28.88595 AU
conjunction	867 Feb 17 j 06:42	2° ✕ 48'01	-1°00'03	direct	873 Nov 22 j 17:42	16° ✕ 00'19	
minimum elong	867 Feb 17 j 06:42	2° ✕ 48'01	1°00'03	evening set	874 Feb 17 j 03:01	17° ✕ 53'24	
max. Earth dist.	867 Feb 18 j 03:51	2° ✕ 50'01	30.92332 AU				
morning rise	867 Mar 04 j 22:31	3° ✕ 23'20		conjunction	874 Mar 04 j 17:59	18° ✕ 28'34	-1°22'12
retrograde	867 Jun 04 j 01:46	5° ✕ 21'56		minimum elong	874 Mar 04 j 17:59	18° ✕ 28'34	1°22'11
opposition	867 Aug 23 j 19:33	3° ✕ 56'56	-1°06'06	max. Earth dist.	874 Mar 05 j 16:35	18° ✕ 30'43	30.88093 AU
min. Earth dist.	867 Aug 22 j 22:39	3° ✕ 58'22	28.92107 AU	morning rise	874 Mar 20 j 12:36	19° ✕ 04'06	
direct	867 Nov 09 j 22:00	2° ✕ 33'51		retrograde	874 Jun 19 j 23:47	21° ✕ 03'12	
evening set	868 Feb 04 j 05:18	4° ✕ 26'47		opposition	874 Sep 08 j 12:22	19° ✕ 38'00	-1°29'22
				min. Earth dist.	874 Sep 07 j 15:13	19° ✕ 39'28	28.87761 AU
conjunction	868 Feb 19 j 18:07	5° ✕ 01'49	-1°03'31	direct	874 Nov 25 j 05:06	18° ✕ 14'52	
minimum elong	868 Feb 19 j 18:06	5° ✕ 01'49	1°03'31	evening set	875 Feb 19 j 14:50	20° ✕ 07'56	
max. Earth dist.	868 Feb 20 j 16:49	5° ✕ 03'58	30.91782 AU				
morning rise	868 Mar 06 j 10:09	5° ✕ 37'10		conjunction	875 Mar 07 j 06:18	20° ✕ 43'08	-1°24'54
retrograde	868 Jun 05 j 14:05	7° ✕ 35'52		minimum elong	875 Mar 07 j 06:18	20° ✕ 43'08	1°24'54
min. Earth dist.	868 Aug 24 j 10:15	6° ✕ 12'23	28.91590 AU	max. Earth dist.	875 Mar 08 j 05:30	20° ✕ 45'20	30.87258 AU
opposition	868 Aug 25 j 08:16	6° ✕ 10'52	-1°09'46	morning rise	875 Mar 23 j 01:15	21° ✕ 18'41	
direct	868 Nov 11 j 09:45	4° ✕ 47'50		retrograde	875 Jun 22 j 13:44	23° ✕ 17'47	
evening set	869 Feb 05 j 16:38	6° ✕ 40'48		min. Earth dist.	875 Sep 10 j 02:31	21° ✕ 54'03	28.86935 AU
				opposition	875 Sep 11 j 00:46	21° ✕ 52'30	-1°32'12
conjunction	869 Feb 21 j 05:38	7° ✕ 15'51	-1°06'54	direct	875 Nov 27 j 18:25	20° ✕ 29'19	
minimum elong	869 Feb 21 j 05:38	7° ✕ 15'51	1°06'54	evening set	876 Feb 22 j 02:40	22° ✕ 22'22	
max. Earth dist.	869 Feb 22 j 03:44	7° ✕ 17'56	30.91291 AU				
morning rise	869 Mar 08 j 22:16	7° ✕ 51'14		conjunction	876 Mar 08 j 18:23	22° ✕ 57'36	-1°27'29
retrograde	869 Jun 08 j 03:37	9° ✕ 50'03		minimum elong	876 Mar 08 j 18:23	22° ✕ 57'36	1°27'28
opposition	869 Aug 27 j 21:00	8° ✕ 25'02	-1°13'19	max. Earth dist.	876 Mar 09 j 17:04	22° ✕ 59'45	30.86449 AU
min. Earth dist.	869 Aug 26 j 23:09	8° ✕ 26'33	28.91123 AU	morning rise	876 Mar 24 j 13:52	23° ✕ 33'10	
direct	869 Nov 13 j 19:18	7° ✕ 02'02		retrograde	876 Jun 24 j 03:30	25° ✕ 32'17	
evening set	870 Feb 08 j 04:00	8° ✕ 55'03		opposition	876 Sep 12 j 13:18	24° ✕ 06'56	-1°34'53
				min. Earth dist.	876 Sep 11 j 15:43	24° ✕ 08'26	28.86179 AU
conjunction	870 Feb 23 j 17:32	9° ✕ 30'07	-1°10'11	direct	876 Nov 29 j 05:32	22° ✕ 43'41	
minimum elong	870 Feb 23 j 17:32	9° ✕ 30'07	1°10'11	evening set	877 Feb 23 j 14:34	24° ✕ 36'44	
max. Earth dist.	870 Feb 24 j 16:55	9° ✕ 32'20	30.90808 AU				
morning rise	870 Mar 11 j 10:25	10° ✕ 05'32		conjunction	877 Mar 11 j 06:51	25° ✕ 12'00	-1°29'55
retrograde	870 Jun 10 j 16:04	12° ✕ 04'27		minimum elong	877 Mar 11 j 06:51	25° ✕ 12'00	1°29'55
min. Earth dist.	870 Aug 29 j 11:52	10° ✕ 40'57	28.90620 AU	max. Earth dist.	877 Mar 12 j 06:47	25° ✕ 14'15	30.85736 AU
opposition	870 Aug 30 j 09:43	10° ✕ 39'27	-1°16'46	morning rise	877 Mar 27 j 02:36	25° ✕ 47'35	
direct	870 Nov 16 j 06:22	9° ✕ 16'27		retrograde	877 Jun 26 j 15:14	27° ✕ 46'42	
evening set	871 Feb 10 j 15:40	11° ✕ 09'30		min. Earth dist.	877 Sep 14 j 03:00	26° ✕ 22'52	28.85521 AU
				opposition	877 Sep 15 j 01:29	26° ✕ 21'18	-1°37'26
conjunction	871 Feb 26 j 05:26	11° ✕ 44'36	-1°13'21	direct	877 Dec 01 j 18:04	24° ✕ 58'01	
minimum elong	871 Feb 26 j 05:25	11° ✕ 44'36	1°13'21	evening set	878 Feb 26 j 02:42	26° ✕ 51'05	
max. Earth dist.	871 Feb 27 j 03:56	11° ✕ 46'44	30.90273 AU				
morning rise	871 Mar 13 j 22:48	12° ✕ 20'03		conjunction	878 Mar 13 j 19:15	27° ✕ 26'21	-1°32'14
retrograde	871 Jun 13 j 06:52	14° ✕ 19'03		minimum elong	878 Mar 13 j 19:15	27° ✕ 26'21	1°32'14
opposition	871 Sep 01 j 22:24	12° ✕ 54'01	-1°20'06	max. Earth dist.	878 Mar 14 j 18:21	27° ✕ 28'32	30.85138 AU
min. Earth dist.	871 Sep 01 j 00:14	12° ✕ 55'34	28.90051 AU	morning rise	878 Mar 29 j 15:36	28° ✕ 01'59	
direct	871 Nov 18 j 16:18	11° ✕ 31'02			878 Jun 20 j 22:01	0° °	
evening set	872 Feb 13 j 03:23	13° ✕ 24'07		retrograde	878 Jun 29 j 04:13	0° ° 01'07	
					878 Jul 07 j 10:50	30° ° ✕	
conjunction	872 Feb 28 j 17:34	13° ✕ 59'14	-1°16'25	opposition	878 Sep 17 j 13:49	28° ✕ 35'40	-1°39'49
minimum elong	872 Feb 28 j 17:34	13° ✕ 59'14	1°16'25	min. Earth dist.	878 Sep 16 j 15:32	28° ✕ 37'14	28.84996 AU
max. Earth dist.	872 Feb 29 j 16:36	14° ✕ 01'25	30.89640 AU	direct	878 Dec 04 j 04:02	27° ✕ 12'22	
morning rise	872 Mar 15 j 11:17	14° ✕ 34'43		evening set	879 Feb 28 j 14:41	29° ✕ 05'27	
retrograde	872 Jun 14 j 20:07	16° ✕ 33'46					
opposition	872 Sep 03 j 11:13	15° ✕ 08'42	-1°23'19	conjunction	879 Mar 16 j 07:47	29° ✕ 40'45	-1°34'24
min. Earth dist.	872 Sep 02 j 13:44	15° ✕ 10'12	28.89369 AU	minimum elong	879 Mar 16 j 07:46	29° ✕ 40'45	1°34'24
direct	872 Nov 20 j 05:02	13° ✕ 45'41		max. Earth dist.	879 Mar 17 j 08:13	29° ✕ 43'04	30.84663 AU
evening set	873 Feb 14 j 15:06	15° ✕ 38'46			879 Mar 24 j 19:56	0° °	
				morning rise	879 Apr 01 j 04:21	0° ° 16'24	
conjunction	873 Mar 02 j 05:43	16° ✕ 13'55	-1°19'22	retrograde	879 Jul 01 j 15:59	2° ° 15'33	
minimum elong	873 Mar 02 j 05:43	16° ✕ 13'55	1°19'22	min. Earth dist.	879 Sep 19 j 03:32	0° ° 51'41	28.84583 AU

opposition	879 Sep 20 j 02:01	0°♈50'06 -1°42'04	minimum elong	886 Apr 01 j 03:08	15°♈25'28 1°45'24
	879 Oct 22 j 01:40	30°♈	max. Earth dist.	886 Apr 02 j 01:53	15°♈27'37 30.82588 AU
direct	879 Dec 06 j 15:11	29°♈26'47	morning rise	886 Apr 17 j 02:37	16°♈01'19
	880 Jan 19 j 20:59	0°♈	retrograde	886 Jul 17 j 16:41	18°♈00'31
evening set	880 Mar 02 j 02:55	1°♈19'55	opposition	886 Oct 05 j 14:45	16°♈35'07 -1°53'15
			min. Earth dist.	886 Oct 04 j 18:04	16°♈36'34 28.82461 AU
conjunction	880 Mar 17 j 20:20	1°♈55'14 -1°36'26	direct	886 Dec 22 j 01:41	15°♈11'42
minimum elong	880 Mar 17 j 20:20	1°♈55'14 1°36'25	evening set	887 Mar 18 j 19:51	17°♈05'10
max. Earth dist.	880 Mar 18 j 20:02	1°♈57'28 30.84319 AU			
morning rise	880 Apr 02 j 17:28	2°♈30'55	conjunction	887 Apr 03 j 16:21	17°♈40'42 -1°46'21
retrograde	880 Jul 03 j 06:20	4°♈30'06	minimum elong	887 Apr 03 j 16:21	17°♈40'42 1°46'22
opposition	880 Sep 21 j 14:14	3°♈04'39 -1°44'09	max. Earth dist.	887 Apr 04 j 13:40	17°♈42'43 30.82089 AU
min. Earth dist.	880 Sep 20 j 15:21	3°♈06'15 28.84300 AU	morning rise	887 Apr 19 j 16:24	18°♈16'34
direct	880 Dec 08 j 01:10	1°♈41'20	retrograde	887 Jul 20 j 06:01	20°♈15'43
evening set	881 Mar 04 j 15:10	3°♈34'31	min. Earth dist.	887 Oct 07 j 06:47	18°♈51'41 28.81968 AU
			opposition	887 Oct 08 j 02:41	18°♈50'17 -1°54'11
conjunction	881 Mar 20 j 09:05	4°♈09'52 -1°38'18	direct	887 Dec 24 j 12:27	17°♈26'47
minimum elong	881 Mar 20 j 09:05	4°♈09'52 1°38'19	evening set	888 Mar 20 j 08:43	19°♈20'17
max. Earth dist.	881 Mar 21 j 09:31	4°♈12'10 30.84067 AU			
morning rise	881 Apr 05 j 06:34	4°♈45'35	conjunction	888 Apr 05 j 05:50	19°♈55'51 -1°47'08
retrograde	881 Jul 05 j 18:46	6°♈44'48	minimum elong	888 Apr 05 j 05:50	19°♈55'51 1°47'08
min. Earth dist.	881 Sep 23 j 04:15	5°♈20'55 28.84080 AU	max. Earth dist.	888 Apr 06 j 04:02	19°♈57'56 30.81605 AU
opposition	881 Sep 24 j 02:27	5°♈19'22 -1°46'05	morning rise	888 Apr 21 j 06:07	20°♈31'44
direct	881 Dec 10 j 12:53	3°♈56'04	retrograde	888 Jul 21 j 17:57	22°♈30'49
evening set	882 Mar 07 j 03:41	5°♈49'19	opposition	888 Oct 09 j 14:24	21°♈05'21 -1°54'56
			min. Earth dist.	888 Oct 08 j 18:43	21°♈06'44 28.81511 AU
conjunction	882 Mar 22 j 22:03	6°♈24'42 -1°40'02	direct	888 Dec 26 j 00:06	19°♈41'47
minimum elong	882 Mar 22 j 22:02	6°♈24'42 1°40'02	evening set	889 Mar 22 j 21:42	21°♈35'18
max. Earth dist.	882 Mar 23 j 21:59	6°♈26'57 30.83873 AU			
morning rise	882 Apr 07 j 19:57	7°♈00'25	conjunction	889 Apr 07 j 19:11	22°♈10'53 -1°47'46
retrograde	882 Jul 08 j 09:42	8°♈59'40	minimum elong	889 Apr 07 j 19:11	22°♈10'53 1°47'46
opposition	882 Sep 26 j 14:25	7°♈34'17 -1°47'51	max. Earth dist.	889 Apr 08 j 16:12	22°♈12'52 30.81196 AU
min. Earth dist.	882 Sep 25 j 15:40	7°♈35'52 28.83890 AU	morning rise	889 Apr 23 j 20:03	22°♈46'48
direct	882 Dec 13 j 00:35	6°♈10'58	retrograde	889 Jul 24 j 07:00	24°♈45'49
evening set	883 Mar 09 j 16:25	8°♈04'18	min. Earth dist.	889 Oct 11 j 06:22	23°♈21'43 28.81157 AU
			opposition	889 Oct 12 j 02:05	23°♈20'19 -1°55'31
conjunction	883 Mar 25 j 11:07	8°♈39'43 -1°41'37	direct	889 Dec 28 j 10:47	21°♈56'41
minimum elong	883 Mar 25 j 11:07	8°♈39'43 1°41'37	evening set	890 Mar 25 j 10:43	23°♈50'14
max. Earth dist.	883 Mar 26 j 10:47	8°♈41'57 30.83660 AU			
morning rise	883 Apr 10 j 09:27	9°♈15'29	conjunction	890 Apr 10 j 08:43	24°♈25'51 -1°48'13
retrograde	883 Jul 10 j 22:55	11°♈14'45	minimum elong	890 Apr 10 j 08:43	24°♈25'51 1°48'13
min. Earth dist.	883 Sep 28 j 05:18	9°♈50'52 28.83661 AU	max. Earth dist.	890 Apr 11 j 06:16	24°♈27'52 30.80887 AU
opposition	883 Sep 29 j 02:39	9°♈49'23 -1°49'27	morning rise	890 Apr 26 j 09:51	25°♈01'46
direct	883 Dec 15 j 11:31	8°♈26'04	retrograde	890 Jul 26 j 17:40	27°♈00'43
evening set	884 Mar 11 j 05:01	10°♈19'27	opposition	890 Oct 14 j 13:36	25°♈35'14 -1°55'55
			min. Earth dist.	890 Oct 13 j 18:37	25°♈36'34 28.80917 AU
conjunction	884 Mar 27 j 00:17	10°♈54'54 -1°43'02	direct	890 Dec 30 j 22:16	24°♈11'33
minimum elong	884 Mar 27 j 00:17	10°♈54'54 1°43'01	evening set	891 Mar 27 j 23:44	26°♈05'08
max. Earth dist.	884 Mar 27 j 23:57	10°♈57'08 30.83399 AU			
morning rise	884 Apr 11 j 22:56	11°♈30'41	conjunction	891 Apr 12 j 22:11	26°♈40'46 -1°48'31
retrograde	884 Jul 12 j 14:02	13°♈29'58	minimum elong	891 Apr 12 j 22:11	26°♈40'46 1°48'31
opposition	884 Sep 30 j 14:45	12°♈04'36 -1°50'53	max. Earth dist.	891 Apr 13 j 19:07	26°♈42'44 30.80732 AU
min. Earth dist.	884 Sep 29 j 16:53	12°♈06'08 28.83351 AU	morning rise	891 Apr 28 j 23:46	27°♈16'42
direct	884 Dec 17 j 01:01	10°♈41'16	retrograde	891 Jul 29 j 07:42	29°♈15'36
evening set	885 Mar 13 j 18:02	12°♈34'42	min. Earth dist.	891 Oct 16 j 05:23	27°♈51'30 28.80838 AU
			opposition	891 Oct 17 j 01:07	27°♈50'07 -1°56'08
conjunction	885 Mar 29 j 13:37	13°♈10'11 -1°44'18	direct	892 Jan 02 j 09:15	26°♈26'22
minimum elong	885 Mar 29 j 13:37	13°♈10'11 1°44'18	evening set	892 Mar 29 j 12:44	28°♈20'01
max. Earth dist.	885 Mar 30 j 11:59	13°♈12'17 30.83034 AU			
morning rise	885 Apr 14 j 12:50	13°♈46'00	conjunction	892 Apr 14 j 11:37	28°♈55'40 -1°48'39
retrograde	885 Jul 15 j 04:20	15°♈45'15	minimum elong	892 Apr 14 j 11:37	28°♈55'41 1°48'38
min. Earth dist.	885 Oct 02 j 06:25	14°♈21'18 28.82946 AU	max. Earth dist.	892 Apr 15 j 08:32	28°♈57'38 30.80722 AU
opposition	885 Oct 03 j 02:50	14°♈19'52 -1°52'09	morning rise	892 Apr 30 j 13:36	29°♈31'38
direct	885 Dec 19 j 12:33	12°♈56'30		892 May 13 j 20:52	0°♈
evening set	886 Mar 16 j 06:54	14°♈49'58	retrograde	892 Jul 30 j 19:49	1°♈30'28
			opposition	892 Oct 18 j 12:45	0°♈05'01 -1°56'11
conjunction	886 Apr 01 j 03:08	15°♈25'28 -1°45'24	min. Earth dist.	892 Oct 17 j 18:12	0°♈06'19 28.80905 AU

	892 Oct 21 j 11:36	30° κ Υ	conjunction	899 May 01 j 13:26	14° \mathcal{B} 41'54 -1°44'54
direct	893 Jan 03 j 19:58	28° Υ 41'15	minimum elong	899 May 01 j 13:26	14° \mathcal{B} 41'54 1°44'54
	893 Mar 15 j 11:38	0° \mathcal{B}	max. Earth dist.	899 May 02 j 06:08	14° \mathcal{B} 43'28 30.82142 AU
evening set	893 Apr 01 j 01:53	0° \mathcal{B} 34'57		899 May 09 j 14:50	15° \mathcal{B}
			morning rise	899 May 17 j 17:53	15° \mathcal{B} 18'00
conjunction	893 Apr 17 j 01:21	1° \mathcal{B} 10'38 -1°48'37	retrograde	899 Aug 16 j 16:04	17° \mathcal{B} 16'14
minimum elong	893 Apr 17 j 01:21	1° \mathcal{B} 10'38 1°48'37	opposition	899 Nov 03 j 20:21	15° \mathcal{B} 51'03 -1°51'33
max. Earth dist.	893 Apr 17 j 22:20	1° \mathcal{B} 12'36 30.80867 AU	min. Earth dist.	899 Nov 03 j 06:17	15° \mathcal{B} 52'02 28.82279 AU
morning rise	893 May 03 j 03:42	1° \mathcal{B} 46'37		899 Dec 06 j 02:11	15° κ \mathcal{B}
retrograde	893 Aug 02 j 10:17	3° \mathcal{B} 45'23	direct	900 Jan 20 j 08:27	14° \mathcal{B} 27'04
min. Earth dist.	893 Oct 20 j 04:54	2° \mathcal{B} 21'19 28.81101 AU		900 Mar 04 j 17:17	15° \mathcal{B}
opposition	893 Oct 21 j 00:02	2° \mathcal{B} 19'58 -1°56'03	evening set	900 Apr 17 j 00:54	16° \mathcal{B} 21'07
direct	894 Jan 06 j 09:26	0° \mathcal{B} 56'12			
evening set	894 Apr 03 j 15:19	2° \mathcal{B} 49'58	conjunction	900 May 03 j 03:28	16° \mathcal{B} 56'59 -1°43'43
			minimum elong	900 May 03 j 03:29	16° \mathcal{B} 56'59 1°43'42
conjunction	894 Apr 19 j 15:06	3° \mathcal{B} 25'41 -1°48'24	max. Earth dist.	900 May 03 j 18:50	16° \mathcal{B} 58'26 30.82204 AU
minimum elong	894 Apr 19 j 15:06	3° \mathcal{B} 25'41 1°48'24	morning rise	900 May 19 j 08:22	17° \mathcal{B} 33'06
max. Earth dist.	894 Apr 20 j 11:02	3° \mathcal{B} 27'33 30.81110 AU	retrograde	900 Aug 18 j 05:43	19° \mathcal{B} 31'12
morning rise	894 May 05 j 17:55	4° \mathcal{B} 01'41	opposition	900 Nov 05 j 07:26	18° \mathcal{B} 06'01 -1°50'12
retrograde	894 Aug 04 j 23:51	6° \mathcal{B} 00'24	min. Earth dist.	900 Nov 04 j 17:13	18° \mathcal{B} 07'01 28.82343 AU
opposition	894 Oct 23 j 11:35	4° \mathcal{B} 35'02 -1°55'44	direct	901 Jan 21 j 19:44	16° \mathcal{B} 41'57
min. Earth dist.	894 Oct 22 j 17:50	4° \mathcal{B} 36'17 28.81384 AU	evening set	901 Apr 19 j 14:41	18° \mathcal{B} 36'03
direct	895 Jan 08 j 20:48	3° \mathcal{B} 11'16			
evening set	895 Apr 06 j 04:34	5° \mathcal{B} 05'05	conjunction	901 May 05 j 17:40	19° \mathcal{B} 11'57 -1°42'22
			minimum elong	901 May 05 j 17:40	19° \mathcal{B} 11'57 1°42'23
conjunction	895 Apr 22 j 04:56	5° \mathcal{B} 40'51 -1°48'02	max. Earth dist.	901 May 06 j 08:34	19° \mathcal{B} 13'20 30.82281 AU
minimum elong	895 Apr 22 j 04:56	5° \mathcal{B} 40'51 1°48'02	morning rise	901 May 21 j 22:51	19° \mathcal{B} 48'04
max. Earth dist.	895 Apr 23 j 01:14	5° \mathcal{B} 42'45 30.81413 AU	retrograde	901 Aug 20 j 16:28	21° \mathcal{B} 46'01
morning rise	895 May 08 j 07:58	6° \mathcal{B} 16'52	opposition	901 Nov 07 j 18:27	20° \mathcal{B} 20'52 -1°48'41
retrograde	895 Aug 07 j 13:16	8° \mathcal{B} 15'31	min. Earth dist.	901 Nov 07 j 05:50	20° \mathcal{B} 21'46 28.82453 AU
opposition	895 Oct 25 j 22:58	6° \mathcal{B} 50'13 -1°55'15	direct	902 Jan 24 j 06:42	18° \mathcal{B} 56'44
min. Earth dist.	895 Oct 25 j 05:05	6° \mathcal{B} 51'28 28.81682 AU	evening set	902 Apr 22 j 04:23	20° \mathcal{B} 50'52
direct	896 Jan 11 j 09:41	5° \mathcal{B} 26'26			
evening set	896 Apr 07 j 18:14	7° \mathcal{B} 20'19	conjunction	902 May 08 j 07:52	21° \mathcal{B} 26'47 -1°40'53
			minimum elong	902 May 08 j 07:52	21° \mathcal{B} 26'47 1°40'52
conjunction	896 Apr 23 j 18:54	7° \mathcal{B} 56'06 -1°47'29	max. Earth dist.	902 May 08 j 22:22	21° \mathcal{B} 28'09 30.82446 AU
minimum elong	896 Apr 23 j 18:54	7° \mathcal{B} 56'06 1°47'29	morning rise	902 May 24 j 13:19	22° \mathcal{B} 02'55
max. Earth dist.	896 Apr 24 j 13:21	7° \mathcal{B} 57'50 30.81703 AU	retrograde	902 Aug 23 j 05:43	24° \mathcal{B} 00'45
morning rise	896 May 09 j 22:27	8° \mathcal{B} 32'09	opposition	902 Nov 10 j 05:22	22° \mathcal{B} 35'37 -1°47'00
retrograde	896 Aug 09 j 03:53	10° \mathcal{B} 30'43	min. Earth dist.	902 Nov 09 j 16:18	22° \mathcal{B} 36'32 28.82663 AU
opposition	896 Oct 27 j 10:24	9° \mathcal{B} 05'28 -1°54'35	direct	903 Jan 26 j 20:08	21° \mathcal{B} 11'26
min. Earth dist.	896 Oct 26 j 17:44	9° \mathcal{B} 06'38 28.81952 AU	evening set	903 Apr 24 j 18:01	23° \mathcal{B} 05'37
direct	897 Jan 12 j 20:58	7° \mathcal{B} 41'39			
evening set	897 Apr 10 j 07:51	9° \mathcal{B} 35'36	conjunction	903 May 10 j 21:46	23° \mathcal{B} 41'33 -1°39'14
			minimum elong	903 May 10 j 21:46	23° \mathcal{B} 41'33 1°39'15
conjunction	897 Apr 26 j 09:09	10° \mathcal{B} 11'25 -1°46'47	max. Earth dist.	903 May 11 j 11:18	23° \mathcal{B} 42'49 30.82715 AU
minimum elong	897 Apr 26 j 09:09	10° \mathcal{B} 11'25 1°46'48	morning rise	903 May 27 j 03:35	24° \mathcal{B} 17'42
max. Earth dist.	897 Apr 27 j 03:50	10° \mathcal{B} 13'10 30.81930 AU	retrograde	903 Aug 25 j 18:02	26° \mathcal{B} 15'24
morning rise	897 May 12 j 12:54	10° \mathcal{B} 47'29	opposition	903 Nov 12 j 16:25	24° \mathcal{B} 50'18 -1°45'10
retrograde	897 Aug 11 j 16:16	12° \mathcal{B} 45'57	min. Earth dist.	903 Nov 12 j 04:39	24° \mathcal{B} 51'08 28.83007 AU
opposition	897 Oct 29 j 21:50	11° \mathcal{B} 20'44 -1°53'44	direct	904 Jan 29 j 07:25	23° \mathcal{B} 26'04
min. Earth dist.	897 Oct 29 j 05:56	11° \mathcal{B} 21'51 28.82126 AU	evening set	904 Apr 26 j 07:40	25° \mathcal{B} 20'19
direct	898 Jan 15 j 09:35	9° \mathcal{B} 56'53			
evening set	898 Apr 12 j 21:39	11° \mathcal{B} 50'52	conjunction	904 May 12 j 11:59	25° \mathcal{B} 56'17 -1°37'26
			minimum elong	904 May 12 j 11:59	25° \mathcal{B} 56'17 1°37'26
conjunction	898 Apr 28 j 23:15	12° \mathcal{B} 26'42 -1°45'55	max. Earth dist.	904 May 13 j 01:46	25° \mathcal{B} 57'34 30.83137 AU
minimum elong	898 Apr 28 j 23:15	12° \mathcal{B} 26'42 1°45'54	morning rise	904 May 28 j 17:58	26° \mathcal{B} 32'26
max. Earth dist.	898 Apr 29 j 15:57	12° \mathcal{B} 28'16 30.82070 AU	retrograde	904 Aug 27 j 07:10	28° \mathcal{B} 30'01
morning rise	898 May 15 j 03:29	13° \mathcal{B} 02'47	opposition	904 Nov 14 j 03:10	27° \mathcal{B} 04'59 -1°43'10
	898 Aug 05 j 21:45	15° \mathcal{B}	min. Earth dist.	904 Nov 13 j 15:08	27° \mathcal{B} 05'51 28.83492 AU
retrograde	898 Aug 14 j 05:17	15° \mathcal{B} 01'08	direct	905 Jan 30 j 20:15	25° \mathcal{B} 40'44
	898 Aug 22 j 11:23	15° κ \mathcal{B}	evening set	905 Apr 28 j 21:33	27° \mathcal{B} 35'03
opposition	898 Nov 01 j 09:05	13° \mathcal{B} 35'56 -1°52'44			
min. Earth dist.	898 Oct 31 j 17:45	13° \mathcal{B} 37'01 28.82229 AU	conjunction	905 May 15 j 02:07	28° \mathcal{B} 11'02 -1°35'29
direct	899 Jan 17 j 20:52	12° \mathcal{B} 12'02	minimum elong	905 May 15 j 02:07	28° \mathcal{B} 11'02 1°35'30
evening set	899 Apr 15 j 11:17	14° \mathcal{B} 06'03	max. Earth dist.	905 May 15 j 14:16	28° \mathcal{B} 12'10 30.83702 AU
			morning rise	905 May 31 j 08:32	28° \mathcal{B} 47'12

	905 Jul 07 j 21:55	0°II	evening set	912 May 14 j 23:46	13°II19'59	
retrograde	905 Aug 29 j 21:42	0°II44'40				
	905 Oct 22 j 22:18	30°R8	conjunction	912 May 31 j 06:42	13°II56'06	-1°17'57
opposition	905 Nov 16 j 14:06	29°819'43 -1°41'00	minimum elong	912 May 31 j 06:42	13°II56'06	1°17'57
min. Earth dist.	905 Nov 16 j 02:59	29°820'30 28.84126 AU	max. Earth dist.	912 May 31 j 12:09	13°II56'36	30.88382 AU
direct	906 Feb 02 j 07:57	27°855'27	morning rise	912 Jun 16 j 14:26	14°II32'18	
evening set	906 May 01 j 11:17	29°849'51	retrograde	912 Sep 14 j 10:05	16°II28'49	
	906 May 06 j 02:14	0°II	opposition	912 Dec 01 j 17:36	15°II04'23	-1°21'45
			min. Earth dist.	912 Dec 01 j 13:16	15°II04'41	28.88663 AU
conjunction	906 May 17 j 16:23	0°II25'52 -1°33'24	direct	913 Feb 17 j 17:27	13°II39'52	
minimum elong	906 May 17 j 16:23	0°II25'52 1°33'23	evening set	913 May 17 j 13:48	15°II34'40	
max. Earth dist.	906 May 18 j 05:03	0°II27'03 30.84395 AU				
morning rise	906 Jun 02 j 22:51	1°II02'03	conjunction	913 Jun 02 j 21:09	16°II10'47	-1°14'57
retrograde	906 Sep 01 j 09:46	2°II59'24	minimum elong	913 Jun 02 j 21:09	16°II10'47	1°14'58
opposition	906 Nov 19 j 00:52	1°II34'33 -1°38'41	max. Earth dist.	913 Jun 03 j 02:14	16°II11'15	30.88830 AU
min. Earth dist.	906 Nov 18 j 14:20	1°II35'18 28.84856 AU	morning rise	913 Jun 19 j 04:55	16°II46'59	
direct	907 Feb 04 j 20:42	0°II10'18	retrograde	913 Sep 16 j 22:05	18°II43'18	
evening set	907 May 04 j 01:15	2°II04'46	opposition	913 Dec 04 j 04:07	17°II18'54	-1°18'29
			min. Earth dist.	913 Dec 03 j 23:55	17°II19'12	28.89098 AU
conjunction	907 May 20 j 06:33	2°II40'49 -1°31'09	direct	914 Feb 20 j 07:06	15°II54'19	
minimum elong	907 May 20 j 06:34	2°II40'49 1°31'10	evening set	914 May 20 j 03:51	17°II49'07	
max. Earth dist.	907 May 20 j 17:25	2°II41'49 30.85176 AU				
morning rise	907 Jun 05 j 13:26	3°II17'00	conjunction	914 Jun 05 j 11:14	18°II25'15	-1°11'50
retrograde	907 Sep 03 j 23:15	5°II14'15	minimum elong	914 Jun 05 j 11:15	18°II25'15	1°11'50
opposition	907 Nov 21 j 11:40	3°II49'30 -1°36'12	max. Earth dist.	914 Jun 05 j 14:28	18°II25'33	30.89281 AU
min. Earth dist.	907 Nov 21 j 01:41	3°II50'13 28.85656 AU	morning rise	914 Jun 21 j 19:13	19°II01'26	
direct	908 Feb 07 j 07:50	2°II25'15	retrograde	914 Sep 19 j 10:56	20°II57'34	
evening set	908 May 05 j 15:10	4°II19'49	opposition	914 Dec 06 j 14:40	19°II33'11	-1°15'06
			min. Earth dist.	914 Dec 06 j 11:35	19°II33'24	28.89578 AU
conjunction	908 May 21 j 20:57	4°II55'53 -1°28'46	direct	915 Feb 22 j 19:26	18°II08'31	
minimum elong	908 May 21 j 20:58	4°II55'53 1°28'46	evening set	915 May 22 j 17:42	20°II03'22	
max. Earth dist.	908 May 22 j 07:49	4°II56'53 30.85970 AU				
morning rise	908 Jun 07 j 03:55	5°II32'05	conjunction	915 Jun 08 j 01:29	20°II39'30	-1°08'37
retrograde	908 Sep 05 j 10:51	7°II29'12	minimum elong	915 Jun 08 j 01:29	20°II39'30	1°08'38
opposition	908 Nov 22 j 22:34	6°II04'34 -1°33'35	max. Earth dist.	915 Jun 08 j 05:04	20°II39'50	30.89800 AU
min. Earth dist.	908 Nov 22 j 14:06	6°II05'10 28.86424 AU	morning rise	915 Jun 24 j 09:22	21°II15'40	
direct	909 Feb 08 j 19:17	4°II40'19	retrograde	915 Sep 21 j 22:04	23°II11'38	
evening set	909 May 08 j 05:24	6°II34'56	opposition	915 Dec 09 j 01:04	21°II47'17	-1°11'36
			min. Earth dist.	915 Dec 08 j 22:35	21°II47'28	28.90135 AU
conjunction	909 May 24 j 11:26	7°II11'01 -1°26'15	direct	916 Feb 25 j 08:48	20°II22'33	
minimum elong	909 May 24 j 11:27	7°II11'01 1°26'15	evening set	916 May 24 j 07:39	22°II17'26	
max. Earth dist.	909 May 24 j 20:20	7°II11'51 30.86714 AU				
morning rise	909 Jun 09 j 18:42	7°II47'14	conjunction	916 Jun 09 j 15:30	22°II53'34	-1°05'18
retrograde	909 Sep 08 j 00:40	9°II44'13	minimum elong	916 Jun 09 j 15:30	22°II53'34	1°05'18
opposition	909 Nov 25 j 09:16	8°II19'40 -1°30'49	max. Earth dist.	916 Jun 09 j 17:16	22°II53'44	30.90422 AU
min. Earth dist.	909 Nov 25 j 01:02	8°II20'15 28.87119 AU	morning rise	916 Jun 25 j 23:37	23°II29'44	
direct	910 Feb 11 j 06:20	6°II55'22	retrograde	916 Sep 23 j 11:13	25°II25'32	
evening set	910 May 10 j 19:37	8°II50'04	opposition	916 Dec 10 j 11:29	24°II01'14	-1°08'00
			min. Earth dist.	916 Dec 10 j 09:20	24°II01'23	28.90818 AU
conjunction	910 May 27 j 01:59	9°II26'10 -1°23'37	direct	917 Feb 26 j 20:32	22°II36'27	
minimum elong	910 May 27 j 01:59	9°II26'10 1°23'36	evening set	917 May 26 j 21:34	24°II31'23	
max. Earth dist.	910 May 27 j 10:01	9°II26'54 30.87355 AU				
morning rise	910 Jun 12 j 09:20	10°II02'23	conjunction	917 Jun 12 j 05:43	25°II07'31	-1°01'53
retrograde	910 Sep 10 j 10:31	11°II59'13	minimum elong	917 Jun 12 j 05:44	25°II07'31	1°01'54
opposition	910 Nov 27 j 20:14	10°II34'43 -1°27'55	max. Earth dist.	917 Jun 12 j 07:48	25°II07'43	30.91163 AU
min. Earth dist.	910 Nov 27 j 13:58	10°II35'10 28.87708 AU	morning rise	917 Jun 28 j 13:41	25°II43'41	
direct	911 Feb 13 j 17:30	9°II10'23	retrograde	917 Sep 25 j 22:26	27°II39'18	
evening set	911 May 13 j 09:34	11°II05'06	opposition	917 Dec 12 j 21:54	26°II15'05	-1°04'18
			min. Earth dist.	917 Dec 12 j 20:54	26°II15'10	28.91619 AU
conjunction	911 May 29 j 16:17	11°II41'12 -1°20'50	direct	918 Mar 01 j 08:41	24°II50'17	
minimum elong	911 May 29 j 16:18	11°II41'12 1°20'51	evening set	918 May 29 j 11:33	26°II45'17	
max. Earth dist.	911 May 29 j 23:13	11°II41'51 30.87911 AU				
morning rise	911 Jun 14 j 23:49	12°II17'25	conjunction	918 Jun 14 j 19:45	27°II21'26	-0°58'23
retrograde	911 Sep 12 j 22:45	14°II14'06	minimum elong	918 Jun 14 j 19:45	27°II21'26	0°58'23
opposition	911 Nov 30 j 06:56	12°II49'39 -1°24'54	max. Earth dist.	918 Jun 14 j 20:17	27°II21'29	30.92045 AU
min. Earth dist.	911 Nov 30 j 00:43	12°II50'05 28.88210 AU	morning rise	918 Jul 01 j 03:51	27°II57'35	
direct	912 Feb 16 j 06:39	11°II25'13	retrograde	918 Sep 28 j 11:29	29°II53'04	

opposition	918 Dec 15 j 08:15	28° Π 28'57	-1°00'30	conjunction	925 Jun 30 j 22:07	12° \mathfrak{D} 59'35	-0°31'42
min. Earth dist.	918 Dec 15 j 06:58	28° Π 29'02	28.92554 AU	minimum elong	925 Jun 30 j 22:08	12° \mathfrak{D} 59'35	0°31'42
direct	919 Mar 03 j 20:06	27° Π 04'08		max. Earth dist.	925 Jun 30 j 14:55	12° \mathfrak{D} 58'55	30.98234 AU
evening set	919 Jun 01 j 01:20	28° Π 59'12		morning rise	925 Jul 17 j 05:35	13° \mathfrak{D} 35'38	
				retrograde	925 Oct 13 j 20:09	15° \mathfrak{D} 30'09	
conjunction	919 Jun 17 j 09:43	29° Π 35'22	-0°54'47	opposition	925 Dec 30 j 08:51	14° \mathfrak{D} 06'37	-0°31'45
minimum elong	919 Jun 17 j 09:43	29° Π 35'22	0°54'47	min. Earth dist.	925 Dec 30 j 14:36	14° \mathfrak{D} 06'13	28.98568 AU
max. Earth dist.	919 Jun 17 j 10:01	29° Π 35'23	30.93026 AU	direct	926 Mar 19 j 07:47	12° \mathfrak{D} 41'37	
	919 Jun 28 j 11:40	0° \mathfrak{D}		evening set	926 Jun 17 j 03:23	14° \mathfrak{D} 37'08	
morning rise	919 Jul 03 j 17:44	0° \mathfrak{D} 11'31					
retrograde	919 Sep 30 j 21:24	2° \mathfrak{D} 06'52		conjunction	926 Jul 03 j 11:59	15° \mathfrak{D} 13'15	-0°27'41
opposition	919 Dec 17 j 18:44	0° \mathfrak{D} 42'52	-0°56'36	minimum elong	926 Jul 03 j 11:59	15° \mathfrak{D} 13'15	0°27'40
min. Earth dist.	919 Dec 17 j 19:13	0° \mathfrak{D} 42'50	28.93565 AU	max. Earth dist.	926 Jul 03 j 04:58	15° \mathfrak{D} 12'36	30.98879 AU
	920 Jan 13 j 04:54	30° \mathfrak{K} Π		morning rise	926 Jul 19 j 19:05	15° \mathfrak{D} 49'16	
direct	920 Mar 05 j 06:51	29° Π 18'04		retrograde	926 Oct 16 j 07:17	17° \mathfrak{D} 43'37	
	920 Apr 25 j 08:49	0° \mathfrak{D}		opposition	927 Jan 01 j 19:10	16° \mathfrak{D} 20'07	-0°27'25
evening set	920 Jun 02 j 15:23	1° \mathfrak{D} 13'13		min. Earth dist.	927 Jan 02 j 02:17	16° \mathfrak{D} 19'37	28.99218 AU
				direct	927 Mar 21 j 21:07	14° \mathfrak{D} 55'03	
conjunction	920 Jun 18 j 23:52	1° \mathfrak{D} 49'23	-0°51'06	evening set	927 Jun 19 j 17:02	16° \mathfrak{D} 50'35	
minimum elong	920 Jun 18 j 23:52	1° \mathfrak{D} 49'23	0°51'06				
max. Earth dist.	920 Jun 18 j 23:05	1° \mathfrak{D} 49'18	30.94063 AU	conjunction	927 Jul 06 j 01:26	17° \mathfrak{D} 26'41	-0°23'37
morning rise	920 Jul 05 j 07:53	2° \mathfrak{D} 25'31		minimum elong	927 Jul 06 j 01:26	17° \mathfrak{D} 26'41	0°23'37
retrograde	920 Oct 02 j 09:36	4° \mathfrak{D} 20'45		max. Earth dist.	927 Jul 05 j 16:46	17° \mathfrak{D} 25'53	30.99557 AU
opposition	920 Dec 19 j 04:57	2° \mathfrak{D} 56'53	-0°52'38	morning rise	927 Jul 22 j 08:30	18° \mathfrak{D} 02'40	
min. Earth dist.	920 Dec 19 j 05:29	2° \mathfrak{D} 56'50	28.94589 AU	retrograde	927 Oct 18 j 19:19	19° \mathfrak{D} 56'52	
direct	921 Mar 07 j 18:54	1° \mathfrak{D} 32'04		opposition	928 Jan 04 j 05:19	18° \mathfrak{D} 33'24	-0°23'03
evening set	921 Jun 05 j 05:35	3° \mathfrak{D} 27'19		min. Earth dist.	928 Jan 04 j 12:11	18° \mathfrak{D} 32'55	28.99922 AU
				direct	928 Mar 23 j 09:44	17° \mathfrak{D} 08'16	
conjunction	921 Jun 21 j 14:04	4° \mathfrak{D} 03'29	-0°47'21	evening set	928 Jun 21 j 06:41	19° \mathfrak{D} 03'50	
minimum elong	921 Jun 21 j 14:05	4° \mathfrak{D} 03'29	0°47'21				
max. Earth dist.	921 Jun 21 j 11:55	4° \mathfrak{D} 03'17	30.95063 AU	conjunction	928 Jul 07 j 15:04	19° \mathfrak{D} 39'55	-0°19'31
morning rise	921 Jul 07 j 22:00	4° \mathfrak{D} 39'37		minimum elong	928 Jul 07 j 15:04	19° \mathfrak{D} 39'55	0°19'31
retrograde	921 Oct 04 j 20:41	6° \mathfrak{D} 34'44		max. Earth dist.	928 Jul 07 j 06:15	19° \mathfrak{D} 39'07	31.00293 AU
opposition	921 Dec 21 j 15:29	5° \mathfrak{D} 10'57	-0°48'34	morning rise	928 Jul 23 j 21:45	20° \mathfrak{D} 15'53	
min. Earth dist.	921 Dec 21 j 17:56	5° \mathfrak{D} 10'47	28.95563 AU	retrograde	928 Oct 20 j 04:37	22° \mathfrak{D} 09'54	
direct	922 Mar 10 j 04:47	3° \mathfrak{D} 46'08		opposition	929 Jan 05 j 15:29	20° \mathfrak{D} 46'29	-0°18'40
evening set	922 Jun 07 j 19:32	5° \mathfrak{D} 41'28		min. Earth dist.	929 Jan 05 j 23:56	20° \mathfrak{D} 45'53	29.00713 AU
				direct	929 Mar 25 j 20:58	19° \mathfrak{D} 21'19	
conjunction	922 Jun 24 j 04:09	6° \mathfrak{D} 17'37	-0°43'31	evening set	929 Jun 23 j 20:19	21° \mathfrak{D} 16'54	
minimum elong	922 Jun 24 j 04:09	6° \mathfrak{D} 17'37	0°43'31				
max. Earth dist.	922 Jun 24 j 01:24	6° \mathfrak{D} 17'22	30.95995 AU	conjunction	929 Jul 10 j 04:32	21° \mathfrak{D} 52'58	-0°15'24
morning rise	922 Jul 10 j 11:54	6° \mathfrak{D} 53'44		minimum elong	929 Jul 10 j 04:32	21° \mathfrak{D} 52'58	0°15'25
retrograde	922 Oct 07 j 08:05	8° \mathfrak{D} 48'43		behind sun begin	929 Jul 10 j 03:06	21° \mathfrak{D} 52'50	
opposition	922 Dec 24 j 01:54	7° \mathfrak{D} 25'02	-0°44'27	behind sun end	929 Jul 10 j 05:57	21° \mathfrak{D} 53'06	
min. Earth dist.	922 Dec 24 j 04:39	7° \mathfrak{D} 24'50	28.96436 AU	max. Earth dist.	929 Jul 09 j 18:54	21° \mathfrak{D} 52'05	31.01151 AU
direct	923 Mar 12 j 18:11	6° \mathfrak{D} 00'11		morning rise	929 Jul 26 j 11:00	22° \mathfrak{D} 28'54	
evening set	923 Jun 10 j 09:39	7° \mathfrak{D} 55'34		retrograde	929 Oct 22 j 16:18	24° \mathfrak{D} 22'46	
				opposition	930 Jan 08 j 01:40	22° \mathfrak{D} 59'25	-0°14'15
conjunction	923 Jun 26 j 18:10	8° \mathfrak{D} 31'43	-0°39'38	min. Earth dist.	930 Jan 08 j 09:36	22° \mathfrak{D} 58'51	29.01631 AU
minimum elong	923 Jun 26 j 18:10	8° \mathfrak{D} 31'43	0°39'38	direct	930 Mar 28 j 09:00	21° \mathfrak{D} 34'13	
max. Earth dist.	923 Jun 26 j 13:15	8° \mathfrak{D} 31'16	30.96821 AU	evening set	930 Jun 26 j 09:45	23° \mathfrak{D} 29'50	
morning rise	923 Jul 13 j 01:54	9° \mathfrak{D} 07'49					
retrograde	923 Oct 09 j 20:27	11° \mathfrak{D} 02'40		conjunction	930 Jul 12 j 17:44	24° \mathfrak{D} 05'53	-0°11'16
opposition	923 Dec 26 j 12:15	9° \mathfrak{D} 39'02	-0°40'16	minimum elong	930 Jul 12 j 17:45	24° \mathfrak{D} 05'53	0°11'17
min. Earth dist.	923 Dec 26 j 16:25	9° \mathfrak{D} 38'45	28.97222 AU	behind sun begin	930 Jul 12 j 12:58	24° \mathfrak{D} 05'28	
direct	924 Mar 14 j 06:12	8° \mathfrak{D} 14'09		behind sun end	930 Jul 12 j 22:31	24° \mathfrak{D} 06'19	
evening set	924 Jun 11 j 23:34	10° \mathfrak{D} 09'35		max. Earth dist.	930 Jul 12 j 07:31	24° \mathfrak{D} 04'57	31.02132 AU
				morning rise	930 Jul 28 j 23:54	24° \mathfrak{D} 41'47	
conjunction	924 Jun 28 j 08:17	10° \mathfrak{D} 45'44	-0°35'41	retrograde	930 Oct 25 j 02:06	26° \mathfrak{D} 35'32	
minimum elong	924 Jun 28 j 08:17	10° \mathfrak{D} 45'44	0°35'41	opposition	931 Jan 10 j 11:55	25° \mathfrak{D} 12'16	-0°09'49
max. Earth dist.	924 Jun 28 j 03:14	10° \mathfrak{D} 45'16	30.97564 AU	min. Earth dist.	931 Jan 10 j 21:08	25° \mathfrak{D} 11'37	29.02688 AU
morning rise	924 Jul 14 j 15:45	11° \mathfrak{D} 21'48		direct	931 Mar 30 j 18:24	23° \mathfrak{D} 47'03	
retrograde	924 Oct 11 j 07:14	13° \mathfrak{D} 16'30		evening set	931 Jun 28 j 23:11	25° \mathfrak{D} 42'43	
opposition	924 Dec 27 j 22:38	11° \mathfrak{D} 52'55	-0°36'02				
min. Earth dist.	924 Dec 28 j 03:47	11° \mathfrak{D} 52'33	28.97913 AU	conjunction	931 Jul 15 j 07:05	26° \mathfrak{D} 18'45	-0°07'08
direct	925 Mar 16 j 19:38	10° \mathfrak{D} 27'59		minimum elong	931 Jul 15 j 07:05	26° \mathfrak{D} 18'45	0°07'08
evening set	925 Jun 14 j 13:38	12° \mathfrak{D} 23'27		behind sun begin	931 Jul 15 j 01:01	26° \mathfrak{D} 18'13	

behind sun end	931 Jul 15 j 13:08	26° Ω 19'17		retrograde	936 Nov 06 j 21:10	9° Ω 51'57	
max. Earth dist.	931 Jul 14 j 20:48	26° Ω 17'49	31.03256 AU	opposition	937 Jan 23 j 01:27	8° Ω 29'10	0°16'52
morning rise	931 Jul 31 j 12:53	26° Ω 54'37		min. Earth dist.	937 Jan 23 j 14:34	8° Ω 28'15	29.09296 AU
retrograde	931 Oct 27 j 12:02	28° Ω 48'15		direct	937 Apr 12 j 20:40	7° Ω 03'57	
opposition	932 Jan 12 j 21:58	27° Ω 25'05	-0°05'21	evening set	937 Jul 12 j 08:19	8° Ω 59'58	
min. Earth dist.	932 Jan 13 j 07:08	27° Ω 24'26	29.03849 AU				
direct	932 Apr 01 j 07:27	25° Ω 59'52		conjunction	937 Jul 28 j 14:28	9° Ω 35'50	0°17'54
evening set	932 Jun 30 j 12:49	27° Ω 55'37		minimum elong	937 Jul 28 j 14:28	9° Ω 35'50	0°17'54
				max. Earth dist.	937 Jul 27 j 22:36	9° Ω 34'22	31.09696 AU
conjunction	932 Jul 16 j 20:21	28° Ω 31'38	-0°02'58	morning rise	937 Aug 13 j 17:51	10° Ω 11'29	
minimum elong	932 Jul 16 j 20:22	28° Ω 31'38	0°02'58	retrograde	937 Nov 09 j 06:59	12° Ω 04'29	
behind sun begin	932 Jul 16 j 13:48	28° Ω 31'03		opposition	938 Jan 25 j 11:55	10° Ω 41'45	0°21'15
behind sun end	932 Jul 17 j 02:56	28° Ω 32'12		min. Earth dist.	938 Jan 26 j 02:48	10° Ω 40'42	29.10114 AU
max. Earth dist.	932 Jul 16 j 08:31	28° Ω 30'32	31.04451 AU	direct	938 Apr 15 j 08:23	9° Ω 16'30	
morning rise	932 Aug 02 j 01:57	29° Ω 07'28		evening set	938 Jul 14 j 21:29	11° Ω 12'32	
	932 Aug 28 j 03:36	0° Ω		max. Earth dist.	938 Jul 30 j 10:18	11° Ω 46'48	31.10487 AU
retrograde	932 Oct 28 j 23:21	1° Ω 01'00					
	933 Jan 01 j 02:46	30° Ω		conjunction	938 Jul 31 j 03:13	11° Ω 48'22	0°21'59
opposition	933 Jan 14 j 08:12	29° Ω 37'55	-0°00'54	minimum elong	938 Jul 31 j 03:13	11° Ω 48'22	0°21'59
min. Earth dist.	933 Jan 14 j 18:24	29° Ω 37'12	29.05068 AU	morning rise	938 Aug 16 j 06:14	12° Ω 23'58	
asc. node	933 Mar 29 j 00:14	28° Ω 13'17		retrograde	938 Nov 11 j 18:25	14° Ω 16'51	
direct	933 Apr 03 j 18:00	28° Ω 12'43		opposition	939 Jan 27 j 22:10	12° Ω 54'09	0°25'36
	933 Jun 29 j 02:46	0° Ω		min. Earth dist.	939 Jan 28 j 12:48	12° Ω 53'08	29.10878 AU
evening set	933 Jul 03 j 02:17	0° Ω 08'33		direct	939 Apr 17 j 21:05	11° Ω 28'53	
				evening set	939 Jul 17 j 10:39	13° Ω 24'55	
conjunction	933 Jul 19 j 09:44	0° Ω 44'32	0°01'19				
minimum elong	933 Jul 19 j 09:43	0° Ω 44'32	0°01'20	conjunction	939 Aug 02 j 16:00	14° Ω 00'43	0°26'02
behind sun begin	933 Jul 19 j 03:08	0° Ω 43'57		minimum elong	939 Aug 02 j 16:00	14° Ω 00'43	0°26'02
behind sun end	933 Jul 19 j 16:19	0° Ω 45'07		max. Earth dist.	939 Aug 01 j 22:24	13° Ω 59'06	31.11235 AU
max. Earth dist.	933 Jul 18 j 22:03	0° Ω 43'28	31.05661 AU	morning rise	939 Aug 18 j 18:31	14° Ω 36'17	
morning rise	933 Aug 04 j 14:46	1° Ω 20'20			939 Aug 29 j 23:43	15° Ω	
retrograde	933 Oct 31 j 09:46	3° Ω 13'46		retrograde	939 Nov 14 j 03:45	16° Ω 29'03	
opposition	934 Jan 16 j 18:29	1° Ω 50'47	0°03'34	opposition	940 Jan 30 j 08:24	15° Ω 06'24	0°29'55
min. Earth dist.	934 Jan 17 j 05:36	1° Ω 50'01	29.06253 AU	min. Earth dist.	940 Jan 31 j 00:29	15° Ω 05'16	29.11639 AU
direct	934 Apr 06 j 06:25	0° Ω 25'37			940 Feb 03 j 03:43	15° Ω	
evening set	934 Jul 05 j 15:57	2° Ω 21'30		direct	940 Apr 19 j 07:03	13° Ω 41'05	
					940 Jul 01 j 01:19	15° Ω	
conjunction	934 Jul 21 j 22:55	2° Ω 57'27	0°05'31	evening set	940 Jul 18 j 23:42	15° Ω 37'09	
minimum elong	934 Jul 21 j 22:55	2° Ω 57'27	0°05'31	max. Earth dist.	940 Aug 03 j 11:03	16° Ω 11'16	31.12007 AU
behind sun begin	934 Jul 21 j 16:35	2° Ω 56'53					
behind sun end	934 Jul 22 j 05:15	2° Ω 58'00		conjunction	940 Aug 04 j 04:43	16° Ω 12'54	0°30'02
max. Earth dist.	934 Jul 21 j 09:13	2° Ω 56'11	31.06819 AU	minimum elong	940 Aug 04 j 04:43	16° Ω 12'54	0°30'02
morning rise	934 Aug 07 j 03:44	3° Ω 33'13		morning rise	940 Aug 20 j 06:43	16° Ω 48'26	
retrograde	934 Nov 02 j 22:24	5° Ω 26'33		retrograde	940 Nov 15 j 12:52	18° Ω 41'05	
opposition	935 Jan 19 j 04:48	4° Ω 03'39	0°08'01	opposition	941 Jan 31 j 18:41	17° Ω 18'28	0°34'10
min. Earth dist.	935 Jan 19 j 16:23	4° Ω 02'50	29.07379 AU	min. Earth dist.	941 Feb 01 j 10:36	17° Ω 17'22	29.12429 AU
direct	935 Apr 08 j 18:22	2° Ω 38'28		direct	941 Apr 21 j 20:18	15° Ω 53'08	
evening set	935 Jul 08 j 05:18	4° Ω 34'24		evening set	941 Jul 21 j 12:40	17° Ω 49'13	
conjunction	935 Jul 24 j 12:10	5° Ω 10'20	0°09'39	conjunction	941 Aug 06 j 17:07	18° Ω 24'57	0°34'00
minimum elong	935 Jul 24 j 12:10	5° Ω 10'20	0°09'40	minimum elong	941 Aug 06 j 17:06	18° Ω 24'57	0°34'00
behind sun begin	935 Jul 24 j 06:46	5° Ω 09'51		max. Earth dist.	941 Aug 05 j 22:17	18° Ω 23'12	31.12828 AU
behind sun end	935 Jul 24 j 17:33	5° Ω 10'49		morning rise	941 Aug 22 j 18:39	19° Ω 00'25	
max. Earth dist.	935 Jul 23 j 22:35	5° Ω 09'05	31.07885 AU	retrograde	941 Nov 17 j 23:13	20° Ω 53'00	
morning rise	935 Aug 09 j 16:25	5° Ω 46'04		opposition	942 Feb 03 j 05:02	19° Ω 30'25	0°38'22
retrograde	935 Nov 05 j 09:09	7° Ω 39'18		min. Earth dist.	942 Feb 03 j 21:25	19° Ω 29'17	29.13313 AU
opposition	936 Jan 21 j 15:14	6° Ω 16'28	0°12'27	direct	942 Apr 24 j 06:21	18° Ω 05'04	
min. Earth dist.	936 Jan 22 j 04:24	6° Ω 15'32	29.08389 AU	evening set	942 Jul 24 j 01:26	20° Ω 01'12	
direct	936 Apr 10 j 07:45	4° Ω 51'16		max. Earth dist.	942 Aug 08 j 11:27	20° Ω 35'12	31.13762 AU
evening set	936 Jul 09 j 18:54	6° Ω 47'15					
max. Earth dist.	936 Jul 25 j 09:44	7° Ω 21'43	31.08845 AU	conjunction	942 Aug 09 j 05:34	20° Ω 36'53	0°37'54
				minimum elong	942 Aug 09 j 05:34	20° Ω 36'53	0°37'54
conjunction	936 Jul 26 j 01:19	7° Ω 23'09	0°13'47	morning rise	942 Aug 25 j 06:27	21° Ω 12'19	
minimum elong	936 Jul 26 j 01:18	7° Ω 23'09	0°13'47	retrograde	942 Nov 20 j 08:46	23° Ω 04'49	
behind sun begin	936 Jul 25 j 21:58	7° Ω 22'51		opposition	943 Feb 05 j 15:24	21° Ω 42'19	0°42'31
behind sun end	936 Jul 26 j 04:39	7° Ω 23'26		min. Earth dist.	943 Feb 06 j 08:08	21° Ω 41'09	29.14303 AU
morning rise	936 Aug 11 j 05:17	7° Ω 58'50		direct	943 Apr 26 j 17:57	20° Ω 16'59	

evening set	943 Jul 26 j 14:14	22° Ω 13'09		max. Earth dist.	949 Aug 23 j 20:48	5° Υ 59'01	31.20841 AU
				morning rise	949 Sep 09 j 15:32	6° Υ 36'09	
conjunction	943 Aug 11 j 17:45	22° Ω 48'47	0°41'45	retrograde	949 Dec 05 j 11:51	8° Υ 28'20	
minimum elong	943 Aug 11 j 17:45	22° Ω 48'47	0°41'46	opposition	950 Feb 20 j 17:17	7° Υ 06'17	1°09'27
max. Earth dist.	943 Aug 10 j 22:17	22° Ω 46'59	31.14811 AU	min. Earth dist.	950 Feb 21 j 13:23	7° Υ 04'53	29.21222 AU
morning rise	943 Aug 27 j 18:17	23° Ω 24'11		direct	950 May 12 j 08:25	5° Υ 41'07	
retrograde	943 Nov 22 j 20:48	25° Ω 16'38		evening set	950 Aug 11 j 06:41	7° Υ 37'30	
opposition	944 Feb 08 j 01:43	23° Ω 54'12	0°46'36	max. Earth dist.	950 Aug 26 j 07:17	8° Υ 10'42	31.21456 AU
min. Earth dist.	944 Feb 08 j 18:19	23° Ω 53'03	29.15403 AU				
direct	944 Apr 28 j 05:40	22° Ω 28'54		conjunction	950 Aug 27 j 06:28	8° Υ 12'51	1°06'41
evening set	944 Jul 28 j 02:57	24° Ω 25'08		minimum elong	950 Aug 27 j 06:28	8° Υ 12'51	1°06'41
max. Earth dist.	944 Aug 12 j 11:27	24° Ω 59'01	31.15938 AU	morning rise	950 Sep 12 j 02:51	8° Υ 47'55	
				retrograde	950 Dec 07 j 21:54	10° Υ 40'02	
conjunction	944 Aug 13 j 06:09	25° Ω 00'45	0°45'33	opposition	951 Feb 23 j 03:55	9° Υ 17'59	1°12'56
minimum elong	944 Aug 13 j 06:09	25° Ω 00'45	0°45'33	min. Earth dist.	951 Feb 24 j 00:40	9° Υ 16'32	29.21802 AU
morning rise	944 Aug 29 j 05:56	25° Ω 36'05		direct	951 May 14 j 18:26	7° Υ 52'47	
retrograde	944 Nov 24 j 07:15	27° Ω 28'30		evening set	951 Aug 13 j 18:52	9° Υ 49'09	
opposition	945 Feb 09 j 12:10	26° Ω 06'10	0°50'37				
min. Earth dist.	945 Feb 10 j 05:56	26° Ω 04'55	29.16550 AU	conjunction	951 Aug 29 j 18:16	10° Υ 24'28	1°09'53
direct	945 Apr 30 j 18:39	24° Ω 40'55		minimum elong	951 Aug 29 j 18:15	10° Υ 24'28	1°09'54
evening set	945 Jul 30 j 15:46	26° Ω 37'12		max. Earth dist.	951 Aug 28 j 19:37	10° Υ 22'22	31.21987 AU
				morning rise	951 Sep 14 j 13:57	10° Υ 59'29	
conjunction	945 Aug 15 j 18:18	27° Ω 12'46	0°49'16	retrograde	951 Dec 10 j 06:40	12° Υ 51'32	
minimum elong	945 Aug 15 j 18:18	27° Ω 12'46	0°49'17	opposition	952 Feb 25 j 14:39	11° Υ 29'28	1°16'18
max. Earth dist.	945 Aug 14 j 22:14	27° Ω 10'55	31.17094 AU	min. Earth dist.	952 Feb 26 j 12:01	11° Υ 27'59	29.22292 AU
morning rise	945 Aug 31 j 17:41	27° Ω 48'04		direct	952 May 16 j 06:48	10° Υ 04'14	
retrograde	945 Nov 26 j 19:13	29° Ω 40'27		evening set	952 Aug 15 j 07:08	12° Υ 00'35	
opposition	946 Feb 11 j 22:37	28° Ω 18'12	0°54'34	max. Earth dist.	952 Aug 30 j 05:48	12° Υ 33'37	31.22457 AU
min. Earth dist.	946 Feb 12 j 15:55	28° Ω 17'00	29.17697 AU				
direct	946 May 03 j 06:56	26° Ω 53'00		conjunction	952 Aug 31 j 05:46	12° Υ 35'50	1°12'59
evening set	946 Aug 02 j 04:16	28° Ω 49'20		minimum elong	952 Aug 31 j 05:45	12° Υ 35'50	1°12'59
max. Earth dist.	946 Aug 17 j 10:27	29° Ω 23'01	31.18199 AU	morning rise	952 Sep 16 j 00:59	13° Υ 10'49	
				retrograde	952 Dec 11 j 17:21	15° Υ 02'48	
conjunction	946 Aug 18 j 06:24	29° Ω 24'52	0°52'55	opposition	953 Feb 27 j 01:17	13° Υ 40'43	1°19'33
minimum elong	946 Aug 18 j 06:23	29° Ω 24'52	0°52'55	min. Earth dist.	953 Feb 27 j 22:23	13° Υ 39'16	29.22768 AU
morning rise	946 Sep 03 j 05:04	0° Υ 00'07		direct	953 May 18 j 18:29	12° Υ 15'28	
	946 Sep 03 j 03:45	0° Υ		evening set	953 Aug 17 j 19:04	14° Υ 11'47	
retrograde	946 Nov 29 j 05:36	1° Υ 52'28					
opposition	947 Feb 14 j 09:19	0° Υ 30'17	0°58'25	conjunction	953 Sep 02 j 17:16	14° Υ 47'00	1°15'59
min. Earth dist.	947 Feb 15 j 04:13	0° Υ 28'58	29.18771 AU	minimum elong	953 Sep 02 j 17:16	14° Υ 47'00	1°15'59
	947 Mar 04 j 22:23	30° Υ 00		max. Earth dist.	953 Sep 01 j 18:22	14° Υ 44'52	31.22933 AU
direct	947 May 05 j 18:53	29° Ω 05'07		morning rise	953 Sep 18 j 11:42	15° Υ 21'55	
	947 Jul 04 j 13:54	0° Υ		retrograde	953 Dec 14 j 02:37	17° Υ 13'52	
evening set	947 Aug 04 j 17:00	1° Υ 01'30		opposition	954 Mar 01 j 12:10	15° Υ 51'46	1°22'41
				min. Earth dist.	954 Mar 02 j 10:02	15° Υ 50'15	29.23275 AU
conjunction	947 Aug 20 j 18:31	1° Υ 36'59	0°56'30	direct	954 May 21 j 06:54	14° Υ 26'30	
minimum elong	947 Aug 20 j 18:31	1° Υ 36'59	0°56'30	evening set	954 Aug 20 j 06:52	16° Υ 22'48	
max. Earth dist.	947 Aug 19 j 21:34	1° Υ 35'03	31.19218 AU	max. Earth dist.	954 Sep 04 j 04:39	16° Υ 55'46	31.23478 AU
morning rise	947 Sep 05 j 16:42	2° Υ 12'11					
retrograde	947 Dec 01 j 17:36	4° Υ 04'29		conjunction	954 Sep 05 j 04:19	16° Υ 57'58	1°18'51
opposition	948 Feb 16 j 19:46	2° Υ 42'22	1°02'12	minimum elong	954 Sep 05 j 04:19	16° Υ 57'58	1°18'51
min. Earth dist.	948 Feb 17 j 14:27	2° Υ 41'04	29.19724 AU	morning rise	954 Sep 20 j 22:20	17° Υ 32'50	
direct	948 May 07 j 08:16	1° Υ 17'13		retrograde	954 Dec 16 j 13:54	19° Υ 24'46	
evening set	948 Aug 06 j 05:42	3° Υ 13'37		opposition	955 Mar 03 j 22:51	18° Υ 02'41	1°25'42
max. Earth dist.	948 Aug 21 j 08:58	3° Υ 47'03	31.20093 AU	min. Earth dist.	955 Mar 04 j 19:37	18° Υ 01'15	29.23868 AU
				direct	955 May 23 j 18:58	16° Υ 37'25	
conjunction	948 Aug 22 j 06:41	3° Υ 49'04	0°59'59	evening set	955 Aug 22 j 18:37	18° Υ 33'44	
minimum elong	948 Aug 22 j 06:41	3° Υ 49'04	0°59'59				
morning rise	948 Sep 07 j 04:13	4° Υ 24'14		conjunction	955 Sep 07 j 15:36	19° Υ 08'51	1°21'37
retrograde	948 Dec 03 j 03:01	6° Υ 16'28		minimum elong	955 Sep 07 j 15:36	19° Υ 08'51	1°21'37
opposition	949 Feb 18 j 06:33	4° Υ 54'23	1°05'52	max. Earth dist.	955 Sep 06 j 16:36	19° Υ 06'43	31.24110 AU
min. Earth dist.	949 Feb 19 j 02:40	4° Υ 52'59	29.20545 AU	morning rise	955 Sep 23 j 08:52	19° Υ 43'40	
direct	949 May 09 j 19:09	3° Υ 29'14		retrograde	955 Dec 18 j 23:54	21° Υ 35'35	
evening set	949 Aug 08 j 18:11	5° Υ 25'38		opposition	956 Mar 05 j 09:37	20° Υ 13'32	1°28'35
				min. Earth dist.	956 Mar 06 j 07:20	20° Υ 12'02	29.24557 AU
conjunction	949 Aug 24 j 18:38	6° Υ 01'02	1°03'23	direct	956 May 25 j 07:00	18° Υ 48'19	
minimum elong	949 Aug 24 j 18:38	6° Υ 01'02	1°03'23	evening set	956 Aug 24 j 06:24	20° Υ 44'38	

max. Earth dist.	956 Sep 08 j 03:33	21° 17 17'34	31.24847 AU	minimum elong	962 Sep 22 j 20:10	4° 26 26	1°37'26
				max. Earth dist.	962 Sep 21 j 20:56	4° 24 16	31.28528 AU
conjunction	956 Sep 09 j 02:43	21° 19 19'43	1°24'16	morning rise	962 Oct 08 j 09:21	5° 00 59	
minimum elong	956 Sep 09 j 02:43	21° 19 19'43	1°24'15	retrograde	963 Jan 02 j 21:54	6° 53 03	
morning rise	956 Sep 24 j 19:28	21° 54 54'30		opposition	963 Mar 21 j 15:11	5° 31 15	1°45'00
retrograde	956 Dec 20 j 11:32	23° 46 46'25		min. Earth dist.	963 Mar 22 j 13:55	5° 29 42	29.28764 AU
opposition	957 Mar 07 j 20:26	22° 24 24'25	1°31'21	direct	963 Jun 10 j 16:11	4° 06 22	
min. Earth dist.	957 Mar 08 j 17:13	22° 22 22'59	29.25321 AU	evening set	963 Sep 09 j 14:37	6° 02 42	
direct	957 May 27 j 20:20	20° 59 59'16		max. Earth dist.	963 Sep 24 j 06:35	6° 35 15	31.28745 AU
evening set	957 Aug 26 j 17:58	22° 55 55'37					
conjunction	957 Sep 11 j 13:41	23° 30 30'39	1°26'47	conjunction	963 Sep 25 j 06:46	6° 37 30	1°39'10
minimum elong	957 Sep 11 j 13:41	23° 30 30'39	1°26'48	minimum elong	963 Sep 25 j 06:46	6° 37 30	1°39'10
max. Earth dist.	957 Sep 10 j 14:32	23° 28 28'30	31.25625 AU	morning rise	963 Oct 10 j 19:33	7° 12 02	
morning rise	957 Sep 27 j 05:48	24° 05 05'24		retrograde	964 Jan 05 j 09:00	9° 04 05	
retrograde	957 Dec 22 j 21:17	25° 57 57'21		opposition	964 Mar 23 j 02:16	7° 42 16	1°46'46
opposition	958 Mar 10 j 07:26	24° 35 35'24	1°33'59	min. Earth dist.	964 Mar 24 j 00:04	7° 40 46	29.28931 AU
min. Earth dist.	958 Mar 11 j 05:02	24° 33 33'55	29.26117 AU	direct	964 Jun 12 j 03:50	6° 17 21	
direct	958 May 30 j 06:58	23° 10 10'19		evening set	964 Sep 11 j 01:41	8° 13 39	
evening set	958 Aug 29 j 05:32	25° 06 06'42		conjunction	964 Sep 26 j 17:22	8° 48 25	1°40'45
max. Earth dist.	958 Sep 13 j 02:03	25° 39 39'35	31.26408 AU	minimum elong	964 Sep 26 j 17:22	8° 48 25	1°40'44
				max. Earth dist.	964 Sep 25 j 17:47	8° 46 13	31.28868 AU
conjunction	958 Sep 14 j 00:43	25° 41 41'42	1°29'11	morning rise	964 Oct 12 j 05:30	9° 22 54	
minimum elong	958 Sep 14 j 00:42	25° 41 41'42	1°29'11	retrograde	965 Jan 06 j 19:15	11° 14 58	
morning rise	958 Sep 29 j 16:13	26° 16 16'24		opposition	965 Mar 25 j 13:41	9° 53 06	1°48'23
retrograde	958 Dec 25 j 06:22	28° 08 08'22		min. Earth dist.	965 Mar 26 j 12:25	9° 51 33	29.29038 AU
opposition	959 Mar 12 j 18:19	26° 46 46'30	1°36'28	direct	965 Jun 14 j 16:45	8° 28 12	
min. Earth dist.	959 Mar 13 j 15:38	26° 45 45'02	29.26871 AU	evening set	965 Sep 13 j 12:30	10° 24 26	
direct	959 Jun 01 j 19:40	25° 21 21'29		max. Earth dist.	965 Sep 28 j 04:09	10° 56 58	31.28969 AU
evening set	959 Aug 31 j 17:11	27° 17 17'52					
max. Earth dist.	959 Sep 15 j 11:58	27° 50 50'38	31.27118 AU	conjunction	965 Sep 29 j 03:34	10° 59 09	1°42'11
				minimum elong	965 Sep 29 j 03:34	10° 59 09	1°42'11
conjunction	959 Sep 16 j 11:40	27° 52 52'51	1°31'27	morning rise	965 Oct 14 j 15:16	11° 33 36	
minimum elong	959 Sep 16 j 11:40	27° 52 52'50	1°31'28	retrograde	966 Jan 09 j 06:38	13° 25 40	
morning rise	959 Oct 02 j 02:41	28° 27 27'31		opposition	966 Mar 28 j 00:58	12° 03 45	1°49'51
	959 Nov 23 j 20:05	0° 19 19'30		min. Earth dist.	966 Mar 28 j 22:29	12° 02 17	29.29142 AU
retrograde	959 Dec 27 j 16:55	0° 19 19'30		direct	966 Jun 17 j 06:42	10° 38 50	
	960 Jan 31 j 08:29	30° 57 57'41	1°38'49	evening set	966 Sep 15 j 23:18	12° 35 01	
opposition	960 Mar 14 j 05:25	28° 56 56'12	29.27544 AU	conjunction	966 Oct 01 j 13:48	13° 09 42	1°43'28
min. Earth dist.	960 Mar 15 j 03:04	27° 32 32'42		minimum elong	966 Oct 01 j 13:48	13° 09 42	1°43'27
direct	960 Jun 03 j 05:23	29° 29 29'07		max. Earth dist.	966 Sep 30 j 14:39	13° 07 33	31.29091 AU
evening set	960 Sep 02 j 04:38	0° 04 04'03	1°33'35	morning rise	966 Oct 17 j 00:59	13° 44 07	
	960 Sep 16 j 03:18	0° 04 04'03	1°33'35	retrograde	967 Jan 11 j 16:02	15° 36 12	
conjunction	960 Sep 17 j 22:39	0° 04 04'03	1°33'35	opposition	967 Mar 30 j 12:14	14° 14 15	1°51'09
minimum elong	960 Sep 17 j 22:38	0° 04 04'03	1°33'35	min. Earth dist.	967 Mar 31 j 10:05	14° 12 45	29.29316 AU
max. Earth dist.	960 Sep 16 j 23:44	0° 01 01'54	31.27721 AU	direct	967 Jun 19 j 17:44	12° 49 20	
morning rise	960 Oct 03 j 12:55	0° 38 38'41		evening set	967 Sep 18 j 09:58	14° 45 29	
retrograde	960 Dec 29 j 01:49	2° 30 30'42		max. Earth dist.	967 Oct 03 j 01:58	15° 18 04	31.29309 AU
opposition	961 Mar 16 j 16:39	1° 08 08'55	1°41'02				
min. Earth dist.	961 Mar 17 j 14:47	1° 07 07'23	29.28078 AU	conjunction	967 Oct 04 j 00:01	15° 20 07	1°44'37
	961 May 04 j 12:02	30° 43 43'59		minimum elong	967 Oct 04 j 00:00	15° 20 07	1°44'37
direct	961 Jun 05 j 17:28	29° 43 43'59		morning rise	967 Oct 19 j 10:39	15° 54 30	
	961 Jul 07 j 10:22	0° 40 40'22		retrograde	968 Jan 14 j 01:01	17° 46 36	
evening set	961 Sep 04 j 16:11	2° 13 13'00	31.28192 AU	opposition	968 Mar 31 j 23:37	16° 24 39	1°52'17
max. Earth dist.	961 Sep 19 j 09:15	2° 15 15'16	1°35'35	min. Earth dist.	968 Apr 01 j 20:29	16° 23 13	29.29575 AU
				direct	968 Jun 21 j 07:10	14° 59 46	
conjunction	961 Sep 20 j 09:26	2° 15 15'16	1°35'35	evening set	968 Sep 19 j 20:37	16° 55 52	
minimum elong	961 Sep 20 j 09:26	2° 15 15'16	1°35'35	max. Earth dist.	968 Oct 04 j 11:38	17° 28 24	31.29619 AU
morning rise	961 Oct 05 j 23:18	2° 49 49'52					
retrograde	961 Dec 31 j 12:40	4° 41 41'54		conjunction	968 Oct 05 j 10:00	17° 30 29	1°45'36
opposition	962 Mar 19 j 03:52	3° 20 20'07	1°43'06	minimum elong	968 Oct 05 j 10:00	17° 30 29	1°45'36
min. Earth dist.	962 Mar 20 j 01:37	3° 18 18'38	29.28493 AU	morning rise	968 Oct 20 j 20:15	18° 04 50	
direct	962 Jun 08 j 04:30	1° 55 55'13		retrograde	969 Jan 15 j 11:40	19° 56 58	
evening set	962 Sep 07 j 03:19	3° 51 51'35		opposition	969 Apr 03 j 11:04	18° 35 02	1°53'16
				min. Earth dist.	969 Apr 04 j 07:26	18° 33 39	29.29940 AU
conjunction	962 Sep 22 j 20:11	4° 26 26	1°37'27	direct	969 Jun 23 j 17:47	17° 10 13	

evening set	969 Sep 22 j 07:04	19° <u>♁</u> 06'17		minimum elong	975 Oct 21 j 07:40	2° <u>♁</u> 44'40	1°48'15
				morning rise	975 Nov 05 j 15:06	3° <u>♁</u> 18'53	
conjunction	969 Oct 07 j 20:06	19° <u>♁</u> 40'52	1°46'26	retrograde	976 Jan 31 j 12:25	5° <u>♁</u> 11'30	
minimum elong	969 Oct 07 j 20:06	19° <u>♁</u> 40'52	1°46'27	opposition	976 Apr 18 j 21:23	3° <u>♁</u> 49'34	1°55'31
max. Earth dist.	969 Oct 06 j 23:18	19° <u>♁</u> 38'55	31.30021 AU	min. Earth dist.	976 Apr 19 j 16:30	3° <u>♁</u> 48'17	29.31458 AU
morning rise	969 Oct 23 j 05:46	20° <u>♁</u> 15'11		direct	976 Jul 09 j 02:25	2° <u>♁</u> 25'09	
retrograde	970 Jan 17 j 20:18	22° <u>♁</u> 07'23		evening set	976 Oct 07 j 07:37	4° <u>♁</u> 20'57	
opposition	970 Apr 05 j 22:37	20° <u>♁</u> 45'28	1°54'05				
min. Earth dist.	970 Apr 06 j 18:53	20° <u>♁</u> 44'05	29.30360 AU	conjunction	976 Oct 22 j 17:27	4° <u>♁</u> 55'21	1°48'00
direct	970 Jun 26 j 05:56	19° <u>♁</u> 20'44		minimum elong	976 Oct 22 j 17:27	4° <u>♁</u> 55'21	1°48'00
evening set	970 Sep 24 j 17:32	21° <u>♁</u> 16'46		max. Earth dist.	976 Oct 21 j 22:34	4° <u>♁</u> 53'35	31.31222 AU
max. Earth dist.	970 Oct 09 j 08:31	21° <u>♁</u> 49'19	31.30457 AU	morning rise	976 Nov 07 j 00:29	5° <u>♁</u> 29'32	
				retrograde	977 Feb 01 j 21:55	7° <u>♁</u> 22'12	
conjunction	970 Oct 10 j 05:55	21° <u>♁</u> 51'19	1°47'08	opposition	977 Apr 21 j 09:24	6° <u>♁</u> 00'15	1°55'11
minimum elong	970 Oct 10 j 05:55	21° <u>♁</u> 51'19	1°47'07	min. Earth dist.	977 Apr 22 j 03:43	5° <u>♁</u> 59'00	29.31208 AU
morning rise	970 Oct 25 j 15:21	22° <u>♁</u> 25'37		direct	977 Jul 11 j 16:25	4° <u>♁</u> 35'50	
retrograde	971 Jan 20 j 06:49	24° <u>♁</u> 17'53		evening set	977 Oct 09 j 17:42	6° <u>♁</u> 31'33	
opposition	971 Apr 08 j 10:08	22° <u>♁</u> 56'00	1°54'44	max. Earth dist.	977 Oct 24 j 07:43	7° <u>♁</u> 04'08	31.30945 AU
min. Earth dist.	971 Apr 09 j 05:30	22° <u>♁</u> 54'40	29.30792 AU				
direct	971 Jun 28 j 16:11	21° <u>♁</u> 31'19		conjunction	977 Oct 25 j 03:01	7° <u>♁</u> 05'56	1°47'37
evening set	971 Sep 27 j 03:56	23° <u>♁</u> 27'20		minimum elong	977 Oct 25 j 03:01	7° <u>♁</u> 05'56	1°47'38
				morning rise	977 Nov 09 j 09:54	7° <u>♁</u> 40'07	
conjunction	971 Oct 12 j 15:59	24° <u>♁</u> 01'52	1°47'39	retrograde	978 Feb 04 j 09:00	9° <u>♁</u> 32'50	
minimum elong	971 Oct 12 j 15:59	24° <u>♁</u> 01'52	1°47'40	opposition	978 Apr 23 j 21:21	8° <u>♁</u> 10'49	1°54'41
max. Earth dist.	971 Oct 11 j 19:55	23° <u>♁</u> 59'59	31.30859 AU	min. Earth dist.	978 Apr 24 j 15:09	8° <u>♁</u> 09'36	29.30922 AU
morning rise	971 Oct 28 j 00:48	24° <u>♁</u> 36'09		direct	978 Jul 14 j 03:41	6° <u>♁</u> 46'25	
retrograde	972 Jan 22 j 16:05	26° <u>♁</u> 28'29		evening set	978 Oct 12 j 03:26	8° <u>♁</u> 42'04	
opposition	972 Apr 09 j 21:50	25° <u>♁</u> 06'37	1°55'13				
min. Earth dist.	972 Apr 10 j 17:54	25° <u>♁</u> 05'15	29.31162 AU	conjunction	978 Oct 27 j 12:34	9° <u>♁</u> 16'26	1°47'04
direct	972 Jun 30 j 02:55	23° <u>♁</u> 42'01		minimum elong	978 Oct 27 j 12:34	9° <u>♁</u> 16'26	1°47'03
evening set	972 Sep 28 j 14:30	25° <u>♁</u> 38'00		max. Earth dist.	978 Oct 26 j 18:59	9° <u>♁</u> 14'46	31.30653 AU
max. Earth dist.	972 Oct 13 j 05:21	26° <u>♁</u> 10'34	31.31192 AU	morning rise	978 Nov 11 j 19:03	9° <u>♁</u> 50'36	
				retrograde	979 Feb 06 j 17:29	11° <u>♁</u> 43'22	
conjunction	972 Oct 14 j 01:55	26° <u>♁</u> 12'30	1°48'02	opposition	979 Apr 26 j 09:26	10° <u>♁</u> 21'18	1°54'01
minimum elong	972 Oct 14 j 01:55	26° <u>♁</u> 12'30	1°48'01	min. Earth dist.	979 Apr 27 j 02:53	10° <u>♁</u> 20'07	29.30634 AU
morning rise	972 Oct 29 j 10:28	26° <u>♁</u> 46'46		direct	979 Jul 16 j 16:31	8° <u>♁</u> 56'56	
retrograde	973 Jan 24 j 03:39	28° <u>♁</u> 39'11		evening set	979 Oct 14 j 13:20	10° <u>♁</u> 52'30	
opposition	973 Apr 12 j 09:37	27° <u>♁</u> 17'19	1°55'32				
min. Earth dist.	973 Apr 13 j 04:24	27° <u>♁</u> 16'02	29.31440 AU	conjunction	979 Oct 29 j 21:56	11° <u>♁</u> 26'50	1°46'22
direct	973 Jul 02 j 14:07	25° <u>♁</u> 52'46		minimum elong	979 Oct 29 j 21:56	11° <u>♁</u> 26'50	1°46'22
evening set	973 Oct 01 j 00:46	27° <u>♁</u> 48'43		max. Earth dist.	979 Oct 29 j 04:06	11° <u>♁</u> 25'10	31.30397 AU
				morning rise	979 Nov 14 j 04:18	12° <u>♁</u> 01'00	
conjunction	973 Oct 16 j 11:49	28° <u>♁</u> 23'12	1°48'15	retrograde	980 Feb 09 j 03:37	13° <u>♁</u> 53'50	
minimum elong	973 Oct 16 j 11:49	28° <u>♁</u> 23'12	1°48'16	opposition	980 Apr 27 j 21:24	12° <u>♁</u> 31'45	1°53'12
max. Earth dist.	973 Oct 15 j 15:54	28° <u>♁</u> 21'20	31.31401 AU	min. Earth dist.	980 Apr 28 j 13:24	12° <u>♁</u> 30'39	29.30418 AU
morning rise	973 Oct 31 j 19:53	28° <u>♁</u> 57'26		direct	980 Jul 18 j 03:01	11° <u>♁</u> 07'24	
	973 Dec 02 j 07:28	0° <u>♁</u>		evening set	980 Oct 15 j 23:02	13° <u>♁</u> 02'55	
retrograde	974 Jan 26 j 14:24	0° <u>♁</u> 49'56					
	974 Mar 25 j 19:07	30° <u>♁</u>		conjunction	980 Oct 31 j 07:26	13° <u>♁</u> 37'15	1°45'32
opposition	974 Apr 14 j 21:38	29° <u>♁</u> 28'04	1°55'42	minimum elong	980 Oct 31 j 07:26	13° <u>♁</u> 37'15	1°45'31
min. Earth dist.	974 Apr 15 j 17:15	29° <u>♁</u> 26'44	29.31589 AU	max. Earth dist.	980 Oct 30 j 15:25	13° <u>♁</u> 35'44	31.30221 AU
direct	974 Jul 05 j 02:06	28° <u>♁</u> 03'35		morning rise	980 Nov 15 j 13:24	14° <u>♁</u> 11'24	
evening set	974 Oct 03 j 11:10	29° <u>♁</u> 59'29			980 Dec 09 j 03:58	15° <u>♁</u>	
	974 Oct 03 j 16:45	0° <u>♁</u>		retrograde	981 Feb 10 j 12:53	16° <u>♁</u> 04'20	
					981 Apr 19 j 08:54	15° <u>♁</u>	
conjunction	974 Oct 18 j 21:45	0° <u>♁</u> 33'56	1°48'20	opposition	981 Apr 30 j 09:41	14° <u>♁</u> 42'13	1°52'13
minimum elong	974 Oct 18 j 21:45	0° <u>♁</u> 33'56	1°48'19	min. Earth dist.	981 May 01 j 01:40	14° <u>♁</u> 41'08	29.30283 AU
max. Earth dist.	974 Oct 18 j 01:56	0° <u>♁</u> 32'05	31.31484 AU	direct	981 Jul 20 j 13:25	13° <u>♁</u> 17'57	
morning rise	974 Nov 03 j 05:31	1° <u>♁</u> 08'10			981 Oct 12 j 04:20	15° <u>♁</u>	
retrograde	975 Jan 29 j 02:00	3° <u>♁</u> 00'43		evening set	981 Oct 18 j 08:40	15° <u>♁</u> 13'23	
opposition	975 Apr 17 j 09:21	1° <u>♁</u> 38'50	1°55'41				
min. Earth dist.	975 Apr 18 j 03:57	1° <u>♁</u> 37'34	29.31590 AU	conjunction	981 Nov 02 j 16:39	15° <u>♁</u> 47'42	1°44'32
direct	975 Jul 07 j 15:18	0° <u>♁</u> 14'23		minimum elong	981 Nov 02 j 16:39	15° <u>♁</u> 47'42	1°44'32
evening set	975 Oct 05 j 21:32	2° <u>♁</u> 10'15		max. Earth dist.	981 Nov 02 j 00:54	15° <u>♁</u> 46'13	31.30138 AU
max. Earth dist.	975 Oct 20 j 11:43	2° <u>♁</u> 42'48	31.31411 AU	morning rise	981 Nov 17 j 22:34	16° <u>♁</u> 21'52	
				retrograde	982 Feb 13 j 00:20	18° <u>♁</u> 14'54	
conjunction	975 Oct 21 j 07:40	2° <u>♁</u> 44'40	1°48'14	opposition	982 May 02 j 21:48	16° <u>♁</u> 52'47	1°51'04

min. Earth dist.	982 May 03 j 11:54	16° \mathbb{M} .51'49	29.30221 AU	conjunction	988 Nov 17 j 10:34	1° \mathbb{X} 03'54	1°33'24
direct	982 Jul 23 j 00:11	15° \mathbb{M} .28'34		minimum elong	988 Nov 17 j 10:34	1° \mathbb{X} 03'54	1°33'23
evening set	982 Oct 20 j 18:18	17° \mathbb{M} .23'59		max. Earth dist.	988 Nov 16 j 22:31	1° \mathbb{X} 02'46	31.28340 AU
max. Earth dist.	982 Nov 04 j 11:21	17° \mathbb{M} .56'54	31.30091 AU	morning rise	988 Dec 02 j 15:36	1° \mathbb{X} 38'05	
				retrograde	989 Feb 28 j 05:46	3° \mathbb{X} 31'49	
conjunction	982 Nov 05 j 02:05	17° \mathbb{M} .58'17	1°43'22	opposition	989 May 18 j 13:10	2° \mathbb{X} 09'28	1°38'39
minimum elong	982 Nov 05 j 02:05	17° \mathbb{M} .58'17	1°43'22	min. Earth dist.	989 May 18 j 23:42	2° \mathbb{X} 08'45	29.28065 AU
morning rise	982 Nov 20 j 07:44	18° \mathbb{M} .32'26		direct	989 Aug 07 j 12:01	0° \mathbb{X} 45'36	
retrograde	983 Feb 15 j 11:24	20° \mathbb{M} .25'36		evening set	989 Nov 04 j 13:35	2° \mathbb{X} 40'31	
opposition	983 May 05 j 09:59	19° \mathbb{M} .03'28	1°49'45				
min. Earth dist.	983 May 06 j 00:29	19° \mathbb{M} .02'29	29.30182 AU	conjunction	989 Nov 19 j 19:54	3° \mathbb{X} 14'47	1°31'15
direct	983 Jul 25 j 11:13	17° \mathbb{M} .39'21		minimum elong	989 Nov 19 j 19:54	3° \mathbb{X} 14'47	1°31'16
evening set	983 Oct 23 j 04:00	19° \mathbb{M} .34'43		max. Earth dist.	989 Nov 19 j 09:21	3° \mathbb{X} 13'48	31.27597 AU
				morning rise	989 Dec 05 j 00:48	3° \mathbb{X} 48'58	
conjunction	983 Nov 07 j 11:30	20° \mathbb{M} .09'01	1°42'04	retrograde	990 Mar 02 j 15:12	5° \mathbb{X} 42'47	
minimum elong	983 Nov 07 j 11:30	20° \mathbb{M} .09'01	1°42'05	opposition	990 May 21 j 01:53	4° \mathbb{X} 20'20	1°36'18
max. Earth dist.	983 Nov 06 j 21:31	20° \mathbb{M} .07'42	31.30054 AU	min. Earth dist.	990 May 21 j 12:40	4° \mathbb{X} 19'36	29.27278 AU
morning rise	983 Nov 22 j 16:59	20° \mathbb{M} .43'10		direct	990 Aug 09 j 23:42	2° \mathbb{X} 56'28	
retrograde	984 Feb 17 j 23:28	22° \mathbb{M} .36'26		evening set	990 Nov 06 j 23:01	4° \mathbb{X} 51'16	
opposition	984 May 06 j 22:19	21° \mathbb{M} .14'18	1°48'17				
min. Earth dist.	984 May 07 j 11:19	21° \mathbb{M} .13'25	29.30111 AU	conjunction	990 Nov 22 j 05:06	5° \mathbb{X} 25'32	1°28'59
direct	984 Jul 26 j 23:09	19° \mathbb{M} .50'15		minimum elong	990 Nov 22 j 05:06	5° \mathbb{X} 25'32	1°28'58
evening set	984 Oct 24 j 13:38	21° \mathbb{M} .45'35		max. Earth dist.	990 Nov 21 j 18:50	5° \mathbb{X} 24'34	31.26800 AU
				morning rise	990 Dec 07 j 10:06	5° \mathbb{X} 59'43	
conjunction	984 Nov 08 j 20:48	22° \mathbb{M} .19'52	1°40'37	retrograde	991 Mar 05 j 02:06	7° \mathbb{X} 53'36	
minimum elong	984 Nov 08 j 20:48	22° \mathbb{M} .19'52	1°40'37	opposition	991 May 23 j 14:18	6° \mathbb{X} 31'04	1°33'48
max. Earth dist.	984 Nov 08 j 07:02	22° \mathbb{M} .18'34	31.29952 AU	min. Earth dist.	991 May 23 j 23:12	6° \mathbb{X} 30'27	29.26468 AU
morning rise	984 Nov 24 j 02:10	22° \mathbb{M} .54'01		direct	991 Aug 12 j 11:14	5° \mathbb{X} 07'11	
retrograde	985 Feb 19 j 10:45	24° \mathbb{M} .47'25		evening set	991 Nov 09 j 08:21	7° \mathbb{X} 01'53	
opposition	985 May 09 j 10:53	23° \mathbb{M} .25'16	1°46'39				
min. Earth dist.	985 May 10 j 00:03	23° \mathbb{M} .24'22	29.29975 AU	conjunction	991 Nov 24 j 14:20	7° \mathbb{X} 36'09	1°26'35
direct	985 Jul 29 j 09:42	22° \mathbb{M} .01'17		minimum elong	991 Nov 24 j 14:21	7° \mathbb{X} 36'09	1°26'35
evening set	985 Oct 26 j 23:16	23° \mathbb{M} .56'33		max. Earth dist.	991 Nov 24 j 05:08	7° \mathbb{X} 35'17	31.26000 AU
				morning rise	991 Dec 09 j 19:16	8° \mathbb{X} 10'21	
conjunction	985 Nov 11 j 06:18	24° \mathbb{M} .30'50	1°39'01	retrograde	992 Mar 06 j 12:45	10° \mathbb{X} 04'19	
minimum elong	985 Nov 11 j 06:18	24° \mathbb{M} .30'50	1°39'02	opposition	992 May 25 j 03:04	8° \mathbb{X} 41'42	1°31'11
max. Earth dist.	985 Nov 10 j 17:52	24° \mathbb{M} .29'40	31.29764 AU	min. Earth dist.	992 May 25 j 11:57	8° \mathbb{X} 41'06	29.25702 AU
morning rise	985 Nov 26 j 11:27	25° \mathbb{M} .05'00		direct	992 Aug 13 j 21:55	7° \mathbb{X} 17'50	
retrograde	986 Feb 21 j 21:39	26° \mathbb{M} .58'29		evening set	992 Nov 10 j 17:30	9° \mathbb{X} 12'27	
opposition	986 May 11 j 23:19	25° \mathbb{M} .36'18	1°44'53				
min. Earth dist.	986 May 12 j 11:38	25° \mathbb{M} .35'28	29.29715 AU	conjunction	992 Nov 25 j 23:24	9° \mathbb{X} 46'43	1°24'04
direct	986 Jul 31 j 23:40	24° \mathbb{M} .12'23		minimum elong	992 Nov 25 j 23:24	9° \mathbb{X} 46'43	1°24'03
evening set	986 Oct 29 j 09:00	26° \mathbb{M} .07'35		max. Earth dist.	992 Nov 25 j 15:32	9° \mathbb{X} 45'58	31.25282 AU
				morning rise	992 Dec 11 j 04:19	10° \mathbb{X} 20'55	
conjunction	986 Nov 13 j 15:41	26° \mathbb{M} .41'52	1°37'17	retrograde	993 Mar 09 j 00:14	12° \mathbb{X} 15'00	
minimum elong	986 Nov 13 j 15:41	26° \mathbb{M} .41'52	1°37'16	opposition	993 May 27 j 15:43	10° \mathbb{X} 52'19	1°28'25
max. Earth dist.	986 Nov 13 j 02:39	26° \mathbb{M} .40'39	31.29440 AU	min. Earth dist.	993 May 27 j 22:33	10° \mathbb{X} 51'51	29.25018 AU
morning rise	986 Nov 28 j 20:53	27° \mathbb{M} .16'02		direct	993 Aug 16 j 09:22	9° \mathbb{X} 28'29	
retrograde	987 Feb 24 j 10:05	29° \mathbb{M} .09'37		evening set	993 Nov 13 j 02:48	11° \mathbb{X} 23'02	
opposition	987 May 14 j 11:53	27° \mathbb{M} .47'24	1°42'57				
min. Earth dist.	987 May 14 j 23:44	27° \mathbb{M} .46'36	29.29319 AU	conjunction	993 Nov 28 j 08:32	11° \mathbb{X} 57'18	1°21'25
direct	987 Aug 03 j 11:25	26° \mathbb{M} .23'30		minimum elong	993 Nov 28 j 08:33	11° \mathbb{X} 57'18	1°21'26
evening set	987 Oct 31 j 18:34	28° \mathbb{M} .18'38		max. Earth dist.	993 Nov 28 j 01:11	11° \mathbb{X} 56'37	31.24649 AU
				morning rise	993 Dec 13 j 13:36	12° \mathbb{X} 31'32	
conjunction	987 Nov 16 j 01:12	28° \mathbb{M} .52'55	1°35'24	retrograde	994 Mar 11 j 12:04	14° \mathbb{X} 25'44	
minimum elong	987 Nov 16 j 01:12	28° \mathbb{M} .52'55	1°35'25	opposition	994 May 30 j 04:21	13° \mathbb{X} 03'00	1°25'32
max. Earth dist.	987 Nov 15 j 13:37	28° \mathbb{M} .51'49	31.28962 AU	min. Earth dist.	994 May 30 j 10:52	13° \mathbb{X} 02'33	29.24435 AU
morning rise	987 Dec 01 j 06:08	29° \mathbb{M} .27'05		direct	994 Aug 18 j 19:23	11° \mathbb{X} 39'13	
	987 Dec 16 j 18:09	0° \mathbb{X}		evening set	994 Nov 15 j 11:55	13° \mathbb{X} 33'43	
retrograde	988 Feb 26 j 19:02	1° \mathbb{X} 20'45					
	988 May 15 j 01:52	30° \mathbb{K} \mathbb{M}		conjunction	994 Nov 30 j 17:45	14° \mathbb{X} 08'00	1°18'40
opposition	988 May 16 j 00:32	29° \mathbb{M} .58'28	1°40'52	minimum elong	994 Nov 30 j 17:45	14° \mathbb{X} 08'00	1°18'39
min. Earth dist.	988 May 16 j 12:16	29° \mathbb{M} .57'41	29.28753 AU	max. Earth dist.	994 Nov 30 j 12:16	14° \mathbb{X} 07'29	31.24108 AU
direct	988 Aug 05 j 00:22	28° \mathbb{M} .34'36		morning rise	994 Dec 15 j 22:46	14° \mathbb{X} 42'15	
	988 Oct 19 j 06:20	0° \mathbb{X}		retrograde	995 Mar 13 j 23:31	16° \mathbb{X} 36'34	
evening set	988 Nov 02 j 04:16	0° \mathbb{X} 29'38		opposition	995 Jun 01 j 17:01	15° \mathbb{X} 13'49	1°22'31
				min. Earth dist.	995 Jun 01 j 22:09	15° \mathbb{X} 13'28	29.23905 AU

direct	995 Aug 21 j 08:34	13° \mathring{A} 50'07		morning rise	1001 Dec 30 j 16:59	0° \mathring{B} 01'49	
evening set	995 Nov 17 j 21:09	15° \mathring{A} 44'34		retrograde	1002 Mar 29 j 07:07	1° \mathring{B} 57'03	
				opposition	1002 Jun 17 j 11:42	0° \mathring{B} 33'59	0°58'17
conjunction	995 Dec 03 j 02:46	16° \mathring{A} 18'52	1°15'47	min. Earth dist.	1002 Jun 17 j 11:25	0° \mathring{B} 34'00	29.18873 AU
minimum elong	995 Dec 03 j 02:46	16° \mathring{A} 18'52	1°15'47		1002 Jul 09 j 01:23	30° \mathring{R} \mathring{A}	
max. Earth dist.	995 Dec 02 j 21:14	16° \mathring{A} 18'20	31.23605 AU	direct	1002 Sep 05 j 16:05	29° \mathring{A} 10'34	
morning rise	995 Dec 18 j 08:00	16° \mathring{A} 53'08			1002 Oct 31 j 04:41	0° \mathring{B}	
retrograde	996 Mar 15 j 12:47	18° \mathring{A} 47'36		evening set	1002 Dec 02 j 14:36	1° \mathring{B} 04'34	
opposition	996 Jun 03 j 05:51	17° \mathring{A} 24'49	1°19'23				
min. Earth dist.	996 Jun 03 j 10:02	17° \mathring{A} 24'32	29.23413 AU	conjunction	1002 Dec 17 j 20:22	1° \mathring{B} 38'57	0°52'46
direct	996 Aug 22 j 19:34	16° \mathring{A} 01'12		minimum elong	1002 Dec 17 j 20:23	1° \mathring{B} 38'57	0°52'46
evening set	996 Nov 19 j 06:20	17° \mathring{A} 55'37		max. Earth dist.	1002 Dec 17 j 19:57	1° \mathring{B} 38'55	31.18312 AU
				morning rise	1003 Jan 02 j 02:39	2° \mathring{B} 13'23	
conjunction	996 Dec 04 j 12:05	18° \mathring{A} 29'55	1°12'47	retrograde	1003 Mar 31 j 19:21	4° \mathring{B} 08'43	
minimum elong	996 Dec 04 j 12:05	18° \mathring{A} 29'55	1°12'47	opposition	1003 Jun 20 j 00:46	2° \mathring{B} 45'32	0°54'27
max. Earth dist.	996 Dec 04 j 08:27	18° \mathring{A} 29'35	31.23111 AU	min. Earth dist.	1003 Jun 20 j 00:23	2° \mathring{B} 45'34	29.17800 AU
morning rise	996 Dec 19 j 17:15	19° \mathring{A} 04'12		direct	1003 Sep 08 j 02:40	1° \mathring{B} 22'07	
retrograde	997 Mar 17 j 22:49	20° \mathring{A} 58'49		evening set	1003 Dec 04 j 23:43	3° \mathring{B} 16'01	
opposition	997 Jun 05 j 18:47	19° \mathring{A} 36'02	1°16'07				
min. Earth dist.	997 Jun 05 j 22:29	19° \mathring{A} 35'47	29.22898 AU	conjunction	1003 Dec 20 j 05:42	3° \mathring{B} 50'24	0°49'09
direct	997 Aug 25 j 07:47	18° \mathring{A} 12'29		minimum elong	1003 Dec 20 j 05:43	3° \mathring{B} 50'24	0°49'09
evening set	997 Nov 21 j 15:39	20° \mathring{A} 06'51		max. Earth dist.	1003 Dec 20 j 07:16	3° \mathring{B} 50'33	31.17245 AU
				morning rise	1004 Jan 04 j 12:01	4° \mathring{B} 24'51	
conjunction	997 Dec 06 j 21:14	20° \mathring{A} 41'10	1°09'41	retrograde	1004 Apr 02 j 07:11	6° \mathring{B} 20'17	
minimum elong	997 Dec 06 j 21:14	20° \mathring{A} 41'10	1°09'41	opposition	1004 Jun 21 j 13:46	4° \mathring{B} 57'00	0°50'32
max. Earth dist.	997 Dec 06 j 17:29	20° \mathring{A} 40'49	31.22582 AU	min. Earth dist.	1004 Jun 21 j 11:53	4° \mathring{B} 57'07	29.16747 AU
morning rise	997 Dec 22 j 02:41	21° \mathring{A} 15'29		direct	1004 Sep 09 j 15:41	3° \mathring{B} 33'34	
retrograde	998 Mar 20 j 10:39	23° \mathring{A} 10'14		evening set	1004 Dec 06 j 09:05	5° \mathring{B} 27'23	
opposition	998 Jun 08 j 07:40	21° \mathring{A} 47'26	1°12'45				
min. Earth dist.	998 Jun 08 j 10:03	21° \mathring{A} 47'16	29.22328 AU	conjunction	1004 Dec 21 j 14:59	6° \mathring{B} 01'47	0°45'27
direct	998 Aug 27 j 19:23	20° \mathring{A} 23'57		minimum elong	1004 Dec 21 j 14:59	6° \mathring{B} 01'47	0°45'26
evening set	998 Nov 24 j 01:00	22° \mathring{A} 18'16		max. Earth dist.	1004 Dec 21 j 16:35	6° \mathring{B} 01'56	31.16239 AU
				morning rise	1005 Jan 05 j 21:41	6° \mathring{B} 36'15	
conjunction	998 Dec 09 j 06:41	22° \mathring{A} 52'36	1°06'29	retrograde	1005 Apr 04 j 20:36	8° \mathring{B} 31'48	
minimum elong	998 Dec 09 j 06:42	22° \mathring{A} 52'36	1°06'28	opposition	1005 Jun 24 j 02:45	7° \mathring{B} 08'24	0°46'32
max. Earth dist.	998 Dec 09 j 04:18	22° \mathring{A} 52'23	31.21957 AU	min. Earth dist.	1005 Jun 23 j 23:43	7° \mathring{B} 08'36	29.15797 AU
morning rise	998 Dec 24 j 12:08	23° \mathring{A} 26'56		direct	1005 Sep 12 j 02:09	5° \mathring{B} 44'59	
retrograde	999 Mar 22 j 21:16	25° \mathring{A} 21'50		evening set	1005 Dec 08 j 18:14	7° \mathring{B} 38'43	
opposition	999 Jun 10 j 20:38	23° \mathring{A} 58'59	1°09'17				
min. Earth dist.	999 Jun 10 j 23:20	23° \mathring{A} 58'48	29.21646 AU	conjunction	1005 Dec 24 j 00:25	8° \mathring{B} 13'08	0°41'41
direct	999 Aug 30 j 06:59	22° \mathring{A} 35'33		minimum elong	1005 Dec 24 j 00:25	8° \mathring{B} 13'08	0°41'41
evening set	999 Nov 26 j 10:29	24° \mathring{A} 29'49		max. Earth dist.	1005 Dec 24 j 04:07	8° \mathring{B} 13'29	31.15337 AU
				morning rise	1006 Jan 08 j 07:12	8° \mathring{B} 47'38	
conjunction	999 Dec 11 j 16:07	25° \mathring{A} 04'09	1°03'11	retrograde	1006 Apr 07 j 07:05	10° \mathring{B} 43'17	
minimum elong	999 Dec 11 j 16:08	25° \mathring{A} 04'09	1°03'12	opposition	1006 Jun 26 j 15:44	9° \mathring{B} 19'50	0°42'29
max. Earth dist.	999 Dec 11 j 13:56	25° \mathring{A} 03'57	31.21227 AU	min. Earth dist.	1006 Jun 26 j 11:52	9° \mathring{B} 20'05	29.14942 AU
morning rise	999 Dec 26 j 21:46	25° \mathring{A} 38'32		direct	1006 Sep 14 j 14:25	7° \mathring{B} 56'26	
retrograde	1000 Mar 24 j 08:48	27° \mathring{A} 33'33		evening set	1006 Dec 11 j 03:37	9° \mathring{B} 50'07	
opposition	1000 Jun 12 j 09:40	26° \mathring{A} 10'39	1°05'42				
min. Earth dist.	1000 Jun 12 j 10:38	26° \mathring{A} 10'35	29.20843 AU	conjunction	1006 Dec 26 j 09:46	10° \mathring{B} 24'32	0°37'51
direct	1000 Aug 31 j 18:35	24° \mathring{A} 47'15		minimum elong	1006 Dec 26 j 09:46	10° \mathring{B} 24'32	0°37'50
evening set	1000 Nov 27 j 19:50	26° \mathring{A} 41'26		max. Earth dist.	1006 Dec 26 j 13:42	10° \mathring{B} 24'55	31.14545 AU
				morning rise	1007 Jan 10 j 16:55	10° \mathring{B} 59'04	
conjunction	1000 Dec 13 j 01:30	27° \mathring{A} 15'47	0°59'48	retrograde	1007 Apr 09 j 20:01	12° \mathring{B} 54'50	
minimum elong	1000 Dec 13 j 01:31	27° \mathring{A} 15'47	0°59'47	opposition	1007 Jun 29 j 04:35	11° \mathring{B} 31'20	0°38'21
max. Earth dist.	1000 Dec 12 j 23:55	27° \mathring{A} 15'38	31.20355 AU	min. Earth dist.	1007 Jun 28 j 23:01	11° \mathring{B} 31'42	29.14197 AU
morning rise	1000 Dec 28 j 07:19	27° \mathring{A} 50'10		direct	1007 Sep 17 j 02:20	10° \mathring{B} 07'59	
retrograde	1001 Mar 26 j 19:40	29° \mathring{A} 45'19		evening set	1007 Dec 13 j 12:56	12° \mathring{B} 01'36	
opposition	1001 Jun 14 j 22:53	28° \mathring{A} 22'20	1°02'02				
min. Earth dist.	1001 Jun 15 j 00:12	28° \mathring{A} 22'15	29.19909 AU	conjunction	1007 Dec 28 j 19:18	12° \mathring{B} 36'04	0°33'58
direct	1001 Sep 03 j 05:05	26° \mathring{A} 58'57		minimum elong	1007 Dec 28 j 19:18	12° \mathring{B} 36'04	0°33'58
evening set	1001 Nov 30 j 05:13	28° \mathring{A} 53'02		max. Earth dist.	1007 Dec 29 j 00:55	12° \mathring{B} 36'35	31.13838 AU
				morning rise	1008 Jan 13 j 02:36	13° \mathring{B} 10'37	
conjunction	1001 Dec 15 j 11:01	29° \mathring{A} 27'24	0°56'19	retrograde	1008 Apr 11 j 07:34	15° \mathring{B} 06'32	
minimum elong	1001 Dec 15 j 11:02	29° \mathring{A} 27'24	0°56'20	opposition	1008 Jun 30 j 17:45	13° \mathring{B} 42'58	0°34'10
max. Earth dist.	1001 Dec 15 j 10:29	29° \mathring{A} 27'21	31.19376 AU	min. Earth dist.	1008 Jun 30 j 12:04	13° \mathring{B} 43'22	29.13523 AU
	1001 Dec 29 j 21:23	0° \mathring{B}		direct	1008 Sep 18 j 14:03	12° \mathring{B} 19'41	

evening set	1008 Dec 14 j 22:16	14° $\overline{3}$ 13'16		minimum elong	1015 Jan 12 j 16:18	28° $\overline{3}$ 01'24	0°05'35
				behind sun begin	1015 Jan 12 j 10:08	28° $\overline{3}$ 00'50	
conjunction	1008 Dec 30 j 04:46	14° $\overline{3}$ 47'44	0°30'01	behind sun end	1015 Jan 12 j 22:28	28° $\overline{3}$ 01'57	
minimum elong	1008 Dec 30 j 04:46	14° $\overline{3}$ 47'44	0°30'00	max. Earth dist.	1015 Jan 13 j 02:52	28° $\overline{3}$ 02'23	31.08128 AU
max. Earth dist.	1008 Dec 30 j 11:08	14° $\overline{3}$ 48'20	31.13200 AU	morning rise	1015 Jan 28 j 01:39	28° $\overline{3}$ 36'11	
morning rise	1009 Jan 14 j 12:24	15° $\overline{3}$ 22'20			1015 Mar 13 j 13:01	0° \approx	
retrograde	1009 Apr 13 j 19:27	17° $\overline{3}$ 18'23		retrograde	1015 Apr 27 j 21:59	0° \approx 33'02	
opposition	1009 Jul 03 j 06:47	15° $\overline{3}$ 54'48	0°29'55		1015 Jun 14 j 00:53	30° \overline{R} $\overline{3}$	
min. Earth dist.	1009 Jul 02 j 23:10	15° $\overline{3}$ 55'19	29.12889 AU	opposition	1015 Jul 17 j 13:55	29° $\overline{3}$ 09'07	0°03'40
direct	1009 Sep 21 j 01:29	14° $\overline{3}$ 31'34		min. Earth dist.	1015 Jul 17 j 03:24	29° $\overline{3}$ 09'49	29.07550 AU
evening set	1009 Dec 17 j 07:50	16° $\overline{3}$ 25'06		direct	1015 Oct 04 j 19:47	27° $\overline{3}$ 46'01	
				evening set	1015 Dec 30 j 18:33	29° $\overline{3}$ 39'18	
					1016 Jan 08 j 23:47	0° \approx	
conjunction	1010 Jan 01 j 14:27	16° $\overline{3}$ 59'36	0°26'01				
minimum elong	1010 Jan 01 j 14:27	16° $\overline{3}$ 59'36	0°26'02				
max. Earth dist.	1010 Jan 01 j 21:28	17° $\overline{3}$ 00'16	31.12559 AU	conjunction	1016 Jan 15 j 02:20	0° \approx 13'55	0°01'26
morning rise	1010 Jan 16 j 22:23	17° $\overline{3}$ 34'14		minimum elong	1016 Jan 15 j 02:19	0° \approx 13'55	0°01'26
retrograde	1010 Apr 16 j 06:43	19° $\overline{3}$ 30'26		behind sun begin	1016 Jan 14 j 19:55	0° \approx 13'20	
opposition	1010 Jul 05 j 19:51	18° $\overline{3}$ 06'49	0°25'37	behind sun end	1016 Jan 15 j 08:43	0° \approx 14'29	
min. Earth dist.	1010 Jul 05 j 12:33	18° $\overline{3}$ 07'19	29.12241 AU	max. Earth dist.	1016 Jan 15 j 12:53	0° \approx 14'54	31.06971 AU
direct	1010 Sep 23 j 11:38	16° $\overline{3}$ 43'39		morning rise	1016 Jan 30 j 12:08	0° \approx 48'44	
evening set	1010 Dec 19 j 17:26	18° $\overline{3}$ 37'09		retrograde	1016 Apr 29 j 12:11	2° \approx 45'41	
				desc. node	1016 May 17 j 10:46	2° \approx 40'30	
conjunction	1011 Jan 04 j 00:18	19° $\overline{3}$ 11'40	0°21'59	opposition	1016 Jul 19 j 03:03	1° \approx 21'39	-0°00'45
minimum elong	1011 Jan 04 j 00:18	19° $\overline{3}$ 11'40	0°21'59	min. Earth dist.	1016 Jul 18 j 15:09	1° \approx 22'28	29.06401 AU
max. Earth dist.	1011 Jan 04 j 08:30	19° $\overline{3}$ 12'27	31.11891 AU		1016 Sep 27 j 01:11	30° \overline{R} $\overline{3}$	
morning rise	1011 Jan 19 j 08:26	19° $\overline{3}$ 46'20		direct	1016 Oct 06 j 08:10	29° $\overline{3}$ 58'33	
retrograde	1011 Apr 18 j 18:51	21° $\overline{3}$ 42'41			1016 Oct 15 j 13:17	0° \approx	
opposition	1011 Jul 08 j 08:58	20° $\overline{3}$ 19'03	0°21'17	evening set	1017 Jan 01 j 04:19	1° \approx 51'46	
min. Earth dist.	1011 Jul 08 j 00:06	20° $\overline{3}$ 19'39	29.11527 AU				
direct	1011 Sep 25 j 22:42	18° $\overline{3}$ 55'55		conjunction	1017 Jan 16 j 12:22	2° \approx 26'25	-0°02'49
evening set	1011 Dec 22 j 03:10	20° $\overline{3}$ 49'24		minimum elong	1017 Jan 16 j 12:22	2° \approx 26'25	0°02'50
				behind sun begin	1017 Jan 16 j 05:58	2° \approx 25'50	
conjunction	1012 Jan 06 j 10:03	21° $\overline{3}$ 23'56	0°17'55	behind sun end	1017 Jan 16 j 18:45	2° \approx 26'59	
minimum elong	1012 Jan 06 j 10:03	21° $\overline{3}$ 23'56	0°17'56	max. Earth dist.	1017 Jan 17 j 00:26	2° \approx 27'32	31.05829 AU
max. Earth dist.	1012 Jan 06 j 18:08	21° $\overline{3}$ 24'41	31.11126 AU	morning rise	1017 Jan 31 j 22:28	3° \approx 01'15	
morning rise	1012 Jan 21 j 18:35	21° $\overline{3}$ 58'38		retrograde	1017 May 02 j 00:18	4° \approx 58'19	
retrograde	1012 Apr 20 j 07:57	23° $\overline{3}$ 55'08		opposition	1017 Jul 21 j 16:15	3° \approx 34'12	-0°05'11
opposition	1012 Jul 09 j 22:20	22° $\overline{3}$ 31'27	0°16'55	min. Earth dist.	1017 Jul 21 j 04:19	3° \approx 35'00	29.05296 AU
min. Earth dist.	1012 Jul 09 j 13:39	22° $\overline{3}$ 32'02	29.10715 AU	direct	1017 Oct 08 j 20:15	2° \approx 11'05	
direct	1012 Sep 27 j 08:50	21° $\overline{3}$ 08'21		evening set	1018 Jan 03 j 14:16	4° \approx 04'15	
evening set	1012 Dec 23 j 12:57	23° $\overline{3}$ 01'48					
				conjunction	1018 Jan 18 j 22:32	4° \approx 38'55	-0°06'57
conjunction	1013 Jan 07 j 20:11	23° $\overline{3}$ 36'21	0°13'49	minimum elong	1018 Jan 18 j 22:33	4° \approx 38'55	0°06'57
minimum elong	1013 Jan 07 j 20:11	23° $\overline{3}$ 36'21	0°13'49	behind sun begin	1018 Jan 18 j 16:35	4° \approx 38'23	
behind sun begin	1013 Jan 07 j 16:42	23° $\overline{3}$ 36'02		behind sun end	1018 Jan 19 j 04:31	4° \approx 39'27	
behind sun end	1013 Jan 07 j 23:40	23° $\overline{3}$ 36'40		max. Earth dist.	1018 Jan 19 j 11:21	4° \approx 40'07	31.04773 AU
max. Earth dist.	1013 Jan 08 j 05:47	23° $\overline{3}$ 37'15	31.10251 AU	morning rise	1018 Feb 03 j 09:00	5° \approx 13'48	
morning rise	1013 Jan 23 j 04:52	24° $\overline{3}$ 11'04		retrograde	1018 May 04 j 12:15	7° \approx 10'57	
retrograde	1013 Apr 22 j 20:29	26° $\overline{3}$ 07'42		opposition	1018 Jul 24 j 05:04	5° \approx 46'46	-0°09'37
opposition	1013 Jul 12 j 11:31	24° $\overline{3}$ 43'58	0°12'31	min. Earth dist.	1018 Jul 23 j 15:13	5° \approx 47'43	29.04289 AU
min. Earth dist.	1013 Jul 12 j 01:52	24° $\overline{3}$ 44'37	29.09768 AU	direct	1018 Oct 11 j 08:03	4° \approx 23'40	
direct	1013 Sep 29 j 21:03	23° $\overline{3}$ 20'53		evening set	1019 Jan 06 j 00:16	6° \approx 16'48	
evening set	1013 Dec 25 j 22:53	25° $\overline{3}$ 14'17					
				conjunction	1019 Jan 21 j 08:44	6° \approx 51'29	-0°11'04
conjunction	1014 Jan 10 j 06:11	25° $\overline{3}$ 48'52	0°09'43	minimum elong	1019 Jan 21 j 08:44	6° \approx 51'29	0°11'04
minimum elong	1014 Jan 10 j 06:11	25° $\overline{3}$ 48'52	0°09'43	behind sun begin	1019 Jan 21 j 03:53	6° \approx 51'03	
behind sun begin	1014 Jan 10 j 00:53	25° $\overline{3}$ 48'23		behind sun end	1019 Jan 21 j 13:34	6° \approx 51'56	
behind sun end	1014 Jan 10 j 11:29	25° $\overline{3}$ 49'20		max. Earth dist.	1019 Jan 21 j 22:12	6° \approx 52'45	31.03810 AU
max. Earth dist.	1014 Jan 10 j 15:10	25° $\overline{3}$ 49'42	31.09246 AU	morning rise	1019 Feb 05 j 19:33	7° \approx 26'24	
morning rise	1014 Jan 25 j 15:23	26° $\overline{3}$ 23'37		retrograde	1019 May 06 j 23:42	9° \approx 23'41	
retrograde	1014 Apr 25 j 10:33	28° $\overline{3}$ 20'22		opposition	1019 Jul 26 j 18:13	7° \approx 59'27	-0°14'02
opposition	1014 Jul 15 j 00:45	26° $\overline{3}$ 56'32	0°08'06	min. Earth dist.	1019 Jul 26 j 04:26	8° \approx 00'23	29.03389 AU
min. Earth dist.	1014 Jul 14 j 14:38	26° $\overline{3}$ 57'13	29.08706 AU	direct	1019 Oct 13 j 18:44	6° \approx 36'22	
direct	1014 Oct 02 j 07:18	25° $\overline{3}$ 33'27		evening set	1020 Jan 08 j 10:06	8° \approx 29'28	
evening set	1014 Dec 28 j 08:39	27° $\overline{3}$ 26'48					
				conjunction	1020 Jan 23 j 18:55	9° \approx 04'11	-0°15'11
conjunction	1015 Jan 12 j 16:18	28° $\overline{3}$ 01'24	0°05'36	minimum elong	1020 Jan 23 j 18:56	9° \approx 04'11	0°15'10



























































































































behind sun begin	1020 Jan 23 j 16:35	9° \approx 03'58		retrograde	1026 May 22 j 19:26	24° \approx 57'13	
behind sun end	1020 Jan 23 j 21:16	9° \approx 04'24		opposition	1026 Aug 11 j 13:41	23° \approx 32'38	-0°44'06
max. Earth dist.	1020 Jan 24 j 09:57	9° \approx 05'36	31.02965 AU	min. Earth dist.	1026 Aug 10 j 20:24	23° \approx 33'49	28.97730 AU
morning rise	1020 Feb 08 j 06:01	9° \approx 39'07		direct	1026 Oct 29 j 00:18	22° \approx 09'40	
retrograde	1020 May 08 j 12:05	11° \approx 36'33		evening set	1027 Jan 23 j 11:35	24° \approx 02'42	
opposition	1020 Jul 28 j 07:15	10° \approx 12'15	-0°18'26				
min. Earth dist.	1020 Jul 27 j 15:35	10° \approx 13'20	29.02584 AU	conjunction	1027 Feb 07 j 22:21	24° \approx 37'34	-0°43'09
direct	1020 Oct 15 j 06:05	8° \approx 49'12		minimum elong	1027 Feb 07 j 22:21	24° \approx 37'34	0°43'09
evening set	1021 Jan 09 j 20:18	10° \approx 42'18		max. Earth dist.	1027 Feb 08 j 16:32	24° \approx 39'17	30.97152 AU
				morning rise	1027 Feb 23 j 12:05	25° \approx 12'44	
conjunction	1021 Jan 25 j 05:15	11° \approx 17'02	-0°19'17	retrograde	1027 May 25 j 09:04	27° \approx 10'56	
minimum elong	1021 Jan 25 j 05:15	11° \approx 17'02	0°19'17	min. Earth dist.	1027 Aug 13 j 08:05	25° \approx 47'33	28.96615 AU
max. Earth dist.	1021 Jan 25 j 20:19	11° \approx 18'27	31.02199 AU	opposition	1027 Aug 14 j 02:41	25° \approx 46'16	-0°48'11
morning rise	1021 Feb 09 j 16:51	11° \approx 52'01		direct	1027 Oct 31 j 12:55	24° \approx 23'15	
retrograde	1021 May 11 j 00:44	13° \approx 49'34		evening set	1028 Jan 25 j 22:18	26° \approx 16'14	
opposition	1021 Jul 30 j 20:19	12° \approx 25'15	-0°22'48				
min. Earth dist.	1021 Jul 30 j 04:44	12° \approx 26'19	29.01860 AU	conjunction	1028 Feb 10 j 09:19	26° \approx 51'08	-0°46'56
direct	1021 Oct 17 j 15:52	11° \approx 02'14		minimum elong	1028 Feb 10 j 09:19	26° \approx 51'08	0°46'55
evening set	1022 Jan 12 j 06:26	12° \approx 55'19		max. Earth dist.	1028 Feb 11 j 03:39	26° \approx 52'52	30.96001 AU
				morning rise	1028 Feb 25 j 23:31	27° \approx 26'20	
conjunction	1022 Jan 27 j 15:50	13° \approx 30'04	-0°23'21	retrograde	1028 May 26 j 21:38	29° \approx 24'36	
minimum elong	1022 Jan 27 j 15:50	13° \approx 30'04	0°23'21	opposition	1028 Aug 15 j 15:46	27° \approx 59'50	-0°52'12
max. Earth dist.	1022 Jan 28 j 08:40	13° \approx 31'40	31.01489 AU	min. Earth dist.	1028 Aug 14 j 21:46	28° \approx 01'04	28.95462 AU
morning rise	1022 Feb 12 j 03:39	14° \approx 05'05		direct	1028 Nov 02 j 00:39	26° \approx 36'46	
	1022 Mar 10 j 21:09	15° \approx		evening set	1029 Jan 27 j 09:04	28° \approx 29'42	
retrograde	1022 May 13 j 12:49	16° \approx 02'47					
	1022 Jul 20 j 01:59	15° \approx		conjunction	1029 Feb 11 j 20:33	29° \approx 04'38	-0°50'39
opposition	1022 Aug 02 j 09:19	14° \approx 38'25	-0°27'09	minimum elong	1029 Feb 11 j 20:33	29° \approx 04'38	0°50'40
min. Earth dist.	1022 Aug 01 j 16:40	14° \approx 39'34	29.01153 AU	max. Earth dist.	1029 Feb 12 j 16:04	29° \approx 06'29	30.94857 AU
direct	1022 Oct 20 j 03:07	13° \approx 15'27		morning rise	1029 Feb 27 j 11:03	29° \approx 39'51	
	1023 Jan 10 j 19:43	15° \approx			1029 Mar 08 j 17:50	0° \approx	
evening set	1023 Jan 14 j 16:50	15° \approx 08'32		retrograde	1029 May 29 j 10:16	1° \approx 38'11	
				min. Earth dist.	1029 Aug 17 j 08:58	0° \approx 14'39	28.94341 AU
conjunction	1023 Jan 30 j 02:19	15° \approx 43'18	-0°27'24	opposition	1029 Aug 18 j 04:27	0° \approx 13'18	-0°56'08
minimum elong	1023 Jan 30 j 02:18	15° \approx 43'18	0°27'25		1029 Aug 26 j 06:33	30° \approx	
max. Earth dist.	1023 Jan 30 j 18:39	15° \approx 44'51	31.00779 AU	direct	1029 Nov 04 j 13:04	28° \approx 50'12	
morning rise	1023 Feb 14 j 14:38	16° \approx 18'21			1030 Jan 09 j 05:50	0° \approx	
retrograde	1023 May 16 j 03:05	18° \approx 16'11		evening set	1030 Jan 29 j 20:02	0° \approx 43'07	
opposition	1023 Aug 04 j 22:26	16° \approx 51'48	-0°31'28				
min. Earth dist.	1023 Aug 04 j 05:25	16° \approx 52'57	29.00436 AU	conjunction	1030 Feb 14 j 07:41	1° \approx 18'03	-0°54'18
direct	1023 Oct 22 j 12:24	15° \approx 28'50		minimum elong	1030 Feb 14 j 07:41	1° \approx 18'03	0°54'17
evening set	1024 Jan 17 j 03:20	17° \approx 21'56		max. Earth dist.	1030 Feb 15 j 02:58	1° \approx 19'53	30.93765 AU
				morning rise	1030 Mar 01 j 22:43	1° \approx 53'19	
conjunction	1024 Feb 01 j 13:12	17° \approx 56'44	-0°31'25	retrograde	1030 May 31 j 22:18	3° \approx 51'43	
minimum elong	1024 Feb 01 j 13:12	17° \approx 56'44	0°31'24	opposition	1030 Aug 20 j 17:19	2° \approx 26'45	-1°00'00
max. Earth dist.	1024 Feb 02 j 06:58	17° \approx 58'24	31.00026 AU	min. Earth dist.	1030 Aug 19 j 22:04	2° \approx 28'05	28.93310 AU
morning rise	1024 Feb 17 j 01:44	18° \approx 31'48		direct	1030 Nov 06 j 23:12	1° \approx 03'38	
retrograde	1024 May 17 j 15:41	20° \approx 29'46		evening set	1031 Feb 01 j 06:47	2° \approx 56'31	
opposition	1024 Aug 06 j 11:34	19° \approx 05'20	-0°35'44				
min. Earth dist.	1024 Aug 05 j 18:24	19° \approx 06'30	28.99646 AU	conjunction	1031 Feb 16 j 18:55	3° \approx 31'29	-0°57'52
direct	1024 Oct 24 j 00:35	17° \approx 42'24		minimum elong	1031 Feb 16 j 18:55	3° \approx 31'29	0°57'52
evening set	1025 Jan 18 j 13:59	19° \approx 35'28		max. Earth dist.	1031 Feb 17 j 15:59	3° \approx 33'29	30.92781 AU
				morning rise	1031 Mar 04 j 10:09	4° \approx 06'46	
conjunction	1025 Feb 03 j 00:04	20° \approx 10'18	-0°35'23	retrograde	1031 Jun 03 j 09:48	6° \approx 05'15	
minimum elong	1025 Feb 03 j 00:04	20° \approx 10'18	0°35'23	min. Earth dist.	1031 Aug 22 j 09:37	4° \approx 41'39	28.92390 AU
max. Earth dist.	1025 Feb 03 j 17:23	20° \approx 11'56	30.99191 AU	opposition	1031 Aug 23 j 06:02	4° \approx 40'14	-1°03'46
morning rise	1025 Feb 18 j 13:06	20° \approx 45'24		direct	1031 Nov 09 j 10:42	3° \approx 17'06	
retrograde	1025 May 20 j 07:06	22° \approx 43'27		evening set	1032 Feb 03 j 17:51	5° \approx 10'00	
min. Earth dist.	1025 Aug 08 j 06:43	21° \approx 20'12	28.98756 AU				
opposition	1025 Aug 09 j 00:40	21° \approx 18'58	-0°39'56	conjunction	1032 Feb 19 j 06:10	5° \approx 44'59	-1°01'20
direct	1025 Oct 26 j 12:30	19° \approx 56'01		minimum elong	1032 Feb 19 j 06:10	5° \approx 44'59	1°01'20
evening set	1026 Jan 21 j 00:48	21° \approx 49'05		max. Earth dist.	1032 Feb 20 j 02:48	5° \approx 46'56	30.91930 AU
				morning rise	1032 Mar 05 j 21:59	6° \approx 20'17	
conjunction	1026 Feb 05 j 11:14	22° \approx 23'56	-0°39'17	retrograde	1032 Jun 04 j 23:54	8° \approx 18'53	
minimum elong	1026 Feb 05 j 11:14	22° \approx 23'56	0°39'16	opposition	1032 Aug 24 j 18:47	6° \approx 53'49	-1°07'26
max. Earth dist.	1026 Feb 06 j 05:14	22° \approx 25'38	30.98223 AU	min. Earth dist.	1032 Aug 23 j 21:56	6° \approx 55'15	28.91618 AU
morning rise	1026 Feb 21 j 00:35	22° \approx 59'04		direct	1032 Nov 10 j 19:47	5° \approx 30'40	

evening set	1033 Feb 05 j 04:50	7° ✕ 23'36	opposition	1039 Sep 10 j 11:23	22° ✕ 34'00	-1°30'04
			min. Earth dist.	1039 Sep 09 j 13:55	22° ✕ 35'30	28.87398 AU
conjunction	1033 Feb 20 j 17:40	7° ✕ 58'37 -1°04'44	direct	1039 Nov 27 j 05:09	21° ✕ 10'54	
minimum elong	1033 Feb 20 j 17:39	7° ✕ 58'37 1°04'44	evening set	1040 Feb 21 j 13:58	23° ✕ 04'00	
max. Earth dist.	1033 Feb 21 j 15:52	8° ✕ 00'43 30.91208 AU				
morning rise	1033 Mar 08 j 09:45	8° ✕ 33'57	conjunction	1040 Mar 08 j 05:27	23° ✕ 39'13	-1°25'31
retrograde	1033 Jun 07 j 12:14	10° ✕ 32'38	minimum elong	1040 Mar 08 j 05:27	23° ✕ 39'13	1°25'30
min. Earth dist.	1033 Aug 26 j 10:16	9° ✕ 09'01 28.90953 AU	max. Earth dist.	1040 Mar 09 j 04:55	23° ✕ 41'26	30.86911 AU
opposition	1033 Aug 27 j 07:29	9° ✕ 07'33 -1°11'00	morning rise	1040 Mar 24 j 00:22	24° ✕ 14'47	
direct	1033 Nov 13 j 07:32	7° ✕ 44'26	retrograde	1040 Jun 23 j 11:45	26° ✕ 13'55	
evening set	1034 Feb 07 j 16:06	9° ✕ 37'23	opposition	1040 Sep 11 j 23:47	24° ✕ 48'39	-1°32'48
			min. Earth dist.	1040 Sep 11 j 01:51	24° ✕ 50'11	28.86598 AU
conjunction	1034 Feb 23 j 05:11	10° ✕ 12'25 -1°08'01	direct	1040 Nov 28 j 17:26	23° ✕ 25'30	
minimum elong	1034 Feb 23 j 05:11	10° ✕ 12'25 1°08'01	evening set	1041 Feb 23 j 02:00	25° ✕ 18'36	
max. Earth dist.	1034 Feb 24 j 03:07	10° ✕ 14'30 30.90599 AU				
morning rise	1034 Mar 10 j 21:46	10° ✕ 47'47	conjunction	1041 Mar 10 j 17:45	25° ✕ 53'50	-1°28'00
retrograde	1034 Jun 10 j 03:35	12° ✕ 46'34	minimum elong	1041 Mar 10 j 17:45	25° ✕ 53'50	1°28'01
opposition	1034 Aug 29 j 20:02	11° ✕ 21'29 -1°14'29	max. Earth dist.	1041 Mar 11 j 16:10	25° ✕ 55'57	30.86111 AU
min. Earth dist.	1034 Aug 28 j 21:56	11° ✕ 23'00 28.90391 AU	morning rise	1041 Mar 26 j 13:16	26° ✕ 29'25	
direct	1034 Nov 15 j 18:33	9° ✕ 58'22	retrograde	1041 Jun 26 j 01:24	28° ✕ 28'34	
evening set	1035 Feb 10 j 03:25	11° ✕ 51'23	opposition	1041 Sep 14 j 12:13	27° ✕ 03'13	-1°35'24
			min. Earth dist.	1041 Sep 13 j 14:29	27° ✕ 04'44	28.85820 AU
conjunction	1035 Feb 25 j 16:53	12° ✕ 26'27 -1°11'13	direct	1041 Dec 01 j 03:25	25° ✕ 40'00	
minimum elong	1035 Feb 25 j 16:52	12° ✕ 26'27 1°11'14	evening set	1042 Feb 25 j 13:55	27° ✕ 33'05	
max. Earth dist.	1035 Feb 26 j 15:46	12° ✕ 28'37 30.90058 AU				
morning rise	1035 Mar 13 j 09:49	13° ✕ 01'51	conjunction	1042 Mar 13 j 06:11	28° ✕ 08'21	-1°30'21
retrograde	1035 Jun 12 j 16:16	15° ✕ 00'44	minimum elong	1042 Mar 13 j 06:11	28° ✕ 08'21	1°30'21
min. Earth dist.	1035 Aug 31 j 11:15	13° ✕ 37'08 28.89877 AU	max. Earth dist.	1042 Mar 14 j 05:45	28° ✕ 10'34	30.85344 AU
opposition	1035 Sep 01 j 08:47	13° ✕ 35'39 -1°17'50	morning rise	1042 Mar 29 j 01:56	28° ✕ 43'57	
direct	1035 Nov 18 j 05:22	12° ✕ 12'34		1042 May 07 j 05:45	0° ∇	
evening set	1036 Feb 12 j 14:46	14° ✕ 05'37	retrograde	1042 Jun 28 j 12:10	0° ∇ 43'06	
				1042 Aug 21 j 13:15	30° ℞ ✕	
conjunction	1036 Feb 28 j 04:39	14° ✕ 40'43 -1°14'18	min. Earth dist.	1042 Sep 16 j 02:36	29° ✕ 19'13	28.85097 AU
minimum elong	1036 Feb 28 j 04:38	14° ✕ 40'43 1°14'18	opposition	1042 Sep 17 j 00:24	29° ✕ 17'42	-1°37'51
max. Earth dist.	1036 Feb 29 j 03:43	14° ✕ 42'54 30.89557 AU	direct	1042 Dec 03 j 15:30	27° ✕ 54'25	
morning rise	1036 Mar 14 j 21:59	15° ✕ 16'09	evening set	1043 Feb 28 j 01:59	29° ✕ 47'31	
retrograde	1036 Jun 14 j 07:27	17° ✕ 15'07		1043 Mar 05 j 16:42	0° ∇	
opposition	1036 Sep 02 j 21:26	15° ✕ 50'02 -1°21'05				
min. Earth dist.	1036 Sep 01 j 22:52	15° ✕ 51'36 28.89371 AU	conjunction	1043 Mar 15 j 18:34	0° ∇ 22'47	-1°32'35
direct	1036 Nov 19 j 17:48	14° ✕ 26'59	minimum elong	1043 Mar 15 j 18:34	0° ∇ 22'47	1°32'35
evening set	1037 Feb 14 j 02:32	16° ✕ 20'03	max. Earth dist.	1043 Mar 16 j 17:35	0° ∇ 24'57	30.84681 AU
			morning rise	1043 Mar 31 j 14:51	0° ∇ 58'24	
conjunction	1037 Mar 01 j 16:42	16° ✕ 55'11 -1°17'17	retrograde	1043 Jul 01 j 02:13	2° ∇ 57'33	
minimum elong	1037 Mar 01 j 16:42	16° ✕ 55'11 1°17'17	opposition	1043 Sep 19 j 12:39	1° ∇ 32'07	-1°40'09
max. Earth dist.	1037 Mar 02 j 15:31	16° ✕ 57'21 30.89014 AU	min. Earth dist.	1043 Sep 18 j 14:09	1° ∇ 33'41	28.84503 AU
morning rise	1037 Mar 17 j 10:30	17° ✕ 30'40	direct	1043 Dec 06 j 02:02	0° ∇ 08'46	
retrograde	1037 Jun 16 j 21:40	19° ✕ 29'43	evening set	1044 Mar 01 j 13:58	2° ∇ 01'53	
opposition	1037 Sep 05 j 10:04	18° ✕ 04'36 -1°24'12				
min. Earth dist.	1037 Sep 04 j 12:36	18° ✕ 06'05 28.88806 AU	conjunction	1044 Mar 17 j 07:01	2° ∇ 37'11	-1°34'39
direct	1037 Nov 22 j 05:34	16° ✕ 41'33	minimum elong	1044 Mar 17 j 07:01	2° ∇ 37'11	1°34'39
evening set	1038 Feb 16 j 14:19	18° ✕ 34'40	max. Earth dist.	1044 Mar 18 j 06:54	2° ∇ 39'26	30.84141 AU
			morning rise	1044 Apr 02 j 03:40	3° ∇ 12'50	
conjunction	1038 Mar 04 j 04:59	19° ✕ 09'50 -1°20'09	retrograde	1044 Jul 02 j 14:18	5° ∇ 12'00	
minimum elong	1038 Mar 04 j 04:59	19° ✕ 09'50 1°20'08	min. Earth dist.	1044 Sep 20 j 02:59	3° ∇ 48'02	28.84038 AU
max. Earth dist.	1038 Mar 05 j 04:17	19° ✕ 12'02 30.88405 AU	opposition	1044 Sep 21 j 00:54	3° ∇ 46'30	-1°42'18
morning rise	1038 Mar 19 j 23:05	19° ✕ 45'20	direct	1044 Dec 07 j 12:35	2° ∇ 23'08	
retrograde	1038 Jun 19 j 11:22	21° ✕ 44'26	evening set	1045 Mar 04 j 02:09	4° ∇ 16'17	
opposition	1038 Sep 07 j 22:40	20° ✕ 19'18 -1°27'12				
min. Earth dist.	1038 Sep 07 j 00:17	20° ✕ 20'51 28.88145 AU	conjunction	1045 Mar 19 j 19:41	4° ∇ 51'36	-1°36'36
direct	1038 Nov 24 j 18:32	18° ✕ 56'14	minimum elong	1045 Mar 19 j 19:41	4° ∇ 51'36	1°36'36
evening set	1039 Feb 19 j 02:09	20° ✕ 49'20	max. Earth dist.	1045 Mar 20 j 19:36	4° ∇ 53'51	30.83752 AU
			morning rise	1045 Apr 04 j 16:45	5° ∇ 27'16	
conjunction	1039 Mar 06 j 17:03	21° ✕ 24'32 -1°22'53	retrograde	1045 Jul 05 j 05:08	7° ∇ 26'26	
minimum elong	1039 Mar 06 j 17:03	21° ✕ 24'32 1°22'54	opposition	1045 Sep 23 j 12:52	6° ∇ 00'56	-1°44'17
max. Earth dist.	1039 Mar 07 j 15:27	21° ✕ 26'39 30.87690 AU	min. Earth dist.	1045 Sep 22 j 13:55	6° ∇ 02'33	28.83720 AU
morning rise	1039 Mar 22 j 11:42	22° ✕ 00'04	direct	1045 Dec 10 j 01:07	4° ∇ 37'33	
retrograde	1039 Jun 21 j 23:43	23° ✕ 59'12	evening set	1046 Mar 06 j 14:29	6° ∇ 30'44	

conjunction	1046 Mar 22 j 08:21	7° Υ 06'05	-1°38'23	direct	1052 Dec 25 j 09:28	20° Υ 22'25	
minimum elong	1046 Mar 22 j 08:21	7° Υ 06'05	1°38'23	evening set	1053 Mar 22 j 07:52	22° Υ 15'56	
max. Earth dist.	1046 Mar 23 j 08:11	7° Υ 08'20	30.83490 AU				
morning rise	1046 Apr 07 j 05:54	7° Υ 41'47		conjunction	1053 Apr 07 j 04:59	22° Υ 51'29	-1°46'36
retrograde	1046 Jul 07 j 18:53	9° Υ 40'58		minimum elong	1053 Apr 07 j 04:59	22° Υ 51'29	1°46'36
min. Earth dist.	1046 Sep 25 j 03:02	8° Υ 17'01	28.83527 AU	max. Earth dist.	1053 Apr 08 j 02:54	22° Υ 53'33	30.82294 AU
opposition	1046 Sep 26 j 01:05	8° Υ 15'28	-1°46'07	morning rise	1053 Apr 23 j 05:21	23° Υ 27'23	
direct	1046 Dec 12 j 12:33	6° Υ 52'06		retrograde	1053 Jul 23 j 15:07	25° Υ 26'28	
evening set	1047 Mar 09 j 02:39	8° Υ 45'19		opposition	1053 Oct 11 j 13:09	24° Υ 01'05	-1°54'19
				min. Earth dist.	1053 Oct 10 j 17:48	24° Υ 02'26	28.82239 AU
conjunction	1047 Mar 24 j 21:05	9° Υ 20'42	-1°40'02	direct	1053 Dec 27 j 20:00	22° Υ 37'34	
minimum elong	1047 Mar 24 j 21:05	9° Υ 20'42	1°40'02	evening set	1054 Mar 24 j 20:54	24° Υ 31'07	
max. Earth dist.	1047 Mar 25 j 21:36	9° Υ 23'01	30.83355 AU				
morning rise	1047 Apr 09 j 18:56	9° Υ 56'26		conjunction	1054 Apr 09 j 18:29	25° Υ 06'42	-1°47'09
retrograde	1047 Jul 10 j 08:58	11° Υ 55'37		minimum elong	1054 Apr 09 j 18:29	25° Υ 06'42	1°47'08
opposition	1047 Sep 28 j 13:09	10° Υ 30'10	-1°47'48	max. Earth dist.	1054 Apr 10 j 15:48	25° Υ 08'42	30.81947 AU
min. Earth dist.	1047 Sep 27 j 14:08	10° Υ 31'46	28.83430 AU	morning rise	1054 Apr 25 j 19:17	25° Υ 42'36	
direct	1047 Dec 15 j 01:22	9° Υ 06'48		retrograde	1054 Jul 26 j 05:08	27° Υ 41'38	
evening set	1048 Mar 10 j 15:18	11° Υ 00'04		min. Earth dist.	1054 Oct 13 j 04:56	26° Υ 17'37	28.81909 AU
				opposition	1054 Oct 14 j 00:50	26° Υ 16'13	-1°54'48
conjunction	1048 Mar 26 j 10:01	11° Υ 35'29	-1°41'31	direct	1054 Dec 30 j 09:03	24° Υ 52'38	
minimum elong	1048 Mar 26 j 10:01	11° Υ 35'29	1°41'31	evening set	1055 Mar 27 j 09:51	26° Υ 46'13	
max. Earth dist.	1048 Mar 27 j 09:38	11° Υ 37'43	30.83285 AU				
morning rise	1048 Apr 11 j 08:26	12° Υ 11'15		conjunction	1055 Apr 12 j 07:49	27° Υ 21'49	-1°47'31
retrograde	1048 Jul 11 j 22:45	14° Υ 10'28		minimum elong	1055 Apr 12 j 07:49	27° Υ 21'49	1°47'31
min. Earth dist.	1048 Sep 29 j 03:23	12° Υ 46'34	28.83384 AU	max. Earth dist.	1055 Apr 13 j 04:48	27° Υ 23'48	30.81639 AU
opposition	1048 Sep 30 j 01:16	12° Υ 45'02	-1°49'18	morning rise	1055 Apr 28 j 09:04	27° Υ 57'45	
direct	1048 Dec 16 j 11:49	11° Υ 21'41		retrograde	1055 Jul 28 j 17:48	29° Υ 56'43	
evening set	1049 Mar 13 j 03:58	13° Υ 15'01		opposition	1055 Oct 16 j 12:37	28° Υ 31'17	-1°55'06
				min. Earth dist.	1055 Oct 15 j 17:57	28° Υ 32'36	28.81649 AU
conjunction	1049 Mar 28 j 23:19	13° Υ 50'28	-1°42'51	direct	1056 Jan 01 j 20:46	27° Υ 07'38	
minimum elong	1049 Mar 28 j 23:18	13° Υ 50'28	1°42'52	evening set	1056 Mar 28 j 22:54	29° Υ 01'15	
max. Earth dist.	1049 Mar 29 j 23:42	13° Υ 52'47	30.83232 AU				
morning rise	1049 Apr 13 j 21:59	14° Υ 26'16		conjunction	1056 Apr 13 j 21:28	29° Υ 36'53	-1°47'44
retrograde	1049 Jul 14 j 12:24	16° Υ 25'29		minimum elong	1056 Apr 13 j 21:28	29° Υ 36'53	1°47'43
opposition	1049 Oct 02 j 13:17	15° Υ 00'05	-1°50'39	max. Earth dist.	1056 Apr 14 j 18:39	29° Υ 38'53	30.81435 AU
min. Earth dist.	1049 Oct 01 j 15:18	15° Υ 01'38	28.83308 AU		1056 Apr 24 j 04:01	0° \mathcal{B}	
direct	1049 Dec 19 j 00:21	13° Υ 36'45		morning rise	1056 Apr 29 j 23:02	0° \mathcal{B} 12'50	
evening set	1050 Mar 15 j 16:55	15° Υ 30'09		retrograde	1056 Jul 30 j 07:34	2° \mathcal{B} 11'43	
				min. Earth dist.	1056 Oct 17 j 04:36	0° \mathcal{B} 47'39	28.81498 AU
conjunction	1050 Mar 31 j 12:31	16° Υ 05'38	-1°44'02	opposition	1056 Oct 18 j 00:01	0° \mathcal{B} 46'17	-1°55'15
minimum elong	1050 Mar 31 j 12:31	16° Υ 05'38	1°44'01		1056 Nov 15 j 22:23	30° \mathcal{R} Υ	
max. Earth dist.	1050 Apr 01 j 11:17	16° Υ 07'47	30.83122 AU	direct	1057 Jan 03 j 09:44	29° Υ 22'35	
morning rise	1050 Apr 16 j 11:44	16° Υ 41'27			1057 Feb 19 j 14:41	0° \mathcal{B}	
retrograde	1050 Jul 17 j 02:09	18° Υ 40'40		evening set	1057 Mar 31 j 12:09	1° \mathcal{B} 16'15	
min. Earth dist.	1050 Oct 04 j 04:10	17° Υ 16'47	28.83165 AU				
opposition	1050 Oct 05 j 01:23	17° Υ 15'18	-1°51'49	conjunction	1057 Apr 16 j 11:02	1° \mathcal{B} 51'55	-1°47'46
direct	1050 Dec 21 j 10:39	15° Υ 51'57		minimum elong	1057 Apr 16 j 11:02	1° \mathcal{B} 51'55	1°47'47
evening set	1051 Mar 18 j 05:49	17° Υ 45'24		max. Earth dist.	1057 Apr 17 j 07:11	1° \mathcal{B} 53'48	30.81343 AU
				morning rise	1057 May 02 j 13:07	2° \mathcal{B} 27'53	
conjunction	1051 Apr 03 j 02:01	18° Υ 20'54	-1°45'03	retrograde	1057 Aug 01 j 21:27	4° \mathcal{B} 26'41	
minimum elong	1051 Apr 03 j 02:01	18° Υ 20'54	1°45'03	opposition	1057 Oct 20 j 11:37	3° \mathcal{B} 01'16	-1°55'12
max. Earth dist.	1051 Apr 04 j 01:14	18° Υ 23'06	30.82925 AU	min. Earth dist.	1057 Oct 19 j 17:17	3° \mathcal{B} 02'33	28.81479 AU
morning rise	1051 Apr 19 j 01:29	18° Υ 56'45		direct	1058 Jan 05 j 20:54	1° \mathcal{B} 37'32	
retrograde	1051 Jul 19 j 13:32	20° Υ 55'57		evening set	1058 Apr 03 j 01:13	3° \mathcal{B} 31'14	
opposition	1051 Oct 07 j 13:25	19° Υ 30'35	-1°52'49				
min. Earth dist.	1051 Oct 06 j 16:45	19° Υ 32'02	28.82918 AU	conjunction	1058 Apr 19 j 00:43	4° \mathcal{B} 06'56	-1°47'39
direct	1051 Dec 23 j 22:45	18° Υ 07'12		minimum elong	1058 Apr 19 j 00:43	4° \mathcal{B} 06'56	1°47'39
evening set	1052 Mar 19 j 18:48	20° Υ 00'41		max. Earth dist.	1058 Apr 19 j 21:40	4° \mathcal{B} 08'54	30.81391 AU
				morning rise	1058 May 05 j 03:00	4° \mathcal{B} 42'55	
conjunction	1052 Apr 04 j 15:23	20° Υ 36'13	-1°45'54	retrograde	1058 Aug 04 j 11:24	6° \mathcal{B} 41'39	
minimum elong	1052 Apr 04 j 15:23	20° Υ 36'13	1°45'54	opposition	1058 Oct 22 j 23:02	5° \mathcal{B} 16'16	-1°54'59
max. Earth dist.	1052 Apr 05 j 13:10	20° Υ 38'16	30.82645 AU	min. Earth dist.	1058 Oct 22 j 04:21	5° \mathcal{B} 17'35	28.81586 AU
morning rise	1052 Apr 20 j 15:26	21° Υ 12'05		direct	1059 Jan 08 j 10:24	3° \mathcal{B} 52'32	
retrograde	1052 Jul 21 j 03:30	23° Υ 11'14		evening set	1059 Apr 05 j 14:33	5° \mathcal{B} 46'16	
min. Earth dist.	1052 Oct 08 j 04:49	21° Υ 47'18	28.82601 AU				
opposition	1052 Oct 09 j 01:23	21° Υ 45'51	-1°53'39	conjunction	1059 Apr 21 j 14:21	6° \mathcal{B} 22'00	-1°47'22

minimum elong	1059 Apr 21 j 14:21	6° 8 22'00	1°47'22	opposition	1065 Nov 07 j 06:27	21° 8 02'49	-1°48'33
max. Earth dist.	1059 Apr 22 j 09:55	6° 8 23'50	30.81570 AU	min. Earth dist.	1065 Nov 06 j 16:27	21° 8 03'49	28.83081 AU
morning rise	1059 May 07 j 17:12	6° 8 58'01		direct	1066 Jan 23 j 19:14	19° 8 38'48	
retrograde	1059 Aug 07 j 00:28	8° 8 56'41		evening set	1066 Apr 21 j 14:06	21° 8 32'55	
opposition	1059 Oct 25 j 10:29	7° 8 31'20	-1°54'35				
min. Earth dist.	1059 Oct 24 j 16:28	7° 8 32'37	28.81827 AU	conjunction	1066 May 07 j 17:04	22° 8 08'49	-1°40'48
direct	1060 Jan 10 j 21:02	6° 8 07'35		minimum elong	1066 May 07 j 17:04	22° 8 08'49	1°40'48
evening set	1060 Apr 07 j 03:50	8° 8 01'23		max. Earth dist.	1066 May 08 j 07:13	22° 8 10'08	30.82991 AU
				morning rise	1066 May 23 j 22:20	22° 8 44'56	
conjunction	1060 Apr 23 j 04:16	8° 8 37'09	-1°46'55	retrograde	1066 Aug 22 j 17:05	24° 8 42'53	
minimum elong	1060 Apr 23 j 04:16	8° 8 37'09	1°46'55	opposition	1066 Nov 09 j 17:38	23° 8 17'46	-1°46'57
max. Earth dist.	1060 Apr 24 j 00:28	8° 8 39'03	30.81853 AU	min. Earth dist.	1066 Nov 09 j 05:09	23° 8 18'39	28.83114 AU
morning rise	1060 May 09 j 07:21	9° 8 13'11		direct	1067 Jan 26 j 07:02	21° 8 53'41	
retrograde	1060 Aug 08 j 12:28	11° 8 11'47		evening set	1067 Apr 24 j 03:44	23° 8 47'49	
opposition	1060 Oct 26 j 21:54	9° 8 46'30	-1°54'01				
min. Earth dist.	1060 Oct 26 j 04:26	9° 8 47'44	28.82132 AU	conjunction	1067 May 10 j 07:18	24° 8 23'44	-1°39'14
direct	1061 Jan 12 j 09:10	8° 8 22'45		minimum elong	1067 May 10 j 07:19	24° 8 23'44	1°39'14
evening set	1061 Apr 09 j 17:28	10° 8 16'37		max. Earth dist.	1067 May 10 j 21:45	24° 8 25'05	30.83047 AU
				morning rise	1067 May 26 j 12:45	24° 8 59'52	
conjunction	1061 Apr 25 j 18:13	10° 8 52'24	-1°46'18	retrograde	1067 Aug 25 j 06:08	26° 8 57'40	
minimum elong	1061 Apr 25 j 18:14	10° 8 52'24	1°46'17	opposition	1067 Nov 12 j 04:31	25° 8 32'34	-1°45'12
max. Earth dist.	1061 Apr 26 j 12:48	10° 8 54'09	30.82184 AU	min. Earth dist.	1067 Nov 11 j 16:05	25° 8 33'27	28.83187 AU
morning rise	1061 May 11 j 21:48	11° 8 28'27		direct	1068 Jan 28 j 20:59	24° 8 08'23	
retrograde	1061 Aug 11 j 02:44	13° 8 26'59		evening set	1068 Apr 25 j 17:33	26° 8 02'33	
opposition	1061 Oct 29 j 09:10	12° 8 01'46	-1°53'15				
min. Earth dist.	1061 Oct 28 j 16:01	12° 8 02'59	28.82463 AU	conjunction	1068 May 11 j 21:22	26° 8 38'30	-1°37'32
direct	1062 Jan 14 j 19:37	10° 8 37'59		minimum elong	1068 May 11 j 21:23	26° 8 38'30	1°37'31
evening set	1062 Apr 12 j 07:07	12° 8 31'56		max. Earth dist.	1068 May 12 j 10:07	26° 8 39'42	30.83165 AU
				morning rise	1068 May 26 j 03:18	27° 8 14'39	
conjunction	1062 Apr 28 j 08:23	13° 8 07'45	-1°45'31	retrograde	1068 Aug 26 j 19:01	29° 8 12'18	
minimum elong	1062 Apr 28 j 08:23	13° 8 07'45	1°45'30	opposition	1068 Nov 13 j 15:29	27° 8 47'13	-1°43'18
max. Earth dist.	1062 Apr 29 j 02:54	13° 8 09'29	30.82491 AU	min. Earth dist.	1068 Nov 13 j 03:55	27° 8 48'02	28.83358 AU
morning rise	1062 May 14 j 12:11	13° 8 43'50		direct	1069 Jan 30 j 08:14	26° 8 22'58	
	1062 Jun 23 j 00:41	15° 8		evening set	1069 Apr 28 j 07:13	28° 8 17'11	
retrograde	1062 Aug 13 j 13:57	15° 8 42'16					
	1062 Oct 05 j 08:13	15° 8		conjunction	1069 May 14 j 11:35	28° 8 53'09	-1°35'40
opposition	1062 Oct 31 j 20:38	14° 8 17'06	-1°52'20	minimum elong	1069 May 14 j 11:35	28° 8 53'09	1°35'40
min. Earth dist.	1062 Oct 31 j 04:58	14° 8 18'13	28.82741 AU	max. Earth dist.	1069 May 15 j 00:51	28° 8 54'23	30.83388 AU
direct	1063 Jan 17 j 06:17	12° 8 53'18		morning rise	1069 May 30 j 17:35	29° 8 29'18	
evening set	1063 Apr 14 j 20:43	14° 8 47'18			1069 Jun 14 j 06:18	0° II	
	1063 Apr 20 j 14:47	15° 8		retrograde	1069 Aug 29 j 06:57	1° II 26'49	
				opposition	1069 Nov 16 j 02:16	0° II 01'46	-1°41'14
conjunction	1063 Apr 30 j 22:26	15° 8 23'08	-1°44'34	min. Earth dist.	1069 Nov 15 j 15:12	0° II 02'33	28.83639 AU
minimum elong	1063 Apr 30 j 22:27	15° 8 23'08	1°44'34		1069 Nov 17 j 03:11	30° 8	
max. Earth dist.	1063 May 01 j 15:42	15° 8 24'45	30.82742 AU	direct	1070 Feb 01 j 20:56	28° 8 37'29	
morning rise	1063 May 17 j 02:40	15° 8 59'14			1070 Apr 15 j 18:51	0° II	
retrograde	1063 Aug 16 j 03:03	17° 8 57'34		evening set	1070 Apr 30 j 20:59	0° II 31'45	
opposition	1063 Nov 03 j 08:00	16° 8 32'27	-1°51'14				
min. Earth dist.	1063 Nov 02 j 16:19	16° 8 33'33	28.82939 AU	conjunction	1070 May 17 j 01:36	1° II 07'44	-1°33'40
direct	1064 Jan 19 j 18:58	15° 8 08'35		minimum elong	1070 May 17 j 01:36	1° II 07'44	1°33'40
evening set	1064 Apr 16 j 10:35	17° 8 02'38		max. Earth dist.	1070 May 17 j 13:16	1° II 08'50	30.83755 AU
				morning rise	1070 Jun 02 j 08:01	1° II 43'54	
conjunction	1064 May 02 j 12:44	17° 8 38'29	-1°43'28	retrograde	1070 Aug 31 j 20:50	3° II 41'17	
minimum elong	1064 May 02 j 12:44	17° 8 38'29	1°43'28	opposition	1070 Nov 18 j 13:05	2° II 16'17	-1°39'01
max. Earth dist.	1064 May 03 j 05:00	17° 8 40'01	30.82887 AU	min. Earth dist.	1070 Nov 18 j 01:59	2° II 17'05	28.84084 AU
morning rise	1064 May 18 j 17:18	18° 8 14'35		direct	1071 Feb 04 j 07:45	0° II 51'58	
retrograde	1064 Aug 17 j 14:50	20° 8 12'49		evening set	1071 May 03 j 10:32	2° II 46'17	
opposition	1064 Nov 04 j 19:18	18° 8 47'42	-1°49'58				
min. Earth dist.	1064 Nov 04 j 05:30	18° 8 48'41	28.83041 AU	conjunction	1071 May 19 j 15:39	3° II 22'18	-1°31'32
direct	1065 Jan 21 j 06:03	17° 8 23'46		minimum elong	1071 May 19 j 15:39	3° II 22'18	1°31'31
evening set	1065 Apr 19 j 00:22	19° 8 17'51		max. Earth dist.	1071 May 20 j 03:40	3° II 23'26	30.84272 AU
				morning rise	1071 Jun 04 j 22:13	3° II 58'29	
conjunction	1065 May 05 j 03:04	19° 8 53'44	-1°42'12	retrograde	1071 Sep 03 j 07:21	5° II 55'45	
minimum elong	1065 May 05 j 03:04	19° 8 53'44	1°42'13	opposition	1071 Nov 20 j 23:56	4° II 30'50	-1°36'39
max. Earth dist.	1065 May 05 j 18:40	19° 8 55'11	30.82964 AU	min. Earth dist.	1071 Nov 20 j 14:02	4° II 31'32	28.84667 AU
morning rise	1065 May 21 j 07:55	20° 8 29'50		direct	1072 Feb 06 j 18:32	3° II 06'31	
retrograde	1065 Aug 20 j 04:11	22° 8 27'56		evening set	1072 May 05 j 00:23	5° II 00'54	

conjunction	1072 May 21 j 05:50	5°II36'56	-1°29'14	direct	1079 Feb 22 j 07:22	18°II49'36	
minimum elong	1072 May 21 j 05:50	5°II36'56	1°29'15	evening set	1079 May 22 j 02:34	20°II44'26	
max. Earth dist.	1072 May 21 j 16:42	5°II37'57	30.84938 AU				
morning rise	1072 Jun 06 j 12:44	6°II13'07		conjunction	1079 Jun 07 j 10:02	21°II20'34	-1°09'40
retrograde	1072 Sep 04 j 19:52	8°II10'16		minimum elong	1079 Jun 07 j 10:02	21°II20'34	1°09'40
opposition	1072 Nov 22 j 10:31	6°II45'28	-1°34'08	max. Earth dist.	1079 Jun 07 j 13:17	21°II20'52	30.89561 AU
min. Earth dist.	1072 Nov 22 j 00:25	6°II46'11	28.85378 AU	morning rise	1079 Jun 23 j 18:03	21°II56'46	
direct	1073 Feb 08 j 06:22	5°II21'07		retrograde	1079 Sep 21 j 11:33	23°II52'53	
evening set	1073 May 07 j 14:21	7°II15'36		opposition	1079 Dec 08 j 13:13	22°II28'32	-1°12'46
				min. Earth dist.	1079 Dec 08 j 09:44	22°II28'47	28.89860 AU
conjunction	1073 May 23 j 20:07	7°II51'40	-1°26'49	direct	1080 Feb 24 j 19:43	21°II03'54	
minimum elong	1073 May 23 j 20:08	7°II51'40	1°26'49	evening set	1080 May 23 j 16:33	22°II58'45	
max. Earth dist.	1073 May 24 j 06:26	7°II52'38	30.85689 AU				
morning rise	1073 Jun 09 j 03:11	8°II27'52		conjunction	1080 Jun 09 j 00:21	23°II34'54	-1°06'26
retrograde	1073 Sep 07 j 07:25	10°II24'54		minimum elong	1080 Jun 09 j 00:21	23°II34'54	1°06'26
opposition	1073 Nov 24 j 21:22	9°II00'12	-1°31'28	max. Earth dist.	1080 Jun 09 j 03:36	23°II35'12	30.90082 AU
min. Earth dist.	1073 Nov 24 j 13:00	9°II00'48	28.86157 AU	morning rise	1080 Jun 25 j 08:17	24°II11'05	
direct	1074 Feb 10 j 16:09	7°II35'52		retrograde	1080 Sep 22 j 21:38	26°II07'01	
evening set	1074 May 10 j 04:09	9°II30'26		opposition	1080 Dec 09 j 23:38	24°II42'42	-1°09'15
				min. Earth dist.	1080 Dec 09 j 21:39	24°II42'51	28.90403 AU
conjunction	1074 May 26 j 10:18	10°II06'31	-1°24'16	direct	1081 Feb 26 j 07:42	23°II17'59	
minimum elong	1074 May 26 j 10:18	10°II06'31	1°24'16	evening set	1081 May 26 j 06:33	25°II12'52	
max. Earth dist.	1074 May 26 j 19:54	10°II07'24	30.86486 AU				
morning rise	1074 Jun 11 j 17:31	10°II42'43		conjunction	1081 Jun 11 j 14:27	25°II49'00	-1°03'06
retrograde	1074 Sep 09 j 20:07	12°II39'39		minimum elong	1081 Jun 11 j 14:28	25°II49'01	1°03'06
opposition	1074 Nov 27 j 08:02	11°II15'03	-1°28'40	max. Earth dist.	1081 Jun 11 j 16:18	25°II49'11	30.90675 AU
min. Earth dist.	1074 Nov 26 j 23:35	11°II15'39	28.86936 AU	morning rise	1081 Jun 27 j 22:32	26°II25'11	
direct	1075 Feb 13 j 04:31	9°II50'42		retrograde	1081 Sep 25 j 09:54	28°II20'56	
evening set	1075 May 12 j 18:19	11°II45'22		opposition	1081 Dec 12 j 10:00	26°II56'40	-1°05'38
				min. Earth dist.	1081 Dec 12 j 07:45	26°II56'49	28.91040 AU
conjunction	1075 May 29 j 00:40	12°II21'27	-1°21'35	direct	1082 Feb 28 j 19:44	25°II31'53	
minimum elong	1075 May 29 j 00:40	12°II21'27	1°21'34	evening set	1082 May 28 j 20:16	27°II26'47	
max. Earth dist.	1075 May 29 j 08:34	12°II22'11	30.87242 AU				
morning rise	1075 Jun 14 j 08:07	12°II57'40		conjunction	1082 Jun 14 j 04:22	28°II02'56	-0°59'40
retrograde	1075 Sep 12 j 08:29	14°II54'28		minimum elong	1082 Jun 14 j 04:22	28°II02'56	0°59'41
opposition	1075 Nov 29 j 18:48	13°II29'57	-1°25'44	max. Earth dist.	1082 Jun 14 j 05:55	28°II03'05	30.91365 AU
min. Earth dist.	1075 Nov 29 j 12:11	13°II30'25	28.87663 AU	morning rise	1082 Jun 30 j 12:24	28°II39'06	
direct	1076 Feb 15 j 16:08	12°II05'35			1082 Aug 12 j 18:21	0°☾	
evening set	1076 May 14 j 08:23	14°II00'18		retrograde	1082 Sep 27 j 20:34	0°☾34'41	
					1082 Nov 13 j 17:10	30°☾II	
conjunction	1076 May 30 j 15:12	14°II36'24	-1°18'46	opposition	1082 Dec 14 j 20:29	29°II10'28	-1°01'55
minimum elong	1076 May 30 j 15:12	14°II36'25	1°18'46	min. Earth dist.	1082 Dec 14 j 19:45	29°II10'31	28.91798 AU
max. Earth dist.	1076 May 30 j 22:44	14°II37'07	30.87931 AU	direct	1083 Mar 03 j 05:45	27°II45'38	
morning rise	1076 Jun 15 j 22:42	15°II12'37		evening set	1083 May 31 j 10:06	29°II40'35	
retrograde	1076 Sep 13 j 21:06	17°II09'16			1083 Jun 09 j 06:14	0°☾	
opposition	1076 Dec 01 j 05:30	15°II44'49	-1°22'40				
min. Earth dist.	1076 Nov 30 j 23:22	15°II45'15	28.88291 AU	conjunction	1083 Jun 16 j 18:23	0°☾16'43	-0°56'09
direct	1077 Feb 17 j 06:15	14°II20'24		minimum elong	1083 Jun 16 j 18:24	0°☾16'43	0°56'09
evening set	1077 May 16 j 22:36	16°II15'10		max. Earth dist.	1083 Jun 16 j 19:19	0°☾16'49	30.92202 AU
				morning rise	1083 Jul 03 j 02:27	0°☾52'53	
conjunction	1077 Jun 02 j 05:30	16°II51'17	-1°15'51	retrograde	1083 Sep 30 j 07:44	2°☾48'18	
minimum elong	1077 Jun 02 j 05:31	16°II51'17	1°15'50	opposition	1083 Dec 17 j 06:40	1°☾24'10	-0°58'07
max. Earth dist.	1077 Jun 02 j 10:49	16°II51'47	30.88521 AU	min. Earth dist.	1083 Dec 17 j 05:32	1°☾24'15	28.92696 AU
morning rise	1077 Jun 18 j 13:16	17°II27'30			1084 Feb 27 j 08:03	30°☾II	
retrograde	1077 Sep 16 j 09:55	19°II24'00		direct	1084 Mar 04 j 18:09	29°II59'18	
opposition	1077 Dec 03 j 16:10	17°II59'35	-1°19'29		1084 Mar 11 j 05:15	0°☾	
min. Earth dist.	1077 Dec 03 j 11:19	17°II59'55	28.88847 AU	evening set	1084 Jun 02 j 00:04	1°☾54'19	
direct	1078 Feb 19 j 17:31	16°II35'05					
evening set	1078 May 19 j 12:35	18°II29'54		conjunction	1084 Jun 18 j 08:24	2°☾30'28	-0°52'33
				minimum elong	1084 Jun 18 j 08:24	2°☾30'28	0°52'34
conjunction	1078 Jun 04 j 19:55	19°II06'02	-1°12'49	max. Earth dist.	1084 Jun 18 j 08:08	2°☾30'26	30.93169 AU
minimum elong	1078 Jun 04 j 19:55	19°II06'02	1°12'49	morning rise	1084 Jul 04 j 16:29	3°☾06'36	
max. Earth dist.	1078 Jun 05 j 01:16	19°II06'32	30.89052 AU	retrograde	1084 Oct 01 j 18:46	5°☾01'53	
morning rise	1078 Jun 21 j 03:38	19°II42'13		opposition	1084 Dec 18 j 17:06	3°☾37'51	-0°54'13
retrograde	1078 Sep 18 j 22:20	21°II38'32		min. Earth dist.	1084 Dec 18 j 17:21	3°☾37'50	28.93727 AU
opposition	1078 Dec 06 j 02:44	20°II14'10	-1°16'11	direct	1085 Mar 07 j 04:55	2°☾12'59	
min. Earth dist.	1078 Dec 05 j 22:51	20°II14'26	28.89350 AU	evening set	1085 Jun 04 j 13:51	4°☾08'04	

conjunction	1085 Jun 20 j 22:24	4°  44'13 -0°48'52	direct	1092 Mar 22 j 17:32	17°  49'37
minimum elong	1085 Jun 20 j 22:24	4°  44'13 0°48'52	evening set	1092 Jun 20 j 15:36	19°  45'09
max. Earth dist.	1085 Jun 20 j 22:10	4°  44'12 30.94257 AU			
morning rise	1085 Jul 07 j 06:19	5°  20'20	conjunction	1092 Jul 07 j 00:03	20°  21'15 -0°21'23
retrograde	1085 Oct 04 j 06:25	7°  15'30	minimum elong	1092 Jul 07 j 00:03	20°  21'15 0°21'24
opposition	1085 Dec 21 j 03:23	5°  51'35 -0°50'14	max. Earth dist.	1092 Jul 06 j 15:44	20°  20'29 31.00814 AU
min. Earth dist.	1085 Dec 21 j 03:51	5°  51'33 28.94839 AU	morning rise	1092 Jul 23 j 06:59	20°  57'14
direct	1086 Mar 09 j 17:50	4°  26'44	retrograde	1092 Oct 19 j 16:23	22°  51'25
evening set	1086 Jun 07 j 03:52	6°  21'55	opposition	1093 Jan 05 j 03:48	21°  28'04 -0°20'41
			min. Earth dist.	1093 Jan 05 j 10:50	21°  27'34 29.01160 AU
conjunction	1086 Jun 23 j 12:18	6°  58'03 -0°45'06	direct	1093 Mar 25 j 06:31	20°  03'01
minimum elong	1086 Jun 23 j 12:18	6°  58'03 0°45'07	evening set	1093 Jun 23 j 05:19	21°  58'35
max. Earth dist.	1086 Jun 23 j 10:15	6°  57'52 30.95398 AU			
morning rise	1086 Jul 09 j 20:17	7°  34'10	conjunction	1093 Jul 09 j 13:33	22°  34'40 -0°17'19
retrograde	1086 Oct 06 j 19:05	9°  29'13	minimum elong	1093 Jul 09 j 13:33	22°  34'40 0°17'18
opposition	1086 Dec 23 j 13:42	8°  05'25 -0°46'11	max. Earth dist.	1093 Jul 09 j 04:04	22°  33'48 31.01503 AU
min. Earth dist.	1086 Dec 23 j 15:19	8°  05'18 28.95991 AU	morning rise	1093 Jul 25 j 20:14	23°  10'37
direct	1087 Mar 12 j 04:24	6°  40'34	retrograde	1093 Oct 22 j 02:07	25°  04'39
evening set	1087 Jun 09 j 17:44	8°  35'50	opposition	1094 Jan 07 j 14:05	23°  41'20 -0°16'18
			min. Earth dist.	1094 Jan 07 j 22:33	23°  40'44 29.01877 AU
conjunction	1087 Jun 26 j 02:24	9°  11'59 -0°41'17	direct	1094 Mar 27 j 17:10	22°  16'14
minimum elong	1087 Jun 26 j 02:25	9°  11'59 0°41'16	evening set	1094 Jun 25 j 18:51	24°  11'49
max. Earth dist.	1087 Jun 26 j 00:24	9°  11'48 30.96530 AU			
morning rise	1087 Jul 12 j 10:09	9°  48'05	conjunction	1094 Jul 12 j 03:04	24°  47'53 -0°13'13
retrograde	1087 Oct 09 j 07:19	11°  43'01	minimum elong	1094 Jul 12 j 03:04	24°  47'53 0°13'14
opposition	1087 Dec 26 j 00:09	10°  19'19 -0°42'03	behind sun begin	1094 Jul 11 j 23:21	24°  47'33
min. Earth dist.	1087 Dec 26 j 02:54	10°  19'07 28.97080 AU	behind sun end	1094 Jul 12 j 06:47	24°  48'12
direct	1088 Mar 13 j 18:07	8°  54'29	max. Earth dist.	1094 Jul 11 j 17:35	24°  47'01 31.02252 AU
evening set	1088 Jun 11 j 07:55	10°  49'50	morning rise	1094 Jul 28 j 09:25	25°  23'48
			retrograde	1094 Oct 24 j 12:27	27°  17'41
conjunction	1088 Jun 27 j 16:26	11°  25'58 -0°37'23	opposition	1095 Jan 10 j 00:12	25°  54'24 -0°11'55
minimum elong	1088 Jun 27 j 16:26	11°  25'58 0°37'24	min. Earth dist.	1095 Jan 10 j 08:45	25°  53'48 29.02659 AU
max. Earth dist.	1088 Jun 27 j 12:00	11°  25'34 30.97580 AU	direct	1095 Mar 30 j 05:28	24°  29'15
morning rise	1088 Jul 14 j 00:12	12°  02'03	evening set	1095 Jun 28 j 08:29	26°  24'53
retrograde	1088 Oct 10 j 20:28	13°  56'51			
opposition	1088 Dec 27 j 10:28	12°  33'15 -0°37'52	conjunction	1095 Jul 14 j 16:23	27°  00'55 -0°09'07
min. Earth dist.	1088 Dec 27 j 13:48	12°  33'01 28.98081 AU	minimum elong	1095 Jul 14 j 16:23	27°  00'55 0°09'06
direct	1089 Mar 16 j 06:30	11°  08'23	behind sun begin	1095 Jul 14 j 10:49	27°  00'25
evening set	1089 Jun 13 j 21:55	13°  03'49	behind sun end	1095 Jul 14 j 21:57	27°  01'24
			max. Earth dist.	1095 Jul 14 j 05:23	26°  59'54 31.03083 AU
conjunction	1089 Jun 30 j 06:33	13°  39'57 -0°33'27	morning rise	1095 Jul 30 j 22:34	27°  36'49
minimum elong	1089 Jun 30 j 06:33	13°  39'57 0°33'27	retrograde	1095 Oct 26 j 23:47	29°  30'34
max. Earth dist.	1089 Jun 30 j 01:51	13°  39'31 30.98520 AU	opposition	1096 Jan 12 j 10:26	28°  07'20 -0°07'30
morning rise	1089 Jul 16 j 13:59	14°  16'01	min. Earth dist.	1096 Jan 12 j 19:40	28°  06'41 29.03554 AU
retrograde	1089 Oct 13 j 07:04	16°  10'40	direct	1096 Mar 31 j 16:11	26°  42'08
opposition	1089 Dec 29 j 20:59	14°  47'09 -0°33'38	evening set	1096 Jun 29 j 21:57	28°  37'49
min. Earth dist.	1089 Dec 30 j 02:05	14°  46'47 28.98962 AU			
direct	1090 Mar 18 j 18:45	13°  22'16	conjunction	1096 Jul 16 j 05:50	29°  13'50 -0°05'00
evening set	1090 Jun 16 j 11:48	15°  17'44	minimum elong	1096 Jul 16 j 05:49	29°  13'50 0°05'01
			behind sun begin	1096 Jul 15 j 23:25	29°  13'16
conjunction	1090 Jul 02 j 20:18	15°  53'52 -0°29'28	behind sun end	1096 Jul 16 j 12:14	29°  14'24
minimum elong	1090 Jul 02 j 20:18	15°  53'52 0°29'29	max. Earth dist.	1096 Jul 15 j 19:21	29°  12'53 31.04032 AU
max. Earth dist.	1090 Jul 02 j 13:43	15°  53'15 30.99361 AU	morning rise	1096 Aug 01 j 11:31	29°  49'41
morning rise	1090 Jul 19 j 03:43	16°  29'54		1096 Aug 06 j 06:46	0° 
retrograde	1090 Oct 15 j 19:39	18°  24'24	retrograde	1096 Oct 28 j 10:35	1°  43'19
opposition	1091 Jan 01 j 07:18	17°  00'57 -0°29'21	opposition	1097 Jan 13 j 20:38	0°  20'09 -0°03'05
min. Earth dist.	1091 Jan 01 j 12:31	17°  00'35 28.99751 AU	min. Earth dist.	1097 Jan 14 j 06:31	0°  19'28 29.04555 AU
direct	1091 Mar 21 j 07:13	15°  36'01		1097 Jan 25 j 21:11	30° 
evening set	1091 Jun 19 j 01:43	17°  31'31	direct	1097 Apr 03 j 06:00	28°  54'58
				1097 Jun 07 j 09:28	0° 
conjunction	1091 Jul 05 j 10:14	18°  07'39 -0°25'27	evening set	1097 Jul 02 j 11:32	0°  50'42
minimum elong	1091 Jul 05 j 10:14	18°  07'39 0°25'26			
max. Earth dist.	1091 Jul 05 j 03:00	18°  06'59 31.00106 AU	conjunction	1097 Jul 18 j 19:00	1°  26'41 -0°00'49
morning rise	1091 Jul 21 j 17:21	18°  43'39	minimum elong	1097 Jul 18 j 19:00	1°  26'41 0°00'49
retrograde	1091 Oct 18 j 06:12	20°  38'00	behind sun begin	1097 Jul 18 j 12:26	1°  26'06
opposition	1092 Jan 03 j 17:35	19°  14'36 -0°25'02	behind sun end	1097 Jul 19 j 01:35	1°  27'16
min. Earth dist.	1092 Jan 04 j 00:46	19°  14'05 29.00470 AU	max. Earth dist.	1097 Jul 18 j 06:50	1°  25'34 31.05099 AU

morning rise	1097 Aug 04 j 00:32	2°02'31	
asc. node	1097 Sep 27 j 01:58	3°03'40	
retrograde	1097 Oct 30 j 22:53	3°05'02	
opposition	1098 Jan 16 j 06:50	2°03'57	0°01'20
min. Earth dist.	1098 Jan 16 j 16:40	2°03'16	29.05673 AU
direct	1098 Apr 05 j 18:03	1°07'46	
evening set	1098 Jul 05 j 00:48	3°03'34	
conjunction	1098 Jul 21 j 08:11	3°03'32	0°03'25
minimum elong	1098 Jul 21 j 08:11	3°03'32	0°03'25
behind sun begin	1098 Jul 21 j 01:38	3°03'58	
behind sun end	1098 Jul 21 j 14:43	3°04'07	
max. Earth dist.	1098 Jul 20 j 20:23	3°03'28	31.06243 AU
morning rise	1098 Aug 06 j 13:11	4°01'52	
retrograde	1098 Nov 02 j 09:29	6°08'45	
opposition	1099 Jan 18 j 17:09	4°04'46	0°05'46
min. Earth dist.	1099 Jan 19 j 04:29	4°04'59	29.06829 AU
direct	1099 Apr 08 j 06:05	3°02'37	
evening set	1099 Jul 07 j 14:23	5°01'28	
conjunction	1099 Jul 23 j 21:21	5°02'25	0°07'32
minimum elong	1099 Jul 23 j 21:22	5°02'25	0°07'33
behind sun begin	1099 Jul 23 j 15:24	5°01'53	
behind sun end	1099 Jul 24 j 03:20	5°02'57	
max. Earth dist.	1099 Jul 23 j 07:56	5°01'11	31.07404 AU
morning rise	1099 Aug 09 j 02:08	6°02'10	
retrograde	1099 Nov 04 j 22:23	8°02'29	
opposition	1100 Jan 21 j 03:15	6°05'36	0°10'10
min. Earth dist.	1100 Jan 21 j 14:34	6°05'49	29.07970 AU
direct	1100 Apr 09 j 19:00	5°03'27	
evening set	1100 Jul 09 j 03:56	7°02'22	
conjunction	1100 Jul 25 j 10:41	8°05'18	0°11'39
minimum elong	1100 Jul 25 j 10:40	8°05'18	0°11'38
behind sun begin	1100 Jul 25 j 06:04	8°04'53	
behind sun end	1100 Jul 25 j 15:17	8°05'42	
max. Earth dist.	1100 Jul 24 j 20:49	8°04'01	31.08499 AU
morning rise	1100 Aug 10 j 14:54	8°04'01	
retrograde	1100 Nov 06 j 08:53	10°03'41	
opposition	1101 Jan 22 j 13:44	9°01'26	0°14'34
min. Earth dist.	1101 Jan 23 j 02:54	9°01'30	29.09029 AU
direct	1101 Apr 12 j 06:10	7°04'16	
evening set	1101 Jul 11 j 17:18	9°04'14	
conjunction	1101 Jul 27 j 23:40	10°01'08	0°15'44
minimum elong	1101 Jul 27 j 23:40	10°01'08	0°15'44
behind sun begin	1101 Jul 27 j 23:04	10°01'04	
behind sun end	1101 Jul 28 j 00:16	10°01'11	
max. Earth dist.	1101 Jul 27 j 08:45	10°01'45	31.09506 AU
morning rise	1101 Aug 13 j 03:31	10°01'53	
retrograde	1101 Nov 08 j 19:14	12°04'55	