

opposition	13600 Feb 19 16:35	9° \mathbb{M} 52'12	-0°47'48	direct	13605 Oct 16 11:49	2° \mathbb{H} 01'20	
min. Earth dist.	13600 Feb 20 12:15	9° \mathbb{M} 45'42	3.98169 AU	evening set	13606 Feb 18 17:23	19° \mathbb{H} 28'19	
direct	13600 Apr 18 23:32	4° \mathbb{M} 55'43					
evening set	13600 Aug 24 00:39	24° \mathbb{M} 51'54		conjunction	13606 Mar 03 23:01	22° \mathbb{H} 19'12	0°27'41
				minimum elong	13606 Mar 03 23:01	22° \mathbb{H} 19'13	0°27'56
conjunction	13600 Sep 06 05:16	28° \mathbb{M} 04'43	-0°24'52	max. Earth dist.	13606 Mar 04 14:42	22° \mathbb{H} 27'40	6.44951 AU
minimum elong	13600 Sep 06 05:17	28° \mathbb{M} 04'44	0°25'00	morning rise	13606 Mar 17 03:29	25° \mathbb{H} 09'20	
max. Earth dist.	13600 Sep 05 17:46	27° \mathbb{M} 57'43	5.92654 AU		13606 Apr 09 08:21	0° \mathbb{Y}	
	13600 Sep 14 02:14	0° \mathbb{L}		retrograde	13606 Jul 16 16:08	12° \mathbb{Y} 00'06	
morning rise	13600 Sep 19 11:37	1° \mathbb{L} 18'39		opposition	13606 Sep 15 15:39	7° \mathbb{Y} 02'59	0°30'11
retrograde	13601 Jan 28 20:18	22° \mathbb{L} 02'27		min. Earth dist.	13606 Sep 15 14:38	7° \mathbb{Y} 03'19	4.49043 AU
opposition	13601 Mar 29 03:31	17° \mathbb{L} 03'16	-0°22'51	direct	13606 Nov 16 16:41	2° \mathbb{Y} 02'13	
min. Earth dist.	13601 Mar 28 20:49	17° \mathbb{L} 05'31	3.89664 AU	evening set	13607 Mar 21 10:50	19° \mathbb{Y} 06'34	
direct	13601 May 26 09:36	12° \mathbb{L} 08'06					
	13601 Sep 20 21:23	0° \mathbb{M}		conjunction	13607 Apr 03 12:36	21° \mathbb{Y} 53'36	0°12'40
evening set	13601 Sep 30 22:11	2° \mathbb{M} 25'33		minimum elong	13607 Apr 03 12:37	21° \mathbb{Y} 53'36	0°12'23
				behind sun begin	13607 Apr 03 07:22	21° \mathbb{Y} 50'49	
conjunction	13601 Oct 14 08:30	5° \mathbb{M} 42'38	-0°04'08	behind sun end	13607 Apr 03 17:51	21° \mathbb{Y} 56'23	
minimum elong	13601 Oct 14 08:30	5° \mathbb{M} 42'38	0°03'36	max. Earth dist.	13607 Apr 03 00:13	21° \mathbb{Y} 47'00	6.51030 AU
behind sun begin	13601 Oct 14 00:14	5° \mathbb{M} 37'35		morning rise	13607 Apr 16 12:31	24° \mathbb{Y} 39'46	
behind sun end	13601 Oct 14 16:46	5° \mathbb{M} 47'40			13607 May 12 09:44	0° \mathbb{B}	
max. Earth dist.	13601 Oct 15 11:57	5° \mathbb{M} 59'27	5.89593 AU	retrograde	13607 Aug 15 05:21	11° \mathbb{B} 14'30	
morning rise	13601 Oct 27 20:46	9° \mathbb{M} 00'43		opposition	13607 Oct 15 09:56	6° \mathbb{B} 19'38	0°05'14
	13601 Nov 22 02:41	15° \mathbb{M}		min. Earth dist.	13607 Oct 16 03:24	6° \mathbb{B} 14'02	4.50794 AU
asc. node	13601 Dec 24 17:52	21° \mathbb{M} 55'02		direct	13607 Dec 16 21:37	1° \mathbb{B} 18'46	
retrograde	13602 Mar 08 10:11	29° \mathbb{M} 49'08		desc. node	13607 Dec 29 19:49	1° \mathbb{B} 33'39	
opposition	13602 May 06 16:36	24° \mathbb{M} 46'59	0°12'01		13608 Apr 03 08:39	15° \mathbb{B}	
min. Earth dist.	13602 May 05 12:05	24° \mathbb{M} 56'39	3.92477 AU	evening set	13608 Apr 19 13:33	18° \mathbb{B} 24'24	
direct	13602 Jul 03 18:10	19° \mathbb{M} 51'20		max. Earth dist.	13608 Apr 30 21:56	20° \mathbb{B} 50'38	6.48302 AU
	13602 Sep 25 19:04	0° \mathbb{X}					
evening set	13602 Nov 08 02:58	9° \mathbb{X} 48'22		conjunction	13608 May 02 11:51	21° \mathbb{B} 11'04	-0°05'39
				minimum elong	13608 May 02 11:51	21° \mathbb{B} 11'04	0°06'23
conjunction	13602 Nov 21 16:29	13° \mathbb{X} 02'55	0°18'14	behind sun begin	13608 May 02 04:19	21° \mathbb{B} 07'02	
minimum elong	13602 Nov 21 16:28	13° \mathbb{X} 02'54	0°19'12	behind sun end	13608 May 02 19:22	21° \mathbb{B} 15'06	
max. Earth dist.	13602 Nov 24 00:16	13° \mathbb{X} 36'18	5.97913 AU	morning rise	13608 May 15 08:31	23° \mathbb{B} 57'06	
morning rise	13602 Dec 05 07:18	16° \mathbb{X} 17'54			13608 Jun 13 12:38	0° \mathbb{I}	
	13603 Feb 07 13:33	0° \mathbb{Z}		retrograde	13608 Sep 13 16:55	10° \mathbb{I} 46'32	
retrograde	13603 Apr 13 21:04	6° \mathbb{Z} 17'00		opposition	13608 Nov 13 18:37	5° \mathbb{I} 52'49	-0°21'24
min. Earth dist.	13603 Jun 10 20:13	1° \mathbb{Z} 26'42	4.05314 AU	min. Earth dist.	13608 Nov 15 04:13	5° \mathbb{I} 42'04	4.43763 AU
opposition	13603 Jun 12 11:17	1° \mathbb{Z} 13'29	0°40'42	direct	13609 Jan 15 04:48	0° \mathbb{I} 52'07	
	13603 Jun 21 15:05	30° \mathbb{R} \mathbb{X}		evening set	13609 May 20 01:21	18° \mathbb{I} 22'52	
direct	13603 Aug 10 04:13	26° \mathbb{X} 16'05		max. Earth dist.	13609 May 30 15:20	20° \mathbb{I} 42'47	6.37380 AU
	13603 Sep 28 06:11	0° \mathbb{Z}					
evening set	13603 Dec 14 22:32	15° \mathbb{Z} 22'56		conjunction	13609 Jun 01 21:44	21° \mathbb{I} 12'52	-0°22'43
				minimum elong	13609 Jun 01 21:43	21° \mathbb{I} 12'51	0°23'43
conjunction	13603 Dec 28 11:20	18° \mathbb{Z} 29'46	0°32'45	morning rise	13609 Jun 14 17:02	24° \mathbb{I} 02'34	
minimum elong	13603 Dec 28 11:20	18° \mathbb{Z} 29'45	0°33'46		13609 Jul 12 14:16	0° \mathbb{O}	
max. Earth dist.	13603 Dec 30 22:04	19° \mathbb{Z} 03'34	6.13916 AU	retrograde	13609 Oct 15 23:00	11° \mathbb{O} 36'18	
morning rise	13604 Jan 11 00:48	21° \mathbb{Z} 36'29		opposition	13609 Dec 15 17:24	6° \mathbb{O} 42'34	-0°43'28
	13604 Feb 18 15:41	0° \mathbb{A}		min. Earth dist.	13609 Dec 17 08:58	6° \mathbb{O} 29'49	4.29570 AU
retrograde	13604 May 16 11:53	10° \mathbb{A} 21'05		direct	13610 Feb 15 09:19	1° \mathbb{O} 42'36	
min. Earth dist.	13604 Jul 14 04:09	5° \mathbb{A} 30'11	4.22806 AU	evening set	13610 Jun 20 21:35	19° \mathbb{O} 59'02	
opposition	13604 Jul 15 15:01	5° \mathbb{A} 18'31	0°52'53	max. Earth dist.	13610 Jul 01 11:48	22° \mathbb{O} 24'21	6.20924 AU
direct	13604 Sep 13 11:45	0° \mathbb{A} 19'17					
	13605 Jan 01 08:15	15° \mathbb{A}		conjunction	13610 Jul 03 18:22	22° \mathbb{O} 55'41	-0°33'57
evening set	13605 Jan 17 10:39	18° \mathbb{A} 30'06		minimum elong	13610 Jul 03 18:22	22° \mathbb{O} 55'41	0°34'57
				morning rise	13610 Jul 16 14:43	25° \mathbb{O} 52'30	
conjunction	13605 Jan 30 20:32	21° \mathbb{A} 28'05	0°35'31		13610 Aug 03 22:56	0° \mathbb{Q}	
minimum elong	13605 Jan 30 20:32	21° \mathbb{A} 28'05	0°36'16	retrograde	13610 Nov 19 21:09	14° \mathbb{Q} 34'21	
max. Earth dist.	13605 Feb 01 16:24	21° \mathbb{A} 52'23	6.31424 AU	opposition	13611 Jan 19 01:37	9° \mathbb{Q} 39'40	-0°53'40
morning rise	13605 Feb 13 05:39	24° \mathbb{A} 25'26		min. Earth dist.	13611 Jan 20 12:38	9° \mathbb{Q} 28'15	4.11965 AU
	13605 Mar 11 08:36	0° \mathbb{H}		direct	13611 Mar 20 13:14	4° \mathbb{Q} 41'21	
retrograde	13605 Jun 16 18:54	12° \mathbb{H} 01'32			13611 Jun 15 04:56	15° \mathbb{Q}	
opposition	13605 Aug 16 09:45	7° \mathbb{H} 01'35	0°47'55	evening set	13611 Jul 24 20:47	23° \mathbb{Q} 54'03	
min. Earth dist.	13605 Aug 15 13:02	7° \mathbb{H} 08'23	4.38904 AU	max. Earth dist.	13611 Aug 05 05:09	26° \mathbb{Q} 35'58	6.03661 AU

conjunction	13611 Aug 06 20:37	26°♎59'31	-0°34'38	morning rise	13617 Feb 17 19:36	28°♊57'05	
minimum elong	13611 Aug 06 20:38	26°♎59'31	0°35'18		13617 Feb 22 15:04	0°♊	
morning rise	13611 Aug 19 21:23	0°♏05'45		retrograde	13617 Jun 21 00:24	16°♊25'57	
	13611 Aug 19 11:41	0°♏		opposition	13617 Aug 20 16:56	11°♊26'22	0°46'02
retrograde	13611 Dec 27 07:04	20°♏02'34		min. Earth dist.	13617 Aug 19 22:35	11°♊32'23	4.40567 AU
opposition	13612 Feb 24 23:07	15°♏05'50	-0°45'21	direct	13617 Oct 20 22:03	6°♊26'01	
min. Earth dist.	13612 Feb 25 14:38	15°♏00'41	3.96603 AU	evening set	13618 Feb 23 02:28	23°♊49'05	
direct	13612 Apr 24 01:43	10°♏09'32					
	13612 Aug 28 12:26	0°♎		conjunction	13618 Mar 08 07:43	26°♊39'20	0°25'53
evening set	13612 Aug 29 05:02	0°♎10'04		minimum elong	13618 Mar 08 07:44	26°♊39'20	0°26'04
				max. Earth dist.	13618 Mar 08 21:07	26°♊46'32	6.46178 AU
conjunction	13612 Sep 11 10:30	3°♎23'44	-0°22'25	morning rise	13618 Mar 21 11:24	29°♊28'44	
minimum elong	13612 Sep 11 10:31	3°♎23'44	0°22'27		13618 Mar 23 22:07	0°♏	
max. Earth dist.	13612 Sep 11 05:02	3°♎20'24	5.91734 AU	retrograde	13618 Jul 20 19:23	16°♏15'47	
morning rise	13612 Sep 24 17:37	6°♎38'28		opposition	13618 Sep 19 20:13	11°♏19'05	0°26'57
retrograde	13613 Feb 03 06:27	27°♎25'37		min. Earth dist.	13618 Sep 19 20:57	11°♏18'51	4.49793 AU
opposition	13613 Apr 03 12:32	22°♎25'58	-0°18'12	direct	13618 Nov 20 23:00	6°♏18'25	
min. Earth dist.	13613 Apr 03 03:22	22°♎29'03	3.89491 AU	evening set	13619 Mar 25 16:55	23°♏21'28	
direct	13613 May 31 17:56	17°♎30'47					
	13613 Sep 03 01:24	0°♏		conjunction	13619 Apr 07 17:58	26°♏08'10	0°10'12
evening set	13613 Oct 06 05:32	7°♏47'21		minimum elong	13619 Apr 07 17:59	26°♏08'10	0°09'49
				behind sun begin	13619 Apr 07 11:27	26°♏04'42	
conjunction	13613 Oct 19 16:32	11°♏04'26	-0°00'49	behind sun end	13619 Apr 08 00:31	26°♏11'39	
minimum elong	13613 Oct 19 16:33	11°♏04'26	0°00'12	max. Earth dist.	13619 Apr 07 01:11	25°♏59'12	6.51280 AU
behind sun begin	13613 Oct 19 08:15	10°♏59'24		morning rise	13619 Apr 20 17:28	28°♏54'05	
behind sun end	13613 Oct 20 00:50	11°♏09'29			13619 Apr 25 22:17	0°♊	
max. Earth dist.	13613 Oct 21 01:21	11°♏24'29	5.90185 AU		13619 Aug 01 19:30	15°♊	
morning rise	13613 Nov 02 05:22	14°♏22'28		retrograde	13619 Aug 19 11:19	15°♊28'36	
asc. node	13613 Nov 03 01:20	14°♏34'34			13619 Sep 05 23:54	15°♏♊	
	13613 Nov 04 19:22	15°♏		opposition	13619 Oct 19 14:50	10°♊33'59	0°01'27
	13614 Jan 14 16:23	0°♊		min. Earth dist.	13619 Oct 20 11:07	10°♊27'29	4.50558 AU
retrograde	13614 Mar 13 14:55	5°♊06'27		desc. node	13619 Nov 09 03:37	8°♊03'32	
opposition	13614 May 11 21:43	0°♊04'01	0°16'43	direct	13619 Dec 21 04:08	5°♊33'09	
min. Earth dist.	13614 May 10 14:48	0°♊14'30	3.93775 AU		13620 Mar 17 02:01	15°♊	
	13614 May 12 09:35	30°♏♏		evening set	13620 Apr 23 18:52	22°♊40'01	
direct	13614 Jul 08 23:51	25°♏08'10		max. Earth dist.	13620 May 05 00:46	25°♊05'11	6.47606 AU
	13614 Sep 02 18:32	0°♊					
evening set	13614 Nov 13 07:46	14°♊59'30		conjunction	13620 May 06 16:49	25°♊26'48	-0°08'11
				minimum elong	13620 May 06 16:49	25°♊26'48	0°08'59
conjunction	13614 Nov 26 21:14	18°♊13'10	0°20'52	behind sun begin	13620 May 06 09:59	25°♊23'08	
minimum elong	13614 Nov 26 21:13	18°♊13'09	0°21'52	behind sun end	13620 May 06 23:39	25°♊30'28	
max. Earth dist.	13614 Nov 29 05:20	18°♊46'35	5.99754 AU	morning rise	13620 May 19 13:05	28°♊12'57	
morning rise	13614 Dec 10 12:15	21°♊27'17			13620 May 27 21:51	0°♏	
	13615 Jan 17 09:38	0°♊		retrograde	13620 Sep 17 23:52	15°♏05'27	
retrograde	13615 Apr 18 15:56	11°♊17'03		opposition	13620 Nov 18 02:14	10°♏11'47	-0°24'51
min. Earth dist.	13615 Jun 15 17:15	6°♊26'46	4.07490 AU	min. Earth dist.	13620 Nov 19 12:00	10°♏00'59	4.42658 AU
opposition	13615 Jun 17 08:28	6°♊13'30	0°43'28	direct	13621 Jan 19 10:01	5°♏11'11	
direct	13615 Aug 15 04:45	1°♊15'45		evening set	13621 May 24 08:22	22°♏45'25	
evening set	13615 Dec 19 20:41	20°♊15'10		max. Earth dist.	13621 Jun 03 22:29	25°♏05'51	6.35934 AU
conjunction	13616 Jan 02 09:21	23°♊20'51	0°33'50	conjunction	13621 Jun 06 04:35	25°♏35'53	-0°24'41
minimum elong	13616 Jan 02 09:21	23°♊20'51	0°34'49	minimum elong	13621 Jun 06 04:34	25°♏35'52	0°25'44
max. Earth dist.	13616 Jan 04 19:27	23°♊54'08	6.16242 AU	morning rise	13621 Jun 18 23:41	28°♏26'05	
morning rise	13616 Jan 15 22:11	26°♊26'17			13621 Jun 26 02:44	0°♏	
	13616 Jan 31 20:24	0°♏		retrograde	13621 Oct 20 13:51	16°♏05'59	
	13616 May 17 15:57	15°♏		opposition	13621 Dec 20 06:23	11°♏12'13	-0°45'39
retrograde	13616 May 21 00:13	15°♏01'06		min. Earth dist.	13621 Dec 21 22:54	10°♏59'09	4.27853 AU
	13616 May 24 08:03	15°♏♏		direct	13622 Feb 19 20:25	6°♏12'26	
min. Earth dist.	13616 Jul 18 19:02	10°♏09'51	4.25064 AU	evening set	13622 Jun 25 08:45	24°♏34'05	
opposition	13616 Jul 20 04:03	9°♏58'51	0°53'07	max. Earth dist.	13622 Jul 05 22:30	26°♏59'48	6.19057 AU
direct	13616 Sep 18 05:07	4°♏59'27					
	13616 Dec 14 14:30	15°♏		conjunction	13622 Jul 08 05:37	27°♏31'34	-0°34'43
evening set	13617 Jan 22 01:40	23°♏03'51		minimum elong	13622 Jul 08 05:36	27°♏31'34	0°35'41
					13622 Jul 18 23:19	0°♏	
conjunction	13617 Feb 04 10:55	26°♏00'46	0°34'58	morning rise	13622 Jul 21 02:22	0°♏29'19	
minimum elong	13617 Feb 04 10:56	26°♏00'47	0°35'38		13622 Oct 01 15:15	15°♏	
max. Earth dist.	13617 Feb 06 02:46	26°♏22'45	6.33442 AU	retrograde	13622 Nov 24 16:28	19°♏19'28	

	13623 Jan 19 08:11	15° κ 8 Ω	opposition	13628 Jul 24 17:01	14° \approx 39'56	0°52'59
opposition	13623 Jan 23 20:55	14° Ω 24'33 -0°53'39	direct	13628 Sep 22 20:50	9° \approx 40'21	
min. Earth dist.	13623 Jan 25 05:40	14° Ω 13'50 4.10085 AU		13628 Nov 23 03:39	15° \approx	
direct	13623 Mar 25 03:57	9° Ω 26'27	evening set	13629 Jan 26 16:41	27° \approx 39'17	
	13623 May 25 09:31	15° Ω		13629 Feb 06 09:22	0° \mathcal{H}	
evening set	13623 Jul 29 14:03	28° Ω 45'06				
	13623 Aug 03 19:56	0° \mathcal{M}	conjunction	13629 Feb 09 01:30	0° \mathcal{H} 35'16	0°34'11
max. Earth dist.	13623 Aug 10 02:53	1° \mathcal{M} 30'16 6.01940 AU	minimum elong	13629 Feb 09 01:31	0° \mathcal{H} 35'16	0°34'47
			max. Earth dist.	13629 Feb 10 15:01	0° \mathcal{H} 55'53	6.35243 AU
conjunction	13623 Aug 11 14:31	1° \mathcal{M} 51'36 -0°33'42	morning rise	13629 Feb 22 09:27	3° \mathcal{H} 30'34	
minimum elong	13623 Aug 11 14:32	1° \mathcal{M} 51'37 0°34'18	retrograde	13629 Jun 25 07:25	20° \mathcal{H} 52'43	
morning rise	13623 Aug 24 15:51	4° \mathcal{M} 58'55	min. Earth dist.	13629 Aug 24 08:49	15° \mathcal{H} 58'44	4.42115 AU
retrograde	13624 Jan 01 11:13	25° \mathcal{M} 03'41	opposition	13629 Aug 25 00:51	15° \mathcal{H} 53'29	0°43'52
opposition	13624 Mar 01 00:29	20° \mathcal{M} 06'40 -0°42'38	direct	13629 Oct 25 10:20	10° \mathcal{H} 53'03	
min. Earth dist.	13624 Mar 01 14:35	20° \mathcal{M} 01'59 3.95198 AU	evening set	13630 Feb 27 12:05	28° \mathcal{H} 12'06	
direct	13624 Apr 29 00:51	15° \mathcal{M} 10'33		13630 Mar 07 21:47	0° \mathcal{Y}	
	13624 Aug 12 03:05	0° $\underline{\Omega}$				
evening set	13624 Sep 03 04:26	5° $\underline{\Omega}$ 15'21	conjunction	13630 Mar 12 16:38	1° \mathcal{Y} 01'38	0°23'56
			minimum elong	13630 Mar 12 16:39	1° \mathcal{Y} 01'39	0°24'02
conjunction	13624 Sep 16 10:45	8° $\underline{\Omega}$ 29'53 -0°19'54	max. Earth dist.	13630 Mar 13 01:37	1° \mathcal{Y} 06'27	6.47342 AU
minimum elong	13624 Sep 16 10:46	8° $\underline{\Omega}$ 29'53 0°19'51	morning rise	13630 Mar 25 19:48	3° \mathcal{Y} 50'21	
max. Earth dist.	13624 Sep 16 09:15	8° $\underline{\Omega}$ 28'57 5.90786 AU	retrograde	13630 Jul 24 23:33	20° \mathcal{Y} 33'39	
morning rise	13624 Sep 29 18:47	11° $\underline{\Omega}$ 45'30	opposition	13630 Sep 24 01:14	15° \mathcal{Y} 37'09	0°23'33
	13624 Dec 29 22:51	0° \mathcal{M}	min. Earth dist.	13630 Sep 24 04:32	15° \mathcal{Y} 36'05	4.50490 AU
retrograde	13625 Feb 08 11:06	2° \mathcal{M} 36'25	direct	13630 Nov 25 06:32	10° \mathcal{Y} 36'19	
	13625 Mar 21 03:37	30° \mathcal{R} $\underline{\Omega}$	evening set	13631 Mar 29 22:57	27° \mathcal{Y} 37'58	
opposition	13625 Apr 08 16:23	27° $\underline{\Omega}$ 36'26 -0°13'38		13631 Apr 10 01:56	0° \mathcal{B}	
min. Earth dist.	13625 Apr 08 04:03	27° $\underline{\Omega}$ 40'35 3.89133 AU				
direct	13625 Jun 05 18:24	22° $\underline{\Omega}$ 41'18	conjunction	13631 Apr 11 23:39	0° \mathcal{B} 24'24	0°07'39
	13625 Aug 14 02:47	0° \mathcal{M}	minimum elong	13631 Apr 11 23:39	0° \mathcal{B} 24'25	0°07'13
asc. node	13625 Sep 12 20:40	6° \mathcal{M} 14'19	behind sun begin	13631 Apr 11 16:17	0° \mathcal{B} 20'30	
evening set	13625 Oct 11 08:40	12° \mathcal{M} 58'22	behind sun end	13631 Apr 12 07:01	0° \mathcal{B} 28'19	
	13625 Oct 19 16:23	15° \mathcal{M}	max. Earth dist.	13631 Apr 11 04:51	0° \mathcal{B} 14'23	6.51435 AU
			morning rise	13631 Apr 24 22:25	3° \mathcal{B} 10'01	
conjunction	13625 Oct 24 20:08	16° \mathcal{M} 15'36 0°02'23		13631 Jun 26 12:41	15° \mathcal{B}	
minimum elong	13625 Oct 24 20:09	16° \mathcal{M} 15'37 0°03'04	retrograde	13631 Aug 23 15:11	19° \mathcal{B} 44'33	
behind sun begin	13625 Oct 24 11:49	16° \mathcal{M} 10'33	desc. node	13631 Sep 20 16:16	18° \mathcal{B} 33'07	
behind sun end	13625 Oct 25 04:28	16° \mathcal{M} 20'40		13631 Oct 22 13:05	15° \mathcal{R} \mathcal{B}	
max. Earth dist.	13625 Oct 26 07:02	16° \mathcal{M} 36'55 5.90435 AU	opposition	13631 Oct 23 20:09	14° \mathcal{B} 50'04	-0°02'22
morning rise	13625 Nov 07 09:44	19° \mathcal{M} 33'49	min. Earth dist.	13631 Oct 24 18:03	14° \mathcal{B} 43'03	4.50138 AU
	13625 Dec 23 02:37	0° \mathcal{Z}	direct	13631 Dec 25 09:17	9° \mathcal{B} 49'13	
retrograde	13626 Mar 18 15:35	10° \mathcal{Z} 15'19		13632 Feb 25 09:33	15° \mathcal{B}	
opposition	13626 May 16 23:06	5° \mathcal{Z} 12'38 0°21'06	evening set	13632 Apr 28 00:31	26° \mathcal{B} 57'45	
min. Earth dist.	13626 May 15 14:21	5° \mathcal{Z} 23'45 3.94604 AU	max. Earth dist.	13632 May 09 02:46	29° \mathcal{B} 21'19	6.46605 AU
direct	13626 Jul 14 02:19	0° \mathcal{Z} 16'33				
evening set	13626 Nov 18 09:57	20° \mathcal{Z} 04'29	conjunction	13632 May 10 21:57	29° \mathcal{B} 44'42	-0°10'43
			minimum elong	13632 May 10 21:57	29° \mathcal{B} 44'42	0°11'34
conjunction	13626 Dec 01 23:46	23° \mathcal{Z} 17'39 0°23'15	behind sun begin	13632 May 10 16:14	29° \mathcal{B} 41'37	
minimum elong	13626 Dec 01 23:45	23° \mathcal{Z} 17'39 0°24'17	behind sun end	13632 May 11 03:41	29° \mathcal{B} 47'47	
max. Earth dist.	13626 Dec 04 10:08	23° \mathcal{Z} 52'18 6.01090 AU		13632 May 12 02:13	0° \mathcal{I}	
morning rise	13626 Dec 15 14:40	26° \mathcal{Z} 31'06	morning rise	13632 May 23 17:59	2° \mathcal{I} 31'07	
	13626 Dec 30 14:34	0° \mathcal{Z}	retrograde	13632 Sep 22 10:39	19° \mathcal{I} 27'52	
retrograde	13627 Apr 23 11:53	16° \mathcal{Z} 13'45	opposition	13632 Nov 22 11:24	14° \mathcal{I} 34'13	-0°28'15
min. Earth dist.	13627 Jun 20 13:17	11° \mathcal{Z} 23'20 4.09174 AU	min. Earth dist.	13632 Nov 23 23:40	14° \mathcal{I} 22'36	4.41106 AU
opposition	13627 Jun 22 04:01	11° \mathcal{Z} 10'15 0°45'50	direct	13633 Jan 23 18:50	9° \mathcal{I} 33'37	
direct	13627 Aug 20 03:15	6° \mathcal{Z} 12'17	evening set	13633 May 28 17:00	27° \mathcal{I} 12'46	
evening set	13627 Dec 24 18:06	25° \mathcal{Z} 06'11	max. Earth dist.	13633 Jun 08 05:13	29° \mathcal{I} 32'47	6.33930 AU
conjunction	13628 Jan 07 06:29	28° \mathcal{Z} 10'56 0°34'39	conjunction	13633 Jun 10 13:10	0° \mathcal{O} 03'58	-0°26'35
minimum elong	13628 Jan 07 06:29	28° \mathcal{Z} 10'56 0°35'38	minimum elong	13633 Jun 10 13:10	0° \mathcal{O} 03'58	0°27'38
max. Earth dist.	13628 Jan 09 15:45	28° \mathcal{Z} 43'35 6.18117 AU		13633 Jun 10 06:02	0° \mathcal{O}	
	13628 Jan 15 06:02	0° \approx	morning rise	13633 Jun 23 08:19	2° \mathcal{O} 54'58	
morning rise	13628 Jan 20 19:03	1° \approx 15'23	retrograde	13633 Oct 25 05:51	20° \mathcal{O} 43'03	
	13628 Mar 29 22:46	15° \approx	opposition	13633 Dec 24 22:05	15° \mathcal{O} 49'07	-0°47'41
retrograde	13628 May 25 10:25	19° \approx 41'58	min. Earth dist.	13633 Dec 26 13:43	15° \mathcal{O} 36'19	4.25523 AU
	13628 Jul 22 04:46	15° \mathcal{R} \approx	direct	13634 Feb 24 07:41	10° \mathcal{O} 49'28	
min. Earth dist.	13628 Jul 23 08:26	14° \approx 50'47 4.26971 AU	evening set	13634 Jun 29 23:40	29° \mathcal{O} 18'37	

	13634 Jul 02 23:38	0°♎			13639 Dec 29 18:03	0°♏	
max. Earth dist.	13634 Jul 10 15:43	1°♎46'26	6.16584 AU				
				conjunction	13640 Jan 12 04:47	3°♏02'43	0°35'17
conjunction	13634 Jul 12 20:50	2°♎17'15	-0°35'18	minimum elong	13640 Jan 12 04:47	3°♏02'43	0°36'13
minimum elong	13634 Jul 12 20:50	2°♎17'15	0°36'14	max. Earth dist.	13640 Jan 14 11:55	3°♏33'58	6.20782 AU
morning rise	13634 Jul 25 18:00	5°♎16'13		morning rise	13640 Jan 25 16:44	6°♏05'44	
	13634 Sep 08 11:10	15°♎			13640 Mar 07 14:59	15°♏	
retrograde	13634 Nov 29 20:16	24°♎17'03		retrograde	13640 May 29 22:14	24°♏21'31	
opposition	13635 Jan 28 21:37	19°♎21'54	-0°53'17	min. Earth dist.	13640 Jul 27 23:50	19°♏29'51	4.29573 AU
min. Earth dist.	13635 Jan 30 05:37	19°♎11'25	4.07654 AU	opposition	13640 Jul 29 05:59	19°♏19'50	0°52'34
	13635 Mar 10 19:16	15°♏♎			13640 Sep 07 03:52	15°♏♏	
direct	13635 Mar 30 01:19	14°♎24'02		direct	13640 Sep 27 15:30	14°♏20'06	
	13635 Apr 18 05:27	15°♎			13640 Oct 18 06:09	15°♏	
	13635 Jul 18 04:47	0°♎			13641 Jan 21 03:11	0°♏	
evening set	13635 Aug 03 13:03	3°♎50'30		evening set	13641 Jan 31 06:47	2°♏11'26	
max. Earth dist.	13635 Aug 15 05:44	6°♎38'46	5.99783 AU				
				conjunction	13641 Feb 13 15:00	5°♏06'15	0°33'15
conjunction	13635 Aug 16 14:18	6°♎58'20	-0°32'29	minimum elong	13641 Feb 13 15:01	5°♏06'15	0°33'47
minimum elong	13635 Aug 16 14:18	6°♎58'21	0°32'59	max. Earth dist.	13641 Feb 15 01:36	5°♏25'09	6.37579 AU
morning rise	13635 Aug 29 16:33	10°♎07'03		morning rise	13641 Feb 26 22:14	8°♏00'19	
	13635 Dec 23 03:54	0°♎		retrograde	13641 Jun 29 10:42	25°♏14'28	
retrograde	13636 Jan 06 20:50	0°♎21'14		opposition	13641 Aug 29 06:58	20°♏15'36	0°41'32
	13636 Jan 21 12:45	30°♏♎		min. Earth dist.	13641 Aug 28 16:47	20°♏20'14	4.44030 AU
opposition	13636 Mar 06 08:37	25°♎23'51	-0°39'26	direct	13641 Oct 29 19:24	15°♏15'05	
min. Earth dist.	13636 Mar 06 18:47	25°♎20'28	3.93560 AU		13642 Feb 19 23:29	0°♏	
direct	13636 May 04 03:48	20°♎27'58		evening set	13642 Mar 03 19:21	2°♏29'24	
	13636 Jul 24 01:56	0°♎					
evening set	13636 Sep 08 11:13	10°♎37'41		conjunction	13642 Mar 16 23:20	5°♏18'10	0°21'55
				minimum elong	13642 Mar 16 23:20	5°♏18'11	0°21'56
conjunction	13636 Sep 21 18:16	13°♎53'03	-0°17'04	max. Earth dist.	13642 Mar 17 04:32	5°♏20'57	6.48702 AU
minimum elong	13636 Sep 21 18:17	13°♎53'04	0°16'56	morning rise	13642 Mar 30 01:43	8°♏06'06	
max. Earth dist.	13636 Sep 21 21:10	13°♎54'50	5.89835 AU	retrograde	13642 Jul 29 01:41	24°♏45'37	
morning rise	13636 Oct 05 03:20	17°♎09'35		opposition	13642 Sep 28 04:24	19°♏49'30	0°20'08
	13636 Dec 01 10:28	0°♎		min. Earth dist.	13642 Sep 28 10:56	19°♏47'23	4.51206 AU
retrograde	13637 Feb 13 21:28	8°♎03'43		direct	13642 Nov 29 12:31	14°♏48'41	
min. Earth dist.	13637 Apr 13 11:09	3°♎08'38	3.88991 AU		13643 Mar 25 11:14	0°♏	
opposition	13637 Apr 14 02:55	3°♎03'18	-0°08'39	evening set	13643 Apr 03 02:52	1°♏49'10	
	13637 May 08 14:55	30°♏♎		max. Earth dist.	13643 Apr 15 02:36	4°♏22'25	6.51439 AU
direct	13637 Jun 11 04:00	28°♎08'08					
	13637 Jul 14 13:28	0°♎		conjunction	13643 Apr 16 02:55	4°♏35'24	0°05'08
asc. node	13637 Jul 20 13:02	0°♎41'41		minimum elong	13643 Apr 16 02:54	4°♏35'23	0°04'38
	13637 Oct 02 13:35	15°♎		behind sun begin	13643 Apr 15 19:03	4°♏31'13	
evening set	13637 Oct 16 18:28	18°♎24'25		behind sun end	13643 Apr 16 10:44	4°♏39'33	
				morning rise	13643 Apr 29 01:19	7°♏20'51	
conjunction	13637 Oct 30 06:43	21°♎41'39	0°05'40		13643 Jun 05 22:22	15°♏	
minimum elong	13637 Oct 30 06:42	21°♎41'39	0°06'24	desc. node	13643 Aug 03 10:52	23°♏02'21	
behind sun begin	13637 Oct 29 22:50	21°♎36'52		retrograde	13643 Aug 27 19:38	23°♏56'22	
behind sun end	13637 Oct 30 14:34	21°♎46'25		opposition	13643 Oct 28 00:03	19°♏02'03	-0°06'07
max. Earth dist.	13637 Oct 31 23:28	22°♎06'29	5.91139 AU	min. Earth dist.	13643 Oct 29 00:57	18°♏54'04	4.49429 AU
morning rise	13637 Nov 12 20:38	24°♎59'41			13643 Dec 03 20:45	15°♏♏	
	13637 Dec 03 23:33	0°♏		direct	13643 Dec 29 13:41	14°♏01'10	
retrograde	13638 Mar 23 22:29	15°♏36'05			13644 Jan 24 10:10	15°♏	
min. Earth dist.	13638 May 20 19:24	10°♏44'47	3.96075 AU		13644 Apr 26 13:13	0°♏	
opposition	13638 May 22 05:36	10°♏33'11	0°25'31	evening set	13644 May 02 04:47	1°♏12'36	
direct	13638 Jul 19 10:48	5°♏36'56		max. Earth dist.	13644 May 13 04:43	3°♏35'20	6.45219 AU
evening set	13638 Nov 23 16:29	25°♏18'39					
				conjunction	13644 May 15 02:07	3°♏59'59	-0°13'10
conjunction	13638 Dec 07 06:14	28°♏30'50	0°25'34	minimum elong	13644 May 15 02:06	3°♏59'59	0°14'04
minimum elong	13638 Dec 07 06:14	28°♏30'49	0°26'36	behind sun begin	13644 May 14 22:06	3°♏57'49	
max. Earth dist.	13638 Dec 09 18:32	29°♏06'26	6.03172 AU	behind sun end	13644 May 15 06:06	4°♏02'08	
	13638 Dec 13 13:22	0°♏		morning rise	13644 May 27 21:45	6°♏46'48	
morning rise	13638 Dec 20 21:08	1°♏43'14		retrograde	13644 Sep 26 19:25	23°♏49'21	
retrograde	13639 Apr 28 06:32	21°♏15'31		opposition	13644 Nov 26 19:57	18°♏55'43	-0°31'30
min. Earth dist.	13639 Jun 25 10:02	16°♏25'31	4.11655 AU	min. Earth dist.	13644 Nov 28 09:05	18°♏43'50	4.39119 AU
opposition	13639 Jun 27 01:52	16°♏12'05	0°47'58	direct	13645 Jan 28 00:24	13°♏55'14	
direct	13639 Aug 25 03:53	11°♏13'54			13645 May 25 10:31	0°♏	
evening set	13639 Dec 29 16:54	29°♏59'21		evening set	13645 Jun 02 01:43	1°♏41'02	

max. Earth dist.	13645 Jun 12 12:38	4°☾01'08	6.31468 AU	minimum elong	13650 Dec 12 12:19	3°☾43'08	0°28'42
conjunction	13645 Jun 14 21:49	4°☾33'11	-0°28'20	max. Earth dist.	13650 Dec 15 00:33	4°☾18'30	6.05687 AU
minimum elong	13645 Jun 14 21:48	4°☾33'11	0°29'23	morning rise	13650 Dec 26 02:56	6°☾54'12	
morning rise	13645 Jun 27 17:10	7°☾25'15		retrograde	13651 May 03 01:30	26°☾14'40	
retrograde	13645 Oct 30 02:05	25°☾23'30		min. Earth dist.	13651 Jun 30 08:03	21°☾24'13	4.14415 AU
opposition	13645 Dec 29 15:21	20°☾29'29	-0°49'28	opposition	13651 Jul 01 22:25	21°☾11'18	0°49'41
min. Earth dist.	13645 Dec 31 07:40	20°☾16'26	4.22730 AU	direct	13651 Aug 30 06:07	16°☾12'46	
direct	13646 Feb 28 21:51	15°☾30'01		evening set	13651 Dec 12 16:22	0°☾	
	13646 Jun 16 10:34	0°☾			13652 Jan 03 14:05	4°☾49'05	
evening set	13646 Jul 04 16:06	4°☾08'22		conjunction	13652 Jan 17 01:36	7°☾51'04	0°35'39
max. Earth dist.	13646 Jul 15 09:57	6°☾38'12	6.13698 AU	minimum elong	13652 Jan 17 01:36	7°☾51'04	0°36'33
				max. Earth dist.	13652 Jan 19 07:40	8°☾21'31	6.23545 AU
conjunction	13646 Jul 17 13:50	7°☾08'27	-0°35'40	morning rise	13652 Jan 30 12:50	10°☾52'35	
minimum elong	13646 Jul 17 13:50	7°☾08'27	0°36'34		13652 Feb 18 08:15	15°☾	
morning rise	13646 Jul 30 11:35	10°☾08'57		retrograde	13652 Jun 03 06:46	28°☾57'36	
	13646 Aug 20 18:44	15°☾		opposition	13652 Aug 02 17:27	23°☾56'16	0°51'48
retrograde	13646 Dec 05 01:17	29°☾22'07		min. Earth dist.	13652 Aug 01 12:30	24°☾05'52	4.32111 AU
opposition	13647 Feb 03 00:51	24°☾26'45	-0°52'35	direct	13652 Oct 02 06:34	18°☾56'23	
min. Earth dist.	13647 Feb 04 05:46	24°☾17'16	4.04940 AU	evening set	13653 Jan 03 20:50	0°☾	
direct	13647 Apr 03 22:28	19°☾29'13			13653 Feb 04 19:33	6°☾40'37	
	13647 Jun 29 18:38	0°☾		conjunction	13653 Feb 18 03:03	9°☾34'18	0°32'06
evening set	13647 Aug 08 15:24	9°☾04'41		minimum elong	13653 Feb 18 03:03	9°☾34'18	0°32'34
				max. Earth dist.	13653 Feb 19 08:25	9°☾50'18	6.39709 AU
conjunction	13647 Aug 21 17:22	12°☾13'57	-0°31'00	morning rise	13653 Mar 03 09:37	12°☾27'15	
minimum elong	13647 Aug 21 17:22	12°☾13'58	0°31'26	retrograde	13653 Jul 03 16:09	29°☾34'25	
max. Earth dist.	13647 Aug 20 13:02	11°☾56'50	5.97505 AU	opposition	13653 Sep 02 12:48	24°☾35'58	0°38'58
morning rise	13647 Sep 03 20:40	15°☾24'12		min. Earth dist.	13653 Sep 02 02:31	24°☾39'19	4.45619 AU
	13647 Nov 10 23:46	0°☾		direct	13653 Nov 03 05:46	19°☾35'21	
retrograde	13648 Jan 12 09:44	5°☾48'10		evening set	13654 Feb 02 22:31	0°☾	
opposition	13648 Mar 11 19:59	0°☾50'20	-0°35'52		13654 Mar 08 02:26	6°☾46'00	
min. Earth dist.	13648 Mar 12 02:19	0°☾48'13	3.91975 AU	conjunction	13654 Mar 21 05:51	9°☾34'12	0°19'46
	13648 Mar 18 03:24	30°☾		minimum elong	13654 Mar 21 05:51	9°☾34'13	0°19'41
direct	13648 May 09 11:39	25°☾54'39		max. Earth dist.	13654 Mar 21 06:35	9°☾34'36	6.49643 AU
	13648 Jun 29 03:26	0°☾		morning rise	13654 Apr 03 07:38	12°☾21'33	
evening set	13648 Sep 13 21:07	16°☾08'49		retrograde	13654 Aug 02 04:01	28°☾58'38	
				opposition	13654 Oct 02 08:04	24°☾02'48	0°16'34
conjunction	13648 Sep 27 05:15	19°☾25'01	-0°14'04	min. Earth dist.	13654 Oct 02 17:01	23°☾59'55	4.51470 AU
minimum elong	13648 Sep 27 05:15	19°☾25'01	0°13'49	direct	13654 Dec 03 17:03	19°☾01'55	
behind sun begin	13648 Sep 27 00:52	19°☾22'20		evening set	13655 Mar 08 19:37	0°☾	
behind sun end	13648 Sep 27 09:38	19°☾27'42		max. Earth dist.	13655 Apr 07 07:49	6°☾02'39	
max. Earth dist.	13648 Sep 27 15:49	19°☾31'30	5.89133 AU		13655 Apr 19 04:32	8°☾34'26	6.51009 AU
morning rise	13648 Oct 10 15:05	22°☾42'17		conjunction	13655 Apr 20 07:31	8°☾48'52	0°02'31
	13648 Nov 10 12:15	0°☾		minimum elong	13655 Apr 20 07:30	8°☾48'52	0°01'58
retrograde	13649 Feb 19 12:01	13°☾37'56		behind sun begin	13655 Apr 19 23:29	8°☾44'36	
opposition	13649 Apr 19 15:50	8°☾37'03	-0°03'33	behind sun end	13655 Apr 20 15:31	8°☾53'08	
min. Earth dist.	13649 Apr 18 20:52	8°☾43'28	3.89275 AU	morning rise	13655 May 03 05:21	11°☾34'18	
asc. node	13649 May 28 20:49	4°☾18'16			13655 May 19 14:13	15°☾	
direct	13649 Jun 16 16:29	3°☾41'50		desc. node	13655 Jun 13 16:26	19°☾53'52	
	13649 Sep 13 17:06	15°☾		retrograde	13655 Sep 01 01:39	28°☾12'05	
evening set	13649 Oct 22 06:02	23°☾55'12		opposition	13655 Nov 01 05:57	23°☾17'58	-0°09'54
				min. Earth dist.	13655 Nov 02 09:21	23°☾09'13	4.48329 AU
conjunction	13649 Nov 04 18:35	27°☾12'01	0°08'54	direct	13656 Jan 02 19:34	18°☾17'08	
minimum elong	13649 Nov 04 18:35	27°☾12'01	0°09'44		13656 Apr 10 00:30	0°☾	
behind sun begin	13649 Nov 04 11:45	27°☾07'53		evening set	13656 May 06 11:22	5°☾32'31	
behind sun end	13649 Nov 05 01:26	27°☾16'10		max. Earth dist.	13656 May 17 07:01	7°☾53'34	6.43506 AU
max. Earth dist.	13649 Nov 06 15:39	27°☾39'22	5.92343 AU	conjunction	13656 May 19 08:17	8°☾20'25	-0°15'37
	13649 Nov 16 07:53	0°☾		minimum elong	13656 May 19 08:16	8°☾20'24	0°16'33
morning rise	13649 Nov 18 09:02	0°☾29'37		morning rise	13656 Jun 01 03:56	11°☾07'52	
retrograde	13650 Mar 29 02:17	20°☾58'24		retrograde	13656 Oct 01 09:15	28°☾17'18	
min. Earth dist.	13650 May 25 23:03	16°☾07'44	3.98049 AU	opposition	13656 Dec 01 07:51	23°☾23'41	-0°34'40
opposition	13650 May 27 12:03	15°☾55'11	0°29'42	min. Earth dist.	13656 Dec 02 22:27	23°☾11'18	4.36886 AU
direct	13650 Jul 24 18:25	10°☾58'38		direct	13657 Feb 01 10:14	18°☾23'16	
	13650 Nov 26 15:29	0°☾					
evening set	13650 Nov 28 22:45	0°☾32'14					
conjunction	13650 Dec 12 12:20	3°☾43'09	0°27'40				

	13657 May 08 11:28	0°☾	opposition	13662 Jun 01 14:21	21°♄07'08	0°33'26
evening set	13657 Jun 06 13:27	6°☾16'22	direct	13662 Jul 30 00:56	16°♄10'18	
max. Earth dist.	13657 Jun 17 00:54	8°☾37'32 6.28885 AU		13662 Nov 09 10:59	0°♄	
			evening set	13662 Dec 04 00:31	5°♄34'54	
conjunction	13657 Jun 19 09:48	9°☾09'37 -0°29'58				
minimum elong	13657 Jun 19 09:47	9°☾09'36 0°31'00	conjunction	13662 Dec 17 14:01	8°♄44'30	0°29'27
morning rise	13657 Jul 02 05:15	12°☾02'47	minimum elong	13662 Dec 17 14:00	8°♄44'29	0°30'31
	13657 Oct 23 23:27	0°♂	max. Earth dist.	13662 Dec 20 03:26	9°♄20'19	6.08397 AU
retrograde	13657 Nov 04 00:03	0°♂11'33	morning rise	13662 Dec 31 04:08	11°♄54'06	
	13657 Nov 15 01:21	30°♄☾		13663 Apr 12 03:25	0°♄	
opposition	13658 Jan 03 11:54	25°☾17'28 -0°50'58	retrograde	13663 May 07 15:22	1°♄02'39	
min. Earth dist.	13658 Jan 05 02:57	25°☾04'49 4.19992 AU		13663 Jun 01 23:19	30°♄♄	
direct	13658 Mar 05 13:13	20°☾18'20	min. Earth dist.	13663 Jul 05 00:31	26°♄12'17	4.17199 AU
	13658 May 29 02:15	0°♂	opposition	13663 Jul 06 14:26	25°♄59'34	0°50'58
evening set	13658 Jul 09 12:08	9°♂05'41	direct	13663 Sep 04 01:50	21°♄00'52	
max. Earth dist.	13658 Jul 20 08:30	11°♂37'57 6.11045 AU		13663 Nov 24 07:06	0°♄	
			evening set	13664 Jan 08 07:01	9°♄28'30	
conjunction	13658 Jul 22 10:13	12°♂07'07 -0°35'47				
minimum elong	13658 Jul 22 10:13	12°♂07'07 0°36'38	conjunction	13664 Jan 21 17:50	12°♄29'07	0°35'47
	13658 Aug 03 17:10	15°♂	minimum elong	13664 Jan 21 17:50	12°♄29'07	0°36'37
morning rise	13658 Aug 04 08:43	15°♂09'05	max. Earth dist.	13664 Jan 23 19:10	12°♄56'46	6.26160 AU
	13658 Oct 16 02:15	0°♄		13664 Feb 01 23:50	15°♄	
retrograde	13658 Dec 10 10:32	4°♄33'46	morning rise	13664 Feb 04 04:34	15°♄29'18	
	13659 Feb 05 12:44	30°♄♂		13664 Apr 20 17:14	0°♄	
opposition	13659 Feb 08 07:11	29°♂38'08 -0°51'25	retrograde	13664 Jun 07 13:42	3°♄24'42	
min. Earth dist.	13659 Feb 09 09:15	29°♂29'33 4.02624 AU		13664 Jul 25 16:49	30°♄♄	
direct	13659 Apr 09 00:35	24°♂40'57	min. Earth dist.	13664 Aug 05 23:37	28°♄32'15	4.34366 AU
	13659 Jun 07 04:28	0°♄	opposition	13664 Aug 07 01:11	28°♄23'48	0°50'47
evening set	13659 Aug 13 19:50	14°♄23'42	direct	13664 Oct 06 19:05	23°♄23'45	
				13664 Dec 15 10:34	0°♄	
conjunction	13659 Aug 26 22:47	17°♄34'12 -0°29'15	evening set	13665 Feb 09 04:52	11°♄02'14	
minimum elong	13659 Aug 26 22:48	17°♄34'12 0°29'36				
max. Earth dist.	13659 Aug 26 01:04	17°♄21'01 5.95793 AU	conjunction	13665 Feb 22 11:58	13°♄55'02	0°30'50
morning rise	13659 Sep 09 02:53	20°♄45'39	minimum elong	13665 Feb 22 11:58	13°♄55'03	0°31'14
	13659 Oct 19 06:54	0°♄	max. Earth dist.	13665 Feb 23 14:13	14°♄09'17	6.41456 AU
retrograde	13660 Jan 17 23:45	11°♄16'44	morning rise	13665 Mar 07 17:44	16°♄47'02	
opposition	13660 Mar 17 08:15	6°♄18'33 -0°31'58		13665 May 17 10:44	0°♄	
min. Earth dist.	13660 Mar 17 10:50	6°♄17'41 3.91092 AU	retrograde	13665 Jul 07 17:28	3°♄48'43	
direct	13660 May 14 20:23	1°♄23'09		13665 Aug 28 16:51	30°♄♄	
evening set	13660 Sep 19 07:12	21°♄38'50	opposition	13665 Sep 06 15:51	28°♄50'44	0°36'20
			min. Earth dist.	13665 Sep 06 07:41	28°♄53'23	4.46775 AU
conjunction	13660 Oct 02 15:54	24°♄55'21 -0°10'58	direct	13665 Nov 07 10:27	23°♄50'06	
minimum elong	13660 Oct 02 15:55	24°♄55'21 0°10'37		13666 Jan 14 11:49	0°♄	
behind sun begin	13660 Oct 02 09:28	24°♄51'25	evening set	13666 Mar 12 07:28	10°♄58'39	
behind sun end	13660 Oct 02 22:21	24°♄59'17				
max. Earth dist.	13660 Oct 03 07:18	25°♄04'47 5.89164 AU	conjunction	13666 Mar 25 10:17	13°♄46'27	0°17'35
morning rise	13660 Oct 16 02:40	28°♄12'58	minimum elong	13666 Mar 25 10:18	13°♄46'27	0°17'26
	13660 Oct 23 11:15	0°♄	max. Earth dist.	13666 Mar 25 06:05	13°♄44'12	6.50139 AU
	13661 Jan 04 09:15	15°♄	morning rise	13666 Apr 07 11:34	16°♄33'26	
retrograde	13661 Feb 24 20:51	19°♄06'47		13666 Jun 20 14:59	0°♄	
asc. node	13661 Apr 09 08:12	16°♄09'35	retrograde	13666 Aug 06 07:42	3°♄09'37	
	13661 Apr 18 08:23	15°♄♄		13666 Sep 22 09:23	30°♄♄	
min. Earth dist.	13661 Apr 24 02:59	14°♄13'22 3.90239 AU	opposition	13666 Oct 06 10:53	28°♄14'08	0°13'02
opposition	13661 Apr 25 02:14	14°♄05'30 0°01'27	min. Earth dist.	13666 Oct 06 23:30	28°♄10'05	4.51299 AU
direct	13661 Jun 22 02:19	9°♄10'12	direct	13666 Dec 07 21:54	23°♄13'15	
	13661 Aug 22 09:07	15°♄		13667 Feb 17 22:55	0°♄	
evening set	13661 Oct 27 15:00	29°♄18'25	evening set	13667 Apr 11 11:59	10°♄15'30	
	13661 Oct 30 12:06	0°♄	desc. node	13667 Apr 22 19:47	12°♄40'43	
			max. Earth dist.	13667 Apr 23 03:52	12°♄45'03	6.50182 AU
conjunction	13661 Nov 10 03:50	2°♄34'29 0°11'58				
minimum elong	13661 Nov 10 03:49	2°♄34'29 0°12'51	conjunction	13667 Apr 24 11:15	13°♄01'52	-0°00'06
behind sun begin	13661 Nov 09 22:42	2°♄31'24	minimum elong	13667 Apr 24 11:14	13°♄01'52	0°00'44
behind sun end	13661 Nov 10 08:56	2°♄37'33	behind sun begin	13667 Apr 24 03:14	12°♄57'35	
max. Earth dist.	13661 Nov 12 03:59	3°♄03'36 5.94124 AU	behind sun end	13667 Apr 24 19:15	13°♄06'08	
morning rise	13661 Nov 23 18:24	5°♄51'15		13667 May 03 15:47	15°♄	
retrograde	13662 Apr 03 02:57	26°♄10'30	morning rise	13667 May 07 08:48	15°♄47'30	
min. Earth dist.	13662 May 31 01:11	21°♄19'44 4.00414 AU		13667 Jul 26 06:41	0°♄	

retrograde	13667 Sep 05 07:58	2° Π 28'48		asc. node	13673 Feb 19 16:55	24° \mathbb{M} 16'51	
	13667 Oct 16 15:40	30° \mathbb{R} 8		retrograde	13673 Mar 02 04:17	24° \mathbb{M} 27'56	
opposition	13667 Nov 05 11:55	27° \mathbb{B} 34'47	-0°13'35	min. Earth dist.	13673 Apr 29 08:46	19° \mathbb{M} 34'41	3.91143 AU
min. Earth dist.	13667 Nov 06 16:40	27° \mathbb{B} 25'35	4.46919 AU	opposition	13673 Apr 30 09:41	19° \mathbb{M} 26'14	0°06'23
direct	13668 Jan 06 23:49	22° \mathbb{B} 33'57			13673 Jun 10 14:37	15° \mathbb{R} \mathbb{M}	
	13668 Mar 22 09:40	0° Π		direct	13673 Jun 27 10:54	14° \mathbb{M} 30'46	
evening set	13668 May 10 18:09	9° Π 54'10			13673 Jul 14 06:42	15° \mathbb{M}	
max. Earth dist.	13668 May 21 13:28	12° Π 15'35	6.41616 AU		13673 Oct 13 11:59	0° \mathbb{A}	
				evening set	13673 Nov 01 21:14	4° \mathbb{A} 34'21	
conjunction	13668 May 23 15:02	12° Π 42'43	-0°17'56				
minimum elong	13668 May 23 15:01	12° Π 42'43	0°18'54	conjunction	13673 Nov 15 10:27	7° \mathbb{A} 49'49	0°14'55
morning rise	13668 Jun 05 10:23	15° Π 30'49		minimum elong	13673 Nov 15 10:27	7° \mathbb{A} 49'49	0°15'50
	13668 Aug 23 10:57	0° \mathbb{E}		behind sun begin	13673 Nov 15 09:31	7° \mathbb{A} 49'16	
retrograde	13668 Oct 05 22:48	2° \mathbb{E} 47'32		behind sun end	13673 Nov 15 11:22	7° \mathbb{A} 50'22	
	13668 Nov 18 21:25	30° \mathbb{R} Π		max. Earth dist.	13673 Nov 17 14:40	8° \mathbb{A} 21'15	5.95680 AU
opposition	13668 Dec 05 20:15	27° Π 53'56	-0°37'37	morning rise	13673 Nov 29 01:08	11° \mathbb{A} 05'52	
min. Earth dist.	13668 Dec 07 11:29	27° Π 41'20	4.34639 AU		13674 Mar 11 00:42	0° \mathbb{B}	
direct	13669 Feb 05 19:45	22° Π 53'40		retrograde	13674 Apr 08 02:04	1° \mathbb{B} 16'41	
	13669 Apr 19 03:17	0° \mathbb{E}			13674 May 05 23:14	30° \mathbb{R} \mathbb{A}	
evening set	13669 Jun 11 01:47	10° \mathbb{E} 53'50		min. Earth dist.	13674 Jun 05 00:10	26° \mathbb{A} 26'14	4.02447 AU
max. Earth dist.	13669 Jun 21 12:39	13° \mathbb{E} 15'31	6.26439 AU	opposition	13674 Jun 06 14:27	26° \mathbb{A} 13'16	0°36'54
				direct	13674 Aug 04 03:14	21° \mathbb{A} 16'12	
conjunction	13669 Jun 23 22:05	13° \mathbb{E} 48'05	-0°31'22		13674 Oct 21 09:18	0° \mathbb{B}	
minimum elong	13669 Jun 23 22:05	13° \mathbb{E} 48'04	0°32'25	evening set	13674 Dec 09 01:14	10° \mathbb{B} 33'24	
morning rise	13669 Jul 06 17:57	16° \mathbb{E} 42'23					
	13669 Sep 11 02:04	0° Ω		conjunction	13674 Dec 22 14:21	13° \mathbb{B} 41'48	0°31'02
retrograde	13669 Nov 08 23:24	5° Ω 01'05		minimum elong	13674 Dec 22 14:20	13° \mathbb{B} 41'48	0°32'05
opposition	13670 Jan 08 09:01	0° Ω 06'46	-0°52'06	max. Earth dist.	13674 Dec 25 01:48	14° \mathbb{B} 16'18	6.10694 AU
	13670 Jan 09 05:49	30° \mathbb{R} \mathbb{E}		morning rise	13675 Jan 05 04:18	16° \mathbb{B} 50'13	
min. Earth dist.	13670 Jan 09 22:39	29° \mathbb{E} 54'32	4.17513 AU		13675 Mar 10 01:38	0° \approx	
direct	13670 Mar 10 06:30	25° \mathbb{E} 07'47		retrograde	13675 May 12 05:04	5° \approx 48'40	
	13670 May 06 19:00	0° Ω		min. Earth dist.	13675 Jul 09 17:29	0° \approx 57'59	4.19537 AU
evening set	13670 Jul 14 07:38	14° Ω 02'49		opposition	13675 Jul 11 05:52	0° \approx 45'47	0°51'56
	13670 Jul 18 09:15	15° Ω			13675 Jul 16 23:00	30° \mathbb{R} \mathbb{B}	
max. Earth dist.	13670 Jul 25 08:53	16° Ω 38'40	6.08749 AU	direct	13675 Sep 08 21:26	25° \mathbb{B} 46'49	
					13675 Nov 01 07:15	0° \approx	
conjunction	13670 Jul 27 06:21	17° Ω 05'29	-0°35'38	evening set	13676 Jan 13 00:00	14° \approx 07'30	
minimum elong	13670 Jul 27 06:22	17° Ω 05'29	0°36'25		13676 Jan 16 22:33	15° \approx	
morning rise	13670 Aug 09 05:20	20° Ω 08'41					
	13670 Sep 22 16:14	0° \mathbb{P}		conjunction	13676 Jan 26 10:34	17° \approx 07'03	0°35'41
retrograde	13670 Dec 15 17:37	9° \mathbb{P} 43'08		minimum elong	13676 Jan 26 10:34	17° \approx 07'03	0°36'29
opposition	13671 Feb 13 12:20	4° \mathbb{P} 47'11	-0°49'49	max. Earth dist.	13676 Jan 28 10:19	17° \approx 33'41	6.28367 AU
min. Earth dist.	13671 Feb 14 11:51	4° \mathbb{P} 39'26	4.00721 AU	morning rise	13676 Feb 08 20:32	20° \approx 06'01	
	13671 Apr 04 04:22	30° \mathbb{R} Ω			13676 Mar 27 22:17	0° \mathbb{H}	
direct	13671 Apr 14 01:08	29° Ω 50'17		retrograde	13676 Jun 11 21:14	7° \mathbb{H} 53'14	
	13671 Apr 23 22:03	0° \mathbb{P}		min. Earth dist.	13676 Aug 10 10:10	3° \mathbb{H} 00'37	4.36279 AU
evening set	13671 Aug 18 22:58	19° \mathbb{P} 38'35		opposition	13676 Aug 11 09:57	2° \mathbb{H} 52'47	0°49'27
max. Earth dist.	13671 Aug 31 08:15	22° \mathbb{P} 38'57	5.94444 AU		13676 Sep 03 19:03	30° \mathbb{R} \approx	
				direct	13676 Oct 11 07:02	27° \approx 52'43	
conjunction	13671 Sep 01 02:30	22° \mathbb{P} 50'03	-0°27'16		13676 Nov 18 03:10	0° \mathbb{H}	
minimum elong	13671 Sep 01 02:31	22° \mathbb{P} 50'03	0°27'31	evening set	13677 Feb 13 15:33	15° \mathbb{H} 26'26	
morning rise	13671 Sep 14 07:39	26° \mathbb{P} 02'34					
	13671 Sep 30 21:46	0° $\underline{\mathbb{B}}$		conjunction	13677 Feb 26 21:54	18° \mathbb{H} 18'24	0°29'21
retrograde	13672 Jan 23 08:46	16° $\underline{\mathbb{B}}$ 39'03		minimum elong	13677 Feb 26 21:55	18° \mathbb{H} 18'24	0°29'40
opposition	13672 Mar 22 17:30	11° $\underline{\mathbb{B}}$ 40'23	-0°27'48	max. Earth dist.	13677 Feb 27 19:02	18° \mathbb{H} 29'50	6.42948 AU
min. Earth dist.	13672 Mar 22 15:37	11° $\underline{\mathbb{B}}$ 41'01	3.90459 AU	morning rise	13677 Mar 12 03:14	21° \mathbb{H} 09'37	
direct	13672 May 20 02:53	6° $\underline{\mathbb{B}}$ 45'03			13677 Apr 24 22:47	0° \mathbb{Y}	
evening set	13672 Sep 24 14:35	27° $\underline{\mathbb{B}}$ 01'33		retrograde	13677 Jul 11 22:45	8° \mathbb{Y} 06'41	
	13672 Oct 06 18:09	0° \mathbb{M}		opposition	13677 Sep 10 21:07	3° \mathbb{Y} 09'08	0°33'25
				min. Earth dist.	13677 Sep 10 16:13	3° \mathbb{Y} 10'43	4.47787 AU
conjunction	13672 Oct 08 00:03	0° \mathbb{M} 18'21	-0°07'49		13677 Oct 07 06:46	30° \mathbb{R} \mathbb{H}	
minimum elong	13672 Oct 08 00:03	0° \mathbb{M} 18'21	0°07'23	direct	13677 Nov 11 18:41	28° \mathbb{H} 08'31	
behind sun begin	13672 Oct 07 16:27	0° \mathbb{M} 13'42			13677 Dec 17 14:00	0° \mathbb{Y}	
behind sun end	13672 Oct 08 07:40	0° \mathbb{M} 22'59		evening set	13678 Mar 16 14:10	15° \mathbb{Y} 15'10	
max. Earth dist.	13672 Oct 08 20:53	0° \mathbb{M} 31'07	5.89312 AU				
morning rise	13672 Oct 21 11:26	3° \mathbb{M} 36'11		conjunction	13678 Mar 29 16:36	18° \mathbb{Y} 02'37	0°15'15
	13672 Dec 10 13:37	15° \mathbb{M}		minimum elong	13678 Mar 29 16:37	18° \mathbb{Y} 02'37	0°15'02

behind sun begin	13678 Mar 29 13:51	18° Υ 01'09		max. Earth dist.	13683 Sep 05 11:51	27° η 45'22	5.93307 AU
behind sun end	13678 Mar 29 19:23	18° Υ 04'06					
max. Earth dist.	13678 Mar 29 09:59	17° Υ 59'06	6.50638 AU	conjunction	13683 Sep 06 01:05	27° η 53'25	-0°25'11
morning rise	13678 Apr 11 17:12	20° Υ 49'12		minimum elong	13683 Sep 06 01:06	27° η 53'26	0°25'19
	13678 May 28 02:01	0° \mathcal{B}			13683 Sep 14 16:49	0° \mathcal{A}	
retrograde	13678 Aug 10 10:55	7° \mathcal{B} 24'23		morning rise	13683 Sep 19 06:57	1° \mathcal{A} 06'50	
opposition	13678 Oct 10 15:27	2° \mathcal{B} 29'14	0°09'20	retrograde	13684 Jan 28 14:40	21° \mathcal{A} 48'21	
min. Earth dist.	13678 Oct 11 05:09	2° \mathcal{B} 24'51	4.51300 AU	opposition	13684 Mar 27 21:13	16° \mathcal{A} 49'19	-0°23'37
	13678 Oct 30 23:10	30° $\mathcal{K}\Upsilon$		min. Earth dist.	13684 Mar 27 17:35	16° \mathcal{A} 50'32	3.89838 AU
direct	13678 Dec 12 02:09	27° Υ 28'29		direct	13684 May 25 05:20	11° \mathcal{A} 54'01	
	13679 Jan 23 09:07	0° \mathcal{B}			13684 Sep 20 15:09	0° \mathcal{M}	
desc. node	13679 Feb 27 03:05	5° \mathcal{B} 06'05		evening set	13684 Sep 29 16:45	2° \mathcal{M} 11'46	
evening set	13679 Apr 15 17:35	14° \mathcal{B} 31'29					
	13679 Apr 17 23:06	15° \mathcal{B}		conjunction	13684 Oct 13 02:59	5° \mathcal{M} 28'57	-0°04'45
max. Earth dist.	13679 Apr 27 06:58	16° \mathcal{B} 59'55	6.49711 AU	minimum elong	13684 Oct 13 02:58	5° \mathcal{M} 28'56	0°04'14
				behind sun begin	13684 Oct 12 18:45	5° \mathcal{M} 23'55	
conjunction	13679 Apr 28 16:20	17° \mathcal{B} 17'50	-0°02'44	behind sun end	13684 Oct 13 11:10	5° \mathcal{M} 33'57	
minimum elong	13679 Apr 28 16:20	17° \mathcal{B} 17'50	0°03'26	max. Earth dist.	13684 Oct 14 04:04	5° \mathcal{M} 44'19	5.89273 AU
behind sun begin	13679 Apr 28 08:23	17° \mathcal{B} 13'35		morning rise	13684 Oct 26 15:03	8° \mathcal{M} 47'06	
behind sun end	13679 Apr 29 00:16	17° \mathcal{B} 22'05			13684 Nov 21 20:04	15° \mathcal{M}	
morning rise	13679 May 11 13:26	20° \mathcal{B} 03'30		asc. node	13685 Jan 03 13:45	23° \mathcal{M} 42'58	
	13679 Jun 30 22:13	0° \mathcal{I}		retrograde	13685 Mar 07 06:28	29° \mathcal{M} 37'45	
retrograde	13679 Sep 09 16:05	6° \mathcal{I} 47'08		min. Earth dist.	13685 May 04 08:24	24° \mathcal{M} 45'06	3.91709 AU
opposition	13679 Nov 09 19:03	1° \mathcal{I} 53'20	-0°17'14	opposition	13685 May 05 11:52	24° \mathcal{M} 35'48	0°11'02
min. Earth dist.	13679 Nov 11 01:59	1° \mathcal{I} 43'26	4.46009 AU	direct	13685 Jul 02 11:59	19° \mathcal{M} 40'12	
	13679 Nov 24 22:21	30° $\mathcal{K}\mathcal{B}$			13685 Sep 25 08:53	0° \mathcal{J}	
direct	13680 Jan 11 07:12	26° \mathcal{B} 52'38		evening set	13685 Nov 06 23:48	9° \mathcal{J} 41'04	
	13680 Feb 27 06:14	0° \mathcal{I}					
evening set	13680 May 15 00:50	14° \mathcal{I} 15'48		conjunction	13685 Nov 20 13:11	12° \mathcal{J} 56'07	0°17'38
max. Earth dist.	13680 May 25 17:25	16° \mathcal{I} 36'12	6.40328 AU	minimum elong	13685 Nov 20 13:10	12° \mathcal{J} 56'07	0°18'36
				max. Earth dist.	13685 Nov 22 17:54	13° \mathcal{J} 27'45	5.96774 AU
conjunction	13680 May 27 21:20	17° \mathcal{I} 04'43	-0°20'10	morning rise	13685 Dec 04 04:14	16° \mathcal{J} 11'44	
minimum elong	13680 May 27 21:19	17° \mathcal{I} 04'42	0°21'09		13686 Feb 06 18:28	0° \mathcal{Z}	
morning rise	13680 Jun 09 16:38	19° \mathcal{I} 53'16		retrograde	13686 Apr 12 21:40	6° \mathcal{Z} 16'17	
	13680 Jul 29 13:17	0° \mathcal{E}		min. Earth dist.	13686 Jun 09 20:33	1° \mathcal{Z} 25'54	4.03941 AU
retrograde	13680 Oct 10 10:59	7° \mathcal{E} 15'27		opposition	13686 Jun 11 11:19	1° \mathcal{Z} 12'46	0°39'59
opposition	13680 Dec 10 08:01	2° \mathcal{E} 21'47	-0°40'18		13686 Jun 20 12:42	30° $\mathcal{K}\mathcal{J}$	
min. Earth dist.	13680 Dec 11 22:57	2° \mathcal{E} 09'15	4.33044 AU	direct	13686 Aug 09 02:42	26° \mathcal{J} 15'23	
	13680 Dec 29 11:42	30° $\mathcal{K}\mathcal{I}$			13686 Sep 27 04:33	0° \mathcal{Z}	
direct	13681 Feb 10 04:39	27° \mathcal{I} 21'39		evening set	13686 Dec 13 23:37	15° \mathcal{Z} 27'24	
	13681 Mar 24 13:22	0° \mathcal{E}					
evening set	13681 Jun 15 12:00	15° \mathcal{E} 26'41		conjunction	13686 Dec 27 12:48	18° \mathcal{Z} 35'00	0°32'22
max. Earth dist.	13681 Jun 26 00:56	17° \mathcal{E} 50'03	6.24658 AU	minimum elong	13686 Dec 27 12:47	18° \mathcal{Z} 34'59	0°33'23
				max. Earth dist.	13686 Dec 30 00:50	19° \mathcal{Z} 09'41	6.12466 AU
conjunction	13681 Jun 28 08:27	18° \mathcal{E} 21'39	-0°32'35	morning rise	13687 Jan 10 02:19	21° \mathcal{Z} 42'26	
minimum elong	13681 Jun 28 08:27	18° \mathcal{E} 21'39	0°33'37		13687 Feb 17 02:07	0° \approx	
morning rise	13681 Jul 11 04:16	21° \mathcal{E} 16'42		retrograde	13687 May 16 19:19	10° \approx 32'44	
	13681 Aug 20 16:22	0° \mathcal{Q}		min. Earth dist.	13687 Jul 14 09:02	5° \approx 41'53	4.21406 AU
retrograde	13681 Nov 13 19:18	9° \mathcal{Q} 43'08		opposition	13687 Jul 15 20:22	5° \approx 30'03	0°52'33
opposition	13682 Jan 13 02:55	4° \mathcal{Q} 48'42	-0°52'51	direct	13687 Sep 13 15:26	0° \approx 30'54	
min. Earth dist.	13682 Jan 14 16:09	4° \mathcal{Q} 36'35	4.15665 AU		13687 Dec 31 09:27	15° \approx	
	13682 Mar 04 16:11	30° $\mathcal{K}\mathcal{E}$		evening set	13688 Jan 17 16:36	18° \approx 46'00	
direct	13682 Mar 14 20:59	29° \mathcal{E} 49'59					
	13682 Mar 25 01:45	0° \mathcal{Q}		conjunction	13688 Jan 31 02:35	21° \approx 44'35	0°35'22
	13682 Jul 02 08:07	15° \mathcal{Q}		minimum elong	13688 Jan 31 02:35	21° \approx 44'35	0°36'06
evening set	13682 Jul 18 23:30	18° \mathcal{Q} 50'42		max. Earth dist.	13688 Feb 01 23:24	22° \approx 09'28	6.30180 AU
max. Earth dist.	13682 Jul 30 01:51	21° \mathcal{Q} 27'52	6.06979 AU	morning rise	13688 Feb 13 12:09	24° \approx 42'35	
					13688 Mar 09 04:09	0° \mathcal{H}	
conjunction	13682 Jul 31 22:29	21° \mathcal{Q} 54'18	-0°35'14	retrograde	13688 Jun 16 04:10	12° \mathcal{H} 22'41	
minimum elong	13682 Jul 31 22:29	21° \mathcal{Q} 54'18	0°35'58	opposition	13688 Aug 15 18:47	7° \mathcal{H} 22'29	0°47'51
morning rise	13682 Aug 13 22:12	24° \mathcal{Q} 58'34		min. Earth dist.	13688 Aug 14 20:46	7° \mathcal{H} 29'44	4.37909 AU
	13682 Sep 04 16:02	0° \mathcal{M}		direct	13688 Oct 15 19:05	2° \mathcal{H} 22'13	
retrograde	13682 Dec 20 17:50	14° \mathcal{M} 41'07		evening set	13689 Feb 18 02:24	19° \mathcal{H} 51'40	
opposition	13683 Feb 18 12:25	9° \mathcal{M} 44'50	-0°47'55				
min. Earth dist.	13683 Feb 19 08:50	9° \mathcal{M} 38'05	3.99186 AU	conjunction	13689 Mar 03 08:22	22° \mathcal{H} 42'55	0°27'42
direct	13683 Apr 18 20:58	4° \mathcal{M} 48'08		minimum elong	13689 Mar 03 08:23	22° \mathcal{H} 42'55	0°27'56
evening set	13683 Aug 23 20:42	24° \mathcal{M} 41'03		max. Earth dist.	13689 Mar 04 03:40	22° \mathcal{H} 53'19	6.44285 AU

morning rise	13689 Mar 16 12:51	25° H 33'19	direct	13695 Apr 23 23:52	9° H 59'25	
	13689 Apr 06 17:46	0° Y	evening set	13695 Aug 29 01:08	29° H 58'31	
retrograde	13689 Jul 16 02:36	12° Y 25'46		13695 Aug 29 03:34	0° A	
opposition	13689 Sep 15 02:32	7° Y 28'29 0°30'19				
min. Earth dist.	13689 Sep 14 23:21	7° Y 29'31 4.48731 AU	conjunction	13695 Sep 11 06:24	3° A 12'00 -0°22'46	
direct	13689 Nov 16 02:28	2° Y 27'47	minimum elong	13695 Sep 11 06:24	3° A 12'00 0°22'49	
evening set	13690 Mar 20 21:07	19° Y 32'17	max. Earth dist.	13695 Sep 10 21:37	3° A 06'38 5.91913 AU	
			morning rise	13695 Sep 24 13:18	6° A 26'33	
conjunction	13690 Apr 02 22:48	22° Y 19'18 0°12'50	retrograde	13696 Feb 03 01:38	27° A 13'35	
minimum elong	13690 Apr 02 22:49	22° Y 19'19 0°12'32	opposition	13696 Apr 02 07:22	22° A 14'11 -0°18'59	
behind sun begin	13690 Apr 02 17:40	22° Y 16'35	min. Earth dist.	13696 Apr 01 23:34	22° A 16'48 3.89200 AU	
behind sun end	13690 Apr 03 03:58	22° Y 22'03	direct	13696 May 30 11:38	17° A 19'00	
max. Earth dist.	13690 Apr 02 11:26	22° Y 13'15 6.51091 AU		13696 Sep 02 16:11	0° M	
morning rise	13690 Apr 15 22:59	25° Y 05'31	evening set	13696 Oct 05 02:03	7° M 37'57	
	13690 May 09 16:38	0° B				
retrograde	13690 Aug 14 16:45	11° B 39'36	conjunction	13696 Oct 18 12:51	10° M 55'22 -0°01'26	
opposition	13690 Oct 14 20:32	6° B 44'36 0°05'33	minimum elong	13696 Oct 18 12:51	10° M 55'22 0°00'49	
min. Earth dist.	13690 Oct 15 13:26	6° B 39'11 4.51210 AU	behind sun begin	13696 Oct 18 04:30	10° M 50'16	
direct	13690 Dec 16 09:15	1° B 43'43	behind sun end	13696 Oct 18 21:12	11° M 00'28	
desc. node	13691 Jan 03 22:32	2° B 14'22	max. Earth dist.	13696 Oct 19 17:43	11° M 13'02 5.89450 AU	
	13691 Apr 01 20:27	15° B	morning rise	13696 Nov 01 01:46	14° M 13'47	
evening set	13691 Apr 19 22:58	18° B 47'28		13696 Nov 04 06:00	15° M	
max. Earth dist.	13691 May 01 09:16	21° B 14'27 6.49046 AU	asc. node	13696 Nov 12 13:33	16° M 59'51	
				13697 Jan 14 04:21	0° A	
conjunction	13691 May 02 21:23	21° B 33'53 -0°05'20	retrograde	13697 Mar 12 13:44	5° A 01'58	
minimum elong	13691 May 02 21:23	21° B 33'53 0°06'06	opposition	13697 May 10 20:00	29° M 59'42 0°15'51	
behind sun begin	13691 May 02 13:48	21° B 29'49	min. Earth dist.	13697 May 09 13:57	0° A 09'53 3.92686 AU	
behind sun end	13691 May 03 04:59	21° B 37'57		13697 May 10 19:06	30° R M	
morning rise	13691 May 15 18:02	24° B 19'37	direct	13697 Jul 07 21:20	25° M 03'56	
	13691 Jun 12 01:58	0° II		13697 Sep 02 00:23	0° A	
retrograde	13691 Sep 13 22:52	11° II 06'12	evening set	13697 Nov 12 07:39	15° A 00'13	
opposition	13691 Nov 14 02:32	6° II 12'24 -0°20'51				
min. Earth dist.	13691 Nov 15 10:16	6° II 02'15 4.44792 AU	conjunction	13697 Nov 25 21:23	18° A 14'36 0°20'21	
direct	13692 Jan 15 12:29	1° II 11'42	minimum elong	13697 Nov 25 21:22	18° A 14'36 0°21'21	
evening set	13692 May 19 08:18	18° II 38'52	max. Earth dist.	13697 Nov 28 05:58	18° A 48'25 5.98469 AU	
max. Earth dist.	13692 May 30 00:02	20° II 59'19 6.38621 AU	morning rise	13697 Dec 09 12:21	21° A 29'23	
				13698 Jan 16 02:36	0° B	
conjunction	13692 Jun 01 04:37	21° II 28'20 -0°22'19	retrograde	13698 Apr 17 22:11	11° B 24'58	
minimum elong	13692 Jun 01 04:37	21° II 28'19 0°23'20	min. Earth dist.	13698 Jun 14 21:05	6° B 34'40 4.06162 AU	
morning rise	13692 Jun 13 23:44	24° II 17'29	opposition	13698 Jun 16 12:07	6° B 21'28 0°42'53	
	13692 Jul 10 17:47	0° C	direct	13698 Aug 14 06:49	1° B 23'53	
retrograde	13692 Oct 15 02:37	11° C 46'37	evening set	13698 Dec 19 01:05	20° B 27'57	
opposition	13692 Dec 14 21:26	6° C 52'55 -0°42'50				
min. Earth dist.	13692 Dec 16 13:54	6° C 39'54 4.30930 AU	conjunction	13699 Jan 01 13:51	23° B 34'15 0°33'31	
direct	13693 Feb 14 15:56	1° C 52'54	minimum elong	13699 Jan 01 13:51	23° B 34'15 0°34'31	
evening set	13693 Jun 20 00:36	20° C 04'41	max. Earth dist.	13699 Jan 04 01:24	24° B 08'27 6.15003 AU	
max. Earth dist.	13693 Jun 30 12:30	22° C 28'17 6.22285 AU	morning rise	13699 Jan 15 03:02	26° B 40'22	
				13699 Jan 29 22:35	0° A	
conjunction	13693 Jul 02 21:10	23° C 00'42 -0°33'37		13699 May 07 02:42	15° A	
minimum elong	13693 Jul 02 21:10	23° C 00'42 0°34'37	retrograde	13699 May 21 07:20	15° A 19'42	
morning rise	13693 Jul 15 17:28	25° C 56'54		13699 Jun 04 11:43	15° R A	
	13693 Aug 02 19:01	0° Q	min. Earth dist.	13699 Jul 19 00:55	10° A 28'56 4.24031 AU	
retrograde	13693 Nov 18 17:46	14° Q 33'28	opposition	13699 Jul 20 11:50	10° A 17'16 0°52'51	
opposition	13694 Jan 18 00:36	9° Q 38'47 -0°53'17	direct	13699 Sep 18 10:28	5° A 17'56	
min. Earth dist.	13694 Jan 19 11:46	9° Q 27'19 4.13206 AU		13699 Dec 13 04:19	15° A	
direct	13694 Mar 19 13:30	4° Q 40'16	evening set	13700 Jan 22 09:21	23° A 25'05	
	13694 Jun 14 11:01	15° Q				
evening set	13694 Jul 23 19:41	23° Q 49'00	conjunction	13700 Feb 04 18:49	26° A 22'23 0°34'51	
max. Earth dist.	13694 Aug 04 02:53	26° Q 29'49 6.04662 AU	minimum elong	13700 Feb 04 18:50	26° A 22'23 0°35'32	
			max. Earth dist.	13700 Feb 06 12:56	26° A 45'39 6.32695 AU	
conjunction	13694 Aug 05 19:23	26° Q 53'55 -0°34'35	morning rise	13700 Feb 18 03:34	29° A 19'02	
minimum elong	13694 Aug 05 19:23	26° Q 53'56 0°35'15		13700 Feb 21 06:36	0° H	
morning rise	13694 Aug 18 19:43	29° Q 59'33	retrograde	13700 Jun 21 11:02	16° H 50'03	
	13694 Aug 18 20:28	0° H	min. Earth dist.	13700 Aug 20 07:37	11° H 56'37 4.40111 AU	
retrograde	13694 Dec 26 03:01	19° H 52'26	opposition	13700 Aug 21 02:57	11° H 50'17 0°46'00	
opposition	13695 Feb 23 18:27	14° H 55'52 -0°45'34	direct	13700 Oct 21 08:05	6° H 49'58	
min. Earth dist.	13695 Feb 24 13:03	14° H 49'43 3.97230 AU	evening set	13701 Feb 23 11:32	24° H 13'32	






































































































































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minimum elong	13701 Mar 08 16:46	27° X 03'52	0°26'07	minimum elong	13706 Aug 11 19:02	2° M 01'01	0°34'16
max. Earth dist.	13701 Mar 09 07:04	27° X 11'33	6.46005 AU	morning rise	13706 Aug 24 20:21	5° M 08'15	
morning rise	13701 Mar 21 20:42	29° X 53'22		retrograde	13707 Jan 01 13:49	25° M 12'21	
	13701 Mar 22 09:08	0° Y		opposition	13707 Mar 02 03:25	20° M 15'26	-0°42'49
retrograde	13701 Jul 21 05:14	16° Y 40'36		min. Earth dist.	13707 Mar 02 17:41	20° M 10'42	3.95152 AU
opposition	13701 Sep 20 06:19	11° Y 43'38	0°27'09	direct	13707 Apr 30 03:04	15° M 19'15	
min. Earth dist.	13701 Sep 20 06:06	11° Y 43'42	4.49870 AU		13707 Aug 12 15:34	0° A	
direct	13701 Nov 21 09:02	6° Y 42'52		evening set	13707 Sep 04 08:59	5° A 24'49	
evening set	13702 Mar 26 01:37	23° Y 44'57					
				conjunction	13707 Sep 17 15:05	8° A 39'21	-0°20'08
conjunction	13702 Apr 08 02:56	26° Y 31'35	0°10'25	minimum elong	13707 Sep 17 15:06	8° A 39'22	0°20'06
minimum elong	13702 Apr 08 02:56	26° Y 31'35	0°10'02	max. Earth dist.	13707 Sep 17 11:43	8° A 37'18	5.90590 AU
behind sun begin	13702 Apr 07 20:29	26° Y 28'10		morning rise	13707 Sep 30 23:04	11° A 55'02	
behind sun end	13702 Apr 08 09:23	26° Y 35'00			13707 Dec 29 18:17	0° M	
max. Earth dist.	13702 Apr 07 12:46	26° Y 24'02	6.51568 AU	retrograde	13708 Feb 09 14:58	2° M .46'52	
morning rise	13702 Apr 21 02:20	29° Y 17'22			13708 Mar 22 18:55	30° R A	
	13702 Apr 24 11:02	0° B		opposition	13708 Apr 08 20:34	27° A 46'56	-0°14'08
	13702 Jul 27 04:48	15° B		min. Earth dist.	13708 Apr 08 08:49	27° A 50'54	3.88798 AU
retrograde	13702 Aug 19 18:29	15° B 50'43		direct	13708 Jun 05 23:18	22° A 51'46	
	13702 Sep 12 06:52	15° R B			13708 Aug 13 08:04	0° M	
opposition	13702 Oct 19 23:33	10° B 55'56	0°01'52	asc. node	13708 Sep 19 23:33	8° M .01'08	
min. Earth dist.	13702 Oct 20 18:39	10° B 49'49	4.50994 AU	evening set	13708 Oct 11 13:54	13° M .10'26	
desc. node	13702 Nov 15 12:55	7° B 47'38			13708 Oct 19 01:43	15° M .	
direct	13702 Dec 21 12:26	5° B 55'04					
	13703 Mar 16 13:04	15° B		conjunction	13708 Oct 25 01:31	16° M .27'54	0°02'00
evening set	13703 Apr 25 02:45	23° B 00'15		minimum elong	13708 Oct 25 01:30	16° M .27'53	0°02'41
max. Earth dist.	13703 May 06 08:23	25° B 25'06	6.48132 AU	behind sun begin	13708 Oct 24 17:09	16° M .22'49	
				behind sun end	13708 Oct 25 09:50	16° M .32'58	
conjunction	13703 May 08 00:39	25° B 46'49	-0°07'51	max. Earth dist.	13708 Oct 26 13:23	16° M .49'49	5.90023 AU
minimum elong	13703 May 08 00:38	25° B 46'49	0°08'39	morning rise	13708 Nov 07 14:49	19° M .46'13	
behind sun begin	13703 May 07 17:42	25° B 43'05			13708 Dec 22 06:34	0° A	
behind sun end	13703 May 08 07:34	25° B 50'32		retrograde	13709 Mar 18 23:13	10° A 29'33	
morning rise	13703 May 20 21:04	28° B 32'48		min. Earth dist.	13709 May 15 21:09	5° A 37'49	3.94155 AU
	13703 May 27 16:38	0° I		opposition	13709 May 17 05:17	5° A 26'55	0°20'31
retrograde	13703 Sep 19 07:30	15° I 23'26		direct	13709 Jul 14 08:27	0° A 30'55	
opposition	13703 Nov 19 09:12	10° I 29'43	-0°24'19	evening set	13709 Nov 18 16:30	20° A 20'27	
min. Earth dist.	13703 Nov 20 19:59	10° I 18'34	4.43210 AU				
direct	13704 Jan 20 18:44	5° I 29'00		conjunction	13709 Dec 02 06:11	23° A 33'47	0°22'53
evening set	13704 May 24 14:50	23° I 01'26		minimum elong	13709 Dec 02 06:10	23° A 33'47	0°23'55
max. Earth dist.	13704 Jun 04 04:01	25° I 21'09	6.36471 AU	max. Earth dist.	13709 Dec 04 16:50	24° A 08'38	6.00638 AU
				morning rise	13709 Dec 15 21:11	26° A 47'28	
conjunction	13704 Jun 06 11:09	25° I 51'42	-0°24'20		13709 Dec 29 16:02	0° B	
minimum elong	13704 Jun 06 11:08	25° I 51'42	0°25'22	retrograde	13710 Apr 23 18:38	16° B 31'54	
morning rise	13704 Jun 19 06:18	28° I 41'42		min. Earth dist.	13710 Jun 20 19:49	11° B 41'55	4.08776 AU
	13704 Jun 25 04:54	0° B		opposition	13710 Jun 22 11:59	11° B 28'21	0°45'24
retrograde	13704 Oct 20 17:12	16° B 19'35		direct	13710 Aug 20 09:38	6° B 30'27	
opposition	13704 Dec 20 11:14	11° B 25'45	-0°45'09	evening set	13710 Dec 25 01:35	25° B 25'21	
min. Earth dist.	13704 Dec 22 03:13	11° B 12'52	4.28340 AU				
direct	13705 Feb 20 01:02	6° B 25'52		conjunction	13711 Jan 07 13:55	28° B 30'13	0°34'24
evening set	13705 Jun 25 14:04	24° B 46'09		minimum elong	13711 Jan 07 13:55	28° B 30'13	0°35'23
max. Earth dist.	13705 Jul 06 03:48	27° B 11'41	6.19456 AU	max. Earth dist.	13711 Jan 09 23:20	29° B 02'59	6.17805 AU
					13711 Jan 14 03:23	0° C	
conjunction	13705 Jul 08 10:58	27° B 43'27	-0°34'28	morning rise	13711 Jan 21 02:29	1° C 34'48	
minimum elong	13705 Jul 08 10:57	27° B 43'27	0°35'25		13711 Mar 29 02:35	15° C	
	13705 Jul 18 08:08	0° C		retrograde	13711 May 26 20:33	20° C 02'39	
morning rise	13705 Jul 21 07:38	0° C 41'00		min. Earth dist.	13711 Jul 24 17:55	15° C 11'18	4.26749 AU
	13705 Sep 30 15:42	15° C		opposition	13711 Jul 26 02:16	15° C 00'31	0°52'46
retrograde	13705 Nov 24 20:58	19° C 29'30			13711 Jul 26 03:50	15° R C	
	13706 Jan 20 18:32	15° R C		direct	13711 Sep 24 06:38	10° C 00'59	
opposition	13706 Jan 24 00:20	14° C 34'37	-0°53'25		13711 Nov 22 06:56	15° C	
min. Earth dist.	13706 Jan 25 10:58	14° C 23'18	4.10350 AU	evening set	13712 Jan 28 00:46	28° C 00'08	
direct	13706 Mar 25 09:22	9° C 36'23			13712 Feb 06 03:24	0° X	
	13706 May 24 14:25	15° C					
evening set	13706 Jul 29 18:34	28° C 54'34		conjunction	13712 Feb 10 09:39	0° X 56'12	0°34'07
	13706 Aug 03 08:34	0° M		minimum elong	13712 Feb 10 09:40	0° X 56'12	0°34'43
max. Earth dist.	13706 Aug 10 05:17	1° M 38'26	6.02049 AU	max. Earth dist.	13712 Feb 12 00:38	1° X 17'37	6.35112 AU

morning rise	13712 Feb 23 17:41	3° X 51'35		min. Earth dist.	13718 Jan 30 11:11	19° Ω 29'00	4.07742 AU
retrograde	13712 Jun 25 15:24	21° X 14'15			13718 Mar 16 13:03	15° R Ω	
opposition	13712 Aug 25 10:07	16° X 14'52	0°43'53	direct	13718 Mar 30 06:45	14° Ω 41'28	
min. Earth dist.	13712 Aug 24 16:46	16° X 20'33	4.42079 AU		13718 Apr 13 01:11	15° Ω	
direct	13712 Oct 25 18:21	11° X 14'28			13718 Jul 17 05:34	0° np	
evening set	13713 Feb 27 20:18	28° X 33'16		evening set	13718 Aug 03 20:39	4° np 08'10	
	13713 Mar 06 14:37	0° Y					
conjunction	13713 Mar 13 00:57	1° Y 22'49	0°24'02	conjunction	13718 Aug 16 21:44	7° np 15'57	-0°32'30
minimum elong	13713 Mar 13 00:58	1° Y 22'49	0°24'08	minimum elong	13718 Aug 16 21:45	7° np 15'57	0°32'59
max. Earth dist.	13713 Mar 13 11:06	1° Y 28'15	6.47398 AU	max. Earth dist.	13718 Aug 15 12:33	6° np 55'59	5.99870 AU
morning rise	13713 Mar 26 04:06	4° Y 11'31		morning rise	13718 Aug 29 23:59	10° np 24'36	
retrograde	13713 Jul 25 08:29	20° Y 54'45		retrograde	13718 Dec 18 08:38	0° Ω	
opposition	13713 Sep 24 10:17	15° Y 58'13	0°23'48		13719 Jan 07 02:49	0° Ω 38'12	
min. Earth dist.	13713 Sep 24 13:30	15° Y 57'11	4.50615 AU	opposition	13719 Jan 26 19:59	30° R np	
direct	13713 Nov 25 15:58	10° Y 57'26		min. Earth dist.	13719 Mar 07 14:42	25° np 40'54	-0°39'39
evening set	13714 Mar 30 06:59	27° Y 58'28		direct	13719 Mar 08 01:14	25° np 37'23	3.93653 AU
	13714 Apr 08 19:33	0° Z			13719 May 05 11:05	20° np 45'01	
max. Earth dist.	13714 Apr 11 11:55	0° Z 34'21	6.51603 AU	evening set	13719 Jul 23 23:45	0° Ω	
					13719 Sep 09 18:12	10° Ω 54'35	
conjunction	13714 Apr 12 07:40	0° Z 44'53	0°07'54	conjunction	13719 Sep 23 01:16	14° Ω 09'52	-0°17'20
minimum elong	13714 Apr 12 07:40	0° Z 44'53	0°07'27	minimum elong	13719 Sep 23 01:17	14° Ω 09'53	0°17'11
behind sun begin	13714 Apr 12 00:21	0° Z 41'00		max. Earth dist.	13719 Sep 23 05:28	14° Ω 12'27	5.89958 AU
behind sun end	13714 Apr 12 14:58	0° Z 48'45		morning rise	13719 Oct 06 09:59	17° Ω 26'14	
morning rise	13714 Apr 25 06:44	3° Z 30'31			13719 Dec 01 07:06	0° M	
	13714 Jun 24 15:50	15° Z		retrograde	13720 Feb 15 04:34	8° M .19'29	
retrograde	13714 Aug 23 23:56	20° Z 04'39		opposition	13720 Apr 14 08:56	3° M .19'10	-0°09'12
desc. node	13714 Sep 26 23:11	18° Z 21'20		min. Earth dist.	13720 Apr 13 17:49	3° M .24'16	3.89140 AU
opposition	13714 Oct 24 04:25	15° Z 10'05	-0°01'56		13720 May 11 11:33	30° R Ω	
min. Earth dist.	13714 Oct 25 02:30	15° Z 03'00	4.50331 AU	direct	13720 Jun 11 10:54	28° Ω 24'02	
	13714 Oct 25 11:52	15° R Z			13720 Jul 12 07:18	0° M	
direct	13714 Dec 25 17:47	10° Z 09'11		asc. node	13720 Jul 27 20:57	1° M .53'46	
	13715 Feb 23 12:51	15° Z			13720 Oct 01 17:49	15° M	
evening set	13715 Apr 29 08:15	27° Z 17'11		evening set	13720 Oct 17 00:32	18° M .39'34	
max. Earth dist.	13715 May 10 11:40	29° Z 41'16	6.46806 AU				
	13715 May 11 22:17	0° II		conjunction	13720 Oct 30 12:27	21° M .56'36	0°05'15
conjunction	13715 May 12 06:00	0° II 04'09	-0°10'23	minimum elong	13720 Oct 30 12:26	21° M .56'36	0°05'59
minimum elong	13715 May 12 05:59	0° II 04'09	0°11'14	behind sun begin	13720 Oct 30 04:29	21° M .51'47	
behind sun begin	13715 May 12 00:05	0° II 00'58		behind sun end	13720 Oct 30 20:23	22° M .01'25	
behind sun end	13715 May 12 11:53	0° II 07'19		max. Earth dist.	13720 Nov 01 04:19	22° M .20'53	5.91270 AU
morning rise	13715 May 25 01:59	2° II 50'30		morning rise	13720 Nov 13 02:19	25° M .14'30	
retrograde	13715 Sep 23 17:01	19° II 46'37			13720 Dec 03 03:41	0° Z	
opposition	13715 Nov 23 18:32	14° II 52'58	-0°27'45	retrograde	13721 Mar 24 02:27	15° Z 50'14	
min. Earth dist.	13715 Nov 25 06:12	14° II 41'33	4.41304 AU	min. Earth dist.	13721 May 21 00:11	10° Z 59'10	3.96163 AU
direct	13716 Jan 25 01:20	9° II 52'23		opposition	13721 May 22 11:09	10° Z 47'19	0°24'51
evening set	13716 May 29 00:41	27° II 31'13		direct	13721 Jul 19 15:29	5° Z 51'04	
max. Earth dist.	13716 Jun 08 12:25	29° II 50'56	6.34104 AU	evening set	13721 Nov 23 21:31	25° Z 32'15	
	13716 Jun 09 04:41	0° O					
conjunction	13716 Jun 10 20:50	0° O 22'23	-0°26'15	conjunction	13721 Dec 07 11:05	28° Z 44'19	0°25'09
minimum elong	13716 Jun 10 20:50	0° O 22'23	0°27'18	minimum elong	13721 Dec 07 11:04	28° Z 44'19	0°26'11
morning rise	13716 Jun 23 16:08	3° O 13'22		max. Earth dist.	13721 Dec 09 22:05	29° Z 19'10	6.03185 AU
retrograde	13716 Oct 25 13:42	21° O 00'50			13721 Dec 12 19:16	0° Z	
opposition	13716 Dec 25 04:46	16° O 06'59	-0°47'15	morning rise	13721 Dec 21 01:48	1° Z 56'39	
min. Earth dist.	13716 Dec 26 21:34	15° O 53'48	4.25657 AU	retrograde	13722 Apr 28 12:45	21° Z 29'14	
direct	13717 Feb 24 15:41	11° O 07'18		min. Earth dist.	13722 Jun 25 17:03	16° Z 38'49	4.11566 AU
evening set	13717 Jun 30 07:06	29° O 36'26		opposition	13722 Jun 27 07:48	16° Z 25'45	0°47'27
	13717 Jul 02 00:06	0° Ω		direct	13722 Aug 25 10:57	11° Z 27'34	
max. Earth dist.	13717 Jul 10 22:24	2° Ω 03'47	6.16682 AU	evening set	13722 Dec 28 22:26	0° \approx	
					13722 Dec 29 21:37	0° \approx 13'04	
conjunction	13717 Jul 13 04:27	2° Ω 35'06	-0°35'05	conjunction	13723 Jan 12 09:36	3° \approx 16'32	0°35'01
minimum elong	13717 Jul 13 04:26	2° Ω 35'06	0°36'02	minimum elong	13723 Jan 12 09:36	3° \approx 16'32	0°35'58
morning rise	13717 Jul 26 01:38	5° Ω 34'04		max. Earth dist.	13723 Jan 14 17:54	3° \approx 48'27	6.20593 AU
	13717 Sep 07 06:58	15° Ω		morning rise	13723 Jan 25 21:30	6° \approx 19'38	
retrograde	13717 Nov 30 01:39	24° Ω 34'20			13723 Mar 07 14:45	15° \approx	
opposition	13718 Jan 29 03:40	19° Ω 39'19	-0°53'08	retrograde	13723 May 31 03:52	24° \approx 36'30	
				min. Earth dist.	13723 Jul 29 05:21	19° \approx 45'06	4.29306 AU

opposition	13723 Jul 30 12:28	19° \approx 34'46	0°52'22			13729 Jun 15 08:14	0° Ω	
	13723 Sep 12 17:53	15° \approx		evening set		13729 Jul 05 00:38	4° Ω 27'19	
direct	13723 Sep 28 20:27	14° \approx 35'04		max. Earth dist.		13729 Jul 15 18:07	6° Ω 56'48	6.14213 AU
	13723 Oct 15 03:02	15° \approx						
	13724 Jan 21 03:37	0° \mathbb{X}		conjunction		13729 Jul 17 22:11	7° Ω 27'09	-0°35'27
evening set	13724 Feb 01 12:30	2° \mathbb{X} 27'07		minimum elong		13729 Jul 17 22:11	7° Ω 27'09	0°36'21
				morning rise		13729 Jul 30 19:58	10° Ω 27'24	
conjunction	13724 Feb 14 20:42	5° \mathbb{X} 22'03	0°33'12			13729 Aug 19 18:23	15° Ω	
minimum elong	13724 Feb 14 20:43	5° \mathbb{X} 22'04	0°33'45	retrograde		13729 Dec 05 07:31	29° Ω 38'09	
max. Earth dist.	13724 Feb 16 06:17	5° \mathbb{X} 40'26	6.37256 AU	opposition		13730 Feb 03 06:54	24° Ω 42'49	-0°52'24
morning rise	13724 Feb 28 04:08	8° \mathbb{X} 16'19		min. Earth dist.		13730 Feb 04 12:10	24° Ω 33'13	4.05524 AU
retrograde	13724 Jun 29 19:44	25° \mathbb{X} 31'53		direct		13730 Apr 04 06:25	19° Ω 45'13	
opposition	13724 Aug 29 14:37	20° \mathbb{X} 32'58	0°41'38			13730 Jun 28 20:53	0° \mathbb{M}	
min. Earth dist.	13724 Aug 29 01:14	20° \mathbb{X} 37'20	4.43675 AU	evening set		13730 Aug 08 21:51	9° \mathbb{M} 18'41	
direct	13724 Oct 30 03:20	15° \mathbb{X} 32'27						
	13725 Feb 18 19:25	0° \mathbb{Y}		conjunction		13730 Aug 21 23:48	12° \mathbb{M} 27'37	-0°31'02
evening set	13725 Mar 04 02:13	2° \mathbb{Y} 47'39		minimum elong		13730 Aug 21 23:49	12° \mathbb{M} 27'38	0°31'27
				max. Earth dist.		13730 Aug 20 20:07	12° \mathbb{M} 10'54	5.98117 AU
conjunction	13725 Mar 17 06:22	5° \mathbb{Y} 36'38	0°22'04	morning rise		13730 Sep 04 02:45	15° \mathbb{M} 37'26	
minimum elong	13725 Mar 17 06:23	5° \mathbb{Y} 36'39	0°22'04			13730 Nov 10 02:04	0° $\underline{\Omega}$	
max. Earth dist.	13725 Mar 17 12:07	5° \mathbb{Y} 39'43	6.48346 AU	retrograde		13731 Jan 12 13:38	5° $\underline{\Omega}$ 58'26	
morning rise	13725 Mar 30 08:58	8° \mathbb{Y} 24'47		opposition		13731 Mar 12 23:51	1° $\underline{\Omega}$ 00'45	-0°36'08
retrograde	13725 Jul 29 09:39	25° \mathbb{Y} 05'35		min. Earth dist.		13731 Mar 13 07:04	0° $\underline{\Omega}$ 58'21	3.92559 AU
opposition	13725 Sep 28 12:49	20° \mathbb{Y} 09'21	0°20'28			13731 Mar 20 15:19	30° \mathbb{R} \mathbb{M}	
min. Earth dist.	13725 Sep 28 18:21	20° \mathbb{Y} 07'34	4.50892 AU	direct		13731 May 10 16:10	26° \mathbb{M} 05'06	
direct	13725 Nov 29 19:19	15° \mathbb{Y} 08'31				13731 Jun 29 05:38	0° $\underline{\Omega}$	
	13726 Mar 24 03:46	0° \mathbb{Z}		evening set		13731 Sep 15 01:11	16° $\underline{\Omega}$ 17'11	
evening set	13726 Apr 03 10:59	2° \mathbb{Z} 09'49						
conjunction	13726 Apr 16 11:18	4° \mathbb{Z} 56'13	0°05'25	conjunction		13731 Sep 28 08:52	19° $\underline{\Omega}$ 32'59	-0°14'24
minimum elong	13726 Apr 16 11:18	4° \mathbb{Z} 56'13	0°04'55	minimum elong		13731 Sep 28 08:53	19° $\underline{\Omega}$ 33'00	0°14'08
behind sun begin	13726 Apr 16 03:30	4° \mathbb{Z} 52'04		behind sun begin		13731 Sep 28 04:48	19° $\underline{\Omega}$ 30'30	
behind sun end	13726 Apr 16 19:07	5° \mathbb{Z} 00'22		behind sun end		13731 Sep 28 12:58	19° $\underline{\Omega}$ 35'29	
max. Earth dist.	13726 Apr 15 12:49	4° \mathbb{Z} 44'12	6.51206 AU	max. Earth dist.		13731 Sep 28 16:58	19° $\underline{\Omega}$ 37'56	5.89610 AU
morning rise	13726 Apr 29 09:48	7° \mathbb{Z} 41'49		morning rise		13731 Oct 11 18:36	22° $\underline{\Omega}$ 49'55	
	13726 Jun 04 09:51	15° \mathbb{Z}				13731 Nov 11 02:55	0° \mathbb{M}	
desc. node	13726 Aug 10 01:56	23° \mathbb{Z} 47'52		retrograde		13732 Feb 20 12:36	13° \mathbb{M} 43'33	
retrograde	13726 Aug 28 04:38	24° \mathbb{Z} 18'00		opposition		13732 Apr 19 18:02	8° \mathbb{M} 42'48	-0°04'14
opposition	13726 Oct 28 08:58	19° \mathbb{Z} 23'41	-0°05'39	min. Earth dist.		13732 Apr 18 22:53	8° \mathbb{M} 49'16	3.89591 AU
min. Earth dist.	13726 Oct 29 09:30	19° \mathbb{Z} 15'50	4.49297 AU	asc. node		13732 Jun 05 20:59	4° \mathbb{M} 00'01	
	13726 Dec 09 13:42	15° \mathbb{R} \mathbb{Z}		direct		13732 Jun 16 18:51	3° \mathbb{M} 47'36	
direct	13726 Dec 29 22:37	14° \mathbb{Z} 22'50		evening set		13732 Sep 13 09:58	15° \mathbb{M}	
	13727 Jan 19 09:14	15° \mathbb{Z}				13732 Oct 22 08:11	24° \mathbb{M} 00'04	
	13727 Apr 26 04:58	0° \mathbb{I}		conjunction		13732 Nov 04 20:31	27° \mathbb{M} 16'42	0°08'24
evening set	13727 May 03 13:59	1° \mathbb{I} 34'37		minimum elong		13732 Nov 04 20:31	27° \mathbb{M} 16'42	0°09'14
max. Earth dist.	13727 May 14 13:09	3° \mathbb{I} 57'00	6.45203 AU	behind sun begin		13732 Nov 04 13:29	27° \mathbb{M} 12'27	
				behind sun end		13732 Nov 05 03:33	27° \mathbb{M} 20'57	
conjunction	13727 May 16 11:18	4° \mathbb{I} 22'03	-0°12'49	max. Earth dist.		13732 Nov 06 16:01	27° \mathbb{M} 43'07	5.92467 AU
minimum elong	13727 May 16 11:18	4° \mathbb{I} 22'03	0°13'44			13732 Nov 16 02:01	0° \mathbb{Z}	
behind sun begin	13727 May 16 07:00	4° \mathbb{I} 19'44		morning rise		13732 Nov 18 10:40	0° \mathbb{Z} 34'08	
behind sun end	13727 May 16 15:35	4° \mathbb{I} 24'22		retrograde		13733 Mar 29 04:44	21° \mathbb{Z} 03'01	
morning rise	13727 May 29 07:16	7° \mathbb{I} 08'58		min. Earth dist.		13733 May 26 02:54	16° \mathbb{Z} 11'53	3.97949 AU
retrograde	13727 Sep 28 05:07	24° \mathbb{I} 11'21		opposition		13733 May 27 14:14	15° \mathbb{Z} 59'53	0°28'56
opposition	13727 Nov 28 04:52	19° \mathbb{I} 17'43	-0°30'59	direct		13733 Jul 24 21:43	11° \mathbb{Z} 03'24	
min. Earth dist.	13727 Nov 29 17:53	19° \mathbb{I} 05'50	4.39230 AU			13733 Nov 26 08:05	0° \mathbb{Z}	
direct	13728 Jan 29 09:54	14° \mathbb{I} 17'11		evening set		13733 Nov 29 00:30	0° \mathbb{Z} 37'37	
	13728 May 24 04:08	0° \mathbb{E}						
evening set	13728 Jun 02 10:52	2° \mathbb{E} 02'37		conjunction		13733 Dec 12 14:07	3° \mathbb{Z} 48'40	0°27'13
max. Earth dist.	13728 Jun 12 23:14	4° \mathbb{E} 23'23	6.31718 AU	minimum elong		13733 Dec 12 14:06	3° \mathbb{Z} 48'39	0°28'16
				max. Earth dist.		13733 Dec 15 02:54	4° \mathbb{Z} 24'22	6.05379 AU
conjunction	13728 Jun 15 07:13	4° \mathbb{E} 54'45	-0°28'01	morning rise		13733 Dec 26 04:33	6° \mathbb{Z} 59'50	
minimum elong	13728 Jun 15 07:12	4° \mathbb{E} 54'45	0°29'03	retrograde		13734 May 03 05:14	26° \mathbb{Z} 22'11	
morning rise	13728 Jun 28 02:30	7° \mathbb{E} 46'43		min. Earth dist.		13734 Jun 30 11:12	21° \mathbb{Z} 31'58	4.13944 AU
retrograde	13728 Oct 30 09:01	25° \mathbb{E} 43'40		opposition		13734 Jul 02 02:00	21° \mathbb{Z} 18'55	0°49'11
opposition	13728 Dec 29 23:13	20° \mathbb{E} 49'41	-0°49'02	direct		13734 Aug 30 08:05	16° \mathbb{Z} 20'32	
min. Earth dist.	13728 Dec 31 14:43	20° \mathbb{E} 36'55	4.23130 AU			13734 Dec 12 02:33	0° \approx	
direct	13729 Mar 01 05:26	15° \mathbb{E} 50'16		evening set		13735 Jan 03 17:12	4° \approx 58'34	

conjunction	13735 Jan 17 04:37	8° \approx 00'48	0°35'25	opposition	13741 Jan 03 15:39	25° \approx 28'36	-0°50'28
minimum elong	13735 Jan 17 04:37	8° \approx 00'48	0°36'19	min. Earth dist.	13741 Jan 05 06:30	25° \approx 16'01	4.21306 AU
max. Earth dist.	13735 Jan 19 09:02	8° \approx 30'23	6.22940 AU	direct	13741 Mar 05 19:17	20° \approx 29'18	
morning rise	13735 Jan 30 16:07	11° \approx 02'41			13741 May 28 13:11	0° Ω	
	13735 Feb 17 15:54	15° \approx		evening set	13741 Jul 09 15:00	9° Ω 11'50	
retrograde	13735 Jun 04 13:55	29° \approx 10'31		max. Earth dist.	13741 Jul 20 11:57	11° Ω 43'53	6.12412 AU
opposition	13735 Aug 03 23:12	24° \approx 09'09	0°51'39				
min. Earth dist.	13735 Aug 02 18:57	24° \approx 18'31	4.31435 AU	conjunction	13741 Jul 22 13:02	12° Ω 12'36	-0°35'35
direct	13735 Oct 03 11:49	19° \approx 09'19		minimum elong	13741 Jul 22 13:02	12° Ω 12'36	0°36'27
	13736 Jan 03 20:51	0° \mathcal{H}			13741 Aug 03 11:25	15° Ω	
evening set	13736 Feb 06 00:49	6° \mathcal{H} 55'45		morning rise	13741 Aug 04 11:07	15° Ω 13'48	
					13741 Oct 16 00:58	0° \mathcal{H}	
conjunction	13736 Feb 19 08:38	9° \mathcal{H} 49'50	0°32'05	retrograde	13741 Dec 10 07:56	4° \mathcal{H} 32'34	
minimum elong	13736 Feb 19 08:39	9° \mathcal{H} 49'50	0°32'34		13742 Feb 05 07:36	30° $\mathcal{R}\Omega$	
max. Earth dist.	13736 Feb 20 15:57	10° \mathcal{H} 06'54	6.39022 AU	opposition	13742 Feb 08 05:46	29° Ω 36'58	-0°51'20
morning rise	13736 Mar 03 15:17	12° \mathcal{H} 43'08		min. Earth dist.	13742 Feb 09 09:16	29° Ω 27'56	4.03900 AU
retrograde	13736 Jul 03 23:42	29° \mathcal{H} 52'53		direct	13742 Apr 09 01:03	24° Ω 39'37	
opposition	13736 Sep 02 20:27	24° \mathcal{H} 54'27	0°39'07		13742 Jun 07 10:46	0° \mathcal{H}	
min. Earth dist.	13736 Sep 02 08:42	24° \mathcal{H} 58'17	4.44990 AU	evening set	13742 Aug 13 18:14	14° \mathcal{H} 17'50	
direct	13736 Nov 03 11:01	19° \mathcal{H} 53'58					
	13737 Feb 01 12:19	0° \mathcal{Y}		conjunction	13742 Aug 26 20:40	17° \mathcal{H} 27'39	-0°29'26
evening set	13737 Mar 08 10:04	7° \mathcal{Y} 06'30		minimum elong	13742 Aug 26 20:41	17° \mathcal{H} 27'39	0°29'46
				max. Earth dist.	13742 Aug 25 19:10	17° \mathcal{H} 12'12	5.96810 AU
conjunction	13737 Mar 21 13:34	9° \mathcal{Y} 54'57	0°19'56	morning rise	13742 Sep 09 00:35	20° \mathcal{H} 38'28	
minimum elong	13737 Mar 21 13:35	9° \mathcal{Y} 54'57	0°19'51		13742 Oct 19 20:23	0° $\underline{\mathcal{A}}$	
max. Earth dist.	13737 Mar 21 14:56	9° \mathcal{Y} 55'41	6.49144 AU	retrograde	13743 Jan 17 16:26	11° $\underline{\mathcal{A}}$ 05'19	
morning rise	13737 Apr 03 15:36	12° \mathcal{Y} 42'36		opposition	13743 Mar 18 02:56	6° $\underline{\mathcal{A}}$ 07'12	-0°32'32
retrograde	13737 Aug 02 14:47	29° \mathcal{Y} 21'22		min. Earth dist.	13743 Mar 18 06:37	6° $\underline{\mathcal{A}}$ 05'58	3.91711 AU
opposition	13737 Oct 02 17:24	24° \mathcal{Y} 25'34	0°16'54	direct	13743 May 15 16:30	1° $\underline{\mathcal{A}}$ 11'36	
min. Earth dist.	13737 Oct 03 02:11	24° \mathcal{Y} 22'45	4.51164 AU	evening set	13743 Sep 20 02:21	21° $\underline{\mathcal{A}}$ 25'41	
direct	13737 Dec 04 02:28	19° \mathcal{Y} 24'49					
	13738 Mar 07 04:03	0° \mathcal{B}		conjunction	13743 Oct 03 10:53	24° $\underline{\mathcal{A}}$ 42'00	-0°11'30
evening set	13738 Apr 07 16:48	6° \mathcal{B} 26'16		minimum elong	13743 Oct 03 10:53	24° $\underline{\mathcal{A}}$ 42'00	0°11'10
				behind sun begin	13743 Oct 03 04:43	24° $\underline{\mathcal{A}}$ 38'14	
conjunction	13738 Apr 20 16:37	9° \mathcal{B} 12'35	0°02'49	behind sun end	13743 Oct 03 17:03	24° $\underline{\mathcal{A}}$ 45'46	
minimum elong	13738 Apr 20 16:37	9° \mathcal{B} 12'35	0°02'15	max. Earth dist.	13743 Oct 03 23:50	24° $\underline{\mathcal{A}}$ 49'56	5.89322 AU
behind sun begin	13738 Apr 20 08:36	9° \mathcal{B} 08'19		morning rise	13743 Oct 16 21:14	27° $\underline{\mathcal{A}}$ 59'23	
behind sun end	13738 Apr 21 00:38	9° \mathcal{B} 16'51			13743 Oct 25 04:28	0° \mathcal{M}	
max. Earth dist.	13738 Apr 19 14:29	8° \mathcal{B} 58'37	6.50954 AU		13744 Jan 06 16:24	15° \mathcal{M}	
morning rise	13738 May 03 14:43	11° \mathcal{B} 58'09		retrograde	13744 Feb 25 16:30	18° \mathcal{M} 53'27	
	13738 May 18 01:15	15° \mathcal{B}			13744 Apr 16 11:08	15° $\mathcal{R}\mathcal{M}$	
desc. node	13738 Jun 20 15:28	21° \mathcal{B} 27'54		asc. node	13744 Apr 19 10:54	14° \mathcal{M} 36'10	
retrograde	13738 Sep 01 10:33	28° \mathcal{B} 35'55		opposition	13744 Apr 24 20:57	13° \mathcal{M} 52'19	0°00'30
opposition	13738 Nov 01 15:17	23° \mathcal{B} 41'46	-0°09'25	min. Earth dist.	13744 Apr 24 00:34	13° \mathcal{M} 59'13	3.89893 AU
min. Earth dist.	13738 Nov 02 16:51	23° \mathcal{B} 33'35	4.48576 AU	direct	13744 Jun 21 22:06	8° \mathcal{M} 56'58	
direct	13739 Jan 03 03:59	18° \mathcal{B} 41'00			13744 Aug 23 09:27	15° \mathcal{M}	
	13739 Apr 09 10:54	0° \mathcal{I}		evening set	13744 Oct 27 10:34	29° \mathcal{M} 07'25	
evening set	13739 May 07 20:20	5° \mathcal{I} 55'20			13744 Oct 31 01:43	0° \mathcal{Z}	
max. Earth dist.	13739 May 18 19:18	8° \mathcal{I} 17'57	6.44079 AU				
				conjunction	13744 Nov 09 23:28	2° \mathcal{Z} 23'53	0°11'20
conjunction	13739 May 20 17:26	8° \mathcal{I} 43'04	-0°15'15	minimum elong	13744 Nov 09 23:27	2° \mathcal{Z} 23'53	0°12'13
minimum elong	13739 May 20 17:26	8° \mathcal{I} 43'04	0°16'11	behind sun begin	13744 Nov 09 17:54	2° \mathcal{Z} 20'32	
morning rise	13739 Jun 02 12:58	11° \mathcal{I} 30'17		behind sun end	13744 Nov 10 05:01	2° \mathcal{Z} 27'14	
retrograde	13739 Oct 02 15:40	28° \mathcal{I} 37'20		max. Earth dist.	13744 Nov 11 22:34	2° \mathcal{Z} 52'25	5.93324 AU
opposition	13739 Dec 02 15:22	23° \mathcal{I} 43'45	-0°34'06	morning rise	13744 Nov 23 13:58	5° \mathcal{Z} 41'03	
min. Earth dist.	13739 Dec 04 05:04	23° \mathcal{I} 31'40	4.37775 AU	retrograde	13745 Apr 03 02:35	26° \mathcal{Z} 04'34	
direct	13740 Feb 02 18:44	18° \mathcal{I} 43'24		min. Earth dist.	13745 May 30 23:43	21° \mathcal{Z} 13'49	3.99272 AU
	13740 May 07 07:28	0° \mathcal{E}		opposition	13745 Jun 01 12:31	21° \mathcal{Z} 01'20	0°32'38
evening set	13740 Jun 06 20:29	6° \mathcal{E} 33'15		direct	13745 Jul 29 20:55	16° \mathcal{Z} 04'37	
max. Earth dist.	13740 Jun 17 07:37	8° \mathcal{E} 53'56	6.30028 AU		13745 Nov 09 14:03	0° \mathcal{Z}	
				evening set	13745 Dec 03 23:53	5° \mathcal{Z} 33'56	
conjunction	13740 Jun 19 16:34	9° \mathcal{E} 25'58	-0°29'36				
minimum elong	13740 Jun 19 16:34	9° \mathcal{E} 25'58	0°30'39	conjunction	13745 Dec 17 13:20	8° \mathcal{Z} 44'11	0°29'01
morning rise	13740 Jul 02 12:04	12° \mathcal{E} 18'39		minimum elong	13745 Dec 17 13:20	8° \mathcal{Z} 44'11	0°30'04
	13740 Oct 19 14:27	0° Ω		max. Earth dist.	13745 Dec 20 00:51	9° \mathcal{Z} 19'00	6.07026 AU
retrograde	13740 Nov 04 02:55	0° Ω 22'45		morning rise	13745 Dec 31 03:50	11° \mathcal{Z} 54'33	
	13740 Nov 19 14:45	30° $\mathcal{R}\mathcal{E}$			13746 Apr 11 01:54	0° \approx	

retrograde	13746 May 07 19:54	1°≈09'00		minimum elong	13751 May 24 23:37	13°Ⅱ03'27	0°18'34
	13746 Jun 03 10:18	30°ⅤⅢ		morning rise	13751 Jun 06 19:05	15°Ⅱ51'09	
min. Earth dist.	13746 Jul 05 04:01	26°Ⅲ18'32	4.15747 AU		13751 Aug 22 10:23	0°Ⅲ	
opposition	13746 Jul 06 17:50	26°Ⅲ05'49	0°50'33	retrograde	13751 Oct 07 03:44	3°Ⅲ04'00	
direct	13746 Sep 04 03:34	21°Ⅲ07'09			13751 Nov 22 11:44	30°ⅤⅡ	
	13746 Nov 23 15:48	0°≈		opposition	13751 Dec 07 02:37	28°Ⅱ10'22	-0°37'03
evening set	13747 Jan 08 10:56	9°≈39'39		min. Earth dist.	13751 Dec 08 16:46	27°Ⅱ58'07	4.35906 AU
				direct	13752 Feb 07 03:01	23°Ⅱ10'04	
conjunction	13747 Jan 21 22:12	12°≈41'01	0°35'35		13752 Apr 17 23:55	0°Ⅲ	
minimum elong	13747 Jan 21 22:13	12°≈41'01	0°36'25	evening set	13752 Jun 11 06:57	11°Ⅲ05'55	
max. Earth dist.	13747 Jan 24 02:05	13°≈10'10	6.24772 AU	max. Earth dist.	13752 Jun 21 19:20	13°Ⅲ27'57	6.27825 AU
	13747 Feb 01 05:59	15°≈					
morning rise	13747 Feb 04 09:03	15°≈41'52		conjunction	13752 Jun 24 03:16	13°Ⅲ59'34	-0°31'02
	13747 Apr 19 23:58	0°Ⅴ		minimum elong	13752 Jun 24 03:15	13°Ⅲ59'33	0°32'05
retrograde	13747 Jun 08 22:44	3°Ⅴ42'11		morning rise	13752 Jul 06 22:46	16°Ⅲ53'11	
	13747 Jul 29 07:55	30°Ⅴ≈			13752 Sep 10 10:37	0°Ⅳ	
min. Earth dist.	13747 Aug 07 05:55	28°≈50'08	4.33146 AU	retrograde	13752 Nov 09 00:19	5°Ⅳ06'35	
opposition	13747 Aug 08 09:01	28°≈41'10	0°50'40	opposition	13753 Jan 08 10:36	0°Ⅳ12'21	-0°51'38
direct	13747 Oct 08 00:38	23°≈41'13		min. Earth dist.	13753 Jan 10 01:20	29°Ⅲ59'47	4.18910 AU
	13747 Dec 14 20:50	0°Ⅴ			13753 Jan 10 00:41	30°ⅤⅢ	
evening set	13748 Feb 10 13:00	11°Ⅴ23'07		direct	13753 Mar 10 10:10	25°Ⅲ13'19	
					13753 May 06 10:31	0°Ⅳ	
conjunction	13748 Feb 23 20:09	14°Ⅴ16'22	0°30'48	evening set	13753 Jul 14 08:37	14°Ⅳ03'37	
minimum elong	13748 Feb 23 20:10	14°Ⅴ16'22	0°31'12		13753 Jul 18 09:05	15°Ⅳ	
max. Earth dist.	13748 Feb 24 23:04	14°Ⅴ31'00	6.40487 AU	max. Earth dist.	13753 Jul 25 06:28	16°Ⅳ37'05	6.10016 AU
morning rise	13748 Mar 08 02:22	17°Ⅴ08'53					
	13748 May 15 00:39	0°Ⅴ		conjunction	13753 Jul 27 06:57	17°Ⅳ05'36	-0°35'29
retrograde	13748 Jul 08 05:32	4°Ⅴ13'27		minimum elong	13753 Jul 27 06:58	17°Ⅳ05'36	0°36'16
	13748 Sep 01 08:41	30°ⅤⅤ		morning rise	13753 Aug 09 05:50	20°Ⅳ08'09	
opposition	13748 Sep 07 02:34	29°Ⅴ15'18	0°36'24		13753 Sep 22 21:05	0°Ⅵ	
min. Earth dist.	13748 Sep 06 17:39	29°Ⅴ18'12	4.46113 AU	retrograde	13753 Dec 15 12:18	9°Ⅵ37'33	
direct	13748 Nov 07 20:26	24°Ⅴ14'42		opposition	13754 Feb 13 09:03	4°Ⅵ41'39	-0°49'50
	13749 Jan 12 06:49	0°Ⅴ		min. Earth dist.	13754 Feb 14 09:27	4°Ⅵ33'36	4.01719 AU
evening set	13749 Mar 12 17:34	11°Ⅴ24'36			13754 Apr 01 13:37	30°ⅤⅣ	
				direct	13754 Apr 13 23:15	29°Ⅳ44'34	
conjunction	13749 Mar 25 20:42	14°Ⅴ12'36	0°17'42		13754 Apr 26 10:03	0°Ⅵ	
minimum elong	13749 Mar 25 20:42	14°Ⅴ12'37	0°17'32	evening set	13754 Aug 18 20:00	19°Ⅵ29'54	
max. Earth dist.	13749 Mar 25 19:55	14°Ⅴ12'11	6.49837 AU				
morning rise	13749 Apr 07 22:02	16°Ⅴ59'45		conjunction	13754 Aug 31 23:23	22°Ⅵ40'57	-0°27'31
	13749 Jun 17 16:13	0°Ⅶ		minimum elong	13754 Aug 31 23:24	22°Ⅵ40'58	0°27'45
retrograde	13749 Aug 06 17:47	3°Ⅶ36'31		max. Earth dist.	13754 Aug 31 03:35	22°Ⅵ28'55	5.95073 AU
	13749 Sep 26 12:56	30°ⅤⅤ		morning rise	13754 Sep 14 04:04	25°Ⅵ53'00	
opposition	13749 Oct 06 22:08	28°Ⅴ40'54	0°13'16		13754 Oct 01 11:06	0°Ⅶ	
min. Earth dist.	13749 Oct 07 08:07	28°Ⅴ37'42	4.51370 AU	retrograde	13755 Jan 23 04:41	16°Ⅶ27'21	
direct	13749 Dec 08 07:26	23°Ⅴ40'07		opposition	13755 Mar 23 12:10	11°Ⅶ28'53	-0°28'26
	13750 Feb 15 17:22	0°Ⅶ		min. Earth dist.	13755 Mar 23 13:25	11°Ⅶ28'28	3.90617 AU
evening set	13750 Apr 11 22:24	10°Ⅶ41'32		direct	13755 May 20 23:32	6°Ⅶ33'27	
				evening set	13755 Sep 25 10:12	26°Ⅶ50'25	
conjunction	13750 Apr 24 21:40	13°Ⅶ27'44	0°00'09				
minimum elong	13750 Apr 24 21:41	13°Ⅶ27'45	0°00'30	conjunction	13755 Oct 08 19:32	0°Ⅶ07'18	-0°08'22
behind sun begin	13750 Apr 24 13:41	13°Ⅶ23'29		minimum elong	13755 Oct 08 19:33	0°Ⅶ07'19	0°07'56
behind sun end	13750 Apr 25 05:41	13°Ⅶ32'00		behind sun begin	13755 Oct 08 12:06	0°Ⅶ02'45	
max. Earth dist.	13750 Apr 23 16:43	13°Ⅶ12'14	6.50628 AU	behind sun end	13755 Oct 09 03:00	0°Ⅶ11'52	
desc. node	13750 Apr 28 13:55	14°Ⅶ15'01			13755 Oct 08 07:37	0°Ⅶ	
	13750 May 02 01:58	15°Ⅶ		max. Earth dist.	13755 Oct 09 13:41	0°Ⅶ18'26	5.88983 AU
morning rise	13750 May 07 19:18	16°Ⅶ13'14		morning rise	13755 Oct 22 06:48	3°Ⅶ25'16	
	13750 Jul 23 06:26	0°Ⅷ			13755 Dec 12 04:55	15°Ⅶ	
retrograde	13750 Sep 05 17:54	2°Ⅷ52'44		asc. node	13756 Mar 01 09:25	24°Ⅶ19'19	
	13750 Oct 20 13:50	30°ⅤⅧ		retrograde	13756 Mar 02 01:21	24°Ⅶ19'22	
opposition	13750 Nov 05 21:44	27°Ⅶ58'43	-0°13'09	min. Earth dist.	13756 Apr 29 05:56	19°Ⅶ26'04	3.90378 AU
min. Earth dist.	13750 Nov 07 02:06	27°Ⅶ49'39	4.47697 AU	opposition	13756 Apr 30 06:01	19°Ⅶ17'55	0°05'28
direct	13751 Jan 07 11:08	22°Ⅶ57'57			13756 Jun 08 04:30	15°ⅤⅦ	
	13751 Mar 21 14:19	0°Ⅷ		direct	13756 Jun 27 05:11	14°Ⅶ22'32	
evening set	13751 May 12 02:52	10°Ⅷ15'19			13756 Jul 16 08:37	15°Ⅶ	
max. Earth dist.	13751 May 22 22:07	12°Ⅷ36'24	6.42673 AU		13756 Oct 13 18:36	0°Ⅷ	
				evening set	13756 Nov 01 19:17	4°Ⅷ30'05	
conjunction	13751 May 24 23:38	13°Ⅷ03'27	-0°17'35				

conjunction	13756 Nov 15 08:23	7°  46'06	0°14'21			13762 Jan 20 08:03	0° 	
minimum elong	13756 Nov 15 08:22	7°  46'06	0°15'16	desc. node		13762 Mar 06 03:54	6°  39'45	
behind sun begin	13756 Nov 15 05:54	7°  44'37		evening set		13762 Apr 16 01:51	14°  52'39	
behind sun end	13756 Nov 15 10:50	7°  47'34				13762 Apr 16 15:41	15° 	
max. Earth dist.	13756 Nov 17 09:32	8°  15'46	5.94567 AU	max. Earth dist.		13762 Apr 27 16:22	17°  21'28	6.50179 AU
morning rise	13756 Nov 28 23:16	11°  02'46						
	13757 Mar 10 17:26	0° 		conjunction		13762 Apr 29 00:48	17°  38'51	-0°02'26
retrograde	13757 Apr 08 03:56	1°  19'01		minimum elong		13762 Apr 29 00:47	17°  38'51	0°03'09
	13757 May 06 11:36	30°  R 		behind sun begin		13762 Apr 28 16:49	17°  34'36	
min. Earth dist.	13757 Jun 05 01:31	26°  128'33	4.01134 AU	behind sun end		13762 Apr 29 08:45	17°  34'06	
opposition	13757 Jun 06 15:30	26°  15'40	0°36'14	morning rise		13762 May 11 21:56	20°  32'42'0	
direct	13757 Aug 04 03:05	21°  18'40				13762 Jun 29 08:20	0°  II	
	13757 Oct 21 00:30	0° 		retrograde		13762 Sep 09 22:05	7°  II06'11	
evening set	13757 Dec 09 03:29	10°  340'57		opposition		13762 Nov 10 02:31	2°  II12'13	-0°16'44
				min. Earth dist.		13762 Nov 11 08:18	2°  II02'41	4.46570 AU
conjunction	13757 Dec 22 16:56	13°  350'05	0°30'40			13762 Nov 27 22:56	30°  R 	
minimum elong	13757 Dec 22 16:56	13°  350'05	0°31'44	direct		13763 Jan 11 13:56	27°  311'24	
max. Earth dist.	13757 Dec 25 06:09	14°  325'42	6.09353 AU			13763 Feb 25 01:55	0°  II	
morning rise	13758 Jan 05 06:54	16°  359'10		evening set		13763 May 16 07:54	14°  II32'41	
	13758 Mar 09 00:40	0° 		max. Earth dist.		13763 May 27 01:24	16°  II53'21	6.40923 AU
retrograde	13758 May 12 13:15	6°  302'54						
min. Earth dist.	13758 Jul 09 22:54	1°  312'24	4.18303 AU	conjunction		13763 May 29 04:28	17°  II21'23	-0°19'48
opposition	13758 Jul 11 12:02	0°  359'56	0°51'37	minimum elong		13763 May 29 04:28	17°  II21'22	0°20'47
	13758 Jul 19 00:03	30°  R 		morning rise		13763 Jun 10 23:44	20°  II09'41	
direct	13758 Sep 09 01:51	26°  301'05				13763 Jul 29 09:29	0°  36	
	13758 Oct 30 18:22	0° 		retrograde		13763 Oct 11 16:55	7°  329'38	
evening set	13759 Jan 13 06:26	14°  325'24		opposition		13763 Dec 11 13:29	2°  335'59	-0°39'46
	13759 Jan 15 20:36	15° 		min. Earth dist.		13763 Dec 13 05:43	2°  323'03	4.33616 AU
						13764 Jan 01 20:02	30°  R  II	
conjunction	13759 Jan 26 17:02	17°  325'26	0°35'32	direct		13764 Feb 11 11:47	27°  II35'44	
minimum elong	13759 Jan 26 17:02	17°  325'26	0°36'20			13764 Mar 22 20:04	0°  36	
max. Earth dist.	13759 Jan 28 18:00	17°  352'47	6.27338 AU	evening set		13764 Jun 15 17:38	15°  339'03	
morning rise	13759 Feb 09 03:23	20°  324'57		max. Earth dist.		13764 Jun 26 04:12	18°  300'57	6.25156 AU
	13759 Mar 27 09:12	0° 						
retrograde	13759 Jun 13 06:15	8°  315'25		conjunction		13764 Jun 28 14:01	18°  333'49	-0°32'17
opposition	13759 Aug 12 19:11	3°  314'41	0°49'23	minimum elong		13764 Jun 28 14:01	18°  333'49	0°33'19
min. Earth dist.	13759 Aug 11 18:01	3°  323'00	4.35523 AU	morning rise		13764 Jul 11 09:59	21°  328'41	
	13759 Sep 08 17:05	30°  R 				13764 Aug 19 23:02	0°  39	
direct	13759 Oct 12 14:47	28°  314'33		retrograde		13764 Nov 13 21:34	9°  353'07	
	13759 Nov 15 21:26	0° 		opposition		13765 Jan 13 06:23	4°  358'40	-0°52'31
evening set	13760 Feb 15 00:15	15°  349'49		min. Earth dist.		13765 Jan 14 19:33	4°  346'34	4.16050 AU
						13765 Mar 13 13:09	30°  R  36	
conjunction	13760 Feb 28 06:54	18°  342'01	0°29'22	direct		13765 Mar 15 00:38	29°  359'47	
minimum elong	13760 Feb 28 06:55	18°  342'02	0°29'41			13765 Mar 16 12:08	0°  39	
max. Earth dist.	13760 Feb 29 07:25	18°  355'18	6.42508 AU			13765 Jul 01 20:30	15°  39	
morning rise	13760 Mar 12 12:12	21°  333'25		evening set		13765 Jul 19 03:56	18°  359'40	
	13760 Apr 23 03:11	0° 		max. Earth dist.		13765 Jul 30 06:21	21°  336'43	6.07224 AU
retrograde	13760 Jul 12 08:17	8°  331'21						
opposition	13760 Sep 11 07:15	3°  333'34	0°33'34	conjunction		13765 Aug 01 03:01	22°  303'10	-0°35'09
min. Earth dist.	13760 Sep 11 00:34	3°  335'44	4.47643 AU	minimum elong		13765 Aug 01 03:02	22°  303'10	0°35'53
	13760 Oct 11 23:46	30°  R 		morning rise		13765 Aug 14 02:33	25°  307'17	
direct	13760 Nov 12 04:11	28°  332'55				13765 Sep 04 05:10	0°  39	
	13760 Dec 13 16:23	0° 		retrograde		13765 Dec 20 21:55	14°  348'46	
evening set	13761 Mar 16 23:28	15°  339'08		opposition		13766 Feb 18 15:06	9°  352'36	-0°47'59
				min. Earth dist.		13766 Feb 19 13:38	9°  345'09	3.99255 AU
conjunction	13761 Mar 30 01:47	18°  326'31	0°15'26	direct		13766 Apr 19 01:22	4°  355'48	
minimum elong	13761 Mar 30 01:47	18°  326'31	0°15'13	evening set		13766 Aug 24 00:53	24°  349'09	
behind sun begin	13761 Mar 29 23:18	18°  325'12						
behind sun end	13761 Mar 30 04:17	18°  327'51		conjunction		13766 Sep 06 05:10	28°  301'32	-0°25'22
max. Earth dist.	13761 Mar 29 19:21	18°  323'06	6.50755 AU	minimum elong		13766 Sep 06 05:11	28°  301'32	0°25'30
morning rise	13761 Apr 12 02:38	21°  313'05		max. Earth dist.		13766 Sep 05 13:55	27°  352'14	5.93194 AU
	13761 May 26 06:08	0° 				13766 Sep 14 07:33	0°  39	
retrograde	13761 Aug 10 21:15	7°  347'28		morning rise		13766 Sep 19 11:00	1°  314'58	
opposition	13761 Oct 11 00:58	2°  352'06	0°09'40	retrograde		13767 Jan 28 17:53	21°  356'55	
min. Earth dist.	13761 Oct 11 14:45	2°  347'41	4.51623 AU	opposition		13767 Mar 29 00:28	16°  358'03	-0°24'04
	13761 Nov 03 21:31	30°  R 		min. Earth dist.		13767 Mar 28 20:51	16°  359'16	3.89570 AU
direct	13761 Dec 12 12:44	27°  351'11		direct		13767 May 26 07:28	12°  302'47	

	13767 Sep 21 02:48	0°♄		behind sun begin	13773 Apr 03 02:13	22°♑38'31	
evening set	13767 Sep 30 21:33	2°♄22'09		behind sun end	13773 Apr 03 12:14	22°♑43'50	
				max. Earth dist.	13773 Apr 02 21:49	22°♑36'10	6.51265 AU
conjunction	13767 Oct 14 07:35	5°♄39'27 -0°05'07		morning rise	13773 Apr 16 07:19	25°♑27'20	
minimum elong	13767 Oct 14 07:34	5°♄39'27 0°04'36			13773 May 08 05:44	0°♄	
behind sun begin	13767 Oct 13 23:25	5°♄34'28		retrograde	13773 Aug 15 00:19	12°♄00'57	
behind sun end	13767 Oct 14 15:44	5°♄44'26		opposition	13773 Oct 15 05:06	7°♄05'53 0°05'57	
max. Earth dist.	13767 Oct 15 06:47	5°♄53'42 5.88881 AU		min. Earth dist.	13773 Oct 15 21:08	7°♄00'45 4.51439 AU	
morning rise	13767 Oct 27 19:41	8°♄57'48		direct	13773 Dec 16 17:03	2°♄05'03	
	13767 Nov 22 05:16	15°♄		desc. node	13774 Jan 10 19:36	3°♄00'21	
asc. node	13768 Jan 11 07:14	24°♄59'46			13774 Mar 31 11:48	15°♄	
retrograde	13768 Mar 07 11:30	29°♄50'21		evening set	13774 Apr 20 06:58	19°♄08'00	
opposition	13768 May 05 17:09	24°♄48'27 0°10'27		max. Earth dist.	13774 May 01 16:37	21°♄34'35 6.49302 AU	
min. Earth dist.	13768 May 04 13:58	24°♄57'40 3.91229 AU					
direct	13768 Jul 02 17:33	19°♄52'53		conjunction	13774 May 03 05:22	21°♄54'20 -0°05'01	
	13768 Sep 24 12:16	0°♄		minimum elong	13774 May 03 05:21	21°♄54'20 0°05'47	
evening set	13768 Nov 07 05:49	9°♄55'47		behind sun begin	13774 May 02 21:42	21°♄50'15	
				behind sun end	13774 May 03 13:00	21°♄58'25	
conjunction	13768 Nov 20 19:20	13°♄11'06 0°17'15		morning rise	13774 May 16 02:14	24°♄40'03	
minimum elong	13768 Nov 20 19:19	13°♄11'06 0°18'13			13774 Jun 10 17:37	0°♄	
max. Earth dist.	13768 Nov 23 01:21	13°♄43'34 5.96277 AU		retrograde	13774 Sep 14 07:42	11°♄25'49	
morning rise	13768 Dec 04 10:11	16°♄26'55		opposition	13774 Nov 14 10:06	6°♄32'00 -0°20'21	
	13769 Feb 05 11:19	0°♄		min. Earth dist.	13774 Nov 15 18:56	6°♄21'30 4.45042 AU	
retrograde	13769 Apr 13 06:45	6°♄33'39		direct	13775 Jan 15 21:10	1°♄31'13	
min. Earth dist.	13769 Jun 10 04:15	1°♄43'16 4.03470 AU		evening set	13775 May 20 15:49	18°♄57'45	
opposition	13769 Jun 11 18:54	1°♄30'11 0°39'30		max. Earth dist.	13775 May 31 06:45	21°♄17'40 6.38844 AU	
	13769 Jun 23 01:49	30°♄					
direct	13769 Aug 09 09:55	26°♄32'55		conjunction	13775 Jun 02 12:20	21°♄47'12 -0°21'58	
	13769 Sep 25 08:46	0°♄		minimum elong	13775 Jun 02 12:19	21°♄47'11 0°23'00	
evening set	13769 Dec 14 07:00	15°♄46'22		morning rise	13775 Jun 15 07:33	24°♄36'18	
					13775 Jul 10 13:20	0°♄	
conjunction	13769 Dec 27 20:03	18°♄54'08 0°32'05		retrograde	13775 Oct 16 08:21	12°♄04'35	
minimum elong	13769 Dec 27 20:02	18°♄54'07 0°33'07		opposition	13775 Dec 16 03:57	7°♄10'52 -0°42'22	
max. Earth dist.	13769 Dec 30 08:43	19°♄29'12 6.12051 AU		min. Earth dist.	13775 Dec 17 19:44	6°♄58'04 4.31116 AU	
morning rise	13770 Jan 10 09:43	22°♄01'47		direct	13776 Feb 15 21:37	2°♄10'48	
	13770 Feb 15 18:27	0°♄		evening set	13776 Jun 20 07:54	20°♄22'19	
retrograde	13770 May 17 02:56	10°♄53'44		max. Earth dist.	13776 Jun 30 20:16	22°♄46'06 6.22423 AU	
min. Earth dist.	13770 Jul 14 16:43	6°♄03'14 4.21088 AU					
opposition	13770 Jul 16 05:21	5°♄50'58 0°52'16		conjunction	13776 Jul 03 04:33	23°♄18'19 -0°33'21	
direct	13770 Sep 13 22:56	0°♄51'53		minimum elong	13776 Jul 03 04:33	23°♄18'18 0°34'22	
	13770 Dec 30 01:23	15°♄		morning rise	13776 Jul 16 00:48	26°♄14'27	
evening set	13771 Jan 18 00:44	19°♄07'37			13776 Aug 01 18:37	0°♄	
				retrograde	13776 Nov 19 01:06	14°♄50'23	
conjunction	13771 Jan 31 10:49	22°♄06'18 0°35'15		opposition	13777 Jan 18 06:43	9°♄55'47 -0°53'02	
minimum elong	13771 Jan 31 10:49	22°♄06'18 0°35'59		min. Earth dist.	13777 Jan 19 19:20	9°♄43'51 4.13287 AU	
max. Earth dist.	13771 Feb 02 08:48	22°♄31'51 6.29984 AU		direct	13777 Mar 19 20:59	4°♄57'15	
morning rise	13771 Feb 13 20:20	25°♄04'23			13777 Jun 13 08:51	15°♄	
	13771 Mar 08 18:03	0°♄		evening set	13777 Jul 24 02:59	24°♄06'08	
retrograde	13771 Jun 17 14:19	12°♄45'15		max. Earth dist.	13777 Aug 04 08:38	26°♄46'02 6.04694 AU	
min. Earth dist.	13771 Aug 16 06:09	7°♄52'20 4.37822 AU					
opposition	13771 Aug 17 04:26	7°♄45'00 0°47'48		conjunction	13777 Aug 06 02:42	27°♄11'03 -0°34'31	
direct	13771 Oct 17 04:55	2°♄44'49		minimum elong	13777 Aug 06 02:42	27°♄11'03 0°35'11	
evening set	13772 Feb 19 10:54	20°♄14'07			13777 Aug 17 22:55	0°♄	
				morning rise	13777 Aug 19 03:05	0°♄16'41	
conjunction	13772 Mar 03 16:50	23°♄05'22 0°27'45		retrograde	13777 Dec 26 08:25	20°♄09'04	
minimum elong	13772 Mar 03 16:50	23°♄05'23 0°27'59		opposition	13778 Feb 24 00:17	15°♄12'37 -0°45'40	
max. Earth dist.	13772 Mar 04 12:04	23°♄15'45 6.44294 AU		min. Earth dist.	13778 Feb 24 18:19	15°♄06'39 3.97250 AU	
morning rise	13772 Mar 16 21:34	25°♄55'50		direct	13778 Apr 24 05:01	10°♄16'10	
	13772 Apr 05 06:25	0°♄			13778 Aug 28 06:48	0°♄	
retrograde	13772 Jul 16 11:56	12°♄48'21		evening set	13778 Aug 29 08:30	0°♄15'35	
opposition	13772 Sep 15 11:56	7°♄50'57 0°30'30					
min. Earth dist.	13772 Sep 15 08:18	7°♄52'07 4.48826 AU		conjunction	13778 Sep 11 13:34	3°♄28'58 -0°22'57	
direct	13772 Nov 16 11:30	2°♄50'15		minimum elong	13778 Sep 11 13:35	3°♄28'58 0°23'00	
evening set	13773 Mar 21 05:16	19°♄54'10		max. Earth dist.	13778 Sep 11 04:06	3°♄23'11 5.91938 AU	
				morning rise	13778 Sep 24 20:21	6°♄43'27	
conjunction	13773 Apr 03 07:13	22°♄41'10 0°13'02		retrograde	13779 Feb 03 07:16	27°♄30'05	
minimum elong	13773 Apr 03 07:13	22°♄41'11 0°12'44		opposition	13779 Apr 03 13:37	22°♄30'41 -0°19'26	

min. Earth dist.	13779 Apr 03 06:09	22°♌33'12	3.89233 AU	evening set	13785 Mar 25 09:38	24°♍04'59	
direct	13779 May 31 19:03	17°♌35'29					
	13779 Sep 02 17:38	0°♌		conjunction	13785 Apr 07 10:58	26°♍51'46	0°10'39
evening set	13779 Oct 06 08:39	7°♌54'11		minimum elong	13785 Apr 07 10:58	26°♍51'46	0°10'16
				behind sun begin	13785 Apr 07 04:37	26°♍48'23	
conjunction	13779 Oct 19 19:26	11°♌11'31	-0°01'49	behind sun end	13785 Apr 07 17:19	26°♍55'08	
minimum elong	13779 Oct 19 19:27	11°♌11'31	0°01'11	max. Earth dist.	13785 Apr 06 20:02	26°♍43'48	6.51316 AU
behind sun begin	13779 Oct 19 11:06	11°♌06'25		morning rise	13785 Apr 20 10:44	29°♍37'45	
behind sun end	13779 Oct 20 03:49	11°♌16'37			13785 Apr 22 04:46	0°♌	
max. Earth dist.	13779 Oct 21 01:52	11°♌30'09	5.89508 AU		13785 Jul 21 23:07	15°♌	
morning rise	13779 Nov 02 08:00	14°♌29'46		retrograde	13785 Aug 19 04:19	16°♌12'01	
	13779 Nov 04 09:50	15°♌			13785 Sep 16 07:23	15°♌♌	
asc. node	13779 Nov 20 14:35	18°♌51'59		opposition	13785 Oct 19 08:35	11°♌17'11	0°02'16
	13780 Jan 13 19:54	0°♌♌		min. Earth dist.	13785 Oct 20 03:33	11°♌11'06	4.50810 AU
retrograde	13780 Mar 12 20:51	5°♌17'28		desc. node	13785 Nov 20 23:26	7°♌35'18	
min. Earth dist.	13780 May 09 20:49	0°♌25'13	3.92749 AU	direct	13785 Dec 20 21:04	6°♌16'18	
opposition	13780 May 11 02:21	0°♌15'12	0°15'13		13786 Mar 13 22:53	15°♌	
	13780 May 12 23:12	30°♌♌		evening set	13786 Apr 24 11:34	23°♌22'03	
direct	13780 Jul 08 04:16	25°♌19'27		max. Earth dist.	13786 May 05 19:12	25°♌47'57	6.48042 AU
	13780 Aug 31 16:29	0°♌♌					
evening set	13780 Nov 12 13:38	15°♌15'10		conjunction	13786 May 07 09:50	26°♌08'46	-0°07'32
				minimum elong	13786 May 07 09:49	26°♌08'46	0°08'20
conjunction	13780 Nov 26 03:05	18°♌29'25	0°19'55	behind sun begin	13786 May 07 02:47	26°♌04'59	
minimum elong	13780 Nov 26 03:04	18°♌29'24	0°20'56	behind sun end	13786 May 07 16:52	26°♌12'32	
max. Earth dist.	13780 Nov 28 11:05	19°♌02'52	5.98491 AU	morning rise	13786 May 20 06:16	28°♌54'50	
morning rise	13780 Dec 09 18:01	21°♌44'07			13786 May 25 08:21	0°♌	
	13781 Jan 15 04:21	0°♌		retrograde	13786 Sep 18 15:50	15°♌45'41	
retrograde	13781 Apr 18 02:39	11°♌39'37		opposition	13786 Nov 18 18:08	10°♌51'58	-0°23'49
min. Earth dist.	13781 Jun 15 02:31	6°♌49'32	4.06130 AU	min. Earth dist.	13786 Nov 20 03:45	10°♌41'12	4.43241 AU
opposition	13781 Jun 16 18:22	6°♌36'04	0°42'20	direct	13787 Jan 20 02:41	5°♌51'20	
direct	13781 Aug 14 12:11	1°♌38'29		evening set	13787 May 25 00:20	23°♌23'47	
evening set	13781 Dec 19 06:32	20°♌42'22		max. Earth dist.	13787 Jun 04 13:53	25°♌43'42	6.36623 AU
conjunction	13782 Jan 01 19:11	23°♌48'40	0°33'13	conjunction	13787 Jun 06 20:37	26°♌14'02	-0°23'59
minimum elong	13782 Jan 01 19:11	23°♌48'39	0°34'13	minimum elong	13787 Jun 06 20:37	26°♌14'02	0°25'02
max. Earth dist.	13782 Jan 04 05:59	24°♌22'27	6.14902 AU	morning rise	13787 Jun 19 15:56	29°♌04'02	
morning rise	13782 Jan 15 08:15	26°♌54'46			13787 Jun 23 21:49	0°♌	
	13782 Jan 29 01:41	0°♌♌		retrograde	13787 Oct 21 02:49	16°♌41'11	
	13782 May 02 14:42	15°♌♌		opposition	13787 Dec 20 19:47	11°♌47'25	-0°44'41
retrograde	13782 May 21 15:06	15°♌34'53		min. Earth dist.	13787 Dec 22 12:18	11°♌34'21	4.28613 AU
	13782 Jun 09 11:39	15°♌♌		direct	13788 Feb 20 10:57	6°♌47'32	
min. Earth dist.	13782 Jul 19 08:45	10°♌43'46	4.23855 AU	evening set	13788 Jun 24 23:00	25°♌07'01	
opposition	13782 Jul 20 18:48	10°♌32'23	0°52'33	max. Earth dist.	13788 Jul 05 12:45	27°♌32'26	6.19844 AU
direct	13782 Sep 18 18:07	5°♌33'05					
	13782 Dec 12 02:29	15°♌		conjunction	13788 Jul 07 19:59	28°♌04'12	-0°34'12
evening set	13783 Jan 22 15:05	23°♌40'33		minimum elong	13788 Jul 07 19:59	28°♌04'12	0°35'10
					13788 Jul 16 05:15	0°♌	
conjunction	13783 Feb 05 00:37	26°♌37'58	0°34'45	morning rise	13788 Jul 20 16:38	1°♌01'36	
minimum elong	13783 Feb 05 00:38	26°♌37'59	0°35'25		13788 Sep 27 21:18	15°♌	
max. Earth dist.	13783 Feb 06 19:25	27°♌01'37	6.32446 AU	retrograde	13788 Nov 24 02:32	19°♌48'13	
morning rise	13783 Feb 18 09:30	29°♌34'47			13789 Jan 22 11:09	15°♌♌	
	13783 Feb 20 07:36	0°♌♌		opposition	13789 Jan 23 07:18	14°♌53'25	-0°53'08
retrograde	13783 Jun 21 17:37	17°♌07'02		min. Earth dist.	13789 Jan 24 16:59	14°♌42'26	4.10849 AU
opposition	13783 Aug 21 10:30	12°♌07'09	0°46'00	direct	13789 Mar 24 16:08	9°♌55'13	
min. Earth dist.	13783 Aug 20 14:16	12°♌13'48	4.39823 AU		13789 May 22 00:59	15°♌	
direct	13783 Oct 21 14:03	7°♌06'52		evening set	13789 Jul 29 02:13	29°♌11'48	
evening set	13784 Feb 23 18:23	24°♌31'13			13789 Aug 01 11:25	0°♌♌	
				max. Earth dist.	13789 Aug 09 12:35	1°♌55'17	6.02610 AU
conjunction	13784 Mar 07 23:46	27°♌21'42	0°26'02	conjunction	13789 Aug 11 02:28	2°♌17'56	-0°33'38
minimum elong	13784 Mar 07 23:47	27°♌21'42	0°26'12	minimum elong	13789 Aug 11 02:29	2°♌17'57	0°34'13
max. Earth dist.	13784 Mar 08 14:42	27°♌29'44	6.45707 AU	morning rise	13789 Aug 24 03:40	5°♌24'52	
	13784 Mar 20 06:29	0°♌♌		retrograde	13789 Dec 31 18:38	25°♌26'21	
morning rise	13784 Mar 21 03:45	0°♌11'22		opposition	13790 Mar 01 08:29	20°♌29'30	-0°42'56
retrograde	13784 Jul 20 14:09	16°♌09'49		min. Earth dist.	13790 Mar 01 23:30	20°♌24'31	3.95710 AU
opposition	13784 Sep 19 14:46	12°♌02'50	0°27'24	direct	13790 Apr 29 10:15	15°♌33'17	
min. Earth dist.	13784 Sep 19 14:38	12°♌02'53	4.49584 AU		13790 Aug 10 23:14	0°♌	
direct	13784 Nov 20 17:24	7°♌02'08					

evening set	13790 Sep 03 14:16	5°♂36'55		conjunction	13796 Mar 12 08:08	1°♂42'22	0°24'09
				minimum elong	13796 Mar 12 08:09	1°♂42'23	0°24'14
conjunction	13790 Sep 16 20:17	8°♂51'07	-0°20'22	max. Earth dist.	13796 Mar 12 19:22	1°♂48'24	6.46811 AU
minimum elong	13790 Sep 16 20:18	8°♂51'08	0°20'19	morning rise	13796 Mar 25 11:32	4°♂31'24	
max. Earth dist.	13790 Sep 16 17:20	8°♂49'19	5.91100 AU	retrograde	13796 Jul 24 17:04	21°♂16'39	
morning rise	13790 Sep 30 03:50	12°♂06'24		opposition	13796 Sep 23 19:16	16°♂20'02	0°24'05
	13790 Dec 27 15:57	0°♂		min. Earth dist.	13796 Sep 23 21:00	16°♂19'28	4.50153 AU
retrograde	13791 Feb 08 18:41	2°♂55'55		direct	13796 Nov 24 23:00	11°♂19'20	
	13791 Mar 24 04:18	30°♂		evening set	13797 Mar 29 15:41	28°♂21'34	
opposition	13791 Apr 08 23:55	27°♂56'09	-0°14'41		13797 Apr 06 08:55	0°♂	
min. Earth dist.	13791 Apr 08 13:15	27°♂59'45	3.89207 AU				
direct	13791 Jun 06 03:31	23°♂01'03		conjunction	13797 Apr 11 16:37	1°♂08'10	0°08'09
	13791 Aug 12 17:21	0°♂		minimum elong	13797 Apr 11 16:37	1°♂08'10	0°07'41
asc. node	13791 Sep 28 02:29	10°♂01'51		behind sun begin	13797 Apr 11 09:23	1°♂04'19	
evening set	13791 Oct 11 17:11	13°♂18'18		behind sun end	13797 Apr 11 23:52	1°♂12'01	
	13791 Oct 18 16:06	15°♂		max. Earth dist.	13797 Apr 10 23:25	0°♂58'59	6.51341 AU
				morning rise	13797 Apr 24 15:45	3°♂53'58	
conjunction	13791 Oct 25 04:24	16°♂35'30	0°01'32		13797 Jun 21 11:55	15°♂	
minimum elong	13791 Oct 25 04:22	16°♂35'29	0°02'13	retrograde	13797 Aug 23 09:39	20°♂28'50	
behind sun begin	13791 Oct 24 20:01	16°♂30'24		desc. node	13797 Oct 02 00:01	18°♂11'09	
behind sun end	13791 Oct 25 12:44	16°♂40'34		opposition	13797 Oct 23 14:13	15°♂34'17	-0°01'32
max. Earth dist.	13791 Oct 26 14:08	16°♂56'07	5.90267 AU	min. Earth dist.	13797 Oct 24 11:16	15°♂27'33	4.50322 AU
morning rise	13791 Nov 07 17:37	19°♂53'38			13797 Oct 28 01:34	15°♂	
	13791 Dec 21 19:32	0°♂		direct	13797 Dec 25 03:42	10°♂33'31	
retrograde	13792 Mar 18 00:30	10°♂36'15			13798 Feb 20 03:47	15°♂	
min. Earth dist.	13792 May 14 23:34	5°♂44'41	3.94211 AU	evening set	13798 Apr 28 17:52	27°♂41'15	
opposition	13792 May 16 07:53	5°♂33'43	0°19'47		13798 May 09 11:29	0°♂	
direct	13792 Jul 13 10:27	0°♂37'45		max. Earth dist.	13798 May 09 21:32	0°♂05'26	6.47090 AU
evening set	13792 Nov 17 18:50	20°♂27'19					
				conjunction	13798 May 11 15:34	0°♂28'08	-0°10'04
conjunction	13792 Dec 01 08:23	23°♂40'40	0°22'25	minimum elong	13798 May 11 15:33	0°♂28'08	0°10'55
minimum elong	13792 Dec 01 08:22	23°♂40'39	0°23'27	behind sun begin	13798 May 11 09:30	0°♂24'53	
max. Earth dist.	13792 Dec 03 17:24	24°♂14'34	6.00502 AU	behind sun end	13798 May 11 21:37	0°♂31'23	
morning rise	13792 Dec 14 23:13	26°♂54'21		morning rise	13798 May 24 11:51	3°♂14'28	
	13792 Dec 28 05:56	0°♂		retrograde	13798 Sep 23 02:06	20°♂09'17	
retrograde	13793 Apr 22 22:55	16°♂40'03		opposition	13798 Nov 23 03:30	15°♂15'36	-0°27'14
min. Earth dist.	13793 Jun 20 00:51	11°♂49'38	4.08449 AU	min. Earth dist.	13798 Nov 24 14:20	15°♂04'27	4.41898 AU
opposition	13793 Jun 21 15:38	11°♂36'32	0°44'49	direct	13799 Jan 24 11:23	10°♂15'01	
direct	13793 Aug 19 13:58	6°♂38'43		evening set	13799 May 29 09:06	27°♂51'37	
evening set	13793 Dec 24 04:25	25°♂34'46			13799 Jun 08 01:03	0°♂	
				max. Earth dist.	13799 Jun 08 23:04	0°♂12'14	6.35000 AU
conjunction	13794 Jan 06 16:51	28°♂39'52	0°34'07				
minimum elong	13794 Jan 06 16:51	28°♂39'52	0°35'06	conjunction	13799 Jun 11 05:25	0°♂42'27	-0°25'55
max. Earth dist.	13794 Jan 09 03:10	29°♂13'10	6.17320 AU	minimum elong	13799 Jun 11 05:24	0°♂42'27	0°26'58
	13794 Jan 12 13:14	0°♂		morning rise	13799 Jun 24 00:32	3°♂33'02	
morning rise	13794 Jan 20 05:26	1°♂44'42		retrograde	13799 Oct 25 17:37	21°♂16'45	
	13794 Mar 27 01:41	15°♂		opposition	13799 Dec 25 10:44	16°♂22'52	-0°46'45
retrograde	13794 May 26 01:18	20°♂14'54		min. Earth dist.	13799 Dec 27 02:17	16°♂10'07	4.26822 AU
min. Earth dist.	13794 Jul 23 22:13	15°♂23'51	4.26165 AU	direct	13800 Feb 24 22:23	11°♂23'11	
opposition	13794 Jul 25 07:32	15°♂12'45	0°52'31	evening set	13800 Jun 30 12:26	29°♂48'00	
	13794 Jul 26 21:51	15°♂			13800 Jul 01 09:24	0°♂	
direct	13794 Sep 23 09:58	10°♂13'19		max. Earth dist.	13800 Jul 11 03:30	2°♂14'49	6.18016 AU
	13794 Nov 20 01:40	15°♂					
evening set	13795 Jan 27 05:33	28°♂14'18		conjunction	13800 Jul 13 09:27	2°♂45'59	-0°34'50
	13795 Feb 04 06:08	0°♂		minimum elong	13800 Jul 13 09:27	2°♂45'59	0°35'47
				morning rise	13800 Jul 26 06:31	5°♂44'18	
conjunction	13795 Feb 09 14:29	1°♂10'40	0°34'03		13800 Sep 06 18:53	15°♂	
minimum elong	13795 Feb 09 14:29	1°♂10'41	0°34'38	retrograde	13800 Nov 30 02:15	24°♂38'56	
max. Earth dist.	13795 Feb 11 04:33	1°♂31'38	6.34475 AU	opposition	13801 Jan 29 05:01	19°♂43'52	-0°52'54
morning rise	13795 Feb 22 22:46	4°♂06'25		min. Earth dist.	13801 Jan 30 13:22	19°♂33'16	4.09111 AU
retrograde	13795 Jun 26 00:30	21°♂31'37			13801 Mar 18 10:12	15°♂	
opposition	13795 Aug 25 17:30	16°♂32'13	0°43'57	direct	13801 Mar 30 11:17	14°♂45'48	
min. Earth dist.	13795 Aug 25 00:47	16°♂37'41	4.41438 AU		13801 Apr 11 11:21	15°♂	
direct	13795 Oct 26 01:38	11°♂31'50			13801 Jul 17 06:08	0°♂	
evening set	13796 Feb 28 03:15	28°♂52'30		evening set	13801 Aug 03 21:12	4°♂07'27	
	13796 Mar 04 09:27	0°♂					
				conjunction	13801 Aug 16 22:09	7°♂14'31	-0°32'33

minimum elong	13801 Aug 16 22:10	7° \mathbb{M} 14'32	0°33'02	minimum elong	13807 Feb 15 03:22	5° \mathbb{H} 39'38	0°33'42
max. Earth dist.	13801 Aug 15 12:16	6° \mathbb{M} 54'13	6.01131 AU	max. Earth dist.	13807 Feb 16 16:04	5° \mathbb{H} 59'46	6.36051 AU
morning rise	13801 Aug 29 23:54	10° \mathbb{M} 22'24		morning rise	13807 Feb 28 10:58	8° \mathbb{H} 34'29	
	13801 Dec 20 06:06	0° \mathbb{L}		retrograde	13807 Jul 01 05:11	25° \mathbb{H} 53'58	
retrograde	13802 Jan 06 22:26	0° \mathbb{L} 30'29		min. Earth dist.	13807 Aug 30 08:23	21° \mathbb{H} 00'02	4.42723 AU
	13802 Jan 24 12:42	30° \mathbb{R} \mathbb{M}		opposition	13807 Aug 31 00:00	20° \mathbb{H} 54'56	0°41'42
opposition	13802 Mar 07 11:04	25° \mathbb{M} 33'18	-0°40'00	direct	13807 Oct 31 10:04	15° \mathbb{H} 54'32	
min. Earth dist.	13802 Mar 07 23:27	25° \mathbb{M} 29'11	3.94654 AU		13808 Feb 18 05:58	0° \mathbb{Y}	
direct	13802 May 05 08:49	20° \mathbb{M} 37'16		evening set	13808 Mar 04 11:46	3° \mathbb{Y} 12'13	
	13802 Jul 24 15:31	0° \mathbb{L}					
evening set	13802 Sep 09 14:39	10° \mathbb{L} 43'33		conjunction	13808 Mar 17 16:01	6° \mathbb{Y} 01'30	0°22'09
				minimum elong	13808 Mar 17 16:02	6° \mathbb{Y} 01'31	0°22'09
conjunction	13802 Sep 22 21:12	13° \mathbb{L} 58'20	-0°17'46	max. Earth dist.	13808 Mar 17 23:18	6° \mathbb{Y} 05'24	6.47714 AU
minimum elong	13802 Sep 22 21:13	13° \mathbb{L} 58'21	0°17'37	morning rise	13808 Mar 30 18:53	8° \mathbb{Y} 49'59	
max. Earth dist.	13802 Sep 22 20:52	13° \mathbb{L} 58'07	5.90559 AU	retrograde	13808 Jul 29 22:05	25° \mathbb{Y} 32'27	
morning rise	13802 Oct 06 05:45	17° \mathbb{L} 14'16		opposition	13808 Sep 29 00:02	20° \mathbb{Y} 36'10	0°20'40
	13802 Dec 02 05:23	0° \mathbb{M}		min. Earth dist.	13808 Sep 29 04:52	20° \mathbb{Y} 34'36	4.50609 AU
retrograde	13803 Feb 14 21:27	8° \mathbb{M} 05'32		direct	13808 Nov 30 06:50	15° \mathbb{Y} 35'25	
opposition	13803 Apr 15 03:16	3° \mathbb{M} 05'22	-0°10'04		13809 Mar 22 09:54	0° \mathbb{B}	
min. Earth dist.	13803 Apr 14 13:18	3° \mathbb{M} 10'05	3.89257 AU	evening set	13809 Apr 03 21:34	2° \mathbb{B} 37'00	
	13803 May 09 23:38	30° \mathbb{R} \mathbb{L}					
direct	13803 Jun 12 05:30	28° \mathbb{L} 10'10		conjunction	13809 Apr 16 21:58	5° \mathbb{B} 23'24	0°05'37
	13803 Jul 15 07:52	0° \mathbb{M}		minimum elong	13809 Apr 16 21:59	5° \mathbb{B} 23'25	0°05'06
asc. node	13803 Aug 08 18:22	3° \mathbb{M} 22'46		behind sun begin	13809 Apr 16 14:12	5° \mathbb{B} 19'17	
	13803 Oct 03 11:42	15° \mathbb{M}		behind sun end	13809 Apr 17 05:46	5° \mathbb{B} 27'33	
evening set	13803 Oct 17 19:27	18° \mathbb{M} 26'14		max. Earth dist.	13809 Apr 16 01:05	5° \mathbb{B} 12'16	6.51291 AU
				morning rise	13809 Apr 29 20:40	8° \mathbb{B} 09'03	
conjunction	13803 Oct 31 07:18	21° \mathbb{M} 43'23	0°04'37		13809 Jun 02 11:36	15° \mathbb{B}	
minimum elong	13803 Oct 31 07:17	21° \mathbb{M} 43'23	0°05'22	desc. node	13809 Aug 15 02:08	24° \mathbb{B} 27'37	
behind sun begin	13803 Oct 30 23:13	21° \mathbb{M} 38'29		retrograde	13809 Aug 28 14:20	24° \mathbb{B} 44'36	
behind sun end	13803 Oct 31 15:20	21° \mathbb{M} 48'17		opposition	13809 Oct 28 19:34	19° \mathbb{B} 50'10	-0°05'18
max. Earth dist.	13803 Nov 01 20:33	22° \mathbb{M} 06'07	5.90906 AU	min. Earth dist.	13809 Oct 29 18:04	19° \mathbb{B} 42'58	4.49750 AU
morning rise	13803 Nov 13 20:55	25° \mathbb{M} 01'24			13809 Dec 19 12:46	15° \mathbb{R} \mathbb{B}	
	13803 Dec 04 20:17	0° \mathbb{X}		direct	13809 Dec 30 08:34	14° \mathbb{B} 49'22	
retrograde	13804 Mar 24 00:32	15° \mathbb{X} 39'55			13810 Jan 10 05:33	15° \mathbb{B}	
min. Earth dist.	13804 May 20 23:04	10° \mathbb{X} 48'12	3.95352 AU		13810 Apr 24 15:42	0° \mathbb{I}	
opposition	13804 May 22 07:38	10° \mathbb{X} 37'09	0°23'58	evening set	13810 May 03 23:40	1° \mathbb{I} 59'17	
direct	13804 Jul 19 12:09	5° \mathbb{X} 40'57		max. Earth dist.	13810 May 15 02:09	4° \mathbb{I} 23'09	6.46001 AU
evening set	13804 Nov 23 18:49	25° \mathbb{X} 25'59					
				conjunction	13810 May 16 21:09	4° \mathbb{I} 46'28	-0°12'32
conjunction	13804 Dec 07 08:34	28° \mathbb{X} 38'41	0°24'39	minimum elong	13810 May 16 21:09	4° \mathbb{I} 46'27	0°13'26
minimum elong	13804 Dec 07 08:33	28° \mathbb{X} 38'41	0°25'41	behind sun begin	13810 May 16 16:37	4° \mathbb{I} 44'01	
max. Earth dist.	13804 Dec 09 19:37	29° \mathbb{X} 13'39	6.02028 AU	behind sun end	13810 May 17 01:40	4° \mathbb{I} 48'54	
	13804 Dec 13 01:58	0° \mathbb{Z}		morning rise	13810 May 29 16:58	7° \mathbb{I} 33'04	
morning rise	13804 Dec 20 23:22	1° \mathbb{Z} 51'37		retrograde	13810 Sep 28 11:39	24° \mathbb{I} 32'23	
retrograde	13805 Apr 28 14:53	21° \mathbb{Z} 29'38		opposition	13810 Nov 28 12:50	19° \mathbb{I} 38'46	-0°30'29
min. Earth dist.	13805 Jun 25 17:29	16° \mathbb{Z} 39'29	4.10210 AU	min. Earth dist.	13810 Nov 30 01:07	19° \mathbb{I} 27'10	4.40323 AU
opposition	13805 Jun 27 08:44	16° \mathbb{Z} 26'15	0°46'56	direct	13811 Jan 29 19:10	14° \mathbb{I} 38'18	
direct	13805 Aug 25 08:58	11° \mathbb{Z} 28'13			13811 May 24 02:37	0° \mathbb{O}	
	13805 Dec 28 14:22	0° \mathbb{A}		evening set	13811 Jun 03 18:00	2° \mathbb{O} 19'56	
evening set	13805 Dec 29 23:31	0° \mathbb{A} 18'45		max. Earth dist.	13811 Jun 14 05:42	4° \mathbb{O} 39'59	6.33019 AU
conjunction	13806 Jan 12 11:34	3° \mathbb{A} 22'54	0°34'46	conjunction	13811 Jun 16 14:04	5° \mathbb{O} 11'28	-0°27'41
minimum elong	13806 Jan 12 11:34	3° \mathbb{A} 22'54	0°35'43	minimum elong	13811 Jun 16 14:04	5° \mathbb{O} 11'28	0°28'43
max. Earth dist.	13806 Jan 14 18:50	3° \mathbb{A} 54'21	6.19161 AU	morning rise	13811 Jun 29 09:24	8° \mathbb{O} 02'54	
morning rise	13806 Jan 25 23:52	6° \mathbb{A} 26'47		retrograde	13811 Oct 31 11:45	25° \mathbb{O} 54'54	
	13806 Mar 06 22:52	15° \mathbb{A}		opposition	13811 Dec 31 02:55	21° \mathbb{O} 00'55	-0°48'33
retrograde	13806 May 31 11:53	24° \mathbb{A} 49'14		min. Earth dist.	13812 Jan 01 18:31	20° \mathbb{O} 48'06	4.24540 AU
min. Earth dist.	13806 Jul 29 11:27	19° \mathbb{A} 57'42	4.27931 AU	direct	13812 Mar 01 11:40	16° \mathbb{O} 01'21	
opposition	13806 Jul 30 18:26	19° \mathbb{A} 47'24	0°52'13		13812 Jun 14 22:05	0° \mathbb{Q}	
	13806 Sep 17 18:41	15° \mathbb{R} \mathbb{A}		evening set	13812 Jul 05 03:21	4° \mathbb{Q} 33'31	
direct	13806 Sep 29 01:11	14° \mathbb{A} 47'46		max. Earth dist.	13812 Jul 15 21:06	7° \mathbb{Q} 02'37	6.15623 AU
	13806 Oct 10 08:10	15° \mathbb{A}					
	13807 Jan 20 03:00	0° \mathbb{H}		conjunction	13812 Jul 18 00:53	7° \mathbb{Q} 32'42	-0°35'15
evening set	13807 Feb 01 18:43	2° \mathbb{H} 44'02		minimum elong	13812 Jul 18 00:53	7° \mathbb{Q} 32'42	0°36'09
				morning rise	13812 Jul 30 22:16	10° \mathbb{Q} 32'13	
conjunction	13807 Feb 15 03:21	5° \mathbb{H} 39'38	0°33'09		13812 Aug 19 13:42	15° \mathbb{Q}	

retrograde	13812 Dec 05 05:01	29°♏37'12	opposition	13818 Aug 04 06:50	24°♏26'20	0°51'34
opposition	13813 Feb 03 05:24	24°♏41'57 -0°52'16	direct	13818 Oct 03 17:26	19°♏26'33	
min. Earth dist.	13813 Feb 04 12:04	24°♏31'54 4.06807 AU		13819 Jan 02 13:41	0°♏	
direct	13813 Apr 04 06:34	19°♏44'12	evening set	13819 Feb 06 08:24	7°♏15'31	
	13813 Jun 29 02:37	0°♏				
evening set	13813 Aug 08 20:18	9°♏13'22	conjunction	13819 Feb 19 16:13	10°♏09'53	0°32'06
			minimum elong	13819 Feb 19 16:14	10°♏09'54	0°32'34
conjunction	13813 Aug 21 21:48	12°♏21'40 -0°31'10	max. Earth dist.	13819 Feb 21 00:15	10°♏27'23	6.38290 AU
minimum elong	13813 Aug 21 21:49	12°♏21'41 0°31'35	morning rise	13819 Mar 04 23:14	13°♏03'35	
max. Earth dist.	13813 Aug 20 14:20	12°♏02'43 5.99126 AU		13819 Jun 22 16:56	0°♏	
morning rise	13813 Sep 04 00:36	15°♏30'55	retrograde	13819 Jul 05 10:08	0°♏15'17	
	13813 Nov 10 19:54	0°♏		13819 Jul 18 01:28	30°♏	
retrograde	13814 Jan 12 06:26	5°♏47'50	opposition	13819 Sep 04 06:04	25°♏16'34	0°39'15
opposition	13814 Mar 12 18:32	0°♏50'15 -0°36'37	min. Earth dist.	13819 Sep 03 17:39	25°♏20'38	4.44561 AU
min. Earth dist.	13814 Mar 13 03:03	0°♏47'24 3.93160 AU	direct	13819 Nov 04 20:23	20°♏16'00	
	13814 Mar 19 02:01	30°♏		13820 Jan 31 21:57	0°♏	
direct	13814 May 10 12:26	25°♏54'24	evening set	13820 Mar 08 18:50	7°♏28'59	
	13814 Jun 30 07:19	0°♏				
evening set	13814 Sep 14 20:35	16°♏05'05	conjunction	13820 Mar 21 22:35	10°♏17'32	0°20'05
			minimum elong	13820 Mar 21 22:36	10°♏17'33	0°20'00
conjunction	13814 Sep 28 04:08	19°♏20'43 -0°14'53	max. Earth dist.	13820 Mar 22 03:00	10°♏19'54	6.49023 AU
minimum elong	13814 Sep 28 04:09	19°♏20'43 0°14'38	morning rise	13820 Apr 04 00:38	13°♏05'14	
behind sun begin	13814 Sep 28 00:36	19°♏18'33	retrograde	13820 Aug 02 22:50	29°♏43'53	
behind sun end	13814 Sep 28 07:41	19°♏22'53	opposition	13820 Oct 03 02:52	24°♏47'50	0°17'13
max. Earth dist.	13814 Sep 28 10:07	19°♏24'22 5.89753 AU	min. Earth dist.	13820 Oct 03 09:31	24°♏45'42	4.51314 AU
morning rise	13814 Oct 11 13:26	22°♏37'25	direct	13820 Dec 04 10:37	19°♏47'02	
	13814 Nov 11 19:57	0°♏		13821 Mar 05 15:45	0°♏	
retrograde	13815 Feb 20 08:38	13°♏31'18	evening set	13821 Apr 08 01:16	6°♏47'19	
opposition	13815 Apr 20 12:49	8°♏30'44 -0°05'08	max. Earth dist.	13821 Apr 20 00:16	9°♏20'14	6.51329 AU
min. Earth dist.	13815 Apr 19 20:35	8°♏36'13 3.89234 AU				
direct	13815 Jun 17 14:39	3°♏35'30	conjunction	13821 Apr 21 01:07	9°♏33'30	0°03'07
asc. node	13815 Jun 17 02:22	3°♏35'31	minimum elong	13821 Apr 21 01:05	9°♏33'29	0°02'32
	13815 Sep 15 01:48	15°♏	behind sun begin	13821 Apr 20 17:05	9°♏29'14	
evening set	13815 Oct 23 04:09	23°♏50'21	behind sun end	13821 Apr 21 09:06	9°♏37'45	
			morning rise	13821 May 03 23:16	12°♏18'54	
conjunction	13815 Nov 05 16:31	27°♏07'23 0°07'47		13821 May 16 18:01	15°♏	
minimum elong	13815 Nov 05 16:31	27°♏07'23 0°08'37	desc. node	13821 Jun 27 13:06	22°♏54'16	
behind sun begin	13815 Nov 05 09:15	27°♏02'59	retrograde	13821 Sep 01 18:57	28°♏55'11	
behind sun end	13815 Nov 05 23:47	27°♏11'47	opposition	13821 Nov 01 23:23	24°♏00'55	-0°08'56
max. Earth dist.	13815 Nov 07 10:34	27°♏32'58 5.91666 AU	min. Earth dist.	13821 Nov 03 01:18	23°♏52'38	4.49100 AU
	13815 Nov 17 12:53	0°♏	direct	13822 Jan 03 13:30	19°♏00'04	
morning rise	13815 Nov 19 06:39	0°♏25'13		13822 Apr 08 06:22	0°♏	
retrograde	13816 Mar 29 04:15	20°♏58'21	evening set	13822 May 08 03:35	6°♏12'29	
min. Earth dist.	13816 May 26 01:23	16°♏07'19 3.96824 AU	max. Earth dist.	13822 May 19 01:30	8°♏34'21	6.44683 AU
opposition	13816 May 27 12:32	15°♏55'24 0°28'09				
direct	13816 Jul 24 17:49	10°♏59'02	conjunction	13822 May 21 00:41	9°♏00'00	-0°14'52
	13816 Nov 26 07:22	0°♏	minimum elong	13822 May 21 00:40	9°♏00'00	0°15'50
evening set	13816 Nov 29 00:21	0°♏38'02	behind sun begin	13822 May 20 23:13	8°♏59'12	
			behind sun end	13822 May 21 02:08	9°♏00'47	
conjunction	13816 Dec 12 13:55	3°♏49'44 0°26'47	morning rise	13822 Jun 02 20:23	11°♏47'01	
minimum elong	13816 Dec 12 13:55	3°♏49'43 0°27'50	retrograde	13822 Oct 02 20:44	28°♏51'53	
max. Earth dist.	13816 Dec 15 00:55	4°♏24'30 6.04060 AU	opposition	13822 Dec 02 21:04	23°♏58'13	-0°33'33
morning rise	13816 Dec 26 04:42	7°♏01'38	min. Earth dist.	13822 Dec 04 10:26	23°♏46'14	4.38401 AU
retrograde	13817 May 03 09:55	26°♏29'38	direct	13823 Feb 03 00:42	18°♏57'43	
min. Earth dist.	13817 Jun 30 14:43	21°♏39'22 4.12592 AU		13823 May 07 11:15	0°♏	
opposition	13817 Jul 02 05:32	21°♏26'17 0°48'46	evening set	13823 Jun 08 02:06	6°♏45'42	
direct	13817 Aug 30 10:22	16°♏27'57	max. Earth dist.	13823 Jun 18 14:07	9°♏06'38	6.30624 AU
	13817 Dec 11 10:08	0°♏				
evening set	13818 Jan 03 21:17	5°♏10'25	conjunction	13823 Jun 20 22:22	9°♏38'13	-0°29'16
			minimum elong	13823 Jun 20 22:21	9°♏38'13	0°30'19
conjunction	13818 Jan 17 09:05	8°♏13'19 0°35'14	morning rise	13823 Jul 03 17:40	12°♏30'37	
minimum elong	13818 Jan 17 09:05	8°♏13'19 0°36'07		13823 Oct 17 15:52	0°♏	
max. Earth dist.	13818 Jan 19 16:24	8°♏44'37 6.21708 AU	retrograde	13823 Nov 05 06:39	0°♏32'27	
morning rise	13818 Jan 30 20:38	11°♏15'47		13823 Nov 23 19:55	30°♏	
	13818 Feb 16 19:05	15°♏	opposition	13824 Jan 04 19:15	25°♏38'23	-0°50'04
retrograde	13818 Jun 04 22:25	29°♏27'52	min. Earth dist.	13824 Jan 06 11:17	25°♏25'26	4.21823 AU
min. Earth dist.	13818 Aug 03 00:51	24°♏36'16 4.30421 AU	direct	13824 Mar 05 23:47	20°♏39'02	

	13824 May 27 23:12	0°♏	opposition	13829 Jul 07 02:12	26°♌25'43	0°50'13
evening set	13824 Jul 09 19:13	9°♏20'13	direct	13829 Sep 04 11:09	21°♌27'11	
max. Earth dist.	13824 Jul 20 13:18	11°♏50'31 6.12793 AU		13829 Nov 22 04:13	0°♍	
			evening set	13830 Jan 08 18:42	10°♍00'39	
conjunction	13824 Jul 22 17:04	12°♏20'47 -0°35'26				
minimum elong	13824 Jul 22 17:05	12°♏20'47 0°36'17	conjunction	13830 Jan 22 05:48	13°♍02'07	0°35'25
	13824 Aug 03 01:45	15°♏	minimum elong	13830 Jan 22 05:49	13°♍02'07	0°36'16
morning rise	13824 Aug 04 15:17	15°♏21'50	max. Earth dist.	13830 Jan 24 10:03	13°♍31'30	6.24455 AU
	13824 Oct 15 10:02	0°♐		13830 Jan 30 23:49	15°♍	
retrograde	13824 Dec 10 09:17	4°♐39'06	morning rise	13830 Feb 04 16:52	16°♍03'09	
	13825 Feb 06 05:51	30°♐♏		13830 Apr 17 17:40	0°♐	
opposition	13825 Feb 08 07:50	29°♏43'34 -0°51'18	retrograde	13830 Jun 09 07:19	4°♐04'39	
min. Earth dist.	13825 Feb 09 11:43	29°♏34'23 4.04105 AU		13830 Aug 01 14:40	30°♐♍	
direct	13825 Apr 09 03:28	24°♏46'05	opposition	13830 Aug 08 18:22	29°♍03'27	0°50'34
	13825 Jun 06 22:15	0°♐	min. Earth dist.	13830 Aug 07 14:31	29°♍12'41	4.32953 AU
evening set	13825 Aug 13 21:39	14°♐24'19	direct	13830 Oct 08 09:04	24°♍03'31	
max. Earth dist.	13825 Aug 25 22:32	17°♐18'37 5.96830 AU		13830 Dec 12 22:50	0°♐	
			evening set	13831 Feb 10 21:09	11°♐45'30	
conjunction	13825 Aug 27 00:09	17°♐34'08 -0°29'33				
minimum elong	13825 Aug 27 00:10	17°♐34'08 0°29'53	conjunction	13831 Feb 24 04:30	14°♐38'49	0°30'49
morning rise	13825 Sep 09 03:46	20°♐44'52	minimum elong	13831 Feb 24 04:31	14°♐38'49	0°31'12
	13825 Oct 19 11:27	0°♑	max. Earth dist.	13831 Feb 25 09:45	14°♐54'43	6.40432 AU
retrograde	13826 Jan 17 20:27	11°♑11'42	morning rise	13831 Mar 09 10:38	17°♐31'21	
opposition	13826 Mar 18 05:07	6°♑13'47 -0°32'55		13831 May 13 19:44	0°♑	
min. Earth dist.	13826 Mar 18 10:49	6°♑11'53 3.91535 AU	retrograde	13831 Jul 09 14:21	4°♑36'06	
direct	13826 May 15 19:54	1°♑18'12		13831 Sep 05 15:43	30°♐♐	
evening set	13826 Sep 20 06:02	21°♑33'39	opposition	13831 Sep 08 11:52	29°♐37'51	0°36'33
			min. Earth dist.	13831 Sep 08 01:54	29°♐41'06	4.46173 AU
conjunction	13826 Oct 03 14:27	24°♑50'06 -0°11'51	direct	13831 Nov 09 05:06	24°♐37'18	
minimum elong	13826 Oct 03 14:27	24°♑50'06 0°11'31		13832 Jan 11 06:19	0°♑	
behind sun begin	13826 Oct 03 08:28	24°♑46'27	evening set	13832 Mar 13 01:52	11°♑46'34	
behind sun end	13826 Oct 03 20:26	24°♑53'46				
max. Earth dist.	13826 Oct 04 02:07	24°♑57'15 5.88971 AU	conjunction	13832 Mar 26 04:51	14°♑34'30	0°17'52
morning rise	13826 Oct 17 00:46	28°♑07'38	minimum elong	13832 Mar 26 04:52	14°♑34'31	0°17'43
	13826 Oct 24 17:59	0°♒	max. Earth dist.	13832 Mar 26 03:23	14°♑33'43	6.49992 AU
	13827 Jan 05 18:17	15°♒	morning rise	13832 Apr 08 06:26	17°♑21'38	
retrograde	13827 Feb 25 20:32	19°♒03'22		13832 Jun 15 09:46	0°♒	
	13827 Apr 18 21:29	15°♒♒	retrograde	13832 Aug 07 03:37	3°♒57'55	
min. Earth dist.	13827 Apr 25 04:00	14°♒09'26 3.89426 AU		13832 Sep 29 17:45	30°♐♑	
opposition	13827 Apr 26 00:48	14°♒02'24 -0°00'07	opposition	13832 Oct 07 06:52	29°♑02'12	0°13'38
asc. node	13827 Apr 27 09:18	13°♒51'25	min. Earth dist.	13832 Oct 07 17:21	28°♑58'49	4.51597 AU
direct	13827 Jun 23 00:03	9°♒07'09	direct	13832 Dec 08 16:54	24°♑01'20	
	13827 Aug 23 12:54	15°♒		13833 Feb 13 21:51	0°♒	
evening set	13827 Oct 28 15:35	29°♒19'49	evening set	13833 Apr 12 06:02	11°♒01'46	
	13827 Oct 31 10:08	0°♓	max. Earth dist.	13833 Apr 24 01:19	13°♒32'50	6.50905 AU
conjunction	13827 Nov 11 04:17	2°♓36'30 0°10'56	conjunction	13833 Apr 25 05:33	13°♒47'56	0°00'28
minimum elong	13827 Nov 11 04:16	2°♓36'29 0°11'49	minimum elong	13833 Apr 25 05:32	13°♒47'56	0°00'11
behind sun begin	13827 Nov 10 22:28	2°♓32'59	behind sun begin	13833 Apr 24 21:35	13°♒43'42	
behind sun end	13827 Nov 11 10:05	2°♓40'00	behind sun end	13833 Apr 25 13:29	13°♒52'09	
max. Earth dist.	13827 Nov 13 01:40	3°♓04'02 5.92785 AU		13833 Apr 30 20:14	15°♒	
morning rise	13827 Nov 24 18:52	5°♓53'55	desc. node	13833 May 05 21:45	16°♒04'53	
retrograde	13828 Apr 03 08:49	26°♓19'57	morning rise	13833 May 08 03:12	16°♒33'20	
min. Earth dist.	13828 May 31 06:03	21°♓29'13 3.98714 AU		13833 Jul 21 00:30	0°♓	
opposition	13828 Jun 01 18:50	21°♓16'44 0°32'05	retrograde	13833 Sep 06 00:16	3°♓11'54	
direct	13828 Jul 30 03:18	16°♓20'03		13833 Oct 23 14:19	30°♐♓	
	13828 Nov 08 13:51	0°♔	opposition	13833 Nov 06 05:07	28°♒17'46	-0°12'39
evening set	13828 Dec 04 06:22	5°♔51'20	min. Earth dist.	13833 Nov 07 08:30	28°♒09'01	4.48003 AU
			direct	13834 Jan 07 17:18	23°♒16'55	
conjunction	13828 Dec 17 19:58	9°♔01'51 0°28'42		13834 Mar 20 02:04	0°♓	
minimum elong	13828 Dec 17 19:57	9°♔01'51 0°29'45	evening set	13834 May 12 10:03	10°♓33'19	
max. Earth dist.	13828 Dec 20 09:25	9°♔37'51 6.06518 AU	max. Earth dist.	13834 May 23 06:04	12°♓54'41	6.42978 AU
morning rise	13828 Dec 31 10:16	12°♔12'25				
	13829 Apr 07 16:59	0°♕	conjunction	13834 May 25 06:56	13°♓21'22	-0°17'14
retrograde	13829 May 08 05:28	1°♕28'55	minimum elong	13834 May 25 06:55	13°♓21'22	0°18'12
	13829 Jun 07 12:07	30°♐♔	morning rise	13834 Jun 07 02:25	16°♓08'58	
min. Earth dist.	13829 Jul 05 11:52	26°♔38'36 4.15327 AU		13834 Aug 20 12:41	0°♕	

retrograde	13834 Oct 07 10:53	3°☾20'39		behind sun end	13839 Nov 16 17:40	8°♄02'45	
	13834 Nov 25 01:28	30°♁II		max. Earth dist.	13839 Nov 18 17:08	8°♄31'25	5.94552 AU
opposition	13834 Dec 07 08:53	28°II27'02	-0°36'32	morning rise	13839 Nov 30 05:07	11°♄17'26	
min. Earth dist.	13834 Dec 09 00:18	28°II14'23	4.36174 AU		13840 Mar 08 08:43	0°♄	
direct	13835 Feb 07 10:27	23°II26'38		retrograde	13840 Apr 08 11:11	1°♄33'43	
	13835 Apr 17 16:48	0°☾			13840 May 09 08:52	30°♁♄	
evening set	13835 Jun 12 13:43	11°☾21'49		min. Earth dist.	13840 Jun 05 08:22	26°♄43'07	4.01110 AU
max. Earth dist.	13835 Jun 22 23:56	13°☾42'36	6.28030 AU	opposition	13840 Jun 06 22:04	26°♄30'21	0°35'38
				direct	13840 Aug 04 09:53	21°♄33'24	
conjunction	13835 Jun 25 10:00	14°☾15'23	-0°30'44		13840 Oct 20 00:28	0°♄	
minimum elong	13835 Jun 25 09:59	14°☾15'23	0°31'47	evening set	13840 Dec 09 09:17	10°♄55'25	
morning rise	13835 Jul 08 05:42	17°☾08'58					
	13835 Sep 10 02:52	0°♁		conjunction	13840 Dec 22 22:29	14°♄04'31	0°30'20
retrograde	13835 Nov 10 04:53	5°♁21'27		minimum elong	13840 Dec 22 22:29	14°♄04'30	0°31'23
opposition	13836 Jan 09 15:56	0°♁27'11	-0°51'18	max. Earth dist.	13840 Dec 25 11:14	14°♄39'52	6.09279 AU
min. Earth dist.	13836 Jan 11 06:22	0°♁14'43	4.19041 AU	morning rise	13841 Jan 05 12:32	17°♄13'37	
	13836 Jan 13 03:47	30°♁☾			13841 Mar 07 19:56	0°♁	
direct	13836 Mar 10 15:16	25°☾28'02		retrograde	13841 May 12 18:26	6°♁17'54	
	13836 May 05 02:26	0°♁		min. Earth dist.	13841 Jul 10 05:00	1°♁27'33	4.18180 AU
evening set	13836 Jul 14 15:06	14°♁18'20		opposition	13841 Jul 11 18:50	1°♁14'51	0°51'14
	13836 Jul 17 14:31	15°♁			13841 Jul 21 04:45	30°♁♄	
max. Earth dist.	13836 Jul 25 13:41	16°♁52'07	6.10078 AU	direct	13841 Sep 09 07:37	26°♄16'02	
					13841 Oct 29 06:04	0°♁	
conjunction	13836 Jul 27 13:36	17°♁20'19	-0°35'22	evening set	13842 Jan 13 12:02	14°♁40'32	
minimum elong	13836 Jul 27 13:36	17°♁20'19	0°36'09		13842 Jan 14 23:03	15°♁	
morning rise	13836 Aug 09 12:19	20°♁22'49					
	13836 Sep 21 22:40	0°♁		conjunction	13842 Jan 26 22:43	17°♁40'38	0°35'22
retrograde	13836 Dec 15 18:55	9°♁51'44		minimum elong	13842 Jan 26 22:43	17°♁40'38	0°36'10
opposition	13837 Feb 13 14:17	4°♁55'57	-0°49'50	max. Earth dist.	13842 Jan 28 23:59	18°♁08'11	6.27169 AU
min. Earth dist.	13837 Feb 14 16:13	4°♁47'25	4.01715 AU	morning rise	13842 Feb 09 08:59	20°♁40'13	
	13837 Apr 10 19:31	30°♁♁			13842 Mar 26 05:27	0°♁	
direct	13837 Apr 14 05:52	29°♁58'50		retrograde	13842 Jun 13 14:30	8°♁31'45	
	13837 Apr 17 16:09	0°♁		min. Earth dist.	13842 Aug 12 01:46	3°♁39'14	4.35310 AU
evening set	13837 Aug 19 02:42	19°♁44'38		opposition	13842 Aug 13 02:42	3°♁31'01	0°49'18
max. Earth dist.	13837 Aug 31 08:41	22°♁42'45	5.95021 AU		13842 Sep 11 20:57	30°♁♁	
				direct	13842 Oct 12 22:12	28°♁30'59	
conjunction	13837 Sep 01 06:00	22°♁55'41	-0°27'38		13842 Nov 13 06:48	0°♁	
minimum elong	13837 Sep 01 06:01	22°♁55'42	0°27'52	evening set	13843 Feb 15 06:41	16°♁06'46	
morning rise	13837 Sep 14 10:42	26°♁07'44					
	13837 Sep 30 16:25	0°♁		conjunction	13843 Feb 28 13:20	18°♁59'06	0°29'25
retrograde	13838 Jan 23 09:37	16°♁41'56		minimum elong	13843 Feb 28 13:21	18°♁59'06	0°29'42
opposition	13838 Mar 23 17:44	11°♁43'35	-0°28'49	max. Earth dist.	13843 Mar 01 13:16	19°♁12'03	6.42257 AU
min. Earth dist.	13838 Mar 23 18:19	11°♁43'23	3.90558 AU	morning rise	13843 Mar 13 18:56	21°♁50'41	
direct	13838 May 21 04:15	6°♁48'10			13843 Apr 22 19:56	0°♁	
evening set	13838 Sep 25 16:54	27°♁05'32		retrograde	13843 Jul 13 16:39	8°♁49'50	
	13838 Oct 07 13:38	0°♁		opposition	13843 Sep 12 15:17	3°♁51'58	0°33'44
				min. Earth dist.	13843 Sep 12 08:25	3°♁54'12	4.47385 AU
conjunction	13838 Oct 09 02:00	0°♁22'20	-0°08'42		13843 Oct 16 21:49	30°♁♁	
minimum elong	13838 Oct 09 02:00	0°♁22'20	0°08'16	direct	13843 Nov 13 11:12	28°♁51'21	
behind sun begin	13838 Oct 08 18:39	0°♁17'51			13843 Dec 11 07:58	0°♁	
behind sun end	13838 Oct 09 09:21	0°♁26'50		evening set	13844 Mar 17 06:47	15°♁58'21	
max. Earth dist.	13838 Oct 09 19:16	0°♁32'56	5.88939 AU				
morning rise	13838 Oct 22 13:07	3°♁40'14		conjunction	13844 Mar 30 09:26	18°♁45'55	0°15'37
	13838 Dec 11 05:21	15°♁		minimum elong	13844 Mar 30 09:26	18°♁45'55	0°15'24
retrograde	13839 Mar 03 06:46	24°♁34'21		behind sun begin	13844 Mar 30 07:17	18°♁44'46	
asc. node	13839 Mar 08 23:36	24°♁31'03		behind sun end	13844 Mar 30 11:35	18°♁47'03	
opposition	13839 May 01 12:17	19°♁32'52	0°04'53	max. Earth dist.	13844 Mar 30 04:48	18°♁43'27	6.50522 AU
min. Earth dist.	13839 Apr 30 12:23	19°♁40'58	3.90343 AU	morning rise	13844 Apr 12 10:17	21°♁32'37	
	13839 Jun 13 19:03	15°♁♁			13844 May 24 17:50	0°♁	
direct	13839 Jun 28 12:42	14°♁37'28		retrograde	13844 Aug 11 05:28	8°♁07'59	
	13839 Jul 13 06:41	15°♁		opposition	13844 Oct 11 09:33	3°♁12'37	0°10'03
	13839 Oct 13 23:16	0°♄		min. Earth dist.	13844 Oct 11 22:25	3°♁08'30	4.51438 AU
evening set	13839 Nov 03 01:26	4°♄44'54			13844 Nov 07 15:15	30°♁♁	
				direct	13844 Dec 12 19:55	28°♁11'50	
conjunction	13839 Nov 16 14:33	8°♄00'53	0°13'56		13845 Jan 17 06:47	0°♁	
minimum elong	13839 Nov 16 14:32	8°♄00'52	0°14'51	desc. node	13845 Mar 13 04:28	8°♁15'39	
behind sun begin	13839 Nov 16 11:24	7°♄58'59			13845 Apr 15 08:09	15°♁	

evening set	13845 Apr 16 10:13	15° ♁ 13'51		behind sun begin	13850 Oct 14 03:13	5° ♁ 43'47	
max. Earth dist.	13845 Apr 28 00:30	17° ♁ 42'37	6.50063 AU	behind sun end	13850 Oct 14 19:25	5° ♁ 53'41	
conjunction	13845 Apr 29 09:12	18° ♁ 00'09	-0°02'08	max. Earth dist.	13850 Oct 15 11:07	6° ♁ 03'19	5.89216 AU
minimum elong	13845 Apr 29 09:11	18° ♁ 00'09	0°02'51	morning rise	13850 Oct 27 22:59	9° ♁ 06'46	
behind sun begin	13845 Apr 29 01:12	17° ♁ 55'54			13850 Nov 21 17:23	15° ♁	
behind sun end	13845 Apr 29 17:10	18° ♁ 04'25		asc. node	13851 Jan 18 15:19	26° ♁ 13'20	
morning rise	13845 May 12 06:38	20° ♁ 45'48		retrograde	13851 Mar 08 15:20	29° ♁ 58'00	
	13845 Jun 27 15:40	0° ♁		opposition	13851 May 06 20:08	24° ♁ 56'12	0°09'45
retrograde	13845 Sep 10 08:39	7° ♁ 28'06		min. Earth dist.	13851 May 05 17:56	25° ♁ 05'05	3.91415 AU
opposition	13845 Nov 10 11:26	2° ♁ 34'11	-0°16'15	direct	13851 Jul 03 21:07	20° ♁ 00'41	
min. Earth dist.	13845 Nov 11 17:47	2° ♁ 24'28	4.46536 AU		13851 Sep 25 00:54	0° ♁	
	13845 Dec 01 14:06	30° ♁		evening set	13851 Nov 08 08:24	10° ♁ 02'55	
direct	13846 Jan 11 23:16	27° ♁ 33'23		conjunction	13851 Nov 21 21:36	13° ♁ 18'08	0°16'46
	13846 Feb 22 06:35	0° ♁		minimum elong	13851 Nov 21 21:35	13° ♁ 18'08	0°17'45
evening set	13846 May 16 16:51	14° ♁ 54'53		max. Earth dist.	13851 Nov 24 01:53	13° ♁ 49'33	5.96272 AU
max. Earth dist.	13846 May 27 10:32	17° ♁ 15'38	6.40987 AU	morning rise	13851 Dec 05 12:28	16° ♁ 33'55	
conjunction	13846 May 29 13:39	17° ♁ 43'39	-0°19'28		13852 Feb 05 21:21	0° ♁	
minimum elong	13846 May 29 13:38	17° ♁ 43'39	0°20'28	retrograde	13852 Apr 13 08:29	6° ♁ 41'07	
morning rise	13846 Jun 11 09:02	20° ♁ 32'00		min. Earth dist.	13852 Jun 10 07:04	1° ♁ 50'52	4.03286 AU
	13846 Jul 27 17:39	0° ♁		opposition	13852 Jun 11 22:04	1° ♁ 37'39	0°38'52
retrograde	13846 Oct 12 00:42	7° ♁ 51'35			13852 Jun 24 04:40	30° ♁	
opposition	13846 Dec 11 21:47	2° ♁ 57'57	-0°39'18	direct	13852 Aug 09 11:50	26° ♁ 40'25	
min. Earth dist.	13846 Dec 13 12:41	2° ♁ 45'27	4.33799 AU		13852 Sep 24 13:28	0° ♁	
	13847 Jan 05 15:20	30° ♁		evening set	13852 Dec 14 09:39	15° ♁ 54'35	
direct	13847 Feb 11 18:57	27° ♁ 57'45		conjunction	13852 Dec 27 22:40	19° ♁ 02'28	0°31'44
	13847 Mar 20 20:38	0° ♁		minimum elong	13852 Dec 27 22:40	19° ♁ 02'27	0°32'46
evening set	13847 Jun 17 02:38	16° ♁ 00'40		max. Earth dist.	13852 Dec 30 10:19	19° ♁ 36'59	6.11706 AU
max. Earth dist.	13847 Jun 27 14:38	18° ♁ 23'16	6.25454 AU	morning rise	13853 Jan 10 12:15	22° ♁ 10'15	
conjunction	13847 Jun 29 23:05	18° ♁ 55'21	-0°32'00		13853 Feb 15 03:43	0° ♁	
minimum elong	13847 Jun 29 23:05	18° ♁ 55'21	0°33'02	retrograde	13853 May 17 08:50	11° ♁ 04'05	
morning rise	13847 Jul 12 18:59	21° ♁ 50'06		min. Earth dist.	13853 Jul 14 22:30	6° ♁ 13'13	4.20610 AU
	13847 Aug 19 13:56	0° ♁		opposition	13853 Jul 16 10:09	6° ♁ 01'17	0°51'56
retrograde	13847 Nov 15 05:56	10° ♁ 13'10		direct	13853 Sep 14 04:01	1° ♁ 02'15	
opposition	13848 Jan 14 13:56	5° ♁ 18'47	-0°52'10		13853 Dec 29 07:40	15° ♁	
min. Earth dist.	13848 Jan 16 03:56	5° ♁ 06'26	4.16452 AU	evening set	13854 Jan 18 04:40	19° ♁ 19'25	
direct	13848 Mar 15 09:34	0° ♁ 19'57		conjunction	13854 Jan 31 14:53	22° ♁ 18'23	0°35'07
	13848 Jun 30 18:26	15° ♁		minimum elong	13854 Jan 31 14:53	22° ♁ 18'23	0°35'51
evening set	13848 Jul 19 11:52	19° ♁ 18'31		max. Earth dist.	13854 Feb 02 13:33	22° ♁ 44'20	6.29408 AU
max. Earth dist.	13848 Jul 30 13:09	21° ♁ 54'46	6.07700 AU	morning rise	13854 Feb 14 00:35	25° ♁ 16'47	
conjunction	13848 Aug 01 10:53	22° ♁ 21'47	-0°35'01		13854 Mar 07 21:53	0° ♁	
minimum elong	13848 Aug 01 10:53	22° ♁ 21'48	0°35'45	retrograde	13854 Jun 17 20:04	13° ♁ 00'02	
morning rise	13848 Aug 14 10:24	25° ♁ 25'41		min. Earth dist.	13854 Aug 16 11:37	8° ♁ 07'20	4.37208 AU
	13848 Sep 03 04:59	0° ♁		opposition	13854 Aug 17 10:53	7° ♁ 59'40	0°47'47
retrograde	13848 Dec 21 02:03	15° ♁ 04'48		direct	13854 Oct 17 09:27	2° ♁ 59'31	
opposition	13849 Feb 18 20:41	10° ♁ 08'43	-0°47'58	evening set	13855 Feb 19 16:57	20° ♁ 30'35	
min. Earth dist.	13849 Feb 19 18:27	10° ♁ 01'32	3.99783 AU	conjunction	13855 Mar 04 23:06	23° ♁ 22'09	0°27'49
direct	13849 Apr 19 07:03	5° ♁ 11'54		minimum elong	13855 Mar 04 23:07	23° ♁ 22'09	0°28'03
evening set	13849 Aug 24 07:04	25° ♁ 03'27		max. Earth dist.	13855 Mar 05 19:09	23° ♁ 32'59	6.43698 AU
conjunction	13849 Sep 06 11:05	28° ♁ 15'29	-0°25'30	morning rise	13855 Mar 18 03:59	26° ♁ 12'55	
minimum elong	13849 Sep 06 11:06	28° ♁ 15'29	0°25'38		13855 Apr 05 02:59	0° ♁	
max. Earth dist.	13849 Sep 05 19:13	28° ♁ 05'49	5.93715 AU	retrograde	13855 Jul 17 21:00	13° ♁ 07'33	
	13849 Sep 13 14:42	0° ♁		opposition	13855 Sep 16 20:14	8° ♁ 10'07	0°30'43
morning rise	13849 Sep 19 16:40	1° ♁ 28'33		min. Earth dist.	13855 Sep 16 16:30	8° ♁ 11'20	4.48293 AU
retrograde	13850 Jan 28 21:04	22° ♁ 08'05		direct	13855 Nov 17 19:29	3° ♁ 09'30	
opposition	13850 Mar 29 04:21	17° ♁ 09'15	-0°24'29	evening set	13856 Mar 21 13:22	20° ♁ 14'52	
min. Earth dist.	13850 Mar 29 01:44	17° ♁ 10'08	3.90017 AU	conjunction	13856 Apr 03 15:23	23° ♁ 02'06	0°13'15
direct	13850 May 26 13:11	12° ♁ 13'56		minimum elong	13856 Apr 03 15:24	23° ♁ 02'06	0°12'56
	13850 Sep 20 14:42	0° ♁		behind sun begin	13856 Apr 03 10:32	22° ♁ 59'31	
evening set	13850 Oct 01 01:24	2° ♁ 31'42		behind sun end	13856 Apr 03 20:16	23° ♁ 04'41	
conjunction	13850 Oct 14 11:19	5° ♁ 48'44	-0°05'31	max. Earth dist.	13856 Apr 03 05:53	22° ♁ 57'02	6.50847 AU
minimum elong	13850 Oct 14 11:19	5° ♁ 48'44	0°04'59	morning rise	13856 Apr 16 15:52	25° ♁ 48'32	
					13856 May 06 19:46	0° ♁	

retrograde	13856 Aug 15 10:26	12°♄23'29		conjunction	13862 Oct 19 13:58	10°♍57'38	-0°02'26
opposition	13856 Oct 15 14:35	7°♄28'22	0°06'19	minimum elong	13862 Oct 19 13:58	10°♍57'38	0°01'49
min. Earth dist.	13856 Oct 16 05:53	7°♄23'27	4.51202 AU	behind sun begin	13862 Oct 19 05:37	10°♍52'32	
direct	13856 Dec 17 01:56	2°♄27'35		behind sun end	13862 Oct 19 22:20	11°♍02'43	
desc. node	13857 Jan 17 04:57	3°♄51'47		max. Earth dist.	13862 Oct 20 16:01	11°♍13'34	5.89598 AU
	13857 Mar 29 23:31	15°♄		morning rise	13862 Nov 02 02:26	14°♍15'47	
evening set	13857 Apr 20 16:10	19°♄31'03			13862 Nov 05 03:23	15°♍	
max. Earth dist.	13857 May 02 04:55	21°♄59'15	6.49314 AU	asc. node	13862 Dec 01 09:21	21°♍10'13	
					13863 Jan 14 23:46	0°♄	
conjunction	13857 May 03 14:54	22°♄17'30	-0°04'44	retrograde	13863 Mar 13 15:01	5°♄04'10	
minimum elong	13857 May 03 14:54	22°♄17'30	0°05'29	opposition	13863 May 11 21:11	0°♄02'07	0°14'16
behind sun begin	13857 May 03 07:12	22°♄13'23		min. Earth dist.	13863 May 10 16:35	0°♄11'49	3.92354 AU
behind sun end	13857 May 03 22:36	22°♄21'37			13863 May 12 03:26	30°♍	
morning rise	13857 May 16 11:47	25°♄03'15		direct	13863 Jul 08 22:23	25°♍06'24	
	13857 Jun 09 05:02	0°♄			13863 Sep 02 18:55	0°♄	
retrograde	13857 Sep 14 15:57	11°♄48'44		evening set	13863 Nov 13 09:13	15°♄04'38	
opposition	13857 Nov 14 19:23	6°♄54'55	-0°19'53				
min. Earth dist.	13857 Nov 16 02:16	6°♄45'03	4.45352 AU	conjunction	13863 Nov 26 22:42	18°♄19'18	0°19'21
direct	13858 Jan 16 05:46	1°♄54'17		minimum elong	13863 Nov 26 22:41	18°♄19'17	0°20'22
evening set	13858 May 21 01:04	19°♄19'36		max. Earth dist.	13863 Nov 29 04:24	18°♄51'28	5.97675 AU
max. Earth dist.	13858 May 31 17:18	21°♄40'05	6.39464 AU	morning rise	13863 Dec 10 13:34	21°♄34'25	
					13864 Jan 16 16:03	0°♄	
conjunction	13858 Jun 02 21:30	22°♄08'49	-0°21'38	retrograde	13864 Apr 18 03:07	11°♄34'27	
minimum elong	13858 Jun 02 21:29	22°♄08'49	0°22'40	min. Earth dist.	13864 Jun 15 02:48	6°♄43'54	4.04986 AU
morning rise	13858 Jun 15 16:50	24°♄57'43		opposition	13864 Jun 16 16:52	6°♄31'01	0°41'41
	13858 Jul 09 05:59	0°♄		direct	13864 Aug 14 10:09	1°♄33'33	
retrograde	13858 Oct 16 16:06	12°♄23'26		evening set	13864 Dec 19 05:47	20°♄42'06	
opposition	13858 Dec 16 11:26	7°♄29'44	-0°41'53				
min. Earth dist.	13858 Dec 18 03:10	7°♄16'57	4.32029 AU	conjunction	13865 Jan 01 18:42	23°♄49'06	0°32'54
direct	13859 Feb 16 07:16	2°♄29'41		minimum elong	13865 Jan 01 18:41	23°♄49'06	0°33'54
evening set	13859 Jun 21 14:47	20°♄37'53		max. Earth dist.	13865 Jan 04 06:15	24°♄23'25	6.13552 AU
max. Earth dist.	13859 Jul 02 03:33	23°♄01'30	6.23581 AU	morning rise	13865 Jan 15 07:58	26°♄55'56	
					13865 Jan 28 22:15	0°♄	
conjunction	13859 Jul 04 11:23	23°♄33'22	-0°33'06		13865 May 01 00:54	15°♄	
minimum elong	13859 Jul 04 11:23	23°♄33'21	0°34'06	retrograde	13865 May 21 18:49	15°♄41'40	
morning rise	13859 Jul 17 07:29	26°♄28'58			13865 Jun 11 11:06	15°♄	
	13859 Aug 02 00:04	0°♄		min. Earth dist.	13865 Jul 19 10:43	10°♄50'59	4.22449 AU
retrograde	13859 Nov 20 01:56	14°♄59'57		opposition	13865 Jul 20 22:02	10°♄39'11	0°52'20
opposition	13860 Jan 19 10:04	10°♄05'22	-0°52'43	direct	13865 Sep 18 18:12	5°♄40'01	
min. Earth dist.	13860 Jan 20 21:37	9°♄53'48	4.14621 AU		13865 Dec 11 09:40	15°♄	
direct	13860 Mar 20 01:15	5°♄06'47		evening set	13866 Jan 22 18:58	23°♄52'08	
	13860 Jun 12 22:55	15°♄					
evening set	13860 Jul 24 05:49	24°♄10'46		conjunction	13866 Feb 05 04:40	26°♄50'13	0°34'40
max. Earth dist.	13860 Aug 04 10:48	26°♄49'47	6.06069 AU	minimum elong	13866 Feb 05 04:41	26°♄50'14	0°35'20
				max. Earth dist.	13866 Feb 06 23:28	27°♄13'57	6.31104 AU
conjunction	13860 Aug 06 05:10	27°♄14'56	-0°34'29	morning rise	13866 Feb 18 13:54	29°♄47'43	
minimum elong	13860 Aug 06 05:11	27°♄14'56	0°35'09		13866 Feb 19 12:17	0°♄	
	13860 Aug 17 19:43	0°♄		retrograde	13866 Jun 22 03:23	17°♄24'42	
morning rise	13860 Aug 19 05:15	0°♄19'47		opposition	13866 Aug 21 18:05	12°♄24'44	0°46'04
retrograde	13860 Dec 26 05:54	20°♄06'17		min. Earth dist.	13866 Aug 20 21:46	12°♄31'25	4.38642 AU
opposition	13861 Feb 23 22:36	15°♄09'51	-0°45'50	direct	13866 Oct 21 20:58	7°♄24'30	
min. Earth dist.	13861 Feb 24 18:20	15°♄03'19	3.98495 AU	evening set	13867 Feb 24 02:06	24°♄52'10	
direct	13861 Apr 24 06:44	10°♄13'13					
	13861 Aug 28 16:44	0°♄		conjunction	13867 Mar 09 07:47	27°♄43'08	0°26'07
evening set	13861 Aug 29 06:21	0°♄08'14		minimum elong	13867 Mar 09 07:48	27°♄43'09	0°26'17
				max. Earth dist.	13867 Mar 10 01:02	27°♄52'26	6.44772 AU
conjunction	13861 Sep 11 11:12	3°♄21'01	-0°23'17		13867 Mar 19 21:57	0°♄	
minimum elong	13861 Sep 11 11:13	3°♄21'01	0°23'20	morning rise	13867 Mar 22 12:04	0°♄33'17	
max. Earth dist.	13861 Sep 11 00:11	3°♄14'18	5.92910 AU	retrograde	13867 Jul 21 23:38	17°♄24'26	
morning rise	13861 Sep 24 17:29	6°♄34'49		opposition	13867 Sep 21 00:42	12°♄27'19	0°27'36
retrograde	13862 Feb 03 01:56	27°♄17'33		min. Earth dist.	13867 Sep 20 22:25	12°♄28'03	4.48959 AU
opposition	13862 Apr 03 08:20	22°♄18'24	-0°20'12	direct	13867 Nov 22 01:21	7°♄26'39	
min. Earth dist.	13862 Apr 03 03:00	22°♄20'11	3.89806 AU	evening set	13868 Mar 25 19:32	24°♄30'53	
direct	13862 May 31 14:35	17°♄23'10					
	13862 Sep 03 12:53	0°♄		conjunction	13868 Apr 07 21:05	27°♄17'50	0°10'50
evening set	13862 Oct 06 03:37	7°♄40'31		minimum elong	13868 Apr 07 21:06	27°♄17'51	0°10'26
				behind sun begin	13868 Apr 07 14:50	27°♄14'31	

behind sun end	13868 Apr 08 03:23	27° Υ 21'11		morning rise	13873 Sep 29 23:00	11° Ω 53'15	
max. Earth dist.	13868 Apr 07 09:20	27° Υ 11'35	6.51054 AU		13873 Dec 29 08:57	0° \mathbb{M}	
morning rise	13868 Apr 20 20:54	0° \mathcal{B} 03'58		retrograde	13874 Feb 08 10:49	2° \mathbb{M} 40'43	
	13868 Apr 20 13:24	0° \mathcal{B}			13874 Mar 21 19:34	30° \mathcal{R} $\underline{\mathcal{A}}$	
	13868 Jul 17 10:37	15° \mathcal{B}		opposition	13874 Apr 08 17:20	27° $\underline{\mathcal{A}}$ 41'06	-0°15'33
retrograde	13868 Aug 19 14:39	16° \mathcal{B} 38'37		min. Earth dist.	13874 Apr 08 08:01	27° $\underline{\mathcal{A}}$ 44'15	3.89307 AU
	13868 Sep 21 17:58	15° \mathcal{R} \mathcal{B}		direct	13874 Jun 05 21:40	22° $\underline{\mathcal{A}}$ 45'52	
opposition	13868 Oct 19 19:14	11° \mathcal{B} 43'44	0°02'35		13874 Aug 13 19:59	0° \mathbb{M}	
min. Earth dist.	13868 Oct 20 12:50	11° \mathcal{B} 38'05	4.50920 AU	asc. node	13874 Oct 09 09:27	12° \mathbb{M} 33'20	
desc. node	13868 Nov 26 04:39	7° \mathcal{B} 39'12		evening set	13874 Oct 11 11:34	13° \mathbb{M} 03'46	
direct	13868 Dec 21 08:13	6° \mathcal{B} 42'57			13874 Oct 19 10:11	15° \mathbb{M}	
	13869 Mar 11 23:04	15° \mathcal{B}					
evening set	13869 Apr 24 21:38	23° \mathcal{B} 47'46		conjunction	13874 Oct 24 22:41	16° \mathbb{M} 21'03	0°00'54
max. Earth dist.	13869 May 06 05:46	26° \mathcal{B} 13'50	6.48516 AU	minimum elong	13874 Oct 24 22:42	16° \mathbb{M} 21'04	0°01'34
				behind sun begin	13874 Oct 24 14:20	16° \mathbb{M} 15'59	
conjunction	13869 May 07 19:47	26° \mathcal{B} 34'18	-0°07'16	behind sun end	13874 Oct 25 07:04	16° \mathbb{M} 26'10	
minimum elong	13869 May 07 19:47	26° \mathcal{B} 34'18	0°08'04	max. Earth dist.	13874 Oct 26 06:13	16° \mathbb{M} 40'21	5.89887 AU
behind sun begin	13869 May 07 12:40	26° \mathcal{B} 30'30		morning rise	13874 Nov 07 11:39	19° \mathbb{M} 39'18	
behind sun end	13869 May 08 02:54	26° \mathcal{B} 38'07			13874 Dec 22 15:26	0° \mathcal{X}	
morning rise	13869 May 20 16:29	29° \mathcal{B} 20'15		retrograde	13875 Mar 18 21:58	10° \mathcal{X} 24'40	
	13869 May 23 18:55	0° \mathbb{I}		min. Earth dist.	13875 May 15 21:42	5° \mathcal{X} 32'25	3.93391 AU
retrograde	13869 Sep 19 00:40	16° \mathbb{I} 09'06		opposition	13875 May 17 03:36	5° \mathcal{X} 22'17	0°18'52
opposition	13869 Nov 19 03:13	11° \mathbb{I} 15'18	-0°23'22	direct	13875 Jul 14 06:19	0° \mathcal{X} 26'22	
min. Earth dist.	13869 Nov 20 11:57	11° \mathbb{I} 04'49	4.44050 AU	evening set	13875 Nov 18 15:37	20° \mathcal{X} 19'50	
direct	13870 Jan 20 13:11	6° \mathbb{I} 14'38					
evening set	13870 May 25 08:28	23° \mathbb{I} 44'06		conjunction	13875 Dec 02 05:19	23° \mathcal{X} 33'47	0°21'54
max. Earth dist.	13870 Jun 05 00:08	26° \mathbb{I} 04'47	6.37720 AU	minimum elong	13875 Dec 02 05:18	23° \mathcal{X} 33'46	0°22'56
				max. Earth dist.	13875 Dec 04 14:19	24° \mathcal{X} 07'45	5.99351 AU
conjunction	13870 Jun 07 04:54	26° \mathbb{I} 33'56	-0°23'40	morning rise	13875 Dec 15 20:15	26° \mathcal{X} 48'05	
minimum elong	13870 Jun 07 04:53	26° \mathbb{I} 33'56	0°24'44		13875 Dec 29 12:55	0° \mathcal{Z}	
morning rise	13870 Jun 19 23:59	29° \mathbb{I} 23'27		retrograde	13876 Apr 23 00:19	16° \mathcal{Z} 39'09	
	13870 Jun 22 18:38	0° \mathcal{E}		min. Earth dist.	13876 Jun 20 00:29	11° \mathcal{Z} 49'03	4.07132 AU
retrograde	13870 Oct 21 05:41	16° \mathcal{E} 56'13		opposition	13876 Jun 21 15:56	11° \mathcal{Z} 35'43	0°44'17
opposition	13870 Dec 21 01:02	12° \mathcal{E} 02'26	-0°44'12	direct	13876 Aug 19 11:25	6° \mathcal{Z} 38'02	
min. Earth dist.	13870 Dec 22 16:32	11° \mathcal{E} 49'44	4.29937 AU	evening set	13876 Dec 24 05:48	25° \mathcal{Z} 38'57	
direct	13871 Feb 20 17:15	7° \mathcal{E} 02'32					
evening set	13871 Jun 26 03:39	25° \mathcal{E} 17'21		conjunction	13877 Jan 06 18:17	28° \mathcal{Z} 44'43	0°33'51
max. Earth dist.	13871 Jul 06 16:50	27° \mathcal{E} 42'01	6.21281 AU	minimum elong	13877 Jan 06 18:17	28° \mathcal{Z} 44'42	0°34'50
				max. Earth dist.	13877 Jan 09 03:53	29° \mathcal{Z} 17'43	6.15980 AU
conjunction	13871 Jul 09 00:18	28° \mathcal{E} 13'50	-0°33'58		13877 Jan 12 05:45	0° \approx	
minimum elong	13871 Jul 09 00:17	28° \mathcal{E} 13'50	0°34'56	morning rise	13877 Jan 20 07:12	1° \approx 50'16	
	13871 Jul 16 17:24	0° Ω			13877 Mar 26 06:57	15° \approx	
morning rise	13871 Jul 21 20:48	1° Ω 10'32		retrograde	13877 May 26 08:13	20° \approx 25'37	
	13871 Sep 28 10:29	15° Ω		min. Earth dist.	13877 Jul 24 03:22	15° \approx 34'29	4.24937 AU
retrograde	13871 Nov 25 02:22	19° Ω 51'20		opposition	13877 Jul 25 12:46	15° \approx 23'21	0°52'23
	13872 Jan 23 21:08	15° \mathcal{R} Ω			13877 Jul 28 10:47	15° \mathcal{R} \approx	
opposition	13872 Jan 24 07:45	14° Ω 56'32	-0°52'53	direct	13877 Sep 23 14:19	10° \approx 23'57	
min. Earth dist.	13872 Jan 25 18:36	14° Ω 45'09	4.12269 AU		13877 Nov 18 22:58	15° \approx	
direct	13872 Mar 24 19:57	9° Ω 58'06		evening set	13878 Jan 27 10:46	28° \approx 28'28	
	13872 May 21 22:45	15° Ω			13878 Feb 03 09:14	0° \mathcal{H}	
evening set	13872 Jul 29 01:56	29° Ω 09'39					
	13872 Aug 01 14:58	0° \mathbb{P}		conjunction	13878 Feb 09 20:03	1° \mathcal{H} 25'22	0°34'01
max. Earth dist.	13872 Aug 09 11:06	1° \mathbb{P} 51'53	6.03884 AU	minimum elong	13878 Feb 09 20:04	1° \mathcal{H} 25'23	0°34'37
				max. Earth dist.	13878 Feb 11 13:38	1° \mathcal{H} 48'18	6.33476 AU
conjunction	13872 Aug 11 02:03	2° \mathbb{P} 15'06	-0°33'39	morning rise	13878 Feb 23 04:28	4° \mathcal{H} 21'35	
minimum elong	13872 Aug 11 02:04	2° \mathbb{P} 15'07	0°34'15	retrograde	13878 Jun 26 08:09	21° \mathcal{H} 49'53	
morning rise	13872 Aug 24 02:48	5° \mathbb{P} 21'16		min. Earth dist.	13878 Aug 25 06:29	16° \mathcal{H} 56'32	4.40727 AU
retrograde	13872 Dec 31 13:09	25° \mathbb{P} 17'19		opposition	13878 Aug 26 01:33	16° \mathcal{H} 50'17	0°44'04
opposition	13873 Mar 01 03:59	20° \mathbb{P} 20'35	-0°43'14	direct	13878 Oct 26 07:27	11° \mathcal{H} 49'58	
min. Earth dist.	13873 Mar 01 20:45	20° \mathbb{P} 15'02	3.96706 AU	evening set	13879 Feb 28 10:56	29° \mathcal{H} 12'06	
direct	13873 Apr 29 06:52	15° \mathbb{P} 24'12			13879 Mar 04 04:31	0° Υ	
	13873 Aug 11 15:25	0° $\underline{\mathcal{A}}$					
evening set	13873 Sep 03 10:06	5° $\underline{\mathcal{A}}$ 24'41		conjunction	13879 Mar 13 15:52	2° Υ 02'08	0°24'18
				minimum elong	13879 Mar 13 15:53	2° Υ 02'09	0°24'23
conjunction	13873 Sep 16 15:37	8° $\underline{\mathcal{A}}$ 38'24	-0°20'47	max. Earth dist.	13879 Mar 14 04:27	2° Υ 08'54	6.46424 AU
minimum elong	13873 Sep 16 15:38	8° $\underline{\mathcal{A}}$ 38'24	0°20'45	morning rise	13879 Mar 26 19:31	4° Υ 51'23	
max. Earth dist.	13873 Sep 16 08:06	8° $\underline{\mathcal{A}}$ 33'49	5.91690 AU	retrograde	13879 Jul 26 02:58	21° Υ 37'26	

opposition	13879 Sep 25 04:18	16° Υ 40'40	0°24'24			13885 Jan 24 14:21	30° \mathbb{R} \mathbb{M}	
min. Earth dist.	13879 Sep 25 05:37	16° Υ 40'14	4.50068 AU	opposition		13885 Mar 06 11:41	25° \mathbb{M} 37'02	-0°40'19
direct	13879 Nov 26 08:49	11° Υ 39'56		min. Earth dist.		13885 Mar 07 00:37	25° \mathbb{M} 32'44	3.94612 AU
evening set	13880 Mar 29 23:39	28° Υ 41'41		direct		13885 May 04 09:48	20° \mathbb{M} 40'56	
	13880 Apr 05 03:09	0° \mathbb{B}				13885 Jul 23 09:28	0° \mathbb{A}	
max. Earth dist.	13880 Apr 11 08:32	1° \mathbb{B} 19'39	6.51530 AU	evening set		13885 Sep 08 16:50	10° \mathbb{A} 48'12	
conjunction	13880 Apr 12 00:40	1° \mathbb{B} 28'14	0°08'26	conjunction		13885 Sep 21 23:27	14° \mathbb{A} 03'05	-0°18'06
minimum elong	13880 Apr 12 00:40	1° \mathbb{B} 28'14	0°07'58	minimum elong		13885 Sep 21 23:28	14° \mathbb{A} 03'06	0°17'57
behind sun begin	13880 Apr 11 17:30	1° \mathbb{B} 24'26		max. Earth dist.		13885 Sep 21 23:00	14° \mathbb{A} 02'48	5.90318 AU
behind sun end	13880 Apr 12 07:50	1° \mathbb{B} 32'02		morning rise		13885 Oct 05 07:42	17° \mathbb{A} 19'03	
morning rise	13880 Apr 24 23:57	4° \mathbb{B} 13'59				13885 Nov 30 20:02	0° \mathbb{M}	
	13880 Jun 19 19:14	15° \mathbb{B}		retrograde		13886 Feb 14 01:18	8° \mathbb{M} 11'37	
retrograde	13880 Aug 23 16:32	20° \mathbb{B} 47'55		opposition		13886 Apr 14 05:23	3° \mathbb{M} 11'36	-0°10'43
desc. node	13880 Oct 09 03:40	17° \mathbb{B} 43'46		min. Earth dist.		13886 Apr 13 17:04	3° \mathbb{M} 15'45	3.88834 AU
opposition	13880 Oct 23 22:09	15° \mathbb{B} 53'11	-0°01'02			13886 May 10 02:05	30° \mathbb{R} \mathbb{A}	
min. Earth dist.	13880 Oct 24 17:44	15° \mathbb{B} 46'55	4.50733 AU	direct		13886 Jun 11 08:21	28° \mathbb{A} 16'26	
	13880 Oct 30 21:04	15° \mathbb{R} \mathbb{B}				13886 Jul 13 09:50	0° \mathbb{M}	
direct	13880 Dec 25 11:04	10° \mathbb{B} 52'21		asc. node		13886 Aug 15 23:48	4° \mathbb{M} 54'40	
	13881 Feb 18 07:23	15° \mathbb{B}				13886 Oct 02 01:18	15° \mathbb{M}	
evening set	13881 Apr 29 00:45	27° \mathbb{B} 58'24		evening set		13886 Oct 16 22:41	18° \mathbb{M} 34'36	
	13881 May 08 11:03	0° \mathbb{I}						
max. Earth dist.	13881 May 10 06:41	0° \mathbb{I} 23'32	6.47665 AU	conjunction		13886 Oct 30 10:28	21° \mathbb{M} 52'00	0°04'10
conjunction	13881 May 11 22:39	0° \mathbb{I} 45'07	-0°09'41	minimum elong		13886 Oct 30 10:27	21° \mathbb{M} 52'00	0°04'55
minimum elong	13881 May 11 22:38	0° \mathbb{I} 45'06	0°10'33	behind sun begin		13886 Oct 30 02:19	21° \mathbb{M} 47'03	
behind sun begin	13881 May 11 16:25	0° \mathbb{I} 41'46		behind sun end		13886 Oct 30 18:36	21° \mathbb{M} 56'57	
behind sun end	13881 May 12 04:52	0° \mathbb{I} 48'27		max. Earth dist.		13886 Oct 31 23:35	22° \mathbb{M} 14'40	5.90352 AU
morning rise	13881 May 24 18:50	3° \mathbb{I} 31'12		morning rise		13886 Nov 13 00:05	25° \mathbb{M} 10'17	
retrograde	13881 Sep 23 06:51	20° \mathbb{I} 23'56				13886 Dec 03 07:24	0° \mathbb{A}	
opposition	13881 Nov 23 09:14	15° \mathbb{I} 30'14	-0°26'39	retrograde		13887 Mar 24 05:02	15° \mathbb{A} 51'19	
min. Earth dist.	13881 Nov 24 20:04	15° \mathbb{I} 19'05	4.42563 AU	min. Earth dist.		13887 May 21 02:47	10° \mathbb{A} 59'58	3.94748 AU
direct	13882 Jan 24 17:59	10° \mathbb{I} 29'37		opposition		13887 May 22 12:12	10° \mathbb{A} 48'38	0°23'20
evening set	13882 May 29 14:31	28° \mathbb{I} 04'06		direct		13887 Jul 19 14:59	5° \mathbb{A} 52'33	
	13882 Jun 07 08:13	0° \mathbb{E}		evening set		13887 Nov 24 00:02	25° \mathbb{A} 39'51	
max. Earth dist.	13882 Jun 09 02:53	0° \mathbb{E} 23'40	6.35679 AU	conjunction		13887 Dec 07 13:36	28° \mathbb{A} 52'47	0°24'16
conjunction	13882 Jun 11 10:42	0° \mathbb{E} 54'39	-0°25'32	minimum elong		13887 Dec 07 13:36	28° \mathbb{A} 52'46	0°25'19
minimum elong	13882 Jun 11 10:41	0° \mathbb{E} 54'39	0°26'35	max. Earth dist.		13887 Dec 09 23:35	29° \mathbb{A} 27'10	6.01425 AU
morning rise	13882 Jun 24 05:59	3° \mathbb{E} 45'01				13887 Dec 12 06:59	0° \mathbb{B}	
retrograde	13882 Oct 25 21:02	21° \mathbb{E} 26'16		morning rise		13887 Dec 21 04:32	2° \mathbb{B} 06'02	
opposition	13882 Dec 25 14:04	16° \mathbb{E} 32'25	-0°46'15	retrograde		13888 Apr 27 22:06	21° \mathbb{B} 46'32	
min. Earth dist.	13882 Dec 27 06:20	16° \mathbb{E} 19'25	4.27444 AU	min. Earth dist.		13888 Jun 25 00:28	16° \mathbb{B} 56'19	4.09662 AU
direct	13883 Feb 25 03:23	11° \mathbb{E} 32'36		opposition		13888 Jun 26 15:44	16° \mathbb{B} 43'03	0°46'31
evening set	13883 Jun 30 15:55	29° \mathbb{E} 55'40		direct		13888 Aug 24 16:12	11° \mathbb{B} 45'02	
	13883 Jun 30 23:30	0° \mathbb{O}				13888 Dec 26 12:37	0° \mathbb{A}	
max. Earth dist.	13883 Jul 11 06:55	2° \mathbb{O} 22'12	6.18535 AU	evening set		13888 Dec 29 06:05	0° \mathbb{A} 37'02	
conjunction	13883 Jul 13 13:06	2° \mathbb{O} 53'28	-0°34'37	conjunction		13889 Jan 11 18:18	3° \mathbb{A} 41'25	0°34'34
minimum elong	13883 Jul 13 13:05	2° \mathbb{O} 53'28	0°35'34	minimum elong		13889 Jan 11 18:18	3° \mathbb{A} 41'25	0°35'30
morning rise	13883 Jul 26 09:57	5° \mathbb{O} 51'31		max. Earth dist.		13889 Jan 14 04:07	4° \mathbb{A} 14'20	6.18725 AU
	13883 Sep 06 09:12	15° \mathbb{O}		morning rise		13889 Jan 25 06:28	6° \mathbb{A} 45'27	
retrograde	13883 Nov 30 03:40	24° \mathbb{O} 44'05				13889 Mar 04 14:53	15° \mathbb{A}	
opposition	13884 Jan 29 06:19	19° \mathbb{O} 49'09	-0°52'44	retrograde		13889 May 30 20:36	25° \mathbb{A} 09'27	
min. Earth dist.	13884 Jan 30 15:44	19° \mathbb{O} 38'13	4.09485 AU	min. Earth dist.		13889 Jul 28 18:41	20° \mathbb{A} 18'14	4.27628 AU
	13884 Mar 19 23:03	15° \mathbb{R} \mathbb{O}		opposition		13889 Jul 30 02:59	20° \mathbb{A} 07'30	0°52'03
direct	13884 Mar 29 12:51	14° \mathbb{O} 51'02		direct		13889 Sep 28 08:30	15° \mathbb{A} 07'56	
	13884 Apr 08 02:35	15° \mathbb{O}				13890 Jan 17 20:01	0° \mathbb{H}	
evening set	13884 Aug 02 23:41	4° \mathbb{M} 12'00		evening set		13890 Feb 01 02:12	3° \mathbb{H} 04'31	
max. Earth dist.	13884 Aug 14 11:40	6° \mathbb{M} 56'55	6.01313 AU	conjunction		13890 Feb 14 10:42	6° \mathbb{H} 00'09	0°33'08
conjunction	13884 Aug 16 00:23	7° \mathbb{M} 18'55	-0°32'36	minimum elong		13890 Feb 14 10:42	6° \mathbb{H} 00'09	0°33'40
minimum elong	13884 Aug 16 00:24	7° \mathbb{M} 18'56	0°33'06	max. Earth dist.		13890 Feb 15 23:17	6° \mathbb{H} 20'14	6.35887 AU
morning rise	13884 Aug 29 02:12	10° \mathbb{M} 26'43		morning rise		13890 Feb 27 18:33	8° \mathbb{H} 55'07	
	13884 Dec 18 06:44	0° \mathbb{A}		retrograde		13890 Jun 30 14:31	26° \mathbb{H} 15'07	
retrograde	13885 Jan 05 22:21	0° \mathbb{A} 34'08		opposition		13890 Aug 30 08:57	21° \mathbb{H} 15'53	0°41'47
				min. Earth dist.		13890 Aug 29 17:16	21° \mathbb{H} 21'01	4.42695 AU
				direct		13890 Oct 30 19:04	16° \mathbb{H} 15'25	

	13891 Feb 15 21:53	0°♈		minimum elong	13896 Aug 21 03:17	12°♏32'52	0°31'39
evening set	13891 Mar 04 19:17	3°♈32'36		morning rise	13896 Sep 03 05:51	15°♏42'04	
					13896 Nov 08 22:38	0°♏	
conjunction	13891 Mar 17 23:45	6°♈21'54	0°22'19	retrograde	13897 Jan 11 12:30	5°♏59'05	
minimum elong	13891 Mar 17 23:46	6°♈21'54	0°22'18	opposition	13897 Mar 11 22:55	1°♏01'40	-0°36'56
max. Earth dist.	13891 Mar 18 09:13	6°♈26'58	6.47816 AU	min. Earth dist.	13897 Mar 12 08:52	0°♏58'21	3.93046 AU
morning rise	13891 Mar 31 02:34	9°♈10'20			13897 Mar 19 17:13	30°♏	
retrograde	13891 Jul 30 04:56	25°♈52'23		direct	13897 May 09 17:49	26°♏05'51	
opposition	13891 Sep 29 08:12	20°♈55'56	0°20'59		13897 Jun 28 05:17	0°♏	
min. Earth dist.	13891 Sep 29 11:31	20°♈54'52	4.50820 AU	evening set	13897 Sep 14 02:19	16°♏17'24	
direct	13891 Nov 30 13:40	15°♈55'10					
	13892 Mar 20 04:33	0°♉		conjunction	13897 Sep 27 09:43	19°♏33'03	-0°15'12
evening set	13892 Apr 03 04:49	2°♉55'42		minimum elong	13897 Sep 27 09:43	19°♏33'03	0°14'56
max. Earth dist.	13892 Apr 15 08:47	5°♉31'06	6.51590 AU	behind sun begin	13897 Sep 27 06:33	19°♏31'07	
				behind sun end	13897 Sep 27 12:54	19°♏34'59	
conjunction	13892 Apr 16 05:15	5°♉42'01	0°05'55	max. Earth dist.	13897 Sep 27 14:49	19°♏36'10	5.89602 AU
minimum elong	13892 Apr 16 05:14	5°♉42'00	0°05'24	morning rise	13897 Oct 10 18:59	22°♏49'48	
behind sun begin	13892 Apr 15 21:30	5°♉37'54			13897 Nov 10 03:05	0°♏	
behind sun end	13892 Apr 16 12:58	5°♉46'07		retrograde	13898 Feb 19 13:22	13°♏44'05	
morning rise	13892 Apr 29 04:01	8°♉27'32		opposition	13898 Apr 19 17:59	8°♏43'37	-0°05'44
	13892 May 31 05:08	15°♉		min. Earth dist.	13898 Apr 19 00:50	8°♏49'25	3.89097 AU
desc. node	13892 Aug 21 07:04	24°♉58'00		direct	13898 Jun 16 18:35	3°♏48'28	
retrograde	13892 Aug 27 22:16	25°♉02'04		asc. node	13898 Jun 23 09:36	3°♏53'02	
opposition	13892 Oct 28 02:49	20°♉07'34	-0°04'47		13898 Sep 13 06:53	15°♏	
min. Earth dist.	13892 Oct 29 02:00	20°♉00'09	4.50100 AU	evening set	13898 Oct 22 09:57	24°♏03'52	
direct	13892 Dec 29 16:57	15°♉06'40					
	13893 Apr 22 15:29	0°♊		conjunction	13898 Nov 04 22:03	27°♏20'52	0°07'22
evening set	13893 May 03 06:08	2°♊15'19		minimum elong	13898 Nov 04 22:03	27°♏20'52	0°08'12
max. Earth dist.	13893 May 14 07:30	4°♊38'29	6.46366 AU	behind sun begin	13898 Nov 04 14:39	27°♏16'23	
				behind sun end	13898 Nov 05 05:26	27°♏25'21	
conjunction	13893 May 16 03:40	5°♊02'23	-0°12'09	max. Earth dist.	13898 Nov 06 14:57	27°♏45'46	5.91553 AU
minimum elong	13893 May 16 03:39	5°♊02'22	0°13'04		13898 Nov 15 20:03	0°♊	
behind sun begin	13893 May 15 22:51	4°♊59'47		morning rise	13898 Nov 18 12:06	0°♊38'42	
behind sun end	13893 May 16 08:27	5°♊04'58		retrograde	13899 Mar 29 09:35	21°♊12'18	
morning rise	13893 May 28 23:43	7°♊48'54		min. Earth dist.	13899 May 26 07:33	16°♊21'12	3.96726 AU
retrograde	13893 Sep 27 17:03	24°♊46'56		opposition	13899 May 27 18:33	16°♊09'19	0°27'31
opposition	13893 Nov 27 18:31	19°♊53'12	-0°29'56	direct	13899 Jul 25 00:38	11°♊12'57	
min. Earth dist.	13893 Nov 29 06:30	19°♊41'41	4.40672 AU		13899 Nov 25 12:51	0°♋	
direct	13894 Jan 29 00:39	14°♊52'34		evening set	13899 Nov 29 05:45	0°♋52'02	
	13894 May 22 07:38	0°♌					
evening set	13894 Jun 02 23:48	2°♌33'15		conjunction	13899 Dec 12 19:24	4°♋03'45	0°26'24
max. Earth dist.	13894 Jun 13 12:28	4°♌53'40	6.33324 AU	minimum elong	13899 Dec 12 19:24	4°♋03'44	0°27'27
				max. Earth dist.	13899 Dec 15 08:00	4°♋39'28	6.03975 AU
conjunction	13894 Jun 15 20:06	5°♌24'43	-0°27'20	morning rise	13899 Dec 26 09:54	7°♋15'37	
minimum elong	13894 Jun 15 20:06	5°♌24'43	0°28'23	retrograde	13900 May 03 17:09	26°♋44'08	
morning rise	13894 Jun 28 15:19	8°♌16'01		min. Earth dist.	13900 Jun 30 21:05	21°♋53'54	4.12494 AU
retrograde	13894 Oct 30 16:30	26°♌06'45		opposition	13900 Jul 02 12:01	21°♋40'47	0°48'19
opposition	13894 Dec 30 07:21	21°♌12'49	-0°48'07	direct	13900 Aug 30 16:29	16°♋42'33	
min. Earth dist.	13894 Dec 31 23:59	20°♌59'42	4.24775 AU		13900 Dec 10 12:20	0°♌	
direct	13895 Mar 01 16:37	16°♌13'10		evening set	13901 Jan 04 02:43	5°♌25'04	
	13895 Jun 14 06:24	0°♍					
evening set	13895 Jul 05 08:51	4°♍44'57		conjunction	13901 Jan 17 14:18	8°♌27'58	0°35'00
max. Earth dist.	13895 Jul 16 00:06	7°♍12'37	6.15759 AU	minimum elong	13901 Jan 17 14:18	8°♌27'58	0°35'53
				max. Earth dist.	13901 Jan 19 20:58	8°♌58'54	6.21568 AU
conjunction	13895 Jul 18 06:14	7°♍44'03	-0°35'03	morning rise	13901 Jan 31 02:02	11°♌30'32	
minimum elong	13895 Jul 18 06:14	7°♍44'03	0°35'58		13901 Feb 15 21:00	15°♌	
morning rise	13895 Jul 31 03:48	10°♍43'32		retrograde	13901 Jun 05 04:41	29°♌43'32	
	13895 Aug 18 22:53	15°♍		min. Earth dist.	13901 Aug 03 07:37	24°♌51'56	4.30248 AU
retrograde	13895 Dec 05 08:33	29°♍47'54		opposition	13901 Aug 04 13:45	24°♌41'56	0°51'23
opposition	13896 Feb 03 09:20	24°♍52'41	-0°52'10	direct	13901 Oct 03 23:29	19°♌42'11	
min. Earth dist.	13896 Feb 04 16:07	24°♍42'35	4.06838 AU		13902 Jan 01 11:01	0°♎	
direct	13896 Apr 03 10:43	19°♍54'50		evening set	13902 Feb 06 14:03	7°♎31'32	
	13896 Jun 27 10:39	0°♏					
evening set	13896 Aug 08 01:37	9°♏24'30		conjunction	13902 Feb 19 22:07	10°♎26'03	0°32'05
max. Earth dist.	13896 Aug 19 20:25	12°♏14'16	5.99072 AU	minimum elong	13902 Feb 19 22:08	10°♎26'03	0°32'32
				max. Earth dist.	13902 Feb 21 07:41	10°♎44'24	6.38100 AU
conjunction	13896 Aug 21 03:16	12°♏32'52	-0°31'14	morning rise	13902 Mar 05 05:05	13°♎19'50	

	13902 Jun 17 01:46	0°♈	morning rise	13907 Aug 05 22:50	15°♏39'54	
retrograde	13902 Jul 05 17:37	0°♈32'35		13907 Oct 14 21:48	0°♐	
	13902 Jul 24 06:47	30°♐33'52	retrograde	13907 Dec 11 15:32	4°♐55'09	
opposition	13902 Sep 04 13:27	25°♐33'52 0°39'22	opposition	13908 Feb 09 13:33	29°♏59'42	-0°51'10
min. Earth dist.	13902 Sep 04 00:23	25°♐38'08 4.44360 AU		13908 Feb 09 12:38	30°♐♏	
direct	13902 Nov 05 02:32	20°♐33'25	min. Earth dist.	13908 Feb 10 18:29	29°♏50'12	4.04570 AU
	13903 Jan 30 14:45	0°♈	direct	13908 Apr 09 10:50	25°♏02'12	
evening set	13903 Mar 10 01:31	7°♈46'56		13908 Jun 05 14:17	0°♐	
			evening set	13908 Aug 14 03:57	14°♐38'47	
conjunction	13903 Mar 23 05:15	10°♈35'37 0°20'15	max. Earth dist.	13908 Aug 26 02:59	17°♐31'49	5.97312 AU
minimum elong	13903 Mar 23 05:16	10°♈35'37 0°20'10				
max. Earth dist.	13903 Mar 23 08:32	10°♈37'22 6.48821 AU	conjunction	13908 Aug 27 06:14	17°♐48'18	-0°29'37
morning rise	13903 Apr 05 07:39	13°♈23'29	minimum elong	13908 Aug 27 06:15	17°♐48'18	0°29'56
	13903 Jul 29 15:19	0°♐	morning rise	13908 Sep 09 09:48	20°♐58'44	
retrograde	13903 Aug 04 08:34	0°♐03'03		13908 Oct 18 16:28	0°♑	
	13903 Aug 10 00:51	30°♐♈	retrograde	13909 Jan 17 22:51	11°♑23'02	
opposition	13903 Oct 04 10:50	25°♈07'00 0°17'34	opposition	13909 Mar 18 08:53	6°♑25'11	-0°33'13
min. Earth dist.	13903 Oct 04 18:04	25°♈04'40 4.51130 AU	min. Earth dist.	13909 Mar 18 14:06	6°♑23'27	3.91999 AU
direct	13903 Dec 05 18:31	20°♈06'12	direct	13909 May 15 23:46	1°♑29'31	
	13904 Mar 04 05:57	0°♐	evening set	13909 Sep 20 10:24	21°♑43'22	
evening set	13904 Apr 08 08:37	7°♐07'02				
max. Earth dist.	13904 Apr 20 08:57	9°♐40'38 6.51189 AU	conjunction	13909 Oct 03 18:29	24°♑59'28	-0°12'11
			minimum elong	13909 Oct 03 18:30	24°♑59'28	0°11'51
conjunction	13904 Apr 21 08:46	9°♐53'21 0°03'24	behind sun begin	13909 Oct 03 12:42	24°♑55'56	
minimum elong	13904 Apr 21 08:45	9°♐53'21 0°02'49	behind sun end	13909 Oct 04 00:17	25°♑03'01	
behind sun begin	13904 Apr 21 00:45	9°♐49'06	max. Earth dist.	13909 Oct 04 04:53	25°♑05'50	5.89364 AU
behind sun end	13904 Apr 21 16:45	9°♐57'36	morning rise	13909 Oct 17 04:32	28°♑16'40	
morning rise	13904 May 04 07:02	12°♐38'54		13909 Oct 24 06:58	0°♒	
	13904 May 15 11:16	15°♐		13910 Jan 05 00:26	15°♒	
desc. node	13904 Jul 04 07:03	24°♐15'31	retrograde	13910 Feb 25 22:19	19°♒10'40	
retrograde	13904 Sep 02 02:31	29°♐15'42		13910 Apr 19 22:18	15°♒♒	
opposition	13904 Nov 02 07:25	24°♐21'25 -0°08'28	min. Earth dist.	13910 Apr 25 07:51	14°♒16'24	3.89686 AU
min. Earth dist.	13904 Nov 03 08:02	24°♐13'32 4.49032 AU	opposition	13910 Apr 26 03:36	14°♒09'43	-0°00'46
direct	13905 Jan 03 19:34	19°♐20'36	asc. node	13910 May 04 16:01	13°♒01'15	
	13905 Apr 06 19:56	0°♑	direct	13910 Jun 23 04:42	9°♒14'26	
evening set	13905 May 08 11:43	6°♑33'18		13910 Aug 23 00:10	15°♒	
max. Earth dist.	13905 May 19 11:02	8°♑55'53 6.44705 AU	evening set	13910 Oct 28 18:02	29°♒26'04	
				13910 Oct 31 02:14	0°♓	
conjunction	13905 May 21 09:00	9°♑20'53 -0°14'32				
minimum elong	13905 May 21 08:59	9°♑20'52 0°15'29	conjunction	13910 Nov 11 06:41	2°♓42'38	0°10'27
behind sun begin	13905 May 21 06:45	9°♑19'40	minimum elong	13910 Nov 11 06:40	2°♓42'38	0°11'21
behind sun end	13905 May 21 11:12	9°♑22'05	behind sun begin	13910 Nov 11 00:36	2°♓38'58	
morning rise	13905 Jun 03 04:48	12°♑07'57	behind sun end	13910 Nov 11 12:45	2°♓46'17	
retrograde	13905 Oct 03 05:46	29°♑12'36	max. Earth dist.	13910 Nov 13 04:40	3°♓10'31	5.92900 AU
opposition	13905 Dec 03 04:54	24°♑19'00 -0°33'03	morning rise	13910 Nov 24 20:53	5°♓59'52	
min. Earth dist.	13905 Dec 04 18:53	24°♑06'50 4.38518 AU	retrograde	13911 Apr 04 12:19	26°♓25'45	
direct	13906 Feb 03 09:07	19°♑18'31	min. Earth dist.	13911 Jun 01 09:31	21°♓34'50	3.98668 AU
	13906 May 06 02:16	0°♓	opposition	13911 Jun 02 21:37	21°♓22'36	0°31'24
evening set	13906 Jun 08 10:28	7°♓06'16	direct	13911 Jul 31 06:08	16°♓25'58	
max. Earth dist.	13906 Jun 18 21:19	9°♓26'30 6.30835 AU		13911 Nov 09 05:27	0°♓	
			evening set	13911 Dec 05 08:38	5°♓57'24	
conjunction	13906 Jun 21 06:44	9°♓58'44 -0°28'57				
minimum elong	13906 Jun 21 06:43	9°♓58'44 0°30'00	conjunction	13911 Dec 18 22:00	9°♓07'56	0°28'17
morning rise	13906 Jul 04 02:16	12°♓51'07	minimum elong	13911 Dec 18 21:59	9°♓07'55	0°29'22
	13906 Oct 12 23:22	0°♏	max. Earth dist.	13911 Dec 21 10:02	9°♓43'07	6.06293 AU
retrograde	13906 Nov 05 13:10	0°♏51'53	morning rise	13912 Jan 01 12:24	12°♓18'36	
	13906 Nov 29 02:53	30°♐♓		13912 Apr 06 13:17	0°♐	
opposition	13907 Jan 05 02:15	25°♓57'48 -0°49'40	retrograde	13912 May 08 07:47	1°♐36'27	
min. Earth dist.	13907 Jan 06 17:17	25°♓45'10 4.22131 AU		13912 Jun 08 23:07	30°♐♓	
direct	13907 Mar 07 06:32	20°♓58'24	min. Earth dist.	13912 Jul 05 15:11	26°♓46'12	4.14959 AU
	13907 May 27 16:17	0°♏	opposition	13912 Jul 07 05:50	26°♓33'12	0°49'47
evening set	13907 Jul 11 02:53	9°♏38'41	direct	13912 Sep 04 13:39	21°♓34'39	
max. Earth dist.	13907 Jul 21 22:32	12°♏09'42 6.13191 AU		13912 Nov 21 14:19	0°♐	
			evening set	13913 Jan 08 21:43	10°♐09'20	
conjunction	13907 Jul 24 00:51	12°♏39'05 -0°35'15				
minimum elong	13907 Jul 24 00:51	12°♏39'05 0°36'06	conjunction	13913 Jan 22 08:58	13°♐11'01	0°35'14
	13907 Aug 03 02:13	15°♏	minimum elong	13913 Jan 22 08:58	13°♐11'01	0°36'04

max. Earth dist.	13913 Jan 24 13:17	13° \approx 40'29	6.23982 AU	max. Earth dist.	13918 Jun 23 10:05	14° \approx 01'46	6.28947 AU
	13913 Jan 30 10:46	15° \approx					
morning rise	13913 Feb 04 19:58	16° \approx 12'16		conjunction	13918 Jun 25 17:50	14° \approx 33'13	-0°30'27
	13913 Apr 16 16:41	0° \approx		minimum elong	13918 Jun 25 17:50	14° \approx 33'13	0°31'30
retrograde	13913 Jun 09 13:51	4° \approx 15'54		morning rise	13918 Jul 08 13:22	17° \approx 26'23	
	13913 Aug 03 06:24	30° \approx			13918 Sep 08 20:09	0° \approx	
opposition	13913 Aug 08 23:49	29° \approx 14'41	0°50'28	retrograde	13918 Nov 10 09:56	5° \approx 35'03	
min. Earth dist.	13913 Aug 07 20:16	29° \approx 23'48	4.32410 AU	opposition	13919 Jan 09 21:00	0° \approx 40'52	-0°50'56
direct	13913 Oct 08 14:06	24° \approx 14'48		min. Earth dist.	13919 Jan 11 11:51	0° \approx 28'16	4.20204 AU
	13913 Dec 11 22:15	0° \approx			13919 Jan 15 03:23	30° \approx	
evening set	13914 Feb 11 01:54	11° \approx 58'22		direct	13919 Mar 11 22:39	25° \approx 41'45	
					13919 May 04 22:22	0° \approx	
conjunction	13914 Feb 24 09:19	14° \approx 51'58	0°30'50	evening set	13919 Jul 15 19:37	14° \approx 27'48	
minimum elong	13914 Feb 24 09:20	14° \approx 51'58	0°31'13		13919 Jul 18 02:57	15° \approx	
max. Earth dist.	13914 Feb 25 14:10	15° \approx 07'40	6.39847 AU	max. Earth dist.	13919 Jul 26 16:57	17° \approx 00'28	6.11389 AU
morning rise	13914 Mar 09 15:48	17° \approx 44'50					
	13914 May 12 10:10	0° \approx		conjunction	13919 Jul 28 17:50	17° \approx 29'07	-0°35'15
retrograde	13914 Jul 09 21:49	4° \approx 51'50		minimum elong	13919 Jul 28 17:50	17° \approx 29'08	0°36'02
	13914 Sep 07 22:53	30° \approx		morning rise	13919 Aug 10 16:23	20° \approx 30'58	
opposition	13914 Sep 08 18:55	29° \approx 53'28	0°36'43		13919 Sep 22 14:06	0° \approx	
min. Earth dist.	13914 Sep 08 08:33	29° \approx 56'51	4.45606 AU	retrograde	13919 Dec 16 16:13	9° \approx 54'08	
direct	13914 Nov 09 10:48	24° \approx 52'56		opposition	13920 Feb 14 14:24	4° \approx 58'24	-0°49'51
	13915 Jan 09 18:16	0° \approx		min. Earth dist.	13920 Feb 15 15:50	4° \approx 50'03	4.03064 AU
evening set	13915 Mar 14 08:35	12° \approx 03'52		direct	13920 Apr 14 07:18	0° \approx 01'11	
				evening set	13920 Aug 19 02:21	19° \approx 42'05	
conjunction	13915 Mar 27 11:57	14° \approx 52'07	0°18'03	max. Earth dist.	13920 Aug 31 06:39	22° \approx 38'41	5.96250 AU
minimum elong	13915 Mar 27 11:57	14° \approx 52'07	0°17'54				
max. Earth dist.	13915 Mar 27 12:36	14° \approx 52'28	6.49498 AU	conjunction	13920 Sep 01 05:15	22° \approx 52'22	-0°27'52
morning rise	13915 Apr 09 13:34	17° \approx 39'29		minimum elong	13920 Sep 01 05:16	22° \approx 52'23	0°28'06
	13915 Jun 14 12:15	0° \approx		morning rise	13920 Sep 14 09:31	26° \approx 03'39	
retrograde	13915 Aug 08 11:46	4° \approx 17'26			13920 Sep 30 23:17	0° \approx	
	13915 Oct 03 15:47	30° \approx		retrograde	13921 Jan 23 04:27	16° \approx 32'42	
opposition	13915 Oct 08 15:12	29° \approx 21'43	0°13'58	opposition	13921 Mar 23 13:19	11° \approx 34'27	-0°29'26
min. Earth dist.	13915 Oct 09 00:28	29° \approx 18'45	4.51227 AU	min. Earth dist.	13921 Mar 23 16:14	11° \approx 33'29	3.91491 AU
direct	13915 Dec 09 23:44	24° \approx 21'01		direct	13921 May 21 02:52	6° \approx 38'55	
	13916 Feb 13 03:10	0° \approx		evening set	13921 Sep 25 12:12	26° \approx 53'17	
evening set	13916 Apr 12 14:31	11° \approx 22'32					
max. Earth dist.	13916 Apr 24 10:08	13° \approx 53'54	6.50713 AU	conjunction	13921 Oct 08 21:04	0° \approx 09'42	-0°09'16
				minimum elong	13921 Oct 08 21:05	0° \approx 09'42	0°08'50
conjunction	13916 Apr 25 14:02	14° \approx 08'50	0°00'46	behind sun begin	13921 Oct 08 13:56	0° \approx 05'20	
minimum elong	13916 Apr 25 14:02	14° \approx 08'50	0°00'06	behind sun end	13921 Oct 09 04:15	0° \approx 14'05	
behind sun begin	13916 Apr 25 06:16	14° \approx 04'42			13921 Oct 08 05:15	0° \approx	
behind sun end	13916 Apr 25 21:47	14° \approx 12'58		max. Earth dist.	13921 Oct 09 12:47	0° \approx 19'19	5.89469 AU
	13916 Apr 29 13:36	15° \approx		morning rise	13921 Oct 22 07:43	3° \approx 27'09	
morning rise	13916 May 08 12:00	16° \approx 54'26			13921 Dec 12 03:02	15° \approx	
desc. node	13916 May 12 13:34	17° \approx 46'10		retrograde	13922 Mar 03 01:35	24° \approx 19'45	
	13916 Jul 18 15:46	0° \approx		asc. node	13922 Mar 19 05:05	23° \approx 53'25	
retrograde	13916 Sep 06 10:50	3° \approx 33'33		min. Earth dist.	13922 Apr 30 08:21	19° \approx 25'56	3.90408 AU
	13916 Oct 26 22:50	30° \approx		opposition	13922 May 01 06:12	19° \approx 18'33	0°03'54
opposition	13916 Nov 06 14:13	28° \approx 39'29	-0°12'12		13922 Jun 09 09:14	15° \approx	
min. Earth dist.	13916 Nov 07 17:29	28° \approx 30'46	4.48043 AU	direct	13922 Jun 28 06:51	14° \approx 23'13	
direct	13917 Jan 08 02:46	23° \approx 38'46			13922 Jul 17 05:26	15° \approx	
	13917 Mar 18 06:30	0° \approx			13922 Oct 14 17:24	0° \approx	
evening set	13917 May 12 18:57	10° \approx 54'57		evening set	13922 Nov 02 19:39	4° \approx 31'17	
max. Earth dist.	13917 May 23 16:23	13° \approx 16'59	6.43293 AU				
				conjunction	13922 Nov 16 08:28	7° \approx 47'22	0°13'18
conjunction	13917 May 25 16:02	13° \approx 42'58	-0°16'54	minimum elong	13922 Nov 16 08:27	7° \approx 47'22	0°14'13
minimum elong	13917 May 25 16:02	13° \approx 42'58	0°17'53	behind sun begin	13922 Nov 16 04:32	7° \approx 45'01	
morning rise	13917 Jun 07 11:37	16° \approx 30'31		behind sun end	13922 Nov 16 12:22	7° \approx 49'43	
	13917 Aug 18 08:04	0° \approx		max. Earth dist.	13922 Nov 18 07:26	8° \approx 15'45	5.94137 AU
retrograde	13917 Oct 07 17:45	3° \approx 40'51		morning rise	13922 Nov 29 23:06	11° \approx 04'09	
	13917 Nov 28 03:26	30° \approx			13923 Mar 11 01:31	0° \approx	
opposition	13917 Dec 07 16:47	28° \approx 47'15	-0°36'03	retrograde	13923 Apr 09 06:53	1° \approx 23'21	
min. Earth dist.	13917 Dec 09 06:06	28° \approx 35'16	4.36800 AU		13923 May 08 09:29	30° \approx	
direct	13918 Feb 07 17:35	23° \approx 46'58		min. Earth dist.	13923 Jun 06 04:45	26° \approx 32'45	4.00288 AU
	13918 Apr 16 02:33	0° \approx		opposition	13923 Jun 07 17:58	26° \approx 20'07	0°34'51
evening set	13918 Jun 12 21:35	11° \approx 40'01		direct	13923 Aug 05 03:51	21° \approx 23'16	

	13923 Oct 21 14:05	0°♂	retrograde	13928 Sep 10 16:13	7°♂51'05	
evening set	13923 Dec 10 05:53	10°♂49'01	opposition	13928 Nov 10 20:33	2°♂57'02 -0°15'50	
			min. Earth dist.	13928 Nov 12 00:43	2°♂48'02 4.47027 AU	
conjunction	13923 Dec 23 19:16	13°♂58'42 0°29'56		13928 Dec 05 13:39	30°♂♂	
minimum elong	13923 Dec 23 19:15	13°♂58'41 0°30'59	direct	13929 Jan 12 08:12	27°♂56'20	
max. Earth dist.	13923 Dec 26 06:42	14°♂33'24 6.08154 AU		13929 Feb 19 04:25	0°♂	
morning rise	13924 Jan 06 09:21	17°♂08'23	evening set	13929 May 17 01:25	15°♂15'44	
	13924 Mar 07 23:24	0°♂	max. Earth dist.	13929 May 27 20:19	17°♂36'55 6.41819 AU	
retrograde	13924 May 12 21:06	6°♂17'54				
min. Earth dist.	13924 Jul 10 06:30	1°♂27'15 4.16869 AU	conjunction	13929 May 29 22:05	18°♂04'10 -0°19'09	
opposition	13924 Jul 11 19:18	1°♂14'53 0°50'55	minimum elong	13929 May 29 22:04	18°♂04'09 0°20'09	
	13924 Jul 21 04:54	30°♂♂	morning rise	13929 Jun 11 17:33	20°♂52'11	
direct	13924 Sep 09 07:05	26°♂16'11		13929 Jul 26 08:33	0°♂	
	13924 Oct 29 02:12	0°♂	retrograde	13929 Oct 12 07:02	8°♂08'24	
evening set	13925 Jan 13 12:55	14°♂45'15	opposition	13929 Dec 12 04:16	3°♂14'43 -0°38'49	
	13925 Jan 14 15:22	15°♂	min. Earth dist.	13929 Dec 13 19:13	3°♂02'13 4.34914 AU	
				13930 Jan 08 17:22	30°♂♂	
conjunction	13925 Jan 26 23:50	17°♂46'03 0°35'15	direct	13930 Feb 12 04:00	28°♂14'28	
minimum elong	13925 Jan 26 23:50	17°♂46'03 0°36'03		13930 Mar 18 12:18	0°♂	
max. Earth dist.	13925 Jan 29 02:09	18°♂14'15 6.25790 AU	evening set	13930 Jun 17 08:13	16°♂13'21	
morning rise	13925 Feb 09 10:27	20°♂46'21	max. Earth dist.	13930 Jun 27 20:15	18°♂35'32 6.26774 AU	
	13925 Mar 25 14:03	0°♂				
retrograde	13925 Jun 13 19:18	8°♂43'01	conjunction	13930 Jun 30 04:36	19°♂07'27 -0°31'43	
min. Earth dist.	13925 Aug 12 05:05	3°♂50'52 4.33997 AU	minimum elong	13930 Jun 30 04:36	19°♂07'27 0°32'46	
opposition	13925 Aug 13 07:31	3°♂42'08 0°49'20	morning rise	13930 Jul 13 00:20	22°♂01'35	
	13925 Sep 14 02:40	30°♂♂		13930 Aug 18 23:27	0°♂	
direct	13925 Oct 13 00:15	28°♂42'10	retrograde	13930 Nov 15 05:01	10°♂19'13	
	13925 Nov 11 06:06	0°♂	opposition	13931 Jan 14 15:45	5°♂24'50 -0°51'50	
evening set	13926 Feb 15 11:51	16°♂21'49	min. Earth dist.	13931 Jan 16 04:51	5°♂12'47 4.17890 AU	
			direct	13931 Mar 16 12:31	0°♂25'54	
conjunction	13926 Feb 28 18:50	19°♂14'43 0°29'29		13931 Jul 01 16:40	15°♂	
minimum elong	13926 Feb 28 18:50	19°♂14'43 0°29'47	evening set	13931 Jul 20 13:02	19°♂19'18	
max. Earth dist.	13926 Mar 01 20:30	19°♂28'40 6.41121 AU	max. Earth dist.	13931 Jul 31 13:38	21°♂54'39 6.09124 AU	
morning rise	13926 Mar 14 00:38	22°♂06'51				
	13926 Apr 21 12:49	0°♂	conjunction	13931 Aug 02 11:42	22°♂21'48 -0°34'58	
retrograde	13926 Jul 14 01:55	9°♂09'33	minimum elong	13931 Aug 02 11:42	22°♂21'48 0°35'42	
opposition	13926 Sep 12 23:29	4°♂11'34 0°33'58	morning rise	13931 Aug 15 10:52	25°♂24'54	
min. Earth dist.	13926 Sep 12 15:47	4°♂14'04 4.46490 AU		13931 Sep 04 08:22	0°♂	
	13926 Oct 21 13:35	30°♂♂	retrograde	13931 Dec 21 22:17	14°♂58'05	
direct	13926 Nov 13 18:49	29°♂11'00	opposition	13932 Feb 19 17:28	10°♂02'02 -0°48'07	
	13926 Dec 07 04:00	0°♂	min. Earth dist.	13932 Feb 20 17:10	9°♂54'13 4.01038 AU	
evening set	13927 Mar 18 15:04	16°♂20'11	direct	13932 Apr 19 07:15	5°♂05'01	
			evening set	13932 Aug 24 03:25	24°♂52'11	
conjunction	13927 Mar 31 17:49	19°♂08'03 0°15'49				
minimum elong	13927 Mar 31 17:50	19°♂08'03 0°15'35	conjunction	13932 Sep 06 07:13	28°♂03'37 -0°25'50	
behind sun begin	13927 Mar 31 16:04	19°♂07'07	minimum elong	13932 Sep 06 07:14	28°♂03'38 0°25'57	
behind sun end	13927 Mar 31 19:35	19°♂08'59	max. Earth dist.	13932 Sep 05 13:21	27°♂52'46 5.94675 AU	
max. Earth dist.	13927 Mar 31 14:10	19°♂06'06 6.49929 AU		13932 Sep 14 06:45	0°♂	
morning rise	13927 Apr 13 19:04	21°♂55'06	morning rise	13932 Sep 19 12:21	1°♂16'03	
	13927 May 24 00:03	0°♂	retrograde	13933 Jan 28 13:50	21°♂51'39	
retrograde	13927 Aug 12 15:30	8°♂31'55	opposition	13933 Mar 28 21:24	16°♂53'02 -0°25'15	
opposition	13927 Oct 12 19:19	3°♂36'22 0°10'22	min. Earth dist.	13933 Mar 28 20:46	16°♂53'14 3.90569 AU	
min. Earth dist.	13927 Oct 13 06:49	3°♂32'40 4.51185 AU	direct	13933 May 26 06:49	11°♂57'38	
	13927 Nov 13 07:12	30°♂♂		13933 Sep 21 13:27	0°♂	
direct	13927 Dec 14 05:12	28°♂35'35	evening set	13933 Sep 30 19:03	2°♂14'09	
	13928 Jan 14 09:04	0°♂				
desc. node	13928 Mar 19 10:50	9°♂47'48	conjunction	13933 Oct 14 04:31	5°♂31'00 -0°06'08	
	13928 Apr 13 20:16	15°♂	minimum elong	13933 Oct 14 04:30	5°♂30'59 0°05'37	
evening set	13928 Apr 16 19:27	15°♂37'44	behind sun begin	13933 Oct 13 20:30	5°♂26'06	
			behind sun end	13933 Oct 14 12:30	5°♂35'52	
conjunction	13928 Apr 29 18:42	18°♂24'04 -0°01'52	max. Earth dist.	13933 Oct 14 23:37	5°♂42'42 5.89283 AU	
minimum elong	13928 Apr 29 18:43	18°♂24'05 0°02'35	morning rise	13933 Oct 27 16:04	8°♂48'54	
behind sun begin	13928 Apr 29 10:43	18°♂19'49		13933 Nov 22 17:26	15°♂	
behind sun end	13928 Apr 30 02:43	18°♂28'20	asc. node	13934 Jan 29 12:53	27°♂23'13	
max. Earth dist.	13928 Apr 28 13:27	18°♂08'24 6.50182 AU	retrograde	13934 Mar 08 07:53	29°♂40'50	
morning rise	13928 May 12 16:07	21°♂09'41	opposition	13934 May 06 13:28	24°♂39'14 0°08'45	
	13928 Jun 25 20:21	0°♂	min. Earth dist.	13934 May 05 12:22	24°♂47'44 3.90991 AU	

direct	13934 Jul 03 14:00	19° \mathbb{M} 43'43		conjunction	13940 May 03 21:08	22° \mathcal{B} 33'48	-0°04'20
	13934 Sep 26 01:06	0° \mathcal{A}		minimum elong	13940 May 03 21:09	22° \mathcal{B} 33'49	0°05'06
evening set	13934 Nov 08 02:35	9° \mathcal{A} 48'35		behind sun begin	13940 May 03 13:23	22° \mathcal{B} 29'40	
				behind sun end	13940 May 04 04:55	22° \mathcal{B} 37'57	
conjunction	13934 Nov 21 15:50	13° \mathcal{A} 04'12	0°16'10	morning rise	13940 May 16 18:17	25° \mathcal{B} 19'26	
minimum elong	13934 Nov 21 15:50	13° \mathcal{A} 04'12	0°17'08		13940 Jun 08 04:10	0° \mathbb{I}	
max. Earth dist.	13934 Nov 23 18:23	13° \mathcal{A} 34'39	5.95433 AU	retrograde	13940 Sep 14 21:29	12° \mathbb{I} 03'06	
morning rise	13934 Dec 05 06:35	16° \mathcal{A} 20'24		opposition	13940 Nov 15 00:53	7° \mathbb{I} 09'10	-0°19'16
	13935 Feb 06 17:14	0° \mathcal{B}		min. Earth dist.	13940 Nov 16 07:39	6° \mathbb{I} 59'19	4.45983 AU
retrograde	13935 Apr 14 07:54	6° \mathcal{B} 32'17		direct	13941 Jan 16 12:28	2° \mathbb{I} 08'24	
min. Earth dist.	13935 Jun 11 06:01	1° \mathcal{B} 41'35	4.02137 AU	evening set	13941 May 21 05:41	19° \mathbb{I} 31'32	
opposition	13935 Jun 12 19:20	1° \mathcal{B} 28'56	0°38'10	max. Earth dist.	13941 May 31 23:02	21° \mathbb{I} 52'21	6.40177 AU
	13935 Jun 23 22:17	30° \mathcal{R} \mathcal{A}					
direct	13935 Aug 10 08:34	26° \mathcal{A} 31'51		conjunction	13941 Jun 03 02:20	22° \mathbb{I} 20'32	-0°21'13
	13935 Sep 26 08:30	0° \mathcal{B}		minimum elong	13941 Jun 03 02:19	22° \mathbb{I} 20'31	0°22'15
evening set	13935 Dec 15 07:42	15° \mathcal{B} 50'42		morning rise	13941 Jun 15 21:33	25° \mathbb{I} 09'08	
					13941 Jul 08 13:43	0° \mathcal{B}	
conjunction	13935 Dec 28 20:55	18° \mathcal{B} 59'17	0°31'24	retrograde	13941 Oct 16 17:06	12° \mathcal{B} 32'11	
minimum elong	13935 Dec 28 20:55	18° \mathcal{B} 59'17	0°32'25	opposition	13941 Dec 16 14:09	7° \mathcal{B} 38'28	-0°41'18
max. Earth dist.	13935 Dec 31 09:29	19° \mathcal{B} 34'26	6.10384 AU	min. Earth dist.	13941 Dec 18 05:35	7° \mathcal{B} 25'48	4.32759 AU
morning rise	13936 Jan 11 10:43	22° \mathcal{B} 07'48		direct	13942 Feb 16 10:13	2° \mathcal{B} 38'21	
	13936 Feb 16 03:53	0° \approx		evening set	13942 Jun 21 17:43	20° \mathcal{B} 44'21	
retrograde	13936 May 17 11:11	11° \approx 07'10		max. Earth dist.	13942 Jul 02 05:18	23° \mathcal{B} 07'07	6.24246 AU
min. Earth dist.	13936 Jul 14 22:59	6° \approx 16'49	4.19286 AU				
opposition	13936 Jul 16 12:07	6° \approx 04'23	0°51'42	conjunction	13942 Jul 04 14:10	23° \mathcal{B} 39'31	-0°32'47
direct	13936 Sep 14 02:49	1° \approx 05'31		minimum elong	13942 Jul 04 14:09	23° \mathcal{B} 39'31	0°33'48
	13936 Dec 28 21:20	15° \approx		morning rise	13942 Jul 17 10:17	26° \mathcal{B} 34'50	
evening set	13937 Jan 18 07:12	19° \approx 27'01			13942 Aug 01 16:43	0° \mathcal{Q}	
					13942 Nov 14 07:30	15° \mathcal{Q}	
conjunction	13937 Jan 31 17:30	22° \approx 26'33	0°35'03	retrograde	13942 Nov 20 02:55	15° \mathcal{Q} 03'15	
minimum elong	13937 Jan 31 17:31	22° \approx 26'34	0°35'48		13942 Nov 25 22:22	15° \mathcal{R} \mathcal{Q}	
max. Earth dist.	13937 Feb 02 16:36	22° \approx 52'50	6.28214 AU	opposition	13943 Jan 19 10:29	10° \mathcal{Q} 08'43	-0°52'26
morning rise	13937 Feb 14 03:30	25° \approx 25'35		min. Earth dist.	13943 Jan 20 23:37	9° \mathcal{Q} 56'37	4.15147 AU
	13937 Mar 07 06:33	0° \mathcal{H}		direct	13943 Mar 21 04:04	5° \mathcal{Q} 09'57	
retrograde	13937 Jun 18 03:54	13° \mathcal{H} 13'01			13943 Jun 13 19:28	15° \mathcal{Q}	
opposition	13937 Aug 17 16:54	8° \mathcal{H} 12'32	0°47'53	evening set	13943 Jul 25 06:53	24° \mathcal{Q} 12'34	
min. Earth dist.	13937 Aug 16 17:18	8° \mathcal{H} 20'19	4.36239 AU	max. Earth dist.	13943 Aug 05 10:45	26° \mathcal{Q} 50'45	6.06416 AU
direct	13937 Oct 17 15:02	3° \mathcal{H} 12'26					
evening set	13938 Feb 19 22:25	20° \mathcal{H} 45'56		conjunction	13943 Aug 07 06:19	27° \mathcal{Q} 16'35	-0°34'27
				minimum elong	13943 Aug 07 06:20	27° \mathcal{Q} 16'35	0°35'08
conjunction	13938 Mar 05 04:49	23° \mathcal{H} 37'52	0°27'58		13943 Aug 18 18:15	0° \mathbb{P}	
minimum elong	13938 Mar 05 04:50	23° \mathcal{H} 37'52	0°28'12	morning rise	13943 Aug 20 06:13	0° \mathbb{P} 21'13	
max. Earth dist.	13938 Mar 06 03:35	23° \mathcal{H} 50'10	6.43020 AU	retrograde	13943 Dec 27 04:58	20° \mathbb{P} 06'12	
morning rise	13938 Mar 18 09:56	26° \mathcal{H} 29'00		opposition	13944 Feb 24 21:35	15° \mathbb{P} 09'55	-0°46'03
	13938 Apr 04 01:20	0° \mathcal{Y}		min. Earth dist.	13944 Feb 25 18:22	15° \mathbb{P} 03'02	3.98632 AU
retrograde	13938 Jul 18 03:37	13° \mathcal{Y} 25'32		direct	13944 Apr 24 05:22	10° \mathbb{P} 13'12	
opposition	13938 Sep 17 03:47	8° \mathcal{Y} 27'53	0°31'03		13944 Aug 28 16:58	0° \mathcal{L}	
min. Earth dist.	13938 Sep 16 21:51	8° \mathcal{Y} 29'49	4.47934 AU	evening set	13944 Aug 29 06:57	0° \mathcal{L} 08'28	
direct	13938 Nov 18 01:20	3° \mathcal{Y} 27'17					
evening set	13939 Mar 22 20:12	20° \mathcal{Y} 33'03		conjunction	13944 Sep 11 11:32	3° \mathcal{L} 21'12	-0°23'35
				minimum elong	13944 Sep 11 11:33	3° \mathcal{L} 21'13	0°23'38
conjunction	13939 Apr 04 22:23	23° \mathcal{Y} 20'20	0°13'32	max. Earth dist.	13944 Sep 10 21:28	3° \mathcal{L} 12'38	5.92811 AU
minimum elong	13939 Apr 04 22:24	23° \mathcal{Y} 20'20	0°13'13	morning rise	13944 Sep 24 17:51	6° \mathcal{L} 35'02	
behind sun begin	13939 Apr 04 17:45	23° \mathcal{Y} 17'52		retrograde	13945 Feb 03 00:56	27° \mathcal{L} 18'19	
behind sun end	13939 Apr 05 03:03	23° \mathcal{Y} 22'48		opposition	13945 Apr 03 07:56	22° \mathcal{L} 19'15	-0°20'51
max. Earth dist.	13939 Apr 04 15:39	23° \mathcal{Y} 16'45	6.50817 AU	min. Earth dist.	13945 Apr 03 03:03	22° \mathcal{L} 20'54	3.89470 AU
morning rise	13939 Apr 17 22:52	26° \mathcal{Y} 06'48		direct	13945 May 31 14:35	17° \mathcal{L} 23'57	
	13939 May 06 14:51	0° \mathcal{B}			13945 Sep 03 10:11	0° \mathbb{M}	
retrograde	13939 Aug 16 17:17	12° \mathcal{B} 41'26		evening set	13945 Oct 06 04:46	7° \mathbb{M} 43'15	
opposition	13939 Oct 16 21:53	7° \mathcal{B} 46'12	0°06'49				
min. Earth dist.	13939 Oct 17 12:18	7° \mathcal{B} 41'35	4.51455 AU	conjunction	13945 Oct 19 15:11	11° \mathbb{M} 00'35	-0°02'56
direct	13939 Dec 18 10:06	2° \mathcal{B} 45'26		minimum elong	13945 Oct 19 15:11	11° \mathbb{M} 00'36	0°02'19
desc. node	13940 Jan 26 22:06	4° \mathcal{B} 58'48		behind sun begin	13945 Oct 19 06:51	10° \mathbb{M} 55'30	
	13940 Mar 28 20:22	15° \mathcal{B}		behind sun end	13945 Oct 19 23:32	11° \mathbb{M} 05'41	
evening set	13940 Apr 20 22:31	19° \mathcal{B} 47'33		max. Earth dist.	13945 Oct 20 17:11	11° \mathbb{M} 16'32	5.89089 AU
max. Earth dist.	13940 May 02 10:53	22° \mathcal{B} 15'25	6.49791 AU	morning rise	13945 Nov 02 03:23	14° \mathbb{M} 18'55	
					13945 Nov 04 23:05	15° \mathbb{M}	

asc. node	13945 Dec 10 04:07	23° \mathbb{M} 10'18	opposition	13951 Oct 21 01:47	11° $\mathbf{8}$ 58'59	0°03'06
	13946 Jan 14 13:28	0° $\mathbf{7}$	min. Earth dist.	13951 Oct 21 18:20	11° $\mathbf{8}$ 53'41	4.51285 AU
retrograde	13946 Mar 13 18:53	5° $\mathbf{7}$ 09'47	desc. node	13951 Dec 05 09:57	7° $\mathbf{8}$ 24'46	
opposition	13946 May 11 23:27	0° $\mathbf{7}$ 07'47	0°13'32	direct	13951 Dec 22 13:58	6° $\mathbf{8}$ 58'09
min. Earth dist.	13946 May 10 20:06	0° $\mathbf{7}$ 17'03	3.91721 AU		13952 Mar 10 20:32	15° $\mathbf{8}$
	13946 May 12 22:23	30° \mathbf{R} \mathbb{M}	evening set	13952 Apr 25 03:13	24° $\mathbf{8}$ 01'36	
direct	13946 Jul 09 00:50	25° \mathbb{M} 12'07	max. Earth dist.	13952 May 06 13:08	26° $\mathbf{8}$ 28'26	6.48942 AU
	13946 Sep 02 05:30	0° $\mathbf{7}$				
evening set	13946 Nov 13 12:14	15° $\mathbf{7}$ 12'51	conjunction	13952 May 08 01:35	26° $\mathbf{8}$ 48'03	-0°06'52
			minimum elong	13952 May 08 01:34	26° $\mathbf{8}$ 48'02	0°07'40
conjunction	13946 Nov 27 01:45	18° $\mathbf{7}$ 27'50	0°18'54	behind sun begin	13952 May 07 18:21	26° $\mathbf{8}$ 44'10
minimum elong	13946 Nov 27 01:44	18° $\mathbf{7}$ 27'50	0°19'55	behind sun end	13952 May 08 08:48	26° $\mathbf{8}$ 51'54
max. Earth dist.	13946 Nov 29 08:28	19° $\mathbf{7}$ 00'39	5.96990 AU	morning rise	13952 May 20 22:12	29° $\mathbf{8}$ 33'49
morning rise	13946 Dec 10 16:39	21° $\mathbf{7}$ 43'18			13952 May 22 23:16	0° \mathbf{II}
	13947 Jan 16 00:48	0° $\mathbf{8}$	retrograde	13952 Sep 19 04:57	16° \mathbf{II} 21'15	
retrograde	13947 Apr 19 08:02	11° $\mathbf{8}$ 46'07	opposition	13952 Nov 19 08:10	11° \mathbf{II} 27'25	-0°22'45
min. Earth dist.	13947 Jun 16 06:30	6° $\mathbf{8}$ 55'58	4.04333 AU	min. Earth dist.	13952 Nov 20 17:05	11° \mathbf{II} 16'54
opposition	13947 Jun 17 21:50	6° $\mathbf{8}$ 42'40	0°41'10	direct	13953 Jan 20 18:39	6° \mathbf{II} 26'43
direct	13947 Aug 15 13:18	1° $\mathbf{8}$ 45'16	evening set	13953 May 25 13:16	23° \mathbf{II} 54'51	
evening set	13947 Dec 20 10:55	20° $\mathbf{8}$ 55'49	max. Earth dist.	13953 Jun 05 03:13	26° \mathbf{II} 14'30	6.38140 AU
conjunction	13948 Jan 02 23:44	24° $\mathbf{8}$ 03'03	0°32'37	conjunction	13953 Jun 07 09:37	26° \mathbf{II} 44'32
minimum elong	13948 Jan 02 23:44	24° $\mathbf{8}$ 03'02	0°33'37	minimum elong	13953 Jun 07 09:37	26° \mathbf{II} 44'31
max. Earth dist.	13948 Jan 05 10:51	24° $\mathbf{8}$ 37'09	6.12981 AU	morning rise	13953 Jun 20 04:59	29° \mathbf{II} 33'56
morning rise	13948 Jan 16 13:10	27° $\mathbf{8}$ 10'10			13953 Jun 22 04:31	0° $\mathbf{9}$
	13948 Jan 29 01:27	0° $\mathbf{9}$	retrograde	13953 Oct 21 09:34	17° $\mathbf{9}$ 05'13	
	13948 Apr 27 12:38	15° $\mathbf{9}$	opposition	13953 Dec 21 04:21	12° $\mathbf{9}$ 11'26	-0°43'40
retrograde	13948 May 22 02:45	15° $\mathbf{9}$ 58'00	min. Earth dist.	13953 Dec 22 20:37	11° $\mathbf{9}$ 58'27	4.30284 AU
	13948 Jun 15 12:48	15° \mathbf{R} $\mathbf{9}$	direct	13954 Feb 20 21:49	7° $\mathbf{9}$ 11'22	
min. Earth dist.	13948 Jul 19 18:00	11° $\mathbf{9}$ 07'09	4.21996 AU	evening set	13954 Jun 26 07:32	25° $\mathbf{9}$ 25'28
opposition	13948 Jul 21 05:15	10° $\mathbf{9}$ 55'21	0°52'05	max. Earth dist.	13954 Jul 06 20:43	27° $\mathbf{9}$ 49'59
direct	13948 Sep 19 01:48	5° $\mathbf{9}$ 56'10				
	13948 Dec 10 05:09	15° $\mathbf{9}$	conjunction	13954 Jul 09 04:25	28° $\mathbf{9}$ 21'54	-0°33'42
evening set	13949 Jan 23 01:10	24° $\mathbf{9}$ 09'08	minimum elong	13954 Jul 09 04:25	28° $\mathbf{9}$ 21'54	0°34'40
				13954 Jul 16 07:30	0° $\mathbf{9}$	
conjunction	13949 Feb 05 11:04	27° $\mathbf{9}$ 07'23	0°34'36	morning rise	13954 Jul 22 00:48	1° $\mathbf{9}$ 18'29
minimum elong	13949 Feb 05 11:05	27° $\mathbf{9}$ 07'23	0°35'15		13954 Sep 27 19:26	15° $\mathbf{9}$
max. Earth dist.	13949 Feb 07 08:43	27° $\mathbf{9}$ 32'42	6.30806 AU	retrograde	13954 Nov 25 04:46	19° $\mathbf{9}$ 58'13
morning rise	13949 Feb 18 20:16	0° \mathbf{X} 05'00		opposition	13955 Jan 24 10:00	15° $\mathbf{9}$ 03'33
	13949 Feb 18 11:10	0° \mathbf{X}	min. Earth dist.	13955 Jan 24 20:54	15° \mathbf{R} $\mathbf{9}$	-0°52'40
retrograde	13949 Jun 22 10:17	17° \mathbf{X} 42'52	4.38508 AU	direct	13955 Jan 25 21:35	14° $\mathbf{9}$ 51'57
min. Earth dist.	13949 Aug 21 03:52	12° \mathbf{X} 50'01	0°46'06	evening set	13955 Mar 25 22:02	10° $\mathbf{9}$ 05'06
opposition	13949 Aug 22 02:01	12° \mathbf{X} 42'45			13955 May 22 08:14	15° $\mathbf{9}$
direct	13949 Oct 22 03:21	7° \mathbf{X} 42'32			13955 Jul 30 05:37	29° $\mathbf{9}$ 16'50
evening set	13950 Feb 24 08:54	25° \mathbf{X} 09'58			13955 Aug 02 06:33	0° $\mathbf{10}$
			max. Earth dist.	13955 Aug 10 12:26	1° $\mathbf{10}$ 57'43	6.03892 AU
conjunction	13950 Mar 09 14:32	28° \mathbf{X} 00'55	0°26'15	conjunction	13955 Aug 12 05:34	2° $\mathbf{10}$ 22'15
minimum elong	13950 Mar 09 14:33	28° \mathbf{X} 00'56	0°26'24	minimum elong	13955 Aug 12 05:35	2° $\mathbf{10}$ 22'15
max. Earth dist.	13950 Mar 10 08:05	28° \mathbf{X} 10'23	6.44801 AU	morning rise	13955 Aug 25 06:27	5° $\mathbf{10}$ 28'26
	13950 Mar 18 19:39	0° \mathbf{Y}	retrograde	13956 Jan 01 15:23	25° $\mathbf{10}$ 24'31	
morning rise	13950 Mar 22 19:00	0° \mathbf{Y} 51'05	opposition	13956 Mar 01 06:22	20° $\mathbf{10}$ 27'53	-0°43'28
retrograde	13950 Jul 22 08:07	17° \mathbf{Y} 42'04	min. Earth dist.	13956 Mar 01 23:24	20° $\mathbf{10}$ 22'14	3.96586 AU
opposition	13950 Sep 21 08:25	12° \mathbf{Y} 44'49	0°27'54	direct	13956 Apr 29 09:27	15° $\mathbf{10}$ 31'29
min. Earth dist.	13950 Sep 21 06:22	12° \mathbf{Y} 45'29	4.49124 AU		13956 Aug 11 05:07	0° $\mathbf{11}$
direct	13950 Nov 22 10:04	7° \mathbf{Y} 44'06	evening set	13956 Sep 03 14:05	5° $\mathbf{11}$ 33'08	
evening set	13951 Mar 27 02:00	24° \mathbf{Y} 47'22				
conjunction	13951 Apr 09 03:40	27° \mathbf{Y} 34'15	0°11'08	conjunction	13956 Sep 16 19:42	8° $\mathbf{11}$ 46'58
minimum elong	13951 Apr 09 03:40	27° \mathbf{Y} 34'15	0°10'44	minimum elong	13956 Sep 16 19:43	8° $\mathbf{11}$ 46'59
behind sun begin	13951 Apr 08 21:31	27° \mathbf{Y} 30'59		max. Earth dist.	13956 Sep 16 12:59	8° $\mathbf{11}$ 42'52
behind sun end	13951 Apr 09 09:49	27° \mathbf{Y} 37'31		morning rise	13956 Sep 30 02:49	12° $\mathbf{11}$ 01'51
max. Earth dist.	13951 Apr 08 16:18	27° \mathbf{Y} 28'12	6.51332 AU		13956 Dec 28 07:09	0° $\mathbf{12}$
	13951 Apr 20 13:18	0° $\mathbf{8}$	retrograde	13957 Feb 08 16:06	2° $\mathbf{12}$ 50'09	
morning rise	13951 Apr 22 03:37	0° $\mathbf{8}$ 20'19			13957 Mar 23 06:49	30° \mathbf{R} $\mathbf{12}$
	13951 Jul 16 02:25	15° $\mathbf{8}$	opposition	13957 Apr 08 20:53	27° $\mathbf{12}$ 50'42	-0°16'07
retrograde	13951 Aug 20 20:17	16° $\mathbf{8}$ 54'01	min. Earth dist.	13957 Apr 08 12:43	27° $\mathbf{12}$ 53'27	3.89067 AU
	13951 Sep 25 15:22	15° \mathbf{R} $\mathbf{8}$	direct	13957 Jun 06 01:56	22° $\mathbf{12}$ 55'33	

	13957 Aug 13 02:43	0°♌		minimum elong	13963 Apr 13 07:08	1°♏45'31	0°08'15
evening set	13957 Oct 11 16:10	13°♌14'38		behind sun begin	13963 Apr 13 00:03	1°♏41'45	
asc. node	13957 Oct 17 14:42	14°♌41'36		behind sun end	13963 Apr 13 14:13	1°♏49'16	
	13957 Oct 18 20:47	15°♌		max. Earth dist.	13963 Apr 12 15:09	1°♏36'59	6.51415 AU
				morning rise	13963 Apr 26 06:36	4°♏31'22	
conjunction	13957 Oct 25 03:09	16°♌32'01	0°00'27		13963 Jun 19 06:52	15°♏	
minimum elong	13957 Oct 25 03:07	16°♌32'00	0°01'08	retrograde	13963 Aug 25 01:01	21°♏05'44	
behind sun begin	13957 Oct 24 18:46	16°♌26'55		desc. node	13963 Oct 17 02:25	17°♏12'53	
behind sun end	13957 Oct 25 11:29	16°♌37'06		opposition	13963 Oct 25 05:18	16°♏11'00	-0°00'34
max. Earth dist.	13957 Oct 26 10:33	16°♌51'14	5.89639 AU	min. Earth dist.	13963 Oct 26 01:31	16°♏04'31	4.50662 AU
morning rise	13957 Nov 07 16:01	19°♌50'20			13963 Nov 03 12:55	15°♏♏	
	13957 Dec 21 21:49	0°♏		direct	13963 Dec 26 18:42	11°♏10'09	
retrograde	13958 Mar 19 02:00	10°♏36'37			13964 Feb 17 10:09	15°♏	
min. Earth dist.	13958 May 16 01:21	5°♏44'50	3.93181 AU	evening set	13964 Apr 29 07:43	28°♏16'22	
opposition	13958 May 17 08:25	5°♏34'18	0°18'12		13964 May 07 08:39	0°♐	
direct	13958 Jul 14 09:41	0°♏38'29		max. Earth dist.	13964 May 10 13:06	0°♐41'14	6.47651 AU
evening set	13958 Nov 18 20:28	20°♏32'32					
				conjunction	13964 May 12 05:44	1°♐03'09	-0°09'20
conjunction	13958 Dec 02 09:55	23°♏46'28	0°21'28	minimum elong	13964 May 12 05:43	1°♐03'08	0°10'12
minimum elong	13958 Dec 02 09:54	23°♏46'28	0°22'31	behind sun begin	13964 May 11 23:20	0°♐59'43	
max. Earth dist.	13958 Dec 04 17:54	24°♏19'52	5.99178 AU	behind sun end	13964 May 12 12:05	1°♐06'34	
morning rise	13958 Dec 16 00:50	27°♏00'50		morning rise	13964 May 25 02:11	3°♐49'20	
	13958 Dec 28 19:10	0°♑		retrograde	13964 Sep 23 13:51	20°♐42'00	
retrograde	13959 Apr 24 05:45	16°♑52'42		opposition	13964 Nov 23 16:06	15°♐48'14	-0°26'07
min. Earth dist.	13959 Jun 21 06:32	12°♑02'26	4.06980 AU	min. Earth dist.	13964 Nov 25 02:12	15°♐37'19	4.42627 AU
opposition	13959 Jun 22 21:40	11°♑49'12	0°43'45	direct	13965 Jan 25 00:05	10°♐47'33	
direct	13959 Aug 20 18:05	6°♑51'30		evening set	13965 May 29 21:45	28°♐21'55	
evening set	13959 Dec 25 10:33	25°♑52'35			13965 Jun 06 07:30	0°♑	
				max. Earth dist.	13965 Jun 09 12:00	0°♑42'25	6.35831 AU
conjunction	13960 Jan 07 23:08	28°♑58'24	0°33'34				
minimum elong	13960 Jan 07 23:07	28°♑58'23	0°34'34	conjunction	13965 Jun 11 18:12	1°♑12'29	-0°25'11
max. Earth dist.	13960 Jan 10 10:37	29°♑32'30	6.15840 AU	minimum elong	13965 Jun 11 18:11	1°♑12'29	0°26'15
	13960 Jan 12 10:36	0°♒		morning rise	13965 Jun 24 13:25	4°♑02'47	
morning rise	13960 Jan 21 11:50	2°♒03'57		retrograde	13965 Oct 26 03:29	21°♑43'10	
	13960 Mar 25 01:19	15°♒		opposition	13965 Dec 25 20:17	16°♑49'22	-0°45'48
retrograde	13960 May 26 14:32	20°♒40'02		min. Earth dist.	13965 Dec 27 12:48	16°♑36'18	4.27691 AU
min. Earth dist.	13960 Jul 24 08:45	15°♒49'08	4.24796 AU	direct	13966 Feb 25 09:51	11°♑49'31	
opposition	13960 Jul 25 18:56	15°♒37'44	0°52'07	evening set	13966 Jun 30 23:03	0°♒11'55	
	13960 Jul 30 12:27	15°♒♒			13966 Jun 30 02:12	0°♒	
direct	13960 Sep 23 19:28	10°♒38'25		max. Earth dist.	13966 Jul 11 12:35	2°♒37'33	6.18857 AU
	13960 Nov 17 13:11	15°♒					
evening set	13961 Jan 27 15:50	28°♒43'05		conjunction	13966 Jul 13 20:04	3°♒09'33	-0°34'23
	13961 Feb 02 11:41	0°♓		minimum elong	13966 Jul 13 20:04	3°♒09'33	0°35'20
				morning rise	13966 Jul 26 17:05	6°♒07'29	
conjunction	13961 Feb 10 00:57	1°♓40'01	0°33'57		13966 Sep 05 09:09	15°♒	
minimum elong	13961 Feb 10 00:58	1°♓40'01	0°34'33	retrograde	13966 Nov 30 08:01	24°♒58'22	
max. Earth dist.	13961 Feb 11 17:31	2°♓02'24	6.33316 AU	opposition	13967 Jan 29 11:25	20°♒03'25	-0°52'31
morning rise	13961 Feb 23 09:35	4°♓36'21		min. Earth dist.	13967 Jan 30 20:27	19°♒52'36	4.09869 AU
retrograde	13961 Jun 26 15:32	22°♓05'33		direct	13967 Mar 30 18:43	15°♒05'13	
opposition	13961 Aug 26 08:14	17°♓05'51	0°44'07		13967 Jul 16 07:12	0°♓♐	
min. Earth dist.	13961 Aug 25 13:36	17°♓11'58	4.40559 AU	evening set	13967 Aug 04 05:31	4°♓24'55	
direct	13961 Oct 26 13:54	12°♓05'31		max. Earth dist.	13967 Aug 15 18:46	7°♓10'22	6.01742 AU
evening set	13962 Feb 28 16:22	29°♓27'57					
	13962 Mar 03 04:19	0°♓♐		conjunction	13967 Aug 17 06:17	7°♓31'38	-0°32'35
				minimum elong	13967 Aug 17 06:18	7°♓31'39	0°33'05
conjunction	13962 Mar 13 21:35	2°♓18'08	0°24'26	morning rise	13967 Aug 30 07:47	10°♓39'07	
minimum elong	13962 Mar 13 21:36	2°♓18'08	0°24'30		13967 Dec 16 18:08	0°♓♑	
max. Earth dist.	13962 Mar 14 11:50	2°♓25'47	6.46258 AU	retrograde	13968 Jan 07 02:38	0°♓44'15	
morning rise	13962 Mar 27 01:15	5°♓07'29			13968 Jan 28 08:35	30°♓♐♐	
retrograde	13962 Jul 26 09:04	21°♓54'19		opposition	13968 Mar 06 15:18	25°♓47'15	-0°40'30
opposition	13962 Sep 25 11:06	16°♓57'28	0°24'42	min. Earth dist.	13968 Mar 07 05:32	25°♓42'32	3.95052 AU
min. Earth dist.	13962 Sep 25 11:11	16°♓57'26	4.49920 AU	direct	13968 May 04 15:12	20°♓51'06	
direct	13962 Nov 26 13:37	11°♓56'46			13968 Jul 22 19:25	0°♓♑	
evening set	13963 Mar 31 06:03	28°♓58'52		evening set	13968 Sep 08 21:05	10°♓56'48	
	13963 Apr 05 01:16	0°♓					
				conjunction	13968 Sep 22 03:23	14°♓11'22	-0°18'22
conjunction	13963 Apr 13 07:08	1°♓45'31	0°08'42	minimum elong	13968 Sep 22 03:24	14°♓11'23	0°18'13

max. Earth dist.	13968 Sep 22 01:18	14°♌10'06	5.90710 AU	min. Earth dist.	13974 Sep 29 18:57	21°♏11'09	4.50370 AU
morning rise	13968 Oct 05 11:31	17°♌27'03		direct	13974 Nov 30 20:17	16°♏11'37	
	13968 Nov 30 08:47	0°♌			13975 Mar 20 01:03	0°♏	
retrograde	13969 Feb 14 02:07	8°♌17'35		evening set	13975 Apr 04 11:42	3°♏13'33	
opposition	13969 Apr 14 07:33	3°♌17'39	-0°11'18				
min. Earth dist.	13969 Apr 13 18:49	3°♌21'57	3.89144 AU	conjunction	13975 Apr 17 12:28	6°♏00'06	0°06'11
	13969 May 11 04:47	30°♌		minimum elong	13975 Apr 17 12:28	6°♏00'06	0°05'40
direct	13969 Jun 11 10:15	28°♌22'29		behind sun begin	13975 Apr 17 04:46	5°♏56'01	
	13969 Jul 12 13:40	0°♌		behind sun end	13975 Apr 17 20:10	6°♏04'12	
asc. node	13969 Aug 24 04:12	6°♌31'48		max. Earth dist.	13975 Apr 16 17:40	5°♏50'04	6.51257 AU
	13969 Oct 01 19:10	15°♌		morning rise	13975 Apr 30 11:22	8°♏45'51	
evening set	13969 Oct 17 01:07	18°♌39'34			13975 May 30 21:59	15°♏	
				desc. node	13975 Aug 28 18:08	25°♏21'30	
conjunction	13969 Oct 30 12:32	21°♌56'43	0°03'42	retrograde	13975 Aug 29 05:48	25°♏21'31	
minimum elong	13969 Oct 30 12:32	21°♌56'43	0°04'28	opposition	13975 Oct 29 10:44	20°♏27'03	-0°04'20
behind sun begin	13969 Oct 30 04:20	21°♌51'44		min. Earth dist.	13975 Oct 30 08:05	20°♏20'12	4.49943 AU
behind sun end	13969 Oct 30 20:43	22°♌01'42		direct	13975 Dec 30 22:40	15°♏26'19	
max. Earth dist.	13969 Oct 31 23:44	22°♌18'13	5.90544 AU		13976 Apr 21 09:00	0°♐	
morning rise	13969 Nov 13 01:55	25°♌14'47		evening set	13976 May 03 14:09	2°♐35'29	
	13969 Dec 03 01:33	0°♐		max. Earth dist.	13976 May 14 17:44	4°♐59'48	6.46438 AU
retrograde	13970 Mar 24 06:20	15°♐55'17					
min. Earth dist.	13970 May 21 05:43	11°♐03'38	3.94785 AU	conjunction	13976 May 16 11:49	5°♐22'36	-0°11'49
opposition	13970 May 22 14:10	10°♐52'37	0°22'37	minimum elong	13976 May 16 11:49	5°♐22'35	0°12'45
direct	13970 Jul 19 18:12	5°♐56'32		behind sun begin	13976 May 16 06:47	5°♐19'53	
evening set	13970 Nov 24 01:27	25°♐43'42		behind sun end	13976 May 16 16:50	5°♐25'18	
				morning rise	13976 May 29 07:58	8°♐09'09	
conjunction	13970 Dec 07 15:05	28°♐56'39	0°23'49	retrograde	13976 Sep 28 01:48	25°♐06'50	
minimum elong	13970 Dec 07 15:04	28°♐56'39	0°24'52	opposition	13976 Nov 28 02:23	20°♐13'14	-0°29'27
max. Earth dist.	13970 Dec 10 01:52	29°♐31'32	6.01318 AU	min. Earth dist.	13976 Nov 29 14:09	20°♐01'47	4.41013 AU
	13970 Dec 12 01:52	0°♑		direct	13977 Jan 29 09:08	15°♐12'46	
morning rise	13970 Dec 21 05:43	2°♑09'52			13977 May 21 03:41	0°♑	
retrograde	13971 Apr 29 01:33	21°♑51'17		evening set	13977 Jun 03 07:39	2°♑52'18	
min. Earth dist.	13971 Jun 26 03:19	17°♑01'03	4.09417 AU	max. Earth dist.	13977 Jun 13 20:13	5°♑12'31	6.33946 AU
opposition	13971 Jun 27 18:24	16°♑47'52	0°45'59				
direct	13971 Aug 25 18:15	11°♑49'56		conjunction	13977 Jun 16 03:54	5°♑43'33	-0°27'01
	13971 Dec 27 04:34	0°♑		minimum elong	13977 Jun 16 03:53	5°♑43'33	0°28'05
evening set	13971 Dec 30 08:09	0°♑42'47		morning rise	13977 Jun 28 23:16	8°♑34'39	
				retrograde	13977 Oct 30 21:21	26°♑22'46	
conjunction	13972 Jan 12 20:12	3°♑47'18	0°34'18	opposition	13977 Dec 30 13:03	21°♑28'51	-0°47'42
minimum elong	13972 Jan 12 20:12	3°♑47'18	0°35'15	min. Earth dist.	13978 Jan 01 04:04	21°♑16'15	4.25681 AU
max. Earth dist.	13972 Jan 15 04:45	4°♑19'32	6.18342 AU	direct	13978 Mar 01 22:39	16°♑29'16	
morning rise	13972 Jan 26 08:35	6°♑51'33			13978 Jun 13 11:00	0°♒	
	13972 Mar 04 03:40	15°♑		evening set	13978 Jul 05 14:21	4°♒57'51	
retrograde	13972 May 31 00:18	25°♑17'29		max. Earth dist.	13978 Jul 16 07:44	7°♒26'19	6.16900 AU
min. Earth dist.	13972 Jul 28 22:45	20°♑26'13	4.27153 AU				
opposition	13972 Jul 30 07:01	20°♑15'28	0°51'51	conjunction	13978 Jul 18 11:43	7°♒56'26	-0°34'53
direct	13972 Sep 28 11:32	15°♑15'56		minimum elong	13978 Jul 18 11:43	7°♒56'26	0°35'48
	13973 Jan 17 05:57	0°♒		morning rise	13978 Jul 31 08:56	10°♒55'19	
evening set	13973 Feb 01 05:24	3°♒14'00			13978 Aug 18 08:04	15°♒	
				retrograde	13978 Dec 05 09:55	29°♒54'41	
conjunction	13973 Feb 14 14:10	6°♒09'54	0°33'06	opposition	13979 Feb 03 11:15	24°♒59'33	-0°52'03
minimum elong	13973 Feb 14 14:11	6°♒09'55	0°33'38	min. Earth dist.	13979 Feb 04 18:50	24°♒49'12	4.08131 AU
max. Earth dist.	13973 Feb 16 04:13	6°♒30'49	6.35363 AU	direct	13979 Apr 04 14:56	20°♒01'42	
morning rise	13973 Feb 27 22:00	9°♒05'08			13979 Jun 28 04:31	0°♓	
retrograde	13973 Jun 30 20:36	26°♒27'19		evening set	13979 Aug 09 02:50	9°♓26'27	
opposition	13973 Aug 30 14:36	21°♒28'05	0°41'54	max. Earth dist.	13979 Aug 20 19:05	12°♓14'15	6.00377 AU
min. Earth dist.	13973 Aug 29 22:13	21°♒33'26	4.42158 AU				
direct	13973 Oct 30 23:07	16°♒27'44		conjunction	13979 Aug 22 04:03	12°♓34'03	-0°31'22
	13974 Feb 15 00:26	0°♓		minimum elong	13979 Aug 22 04:04	12°♓34'03	0°31'47
evening set	13974 Mar 05 00:33	3°♓46'31		morning rise	13979 Sep 04 06:24	15°♓42'31	
					13979 Nov 10 04:43	0°♔	
conjunction	13974 Mar 18 05:02	6°♓36'04	0°22'28	retrograde	13980 Jan 12 06:53	5°♔53'42	
minimum elong	13974 Mar 18 05:03	6°♓36'04	0°22'27	opposition	13980 Mar 11 19:44	0°♔56'21	-0°37'23
max. Earth dist.	13974 Mar 18 13:35	6°♓40'39	6.47300 AU	min. Earth dist.	13980 Mar 12 05:49	0°♔52'59	3.94220 AU
morning rise	13974 Mar 31 08:15	9°♓24'49			13980 Mar 18 22:05	30°♓	
retrograde	13974 Jul 30 14:00	26°♓08'47		direct	13980 May 09 16:01	26°♓00'23	
opposition	13974 Sep 29 15:18	21°♓12'20	0°21'19		13980 Jun 28 20:43	0°♕	

evening set	13980 Sep 13 22:45	16°♏07'44		conjunction	13986 Mar 22 11:25	10°♑51'51	0°20'28
				minimum elong	13986 Mar 22 11:26	10°♑51'51	0°20'22
conjunction	13980 Sep 27 05:43	19°♏22'44	-0°15'42	max. Earth dist.	13986 Mar 22 17:56	10°♑55'20	6.47974 AU
minimum elong	13980 Sep 27 05:44	19°♏22'45	0°15'26	morning rise	13986 Apr 04 13:55	13°♑40'07	
behind sun begin	13980 Sep 27 03:20	19°♏21'17			13986 Jul 19 06:10	0°♎	
behind sun end	13980 Sep 27 08:07	19°♏24'12		retrograde	13986 Aug 03 16:18	0°♎22'04	
max. Earth dist.	13980 Sep 27 08:27	19°♏24'24	5.90497 AU		13986 Aug 19 01:14	30°♑♑	
morning rise	13980 Oct 10 14:30	22°♏38'50		opposition	13986 Oct 03 18:50	25°♑25'52	0°17'56
	13980 Nov 10 19:32	0°♌		min. Earth dist.	13986 Oct 04 00:10	25°♑24'08	4.50582 AU
retrograde	13981 Feb 19 06:17	13°♌29'45		direct	13986 Dec 05 01:02	20°♑25'09	
opposition	13981 Apr 19 11:43	8°♌29'25	-0°06'40		13987 Mar 02 19:45	0°♎	
min. Earth dist.	13981 Apr 18 21:05	8°♌34'21	3.89576 AU	evening set	13987 Apr 08 16:37	7°♎27'05	
direct	13981 Jun 16 14:30	3°♌34'11					
asc. node	13981 Jul 04 15:07	4°♌07'42		conjunction	13987 Apr 21 16:44	10°♎13'31	0°03'41
	13981 Sep 14 04:57	15°♌		minimum elong	13987 Apr 21 16:45	10°♎13'31	0°03'06
evening set	13981 Oct 22 03:25	23°♌48'24		behind sun begin	13987 Apr 21 08:46	10°♎09'17	
				behind sun end	13987 Apr 22 00:44	10°♎17'46	
conjunction	13981 Nov 04 15:25	27°♌05'18	0°06'42	max. Earth dist.	13987 Apr 20 18:01	10°♎01'23	6.50981 AU
minimum elong	13981 Nov 04 15:25	27°♌05'18	0°07'32	morning rise	13987 May 04 15:21	12°♎59'14	
behind sun begin	13981 Nov 04 07:50	27°♌00'42			13987 May 14 04:28	15°♎	
behind sun end	13981 Nov 04 23:00	27°♌09'54		desc. node	13987 Jul 10 20:42	25°♎30'59	
max. Earth dist.	13981 Nov 06 07:06	27°♌29'27	5.91575 AU	retrograde	13987 Sep 02 12:03	29°♎36'14	
	13981 Nov 16 15:02	0°♎		opposition	13987 Nov 02 15:59	24°♎41'51	-0°08'01
morning rise	13981 Nov 18 05:04	0°♎22'59		min. Earth dist.	13987 Nov 03 16:03	24°♎34'09	4.49177 AU
retrograde	13982 Mar 29 05:05	20°♎57'35		direct	13988 Jan 04 04:54	19°♎41'04	
min. Earth dist.	13982 May 26 03:17	16°♎06'09	3.96307 AU		13988 Apr 04 10:58	0°♐	
opposition	13982 May 27 12:48	15°♎54'48	0°26'36	evening set	13988 May 07 19:38	6°♐52'46	
direct	13982 Jul 24 18:16	10°♎58'31		max. Earth dist.	13988 May 18 20:52	9°♐16'13	6.45205 AU
	13982 Nov 26 04:19	0°♎					
evening set	13982 Nov 29 00:09	0°♎39'48		conjunction	13988 May 20 17:04	9°♐40'12	-0°14'13
				minimum elong	13988 May 20 17:04	9°♐40'12	0°15'10
conjunction	13982 Dec 12 13:39	3°♎51'53	0°25'53	behind sun begin	13988 May 20 14:19	9°♐38'43	
minimum elong	13982 Dec 12 13:38	3°♎51'52	0°26'57	behind sun end	13988 May 20 19:49	9°♐41'41	
max. Earth dist.	13982 Dec 14 23:32	4°♎26'04	6.03153 AU	morning rise	13988 Jun 02 12:55	12°♐27'07	
morning rise	13982 Dec 26 04:24	7°♎04'13		retrograde	13988 Oct 02 10:52	29°♐29'34	
retrograde	13983 May 03 14:28	26°♎37'01		opposition	13988 Dec 02 11:36	24°♐35'53	-0°32'33
min. Earth dist.	13983 Jun 30 18:45	21°♎46'46	4.11387 AU	min. Earth dist.	13988 Dec 03 23:23	24°♐24'25	4.39361 AU
opposition	13983 Jul 02 09:34	21°♎33'40	0°47'51	direct	13989 Feb 02 15:29	19°♐35'26	
direct	13983 Aug 30 11:53	16°♎35'29			13989 May 04 02:18	0°♑	
	13983 Dec 10 17:31	0°♑		evening set	13989 Jun 07 16:34	7°♑20'06	
evening set	13984 Jan 04 00:37	5°♑22'09		max. Earth dist.	13989 Jun 18 05:35	9°♑41'10	6.31962 AU
conjunction	13984 Jan 17 12:30	8°♑25'43	0°34'49	conjunction	13989 Jun 20 12:48	10°♑12'06	-0°28'39
minimum elong	13984 Jan 17 12:30	8°♑25'43	0°35'42	minimum elong	13989 Jun 20 12:47	10°♑12'06	0°29'42
max. Earth dist.	13984 Jan 19 19:23	8°♑56'52	6.20296 AU	morning rise	13989 Jul 03 08:09	13°♑03'58	
morning rise	13984 Jan 31 00:19	11°♑28'55			13989 Oct 10 03:50	0°♒	
	13984 Feb 15 21:14	15°♑		retrograde	13989 Nov 04 15:51	1°♒00'11	
retrograde	13984 Jun 04 08:38	29°♑47'01			13989 Nov 30 01:42	30°♑♑	
min. Earth dist.	13984 Aug 02 09:40	24°♑55'22	4.28931 AU	opposition	13990 Jan 04 05:17	26°♑06'09	-0°49'16
opposition	13984 Aug 03 15:48	24°♑45'21	0°51'22	min. Earth dist.	13990 Jan 05 20:58	25°♑53'19	4.23461 AU
direct	13984 Oct 03 00:03	19°♑45'43		direct	13990 Mar 06 12:13	21°♑06'43	
	13984 Dec 31 00:26	0°♒			13990 May 26 07:07	0°♒	
evening set	13985 Feb 05 16:17	7°♒39'05		evening set	13990 Jul 10 05:10	9°♒42'15	
				max. Earth dist.	13990 Jul 20 23:08	12°♒11'50	6.14612 AU
conjunction	13985 Feb 19 00:30	10°♒34'13	0°32'08	conjunction	13990 Jul 23 02:50	12°♒41'56	-0°35'08
minimum elong	13985 Feb 19 00:31	10°♒34'13	0°32'36	minimum elong	13990 Jul 23 02:51	12°♒41'56	0°35'58
max. Earth dist.	13985 Feb 20 10:32	10°♒52'51	6.36837 AU		13990 Aug 02 00:09	15°♒	
morning rise	13985 Mar 04 07:56	13°♒28'40		morning rise	13990 Aug 05 00:40	15°♒42'03	
	13985 Jun 12 21:43	0°♑			13990 Oct 14 02:12	0°♑	
retrograde	13985 Jul 05 00:05	0°♑45'39		retrograde	13990 Dec 10 10:33	4°♑51'20	
	13985 Jul 26 23:47	30°♑♑			13991 Feb 07 22:56	30°♑♒	
opposition	13985 Sep 03 19:13	25°♑46'43	0°39'36	opposition	13991 Feb 08 11:23	29°♒55'55	-0°51'09
min. Earth dist.	13985 Sep 03 05:04	25°♑51'20	4.43260 AU	min. Earth dist.	13991 Feb 09 15:58	29°♒46'32	4.05965 AU
direct	13985 Nov 04 06:23	20°♑46'16		direct	13991 Apr 09 10:02	24°♒58'19	
	13986 Jan 28 12:45	0°♑			13991 Jun 06 02:16	0°♑	
evening set	13986 Mar 09 07:14	8°♑02'43		evening set	13991 Aug 14 01:20	14°♑29'59	

max. Earth dist.	13991 Aug 25 22:54	17° \mathbb{M} 21'38	5.98546 AU		13996 Dec 10 04:39	0° \mathbb{H}	
				evening set	13997 Feb 10 04:57	12° \mathbb{H} 08'23	
conjunction	13991 Aug 27 03:18	17° \mathbb{M} 38'45	-0°29'50		13997 Feb 23 12:38	15° \mathbb{H} 02'26	0°30'58
minimum elong	13991 Aug 27 03:18	17° \mathbb{M} 38'46	0°30'11	conjunction	13997 Feb 23 12:38	15° \mathbb{H} 02'27	0°31'20
morning rise	13991 Sep 09 06:24	20° \mathbb{M} 48'26		minimum elong	13997 Feb 24 19:37	15° \mathbb{H} 19'21	6.38931 AU
	13991 Oct 19 11:23	0° \mathbb{L}		max. Earth dist.	13997 Mar 08 19:16	17° \mathbb{H} 55'45	
retrograde	13992 Jan 17 15:49	11° \mathbb{L} 07'41		morning rise	13997 May 10 05:29	0° \mathbb{Y}	
opposition	13992 Mar 17 02:14	6° \mathbb{L} 09'57	-0°33'50	retrograde	13997 Jul 09 04:28	5° \mathbb{Y} 05'37	
min. Earth dist.	13992 Mar 17 10:00	6° \mathbb{L} 07'22	3.92911 AU	opposition	13997 Sep 08 00:47	0° \mathbb{Y} 07'07	0°37'03
direct	13992 May 14 20:15	1° \mathbb{L} 14'10		min. Earth dist.	13997 Sep 07 13:24	0° \mathbb{Y} 10'49	4.44985 AU
evening set	13992 Sep 19 03:41	21° \mathbb{L} 25'12			13997 Sep 08 22:37	30° \mathbb{R} \mathbb{H}	
				direct	13997 Nov 08 16:22	25° \mathbb{H} 06'38	
conjunction	13992 Oct 02 11:35	24° \mathbb{L} 40'56	-0°12'47		13998 Jan 07 09:39	0° \mathbb{Y}	
minimum elong	13992 Oct 02 11:35	24° \mathbb{L} 40'57	0°12'27	evening set	13998 Mar 13 13:51	12° \mathbb{Y} 18'46	
behind sun begin	13992 Oct 02 06:10	24° \mathbb{L} 37'38					
behind sun end	13992 Oct 02 17:01	24° \mathbb{L} 44'15		conjunction	13998 Mar 26 17:16	15° \mathbb{Y} 07'10	0°18'22
max. Earth dist.	13992 Oct 02 19:54	24° \mathbb{L} 46'02	5.89859 AU	minimum elong	13998 Mar 26 17:17	15° \mathbb{Y} 07'10	0°18'12
morning rise	13992 Oct 15 21:11	27° \mathbb{L} 57'44		max. Earth dist.	13998 Mar 26 19:03	15° \mathbb{Y} 08'07	6.49201 AU
	13992 Oct 24 07:12	0° \mathbb{M}		morning rise	13998 Apr 08 19:15	17° \mathbb{Y} 54'45	
	13993 Jan 05 22:47	15° \mathbb{M}			13998 Jun 11 23:17	0° \mathbb{B}	
retrograde	13993 Feb 24 14:42	18° \mathbb{M} 50'20		retrograde	13998 Aug 07 17:55	4° \mathbb{B} 33'13	
	13993 Apr 16 01:12	15° \mathbb{R} \mathbb{M}			13998 Oct 04 22:48	30° \mathbb{R} \mathbb{Y}	
opposition	13993 Apr 24 19:23	13° \mathbb{M} 49'40	-0°01'49	opposition	13998 Oct 07 21:28	29° \mathbb{Y} 37'16	0°14'30
min. Earth dist.	13993 Apr 24 01:32	13° \mathbb{M} 55'42	3.89708 AU	min. Earth dist.	13998 Oct 08 05:32	29° \mathbb{Y} 34'40	4.51248 AU
asc. node	13993 May 15 01:51	11° \mathbb{M} 14'02		direct	13998 Dec 09 05:49	24° \mathbb{Y} 36'30	
direct	13993 Jun 21 20:20	8° \mathbb{M} 54'27			13999 Feb 10 17:23	0° \mathbb{B}	
	13993 Aug 23 14:02	15° \mathbb{M}		evening set	13999 Apr 12 19:50	11° \mathbb{B} 37'16	
evening set	13993 Oct 27 10:26	29° \mathbb{M} 07'02					
	13993 Oct 31 02:01	0° \mathbb{X}		conjunction	13999 Apr 25 19:37	14° \mathbb{B} 23'29	0°01'12
conjunction	13993 Nov 09 22:44	2° \mathbb{X} 23'42	0°09'46	minimum elong	13999 Apr 25 19:38	14° \mathbb{B} 23'30	0°00'32
minimum elong	13993 Nov 09 22:44	2° \mathbb{X} 23'42	0°10'40	behind sun begin	13999 Apr 25 11:37	14° \mathbb{B} 19'14	
behind sun begin	13993 Nov 09 16:18	2° \mathbb{X} 19'49		behind sun end	13999 Apr 26 03:38	14° \mathbb{B} 27'45	
behind sun end	13993 Nov 10 05:10	2° \mathbb{X} 27'35		max. Earth dist.	13999 Apr 24 18:36	14° \mathbb{B} 10'07	6.51031 AU
max. Earth dist.	13993 Nov 11 16:48	2° \mathbb{X} 49'14	5.92438 AU		13999 Apr 28 15:52	15° \mathbb{B}	
morning rise	13993 Nov 23 13:00	5° \mathbb{X} 41'11		morning rise	13999 May 08 17:32	17° \mathbb{B} 08'58	
retrograde	13994 Apr 03 06:24	26° \mathbb{X} 10'16		desc. node	13999 May 22 08:34	20° \mathbb{B} 00'40	
min. Earth dist.	13994 May 31 04:12	21° \mathbb{X} 19'20	3.97800 AU		13999 Jul 17 05:12	0° \mathbb{I}	
opposition	13994 Jun 01 15:44	21° \mathbb{X} 07'17	0°30'32	retrograde	13999 Sep 06 14:06	3° \mathbb{I} 46'37	
direct	13994 Jul 29 22:42	16° \mathbb{X} 10'46			13999 Oct 28 21:37	30° \mathbb{R} \mathbb{B}	
	13994 Nov 08 22:24	0° \mathbb{B}		opposition	13999 Nov 06 19:03	28° \mathbb{B} 52'22	-0°11'32
evening set	13994 Dec 04 03:32	5° \mathbb{B} 46'13		min. Earth dist.	13999 Nov 07 20:46	28° \mathbb{B} 44'09	4.48599 AU
				direct	14000 Jan 08 07:38	23° \mathbb{B} 51'36	
conjunction	13994 Dec 17 17:06	8° \mathbb{B} 57'23	0°27'50		14000 Mar 16 05:50	0° \mathbb{I}	
minimum elong	13994 Dec 17 17:05	8° \mathbb{B} 57'22	0°28'54	evening set	14000 May 11 23:01	11° \mathbb{I} 05'36	
max. Earth dist.	13994 Dec 20 04:19	9° \mathbb{B} 32'12	6.05144 AU	max. Earth dist.	14000 May 22 20:30	13° \mathbb{I} 27'28	6.44009 AU
morning rise	13994 Dec 31 07:32	12° \mathbb{B} 08'39					
	13995 Apr 07 08:51	0° \mathbb{A}		conjunction	14000 May 24 20:00	13° \mathbb{I} 53'20	-0°16'26
retrograde	13995 May 08 08:57	1° \mathbb{A} 31'58		minimum elong	14000 May 24 19:59	13° \mathbb{I} 53'20	0°17'25
	13995 Jun 08 04:08	30° \mathbb{R} \mathbb{B}		morning rise	14000 Jun 06 15:43	16° \mathbb{I} 40'37	
min. Earth dist.	13995 Jul 05 14:48	26° \mathbb{B} 41'32	4.13664 AU		14000 Aug 16 11:27	0° \mathbb{B}	
opposition	13995 Jul 07 04:39	26° \mathbb{B} 28'48	0°49'24	retrograde	14000 Oct 06 20:28	3° \mathbb{B} 48'14	
direct	13995 Sep 04 11:13	21° \mathbb{B} 30'27			14000 Nov 28 05:03	30° \mathbb{R} \mathbb{I}	
	13995 Nov 21 16:54	0° \mathbb{A}		opposition	14000 Dec 06 19:11	28° \mathbb{I} 54'32	-0°35'23
evening set	13996 Jan 08 21:03	10° \mathbb{A} 09'45		min. Earth dist.	14000 Dec 08 09:24	28° \mathbb{I} 42'16	4.37584 AU
				direct	14001 Feb 06 22:14	23° \mathbb{I} 54'05	
conjunction	13996 Jan 22 08:30	13° \mathbb{A} 12'06	0°35'06		14001 Apr 14 14:13	0° \mathbb{B}	
minimum elong	13996 Jan 22 08:30	13° \mathbb{A} 12'06	0°35'56	evening set	14001 Jun 11 23:32	11° \mathbb{B} 44'32	
max. Earth dist.	13996 Jan 24 14:09	13° \mathbb{A} 42'23	6.22680 AU	max. Earth dist.	14001 Jun 22 10:57	14° \mathbb{B} 05'25	6.29720 AU
	13996 Jan 30 07:53	15° \mathbb{A}					
morning rise	13996 Feb 04 19:50	16° \mathbb{A} 14'04		conjunction	14001 Jun 24 19:52	14° \mathbb{B} 37'26	-0°30'04
	13996 Apr 15 04:11	0° \mathbb{H}		minimum elong	14001 Jun 24 19:51	14° \mathbb{B} 37'26	0°31'07
retrograde	13996 Jun 08 16:49	4° \mathbb{H} 22'36		morning rise	14001 Jul 07 15:23	17° \mathbb{B} 30'17	
	13996 Aug 03 05:49	30° \mathbb{R} \mathbb{A}			14001 Sep 07 16:15	0° \mathbb{Q}	
min. Earth dist.	13996 Aug 06 21:34	29° \mathbb{A} 30'59	4.31245 AU	retrograde	14001 Nov 09 07:22	5° \mathbb{Q} 35'48	
opposition	13996 Aug 08 02:55	29° \mathbb{A} 21'15	0°50'31	opposition	14002 Jan 08 20:13	0° \mathbb{Q} 41'36	-0°50'30
direct	13996 Oct 07 14:26	24° \mathbb{A} 21'31		min. Earth dist.	14002 Jan 10 10:53	0° \mathbb{Q} 29'04	4.20898 AU

	14002 Jan 14 05:01	30° $\text{R}\mathfrak{E}$			14007 Mar 07 03:23	0° \approx	
direct	14002 Mar 10 22:08	25° \mathfrak{E} 42'19		retrograde	14007 May 13 01:42	6° \approx 29'17	
	14002 May 03 22:32	0° \mathfrak{O}		min. Earth dist.	14007 Jul 10 10:04	1° \approx 39'06	4.16257 AU
evening set	14002 Jul 14 19:36	14° \mathfrak{O} 26'22		opposition	14007 Jul 12 00:33	1° \approx 26'11	0°50'34
	14002 Jul 17 05:30	15° \mathfrak{O}			14007 Jul 22 21:21	30° $\text{R}\mathfrak{Z}$	
max. Earth dist.	14002 Jul 25 16:02	16° \mathfrak{O} 58'18	6.11932 AU	direct	14007 Sep 09 10:17	26° \mathfrak{Z} 27'32	
					14007 Oct 27 21:00	0° \approx	
conjunction	14002 Jul 27 17:43	17° \mathfrak{O} 27'24	-0°35'08	evening set	14008 Jan 13 17:50	14° \approx 58'11	
minimum elong	14002 Jul 27 17:43	17° \mathfrak{O} 27'24	0°35'55		14008 Jan 13 21:07	15° \approx	
morning rise	14002 Aug 09 16:07	20° \mathfrak{O} 28'56					
	14002 Sep 21 19:16	0° \mathfrak{M}		conjunction	14008 Jan 27 04:43	17° \approx 59'09	0°35'07
retrograde	14002 Dec 15 14:46	9° \mathfrak{M} 49'52		minimum elong	14008 Jan 27 04:43	17° \approx 59'10	0°35'55
opposition	14003 Feb 13 11:53	4° \mathfrak{M} 54'11	-0°49'56	max. Earth dist.	14008 Jan 29 07:20	18° \approx 27'34	6.25334 AU
min. Earth dist.	14003 Feb 14 15:24	4° \mathfrak{M} 45'08	4.03383 AU	morning rise	14008 Feb 09 15:25	20° \approx 59'41	
	14003 Apr 08 14:10	30° $\text{R}\mathfrak{O}$			14008 Mar 23 13:46	0° \mathfrak{H}	
direct	14003 Apr 14 07:00	29° \mathfrak{O} 56'46		retrograde	14008 Jun 13 03:10	8° \mathfrak{H} 57'53	
	14003 Apr 19 23:22	0° \mathfrak{M}		min. Earth dist.	14008 Aug 11 11:59	4° \mathfrak{H} 05'37	4.33711 AU
evening set	14003 Aug 19 00:55	19° \mathfrak{M} 37'06		opposition	14008 Aug 12 14:25	3° \mathfrak{H} 56'53	0°49'19
max. Earth dist.	14003 Aug 31 03:29	22° \mathfrak{M} 32'35	5.96319 AU		14008 Sep 16 08:11	30° $\text{R}\approx$	
				direct	14008 Oct 12 07:43	28° \approx 56'56	
conjunction	14003 Sep 01 03:50	22° \mathfrak{M} 47'20	-0°28'06		14008 Nov 07 12:00	0° \mathfrak{H}	
minimum elong	14003 Sep 01 03:51	22° \mathfrak{M} 47'20	0°28'21	evening set	14009 Feb 14 17:28	16° \mathfrak{H} 36'50	
morning rise	14003 Sep 14 07:56	25° \mathfrak{M} 58'31					
	14003 Oct 01 06:35	0° \mathfrak{L}		conjunction	14009 Feb 28 00:32	19° \mathfrak{H} 29'49	0°29'35
retrograde	14004 Jan 23 02:01	16° \mathfrak{L} 27'14		minimum elong	14009 Feb 28 00:33	19° \mathfrak{H} 29'49	0°29'52
opposition	14004 Mar 22 10:32	11° \mathfrak{L} 29'08	-0°30'03	max. Earth dist.	14009 Mar 01 04:16	19° \mathfrak{H} 44'52	6.41015 AU
min. Earth dist.	14004 Mar 22 14:23	11° \mathfrak{L} 27'51	3.91307 AU	morning rise	14009 Mar 13 06:28	22° \mathfrak{H} 22'02	
direct	14004 May 19 23:11	6° \mathfrak{L} 33'33			14009 Apr 19 10:31	0° \mathfrak{Y}	
evening set	14004 Sep 24 11:14	26° \mathfrak{L} 49'24		retrograde	14009 Jul 13 07:20	9° \mathfrak{Y} 25'00	
				opposition	14009 Sep 12 06:18	4° \mathfrak{Y} 26'51	0°34'14
conjunction	14004 Oct 07 19:50	0° \mathfrak{M} .05'55	-0°09'46	min. Earth dist.	14009 Sep 11 20:58	4° \mathfrak{Y} 29'53	4.46561 AU
minimum elong	14004 Oct 07 19:51	0° \mathfrak{M} .05'56	0°09'21		14009 Oct 24 20:41	30° $\text{R}\mathfrak{H}$	
behind sun begin	14004 Oct 07 12:53	0° \mathfrak{M} .01'40		direct	14009 Nov 13 00:21	29° \mathfrak{H} 26'18	
behind sun end	14004 Oct 08 02:49	0° \mathfrak{M} .10'12			14009 Dec 02 09:08	0° \mathfrak{Y}	
	14004 Oct 07 10:10	0° \mathfrak{M} .		evening set	14010 Mar 17 20:40	16° \mathfrak{Y} 34'47	
max. Earth dist.	14004 Oct 08 08:26	0° \mathfrak{M} .13'39	5.89040 AU				
morning rise	14004 Oct 21 06:31	3° \mathfrak{M} .23'34		conjunction	14010 Mar 30 23:33	19° \mathfrak{Y} 22'35	0°16'06
	14004 Dec 11 07:07	15° \mathfrak{M} .		minimum elong	14010 Mar 30 23:33	19° \mathfrak{Y} 22'35	0°15'52
retrograde	14005 Mar 02 00:26	24° \mathfrak{M} .18'15		behind sun begin	14010 Mar 30 22:45	19° \mathfrak{Y} 22'10	
asc. node	14005 Mar 27 08:14	23° \mathfrak{M} .14'35		behind sun end	14010 Mar 31 00:21	19° \mathfrak{Y} 23'01	
min. Earth dist.	14005 Apr 29 07:47	19° \mathfrak{M} .24'27	3.89784 AU	max. Earth dist.	14010 Mar 30 21:39	19° \mathfrak{Y} 21'35	6.50168 AU
opposition	14005 Apr 30 05:29	19° \mathfrak{M} .17'07	0°03'04	morning rise	14010 Apr 13 00:47	22° \mathfrak{Y} 09'33	
	14005 Jun 07 23:43	15° $\mathfrak{R}\mathfrak{M}$.			14010 May 21 23:13	0° \mathfrak{B}	
direct	14005 Jun 27 05:49	14° \mathfrak{M} .21'45		retrograde	14010 Aug 11 21:06	8° \mathfrak{B} 45'34	
	14005 Jul 16 12:52	15° \mathfrak{M} .		opposition	14010 Oct 12 01:13	3° \mathfrak{B} 49'59	0°10'53
	14005 Oct 13 16:39	0° \mathfrak{X}		min. Earth dist.	14010 Oct 12 12:27	3° \mathfrak{B} 46'23	4.51551 AU
evening set	14005 Nov 01 20:16	4° \mathfrak{X} 32'38			14010 Nov 15 05:46	30° $\text{R}\mathfrak{Y}$	
				direct	14010 Dec 13 12:01	28° \mathfrak{Y} 49'14	
conjunction	14005 Nov 15 09:10	7° \mathfrak{X} 49'04	0°12'46		14011 Jan 10 22:20	0° \mathfrak{B}	
minimum elong	14005 Nov 15 09:09	7° \mathfrak{X} 49'04	0°13'42	desc. node	14011 Mar 29 05:40	11° \mathfrak{B} 55'14	
behind sun begin	14005 Nov 15 04:43	7° \mathfrak{X} 46'23			14011 Apr 13 01:54	15° \mathfrak{B}	
behind sun end	14005 Nov 15 13:35	7° \mathfrak{X} 51'44		evening set	14011 Apr 17 00:24	15° \mathfrak{B} 50'01	
max. Earth dist.	14005 Nov 17 08:32	8° \mathfrak{X} 17'45	5.93409 AU				
morning rise	14005 Nov 28 23:37	11° \mathfrak{X} 06'09		conjunction	14011 Apr 29 23:34	18° \mathfrak{B} 36'11	-0°01'26
	14006 Mar 09 06:31	0° \mathfrak{Z}		minimum elong	14011 Apr 29 23:34	18° \mathfrak{B} 36'11	0°02'09
retrograde	14006 Apr 08 11:09	1° \mathfrak{Z} 28'40		behind sun begin	14011 Apr 29 15:34	18° \mathfrak{B} 31'55	
	14006 May 08 11:13	30° $\text{R}\mathfrak{X}$		behind sun end	14011 Apr 30 07:35	18° \mathfrak{B} 40'27	
min. Earth dist.	14006 Jun 05 08:15	26° \mathfrak{X} 37'47	3.99528 AU	max. Earth dist.	14011 Apr 28 17:18	18° \mathfrak{B} 19'59	6.50637 AU
opposition	14006 Jun 06 20:42	26° \mathfrak{X} 25'25	0°34'11	morning rise	14011 May 12 21:13	21° \mathfrak{B} 21'40	
direct	14006 Aug 04 06:37	21° \mathfrak{X} 28'37			14011 Jun 25 00:03	0° \mathfrak{I}	
	14006 Oct 20 03:04	0° \mathfrak{Z}		retrograde	14011 Sep 10 20:53	8° \mathfrak{I} 01'37	
evening set	14006 Dec 09 08:51	10° \mathfrak{Z} 56'57		opposition	14011 Nov 11 00:51	3° \mathfrak{I} 07'31	-0°15'10
				min. Earth dist.	14011 Nov 12 05:14	2° \mathfrak{I} 58'26	4.47531 AU
conjunction	14006 Dec 22 22:17	14° \mathfrak{Z} 06'59	0°29'34		14011 Dec 07 11:37	30° $\text{R}\mathfrak{B}$	
minimum elong	14006 Dec 22 22:16	14° \mathfrak{Z} 06'59	0°30'37	direct	14012 Jan 12 13:20	28° \mathfrak{B} 06'44	
max. Earth dist.	14006 Dec 25 11:19	14° \mathfrak{Z} 42'39	6.07432 AU		14012 Feb 17 16:41	0° \mathfrak{I}	
morning rise	14007 Jan 05 12:29	17° \mathfrak{Z} 17'03		evening set	14012 May 16 05:01	15° \mathfrak{I} 24'35	

max. Earth dist.	14012 May 27 00:54	17° Π 46'05	6.42335 AU	morning rise	14017 Dec 04 09:56	16° X 30'18	
					14018 Feb 04 20:43	0° Z	
conjunction	14012 May 29 01:57	18° Π 12'53	-0°18'42	retrograde	14018 Apr 13 11:24	6° Z 43'22	
minimum elong	14012 May 29 01:56	18° Π 12'53	0°19'42	min. Earth dist.	14018 Jun 10 09:09	1° Z 53'05	4.01874 AU
morning rise	14012 Jun 10 21:21	21° Π 00'43		opposition	14018 Jun 11 23:50	1° Z 39'59	0°37'32
	14012 Jul 24 19:26	0° G			14018 Jun 24 13:35	30° R X	
retrograde	14012 Oct 11 07:55	8° G 15'08		direct	14018 Aug 09 11:44	26° X 42'57	
opposition	14012 Dec 11 06:26	3° G 21'28	-0°38'11		14018 Sep 24 04:12	0° Z	
min. Earth dist.	14012 Dec 12 21:10	3° G 09'02	4.35403 AU	evening set	14018 Dec 14 11:46	16° Z 02'16	
	14013 Jan 08 23:43	30° R Π					
direct	14013 Feb 11 05:54	28° Π 21'10		conjunction	14018 Dec 28 00:48	19° Z 10'52	0°31'03
	14013 Mar 16 12:02	0° G		minimum elong	14018 Dec 28 00:47	19° Z 10'52	0°32'04
evening set	14013 Jun 16 10:54	16° G 18'49		max. Earth dist.	14018 Dec 30 12:36	19° Z 45'36	6.10175 AU
max. Earth dist.	14013 Jun 26 21:50	18° G 40'17	6.27181 AU	morning rise	14019 Jan 10 14:37	22° Z 19'28	
					14019 Feb 14 08:51	0° \approx	
conjunction	14013 Jun 29 07:14	19° G 12'46	-0°31'23	retrograde	14019 May 17 16:53	11° \approx 19'40	
minimum elong	14013 Jun 29 07:13	19° G 12'46	0°32'25	min. Earth dist.	14019 Jul 15 04:53	6° \approx 29'00	4.19108 AU
morning rise	14013 Jul 12 03:04	22° G 06'45		opposition	14019 Jul 16 17:27	6° \approx 16'44	0°51'21
	14013 Aug 17 16:46	0° Ω		direct	14019 Sep 14 09:15	1° \approx 17'50	
retrograde	14013 Nov 14 06:46	10° Ω 22'52			14019 Dec 28 02:15	15° \approx	
opposition	14014 Jan 13 16:28	5° Ω 28'33	-0°51'29	evening set	14020 Jan 18 11:19	19° \approx 39'25	
min. Earth dist.	14014 Jan 15 07:13	5° Ω 15'58	4.18160 AU				
direct	14014 Mar 15 15:18	0° Ω 29'29		conjunction	14020 Jan 31 21:46	22° \approx 39'03	0°34'55
	14014 Jun 30 12:25	15° Ω		minimum elong	14020 Jan 31 21:46	22° \approx 39'03	0°35'39
evening set	14014 Jul 19 14:50	19° Ω 22'35		max. Earth dist.	14020 Feb 02 22:50	23° \approx 06'25	6.28057 AU
max. Earth dist.	14014 Jul 30 14:18	21° Ω 57'12	6.09241 AU	morning rise	14020 Feb 14 07:41	25° \approx 38'07	
					14020 Mar 05 10:53	0° H	
conjunction	14014 Aug 01 13:37	22° Ω 25'04	-0°34'53	retrograde	14020 Jun 17 08:40	13° H 26'14	
minimum elong	14014 Aug 01 13:37	22° Ω 25'04	0°35'37	opposition	14020 Aug 16 22:35	8° H 25'38	0°47'51
morning rise	14014 Aug 14 12:41	25° Ω 28'06		min. Earth dist.	14020 Aug 15 21:43	8° H 33'50	4.36099 AU
	14014 Sep 03 04:38	0° P		direct	14020 Oct 16 19:11	3° H 25'34	
retrograde	14014 Dec 20 22:41	15° P 00'43		evening set	14021 Feb 19 02:59	20° H 59'07	
opposition	14015 Feb 18 17:38	10° P 04'51	-0°48'14				
min. Earth dist.	14015 Feb 19 17:55	9° P 56'51	4.01003 AU	conjunction	14021 Mar 04 09:20	23° H 51'05	0°28'03
direct	14015 Apr 19 06:45	5° P 07'49		minimum elong	14021 Mar 04 09:21	23° H 51'06	0°28'17
evening set	14015 Aug 24 05:30	24° P 55'58		max. Earth dist.	14021 Mar 05 07:37	24° H 03'08	6.42894 AU
				morning rise	14021 Mar 17 14:38	26° H 42'19	
conjunction	14015 Sep 06 09:06	28° P 07'26	-0°26'04		14021 Apr 02 04:13	0° Y	
minimum elong	14015 Sep 06 09:07	28° P 07'26	0°26'12	retrograde	14021 Jul 17 10:50	13° Y 39'28	
max. Earth dist.	14015 Sep 05 13:02	27° P 55'14	5.94494 AU	opposition	14021 Sep 16 09:51	8° Y 41'44	0°31'18
	14015 Sep 14 02:16	0° $\underline{\Delta}$		min. Earth dist.	14021 Sep 16 04:31	8° Y 43'28	4.47823 AU
morning rise	14015 Sep 19 14:17	1° $\underline{\Delta}$ 19'57		direct	14021 Nov 17 07:59	3° Y 41'06	
retrograde	14016 Jan 28 14:23	21° $\underline{\Delta}$ 56'21		evening set	14022 Mar 22 01:17	20° Y 46'57	
opposition	14016 Mar 27 22:30	16° $\underline{\Delta}$ 57'52	-0°25'49				
min. Earth dist.	14016 Mar 27 22:03	16° $\underline{\Delta}$ 58'01	3.90267 AU	conjunction	14022 Apr 04 03:40	23° Y 34'21	0°13'48
direct	14016 May 25 08:21	12° $\underline{\Delta}$ 02'29		minimum elong	14022 Apr 04 03:40	23° Y 34'21	0°13'29
	14016 Sep 20 05:33	0° M		behind sun begin	14022 Apr 03 23:13	23° Y 31'59	
evening set	14016 Sep 29 21:47	2° M 20'43		behind sun end	14022 Apr 04 08:07	23° Y 36'43	
				max. Earth dist.	14022 Apr 03 21:05	23° Y 30'51	6.50723 AU
conjunction	14016 Oct 13 07:19	5° M 37'44	-0°06'35	morning rise	14022 Apr 17 04:22	26° Y 20'54	
minimum elong	14016 Oct 13 07:19	5° M 37'44	0°06'03		14022 May 04 16:37	0° B	
behind sun begin	14016 Oct 12 23:24	5° M 32'53		retrograde	14022 Aug 15 22:47	12° B 55'55	
behind sun end	14016 Oct 13 15:14	5° M 42'34		opposition	14022 Oct 16 03:49	8° B 00'34	0°07'17
max. Earth dist.	14016 Oct 14 03:18	5° M 50'00	5.88933 AU	min. Earth dist.	14022 Oct 16 17:18	7° B 56'14	4.51398 AU
morning rise	14016 Oct 26 18:35	8° M 55'43		direct	14022 Dec 17 14:37	2° B 59'45	
	14016 Nov 21 07:22	15° M		desc. node	14023 Feb 03 03:37	6° B 09'00	
asc. node	14017 Feb 05 17:39	28° M 22'25			14023 Mar 27 21:11	15° B	
retrograde	14017 Mar 07 12:31	29° M 49'07		evening set	14023 Apr 21 04:12	20° B 01'58	
opposition	14017 May 05 16:34	24° M 47'37	0°08'01	max. Earth dist.	14023 May 02 18:26	22° B 30'47	6.49788 AU
min. Earth dist.	14017 May 04 16:16	24° M 55'51	3.90637 AU				
direct	14017 Jul 02 17:39	19° M 52'11		conjunction	14023 May 04 03:07	22° B 48'19	-0°03'58
	14017 Sep 24 11:02	0° X		minimum elong	14023 May 04 03:06	22° B 48'19	0°04'44
evening set	14017 Nov 07 06:07	9° X 58'16		behind sun begin	14023 May 03 19:17	22° B 44'09	
				behind sun end	14023 May 04 10:54	22° B 52'29	
conjunction	14017 Nov 20 19:14	13° X 14'00	0°15'41	morning rise	14023 May 17 00:14	25° B 33'58	
minimum elong	14017 Nov 20 19:13	13° X 13'59	0°16'40		14023 Jun 07 05:29	0° Π	
max. Earth dist.	14017 Nov 22 22:40	13° X 44'59	5.95108 AU	retrograde	14023 Sep 15 03:04	12° Π 17'35	

opposition	14023 Nov 15 06:45	7° Π 23'38	-0°18'43			14029 Sep 01 00:33	0° ♁	
min. Earth dist.	14023 Nov 16 13:24	7° Π 13'50	4.46044 AU	evening set		14029 Nov 12 13:10	15° ♁ 15'12	
direct	14024 Jan 16 18:18	2° Π 22'53						
evening set	14024 May 20 11:44	19° Π 45'50		conjunction		14029 Nov 26 02:22	18° ♁ 30'06	0°18'25
max. Earth dist.	14024 May 31 04:07	22° Π 06'07	6.40303 AU	minimum elong		14029 Nov 26 02:22	18° ♁ 30'05	0°19'26
				max. Earth dist.		14029 Nov 28 07:13	19° ♁ 01'48	5.96968 AU
conjunction	14024 Jun 02 08:22	22° Π 34'49	-0°20'50	morning rise		14029 Dec 09 17:10	21° ♁ 45'30	
minimum elong	14024 Jun 02 08:21	22° Π 34'49	0°21'53			14030 Jan 14 20:57	0° ♁	
morning rise	14024 Jun 15 03:54	25° Π 23'28		retrograde		14030 Apr 18 09:38	11° ♁ 49'01	
	14024 Jul 06 16:37	0° ♁		min. Earth dist.		14030 Jun 15 09:12	6° ♁ 58'34	4.04171 AU
retrograde	14024 Oct 15 23:13	12° ♁ 45'54		opposition		14030 Jun 16 23:37	6° ♁ 45'34	0°40'32
opposition	14024 Dec 15 19:29	7° ♁ 52'10	-0°40'47	direct		14030 Aug 14 15:51	1° ♁ 48'14	
min. Earth dist.	14024 Dec 17 11:04	7° ♁ 39'26	4.32950 AU	evening set		14030 Dec 19 11:43	20° ♁ 59'19	
direct	14025 Feb 15 16:28	2° ♁ 51'57						
evening set	14025 Jun 20 23:35	20° ♁ 57'30		conjunction		14031 Jan 02 00:39	24° ♁ 06'42	0°32'17
max. Earth dist.	14025 Jul 01 12:09	23° ♁ 20'41	6.24506 AU	minimum elong		14031 Jan 02 00:39	24° ♁ 06'42	0°33'18
				max. Earth dist.		14031 Jan 04 13:05	24° ♁ 41'36	6.12700 AU
conjunction	14025 Jul 03 20:17	23° ♁ 52'38	-0°32'30	morning rise		14031 Jan 15 13:55	27° ♁ 13'56	
minimum elong	14025 Jul 03 20:17	23° ♁ 52'38	0°33'31			14031 Jan 27 19:19	0° ♁	
morning rise	14025 Jul 16 16:18	26° ♁ 47'50				14031 Apr 26 12:07	15° ♁	
	14025 Jul 30 23:30	0° Ω		retrograde		14031 May 22 05:58	16° ♁ 03'24	
	14025 Nov 06 19:03	15° Ω				14031 Jun 16 19:06	15° ♁	
retrograde	14025 Nov 19 06:43	15° Ω 14'50		min. Earth dist.		14031 Jul 19 20:17	11° ♁ 12'45	4.21620 AU
	14025 Dec 01 18:21	15° ♁		opposition		14031 Jul 21 08:04	11° ♁ 00'48	0°51'48
opposition	14026 Jan 18 14:41	10° Ω 20'23	-0°52'07	direct		14031 Sep 19 03:16	6° ♁ 01'44	
min. Earth dist.	14026 Jan 20 03:43	10° Ω 08'21	4.15481 AU			14031 Dec 09 18:07	15° ♁	
direct	14026 Mar 20 08:11	5° Ω 21'37		evening set		14032 Jan 23 03:08	24° ♁ 15'52	
	14026 Jun 12 02:24	15° Ω						
evening set	14026 Jul 24 12:11	24° Ω 23'19		conjunction		14032 Feb 05 12:55	27° ♁ 14'17	0°34'31
max. Earth dist.	14026 Aug 04 14:41	27° Ω 00'37	6.06791 AU	minimum elong		14032 Feb 05 12:56	27° ♁ 14'18	0°35'10
				max. Earth dist.		14032 Feb 07 09:19	27° ♁ 38'57	6.30348 AU
conjunction	14026 Aug 06 11:23	27° Ω 27'05	-0°34'23	morning rise		14032 Feb 18 22:23	0° ♁ 12'11	
minimum elong	14026 Aug 06 11:23	27° Ω 27'06	0°35'03			14032 Feb 18 00:15	0° ♁	
	14026 Aug 17 05:47	0° ♁		retrograde		14032 Jun 21 15:39	17° ♁ 52'11	
morning rise	14026 Aug 19 11:18	0° ♁ 31'33		min. Earth dist.		14032 Aug 20 08:42	12° ♁ 59'07	4.38010 AU
retrograde	14026 Dec 26 07:22	20° ♁ 14'39		opposition		14032 Aug 21 06:22	12° ♁ 51'59	0°46'09
opposition	14027 Feb 24 00:38	15° ♁ 18'24	-0°46'07	direct		14032 Oct 21 07:09	7° ♁ 51'49	
min. Earth dist.	14027 Feb 24 21:29	15° ♁ 11'30	3.99019 AU	evening set		14033 Feb 23 12:15	25° ♁ 20'42	
direct	14027 Apr 24 09:36	10° ♁ 21'36						
	14027 Aug 28 08:44	0° ♁		conjunction		14033 Mar 08 18:14	28° ♁ 11'56	0°26'23
evening set	14027 Aug 29 10:34	0° ♁ 15'37		minimum elong		14033 Mar 08 18:14	28° ♁ 11'57	0°26'32
				max. Earth dist.		14033 Mar 09 13:39	28° ♁ 22'25	6.44302 AU
conjunction	14027 Sep 11 15:10	3° ♁ 28'09	-0°23'47			14033 Mar 17 02:35	0° ♁	
minimum elong	14027 Sep 11 15:11	3° ♁ 28'09	0°23'51	morning rise		14033 Mar 21 22:46	1° ♁ 02'22	
max. Earth dist.	14027 Sep 11 02:06	3° ♁ 20'11	5.93188 AU	retrograde		14033 Jul 21 13:15	17° ♁ 55'18	
morning rise	14027 Sep 24 21:05	6° ♁ 41'40		opposition		14033 Sep 20 13:57	12° ♁ 58'01	0°28'13
retrograde	14028 Feb 03 03:40	27° ♁ 23'05		min. Earth dist.		14033 Sep 20 10:29	12° ♁ 59'08	4.48662 AU
opposition	14028 Apr 02 09:47	22° ♁ 24'09	-0°21'22	direct		14033 Nov 21 13:04	7° ♁ 57'24	
min. Earth dist.	14028 Apr 02 06:13	22° ♁ 25'21	3.89796 AU	evening set		14034 Mar 26 07:15	25° ♁ 02'01	
direct	14028 May 30 17:42	17° ♁ 28'53						
	14028 Sep 02 05:04	0° ♁		conjunction		14034 Apr 08 09:03	27° ♁ 49'08	0°11'24
evening set	14028 Oct 05 06:52	7° ♁ 47'04		minimum elong		14034 Apr 08 09:03	27° ♁ 49'08	0°11'00
				behind sun begin		14034 Apr 08 03:02	27° ♁ 45'57	
conjunction	14028 Oct 18 16:56	11° ♁ 04'10	-0°03'22	behind sun end		14034 Apr 08 15:04	27° ♁ 52'20	
minimum elong	14028 Oct 18 16:57	11° ♁ 04'10	0°02'45	max. Earth dist.		14034 Apr 07 22:02	27° ♁ 43'16	6.50946 AU
behind sun begin	14028 Oct 18 08:37	10° ♁ 59'06				14034 Apr 18 14:28	0° ♁	
behind sun end	14028 Oct 19 01:17	11° ♁ 09'15		morning rise		14034 Apr 21 09:16	0° ♁ 35'27	
max. Earth dist.	14028 Oct 19 17:36	11° ♁ 19'17	5.89311 AU			14034 Jul 12 19:11	15° ♁	
morning rise	14028 Nov 01 05:00	14° ♁ 22'18		retrograde		14034 Aug 20 04:37	17° ♁ 10'31	
	14028 Nov 03 19:06	15° ♁				14034 Sep 27 14:37	15° ♁	
asc. node	14028 Dec 17 05:46	24° ♁ 55'37		opposition		14034 Oct 20 08:28	12° ♁ 15'33	0°03'34
	14029 Jan 13 07:47	0° ♁		min. Earth dist.		14034 Oct 21 01:21	12° ♁ 10'08	4.51007 AU
retrograde	14029 Mar 12 18:51	5° ♁ 12'16		desc. node		14034 Dec 11 18:58	7° ♁ 23'57	
min. Earth dist.	14029 May 09 20:42	0° ♁ 19'50	3.91830 AU	direct		14034 Dec 21 20:44	7° ♁ 14'47	
opposition	14029 May 11 00:37	0° ♁ 10'23	0°12'47			14035 Mar 09 12:04	15° ♁	
	14029 May 12 07:15	30° ♁		evening set		14035 Apr 25 09:50	24° ♁ 19'06	
direct	14029 Jul 08 01:05	25° ♁ 14'48		max. Earth dist.		14035 May 06 20:00	26° ♁ 46'07	6.48820 AU

conjunction	14035 May 08 08:21	27°♄05'40	-0°06'31	max. Earth dist.	14040 Oct 25 00:50	16°♎33'04	5.90072 AU
minimum elong	14035 May 08 08:20	27°♄05'40	0°07'20	asc. node	14040 Oct 28 13:39	17°♎24'57	
behind sun begin	14035 May 08 01:00	27°♄01'45		morning rise	14040 Nov 06 09:09	19°♎33'46	
behind sun end	14035 May 08 15:39	27°♄09'35			14040 Dec 21 23:27	0°♊	
morning rise	14035 May 21 05:15	29°♄51'36		retrograde	14041 Mar 17 18:49	10°♊19'05	
	14035 May 21 20:58	0°♈		min. Earth dist.	14041 May 14 20:45	5°♊26'38	3.93161 AU
retrograde	14035 Sep 19 11:58	16°♈39'23		opposition	14041 May 16 01:33	5°♊16'52	0°17'10
opposition	14035 Nov 19 15:09	11°♈45'34	-0°22'15	direct	14041 Jul 13 04:18	0°♊21'03	
min. Earth dist.	14035 Nov 20 22:38	11°♈35'29	4.44585 AU	evening set	14041 Nov 17 13:17	20°♊15'45	
direct	14036 Jan 21 00:37	6°♈44'57					
evening set	14036 May 24 20:18	24°♈12'47		conjunction	14041 Dec 01 02:47	23°♊29'53	0°20'52
max. Earth dist.	14036 Jun 04 13:14	26°♈33'55	6.38485 AU	minimum elong	14041 Dec 01 02:46	23°♊29'53	0°21'55
				max. Earth dist.	14041 Dec 03 10:11	24°♊02'58	5.98733 AU
conjunction	14036 Jun 06 16:54	27°♈02'25	-0°22'56	morning rise	14041 Dec 14 17:29	26°♊44'25	
minimum elong	14036 Jun 06 16:53	27°♈02'25	0°24'00		14041 Dec 28 15:57	0°♈	
morning rise	14036 Jun 19 12:10	29°♈51'43		retrograde	14042 Apr 23 02:25	16°♈39'12	
	14036 Jun 20 03:17	0°♉		min. Earth dist.	14042 Jun 20 02:29	11°♈48'49	4.06183 AU
retrograde	14036 Oct 20 15:06	17°♉21'25		opposition	14042 Jun 21 16:59	11°♈35'49	0°43'06
opposition	14036 Dec 20 10:11	12°♉27'45	-0°43'14	direct	14042 Aug 19 11:51	6°♈38'14	
min. Earth dist.	14036 Dec 22 01:50	12°♉15'00	4.30914 AU	evening set	14042 Dec 24 06:03	25°♈42'33	
direct	14037 Feb 20 04:07	7°♉27'48					
evening set	14037 Jun 25 13:32	25°♉39'40		conjunction	14043 Jan 06 18:35	28°♈48'52	0°33'17
max. Earth dist.	14037 Jul 06 02:14	28°♉03'41	6.22419 AU	minimum elong	14043 Jan 06 18:35	28°♈48'52	0°34'16
				max. Earth dist.	14043 Jan 09 04:07	29°♈21'56	6.14764 AU
conjunction	14037 Jul 08 10:11	28°♉35'41	-0°33'29		14043 Jan 11 22:26	0°♏	
minimum elong	14037 Jul 08 10:11	28°♉35'41	0°34'27	morning rise	14043 Jan 20 07:40	1°♏55'02	
	14037 Jul 14 13:33	0°♏			14043 Mar 25 13:17	15°♏	
morning rise	14037 Jul 21 06:39	1°♏31'54		retrograde	14043 May 26 14:12	20°♏35'52	
	14037 Sep 25 20:12	15°♏		min. Earth dist.	14043 Jul 24 08:02	15°♏44'51	4.23570 AU
retrograde	14037 Nov 24 06:29	20°♏07'43		opposition	14043 Jul 25 18:03	15°♏33'29	0°52'00
opposition	14038 Jan 23 12:55	15°♏13'02	-0°52'27		14043 Jul 29 22:31	15°♏	
min. Earth dist.	14038 Jan 24 23:44	15°♏01'40	4.13509 AU	direct	14043 Sep 23 16:45	10°♏34'12	
	14038 Jan 25 04:52	15°♏			14043 Nov 17 19:58	15°♏	
direct	14038 Mar 25 02:37	10°♏14'31		evening set	14044 Jan 27 15:10	28°♏42'59	
	14038 May 20 14:49	15°♏			14044 Feb 02 10:53	0°♐	
evening set	14038 Jul 29 08:06	29°♏22'04					
	14038 Aug 01 00:23	0°♐		conjunction	14044 Feb 10 00:43	1°♐40'34	0°33'58
max. Earth dist.	14038 Aug 09 16:10	2°♐03'12	6.05127 AU	minimum elong	14044 Feb 10 00:43	1°♐40'34	0°34'34
				max. Earth dist.	14044 Feb 11 19:04	2°♐04'01	6.32058 AU
conjunction	14038 Aug 11 07:56	2°♐26'50	-0°33'42	morning rise	14044 Feb 23 09:27	4°♐37'31	
minimum elong	14038 Aug 11 07:57	2°♐26'51	0°34'17	retrograde	14044 Jun 25 19:42	22°♐11'15	
morning rise	14038 Aug 24 08:18	5°♐32'17		opposition	14044 Aug 25 11:21	17°♐11'28	0°44'21
retrograde	14038 Dec 31 13:05	25°♐22'41		min. Earth dist.	14044 Aug 24 15:34	17°♐17'58	4.39373 AU
opposition	14039 Mar 01 04:49	20°♐26'06	-0°43'45	direct	14044 Oct 25 14:39	12°♐11'15	
min. Earth dist.	14039 Mar 01 23:14	20°♐20'01	3.97837 AU	evening set	14045 Feb 27 19:40	29°♐37'04	
direct	14039 Apr 29 10:37	15°♐29'37			14045 Mar 01 14:28	0°♑	
	14039 Aug 11 13:03	0°♑					
evening set	14039 Sep 03 11:56	5°♑26'25		conjunction	14045 Mar 13 01:00	2°♑27'45	0°24'39
				minimum elong	14045 Mar 13 01:00	2°♑27'45	0°24'43
conjunction	14039 Sep 16 17:02	8°♑39'30	-0°21'28	max. Earth dist.	14045 Mar 13 15:18	2°♑35'27	6.45229 AU
minimum elong	14039 Sep 16 17:03	8°♑39'30	0°21'25	morning rise	14045 Mar 26 05:09	5°♑17'39	
max. Earth dist.	14039 Sep 16 07:25	8°♑33'38	5.92596 AU	retrograde	14045 Jul 25 17:10	22°♑07'42	
morning rise	14039 Sep 29 23:52	11°♑53'40		opposition	14045 Sep 24 17:11	17°♑10'42	0°25'06
	14039 Dec 29 16:43	0°♒		min. Earth dist.	14045 Sep 24 16:52	17°♑10'49	4.49121 AU
retrograde	14040 Feb 08 08:01	2°♒37'05		direct	14045 Nov 25 18:53	12°♑10'01	
	14040 Mar 20 05:15	30°♒		evening set	14046 Mar 30 12:01	29°♑14'10	
opposition	14040 Apr 07 14:59	27°♒37'44	-0°16'59		14046 Apr 03 02:21	0°♈	
min. Earth dist.	14040 Apr 07 07:22	27°♒40'18	3.89886 AU				
direct	14040 Jun 04 20:53	22°♒42'28		conjunction	14046 Apr 12 13:29	2°♈01'08	0°09'01
	14040 Aug 13 03:55	0°♒		minimum elong	14046 Apr 12 13:29	2°♈01'08	0°08'33
evening set	14040 Oct 10 10:04	12°♒58'51		behind sun begin	14046 Apr 12 06:29	1°♈57'25	
	14040 Oct 18 16:43	15°♒		behind sun end	14046 Apr 12 20:29	2°♈04'51	
				max. Earth dist.	14046 Apr 12 00:16	1°♈54'05	6.50909 AU
conjunction	14040 Oct 23 20:37	16°♒15'48	-0°00'15	morning rise	14046 Apr 25 13:07	4°♈47'15	
minimum elong	14040 Oct 23 20:38	16°♒15'49	0°00'26		14046 Jun 16 21:42	15°♈	
behind sun begin	14040 Oct 23 12:18	16°♒10'45		retrograde	14046 Aug 24 07:27	21°♈22'51	
behind sun end	14040 Oct 24 04:58	16°♒20'53		desc. node	14046 Oct 23 07:56	16°♈37'08	

opposition	14046 Oct 24 12:22	16° 8 28'01	-0°00'05			14052 Jul 14 12:33	0° ℓ	
min. Earth dist.	14046 Oct 25 06:14	16° 8 22'18	4.50489 AU	asc. node		14052 Sep 05 05:59	8° ℓ 55'59	
	14046 Nov 05 03:20	15° 8				14052 Oct 01 22:49	15° ℓ	
direct	14046 Dec 25 23:48	11° 8 27'16		evening set		14052 Oct 15 16:23	18° ℓ 18'05	
	14047 Feb 14 13:19	15° 8						
evening set	14047 Apr 29 14:50	28° 8 33'38		conjunction		14052 Oct 29 03:42	21° ℓ 35'12	0°02'58
	14047 May 06 07:48	0° ℓ		minimum elong		14052 Oct 29 03:41	21° ℓ 35'11	0°03'43
max. Earth dist.	14047 May 10 22:51	0° ℓ 59'51	6.47834 AU	behind sun begin		14052 Oct 28 19:25	21° ℓ 30'09	
				behind sun end		14052 Oct 29 11:57	21° ℓ 40'13	
conjunction	14047 May 12 12:56	1° ℓ 20'24	-0°08'59	max. Earth dist.		14052 Oct 30 13:25	21° ℓ 55'47	5.90500 AU
minimum elong	14047 May 12 12:56	1° ℓ 20'24	0°09'51	morning rise		14052 Nov 11 16:43	24° ℓ 53'09	
behind sun begin	14047 May 12 06:25	1° ℓ 16'55				14052 Dec 03 05:29	0° ♊	
behind sun end	14047 May 12 19:26	1° ℓ 23'54		retrograde		14053 Mar 22 23:26	15° ♊ 34'55	
morning rise	14047 May 25 09:28	4° ℓ 06'34		min. Earth dist.		14053 May 19 22:56	10° ♊ 43'03	3.94294 AU
retrograde	14047 Sep 23 20:52	20° ℓ 58'11		opposition		14053 May 21 06:01	10° ♊ 32'32	0°21'34
opposition	14047 Nov 23 22:43	16° ℓ 04'27	-0°25'36	direct		14053 Jul 18 09:04	5° ♊ 36'35	
min. Earth dist.	14047 Nov 25 08:20	15° ℓ 53'42	4.43161 AU	evening set		14053 Nov 22 17:52	25° ♊ 26'25	
direct	14048 Jan 25 07:43	11° ℓ 03'51						
evening set	14048 May 29 03:49	28° ℓ 36'11		conjunction		14053 Dec 06 07:19	28° ♊ 39'46	0°23'15
	14048 Jun 04 11:59	0° ♋		minimum elong		14053 Dec 06 07:18	28° ♊ 39'45	0°24'17
max. Earth dist.	14048 Jun 08 18:06	0° ♋ 56'29	6.36680 AU	max. Earth dist.		14053 Dec 08 15:11	29° ♊ 12'59	6.00431 AU
						14053 Dec 11 22:19	0° ♋	
conjunction	14048 Jun 11 00:13	1° ♋ 26'27	-0°24'51	morning rise		14053 Dec 19 22:11	1° ♋ 53'30	
minimum elong	14048 Jun 11 00:12	1° ♋ 26'26	0°25'55	retrograde		14054 Apr 27 21:23	21° ♋ 39'35	
morning rise	14048 Jun 23 19:35	4° ♋ 16'27		min. Earth dist.		14054 Jun 24 23:01	16° ♋ 49'24	4.08266 AU
retrograde	14048 Oct 25 05:59	21° ♋ 53'24		opposition		14054 Jun 26 13:59	16° ♋ 36'14	0°45'25
opposition	14048 Dec 24 23:53	16° ♋ 59'35	-0°45'21	direct		14054 Aug 24 11:39	11° ♋ 38'25	
min. Earth dist.	14048 Dec 26 14:56	16° ♋ 46'59	4.28814 AU			14054 Dec 26 13:22	0° ♌	
direct	14049 Feb 24 14:10	11° ♋ 59'43		evening set		14054 Dec 29 04:15	0° ♌ 35'42	
	14049 Jun 28 18:07	0° ♌						
evening set	14049 Jun 30 02:08	0° ♌ 18'13		conjunction		14055 Jan 11 16:38	3° ♌ 40'55	0°34'04
max. Earth dist.	14049 Jul 10 17:29	2° ♌ 44'25	6.20171 AU	minimum elong		14055 Jan 11 16:38	3° ♌ 40'55	0°35'01
				max. Earth dist.		14055 Jan 14 01:53	4° ♌ 13'39	6.17075 AU
conjunction	14049 Jul 12 23:08	3° ♌ 15'16	-0°34'11	morning rise		14055 Jan 25 05:06	6° ♌ 45'49	
minimum elong	14049 Jul 12 23:08	3° ♌ 15'16	0°35'08			14055 Mar 04 08:45	15° ♌	
morning rise	14049 Jul 25 19:47	6° ♌ 12'32		retrograde		14055 May 31 02:29	25° ♌ 16'56	
	14049 Sep 04 05:11	15° ♌		min. Earth dist.		14055 Jul 28 22:42	20° ♌ 25'46	4.25904 AU
retrograde	14049 Nov 29 06:33	24° ♌ 57'58		opposition		14055 Jul 30 07:17	20° ♌ 14'54	0°51'49
opposition	14050 Jan 28 10:30	20° ♌ 03'07	-0°52'22	direct		14055 Sep 28 10:04	15° ♌ 15'32	
min. Earth dist.	14050 Jan 29 20:34	19° ♌ 52'00	4.11273 AU			14056 Jan 17 00:44	0° ♍	
direct	14050 Mar 29 20:04	15° ♌ 04'54		evening set		14056 Feb 01 05:47	3° ♍ 17'25	
	14050 Jul 15 13:38	0° ♍						
evening set	14050 Aug 03 04:09	4° ♍ 19'37		conjunction		14056 Feb 14 14:40	6° ♍ 13'52	0°33'11
max. Earth dist.	14050 Aug 14 14:20	7° ♍ 02'48	6.03097 AU	minimum elong		14056 Feb 14 14:41	6° ♍ 13'52	0°33'43
				max. Earth dist.		14056 Feb 16 05:38	6° ♍ 35'19	6.34250 AU
conjunction	14050 Aug 16 04:28	7° ♍ 25'34	-0°32'43	morning rise		14056 Feb 27 22:55	9° ♍ 09'41	
minimum elong	14050 Aug 16 04:29	7° ♍ 25'34	0°33'13	retrograde		14056 Jun 30 00:34	26° ♍ 35'34	
morning rise	14050 Aug 29 05:45	10° ♍ 32'18		opposition		14056 Aug 29 18:14	21° ♍ 36'07	0°42'14
	14050 Dec 18 18:35	0° ♎		min. Earth dist.		14056 Aug 29 00:28	21° ♍ 41'56	4.41285 AU
retrograde	14051 Jan 05 18:06	0° ♎ 31'39		direct		14056 Oct 30 01:04	16° ♍ 35'48	
	14051 Jan 23 18:23	30° ♎				14057 Feb 13 08:32	0° ♏	
opposition	14051 Mar 06 09:19	25° ♎ 34'46	-0°40'58	evening set		14057 Mar 04 03:40	3° ♏ 56'36	
min. Earth dist.	14051 Mar 06 23:51	25° ♎ 29'57	3.96222 AU					
direct	14051 May 04 10:38	20° ♎ 38'30		conjunction		14057 Mar 17 08:32	6° ♏ 46'28	0°22'46
	14051 Jul 23 18:55	0° ♎		minimum elong		14057 Mar 17 08:33	6° ♏ 46'28	0°22'45
evening set	14051 Sep 08 14:55	10° ♎ 40'16		max. Earth dist.		14057 Mar 17 20:39	6° ♏ 52'58	6.46747 AU
				morning rise		14057 Mar 30 11:49	9° ♏ 35'29	
conjunction	14051 Sep 21 20:53	13° ♎ 54'16	-0°18'54	retrograde		14057 Jul 29 18:17	26° ♏ 20'48	
minimum elong	14051 Sep 21 20:54	13° ♎ 54'16	0°18'45	opposition		14057 Sep 28 20:13	21° ♏ 24'09	0°21'52
max. Earth dist.	14051 Sep 21 16:40	13° ♎ 51'41	5.91572 AU	min. Earth dist.		14057 Sep 28 21:55	21° ♏ 23'36	4.50150 AU
morning rise	14051 Oct 05 04:32	17° ♎ 09'20		direct		14057 Nov 30 00:15	16° ♏ 23'27	
	14051 Dec 01 17:25	0° ♏				14058 Mar 18 06:12	0° ♐	
retrograde	14052 Feb 13 17:17	7° ♏ 56'45		evening set		14058 Apr 03 16:01	3° ♐ 25'17	
opposition	14052 Apr 12 22:39	2° ♏ 57'00	-0°12'20					
min. Earth dist.	14052 Apr 12 12:45	3° ♏ 00'20	3.89571 AU	conjunction		14058 Apr 16 16:45	6° ♏ 11'48	0°06'38
	14052 May 06 12:11	30° ♏		minimum elong		14058 Apr 16 16:45	6° ♏ 11'48	0°06'06
direct	14052 Jun 10 03:32	28° ♏ 01'46		behind sun begin		14058 Apr 16 09:08	6° ♏ 07'46	

behind sun end	14058 Apr 17 00:22	6°♄15'51			14063 Nov 11 09:12	0°♄	
max. Earth dist.	14058 Apr 15 22:45	6°♄02'12	6.51368 AU	retrograde	14064 Feb 19 03:36	13°♄21'06	
morning rise	14058 Apr 29 15:57	8°♄57'34		opposition	14064 Apr 18 08:07	8°♄20'58	-0°07'35
	14058 May 29 02:58	15°♄		min. Earth dist.	14064 Apr 17 18:12	8°♄25'40	3.89036 AU
retrograde	14058 Aug 28 10:44	25°♄32'20		direct	14064 Jun 15 09:49	3°♄25'47	
desc. node	14058 Sep 06 15:55	25°♄24'22		asc. node	14064 Jul 14 10:14	4°♄50'48	
opposition	14058 Oct 28 15:06	20°♄37'40	-0°03'38		14064 Sep 13 15:11	15°♄	
min. Earth dist.	14058 Oct 29 12:16	20°♄30'53	4.50339 AU	evening set	14064 Oct 21 01:39	23°♄42'48	
direct	14058 Dec 30 04:16	15°♄36'50					
	14059 Apr 20 19:21	0°♄		conjunction	14064 Nov 03 13:24	27°♄00'00	0°06'06
evening set	14059 May 03 17:27	2°♄44'07		minimum elong	14064 Nov 03 13:24	27°♄00'00	0°06'56
max. Earth dist.	14059 May 14 22:08	5°♄08'48	6.47065 AU	behind sun begin	14064 Nov 03 05:39	26°♄55'17	
				behind sun end	14064 Nov 03 21:09	27°♄04'42	
conjunction	14059 May 16 15:15	5°♄31'01	-0°11'19	max. Earth dist.	14064 Nov 05 02:41	27°♄22'43	5.90840 AU
minimum elong	14059 May 16 15:15	5°♄31'01	0°12'14		14064 Nov 15 21:19	0°♄	
behind sun begin	14059 May 16 09:54	5°♄28'09		morning rise	14064 Nov 17 03:11	0°♄18'04	
behind sun end	14059 May 16 20:36	5°♄33'54		retrograde	14065 Mar 28 04:41	20°♄56'08	
morning rise	14059 May 29 11:25	8°♄17'20		min. Earth dist.	14065 May 25 02:47	16°♄04'52	3.95463 AU
retrograde	14059 Sep 28 02:00	25°♄12'28		opposition	14065 May 26 12:36	15°♄53'24	0°25'47
opposition	14059 Nov 28 04:14	20°♄18'41	-0°28'42	direct	14065 Jul 23 17:07	10°♄57'11	
min. Earth dist.	14059 Nov 29 14:37	20°♄07'40	4.41801 AU		14065 Nov 25 01:44	0°♄	
direct	14060 Jan 29 10:51	15°♄18'04		evening set	14065 Nov 28 00:43	0°♄41'43	
	14060 May 19 23:38	0°♄					
evening set	14060 Jun 02 08:59	2°♄54'49		conjunction	14065 Dec 11 14:21	3°♄54'14	0°25'26
max. Earth dist.	14060 Jun 12 22:30	5°♄15'15	6.34807 AU	minimum elong	14065 Dec 11 14:21	3°♄54'14	0°26'29
				max. Earth dist.	14065 Dec 14 01:15	4°♄29'06	6.02309 AU
conjunction	14060 Jun 15 05:17	5°♄45'44	-0°26'34	morning rise	14065 Dec 25 05:00	7°♄06'58	
minimum elong	14060 Jun 15 05:16	5°♄45'43	0°27'37	retrograde	14066 May 02 19:21	26°♄43'20	
morning rise	14060 Jun 28 00:33	8°♄36'26		min. Earth dist.	14066 Jun 29 22:11	21°♄53'01	4.10613 AU
retrograde	14060 Oct 29 20:16	26°♄21'08		opposition	14066 Jul 01 12:54	21°♄39'58	0°47'22
opposition	14060 Dec 29 11:49	21°♄27'13	-0°47'08	direct	14066 Aug 29 14:47	16°♄41'53	
min. Earth dist.	14060 Dec 31 04:21	21°♄14'08	4.26515 AU		14066 Dec 09 05:18	0°♄	
direct	14061 Feb 28 23:39	16°♄27'26		evening set	14067 Jan 03 03:46	5°♄30'52	
	14061 Jun 12 17:07	0°♄					
evening set	14061 Jul 04 13:20	4°♄53'24		conjunction	14067 Jan 16 15:40	8°♄34'44	0°34'36
max. Earth dist.	14061 Jul 15 03:57	7°♄20'02	6.17617 AU	minimum elong	14067 Jan 16 15:40	8°♄34'44	0°35'29
				max. Earth dist.	14067 Jan 19 00:07	9°♄06'49	6.19647 AU
conjunction	14061 Jul 17 10:35	7°♄51'37	-0°34'40	morning rise	14067 Jan 30 03:40	11°♄38'17	
minimum elong	14061 Jul 17 10:35	7°♄51'37	0°35'34		14067 Feb 14 06:49	15°♄	
morning rise	14061 Jul 30 07:49	10°♄50'11		retrograde	14067 Jun 04 12:55	29°♄58'41	
	14061 Aug 17 16:55	15°♄		opposition	14067 Aug 03 21:05	24°♄56'52	0°51'15
retrograde	14061 Dec 04 04:17	29°♄46'32		min. Earth dist.	14067 Aug 02 13:15	25°♄07'27	4.28458 AU
opposition	14062 Feb 02 07:09	24°♄51'25	-0°51'58	direct	14067 Oct 03 03:30	19°♄57'18	
min. Earth dist.	14062 Feb 03 14:56	24°♄41'00	4.08658 AU		14067 Dec 30 03:47	0°♄	
direct	14062 Apr 03 11:21	19°♄53'22		evening set	14068 Feb 05 20:48	7°♄51'39	
	14062 Jun 27 19:20	0°♄					
evening set	14062 Aug 07 23:54	9°♄16'51		conjunction	14068 Feb 19 05:07	10°♄46'54	0°32'10
max. Earth dist.	14062 Aug 19 15:03	12°♄03'51	6.00665 AU	minimum elong	14068 Feb 19 05:07	10°♄46'55	0°32'38
				max. Earth dist.	14068 Feb 20 16:48	11°♄06'28	6.36578 AU
conjunction	14062 Aug 21 01:02	12°♄24'15	-0°31'31	morning rise	14068 Mar 03 12:32	13°♄41'28	
minimum elong	14062 Aug 21 01:03	12°♄24'16	0°31'56		14068 Jun 08 23:40	0°♄	
morning rise	14062 Sep 03 03:07	15°♄32'29		retrograde	14068 Jul 04 06:29	0°♄59'16	
	14062 Nov 10 02:18	0°♄			14068 Jul 29 08:54	30°♄	
retrograde	14063 Jan 11 03:03	5°♄42'34		min. Earth dist.	14068 Sep 02 10:38	26°♄05'03	4.43205 AU
opposition	14063 Mar 11 14:50	0°♄45'19	-0°37'55	opposition	14068 Sep 03 01:20	26°♄00'15	0°39'49
min. Earth dist.	14063 Mar 12 03:16	0°♄41'11	3.94213 AU	direct	14068 Nov 03 12:51	20°♄59'53	
	14063 Mar 17 07:25	30°♄			14069 Jan 26 12:40	0°♄	
direct	14063 May 09 12:55	25°♄49'15		evening set	14069 Mar 08 11:59	8°♄15'54	
	14063 Jun 29 22:02	0°♄					
evening set	14063 Sep 13 19:22	15°♄57'26		conjunction	14069 Mar 21 16:07	11°♄05'00	0°20'43
				minimum elong	14069 Mar 21 16:07	11°♄05'00	0°20'37
conjunction	14063 Sep 27 02:19	19°♄12'33	-0°16'12	max. Earth dist.	14069 Mar 21 23:05	11°♄08'44	6.48109 AU
minimum elong	14063 Sep 27 02:20	19°♄12'33	0°15'56	morning rise	14069 Apr 03 18:53	13°♄53'17	
behind sun begin	14063 Sep 27 01:11	19°♄11'51			14069 Jul 14 11:39	0°♄	
behind sun end	14063 Sep 27 03:29	19°♄13'15		retrograde	14069 Aug 02 21:17	0°♄34'47	
max. Earth dist.	14063 Sep 27 03:31	19°♄13'17	5.90203 AU		14069 Aug 22 05:00	30°♄	
morning rise	14063 Oct 10 10:57	22°♄28'44		opposition	14069 Oct 03 00:11	25°♄38'26	0°18'25

min. Earth dist.	14069 Oct 03 04:52	25° Υ 36'56	4.50888 AU	min. Earth dist.	14075 Mar 17 09:05	6° Ω 06'16	3.92641 AU
direct	14069 Dec 04 06:17	20° Υ 37'43		direct	14075 May 14 17:40	1° Ω 13'11	
	14070 Feb 28 22:45	0° \mathcal{B}		evening set	14075 Sep 19 04:22	21° Ω 25'58	
evening set	14070 Apr 07 20:41	7° \mathcal{B} 38'22					
conjunction	14070 Apr 20 21:02	10° \mathcal{B} 24'41	0°04'07	conjunction	14075 Oct 02 12:02	24° Ω 41'50	-0°13'14
minimum elong	14070 Apr 20 21:04	10° \mathcal{B} 24'42	0°03'31	minimum elong	14075 Oct 02 12:02	24° Ω 41'51	0°12'54
behind sun begin	14070 Apr 20 13:06	10° \mathcal{B} 20'28		behind sun begin	14075 Oct 02 06:56	24° Ω 38'43	
behind sun end	14070 Apr 21 05:01	10° \mathcal{B} 28'55		behind sun end	14075 Oct 02 17:09	24° Ω 44'58	
max. Earth dist.	14070 Apr 20 00:29	10° \mathcal{B} 13'43	6.51432 AU	max. Earth dist.	14075 Oct 02 18:06	24° Ω 45'33	5.89456 AU
morning rise	14070 May 03 19:34	13° \mathcal{B} 10'14		morning rise	14075 Oct 15 21:41	27° Ω 58'49	
	14070 May 12 11:58	15° \mathcal{B}			14076 Jan 05 16:53	15° \mathcal{M}	
desc. node	14070 Jul 19 13:30	26° \mathcal{B} 56'13		retrograde	14076 Feb 24 15:03	18° \mathcal{M} 53'10	
retrograde	14070 Sep 01 14:21	29° \mathcal{B} 45'44			14076 Apr 15 10:56	15° \mathcal{R} \mathcal{M}	
opposition	14070 Nov 01 19:33	24° \mathcal{B} 51'18	-0°07'20	opposition	14076 Apr 23 20:06	13° \mathcal{M} 52'34	-0°02'36
min. Earth dist.	14070 Nov 02 18:34	24° \mathcal{B} 43'56	4.49733 AU	min. Earth dist.	14076 Apr 23 02:11	13° \mathcal{M} 58'37	3.89226 AU
direct	14071 Jan 03 08:20	19° \mathcal{B} 50'33		asc. node	14076 May 23 03:19	10° \mathcal{M} 20'40	
	14071 Apr 03 20:44	0° \mathcal{I}		direct	14076 Jun 20 21:15	8° \mathcal{M} 57'20	
evening set	14071 May 07 22:37	7° \mathcal{I} 00'25			14076 Aug 22 07:21	15° \mathcal{M}	
max. Earth dist.	14071 May 18 23:17	9° \mathcal{I} 23'25	6.45815 AU	evening set	14076 Oct 26 12:15	29° \mathcal{M} 11'55	
					14076 Oct 29 19:43	0° \mathcal{J}	
conjunction	14071 May 20 19:57	9° \mathcal{I} 47'38	-0°13'43	conjunction	14076 Nov 09 00:38	2° \mathcal{J} 28'48	0°09'14
minimum elong	14071 May 20 19:57	9° \mathcal{I} 47'38	0°14'40	minimum elong	14076 Nov 09 00:37	2° \mathcal{J} 28'48	0°10'08
behind sun begin	14071 May 20 16:34	9° \mathcal{I} 45'48		behind sun begin	14076 Nov 08 17:57	2° \mathcal{J} 24'46	
behind sun end	14071 May 20 23:20	9° \mathcal{I} 49'27		behind sun end	14076 Nov 09 07:18	2° \mathcal{J} 32'50	
morning rise	14071 Jun 02 15:57	12° \mathcal{I} 34'20		max. Earth dist.	14076 Nov 10 19:58	2° \mathcal{J} 55'09	5.91964 AU
retrograde	14071 Oct 02 13:22	29° \mathcal{I} 34'45		morning rise	14076 Nov 22 14:37	5° \mathcal{J} 46'25	
opposition	14071 Dec 02 13:13	24° \mathcal{I} 41'03	-0°31'50	retrograde	14077 Apr 02 10:39	26° \mathcal{J} 17'25	
min. Earth dist.	14071 Dec 04 02:09	24° \mathcal{I} 29'12	4.39967 AU	min. Earth dist.	14077 May 30 07:49	21° \mathcal{J} 26'17	3.97374 AU
direct	14072 Feb 02 18:54	19° \mathcal{I} 40'29		opposition	14077 May 31 18:53	21° \mathcal{J} 14'24	0°29'48
	14072 May 02 19:51	0° \mathcal{E}		direct	14077 Jul 29 02:06	16° \mathcal{J} 17'56	
evening set	14072 Jun 06 17:54	7° \mathcal{E} 23'21			14077 Nov 07 10:57	0° \mathcal{Z}	
max. Earth dist.	14072 Jun 17 05:45	9° \mathcal{E} 43'36	6.32512 AU	evening set	14077 Dec 03 06:22	5° \mathcal{Z} 54'25	
conjunction	14072 Jun 19 14:16	10° \mathcal{E} 15'11	-0°28'13	conjunction	14077 Dec 16 19:51	9° \mathcal{Z} 05'41	0°27'25
minimum elong	14072 Jun 19 14:15	10° \mathcal{E} 15'10	0°29'17	minimum elong	14077 Dec 16 19:50	9° \mathcal{Z} 05'41	0°28'29
morning rise	14072 Jul 02 09:40	13° \mathcal{E} 06'51		max. Earth dist.	14077 Dec 19 08:25	9° \mathcal{Z} 41'19	6.04788 AU
	14072 Oct 08 23:02	0° \mathcal{O}		morning rise	14077 Dec 30 10:19	12° \mathcal{Z} 17'07	
retrograde	14072 Nov 03 13:44	1° \mathcal{O} 00'58			14078 Apr 04 21:20	0° \approx	
	14072 Nov 29 05:14	30° \mathcal{R} \mathcal{E}		retrograde	14078 May 07 11:57	1° \approx 41'37	
opposition	14073 Jan 03 04:32	26° \mathcal{E} 06'56	-0°48'46		14078 Jun 08 23:45	30° \mathcal{R} \mathcal{Z}	
min. Earth dist.	14073 Jan 04 20:02	25° \mathcal{E} 54'09	4.23910 AU	min. Earth dist.	14078 Jul 04 17:37	26° \mathcal{Z} 51'32	4.13394 AU
direct	14073 Mar 05 11:08	21° \mathcal{E} 07'22		opposition	14078 Jul 06 08:57	26° \mathcal{Z} 38'18	0°48'57
	14073 May 25 07:07	0° \mathcal{O}		direct	14078 Sep 03 14:07	21° \mathcal{Z} 39'56	
evening set	14073 Jul 09 05:28	9° \mathcal{O} 41'55			14078 Nov 20 00:06	0° \approx	
max. Earth dist.	14073 Jul 19 22:49	12° \mathcal{O} 11'02	6.14910 AU	evening set	14079 Jan 08 00:25	10° \approx 19'31	
conjunction	14073 Jul 22 03:07	12° \mathcal{O} 41'28	-0°34'57	conjunction	14079 Jan 21 11:48	13° \approx 21'56	0°34'54
minimum elong	14073 Jul 22 03:07	12° \mathcal{O} 41'28	0°35'47	minimum elong	14079 Jan 21 11:48	13° \approx 21'56	0°35'44
	14073 Aug 01 01:21	15° \mathcal{O}		max. Earth dist.	14079 Jan 23 17:12	13° \approx 52'06	6.22483 AU
morning rise	14073 Aug 04 00:51	15° \mathcal{O} 41'25			14079 Jan 28 17:36	15° \approx	
	14073 Oct 13 05:30	0° \mathcal{M}		morning rise	14079 Feb 03 23:10	16° \approx 23'57	
retrograde	14073 Dec 09 10:12	4° \mathcal{M} 49'28			14079 Apr 14 04:09	0° \mathcal{H}	
	14074 Feb 06 15:49	30° \mathcal{R} \mathcal{O}		retrograde	14079 Jun 08 22:37	4° \mathcal{H} 33'15	
opposition	14074 Feb 07 09:38	29° \mathcal{O} 54'09	-0°51'08		14079 Aug 04 18:45	30° \mathcal{R} \approx	
min. Earth dist.	14074 Feb 08 16:18	29° \mathcal{O} 44'05	4.06065 AU	min. Earth dist.	14079 Aug 07 03:09	29° \approx 41'20	4.31091 AU
direct	14074 Apr 08 10:19	24° \mathcal{O} 56'24		opposition	14079 Aug 08 07:59	29° \approx 31'47	0°50'24
	14074 Jun 05 06:15	0° \mathcal{M}		direct	14079 Oct 07 20:24	24° \approx 32'00	
evening set	14074 Aug 13 01:09	14° \mathcal{M} 28'26			14079 Dec 09 06:29	0° \mathcal{H}	
max. Earth dist.	14074 Aug 24 21:04	17° \mathcal{M} 19'07	5.98446 AU	evening set	14080 Feb 10 08:30	12° \mathcal{H} 18'47	
conjunction	14074 Aug 26 03:07	17° \mathcal{M} 37'15	-0°30'00	conjunction	14080 Feb 23 16:15	15° \mathcal{H} 12'55	0°31'00
minimum elong	14074 Aug 26 03:08	17° \mathcal{M} 37'15	0°30'21	minimum elong	14080 Feb 23 16:16	15° \mathcal{H} 12'55	0°31'22
morning rise	14074 Sep 08 06:09	20° \mathcal{M} 46'56		max. Earth dist.	14080 Feb 25 00:30	15° \mathcal{H} 30'30	6.38807 AU
	14074 Oct 18 13:30	0° \mathcal{A}		morning rise	14080 Mar 07 22:59	18° \mathcal{H} 06'19	
retrograde	14075 Jan 16 14:52	11° \mathcal{A} 06'31			14080 May 08 05:43	0° \mathcal{Y}	
opposition	14075 Mar 17 00:57	6° \mathcal{A} 08'58	-0°34'21				

retrograde	14080 Jul 08 08:17	5°♈16'45		minimum elong	14085 Jul 26 22:02	17°♏35'58	0°35'46
opposition	14080 Sep 07 05:54	0°♈18'05	0°37'15	morning rise	14085 Aug 08 20:21	20°♏37'21	
min. Earth dist.	14080 Sep 06 17:21	0°♈22'10	4.44896 AU		14085 Sep 20 07:39	0°♐	
	14080 Sep 09 13:22	30°♐		retrograde	14085 Dec 14 16:22	9°♐56'39	
direct	14080 Nov 07 19:59	25°♐17'36		opposition	14086 Feb 12 14:03	5°♐01'07	-0°49'54
	14081 Jan 05 08:17	0°♈		min. Earth dist.	14086 Feb 13 17:19	4°♐52'09	4.03729 AU
evening set	14081 Mar 12 17:46	12°♈29'39		direct	14086 Apr 13 08:55	0°♐03'43	
				evening set	14086 Aug 18 04:07	19°♐43'08	
conjunction	14081 Mar 25 21:23	15°♈18'07	0°18'36	max. Earth dist.	14086 Aug 30 05:14	22°♐37'40	5.96661 AU
minimum elong	14081 Mar 25 21:24	15°♈18'07	0°18'26				
max. Earth dist.	14081 Mar 26 00:15	15°♈19'39	6.49155 AU	conjunction	14086 Aug 31 06:44	22°♐53'07	-0°28'15
morning rise	14081 Apr 07 23:25	18°♈05'45		minimum elong	14086 Aug 31 06:45	22°♐53'07	0°28'29
	14081 Jun 09 21:53	0°♏		morning rise	14086 Sep 13 10:46	26°♐04'04	
retrograde	14081 Aug 06 23:11	4°♏44'31			14086 Sep 30 00:02	0°♑	
	14081 Oct 05 14:55	30°♐		retrograde	14087 Jan 22 02:10	16°♑31'12	
opposition	14081 Oct 07 02:32	29°♈48'33	0°14'57	opposition	14087 Mar 22 11:41	11°♑33'10	-0°30'28
min. Earth dist.	14081 Oct 07 10:35	29°♈45'57	4.51236 AU	min. Earth dist.	14087 Mar 22 15:49	11°♑31'48	3.91603 AU
direct	14081 Dec 08 11:16	24°♈47'48		direct	14087 May 20 01:37	6°♑37'34	
	14082 Feb 08 16:31	0°♏		evening set	14087 Sep 24 12:53	26°♑52'33	
evening set	14082 Apr 12 00:21	11°♏48'29					
max. Earth dist.	14082 Apr 23 21:59	14°♏20'46	6.51052 AU	conjunction	14087 Oct 07 21:26	0°♒08'54	-0°10'11
				minimum elong	14087 Oct 07 21:27	0°♒08'55	0°09'45
conjunction	14082 Apr 25 00:10	14°♏34'45	0°01'35	behind sun begin	14087 Oct 07 14:38	0°♒04'45	
minimum elong	14082 Apr 25 00:10	14°♏34'45	0°00'54	behind sun end	14087 Oct 08 04:16	0°♒13'04	
behind sun begin	14082 Apr 24 16:08	14°♏30'29			14087 Oct 07 06:56	0°♒	
behind sun end	14082 Apr 25 08:11	14°♏39'01		max. Earth dist.	14087 Oct 08 10:46	0°♒17'04	5.89276 AU
	14082 Apr 26 23:23	15°♏		morning rise	14087 Oct 21 07:42	3°♒26'17	
morning rise	14082 May 07 22:25	17°♏20'18			14087 Dec 11 03:28	15°♒	
desc. node	14082 May 29 22:57	21°♏54'57		retrograde	14088 Mar 01 02:02	24°♒19'59	
	14082 Jul 15 01:25	0°♐		asc. node	14088 Apr 03 07:44	22°♒32'11	
retrograde	14082 Sep 05 19:51	3°♐57'58		min. Earth dist.	14088 Apr 28 09:37	19°♒25'55	3.89926 AU
	14082 Oct 29 14:49	30°♐		opposition	14088 Apr 29 06:05	19°♒19'00	0°02'20
opposition	14082 Nov 05 23:58	29°♏03'41	-0°10'57		14088 Jun 07 12:18	15°♒	
min. Earth dist.	14082 Nov 07 01:46	28°♏55'25	4.48659 AU	direct	14088 Jun 26 07:32	14°♒23'43	
direct	14083 Jan 07 12:40	24°♏02'52			14088 Jul 15 02:05	15°♒	
	14083 Mar 15 06:36	0°♐			14088 Oct 12 14:31	0°♓	
evening set	14083 May 12 03:38	11°♐16'43		evening set	14088 Oct 31 20:48	4°♓34'09	
max. Earth dist.	14083 May 23 02:39	13°♐39'19	6.44122 AU				
				conjunction	14088 Nov 14 09:25	7°♓50'29	0°12'16
conjunction	14083 May 25 00:57	14°♐04'31	-0°16'02	minimum elong	14088 Nov 14 09:24	7°♓50'28	0°13'11
minimum elong	14083 May 25 00:56	14°♐04'30	0°17'00	behind sun begin	14088 Nov 14 04:32	7°♓47'32	
morning rise	14083 Jun 06 20:39	16°♐51'47		behind sun end	14088 Nov 14 14:16	7°♓53'24	
	14083 Aug 15 09:21	0°♑		max. Earth dist.	14088 Nov 16 08:05	8°♓18'44	5.93429 AU
retrograde	14083 Oct 06 23:43	3°♑58'57		morning rise	14088 Nov 27 23:46	11°♓07'30	
	14083 Nov 29 19:43	30°♐			14089 Mar 08 00:16	0°♓	
opposition	14083 Dec 06 23:24	29°♐05'17	-0°34'49	retrograde	14089 Apr 07 10:40	1°♓30'14	
min. Earth dist.	14083 Dec 08 12:50	28°♐53'16	4.37763 AU		14089 May 07 18:38	30°♐	
direct	14084 Feb 07 01:32	24°♐04'52		min. Earth dist.	14089 Jun 04 08:19	26°♓39'41	3.99439 AU
	14084 Apr 12 16:54	0°♑		opposition	14089 Jun 05 21:31	26°♓27'05	0°33'29
evening set	14084 Jun 11 04:21	11°♑54'57		direct	14089 Aug 03 06:09	21°♓30'23	
max. Earth dist.	14084 Jun 21 15:43	14°♑15'45	6.29957 AU		14089 Oct 18 23:48	0°♓	
				evening set	14089 Dec 08 09:02	10°♓59'01	
conjunction	14084 Jun 24 00:40	14°♑47'48	-0°29'44				
minimum elong	14084 Jun 24 00:40	14°♑47'47	0°30'47	conjunction	14089 Dec 21 22:17	14°♓09'04	0°29'10
morning rise	14084 Jul 06 20:20	17°♑40'36		minimum elong	14089 Dec 21 22:16	14°♓09'04	0°30'13
	14084 Sep 05 21:14	0°♒		max. Earth dist.	14089 Dec 24 09:54	14°♓43'56	6.07233 AU
retrograde	14084 Nov 08 11:56	5°♒45'05		morning rise	14090 Jan 04 12:28	17°♓19'13	
opposition	14085 Jan 07 23:37	0°♒50'57	-0°50'06		14090 Mar 05 21:18	0°♓	
min. Earth dist.	14085 Jan 09 15:13	0°♒38'07	4.21177 AU	retrograde	14090 May 12 04:12	6°♓32'50	
	14085 Jan 14 13:28	30°♐		min. Earth dist.	14090 Jul 09 12:58	1°♓42'18	4.15959 AU
direct	14085 Mar 10 03:21	25°♑51'37		opposition	14090 Jul 11 02:28	1°♓29'42	0°50'10
	14085 May 02 01:36	0°♒			14090 Jul 22 09:58	30°♐	
evening set	14085 Jul 13 23:49	14°♒35'02		direct	14090 Sep 08 13:05	26°♓31'06	
	14085 Jul 15 18:50	15°♒			14090 Oct 26 11:03	0°♓	
max. Earth dist.	14085 Jul 24 19:58	17°♒06'41	6.12246 AU	evening set	14091 Jan 12 18:40	15°♓02'36	
					14091 Jan 12 14:01	15°♓	
conjunction	14085 Jul 26 22:02	17°♒35'58	-0°34'59				

conjunction	14091 Jan 26 05:42	18° \approx 03'47	0°34'58	evening set	14096 Jun 15 16:28	16° \approx 32'12	
minimum elong	14091 Jan 26 05:42	18° \approx 03'47	0°35'46	max. Earth dist.	14096 Jun 26 05:26	18° \approx 54'33	6.27780 AU
max. Earth dist.	14091 Jan 28 09:53	18° \approx 33'05	6.24957 AU				
morning rise	14091 Feb 08 16:23	21° \approx 04'29		conjunction	14096 Jun 28 13:01	19° \approx 25'58	-0°31'06
	14091 Mar 23 03:41	0° \approx		minimum elong	14096 Jun 28 13:00	19° \approx 25'58	0°32'08
retrograde	14091 Jun 13 05:36	9° \approx 04'27		morning rise	14096 Jul 11 08:43	22° \approx 19'42	
opposition	14091 Aug 12 17:22	4° \approx 03'24	0°49'17		14096 Aug 15 22:08	0° \approx	
min. Earth dist.	14091 Aug 11 13:51	4° \approx 12'30	4.33289 AU	retrograde	14096 Nov 13 08:52	10° \approx 32'59	
	14091 Sep 17 20:57	30° \approx		opposition	14097 Jan 12 19:48	5° \approx 38'45	-0°51'11
direct	14091 Oct 12 08:49	29° \approx 03'32		min. Earth dist.	14097 Jan 14 09:37	5° \approx 26'29	4.19020 AU
	14091 Nov 06 03:11	0° \approx		direct	14097 Mar 14 19:01	0° \approx 39'43	
evening set	14092 Feb 14 19:41	16° \approx 44'36			14097 Jun 29 02:11	15° \approx	
				evening set	14097 Jul 18 18:26	19° \approx 29'39	
conjunction	14092 Feb 28 02:46	19° \approx 37'46	0°29'40	max. Earth dist.	14097 Jul 29 17:21	22° \approx 03'37	6.10296 AU
minimum elong	14092 Feb 28 02:47	19° \approx 37'47	0°29'57				
max. Earth dist.	14092 Feb 29 05:53	19° \approx 52'31	6.40571 AU	conjunction	14097 Jul 31 16:53	22° \approx 31'34	-0°34'50
morning rise	14092 Mar 12 08:55	22° \approx 30'14		minimum elong	14097 Jul 31 16:53	22° \approx 31'34	0°35'34
	14092 Apr 17 18:51	0° \approx		morning rise	14097 Aug 13 15:51	25° \approx 34'02	
retrograde	14092 Jul 12 13:16	9° \approx 35'00			14097 Sep 01 22:18	0° \approx	
opposition	14092 Sep 11 10:42	4° \approx 36'48	0°34'30	retrograde	14097 Dec 19 20:57	15° \approx 01'48	
min. Earth dist.	14092 Sep 11 01:56	4° \approx 39'39	4.46125 AU	opposition	14098 Feb 17 17:22	10° \approx 05'54	-0°48'22
	14092 Oct 27 02:29	30° \approx		min. Earth dist.	14098 Feb 18 17:45	9° \approx 57'51	4.02165 AU
direct	14092 Nov 12 04:54	29° \approx 36'15		direct	14098 Apr 18 09:02	5° \approx 08'44	
	14092 Nov 28 08:24	0° \approx		evening set	14098 Aug 23 04:45	24° \approx 52'21	
evening set	14093 Mar 17 00:15	16° \approx 45'53					
				conjunction	14098 Sep 05 08:10	28° \approx 03'08	-0°26'22
conjunction	14093 Mar 30 03:23	19° \approx 33'56	0°16'22	minimum elong	14098 Sep 05 08:11	28° \approx 03'09	0°26'30
minimum elong	14093 Mar 30 03:24	19° \approx 33'56	0°16'07	max. Earth dist.	14098 Sep 04 12:45	27° \approx 51'21	5.95656 AU
max. Earth dist.	14093 Mar 30 02:01	19° \approx 33'12	6.49764 AU		14098 Sep 13 08:52	0° \approx	
morning rise	14093 Apr 12 04:54	22° \approx 21'09		morning rise	14098 Sep 18 12:46	1° \approx 14'52	
	14093 May 20 01:29	0° \approx		retrograde	14099 Jan 27 09:43	21° \approx 45'57	
retrograde	14093 Aug 11 02:04	8° \approx 58'36		opposition	14099 Mar 27 17:58	16° \approx 47'32	-0°26'32
opposition	14093 Oct 11 06:23	4° \approx 02'55	0°11'22	min. Earth dist.	14099 Mar 27 19:21	16° \approx 47'05	3.91289 AU
min. Earth dist.	14093 Oct 11 16:28	3° \approx 59'40	4.51219 AU	direct	14099 May 25 06:02	11° \approx 52'03	
	14093 Nov 17 04:59	30° \approx			14099 Sep 20 23:44	0° \approx	
direct	14093 Dec 12 15:16	29° \approx 02'09		evening set	14099 Sep 29 16:44	2° \approx 06'30	
	14094 Jan 07 07:17	0° \approx					
desc. node	14094 Apr 05 17:44	13° \approx 51'24		conjunction	14099 Oct 13 01:46	5° \approx 22'56	-0°07'13
	14094 Apr 11 04:40	15° \approx		minimum elong	14099 Oct 13 01:45	5° \approx 22'56	0°06'42
evening set	14094 Apr 16 05:31	16° \approx 03'54		behind sun begin	14099 Oct 12 17:59	5° \approx 18'11	
max. Earth dist.	14094 Apr 28 00:45	18° \approx 35'08	6.50419 AU	behind sun end	14099 Oct 13 09:32	5° \approx 27'40	
				max. Earth dist.	14099 Oct 13 18:34	5° \approx 33'13	5.89668 AU
conjunction	14094 Apr 29 05:01	18° \approx 50'16	-0°01'04	morning rise	14099 Oct 26 12:47	8° \approx 40'25	
minimum elong	14094 Apr 29 05:00	18° \approx 50'16	0°01'48		14099 Nov 22 05:17	15° \approx	
behind sun begin	14094 Apr 28 20:59	18° \approx 45'59		asc. node	14100 Feb 16 22:15	28° \approx 57'53	
behind sun end	14094 Apr 29 13:01	18° \approx 54'32		retrograde	14100 Mar 07 03:39	29° \approx 31'03	
morning rise	14094 May 12 02:42	21° \approx 35'53		min. Earth dist.	14100 May 04 09:37	24° \approx 37'43	3.90995 AU
	14094 Jun 22 21:52	0° \approx		opposition	14100 May 05 09:21	24° \approx 29'42	0°06'57
retrograde	14094 Sep 10 02:30	8° \approx 16'28		direct	14100 Jul 02 10:13	19° \approx 34'15	
opposition	14094 Nov 10 06:36	3° \approx 22'24	-0°14'37		14100 Sep 25 15:26	0° \approx	
min. Earth dist.	14094 Nov 11 10:27	3° \approx 13'30	4.47465 AU	evening set	14100 Nov 06 22:42	9° \approx 39'34	
	14094 Dec 09 07:06	30° \approx					
direct	14095 Jan 11 18:51	28° \approx 21'43		conjunction	14100 Nov 20 11:31	12° \approx 55'11	0°15'01
	14095 Feb 14 08:35	0° \approx		minimum elong	14100 Nov 20 11:30	12° \approx 55'11	0°15'59
evening set	14095 May 16 11:06	15° \approx 39'45		max. Earth dist.	14100 Nov 22 11:37	13° \approx 24'12	5.95054 AU
max. Earth dist.	14095 May 27 06:48	18° \approx 01'10	6.42457 AU	morning rise	14100 Dec 04 02:00	16° \approx 11'26	
					14101 Feb 06 06:16	0° \approx	
conjunction	14095 May 29 08:01	18° \approx 28'03	-0°18'20	retrograde	14101 Apr 13 05:36	6° \approx 25'55	
minimum elong	14095 May 29 08:00	18° \approx 28'03	0°19'20	min. Earth dist.	14101 Jun 10 04:51	1° \approx 35'06	4.01419 AU
morning rise	14095 Jun 11 03:44	21° \approx 15'57		opposition	14101 Jun 11 17:35	1° \approx 22'39	0°36'43
	14095 Jul 23 17:15	0° \approx			14101 Jun 22 01:06	30° \approx	
retrograde	14095 Oct 11 13:59	8° \approx 29'41		direct	14101 Aug 09 05:59	26° \approx 25'40	
opposition	14095 Dec 11 11:53	3° \approx 36'02	-0°37'41		14101 Sep 25 22:34	0° \approx	
min. Earth dist.	14095 Dec 13 02:04	3° \approx 23'46	4.35753 AU	evening set	14101 Dec 14 05:11	15° \approx 47'09	
	14096 Jan 11 21:10	30° \approx					
direct	14096 Feb 11 12:17	28° \approx 35'45		conjunction	14101 Dec 27 18:25	18° \approx 56'11	0°30'39
	14096 Mar 13 02:55	0° \approx		minimum elong	14101 Dec 27 18:25	18° \approx 56'10	0°31'40

max. Earth dist.	14101 Dec 30 06:35	19°31'11	6.09389 AU
morning rise	14102 Jan 10 08:12	22°05'10	