retrograde	2600 Apr 11	04:10	25°♐22'52		
opposition	2600 Jun 11	03:02	20°♐30'47	0°41'21	
min. Earth dist.	2600 Jun 12	15:46	20°♐19'05	4.32505 AU	
direct	2600 Aug 12	07:46	15°♐31'34		
	2600 Nov 29	14:52	0°♑		
evening set	2600 Dec 15	21:14	3°♑37'04		
max. Earth dist.	2600 Dec 26	12:47	6°♑02'16	6.25599 AU	
conjunction	2600 Dec 28	13:25	6°♑30'01	0°11'16	
minimum elong	2600 Dec 28	13:25	6°♑30'02	0°11'16	
behind sun begin	2600 Dec 28	07:30	6°♑26'40		
behind sun end	2600 Dec 28	19:21	6°♑33'23		
morning rise	2601 Jan 10	05:00	9°♑22'56		
desc. node	2601 May 01	02:31	27°♑22'07		
retrograde	2601 May 15	08:50	27°♑41'08		
opposition	2601 Jul 15	03:36	22°♑47'38	-0°10'15	
min. Earth dist.	2601 Jul 16	10:41	22°♑37'39	4.18090 AU	
direct	2601 Sep 14	05:55	17°♑50'51		
	2601 Dec 19	08:35	0°♒		
evening set	2602 Jan 17	12:54	6°♒35'27		
max. Earth dist.	2602 Jan 28	22:38	9°♒16'15	6.10729 AU	
conjunction	2602 Jan 30	07:05	9°♒35'22	-0°25'00	
minimum elong	2602 Jan 30	07:04	9°♒35'21	0°25'01	
morning rise	2602 Feb 12	02:09	12°♒36'01		
	2602 Feb 22	09:50	15°♒		
	2602 May 15	01:07	0°♓		
retrograde	2602 Jun 20	20:27	2°♓04'51		
	2602 Jul 27	21:29	30°℞♒		
opposition	2602 Aug 20	07:52	27°♒08'29	-1°01'59	
min. Earth dist.	2602 Aug 20	20:17	27°♒04'25	4.03974 AU	
direct	2602 Oct 18	21:57	22°♒13'57		
	2602 Dec 30	16:42	0°♓		
evening set	2603 Feb 21	07:08	11°♓38'00		
conjunction	2603 Mar 06	06:15	14°♓45'22	-0°54'03	
minimum elong	2603 Mar 06	06:13	14°♓45'21	0°54'03	
max. Earth dist.	2603 Mar 06	03:30	14°♓43'43	5.98648 AU	
morning rise	2603 Mar 19	07:45	17°♓54'10		
	2603 May 12	22:28	0°♈		
retrograde	2603 Jul 29	01:23	8°♈21'48		
opposition	2603 Sep 27	01:03	3°♈21'33	-1°33'03	
min. Earth dist.	2603 Sep 26	14:44	3°♈25'00	3.95247 AU	
	2603 Oct 24	21:46	30°℞♓		
direct	2603 Nov 24	09:27	28°♓27'52		
	2603 Dec 24	15:46	0°♈		
evening set	2604 Mar 29	00:47	18°♈14'49		
conjunction	2604 Apr 11	07:37	21°♈27'48	-1°03'11	
minimum elong	2604 Apr 11	07:37	21°♈27'48	1°03'10	
max. Earth dist.	2604 Apr 12	15:26	21°♈47'06	5.94081 AU	
morning rise	2604 Apr 24	17:23	24°♈42'24		
	2604 May 17	04:36	0°♉		
	2604 Aug 18	21:12	15°♉		
retrograde	2604 Sep 04	05:35	15°♉26'17		
	2604 Sep 20	10:35	15°℞♉		
opposition	2604 Nov 02	20:40	10°♉22'36	-1°27'18	
min. Earth dist.	2604 Nov 01	15:41	10°♉32'25	3.95517 AU	
direct	2604 Dec 30	16:26	5°♉27'40		
	2605 Mar 21	12:44	15°♉		
evening set	2605 May 05	17:50	25°♉08'36		
conjunction	2605 May 19	08:13	28°♉22'48	-0°47'17	
minimum elong	2605 May 19	08:15	28°♉22'50	0°47'17	
max. Earth dist.	2605 May 21	13:06	28°♉54'18	5.99077 AU	
	2605 May 26	03:33	0°♊		
morning rise	2605 Jun 02	01:21	1°♊38'13		
retrograde	2605 Oct 10	16:43	21°♊45'34		
min. Earth dist.	2605 Dec 07	17:21	16°♊52'55	4.04654 AU	
opposition	2605 Dec 09	05:38	16°♊40'32	-0°47'20	
direct	2606 Feb 05	11:45	11°♊42'44		
	2606 Jun 08	02:54	0°♋		
evening set	2606 Jun 11	22:58	0°♋52'42		
conjunction	2606 Jun 25	17:08	4°♋02'53	-0°13'52	
minimum elong	2606 Jun 25	17:09	4°♋02'54	0°13'53	
behind sun begin	2606 Jun 25	13:02	4°♋00'32		
behind sun end	2606 Jun 25	21:16	4°♋05'16		
max. Earth dist.	2606 Jun 27	23:06	4°♋34'01	6.11492 AU	
morning rise	2606 Jul 09	12:09	7°♋13'13		
retrograde	2606 Nov 13	18:57	26°♋12'53		
asc. node	2606 Nov 19	21:04	26°♋09'08		
min. Earth dist.	2607 Jan 11	04:32	21°♋19'14	4.18931 AU	
opposition	2607 Jan 12	09:44	21°♋09'21	0°07'24	
direct	2607 Mar 12	19:41	16°♋08'46		
	2607 Jun 26	05:50	0°♌		
evening set	2607 Jul 17	12:39	4°♌38'04		
conjunction	2607 Jul 31	04:31	7°♌40'40	0°22'57	
minimum elong	2607 Jul 31	04:29	7°♌40'39	0°22'56	
max. Earth dist.	2607 Aug 01	16:25	8°♌00'41	6.26446 AU	
morning rise	2607 Aug 13	19:24	10°♌42'29		
	2607 Sep 02	13:52	15°♌		
retrograde	2607 Dec 15	13:34	28°♌34'21		
opposition	2608 Feb 13	12:11	23°♌34'09	0°56'11	
min. Earth dist.	2608 Feb 12	21:03	23°♌39'12	4.33247 AU	
direct	2608 Apr 14	06:05	18°♌31'50		
	2608 Jul 19	08:12	0°♍		
evening set	2608 Aug 19	01:36	6°♍25'41		
conjunction	2608 Sep 01	11:05	9°♍20'22	0°51'02	
minimum elong	2608 Sep 01	11:03	9°♍20'21	0°51'02	
max. Earth dist.	2608 Sep 01	18:51	9°♍24'35	6.39029 AU	
morning rise	2608 Sep 14	18:15	12°♍13'45		
retrograde	2609 Jan 14	00:17	29°♍17'20		
opposition	2609 Mar 15	06:22	24°♍20'52	1°26'16	
min. Earth dist.	2609 Mar 15	10:34	24°♍19'29	4.43287 AU	
direct	2609 May 16	05:35	19°♍18'02		
	2609 Aug 17	15:19	0°♎		
evening set	2609 Sep 19	20:24	6°♎50'02		
conjunction	2609 Oct 02	22:31	9°♎39'04	1°03'53	
minimum elong	2609 Oct 02	22:30	9°♎39'03	1°03'52	
max. Earth dist.	2609 Oct 02	02:01	9°♎28'01	6.45738 AU	
morning rise	2609 Oct 15	21:55	12°♎26'44		
retrograde	2610 Feb 12	24:00	29°♎09'19		
opposition	2610 Apr 14	14:37	24°♎15'42	1°32'27	
min. Earth dist.	2610 Apr 15	12:11	24°♎08'45	4.46397 AU	
direct	2610 Jun 16	06:24	19°♎13'22		
	2610 Sep 18	06:59	0°♏		
evening set	2610 Oct 20	13:09	6°♏40'39		
max. Earth dist.	2610 Oct 31	17:15	9°♏05'48	6.44964 AU	
conjunction	2610 Nov 02	09:26	9°♏27'39	0°59'25	
minimum elong	2610 Nov 02	09:28	9°♏27'39	0°59'25	
morning rise	2610 Nov 15	03:00	12°♏13'29		
	2610 Nov 28	02:37	15°♏		
retrograde	2611 Mar 15	14:34	29°♏04'09		
opposition	2611 May 15	11:42	24°♏12'02	1°14'13	
min. Earth dist.	2611 May 16	21:21	24°♏01'19	4.41834 AU	

direct	2611 Jul 17	05:04	19°♏11'05		
	2611 Oct 18	13:44	0°♐		
evening set	2611 Nov 20	01:38	6°♐51'40		
max. Earth dist.	2611 Nov 30	14:44	9°♐11'42	6.36892 AU	
conjunction	2611 Dec 02	18:25	9°♐40'24	0°38'45	
minimum elong	2611 Dec 02	18:27	9°♐40'25	0°38'45	
morning rise	2611 Dec 15	09:39	12°♐28'33		
retrograde	2612 Apr 15	20:28	29°♐55'44		
opposition	2612 Jun 15	18:27	25°♐03'31	0°34'42	
min. Earth dist.	2612 Jun 17	08:03	24°♐51'32	4.30665 AU	
direct	2612 Aug 16	21:23	20°♐04'32		
	2612 Nov 12	01:36	0°♑		
evening set	2612 Dec 20	08:34	8°♑14'59		
max. Earth dist.	2612 Dec 31	01:22	10°♑41'34	6.23504 AU	
conjunction	2613 Jan 02	01:00	11°♑08'51	0°06'14	
minimum elong	2613 Jan 02	01:00	11°♑08'51	0°06'15	
behind sun begin	2613 Jan 01	17:26	11°♑04'33		
behind sun end	2613 Jan 02	08:33	11°♑13'10		
morning rise	2613 Jan 14	16:51	14°♑02'46		
desc. node	2613 Mar 10	14:01	25°♑31'15		
	2613 Apr 09	11:24	0°♒		
retrograde	2613 May 20	07:20	2°♒30'35		
	2613 Jun 30	16:02	30°℞♑		
opposition	2613 Jul 20	02:22	27°♑36'45	-0°17'58	
min. Earth dist.	2613 Jul 21	06:58	27°♑27'33	4.15891 AU	
direct	2613 Sep 18	23:08	22°♑40'18		
	2613 Nov 29	18:33	0°♒		
evening set	2614 Jan 22	07:05	11°♒31'09		
max. Earth dist.	2614 Feb 02	20:32	14°♒14'53	6.08617 AU	
conjunction	2614 Feb 04	01:43	14°♒32'10	-0°29'51	
minimum elong	2614 Feb 04	01:42	14°♒32'09	0°29'51	
	2614 Feb 06	00:43	15°♒		
morning rise	2614 Feb 16	21:34	17°♒34'04		
	2614 Apr 15	17:11	0°♓		
retrograde	2614 Jun 26	04:57	7°♓13'14		
opposition	2614 Aug 25	13:57	2°♓16'20	-1°08'07	
min. Earth dist.	2614 Aug 25	23:49	2°♓13'06	4.02140 AU	
	2614 Sep 12	15:04	30°℞♒		
direct	2614 Oct 23	23:59	27°♒22'00		
	2614 Dec 03	12:47	0°♓		
evening set	2615 Feb 26	09:14	16°♓51'23		
conjunction	2615 Mar 11	09:27	19°♓59'50	-0°56'47	
minimum elong	2615 Mar 11	09:25	19°♓59'49	0°56'47	
max. Earth dist.	2615 Mar 11	12:15	20°♓01'32	5.97284 AU	
morning rise	2615 Mar 24	12:00	23°♓09'45		
	2615 Apr 22	19:48	0°♈		
retrograde	2615 Aug 03	12:43	13°♈43'30		
opposition	2615 Oct 02	10:28	8°♈42'46	-1°34'39	
min. Earth dist.	2615 Oct 01	21:02	8°♈47'15	3.94550 AU	
direct	2615 Nov 29	15:06	3°♈49'06		
evening set	2616 Apr 03	08:55	23°♈37'39		
conjunction	2616 Apr 16	16:47	26°♈51'09	-1°02'23	
minimum elong	2616 Apr 16	16:48	26°♈51'10	1°02'23	
max. Earth dist.	2616 Apr 18	03:45	27°♈12'20	5.94117 AU	
	2616 Apr 29	17:25	0°♉		
morning rise	2616 Apr 30	03:55	0°♉06'19		
	2616 Jul 08	22:26	15°♉		
retrograde	2616 Sep 09	12:23	20°♉48'16		
min. Earth dist.	2616 Nov 06	19:48	15°♉55'01	3.96313 AU	
opposition	2616 Nov 08	03:36	15°♉44'13	-1°23'21	
	2616 Nov 13	14:21	15°℞♉		
direct	2617 Jan 04	23:20	10°♉48'56		
	2617 Feb 25	04:01	15°♉		
	2617 May 09	05:10	0°♊		
evening set	2617 May 11	02:18	0°♊26'36		
conjunction	2617 May 24	17:38	3°♊40'31	-0°43'17	
minimum elong	2617 May 24	17:41	3°♊40'33	0°43'17	
max. Earth dist.	2617 May 27	01:08	4°♊13'28	6.00573 AU	
morning rise	2617 Jun 07	11:16	6°♊55'27		
retrograde	2617 Oct 15	17:00	26°♊53'52		
min. Earth dist.	2617 Dec 12	18:01	22°♊00'58	4.06657 AU	
opposition	2617 Dec 14	05:34	21°♊48'51	-0°39'56	
direct	2618 Feb 10	15:44	16°♊50'37		
	2618 May 21	14:56	0°♋		
evening set	2618 Jun 17	02:31	5°♋54'06		
conjunction	2618 Jun 30	20:38	9°♋03'13	-0°08'34	
minimum elong	2618 Jun 30	20:39	9°♋03'13	0°08'34	
behind sun begin	2618 Jun 30	13:23	8°♋59'05		
behind sun end	2618 Jul 01	03:55	9°♋07'22		
max. Earth dist.	2618 Jul 03	01:53	9°♋33'45	6.13818 AU	
morning rise	2618 Jul 14	15:22	12°♋12'20		
asc. node	2618 Sep 29	11:54	27°♋14'29		
	2618 Oct 24	06:55	0°♌		
retrograde	2618 Nov 18	07:47	1°♌00'45		
	2618 Dec 13	04:42	30°℞♋		
min. Earth dist.	2619 Jan 15	20:20	26°♋07'15	4.21350 AU	
opposition	2619 Jan 17	00:53	25°♋57'36	0°15'00	
direct	2619 Mar 17	14:39	20°♋56'42		
	2619 Jun 07	16:23	0°♌		
evening set	2619 Jul 22	08:30	9°♌19'21		
conjunction	2619 Aug 04	23:30	12°♌20'36	0°27'35	
minimum elong	2619 Aug 04	23:29	12°♌20'35	0°27'35	
max. Earth dist.	2619 Aug 06	06:47	12°♌37'58	6.28757 AU	
	2619 Aug 16	23:16	15°♌		
morning rise	2619 Aug 18	13:25	15°♌21'01		
	2619 Nov 04	22:45	0°♍		
retrograde	2619 Dec 19	21:37	3°♍03'42		
	2620 Feb 02	21:47	30°℞♌		
opposition	2620 Feb 17	20:43	28°♌04'02	1°01'38	
min. Earth dist.	2620 Feb 17	09:10	28°♌07'52	4.35262 AU	
direct	2620 Apr 18	20:32	23°♌01'34		
	2620 Jun 29	23:32	0°♍		
evening set	2620 Aug 23	13:43	10°♍50'33		
conjunction	2620 Sep 05	22:12	13°♍44'11	0°53'47	
minimum elong	2620 Sep 05	22:11	13°♍44'10	0°53'47	
max. Earth dist.	2620 Sep 06	01:47	13°♍46'07	6.40578 AU	
morning rise	2620 Sep 19	04:13	16°♍36'29		
	2620 Nov 29	22:32	0°♎		
retrograde	2621 Jan 18	03:00	3°♎34'59		
	2621 Mar 08	23:34	30°℞♍		
opposition	2621 Mar 19	11:23	28°♍38'57	1°28'33	
min. Earth dist.	2621 Mar 19	17:55	28°♍36'49	4.44291 AU	
direct	2621 May 20	13:07	23°♍36'08		
	2621 Jul 29	05:01	0°♎		
evening set	2621 Sep 24	03:25	11°♎06'12		
max. Earth dist.	2621 Oct 06	04:54	13°♎41'55	6.46115 AU	
conjunction	2621 Oct 07	04:37	13°♎54'43	1°04'16	
minimum elong	2621 Oct 07	04:37	13°♎54'43	1°04'16	
morning rise	2621 Oct 20	02:59	16°♎41'53		
	2621 Dec 31	02:16	0°♏		
retrograde	2622 Feb 17	04:29	3°♏23'59		
	2622 Apr 07	01:06	30°℞♎		
opposition	2622 Apr 18	19:57	28°♎30'44	1°31'18	
min. Earth dist.	2622 Apr 19	20:17	28°♎22'55	4.46132 AU	

direct	2622 Jun 20 13:36	23°♎28'34	
	2622 Aug 30 02:21	0°♏	
evening set	2622 Oct 24 18:37	10°♏57'09	
max. Earth dist.	2622 Nov 04 17:50	13°♏20'05	6.44055 AU
conjunction	2622 Nov 06 14:12	13°♏44'15	0°57'26
minimum elong	2622 Nov 06 14:13	13°♏44'16	0°57'25
	2622 Nov 12 09:13	15°♏	
morning rise	2622 Nov 19 07:26	16°♏30'18	
	2623 Jan 30 16:27	0°♐	
retrograde	2623 Mar 20 00:14	3°♐25'13	
	2623 May 08 08:08	30°℞♏	
opposition	2623 May 19 21:06	28°♏33'12	1°09'52
min. Earth dist.	2623 May 21 08:22	28°♏21'57	4.40338 AU
direct	2623 Jul 21 13:19	23°♏32'26	
	2623 Sep 29 01:52	0°♐	
evening set	2623 Nov 24 08:57	11°♐17'28	
max. Earth dist.	2623 Dec 04 22:25	13°♐38'19	6.34924 AU
conjunction	2623 Dec 07 01:45	14°♐06'58	0°34'46
minimum elong	2623 Dec 07 01:47	14°♐06'58	0°34'46
morning rise	2623 Dec 19 16:49	16°♐55'53	
	2624 Feb 24 12:37	0°♑	
retrograde	2624 Apr 20 12:55	4°♑31'34	
	2624 Jun 17 18:02	30°℞♐	
opposition	2624 Jun 20 11:05	29°♐39'16	0°27'49
min. Earth dist.	2624 Jun 21 23:51	29°♐27'33	4.28350 AU
direct	2624 Aug 21 09:42	24°♐40'41	
	2624 Oct 21 19:56	0°♑	
evening set	2624 Dec 24 21:36	12°♑57'48	
max. Earth dist.	2625 Jan 04 15:37	15°♑25'58	6.21029 AU
conjunction	2625 Jan 06 14:06	15°♑52'45	0°01'06
minimum elong	2625 Jan 06 14:06	15°♑52'45	0°01'05
behind sun begin	2625 Jan 06 06:07	15°♑48'10	
behind sun end	2625 Jan 06 22:05	15°♑57'20	
desc. node	2625 Jan 18 02:21	18°♑31'45	
morning rise	2625 Jan 19 06:31	18°♑47'54	
	2625 Mar 13 06:02	0°♒	
retrograde	2625 May 25 11:04	7°♒27'00	
opposition	2625 Jul 25 03:53	2°♒32'50	-0°25'41
min. Earth dist.	2625 Jul 26 06:26	2°♒24'15	4.13443 AU
	2625 Aug 14 22:03	30°℞♑	
direct	2625 Sep 23 20:05	27°♑36'43	
	2625 Nov 02 02:13	0°♒	
	2626 Jan 20 10:41	15°♒	
evening set	2626 Jan 27 04:04	16°♒34'42	
conjunction	2626 Feb 08 23:30	19°♒36'58	-0°34'33
minimum elong	2626 Feb 08 23:28	19°♒36'57	0°34'32
max. Earth dist.	2626 Feb 07 23:22	19°♒22'38	6.06436 AU
morning rise	2626 Feb 21 20:06	22°♒40'11	
	2626 Mar 25 22:53	0°♓	
retrograde	2626 Jul 01 15:43	12°♓29'32	
opposition	2626 Aug 30 22:34	7°♓32'09	-1°13'48
min. Earth dist.	2626 Aug 31 04:49	7°♓30'06	4.00471 AU
direct	2626 Oct 29 02:42	2°♓38'06	
evening set	2627 Mar 03 14:12	22°♓12'01	
conjunction	2627 Mar 16 15:15	25°♓21'22	-0°59'05
minimum elong	2627 Mar 16 15:14	25°♓21'21	0°59'04
max. Earth dist.	2627 Mar 16 22:19	25°♓25'39	5.96266 AU
morning rise	2627 Mar 29 19:07	28°♓32'17	
	2627 Apr 04 21:32	0°♈	
retrograde	2627 Aug 08 23:19	19°♈10'11	
opposition	2627 Oct 07 21:06	14°♈08'49	-1°35'24
min. Earth dist.	2627 Oct 07 03:30	14°♈14'44	3.94320 AU
direct	2627 Dec 04 23:12	9°♈15'01	
evening set	2628 Apr 08 17:48	29°♈03'08	
	2628 Apr 12 16:17	0°♉	
conjunction	2628 Apr 22 02:55	2°♉16'55	-1°01'02
minimum elong	2628 Apr 22 02:56	2°♉16'56	1°01'03
max. Earth dist.	2628 Apr 23 19:20	2°♉41'21	5.94679 AU
morning rise	2628 May 05 14:59	5°♉32'14	
	2628 Jun 16 03:34	15°♉	
retrograde	2628 Sep 14 19:54	26°♉09'47	
min. Earth dist.	2628 Nov 12 01:22	21°♉16'24	3.97582 AU
opposition	2628 Nov 13 09:49	21°♉05'21	-1°18'41
direct	2629 Jan 10 07:25	16°♉09'41	
	2629 Apr 21 14:15	0°♊	
evening set	2629 May 16 09:57	5°♊42'24	
conjunction	2629 May 30 01:56	8°♊55'46	-0°38'58
minimum elong	2629 May 30 01:58	8°♊55'47	0°38'58
max. Earth dist.	2629 Jun 01 10:56	9°♊29'25	6.02401 AU
morning rise	2629 Jun 12 20:05	12°♊10'02	
	2629 Sep 15 08:36	0°♋	
retrograde	2629 Oct 20 13:23	1°♋58'12	
	2629 Nov 24 12:08	30°℞♊	
min. Earth dist.	2629 Dec 17 15:22	27°♊05'31	4.08839 AU
opposition	2629 Dec 19 03:15	26°♊53'17	-0°32'18
direct	2630 Feb 15 15:56	21°♊54'38	
	2630 May 01 23:50	0°♋	
evening set	2630 Jun 22 04:25	10°♋51'27	
conjunction	2630 Jul 05 22:16	13°♋59'25	-0°03'16
minimum elong	2630 Jul 05 22:17	13°♋59'26	0°03'16
behind sun begin	2630 Jul 05 13:58	13°♋54'42	
behind sun end	2630 Jul 06 06:37	14°♋04'09	
max. Earth dist.	2630 Jul 07 23:54	14°♋27'44	6.16160 AU
morning rise	2630 Jul 19 16:40	17°♋07'18	
asc. node	2630 Aug 08 22:55	21°♋37'01	
	2630 Sep 21 01:18	0°♌	
retrograde	2630 Nov 22 21:09	5°♌44'59	
opposition	2631 Jan 21 14:37	0°♌42'15	0°22'25
min. Earth dist.	2631 Jan 20 13:05	0°♌50'51	4.23626 AU
	2631 Jan 26 20:17	30°℞♋	
direct	2631 Mar 22 10:34	25°♋41'01	
	2631 May 15 17:58	0°♌	
evening set	2631 Jul 27 02:43	13°♌57'41	
	2631 Jul 31 19:55	15°♌	
conjunction	2631 Aug 09 17:05	16°♌57'46	0°32'02
minimum elong	2631 Aug 09 17:03	16°♌57'45	0°32'03
max. Earth dist.	2631 Aug 10 21:37	17°♌13'32	6.30800 AU
morning rise	2631 Aug 23 05:52	19°♌56'52	
	2631 Oct 11 12:28	0°♍	
retrograde	2631 Dec 24 03:28	7°♍31'35	
opposition	2632 Feb 22 04:41	2°♍32'27	1°06'44
min. Earth dist.	2632 Feb 21 19:00	2°♍35'40	4.36940 AU
	2632 Mar 13 08:43	30°℞♌	
direct	2632 Apr 23 07:50	27°♌29'52	
	2632 Jun 03 18:36	0°♍	
evening set	2632 Aug 28 01:44	15°♍15'08	
conjunction	2632 Sep 10 09:04	18°♍07'50	0°56'16
minimum elong	2632 Sep 10 09:02	18°♍07'49	0°56'15
max. Earth dist.	2632 Sep 10 07:24	18°♍06'56	6.41769 AU
morning rise	2632 Sep 23 14:01	20°♍59'13	
	2632 Nov 07 04:16	0°♎	
retrograde	2633 Jan 22 08:42	7°♎53'47	
opposition	2633 Mar 23 17:11	2°♎58'15	1°30'24
min. Earth dist.	2633 Mar 24 03:26	2°♎54'55	4.44942 AU

	2633 Apr 17 05:26	30°℞♍	
direct	2633 May 24 23:06	27°♍55'26	
	2633 Jul 01 23:41	0°♎	
evening set	2633 Sep 28 11:16	15°♎24'30	
max. Earth dist.	2633 Oct 10 08:08	17°♎57'49	6.46165 AU
conjunction	2633 Oct 11 11:39	18°♎12'40	1°04'19
minimum elong	2633 Oct 11 11:39	18°♎12'40	1°04'20
morning rise	2633 Oct 24 09:11	20°♎59'30	
	2633 Dec 08 03:24	0°♏	
retrograde	2634 Feb 21 10:04	7°♏42'05	
opposition	2634 Apr 23 03:02	2°♏49'04	1°29'41
min. Earth dist.	2634 Apr 24 04:51	2°♏40'47	4.45603 AU
	2634 May 16 12:01	30°℞♎	
direct	2634 Jun 24 20:30	27°♎47'02	
	2634 Aug 03 08:35	0°♏	
	2634 Oct 27 17:07	15°♏	
evening set	2634 Oct 29 01:25	15°♏17'28	
max. Earth dist.	2634 Nov 08 23:20	17°♏40'04	6.42987 AU
conjunction	2634 Nov 10 20:32	18°♏04'46	0°55'05
minimum elong	2634 Nov 10 20:34	18°♏04'47	0°55'05
morning rise	2634 Nov 23 13:13	20°♏51'04	
	2635 Jan 07 10:26	0°♐	
retrograde	2635 Mar 24 11:38	7°♐50'41	
opposition	2635 May 24 08:50	2°♐58'47	1°05'00
min. Earth dist.	2635 May 25 21:12	2°♐47'12	4.38789 AU
	2635 Jun 18 10:57	30°℞♏	
direct	2635 Jul 25 23:44	27°♏58'21	
	2635 Sep 01 09:13	0°♐	
evening set	2635 Nov 28 18:18	15°♐47'42	
max. Earth dist.	2635 Dec 09 06:11	18°♐08'23	6.33016 AU
conjunction	2635 Dec 11 10:49	18°♐37'52	0°30'28
minimum elong	2635 Dec 11 10:50	18°♐37'53	0°30'29
morning rise	2635 Dec 24 02:04	21°♐27'36	
	2636 Feb 02 11:06	0°♑	
retrograde	2636 Apr 25 08:34	9°♑11'37	
opposition	2636 Jun 25 05:55	4°♑19'11	0°20'36
min. Earth dist.	2636 Jun 26 17:38	4°♑07'46	4.26210 AU
	2636 Aug 05 10:37	30°℞♐	
direct	2636 Aug 26 00:47	29°♐20'57	
	2636 Sep 15 14:19	0°♑	
desc. node	2636 Nov 27 02:23	10°♑35'28	
evening set	2636 Dec 29 12:13	17°♑44'00	
max. Earth dist.	2637 Jan 09 10:26	20°♑15'16	6.18870 AU
conjunction	2637 Jan 11 05:07	20°♑39'58	-0°04'13
minimum elong	2637 Jan 11 05:06	20°♑39'58	0°04'13
behind sun begin	2637 Jan 10 21:14	20°♑35'26	
behind sun end	2637 Jan 11 12:58	20°♑44'30	
morning rise	2637 Jan 23 21:48	23°♑36'10	
	2637 Feb 21 12:55	0°♒	
retrograde	2637 May 30 15:01	12°♒25'15	
opposition	2637 Jul 30 06:28	7°♒30'47	-0°33'20
min. Earth dist.	2637 Jul 31 06:25	7°♒23'02	4.11458 AU
direct	2637 Sep 28 17:20	2°♒35'07	
	2638 Jan 03 01:57	15°♒	
evening set	2638 Feb 01 01:39	21°♒38'26	
conjunction	2638 Feb 13 21:31	24°♒41'38	-0°39'00
minimum elong	2638 Feb 13 21:29	24°♒41'37	0°39'00
max. Earth dist.	2638 Feb 13 00:48	24°♒29'17	6.04804 AU
morning rise	2638 Feb 26 19:05	27°♒45'57	
	2638 Mar 08 06:44	0°♓	
retrograde	2638 Jul 06 23:23	17°♓43'21	
opposition	2638 Sep 05 06:18	12°♓45'23	-1°18'51
min. Earth dist.	2638 Sep 05 08:10	12°♓44'46	3.99372 AU
direct	2638 Nov 03 05:59	7°♓51'30	
evening set	2639 Mar 08 17:41	27°♓27'52	
	2639 Mar 19 05:22	0°♈	
conjunction	2639 Mar 21 19:49	0°♈37'52	-1°00'51
minimum elong	2639 Mar 21 19:48	0°♈37'52	1°00'50
max. Earth dist.	2639 Mar 22 09:22	0°♈46'05	5.95810 AU
morning rise	2639 Apr 04 00:34	3°♈49'26	
retrograde	2639 Aug 14 08:47	24°♈29'03	
min. Earth dist.	2639 Oct 12 09:02	19°♈33'45	3.94572 AU
opposition	2639 Oct 13 04:33	19°♈27'11	-1°35'18
direct	2639 Dec 10 06:06	14°♈33'16	
	2640 Mar 26 16:26	0°♉	
evening set	2640 Apr 13 23:45	4°♉19'27	
conjunction	2640 Apr 27 09:49	7°♉33'16	-0°59'14
minimum elong	2640 Apr 27 09:51	7°♉33'17	0°59'14
max. Earth dist.	2640 Apr 29 05:22	7°♉59'30	5.95590 AU
morning rise	2640 May 10 22:58	10°♉48'37	
	2640 May 28 18:20	15°♉	
	2640 Aug 22 01:29	0°♊	
retrograde	2640 Sep 19 20:47	1°♊20'18	
	2640 Oct 18 10:56	30°℞♉	
min. Earth dist.	2640 Nov 17 01:09	26°♉27'20	3.99057 AU
opposition	2640 Nov 18 11:22	26°♉15'42	-1°13'31
direct	2641 Jan 15 09:10	21°♉19'40	
	2641 Apr 02 10:10	0°♊	
evening set	2641 May 21 13:27	10°♊47'15	
conjunction	2641 Jun 04 05:53	13°♊59'59	-0°34'29
minimum elong	2641 Jun 04 05:56	14°♊00'00	0°34'29
max. Earth dist.	2641 Jun 06 13:34	14°♊32'41	6.04282 AU
morning rise	2641 Jun 18 00:27	17°♊13'31	
	2641 Aug 17 08:07	0°♋	
retrograde	2641 Oct 25 06:34	6°♋51'55	
min. Earth dist.	2641 Dec 22 10:42	1°♋58'50	4.10904 AU
opposition	2641 Dec 23 20:50	1°♋47'12	-0°24'45
	2642 Jan 06 07:38	30°℞♊	
direct	2642 Feb 20 14:25	26°♊48'10	
	2642 Apr 06 21:13	0°♋	
asc. node	2642 Jun 19 17:47	13°♋59'59	
evening set	2642 Jun 27 02:06	15°♋39'06	
conjunction	2642 Jul 10 19:54	18°♋46'05	0°02'02
minimum elong	2642 Jul 10 19:54	18°♋46'06	0°02'01
behind sun begin	2642 Jul 10 11:32	18°♋41'22	
behind sun end	2642 Jul 11 04:17	18°♋50'50	
max. Earth dist.	2642 Jul 12 20:06	19°♋13'28	6.18250 AU
morning rise	2642 Jul 24 13:39	21°♋52'48	
	2642 Aug 31 08:22	0°♌	
retrograde	2642 Nov 27 06:55	10°♌21'09	
min. Earth dist.	2643 Jan 25 01:09	5°♌26'58	4.25562 AU
opposition	2643 Jan 26 00:59	5°♌18'58	0°29'26
direct	2643 Mar 27 00:39	0°♌17'32	
	2643 Jul 15 14:09	15°♌	
evening set	2643 Jul 31 18:19	18°♌29'44	
conjunction	2643 Aug 14 07:42	21°♌28'46	0°36'10
minimum elong	2643 Aug 14 07:40	21°♌28'45	0°36'11
max. Earth dist.	2643 Aug 15 06:30	21°♌41'20	6.32432 AU
morning rise	2643 Aug 27 19:40	24°♌26'48	
	2643 Sep 22 22:10	0°♍	
retrograde	2643 Dec 28 09:49	11°♍55'18	
opposition	2644 Feb 26 10:56	6°♍56'44	1°11'21
min. Earth dist.	2644 Feb 26 04:51	6°♍58'44	4.38179 AU
direct	2644 Apr 27 18:42	1°♍54'02	

evening set	2644 Sep 01	11:56	19°♍37'02		
conjunction	2644 Sep 14	18:29	22°♍29'06	0°58'22	
minimum elong	2644 Sep 14	18:27	22°♍29'05	0°58'22	
max. Earth dist.	2644 Sep 14	14:07	22°♍26'44	6.42530 AU	
morning rise	2644 Sep 27	22:15	25°♍19'45		
	2644 Oct 20	03:07	0°♎		
retrograde	2645 Jan 26	12:17	12°♎11'57		
opposition	2645 Mar 27	22:31	7°♎16'51	1°31'44	
min. Earth dist.	2645 Mar 28	10:13	7°♎13'03	4.45216 AU	
direct	2645 May 29	05:22	2°♎14'07		
evening set	2645 Oct 02	18:40	19°♎43'14		
max. Earth dist.	2645 Oct 14	11:23	22°♎14'32	6.45934 AU	
conjunction	2645 Oct 15	18:07	22°♎31'08	1°04'01	
minimum elong	2645 Oct 15	18:07	22°♎31'09	1°04'00	
morning rise	2645 Oct 28	14:54	25°♎17'46		
	2645 Nov 20	00:01	0°♏		
retrograde	2646 Feb 25	18:07	12°♏01'43		
opposition	2646 Apr 27	10:43	7°♏08'59	1°27'33	
min. Earth dist.	2646 Apr 28	15:01	6°♏59'55	4.44897 AU	
direct	2646 Jun 29	05:31	2°♏07'08		
	2646 Oct 11	09:15	15°♏		
evening set	2646 Nov 02	08:30	19°♏39'40		
max. Earth dist.	2646 Nov 13	03:54	22°♏01'20	6.41852 AU	
conjunction	2646 Nov 15	03:08	22°♏27'13	0°52'25	
minimum elong	2646 Nov 15	03:10	22°♏27'14	0°52'26	
morning rise	2646 Nov 27	19:29	25°♏13'49		
	2646 Dec 20	04:12	0°♐		
retrograde	2647 Mar 28	23:15	12°♐18'14		
opposition	2647 May 28	21:09	7°♐26'17	0°59'43	
min. Earth dist.	2647 May 30	09:08	7°♐14'49	4.37299 AU	
direct	2647 Jul 30	09:16	2°♐26'05		
evening set	2647 Dec 03	03:35	20°♐19'15		
max. Earth dist.	2647 Dec 13	17:34	22°♐41'37	6.31286 AU	
conjunction	2647 Dec 15	20:03	23°♐10'02	0°26'00	
minimum elong	2647 Dec 15	20:05	23°♐10'03	0°25'59	
morning rise	2647 Dec 28	11:11	26°♐00'27		
	2648 Jan 15	14:07	0°♑		
retrograde	2648 Apr 30	04:14	13°♑52'04		
opposition	2648 Jun 30	00:48	8°♑59'25	0°13'14	
min. Earth dist.	2648 Jul 01	11:55	8°♑48'12	4.24329 AU	
direct	2648 Aug 30	16:19	4°♑01'31		
desc. node	2648 Oct 06	15:27	6°♑05'04		
evening set	2649 Jan 03	02:11	22°♑29'17		
max. Earth dist.	2649 Jan 14	01:40	25°♑01'58	6.16974 AU	
conjunction	2649 Jan 15	19:08	25°♑26'04	-0°09'22	
minimum elong	2649 Jan 15	19:08	25°♑26'04	0°09'22	
behind sun begin	2649 Jan 15	12:24	25°♑22'10		
behind sun end	2649 Jan 16	01:53	25°♑29'58		
morning rise	2649 Jan 28	12:27	28°♑23'17		
	2649 Feb 04	12:31	0°♒		
	2649 Apr 26	06:47	15°♒		
retrograde	2649 Jun 04	16:30	17°♒21'25		
	2649 Jul 14	11:26	15°℞♒		
opposition	2649 Aug 04	07:49	12°♒26'26	-0°40'41	
min. Earth dist.	2649 Aug 05	04:33	12°♒19'43	4.09684 AU	
direct	2649 Oct 03	13:22	7°♒31'00		
	2649 Dec 14	12:19	15°♒		
evening set	2650 Feb 05	21:53	26°♒38'59		
conjunction	2650 Feb 18	18:30	29°♒43'09	-0°43'08	
minimum elong	2650 Feb 18	18:28	29°♒43'07	0°43'08	
max. Earth dist.	2650 Feb 18	03:14	29°♒34'00	6.03311 AU	
	2650 Feb 19	22:40	0°♓		
morning rise	2650 Mar 03	16:43	2°♓48'25		
retrograde	2650 Jul 12	07:31	22°♓53'12		
opposition	2650 Sep 10	12:04	17°♓54'41	-1°23'16	
min. Earth dist.	2650 Sep 10	11:53	17°♓54'45	3.98316 AU	
direct	2650 Nov 08	08:48	13°♓00'53		
	2651 Mar 02	16:29	0°♈		
evening set	2651 Mar 13	19:56	2°♈39'48		
conjunction	2651 Mar 26	23:01	5°♈50'30	-1°02'09	
minimum elong	2651 Mar 26	23:00	5°♈50'30	1°02'09	
max. Earth dist.	2651 Mar 27	16:10	6°♈00'54	5.95272 AU	
morning rise	2651 Apr 09	05:02	9°♈02'51		
retrograde	2651 Aug 19	14:58	29°♈44'20		
min. Earth dist.	2651 Oct 17	11:25	24°♈49'39	3.94644 AU	
opposition	2651 Oct 18	10:12	24°♈41'59	-1°34'29	
direct	2651 Dec 15	08:48	19°♈47'51		
	2652 Mar 08	05:35	0°♉		
evening set	2652 Apr 19	04:56	9°♉33'07		
conjunction	2652 May 02	16:02	12°♉47'07	-0°56'59	
minimum elong	2652 May 02	16:03	12°♉47'08	0°56'59	
max. Earth dist.	2652 May 04	13:26	13°♉14'25	5.96245 AU	
	2652 May 11	21:23	15°♉		
morning rise	2652 May 16	06:11	16°♉02'35		
	2652 Jul 20	07:25	0°♊		
retrograde	2652 Sep 24	22:04	6°♊29'35		
min. Earth dist.	2652 Nov 22	02:02	1°♊36'29	4.00202 AU	
opposition	2652 Nov 23	12:27	1°♊24'44	-1°07'52	
	2652 Dec 04	01:02	30°℞♉		
direct	2653 Jan 20	12:28	26°♉28'16		
	2653 Mar 08	11:36	0°♊		
evening set	2653 May 26	17:22	15°♊52'05		
conjunction	2653 Jun 09	10:31	19°♊04'24	-0°29'45	
minimum elong	2653 Jun 09	10:33	19°♊04'25	0°29'45	
max. Earth dist.	2653 Jun 11	19:31	19°♊37'44	6.05823 AU	
morning rise	2653 Jun 23	05:16	22°♊17'18		
	2653 Jul 27	19:41	0°♋		
retrograde	2653 Oct 30	01:39	11°♋47'04		
min. Earth dist.	2653 Dec 27	05:46	6°♋53'58	4.12664 AU	
opposition	2653 Dec 28	15:06	6°♋42'38	-0°16'58	
direct	2654 Feb 25	11:54	1°♋43'13		
asc. node	2654 Apr 29	09:54	7°♋32'22		
evening set	2654 Jul 02	01:35	20°♋29'28		
conjunction	2654 Jul 15	18:58	23°♋35'31	0°07'15	
minimum elong	2654 Jul 15	18:58	23°♋35'31	0°07'15	
behind sun begin	2654 Jul 15	11:20	23°♋31'13		
behind sun end	2654 Jul 16	02:36	23°♋39'49		
max. Earth dist.	2654 Jul 17	15:18	24°♋00'35	6.20076 AU	
morning rise	2654 Jul 29	12:24	26°♋41'13		
	2654 Aug 13	11:38	0°♌		
	2654 Nov 28	08:50	15°♌		
retrograde	2654 Dec 01	18:26	15°♌01'09		
	2654 Dec 05	03:50	15°℞♌		
opposition	2655 Jan 30	13:20	9°♌59'25	0°36'23	
min. Earth dist.	2655 Jan 29	15:42	10°♌06'41	4.27304 AU	
direct	2655 Mar 31	17:21	4°♌57'45		
	2655 Jun 27	15:49	15°♌		
evening set	2655 Aug 05	11:40	23°♌05'58		
conjunction	2655 Aug 19	00:23	26°♌04'02	0°40'12	
minimum elong	2655 Aug 19	00:21	26°♌04'00	0°40'11	
max. Earth dist.	2655 Aug 19	21:08	26°♌15'26	6.33987 AU	
morning rise	2655 Sep 01	11:08	29°♌00'58		
	2655 Sep 05	23:48	0°♍		

retrograde	2656 Jan 01 17:19	16°♍23'25	
opposition	2656 Mar 01 19:31	11°♍25'27	1°15'40
min. Earth dist.	2656 Mar 01 15:02	11°♍26'56	4.39468 AU
direct	2656 May 02 06:13	6°♍22'49	
evening set	2656 Sep 06 00:12	24°♍03'06	
conjunction	2656 Sep 19 05:31	26°♍54'20	1°00'13
minimum elong	2656 Sep 19 05:30	26°♍54'19	1°00'13
max. Earth dist.	2656 Sep 18 20:38	26°♍49'32	6.43479 AU
morning rise	2656 Oct 02 08:21	29°♍44'13	
	2656 Oct 03 13:45	0°♎	
retrograde	2657 Jan 30 19:31	16°♎33'20	
opposition	2657 Apr 01 05:49	11°♎38'40	1°32'38
min. Earth dist.	2657 Apr 01 20:12	11°♎34'01	4.45809 AU
direct	2657 Jun 02 15:53	6°♎36'04	
evening set	2657 Oct 07 02:49	24°♎03'52	
max. Earth dist.	2657 Oct 18 17:35	26°♎34'05	6.46144 AU
conjunction	2657 Oct 20 01:33	26°♎51'23	1°03'24
minimum elong	2657 Oct 20 01:33	26°♎51'23	1°03'23
morning rise	2657 Nov 01 21:21	29°♎37'36	
	2657 Nov 03 15:05	0°♏	
	2658 Jan 31 04:43	15°♏	
retrograde	2658 Mar 01 23:51	16°♏21'30	
	2658 Mar 31 21:22	15°℞♏	
opposition	2658 May 01 18:48	11°♏28'58	1°24'59
min. Earth dist.	2658 May 02 23:18	11°♏19'51	4.44725 AU
direct	2658 Jul 03 12:47	6°♏27'22	
	2658 Sep 23 11:22	15°♏	
evening set	2658 Nov 06 14:43	24°♏00'04	
max. Earth dist.	2658 Nov 17 08:59	26°♏21'22	6.41313 AU
conjunction	2658 Nov 19 08:43	26°♏47'36	0°49'33
minimum elong	2658 Nov 19 08:45	26°♏47'37	0°49'33
morning rise	2658 Dec 02 00:38	29°♏34'15	
	2658 Dec 03 23:52	0°♐	
retrograde	2659 Apr 02 10:32	16°♐41'45	
opposition	2659 Jun 02 08:21	11°♐49'51	0°54'14
min. Earth dist.	2659 Jun 03 21:37	11°♐37'59	4.36393 AU
direct	2659 Aug 03 20:06	6°♐49'57	
evening set	2659 Dec 07 10:29	24°♐44'59	
max. Earth dist.	2659 Dec 17 23:31	27°♐07'16	6.30081 AU
conjunction	2659 Dec 20 02:44	27°♐36'10	0°21'32
minimum elong	2659 Dec 20 02:45	27°♐36'11	0°21'31
	2659 Dec 30 17:44	0°♑	
morning rise	2660 Jan 01 17:56	0°♑27'05	
retrograde	2660 May 04 18:56	18°♑24'51	
opposition	2660 Jul 04 16:22	13°♑31'56	0°06'02
min. Earth dist.	2660 Jul 06 01:48	13°♑21'14	4.22884 AU
desc. node	2660 Aug 18 12:35	9°♑00'17	
direct	2660 Sep 04 03:36	8°♑34'20	
evening set	2661 Jan 07 12:36	27°♑05'44	
max. Earth dist.	2661 Jan 18 15:26	29°♑40'51	6.15415 AU
conjunction	2661 Jan 20 05:53	0°♒03'17	-0°14'15
minimum elong	2661 Jan 20 05:52	0°♒03'16	0°14'14
behind sun begin	2661 Jan 20 01:51	0°♒00'57	
behind sun end	2661 Jan 20 09:52	0°♒05'36	
	2661 Jan 20 00:14	0°♒	
morning rise	2661 Feb 01 23:27	3°♒01'18	
	2661 Mar 30 08:58	15°♒	
retrograde	2661 Jun 09 15:29	22°♒07'35	
opposition	2661 Aug 09 04:55	17°♒12'15	-0°47'28
min. Earth dist.	2661 Aug 10 00:49	17°♒05'47	4.08118 AU
	2661 Aug 26 19:19	15°℞♒	
direct	2661 Oct 08 07:12	12°♒17'05	
	2661 Nov 18 21:46	15°♒	
	2662 Feb 04 07:11	0°♓	
evening set	2662 Feb 10 14:05	1°♓29'26	
conjunction	2662 Feb 23 11:20	4°♓34'31	-0°46'47
minimum elong	2662 Feb 23 11:18	4°♓34'30	0°46'47
max. Earth dist.	2662 Feb 22 22:01	4°♓26'32	6.01874 AU
morning rise	2662 Mar 08 10:34	7°♓40'52	
retrograde	2662 Jul 17 09:33	27°♓53'04	
opposition	2662 Sep 15 13:14	22°♓54'05	-1°26'54
min. Earth dist.	2662 Sep 15 09:44	22°♓55'15	3.97171 AU
direct	2662 Nov 13 05:05	18°♓00'21	
	2663 Feb 13 14:52	0°♈	
evening set	2663 Mar 18 18:35	7°♈42'45	
conjunction	2663 Mar 31 22:45	10°♈54'18	-1°02'56
minimum elong	2663 Mar 31 22:45	10°♈54'18	1°02'56
max. Earth dist.	2663 Apr 01 19:14	11°♈06'45	5.94527 AU
morning rise	2663 Apr 14 05:55	14°♈07'31	
	2663 Jun 28 19:32	0°♉	
retrograde	2663 Aug 24 18:22	4°♉52'04	
	2663 Oct 22 04:27	30°℞♈	
opposition	2663 Oct 23 12:12	29°♈49'16	-1°33'00
min. Earth dist.	2663 Oct 22 12:05	29°♈57'25	3.94386 AU
direct	2663 Dec 20 09:47	24°♈54'54	
	2664 Feb 15 02:47	0°♉	
evening set	2664 Apr 24 07:50	14°♉41'01	
	2664 Apr 25 15:36	15°♉	
conjunction	2664 May 07 20:13	17°♉55'28	-0°54'22
minimum elong	2664 May 07 20:15	17°♉55'29	0°54'22
max. Earth dist.	2664 May 09 21:18	18°♉24'55	5.96518 AU
morning rise	2664 May 21 11:20	21°♉11'15	
	2664 Jun 29 05:37	0°♊	
retrograde	2664 Sep 29 23:05	11°♊34'56	
min. Earth dist.	2664 Nov 27 00:22	6°♊41'58	4.00977 AU
opposition	2664 Nov 28 11:23	6°♊30'02	-1°01'52
direct	2665 Jan 25 12:19	1°♊33'12	
evening set	2665 May 31 20:27	20°♊54'50	
conjunction	2665 Jun 14 14:00	24°♊06'49	-0°24'54
minimum elong	2665 Jun 14 14:02	24°♊06'50	0°24'53
max. Earth dist.	2665 Jun 16 21:46	24°♊39'20	6.07021 AU
morning rise	2665 Jun 28 09:15	27°♊19'20	
	2665 Jul 10 01:55	0°♋	
retrograde	2665 Nov 03 18:25	16°♋41'43	
min. Earth dist.	2665 Dec 31 23:42	11°♋48'39	4.14153 AU
opposition	2666 Jan 02 08:43	11°♋37'26	-0°09'14
direct	2666 Mar 02 08:34	6°♋37'36	
asc. node	2666 Mar 09 12:45	6°♋42'46	
evening set	2666 Jul 07 00:39	25°♋19'55	
conjunction	2666 Jul 20 17:50	28°♋25'06	0°12'21
minimum elong	2666 Jul 20 17:49	28°♋25'06	0°12'22
behind sun begin	2666 Jul 20 12:29	28°♋22'06	
behind sun end	2666 Jul 20 23:10	28°♋28'05	
max. Earth dist.	2666 Jul 22 12:53	28°♋49'22	6.21749 AU
	2666 Jul 27 18:20	0°♌	
morning rise	2666 Aug 03 10:30	1°♌29'45	
	2666 Oct 10 22:00	15°♌	
retrograde	2666 Dec 06 06:35	19°♌41'32	
	2667 Feb 01 14:28	15°℞♌	
min. Earth dist.	2667 Feb 03 05:45	14°♌46'51	4.28996 AU
opposition	2667 Feb 04 01:34	14°♌40'13	0°43'03
direct	2667 Apr 05 09:56	9°♌38'19	
	2667 Jun 06 03:15	15°♌	
evening set	2667 Aug 10 04:58	27°♌42'15	

	2667 Aug 20 16:59	0°♍	
conjunction	2667 Aug 23 16:37	0°♍39'16	0°43'56
minimum elong	2667 Aug 23 16:35	0°♍39'14	0°43'55
max. Earth dist.	2667 Aug 24 09:17	0°♍48'23	6.35541 AU
morning rise	2667 Sep 06 02:26	3°♍35'07	
retrograde	2668 Jan 06 00:02	20°♍51'14	
opposition	2668 Mar 06 03:44	15°♍53'36	1°19'30
min. Earth dist.	2668 Mar 06 01:35	15°♍54'19	4.40767 AU
direct	2668 May 06 18:23	10°♍50'48	
evening set	2668 Sep 10 11:29	28°♍27'57	
	2668 Sep 17 14:41	0°♎	
conjunction	2668 Sep 23 15:55	1°♎18'25	1°01'42
minimum elong	2668 Sep 23 15:54	1°♎18'25	1°01'42
max. Earth dist.	2668 Sep 23 04:57	1°♎12'30	6.44396 AU
morning rise	2668 Oct 06 17:29	4°♎07'29	
retrograde	2669 Feb 04 00:12	20°♎53'33	
opposition	2669 Apr 05 12:39	15°♎59'12	1°33'00
min. Earth dist.	2669 Apr 06 04:45	15°♎54'00	4.46267 AU
direct	2669 Jun 07 00:25	10°♎56'39	
evening set	2669 Oct 11 10:21	28°♎23'23	
	2669 Oct 18 21:42	0°♏	
max. Earth dist.	2669 Oct 22 20:09	0°♏51'06	6.46071 AU
conjunction	2669 Oct 24 08:05	1°♏10'34	1°02'25
minimum elong	2669 Oct 24 08:06	1°♏10'34	1°02'25
morning rise	2669 Nov 06 03:18	3°♏56'32	
	2670 Jan 01 16:47	15°♏	
retrograde	2670 Mar 06 08:30	20°♏41'26	
opposition	2670 May 06 03:19	15°♏49'02	1°21'55
min. Earth dist.	2670 May 07 10:28	15°♏39'05	4.44112 AU
	2670 May 12 13:21	15°℞♏	
direct	2670 Jul 07 22:30	10°♏47'33	
	2670 Sep 01 06:47	15°♏	
evening set	2670 Nov 10 21:27	28°♏21'52	
	2670 Nov 18 08:35	0°♐	
max. Earth dist.	2670 Nov 21 14:15	0°♐42'44	6.40190 AU
conjunction	2670 Nov 23 15:10	1°♐09'40	0°46'20
minimum elong	2670 Nov 23 15:11	1°♐09'41	0°46'20
morning rise	2670 Dec 06 06:41	3°♐56'38	
retrograde	2671 Apr 06 22:10	21°♐09'15	
opposition	2671 Jun 06 21:11	16°♐17'15	0°48'17
min. Earth dist.	2671 Jun 08 09:59	16°♐05'32	4.34822 AU
direct	2671 Aug 08 05:31	11°♐17'36	
evening set	2671 Dec 11 19:59	29°♐16'52	
	2671 Dec 15 00:39	0°♑	
max. Earth dist.	2671 Dec 22 09:56	1°♑40'17	6.28178 AU
conjunction	2671 Dec 24 12:10	2°♑08'47	0°16'46
minimum elong	2671 Dec 24 12:11	2°♑08'47	0°16'46
morning rise	2672 Jan 06 03:31	5°♑00'32	
retrograde	2672 May 09 16:45	23°♑07'02	
desc. node	2672 Jun 28 04:59	19°♑39'27	
opposition	2672 Jul 09 12:24	18°♑13'53	-0°01'32
min. Earth dist.	2672 Jul 10 21:46	18°♑03'11	4.20756 AU
direct	2672 Sep 08 20:22	13°♑16'36	
	2673 Jan 03 22:25	0°♒	
evening set	2673 Jan 12 03:51	1°♒53'58	
max. Earth dist.	2673 Jan 23 08:41	4°♒31'00	6.13243 AU
conjunction	2673 Jan 24 21:31	4°♒52'35	-0°19'18
minimum elong	2673 Jan 24 21:30	4°♒52'34	0°19'18
morning rise	2673 Feb 06 15:47	7°♒51'49	
	2673 Mar 10 08:36	15°♒	
retrograde	2673 Jun 14 18:58	27°♒08'31	
opposition	2673 Aug 14 08:12	22°♒12'44	-0°54'22
min. Earth dist.	2673 Aug 15 00:32	22°♒07'26	4.06103 AU
direct	2673 Oct 13 04:19	17°♒17'53	
	2674 Jan 18 01:03	0°♓	
evening set	2674 Feb 15 13:18	6°♓36'14	
conjunction	2674 Feb 28 11:22	9°♓42'25	-0°50'20
minimum elong	2674 Feb 28 11:20	9°♓42'24	0°50'19
max. Earth dist.	2674 Feb 28 02:43	9°♓37'12	6.00202 AU
morning rise	2674 Mar 13 11:34	12°♓49'57	
	2674 Jun 07 06:39	0°♈	
retrograde	2674 Jul 22 20:25	3°♈10'14	
	2674 Sep 06 20:20	30°℞♓	
opposition	2674 Sep 20 21:29	28°♓10'43	-1°30'05
min. Earth dist.	2674 Sep 20 15:23	28°♓12'45	3.96035 AU
direct	2674 Nov 18 10:14	23°♓17'03	
	2675 Jan 23 16:00	0°♈	
evening set	2675 Mar 24 00:35	13°♈02'40	
conjunction	2675 Apr 06 06:03	16°♈15'02	-1°03'16
minimum elong	2675 Apr 06 06:03	16°♈15'02	1°03'15
max. Earth dist.	2675 Apr 07 08:23	16°♈31'01	5.94054 AU
morning rise	2675 Apr 19 14:25	19°♈29'02	
	2675 Jun 04 22:36	0°♉	
retrograde	2675 Aug 30 04:09	10°♉14'33	
opposition	2675 Oct 28 20:10	5°♉11'25	-1°30'39
min. Earth dist.	2675 Oct 27 17:31	5°♉20'26	3.94678 AU
direct	2675 Dec 25 16:01	0°♉16'54	
	2676 Apr 08 05:03	15°♉	
evening set	2676 Apr 29 16:28	20°♉01'25	
conjunction	2676 May 13 05:42	23°♉15'49	-0°51'12
minimum elong	2676 May 13 05:44	23°♉15'51	0°51'12
max. Earth dist.	2676 May 15 08:27	23°♉46'11	5.97541 AU
morning rise	2676 May 26 21:53	26°♉31'34	
	2676 Jun 10 17:41	0°♊	
retrograde	2676 Oct 05 00:23	16°♊48'20	
min. Earth dist.	2676 Dec 02 01:01	11°♊55'46	4.02620 AU
opposition	2676 Dec 03 13:27	11°♊43'20	-0°55'11
direct	2677 Jan 30 16:28	6°♊46'05	
evening set	2677 Jun 06 01:49	26°♊02'12	
conjunction	2677 Jun 19 19:45	29°♊13'21	-0°19'46
minimum elong	2677 Jun 19 19:46	29°♊13'22	0°19'46
max. Earth dist.	2677 Jun 22 03:46	29°♊45'51	6.09151 AU
	2677 Jun 23 04:09	0°♋	
morning rise	2677 Jul 03 14:50	2°♋24'48	
retrograde	2677 Nov 08 12:13	21°♋36'16	
min. Earth dist.	2678 Jan 05 19:11	16°♋42'54	4.16522 AU
opposition	2678 Jan 07 02:27	16°♋32'18	-0°01'25
asc. node	2678 Jan 17 05:50	15°♋10'50	
direct	2678 Mar 07 07:18	11°♋32'08	
evening set	2678 Jul 11 22:54	0°♌07'36	
	2678 Jul 11 09:15	0°♌	
conjunction	2678 Jul 25 15:28	3°♌11'29	0°17'21
minimum elong	2678 Jul 25 15:26	3°♌11'28	0°17'21
max. Earth dist.	2678 Jul 27 07:35	3°♌33'58	6.24150 AU
morning rise	2678 Aug 08 07:22	6°♌14'44	
	2678 Sep 18 21:26	15°♌	
retrograde	2678 Dec 10 14:08	24°♌16'22	
opposition	2679 Feb 08 11:42	19°♌15'31	0°49'16
min. Earth dist.	2679 Feb 07 17:34	19°♌21'35	4.31228 AU
	2679 Mar 18 21:59	15°℞♌	
direct	2679 Apr 10 00:13	14°♌13'25	
	2679 May 02 10:24	15°♌	
	2679 Aug 04 14:20	0°♍	

evening set	2679 Aug 14	19:06	2°♍11'41	
conjunction	2679 Aug 28	05:46	5°♍07'30	0°47'18
minimum elong	2679 Aug 28	05:44	5°♍07'29	0°47'18
max. Earth dist.	2679 Aug 28	18:24	5°♍14'24	6.37431 AU
morning rise	2679 Sep 10	14:19	8°♍02'05	
retrograde	2680 Jan 10	04:31	25°♍11'35	
opposition	2680 Mar 10	09:20	20°♍14'29	1°22'44
min. Earth dist.	2680 Mar 10	10:25	20°♍14'08	4.42182 AU
direct	2680 May 11	04:23	15°♍11'41	
	2680 Sep 01	18:31	0°♎	
evening set	2680 Sep 14	19:32	2°♎45'41	
conjunction	2680 Sep 27	22:52	5°♎35'25	1°02'48
minimum elong	2680 Sep 27	22:51	5°♎35'24	1°02'47
max. Earth dist.	2680 Sep 27	06:32	5°♎26'36	6.45210 AU
morning rise	2680 Oct 10	23:31	8°♎23'47	
retrograde	2681 Feb 08	03:46	25°♎07'44	
opposition	2681 Apr 09	17:05	20°♎13'42	1°32'52
min. Earth dist.	2681 Apr 10	12:09	20°♎07'33	4.46451 AU
direct	2681 Jun 11	06:54	15°♎11'12	
	2681 Oct 03	05:59	0°♏	
evening set	2681 Oct 15	15:20	2°♏38'02	
max. Earth dist.	2681 Oct 26	22:47	5°♏04'41	6.45604 AU
conjunction	2681 Oct 28	12:32	5°♏25'09	1°01'07
minimum elong	2681 Oct 28	12:33	5°♏25'10	1°01'07
morning rise	2681 Nov 10	06:55	8°♏11'03	
	2681 Dec 13	04:02	15°♏	
retrograde	2682 Mar 10	14:24	24°♏58'31	
opposition	2682 May 10	10:26	20°♏06'17	1°18'30
min. Earth dist.	2682 May 11	18:48	19°♏55'57	4.43022 AU
direct	2682 Jul 12	04:31	15°♏05'02	
	2682 Nov 02	14:52	0°♐	
evening set	2682 Nov 15	03:13	2°♐42'37	
max. Earth dist.	2682 Nov 25	17:14	5°♐02'35	6.38545 AU
conjunction	2682 Nov 27	20:28	5°♐30'55	0°42'55
minimum elong	2682 Nov 27	20:30	5°♐30'56	0°42'54
morning rise	2682 Dec 10	11:59	8°♐18'31	
retrograde	2683 Apr 11	13:06	25°♐38'17	
opposition	2683 Jun 11	10:47	20°♐46'13	0°42'06
min. Earth dist.	2683 Jun 13	00:44	20°♐34'07	4.32704 AU
direct	2683 Aug 12	17:02	15°♐46'50	
	2683 Nov 28	19:56	0°♑	
evening set	2683 Dec 16	06:10	3°♑52'07	
max. Earth dist.	2683 Dec 26	21:08	6°♑16'54	6.25765 AU
conjunction	2683 Dec 28	22:34	6°♑45'04	0°11'54
minimum elong	2683 Dec 28	22:35	6°♑45'05	0°11'55
behind sun begin	2683 Dec 28	16:59	6°♑41'55	
behind sun end	2683 Dec 29	04:11	6°♑48'15	
morning rise	2684 Jan 10	14:10	9°♑37'56	
desc. node	2684 May 08	00:15	27°♑50'55	
retrograde	2684 May 14	14:37	27°♑55'03	
opposition	2684 Jul 14	10:18	23°♑01'37	-0°09'11
min. Earth dist.	2684 Jul 15	17:08	22°♑51'44	4.18229 AU
direct	2684 Sep 13	12:28	18°♑04'44	
	2684 Dec 17	15:07	0°♒	
evening set	2685 Jan 16	21:48	6°♒49'27	
max. Earth dist.	2685 Jan 28	06:40	9°♒29'43	6.10829 AU
conjunction	2685 Jan 29	15:54	9°♒49'18	-0°24'17
minimum elong	2685 Jan 29	15:52	9°♒49'17	0°24'17
morning rise	2685 Feb 11	10:54	12°♒49'53	
	2685 Feb 20	18:37	15°♒	
	2685 May 12	09:38	0°♓	
retrograde	2685 Jun 20	04:08	2°♓17'52	
	2685 Jul 29	04:40	30°℞♒	
opposition	2685 Aug 19	14:37	27°♒21'35	-1°00'58
min. Earth dist.	2685 Aug 20	04:08	27°♒17'10	4.04021 AU
direct	2685 Oct 18	06:29	22°♒26'58	
	2685 Dec 28	21:13	0°♓	
evening set	2686 Feb 20	15:31	11°♓51'13	
conjunction	2686 Mar 05	14:37	14°♓58'33	-0°53'31
minimum elong	2686 Mar 05	14:35	14°♓58'32	0°53'31
max. Earth dist.	2686 Mar 05	11:54	14°♓56'55	5.98660 AU
morning rise	2686 Mar 18	15:53	18°♓07'15	
	2686 May 11	03:27	0°♈	
retrograde	2686 Jul 28	08:40	8°♈34'23	
opposition	2686 Sep 26	08:11	3°♈34'16	-1°32'31
min. Earth dist.	2686 Sep 25	22:14	3°♈37'35	3.95240 AU
	2686 Oct 26	12:00	30°℞♓	
direct	2686 Nov 23	16:34	28°♓40'39	
	2686 Dec 21	18:03	0°♈	
evening set	2687 Mar 29	08:55	18°♈27'43	
conjunction	2687 Apr 11	15:20	21°♈40'34	-1°03'02
minimum elong	2687 Apr 11	15:20	21°♈40'34	1°03'02
max. Earth dist.	2687 Apr 12	21:23	21°♈58'47	5.94047 AU
morning rise	2687 Apr 25	01:01	24°♈55'06	
	2687 May 16	13:53	0°♉	
	2687 Aug 15	14:08	15°♉	
retrograde	2687 Sep 04	11:50	15°♉38'59	
	2687 Sep 24	08:05	15°℞♉	
min. Earth dist.	2687 Nov 01	22:41	10°♉45'23	3.95463 AU
opposition	2687 Nov 03	04:19	10°♉35'20	-1°27'28
direct	2687 Dec 31	00:13	5°♉40'26	
	2688 Mar 19	19:27	15°♉	
evening set	2688 May 05	01:15	25°♉21'21	
conjunction	2688 May 18	15:30	28°♉35'30	-0°47'36
minimum elong	2688 May 18	15:32	28°♉35'31	0°47'36
max. Earth dist.	2688 May 20	21:20	29°♉07'35	5.99023 AU
	2688 May 24	13:21	0°♊	
morning rise	2688 Jun 01	08:13	1°♊50'47	
retrograde	2688 Oct 10	01:36	21°♊58'40	
min. Earth dist.	2688 Dec 07	02:31	17°♊05'46	4.04596 AU
opposition	2688 Dec 08	14:13	16°♊53'36	-0°48'06
direct	2689 Feb 04	21:00	11°♊55'54	
	2689 Jun 06	11:27	0°♋	
evening set	2689 Jun 11	05:53	1°♋05'31	
conjunction	2689 Jun 24	23:53	4°♋15'40	-0°14'31
minimum elong	2689 Jun 24	23:54	4°♋15'40	0°14'31
behind sun begin	2689 Jun 24	20:31	4°♋13'44	
behind sun end	2689 Jun 25	03:17	4°♋17'37	
max. Earth dist.	2689 Jun 27	06:58	4°♋47'26	6.11428 AU
morning rise	2689 Jul 08	18:52	7°♋26'00	
retrograde	2689 Nov 13	02:10	26°♋26'19	
asc. node	2689 Nov 26	15:52	26°♋07'59	
min. Earth dist.	2690 Jan 10	11:57	21°♋33'02	4.18876 AU
opposition	2690 Jan 11	18:30	21°♋22'41	0°06'21
direct	2690 Mar 12	02:51	16°♋22'11	
	2690 Jun 24	12:08	0°♌	
evening set	2690 Jul 16	19:36	4°♌51'12	
conjunction	2690 Jul 30	11:26	7°♌53'48	0°22'13
minimum elong	2690 Jul 30	11:24	7°♌53'47	0°22'12
max. Earth dist.	2690 Jul 31	23:00	8°♌13'39	6.26396 AU
morning rise	2690 Aug 13	02:26	10°♌55'41	
	2690 Aug 31	19:54	15°♌	
retrograde	2690 Dec 14	23:18	28°♌48'13	

opposition	2691 Feb 12 21:10	23°♌47'55	0°55'12
min. Earth dist.	2691 Feb 12 06:37	23°♌52'46	4.33192 AU
direct	2691 Apr 14 15:36	18°♌45'39	
	2691 Jul 18 12:01	0°♍	
evening set	2691 Aug 19 08:43	6°♍39'17	
conjunction	2691 Sep 01 18:26	9°♍34'04	0°50'26
minimum elong	2691 Sep 01 18:24	9°♍34'03	0°50'27
max. Earth dist.	2691 Sep 02 02:59	9°♍38'43	6.38962 AU
morning rise	2691 Sep 15 01:49	12°♍27'34	
retrograde	2692 Jan 14 08:09	29°♍31'46	
opposition	2692 Mar 14 15:08	24°♍35'09	1°25'37
min. Earth dist.	2692 Mar 14 18:28	24°♍34'04	4.43218 AU
direct	2692 May 15 12:48	19°♍32'19	
	2692 Aug 15 17:09	0°♎	
evening set	2692 Sep 19 04:08	7°♎04'26	
max. Earth dist.	2692 Oct 01 10:57	9°♎43'02	6.45674 AU
conjunction	2692 Oct 02 06:31	9°♎53'36	1°03'35
minimum elong	2692 Oct 02 06:31	9°♎53'36	1°03'35
morning rise	2692 Oct 15 06:07	12°♎41'24	
retrograde	2693 Feb 12 09:07	29°♎24'24	
opposition	2693 Apr 13 23:12	24°♎30'46	1°32'17
min. Earth dist.	2693 Apr 14 20:59	24°♎23'46	4.46329 AU
direct	2693 Jun 15 15:11	19°♎28'27	
	2693 Sep 16 07:51	0°♏	
evening set	2693 Oct 19 21:52	6°♏56'09	
max. Earth dist.	2693 Oct 31 00:33	9°♏20'36	6.44886 AU
conjunction	2693 Nov 01 18:17	9°♏43'16	0°59'29
minimum elong	2693 Nov 01 18:19	9°♏43'17	0°59'29
morning rise	2693 Nov 14 12:15	12°♏29'16	
	2693 Nov 26 05:50	15°♏	
retrograde	2694 Mar 15 00:07	29°♏20'12	
opposition	2694 May 14 20:09	24°♏28'06	1°14'34
min. Earth dist.	2694 May 16 06:06	24°♏17'16	4.41760 AU
direct	2694 Jul 16 13:31	19°♏27'04	
	2694 Oct 16 13:27	0°♐	
evening set	2694 Nov 19 11:05	7°♐08'22	
max. Earth dist.	2694 Nov 30 01:26	9°♐29'03	6.36843 AU
conjunction	2694 Dec 02 04:14	9°♐57'15	0°39'09
minimum elong	2694 Dec 02 04:15	9°♐57'16	0°39'09
morning rise	2694 Dec 14 19:26	12°♐45'28	
	2695 Apr 04 14:21	0°♑	
retrograde	2695 Apr 16 04:34	0°♑12'35	
	2695 Apr 27 19:35	30°℞♐	
opposition	2695 Jun 16 02:46	25°♐20'30	0°35'28
min. Earth dist.	2695 Jun 17 15:57	25°♐08'39	4.30674 AU
direct	2695 Aug 17 05:14	20°♐21'34	
	2695 Nov 10 23:55	0°♑	
evening set	2695 Dec 20 18:45	8°♑32'34	
max. Earth dist.	2695 Dec 31 10:44	10°♑58'43	6.23580 AU
conjunction	2696 Jan 02 11:06	11°♑26'26	0°06'52
minimum elong	2696 Jan 02 11:06	11°♑26'26	0°06'52
behind sun begin	2696 Jan 02 03:41	11°♑22'12	
behind sun end	2696 Jan 02 18:32	11°♑30'40	
morning rise	2696 Jan 15 03:08	14°♑20'21	
desc. node	2696 Mar 17 02:01	27°♑01'41	
	2696 Apr 06 12:11	0°♒	
retrograde	2696 May 19 16:31	2°♒47'29	
	2696 Jul 02 11:47	30°℞♑	
opposition	2696 Jul 19 10:29	27°♑53'48	-0°16'56
min. Earth dist.	2696 Jul 20 15:29	27°♑44'28	4.16055 AU
direct	2696 Sep 18 08:38	22°♑57'18	
	2696 Nov 27 14:36	0°♒	
evening set	2697 Jan 21 16:53	11°♒48'02	
max. Earth dist.	2697 Feb 02 07:09	14°♒32'08	6.08887 AU
conjunction	2697 Feb 03 11:36	14°♒48'57	-0°29'10
minimum elong	2697 Feb 03 11:34	14°♒48'56	0°29'09
	2697 Feb 04 06:16	15°♒	
morning rise	2697 Feb 16 07:13	17°♒50'40	
	2697 Apr 13 15:32	0°♓	
retrograde	2697 Jun 25 12:13	7°♓28'00	
opposition	2697 Aug 24 21:14	2°♓31'17	-1°07'08
min. Earth dist.	2697 Aug 25 07:07	2°♓28'03	4.02527 AU
	2697 Sep 14 03:08	30°℞♒	
direct	2697 Oct 23 07:25	27°♒37'01	
	2697 Nov 30 20:42	0°♓	
evening set	2698 Feb 25 17:40	17°♓05'04	
conjunction	2698 Mar 10 17:26	20°♓13'09	-0°56'16
minimum elong	2698 Mar 10 17:25	20°♓13'08	0°56'16
max. Earth dist.	2698 Mar 10 18:47	20°♓13'58	5.97740 AU
morning rise	2698 Mar 23 19:51	23°♓22'45	
	2698 Apr 21 05:02	0°♈	
retrograde	2698 Aug 02 16:31	13°♈54'03	
opposition	2698 Oct 01 16:22	8°♈53'22	-1°34'07
min. Earth dist.	2698 Oct 01 02:32	8°♈57'59	3.95018 AU
direct	2698 Nov 28 22:10	3°♈59'41	
evening set	2699 Apr 03 14:41	23°♈46'19	
conjunction	2699 Apr 16 22:20	26°♈59'28	-1°02'18
minimum elong	2699 Apr 16 22:21	26°♈59'29	1°02'18
max. Earth dist.	2699 Apr 18 09:52	27°♈20'59	5.94540 AU
	2699 Apr 29 09:15	0°♉	
morning rise	2699 Apr 30 08:54	0°♉14'12	
	2699 Jul 08 10:54	15°♉	
retrograde	2699 Sep 09 17:43	20°♉54'29	
min. Earth dist.	2699 Nov 07 02:10	16°♉00'48	3.96609 AU
opposition	2699 Nov 08 08:30	15°♉50'30	-1°23'38
	2699 Nov 14 13:59	15°℞♉	
direct	2700 Jan 05 05:50	10°♉55'16	
	2700 Feb 24 17:03	15°♉	
	2700 May 09 00:21	0°♊	
evening set	2700 May 11 06:01	0°♊31'38	
conjunction	2700 May 24 20:58	3°♊45'20	-0°43'45
minimum elong	2700 May 24 21:00	3°♊45'22	0°43'45
max. Earth dist.	2700 May 27 04:07	4°♊18'03	6.00688 AU
morning rise	2700 Jun 07 14:23	7°♊00'06	
retrograde	2700 Oct 15 20:30	26°♊58'43	
min. Earth dist.	2700 Dec 12 22:14	22°♊06'03	4.06595 AU
opposition	2700 Dec 14 10:24	21°♊53'44	-0°40'55
direct	2701 Feb 10 19:05	16°♊55'38	
	2701 May 21 09:13	0°♋	
evening set	2701 Jun 17 05:45	5°♋59'08	
conjunction	2701 Jun 30 23:41	9°♋08'17	-0°09'22
minimum elong	2701 Jun 30 23:42	9°♋08'18	0°09'21
behind sun begin	2701 Jun 30 16:44	9°♋04'19	
behind sun end	2701 Jul 01 06:39	9°♋12'16	
max. Earth dist.	2701 Jul 03 03:24	9°♋37'59	6.13581 AU
morning rise	2701 Jul 14 18:28	12°♋17'32	
asc. node	2701 Oct 08 09:49	28°♋29'40	
	2701 Oct 23 02:01	0°♌	
retrograde	2701 Nov 18 14:28	1°♌07'47	
	2701 Dec 14 20:59	30°℞♋	
min. Earth dist.	2702 Jan 16 03:19	26°♋13'53	4.20967 AU
opposition	2702 Jan 17 06:54	26°♋04'33	0°13'47
direct	2702 Mar 17 21:06	21°♋03'43	
	2702 Jun 07 04:59	0°♌	

evening set	2702 Jul 22	12:49	9°♌27'25	
conjunction	2702 Aug 05	04:09	12°♌28'59	0°26'47
minimum elong	2702 Aug 05	04:07	12°♌28'58	0°26'47
max. Earth dist.	2702 Aug 06	13:00	12°♌47'14	6.28272 AU
	2702 Aug 16	12:23	15°♌	
morning rise	2702 Aug 18	18:11	15°♌29'41	
	2702 Nov 03	21:09	0°♍	
retrograde	2702 Dec 20	04:35	3°♍14'38	
	2703 Feb 04	17:00	30°℞♌	
opposition	2703 Feb 18	04:09	28°♌14'54	1°00'39
min. Earth dist.	2703 Feb 17	15:22	28°♌19'08	4.34733 AU
direct	2703 Apr 20	01:39	23°♌12'30	
	2703 Jun 30	02:44	0°♍	
evening set	2703 Aug 24	20:10	11°♍02'56	
conjunction	2703 Sep 07	04:49	13°♍56'51	0°53'13
minimum elong	2703 Sep 07	04:47	13°♍56'50	0°53'12
max. Earth dist.	2703 Sep 07	08:13	13°♍58'43	6.40060 AU
morning rise	2703 Sep 20	11:14	16°♍49'31	
	2703 Nov 29	12:44	0°♎	
retrograde	2704 Jan 19	13:31	3°♎49'59	
	2704 Mar 11	07:45	30°℞♍	
opposition	2704 Mar 19	20:21	28°♍53'52	1°27'58
min. Earth dist.	2704 Mar 20	03:13	28°♍51'38	4.43828 AU
direct	2704 May 20	22:09	23°♍51'03	
	2704 Jul 27	23:12	0°♎	
evening set	2704 Sep 24	11:46	11°♎22'20	
conjunction	2704 Oct 07	13:21	14°♎11'08	1°04'01
minimum elong	2704 Oct 07	13:20	14°♎11'08	1°04'01
max. Earth dist.	2704 Oct 06	14:21	13°♎58'43	6.45749 AU
morning rise	2704 Oct 20	12:04	16°♎58'35	
	2704 Dec 29	08:13	0°♏	
retrograde	2705 Feb 17	13:48	3°♏41'47	
	2705 Apr 09	20:22	30°℞♎	
opposition	2705 Apr 19	05:27	28°♎48'24	1°31'11
min. Earth dist.	2705 Apr 20	04:30	28°♎41'00	4.45903 AU
direct	2705 Jun 20	21:32	23°♎46'12	
	2705 Aug 28	16:02	0°♏	
evening set	2705 Oct 25	04:28	11°♏15'27	
max. Earth dist.	2705 Nov 05	05:54	13°♏39'33	6.44000 AU
conjunction	2705 Nov 07	00:21	14°♏02'41	0°57'30
minimum elong	2705 Nov 07	00:22	14°♏02'42	0°57'29
	2705 Nov 11	09:30	15°♏	
morning rise	2705 Nov 19	17:41	16°♏48'49	
	2706 Jan 28	20:23	0°♐	
retrograde	2706 Mar 20	09:54	3°♐43'32	
	2706 May 11	05:29	30°℞♏	
opposition	2706 May 20	06:34	28°♏51'32	1°10'11
min. Earth dist.	2706 May 21	17:29	28°♏40'24	4.40466 AU
direct	2706 Jul 21	23:10	23°♏50'47	
	2706 Sep 27	16:00	0°♐	
evening set	2706 Nov 24	19:11	11°♐35'25	
max. Earth dist.	2706 Dec 05	07:53	13°♐55'47	6.35232 AU
conjunction	2706 Dec 07	11:57	14°♐24'49	0°35'09
minimum elong	2706 Dec 07	11:59	14°♐24'50	0°35'09
morning rise	2706 Dec 20	03:16	17°♐13'40	
	2707 Feb 23	02:01	0°♑	
retrograde	2707 Apr 21	21:33	4°♑47'47	
opposition	2707 Jun 21	19:26	29°♐55'29	0°28'35
	2707 Jun 21	05:16	30°℞♐	
min. Earth dist.	2707 Jun 23	07:48	29°♐43'52	4.28829 AU
direct	2707 Aug 22	18:55	24°♐56'47	
	2707 Oct 21	13:19	0°♑	
evening set	2707 Dec 26	06:48	13°♑12'27	
max. Earth dist.	2708 Jan 06	02:20	15°♑41'13	6.21655 AU
conjunction	2708 Jan 07	23:25	16°♑07'09	0°01'46
minimum elong	2708 Jan 07	23:26	16°♑07'10	0°01'45
behind sun begin	2708 Jan 07	15:27	16°♑02'36	
behind sun end	2708 Jan 08	07:25	16°♑11'44	
morning rise	2708 Jan 20	15:37	19°♑01'59	
desc. node	2708 Jan 26	15:35	20°♑24'01	
	2708 Mar 12	10:42	0°♒	
retrograde	2708 May 25	16:38	7°♒38'00	
opposition	2708 Jul 25	09:51	2°♒43'57	-0°24'34
min. Earth dist.	2708 Jul 26	12:46	2°♒35'17	4.14181 AU
	2708 Aug 16	21:11	30°℞♑	
direct	2708 Sep 24	03:12	27°♑47'48	
	2708 Oct 31	20:14	0°♒	
	2709 Jan 20	02:28	15°♒	
evening set	2709 Jan 27	11:12	16°♒43'26	
max. Earth dist.	2709 Feb 08	04:18	19°♒29'50	6.07206 AU
conjunction	2709 Feb 09	06:15	19°♒45'14	-0°33'48
minimum elong	2709 Feb 09	06:13	19°♒45'13	0°33'47
morning rise	2709 Feb 22	02:44	22°♒48'01	
	2709 Mar 25	16:24	0°♓	
retrograde	2709 Jul 01	17:23	12°♓33'43	
opposition	2709 Aug 31	01:56	7°♓36'25	-1°12'44
min. Earth dist.	2709 Aug 31	08:12	7°♓34'21	4.01195 AU
direct	2709 Oct 29	07:33	2°♓42'17	
evening set	2710 Mar 03	18:03	22°♓13'45	
conjunction	2710 Mar 16	18:56	25°♓22'41	-0°58'34
minimum elong	2710 Mar 16	18:54	25°♓22'41	0°58'33
max. Earth dist.	2710 Mar 17	02:10	25°♓27'04	5.96883 AU
morning rise	2710 Mar 29	22:14	28°♓33'07	
	2710 Apr 04	23:29	0°♈	
retrograde	2710 Aug 09	01:21	19°♈08'23	
opposition	2710 Oct 07	22:45	14°♈07'11	-1°34'59
min. Earth dist.	2710 Oct 07	07:03	14°♈12'26	3.94744 AU
direct	2710 Dec 05	02:51	9°♈13'25	
evening set	2711 Apr 09	19:18	29°♈00'09	
	2711 Apr 13	22:43	0°♉	
conjunction	2711 Apr 23	03:57	2°♉13'39	-1°01'05
minimum elong	2711 Apr 23	03:59	2°♉13'40	1°01'06
max. Earth dist.	2711 Apr 24	18:23	2°♉36'52	5.94853 AU
morning rise	2711 May 06	15:46	5°♉28'46	
	2711 Jun 17	10:58	15°♉	
retrograde	2711 Sep 15	20:09	26°♉06'07	
min. Earth dist.	2711 Nov 13	02:37	21°♉12'54	3.97492 AU
opposition	2711 Nov 14	11:09	21°♉01'51	-1°19'14
direct	2712 Jan 11	07:40	16°♉06'17	
	2712 Apr 21	20:43	0°♊	
evening set	2712 May 16	10:41	5°♊39'33	
conjunction	2712 May 30	02:21	8°♊52'58	-0°39'35
minimum elong	2712 May 30	02:23	8°♊52'59	0°39'36
max. Earth dist.	2712 Jun 01	09:11	9°♊25'23	6.02045 AU
morning rise	2712 Jun 12	20:21	12°♊07'20	
	2712 Sep 15	12:46	0°♋	
retrograde	2712 Oct 20	16:50	1°♋58'04	
	2712 Nov 24	14:52	30°℞♊	
min. Earth dist.	2712 Dec 17	19:41	27°♊05'03	4.08252 AU
opposition	2712 Dec 19	06:32	26°♊53'10	-0°33'29
direct	2713 Feb 15	19:17	21°♊54'38	
	2713 May 01	23:59	0°♋	
evening set	2713 Jun 22	06:20	10°♋53'29	

conjunction	2713 Jul 06 00:26	14°♋01'53	-0°04'07
minimum elong	2713 Jul 06 00:26	14°♋01'53	0°04'07
behind sun begin	2713 Jul 05 16:11	13°♋57'11	
behind sun end	2713 Jul 06 08:41	14°♋06'34	
max. Earth dist.	2713 Jul 08 03:37	14°♋31'08	6.15405 AU
morning rise	2713 Jul 19 18:48	17°♋10'08	
asc. node	2713 Aug 18 06:51	23°♋38'34	
	2713 Sep 20 16:39	0°♌	
retrograde	2713 Nov 23 03:43	5°♌51'33	
opposition	2714 Jan 21 20:30	0°♌48'49	0°21'12
min. Earth dist.	2714 Jan 20 18:04	0°♌57'43	4.22785 AU
	2714 Jan 27 21:58	30℞♋	
direct	2714 Mar 22 14:05	25°♋47'45	
	2714 May 15 02:01	0°♌	
evening set	2714 Jul 27 07:45	14°♌07'08	
	2714 Jul 31 07:36	15°♌	
conjunction	2714 Aug 09 22:11	17°♌07'40	0°31'17
minimum elong	2714 Aug 09 22:09	17°♌07'39	0°31'17
max. Earth dist.	2714 Aug 11 02:07	17°♌23'08	6.29942 AU
morning rise	2714 Aug 23 11:28	20°♌07'18	
	2714 Oct 10 16:08	0°♍	
retrograde	2714 Dec 24 13:40	7°♍45'31	
opposition	2715 Feb 22 13:19	2°♍46'20	1°05'51
min. Earth dist.	2715 Feb 22 03:38	2°♍49'33	4.36156 AU
	2715 Mar 16 18:49	30℞♌	
direct	2715 Apr 24 15:42	27°♌43'52	
	2715 Jun 02 22:17	0°♍	
evening set	2715 Aug 29 09:31	15°♍31'23	
conjunction	2715 Sep 11 17:19	18°♍24'31	0°55'46
minimum elong	2715 Sep 11 17:18	18°♍24'30	0°55'45
max. Earth dist.	2715 Sep 11 18:41	18°♍25'15	6.41157 AU
morning rise	2715 Sep 24 22:28	21°♍16'16	
	2715 Nov 06 21:59	0°♎	
retrograde	2716 Jan 23 18:27	8°♎12'57	
opposition	2716 Mar 24 03:22	3°♎17'21	1°29'55
min. Earth dist.	2716 Mar 24 11:18	3°♎14'46	4.44579 AU
	2716 Apr 20 19:20	30℞♍	
direct	2716 May 25 06:47	28°♍14'41	
	2716 Jun 29 03:37	0°♎	
evening set	2716 Sep 28 21:03	15°♎44'32	
conjunction	2716 Oct 11 21:34	18°♎32'49	1°04'08
minimum elong	2716 Oct 11 21:34	18°♎32'49	1°04'09
max. Earth dist.	2716 Oct 10 19:37	18°♎18'48	6.46122 AU
morning rise	2716 Oct 24 19:25	21°♎19'46	
	2716 Dec 06 16:57	0°♏	
retrograde	2717 Feb 21 21:22	8°♏02'14	
opposition	2717 Apr 23 13:16	3°♏09'12	1°29'38
min. Earth dist.	2717 Apr 24 14:36	3°♏01'04	4.45897 AU
	2717 May 20 04:57	30℞♎	
direct	2717 Jun 25 07:38	28°♎07'12	
	2717 Jul 31 13:08	0°♏	
	2717 Oct 26 15:49	15°♏	
evening set	2717 Oct 29 11:11	15°♏36'21	
max. Earth dist.	2717 Nov 09 10:07	17°♏59'18	6.43616 AU
conjunction	2717 Nov 11 06:26	18°♏23'29	0°55'15
minimum elong	2717 Nov 11 06:27	18°♏23'29	0°55'15
morning rise	2717 Nov 23 23:15	21°♏09'34	
	2718 Jan 06 06:03	0°♐	
retrograde	2718 Mar 24 18:32	8°♐06'36	
opposition	2718 May 24 16:48	3°♐14'37	1°05'30
min. Earth dist.	2718 May 26 03:35	3°♐03'31	4.39727 AU
	2718 Jun 21 11:13	30℞♏	
direct	2718 Jul 26 07:47	28°♏14'06	
	2718 Aug 30 04:36	0°♐	
evening set	2718 Nov 29 01:59	16°♐00'13	
max. Earth dist.	2718 Dec 09 16:02	18°♐21'40	6.34200 AU
conjunction	2718 Dec 11 18:32	18°♐49'54	0°31'04
minimum elong	2718 Dec 11 18:34	18°♐49'55	0°31'04
morning rise	2718 Dec 24 09:32	21°♐39'05	
	2719 Feb 01 22:02	0°♑	
retrograde	2719 Apr 26 11:49	9°♑18'19	
opposition	2719 Jun 26 09:48	4°♑25'54	0°21'45
min. Earth dist.	2719 Jun 27 22:12	4°♑14'17	4.27545 AU
	2719 Aug 08 11:48	30℞♐	
direct	2719 Aug 27 07:01	29°♐27'32	
	2719 Sep 15 01:04	0°♑	
desc. node	2719 Dec 08 11:39	12°♑48'42	
evening set	2719 Dec 30 16:15	17°♑46'09	
max. Earth dist.	2720 Jan 10 11:49	20°♑15'28	6.20214 AU
conjunction	2720 Jan 12 08:50	20°♑41'27	-0°03'16
minimum elong	2720 Jan 12 08:49	20°♑41'27	0°03'16
behind sun begin	2720 Jan 12 00:52	20°♑36'53	
behind sun end	2720 Jan 12 16:46	20°♑46'00	
morning rise	2720 Jan 25 01:27	23°♑37'01	
	2720 Feb 22 17:14	0°♒	
retrograde	2720 May 30 12:13	12°♒20'27	
opposition	2720 Jul 30 05:22	7°♒25'59	-0°31'44
min. Earth dist.	2720 Jul 31 06:02	7°♒18'01	4.12673 AU
direct	2720 Sep 28 18:04	2°♒30'04	
	2721 Jan 03 16:04	15°♒	
evening set	2721 Feb 01 01:22	21°♒29'37	
conjunction	2721 Feb 13 21:05	24°♒32'17	-0°38'00
minimum elong	2721 Feb 13 21:03	24°♒32'16	0°38'00
max. Earth dist.	2721 Feb 12 23:22	24°♒19'22	6.05772 AU
morning rise	2721 Feb 26 18:06	27°♒35'58	
	2721 Mar 08 23:30	0°♓	
retrograde	2721 Jul 06 19:31	17°♓29'14	
opposition	2721 Sep 05 01:58	12°♓31'28	-1°17'34
min. Earth dist.	2721 Sep 05 06:53	12°♓29'51	3.99970 AU
direct	2721 Nov 03 04:22	7°♓37'27	
evening set	2722 Mar 08 14:30	27°♓12'23	
	2722 Mar 20 03:41	0°♈	
conjunction	2722 Mar 21 16:14	0°♈22'09	-1°00'20
minimum elong	2722 Mar 21 16:13	0°♈22'08	1°00'19
max. Earth dist.	2722 Mar 22 01:50	0°♈27'57	5.95974 AU
morning rise	2722 Apr 03 20:47	3°♈33'31	
retrograde	2722 Aug 14 03:38	24°♈12'52	
min. Earth dist.	2722 Oct 12 05:23	19°♈17'30	3.94280 AU
opposition	2722 Oct 13 00:04	19°♈11'13	-1°35'07
direct	2722 Dec 10 00:43	14°♈17'17	
	2723 Mar 28 14:13	0°♉	
evening set	2723 Apr 14 20:33	4°♉05'25	
conjunction	2723 Apr 28 06:24	7°♉19'28	-0°59'29
minimum elong	2723 Apr 28 06:25	7°♉19'29	0°59'28
max. Earth dist.	2723 Apr 29 23:00	7°♉43'59	5.94881 AU
morning rise	2723 May 11 19:19	10°♉35'04	
	2723 May 30 13:14	15°♉	
	2723 Aug 24 21:20	0°♊	
retrograde	2723 Sep 20 20:33	1°♊10'45	
	2723 Oct 17 15:18	30℞♉	
min. Earth dist.	2723 Nov 18 01:37	26°♉17'25	3.97998 AU
opposition	2723 Nov 19 10:28	26°♉06'14	-1°14'26
direct	2724 Jan 16 08:07	21°♉10'16	
	2724 Apr 03 00:24	0°♊	
evening set	2724 May 21 13:02	10°♊42'04	

conjunction	2724 Jun 04	05:38	13°♊55'26	-0°35'15	
minimum elong	2724 Jun 04	05:40	13°♊55'27	0°35'15	
max. Earth dist.	2724 Jun 06	14:33	14°♊28'58	6.03006 AU	
morning rise	2724 Jun 18	00:07	17°♊09'35		
	2724 Aug 17	10:42	0°♋		
retrograde	2724 Oct 25	12:32	6°♋53'49		
min. Earth dist.	2724 Dec 22	14:15	2°♋00'55	4.09554 AU	
opposition	2724 Dec 24	01:02	1°♋49'05	-0°26'01	
	2725 Jan 06	17:24	30°℞♊		
direct	2725 Feb 20	16:11	26°♊50'10		
	2725 Apr 06	15:45	0°♋		
evening set	2725 Jun 27	06:17	15°♋45'35		
asc. node	2725 Jun 28	21:54	16°♋08'02		
conjunction	2725 Jul 11	00:08	18°♋53'13	0°01'10	
minimum elong	2725 Jul 11	00:08	18°♋53'13	0°01'10	
behind sun begin	2725 Jul 10	15:45	18°♋48'28		
behind sun end	2725 Jul 11	08:31	18°♋57'58		
max. Earth dist.	2725 Jul 13	00:24	19°♋20'41	6.16938 AU	
morning rise	2725 Jul 24	18:22	22°♋00'39		
	2725 Aug 30	18:27	0°♌		
retrograde	2725 Nov 27	16:02	10°♌34'05		
min. Earth dist.	2726 Jan 25	08:47	5°♌40'00	4.24402 AU	
opposition	2726 Jan 26	09:33	5°♌31'40	0°28'21	
direct	2726 Mar 27	07:32	0°♌30'15		
	2726 Jul 14	17:04	15°♌		
evening set	2726 Aug 01	02:19	18°♌45'40		
conjunction	2726 Aug 14	16:10	21°♌45'14	0°35'31	
minimum elong	2726 Aug 14	16:08	21°♌45'13	0°35'31	
max. Earth dist.	2726 Aug 15	18:34	21°♌59'49	6.31529 AU	
morning rise	2726 Aug 28	04:17	24°♌43'44		
	2726 Sep 21	20:39	0°♍		
retrograde	2726 Dec 28	21:16	12°♍15'06		
opposition	2727 Feb 26	22:06	7°♍16'22	1°10'36	
min. Earth dist.	2727 Feb 26	13:53	7°♍19'05	4.37577 AU	
direct	2727 Apr 29	03:49	2°♍13'46		
evening set	2727 Sep 02	22:16	19°♍57'53		
conjunction	2727 Sep 16	04:52	22°♍50'06	0°57'57	
minimum elong	2727 Sep 16	04:50	22°♍50'05	0°57'57	
max. Earth dist.	2727 Sep 16	01:26	22°♍48'14	6.42271 AU	
morning rise	2727 Sep 29	09:04	25°♍40'59		
	2727 Oct 19	20:15	0°♎		
retrograde	2728 Jan 28	01:02	12°♎33'41		
opposition	2728 Mar 28	10:14	7°♎38'25	1°31'19	
min. Earth dist.	2728 Mar 28	21:13	7°♎34'51	4.45299 AU	
direct	2728 May 29	17:19	2°♎35'41		
evening set	2728 Oct 03	05:06	20°♎03'53		
max. Earth dist.	2728 Oct 15	00:55	22°♎36'37	6.46358 AU	
conjunction	2728 Oct 16	04:53	22°♎51'43	1°03'53	
minimum elong	2728 Oct 16	04:53	22°♎51'43	1°03'52	
morning rise	2728 Oct 29	01:42	25°♎38'14		
	2728 Nov 18	19:29	0°♏		
retrograde	2729 Feb 26	02:21	12°♏20'25		
opposition	2729 Apr 27	20:28	7°♏27'34	1°27'34	
min. Earth dist.	2729 Apr 28	22:43	7°♏19'10	4.45625 AU	
direct	2729 Jun 29	14:20	2°♏25'43		
	2729 Oct 10	09:53	15°♏		
evening set	2729 Nov 02	17:39	19°♏55'41		
max. Earth dist.	2729 Nov 13	14:16	22°♏17'42	6.42835 AU	
conjunction	2729 Nov 15	12:15	22°♏42'52	0°52'40	
minimum elong	2729 Nov 15	12:17	22°♏42'53	0°52'41	
morning rise	2729 Nov 28	04:38	25°♏29'06		
	2729 Dec 19	09:01	0°♐		
retrograde	2730 Mar 29	06:01	12°♐29'53		
opposition	2730 May 29	03:45	7°♐37'59	1°00'21	
min. Earth dist.	2730 May 30	16:26	7°♐26'19	4.38456 AU	
direct	2730 Jul 30	18:14	2°♐37'43		
evening set	2730 Dec 03	09:47	20°♐27'11		
max. Earth dist.	2730 Dec 13	22:20	22°♐48'23	6.32524 AU	
conjunction	2730 Dec 16	02:10	23°♐17'28	0°26'41	
minimum elong	2730 Dec 16	02:11	23°♐17'29	0°26'41	
morning rise	2730 Dec 28	17:17	26°♐07'22		
	2731 Jan 15	08:36	0°♑		
retrograde	2731 May 01	04:47	13°♑54'17		
opposition	2731 Jul 01	02:54	9°♑01'39	0°14'32	
min. Earth dist.	2731 Jul 02	13:51	8°♑50'29	4.25559 AU	
direct	2731 Aug 31	19:23	4°♑03'36		
desc. node	2731 Oct 18	08:39	7°♑22'51		
evening set	2732 Jan 04	04:53	22°♑27'44		
max. Earth dist.	2732 Jan 15	03:54	24°♑59'43	6.18089 AU	
conjunction	2732 Jan 16	21:47	25°♑24'01	-0°08'21	
minimum elong	2732 Jan 16	21:47	25°♑24'01	0°08'21	
behind sun begin	2732 Jan 16	14:43	25°♑19'56		
behind sun end	2732 Jan 17	04:51	25°♑28'05		
morning rise	2732 Jan 29	14:43	28°♑20'39		
	2732 Feb 05	19:55	0°♒		
	2732 Apr 27	05:00	15°♒		
retrograde	2732 Jun 04	15:11	17°♒14'15		
	2732 Jul 13	07:21	15°℞♒		
opposition	2732 Aug 04	05:58	12°♒19'28	-0°39'05	
min. Earth dist.	2732 Aug 05	05:26	12°♒11'52	4.10568 AU	
direct	2732 Oct 03	14:28	7°♒23'53		
	2732 Dec 15	05:35	15°♒		
evening set	2733 Feb 05	21:29	26°♒29'37		
conjunction	2733 Feb 18	17:48	29°♒33'25	-0°42'10	
minimum elong	2733 Feb 18	17:46	29°♒33'24	0°42'11	
max. Earth dist.	2733 Feb 17	22:36	29°♒21'56	6.03874 AU	
	2733 Feb 20	14:17	0°♓		
morning rise	2733 Mar 03	15:52	2°♓38'21		
retrograde	2733 Jul 12	02:46	22°♓40'51		
opposition	2733 Sep 10	08:22	17°♓42'36	-1°22'09	
min. Earth dist.	2733 Sep 10	09:10	17°♓42'20	3.98495 AU	
direct	2733 Nov 08	05:14	12°♓48'46		
	2734 Mar 03	10:29	0°♈		
evening set	2734 Mar 13	18:02	2°♈28'05		
conjunction	2734 Mar 26	20:53	5°♈38'47	-1°01'44	
minimum elong	2734 Mar 26	20:52	5°♈38'47	1°01'45	
max. Earth dist.	2734 Mar 27	11:34	5°♈47'42	5.95065 AU	
morning rise	2734 Apr 09	02:35	8°♈51'07		
retrograde	2734 Aug 19	13:39	29°♈34'15		
min. Earth dist.	2734 Oct 17	11:21	24°♈39'09	3.94061 AU	
opposition	2734 Oct 18	08:15	24°♈32'07	-1°34'29	
direct	2734 Dec 15	07:30	19°♈38'04		
	2735 Mar 09	20:22	0°♉		
evening set	2735 Apr 20	04:17	9°♉26'20		
conjunction	2735 May 03	15:21	12°♉40'42	-0°57'18	
minimum elong	2735 May 03	15:23	12°♉40'44	0°57'17	
max. Earth dist.	2735 May 05	12:59	13°♉08'12	5.95394 AU	
	2735 May 13	06:53	15°♉		
morning rise	2735 May 17	05:17	15°♉56'32		
	2735 Jul 21	15:24	0°♊		
retrograde	2735 Sep 26	01:39	6°♊27'47		
min. Earth dist.	2735 Nov 23	04:01	1°♊34'51	3.99214 AU	
opposition	2735 Nov 24	14:27	1°♊23'07	-1°08'48	
	2735 Dec 04	22:01	30°℞♉		

direct	2736 Jan 21 12:52	26°♉26'52	
	2736 Mar 08 15:15	0°♊	
evening set	2736 May 26 19:46	15°♊54'19	
conjunction	2736 Jun 09 12:43	19°♊07'04	-0°30'31
minimum elong	2736 Jun 09 12:45	19°♊07'05	0°30'30
max. Earth dist.	2736 Jun 11 21:07	19°♊40'08	6.04802 AU
morning rise	2736 Jun 23 07:40	22°♊20'30	
	2736 Jul 27 13:44	0°♋	
retrograde	2736 Oct 30 07:11	11°♋54'42	
min. Earth dist.	2736 Dec 27 10:31	7°♋01'52	4.11734 AU
opposition	2736 Dec 28 21:05	6°♋50'06	-0°18'13
direct	2737 Feb 25 16:14	1°♋50'46	
asc. node	2737 May 08 17:42	9°♋16'12	
evening set	2737 Jul 02 06:40	20°♋39'35	
conjunction	2737 Jul 16 00:19	23°♋46'01	0°06'24
minimum elong	2737 Jul 16 00:18	23°♋46'01	0°06'24
behind sun begin	2737 Jul 15 16:28	23°♋41'36	
behind sun end	2737 Jul 16 08:09	23°♋50'26	
max. Earth dist.	2737 Jul 17 23:17	24°♋12'38	6.19325 AU
morning rise	2737 Jul 29 17:45	26°♋52'05	
	2737 Aug 12 20:37	0°♌	
	2737 Nov 19 20:54	15°♌	
retrograde	2737 Dec 02 03:41	15°♌14'45	
	2737 Dec 14 07:42	15°℞♌	
opposition	2738 Jan 30 21:47	10°♌12'48	0°35'14
min. Earth dist.	2738 Jan 29 23:08	10°♌20'24	4.26762 AU
direct	2738 Apr 01 00:38	5°♌11'10	
	2738 Jun 26 18:00	15°♌	
evening set	2738 Aug 05 18:40	23°♌20'11	
conjunction	2738 Aug 19 07:25	26°♌18'26	0°39'28
minimum elong	2738 Aug 19 07:23	26°♌18'25	0°39'28
max. Earth dist.	2738 Aug 20 05:02	26°♌30'19	6.33654 AU
morning rise	2738 Sep 01 18:33	29°♌15'36	
	2738 Sep 05 04:09	0°♍	
retrograde	2739 Jan 02 01:55	16°♍38'58	
opposition	2739 Mar 03 04:31	11°♍40'41	1°14'48
min. Earth dist.	2739 Mar 02 23:09	11°♍42'27	4.39327 AU
direct	2739 May 03 14:34	6°♍37'56	
evening set	2739 Sep 07 07:33	24°♍17'51	
conjunction	2739 Sep 20 13:14	27°♍09'10	0°59'45
minimum elong	2739 Sep 20 13:12	27°♍09'09	0°59'45
max. Earth dist.	2739 Sep 20 06:48	27°♍05'41	6.43509 AU
morning rise	2739 Oct 03 16:07	29°♍59'04	
	2739 Oct 03 17:50	0°♎	
retrograde	2740 Feb 01 02:58	16°♎47'55	
opposition	2740 Apr 01 14:06	11°♎53'03	1°32'12
min. Earth dist.	2740 Apr 02 03:26	11°♎48'44	4.45956 AU
direct	2740 Jun 02 23:15	6°♎50'22	
evening set	2740 Oct 07 10:19	24°♎17'19	
max. Earth dist.	2740 Oct 19 00:12	26°♎47'02	6.46363 AU
conjunction	2740 Oct 20 09:05	27°♎04'48	1°03'18
minimum elong	2740 Oct 20 09:06	27°♎04'48	1°03'17
morning rise	2740 Nov 02 05:17	29°♎51'02	
	2740 Nov 02 21:59	0°♏	
	2741 Jan 29 05:07	15°♏	
retrograde	2741 Mar 02 08:17	16°♏34'04	
	2741 Apr 03 12:20	15°℞♏	
opposition	2741 May 02 01:59	11°♏41'25	1°25'07
min. Earth dist.	2741 May 03 07:26	11°♏32'00	4.44976 AU
direct	2741 Jul 03 21:04	6°♏39'39	
	2741 Sep 22 16:18	15°♏	
evening set	2741 Nov 06 21:58	24°♏11'40	
max. Earth dist.	2741 Nov 17 16:33	26°♏32'59	6.41568 AU
conjunction	2741 Nov 19 16:17	26°♏59'11	0°49'52
minimum elong	2741 Nov 19 16:19	26°♏59'12	0°49'52
morning rise	2741 Dec 02 08:15	29°♏45'46	
	2741 Dec 03 10:21	0°♐	
retrograde	2742 Apr 02 15:34	16°♐52'09	
opposition	2742 Jun 02 14:10	12°♐00'12	0°54'57
min. Earth dist.	2742 Jun 04 02:47	11°♐48'32	4.36644 AU
direct	2742 Aug 04 01:11	7°♐00'10	
evening set	2742 Dec 07 17:39	24°♐54'50	
max. Earth dist.	2742 Dec 18 06:37	27°♐16'59	6.30307 AU
conjunction	2742 Dec 20 09:57	27°♐45'57	0°22'12
minimum elong	2742 Dec 20 09:58	27°♐45'58	0°22'12
	2742 Dec 30 07:41	0°♑	
morning rise	2743 Jan 02 01:11	0°♑36'47	
retrograde	2743 May 06 01:19	18°♑33'21	
opposition	2743 Jul 05 21:22	13°♑40'32	0°07'12
min. Earth dist.	2743 Jul 07 08:27	13°♑29'18	4.23068 AU
desc. node	2743 Aug 28 11:56	8°♑48'43	
direct	2743 Sep 05 10:20	8°♑42'48	
evening set	2744 Jan 08 19:28	27°♑14'10	
max. Earth dist.	2744 Jan 19 20:21	29°♑48'07	6.15542 AU
	2744 Jan 20 16:44	0°♒	
conjunction	2744 Jan 21 12:45	0°♒11'40	-0°13'25
minimum elong	2744 Jan 21 12:44	0°♒11'40	0°13'25
behind sun begin	2744 Jan 21 08:03	0°♒08'56	
behind sun end	2744 Jan 21 17:25	0°♒14'23	
morning rise	2744 Feb 03 06:23	3°♒09'39	
	2744 Mar 29 21:55	15°♒	
retrograde	2744 Jun 09 18:44	22°♒14'52	
opposition	2744 Aug 09 09:14	17°♒19'39	-0°46'15
min. Earth dist.	2744 Aug 10 04:52	17°♒13'16	4.08195 AU
	2744 Aug 28 01:44	15°℞♒	
direct	2744 Oct 08 11:14	12°♒24'25	
	2744 Nov 18 03:35	15°♒	
	2745 Feb 04 00:40	0°♓	
evening set	2745 Feb 10 20:40	1°♓37'07	
conjunction	2745 Feb 23 17:47	4°♓42'08	-0°46'05
minimum elong	2745 Feb 23 17:45	4°♓42'07	0°46'04
max. Earth dist.	2745 Feb 23 04:03	4°♓33'53	6.01899 AU
morning rise	2745 Mar 08 16:47	7°♓48'23	
retrograde	2745 Jul 17 15:06	28°♓00'07	
opposition	2745 Sep 15 18:02	23°♓01'16	-1°26'06
min. Earth dist.	2745 Sep 15 15:45	23°♓02'02	3.97136 AU
direct	2745 Nov 13 11:40	18°♓07'32	
	2746 Feb 13 07:25	0°♈	
evening set	2746 Mar 19 00:37	7°♈50'20	
conjunction	2746 Apr 01 04:40	11°♈01'52	-1°02'38
minimum elong	2746 Apr 01 04:40	11°♈01'51	1°02'38
max. Earth dist.	2746 Apr 02 01:39	11°♈14'36	5.94455 AU
morning rise	2746 Apr 14 11:33	14°♈15'00	
	2746 Jun 28 05:45	0°♉	
retrograde	2746 Aug 25 00:18	4°♉59'38	
opposition	2746 Oct 23 17:47	29°♈57'00	-1°32'58
min. Earth dist.	2746 Oct 22 17:43	0°♉05'07	3.94298 AU
	2746 Oct 23 08:53	30°℞♈	
direct	2746 Dec 20 14:57	25°♈02'46	
	2747 Feb 14 13:25	0°♉	
evening set	2747 Apr 25 13:40	14°♉49'10	
	2747 Apr 26 07:48	15°♉	
conjunction	2747 May 09 01:37	18°♉03'30	-0°54'36

minimum elong	2747 May 09	01:39	18°♉03'31	0°54'36
max. Earth dist.	2747 May 11	01:16	18°♉32'07	5.96409 AU
morning rise	2747 May 22	16:39	21°♉19'17	
	2747 Jun 29	19:16	0°♊	
retrograde	2747 Oct 01	04:11	11°♊43'37	
min. Earth dist.	2747 Nov 28	06:00	6°♊50'57	4.00863 AU
opposition	2747 Nov 29	17:51	6°♊38'43	-1°02'34
direct	2748 Jan 26	18:31	1°♊42'00	
evening set	2748 Jun 01	01:41	21°♊03'38	
conjunction	2748 Jun 14	19:10	24°♊15'36	-0°25'32
minimum elong	2748 Jun 14	19:11	24°♊15'37	0°25'32
max. Earth dist.	2748 Jun 17	04:08	24°♊48'51	6.06925 AU
morning rise	2748 Jun 28	14:05	27°♊28'04	
	2748 Jul 09	15:21	0°♋	
retrograde	2748 Nov 04	02:17	16°♋51'22	
min. Earth dist.	2749 Jan 01	07:10	11°♋58'12	4.14074 AU
opposition	2749 Jan 02	16:01	11°♋47'02	-0°10'21
direct	2749 Mar 02	15:52	6°♋47'22	
asc. node	2749 Mar 18	02:36	7°♋11'01	
evening set	2749 Jul 07	05:51	25°♋29'23	
conjunction	2749 Jul 20	22:58	28°♋34'35	0°11'33
minimum elong	2749 Jul 20	22:57	28°♋34'35	0°11'33
behind sun begin	2749 Jul 20	17:06	28°♋31'17	
behind sun end	2749 Jul 21	04:49	28°♋37'52	
max. Earth dist.	2749 Jul 22	18:47	28°♋59'16	6.21678 AU
	2749 Jul 27	06:40	0°♌	
morning rise	2749 Aug 03	15:47	1°♌39'19	
	2749 Oct 10	01:52	15°♌	
retrograde	2749 Dec 06	12:30	19°♌51'53	
min. Earth dist.	2750 Feb 03	11:58	14°♌57'26	4.28942 AU
	2750 Feb 03	04:20	15°℞♌	
opposition	2750 Feb 04	08:53	14°♌50'26	0°41'53
direct	2750 Apr 05	15:44	9°♌48'36	
	2750 Jun 05	07:00	15°♌	
evening set	2750 Aug 10	10:22	27°♌52'18	
	2750 Aug 20	04:08	0°♍	
conjunction	2750 Aug 23	22:13	0°♍49'23	0°43'13
minimum elong	2750 Aug 23	22:11	0°♍49'22	0°43'12
max. Earth dist.	2750 Aug 24	15:42	0°♍58'58	6.35509 AU
morning rise	2750 Sep 06	08:07	3°♍45'19	
retrograde	2751 Jan 06	07:48	21°♍02'00	
opposition	2751 Mar 07	11:06	16°♍04'18	1°18'38
min. Earth dist.	2751 Mar 07	08:56	16°♍05'01	4.40741 AU
direct	2751 May 08	01:29	11°♍01'34	
evening set	2751 Sep 11	17:15	28°♍38'32	
	2751 Sep 18	00:47	0°♎	
conjunction	2751 Sep 24	21:50	1°♎29'06	1°01'16
minimum elong	2751 Sep 24	21:49	1°♎29'05	1°01'16
max. Earth dist.	2751 Sep 24	10:11	1°♎22'49	6.44365 AU
morning rise	2751 Oct 07	23:49	4°♎18'19	
retrograde	2752 Feb 05	07:42	21°♎04'48	
opposition	2752 Apr 05	19:40	16°♎10'20	1°32'39
min. Earth dist.	2752 Apr 06	11:48	16°♎05'06	4.46235 AU
direct	2752 Jun 07	06:49	11°♎07'44	
evening set	2752 Oct 11	16:45	28°♎34'37	
	2752 Oct 18	07:24	0°♏	
max. Earth dist.	2752 Oct 23	04:24	1°♏03'16	6.46042 AU
conjunction	2752 Oct 24	14:56	1°♏21'58	1°02'23
minimum elong	2752 Oct 24	14:56	1°♏21'58	1°02'22
morning rise	2752 Nov 06	10:14	4°♏08'02	
	2752 Dec 31	19:36	15°♏	
retrograde	2753 Mar 06	14:50	20°♏53'04	
opposition	2753 May 06	09:46	16°♏00'40	1°22'10
min. Earth dist.	2753 May 07	16:22	15°♏50'53	4.44086 AU
	2753 May 14	08:58	15°℞♏	
direct	2753 Jul 08	04:06	10°♏59'10	
	2753 Aug 31	03:45	15°♏	
evening set	2753 Nov 11	04:50	28°♏33'57	
	2753 Nov 17	17:57	0°♐	
max. Earth dist.	2753 Nov 21	20:30	0°♐54'14	6.40165 AU
conjunction	2753 Nov 23	22:36	1°♐21'50	0°46'42
minimum elong	2753 Nov 23	22:37	1°♐21'51	0°46'42
morning rise	2753 Dec 06	14:27	4°♐08'55	
retrograde	2754 Apr 07	06:18	21°♐21'28	
opposition	2754 Jun 07	03:40	16°♐29'31	0°49'04
min. Earth dist.	2754 Jun 08	17:28	16°♐17'28	4.34805 AU
direct	2754 Aug 08	12:56	11°♐29'48	
evening set	2754 Dec 12	03:48	29°♐29'37	
	2754 Dec 14	09:49	0°♑	
max. Earth dist.	2754 Dec 22	17:42	1°♑52'59	6.28189 AU
conjunction	2754 Dec 24	20:15	2°♑21'38	0°17'26
minimum elong	2754 Dec 24	20:16	2°♑21'39	0°17'26
morning rise	2755 Jan 06	11:38	5°♑13'26	
retrograde	2755 May 10	22:06	23°♑19'28	
desc. node	2755 Jul 07	16:13	18°♑50'12	
opposition	2755 Jul 10	18:31	18°♑26'25	-0°00'25
min. Earth dist.	2755 Jul 12	03:05	18°♑15'59	4.20834 AU
direct	2755 Sep 10	01:59	13°♑29'09	
	2756 Jan 04	08:08	0°♒	
evening set	2756 Jan 13	12:05	2°♒06'45	
max. Earth dist.	2756 Jan 24	16:55	4°♒43'46	6.13400 AU
conjunction	2756 Jan 26	05:40	5°♒05'19	-0°18'31
minimum elong	2756 Jan 26	05:39	5°♒05'18	0°18'32
morning rise	2756 Feb 07	23:53	8°♒04'27	
	2756 Mar 09	17:20	15°♒	
retrograde	2756 Jun 15	01:48	27°♒19'55	
opposition	2756 Aug 14	14:01	22°♒24'16	-0°53'14
min. Earth dist.	2756 Aug 15	07:03	22°♒18'43	4.06344 AU
direct	2756 Oct 13	12:14	17°♒29'21	
	2757 Jan 17	12:18	0°♓	
evening set	2757 Feb 15	20:34	6°♓47'00	
conjunction	2757 Feb 28	18:32	9°♓53'00	-0°49'40
minimum elong	2757 Feb 28	18:30	9°♓52'58	0°49'40
max. Earth dist.	2757 Feb 28	10:13	9°♓47'59	6.00529 AU
morning rise	2757 Mar 13	18:27	13°♓00'16	
	2757 Jun 06	09:43	0°♈	
retrograde	2757 Jul 23	00:48	3°♈18'25	
	2757 Sep 08	03:50	30°℞♓	
opposition	2757 Sep 21	02:29	28°♓19'01	-1°29'20
min. Earth dist.	2757 Sep 20	20:18	28°♓21'04	3.96435 AU
direct	2757 Nov 18	15:26	23°♓25'22	
	2758 Jan 23	05:06	0°♈	
evening set	2758 Mar 24	05:54	13°♈09'16	
conjunction	2758 Apr 06	10:51	16°♈21'14	-1°03'01
minimum elong	2758 Apr 06	10:51	16°♈21'14	1°03'01
max. Earth dist.	2758 Apr 07	11:25	16°♈36'09	5.94461 AU
morning rise	2758 Apr 19	18:59	19°♈34'53	
	2758 Jun 04	16:46	0°♉	
retrograde	2758 Aug 30	06:01	10°♉18'27	
min. Earth dist.	2758 Oct 27	21:08	5°♉24'23	3.95022 AU
opposition	2758 Oct 29	00:00	5°♉15'17	-1°30'42
direct	2758 Dec 25	20:57	0°♉20'44	
	2759 Apr 09	03:52	15°♉	
evening set	2759 Apr 30	19:23	20°♉03'39	

conjunction	2759 May 14 08:24	23°♉17'48	-0°51'32
minimum elong	2759 May 14 08:26	23°♉17'49	0°51'33
max. Earth dist.	2759 May 16 11:36	23°♉48'26	5.97772 AU
morning rise	2759 May 28 00:02	26°♉33'13	
	2759 Jun 11 17:12	0°♊	
retrograde	2759 Oct 06 04:08	16°♊49'33	
min. Earth dist.	2759 Dec 03 05:49	11°♊56'33	4.02691 AU
opposition	2759 Dec 04 17:03	11°♊44'33	-0°56'05
direct	2760 Jan 31 20:54	6°♊47'23	
evening set	2760 Jun 06 03:34	26°♊02'54	
conjunction	2760 Jun 19 21:14	29°♊13'59	-0°20'33
minimum elong	2760 Jun 19 21:15	29°♊14'00	0°20'34
max. Earth dist.	2760 Jun 22 05:11	29°♊46'27	6.09036 AU
	2760 Jun 23 04:32	0°♋	
morning rise	2760 Jul 03 16:15	2°♋25'28	
retrograde	2760 Nov 08 14:56	21°♋38'12	
min. Earth dist.	2761 Jan 05 22:27	16°♋45'04	4.16258 AU
opposition	2761 Jan 07 06:34	16°♋34'10	-0°02'43
asc. node	2761 Jan 26 19:45	14°♋02'53	
direct	2761 Mar 07 09:31	11°♋34'06	
	2761 Jul 11 06:52	0°♌	
evening set	2761 Jul 12 01:09	0°♌10'11	
conjunction	2761 Jul 25 17:45	3°♌14'15	0°16'27
minimum elong	2761 Jul 25 17:44	3°♌14'15	0°16'27
max. Earth dist.	2761 Jul 27 09:10	3°♌36'23	6.23762 AU
morning rise	2761 Aug 08 09:50	6°♌17'45	
	2761 Sep 18 16:36	15°♌	
retrograde	2761 Dec 10 20:54	24°♌21'35	
opposition	2762 Feb 08 17:16	19°♌20'39	0°48'05
min. Earth dist.	2762 Feb 07 23:53	19°♌26'27	4.30755 AU
	2762 Mar 20 09:06	15°℞♌	
direct	2762 Apr 10 05:44	14°♌18'36	
	2762 May 01 06:39	15°♌	
	2762 Aug 04 06:33	0°♍	
evening set	2762 Aug 14 23:05	2°♍18'08	
conjunction	2762 Aug 28 10:04	5°♍14'17	0°46'36
minimum elong	2762 Aug 28 10:02	5°♍14'15	0°46'36
max. Earth dist.	2762 Aug 28 23:37	5°♍21'41	6.36915 AU
morning rise	2762 Sep 10 18:56	8°♍09'13	
retrograde	2763 Jan 10 10:49	25°♍20'51	
opposition	2763 Mar 11 16:07	20°♍23'37	1°21'59
min. Earth dist.	2763 Mar 11 16:05	20°♍23'38	4.41685 AU
direct	2763 May 12 09:01	15°♍20'51	
	2763 Sep 02 04:36	0°♎	
evening set	2763 Sep 16 01:35	2°♎56'14	
conjunction	2763 Sep 29 05:15	5°♎46'16	1°02'26
minimum elong	2763 Sep 29 05:14	5°♎46'15	1°02'25
max. Earth dist.	2763 Sep 28 14:25	5°♎38'15	6.44789 AU
morning rise	2763 Oct 12 06:11	8°♎34'55	
retrograde	2764 Feb 09 12:20	25°♎20'20	
opposition	2764 Apr 10 00:52	20°♎26'16	1°32'37
min. Earth dist.	2764 Apr 10 19:35	20°♎20'13	4.46138 AU
direct	2764 Jun 11 14:27	15°♎23'49	
	2764 Oct 02 12:00	0°♏	
evening set	2764 Oct 15 23:10	2°♏51'34	
max. Earth dist.	2764 Oct 27 06:15	5°♏18'06	6.45426 AU
conjunction	2764 Oct 28 20:33	5°♏38'52	1°01'07
minimum elong	2764 Oct 28 20:34	5°♏38'52	1°01'07
morning rise	2764 Nov 10 15:23	8°♏24'58	
	2764 Dec 12 07:49	15°♏	
retrograde	2765 Mar 10 23:20	25°♏12'50	
opposition	2765 May 10 18:25	20°♏20'33	1°18'45
min. Earth dist.	2765 May 12 02:26	20°♏10'19	4.43005 AU
direct	2765 Jul 12 12:23	15°♏19'15	
	2765 Nov 01 20:24	0°♐	
evening set	2765 Nov 15 11:50	2°♐57'02	
max. Earth dist.	2765 Nov 26 04:01	5°♐18'04	6.38710 AU
conjunction	2765 Nov 28 05:25	5°♐45'23	0°43'15
minimum elong	2765 Nov 28 05:26	5°♐45'23	0°43'15
morning rise	2765 Dec 10 20:53	8°♐32'56	
retrograde	2766 Apr 11 19:32	25°♐51'41	
opposition	2766 Jun 11 17:56	20°♐59'41	0°42'50
min. Earth dist.	2766 Jun 13 06:56	20°♐47'54	4.33061 AU
direct	2766 Aug 13 00:02	16°♐00'21	
	2766 Nov 28 04:31	0°♑	
evening set	2766 Dec 16 14:32	4°♑04'41	
max. Earth dist.	2766 Dec 27 05:06	6°♑29'07	6.26289 AU
conjunction	2766 Dec 29 06:48	6°♑57'25	0°12'33
minimum elong	2766 Dec 29 06:49	6°♑57'25	0°12'34
behind sun begin	2766 Dec 29 01:36	6°♑54'28	
behind sun end	2766 Dec 29 12:02	7°♑00'23	
morning rise	2767 Jan 10 22:30	9°♑50'05	
retrograde	2767 May 15 20:31	28°♑04'43	
desc. node	2767 May 17 06:07	28°♑04'32	
opposition	2767 Jul 15 15:42	23°♑11'22	-0°08'03
min. Earth dist.	2767 Jul 16 23:00	23°♑01'19	4.18884 AU
direct	2767 Sep 14 19:59	18°♑14'24	
	2767 Dec 18 05:50	0°♒	
evening set	2768 Jan 18 04:14	6°♒57'09	
conjunction	2768 Jan 30 22:20	9°♒56'39	-0°23'28
minimum elong	2768 Jan 30 22:19	9°♒56'39	0°23'28
max. Earth dist.	2768 Jan 29 13:21	9°♒37'16	6.11568 AU
morning rise	2768 Feb 12 17:04	12°♒56'49	
	2768 Feb 21 13:04	15°♒	
	2768 May 11 23:22	0°♓	
retrograde	2768 Jun 20 06:06	2°♓21'09	
	2768 Jul 29 19:42	30°℞♒	
opposition	2768 Aug 19 17:18	27°♒25'04	-0°59'45
min. Earth dist.	2768 Aug 20 07:11	27°♒20'32	4.04793 AU
direct	2768 Oct 18 10:01	22°♒30'27	
	2768 Dec 28 20:16	0°♓	
evening set	2769 Feb 20 19:12	11°♓52'12	
conjunction	2769 Mar 05 17:48	14°♓59'01	-0°52'51
minimum elong	2769 Mar 05 17:46	14°♓59'00	0°52'51
max. Earth dist.	2769 Mar 05 12:51	14°♓56'02	5.99377 AU
morning rise	2769 Mar 18 18:49	18°♓07'16	
	2769 May 11 08:39	0°♈	
retrograde	2769 Jul 28 06:58	8°♈31'08	
opposition	2769 Sep 26 08:35	3°♈31'10	-1°31'49
min. Earth dist.	2769 Sep 25 23:01	3°♈34'21	3.95811 AU
	2769 Oct 25 23:23	30°℞♓	
direct	2769 Nov 23 18:28	28°♓37'31	
	2769 Dec 22 10:01	0°♈	
evening set	2770 Mar 29 09:25	18°♈22'41	
conjunction	2770 Apr 11 15:38	21°♈35'13	-1°02'54
minimum elong	2770 Apr 11 15:38	21°♈35'13	1°02'53
max. Earth dist.	2770 Apr 12 21:32	21°♈53'20	5.94429 AU
morning rise	2770 Apr 25 00:43	24°♈49'21	
	2770 May 16 23:58	0°♉	
	2770 Aug 17 10:07	15°♉	
retrograde	2770 Sep 04 12:22	15°♉32'02	
	2770 Sep 22 10:04	15°℞♉	
min. Earth dist.	2770 Nov 02 00:13	10°♉37'58	3.95592 AU
opposition	2770 Nov 03 03:59	10°♉28'33	-1°27'46

direct	2770 Dec 31 01:22	5°♉33'44	
	2771 Mar 21 08:39	15°♉	
evening set	2771 May 06 00:17	25°♉14'21	
conjunction	2771 May 19 14:09	28°♉28'25	-0°48'08
minimum elong	2771 May 19 14:11	28°♉28'26	0°48'07
max. Earth dist.	2771 May 21 18:40	28°♉59'43	5.98873 AU
	2771 May 25 23:53	0°♊	
morning rise	2771 Jun 02 06:43	1°♊43'41	
retrograde	2771 Oct 11 01:16	21°♊53'05	
min. Earth dist.	2771 Dec 08 02:44	17°♊00'24	4.04197 AU
opposition	2771 Dec 09 14:51	16°♊48'05	-0°49'15
direct	2772 Feb 05 19:45	11°♊50'32	
	2772 Jun 06 17:55	0°♋	
evening set	2772 Jun 11 05:25	1°♋01'37	
conjunction	2772 Jun 24 23:17	4°♋12'00	-0°15'26
minimum elong	2772 Jun 24 23:18	4°♋12'00	0°15'26
behind sun begin	2772 Jun 24 21:31	4°♋10'59	
behind sun end	2772 Jun 25 01:06	4°♋13'02	
max. Earth dist.	2772 Jun 27 04:55	4°♋42'59	6.10811 AU
morning rise	2772 Jul 08 18:19	7°♋22'39	
retrograde	2772 Nov 13 06:25	26°♋26'24	
asc. node	2772 Dec 06 21:25	25°♋31'10	
opposition	2773 Jan 11 21:45	21°♋22'43	0°04'58
min. Earth dist.	2773 Jan 10 16:07	21°♋32'45	4.18101 AU
direct	2773 Mar 12 06:00	16°♋22'19	
	2773 Jun 24 10:11	0°♌	
evening set	2773 Jul 16 21:29	4°♌53'46	
conjunction	2773 Jul 30 13:41	7°♌56'53	0°21'19
minimum elong	2773 Jul 30 13:39	7°♌56'52	0°21'18
max. Earth dist.	2773 Aug 01 03:04	8°♌17'47	6.25535 AU
morning rise	2773 Aug 13 04:54	10°♌59'16	
	2773 Aug 31 14:51	15°♌	
retrograde	2773 Dec 15 04:58	28°♌55'26	
min. Earth dist.	2774 Feb 12 10:55	24°♌00'24	4.32332 AU
opposition	2774 Feb 13 02:56	23°♌55'04	0°54'05
direct	2774 Apr 14 18:36	18°♌52'54	
	2774 Jul 17 22:43	0°♍	
evening set	2774 Aug 19 13:56	6°♍49'08	
conjunction	2774 Sep 01 23:52	9°♍44'21	0°49'48
minimum elong	2774 Sep 01 23:50	9°♍44'19	0°49'48
max. Earth dist.	2774 Sep 02 08:44	9°♍49'11	6.38192 AU
morning rise	2774 Sep 15 07:43	12°♍38'20	
retrograde	2775 Jan 14 18:06	29°♍45'18	
opposition	2775 Mar 15 23:21	24°♍48'38	1°24'57
min. Earth dist.	2775 Mar 16 02:30	24°♍47'36	4.42611 AU
direct	2775 May 16 20:51	19°♍45'53	
	2775 Aug 15 18:04	0°♎	
evening set	2775 Sep 20 11:41	7°♎19'32	
conjunction	2775 Oct 03 14:28	10°♎09'01	1°03'18
minimum elong	2775 Oct 03 14:28	10°♎09'00	1°03'17
max. Earth dist.	2775 Oct 02 20:46	9°♎59'27	6.45311 AU
morning rise	2775 Oct 16 14:24	12°♎57'06	
retrograde	2776 Feb 13 17:28	29°♎41'04	
opposition	2776 Apr 14 08:06	24°♎47'20	1°32'07
min. Earth dist.	2776 Apr 15 03:47	24°♎40'59	4.46276 AU
direct	2776 Jun 15 22:33	19°♎45'02	
	2776 Sep 15 05:55	0°♏	
evening set	2776 Oct 20 06:35	7°♏12'33	
max. Earth dist.	2776 Oct 31 12:25	9°♏38'33	6.45190 AU
conjunction	2776 Nov 02 03:15	9°♏59'39	0°59'33
minimum elong	2776 Nov 02 03:16	9°♏59'40	0°59'33
morning rise	2776 Nov 14 21:17	12°♏45'35	
	2776 Nov 25 08:25	15°♏	
retrograde	2777 Mar 15 07:20	29°♏34'57	
opposition	2777 May 15 03:51	24°♏42'50	1°14'57
min. Earth dist.	2777 May 16 12:50	24°♏32'19	4.42415 AU
direct	2777 Jul 16 22:14	19°♏41'49	
	2777 Oct 15 18:01	0°♐	
evening set	2777 Nov 19 18:48	7°♐20'43	
max. Earth dist.	2777 Nov 30 08:51	9°♐40'59	6.37807 AU
conjunction	2777 Dec 02 11:50	10°♐09'13	0°39'39
minimum elong	2777 Dec 02 11:52	10°♐09'14	0°39'39
morning rise	2777 Dec 15 03:12	12°♐57'04	
	2778 Apr 01 15:36	0°♑	
retrograde	2778 Apr 16 08:29	0°♑20'12	
	2778 May 01 01:20	30°℞♐	
opposition	2778 Jun 16 07:16	25°♐28'03	0°36'30
min. Earth dist.	2778 Jun 17 19:59	25°♐16'20	4.31884 AU
direct	2778 Aug 17 11:40	20°♐28'55	
	2778 Nov 10 18:22	0°♑	
evening set	2778 Dec 20 23:06	8°♑35'48	
max. Earth dist.	2778 Dec 31 16:15	11°♑02'05	6.24939 AU
conjunction	2779 Jan 02 15:30	11°♑29'05	0°07'46
minimum elong	2779 Jan 02 15:31	11°♑29'05	0°07'46
behind sun begin	2779 Jan 02 08:19	11°♑25'00	
behind sun end	2779 Jan 02 22:42	11°♑33'10	
morning rise	2779 Jan 15 07:11	14°♑22'20	
desc. node	2779 Mar 28 23:43	28°♑40'41	
	2779 Apr 07 21:41	0°♒	
retrograde	2779 May 20 14:44	2°♒43'41	
	2779 Jul 02 22:06	30°℞♑	
opposition	2779 Jul 20 10:03	27°♑50'02	-0°15'21
min. Earth dist.	2779 Jul 21 15:51	27°♑40'28	4.17445 AU
direct	2779 Sep 19 10:18	22°♑53'22	
	2779 Nov 29 04:29	0°♒	
evening set	2780 Jan 22 17:06	11°♒39'33	
max. Earth dist.	2780 Feb 03 03:57	14°♒21'14	6.10149 AU
conjunction	2780 Feb 04 11:22	14°♒39'46	-0°28'04
minimum elong	2780 Feb 04 11:20	14°♒39'45	0°28'03
	2780 Feb 05 21:40	15°♒	
morning rise	2780 Feb 17 06:47	17°♒40'48	
	2780 Apr 14 17:37	0°♓	
retrograde	2780 Jun 25 05:36	7°♓12'40	
opposition	2780 Aug 24 16:12	2°♓16'02	-1°05'34
min. Earth dist.	2780 Aug 25 03:27	2°♓12'21	4.03514 AU
	2780 Sep 11 17:11	30°℞♒	
direct	2780 Oct 23 04:45	27°♒21'32	
	2780 Dec 02 21:58	0°♓	
evening set	2781 Feb 25 13:36	16°♓46'42	
conjunction	2781 Mar 10 13:11	19°♓54'21	-0°55'30
minimum elong	2781 Mar 10 13:10	19°♓54'20	0°55'30
max. Earth dist.	2781 Mar 10 13:04	19°♓54'17	5.98365 AU
morning rise	2781 Mar 23 14:59	23°♓03'26	
	2781 Apr 22 11:38	0°♈	
retrograde	2781 Aug 02 10:45	13°♈32'23	
opposition	2781 Oct 01 09:45	8°♈31'56	-1°33'31
min. Earth dist.	2781 Sep 30 22:47	8°♈35'36	3.95192 AU
direct	2781 Nov 28 17:12	3°♈38'14	
evening set	2782 Apr 03 08:57	23°♈25'03	
conjunction	2782 Apr 16 16:11	26°♈38'10	-1°02'20
minimum elong	2782 Apr 16 16:11	26°♈38'11	1°02'20
max. Earth dist.	2782 Apr 18 00:05	26°♈57'30	5.94246 AU
morning rise	2782 Apr 30 02:36	29°♈52'57	

	2782 Apr	30	14:20	0°♉	
	2782 Jul	10	04:19	15°♉	
retrograde	2782 Sep	09	12:28	20°♉35'25	
min. Earth dist.	2782 Nov	06	21:39	15°♉41'48	3.95890 AU
opposition	2782 Nov	08	03:40	15°♉31'37	-1°24'21
	2782 Nov	12	01:04	15°℞♉	
direct	2783 Jan	04	23:16	10°♉36'30	
	2783 Feb	26	11:53	15°♉	
	2783 May	09	22:28	0°♊	
evening set	2783 May	11	01:52	0°♊16'12	
conjunction	2783 May	24	16:39	3°♊30'20	-0°44'30
minimum elong	2783 May	24	16:42	3°♊30'21	0°44'30
max. Earth dist.	2783 May	26	21:42	4°♊01'54	5.99628 AU
morning rise	2783 Jun	07	10:00	6°♊45'35	
retrograde	2783 Oct	15	21:31	26°♊49'41	
min. Earth dist.	2783 Dec	12	23:01	21°♊56'43	4.05309 AU
opposition	2783 Dec	14	10:14	21°♊44'42	-0°42'21
direct	2784 Feb	10	18:08	16°♊46'44	
	2784 May	20	19:00	0°♋	
evening set	2784 Jun	16	05:24	5°♋54'51	
conjunction	2784 Jun	29	23:37	9°♋04'45	-0°10'21
minimum elong	2784 Jun	29	23:38	9°♋04'45	0°10'21
behind sun begin	2784 Jun	29	17:06	9°♋01'00	
behind sun end	2784 Jun	30	06:10	9°♋08'30	
max. Earth dist.	2784 Jul	02	05:39	9°♋35'51	6.12207 AU
morning rise	2784 Jul	13	18:30	12°♋14'42	
asc. node	2784 Oct	18	00:27	29°♋39'50	
	2784 Oct	21	18:18	0°♌	
retrograde	2784 Nov	17	20:07	1°♌10'44	
	2784 Dec	14	16:08	30°℞♋	
min. Earth dist.	2785 Jan	15	06:26	26°♋17'17	4.19644 AU
opposition	2785 Jan	16	11:33	26°♋07'26	0°12'24
direct	2785 Mar	16	22:44	21°♋06'45	
	2785 Jun	05	21:42	0°♌	
evening set	2785 Jul	21	17:06	9°♌34'29	
conjunction	2785 Aug	04	08:33	12°♌36'39	0°25'56
minimum elong	2785 Aug	04	08:31	12°♌36'38	0°25'56
max. Earth dist.	2785 Aug	05	17:52	12°♌55'12	6.27101 AU
	2785 Aug	15	02:21	15°♌	
morning rise	2785 Aug	17	23:07	15°♌38'02	
	2785 Nov	01	17:24	0°♍	
retrograde	2785 Dec	19	14:18	3°♍27'11	
	2786 Feb	05	16:53	30°℞♌	
opposition	2786 Feb	17	12:26	28°♌27'15	0°59'39
min. Earth dist.	2786 Feb	16	23:05	28°♌31'41	4.33795 AU
direct	2786 Apr	19	09:10	23°♌24'54	
	2786 Jun	28	01:46	0°♍	
evening set	2786 Aug	24	03:35	11°♍17'41	
conjunction	2786 Sep	06	12:42	14°♍12'02	0°52'39
minimum elong	2786 Sep	06	12:40	14°♍12'01	0°52'38
max. Earth dist.	2786 Sep	06	19:51	14°♍15'55	6.39432 AU
morning rise	2786 Sep	19	19:18	17°♍05'02	
	2786 Nov	26	22:21	0°♎	
retrograde	2787 Jan	18	22:24	4°♎07'20	
	2787 Mar	13	23:26	30°℞♍	
opposition	2787 Mar	20	06:02	29°♍11'03	1°27'24
min. Earth dist.	2787 Mar	20	10:19	29°♍09'40	4.43539 AU
direct	2787 May	21	05:40	24°♍08'20	
	2787 Jul	26	12:31	0°♎	
evening set	2787 Sep	24	20:42	11°♎39'52	
conjunction	2787 Oct	07	22:23	14°♎28'43	1°03'47
minimum elong	2787 Oct	07	22:22	14°♎28'42	1°03'47
max. Earth dist.	2787 Oct	07	01:02	14°♎17'11	6.45826 AU
morning rise	2787 Oct	20	21:24	17°♎16'13	
	2787 Dec	27	16:03	0°♏	
retrograde	2788 Feb	17	23:47	3°♏58'48	
	2788 Apr	11	11:28	30°℞♎	
opposition	2788 Apr	18	14:38	29°♎05'22	1°31'04
min. Earth dist.	2788 Apr	19	13:14	28°♎58'06	4.46320 AU
direct	2788 Jun	20	07:50	24°♎03'10	
	2788 Aug	26	08:07	0°♏	
evening set	2788 Oct	24	12:48	11°♏30'42	
max. Earth dist.	2788 Nov	04	15:11	13°♏55'04	6.44724 AU
conjunction	2788 Nov	06	08:50	14°♏17'43	0°57'39
minimum elong	2788 Nov	06	08:51	14°♏17'44	0°57'38
	2788 Nov	09	14:34	15°♏	
morning rise	2788 Nov	19	02:19	17°♏03'37	
	2789 Jan	26	15:11	0°♐	
retrograde	2789 Mar	19	15:15	3°♐55'33	
	2789 May	12	02:31	30°℞♏	
opposition	2789 May	19	13:01	29°♏03'29	1°10'41
min. Earth dist.	2789 May	20	22:37	28°♏52'46	4.41448 AU
direct	2789 Jul	21	05:48	24°♏02'40	
	2789 Sep	25	20:16	0°♐	
evening set	2789 Nov	24	01:21	11°♐44'07	
max. Earth dist.	2789 Dec	04	15:54	14°♐05'05	6.36405 AU
conjunction	2789 Dec	06	18:11	14°♐33'03	0°35'45
minimum elong	2789 Dec	06	18:12	14°♐33'04	0°35'46
morning rise	2789 Dec	19	09:16	17°♐21'23	
	2790 Feb	21	18:04	0°♑	
retrograde	2790 Apr	20	23:18	4°♑50'58	
opposition	2790 Jun	20	21:54	29°♐58'46	0°29'48
	2790 Jun	20	18:02	30°℞♐	
min. Earth dist.	2790 Jun	22	11:02	29°♐46'56	4.30107 AU
direct	2790 Aug	21	23:38	25°♐00'00	
	2790 Oct	20	11:40	0°♑	
evening set	2790 Dec	25	09:37	13°♑11'40	
max. Earth dist.	2791 Jan	05	02:27	15°♑38'31	6.22923 AU
conjunction	2791 Jan	07	02:00	16°♑05'47	0°02'47
minimum elong	2791 Jan	07	01:58	16°♑05'47	0°02'47
behind sun begin	2791 Jan	06	18:01	16°♑01'14	
behind sun end	2791 Jan	07	09:56	16°♑10'19	
morning rise	2791 Jan	19	18:07	19°♑00'01	
desc. node	2791 Feb	06	01:46	22°♑53'41	
	2791 Mar	12	21:51	0°♒	
retrograde	2791 May	25	13:18	7°♒30'53	
opposition	2791 Jul	25	07:41	2°♒36'54	-0°22'52
min. Earth dist.	2791 Jul	26	11:22	2°♒27'59	4.15324 AU
	2791 Aug	15	17:32	30°℞♑	
direct	2791 Sep	24	02:46	27°♑40'32	
	2791 Nov	01	22:54	0°♒	
	2792 Jan	20	19:17	15°♒	
evening set	2792 Jan	27	10:09	16°♒32'52	
max. Earth dist.	2792 Feb	08	02:14	19°♒18'15	6.08123 AU
conjunction	2792 Feb	09	05:07	19°♒34'12	-0°32'41
minimum elong	2792 Feb	09	05:06	19°♒34'11	0°32'41
morning rise	2792 Feb	22	01:07	22°♒36'24	
	2792 Mar	25	13:54	0°♓	
retrograde	2792 Jun	30	12:28	12°♓18'10	
opposition	2792 Aug	29	20:40	7°♓21'07	-1°11'16
min. Earth dist.	2792 Aug	30	05:51	7°♓18'06	4.01778 AU
direct	2792 Oct	28	04:46	2°♓26'52	
evening set	2793 Mar	02	14:20	21°♓57'07	
conjunction	2793 Mar	15	14:45	25°♓05'47	-0°57'54

minimum elong	2793 Mar 15 14:44	25°♓05'46	0°57'53
max. Earth dist.	2793 Mar 15 17:57	25°♓07'43	5.97073 AU
morning rise	2793 Mar 28 17:52	28°♓16'01	
	2793 Apr 04 23:49	0°♈	
retrograde	2793 Aug 07 19:08	18°♈50'48	
opposition	2793 Oct 06 17:16	13°♈49'52	-1°34'35
min. Earth dist.	2793 Oct 06 02:15	13°♈54'53	3.94521 AU
direct	2793 Dec 03 20:52	8°♈56'07	
evening set	2794 Apr 08 15:20	28°♈44'36	
	2794 Apr 13 20:22	0°♉	
conjunction	2794 Apr 21 23:46	1°♉58'16	-1°01'13
minimum elong	2794 Apr 21 23:48	1°♉58'17	1°01'13
max. Earth dist.	2794 Apr 23 11:57	2°♉20'11	5.94271 AU
morning rise	2794 May 05 11:17	5°♉13'33	
	2794 Jun 17 09:28	15°♉	
retrograde	2794 Sep 14 18:28	25°♉54'17	
min. Earth dist.	2794 Nov 12 01:40	21°♉00'46	3.96621 AU
opposition	2794 Nov 13 08:53	20°♉50'09	-1°20'03
direct	2795 Jan 10 05:31	15°♉54'43	
	2795 Apr 22 10:56	0°♊	
evening set	2795 May 16 08:59	5°♊31'31	
conjunction	2795 May 30 00:41	8°♊45'25	-0°40'21
minimum elong	2795 May 30 00:43	8°♊45'26	0°40'21
max. Earth dist.	2795 Jun 01 08:56	9°♊18'44	6.01022 AU
morning rise	2795 Jun 12 18:33	12°♊00'14	
	2795 Sep 16 00:49	0°♋	
retrograde	2795 Oct 20 20:09	1°♋55'40	
	2795 Nov 24 08:25	30°℞♊	
min. Earth dist.	2795 Dec 17 20:48	27°♊02'59	4.07219 AU
opposition	2795 Dec 19 08:38	26°♊50'47	-0°34'53
direct	2796 Feb 15 19:24	21°♊52'25	
	2796 May 01 02:56	0°♋	
evening set	2796 Jun 21 07:56	10°♋54'26	
conjunction	2796 Jul 05 01:56	14°♋03'14	-0°05'06
minimum elong	2796 Jul 05 01:55	14°♋03'14	0°05'06
behind sun begin	2796 Jul 04 17:48	13°♋58'36	
behind sun end	2796 Jul 05 10:03	14°♋07'52	
max. Earth dist.	2796 Jul 07 05:19	14°♋32'40	6.14455 AU
morning rise	2796 Jul 18 20:37	17°♋12'01	
asc. node	2796 Aug 27 22:58	25°♋51'28	
	2796 Sep 19 09:49	0°♌	
retrograde	2796 Nov 22 09:05	5°♌57'10	
min. Earth dist.	2797 Jan 19 22:34	1°♌03'25	4.22004 AU
opposition	2797 Jan 21 01:57	0°♌54'09	0°19'48
	2797 Jan 27 19:14	30°℞♋	
direct	2797 Mar 21 18:28	25°♋53'06	
	2797 May 13 13:56	0°♌	
evening set	2797 Jul 26 11:45	14°♌14'10	
	2797 Jul 29 22:49	15°♌	
conjunction	2797 Aug 09 02:33	17°♌15'01	0°30'23
minimum elong	2797 Aug 09 02:31	17°♌15'00	0°30'24
max. Earth dist.	2797 Aug 10 09:54	17°♌32'24	6.29389 AU
morning rise	2797 Aug 22 15:54	20°♌14'56	
	2797 Oct 09 02:38	0°♍	
retrograde	2797 Dec 23 20:15	7°♍54'52	
opposition	2798 Feb 21 20:05	2°♍55'26	1°04'44
min. Earth dist.	2798 Feb 21 08:39	2°♍59'14	4.35829 AU
	2798 Mar 17 10:42	30°℞♌	
direct	2798 Apr 23 20:51	27°♌52'56	
	2798 May 31 18:26	0°♍	
evening set	2798 Aug 28 14:53	15°♍40'34	
conjunction	2798 Sep 10 22:43	18°♍33'47	0°55'08
minimum elong	2798 Sep 10 22:41	18°♍33'46	0°55'08
max. Earth dist.	2798 Sep 11 00:07	18°♍34'33	6.41038 AU
morning rise	2798 Sep 24 04:18	21°♍25'41	
	2798 Nov 05 07:22	0°♎	
retrograde	2799 Jan 23 02:07	8°♎22'33	
opposition	2799 Mar 24 10:09	3°♎26'40	1°29'16
min. Earth dist.	2799 Mar 24 18:05	3°♎24'05	4.44625 AU
	2799 Apr 22 16:38	30°℞♍	
direct	2799 May 25 13:55	28°♍23'51	
	2799 Jun 27 19:11	0°♎	
evening set	2799 Sep 29 02:18	15°♎52'57	
max. Earth dist.	2799 Oct 11 03:00	18°♎28'12	6.46295 AU
conjunction	2799 Oct 12 03:14	18°♎41'16	1°03'54
minimum elong	2799 Oct 12 03:14	18°♎41'16	1°03'55
morning rise	2799 Oct 25 01:12	21°♎28'13	
	2799 Dec 06 05:12	0°♏	
retrograde	2800 Feb 22 01:43	8°♏09'57	
opposition	2800 Apr 22 18:40	3°♏16'44	1°29'36
min. Earth dist.	2800 Apr 23 18:47	3°♏09'00	4.46153 AU
	2800 May 20 16:54	30°℞♎	
direct	2800 Jun 24 11:40	28°♎14'38	
	2800 Jul 29 12:22	0°♏	
	2800 Oct 25 08:46	15°♏	
evening set	2800 Oct 28 16:30	15°♏42'57	
max. Earth dist.	2800 Nov 08 15:37	18°♏05'53	6.43916 AU
conjunction	2800 Nov 10 11:52	18°♏30'01	0°55'29
minimum elong	2800 Nov 10 11:53	18°♏30'02	0°55'29
morning rise	2800 Nov 23 04:53	21°♏16'03	
	2801 Jan 04 22:34	0°♐	
retrograde	2801 Mar 23 23:45	8°♐11'52	
opposition	2801 May 23 20:51	3°♐19'54	1°06'08
min. Earth dist.	2801 May 25 08:54	3°♐08'25	4.40031 AU
	2801 Jun 21 13:15	30°℞♏	
direct	2801 Jul 25 13:16	28°♏19'15	
	2801 Aug 28 12:13	0°♐	
evening set	2801 Nov 28 06:57	16°♐04'47	
max. Earth dist.	2801 Dec 08 19:18	18°♐25'12	6.34475 AU
conjunction	2801 Dec 10 23:37	18°♐54'25	0°31'43
minimum elong	2801 Dec 10 23:39	18°♐54'25	0°31'43
morning rise	2801 Dec 23 14:48	21°♐43'32	
	2802 Jan 31 18:45	0°♑	
retrograde	2802 Apr 25 14:22	9°♑21'30	
opposition	2802 Jun 25 12:35	4°♑29'07	0°22'58
min. Earth dist.	2802 Jun 27 00:44	4°♑17'34	4.27782 AU
	2802 Aug 08 13:41	30°℞♐	
direct	2802 Aug 26 09:31	29°♐30'36	
	2802 Sep 13 06:31	0°♑	
desc. node	2802 Dec 17 13:51	15°♑02'19	
evening set	2802 Dec 29 20:48	17°♑49'05	
max. Earth dist.	2803 Jan 09 16:50	20°♑18'33	6.20398 AU
conjunction	2803 Jan 11 13:32	20°♑44'21	-0°02'20
minimum elong	2803 Jan 11 13:32	20°♑44'21	0°02'20
behind sun begin	2803 Jan 11 05:33	20°♑39'46	
behind sun end	2803 Jan 11 21:31	20°♑48'56	
morning rise	2803 Jan 24 06:01	23°♑39'49	
	2803 Feb 21 16:47	0°♒	
retrograde	2803 May 30 15:48	12°♒22'09	
opposition	2803 Jul 30 07:30	7°♒27'52	-0°30'19
min. Earth dist.	2803 Jul 31 09:56	7°♒19'20	4.12790 AU
direct	2803 Sep 28 21:42	2°♒31'52	
	2804 Jan 03 16:31	15°♒	
evening set	2804 Feb 01 05:44	21°♒31'45	
max. Earth dist.	2804 Feb 13 01:08	24°♒20'00	6.05808 AU

conjunction	2804 Feb 14	01:17	24°♒34'22	-0°37'07	
minimum elong	2804 Feb 14	01:15	24°♒34'21	0°37'08	
morning rise	2804 Feb 26	22:20	27°♒38'00		
	2804 Mar 08	00:04	0°♓		
retrograde	2804 Jul 05	20:36	17°♓30'40		
opposition	2804 Sep 04	04:02	12°♓33'05	-1°16'29	
min. Earth dist.	2804 Sep 04	08:37	12°♓31'35	3.99935 AU	
direct	2804 Nov 02	06:06	7°♓39'05		
evening set	2805 Mar 07	18:30	27°♓14'42		
	2805 Mar 19	03:47	0°♈		
conjunction	2805 Mar 20	20:04	0°♈24'26	-0°59'50	
minimum elong	2805 Mar 20	20:02	0°♈24'25	0°59'50	
max. Earth dist.	2805 Mar 21	05:30	0°♈30'09	5.95885 AU	
morning rise	2805 Apr 03	00:16	3°♈35'43		
retrograde	2805 Aug 13	07:31	24°♈15'24		
min. Earth dist.	2805 Oct 11	09:37	19°♈19'49	3.94135 AU	
opposition	2805 Oct 12	03:19	19°♈13'52	-1°34'49	
direct	2805 Dec 09	05:15	14°♈20'01		
	2806 Mar 27	12:25	0°♉		
evening set	2806 Apr 14	00:14	4°♉08'47		
conjunction	2806 Apr 27	09:55	7°♉22'49	-0°59'34	
minimum elong	2806 Apr 27	09:56	7°♉22'50	0°59'33	
max. Earth dist.	2806 Apr 29	03:38	7°♉48'01	5.94710 AU	
morning rise	2806 May 10	22:32	10°♉38'23		
	2806 May 29	10:28	15°♉		
	2806 Aug 23	06:00	0°♊		
retrograde	2806 Sep 20	01:10	1°♊14'56		
	2806 Oct 17	14:51	30°℞♉		
min. Earth dist.	2806 Nov 17	05:37	26°♉21'50	3.97831 AU	
opposition	2806 Nov 18	14:54	26°♉10'31	-1°15'00	
direct	2807 Jan 15	11:36	21°♉14'45		
	2807 Apr 02	19:09	0°♊		
evening set	2807 May 21	16:42	10°♊46'51		
conjunction	2807 Jun 04	08:52	14°♊00'09	-0°35'51	
minimum elong	2807 Jun 04	08:54	14°♊00'10	0°35'51	
max. Earth dist.	2807 Jun 06	16:49	14°♊33'08	6.02839 AU	
morning rise	2807 Jun 18	03:20	17°♊14'19		
	2807 Aug 17	02:22	0°♋		
retrograde	2807 Oct 25	16:40	6°♋59'40		
min. Earth dist.	2807 Dec 22	18:52	2°♋06'58	4.09411 AU	
opposition	2807 Dec 24	06:23	1°♋54'52	-0°27'10	
	2808 Jan 07	17:28	30°℞♊		
direct	2808 Feb 20	21:11	26°♊56'04		
	2808 Apr 05	02:03	0°♋		
evening set	2808 Jun 26	09:34	15°♋51'22		
asc. node	2808 Jul 07	06:26	18°♋19'41		
conjunction	2808 Jul 10	03:32	18°♋59'03	0°00'17	
minimum elong	2808 Jul 10	03:30	18°♋59'03	0°00'16	
behind sun begin	2808 Jul 09	19:11	18°♋54'19		
behind sun end	2808 Jul 10	11:50	19°♋03'46		
max. Earth dist.	2808 Jul 12	05:39	19°♋27'37	6.16838 AU	
morning rise	2808 Jul 23	21:33	22°♋06'30		
	2808 Aug 29	09:55	0°♌		
retrograde	2808 Nov 26	22:17	10°♌40'51		
opposition	2809 Jan 25	15:24	5°♌38'21	0°27'03	
min. Earth dist.	2809 Jan 24	14:12	5°♌46'50	4.24341 AU	
direct	2809 Mar 26	12:34	0°♌37'05		
	2809 Jul 13	08:27	15°♌		
evening set	2809 Jul 31	05:50	18°♌52'04		
conjunction	2809 Aug 13	19:40	21°♌51'40	0°34'40	
minimum elong	2809 Aug 13	19:38	21°♌51'39	0°34'40	
max. Earth dist.	2809 Aug 14	21:58	22°♌06'11	6.31491 AU	
morning rise	2809 Aug 27	08:07	24°♌50'18		
	2809 Sep 20	11:50	0°♍		
retrograde	2809 Dec 28	02:40	12°♍22'15		
opposition	2810 Feb 26	03:47	7°♍23'20	1°09'32	
min. Earth dist.	2810 Feb 25	19:14	7°♍26'10	4.37563 AU	
direct	2810 Apr 28	08:40	2°♍20'44		
evening set	2810 Sep 02	01:57	20°♍04'28		
conjunction	2810 Sep 15	08:55	22°♍56'47	0°57'22	
minimum elong	2810 Sep 15	08:53	22°♍56'47	0°57'22	
max. Earth dist.	2810 Sep 15	07:18	22°♍55'55	6.42285 AU	
morning rise	2810 Sep 28	13:12	25°♍47'45		
	2810 Oct 18	11:24	0°♎		
retrograde	2811 Jan 27	05:49	12°♎40'42		
opposition	2811 Mar 28	15:27	7°♎45'19	1°30'46	
min. Earth dist.	2811 Mar 29	01:40	7°♎42'00	4.45326 AU	
direct	2811 May 29	21:14	2°♎42'37		
evening set	2811 Oct 03	09:25	20°♎10'33		
max. Earth dist.	2811 Oct 15	04:11	22°♎42'45	6.46389 AU	
conjunction	2811 Oct 16	09:18	22°♎58'28	1°03'43	
minimum elong	2811 Oct 16	09:18	22°♎58'28	1°03'43	
morning rise	2811 Oct 29	06:35	25°♎45'06		
	2811 Nov 18	11:01	0°♏		
retrograde	2812 Feb 26	08:45	12°♏27'16		
opposition	2812 Apr 27	01:12	7°♏34'21	1°27'40	
min. Earth dist.	2812 Apr 28	04:26	7°♏25'37	4.45649 AU	
direct	2812 Jun 28	19:34	2°♏32'22		
	2812 Oct 09	01:16	15°♏		
evening set	2812 Nov 01	22:29	20°♏02'27		
max. Earth dist.	2812 Nov 12	19:38	22°♏24'41	6.42848 AU	
conjunction	2812 Nov 14	17:30	22°♏49'46	0°52'58	
minimum elong	2812 Nov 14	17:31	22°♏49'47	0°52'58	
morning rise	2812 Nov 27	10:01	25°♏36'04		
	2812 Dec 18	01:10	0°♐		
retrograde	2813 Mar 28	09:51	12°♐36'38		
opposition	2813 May 28	07:50	7°♐44'42	1°01'05	
min. Earth dist.	2813 May 29	19:45	7°♐33'15	4.38467 AU	
direct	2813 Jul 29	21:05	2°♐44'20		
evening set	2813 Dec 02	15:26	20°♐34'16		
max. Earth dist.	2813 Dec 13	04:10	22°♐55'32	6.32539 AU	
conjunction	2813 Dec 15	07:55	23°♐24'35	0°27'22	
minimum elong	2813 Dec 15	07:57	23°♐24'36	0°27'21	
morning rise	2813 Dec 27	23:08	26°♐14'31		
	2814 Jan 14	01:12	0°♑		
retrograde	2814 Apr 30	10:27	14°♑01'01		
opposition	2814 Jun 30	06:59	9°♑08'29	0°15'43	
min. Earth dist.	2814 Jul 01	19:15	8°♑56'54	4.25587 AU	
direct	2814 Aug 31	00:45	4°♑10'21		
desc. node	2814 Oct 26	20:14	8°♑49'00		
evening set	2815 Jan 03	10:56	22°♑34'56		
max. Earth dist.	2815 Jan 14	08:33	25°♑06'06	6.18146 AU	
conjunction	2815 Jan 16	03:54	25°♑31'14	-0°07'29	
minimum elong	2815 Jan 16	03:53	25°♑31'14	0°07'29	
behind sun begin	2815 Jan 15	20:35	25°♑27'01		
behind sun end	2815 Jan 16	11:11	25°♑35'26		
morning rise	2815 Jan 28	20:55	28°♑27'51		
	2815 Feb 04	13:26	0°♒		
	2815 Apr 26	10:55	15°♒		
retrograde	2815 Jun 04	17:40	17°♒20'34		
	2815 Jul 14	10:38	15°℞♒		
opposition	2815 Aug 04	09:38	12°♒25'53	-0°37'46	
min. Earth dist.	2815 Aug 05	08:16	12°♒18'33	4.10691 AU	
direct	2815 Oct 03	17:54	7°♒30'16		

	2815 Dec 14 21:22	15°♒	
evening set	2816 Feb 06 03:20	26°♒35'59	
conjunction	2816 Feb 18 23:34	29°♒39'39	-0°41'22
minimum elong	2816 Feb 18 23:32	29°♒39'38	0°41'23
max. Earth dist.	2816 Feb 18 04:51	29°♒28'28	6.04072 AU
	2816 Feb 20 09:37	0°♓	
morning rise	2816 Mar 02 21:22	2°♓44'24	
retrograde	2816 Jul 11 06:51	22°♓45'23	
opposition	2816 Sep 09 11:53	17°♓47'13	-1°21'09
min. Earth dist.	2816 Sep 09 13:36	17°♓46'39	3.98757 AU
direct	2816 Nov 07 11:03	12°♓53'21	
	2817 Mar 02 08:48	0°♈	
evening set	2817 Mar 12 22:23	2°♈31'37	
conjunction	2817 Mar 26 01:00	5°♈42'03	-1°01'19
minimum elong	2817 Mar 26 00:59	5°♈42'02	1°01'19
max. Earth dist.	2817 Mar 26 16:05	5°♈51'11	5.95375 AU
morning rise	2817 Apr 08 06:20	8°♈54'04	
retrograde	2817 Aug 18 15:40	29°♈35'19	
opposition	2817 Oct 17 11:01	24°♈33'15	-1°34'15
min. Earth dist.	2817 Oct 16 14:00	24°♈40'19	3.94389 AU
direct	2817 Dec 14 10:27	19°♈39'15	
	2818 Mar 08 22:44	0°♉	
evening set	2818 Apr 19 06:41	9°♉25'57	
conjunction	2818 May 02 17:12	12°♉39'58	-0°57'28
minimum elong	2818 May 02 17:13	12°♉39'59	0°57'28
max. Earth dist.	2818 May 04 12:55	13°♉06'18	5.95666 AU
	2818 May 12 10:07	15°♉	
morning rise	2818 May 16 06:54	15°♉55'30	
	2818 Jul 20 20:24	0°♊	
retrograde	2818 Sep 25 01:56	6°♊25'48	
min. Earth dist.	2818 Nov 22 05:59	1°♊32'53	3.99370 AU
opposition	2818 Nov 23 16:33	1°♊21'06	-1°09'31
	2818 Dec 03 18:11	30°℞♉	
direct	2819 Jan 20 15:33	26°♉24'52	
	2819 Mar 08 23:22	0°♊	
evening set	2819 May 26 20:21	15°♊51'26	
conjunction	2819 Jun 09 13:11	19°♊04'04	-0°31'15
minimum elong	2819 Jun 09 13:13	19°♊04'05	0°31'14
max. Earth dist.	2819 Jun 11 22:03	19°♊37'26	6.04821 AU
morning rise	2819 Jun 23 07:43	22°♊17'21	
	2819 Jul 27 19:41	0°♋	
retrograde	2819 Oct 30 10:21	11°♋52'19	
opposition	2819 Dec 28 23:42	6°♋47'43	-0°19'33
min. Earth dist.	2819 Dec 27 13:50	6°♋59'14	4.11601 AU
direct	2820 Feb 25 18:47	1°♋48'31	
asc. node	2820 May 17 22:49	11°♋08'52	
evening set	2820 Jul 01 07:07	20°♋37'27	
conjunction	2820 Jul 15 00:40	23°♋44'00	0°05'27
minimum elong	2820 Jul 15 00:40	23°♋44'00	0°05'27
behind sun begin	2820 Jul 14 16:37	23°♋39'27	
behind sun end	2820 Jul 15 08:42	23°♋48'32	
max. Earth dist.	2820 Jul 16 23:29	24°♋10'32	6.19038 AU
morning rise	2820 Jul 28 18:18	26°♋50'16	
	2820 Aug 12 00:11	0°♌	
	2820 Nov 18 23:25	15°♌	
retrograde	2820 Dec 01 06:12	15°♌14'52	
	2820 Dec 13 12:11	15°℞♌	
min. Earth dist.	2821 Jan 29 01:52	10°♌20'41	4.26370 AU
opposition	2821 Jan 30 01:17	10°♌12'49	0°33'52
direct	2821 Mar 31 02:10	5°♌11'17	
	2821 Jun 25 18:22	15°♌	
evening set	2821 Aug 04 20:29	23°♌21'24	
conjunction	2821 Aug 18 09:32	26°♌19'56	0°38'38
minimum elong	2821 Aug 18 09:29	26°♌19'55	0°38'37
max. Earth dist.	2821 Aug 19 07:47	26°♌32'11	6.33203 AU
morning rise	2821 Aug 31 20:51	29°♌17'24	
	2821 Sep 04 03:06	0°♍	
retrograde	2822 Jan 01 07:48	16°♍42'56	
opposition	2822 Mar 02 09:20	11°♍44'36	1°13'49
min. Earth dist.	2822 Mar 02 03:59	11°♍46'22	4.38855 AU
direct	2822 May 02 18:29	6°♍41'58	
evening set	2822 Sep 06 11:25	24°♍23'15	
conjunction	2822 Sep 19 17:19	27°♍14'53	0°59'15
minimum elong	2822 Sep 19 17:18	27°♍14'52	0°59'15
max. Earth dist.	2822 Sep 19 10:33	27°♍11'13	6.43053 AU
morning rise	2822 Oct 02 20:43	0°♎05'09	
	2822 Oct 02 11:07	0°♎	
retrograde	2823 Jan 31 09:45	16°♎55'46	
opposition	2823 Apr 01 20:01	12°♎00'49	1°31'46
min. Earth dist.	2823 Apr 02 08:59	11°♎56'36	4.45569 AU
direct	2823 Jun 03 03:50	6°♎58'09	
evening set	2823 Oct 07 15:51	24°♎26'18	
max. Earth dist.	2823 Oct 19 08:29	26°♎57'30	6.46093 AU
conjunction	2823 Oct 20 15:07	27°♎14'04	1°03'12
minimum elong	2823 Oct 20 15:08	27°♎14'04	1°03'11
morning rise	2823 Nov 02 11:29	0°♏00'31	
	2823 Nov 02 10:32	0°♏	
	2824 Jan 27 17:43	15°♏	
retrograde	2824 Mar 01 14:32	16°♏44'23	
	2824 Apr 04 14:21	15°℞♏	
opposition	2824 May 01 08:11	11°♏51'44	1°25'16
min. Earth dist.	2824 May 02 12:25	11°♏42'42	4.44853 AU
direct	2824 Jul 03 02:02	6°♏50'02	
	2824 Sep 20 22:58	15°♏	
evening set	2824 Nov 06 04:58	24°♏22'36	
max. Earth dist.	2824 Nov 16 23:17	26°♏43'49	6.41607 AU
conjunction	2824 Nov 18 23:21	27°♏10'11	0°50'09
minimum elong	2824 Nov 18 23:22	27°♏10'12	0°50'09
morning rise	2824 Dec 01 15:40	29°♏56'53	
	2824 Dec 01 21:23	0°♐	
retrograde	2825 Apr 01 23:03	17°♐02'48	
opposition	2825 Jun 01 20:02	12°♐10'54	0°55'38
min. Earth dist.	2825 Jun 03 09:05	11°♐59'06	4.36853 AU
direct	2825 Aug 03 08:05	7°♐10'50	
evening set	2825 Dec 07 00:35	25°♐05'07	
max. Earth dist.	2825 Dec 17 14:08	27°♐27'27	6.30685 AU
conjunction	2825 Dec 19 17:05	27°♐56'10	0°22'49
minimum elong	2825 Dec 19 17:07	27°♐56'10	0°22'49
	2825 Dec 28 20:53	0°♑	
morning rise	2826 Jan 01 08:19	0°♑46'52	
retrograde	2826 May 05 04:30	18°♑41'30	
opposition	2826 Jul 05 01:43	13°♑48'44	0°08'20
min. Earth dist.	2826 Jul 06 11:40	13°♑37'53	4.23619 AU
direct	2826 Sep 04 14:32	8°♑51'01	
desc. node	2826 Sep 05 10:35	8°♑51'05	
evening set	2827 Jan 08 01:14	27°♑20'50	
max. Earth dist.	2827 Jan 19 02:18	29°♑54'40	6.16218 AU
	2827 Jan 19 11:27	0°♒	
conjunction	2827 Jan 20 18:23	0°♒18'01	-0°12'34
minimum elong	2827 Jan 20 18:23	0°♒18'01	0°12'34
behind sun begin	2827 Jan 20 13:08	0°♒14'58	
behind sun end	2827 Jan 20 23:38	0°♒21'03	
morning rise	2827 Feb 02 11:53	3°♒15'39	
	2827 Mar 29 16:46	15°♒	

retrograde	2827 Jun 09 21:19	22°♒17'38	
opposition	2827 Aug 09 11:22	17°♒22'31	-0°44'56
min. Earth dist.	2827 Aug 10 08:05	17°♒15'48	4.08938 AU
	2827 Aug 28 14:15	15°℞♒	
direct	2827 Oct 08 16:13	12°♒27'12	
	2827 Nov 17 23:04	15°♒	
	2828 Feb 04 02:55	0°♓	
evening set	2828 Feb 10 23:49	1°♓37'32	
conjunction	2828 Feb 23 20:45	4°♓42'08	-0°45'17
minimum elong	2828 Feb 23 20:43	4°♓42'07	0°45'17
max. Earth dist.	2828 Feb 23 06:21	4°♓33'30	6.02644 AU
morning rise	2828 Mar 07 19:25	7°♓47'54	
retrograde	2828 Jul 16 13:49	27°♓55'56	
opposition	2828 Sep 14 17:35	22°♓57'17	-1°25'08
min. Earth dist.	2828 Sep 14 15:43	22°♓57'54	3.97820 AU
direct	2828 Nov 12 11:42	18°♓03'33	
	2829 Feb 12 18:01	0°♈	
evening set	2829 Mar 18 00:46	7°♈44'02	
conjunction	2829 Mar 31 04:15	10°♈55'04	-1°02'18
minimum elong	2829 Mar 31 04:15	10°♈55'04	1°02'18
max. Earth dist.	2829 Mar 31 22:33	11°♈06'10	5.94995 AU
morning rise	2829 Apr 13 10:48	14°♈07'46	
	2829 Jun 28 02:01	0°♉	
retrograde	2829 Aug 23 20:38	4°♉50'14	
	2829 Oct 21 03:26	30°℞♈	
opposition	2829 Oct 22 15:56	29°♈47'41	-1°32'58
min. Earth dist.	2829 Oct 21 16:26	29°♈55'37	3.94618 AU
direct	2829 Dec 19 14:22	24°♈53'27	
	2830 Feb 14 11:46	0°♉	
evening set	2830 Apr 24 11:18	14°♉38'46	
	2830 Apr 25 22:51	15°♉	
conjunction	2830 May 07 23:03	17°♉52'55	-0°54'58
minimum elong	2830 May 07 23:05	17°♉52'56	0°54'58
max. Earth dist.	2830 May 09 22:42	18°♉21'32	5.96487 AU
morning rise	2830 May 21 13:32	21°♉08'27	
	2830 Jun 29 12:31	0°♊	
retrograde	2830 Sep 30 03:42	11°♊33'17	
min. Earth dist.	2830 Nov 27 06:12	6°♊40'09	4.00677 AU
opposition	2830 Nov 28 16:30	6°♊28'27	-1°03'37
direct	2831 Jan 25 17:37	1°♊31'50	
evening set	2831 May 31 23:05	20°♊54'05	
conjunction	2831 Jun 14 16:17	24°♊06'09	-0°26'27
minimum elong	2831 Jun 14 16:19	24°♊06'10	0°26'27
max. Earth dist.	2831 Jun 17 00:33	24°♊39'01	6.06478 AU
morning rise	2831 Jun 28 11:14	27°♊18'48	
	2831 Jul 10 04:24	0°♋	
retrograde	2831 Nov 04 01:39	16°♋44'49	
min. Earth dist.	2832 Jan 01 06:53	11°♋51'51	4.13432 AU
opposition	2832 Jan 02 16:28	11°♋40'26	-0°11'52
direct	2832 Mar 01 13:58	6°♋40'51	
asc. node	2832 Mar 28 04:46	7°♋49'29	
evening set	2832 Jul 06 04:54	25°♋24'52	
conjunction	2832 Jul 19 22:07	28°♋30'28	0°10'31
minimum elong	2832 Jul 19 22:07	28°♋30'28	0°10'31
behind sun begin	2832 Jul 19 15:42	28°♋26'51	
behind sun end	2832 Jul 20 04:31	28°♋34'04	
max. Earth dist.	2832 Jul 21 17:28	28°♋54'56	6.20898 AU
	2832 Jul 26 12:49	0°♌	
morning rise	2832 Aug 02 15:08	1°♌35'38	
	2832 Oct 09 06:27	15°♌	
retrograde	2832 Dec 05 17:14	19°♌51'49	
	2833 Feb 02 07:03	15°℞♌	
opposition	2833 Feb 03 12:06	14°♌50'15	0°40'32
min. Earth dist.	2833 Feb 02 15:47	14°♌57'04	4.28089 AU
direct	2833 Apr 04 18:29	9°♌48'29	
	2833 Jun 04 06:59	15°♌	
evening set	2833 Aug 09 12:22	27°♌54'40	
	2833 Aug 19 01:22	0°♍	
conjunction	2833 Aug 23 00:36	0°♍52'16	0°42'24
minimum elong	2833 Aug 23 00:34	0°♍52'15	0°42'24
max. Earth dist.	2833 Aug 23 19:23	1°♍02'34	6.34653 AU
morning rise	2833 Sep 05 10:55	3°♍48'43	
retrograde	2834 Jan 05 12:59	21°♍08'37	
opposition	2834 Mar 06 16:37	16°♍10'46	1°17'46
min. Earth dist.	2834 Mar 06 13:01	16°♍11'58	4.39968 AU
direct	2834 May 07 04:32	11°♍08'06	
evening set	2834 Sep 10 22:18	28°♍47'13	
	2834 Sep 16 13:37	0°♎	
conjunction	2834 Sep 24 03:15	1°♎38'10	1°00'50
minimum elong	2834 Sep 24 03:14	1°♎38'09	1°00'50
max. Earth dist.	2834 Sep 23 17:42	1°♎33'00	6.43772 AU
morning rise	2834 Oct 07 05:32	4°♎27'45	
retrograde	2835 Feb 04 15:38	21°♎16'06	
opposition	2835 Apr 06 02:49	16°♎21'35	1°32'20
min. Earth dist.	2835 Apr 06 18:00	16°♎16'40	4.45883 AU
direct	2835 Jun 07 13:42	11°♎19'05	
evening set	2835 Oct 11 23:46	28°♎46'44	
	2835 Oct 17 15:54	0°♏	
conjunction	2835 Oct 24 22:07	1°♏34'12	1°02'21
minimum elong	2835 Oct 24 22:08	1°♏34'12	1°02'21
max. Earth dist.	2835 Oct 23 12:06	1°♏15'48	6.45993 AU
morning rise	2835 Nov 06 17:51	4°♏20'25	
	2835 Dec 30 21:36	15°♏	
retrograde	2836 Mar 05 22:18	21°♏05'12	
opposition	2836 May 05 16:47	16°♏12'42	1°22'24
min. Earth dist.	2836 May 06 22:16	16°♏03'16	4.44375 AU
	2836 May 15 06:24	15°℞♏	
direct	2836 Jul 07 11:18	11°♏11'11	
	2836 Aug 29 00:13	15°♏	
evening set	2836 Nov 10 11:52	28°♏44'47	
	2836 Nov 16 05:30	0°♐	
max. Earth dist.	2836 Nov 21 06:34	1°♐06'29	6.40807 AU
conjunction	2836 Nov 23 05:55	1°♐32'30	0°47'06
minimum elong	2836 Nov 23 05:56	1°♐32'31	0°47'05
morning rise	2836 Dec 05 21:40	4°♐19'20	
retrograde	2837 Apr 06 09:25	21°♐29'01	
opposition	2837 Jun 06 08:19	16°♐37'04	0°49'57
min. Earth dist.	2837 Jun 07 20:41	16°♐25'29	4.35775 AU
direct	2837 Aug 07 18:14	11°♐37'21	
evening set	2837 Dec 11 08:50	29°♐33'51	
	2837 Dec 13 07:28	0°♑	
max. Earth dist.	2837 Dec 21 22:28	1°♑56'43	6.29410 AU
conjunction	2837 Dec 24 01:01	2°♑25'18	0°18'16
minimum elong	2837 Dec 24 01:02	2°♑25'19	0°18'16
morning rise	2838 Jan 05 16:22	5°♑16'33	
retrograde	2838 May 09 22:23	23°♑17'27	
opposition	2838 Jul 09 19:07	18°♑24'25	0°01'06
min. Earth dist.	2838 Jul 11 04:24	18°♑13'46	4.22201 AU
desc. node	2838 Jul 18 00:15	17°♑21'42	
direct	2838 Sep 09 05:50	13°♑26'58	
	2839 Jan 03 20:13	0°♒	
evening set	2839 Jan 12 12:56	2°♒00'00	
max. Earth dist.	2839 Jan 23 17:03	4°♒36'04	6.14786 AU

conjunction	2839 Jan 25 06:25	4°♒57'54	-0°17'24
minimum elong	2839 Jan 25 06:23	4°♒57'53	0°17'24
morning rise	2839 Feb 07 00:14	7°♒56'17	
	2839 Mar 10 11:28	15°♒	
retrograde	2839 Jun 14 19:28	27°♒05'37	
opposition	2839 Aug 14 09:21	22°♒10'07	-0°51'29
min. Earth dist.	2839 Aug 15 03:27	22°♒04'15	4.07616 AU
direct	2839 Oct 13 09:19	17°♒15'04	
	2840 Jan 18 16:02	0°♓	
evening set	2840 Feb 15 16:53	6°♓28'44	
conjunction	2840 Feb 28 14:19	9°♓34'03	-0°48'42
minimum elong	2840 Feb 28 14:17	9°♓34'02	0°48'42
max. Earth dist.	2840 Feb 28 02:29	9°♓26'57	6.01539 AU
morning rise	2840 Mar 12 13:53	12°♓40'41	
	2840 Jun 08 01:09	0°♈	
retrograde	2840 Jul 21 15:09	2°♈54'39	
	2840 Sep 03 14:21	30°℞♓	
opposition	2840 Sep 19 18:28	27°♓55'27	-1°28'17
min. Earth dist.	2840 Sep 19 14:01	27°♓56'55	3.97047 AU
direct	2840 Nov 17 09:33	23°♓01'42	
	2841 Jan 24 03:32	0°♈	
evening set	2841 Mar 22 22:39	12°♈44'10	
conjunction	2841 Apr 05 03:22	15°♈55'54	-1°02'46
minimum elong	2841 Apr 05 03:22	15°♈55'54	1°02'46
max. Earth dist.	2841 Apr 06 02:23	16°♈09'52	5.94636 AU
morning rise	2841 Apr 18 10:53	19°♈09'14	
	2841 Jun 05 10:47	0°♉	
retrograde	2841 Aug 28 23:36	9°♉52'56	
opposition	2841 Oct 27 16:19	4°♉50'04	-1°31'03
min. Earth dist.	2841 Oct 26 15:56	4°♉58'18	3.94728 AU
	2841 Dec 18 02:11	30°℞♈	
direct	2841 Dec 24 14:06	29°♈55'38	
	2841 Dec 31 01:27	0°♉	
	2842 Apr 09 14:10	15°♉	
evening set	2842 Apr 29 12:09	19°♉40'24	
conjunction	2842 May 13 00:47	22°♉54'46	-0°52'10
minimum elong	2842 May 13 00:50	22°♉54'47	0°52'10
max. Earth dist.	2842 May 15 01:25	23°♉23'54	5.97044 AU
morning rise	2842 May 26 16:22	26°♉10'30	
	2842 Jun 12 00:05	0°♊	
retrograde	2842 Oct 04 23:32	16°♊31'03	
min. Earth dist.	2842 Dec 02 01:06	11°♊38'18	4.01632 AU
opposition	2842 Dec 03 12:35	11°♊26'12	-0°57'31
direct	2843 Jan 30 13:57	6°♊29'13	
evening set	2843 Jun 05 23:16	25°♊48'58	
conjunction	2843 Jun 19 16:56	29°♊00'39	-0°21'39
minimum elong	2843 Jun 19 16:57	29°♊00'40	0°21'39
max. Earth dist.	2843 Jun 21 23:54	29°♊32'40	6.07759 AU
	2843 Jun 23 22:52	0°♋	
morning rise	2843 Jul 03 12:03	2°♋12'47	
retrograde	2843 Nov 08 17:21	21°♋31'32	
min. Earth dist.	2844 Jan 05 23:41	16°♋38'09	4.14893 AU
opposition	2844 Jan 07 07:15	16°♋27'26	-0°04'22
asc. node	2844 Feb 07 17:57	12°♋42'37	
direct	2844 Mar 06 09:11	11°♋27'31	
	2844 Jul 10 10:46	0°♌	
evening set	2844 Jul 11 01:08	0°♌08'02	
conjunction	2844 Jul 24 18:07	3°♌12'50	0°15'24
minimum elong	2844 Jul 24 18:07	3°♌12'50	0°15'24
behind sun begin	2844 Jul 24 16:19	3°♌11'49	
behind sun end	2844 Jul 24 19:55	3°♌13'50	
max. Earth dist.	2844 Jul 26 12:17	3°♌36'33	6.22434 AU
morning rise	2844 Aug 07 10:29	6°♌17'04	
	2844 Sep 17 15:29	15°♌	
retrograde	2844 Dec 10 01:40	24°♌26'00	
opposition	2845 Feb 07 22:01	19°♌24'55	0°46'48
min. Earth dist.	2845 Feb 07 02:30	19°♌31'26	4.29580 AU
	2845 Mar 20 16:10	15°℞♌	
direct	2845 Apr 09 07:19	14°♌22'59	
	2845 Apr 29 04:52	15°♌	
	2845 Aug 02 20:53	0°♍	
evening set	2845 Aug 14 03:23	2°♍25'49	
conjunction	2845 Aug 27 14:36	5°♍22'28	0°45'51
minimum elong	2845 Aug 27 14:34	5°♍22'27	0°45'52
max. Earth dist.	2845 Aug 28 05:23	5°♍30'34	6.35984 AU
morning rise	2845 Sep 09 23:56	8°♍17'57	
retrograde	2846 Jan 09 19:48	25°♍32'36	
opposition	2846 Mar 10 23:34	20°♍35'13	1°21'11
min. Earth dist.	2846 Mar 10 22:55	20°♍35'26	4.41046 AU
direct	2846 May 11 16:27	15°♍32'30	
	2846 Aug 31 10:34	0°♎	
evening set	2846 Sep 15 08:15	3°♎09'14	
conjunction	2846 Sep 28 12:16	5°♎59'31	1°02'03
minimum elong	2846 Sep 28 12:15	5°♎59'30	1°02'03
max. Earth dist.	2846 Sep 27 23:49	5°♎52'47	6.44488 AU
morning rise	2846 Oct 11 13:30	8°♎48'24	
retrograde	2847 Feb 08 19:16	25°♎34'26	
opposition	2847 Apr 10 08:42	20°♎40'11	1°32'21
min. Earth dist.	2847 Apr 11 01:13	20°♎34'51	4.46190 AU
direct	2847 Jun 11 20:58	15°♎37'44	
	2847 Oct 01 17:31	0°♏	
evening set	2847 Oct 16 06:20	3°♏04'47	
max. Earth dist.	2847 Oct 27 16:28	5°♏32'47	6.45838 AU
conjunction	2847 Oct 29 03:57	5°♏52'00	1°01'09
minimum elong	2847 Oct 29 03:57	5°♏52'00	1°01'09
morning rise	2847 Nov 10 22:51	8°♏38'00	
	2847 Dec 11 13:46	15°♏	
retrograde	2848 Mar 10 04:50	25°♏24'01	
opposition	2848 May 10 00:36	20°♏31'42	1°19'05
min. Earth dist.	2848 May 11 07:46	20°♏21'45	4.43734 AU
direct	2848 Jul 11 19:43	15°♏30'24	
	2848 Oct 31 09:20	0°♐	
evening set	2848 Nov 14 17:46	3°♐05'36	
max. Earth dist.	2848 Nov 25 09:22	5°♐26'03	6.39697 AU
conjunction	2848 Nov 27 11:15	5°♐53'34	0°43'45
minimum elong	2848 Nov 27 11:17	5°♐53'35	0°43'45
morning rise	2848 Dec 10 02:54	8°♐40'46	
retrograde	2849 Apr 10 21:49	25°♐55'36	
opposition	2849 Jun 10 20:40	21°♐03'34	0°43'53
min. Earth dist.	2849 Jun 12 09:32	20°♐51'49	4.34237 AU
direct	2849 Aug 12 04:50	16°♐04'03	
	2849 Nov 27 06:13	0°♑	
evening set	2849 Dec 15 17:21	4°♑04'36	
max. Earth dist.	2849 Dec 26 08:51	6°♑29'05	6.27567 AU
conjunction	2849 Dec 28 09:42	6°♑56'49	0°13'31
minimum elong	2849 Dec 28 09:42	6°♑56'49	0°13'32
behind sun begin	2849 Dec 28 05:09	6°♑54'15	
behind sun end	2849 Dec 28 14:16	6°♑59'24	
morning rise	2850 Jan 10 01:03	9°♑48'51	
retrograde	2850 May 14 17:23	27°♑58'12	
desc. node	2850 May 28 06:24	27°♑41'03	
opposition	2850 Jul 14 13:54	23°♑04'57	-0°06'22
min. Earth dist.	2850 Jul 15 21:56	22°♑54'41	4.20172 AU
direct	2850 Sep 13 20:01	18°♑07'49	

	2850 Dec 17 22:40	0°♒	
evening set	2851 Jan 17 03:18	6°♒46'32	
max. Earth dist.	2851 Jan 28 09:16	9°♒24'26	6.12734 AU
conjunction	2851 Jan 29 21:00	9°♒45'24	-0°22'17
minimum elong	2851 Jan 29 20:59	9°♒45'23	0°22'17
morning rise	2851 Feb 11 15:35	12°♒44'58	
	2851 Feb 21 08:44	15°♒	
	2851 May 14 04:24	0°♓	
retrograde	2851 Jun 19 23:07	2°♓04'18	
	2851 Jul 26 22:38	30°℞♒	
opposition	2851 Aug 19 11:19	27°♒08'18	-0°58'01
min. Earth dist.	2851 Aug 20 02:43	27°♒03'17	4.05708 AU
direct	2851 Oct 18 06:18	22°♒13'27	
	2851 Dec 30 06:21	0°♓	
evening set	2852 Feb 20 14:28	11°♓32'38	
conjunction	2852 Mar 04 12:55	14°♓39'04	-0°51'56
minimum elong	2852 Mar 04 12:53	14°♓39'03	0°51'57
max. Earth dist.	2852 Mar 04 06:39	14°♓35'18	5.99964 AU
morning rise	2852 Mar 17 13:22	17°♓46'50	
	2852 May 11 23:28	0°♈	
retrograde	2852 Jul 27 00:14	8°♈08'18	
opposition	2852 Sep 25 01:01	3°♈08'35	-1°30'58
min. Earth dist.	2852 Sep 24 18:08	3°♈10'52	3.95994 AU
	2852 Oct 20 18:38	30°℞♓	
direct	2852 Nov 22 12:28	28°♓14'55	
	2852 Dec 24 23:11	0°♈	
evening set	2853 Mar 28 03:05	18°♈00'13	
conjunction	2853 Apr 10 08:49	21°♈12'40	-1°02'47
minimum elong	2853 Apr 10 08:49	21°♈12'40	1°02'46
max. Earth dist.	2853 Apr 11 11:03	21°♈28'35	5.94195 AU
morning rise	2853 Apr 23 17:45	24°♈26'49	
	2853 May 17 07:48	0°♉	
	2853 Aug 23 13:59	15°♉	
retrograde	2853 Sep 03 05:48	15°♉11'15	
	2853 Sep 13 20:52	15°℞♉	
opposition	2853 Nov 01 22:06	10°♉07'58	-1°28'18
min. Earth dist.	2853 Oct 31 18:25	10°♉17'20	3.94987 AU
direct	2853 Dec 29 17:56	5°♉13'17	
	2854 Mar 21 16:43	15°♉	
evening set	2854 May 04 19:07	24°♉56'44	
conjunction	2854 May 18 08:49	28°♉11'08	-0°48'49
minimum elong	2854 May 18 08:52	28°♉11'09	0°48'48
max. Earth dist.	2854 May 20 11:57	28°♉41'41	5.97995 AU
	2854 May 25 23:08	0°♊	
morning rise	2854 Jun 01 01:13	1°♊26'46	
retrograde	2854 Oct 10 00:36	21°♊40'47	
min. Earth dist.	2854 Dec 07 01:50	16°♊47'53	4.03164 AU
opposition	2854 Dec 08 13:12	16°♊35'49	-0°50'42
direct	2855 Feb 04 17:44	11°♊38'25	
	2855 Jun 07 07:04	0°♋	
evening set	2855 Jun 11 03:13	0°♋53'00	
conjunction	2855 Jun 24 21:14	4°♋03'54	-0°16'30
minimum elong	2855 Jun 24 21:15	4°♋03'55	0°16'30
max. Earth dist.	2855 Jun 27 05:27	4°♋36'28	6.09760 AU
morning rise	2855 Jul 08 16:16	7°♋15'04	
retrograde	2855 Nov 13 08:55	26°♋23'19	
asc. node	2855 Dec 18 17:46	24°♋22'58	
opposition	2856 Jan 11 24:00	21°♋19'31	0°03'20
min. Earth dist.	2856 Jan 10 16:32	21°♋30'10	4.17157 AU
direct	2856 Mar 11 05:41	16°♋19'16	
	2856 Jun 23 13:20	0°♌	
evening set	2856 Jul 15 22:27	4°♌53'08	
conjunction	2856 Jul 29 14:40	7°♌56'36	0°20'15
minimum elong	2856 Jul 29 14:38	7°♌56'36	0°20'14
max. Earth dist.	2856 Jul 31 04:40	8°♌17'53	6.24770 AU
morning rise	2856 Aug 12 06:18	10°♌59'27	
	2856 Aug 30 15:08	15°♌	
retrograde	2856 Dec 14 10:17	28°♌58'25	
opposition	2857 Feb 12 07:32	23°♌57'46	0°52'43
min. Earth dist.	2857 Feb 11 14:59	24°♌03'17	4.31786 AU
direct	2857 Apr 13 22:57	18°♌55'35	
	2857 Jul 16 18:52	0°♍	
evening set	2857 Aug 18 16:37	6°♍52'37	
conjunction	2857 Sep 01 02:58	9°♍48'05	0°49'00
minimum elong	2857 Sep 01 02:56	9°♍48'04	0°49'00
max. Earth dist.	2857 Sep 01 15:10	9°♍54'44	6.37887 AU
morning rise	2857 Sep 14 10:59	12°♍42'17	
retrograde	2858 Jan 13 21:45	29°♍50'05	
opposition	2858 Mar 15 04:13	24°♍53'10	1°24'04
min. Earth dist.	2858 Mar 15 05:16	24°♍52'49	4.42522 AU
direct	2858 May 15 23:54	19°♍50'24	
	2858 Aug 14 12:33	0°♎	
evening set	2858 Sep 19 15:06	7°♎23'35	
conjunction	2858 Oct 02 17:59	10°♎13'04	1°02'54
minimum elong	2858 Oct 02 17:58	10°♎13'04	1°02'53
max. Earth dist.	2858 Oct 02 00:48	10°♎03'48	6.45413 AU
morning rise	2858 Oct 15 18:16	13°♎01'13	
retrograde	2859 Feb 12 22:29	29°♎44'44	
opposition	2859 Apr 14 12:12	24°♎50'51	1°31'51
min. Earth dist.	2859 Apr 15 08:15	24°♎44'23	4.46504 AU
direct	2859 Jun 16 03:36	19°♎48'27	
	2859 Sep 15 03:13	0°♏	
evening set	2859 Oct 20 09:44	7°♏15'00	
max. Earth dist.	2859 Oct 31 15:28	9°♏40'49	6.45494 AU
conjunction	2859 Nov 02 06:41	10°♏02'05	0°59'39
minimum elong	2859 Nov 02 06:42	10°♏02'05	0°59'39
morning rise	2859 Nov 15 01:00	12°♏47'59	
	2859 Nov 25 07:45	15°♏	
retrograde	2860 Mar 14 09:22	29°♏36'14	
opposition	2860 May 14 06:11	24°♏44'01	1°15'26
min. Earth dist.	2860 May 15 14:40	24°♏33'38	4.42755 AU
direct	2860 Jul 16 00:02	19°♏42'50	
	2860 Oct 14 19:25	0°♐	
evening set	2860 Nov 18 21:41	7°♐21'01	
max. Earth dist.	2860 Nov 29 12:49	9°♐41'41	6.38150 AU
conjunction	2860 Dec 01 14:58	10°♐09'27	0°40'15
minimum elong	2860 Dec 01 15:00	10°♐09'28	0°40'15
morning rise	2860 Dec 14 06:19	12°♐57'11	
	2861 Apr 01 03:52	0°♑	
retrograde	2861 Apr 15 09:41	0°♑18'54	
	2861 Apr 29 15:38	30°℞♐	
opposition	2861 Jun 15 08:09	25°♐26'51	0°37'41
min. Earth dist.	2861 Jun 16 21:55	25°♐14'49	4.32196 AU
direct	2861 Aug 16 13:32	20°♐27'38	
	2861 Nov 09 23:33	0°♑	
evening set	2861 Dec 20 01:38	8°♑34'07	
max. Earth dist.	2861 Dec 30 16:15	10°♑58'57	6.25185 AU
conjunction	2862 Jan 01 17:57	11°♑27'19	0°08'44
minimum elong	2862 Jan 01 17:58	11°♑27'19	0°08'44
behind sun begin	2862 Jan 01 11:02	11°♑23'23	
behind sun end	2862 Jan 02 00:53	11°♑31'15	
morning rise	2862 Jan 14 09:49	14°♑20'30	
	2862 Apr 07 08:29	0°♒	
desc. node	2862 Apr 08 02:54	0°♒05'32	

retrograde	2862 May 19 14:55	2°♒40'39	
	2862 Jul 01 11:26	30°℞♑	
opposition	2862 Jul 19 09:55	27°♑47'06	-0°13'48
min. Earth dist.	2862 Jul 20 16:10	27°♑37'22	4.17605 AU
direct	2862 Sep 18 10:40	22°♑50'17	
	2862 Nov 28 12:29	0°♒	
evening set	2863 Jan 21 19:11	11°♒36'44	
max. Earth dist.	2863 Feb 02 06:17	14°♒18'28	6.10222 AU
conjunction	2863 Feb 03 13:36	14°♒36'57	-0°27'03
minimum elong	2863 Feb 03 13:35	14°♒36'56	0°27'02
	2863 Feb 05 04:41	15°♒	
morning rise	2863 Feb 16 08:46	17°♒37'53	
	2863 Apr 15 02:05	0°♓	
retrograde	2863 Jun 25 06:33	7°♓09'00	
opposition	2863 Aug 24 15:53	2°♓12'37	-1°04'12
min. Earth dist.	2863 Aug 25 04:51	2°♓08'23	4.03494 AU
	2863 Sep 11 04:56	30°℞♒	
direct	2863 Oct 23 05:31	27°♒18'07	
	2863 Dec 03 09:53	0°♓	
evening set	2864 Feb 25 15:37	16°♓44'02	
conjunction	2864 Mar 09 14:53	19°♓51'40	-0°54'48
minimum elong	2864 Mar 09 14:52	19°♓51'39	0°54'48
max. Earth dist.	2864 Mar 09 12:24	19°♓50'09	5.98250 AU
morning rise	2864 Mar 22 16:40	23°♓00'45	
	2864 Apr 21 17:44	0°♈	
retrograde	2864 Aug 01 10:23	13°♈29'52	
opposition	2864 Sep 30 10:19	8°♈29'36	-1°32'55
min. Earth dist.	2864 Sep 29 22:47	8°♈33'27	3.95002 AU
direct	2864 Nov 27 17:26	3°♈35'57	
evening set	2865 Apr 02 10:45	23°♈23'45	
conjunction	2865 Apr 15 17:46	26°♈36'53	-1°02'14
minimum elong	2865 Apr 15 17:47	26°♈36'53	1°02'14
max. Earth dist.	2865 Apr 17 01:43	26°♈56'16	5.94016 AU
morning rise	2865 Apr 29 03:49	29°♈51'38	
	2865 Apr 29 17:44	0°♉	
	2865 Jul 09 07:01	15°♉	
retrograde	2865 Sep 08 14:42	20°♉35'15	
min. Earth dist.	2865 Nov 06 00:37	15°♉41'28	3.95631 AU
opposition	2865 Nov 07 05:58	15°♉31'30	-1°24'42
	2865 Nov 11 02:56	15°℞♉	
direct	2866 Jan 04 02:27	10°♉36'29	
	2866 Feb 25 13:46	15°♉	
	2866 May 08 23:16	0°♊	
evening set	2866 May 10 03:48	0°♊16'54	
conjunction	2866 May 23 18:26	3°♊31'04	-0°45'00
minimum elong	2866 May 23 18:28	3°♊31'05	0°45'00
max. Earth dist.	2866 May 26 01:09	4°♊03'37	5.99374 AU
morning rise	2866 Jun 06 11:29	6°♊46'20	
retrograde	2866 Oct 15 00:58	26°♊51'41	
min. Earth dist.	2866 Dec 12 01:33	21°♊59'04	4.05097 AU
opposition	2866 Dec 13 13:48	21°♊46'42	-0°43'26
direct	2867 Feb 09 20:45	16°♊48'54	
	2867 May 20 17:14	0°♋	
evening set	2867 Jun 16 07:30	5°♋57'09	
conjunction	2867 Jun 30 01:24	9°♋07'01	-0°11'14
minimum elong	2867 Jun 30 01:25	9°♋07'01	0°11'13
behind sun begin	2867 Jun 29 19:20	9°♋03'32	
behind sun end	2867 Jun 30 07:30	9°♋10'30	
max. Earth dist.	2867 Jul 02 06:54	9°♋37'49	6.12033 AU
morning rise	2867 Jul 13 20:22	12°♋17'02	
	2867 Oct 21 05:53	0°♌	
asc. node	2867 Oct 27 23:30	0°♌31'03	
retrograde	2867 Nov 17 23:49	1°♌14'11	
	2867 Dec 15 12:05	30°℞♋	
min. Earth dist.	2868 Jan 15 10:27	26°♋20'41	4.19526 AU
opposition	2868 Jan 16 15:57	26°♋10'42	0°11'01
direct	2868 Mar 16 03:03	21°♋10'03	
	2868 Jun 04 17:39	0°♌	
evening set	2868 Jul 20 19:00	9°♌37'24	
conjunction	2868 Aug 03 10:42	12°♌39'38	0°25'00
minimum elong	2868 Aug 03 10:41	12°♌39'38	0°25'00
max. Earth dist.	2868 Aug 04 22:33	12°♌59'37	6.27050 AU
	2868 Aug 13 23:00	15°♌	
morning rise	2868 Aug 17 01:14	15°♌41'04	
	2868 Oct 31 10:24	0°♍	
retrograde	2868 Dec 18 18:16	3°♍30'46	
	2869 Feb 05 08:14	30°℞♌	
opposition	2869 Feb 16 16:46	28°♌30'41	0°58'23
min. Earth dist.	2869 Feb 16 02:15	28°♌35'31	4.33801 AU
direct	2869 Apr 18 12:02	23°♌28'22	
	2869 Jun 26 20:56	0°♍	
evening set	2869 Aug 23 05:57	11°♍20'33	
conjunction	2869 Sep 05 15:04	14°♍14'55	0°51'55
minimum elong	2869 Sep 05 15:02	14°♍14'54	0°51'55
max. Earth dist.	2869 Sep 05 21:25	14°♍18'22	6.39475 AU
morning rise	2869 Sep 18 22:05	17°♍08'01	
	2869 Nov 25 17:15	0°♎	
retrograde	2870 Jan 18 03:23	4°♎10'24	
	2870 Mar 13 12:25	30°℞♍	
opposition	2870 Mar 19 09:57	29°♍13'58	1°26'36
min. Earth dist.	2870 Mar 19 14:43	29°♍12'24	4.43608 AU
direct	2870 May 20 09:47	24°♍11'08	
	2870 Jul 25 08:34	0°♎	
evening set	2870 Sep 23 23:08	11°♎42'09	
max. Earth dist.	2870 Oct 06 05:12	14°♎20'16	6.45914 AU
conjunction	2870 Oct 07 01:14	14°♎31'05	1°03'27
minimum elong	2870 Oct 07 01:14	14°♎31'04	1°03'28
morning rise	2870 Oct 20 00:24	17°♎18'38	
	2870 Dec 26 13:09	0°♏	
retrograde	2871 Feb 17 02:02	4°♏01'00	
	2871 Apr 11 21:15	30°℞♎	
opposition	2871 Apr 18 17:38	29°♎07'25	1°30'57
min. Earth dist.	2871 Apr 19 15:13	29°♎00'29	4.46418 AU
direct	2871 Jun 20 09:06	24°♎05'07	
	2871 Aug 26 06:02	0°♏	
evening set	2871 Oct 24 15:44	11°♏32'25	
max. Earth dist.	2871 Nov 04 18:08	13°♏56'44	6.44820 AU
conjunction	2871 Nov 06 11:57	14°♏19'28	0°57'50
minimum elong	2871 Nov 06 11:58	14°♏19'29	0°57'49
	2871 Nov 09 14:28	15°♏	
morning rise	2871 Nov 19 05:43	17°♏05'26	
	2872 Jan 26 14:18	0°♐	
retrograde	2872 Mar 18 19:01	3°♐56'54	
	2872 May 11 08:57	30°℞♏	
opposition	2872 May 18 15:18	29°♏04'50	1°11'17
min. Earth dist.	2872 May 20 02:10	28°♏53'43	4.41526 AU
direct	2872 Jul 20 09:05	24°♏03'51	
	2872 Sep 24 19:59	0°♐	
evening set	2872 Nov 23 04:47	11°♐45'29	
max. Earth dist.	2872 Dec 03 17:46	14°♐05'34	6.36450 AU
conjunction	2872 Dec 05 21:48	14°♐34'29	0°36'23
minimum elong	2872 Dec 05 21:50	14°♐34'30	0°36'24
morning rise	2872 Dec 18 13:08	17°♐22'53	
	2873 Feb 20 18:24	0°♑	

retrograde	2873 Apr 20	01:12	4°♑51'57	
opposition	2873 Jun 19	23:35	29°♐59'45	0°30'59
	2873 Jun 19	22:48	30°℞♐	
min. Earth dist.	2873 Jun 21	12:24	29°♐48'00	4.30134 AU
direct	2873 Aug 21	00:45	25°♐00'50	
	2873 Oct 19	11:52	0°♑	
evening set	2873 Dec 24	13:30	13°♑13'06	
max. Earth dist.	2874 Jan 04	07:12	15°♑40'23	6.22943 AU
conjunction	2874 Jan 06	06:04	16°♑07'16	0°03'43
minimum elong	2874 Jan 06	06:03	16°♑07'16	0°03'43
behind sun begin	2874 Jan 05	22:10	16°♑02'45	
behind sun end	2874 Jan 06	13:57	16°♑11'47	
morning rise	2874 Jan 18	22:06	19°♑01'29	
desc. node	2874 Feb 15	11:44	25°♑08'17	
	2874 Mar 11	22:41	0°♒	
retrograde	2874 May 24	16:25	7°♒31'44	
opposition	2874 Jul 24	09:23	2°♒37'56	-0°21'26
min. Earth dist.	2874 Jul 25	14:22	2°♒28'36	4.15360 AU
	2874 Aug 14	22:48	30°℞♑	
direct	2874 Sep 23	05:38	27°♑41'31	
	2874 Oct 31	22:18	0°♒	
	2875 Jan 19	20:52	15°♒	
evening set	2875 Jan 26	14:15	16°♒34'19	
max. Earth dist.	2875 Feb 07	04:19	19°♒18'35	6.08185 AU
conjunction	2875 Feb 08	09:05	19°♒35'37	-0°31'46
minimum elong	2875 Feb 08	09:03	19°♒35'36	0°31'45
morning rise	2875 Feb 21	05:10	22°♒37'48	
	2875 Mar 25	15:21	0°♓	
retrograde	2875 Jun 30	12:51	12°♓18'35	
opposition	2875 Aug 29	22:13	7°♓21'40	-1°10'03
min. Earth dist.	2875 Aug 30	06:39	7°♓18'54	4.01893 AU
direct	2875 Oct 28	06:18	2°♓27'25	
evening set	2876 Mar 01	17:46	21°♓57'33	
conjunction	2876 Mar 14	18:02	25°♓06'03	-0°57'18
minimum elong	2876 Mar 14	18:01	25°♓06'02	0°57'17
max. Earth dist.	2876 Mar 14	21:53	25°♓08'23	5.97250 AU
morning rise	2876 Mar 27	20:44	28°♓16'03	
	2876 Apr 04	02:45	0°♈	
retrograde	2876 Aug 06	21:11	18°♈49'34	
opposition	2876 Oct 05	18:55	13°♈48'43	-1°34'05
min. Earth dist.	2876 Oct 05	04:52	13°♈53'25	3.94732 AU
direct	2876 Dec 03	00:34	8°♈54'59	
evening set	2877 Apr 07	17:06	28°♈42'27	
	2877 Apr 13	01:40	0°♉	
conjunction	2877 Apr 21	01:13	1°♉55'52	-1°01'13
minimum elong	2877 Apr 21	01:14	1°♉55'53	1°01'12
max. Earth dist.	2877 Apr 22	14:08	2°♉18'13	5.94490 AU
morning rise	2877 May 04	12:22	5°♉10'52	
	2877 Jun 16	16:08	15°♉	
retrograde	2877 Sep 13	19:10	25°♉50'33	
min. Earth dist.	2877 Nov 11	02:38	20°♉57'11	3.96811 AU
opposition	2877 Nov 12	10:10	20°♉46'29	-1°20'31
direct	2878 Jan 09	06:16	15°♉51'09	
	2878 Apr 21	19:18	0°♊	
evening set	2878 May 15	09:10	5°♊26'55	
conjunction	2878 May 29	00:22	8°♊40'33	-0°40'58
minimum elong	2878 May 29	00:24	8°♊40'35	0°40'58
max. Earth dist.	2878 May 31	06:44	9°♊12'46	6.01115 AU
morning rise	2878 Jun 11	18:06	11°♊55'15	
	2878 Sep 15	19:09	0°♋	
retrograde	2878 Oct 19	20:11	1°♋50'57	
	2878 Nov 22	15:16	30°℞♊	
min. Earth dist.	2878 Dec 16	22:09	26°♊58'14	4.07184 AU
opposition	2878 Dec 18	09:58	26°♊46'01	-0°36'08
direct	2879 Feb 14	20:52	21°♊47'45	
	2879 May 01	13:06	0°♋	
evening set	2879 Jun 21	07:08	10°♋49'32	
conjunction	2879 Jul 05	01:10	13°♋58'24	-0°06'05
minimum elong	2879 Jul 05	01:10	13°♋58'24	0°06'05
behind sun begin	2879 Jul 04	17:14	13°♋53'52	
behind sun end	2879 Jul 05	09:07	14°♋02'55	
max. Earth dist.	2879 Jul 07	05:38	14°♋28'28	6.14295 AU
morning rise	2879 Jul 18	19:39	17°♋07'13	
asc. node	2879 Sep 07	15:01	27°♋50'51	
	2879 Sep 19	19:14	0°♌	
retrograde	2879 Nov 22	11:53	5°♌53'56	
min. Earth dist.	2880 Jan 20	00:42	1°♌00'10	4.21732 AU
opposition	2880 Jan 21	04:07	0°♌50'55	0°18'19
	2880 Jan 27	11:42	30°℞♋	
direct	2880 Mar 20	19:32	25°♋50'02	
	2880 May 12	22:39	0°♌	
evening set	2880 Jul 25	11:49	14°♌11'43	
	2880 Jul 29	03:13	15°♌	
conjunction	2880 Aug 08	02:39	17°♌12'47	0°29'26
minimum elong	2880 Aug 08	02:37	17°♌12'46	0°29'26
max. Earth dist.	2880 Aug 09	09:16	17°♌29'47	6.29016 AU
morning rise	2880 Aug 21	16:25	20°♌13'01	
	2880 Oct 08	06:11	0°♍	
retrograde	2880 Dec 22	23:46	7°♍55'02	
opposition	2881 Feb 20	23:14	2°♍55'29	1°03'33
min. Earth dist.	2881 Feb 20	11:39	2°♍59'20	4.35403 AU
	2881 Mar 16	13:53	30°℞♌	
direct	2881 Apr 22	22:30	27°♌53'03	
	2881 May 30	18:50	0°♍	
evening set	2881 Aug 27	16:34	15°♍41'55	
conjunction	2881 Sep 10	00:54	18°♍35'28	0°54'29
minimum elong	2881 Sep 10	00:52	18°♍35'27	0°54'28
max. Earth dist.	2881 Sep 10	04:07	18°♍37'13	6.40610 AU
morning rise	2881 Sep 23	06:40	21°♍27'41	
	2881 Nov 04	04:34	0°♎	
retrograde	2882 Jan 22	06:33	8°♎26'22	
opposition	2882 Mar 23	14:18	3°♎30'27	1°28'38
min. Earth dist.	2882 Mar 23	21:17	3°♎28'11	4.44229 AU
	2882 Apr 22	12:43	30°℞♍	
direct	2882 May 24	16:03	28°♍27'45	
	2882 Jun 26	04:40	0°♎	
evening set	2882 Sep 28	06:00	15°♎58'03	
max. Earth dist.	2882 Oct 10	06:14	18°♎33'11	6.45970 AU
conjunction	2882 Oct 11	07:05	18°♎46'36	1°03'40
minimum elong	2882 Oct 11	07:05	18°♎46'36	1°03'40
morning rise	2882 Oct 24	05:35	21°♎33'52	
	2882 Dec 04	20:31	0°♏	
retrograde	2883 Feb 21	08:34	8°♏16'44	
opposition	2883 Apr 22	23:34	3°♏23'30	1°29'35
min. Earth dist.	2883 Apr 24	00:05	3°♏15'37	4.45931 AU
	2883 May 22	01:52	30°℞♎	
direct	2883 Jun 24	16:22	28°♎21'22	
	2883 Jul 28	11:48	0°♏	
	2883 Oct 24	23:50	15°♏	
evening set	2883 Oct 28	21:33	15°♏50'29	
max. Earth dist.	2883 Nov 08	22:13	18°♏14'14	6.43829 AU
conjunction	2883 Nov 10	17:21	18°♏37'45	0°55'41
minimum elong	2883 Nov 10	17:23	18°♏37'46	0°55'41
morning rise	2883 Nov 23	10:33	21°♏23'55	

	2884 Jan 04 11:17	0°♐	
retrograde	2884 Mar 23 04:07	8°♐19'44	
opposition	2884 May 23 01:21	3°♐27'45	1°06'43
min. Earth dist.	2884 May 24 11:57	3°♐16'44	4.40107 AU
	2884 Jun 22 03:26	30°℞♏	
direct	2884 Jul 24 16:19	28°♏27'06	
	2884 Aug 26 07:13	0°♐	
evening set	2884 Nov 27 12:47	16°♐12'41	
max. Earth dist.	2884 Dec 08 02:10	18°♐33'35	6.34720 AU
conjunction	2884 Dec 10 05:32	19°♐02'16	0°32'18
minimum elong	2884 Dec 10 05:34	19°♐02'17	0°32'18
morning rise	2884 Dec 22 20:47	21°♐51'20	
	2885 Jan 30 09:27	0°♑	
retrograde	2885 Apr 24 19:23	9°♑27'55	
opposition	2885 Jun 24 16:20	4°♑35'37	0°24'03
min. Earth dist.	2885 Jun 26 05:14	4°♑23'50	4.28188 AU
	2885 Aug 09 19:59	30°℞♐	
direct	2885 Aug 25 14:46	29°♐37'04	
	2885 Sep 10 08:39	0°♑	
desc. node	2885 Dec 26 02:29	17°♑13'46	
evening set	2885 Dec 29 01:53	17°♑54'27	
max. Earth dist.	2886 Jan 08 20:51	20°♑23'09	6.20941 AU
conjunction	2886 Jan 10 18:33	20°♑49'29	-0°01'28
minimum elong	2886 Jan 10 18:34	20°♑49'30	0°01'28
behind sun begin	2886 Jan 10 10:34	20°♑44'54	
behind sun end	2886 Jan 11 02:33	20°♑54'05	
morning rise	2886 Jan 23 11:04	23°♑44'43	
	2886 Feb 20 13:31	0°♒	
retrograde	2886 May 29 15:42	12°♒24'15	
opposition	2886 Jul 29 09:10	7°♒30'01	-0°28'56
min. Earth dist.	2886 Jul 30 10:40	7°♒21'47	4.13451 AU
direct	2886 Sep 27 23:52	2°♒33'58	
	2887 Jan 02 18:24	15°♒	
evening set	2887 Jan 31 08:51	21°♒31'46	
max. Earth dist.	2887 Feb 12 04:26	24°♒19'51	6.06530 AU
conjunction	2887 Feb 13 04:14	24°♒34'00	-0°36'14
minimum elong	2887 Feb 13 04:12	24°♒33'59	0°36'14
morning rise	2887 Feb 26 00:54	27°♒37'10	
	2887 Mar 08 04:33	0°♓	
retrograde	2887 Jul 05 20:13	17°♓26'11	
opposition	2887 Sep 04 03:21	12°♓28'44	-1°15'18
min. Earth dist.	2887 Sep 04 09:29	12°♓26'43	4.00641 AU
direct	2887 Nov 02 08:34	7°♓34'38	
evening set	2888 Mar 06 18:36	27°♓07'48	
	2888 Mar 18 15:36	0°♈	
conjunction	2888 Mar 19 19:48	0°♈17'04	-0°59'18
minimum elong	2888 Mar 19 19:46	0°♈17'03	0°59'18
max. Earth dist.	2888 Mar 20 04:08	0°♈22'07	5.96506 AU
morning rise	2888 Apr 01 23:36	3°♈27'52	
retrograde	2888 Aug 12 03:41	24°♈04'33	
min. Earth dist.	2888 Oct 10 07:28	19°♈08'59	3.94613 AU
opposition	2888 Oct 11 00:46	19°♈03'11	-1°34'29
direct	2888 Dec 08 03:01	14°♈09'22	
	2889 Mar 27 06:47	0°♉	
evening set	2889 Apr 12 21:31	3°♉56'22	
conjunction	2889 Apr 26 06:36	7°♉10'01	-0°59'44
minimum elong	2889 Apr 26 06:37	7°♉10'01	0°59'43
max. Earth dist.	2889 Apr 27 21:37	7°♉33'35	5.94979 AU
morning rise	2889 May 09 18:54	10°♉25'16	
	2889 May 29 05:39	15°♉	
	2889 Aug 24 19:50	0°♊	
retrograde	2889 Sep 18 20:47	1°♊01'13	
	2889 Oct 13 18:28	30°℞♉	
min. Earth dist.	2889 Nov 16 03:15	26°♉07'59	3.97848 AU
opposition	2889 Nov 17 12:01	25°♉56'50	-1°15'48
direct	2890 Jan 14 09:38	21°♉01'05	
	2890 Apr 02 19:46	0°♊	
evening set	2890 May 20 12:40	10°♊33'02	
conjunction	2890 Jun 03 04:43	13°♊46'20	-0°36'41
minimum elong	2890 Jun 03 04:45	13°♊46'21	0°36'41
max. Earth dist.	2890 Jun 05 12:56	14°♊19'30	6.02612 AU
morning rise	2890 Jun 16 22:45	17°♊00'28	
	2890 Aug 17 03:22	0°♋	
retrograde	2890 Oct 24 16:02	6°♋47'42	
min. Earth dist.	2890 Dec 21 18:15	1°♋54'42	4.08960 AU
opposition	2890 Dec 23 04:55	1°♋42'53	-0°28'41
	2891 Jan 05 01:45	30°℞♊	
direct	2891 Feb 19 19:13	26°♊44'13	
	2891 Apr 06 10:55	0°♋	
evening set	2891 Jun 26 06:29	15°♋40'51	
conjunction	2891 Jul 10 00:18	18°♋48'47	-0°00'52
minimum elong	2891 Jul 10 00:18	18°♋48'47	0°00'53
behind sun begin	2891 Jul 09 15:55	18°♋44'01	
behind sun end	2891 Jul 10 08:41	18°♋53'32	
max. Earth dist.	2891 Jul 12 01:55	19°♋17'05	6.16184 AU
asc. node	2891 Jul 19 00:14	20°♋51'48	
morning rise	2891 Jul 23 18:34	21°♋56'37	
	2891 Aug 30 00:57	0°♌	
retrograde	2891 Nov 26 22:17	10°♌34'16	
opposition	2892 Jan 25 16:08	5°♌31'36	0°25'30
min. Earth dist.	2892 Jan 24 14:13	5°♌40'21	4.23567 AU
direct	2892 Mar 25 11:00	0°♌30'23	
	2892 Jul 12 16:53	15°♌	
evening set	2892 Jul 30 05:07	18°♌47'39	
conjunction	2892 Aug 12 19:17	21°♌47'44	0°33'43
minimum elong	2892 Aug 12 19:16	21°♌47'43	0°33'43
max. Earth dist.	2892 Aug 13 22:34	22°♌02'49	6.30665 AU
morning rise	2892 Aug 26 08:00	24°♌46'50	
	2892 Sep 19 17:20	0°♍	
retrograde	2892 Dec 27 07:13	12°♍22'12	
opposition	2893 Feb 25 07:04	7°♍23'10	1°08'25
min. Earth dist.	2893 Feb 24 22:18	7°♍26'05	4.36747 AU
direct	2893 Apr 27 10:39	2°♍20'40	
evening set	2893 Sep 01 04:28	20°♍06'45	
conjunction	2893 Sep 14 11:43	22°♍59'31	0°56'47
minimum elong	2893 Sep 14 11:41	22°♍59'30	0°56'47
max. Earth dist.	2893 Sep 14 10:19	22°♍58'45	6.41545 AU
morning rise	2893 Sep 27 16:34	25°♍50'58	
	2893 Oct 17 07:48	0°♎	
retrograde	2894 Jan 26 11:53	12°♎46'29	
opposition	2894 Mar 27 20:39	7°♎50'59	1°30'15
min. Earth dist.	2894 Mar 28 06:04	7°♎47'55	4.44743 AU
direct	2894 May 29 00:53	2°♎48'19	
evening set	2894 Oct 02 14:22	20°♎17'54	
conjunction	2894 Oct 15 14:44	23°♎06'07	1°03'34
minimum elong	2894 Oct 15 14:45	23°♎06'07	1°03'34
max. Earth dist.	2894 Oct 14 12:46	22°♎52'05	6.46050 AU
morning rise	2894 Oct 28 12:11	25°♎52'59	
	2894 Nov 17 01:03	0°♏	
retrograde	2895 Feb 25 14:24	12°♏36'03	
opposition	2895 Apr 27 07:04	7°♏43'06	1°27'45
min. Earth dist.	2895 Apr 28 08:22	7°♏35'00	4.45610 AU
direct	2895 Jun 29 00:13	2°♏41'15	
	2895 Oct 08 13:41	15°♏	

evening set	2895 Nov 02 04:43	20°♏11'18	
max. Earth dist.	2895 Nov 13 02:34	22°♏33'53	6.43144 AU
conjunction	2895 Nov 14 23:45	22°♏58'34	0°53'15
minimum elong	2895 Nov 14 23:47	22°♏58'35	0°53'16
morning rise	2895 Nov 27 16:36	25°♏44'51	
	2895 Dec 17 15:10	0°♐	
retrograde	2896 Mar 27 15:44	12°♐43'56	
opposition	2896 May 27 12:40	7°♐52'00	1°01'48
min. Earth dist.	2896 May 29 00:23	7°♐40'37	4.39100 AU
direct	2896 Jul 29 03:25	2°♐51'38	
evening set	2896 Dec 01 20:33	20°♐39'27	
max. Earth dist.	2896 Dec 12 10:29	23°♐01'04	6.33480 AU
conjunction	2896 Dec 14 13:09	23°♐29'26	0°28'06
minimum elong	2896 Dec 14 13:11	23°♐29'27	0°28'05
morning rise	2896 Dec 27 04:16	26°♐18'58	
	2897 Jan 12 23:03	0°♑	
retrograde	2897 Apr 29 09:53	14°♑01'23	
opposition	2897 Jun 29 08:22	9°♑08'53	0°17'05
min. Earth dist.	2897 Jun 30 19:14	8°♑57'45	4.26791 AU
direct	2897 Aug 30 02:44	4°♑10'43	
desc. node	2897 Nov 06 10:21	10°♑40'14	
evening set	2898 Jan 02 12:55	22°♑31'18	
max. Earth dist.	2898 Jan 13 10:40	25°♑02'06	6.19503 AU
conjunction	2898 Jan 15 05:38	25°♑26'58	-0°06'24
minimum elong	2898 Jan 15 05:37	25°♑26'57	0°06'23
behind sun begin	2898 Jan 14 22:05	25°♑22'37	
behind sun end	2898 Jan 15 13:09	25°♑31'17	
morning rise	2898 Jan 27 22:22	28°♑22'53	
	2898 Feb 04 00:11	0°♒	
	2898 Apr 26 20:07	15°♒	
retrograde	2898 Jun 03 14:10	17°♒09'45	
	2898 Jul 11 14:48	15°℞♒	
opposition	2898 Aug 03 06:23	12°♒15'10	-0°35'59
min. Earth dist.	2898 Aug 04 06:41	12°♒07'19	4.12062 AU
direct	2898 Oct 02 18:25	7°♒19'24	
	2898 Dec 14 22:46	15°♒	
evening set	2899 Feb 05 00:33	26°♒20'36	
conjunction	2899 Feb 17 20:29	29°♒23'35	-0°40'16
minimum elong	2899 Feb 17 20:27	29°♒23'33	0°40'16
max. Earth dist.	2899 Feb 16 23:44	29°♒11'13	6.05315 AU
	2899 Feb 20 09:37	0°♓	
morning rise	2899 Mar 02 17:53	2°♓27'36	
retrograde	2899 Jul 10 21:33	22°♓23'05	
opposition	2899 Sep 09 04:02	17°♓25'11	-1°19'45
min. Earth dist.	2899 Sep 09 06:58	17°♓24'13	3.99737 AU
direct	2899 Nov 07 04:22	12°♓31'15	
	2900 Mar 03 19:33	0°♈	
evening set	2900 Mar 12 15:21	2°♈06'37	
conjunction	2900 Mar 25 17:22	5°♈16'31	-1°00'47
minimum elong	2900 Mar 25 17:21	5°♈16'30	1°00'47
max. Earth dist.	2900 Mar 26 04:29	5°♈23'15	5.95982 AU
morning rise	2900 Apr 07 22:16	8°♈28'03	
retrograde	2900 Aug 18 04:58	29°♈07'20	
min. Earth dist.	2900 Oct 16 06:23	24°♈11'59	3.94531 AU
opposition	2900 Oct 17 01:40	24°♈05'30	-1°34'09
direct	2900 Dec 14 02:24	19°♈11'31	
	2901 Mar 10 18:33	0°♉	
evening set	2901 Apr 18 21:33	8°♉58'27	
conjunction	2901 May 02 07:53	12°♉12'29	-0°57'52
minimum elong	2901 May 02 07:55	12°♉12'30	0°57'51
max. Earth dist.	2901 May 04 02:40	12°♉38'16	5.95363 AU
	2901 May 13 22:17	15°♉	
morning rise	2901 May 15 21:04	15°♉28'00	
	2901 Jul 22 23:34	0°♊	
retrograde	2901 Sep 24 20:39	6°♊00'53	
min. Earth dist.	2901 Nov 22 00:38	1°♊07'31	3.98656 AU
opposition	2901 Nov 23 09:20	0°♊56'23	-1°10'46
	2901 Nov 30 08:01	30°℞♉	
direct	2902 Jan 20 08:03	26°♉00'19	
	2902 Mar 11 09:50	0°♊	
evening set	2902 May 26 12:57	15°♊29'57	
conjunction	2902 Jun 09 05:34	18°♊43'02	-0°32'20
minimum elong	2902 Jun 09 05:36	18°♊43'03	0°32'19
max. Earth dist.	2902 Jun 11 13:08	19°♊15'42	6.03767 AU
morning rise	2902 Jun 23 00:15	21°♊56'52	
	2902 Jul 29 00:34	0°♋	
retrograde	2902 Oct 30 07:05	11°♋37'13	
min. Earth dist.	2902 Dec 27 10:00	6°♋44'24	4.10345 AU
opposition	2902 Dec 28 20:41	6°♋32'36	-0°21'21
direct	2903 Feb 25 12:40	1°♋33'34	
asc. node	2903 May 31 21:17	13°♋35'31	
evening set	2903 Jul 02 03:28	20°♋26'48	
conjunction	2903 Jul 15 21:14	23°♋34'02	0°04'15
minimum elong	2903 Jul 15 21:14	23°♋34'02	0°04'15
behind sun begin	2903 Jul 15 13:01	23°♋29'23	
behind sun end	2903 Jul 16 05:28	23°♋38'42	
max. Earth dist.	2903 Jul 17 20:27	24°♋00'53	6.17706 AU
morning rise	2903 Jul 29 15:07	26°♋41'01	
	2903 Aug 13 12:50	0°♌	
	2903 Nov 21 17:30	15°♌	
retrograde	2903 Dec 02 09:47	15°♌11'14	
	2903 Dec 13 00:16	15°℞♌	
min. Earth dist.	2904 Jan 30 03:35	10°♌16'55	4.25078 AU
opposition	2904 Jan 31 03:00	10°♌09'02	0°32'18
direct	2904 Mar 31 02:43	5°♌07'37	
	2904 Jun 25 21:47	15°♌	
evening set	2904 Aug 04 21:13	23°♌21'27	
conjunction	2904 Aug 18 10:40	26°♌20'38	0°37'41
minimum elong	2904 Aug 18 10:38	26°♌20'37	0°37'40
max. Earth dist.	2904 Aug 19 11:09	26°♌34'08	6.32053 AU
morning rise	2904 Aug 31 22:29	29°♌18'47	
	2904 Sep 04 01:59	0°♍	
retrograde	2905 Jan 01 12:10	16°♍48'17	
opposition	2905 Mar 02 14:08	11°♍49'42	1°12'46
min. Earth dist.	2905 Mar 02 06:45	11°♍52'08	4.37932 AU
direct	2905 May 02 20:40	6°♍47'05	
evening set	2905 Sep 06 15:36	24°♍30'39	
conjunction	2905 Sep 19 21:54	27°♍22'40	0°58'42
minimum elong	2905 Sep 19 21:53	27°♍22'39	0°58'42
max. Earth dist.	2905 Sep 19 17:50	27°♍20'28	6.42440 AU
	2905 Oct 02 00:51	0°♎	
morning rise	2905 Oct 03 01:37	0°♎13'19	
retrograde	2906 Jan 31 16:38	17°♎05'36	
opposition	2906 Apr 02 02:24	12°♎10'29	1°31'18
min. Earth dist.	2906 Apr 02 14:06	12°♎06'42	4.45281 AU
direct	2906 Jun 03 10:11	7°♎07'52	
evening set	2906 Oct 07 21:33	24°♎36'14	
conjunction	2906 Oct 20 20:59	27°♎24'03	1°03'05
minimum elong	2906 Oct 20 20:59	27°♎24'03	1°03'05
max. Earth dist.	2906 Oct 19 15:06	27°♎07'55	6.46151 AU
	2906 Nov 01 22:01	0°♏	
morning rise	2906 Nov 02 17:45	0°♏10'36	
	2907 Jan 26 10:16	15°♏	

retrograde	2907 Mar 02 20:25	16°♏53'48	
	2907 Apr 07 09:51	15°℞♏	
opposition	2907 May 02 13:58	12°♏00'58	1°25'25
min. Earth dist.	2907 May 03 17:05	11°♏52'16	4.45248 AU
direct	2907 Jul 04 08:12	6°♏59'10	
	2907 Sep 21 09:36	15°♏	
evening set	2907 Nov 07 10:14	24°♏30'05	
max. Earth dist.	2907 Nov 18 07:28	26°♏52'35	6.42321 AU
conjunction	2907 Nov 20 04:55	27°♏17'28	0°50'31
minimum elong	2907 Nov 20 04:57	27°♏17'29	0°50'31
morning rise	2907 Dec 02 21:10	0°♐03'53	
	2907 Dec 02 14:02	0°♐	
retrograde	2908 Apr 02 00:19	17°♐06'46	
opposition	2908 Jun 01 23:00	12°♐14'48	0°56'30
min. Earth dist.	2908 Jun 03 10:49	12°♐03'24	4.37840 AU
direct	2908 Aug 03 11:43	7°♐14'41	
evening set	2908 Dec 07 03:53	25°♐05'40	
max. Earth dist.	2908 Dec 17 16:53	27°♐27'22	6.31861 AU
conjunction	2908 Dec 19 20:11	27°♐56'12	0°23'41
minimum elong	2908 Dec 19 20:12	27°♐56'13	0°23'41
	2908 Dec 29 00:31	0°♑	
morning rise	2909 Jan 01 11:26	0°♑46'25	
retrograde	2909 May 05 03:30	18°♑36'13	
opposition	2909 Jul 05 00:49	13°♑43'28	0°09'54
min. Earth dist.	2909 Jul 06 11:45	13°♑32'18	4.24887 AU
direct	2909 Sep 04 16:53	8°♑45'32	
desc. node	2909 Sep 17 19:28	9°♑01'39	
evening set	2910 Jan 08 00:42	27°♑11'14	
max. Earth dist.	2910 Jan 19 00:54	29°♑44'06	6.17477 AU
conjunction	2910 Jan 20 17:48	0°♒07'51	-0°11'23
minimum elong	2910 Jan 20 17:47	0°♒07'50	0°11'23
behind sun begin	2910 Jan 20 11:53	0°♒04'26	
behind sun end	2910 Jan 20 23:42	0°♒11'15	
	2910 Jan 20 04:16	0°♒	
morning rise	2910 Feb 02 10:58	3°♒04'49	
	2910 Mar 30 20:48	15°♒	
retrograde	2910 Jun 09 14:09	22°♒01'18	
opposition	2910 Aug 09 05:48	17°♒06'19	-0°43'03
min. Earth dist.	2910 Aug 10 03:23	16°♒59'20	4.10080 AU
	2910 Aug 26 00:49	15°℞♒	
direct	2910 Oct 08 12:06	12°♒10'50	
	2910 Nov 20 02:31	15°♒	
	2911 Feb 05 08:00	0°♓	
evening set	2911 Feb 10 19:29	1°♓17'40	
conjunction	2911 Feb 23 15:59	4°♓21'40	-0°44'11
minimum elong	2911 Feb 23 15:57	4°♓21'39	0°44'11
max. Earth dist.	2911 Feb 22 22:29	4°♓11'13	6.03547 AU
morning rise	2911 Mar 08 14:19	7°♓26'52	
retrograde	2911 Jul 17 04:08	27°♓31'03	
opposition	2911 Sep 15 08:59	22°♓32'33	-1°23'52
min. Earth dist.	2911 Sep 15 08:59	22°♓32'33	3.98362 AU
direct	2911 Nov 13 05:27	17°♓38'40	
	2912 Feb 15 09:40	0°♈	
evening set	2912 Mar 17 17:20	7°♈17'57	
conjunction	2912 Mar 30 20:37	10°♈28'47	-1°01'52
minimum elong	2912 Mar 30 20:37	10°♈28'47	1°01'53
max. Earth dist.	2912 Mar 31 13:33	10°♈39'04	5.95144 AU
morning rise	2912 Apr 13 02:36	13°♈41'13	
	2912 Jun 30 14:33	0°♉	
retrograde	2912 Aug 23 13:38	4°♉23'38	
	2912 Oct 17 12:45	30°℞♈	
min. Earth dist.	2912 Oct 21 10:26	29°♈28'33	3.94354 AU
opposition	2912 Oct 22 07:46	29°♈21'22	-1°33'04
direct	2912 Dec 19 06:44	24°♈27'15	
	2913 Feb 16 17:49	0°♉	
evening set	2913 Apr 24 03:46	14°♉14'14	
	2913 Apr 27 08:08	15°♉	
conjunction	2913 May 07 15:05	17°♉28'33	-0°55'27
minimum elong	2913 May 07 15:07	17°♉28'34	0°55'28
max. Earth dist.	2913 May 09 12:04	17°♉55'36	5.95850 AU
morning rise	2913 May 21 05:31	20°♉44'21	
	2913 Jul 01 00:03	0°♊	
retrograde	2913 Sep 29 22:09	11°♊12'55	
min. Earth dist.	2913 Nov 27 00:37	6°♊20'07	3.99778 AU
opposition	2913 Nov 28 11:28	6°♊08'14	-1°04'56
direct	2914 Jan 25 10:29	1°♊11'49	
evening set	2914 May 31 18:03	20°♊37'37	
conjunction	2914 Jun 14 11:13	23°♊50'09	-0°27'31
minimum elong	2914 Jun 14 11:15	23°♊50'10	0°27'31
max. Earth dist.	2914 Jun 16 19:17	24°♊23'00	6.05444 AU
morning rise	2914 Jun 28 06:07	27°♊03'18	
	2914 Jul 11 01:55	0°♋	
retrograde	2914 Nov 04 02:27	16°♋34'16	
min. Earth dist.	2915 Jan 01 06:31	11°♋41'10	4.12392 AU
opposition	2915 Jan 02 15:49	11°♋29'50	-0°13'37
direct	2915 Mar 02 12:39	6°♋30'27	
asc. node	2915 Apr 10 21:19	8°♋56'56	
evening set	2915 Jul 07 03:02	25°♋17'33	
conjunction	2915 Jul 20 20:30	28°♋23'39	0°09'21
minimum elong	2915 Jul 20 20:30	28°♋23'39	0°09'21
behind sun begin	2915 Jul 20 13:33	28°♋19'44	
behind sun end	2915 Jul 21 03:26	28°♋27'33	
max. Earth dist.	2915 Jul 22 18:53	28°♋49'53	6.19964 AU
	2915 Jul 27 22:59	0°♌	
morning rise	2915 Aug 03 13:42	1°♌29'19	
	2915 Oct 10 16:36	15°♌	
retrograde	2915 Dec 06 18:48	19°♌49'11	
	2916 Feb 03 00:56	15°℞♌	
opposition	2916 Feb 04 14:22	14°♌47'26	0°38'57
min. Earth dist.	2916 Feb 03 15:46	14°♌55'01	4.27351 AU
direct	2916 Apr 04 18:02	9°♌45'47	
	2916 Jun 04 13:01	15°♌	
evening set	2916 Aug 09 13:05	27°♌53'33	
	2916 Aug 19 03:53	0°♍	
conjunction	2916 Aug 23 01:29	0°♍51'26	0°41'26
minimum elong	2916 Aug 23 01:27	0°♍51'25	0°41'26
max. Earth dist.	2916 Aug 23 21:32	1°♍02'27	6.34159 AU
morning rise	2916 Sep 05 12:12	3°♍48'14	
retrograde	2917 Jan 05 17:31	21°♍09'47	
opposition	2917 Mar 06 20:08	16°♍11'44	1°16'38
min. Earth dist.	2917 Mar 06 16:09	16°♍13'02	4.39715 AU
direct	2917 May 07 08:26	11°♍09'02	
evening set	2917 Sep 11 00:06	28°♍48'10	
	2917 Sep 16 13:38	0°♎	
conjunction	2917 Sep 24 05:23	1°♎39'15	1°00'16
minimum elong	2917 Sep 24 05:22	1°♎39'14	1°00'16
max. Earth dist.	2917 Sep 23 21:35	1°♎35'01	6.43744 AU
morning rise	2917 Oct 07 07:58	4°♎28'56	
retrograde	2918 Feb 04 17:25	21°♎17'13	
opposition	2918 Apr 06 05:39	16°♎22'28	1°31'50
min. Earth dist.	2918 Apr 06 19:20	16°♎18'02	4.46041 AU
direct	2918 Jun 07 15:26	11°♎19'53	
evening set	2918 Oct 12 01:35	28°♎46'38	
	2918 Oct 17 18:04	0°♏	

max. Earth dist.	2918 Oct 23	15:46	1°♏16'32	6.46299 AU	
conjunction	2918 Oct 25	00:12	1°♏34'04	1°02'17	
minimum elong	2918 Oct 25	00:13	1°♏34'05	1°02'17	
morning rise	2918 Nov 06	20:04	4°♏20'15		
	2918 Dec 31	01:43	15°♏		
retrograde	2919 Mar 06	23:19	21°♏03'51		
opposition	2919 May 06	18:01	16°♏11'17	1°22'41	
min. Earth dist.	2919 May 07	23:35	16°♏01'50	4.44764 AU	
	2919 May 16	03:07	15°℞♏		
direct	2919 Jul 08	13:12	11°♏09'41		
	2919 Aug 30	06:29	15°♏		
evening set	2919 Nov 11	13:15	28°♏42'12		
	2919 Nov 17	11:42	0°♐		
max. Earth dist.	2919 Nov 22	06:15	1°♐02'51	6.41216 AU	
conjunction	2919 Nov 24	07:22	1°♐29'49	0°47'35	
minimum elong	2919 Nov 24	07:23	1°♐29'50	0°47'35	
morning rise	2919 Dec 06	23:28	4°♐16'35		
retrograde	2920 Apr 06	09:33	21°♐24'40		
opposition	2920 Jun 06	07:43	16°♐32'41	0°51'01	
min. Earth dist.	2920 Jun 07	20:50	16°♐20'52	4.36160 AU	
direct	2920 Aug 07	18:48	11°♐32'46		
evening set	2920 Dec 11	09:33	29°♐28'37		
	2920 Dec 13	17:33	0°♑		
max. Earth dist.	2920 Dec 21	23:32	1°♑51'31	6.29736 AU	
conjunction	2920 Dec 24	02:01	2°♑20'01	0°19'13	
minimum elong	2920 Dec 24	02:02	2°♑20'02	0°19'13	
morning rise	2921 Jan 05	17:16	5°♑11'08		
retrograde	2921 May 09	20:01	23°♑10'26		
opposition	2921 Jul 09	17:01	18°♑17'32	0°02'42	
min. Earth dist.	2921 Jul 11	03:05	18°♑06'38	4.22450 AU	
desc. node	2921 Jul 29	23:33	15°♑48'47		
direct	2921 Sep 09	04:10	13°♑19'58		
	2922 Jan 04	08:47	0°♒		
evening set	2922 Jan 12	13:18	1°♒52'57		
max. Earth dist.	2922 Jan 23	15:02	4°♒27'38	6.14926 AU	
conjunction	2922 Jan 25	06:38	4°♒50'46	-0°16'16	
minimum elong	2922 Jan 25	06:37	4°♒50'45	0°16'16	
morning rise	2922 Feb 07	00:33	7°♒49'06		
	2922 Mar 11	01:28	15°♒		
retrograde	2922 Jun 14	17:43	26°♒57'29		
opposition	2922 Aug 14	06:51	22°♒02'06	-0°49'53	
min. Earth dist.	2922 Aug 15	01:59	21°♒55'53	4.07621 AU	
direct	2922 Oct 13	07:52	17°♒06'53		
	2923 Jan 19	05:38	0°♓		
evening set	2923 Feb 15	16:54	6°♓21'20		
conjunction	2923 Feb 28	14:26	9°♓26'43	-0°47'48	
minimum elong	2923 Feb 28	14:24	9°♓26'41	0°47'48	
max. Earth dist.	2923 Feb 28	02:34	9°♓19'35	6.01425 AU	
morning rise	2923 Mar 13	13:41	12°♓33'18		
	2923 Jun 09	23:19	0°♈		
retrograde	2923 Jul 22	14:37	2°♈47'16		
	2923 Sep 03	12:22	30°℞♓		
opposition	2923 Sep 20	16:50	27°♓48'17	-1°27'20	
min. Earth dist.	2923 Sep 20	13:43	27°♓49'19	3.96827 AU	
direct	2923 Nov 18	08:28	22°♓54'35		
	2924 Jan 25	17:52	0°♈		
evening set	2924 Mar 22	22:56	12°♈38'17		
conjunction	2924 Apr 05	03:15	15°♈50'01	-1°02'27	
minimum elong	2924 Apr 05	03:14	15°♈50'01	1°02'26	
max. Earth dist.	2924 Apr 06	00:16	16°♈02'46	5.94327 AU	
morning rise	2924 Apr 18	10:41	19°♈03'26		
	2924 Jun 05	20:44	0°♉		
retrograde	2924 Aug 28	22:47	9°♉48'17		
opposition	2924 Oct 27	16:27	4°♉45'30	-1°31'07	
min. Earth dist.	2924 Oct 26	15:06	4°♉54'04	3.94373 AU	
	2924 Dec 15	08:41	30°℞♈		
direct	2924 Dec 24	13:20	29°♈51'08		
	2925 Jan 02	18:31	0°♉		
	2925 Apr 09	21:03	15°♉		
evening set	2925 Apr 29	12:46	19°♉37'09		
conjunction	2925 May 13	01:13	22°♉51'34	-0°52'31	
minimum elong	2925 May 13	01:15	22°♉51'35	0°52'31	
max. Earth dist.	2925 May 15	02:05	23°♉20'54	5.96690 AU	
morning rise	2925 May 26	16:29	26°♉07'20		
	2925 Jun 12	05:17	0°♊		
retrograde	2925 Oct 05	01:51	16°♊29'36		
min. Earth dist.	2925 Dec 02	03:45	11°♊36'38	4.01301 AU	
opposition	2925 Dec 03	14:48	11°♊24'40	-0°58'28	
direct	2926 Jan 30	16:47	6°♊27'47		
evening set	2926 Jun 06	00:18	25°♊48'06		
conjunction	2926 Jun 19	17:53	28°♊59'52	-0°22'28	
minimum elong	2926 Jun 19	17:55	28°♊59'53	0°22'28	
max. Earth dist.	2926 Jun 22	03:10	29°♊33'14	6.07483 AU	
	2926 Jun 24	01:09	0°♋		
morning rise	2926 Jul 03	12:51	2°♋12'04		
retrograde	2926 Nov 08	19:53	21°♋32'06		
min. Earth dist.	2927 Jan 06	01:25	16°♋39'10	4.14703 AU	
opposition	2927 Jan 07	10:38	16°♋27'53	-0°05'45	
asc. node	2927 Feb 18	00:12	11°♋58'39		
direct	2927 Mar 07	11:10	11°♋28'06		
	2927 Jul 11	11:25	0°♌		
evening set	2927 Jul 12	02:24	0°♌08'23		
conjunction	2927 Jul 25	19:14	3°♌13'11	0°14'25	
minimum elong	2927 Jul 25	19:13	3°♌13'10	0°14'25	
behind sun begin	2927 Jul 25	15:45	3°♌11'14		
behind sun end	2927 Jul 25	22:41	3°♌15'07		
max. Earth dist.	2927 Jul 27	13:15	3°♌36'50	6.22329 AU	
morning rise	2927 Aug 08	11:48	6°♌17'30		
	2927 Sep 18	15:42	15°♌		
retrograde	2927 Dec 11	05:36	24°♌27'10		
min. Earth dist.	2928 Feb 08	06:21	19°♌32'23	4.29558 AU	
opposition	2928 Feb 09	01:49	19°♌25'52	0°45'25	
	2928 Mar 21	01:33	15°℞♌		
direct	2928 Apr 09	11:35	14°♌23'56		
	2928 Apr 29	01:08	15°♌		
	2928 Aug 02	21:43	0°♍		
evening set	2928 Aug 14	04:37	2°♍26'03		
conjunction	2928 Aug 27	16:10	5°♍22'46	0°45'00	
minimum elong	2928 Aug 27	16:08	5°♍22'45	0°45'01	
max. Earth dist.	2928 Aug 28	09:21	5°♍32'10	6.36041 AU	
morning rise	2928 Sep 10	01:36	8°♍18'17		
retrograde	2929 Jan 09	21:33	25°♍32'57		
opposition	2929 Mar 11	02:36	20°♍35'24	1°20'11	
min. Earth dist.	2929 Mar 11	00:27	20°♍36'06	4.41164 AU	
direct	2929 May 11	17:49	15°♍32'39		
	2929 Aug 31	13:02	0°♎		
evening set	2929 Sep 15	09:45	3°♎08'34		
conjunction	2929 Sep 28	13:53	5°♎58'51	1°01'34	
minimum elong	2929 Sep 28	13:52	5°♎58'51	1°01'34	
max. Earth dist.	2929 Sep 28	01:08	5°♎51'58	6.44654 AU	
morning rise	2929 Oct 11	15:27	8°♎47'47		
retrograde	2930 Feb 08	22:43	25°♎33'25		
opposition	2930 Apr 10	11:02	20°♎39'04	1°31'59	

min. Earth dist.	2930 Apr 11	04:16	20°♎33'30	4.46374 AU
direct	2930 Jun 12	00:05	15°♎36'31	
	2930 Oct 01	22:21	0°♏	
evening set	2930 Oct 16	07:44	3°♏02'53	
max. Earth dist.	2930 Oct 27	17:35	5°♏30'38	6.46017 AU
conjunction	2930 Oct 29	05:39	5°♏50'08	1°01'10
minimum elong	2930 Oct 29	05:40	5°♏50'09	1°01'11
morning rise	2930 Nov 11	00:51	8°♏36'11	
	2930 Dec 11	19:57	15°♏	
retrograde	2931 Mar 11	05:52	25°♏21'38	
opposition	2931 May 11	01:40	20°♏29'11	1°19'30
min. Earth dist.	2931 May 12	08:29	20°♏19'21	4.43898 AU
direct	2931 Jul 12	19:57	15°♏27'43	
	2931 Nov 01	16:13	0°♐	
evening set	2931 Nov 15	19:29	3°♐02'48	
max. Earth dist.	2931 Nov 26	12:07	5°♐23'41	6.39832 AU
conjunction	2931 Nov 28	13:18	5°♐50'48	0°44'18
minimum elong	2931 Nov 28	13:19	5°♐50'49	0°44'17
morning rise	2931 Dec 11	04:59	8°♐38'00	
retrograde	2932 Apr 10	22:29	25°♐52'08	
opposition	2932 Jun 10	20:47	21°♐00'11	0°45'00
min. Earth dist.	2932 Jun 12	10:38	20°♐48'08	4.34332 AU
direct	2932 Aug 12	05:34	16°♐00'34	
	2932 Nov 27	13:56	0°♑	
evening set	2932 Dec 15	19:33	4°♑01'31	
max. Earth dist.	2932 Dec 26	08:39	6°♑24'41	6.27606 AU
conjunction	2932 Dec 28	11:52	6°♑53'45	0°14'26
minimum elong	2932 Dec 28	11:53	6°♑53'45	0°14'27
behind sun begin	2932 Dec 28	08:07	6°♑51'38	
behind sun end	2932 Dec 28	15:39	6°♑55'53	
morning rise	2933 Jan 10	03:29	9°♑45'50	
retrograde	2933 May 14	18:00	27°♑54'41	
desc. node	2933 Jun 08	09:54	26°♑58'34	
opposition	2933 Jul 14	13:47	23°♑01'32	-0°04'51
min. Earth dist.	2933 Jul 15	22:10	22°♑51'08	4.20165 AU
direct	2933 Sep 13	20:19	18°♑04'17	
	2933 Dec 18	06:07	0°♒	
evening set	2934 Jan 17	05:36	6°♒43'50	
conjunction	2934 Jan 29	23:31	9°♒42'47	-0°21'15
minimum elong	2934 Jan 29	23:30	9°♒42'46	0°21'16
max. Earth dist.	2934 Jan 28	12:17	9°♒22'07	6.12706 AU
morning rise	2934 Feb 11	17:53	12°♒42'19	
	2934 Feb 21	15:40	15°♒	
	2934 May 14	16:37	0°♓	
retrograde	2934 Jun 20	00:36	2°♓01'13	
	2934 Jul 26	11:42	30°♑℞	
opposition	2934 Aug 19	11:29	27°♒05'27	-0°56'36
min. Earth dist.	2934 Aug 20	03:58	27°♒00'05	4.05691 AU
direct	2934 Oct 18	07:13	22°♒10'39	
	2934 Dec 30	13:41	0°♓	
evening set	2935 Feb 20	17:01	11°♓30'28	
conjunction	2935 Mar 05	15:09	14°♓36'50	-0°51'10
minimum elong	2935 Mar 05	15:07	14°♓36'48	0°51'10
max. Earth dist.	2935 Mar 05	07:02	14°♓31'56	5.99967 AU
morning rise	2935 Mar 18	15:34	17°♓44'32	
	2935 May 13	06:20	0°♈	
retrograde	2935 Jul 27	23:20	8°♈05'22	
opposition	2935 Sep 26	01:26	3°♈05'49	-1°30'11
min. Earth dist.	2935 Sep 25	17:44	3°♈08'22	3.96038 AU
	2935 Oct 21	08:38	30°♑℞♓	
direct	2935 Nov 23	12:58	28°♓12'12	
	2935 Dec 26	10:55	0°♈	
evening set	2936 Mar 28	04:39	17°♈57'25	
conjunction	2936 Apr 10	10:08	21°♈09'42	-1°02'33
minimum elong	2936 Apr 10	10:09	21°♈09'42	1°02'33
max. Earth dist.	2936 Apr 11	13:09	21°♈26'05	5.94286 AU
morning rise	2936 Apr 23	18:34	24°♈23'36	
	2936 May 17	14:11	0°♉	
	2936 Aug 25	14:16	15°♉	
retrograde	2936 Sep 03	06:37	15°♉07'30	
	2936 Sep 11	21:41	15°℞♉	
opposition	2936 Nov 01	23:00	10°♉04'15	-1°28'28
min. Earth dist.	2936 Oct 31	20:08	10°♉13'21	3.95089 AU
direct	2936 Dec 29	20:25	5°♉09'38	
	2937 Mar 22	01:21	15°♉	
evening set	2937 May 04	19:11	24°♉52'17	
conjunction	2937 May 18	08:35	28°♉06'29	-0°49'15
minimum elong	2937 May 18	08:37	28°♉06'31	0°49'15
max. Earth dist.	2937 May 20	12:41	28°♉37'38	5.98075 AU
	2937 May 26	06:44	0°♊	
morning rise	2937 Jun 01	00:38	1°♊21'56	
retrograde	2937 Oct 10	00:42	21°♊35'54	
min. Earth dist.	2937 Dec 07	02:03	16°♊43'15	4.03193 AU
opposition	2937 Dec 08	14:08	16°♊30'58	-0°51'46
direct	2938 Feb 04	17:40	11°♊33'42	
	2938 Jun 07	15:25	0°♋	
evening set	2938 Jun 11	02:24	0°♋47'44	
conjunction	2938 Jun 24	20:01	3°♋58'32	-0°17'25
minimum elong	2938 Jun 24	20:02	3°♋58'33	0°17'25
max. Earth dist.	2938 Jun 27	02:42	4°♋30'13	6.09687 AU
morning rise	2938 Jul 08	15:03	7°♋09'42	
retrograde	2938 Nov 13	09:51	26°♋19'03	
asc. node	2938 Dec 29	13:28	23°♋02'36	
min. Earth dist.	2939 Jan 10	18:15	21°♋25'44	4.16980 AU
opposition	2939 Jan 12	01:25	21°♋15'09	0°01'51
direct	2939 Mar 12	07:11	16°♋14'59	
	2939 Jun 24	20:26	0°♌	
evening set	2939 Jul 16	21:29	4°♌49'03	
conjunction	2939 Jul 30	13:56	7°♌52'42	0°19'14
minimum elong	2939 Jul 30	13:55	7°♌52'41	0°19'13
max. Earth dist.	2939 Aug 01	05:47	8°♌15'01	6.24505 AU
morning rise	2939 Aug 13	05:31	10°♌55'41	
	2939 Aug 31	21:13	15°♌	
retrograde	2939 Dec 15	12:33	28°♌56'24	
opposition	2940 Feb 13	09:44	23°♌55'41	0°51'23
min. Earth dist.	2940 Feb 12	16:19	24°♌01'30	4.31459 AU
direct	2940 Apr 13	23:08	18°♌53'38	
	2940 Jul 16	22:21	0°♍	
evening set	2940 Aug 18	17:05	6°♍51'25	
conjunction	2940 Sep 01	03:32	9°♍47'08	0°48'13
minimum elong	2940 Sep 01	03:30	9°♍47'07	0°48'13
max. Earth dist.	2940 Sep 01	14:43	9°♍53'14	6.37519 AU
morning rise	2940 Sep 14	12:04	12°♍41'39	
retrograde	2941 Jan 14	02:35	29°♍51'13	
opposition	2941 Mar 15	07:21	24°♍54'11	1°23'14
min. Earth dist.	2941 Mar 15	08:55	24°♍53'40	4.42148 AU
direct	2941 May 16	02:31	19°♍51'24	
	2941 Aug 14	11:02	0°♎	
evening set	2941 Sep 19	17:11	7°♎25'39	
conjunction	2941 Oct 02	20:35	10°♎15'26	1°02'31
minimum elong	2941 Oct 02	20:35	10°♎15'26	1°02'31
max. Earth dist.	2941 Oct 02	05:04	10°♎07'03	6.45073 AU
morning rise	2941 Oct 15	21:05	13°♎03'50	

retrograde	2942 Feb 13	01:50	29°♎48'35	
opposition	2942 Apr 14	15:50	24°♎54'36	1°31'40
min. Earth dist.	2942 Apr 15	10:29	24°♎48'35	4.46238 AU
direct	2942 Jun 16	04:54	19°♎52'13	
	2942 Sep 14	21:31	0°♏	
evening set	2942 Oct 20	13:34	7°♏19'38	
max. Earth dist.	2942 Oct 31	20:09	9°♏45'56	6.45339 AU
conjunction	2942 Nov 02	10:43	10°♏06'52	0°59'44
minimum elong	2942 Nov 02	10:44	10°♏06'53	0°59'44
morning rise	2942 Nov 15	05:21	12°♏52'57	
	2942 Nov 25	02:45	15°♏	
retrograde	2943 Mar 15	14:45	29°♏41'31	
opposition	2943 May 15	10:01	24°♏49'18	1°15'53
min. Earth dist.	2943 May 16	19:02	24°♏38'46	4.42726 AU
direct	2943 Jul 17	04:25	19°♏48'04	
	2943 Oct 15	12:37	0°♐	
evening set	2943 Nov 20	02:26	7°♐26'31	
max. Earth dist.	2943 Nov 30	17:04	9°♐46'53	6.38255 AU
conjunction	2943 Dec 02	19:55	10°♐15'01	0°40'45
minimum elong	2943 Dec 02	19:56	10°♐15'02	0°40'45
morning rise	2943 Dec 15	11:31	13°♐02'48	
	2944 Mar 30	15:29	0°♑	
retrograde	2944 Apr 15	12:52	0°♑23'37	
	2944 May 01	11:06	30°℞♐	
opposition	2944 Jun 15	11:13	25°♐31'33	0°38'41
min. Earth dist.	2944 Jun 17	00:01	25°♐19'49	4.32454 AU
direct	2944 Aug 16	16:10	20°♐32'14	
	2944 Nov 09	18:57	0°♑	
evening set	2944 Dec 20	06:17	8°♑38'11	
max. Earth dist.	2944 Dec 30	22:32	11°♑03'45	6.25590 AU
conjunction	2945 Jan 01	22:45	11°♑31'15	0°09'33
minimum elong	2945 Jan 01	22:46	11°♑31'15	0°09'33
behind sun begin	2945 Jan 01	16:07	11°♑27'29	
behind sun end	2945 Jan 02	05:24	11°♑35'02	
morning rise	2945 Jan 14	14:27	14°♑24'14	
	2945 Apr 07	04:51	0°♒	
desc. node	2945 Apr 17	23:58	1°♒09'58	
retrograde	2945 May 19	17:14	2°♒42'07	
	2945 Jul 01	18:34	30°℞♑	
opposition	2945 Jul 19	11:40	27°♑48'41	-0°12'25
min. Earth dist.	2945 Jul 20	18:44	27°♑38'42	4.18144 AU
direct	2945 Sep 18	14:02	22°♑51'49	
	2945 Nov 28	13:50	0°♒	
evening set	2946 Jan 21	22:31	11°♒36'37	
max. Earth dist.	2946 Feb 02	07:36	14°♒17'00	6.10848 AU
conjunction	2946 Feb 03	16:41	14°♒36'29	-0°26'06
minimum elong	2946 Feb 03	16:40	14°♒36'29	0°26'06
	2946 Feb 05	08:35	15°♒	
morning rise	2946 Feb 16	11:50	17°♒37'06	
	2946 Apr 15	09:32	0°♓	
retrograde	2946 Jun 25	03:56	7°♓04'53	
opposition	2946 Aug 24	15:21	2°♓08'34	-1°02'51
min. Earth dist.	2946 Aug 25	03:47	2°♓04'30	4.04161 AU
	2946 Sep 10	15:13	30°℞♒	
direct	2946 Oct 23	06:00	27°♒13'58	
	2946 Dec 04	01:10	0°♓	
evening set	2947 Feb 25	16:19	16°♓37'40	
conjunction	2947 Mar 10	15:23	19°♓44'52	-0°54'06
minimum elong	2947 Mar 10	15:21	19°♓44'51	0°54'06
max. Earth dist.	2947 Mar 10	13:03	19°♓43'28	5.98901 AU
morning rise	2947 Mar 23	16:37	22°♓53'27	
	2947 Apr 23	07:55	0°♈	
retrograde	2947 Aug 02	08:15	13°♈19'21	
opposition	2947 Oct 01	07:59	8°♈19'13	-1°32'14
min. Earth dist.	2947 Sep 30	22:11	8°♈22'29	3.95553 AU
direct	2947 Nov 28	17:50	3°♈25'32	
evening set	2948 Apr 02	08:27	23°♈11'17	
conjunction	2948 Apr 15	15:01	26°♈24'01	-1°02'09
minimum elong	2948 Apr 15	15:02	26°♈24'01	1°02'10
max. Earth dist.	2948 Apr 16	22:10	26°♈42'53	5.94412 AU
morning rise	2948 Apr 29	00:39	29°♈38'22	
	2948 Apr 30	12:40	0°♉	
	2948 Jul 10	13:51	15°♉	
retrograde	2948 Sep 08	10:35	20°♉20'26	
min. Earth dist.	2948 Nov 05	21:29	15°♉26'43	3.95836 AU
opposition	2948 Nov 07	02:43	15°♉16'49	-1°25'10
	2948 Nov 09	04:24	15°℞♉	
direct	2949 Jan 03	22:47	10°♉21'54	
	2949 Feb 27	00:41	15°♉	
evening set	2949 May 09	23:40	0°♊01'28	
	2949 May 09	21:10	0°♊	
conjunction	2949 May 23	13:47	3°♊15'26	-0°45'40
minimum elong	2949 May 23	13:49	3°♊15'28	0°45'39
max. Earth dist.	2949 May 25	17:58	3°♊46'31	5.99349 AU
morning rise	2949 Jun 06	06:39	6°♊30'36	
retrograde	2949 Oct 14	21:22	26°♊36'58	
min. Earth dist.	2949 Dec 11	23:27	21°♊44'10	4.04838 AU
opposition	2949 Dec 13	11:12	21°♊31'58	-0°44'50
direct	2950 Feb 09	18:18	16°♊34'14	
	2950 May 21	15:23	0°♋	
evening set	2950 Jun 16	03:11	5°♋43'13	
conjunction	2950 Jun 29	21:10	8°♋53'17	-0°12'19
minimum elong	2950 Jun 29	21:11	8°♋53'17	0°12'19
behind sun begin	2950 Jun 29	15:46	8°♋50'11	
behind sun end	2950 Jun 30	02:36	8°♋56'24	
max. Earth dist.	2950 Jul 02	03:33	9°♋24'39	6.11574 AU
morning rise	2950 Jul 13	15:56	12°♋03'29	
	2950 Oct 23	09:02	0°♌	
asc. node	2950 Nov 09	01:03	0°♌55'29	
retrograde	2950 Nov 18	00:01	1°♌03'24	
	2950 Dec 13	08:11	30°℞♋	
min. Earth dist.	2951 Jan 15	09:46	26°♋09'52	4.18909 AU
opposition	2951 Jan 16	15:18	25°♋59'52	0°09'22
direct	2951 Mar 17	00:53	20°♋59'23	
	2951 Jun 06	11:50	0°♌	
evening set	2951 Jul 21	16:30	9°♌28'31	
conjunction	2951 Aug 04	08:15	12°♌31'08	0°23'55
minimum elong	2951 Aug 04	08:13	12°♌31'07	0°23'55
max. Earth dist.	2951 Aug 05	19:20	12°♌50'42	6.26310 AU
	2951 Aug 15	11:36	15°♌	
morning rise	2951 Aug 17	23:14	15°♌33'02	
	2951 Nov 02	02:55	0°♍	
retrograde	2951 Dec 19	20:22	3°♍26'09	
	2952 Feb 05	19:01	30°℞♌	
opposition	2952 Feb 17	18:21	28°♌25'54	0°57'04
min. Earth dist.	2952 Feb 17	03:35	28°♌30'50	4.33011 AU
direct	2952 Apr 18	11:46	23°♌23'39	
	2952 Jun 27	05:45	0°♍	
evening set	2952 Aug 23	06:12	11°♍18'09	
conjunction	2952 Sep 05	15:53	14°♍13'01	0°51'11
minimum elong	2952 Sep 05	15:51	14°♍13'00	0°51'10
max. Earth dist.	2952 Sep 06	00:23	14°♍17'39	6.38711 AU
morning rise	2952 Sep 18	23:09	17°♍06'36	
	2952 Nov 25	18:25	0°♎	

retrograde	2953 Jan 18 07:26	4°♎11'53	
	2953 Mar 13 20:25	30°℞♍	
opposition	2953 Mar 19 13:27	29°♍15'23	1°25'52
min. Earth dist.	2953 Mar 19 16:59	29°♍14'14	4.42927 AU
direct	2953 May 20 10:55	24°♍12'41	
	2953 Jul 25 05:13	0°♎	
evening set	2953 Sep 24 02:25	11°♎45'45	
max. Earth dist.	2953 Oct 06 08:38	14°♎24'10	6.45385 AU
conjunction	2953 Oct 07 04:44	14°♎35'01	1°03'09
minimum elong	2953 Oct 07 04:44	14°♎35'01	1°03'10
morning rise	2953 Oct 20 04:28	17°♎22'59	
	2953 Dec 26 02:23	0°♏	
retrograde	2954 Feb 17 09:01	4°♏07'06	
	2954 Apr 12 21:30	30°℞♎	
opposition	2954 Apr 18 22:40	29°♎13'31	1°30'52
min. Earth dist.	2954 Apr 19 20:05	29°♎06'37	4.46103 AU
direct	2954 Jun 20 13:40	24°♎11'17	
	2954 Aug 25 17:49	0°♏	
evening set	2954 Oct 24 20:40	11°♏39'30	
max. Earth dist.	2954 Nov 05 01:44	14°♏05'13	6.44784 AU
conjunction	2954 Nov 06 17:20	14°♏26'44	0°57'59
minimum elong	2954 Nov 06 17:21	14°♏26'45	0°57'58
	2954 Nov 09 06:30	15°♏	
morning rise	2954 Nov 19 11:17	17°♏12'49	
	2955 Jan 25 23:23	0°♐	
retrograde	2955 Mar 19 23:13	4°♐04'06	
	2955 May 13 12:46	30°℞♏	
opposition	2955 May 19 19:58	29°♏12'01	1°11'50
min. Earth dist.	2955 May 21 04:36	29°♏01'36	4.41814 AU
direct	2955 Jul 21 12:19	24°♏11'07	
	2955 Sep 25 07:26	0°♐	
evening set	2955 Nov 24 10:04	11°♐51'51	
max. Earth dist.	2955 Dec 05 00:59	14°♐12'48	6.37070 AU
conjunction	2955 Dec 07 03:09	14°♐40'39	0°37'00
minimum elong	2955 Dec 07 03:10	14°♐40'40	0°37'00
morning rise	2955 Dec 19 18:31	17°♐28'50	
	2956 Feb 21 11:54	0°♑	
retrograde	2956 Apr 20 04:30	4°♑55'07	
opposition	2956 Jun 20 02:09	0°♑03'00	0°32'10
	2956 Jun 20 11:34	30°℞♐	
min. Earth dist.	2956 Jun 21 15:12	29°♐51'11	4.31059 AU
direct	2956 Aug 21 05:20	25°♐04'04	
	2956 Oct 19 09:07	0°♑	
evening set	2956 Dec 24 16:38	13°♑13'18	
max. Earth dist.	2957 Jan 04 09:30	15°♑39'45	6.24101 AU
conjunction	2957 Jan 06 09:03	16°♑06'58	0°04'43
minimum elong	2957 Jan 06 09:03	16°♑06'57	0°04'42
behind sun begin	2957 Jan 06 01:15	16°♑02'31	
behind sun end	2957 Jan 06 16:51	16°♑11'24	
morning rise	2957 Jan 19 01:01	19°♑00'39	
desc. node	2957 Feb 27 01:08	27°♑27'50	
	2957 Mar 12 07:42	0°♒	
retrograde	2957 May 24 12:40	7°♒25'48	
opposition	2957 Jul 24 07:49	2°♒32'01	-0°19'44
min. Earth dist.	2957 Jul 25 11:55	2°♒22'58	4.16669 AU
	2957 Aug 14 00:24	30°℞♑	
direct	2957 Sep 23 05:18	27°♑35'31	
	2957 Nov 01 21:11	0°♒	
	2958 Jan 20 13:18	15°♒	
evening set	2958 Jan 26 13:13	16°♒23'54	
max. Earth dist.	2958 Feb 07 03:08	19°♒07'33	6.09515 AU
conjunction	2958 Feb 08 07:49	19°♒24'30	-0°30'37
minimum elong	2958 Feb 08 07:48	19°♒24'29	0°30'36
morning rise	2958 Feb 21 03:24	22°♒25'54	
	2958 Mar 26 14:22	0°♓	
retrograde	2958 Jun 30 06:29	12°♓00'50	
opposition	2958 Aug 29 16:04	7°♓04'03	-1°08'24
min. Earth dist.	2958 Aug 30 02:48	7°♓00'33	4.03086 AU
direct	2958 Oct 28 03:55	2°♓09'40	
evening set	2959 Mar 02 12:01	21°♓35'52	
conjunction	2959 Mar 15 11:50	24°♓43'45	-0°56'31
minimum elong	2959 Mar 15 11:49	24°♓43'44	0°56'30
max. Earth dist.	2959 Mar 15 12:50	24°♓44'21	5.98175 AU
morning rise	2959 Mar 28 14:06	27°♓53'06	
	2959 Apr 06 11:05	0°♈	
retrograde	2959 Aug 07 10:33	18°♈22'44	
opposition	2959 Oct 06 09:35	13°♈22'08	-1°33'28
min. Earth dist.	2959 Oct 05 20:43	13°♈26'26	3.95286 AU
direct	2959 Dec 03 15:39	8°♈28'26	
evening set	2960 Apr 07 08:08	28°♈14'28	
	2960 Apr 14 15:01	0°♉	
conjunction	2960 Apr 20 15:41	1°♉27'34	-1°01'18
minimum elong	2960 Apr 20 15:42	1°♉27'35	1°01'18
max. Earth dist.	2960 Apr 22 00:46	1°♉47'36	5.94614 AU
morning rise	2960 May 04 02:25	4°♉42'20	
	2960 Jun 18 12:55	15°♉	
retrograde	2960 Sep 13 09:33	25°♉22'34	
min. Earth dist.	2960 Nov 10 19:17	20°♉28'52	3.96484 AU
opposition	2960 Nov 12 01:23	20°♉18'39	-1°21'24
direct	2961 Jan 08 22:09	15°♉23'24	
	2961 Apr 23 09:26	0°♊	
evening set	2961 May 14 23:56	5°♊00'49	
conjunction	2961 May 28 15:06	8°♊14'44	-0°41'54
minimum elong	2961 May 28 15:08	8°♊14'46	0°41'55
max. Earth dist.	2961 May 30 21:26	8°♊46'59	6.00402 AU
morning rise	2961 Jun 11 08:30	11°♊29'40	
	2961 Sep 19 04:21	0°♋	
retrograde	2961 Oct 19 16:33	1°♋29'37	
	2961 Nov 18 20:46	30°℞♊	
min. Earth dist.	2961 Dec 16 17:41	26°♊36'39	4.06173 AU
opposition	2961 Dec 18 04:36	26°♊24'45	-0°37'56
direct	2962 Feb 14 14:03	21°♊26'39	
	2962 May 02 23:35	0°♋	
evening set	2962 Jun 21 01:01	10°♋32'03	
conjunction	2962 Jul 04 18:59	13°♋41'28	-0°07'21
minimum elong	2962 Jul 04 19:00	13°♋41'29	0°07'21
behind sun begin	2962 Jul 04 11:22	13°♋37'07	
behind sun end	2962 Jul 05 02:39	13°♋45'51	
max. Earth dist.	2962 Jul 06 22:54	14°♋11'18	6.13074 AU
morning rise	2962 Jul 18 13:50	16°♋50'59	
	2962 Sep 20 22:21	0°♌	
asc. node	2962 Sep 21 02:51	0°♌01'52	
retrograde	2962 Nov 22 10:39	5°♌43'11	
min. Earth dist.	2963 Jan 19 22:38	0°♌49'35	4.20444 AU
opposition	2963 Jan 21 03:01	0°♌39'59	0°16'32
	2963 Jan 26 01:40	30°℞♋	
direct	2963 Mar 21 15:28	25°♋39'11	
	2963 May 14 22:56	0°♌	
evening set	2963 Jul 26 09:47	14°♌04'47	
	2963 Jul 30 13:29	15°♌	
conjunction	2963 Aug 09 01:02	17°♌06'32	0°28'19
minimum elong	2963 Aug 09 01:01	17°♌06'31	0°28'19
max. Earth dist.	2963 Aug 10 09:36	17°♌24'40	6.27784 AU
morning rise	2963 Aug 22 15:05	20°♌07'26	

	2963 Oct 09 13:33	0°♍	
retrograde	2963 Dec 24 03:52	7°♍54'03	
opposition	2964 Feb 22 01:58	2°♍54'18	1°02'15
min. Earth dist.	2964 Feb 21 13:33	2°♍58'25	4.34314 AU
	2964 Mar 16 11:19	30°℞♌	
direct	2964 Apr 22 23:35	27°♌51'56	
	2964 May 30 22:38	0°♍	
evening set	2964 Aug 27 18:31	15°♍43'39	
conjunction	2964 Sep 10 03:09	18°♍37'41	0°53'46
minimum elong	2964 Sep 10 03:07	18°♍37'40	0°53'45
max. Earth dist.	2964 Sep 10 07:29	18°♍40'03	6.39740 AU
morning rise	2964 Sep 23 09:32	21°♍30'27	
	2964 Nov 03 23:36	0°♎	
retrograde	2965 Jan 22 11:59	8°♎31'48	
opposition	2965 Mar 23 19:12	3°♎35'38	1°27'57
min. Earth dist.	2965 Mar 24 00:58	3°♎33'45	4.43634 AU
	2965 Apr 23 15:30	30°℞♍	
direct	2965 May 24 19:33	28°♍32'52	
	2965 Jun 25 08:46	0°♎	
evening set	2965 Sep 28 10:19	16°♎04'25	
conjunction	2965 Oct 11 11:52	18°♎53'14	1°03'25
minimum elong	2965 Oct 11 11:52	18°♎53'14	1°03'25
max. Earth dist.	2965 Oct 10 14:33	18°♎41'43	6.45706 AU
morning rise	2965 Oct 24 10:30	21°♎40'40	
	2965 Dec 04 10:36	0°♏	
retrograde	2966 Feb 21 13:04	8°♏23'55	
opposition	2966 Apr 23 04:43	3°♏30'31	1°29'32
min. Earth dist.	2966 Apr 24 03:10	3°♏23'18	4.46005 AU
	2966 May 23 13:13	30°℞♎	
direct	2966 Jun 24 20:39	28°♎28'25	
	2966 Jul 27 10:09	0°♏	
	2966 Oct 24 16:53	15°♏	
evening set	2966 Oct 29 02:34	15°♏56'50	
max. Earth dist.	2966 Nov 09 03:50	18°♏20'48	6.44238 AU
conjunction	2966 Nov 10 22:24	18°♏43'59	0°55'54
minimum elong	2966 Nov 10 22:25	18°♏44'00	0°55'54
morning rise	2966 Nov 23 15:55	21°♏30'04	
	2967 Jan 04 04:43	0°♐	
retrograde	2967 Mar 24 08:31	8°♐23'57	
opposition	2967 May 24 04:56	3°♐31'54	1°07'22
min. Earth dist.	2967 May 25 15:30	3°♐20'52	4.40815 AU
	2967 Jun 24 01:21	30°℞♏	
direct	2967 Jul 25 21:38	28°♏31'08	
	2967 Aug 26 18:28	0°♐	
evening set	2967 Nov 28 16:23	16°♐14'18	
max. Earth dist.	2967 Dec 09 06:40	18°♐35'21	6.35676 AU
conjunction	2967 Dec 11 09:18	19°♐03'33	0°33'01
minimum elong	2967 Dec 11 09:20	19°♐03'34	0°33'01
morning rise	2967 Dec 24 00:30	21°♐52'14	
	2968 Jan 31 13:47	0°♑	
retrograde	2968 Apr 24 17:27	9°♑24'45	
opposition	2968 Jun 24 16:17	4°♑32'26	0°25'25
min. Earth dist.	2968 Jun 26 04:04	4°♑21'01	4.29335 AU
	2968 Aug 08 19:06	30°℞♐	
direct	2968 Aug 25 15:16	29°♐33'47	
	2968 Sep 11 13:36	0°♑	
evening set	2968 Dec 29 02:37	17°♑47'32	
desc. node	2969 Jan 07 11:51	19°♑56'25	
max. Earth dist.	2969 Jan 08 21:33	20°♑15'48	6.22181 AU
conjunction	2969 Jan 10 19:06	20°♑41'59	-0°00'19
minimum elong	2969 Jan 10 19:07	20°♑41'59	0°00'18
behind sun begin	2969 Jan 10 11:10	20°♑37'27	
behind sun end	2969 Jan 11 03:03	20°♑46'32	
morning rise	2969 Jan 23 11:22	23°♑36'36	
	2969 Feb 21 07:11	0°♒	
retrograde	2969 May 29 11:36	12°♒10'51	
opposition	2969 Jul 29 05:00	7°♒16'44	-0°27'05
min. Earth dist.	2969 Jul 30 08:21	7°♒07'55	4.14667 AU
direct	2969 Sep 27 23:15	2°♒20'30	
	2970 Jan 03 21:03	15°♒	
evening set	2970 Jan 31 05:34	21°♒14'29	
max. Earth dist.	2970 Feb 11 22:38	24°♒00'40	6.07612 AU
conjunction	2970 Feb 13 00:43	24°♒16'07	-0°35'02
minimum elong	2970 Feb 13 00:41	24°♒16'06	0°35'02
morning rise	2970 Feb 25 21:05	27°♒18'41	
	2970 Mar 09 09:10	0°♓	
retrograde	2970 Jul 05 10:27	17°♓02'50	
opposition	2970 Sep 03 19:09	12°♓05'36	-1°13'42
min. Earth dist.	2970 Sep 04 02:15	12°♓03'16	4.01478 AU
direct	2970 Nov 02 01:21	7°♓11'25	
evening set	2971 Mar 07 11:46	26°♓42'18	
conjunction	2971 Mar 20 12:30	29°♓51'09	-0°58'37
minimum elong	2971 Mar 20 12:28	29°♓51'08	0°58'36
max. Earth dist.	2971 Mar 20 17:25	29°♓54'07	5.97006 AU
	2971 Mar 21 03:08	0°♈	
morning rise	2971 Apr 02 15:54	3°♈01'32	
retrograde	2971 Aug 12 17:32	23°♈36'29	
opposition	2971 Oct 11 15:28	18°♈35'21	-1°34'05
min. Earth dist.	2971 Oct 11 00:00	18°♈40'32	3.94693 AU
direct	2971 Dec 08 19:14	13°♈41'32	
	2972 Mar 28 21:25	0°♉	
evening set	2972 Apr 12 12:56	3°♉29'02	
conjunction	2972 Apr 25 21:50	6°♉42'43	-0°59'56
minimum elong	2972 Apr 25 21:51	6°♉42'44	0°59'56
max. Earth dist.	2972 Apr 27 12:06	7°♉05'52	5.94665 AU
morning rise	2972 May 09 09:37	9°♉57'58	
	2972 May 30 19:25	15°♉	
	2972 Aug 30 09:20	0°♊	
retrograde	2972 Sep 18 15:29	0°♊36'20	
	2972 Oct 07 16:34	30°℞♉	
min. Earth dist.	2972 Nov 15 21:40	25°♉42'51	3.97189 AU
opposition	2972 Nov 17 04:59	25°♉32'13	-1°16'48
direct	2973 Jan 14 02:11	20°♉36'42	
	2973 Apr 04 10:34	0°♊	
evening set	2973 May 20 05:43	10°♊11'34	
conjunction	2973 Jun 02 21:28	13°♊25'13	-0°37'39
minimum elong	2973 Jun 02 21:31	13°♊25'15	0°37'39
max. Earth dist.	2973 Jun 05 04:24	13°♊57'42	6.01691 AU
morning rise	2973 Jun 16 15:37	16°♊39'50	
	2973 Aug 18 14:07	0°♋	
retrograde	2973 Oct 24 12:25	6°♋31'50	
min. Earth dist.	2973 Dec 21 14:00	1°♋39'14	4.07926 AU
opposition	2973 Dec 23 01:42	1°♋27'04	-0°30'26
	2974 Jan 02 21:32	30°℞♊	
direct	2974 Feb 19 13:29	26°♊28'36	
	2974 Apr 08 02:21	0°♋	
evening set	2974 Jun 26 02:39	15°♋28'46	
conjunction	2974 Jul 09 20:35	18°♋37'13	-0°02'07
minimum elong	2974 Jul 09 20:37	18°♋37'14	0°02'08
behind sun begin	2974 Jul 09 12:14	18°♋32'27	
behind sun end	2974 Jul 10 05:00	18°♋42'00	
max. Earth dist.	2974 Jul 11 23:21	19°♋06'15	6.15172 AU
morning rise	2974 Jul 23 14:58	21°♋45'35	
asc. node	2974 Aug 01 02:03	23°♋39'53	

	2974 Aug 30 16:59	0°♌	
retrograde	2974 Nov 27 00:28	10°♌27'37	
opposition	2975 Jan 25 16:50	5°♌24'51	0°23'46
min. Earth dist.	2975 Jan 24 14:35	5°♌33'42	4.22678 AU
direct	2975 Mar 26 10:50	0°♌23'49	
	2975 Jul 14 00:46	15°♌	
evening set	2975 Jul 31 04:09	18°♌43'16	
conjunction	2975 Aug 13 18:35	21°♌43'45	0°32'37
minimum elong	2975 Aug 13 18:33	21°♌43'44	0°32'37
max. Earth dist.	2975 Aug 15 00:19	22°♌00'13	6.29975 AU
morning rise	2975 Aug 27 07:39	24°♌43'18	
	2975 Sep 20 23:05	0°♍	
retrograde	2975 Dec 28 08:31	12°♍21'07	
opposition	2976 Feb 26 09:28	7°♍21'50	1°07'05
min. Earth dist.	2976 Feb 25 22:40	7°♍25'25	4.36303 AU
direct	2976 Apr 27 10:58	2°♍19'21	
evening set	2976 Sep 01 05:19	20°♍06'02	
conjunction	2976 Sep 14 12:52	22°♍58'59	0°56'03
minimum elong	2976 Sep 14 12:51	22°♍58'58	0°56'03
max. Earth dist.	2976 Sep 14 13:52	22°♍59'31	6.41374 AU
morning rise	2976 Sep 27 17:57	25°♍50'36	
	2976 Oct 17 09:53	0°♎	
retrograde	2977 Jan 26 14:26	12°♎46'28	
opposition	2977 Mar 27 23:03	7°♎50'47	1°29'31
min. Earth dist.	2977 Mar 28 07:39	7°♎47'59	4.44805 AU
direct	2977 May 29 03:41	2°♎48'05	
evening set	2977 Oct 02 15:36	20°♎16'51	
conjunction	2977 Oct 15 16:06	23°♎05'02	1°03'19
minimum elong	2977 Oct 15 16:06	23°♎05'02	1°03'19
max. Earth dist.	2977 Oct 14 13:51	22°♎50'52	6.46301 AU
morning rise	2977 Oct 28 13:57	25°♎51'55	
	2977 Nov 17 05:18	0°♏	
retrograde	2978 Feb 25 15:44	12°♏33'56	
opposition	2978 Apr 27 08:08	7°♏40'46	1°27'47
min. Earth dist.	2978 Apr 28 09:15	7°♏32'42	4.45994 AU
direct	2978 Jun 29 01:43	2°♏38'43	
	2978 Oct 08 21:02	15°♏	
evening set	2978 Nov 02 05:10	20°♏07'25	
max. Earth dist.	2978 Nov 13 04:40	22°♏30'39	6.43606 AU
conjunction	2978 Nov 15 00:36	22°♏54'37	0°53'35
minimum elong	2978 Nov 15 00:37	22°♏54'37	0°53'35
morning rise	2978 Nov 27 17:27	25°♏40'45	
	2978 Dec 18 00:42	0°♐	
retrograde	2979 Mar 28 13:30	12°♐37'59	
opposition	2979 May 28 11:26	7°♐45'59	1°02'40
min. Earth dist.	2979 May 29 22:52	7°♐34'42	4.39584 AU
direct	2979 Jul 30 02:11	2°♐45'27	
evening set	2979 Dec 02 20:28	20°♐32'06	
max. Earth dist.	2979 Dec 13 08:48	22°♐52'43	6.33921 AU
conjunction	2979 Dec 15 13:03	23°♐21'57	0°28'57
minimum elong	2979 Dec 15 13:04	23°♐21'57	0°28'57
morning rise	2979 Dec 28 04:20	26°♐11'20	
	2980 Jan 14 13:43	0°♑	
retrograde	2980 Apr 29 08:08	13°♑51'47	
opposition	2980 Jun 29 05:21	8°♑59'19	0°18'38
min. Earth dist.	2980 Jun 30 18:01	8°♑47'36	4.27138 AU
direct	2980 Aug 30 02:03	4°♑00'54	
desc. node	2980 Nov 18 22:06	12°♑47'45	
evening set	2981 Jan 02 11:56	22°♑21'03	
max. Earth dist.	2981 Jan 13 08:23	24°♑50'59	6.19724 AU
conjunction	2981 Jan 15 04:48	25°♑16'39	-0°05'15
minimum elong	2981 Jan 15 04:47	25°♑16'38	0°05'14
behind sun begin	2981 Jan 14 21:03	25°♑12'11	
behind sun end	2981 Jan 15 12:32	25°♑21'05	
morning rise	2981 Jan 27 21:27	28°♑12'27	
	2981 Feb 04 17:40	0°♒	
	2981 Apr 28 12:26	15°♒	
retrograde	2981 Jun 03 09:47	16°♒57'53	
	2981 Jul 09 13:41	15°℞♒	
opposition	2981 Aug 03 02:21	12°♒03'26	-0°34'14
min. Earth dist.	2981 Aug 04 03:14	11°♒55'24	4.12148 AU
direct	2981 Oct 02 14:21	7°♒07'32	
	2981 Dec 15 21:46	15°♒	
evening set	2982 Feb 04 23:20	26°♒09'15	
conjunction	2982 Feb 17 19:06	29°♒12'12	-0°39'12
minimum elong	2982 Feb 17 19:04	29°♒12'11	0°39'13
max. Earth dist.	2982 Feb 16 20:26	28°♒58'41	6.05248 AU
	2982 Feb 21 03:17	0°♓	
morning rise	2982 Mar 02 16:26	2°♓16'12	
retrograde	2982 Jul 10 18:44	22°♓11'32	
opposition	2982 Sep 09 00:35	17°♓13'45	-1°18'30
min. Earth dist.	2982 Sep 09 04:44	17°♓12'23	3.99503 AU
direct	2982 Nov 07 02:09	12°♓19'42	
	2983 Mar 04 11:39	0°♈	
evening set	2983 Mar 12 14:13	1°♈56'33	
conjunction	2983 Mar 25 16:13	5°♈06'34	-1°00'14
minimum elong	2983 Mar 25 16:12	5°♈06'34	1°00'15
max. Earth dist.	2983 Mar 26 03:36	5°♈13'28	5.95623 AU
morning rise	2983 Apr 07 20:46	8°♈18'08	
retrograde	2983 Aug 18 04:46	28°♈58'39	
min. Earth dist.	2983 Oct 16 05:44	24°♈03'12	3.94090 AU
opposition	2983 Oct 17 00:14	23°♈56'59	-1°33'53
direct	2983 Dec 14 01:01	19°♈03'06	
	2984 Mar 10 08:06	0°♉	
evening set	2984 Apr 17 21:17	8°♉51'45	
conjunction	2984 May 01 07:12	12°♉05'52	-0°58'01
minimum elong	2984 May 01 07:14	12°♉05'53	0°58'01
max. Earth dist.	2984 May 03 00:41	12°♉30'54	5.94875 AU
	2984 May 13 08:22	15°♉	
morning rise	2984 May 14 20:20	15°♉21'33	
	2984 Jul 22 11:03	0°♊	
retrograde	2984 Sep 23 20:16	5°♊56'31	
min. Earth dist.	2984 Nov 21 00:18	1°♊03'35	3.98184 AU
opposition	2984 Nov 22 10:21	0°♊52'00	-1°11'28
	2984 Nov 28 20:03	30°℞♉	
direct	2985 Jan 19 07:48	25°♉56'02	
	2985 Mar 10 21:26	0°♊	
evening set	2985 May 25 13:28	15°♊26'57	
conjunction	2985 Jun 08 05:58	18°♊40'07	-0°33'01
minimum elong	2985 Jun 08 06:00	18°♊40'09	0°33'01
max. Earth dist.	2985 Jun 10 14:25	19°♊13'22	6.03361 AU
morning rise	2985 Jun 22 00:26	21°♊54'04	
	2985 Jul 28 05:14	0°♋	
retrograde	2985 Oct 29 10:36	11°♋36'19	
opposition	2985 Dec 27 23:43	6°♋31'34	-0°22'38
min. Earth dist.	2985 Dec 26 13:13	6°♋43'20	4.10026 AU
direct	2986 Feb 24 16:07	1°♋32'39	
asc. node	2986 Jun 10 01:37	15°♋44'20	
evening set	2986 Jul 01 04:33	20°♋26'08	
conjunction	2986 Jul 14 22:18	23°♋33'27	0°03'17
minimum elong	2986 Jul 14 22:19	23°♋33'27	0°03'17
behind sun begin	2986 Jul 14 13:59	23°♋28'45	
behind sun end	2986 Jul 15 06:38	23°♋38'10	

max. Earth dist.	2986 Jul 17 00:03	24°♋01'44	6.17494 AU
morning rise	2986 Jul 28 16:11	26°♋40'31	
	2986 Aug 12 14:41	0°♌	
	2986 Nov 20 13:57	15°♌	
retrograde	2986 Dec 01 11:48	15°♌11'46	
	2986 Dec 12 09:29	15°℞♌	
min. Earth dist.	2987 Jan 29 05:18	10°♌17'54	4.24991 AU
opposition	2987 Jan 30 06:37	10°♌09'23	0°30'53
direct	2987 Mar 31 04:37	5°♌08'03	
	2987 Jun 25 23:08	15°♌	
evening set	2987 Aug 04 22:28	23°♌21'19	
conjunction	2987 Aug 18 11:56	26°♌20'30	0°36'46
minimum elong	2987 Aug 18 11:54	26°♌20'29	0°36'45
max. Earth dist.	2987 Aug 19 12:58	26°♌34'18	6.32091 AU
morning rise	2987 Aug 31 23:58	29°♌18'42	
	2987 Sep 04 03:40	0°♍	
retrograde	2988 Jan 01 16:09	16°♍48'23	
opposition	2988 Mar 01 17:31	11°♍49'38	1°11'37
min. Earth dist.	2988 Mar 01 10:16	11°♍52'02	4.38067 AU
direct	2988 May 02 00:47	6°♍47'03	
evening set	2988 Sep 05 16:40	24°♍29'34	
conjunction	2988 Sep 18 23:15	27°♍21'36	0°58'05
minimum elong	2988 Sep 18 23:14	27°♍21'35	0°58'05
max. Earth dist.	2988 Sep 18 20:12	27°♍19'57	6.42647 AU
	2988 Oct 01 04:23	0°♎	
morning rise	2988 Oct 02 03:13	0°♎12'17	
retrograde	2989 Jan 30 17:44	17°♎04'06	
opposition	2989 Apr 01 04:33	12°♎08'49	1°30'42
min. Earth dist.	2989 Apr 01 15:13	12°♎05'21	4.45538 AU
direct	2989 Jun 02 11:12	7°♎06'09	
evening set	2989 Oct 06 22:28	24°♎33'32	
conjunction	2989 Oct 19 22:10	27°♎21'21	1°02'57
minimum elong	2989 Oct 19 22:11	27°♎21'21	1°02'56
max. Earth dist.	2989 Oct 18 17:19	27°♎05'46	6.46443 AU
morning rise	2989 Nov 01 19:05	0°♏07'51	
	2989 Nov 01 04:27	0°♏	
	2990 Jan 26 01:02	15°♏	
retrograde	2990 Mar 01 21:12	16°♏50'13	
	2990 Apr 05 20:30	15°℞♏	
opposition	2990 May 01 14:46	11°♏57'21	1°25'34
min. Earth dist.	2990 May 02 18:11	11°♏48'35	4.45539 AU
direct	2990 Jul 03 09:22	6°♏55'32	
	2990 Sep 20 19:02	15°♏	
evening set	2990 Nov 06 11:05	24°♏25'45	
max. Earth dist.	2990 Nov 17 06:27	26°♏47'11	6.42575 AU
conjunction	2990 Nov 19 05:52	27°♏13'07	0°50'55
minimum elong	2990 Nov 19 05:53	27°♏13'08	0°50'55
morning rise	2990 Dec 01 22:29	29°♏59'33	
	2990 Dec 01 23:19	0°♐	
retrograde	2991 Apr 02 00:53	17°♐01'32	
opposition	2991 Jun 01 22:27	12°♐09'34	0°57'27
min. Earth dist.	2991 Jun 03 11:06	11°♐57'53	4.38034 AU
direct	2991 Aug 03 11:57	7°♐09'16	
evening set	2991 Dec 07 04:42	25°♐00'19	
max. Earth dist.	2991 Dec 17 18:06	27°♐22'07	6.31981 AU
conjunction	2991 Dec 19 21:22	27°♐50'55	0°24'33
minimum elong	2991 Dec 19 21:23	27°♐50'56	0°24'32
	2991 Dec 29 11:08	0°♑	
morning rise	2992 Jan 01 12:33	0°♑41'06	
retrograde	2992 May 04 01:55	18°♑30'09	
opposition	2992 Jul 03 23:26	13°♑37'34	0°11'23
min. Earth dist.	2992 Jul 05 10:55	13°♑26'14	4.24934 AU
direct	2992 Sep 03 15:29	8°♑39'35	
desc. node	2992 Sep 28 08:47	9°♑35'51	
evening set	2993 Jan 07 01:58	27°♑06'01	
max. Earth dist.	2993 Jan 18 00:11	29°♑37'48	6.17443 AU
conjunction	2993 Jan 19 18:57	0°♒02'39	-0°10'18
minimum elong	2993 Jan 19 18:57	0°♒02'39	0°10'19
behind sun begin	2993 Jan 19 12:34	29°♑58'57	
behind sun end	2993 Jan 20 01:20	0°♒06'20	
	2993 Jan 19 14:22	0°♒	
morning rise	2993 Feb 01 12:15	2°♒59'40	
	2993 Mar 30 09:18	15°♒	
retrograde	2993 Jun 08 14:11	21°♒55'56	
opposition	2993 Aug 08 04:45	17°♒01'07	-0°41'30
min. Earth dist.	2993 Aug 09 03:10	16°♒53'51	4.09975 AU
	2993 Aug 24 06:09	15°℞♒	
direct	2993 Oct 07 12:07	12°♒05'35	
	2993 Nov 19 18:26	15°♒	
	2994 Feb 04 16:33	0°♓	
evening set	2994 Feb 09 20:58	1°♓13'34	
conjunction	2994 Feb 22 17:34	4°♓17'40	-0°43'16
minimum elong	2994 Feb 22 17:32	4°♓17'39	0°43'16
max. Earth dist.	2994 Feb 22 00:28	4°♓07'26	6.03416 AU
morning rise	2994 Mar 07 15:40	7°♓22'51	
retrograde	2994 Jul 16 04:41	27°♓27'00	
opposition	2994 Sep 14 08:43	22°♓28'44	-1°22'48
min. Earth dist.	2994 Sep 14 09:27	22°♓28'30	3.98244 AU
direct	2994 Nov 12 05:25	17°♓34'57	
	2995 Feb 14 17:00	0°♈	
evening set	2995 Mar 17 18:58	7°♈15'00	
conjunction	2995 Mar 30 21:50	10°♈25'44	-1°01'27
minimum elong	2995 Mar 30 21:49	10°♈25'44	1°01'27
max. Earth dist.	2995 Mar 31 13:12	10°♈35'04	5.95049 AU
morning rise	2995 Apr 13 03:42	13°♈38'08	
	2995 Jun 30 23:08	0°♉	
retrograde	2995 Aug 23 12:52	4°♉20'31	
	2995 Oct 17 04:18	30°℞♈	
min. Earth dist.	2995 Oct 21 09:59	29°♈25'53	3.94298 AU
opposition	2995 Oct 22 08:23	29°♈18'20	-1°32'55
direct	2995 Dec 19 07:22	24°♈24'16	
	2996 Feb 17 02:00	0°♉	
evening set	2996 Apr 23 04:25	14°♉11'09	
	2996 Apr 26 13:56	15°♉	
conjunction	2996 May 06 15:29	17°♉25'19	-0°55'41
minimum elong	2996 May 06 15:31	17°♉25'20	0°55'41
max. Earth dist.	2996 May 08 13:12	17°♉52'51	5.95836 AU
morning rise	2996 May 20 05:26	20°♉40'56	
	2996 Jun 30 06:23	0°♊	
retrograde	2996 Sep 28 23:17	11°♊09'42	
min. Earth dist.	2996 Nov 26 02:40	6°♊16'36	3.99767 AU
opposition	2996 Nov 27 12:52	6°♊04'57	-1°05'43
direct	2997 Jan 24 12:54	1°♊08'35	
evening set	2997 May 30 17:44	20°♊33'46	
conjunction	2997 Jun 13 10:41	23°♊46'12	-0°28'18
minimum elong	2997 Jun 13 10:43	23°♊46'13	0°28'18
max. Earth dist.	2997 Jun 15 20:05	24°♊19'49	6.05400 AU
morning rise	2997 Jun 27 05:22	26°♊59'16	
	2997 Jul 10 08:13	0°♋	
retrograde	2997 Nov 03 02:42	16°♋30'51	
min. Earth dist.	2997 Dec 31 06:55	11°♋38'03	4.12301 AU
opposition	2998 Jan 01 17:21	11°♋26'20	-0°15'00
direct	2998 Mar 01 12:58	6°♋27'03	
asc. node	2998 Apr 20 11:55	10°♋16'01	

evening set	2998 Jul	06	02:27	25°♋13'53	
conjunction	2998 Jul	19	19:42	28°♋19'59	0°08'20
minimum elong	2998 Jul	19	19:42	28°♋19'59	0°08'21
behind sun begin	2998 Jul	19	12:24	28°♋15'52	
behind sun end	2998 Jul	20	03:00	28°♋24'05	
max. Earth dist.	2998 Jul	21	17:02	28°♋45'38	6.19799 AU
	2998 Jul	27	04:36	0°♌	
morning rise	2998 Aug	02	13:03	1°♌25'46	
	2998 Oct	10	00:03	15°♌	
retrograde	2998 Dec	05	21:32	19°♌46'59	
	2999 Feb	01	20:13	15℞♌	
opposition	2999 Feb	03	16:39	14°♌45'05	0°37'32
min. Earth dist.	2999 Feb	02	18:36	14°♌52'29	4.27120 AU
direct	2999 Apr	04	20:36	9°♌43'27	
	2999 Jun	04	19:19	15°♌	
evening set	2999 Aug	09	12:55	27°♌51'28	
	2999 Aug	19	07:27	0°♍	
conjunction	2999 Aug	23	01:40	0°♍49'35	0°40'34
minimum elong	2999 Aug	23	01:38	0°♍49'34	0°40'34
max. Earth dist.	2999 Aug	23	23:36	1°♍01'38	6.33880 AU
morning rise	2999 Sep	05	12:32	3°♍46'35	
retrograde	3000 Jan	05	19:26	21°♍09'38	
opposition	3000 Mar	06	22:52	16°♍11'26	1°15'37
min. Earth dist.	3000 Mar	06	17:32	16°♍13'11	4.39416 AU
direct	3000 May	07	08:53	11°♍08'46	
evening set	3000 Sep	11	01:36	28°♍48'35	
	3000 Sep	16	14:19	0°♎	
conjunction	3000 Sep	24	07:05	1°♎39'53	0°59'45
minimum elong	3000 Sep	24	07:04	1°♎39'52	0°59'45
max. Earth dist.	3000 Sep	23	22:58	1°♎35'29	6.43455 AU
morning rise	3000 Oct	07	10:05	4°♎29'50	
retrograde	3001 Feb	04	22:23	21°♎19'17	
opposition	3001 Apr	06	09:01	16°♎24'27	1°31'26
min. Earth dist.	3001 Apr	06	23:16	16°♎19'50	4.45783 AU
direct	3001 Jun	07	18:56	11°♎21'49	
evening set	3001 Oct	12	04:33	28°♎49'19	
	3001 Oct	17	15:59	0°♏	
max. Earth dist.	3001 Oct	23	19:06	1°♏19'26	6.46098 AU
conjunction	3001 Oct	25	03:32	1°♏36'58	1°02'14
minimum elong	3001 Oct	25	03:32	1°♏36'58	1°02'14
morning rise	3001 Nov	06	23:45	4°♏23'21	
	3001 Dec	30	21:34	15°♏	
retrograde	3002 Mar	07	03:02	21°♏07'32	
opposition	3002 May	06	21:33	16°♏14'52	1°22'57
min. Earth dist.	3002 May	08	02:12	16°♏05'41	4.44657 AU
	3002 May	16	17:58	15℞♏	
direct	3002 Jul	08	15:26	11°♏13'10	
	3002 Aug	29	23:07	15°♏	
evening set	3002 Nov	11	17:21	28°♏46'09	
	3002 Nov	17	08:40	0°♐	
max. Earth dist.	3002 Nov	22	12:26	1°♐07'52	6.41228 AU
conjunction	3002 Nov	24	11:48	1°♐33'53	0°47'59
minimum elong	3002 Nov	24	11:49	1°♐33'54	0°47'58
morning rise	3002 Dec	07	03:59	4°♐20'42	
retrograde	3003 Apr	07	12:57	21°♐28'21	
opposition	3003 Jun	07	10:48	16°♐36'25	0°51'52
min. Earth dist.	3003 Jun	08	24:00	16°♐24'35	4.36304 AU
direct	3003 Aug	08	22:18	11°♐36'26	
evening set	3003 Dec	12	14:11	29°♐32'08	
	3003 Dec	14	15:56	0°♑	
max. Earth dist.	3003 Dec	23	02:50	1°♑54'14	6.30002 AU
conjunction	3003 Dec	25	06:36	2°♑23'28	0°19'57
minimum elong	3003 Dec	25	06:37	2°♑23'28	0°19'58
morning rise	3004 Jan	06	22:05	5°♑14'31	
retrograde	3004 May	09	22:27	23°♑12'14	
opposition	3004 Jul	09	19:04	18°♑19'21	0°04'00
min. Earth dist.	3004 Jul	11	04:57	18°♑08'30	4.22837 AU
desc. node	3004 Aug	08	21:21	14°♑51'02	
direct	3004 Sep	09	07:10	13°♑21'39	
	3005 Jan	04	11:01	0°♒	
evening set	3005 Jan	12	17:00	1°♒53'42	
max. Earth dist.	3005 Jan	23	19:52	4°♒28'49	6.15418 AU
conjunction	3005 Jan	25	10:27	4°♒51'19	-0°15'20
minimum elong	3005 Jan	25	10:26	4°♒51'18	0°15'21
behind sun begin	3005 Jan	25	07:41	4°♒49'42	
behind sun end	3005 Jan	25	13:11	4°♒52'54	
morning rise	3005 Feb	07	04:03	7°♒49'21	
	3005 Mar	11	05:26	15°♒	
retrograde	3005 Jun	14	18:19	26°♒55'01	
opposition	3005 Aug	14	07:17	21°♒59'47	-0°48'29
min. Earth dist.	3005 Aug	15	03:12	21°♒53'19	4.08199 AU
direct	3005 Oct	13	09:38	17°♒04'33	
	3006 Jan	19	14:06	0°♓	
evening set	3006 Feb	15	18:46	6°♓17'11	
conjunction	3006 Feb	28	15:53	9°♓22'09	-0°47'00
minimum elong	3006 Feb	28	15:51	9°♓22'08	0°46'59
max. Earth dist.	3006 Feb	28	01:56	9°♓13'47	6.02024 AU
morning rise	3006 Mar	13	15:02	12°♓28'22	
	3006 Jun	10	22:40	0°♈	
retrograde	3006 Jul	22	11:06	2°♈39'15	
	3006 Sep	02	07:29	30℞♓	
opposition	3006 Sep	20	15:14	27°♓40'22	-1°26'24
min. Earth dist.	3006 Sep	20	11:54	27°♓41'29	3.97388 AU
direct	3006 Nov	18	07:53	22°♓46'38	
	3007 Jan	26	12:07	0°♈	
evening set	3007 Mar	23	21:58	12°♈28'25	
conjunction	3007 Apr	06	01:59	15°♈39'46	-1°02'09
minimum elong	3007 Apr	06	01:59	15°♈39'46	1°02'09
max. Earth dist.	3007 Apr	06	23:08	15°♈52'36	5.94803 AU
morning rise	3007 Apr	19	08:49	18°♈52'44	
	3007 Jun	07	17:15	0°♉	
retrograde	3007 Aug	29	20:19	9°♉35'36	
opposition	3007 Oct	28	13:53	4°♉32'57	-1°31'12
min. Earth dist.	3007 Oct	27	14:09	4°♉40'57	3.94695 AU
	3007 Dec	11	03:58	30℞♈	
direct	3007 Dec	25	12:47	29°♈38'39	
	3008 Jan	08	20:25	0°♉	
	3008 Apr	10	17:29	15°♉	
evening set	3008 Apr	29	09:25	19°♉23'24	
conjunction	3008 May	12	21:28	22°♉37'34	-0°52'57
minimum elong	3008 May	12	21:30	22°♉37'36	0°52'57
max. Earth dist.	3008 May	14	22:02	23°♉06'42	5.96824 AU
morning rise	3008 May	26	12:23	25°♉53'07	
	3008 Jun	13	01:56	0°♊	
retrograde	3008 Oct	04	22:30	16°♊15'29	
min. Earth dist.	3008 Dec	02	00:50	11°♊22'44	4.01243 AU
opposition	3008 Dec	03	12:16	11°♊10'40	-0°59'36
direct	3009 Jan	30	12:51	6°♊13'56	
evening set	3009 Jun	05	20:16	25°♊34'20	
conjunction	3009 Jun	19	13:31	28°♊46'06	-0°23'27
minimum elong	3009 Jun	19	13:33	28°♊46'07	0°23'28
max. Earth dist.	3009 Jun	21	20:44	29°♊18'17	6.07218 AU
	3009 Jun	24	20:21	0°♋	

morning rise	3009 Jul 03 08:29	1°♋58'24	
retrograde	3009 Nov 08 18:37	21°♋20'33	
min. Earth dist.	3010 Jan 06 00:53	16°♋27'22	4.14255 AU
opposition	3010 Jan 07 09:28	16°♋16'18	-0°07'23
asc. node	3010 Mar 01 23:33	11°♋19'34	
direct	3010 Mar 07 09:50	11°♋16'36	
evening set	3010 Jul 11 23:10	29°♋58'10	
	3010 Jul 12 02:26	0°♌	
conjunction	3010 Jul 25 16:16	3°♌03'19	0°13'18
minimum elong	3010 Jul 25 16:15	3°♌03'18	0°13'18
behind sun begin	3010 Jul 25 11:38	3°♌00'43	
behind sun end	3010 Jul 25 20:52	3°♌05'53	
max. Earth dist.	3010 Jul 27 11:57	3°♌27'56	6.21742 AU
morning rise	3010 Aug 08 08:50	6°♌07'56	
	3010 Sep 19 06:59	15°♌	
retrograde	3010 Dec 11 06:38	24°♌20'38	
min. Earth dist.	3011 Feb 08 06:08	19°♌26'06	4.28885 AU
opposition	3011 Feb 09 02:31	19°♌19'16	0°43'56
	3011 Mar 20 08:49	15°℞♌	
direct	3011 Apr 10 09:54	14°♌17'29	
	3011 May 01 17:04	15°♌	
	3011 Aug 04 05:37	0°♍	
evening set	3011 Aug 15 03:49	2°♍21'33	
conjunction	3011 Aug 28 15:32	5°♍18'41	0°44'08
minimum elong	3011 Aug 28 15:29	5°♍18'39	0°44'08
max. Earth dist.	3011 Aug 29 07:49	5°♍27'37	6.35326 AU
morning rise	3011 Sep 11 01:32	8°♍14'42	
retrograde	3012 Jan 11 02:12	25°♍32'21	
opposition	3012 Mar 11 05:18	20°♍34'41	1°19'15
min. Earth dist.	3012 Mar 11 03:29	20°♍35'17	4.40464 AU
direct	3012 May 11 19:32	15°♍31'58	
	3012 Aug 31 12:40	0°♎	
evening set	3012 Sep 15 11:33	3°♎10'00	
conjunction	3012 Sep 28 16:17	6°♎00'44	1°01'07
minimum elong	3012 Sep 28 16:16	6°♎00'43	1°01'07
max. Earth dist.	3012 Sep 28 05:37	5°♎54'58	6.44034 AU
morning rise	3012 Oct 11 18:09	8°♎50'04	
retrograde	3013 Feb 09 02:41	25°♎37'52	
opposition	3013 Apr 10 15:03	20°♎43'28	1°31'41
min. Earth dist.	3013 Apr 11 06:32	20°♎38'27	4.45893 AU
direct	3013 Jun 12 01:26	15°♎41'01	
	3013 Oct 01 15:12	0°♏	
evening set	3013 Oct 16 12:00	3°♏08'54	
max. Earth dist.	3013 Oct 27 23:20	5°♏37'32	6.45746 AU
conjunction	3013 Oct 29 10:09	5°♏56'23	1°01'11
minimum elong	3013 Oct 29 10:09	5°♏56'24	1°01'11
morning rise	3013 Nov 11 05:43	8°♏42'40	
	3013 Dec 11 11:19	15°♏	
retrograde	3014 Mar 11 12:04	25°♏28'49	
opposition	3014 May 11 06:25	20°♏36'26	1°19'50
min. Earth dist.	3014 May 12 13:05	20°♏26'38	4.43883 AU
direct	3014 Jul 13 01:02	15°♏35'02	
	3014 Nov 01 07:19	0°♐	
evening set	3014 Nov 16 00:44	3°♐10'10	
max. Earth dist.	3014 Nov 26 17:51	5°♐31'14	6.40106 AU
conjunction	3014 Nov 28 18:44	5°♐58'10	0°44'46
minimum elong	3014 Nov 28 18:46	5°♐58'11	0°44'45
morning rise	3014 Dec 11 10:41	8°♐45'20	
retrograde	3015 Apr 12 01:44	25°♐57'58	
opposition	3015 Jun 12 00:14	21°♐06'01	0°45'58
min. Earth dist.	3015 Jun 13 12:28	20°♐54'28	4.34917 AU
direct	3015 Aug 13 08:49	16°♐06'22	
	3015 Nov 28 10:10	0°♑	
evening set	3015 Dec 16 23:53	4°♑05'28	
max. Earth dist.	3015 Dec 27 15:17	6°♑29'35	6.28480 AU
conjunction	3015 Dec 29 16:19	6°♑57'22	0°15'18
minimum elong	3015 Dec 29 16:20	6°♑57'23	0°15'18
behind sun begin	3015 Dec 29 13:34	6°♑55'49	
behind sun end	3015 Dec 29 19:06	6°♑58'56	
morning rise	3016 Jan 11 07:42	9°♑49'03	
retrograde	3016 May 14 18:22	27°♑53'51	
desc. node	3016 Jun 19 14:46	25°♑58'44	
opposition	3016 Jul 14 14:20	23°♑00'47	-0°03'19
min. Earth dist.	3016 Jul 15 23:07	22°♑50'17	4.21273 AU
direct	3016 Sep 13 22:54	18°♑03'30	
	3016 Dec 18 13:57	0°♒	
evening set	3017 Jan 17 06:54	6°♒39'14	
max. Earth dist.	3017 Jan 28 11:28	9°♒15'54	6.13941 AU
conjunction	3017 Jan 30 00:27	9°♒37'32	-0°20'09
minimum elong	3017 Jan 30 00:26	9°♒37'32	0°20'09
morning rise	3017 Feb 11 18:41	12°♒36'26	
	3017 Feb 22 03:20	15°♒	
	3017 May 16 06:44	0°♓	
retrograde	3017 Jun 19 17:54	1°♓49'39	
	3017 Jul 24 09:41	30°℞♒	
opposition	3017 Aug 19 07:34	26°♒53'55	-0°54'54
min. Earth dist.	3017 Aug 19 23:55	26°♒48'36	4.06932 AU
direct	3017 Oct 18 05:17	21°♒58'57	
	3017 Dec 31 15:41	0°♓	
evening set	3018 Feb 20 13:41	11°♓14'30	
conjunction	3018 Mar 05 11:34	14°♓20'11	-0°50'13
minimum elong	3018 Mar 05 11:33	14°♓20'10	0°50'14
max. Earth dist.	3018 Mar 05 02:53	14°♓14'58	6.01086 AU
morning rise	3018 Mar 18 11:22	17°♓27'09	
	3018 May 14 19:09	0°♈	
retrograde	3018 Jul 27 15:44	7°♈42'58	
opposition	3018 Sep 25 17:47	2°♈43'36	-1°29'10
min. Earth dist.	3018 Sep 25 12:44	2°♈45'16	3.96886 AU
	3018 Oct 17 13:42	30°℞♓	
direct	3018 Nov 23 08:42	27°♓49'52	
	3018 Dec 29 15:16	0°♈	
evening set	3019 Mar 28 21:17	17°♈32'22	
conjunction	3019 Apr 11 02:15	20°♈44'11	-1°02'20
minimum elong	3019 Apr 11 02:15	20°♈44'11	1°02'20
max. Earth dist.	3019 Apr 12 02:25	20°♈58'50	5.94771 AU
morning rise	3019 Apr 24 10:15	23°♈57'39	
	3019 May 20 04:01	0°♉	
retrograde	3019 Sep 03 20:48	14°♉39'59	
opposition	3019 Nov 02 14:13	9°♉36'57	-1°28'51
min. Earth dist.	3019 Nov 01 12:10	9°♉45'45	3.95167 AU
direct	3019 Dec 30 11:07	4°♉42'24	
	3020 Mar 23 21:21	15°♉	
evening set	3020 May 04 10:10	24°♉25'13	
conjunction	3020 May 17 23:05	27°♉39'23	-0°49'57
minimum elong	3020 May 17 23:07	27°♉39'24	0°49'56
max. Earth dist.	3020 May 19 23:56	28°♉08'37	5.97740 AU
	3020 May 27 18:32	0°♊	
morning rise	3020 May 31 14:54	0°♊54'52	
retrograde	3020 Oct 09 17:52	21°♊11'33	
min. Earth dist.	3020 Dec 06 20:30	16°♊18'34	4.02489 AU
opposition	3020 Dec 08 07:29	16°♊06'38	-0°53'20
direct	3021 Feb 04 11:03	11°♊09'28	
	3021 Jun 08 21:31	0°♋	
evening set	3021 Jun 10 18:53	0°♋26'11	

conjunction	3021 Jun 24	12:40	3°♋37'28	-0°18'39	
minimum elong	3021 Jun 24	12:42	3°♋37'29	0°18'38	
max. Earth dist.	3021 Jun 26	20:12	4°♋09'43	6.08708 AU	
morning rise	3021 Jul 08	07:35	6°♋49'05		
retrograde	3021 Nov 13	08:25	26°♋03'18		
opposition	3022 Jan 11	22:35	20°♋59'22	-0°00'01	
min. Earth dist.	3022 Jan 10	15:13	21°♋10'00	4.15839 AU	
asc. node	3022 Jan 12	02:29	20°♋58'02		
direct	3022 Mar 12	02:04	15°♋59'21		
	3022 Jun 25	16:34	0°♌		
evening set	3022 Jul 16	17:47	4°♌37'04		
conjunction	3022 Jul 30	10:18	7°♌41'19	0°18'01	
minimum elong	3022 Jul 30	10:17	7°♌41'19	0°18'01	
max. Earth dist.	3022 Aug 01	01:43	8°♌03'27	6.23293 AU	
morning rise	3022 Aug 13	02:26	10°♌45'02		
	3022 Sep 01	12:48	15°♌		
retrograde	3022 Dec 15	14:25	28°♌50'37		
opposition	3023 Feb 13	10:48	23°♌49'40	0°49'52	
min. Earth dist.	3023 Feb 12	16:46	23°♌55'42	4.30297 AU	
direct	3023 Apr 14	22:05	18°♌47'39		
	3023 Jul 18	05:44	0°♍		
evening set	3023 Aug 19	17:09	6°♍48'43		
conjunction	3023 Sep 02	04:11	9°♍45'02	0°47'21	
minimum elong	3023 Sep 02	04:09	9°♍45'01	0°47'21	
max. Earth dist.	3023 Sep 02	18:24	9°♍52'49	6.36509 AU	
morning rise	3023 Sep 15	12:59	12°♍40'07		
retrograde	3024 Jan 15	06:44	29°♍53'05		
opposition	3024 Mar 15	11:06	24°♍55'52	1°22'20	
min. Earth dist.	3024 Mar 15	10:53	24°♍55'56	4.41353 AU	
direct	3024 May 16	03:55	19°♍53'09		
	3024 Aug 14	07:36	0°♎		
evening set	3024 Sep 19	20:37	7°♎29'24		
max. Earth dist.	3024 Oct 02	09:14	10°♎11'25	6.44548 AU	
conjunction	3024 Oct 03	00:12	10°♎19'30	1°02'06	
minimum elong	3024 Oct 03	00:11	10°♎19'30	1°02'06	
morning rise	3024 Oct 16	01:15	13°♎08'17		
retrograde	3025 Feb 13	08:22	29°♎54'24		
opposition	3025 Apr 14	20:49	25°♎00'17	1°31'24	
min. Earth dist.	3025 Apr 15	15:04	24°♎54'24	4.46009 AU	
direct	3025 Jun 16	09:50	19°♎57'52		
	3025 Sep 14	13:36	0°♏		
evening set	3025 Oct 20	18:15	7°♏25'36		
max. Earth dist.	3025 Nov 01	03:37	9°♏53'19	6.45430 AU	
conjunction	3025 Nov 02	15:49	10°♏12'57	0°59'47	
minimum elong	3025 Nov 02	15:50	10°♏12'58	0°59'47	
morning rise	3025 Nov 15	10:35	12°♏59'04		
	3025 Nov 24	20:35	15°♏		
retrograde	3026 Mar 15	17:59	29°♏46'49		
opposition	3026 May 15	14:08	24°♏54'31	1°16'17	
min. Earth dist.	3026 May 16	21:01	24°♏44'39	4.43138 AU	
direct	3026 Jul 17	07:26	19°♏53'17		
	3026 Oct 15	07:44	0°♐		
evening set	3026 Nov 20	06:49	7°♐30'17		
max. Earth dist.	3026 Nov 30	23:04	9°♐51'18	6.38959 AU	
conjunction	3026 Dec 03	00:21	10°♐18'32	0°41'17	
minimum elong	3026 Dec 03	00:23	10°♐18'33	0°41'18	
morning rise	3026 Dec 15	16:00	13°♐06'03		
	3027 Mar 31	13:57	0°♑		
retrograde	3027 Apr 16	15:05	0°♑23'52		
	3027 May 02	14:42	30°℞♐		
opposition	3027 Jun 16	12:50	25°♐31'51	0°39'48	
min. Earth dist.	3027 Jun 18	02:08	25°♐19'58	4.33395 AU	
direct	3027 Aug 17	19:56	20°♐32'28		
	3027 Nov 11	00:03	0°♑		
evening set	3027 Dec 21	08:29	8°♑35'28		
max. Earth dist.	3027 Dec 31	23:27	10°♑59'58	6.26686 AU	
conjunction	3028 Jan 03	00:51	11°♑28'04	0°10'32	
minimum elong	3028 Jan 03	00:51	11°♑28'04	0°10'32	
behind sun begin	3028 Jan 02	18:36	11°♑24'32		
behind sun end	3028 Jan 03	07:07	11°♑31'37		
morning rise	3028 Jan 15	16:31	14°♑20'34		
	3028 Apr 08	05:02	0°♒		
desc. node	3028 Apr 30	00:56	1°♒58'10		
retrograde	3028 May 19	13:08	2°♒33'45		
	3028 Jun 30	10:23	30°℞♑		
opposition	3028 Jul 19	09:12	27°♑40'22	-0°10'43	
min. Earth dist.	3028 Jul 20	15:44	27°♑30'34	4.19320 AU	
direct	3028 Sep 18	12:35	22°♑43'23		
	3028 Nov 29	10:44	0°♒		
evening set	3029 Jan 21	21:07	11°♒24'33		
max. Earth dist.	3029 Feb 02	06:03	14°♒04'24	6.11997 AU	
conjunction	3029 Feb 03	15:07	14°♒23'51	-0°24'55	
minimum elong	3029 Feb 03	15:06	14°♒23'50	0°24'54	
	3029 Feb 06	04:36	15°♒		
morning rise	3029 Feb 16	09:48	17°♒23'47		
	3029 Apr 16	17:54	0°♓		
retrograde	3029 Jun 24	21:48	6°♓46'32		
opposition	3029 Aug 24	09:02	1°♓50'24	-1°01'07	
min. Earth dist.	3029 Aug 24	23:50	1°♓45'35	4.05162 AU	
	3029 Sep 07	19:58	30°℞♒		
direct	3029 Oct 23	02:55	26°♒55'42		
	3029 Dec 06	06:52	0°♓		
evening set	3030 Feb 25	10:59	16°♓16'23		
conjunction	3030 Mar 10	09:39	19°♓23'05	-0°53'12	
minimum elong	3030 Mar 10	09:37	19°♓23'04	0°53'12	
max. Earth dist.	3030 Mar 10	04:12	19°♓19'48	5.99647 AU	
morning rise	3030 Mar 23	10:34	22°♓31'10		
	3030 Apr 24	19:27	0°♈		
retrograde	3030 Aug 01	22:17	12°♈53'52		
opposition	3030 Sep 30	23:04	7°♈54'00	-1°31'24	
min. Earth dist.	3030 Sep 30	14:14	7°♈56'57	3.95958 AU	
direct	3030 Nov 28	09:09	3°♈00'20		
evening set	3031 Apr 03	00:35	22°♈45'23		
conjunction	3031 Apr 16	06:40	25°♈57'53	-1°02'04	
minimum elong	3031 Apr 16	06:40	25°♈57'54	1°02'04	
max. Earth dist.	3031 Apr 17	10:27	26°♈14'45	5.94433 AU	
morning rise	3031 Apr 29	15:52	29°♈12'04		
	3031 May 02	23:47	0°♉		
	3031 Jul 13	21:12	15°♉		
retrograde	3031 Sep 09	02:07	19°♉54'58		
	3031 Nov 06	17:48	15°℞♉		
opposition	3031 Nov 07	18:45	14°♉51'32	-1°25'45	
min. Earth dist.	3031 Nov 06	15:02	15°♉00'56	3.95458 AU	
direct	3032 Jan 04	15:25	9°♉56'45		
	3032 Mar 01	06:20	15°♉		
evening set	3032 May 09	15:46	29°♉38'17		
	3032 May 11	04:20	0°♊		
conjunction	3032 May 23	05:49	2°♊52'32	-0°46'26	
minimum elong	3032 May 23	05:51	2°♊52'33	0°46'25	
max. Earth dist.	3032 May 25	10:26	3°♊23'55	5.98652 AU	
morning rise	3032 Jun 05	22:20	6°♊07'56		
retrograde	3032 Oct 14	18:47	26°♊18'22		
min. Earth dist.	3032 Dec 11	19:25	21°♊25'33	4.03928 AU	
opposition	3032 Dec 13	06:42	21°♊13'31	-0°46'25	

direct	3033 Feb 09 12:24	16°♊16'02	
	3033 May 22 15:14	0°♋	
evening set	3033 Jun 15 22:11	5°♋28'21	
conjunction	3033 Jun 29 16:01	8°♋38'52	-0°13'30
minimum elong	3033 Jun 29 16:02	8°♋38'52	0°13'30
behind sun begin	3033 Jun 29 11:33	8°♋36'17	
behind sun end	3033 Jun 29 20:32	8°♋41'27	
max. Earth dist.	3033 Jul 01 22:08	9°♋10'09	6.10556 AU
morning rise	3033 Jul 13 11:05	11°♋49'39	
	3033 Oct 25 08:44	0°♌	
retrograde	3033 Nov 17 23:04	0°♌54'14	
asc. node	3033 Nov 22 00:02	0°♌52'36	
	3033 Dec 11 09:19	30°℞♋	
min. Earth dist.	3034 Jan 15 07:54	26°♋01'02	4.17927 AU
opposition	3034 Jan 16 14:41	25°♋50'36	0°07'35
direct	3034 Mar 16 21:45	20°♋50'17	
	3034 Jun 07 01:49	0°♌	
evening set	3034 Jul 21 14:33	9°♌22'09	
conjunction	3034 Aug 04 06:36	12°♌25'14	0°22'46
minimum elong	3034 Aug 04 06:35	12°♌25'13	0°22'46
max. Earth dist.	3034 Aug 05 20:18	12°♌46'19	6.25485 AU
	3034 Aug 15 20:00	15°♌	
morning rise	3034 Aug 17 21:44	15°♌27'35	
	3034 Nov 02 12:23	0°♍	
retrograde	3034 Dec 19 23:14	3°♍23'51	
	3035 Feb 05 13:19	30°℞♌	
opposition	3035 Feb 17 20:26	28°♌23'24	0°55'35
min. Earth dist.	3035 Feb 17 04:31	28°♌28'43	4.32404 AU
direct	3035 Apr 19 12:39	23°♌21'16	
	3035 Jun 28 10:41	0°♍	
evening set	3035 Aug 24 06:33	11°♍16'47	
conjunction	3035 Sep 06 16:24	14°♍11'53	0°50'19
minimum elong	3035 Sep 06 16:22	14°♍11'52	0°50'18
max. Earth dist.	3035 Sep 07 02:10	14°♍17'13	6.38361 AU
morning rise	3035 Sep 20 00:10	17°♍05'46	
	3035 Nov 26 20:35	0°♎	
retrograde	3036 Jan 19 09:50	4°♎12'03	
	3036 Mar 13 22:51	30°℞♍	
opposition	3036 Mar 19 16:04	29°♍15'15	1°24'56
min. Earth dist.	3036 Mar 19 18:29	29°♍14'27	4.42836 AU
direct	3036 May 20 12:44	24°♍12'28	
	3036 Jul 25 07:13	0°♎	
evening set	3036 Sep 24 03:27	11°♎45'00	
conjunction	3036 Oct 07 06:11	14°♎34'20	1°02'45
minimum elong	3036 Oct 07 06:11	14°♎34'20	1°02'45
max. Earth dist.	3036 Oct 06 13:04	14°♎25'06	6.45550 AU
morning rise	3036 Oct 20 06:01	17°♎22'17	
	3036 Dec 26 07:45	0°♏	
retrograde	3037 Feb 17 09:24	4°♏05'32	
	3037 Apr 12 17:22	30°℞♎	
opposition	3037 Apr 19 00:05	29°♎11'43	1°30'37
min. Earth dist.	3037 Apr 19 20:02	29°♎05'17	4.46464 AU
direct	3037 Jun 20 14:39	24°♎09'24	
	3037 Aug 26 00:49	0°♏	
evening set	3037 Oct 24 21:21	11°♏36'01	
max. Earth dist.	3037 Nov 05 01:43	14°♏01'13	6.45279 AU
conjunction	3037 Nov 06 18:01	14°♏23'05	0°58'07
minimum elong	3037 Nov 06 18:02	14°♏23'06	0°58'07
	3037 Nov 09 14:00	15°♏	
morning rise	3037 Nov 19 12:17	17°♏09'03	
	3038 Jan 26 14:11	0°♐	
retrograde	3038 Mar 19 23:36	3°♐58'22	
	3038 May 12 17:24	30°℞♏	
opposition	3038 May 19 19:21	29°♏06'09	1°12'25
min. Earth dist.	3038 May 21 04:57	28°♏55'26	4.42368 AU
direct	3038 Jul 21 13:25	24°♏05'01	
	3038 Sep 25 23:31	0°♐	
evening set	3038 Nov 24 09:35	11°♐44'04	
max. Earth dist.	3038 Dec 05 00:02	14°♐04'32	6.37614 AU
conjunction	3038 Dec 07 02:55	14°♐32'44	0°37'42
minimum elong	3038 Dec 07 02:57	14°♐32'45	0°37'42
morning rise	3038 Dec 19 18:21	17°♐20'43	
	3039 Feb 22 11:50	0°♑	
retrograde	3039 Apr 21 00:12	4°♑44'41	
	3039 Jun 19 23:25	30°℞♐	
opposition	3039 Jun 20 22:55	29°♐52'31	0°33'33
min. Earth dist.	3039 Jun 22 11:47	29°♐40'45	4.31543 AU
direct	3039 Aug 22 01:54	24°♐53'21	
	3039 Oct 21 11:35	0°♑	
evening set	3039 Dec 25 15:17	13°♑01'37	
max. Earth dist.	3040 Jan 05 07:20	15°♑27'27	6.24468 AU
conjunction	3040 Jan 07 07:43	15°♑55'07	0°05'49
minimum elong	3040 Jan 07 07:43	15°♑55'07	0°05'49
behind sun begin	3040 Jan 07 00:06	15°♑50'47	
behind sun end	3040 Jan 07 15:21	15°♑59'28	
morning rise	3040 Jan 19 23:38	18°♑48'38	
desc. node	3040 Mar 11 16:32	29°♑41'09	
	3040 Mar 13 10:11	0°♒	
retrograde	3040 May 24 09:33	7°♒11'57	
opposition	3040 Jul 24 03:19	2°♒18'16	-0°17'57
min. Earth dist.	3040 Jul 25 09:44	2°♒08'29	4.16867 AU
	3040 Aug 11 18:29	30°℞♑	
direct	3040 Sep 23 03:09	27°♑21'33	
	3040 Nov 03 17:06	0°♒	
	3041 Jan 21 11:07	15°♒	
evening set	3041 Jan 26 11:08	16°♒10'03	
max. Earth dist.	3041 Feb 06 22:33	18°♒52'14	6.09525 AU
conjunction	3041 Feb 08 05:43	19°♒10'38	-0°29'27
minimum elong	3041 Feb 08 05:41	19°♒10'37	0°29'27
morning rise	3041 Feb 21 01:16	22°♒12'00	
	3041 Mar 27 14:12	0°♓	
retrograde	3041 Jun 30 01:29	11°♓46'22	
opposition	3041 Aug 29 11:29	6°♓49'46	-1°06'54
min. Earth dist.	3041 Aug 29 22:34	6°♓46'08	4.02908 AU
direct	3041 Oct 27 22:54	1°♓55'17	
evening set	3042 Mar 02 10:15	21°♓22'57	
conjunction	3042 Mar 15 09:53	24°♓30'55	-0°55'46
minimum elong	3042 Mar 15 09:52	24°♓30'54	0°55'45
max. Earth dist.	3042 Mar 15 09:11	24°♓30'29	5.97823 AU
morning rise	3042 Mar 28 11:58	27°♓40'20	
	3042 Apr 07 06:20	0°♈	
retrograde	3042 Aug 07 08:06	18°♈11'17	
opposition	3042 Oct 06 06:55	13°♈10'48	-1°32'53
min. Earth dist.	3042 Oct 05 19:02	13°♈14'47	3.94775 AU
direct	3042 Dec 03 13:54	8°♈17'05	
evening set	3043 Apr 08 07:11	28°♈05'27	
	3043 Apr 16 04:43	0°♉	
conjunction	3043 Apr 21 14:40	1°♉18'46	-1°01'14
minimum elong	3043 Apr 21 14:41	1°♉18'47	1°01'14
max. Earth dist.	3043 Apr 23 00:40	1°♉39'23	5.94017 AU
morning rise	3043 May 05 01:04	4°♉33'42	
	3043 Jun 20 02:25	15°♉	
retrograde	3043 Sep 14 11:16	25°♉16'31	
min. Earth dist.	3043 Nov 11 19:50	20°♉22'52	3.95870 AU

opposition	3043 Nov 13	01:48	20°♉12'42	-1°21'49
direct	3044 Jan 09	22:03	15°♉17'36	
	3044 Apr 23	17:23	0°♊	
evening set	3044 May 15	00:26	4°♊57'02	
conjunction	3044 May 28	15:14	8°♊11'07	-0°42'26
minimum elong	3044 May 28	15:16	8°♊11'08	0°42'27
max. Earth dist.	3044 May 30	21:20	8°♊43'16	5.99815 AU
morning rise	3044 Jun 11	08:41	11°♊26'19	
	3044 Sep 19	10:23	0°♋	
retrograde	3044 Oct 19	18:05	1°♋28'52	
	3044 Nov 18	20:12	30°℞♊	
min. Earth dist.	3044 Dec 16	19:01	26°♊36'19	4.05681 AU
opposition	3044 Dec 18	07:27	26°♊23'53	-0°39'02
direct	3045 Feb 14	15:36	21°♊25'55	
	3045 May 03	01:55	0°♋	
evening set	3045 Jun 21	02:35	10°♋32'23	
conjunction	3045 Jul 04	20:33	13°♋41'56	-0°08'12
minimum elong	3045 Jul 04	20:34	13°♋41'57	0°08'12
behind sun begin	3045 Jul 04	13:12	13°♋37'43	
behind sun end	3045 Jul 05	03:57	13°♋46'10	
max. Earth dist.	3045 Jul 07	02:09	14°♋12'47	6.12721 AU
morning rise	3045 Jul 18	15:15	16°♋51'34	
	3045 Sep 20	20:50	0°♌	
asc. node	3045 Sep 30	19:59	1°♌33'39	
retrograde	3045 Nov 22	15:38	5°♌45'23	
min. Earth dist.	3046 Jan 20	02:42	0°♌51'45	4.20239 AU
opposition	3046 Jan 21	07:20	0°♌42'04	0°15'11
	3046 Jan 26	12:12	30°℞♋	
direct	3046 Mar 21	19:53	25°♋41'25	
	3046 May 14	19:44	0°♌	
evening set	3046 Jul 26	11:44	14°♌06'48	
	3046 Jul 30	11:46	15°♌	
conjunction	3046 Aug 09	03:01	17°♌08'35	0°27'24
minimum elong	3046 Aug 09	02:59	17°♌08'34	0°27'25
max. Earth dist.	3046 Aug 10	13:26	17°♌27'44	6.27728 AU
morning rise	3046 Aug 22	17:14	20°♌09'34	
	3046 Oct 09	11:08	0°♍	
retrograde	3046 Dec 24	06:17	7°♍56'38	
opposition	3047 Feb 22	06:07	2°♍56'41	1°01'02
min. Earth dist.	3047 Feb 21	16:07	3°♍01'21	4.34407 AU
	3047 Mar 18	00:25	30°℞♌	
direct	3047 Apr 24	02:17	27°♌54'22	
	3047 May 31	16:34	0°♍	
evening set	3047 Aug 28	20:14	15°♍45'04	
conjunction	3047 Sep 11	05:05	18°♍39'06	0°53'03
minimum elong	3047 Sep 11	05:03	18°♍39'05	0°53'03
max. Earth dist.	3047 Sep 11	11:05	18°♍42'22	6.39971 AU
morning rise	3047 Sep 24	11:36	21°♍31'51	
	3047 Nov 04	23:32	0°♎	
retrograde	3048 Jan 23	15:04	8°♎32'41	
opposition	3048 Mar 23	22:17	3°♎36'25	1°27'10
min. Earth dist.	3048 Mar 24	03:43	3°♎34'39	4.43959 AU
	3048 Apr 23	22:04	30°℞♍	
direct	3048 May 24	23:02	28°♍33'42	
	3048 Jun 25	08:00	0°♎	
evening set	3048 Sep 28	11:44	16°♎03'52	
conjunction	3048 Oct 11	13:24	18°♎52'37	1°03'06
minimum elong	3048 Oct 11	13:24	18°♎52'37	1°03'06
max. Earth dist.	3048 Oct 10	15:13	18°♎40'39	6.46086 AU
morning rise	3048 Oct 24	12:25	21°♎40'02	
	3048 Dec 04	14:56	0°♏	
retrograde	3049 Feb 21	15:02	8°♏22'12	

opposition	3049 Apr 23	06:11	3°♏28'42	1°29'26
min. Earth dist.	3049 Apr 24	04:50	3°♏21'25	4.46405 AU
	3049 May 23	06:22	30°℞♎	
direct	3049 Jun 24	22:24	28°♎26'30	
	3049 Jul 27	20:08	0°♏	
	3049 Oct 24	23:17	15°♏	
evening set	3049 Oct 29	03:21	15°♏53'46	
max. Earth dist.	3049 Nov 09	05:59	18°♏18'15	6.44630 AU
conjunction	3049 Nov 10	23:33	18°♏40'52	0°56'07
minimum elong	3049 Nov 10	23:35	18°♏40'53	0°56'07
morning rise	3049 Nov 23	17:06	21°♏26'52	
	3050 Jan 04	14:06	0°♐	
retrograde	3050 Mar 24	07:22	8°♐19'27	
opposition	3050 May 24	04:32	3°♐27'22	1°08'03
min. Earth dist.	3050 May 25	14:54	3°♐16'25	4.41169 AU
	3050 Jun 23	04:40	30°℞♏	
direct	3050 Jul 25	20:40	28°♏26'32	
	3050 Aug 27	14:51	0°♐	
evening set	3050 Nov 28	16:59	16°♐09'05	
max. Earth dist.	3050 Dec 09	05:40	18°♐29'12	6.35948 AU
conjunction	3050 Dec 11	09:55	18°♐58'17	0°33'45
minimum elong	3050 Dec 11	09:57	18°♐58'18	0°33'45
morning rise	3050 Dec 24	01:23	21°♐46'56	
	3051 Feb 01	02:14	0°♑	
retrograde	3051 Apr 25	17:35	9°♑18'20	
opposition	3051 Jun 25	14:41	4°♑26'06	0°26'47
min. Earth dist.	3051 Jun 27	04:20	4°♑14'04	4.29492 AU
	3051 Aug 07	17:27	30°℞♐	
direct	3051 Aug 26	15:33	29°♐27'15	
	3051 Sep 14	12:28	0°♑	
evening set	3051 Dec 30	03:06	17°♑41'20	
max. Earth dist.	3052 Jan 09	20:47	20°♑08'50	6.22210 AU
conjunction	3052 Jan 11	19:47	20°♑35'51	0°00'46
minimum elong	3052 Jan 11	19:48	20°♑35'51	0°00'47
behind sun begin	3052 Jan 11	11:49	20°♑31'17	
behind sun end	3052 Jan 12	03:47	20°♑40'25	
desc. node	3052 Jan 20	03:04	22°♑30'20	
morning rise	3052 Jan 24	12:03	23°♑30'27	
	3052 Feb 22	19:29	0°♒	
retrograde	3052 May 29	09:13	12°♒04'09	
opposition	3052 Jul 29	02:59	7°♒10'12	-0°25'28
min. Earth dist.	3052 Jul 30	06:37	7°♒01'18	4.14586 AU
direct	3052 Sep 27	20:48	2°♒13'54	
	3053 Jan 04	08:13	15°♒	
evening set	3053 Jan 31	06:32	21°♒09'05	
max. Earth dist.	3053 Feb 11	22:18	23°♒54'37	6.07433 AU
conjunction	3053 Feb 13	01:35	24°♒10'48	-0°34'01
minimum elong	3053 Feb 13	01:33	24°♒10'47	0°34'01
morning rise	3053 Feb 25	21:55	27°♒13'25	
	3053 Mar 09	18:57	0°♓	
retrograde	3053 Jul 05	10:54	16°♓57'54	
opposition	3053 Sep 03	18:14	12°♓00'49	-1°12'27
min. Earth dist.	3053 Sep 04	02:23	11°♓58'08	4.01225 AU
direct	3053 Nov 02	01:36	7°♓06'35	
evening set	3054 Mar 07	13:09	26°♓38'57	
conjunction	3054 Mar 20	13:54	29°♓47'54	-0°58'00
minimum elong	3054 Mar 20	13:52	29°♓47'53	0°58'00
max. Earth dist.	3054 Mar 20	19:29	29°♓51'17	5.96735 AU
	3054 Mar 21	09:53	0°♈	
morning rise	3054 Apr 02	17:02	2°♈58'19	
retrograde	3054 Aug 12	18:54	23°♈33'52	
opposition	3054 Oct 11	16:07	18°♈32'53	-1°33'39

min. Earth dist.	3054 Oct 11 00:54	18°♈37'58	3.94452 AU
direct	3054 Dec 08 19:46	13°♈39'10	
	3055 Mar 30 01:54	0°♉	
evening set	3055 Apr 13 14:35	3°♉27'27	
conjunction	3055 Apr 26 23:00	6°♉41'03	-0°59'57
minimum elong	3055 Apr 26 23:02	6°♉41'04	0°59'56
max. Earth dist.	3055 Apr 28 12:05	7°♉03'29	5.94465 AU
morning rise	3055 May 10 10:41	9°♉56'17	
	3055 May 31 23:01	15°♉	
	3055 Aug 31 18:04	0°♊	
retrograde	3055 Sep 19 15:40	0°♊35'15	
	3055 Oct 08 11:21	30°℞♉	
min. Earth dist.	3055 Nov 16 22:18	25°♉42'07	3.97043 AU
opposition	3055 Nov 18 06:53	25°♉31'03	-1°17'18
direct	3056 Jan 15 03:39	20°♉35'34	
	3056 Apr 04 14:34	0°♊	
evening set	3056 May 20 06:43	10°♊10'18	
conjunction	3056 Jun 02 22:19	13°♊23'53	-0°38'14
minimum elong	3056 Jun 02 22:21	13°♊23'54	0°38'14
max. Earth dist.	3056 Jun 05 06:07	13°♊56'54	6.01597 AU
morning rise	3056 Jun 16 16:06	16°♊38'23	
	3056 Aug 18 17:36	0°♋	
retrograde	3056 Oct 24 15:17	6°♋31'00	
min. Earth dist.	3056 Dec 21 17:15	1°♋38'04	4.07841 AU
opposition	3056 Dec 23 04:26	1°♋26'05	-0°31'36
	3057 Jan 02 20:57	30°℞♊	
direct	3057 Feb 19 16:51	26°♊27'39	
	3057 Apr 08 07:11	0°♋	
evening set	3057 Jun 26 03:13	15°♋27'19	
conjunction	3057 Jul 09 21:05	18°♋35'46	-0°03'03
minimum elong	3057 Jul 09 21:06	18°♋35'47	0°03'03
behind sun begin	3057 Jul 09 12:45	18°♋31'02	
behind sun end	3057 Jul 10 05:27	18°♋40'32	
max. Earth dist.	3057 Jul 12 01:13	19°♋05'35	6.15061 AU
morning rise	3057 Jul 23 15:28	21°♋44'10	
asc. node	3057 Aug 11 02:40	25°♋51'09	
	3057 Aug 30 20:02	0°♌	
retrograde	3057 Nov 27 01:46	10°♌27'03	
opposition	3058 Jan 25 19:48	5°♌24'08	0°22'23
min. Earth dist.	3058 Jan 24 16:14	5°♌33'26	4.22538 AU
direct	3058 Mar 26 12:13	0°♌23'08	
	3058 Jul 14 03:09	15°♌	
evening set	3058 Jul 31 04:52	18°♌42'27	
conjunction	3058 Aug 13 19:20	21°♌43'01	0°31'43
minimum elong	3058 Aug 13 19:18	21°♌43'00	0°31'43
max. Earth dist.	3058 Aug 15 00:53	21°♌59'23	6.29802 AU
morning rise	3058 Aug 27 08:38	24°♌42'43	
	3058 Sep 21 00:58	0°♍	
retrograde	3058 Dec 28 13:01	12°♍21'43	
opposition	3059 Feb 26 13:00	7°♍22'18	1°05'57
min. Earth dist.	3059 Feb 26 02:41	7°♍25'43	4.36101 AU
direct	3059 Apr 28 14:47	2°♍19'50	
evening set	3059 Sep 02 06:52	20°♍06'44	
conjunction	3059 Sep 15 14:47	22°♍59'54	0°55'26
minimum elong	3059 Sep 15 14:46	22°♍59'53	0°55'26
max. Earth dist.	3059 Sep 15 16:28	23°♍00'48	6.41153 AU
morning rise	3059 Sep 28 20:14	25°♍51'44	
	3059 Oct 18 09:52	0°♎	
retrograde	3060 Jan 27 17:32	12°♎48'41	
opposition	3060 Mar 28 02:39	7°♎52'50	1°28'55
min. Earth dist.	3060 Mar 28 10:17	7°♎50'20	4.44593 AU
direct	3060 May 29 05:31	2°♎50'06	
evening set	3060 Oct 02 18:33	20°♎19'27	
conjunction	3060 Oct 15 19:26	23°♎07'50	1°03'08
minimum elong	3060 Oct 15 19:26	23°♎07'50	1°03'07
max. Earth dist.	3060 Oct 14 18:22	22°♎54'18	6.46132 AU
morning rise	3060 Oct 28 17:30	25°♎54'54	
	3060 Nov 17 02:59	0°♏	
retrograde	3061 Feb 25 19:56	12°♏37'31	
opposition	3061 Apr 27 11:58	7°♏44'20	1°27'49
min. Earth dist.	3061 Apr 28 12:57	7°♏36'19	4.45879 AU
direct	3061 Jun 29 05:14	2°♏42'18	
	3061 Oct 08 17:05	15°♏	
evening set	3061 Nov 02 09:17	20°♏11'28	
max. Earth dist.	3061 Nov 13 07:49	22°♏34'12	6.43561 AU
conjunction	3061 Nov 15 04:51	22°♏58'46	0°53'50
minimum elong	3061 Nov 15 04:53	22°♏58'47	0°53'50
morning rise	3061 Nov 27 22:09	25°♏45'04	
	3061 Dec 17 21:02	0°♐	
retrograde	3062 Mar 28 18:19	12°♐42'17	
opposition	3062 May 28 15:04	7°♐50'15	1°03'19
min. Earth dist.	3062 May 30 02:36	7°♐38'55	4.39629 AU
direct	3062 Jul 30 06:10	2°♐49'38	
evening set	3062 Dec 03 01:07	20°♐36'30	
max. Earth dist.	3062 Dec 13 14:59	22°♐57'50	6.34069 AU
conjunction	3062 Dec 15 18:04	23°♐26'24	0°29'35
minimum elong	3062 Dec 15 18:06	23°♐26'25	0°29'34
morning rise	3062 Dec 28 09:20	26°♐15'45	
	3063 Jan 14 10:46	0°♑	
retrograde	3063 Apr 30 10:13	13°♑55'11	
opposition	3063 Jun 30 08:01	9°♑02'49	0°19'47
min. Earth dist.	3063 Jul 01 20:17	8°♑51'15	4.27405 AU
direct	3063 Aug 31 04:39	4°♑04'23	
desc. node	3063 Nov 29 13:29	14°♑43'26	
evening set	3064 Jan 03 16:36	22°♑24'09	
max. Earth dist.	3064 Jan 14 12:05	24°♑53'27	6.20087 AU
conjunction	3064 Jan 16 09:20	25°♑19'35	-0°04'23
minimum elong	3064 Jan 16 09:19	25°♑19'34	0°04'22
behind sun begin	3064 Jan 16 01:29	25°♑15'04	
behind sun end	3064 Jan 16 17:10	25°♑24'05	
morning rise	3064 Jan 29 02:04	28°♑15'15	
	3064 Feb 05 17:30	0°♒	
	3064 Apr 28 11:06	15°♒	
retrograde	3064 Jun 03 11:55	16°♒58'43	
	3064 Jul 09 18:30	15°℞♒	
opposition	3064 Aug 03 04:00	12°♒04'22	-0°32'52
min. Earth dist.	3064 Aug 04 05:24	11°♒56'10	4.12585 AU
direct	3064 Oct 02 17:57	7°♒08'23	
	3064 Dec 15 23:57	15°♒	
evening set	3065 Feb 05 02:27	26°♒08'56	
conjunction	3065 Feb 17 22:13	29°♒11'40	-0°38'21
minimum elong	3065 Feb 17 22:11	29°♒11'39	0°38'22
max. Earth dist.	3065 Feb 16 24:00	28°♒58'26	6.05738 AU
	3065 Feb 21 07:23	0°♓	
morning rise	3065 Mar 02 19:13	2°♓15'21	
retrograde	3065 Jul 10 18:44	22°♓08'02	
opposition	3065 Sep 09 00:41	17°♓10'26	-1°17'24
min. Earth dist.	3065 Sep 09 05:30	17°♓08'51	4.00016 AU
direct	3065 Nov 07 03:08	12°♓16'26	
	3066 Mar 04 20:49	0°♈	
evening set	3066 Mar 12 15:24	1°♈51'40	
conjunction	3066 Mar 25 16:53	5°♈01'17	-0°59'45
minimum elong	3066 Mar 25 16:52	5°♈01'16	0°59'46

max. Earth dist.	3066 Mar 26 02:00	5°♈06'48	5.96093 AU
morning rise	3066 Apr 07 21:13	8°♈12'30	
retrograde	3066 Aug 18 01:31	28°♈50'46	
opposition	3066 Oct 16 22:56	23°♈49'15	-1°33'37
min. Earth dist.	3066 Oct 16 04:12	23°♈55'32	3.94463 AU
direct	3066 Dec 14 00:35	18°♈55'24	
	3067 Mar 11 23:10	0°♉	
evening set	3067 Apr 18 19:53	8°♉42'44	
conjunction	3067 May 02 05:30	11°♉56'33	-0°58'12
minimum elong	3067 May 02 05:32	11°♉56'34	0°58'12
max. Earth dist.	3067 May 03 23:00	12°♉21'36	5.95125 AU
	3067 May 14 22:10	15°♉	
morning rise	3067 May 15 18:02	15°♉11'53	
	3067 Jul 24 08:23	0°♊	
retrograde	3067 Sep 24 19:02	5°♊46'22	
min. Earth dist.	3067 Nov 22 00:19	0°♊53'04	3.98269 AU
opposition	3067 Nov 23 09:02	0°♊41'56	-1°12'16
	3067 Nov 28 12:41	30°℞♉	
direct	3068 Jan 20 07:39	25°♉46'06	
	3068 Mar 11 22:32	0°♊	
evening set	3068 May 25 10:37	15°♊16'30	
conjunction	3068 Jun 08 02:50	18°♊29'36	-0°33'50
minimum elong	3068 Jun 08 02:52	18°♊29'37	0°33'49
max. Earth dist.	3068 Jun 10 11:30	19°♊02'58	6.03263 AU
morning rise	3068 Jun 21 21:06	21°♊43'31	
	3068 Jul 28 21:34	0°♋	
retrograde	3068 Oct 29 08:43	11°♋27'01	
min. Earth dist.	3068 Dec 26 11:40	6°♋34'20	4.09771 AU
opposition	3068 Dec 27 23:01	6°♋22'18	-0°24'07
direct	3069 Feb 24 13:42	1°♋23'32	
asc. node	3069 Jun 21 12:58	18°♋08'46	
evening set	3069 Jul 01 02:05	20°♋17'40	
conjunction	3069 Jul 14 19:40	23°♋25'07	0°02'12
minimum elong	3069 Jul 14 19:41	23°♋25'08	0°02'12
behind sun begin	3069 Jul 14 11:19	23°♋20'23	
behind sun end	3069 Jul 15 04:03	23°♋29'52	
max. Earth dist.	3069 Jul 16 20:01	23°♋52'39	6.17084 AU
morning rise	3069 Jul 28 13:41	26°♋32'26	
	3069 Aug 13 02:32	0°♌	
	3069 Nov 23 16:55	15°♌	
retrograde	3069 Dec 01 13:29	15°♌06'08	
	3069 Dec 09 09:27	15°℞♌	
min. Earth dist.	3070 Jan 29 06:55	10°♌11'56	4.24463 AU
opposition	3070 Jan 30 07:30	10°♌03'39	0°29'22
direct	3070 Mar 31 05:28	5°♌02'23	
	3070 Jun 26 08:18	15°♌	
evening set	3070 Aug 04 21:23	23°♌17'04	
conjunction	3070 Aug 18 11:14	26°♌16'38	0°35'50
minimum elong	3070 Aug 18 11:12	26°♌16'37	0°35'49
max. Earth dist.	3070 Aug 19 14:02	26°♌31'26	6.31484 AU
morning rise	3070 Aug 31 23:26	29°♌15'13	
	3070 Sep 04 09:25	0°♍	
retrograde	3071 Jan 01 18:03	16°♍47'35	
opposition	3071 Mar 02 19:55	11°♍48'43	1°10'31
min. Earth dist.	3071 Mar 02 11:18	11°♍51'34	4.37437 AU
direct	3071 May 03 00:34	6°♍46'11	
evening set	3071 Sep 06 18:07	24°♍30'31	
conjunction	3071 Sep 20 00:57	27°♍22'55	0°57'30
minimum elong	3071 Sep 20 00:55	27°♍22'54	0°57'30
max. Earth dist.	3071 Sep 19 21:47	27°♍21'12	6.42043 AU
	3071 Oct 02 03:22	0°♎	
morning rise	3071 Oct 03 05:24	0°♎14'00	
retrograde	3072 Jan 31 23:36	17°♎08'04	
opposition	3072 Apr 01 08:32	12°♎12'43	1°30'13
min. Earth dist.	3072 Apr 01 19:34	12°♎09'08	4.45000 AU
direct	3072 Jun 02 14:57	7°♎10'03	
evening set	3072 Oct 07 02:18	24°♎39'05	
max. Earth dist.	3072 Oct 18 22:05	27°♎11'55	6.46022 AU
conjunction	3072 Oct 20 02:23	27°♎27'12	1°02'49
minimum elong	3072 Oct 20 02:23	27°♎27'13	1°02'48
	3072 Oct 31 21:34	0°♏	
morning rise	3072 Nov 01 23:41	0°♏14'02	
	3073 Jan 25 02:21	15°♏	
retrograde	3073 Mar 02 02:15	16°♏57'39	
	3073 Apr 07 07:00	15°℞♏	
opposition	3073 May 01 19:35	12°♏04'43	1°25'43
min. Earth dist.	3073 May 02 21:41	11°♏56'21	4.45296 AU
direct	3073 Jul 03 12:43	7°♏02'53	
	3073 Sep 20 06:27	15°♏	
evening set	3073 Nov 06 16:34	24°♏33'56	
max. Earth dist.	3073 Nov 17 14:48	26°♏56'52	6.42573 AU
conjunction	3073 Nov 19 11:40	27°♏21'25	0°51'13
minimum elong	3073 Nov 19 11:41	27°♏21'26	0°51'14
	3073 Dec 01 13:50	0°♐	
morning rise	3073 Dec 02 04:22	0°♐07'54	
retrograde	3074 Apr 02 05:30	17°♐09'25	
opposition	3074 Jun 02 03:03	12°♐17'30	0°58'10
min. Earth dist.	3074 Jun 03 15:03	12°♐06'02	4.38309 AU
direct	3074 Aug 03 16:58	7°♐17'14	
evening set	3074 Dec 07 10:23	25°♐07'25	
max. Earth dist.	3074 Dec 17 23:18	27°♐28'50	6.32530 AU
conjunction	3074 Dec 20 02:58	27°♐57'49	0°25'15
minimum elong	3074 Dec 20 02:59	27°♐57'50	0°25'15
	3074 Dec 29 04:48	0°♑	
morning rise	3075 Jan 01 18:22	0°♑47'49	
retrograde	3075 May 05 04:35	18°♑34'08	
opposition	3075 Jul 05 02:04	13°♑41'33	0°12'40
min. Earth dist.	3075 Jul 06 13:00	13°♑30'22	4.25744 AU
direct	3075 Sep 04 19:39	8°♑43'25	
desc. node	3075 Oct 09 22:22	10°♑34'54	
evening set	3076 Jan 08 05:34	27°♑07'10	
max. Earth dist.	3076 Jan 19 05:10	29°♑39'20	6.18459 AU
conjunction	3076 Jan 20 22:35	0°♒03'20	-0°09'19
minimum elong	3076 Jan 20 22:35	0°♒03'20	0°09'19
behind sun begin	3076 Jan 20 15:50	29°♑59'26	
behind sun end	3076 Jan 21 05:20	0°♒07'14	
	3076 Jan 20 16:48	0°♒	
morning rise	3076 Feb 02 15:30	2°♒59'48	
	3076 Mar 30 16:34	15°♒	
retrograde	3076 Jun 08 12:22	21°♒51'07	
opposition	3076 Aug 08 03:47	16°♒56'24	-0°39'53
min. Earth dist.	3076 Aug 09 02:49	16°♒48'58	4.11123 AU
	3076 Aug 23 13:32	15°℞♒	
direct	3076 Oct 07 13:06	12°♒00'46	
	3076 Nov 20 12:36	15°♒	
	3077 Feb 05 07:08	0°♓	
evening set	3077 Feb 09 20:49	1°♓04'42	
conjunction	3077 Feb 22 16:54	4°♓08'06	-0°42'17
minimum elong	3077 Feb 22 16:52	4°♓08'05	0°42'16
max. Earth dist.	3077 Feb 21 21:20	3°♓56'26	6.04560 AU
morning rise	3077 Mar 07 14:46	7°♓12'38	
retrograde	3077 Jul 15 21:09	27°♓11'24	
opposition	3077 Sep 14 03:38	22°♓13'13	-1°21'32
min. Earth dist.	3077 Sep 14 04:53	22°♓12'48	3.99247 AU

direct	3077 Nov 12 02:27	17°♓19'16		
	3078 Feb 15 21:19	0°♈		
evening set	3078 Mar 17 14:19	6°♈55'55		
conjunction	3078 Mar 30 16:52	10°♈06'06	-1°00'58	
minimum elong	3078 Mar 30 16:51	10°♈06'06	1°00'58	
max. Earth dist.	3078 Mar 31 07:21	10°♈14'53	5.95809 AU	
morning rise	3078 Apr 12 22:03	13°♈17'52		
	3078 Jul 03 04:58	0°♉		
retrograde	3078 Aug 23 06:02	3°♉57'13		
	3078 Oct 13 23:01	30°℞♈		
min. Earth dist.	3078 Oct 21 05:22	29°♈01'55	3.94705 AU	
opposition	3078 Oct 22 01:12	28°♈55'14	-1°32'49	
direct	3078 Dec 19 02:27	24°♈01'11		
	3079 Feb 19 02:03	0°♉		
evening set	3079 Apr 23 20:58	13°♉46'56		
	3079 Apr 28 22:42	15°♉		
conjunction	3079 May 07 07:32	17°♉00'52	-0°56'04	
minimum elong	3079 May 07 07:34	17°♉00'54	0°56'04	
max. Earth dist.	3079 May 09 03:13	17°♉27'10	5.95852 AU	
morning rise	3079 May 20 21:09	20°♉16'19		
	3079 Jul 02 20:46	0°♊		
retrograde	3079 Sep 29 16:09	10°♊46'00		
min. Earth dist.	3079 Nov 26 20:16	5°♊53'01	3.99414 AU	
opposition	3079 Nov 28 06:20	5°♊41'25	-1°06'55	
direct	3080 Jan 25 04:45	0°♊45'13		
evening set	3080 May 30 10:32	20°♊11'58		
conjunction	3080 Jun 13 03:13	23°♊24'37	-0°29'22	
minimum elong	3080 Jun 13 03:15	23°♊24'38	0°29'22	
max. Earth dist.	3080 Jun 15 10:05	23°♊56'49	6.04719 AU	
morning rise	3080 Jun 26 21:54	26°♊38'01		
	3080 Jul 11 13:38	0°♋		
retrograde	3080 Nov 02 23:54	16°♋13'35		
min. Earth dist.	3080 Dec 31 04:21	11°♋20'29	4.11373 AU	
opposition	3081 Jan 01 13:55	11°♋09'03	-0°16'47	
direct	3081 Mar 01 08:54	6°♋09'52		
asc. node	3081 May 03 14:20	12°♋03'31		
evening set	3081 Jul 05 21:54	24°♋59'54		
conjunction	3081 Jul 19 15:30	28°♋06'35	0°07'07	
minimum elong	3081 Jul 19 15:30	28°♋06'35	0°07'08	
behind sun begin	3081 Jul 19 07:50	28°♋02'15		
behind sun end	3081 Jul 19 23:10	28°♋10'55		
max. Earth dist.	3081 Jul 21 14:37	28°♋33'19	6.18727 AU	
	3081 Jul 27 23:36	0°♌		
morning rise	3081 Aug 02 08:57	1°♌12'57		
	3081 Oct 10 23:22	15°♌		
retrograde	3081 Dec 05 22:27	19°♌38'53		
	3082 Jan 31 20:05	15°℞♌		
opposition	3082 Feb 03 16:53	14°♌36'54	0°35'55	
min. Earth dist.	3082 Feb 02 17:36	14°♌44'44	4.26013 AU	
direct	3082 Apr 04 17:53	9°♌35'27		
	3082 Jun 05 11:29	15°♌		
evening set	3082 Aug 09 12:13	27°♌46'46		
	3082 Aug 19 14:40	0°♍		
conjunction	3082 Aug 23 01:09	0°♍45'27	0°39'35	
minimum elong	3082 Aug 23 01:07	0°♍45'25	0°39'35	
max. Earth dist.	3082 Aug 23 22:53	0°♍57'25	6.32825 AU	
morning rise	3082 Sep 05 12:36	3°♍43'06		
retrograde	3083 Jan 06 00:45	21°♍10'05		
opposition	3083 Mar 07 02:15	16°♍11'43	1°14'32	
min. Earth dist.	3083 Mar 06 20:45	16°♍13'32	4.38495 AU	
direct	3083 May 07 11:11	11°♍09'05		
evening set	3083 Sep 11 04:09	28°♍51'23		
	3083 Sep 16 11:30	0°♎		
conjunction	3083 Sep 24 10:13	1°♎43'10	0°59'12	
minimum elong	3083 Sep 24 10:11	1°♎43'09	0°59'11	
max. Earth dist.	3083 Sep 24 05:00	1°♎40'21	6.42746 AU	
morning rise	3083 Oct 07 13:31	4°♎33'34		
retrograde	3084 Feb 05 02:55	21°♎25'11		
opposition	3084 Apr 05 13:51	16°♎30'13	1°30'58	
min. Earth dist.	3084 Apr 06 01:56	16°♎26'18	4.45327 AU	
direct	3084 Jun 06 21:19	11°♎27'39		
evening set	3084 Oct 11 09:24	28°♎56'16		
	3084 Oct 16 07:57	0°♏		
max. Earth dist.	3084 Oct 23 01:42	1°♏27'22	6.45939 AU	
conjunction	3084 Oct 24 08:35	1°♏44'05	1°02'07	
minimum elong	3084 Oct 24 08:35	1°♏44'05	1°02'08	
morning rise	3084 Nov 06 05:08	4°♏30'39		
	3084 Dec 29 09:20	15°♏		
retrograde	3085 Mar 06 09:12	21°♏14'59		
opposition	3085 May 06 02:40	16°♏22'17	1°23'06	
min. Earth dist.	3085 May 07 07:03	16°♏13'13	4.44791 AU	
	3085 May 16 22:57	15°℞♏		
direct	3085 Jul 07 21:15	11°♏20'37		
	3085 Aug 28 05:52	15°♏		
evening set	3085 Nov 10 22:26	28°♏52'58		
	3085 Nov 16 01:22	0°♐		
max. Earth dist.	3085 Nov 21 17:57	1°♐14'48	6.41647 AU	
conjunction	3085 Nov 23 17:03	1°♐40'37	0°48'20	
minimum elong	3085 Nov 23 17:04	1°♐40'38	0°48'19	
morning rise	3085 Dec 06 09:27	4°♐27'21		
retrograde	3086 Apr 06 15:45	21°♐33'05		
opposition	3086 Jun 06 14:06	16°♐41'07	0°52'42	
min. Earth dist.	3086 Jun 08 01:54	16°♐29'42	4.36990 AU	
direct	3086 Aug 08 01:36	11°♐41'03		
evening set	3086 Dec 11 17:58	29°♐34'37		
	3086 Dec 13 15:25	0°♑		
max. Earth dist.	3086 Dec 22 08:31	1°♑57'26	6.30905 AU	
conjunction	3086 Dec 24 10:31	2°♑25'36	0°20'46	
minimum elong	3086 Dec 24 10:32	2°♑25'37	0°20'46	
morning rise	3087 Jan 06 01:47	5°♑16'14		
retrograde	3087 May 09 22:18	23°♑10'02		
opposition	3087 Jul 09 19:04	18°♑17'17	0°05'28	
min. Earth dist.	3087 Jul 11 05:36	18°♑06'15	4.23891 AU	
desc. node	3087 Aug 20 06:24	13°♑56'57		
direct	3087 Sep 09 09:05	13°♑19'32		
	3088 Jan 04 21:03	0°♒		
evening set	3088 Jan 12 18:00	1°♒48'16		
max. Earth dist.	3088 Jan 23 18:22	4°♒21'36	6.16520 AU	
conjunction	3088 Jan 25 11:07	4°♒45'19	-0°14'14	
minimum elong	3088 Jan 25 11:06	4°♒45'19	0°14'14	
behind sun begin	3088 Jan 25 07:06	4°♒43'00		
behind sun end	3088 Jan 25 15:06	4°♒47'38		
morning rise	3088 Feb 07 04:40	7°♒42'50		
	3088 Mar 10 20:25	15°♒		
retrograde	3088 Jun 13 12:35	26°♒43'37		
opposition	3088 Aug 13 03:24	21°♒48'27	-0°46'45	
min. Earth dist.	3088 Aug 13 23:26	21°♒41'57	4.09248 AU	
direct	3088 Oct 12 07:24	16°♒53'05		
	3089 Jan 19 12:24	0°♓		
evening set	3089 Feb 14 15:48	6°♓02'24		
conjunction	3089 Feb 27 12:44	9°♓06'52	-0°45'59	
minimum elong	3089 Feb 27 12:42	9°♓06'50	0°45'59	
max. Earth dist.	3089 Feb 26 22:19	8°♓58'13	6.02925 AU	

morning rise	3089 Mar 12	11:19	12°♓12'28		
	3089 Jun 12	09:29	0°♈		
retrograde	3089 Jul 21	04:41	2°♈19'22		
	3089 Aug 29	02:45	30°℞♓		
opposition	3089 Sep 19	08:28	27°♓20'43	-1°25'14	
min. Earth dist.	3089 Sep 19	07:41	27°♓20'58	3.98024 AU	
direct	3089 Nov 17	04:01	22°♓26'55		
	3090 Jan 27	02:16	0°♈		
evening set	3090 Mar 22	15:57	12°♈06'55		
conjunction	3090 Apr 04	19:30	15°♈17'55	-1°01'46	
minimum elong	3090 Apr 04	19:30	15°♈17'55	1°01'46	
max. Earth dist.	3090 Apr 05	13:27	15°♈28'48	5.95100 AU	
morning rise	3090 Apr 18	02:01	18°♈30'34		
	3090 Jun 08	07:11	0°♉		
retrograde	3090 Aug 28	11:54	9°♉12'33		
min. Earth dist.	3090 Oct 26	07:20	4°♉17'56	3.94623 AU	
opposition	3090 Oct 27	06:28	4°♉10'08	-1°31'19	
	3090 Dec 03	12:35	30°℞♈		
direct	3090 Dec 24	04:40	29°♈15'55		
	3091 Jan 13	22:16	0°♉		
	3091 Apr 12	00:54	15°♉		
evening set	3091 Apr 29	02:24	19°♉01'31		
conjunction	3091 May 12	14:02	22°♉15'42	-0°53'26	
minimum elong	3091 May 12	14:04	22°♉15'44	0°53'26	
max. Earth dist.	3091 May 14	11:54	22°♉43'16	5.96396 AU	
morning rise	3091 May 26	04:40	25°♉31'21		
	3091 Jun 14	07:29	0°♊		
retrograde	3091 Oct 04	17:43	15°♊56'40		
min. Earth dist.	3091 Dec 01	21:06	11°♊03'38	4.00514 AU	
opposition	3091 Dec 03	07:29	10°♊51'55	-1°00'53	
direct	3092 Jan 30	08:16	5°♊55'20		
evening set	3092 Jun 04	14:47	25°♊18'30		
conjunction	3092 Jun 18	08:10	28°♊30'43	-0°24'30	
minimum elong	3092 Jun 18	08:11	28°♊30'44	0°24'31	
max. Earth dist.	3092 Jun 20	16:56	29°♊03'53	6.06301 AU	
	3092 Jun 24	17:02	0°♋		
morning rise	3092 Jul 02	02:59	1°♋43'27		
retrograde	3092 Nov 07	18:52	21°♋10'10		
min. Earth dist.	3093 Jan 04	23:11	16°♋17'12	4.13282 AU	
opposition	3093 Jan 06	08:28	16°♋05'54	-0°09'05	
direct	3093 Mar 06	06:38	11°♋06'25		
asc. node	3093 Mar 13	09:09	11°♋11'28		
evening set	3093 Jul 10	21:08	29°♋50'57		
	3093 Jul 11	13:15	0°♌		
conjunction	3093 Jul 24	14:11	2°♌56'31	0°12'10	
minimum elong	3093 Jul 24	14:11	2°♌56'31	0°12'10	
behind sun begin	3093 Jul 24	08:42	2°♌53'26		
behind sun end	3093 Jul 24	19:40	2°♌59'36		
max. Earth dist.	3093 Jul 26	10:04	3°♌21'18	6.20818 AU	
morning rise	3093 Aug 07	07:11	6°♌01'42		
	3093 Sep 18	15:48	15°♌		
retrograde	3093 Dec 10	09:01	24°♌18'08		
min. Earth dist.	3094 Feb 07	07:17	19°♌23'42	4.28122 AU	
opposition	3094 Feb 08	04:37	19°♌16'32	0°42'24	
	3094 Mar 18	18:01	15°℞♌		
direct	3094 Apr 09	10:25	14°♌14'49		
	3094 May 01	08:53	15°♌		
	3094 Aug 03	08:18	0°♍		
evening set	3094 Aug 14	04:10	2°♍20'30		
conjunction	3094 Aug 27	16:19	5°♍17'59	0°43'12	
minimum elong	3094 Aug 27	16:17	5°♍17'58	0°43'12	
max. Earth dist.	3094 Aug 28	12:15	5°♍28'55	6.34812 AU	
morning rise	3094 Sep 10	02:27	8°♍14'18		
retrograde	3095 Jan 10	05:08	25°♍33'36		
opposition	3095 Mar 11	08:37	20°♍35'42	1°18'09	
min. Earth dist.	3095 Mar 11	04:49	20°♍36'58	4.40221 AU	
direct	3095 May 11	21:12	15°♍33'02		
	3095 Aug 31	12:29	0°♎		
evening set	3095 Sep 15	13:20	3°♎10'54		
conjunction	3095 Sep 28	18:09	6°♎01'41	1°00'34	
minimum elong	3095 Sep 28	18:08	6°♎01'41	1°00'34	
max. Earth dist.	3095 Sep 28	08:02	5°♎56'13	6.44068 AU	
morning rise	3095 Oct 11	20:30	8°♎51'09		
retrograde	3096 Feb 09	06:14	25°♎38'31		
opposition	3096 Apr 09	17:50	20°♎43'52	1°31'13	
min. Earth dist.	3096 Apr 10	09:13	20°♎38'54	4.46168 AU	
direct	3096 Jun 11	04:55	15°♎41'17		
	3096 Sep 30	18:34	0°♏		
evening set	3096 Oct 15	13:26	3°♏07'41		
max. Earth dist.	3096 Oct 27	02:46	5°♏37'09	6.46216 AU	
conjunction	3096 Oct 28	11:56	5°♏55'05	1°01'08	
minimum elong	3096 Oct 28	11:57	5°♏55'06	1°01'08	
morning rise	3096 Nov 10	07:36	8°♏41'13		
	3096 Dec 10	17:14	15°♏		
retrograde	3097 Mar 10	11:18	25°♏25'28		
opposition	3097 May 10	06:57	20°♏32'53	1°20'08	
min. Earth dist.	3097 May 11	12:18	20°♏23'30	4.44485 AU	
direct	3097 Jul 12	00:57	15°♏31'19		
	3097 Oct 31	17:53	0°♐		
evening set	3097 Nov 15	01:09	3°♐04'26		
max. Earth dist.	3097 Nov 25	18:33	5°♐25'26	6.40766 AU	
conjunction	3097 Nov 27	19:13	5°♐52'13	0°45'16	
minimum elong	3097 Nov 27	19:15	5°♐52'13	0°45'16	
morning rise	3097 Dec 10	11:15	8°♐39'09		
retrograde	3098 Apr 11	00:34	25°♐49'12		
opposition	3098 Jun 10	22:12	20°♐57'12	0°47'05	
min. Earth dist.	3098 Jun 12	11:59	20°♐45'11	4.35551 AU	
direct	3098 Aug 12	08:46	15°♐57'20		
	3098 Nov 28	04:15	0°♑		
evening set	3098 Dec 15	22:54	3°♑54'50		
max. Earth dist.	3098 Dec 26	11:42	6°♑17'19	6.29007 AU	
conjunction	3098 Dec 28	15:22	6°♑46'33	0°16'17	
minimum elong	3098 Dec 28	15:23	6°♑46'33	0°16'18	
morning rise	3099 Jan 10	06:53	9°♑38'02		
retrograde	3099 May 14	13:30	27°♑40'31		
desc. node	3099 Jul 02	01:40	24°♑20'39		
opposition	3099 Jul 14	09:56	22°♑47'29	-0°01'38	
min. Earth dist.	3099 Jul 15	19:06	22°♑36'50	4.21642 AU	
direct	3099 Sep 13	18:43	17°♑49'57		
	3099 Dec 19	13:37	0°♒		
evening set	3100 Jan 17	04:52	6°♒25'20		
max. Earth dist.	3100 Jan 28	08:51	9°♒01'32	6.14113 AU	
conjunction	3100 Jan 29	22:30	9°♒23'34	-0°18'59	
minimum elong	3100 Jan 29	22:29	9°♒23'33	0°18'58	
morning rise	3100 Feb 11	16:30	12°♒22'19		
	3100 Feb 23	02:03	15°♒		
	3100 May 18	15:42	0°♓		
retrograde	3100 Jun 19	14:43	1°♓34'30		
	3100 Jul 21	14:56	30°℞♒		
opposition	3100 Aug 19	02:45	26°♒38'58	-0°53'15	
min. Earth dist.	3100 Aug 19	21:35	26°♒32'51	4.06871 AU	
direct	3100 Oct 18	02:09	21°♒43'53		
	3101 Jan 01	19:08	0°♓		
evening set	3101 Feb 20	11:33	11°♓00'36		

conjunction	3101 Mar 05 09:17	14°♓06'23	-0°49'19
minimum elong	3101 Mar 05 09:16	14°♓06'21	0°49'19
max. Earth dist.	3101 Mar 04 21:43	13°♓59'25	6.00795 AU
morning rise	3101 Mar 18 09:05	17°♓13'27	
	3101 May 15 20:46	0°♈	
retrograde	3101 Jul 27 12:02	7°♈30'14	
opposition	3101 Sep 25 14:13	2°♈31'04	-1°28'16
min. Earth dist.	3101 Sep 25 09:15	2°♈32'43	3.96391 AU
	3101 Oct 15 13:18	30°℞♓	
direct	3101 Nov 23 04:08	27°♓37'22	
	3101 Dec 31 06:13	0°♈	