retrograde	5100 Jan 17 13:22	8°♎12'10	
opposition	5100 Mar 25 08:08	4°♎46'12	1°50'28
min. Earth dist.	5100 Mar 25 07:17	4°♎46'22	8.18905 AU
direct	5100 Jun 01 03:54	1°♎17'40	
evening set	5100 Sep 14 22:07	9°♎24'36	
conjunction	5100 Oct 02 20:07	11°♎40'58	1°39'14
minimum elong	5100 Oct 02 20:04	11°♎40'57	1°39'14
max. Earth dist.	5100 Oct 02 20:26	11°♎41'04	10.21323 AU
morning rise	5100 Oct 20 15:15	13°♎56'29	
retrograde	5101 Jan 31 08:14	21°♎50'21	
opposition	5101 Apr 08 02:10	18°♎25'24	2°14'12
min. Earth dist.	5101 Apr 08 01:50	18°♎25'28	8.24335 AU
direct	5101 Jun 15 07:25	14°♎57'00	
evening set	5101 Sep 29 09:26	23°♎01'35	
conjunction	5101 Oct 17 04:08	25°♎16'07	1°55'26
minimum elong	5101 Oct 17 04:06	25°♎16'07	1°55'26
max. Earth dist.	5101 Oct 17 03:57	25°♎16'04	10.27526 AU
morning rise	5101 Nov 03 19:18	27°♎29'37	
	5101 Nov 24 17:54	0°♏	
retrograde	5102 Feb 13 19:47	5°♏17'03	
opposition	5102 Apr 21 17:13	1°♏53'11	2°30'09
min. Earth dist.	5102 Apr 21 17:39	1°♏53'06	8.31284 AU
	5102 May 16 15:13	30°℞♎	
direct	5102 Jun 29 10:01	28°♎25'08	
	5102 Aug 11 17:17	0°♏	
evening set	5102 Oct 13 14:06	6°♏25'44	
conjunction	5102 Oct 31 05:06	8°♏38'10	2°05'08
minimum elong	5102 Oct 31 05:04	8°♏38'09	2°05'08
max. Earth dist.	5102 Oct 31 04:01	8°♏37'49	10.35085 AU
morning rise	5102 Nov 17 16:12	10°♏49'25	
	5102 Dec 24 12:11	15°♏	
retrograde	5103 Feb 27 01:11	18°♏29'54	
opposition	5103 May 05 04:27	15°♏07'07	2°37'46
min. Earth dist.	5103 May 05 05:33	15°♏06'54	8.39384 AU
	5103 May 06 16:17	15°℞♏	
direct	5103 Jul 13 08:49	11°♏39'37	
	5103 Sep 16 04:22	15°♏	
evening set	5103 Oct 27 10:29	19°♏34'48	
conjunction	5103 Nov 13 21:46	21°♏45'01	2°08'06
minimum elong	5103 Nov 13 21:46	21°♏45'01	2°08'07
max. Earth dist.	5103 Nov 13 19:56	21°♏44'27	10.43596 AU
morning rise	5103 Dec 01 05:02	23°♏54'00	
	5104 Jan 30 08:20	0°♐	
retrograde	5104 Mar 11 01:02	1°♐27'23	
	5104 Apr 21 16:34	30°℞♏	
opposition	5104 May 17 11:39	28°♏05'37	2°37'08
min. Earth dist.	5104 May 17 12:35	28°♏05'26	8.48196 AU
direct	5104 Jul 26 02:43	24°♏38'52	
	5104 Oct 18 19:59	0°♐	
evening set	5104 Nov 08 21:38	2°♐27'33	
conjunction	5104 Nov 26 05:32	4°♐35'36	2°04'35
minimum elong	5104 Nov 26 05:33	4°♐35'36	2°04'35
max. Earth dist.	5104 Nov 26 03:55	4°♐35'06	10.52605 AU
morning rise	5104 Dec 13 09:20	6°♐42'24	
retrograde	5105 Mar 23 18:45	14°♐08'56	
opposition	5105 May 30 14:24	10°♐48'04	2°28'45
min. Earth dist.	5105 May 30 14:56	10°♐47'58	8.57259 AU
direct	5105 Aug 08 15:35	7°♐22'12	
evening set	5105 Nov 21 23:49	15°♐03'49	

conjunction	5105 Dec 09 04:45	17°♐09'49	1°55'05
minimum elong	5105 Dec 09 04:47	17°♐09'50	1°55'05
max. Earth dist.	5105 Dec 09 03:43	17°♐09'30	10.61648 AU
morning rise	5105 Dec 26 05:31	19°♐14'37	
retrograde	5106 Apr 05 08:14	26°♐34'49	
opposition	5106 Jun 12 12:41	23°♐14'46	2°13'30
min. Earth dist.	5106 Jun 12 13:11	23°♐14'40	8.66125 AU
direct	5106 Aug 21 21:51	19°♐49'51	
evening set	5106 Dec 04 17:31	27°♐24'18	
conjunction	5106 Dec 21 19:44	29°♐28'27	1°40'24
minimum elong	5106 Dec 21 19:46	29°♐28'27	1°40'24
max. Earth dist.	5106 Dec 21 18:59	29°♐28'13	10.70289 AU
	5106 Dec 26 03:16	0°♑	
morning rise	5107 Jan 07 18:02	1°♑31'28	
retrograde	5107 Apr 17 17:16	8°♑46'12	
opposition	5107 Jun 25 07:10	5°♑26'48	1°52'29
min. Earth dist.	5107 Jun 25 08:16	5°♑26'36	8.74396 AU
direct	5107 Sep 03 21:25	2°♑02'55	
evening set	5107 Dec 17 03:21	9°♑30'26	
conjunction	5108 Jan 03 03:06	11°♑32'57	1°21'27
minimum elong	5108 Jan 03 03:08	11°♑32'57	1°21'28
max. Earth dist.	5108 Jan 03 01:42	11°♑32'31	10.78152 AU
morning rise	5108 Jan 19 23:35	13°♑34'29	
retrograde	5108 Apr 28 20:39	20°♑44'50	
opposition	5108 Jul 06 22:01	17°♑25'57	1°26'55
min. Earth dist.	5108 Jul 06 23:22	17°♑25'42	8.81723 AU
direct	5108 Sep 15 16:21	14°♑03'05	
evening set	5108 Dec 28 06:38	21°♑24'19	
conjunction	5109 Jan 14 04:19	23°♑25'26	0°59'15
minimum elong	5109 Jan 14 04:21	23°♑25'27	0°59'16
max. Earth dist.	5109 Jan 14 02:34	23°♑24'55	10.84915 AU
morning rise	5109 Jan 30 23:27	25°♑25'47	
	5109 Mar 15 17:27	0°♒	
retrograde	5109 May 10 23:03	2°♒33'00	
	5109 Jul 09 04:31	30°℞♑	
opposition	5109 Jul 19 09:36	29°♑14'26	0°58'03
min. Earth dist.	5109 Jul 19 10:33	29°♑14'16	8.87805 AU
direct	5109 Sep 28 07:09	25°♑52'35	
	5109 Dec 11 15:06	0°♒	
evening set	5110 Jan 09 04:33	3°♒08'23	
conjunction	5110 Jan 26 00:38	5°♒08'24	0°34'48
minimum elong	5110 Jan 26 00:39	5°♒08'24	0°34'49
max. Earth dist.	5110 Jan 25 23:29	5°♒08'03	10.90293 AU
morning rise	5110 Feb 11 18:38	7°♒07'49	
retrograde	5110 May 23 00:09	14°♒13'15	
opposition	5110 Jul 31 19:01	10°♒54'49	0°27'07
min. Earth dist.	5110 Jul 31 19:09	10°♒54'47	8.92388 AU
direct	5110 Oct 10 15:43	7°♒33'55	
evening set	5111 Jan 20 22:33	14°♒45'18	
	5111 Jan 23 00:50	15°♒	
conjunction	5111 Feb 06 17:14	16°♒44'29	0°09'10
minimum elong	5111 Feb 06 17:15	16°♒44'29	0°09'10
behind sun begin	5111 Feb 06 11:17	16°♒42'44	
behind sun end	5111 Feb 06 23:12	16°♒46'15	
max. Earth dist.	5111 Feb 06 16:54	16°♒44'23	10.94063 AU
morning rise	5111 Feb 23 10:23	18°♒43'17	
retrograde	5111 Jun 04 01:03	25°♒48'19	
desc. node	5111 Jun 18 20:42	25°♒37'28	
opposition	5111 Aug 13 03:04	22°♒29'50	-0°04'40
min. Earth dist.	5111 Aug 13 03:13	22°♒29'48	8.95299 AU

direct	5111 Oct 22 21:01	19°♒09'45	
evening set	5112 Feb 01 14:13	26°♒17'54	
conjunction	5112 Feb 18 07:37	28°♒16'32	-0°16'49
minimum elong	5112 Feb 18 07:36	28°♒16'32	0°16'49
max. Earth dist.	5112 Feb 18 06:55	28°♒16'20	10.96094 AU
	5112 Mar 03 21:01	0°♓	
morning rise	5112 Mar 06 00:24	0°♓15'00	
retrograde	5112 Jun 15 02:31	7°♓20'59	
opposition	5112 Aug 24 10:25	4°♓02'15	-0°36'07
min. Earth dist.	5112 Aug 24 10:58	4°♓02'09	8.96445 AU
direct	5112 Nov 02 23:05	0°♓42'49	
evening set	5113 Feb 12 04:46	7°♓48'58	
conjunction	5113 Feb 28 21:15	9°♓47'21	-0°42'00
minimum elong	5113 Feb 28 21:13	9°♓47'20	0°42'00
max. Earth dist.	5113 Feb 28 20:07	9°♓47'01	10.96320 AU
morning rise	5113 Mar 17 14:04	11°♓45'49	
retrograde	5113 Jun 27 03:58	18°♓54'04	
opposition	5113 Sep 05 17:53	15°♓34'51	-1°06'07
min. Earth dist.	5113 Sep 05 18:22	15°♓34'46	8.95775 AU
direct	5113 Nov 15 00:56	12°♓15'54	
evening set	5114 Feb 23 19:35	19°♓21'20	
conjunction	5114 Mar 12 11:37	21°♓19'46	-1°05'31
minimum elong	5114 Mar 12 11:35	21°♓19'45	1°05'31
max. Earth dist.	5114 Mar 12 11:22	21°♓19'41	10.94723 AU
morning rise	5114 Mar 29 04:37	23°♓18'30	
	5114 Jun 14 13:17	0°♈	
retrograde	5114 Jul 09 10:28	0°♈30'18	
	5114 Aug 03 15:05	30°♓	
opposition	5114 Sep 18 02:15	27°♓10'26	-1°33'33
min. Earth dist.	5114 Sep 18 01:47	27°♓10'31	8.93313 AU
direct	5114 Nov 27 02:57	23°♓51'46	
	5115 Feb 27 04:25	0°♈	
evening set	5115 Mar 07 12:07	0°♈57'39	
conjunction	5115 Mar 24 04:11	2°♈56'30	-1°26'28
minimum elong	5115 Mar 24 04:09	2°♈56'29	1°26'28
max. Earth dist.	5115 Mar 24 04:50	2°♈56'42	10.91370 AU
morning rise	5115 Apr 09 21:47	4°♈55'52	
retrograde	5115 Jul 21 20:33	12°♈12'16	
opposition	5115 Sep 30 12:26	8°♈51'35	-1°57'21
min. Earth dist.	5115 Sep 30 11:25	8°♈51'46	8.89157 AU
direct	5115 Dec 09 02:40	5°♈33'00	
evening set	5116 Mar 18 07:33	12°♈40'34	
conjunction	5116 Apr 04 00:06	14°♈40'08	-1°44'00
minimum elong	5116 Apr 04 00:04	14°♈40'08	1°44'00
max. Earth dist.	5116 Apr 04 00:37	14°♈40'18	10.86389 AU
morning rise	5116 Apr 20 19:01	16°♈40'28	
retrograde	5116 Aug 02 09:40	24°♈02'24	
opposition	5116 Oct 12 01:00	20°♈40'46	-2°16'31
min. Earth dist.	5116 Oct 12 00:18	20°♈40'54	8.83446 AU
direct	5116 Dec 20 05:44	17°♈22'00	
evening set	5117 Mar 30 07:11	24°♈32'25	
conjunction	5117 Apr 16 00:51	26°♈33'06	-1°57'18
minimum elong	5117 Apr 16 00:49	26°♈33'06	1°57'18
max. Earth dist.	5117 Apr 16 00:43	26°♈33'04	10.79946 AU
morning rise	5117 May 02 21:43	28°♈34'44	
	5117 May 15 03:34	0°♉	
retrograde	5117 Aug 15 04:17	6°♉02'54	
opposition	5117 Oct 24 16:25	2°♉40'14	-2°30'04
min. Earth dist.	5117 Oct 24 16:15	2°♉40'15	8.76363 AU
	5117 Dec 04 14:00	30°♈	
direct	5118 Jan 01 11:30	29°♈21'02	
	5118 Jan 28 22:42	0°♉	
evening set	5118 Apr 11 11:53	6°♉35'21	
conjunction	5118 Apr 28 07:36	8°♉37'31	-2°05'38
minimum elong	5118 Apr 28 07:35	8°♉37'31	2°05'39
max. Earth dist.	5118 Apr 28 07:48	8°♉37'35	10.72243 AU
morning rise	5118 May 15 06:59	10°♉40'49	
	5118 Jun 24 03:49	15°♉	
retrograde	5118 Aug 28 03:50	18°♉15'45	
	5118 Nov 04 17:21	15°♉	
opposition	5118 Nov 06 11:25	14°♉51'57	-2°37'12
min. Earth dist.	5118 Nov 06 11:04	14°♉52'01	8.68125 AU
direct	5119 Jan 13 20:19	11°♉32'07	
	5119 Mar 20 03:02	15°♉	
evening set	5119 Apr 23 22:40	18°♉51'19	
conjunction	5119 May 10 21:20	20°♉55'22	-2°08'24
minimum elong	5119 May 10 21:20	20°♉55'22	2°08'25
max. Earth dist.	5119 May 10 22:06	20°♉55'36	10.63530 AU
morning rise	5119 May 27 23:52	23°♉00'39	
	5119 Aug 12 03:43	0°♊	
retrograde	5119 Sep 10 09:44	0°♊42'40	
	5119 Oct 09 22:31	30°♉	
opposition	5119 Nov 19 10:20	27°♉17'44	-2°37'11
min. Earth dist.	5119 Nov 19 09:31	27°♉17'53	8.59041 AU
direct	5120 Jan 26 10:16	23°♉57'06	
	5120 Apr 24 05:09	0°♊	
evening set	5120 May 05 16:51	1°♊22'02	
conjunction	5120 May 22 19:07	3°♊28'18	-2°05'10
minimum elong	5120 May 22 19:08	3°♊28'18	2°05'10
max. Earth dist.	5120 May 22 19:53	3°♊28'32	10.54204 AU
morning rise	5120 Jun 09 01:31	5°♊35'52	
retrograde	5120 Sep 22 22:30	13°♊24'47	
opposition	5120 Dec 01 13:19	9°♊58'49	-2°29'37
min. Earth dist.	5120 Dec 01 12:21	9°♊59'00	8.49583 AU
direct	5121 Feb 07 03:28	6°♊37'10	
evening set	5121 May 18 18:53	14°♊08'27	
conjunction	5121 Jun 05 01:18	16°♊17'08	-1°55'43
minimum elong	5121 Jun 05 01:20	16°♊17'08	1°55'44
max. Earth dist.	5121 Jun 05 01:31	16°♊17'12	10.44787 AU
morning rise	5121 Jun 22 12:05	18°♊27'11	
retrograde	5121 Oct 06 16:22	26°♊22'27	
opposition	5121 Dec 14 20:46	22°♊55'32	-2°14'22
min. Earth dist.	5121 Dec 14 20:08	22°♊55'39	8.40290 AU
direct	5122 Feb 20 02:31	19°♊32'44	
evening set	5122 Jun 01 04:57	27°♊10'40	
conjunction	5122 Jun 18 15:58	29°♊21'51	-1°40'11
minimum elong	5122 Jun 18 16:00	29°♊21'52	1°40'12
max. Earth dist.	5122 Jun 18 16:05	29°♊21'53	10.35806 AU
	5122 Jun 23 17:01	0°♋	
morning rise	5122 Jul 06 07:18	1°♋34'22	
retrograde	5122 Oct 20 13:13	9°♋35'07	
opposition	5122 Dec 28 08:14	6°♋07'24	-1°51'45
min. Earth dist.	5122 Dec 28 07:50	6°♋07'29	8.31681 AU
direct	5123 Mar 05 09:20	2°♋43'23	
evening set	5123 Jun 14 23:27	10°♋28'00	
conjunction	5123 Jul 02 15:10	12°♋41'38	-1°19'05
minimum elong	5123 Jul 02 15:13	12°♋41'39	1°19'05
max. Earth dist.	5123 Jul 02 15:37	12°♋41'46	10.27750 AU
morning rise	5123 Jul 20 10:45	14°♋56'27	
retrograde	5123 Nov 03 14:21	23°♋01'24	
opposition	5124 Jan 10 23:06	19°♋33'08	-1°22'39
min. Earth dist.	5124 Jan 10 22:36	19°♋33'14	8.24231 AU

direct	5124 Mar 17 20:59	16°♋07'53	
evening set	5124 Jun 28 01:48	23°♋58'55	
conjunction	5124 Jul 15 21:50	26°♋14'42	-0°53'19
minimum elong	5124 Jul 15 21:52	26°♋14'43	0°53'20
max. Earth dist.	5124 Jul 15 23:02	26°♋15'05	10.21061 AU
morning rise	5124 Aug 02 20:53	28°♋31'28	
	5124 Aug 14 21:21	0°♌	
retrograde	5124 Nov 16 18:52	6°♌39'08	
opposition	5125 Jan 23 17:00	3°♌10'33	-0°48'28
min. Earth dist.	5125 Jan 23 15:53	3°♌10'47	8.18353 AU
	5125 Mar 14 15:14	30°℞♋	
direct	5125 Mar 31 13:26	29°♋44'10	
	5125 Apr 17 09:47	0°♌	
evening set	5125 Jul 12 10:57	7°♌40'59	
conjunction	5125 Jul 30 10:21	9°♌58'27	-0°24'16
minimum elong	5125 Jul 30 10:22	9°♌58'27	0°24'16
max. Earth dist.	5125 Jul 30 12:04	9°♌58'59	10.16114 AU
morning rise	5125 Aug 17 11:45	12°♌16'35	
	5125 Sep 09 01:48	15°♌	
retrograde	5125 Dec 01 00:51	20°♌25'22	
opposition	5126 Feb 06 13:08	16°♌56'45	-0°11'05
min. Earth dist.	5126 Feb 06 11:38	16°♌57'03	8.14387 AU
	5126 Mar 03 19:51	15°℞♌	
direct	5126 Apr 14 10:38	13°♌29'21	
	5126 May 25 12:43	15°♌	
asc. node	5126 May 27 00:38	15°♌06'26	
evening set	5126 Jul 27 01:40	21°♌31'02	
conjunction	5126 Aug 14 03:11	23°♌49'32	0°06'29
minimum elong	5126 Aug 14 03:10	23°♌49'32	0°06'29
behind sun begin	5126 Aug 13 20:17	23°♌47'20	
behind sun end	5126 Aug 14 10:03	23°♌51'43	
max. Earth dist.	5126 Aug 14 04:46	23°♌50'01	10.13199 AU
morning rise	5126 Sep 01 05:37	26°♌08'22	
	5126 Oct 04 01:18	0°♍	
retrograde	5126 Dec 15 05:58	4°♍16'29	
opposition	5127 Feb 20 10:25	0°♍48'09	0°27'12
min. Earth dist.	5127 Feb 20 09:10	0°♍48'24	8.12566 AU
	5127 Mar 02 07:13	30°℞♌	
direct	5127 Apr 28 11:34	27°♌19'55	
	5127 Jun 23 02:37	0°♍	
evening set	5127 Aug 10 19:55	5°♍25'13	
conjunction	5127 Aug 28 22:03	7°♍44'01	0°36'52
minimum elong	5127 Aug 28 22:01	7°♍44'00	0°36'52
max. Earth dist.	5127 Aug 28 23:01	7°♍44'20	10.12479 AU
morning rise	5127 Sep 16 00:04	10°♍02'47	
retrograde	5127 Dec 29 09:29	18°♍08'36	
opposition	5128 Mar 05 08:05	14°♍40'49	1°03'57
min. Earth dist.	5128 Mar 05 07:26	14°♍40'57	8.12987 AU
direct	5128 May 11 15:05	11°♍12'00	
evening set	5128 Aug 24 15:07	19°♍19'21	
conjunction	5128 Sep 11 16:23	21°♍37'41	1°05'07
minimum elong	5128 Sep 11 16:20	21°♍37'41	1°05'07
max. Earth dist.	5128 Sep 11 16:32	21°♍37'44	10.13990 AU
morning rise	5128 Sep 29 16:32	23°♍55'39	
	5128 Nov 25 06:42	0°♎	
retrograde	5129 Jan 11 09:33	1°♎57'40	
	5129 Feb 28 08:56	30°℞♍	
opposition	5129 Mar 19 04:55	28°♍30'40	1°36'51
min. Earth dist.	5129 Mar 19 04:44	28°♍30'42	8.15623 AU
direct	5129 May 25 20:14	25°♍01'34	
	5129 Aug 12 21:51	0°♎	
evening set	5129 Sep 08 08:51	3°♎09'14	
conjunction	5129 Sep 26 08:05	5°♎26'27	1°29'27
minimum elong	5129 Sep 26 08:02	5°♎26'26	1°29'27
max. Earth dist.	5129 Sep 26 07:46	5°♎26'21	10.17648 AU
morning rise	5129 Oct 14 05:14	7°♎42'59	
retrograde	5130 Jan 25 04:52	15°♎39'54	
opposition	5130 Apr 01 23:52	12°♎13'53	2°03'52
min. Earth dist.	5130 Apr 01 23:37	12°♎13'57	8.20312 AU
direct	5130 Jun 09 01:44	8°♎44'50	
evening set	5130 Sep 22 22:44	16°♎51'00	
conjunction	5130 Oct 10 19:05	19°♎06'34	1°48'30
minimum elong	5130 Oct 10 19:03	19°♎06'33	1°48'30
max. Earth dist.	5130 Oct 10 18:49	19°♎06'29	10.23235 AU
morning rise	5130 Oct 28 12:27	21°♎21'13	
retrograde	5131 Feb 07 18:36	29°♎12'03	
opposition	5131 Apr 15 16:14	25°♎47'11	2°23'36
min. Earth dist.	5131 Apr 15 15:41	25°♎47'17	8.26765 AU
direct	5131 Jun 23 05:18	22°♎18'30	
	5131 Oct 04 09:17	0°♏	
evening set	5131 Oct 07 06:40	0°♏21'25	
conjunction	5131 Oct 24 23:34	2°♏34'58	2°01'19
minimum elong	5131 Oct 24 23:32	2°♏34'58	2°01'19
max. Earth dist.	5131 Oct 24 23:38	2°♏35'00	10.30415 AU
morning rise	5131 Nov 11 12:43	4°♏47'25	
retrograde	5132 Feb 21 04:27	12°♏31'32	
opposition	5132 Apr 28 05:17	9°♏07'54	2°35'10
min. Earth dist.	5132 Apr 28 04:34	9°♏08'02	8.34606 AU
direct	5132 Jul 06 04:19	5°♏39'52	
evening set	5132 Oct 20 07:03	13°♏38'00	
	5132 Oct 31 06:59	15°♏	
conjunction	5132 Nov 06 20:18	15°♏49'23	2°07'27
minimum elong	5132 Nov 06 20:18	15°♏49'23	2°07'28
max. Earth dist.	5132 Nov 06 20:43	15°♏49'31	10.38790 AU
morning rise	5132 Nov 24 05:20	17°♏59'31	
retrograde	5133 Mar 05 08:35	25°♏36'37	
opposition	5133 May 11 14:32	22°♏14'12	2°38'21
min. Earth dist.	5133 May 11 14:20	22°♏14'15	8.43412 AU
direct	5133 Jul 19 23:15	18°♏47'03	
evening set	5133 Nov 02 22:51	26°♏39'12	
conjunction	5133 Nov 20 08:31	28°♏48'22	2°06'56
minimum elong	5133 Nov 20 08:31	28°♏48'22	2°06'56
max. Earth dist.	5133 Nov 20 08:30	28°♏48'22	10.47906 AU
	5133 Nov 29 22:54	0°♐	
morning rise	5133 Dec 07 13:53	0°♐56'17	
retrograde	5134 Mar 18 05:28	8°♐26'21	
opposition	5134 May 24 19:39	5°♐05'08	2°33'30
min. Earth dist.	5134 May 24 20:10	5°♐05'02	8.52709 AU
direct	5134 Aug 02 14:27	1°♐38'58	
evening set	5134 Nov 16 05:53	9°♐24'22	
conjunction	5134 Dec 03 12:09	11°♐31'24	2°00'08
minimum elong	5134 Dec 03 12:11	11°♐31'24	2°00'09
max. Earth dist.	5134 Dec 03 11:18	11°♐31'08	10.57286 AU
morning rise	5134 Dec 20 14:23	13°♐37'12	
retrograde	5135 Mar 30 20:45	21°♐00'39	
opposition	5135 Jun 06 20:29	17°♐40'30	2°21'19
min. Earth dist.	5135 Jun 06 21:13	17°♐40'22	8.62029 AU
direct	5135 Aug 16 00:57	14°♐15'26	
evening set	5135 Nov 29 04:05	21°♐53'40	
conjunction	5135 Dec 16 07:26	23°♐58'43	1°47'46
minimum elong	5135 Dec 16 07:28	23°♐58'44	1°47'46
max. Earth dist.	5135 Dec 16 06:16	23°♐58'22	10.66476 AU
morning rise	5136 Jan 02 07:02	26°♐02'37	

	5136 Feb 07 07:03	0°♉	
retrograde	5136 Apr 11 07:55	3°♉20'09	
opposition	5136 Jun 18 17:14	0°♉00'52	2°02'50
	5136 Jun 18 21:44	30°℞♐	
min. Earth dist.	5136 Jun 18 17:26	0°♉00'49	8.70929 AU
direct	5136 Aug 28 04:34	26°♐36'56	
	5136 Nov 02 15:09	0°♉	
evening set	5136 Dec 10 17:56	4°♉08'00	
conjunction	5136 Dec 27 18:53	6°♉11'18	1°30'40
minimum elong	5136 Dec 27 18:55	6°♉11'18	1°30'41
max. Earth dist.	5136 Dec 27 18:19	6°♉11'07	10.75032 AU
morning rise	5137 Jan 13 16:16	8°♉13'33	
retrograde	5137 Apr 23 14:49	15°♉26'07	
opposition	5137 Jul 01 10:07	12°♉07'28	1°39'13
min. Earth dist.	5137 Jul 01 10:08	12°♉07'28	8.78977 AU
direct	5137 Sep 10 02:34	8°♉44'38	
evening set	5137 Dec 23 00:48	16°♉09'00	
conjunction	5138 Jan 08 23:37	18°♉10'45	1°09'51
minimum elong	5138 Jan 08 23:39	18°♉10'46	1°09'52
max. Earth dist.	5138 Jan 08 23:11	18°♉10'37	10.82529 AU
morning rise	5138 Jan 25 19:15	20°♉11'38	
retrograde	5138 May 05 19:44	27°♉20'21	
opposition	5138 Jul 13 23:36	24°♉02'09	1°11'43
min. Earth dist.	5138 Jul 14 00:20	24°♉02'01	8.85778 AU
direct	5138 Sep 22 18:52	20°♉40'20	
evening set	5139 Jan 04 01:47	27°♉58'45	
conjunction	5139 Jan 20 22:37	29°♉59'16	0°46'18
minimum elong	5139 Jan 20 22:38	29°♉59'17	0°46'20
max. Earth dist.	5139 Jan 20 21:12	29°♉58'51	10.88589 AU
	5139 Jan 21 01:03	0°♒	
morning rise	5139 Feb 06 17:02	1°♒59'05	
retrograde	5139 May 17 20:43	9°♒05'21	
opposition	5139 Jul 26 10:40	5°♒47'21	0°41'35
min. Earth dist.	5139 Jul 26 12:20	5°♒47'02	8.90991 AU
direct	5139 Oct 05 05:52	2°♒26'26	
evening set	5140 Jan 15 22:01	9°♒40'00	
conjunction	5140 Feb 01 17:11	11°♒39'33	0°21'04
minimum elong	5140 Feb 01 17:12	11°♒39'33	0°21'05
max. Earth dist.	5140 Feb 01 14:46	11°♒38'50	10.92931 AU
morning rise	5140 Feb 18 10:50	13°♒38'38	
	5140 Mar 01 07:04	15°♒	
retrograde	5140 May 28 20:54	20°♒43'57	
opposition	5140 Aug 06 19:51	17°♒25'54	0°10'01
min. Earth dist.	5140 Aug 06 21:31	17°♒25'35	8.94411 AU
	5140 Sep 12 12:39	15°℞♒	
direct	5140 Oct 16 14:48	14°♒05'45	
	5140 Nov 19 01:40	15°♒	
desc. node	5140 Dec 03 09:52	15°♒54'11	
evening set	5141 Jan 26 15:13	21°♒15'38	
conjunction	5141 Feb 12 09:12	23°♒14'33	-0°04'58
minimum elong	5141 Feb 12 09:12	23°♒14'33	0°04'57
behind sun begin	5141 Feb 12 02:23	23°♒12'32	
behind sun end	5141 Feb 12 16:00	23°♒16'33	
max. Earth dist.	5141 Feb 12 07:10	23°♒13'59	10.95423 AU
morning rise	5141 Mar 01 02:14	25°♒13'11	
	5141 Apr 16 21:01	0°♓	
retrograde	5141 Jun 09 23:21	2°♓18'56	
	5141 Aug 05 14:36	30°℞♒	
opposition	5141 Aug 19 03:47	29°♒00'34	-0°21'45
min. Earth dist.	5141 Aug 19 04:52	29°♒00'22	8.95966 AU
direct	5141 Oct 28 19:52	25°♒41'01	
	5142 Jan 12 20:12	0°♓	
evening set	5142 Feb 07 06:45	2°♓48'24	
conjunction	5142 Feb 23 23:48	4°♓46'58	-0°30'35
minimum elong	5142 Feb 23 23:47	4°♓46'58	0°30'35
max. Earth dist.	5142 Feb 23 22:25	4°♓46'34	10.96032 AU
morning rise	5142 Mar 12 16:28	6°♓45'29	
retrograde	5142 Jun 22 01:43	13°♓52'59	
opposition	5142 Aug 31 11:46	10°♓34'04	-0°52'36
min. Earth dist.	5142 Aug 31 12:33	10°♓33'55	8.95652 AU
direct	5142 Nov 09 21:44	7°♓14'54	
evening set	5143 Feb 18 21:51	14°♓21'01	
conjunction	5143 Mar 07 14:08	16°♓19'31	-0°55'00
minimum elong	5143 Mar 07 14:06	16°♓19'30	0°55'00
max. Earth dist.	5143 Mar 07 12:34	16°♓19'03	10.94781 AU
morning rise	5143 Mar 24 06:57	18°♓18'13	
retrograde	5143 Jul 04 06:35	25°♓28'45	
opposition	5143 Sep 12 20:21	22°♓09'03	-1°21'24
min. Earth dist.	5143 Sep 12 21:33	22°♓08'50	8.93520 AU
direct	5143 Nov 21 23:28	18°♓50'02	
evening set	5144 Mar 01 13:58	25°♓56'07	
conjunction	5144 Mar 18 05:54	27°♓54'53	-1°17'17
minimum elong	5144 Mar 18 05:52	27°♓54'53	1°17'16
max. Earth dist.	5144 Mar 18 04:01	27°♓54'20	10.91750 AU
morning rise	5144 Apr 03 23:22	29°♓54'06	
	5144 Apr 04 19:32	0°♈	
retrograde	5144 Jul 15 13:23	7°♈08'49	
opposition	5144 Sep 24 06:00	3°♈48'10	-1°47'03
min. Earth dist.	5144 Sep 24 07:11	3°♈47'57	8.89668 AU
direct	5144 Dec 03 00:39	0°♈29'06	
evening set	5145 Mar 13 08:16	7°♈36'26	
conjunction	5145 Mar 30 00:34	9°♈35'49	-1°36'31
minimum elong	5145 Mar 30 00:32	9°♈35'49	1°36'31
max. Earth dist.	5145 Mar 29 23:29	9°♈35'30	10.87056 AU
morning rise	5145 Apr 15 19:00	11°♈35'52	
retrograde	5145 Jul 28 00:48	18°♈55'49	
opposition	5145 Oct 06 17:41	15°♈34'05	-2°08'31
min. Earth dist.	5145 Oct 06 18:03	15°♈34'01	8.84232 AU
direct	5145 Dec 15 04:40	12°♈14'49	
evening set	5146 Mar 25 05:59	19°♈24'33	
conjunction	5146 Apr 10 23:15	21°♈24'56	-1°51'52
minimum elong	5146 Apr 10 23:13	21°♈24'55	1°51'52
max. Earth dist.	5146 Apr 10 23:24	21°♈24'58	10.80871 AU
morning rise	5146 Apr 27 19:07	23°♈26'08	
	5146 Jul 08 01:14	0°♉	
retrograde	5146 Aug 09 18:31	0°♉52'12	
	5146 Sep 11 21:40	30°℞♈	
opposition	5146 Oct 19 08:08	27°♈29'20	-2°24'47
min. Earth dist.	5146 Oct 19 07:31	27°♈29'27	8.77415 AU
direct	5146 Dec 27 08:40	24°♈09'41	
	5147 Mar 25 12:16	0°♉	
evening set	5147 Apr 06 08:34	1°♉22'56	
conjunction	5147 Apr 23 03:25	3°♉24'39	-2°02'34
minimum elong	5147 Apr 23 03:24	3°♉24'39	2°02'35
max. Earth dist.	5147 Apr 23 03:39	3°♉24'44	10.73443 AU
morning rise	5147 May 10 01:33	5°♉27'25	
retrograde	5147 Aug 22 16:42	13°♉00'09	
opposition	5147 Nov 01 01:54	9°♉36'08	-2°34'57
min. Earth dist.	5147 Nov 01 01:15	9°♉36'16	8.69488 AU
direct	5148 Jan 08 14:59	6°♉15'55	
evening set	5148 Apr 17 16:55	13°♉33'44	
	5148 Apr 29 12:55	15°♉	

conjunction	5148 May 04 14:10	15°♉37'10	-2°07'55
minimum elong	5148 May 04 14:09	15°♉37'10	2°07'57
max. Earth dist.	5148 May 04 14:06	15°♉37'09	10.65073 AU
morning rise	5148 May 21 15:22	17°♉41'49	
retrograde	5148 Sep 03 19:42	25°♉21'32	
opposition	5148 Nov 12 23:29	21°♉56'25	-2°38'15
min. Earth dist.	5148 Nov 12 23:04	21°♉56'30	8.60772 AU
direct	5149 Jan 20 03:16	18°♉35'28	
evening set	5149 Apr 30 07:59	25°♉58'41	
conjunction	5149 May 17 08:29	28°♉04'11	-2°07'25
minimum elong	5149 May 17 08:30	28°♉04'11	2°07'26
max. Earth dist.	5149 May 17 08:44	28°♉04'15	10.56108 AU
	5149 Jun 02 01:06	0°♊	
morning rise	5149 Jun 03 13:17	0°♊10'58	
retrograde	5149 Sep 17 05:13	7°♊57'42	
opposition	5149 Nov 26 01:08	4°♊31'34	-2°34'05
min. Earth dist.	5149 Nov 26 00:33	4°♊31'40	8.51652 AU
direct	5150 Feb 01 19:31	1°♊09'45	
evening set	5150 May 13 06:36	8°♊39'01	
conjunction	5150 May 30 11:11	10°♊46'49	-2°00'44
minimum elong	5150 May 30 11:12	10°♊46'50	2°00'46
max. Earth dist.	5150 May 30 12:37	10°♊47'16	10.46966 AU
morning rise	5150 Jun 16 20:02	12°♊56'00	
retrograde	5150 Sep 30 20:24	20°♊49'22	
opposition	5150 Dec 09 07:01	17°♊22'18	-2°22'13
min. Earth dist.	5150 Dec 09 05:35	17°♊22'35	8.42569 AU
direct	5151 Feb 14 17:11	13°♊59'34	
evening set	5151 May 26 13:21	21°♊35'18	
conjunction	5151 Jun 12 22:30	23°♊45'35	-1°47'52
minimum elong	5151 Jun 12 22:32	23°♊45'36	1°47'52
max. Earth dist.	5151 Jun 13 00:44	23°♊46'17	10.38098 AU
morning rise	5151 Jun 30 11:45	25°♊57'13	
	5151 Aug 05 00:02	0°♋	
retrograde	5151 Oct 14 16:52	3°♋56'28	
opposition	5151 Dec 22 17:05	0°♋28'42	-2°02'45
min. Earth dist.	5151 Dec 22 14:59	0°♋29'07	8.33984 AU
	5151 Dec 28 17:25	30°℞♊	
direct	5152 Feb 27 20:38	27°♊04'58	
	5152 Apr 26 04:26	0°♋	
evening set	5152 Jun 08 04:41	4°♋47'20	
conjunction	5152 Jun 25 18:25	7°♋00'06	-1°29'06
minimum elong	5152 Jun 25 18:28	7°♋00'07	1°29'07
max. Earth dist.	5152 Jun 25 20:44	7°♋00'50	10.29973 AU
morning rise	5152 Jul 13 12:02	9°♋14'06	
retrograde	5152 Oct 27 18:45	17°♋18'06	
opposition	5153 Jan 04 06:59	13°♋49'53	-1°36'18
min. Earth dist.	5153 Jan 04 04:48	13°♋50'19	8.26375 AU
direct	5153 Mar 12 04:24	10°♋25'08	
evening set	5153 Jun 22 04:10	18°♋14'01	
conjunction	5153 Jul 09 22:16	20°♋29'03	-1°05'13
minimum elong	5153 Jul 09 22:19	20°♋29'03	1°05'13
max. Earth dist.	5153 Jul 10 00:16	20°♋29'41	10.23057 AU
morning rise	5153 Jul 27 19:51	22°♋45'10	
	5153 Oct 10 08:20	0°♌	
retrograde	5153 Nov 10 23:21	0°♌52'30	
	5153 Dec 12 16:00	30°℞♋	
opposition	5154 Jan 18 00:23	27°♋24'05	-1°04'05
min. Earth dist.	5154 Jan 17 22:33	27°♋24'28	8.20197 AU
direct	5154 Mar 25 19:07	23°♋58'20	
	5154 Jun 21 00:28	0°♌	
evening set	5154 Jul 06 11:02	1°♌53'17	
conjunction	5154 Jul 24 08:55	4°♌10'09	-0°37'23
minimum elong	5154 Jul 24 08:56	4°♌10'10	0°37'22
max. Earth dist.	5154 Jul 24 10:42	4°♌10'44	10.17763 AU
morning rise	5154 Aug 11 09:34	6°♌27'54	
retrograde	5154 Nov 25 04:53	14°♌36'57	
opposition	5155 Jan 31 20:22	11°♌08'35	-0°27'46
min. Earth dist.	5155 Jan 31 18:50	11°♌08'54	8.15821 AU
direct	5155 Apr 08 15:59	7°♌41'56	
	5155 Jul 15 09:29	15°♌	
evening set	5155 Jul 21 00:19	15°♌42'05	
conjunction	5155 Aug 08 00:56	18°♌00'15	-0°07'11
minimum elong	5155 Aug 08 00:56	18°♌00'15	0°07'10
behind sun begin	5155 Aug 07 18:12	17°♌58'07	
behind sun end	5155 Aug 08 07:39	18°♌02'24	
max. Earth dist.	5155 Aug 08 02:48	18°♌00'50	10.14395 AU
morning rise	5155 Aug 26 03:14	20°♌18'57	
asc. node	5155 Nov 03 16:00	27°♌19'35	
retrograde	5155 Dec 09 09:59	28°♌27'55	
opposition	5156 Feb 14 17:49	24°♌59'52	0°10'27
min. Earth dist.	5156 Feb 14 16:11	25°♌00'12	8.13497 AU
direct	5156 Apr 21 17:06	21°♌32'26	
evening set	5156 Aug 03 17:52	29°♌36'34	
	5156 Aug 06 20:00	0°♍	
conjunction	5156 Aug 21 19:51	1°♍55'19	0°23'42
minimum elong	5156 Aug 21 19:50	1°♍55'18	0°23'42
max. Earth dist.	5156 Aug 21 21:51	1°♍55'57	10.13137 AU
morning rise	5156 Sep 08 22:17	4°♍14'11	
retrograde	5156 Dec 22 14:34	12°♍21'22	
opposition	5157 Feb 27 15:57	8°♍53'48	0°48'11
min. Earth dist.	5157 Feb 27 14:08	8°♍54'11	8.13330 AU
direct	5157 May 05 19:53	5°♍25'46	
evening set	5157 Aug 18 13:14	13°♍32'22	
conjunction	5157 Sep 05 15:07	15°♍50'56	0°53'07
minimum elong	5157 Sep 05 15:05	15°♍50'55	0°53'07
max. Earth dist.	5157 Sep 05 17:00	15°♍51'32	10.14007 AU
morning rise	5157 Sep 23 16:10	18°♍09'15	
retrograde	5158 Jan 05 17:20	26°♍13'05	
opposition	5158 Mar 13 13:32	22°♍46'12	1°23'01
min. Earth dist.	5158 Mar 13 11:59	22°♍46'31	8.15237 AU
direct	5158 May 20 00:28	19°♍17'46	
evening set	5158 Sep 02 08:20	27°♍25'18	
conjunction	5158 Sep 20 08:43	29°♍43'01	1°19'21
minimum elong	5158 Sep 20 08:40	29°♍43'00	1°19'21
max. Earth dist.	5158 Sep 20 09:48	29°♍43'21	10.16842 AU
	5158 Sep 22 13:40	0°♎	
morning rise	5158 Oct 08 07:08	2°♎00'09	
retrograde	5159 Jan 19 15:51	9°♎59'21	
opposition	5159 Mar 27 09:36	6°♎33'24	1°52'48
min. Earth dist.	5159 Mar 27 09:03	6°♎33'30	8.19007 AU
direct	5159 Jun 03 05:29	3°♎04'50	
evening set	5159 Sep 17 00:40	11°♎11'47	
conjunction	5159 Oct 04 22:25	13°♎28'04	1°40'50
minimum elong	5159 Oct 04 22:22	13°♎28'03	1°40'50
max. Earth dist.	5159 Oct 04 22:14	13°♎28'01	10.21442 AU
morning rise	5159 Oct 22 17:20	15°♎43'32	
retrograde	5160 Feb 02 09:12	23°♎37'11	
opposition	5160 Apr 09 03:41	20°♎12'17	2°15'50
min. Earth dist.	5160 Apr 09 04:08	20°♎12'12	8.24462 AU
direct	5160 Jun 16 09:57	16°♎43'52	
evening set	5160 Sep 30 11:50	24°♎48'29	
conjunction	5160 Oct 18 06:12	27°♎02'57	1°56'26

minimum elong	5160 Oct 18 06:09	27°♎02'56	1°56'26
max. Earth dist.	5160 Oct 18 05:01	27°♎02'34	10.27638 AU
morning rise	5160 Nov 04 21:11	29°♎16'22	
	5160 Nov 10 18:41	0°♏	
retrograde	5161 Feb 14 20:58	7°♏03'42	
opposition	5161 Apr 22 18:47	3°♏39'55	2°31'00
min. Earth dist.	5161 Apr 22 19:45	3°♏39'43	8.31387 AU
direct	5161 Jun 30 11:58	0°♏11'52	
evening set	5161 Oct 14 16:13	8°♏12'30	
conjunction	5161 Nov 01 06:57	10°♏24'53	2°05'30
minimum elong	5161 Nov 01 06:56	10°♏24'53	2°05'30
max. Earth dist.	5161 Nov 01 05:10	10°♏24'19	10.35164 AU
morning rise	5161 Nov 18 17:57	12°♏36'05	
	5161 Dec 08 21:36	15°♏	
retrograde	5162 Feb 28 02:33	20°♏16'33	
opposition	5162 May 06 06:05	16°♏53'50	2°37'50
min. Earth dist.	5162 May 06 06:59	16°♏53'39	8.39442 AU
	5162 May 31 14:11	15°℞♏	
direct	5162 Jul 14 10:54	13°♏26'23	
	5162 Aug 26 17:25	15°♏	
evening set	5162 Oct 28 12:26	21°♏21'37	
conjunction	5162 Nov 14 23:38	23°♏31'49	2°07'50
minimum elong	5162 Nov 14 23:38	23°♏31'49	2°07'50
max. Earth dist.	5162 Nov 14 21:55	23°♏31'17	10.43631 AU
morning rise	5162 Dec 02 06:45	25°♏40'47	
	5163 Jan 09 23:55	0°♐	
retrograde	5163 Mar 13 02:18	3°♐14'13	
	5163 May 17 23:16	30°℞♏	
opposition	5163 May 19 13:25	29°♏52'30	2°36'24
min. Earth dist.	5163 May 19 13:51	29°♏52'25	8.48202 AU
direct	5163 Jul 28 05:17	26°♏25'51	
	5163 Oct 03 19:14	0°♐	
evening set	5163 Nov 10 23:36	4°♐14'36	
conjunction	5163 Nov 28 07:28	6°♐22'38	2°03'41
minimum elong	5163 Nov 28 07:29	6°♐22'39	2°03'41
max. Earth dist.	5163 Nov 28 06:32	6°♐22'21	10.52590 AU
morning rise	5163 Dec 15 11:02	8°♐29'25	
retrograde	5164 Mar 24 21:36	15°♐56'04	
opposition	5164 May 31 16:29	12°♐35'17	2°27'17
min. Earth dist.	5164 May 31 16:56	12°♐35'12	8.57218 AU
direct	5164 Aug 09 17:18	9°♐09'31	
evening set	5164 Nov 23 01:48	16°♐51'12	
conjunction	5164 Dec 10 06:38	18°♐57'13	1°53'36
minimum elong	5164 Dec 10 06:40	18°♐57'13	1°53'37
max. Earth dist.	5164 Dec 10 05:54	18°♐56'59	10.61594 AU
morning rise	5164 Dec 27 07:16	21°♐02'01	
retrograde	5165 Apr 06 11:03	28°♐22'21	
opposition	5165 Jun 13 15:07	25°♐02'23	2°11'23
min. Earth dist.	5165 Jun 13 16:07	25°♐02'11	8.66057 AU
direct	5165 Aug 22 22:38	21°♐37'33	
evening set	5165 Dec 05 19:27	29°♐12'03	
	5165 Dec 12 10:57	0°♑	
conjunction	5165 Dec 22 21:31	1°♑16'13	1°38'25
minimum elong	5165 Dec 22 21:33	1°♑16'13	1°38'26
max. Earth dist.	5165 Dec 22 20:14	1°♑15'49	10.70212 AU
morning rise	5166 Jan 08 19:53	3°♑19'17	
retrograde	5166 Apr 18 18:20	10°♑34'09	
opposition	5166 Jun 26 09:45	7°♑14'50	1°49'48
min. Earth dist.	5166 Jun 26 11:10	7°♑14'33	8.74308 AU
direct	5166 Sep 05 00:16	3°♑51'00	
evening set	5166 Dec 18 05:19	11°♑18'35	

conjunction	5167 Jan 04 04:58	13°♑21'05	1°19'05
minimum elong	5167 Jan 04 05:00	13°♑21'06	1°19'06
max. Earth dist.	5167 Jan 04 03:13	13°♑20'34	10.78058 AU
morning rise	5167 Jan 21 01:32	15°♑22'40	
retrograde	5167 Apr 30 23:19	22°♑33'12	
opposition	5167 Jul 09 00:41	19°♑14'20	1°23'49
min. Earth dist.	5167 Jul 09 01:33	19°♑14'10	8.81616 AU
direct	5167 Sep 17 20:11	15°♑51'32	
evening set	5167 Dec 30 08:31	23°♑12'45	
conjunction	5168 Jan 16 06:14	25°♑13'54	0°56'34
minimum elong	5168 Jan 16 06:16	25°♑13'54	0°56'36
max. Earth dist.	5168 Jan 16 05:12	25°♑13'35	10.84804 AU
morning rise	5168 Feb 02 01:19	27°♑14'16	
	5168 Feb 26 18:42	0°♒	
retrograde	5168 May 12 01:50	4°♒21'41	
opposition	5168 Jul 20 12:31	1°♒03'05	0°54'39
min. Earth dist.	5168 Jul 20 12:37	1°♒03'04	8.87685 AU
	5168 Aug 03 18:38	30°℞♑	
direct	5168 Sep 29 09:04	27°♑41'17	
	5168 Nov 22 19:20	0°♒	
evening set	5169 Jan 10 06:21	4°♒57'01	
conjunction	5169 Jan 27 02:28	6°♒57'04	0°31'57
minimum elong	5169 Jan 27 02:29	6°♒57'04	0°31'58
max. Earth dist.	5169 Jan 27 02:15	6°♒57'00	10.90173 AU
morning rise	5169 Feb 12 20:24	8°♒56'30	
	5169 Apr 18 17:38	15°♒	
retrograde	5169 May 24 03:08	16°♒02'08	
	5169 Jun 29 07:42	15°℞♒	
opposition	5169 Aug 01 22:04	12°♒43'39	0°23'34
min. Earth dist.	5169 Aug 01 22:02	12°♒43'40	8.92267 AU
direct	5169 Oct 11 18:24	9°♒22'46	
	5170 Jan 08 05:46	15°♒	
evening set	5170 Jan 22 00:28	16°♒34'06	
conjunction	5170 Feb 07 19:02	18°♒33'17	0°06'16
minimum elong	5170 Feb 07 19:03	18°♒33'17	0°06'16
behind sun begin	5170 Feb 07 12:25	18°♒31'20	
behind sun end	5170 Feb 08 01:41	18°♒35'14	
max. Earth dist.	5170 Feb 07 18:35	18°♒33'10	10.93945 AU
morning rise	5170 Feb 24 12:15	20°♒32'06	
desc. node	5170 May 08 18:35	27°♒00'09	
retrograde	5170 Jun 05 04:12	27°♒37'17	
opposition	5170 Aug 14 06:07	24°♒18'45	-0°08'13
min. Earth dist.	5170 Aug 14 06:37	24°♒18'39	8.95189 AU
direct	5170 Oct 23 23:16	20°♒58'40	
evening set	5171 Feb 02 16:08	28°♒06'45	
	5171 Feb 18 15:22	0°♓	
conjunction	5171 Feb 19 09:25	0°♓05'22	-0°19'40
minimum elong	5171 Feb 19 09:25	0°♓05'22	0°19'41
max. Earth dist.	5171 Feb 19 08:28	0°♓05'05	10.95989 AU
morning rise	5171 Mar 08 02:18	2°♓03'52	
retrograde	5171 Jun 17 03:34	9°♓10'01	
opposition	5171 Aug 26 13:32	5°♓51'11	-0°39'31
min. Earth dist.	5171 Aug 26 13:52	5°♓51'07	8.96347 AU
direct	5171 Nov 05 01:57	2°♓31'44	
evening set	5172 Feb 14 06:33	9°♓37'48	
conjunction	5172 Mar 01 23:03	11°♓36'10	-0°44'40
minimum elong	5172 Mar 01 23:02	11°♓36'10	0°44'40
max. Earth dist.	5172 Mar 01 22:43	11°♓36'04	10.96226 AU
morning rise	5172 Mar 18 15:50	13°♓34'38	
retrograde	5172 Jun 28 07:26	20°♓43'05	
opposition	5172 Sep 06 20:57	17°♓23'45	-1°09'14
min. Earth dist.	5172 Sep 06 20:27	17°♓23'51	8.95690 AU

direct	5172 Nov 16 04:50	14°♓04'48	
evening set	5173 Feb 24 21:27	21°♓10'05	
conjunction	5173 Mar 13 13:33	23°♓08'32	-1°07'54
minimum elong	5173 Mar 13 13:31	23°♓08'31	1°07'54
max. Earth dist.	5173 Mar 13 14:15	23°♓08'44	10.94640 AU
morning rise	5173 Mar 30 06:29	25°♓07'16	
	5173 May 17 01:50	0°♈	
retrograde	5173 Jul 10 13:49	2°♈19'11	
	5173 Sep 05 09:36	30°℞♓	
opposition	5173 Sep 19 05:10	28°♓59'13	-1°36'15
min. Earth dist.	5173 Sep 19 04:07	28°♓59'24	8.93240 AU
direct	5173 Nov 28 04:19	25°♓40'33	
	5174 Feb 11 14:42	0°♈	
evening set	5174 Mar 08 14:04	2°♈46'20	
conjunction	5174 Mar 25 06:04	4°♈45'09	-1°28'29
minimum elong	5174 Mar 25 06:02	4°♈45'08	1°28'28
max. Earth dist.	5174 Mar 25 06:38	4°♈45'19	10.91301 AU
morning rise	5174 Apr 10 23:45	6°♈44'31	
retrograde	5174 Jul 22 22:41	14°♈01'01	
opposition	5174 Oct 01 15:19	10°♈40'15	-1°59'32
min. Earth dist.	5174 Oct 01 14:31	10°♈40'24	8.89101 AU
direct	5174 Dec 10 05:12	7°♈21'38	
evening set	5175 Mar 20 09:29	14°♈29'07	
conjunction	5175 Apr 06 01:57	16°♈28'41	-1°45'32
minimum elong	5175 Apr 06 01:55	16°♈28'40	1°45'32
max. Earth dist.	5175 Apr 06 02:07	16°♈28'44	10.86347 AU
morning rise	5175 Apr 22 21:02	18°♈29'01	
retrograde	5175 Aug 04 12:20	25°♈51'01	
opposition	5175 Oct 14 03:48	22°♈29'19	-2°18'04
min. Earth dist.	5175 Oct 14 03:20	22°♈29'24	8.83426 AU
direct	5175 Dec 22 08:17	19°♈10'31	
evening set	5176 Mar 31 09:03	26°♈20'50	
conjunction	5176 Apr 17 02:51	28°♈21'31	-1°58'18
minimum elong	5176 Apr 17 02:49	28°♈21'30	1°58'18
max. Earth dist.	5176 Apr 17 03:22	28°♈21'40	10.79952 AU
	5176 Apr 30 17:53	0°♉	
morning rise	5176 May 03 23:49	0°♉23'10	
retrograde	5176 Aug 16 06:03	7°♉51'22	
opposition	5176 Oct 25 18:58	4°♉28'37	-2°30'56
min. Earth dist.	5176 Oct 25 18:16	4°♉28'45	8.76405 AU
direct	5177 Jan 02 13:55	1°♉09'24	
evening set	5177 Apr 12 13:48	8°♉23'37	
conjunction	5177 Apr 29 09:46	10°♉25'48	-2°06'02
minimum elong	5177 Apr 29 09:45	10°♉25'48	2°06'03
max. Earth dist.	5177 Apr 29 11:02	10°♉26'12	10.72322 AU
morning rise	5177 May 16 09:12	12°♉29'06	
	5177 Jun 07 08:51	15°♉	
retrograde	5177 Aug 29 06:14	20°♉04'00	
opposition	5177 Nov 07 13:43	16°♉40'08	-2°37'18
min. Earth dist.	5177 Nov 07 12:31	16°♉40'22	8.68257 AU
	5177 Nov 30 08:59	15°℞♉	
direct	5178 Jan 14 23:20	13°♉20'19	
	5178 Feb 28 02:45	15°♉	
evening set	5178 Apr 25 00:39	20°♉39'20	
conjunction	5178 May 11 23:27	22°♉43'24	-2°08'11
minimum elong	5178 May 11 23:27	22°♉43'24	2°08'13
max. Earth dist.	5178 May 12 00:33	22°♉43'44	10.63709 AU
morning rise	5178 May 29 02:08	24°♉48'41	
	5178 Jul 17 06:31	0°♊	
retrograde	5178 Sep 11 13:27	2°♊30'31	
	5178 Nov 08 16:05	30°℞♉	
opposition	5178 Nov 20 12:28	29°♉05'35	-2°36'32
min. Earth dist.	5178 Nov 20 11:23	29°♉05'47	8.59263 AU
direct	5179 Jan 27 10:57	25°♉44'56	
	5179 Apr 10 03:14	0°♊	
evening set	5179 May 07 18:48	3°♊09'41	
conjunction	5179 May 24 21:10	5°♊15'56	-2°04'20
minimum elong	5179 May 24 21:12	5°♊15'56	2°04'21
max. Earth dist.	5179 May 24 21:18	5°♊15'58	10.54461 AU
morning rise	5179 Jun 11 03:52	7°♊23'32	
retrograde	5179 Sep 25 00:42	15°♊12'12	
opposition	5179 Dec 03 15:19	11°♊46'15	-2°28'13
min. Earth dist.	5179 Dec 03 14:54	11°♊46'20	8.49856 AU
direct	5180 Feb 09 04:56	8°♊24'36	
evening set	5180 May 19 20:48	15°♊55'45	
conjunction	5180 Jun 06 03:26	18°♊04'26	-1°54'18
minimum elong	5180 Jun 06 03:28	18°♊04'27	1°54'19
max. Earth dist.	5180 Jun 06 03:06	18°♊04'20	10.45074 AU
morning rise	5180 Jun 23 14:33	20°♊14'30	
retrograde	5180 Oct 07 17:01	28°♊09'30	
opposition	5180 Dec 15 22:30	24°♊42'39	-2°12'16
min. Earth dist.	5180 Dec 15 22:30	24°♊42'39	8.40571 AU
direct	5181 Feb 21 05:24	21°♊19'52	
evening set	5181 Jun 02 06:54	28°♊57'41	
	5181 Jun 10 15:14	0°♋	
conjunction	5181 Jun 19 18:13	1°♋08'54	-1°38'15
minimum elong	5181 Jun 19 18:16	1°♋08'55	1°38'16
max. Earth dist.	5181 Jun 19 18:26	1°♋08'59	10.36081 AU
morning rise	5181 Jul 07 09:45	3°♋21'27	
retrograde	5181 Oct 21 14:45	11°♋21'56	
opposition	5181 Dec 29 09:42	7°♋54'19	-1°49'05
min. Earth dist.	5181 Dec 29 09:22	7°♋54'23	8.31942 AU
direct	5182 Mar 06 10:54	4°♋30'20	
evening set	5182 Jun 16 01:24	12°♋14'52	
conjunction	5182 Jul 03 17:26	14°♋28'32	-1°16'44
minimum elong	5182 Jul 03 17:29	14°♋28'33	1°16'44
max. Earth dist.	5182 Jul 03 18:24	14°♋28'50	10.27998 AU
morning rise	5182 Jul 21 13:05	16°♋43'22	
retrograde	5182 Nov 04 16:38	24°♋48'06	
opposition	5183 Jan 12 00:26	21°♋19'54	-1°19'31
min. Earth dist.	5183 Jan 11 23:32	21°♋20'05	8.24464 AU
direct	5183 Mar 19 22:12	17°♋54'43	
evening set	5183 Jun 30 03:51	25°♋45'44	
conjunction	5183 Jul 18 00:07	28°♋01'32	-0°50'41
minimum elong	5183 Jul 18 00:09	28°♋01'33	0°50'41
max. Earth dist.	5183 Jul 18 01:28	28°♋01'59	10.21280 AU
	5183 Aug 02 12:48	0°♌	
morning rise	5183 Aug 04 23:12	0°♌18'18	
retrograde	5183 Nov 18 20:54	8°♌25'47	
opposition	5184 Jan 25 18:14	4°♌57'17	-0°45'03
min. Earth dist.	5184 Jan 25 17:00	4°♌57'32	8.18557 AU
direct	5184 Apr 01 14:46	1°♌30'57	
evening set	5184 Jul 13 13:16	9°♌27'50	
conjunction	5184 Jul 31 12:43	11°♌45'18	-0°21'28
minimum elong	5184 Jul 31 12:44	11°♌45'19	0°21'28
max. Earth dist.	5184 Jul 31 13:47	11°♌45'39	10.16305 AU
morning rise	5184 Aug 18 14:09	14°♌03'26	
	5184 Aug 26 04:19	15°♌	
retrograde	5184 Dec 02 02:27	22°♌12'00	
opposition	5185 Feb 07 14:17	18°♌43'31	-0°07'34
min. Earth dist.	5185 Feb 07 13:22	18°♌43'42	8.14565 AU
direct	5185 Apr 15 11:38	15°♌16'09	

asc. node	5185 Apr 23 12:13	15°♌19'44	
evening set	5185 Jul 28 04:04	23°♌17'57	
conjunction	5185 Aug 15 05:29	25°♌36'26	0°09'16
minimum elong	5185 Aug 15 05:28	25°♌36'25	0°09'16
behind sun begin	5185 Aug 14 23:20	25°♌34'28	
behind sun end	5185 Aug 15 11:36	25°♌38'22	
max. Earth dist.	5185 Aug 15 05:56	25°♌36'34	10.13368 AU
morning rise	5185 Sep 02 07:56	27°♌55'14	
	5185 Sep 19 07:42	0°♍	
retrograde	5185 Dec 16 08:02	6°♍03'11	
opposition	5186 Feb 21 11:36	2°♍34'58	0°30'36
min. Earth dist.	5186 Feb 21 11:13	2°♍35'03	8.12729 AU
	5186 Mar 29 02:14	30°℞♌	
direct	5186 Apr 29 12:19	29°♌06'45	
	5186 May 30 20:15	0°♍	
evening set	5186 Aug 11 22:15	7°♍12'11	
conjunction	5186 Aug 30 00:15	9°♍30'56	0°39'29
minimum elong	5186 Aug 30 00:13	9°♍30'56	0°39'30
max. Earth dist.	5186 Aug 30 00:08	9°♍30'54	10.12635 AU
morning rise	5186 Sep 17 02:15	11°♍49'41	
retrograde	5186 Dec 30 11:09	19°♍55'19	
opposition	5187 Mar 07 09:13	16°♍27'38	1°07'03
min. Earth dist.	5187 Mar 07 09:11	16°♍27'39	8.13138 AU
direct	5187 May 13 17:15	12°♍58'50	
evening set	5187 Aug 26 17:31	21°♍06'20	
conjunction	5187 Sep 13 18:41	23°♍24'37	1°07'25
minimum elong	5187 Sep 13 18:38	23°♍24'36	1°07'25
max. Earth dist.	5187 Sep 13 18:13	23°♍24'28	10.14129 AU
morning rise	5187 Oct 01 18:42	25°♍42'31	
	5187 Nov 07 19:06	0°♎	
retrograde	5188 Jan 13 09:51	3°♎44'22	
opposition	5188 Mar 20 05:57	0°♎17'27	1°39'27
min. Earth dist.	5188 Mar 20 05:48	0°♎17'29	8.15753 AU
	5188 Mar 23 19:25	30°℞♍	
direct	5188 May 26 23:07	26°♍48'22	
	5188 Jul 27 18:57	0°♎	
evening set	5188 Sep 09 11:11	4°♎56'09	
conjunction	5188 Sep 27 10:19	7°♎13'17	1°31'18
minimum elong	5188 Sep 27 10:16	7°♎13'16	1°31'18
max. Earth dist.	5188 Sep 27 10:06	7°♎13'13	10.17764 AU
morning rise	5188 Oct 15 07:11	9°♎29'45	
retrograde	5189 Jan 26 05:09	17°♎26'32	
opposition	5189 Apr 03 00:58	14°♎00'34	2°05'51
min. Earth dist.	5189 Apr 03 00:20	14°♎00'42	8.20415 AU
direct	5189 Jun 10 03:44	10°♎31'32	
evening set	5189 Sep 24 00:47	18°♎37'42	
conjunction	5189 Oct 11 21:01	20°♎53'13	1°49'48
minimum elong	5189 Oct 11 20:58	20°♎53'12	1°49'48
max. Earth dist.	5189 Oct 11 21:16	20°♎53'18	10.23321 AU
morning rise	5189 Oct 29 14:02	23°♎07'46	
	5190 Jan 07 02:07	0°♏	
retrograde	5190 Feb 08 20:53	0°♏58'30	
	5190 Mar 13 23:46	30°℞♎	
opposition	5190 Apr 16 17:22	27°♎33'38	2°24'50
min. Earth dist.	5190 Apr 16 16:45	27°♎33'45	8.26837 AU
direct	5190 Jun 24 05:15	24°♎04'56	
	5190 Sep 20 15:17	0°♏	
evening set	5190 Oct 08 08:33	2°♏07'49	
conjunction	5190 Oct 26 01:17	4°♏21'20	2°02'00
minimum elong	5190 Oct 26 01:15	4°♏21'20	2°02'00
max. Earth dist.	5190 Oct 26 01:31	4°♏21'25	10.30469 AU
morning rise	5190 Nov 12 14:09	6°♏33'42	
retrograde	5191 Feb 22 06:18	14°♏17'41	
opposition	5191 Apr 30 06:23	10°♏54'03	2°35'38
min. Earth dist.	5191 Apr 30 06:15	10°♏54'04	8.34646 AU
direct	5191 Jul 08 05:05	7°♏25'58	
	5191 Oct 19 02:04	15°♏	
evening set	5191 Oct 22 08:43	15°♏24'04	
conjunction	5191 Nov 08 21:44	17°♏35'24	2°07'31
minimum elong	5191 Nov 08 21:43	17°♏35'24	2°07'31
max. Earth dist.	5191 Nov 08 21:34	17°♏35'21	10.38810 AU
morning rise	5191 Nov 26 06:36	19°♏45'30	
retrograde	5192 Mar 06 08:34	27°♏22'27	
opposition	5192 May 12 15:44	24°♏00'03	2°38'03
min. Earth dist.	5192 May 12 16:14	23°♏59'57	8.43419 AU
direct	5192 Jul 21 01:36	20°♏32'49	
evening set	5192 Nov 04 00:09	28°♏24'54	
	5192 Nov 16 20:17	0°♐	
conjunction	5192 Nov 21 09:33	0°♐34'01	2°06'22
minimum elong	5192 Nov 21 09:34	0°♐34'02	2°06'22
max. Earth dist.	5192 Nov 21 08:39	0°♐33'44	10.47896 AU
morning rise	5192 Dec 08 14:53	2°♐41'54	
retrograde	5193 Mar 19 05:32	10°♐11'54	
opposition	5193 May 25 20:50	6°♐50'40	2°32'26
min. Earth dist.	5193 May 25 21:21	6°♐50'34	8.52687 AU
direct	5193 Aug 03 16:52	3°♐24'27	
evening set	5193 Nov 17 06:49	11°♐09'45	
conjunction	5193 Dec 04 13:00	13°♐16'45	1°58'59
minimum elong	5193 Dec 04 13:02	13°♐16'45	1°59'00
max. Earth dist.	5193 Dec 04 11:59	13°♐16'26	10.57254 AU
morning rise	5193 Dec 21 15:13	15°♐22'32	
retrograde	5194 Mar 31 21:36	22°♐45'57	
opposition	5194 Jun 07 21:35	19°♐25'45	2°19'35
min. Earth dist.	5194 Jun 07 21:41	19°♐25'43	8.61978 AU
direct	5194 Aug 17 02:01	16°♐00'40	
evening set	5194 Nov 30 04:49	23°♐38'47	
conjunction	5194 Dec 17 08:13	25°♐43'50	1°46'06
minimum elong	5194 Dec 17 08:15	25°♐43'51	1°46'07
max. Earth dist.	5194 Dec 17 07:46	25°♐43'42	10.66419 AU
morning rise	5195 Jan 03 07:42	27°♐47'44	
	5195 Jan 22 09:20	0°♑	
retrograde	5195 Apr 13 08:39	5°♑05'17	
opposition	5195 Jun 20 18:26	1°♑45'56	2°00'31
min. Earth dist.	5195 Jun 20 18:09	1°♑45'59	8.70854 AU
	5195 Jul 15 02:05	30°℞♐	
direct	5195 Aug 30 06:09	28°♐22'01	
	5195 Oct 14 09:33	0°♑	
evening set	5195 Dec 12 18:36	5°♑52'59	
conjunction	5195 Dec 29 19:32	7°♑56'16	1°28'35
minimum elong	5195 Dec 29 19:34	7°♑56'17	1°28'36
max. Earth dist.	5195 Dec 29 19:41	7°♑56'19	10.74962 AU
morning rise	5196 Jan 15 16:49	9°♑58'31	
retrograde	5196 Apr 24 16:43	17°♑11'09	
opposition	5196 Jul 02 11:32	13°♑52'28	1°36'25
min. Earth dist.	5196 Jul 02 11:42	13°♑52'26	8.78912 AU
direct	5196 Sep 11 03:34	10°♑29'40	
evening set	5196 Dec 24 01:25	17°♑53'54	
conjunction	5197 Jan 10 00:07	19°♑55'40	1°07'25
minimum elong	5197 Jan 10 00:09	19°♑55'40	1°07'27
max. Earth dist.	5197 Jan 09 23:37	19°♑55'31	10.82491 AU
morning rise	5197 Jan 26 19:48	21°♑56'33	
retrograde	5197 May 06 20:03	29°♑05'20	

opposition	5197 Jul 15 01:07	25°♑47'07	1°08'35
min. Earth dist.	5197 Jul 15 02:02	25°♑46'56	8.85775 AU
direct	5197 Sep 23 19:14	22°♑25'19	
evening set	5198 Jan 05 02:19	29°♑43'37	
	5198 Jan 07 10:03	0°♒	
conjunction	5198 Jan 21 23:04	1°♒44'06	0°43'39
minimum elong	5198 Jan 21 23:05	1°♒44'07	0°43'41
max. Earth dist.	5198 Jan 21 21:34	1°♒43'40	10.88637 AU
morning rise	5198 Feb 07 17:36	3°♒43'56	
retrograde	5198 May 18 21:02	10°♒50'14	
opposition	5198 Jul 27 12:07	7°♒32'12	0°38'15
min. Earth dist.	5198 Jul 27 13:14	7°♒32'00	8.91089 AU
direct	5198 Oct 06 08:29	4°♒11'19	
evening set	5199 Jan 16 22:27	11°♒24'42	
conjunction	5199 Feb 02 17:38	13°♒24'13	0°18'19
minimum elong	5199 Feb 02 17:39	13°♒24'13	0°18'20
max. Earth dist.	5199 Feb 02 16:07	13°♒23'46	10.93078 AU
	5199 Feb 16 03:51	15°♒	
morning rise	5199 Feb 19 11:14	15°♒23'16	
retrograde	5199 May 30 22:46	22°♒28'36	
opposition	5199 Aug 08 21:13	19°♒10'31	0°06'39
min. Earth dist.	5199 Aug 08 21:49	19°♒10'24	8.94596 AU
direct	5199 Oct 18 16:16	15°♒50'26	
desc. node	5199 Oct 26 14:01	15°♒53'31	
evening set	5200 Jan 28 15:33	23°♒00'05	
conjunction	5200 Feb 14 09:33	24°♒58'58	-0°07'41
minimum elong	5200 Feb 14 09:32	24°♒58'58	0°07'41
behind sun begin	5200 Feb 14 03:11	24°♒57'06	
behind sun end	5200 Feb 14 15:53	25°♒00'50	
max. Earth dist.	5200 Feb 14 08:36	24°♒58'42	10.95636 AU
morning rise	5200 Mar 02 02:27	26°♒57'35	
	5200 Mar 29 19:50	0°♓	
retrograde	5200 Jun 11 00:14	4°♓03'21	
opposition	5200 Aug 20 05:13	0°♓44'59	-0°25'03
min. Earth dist.	5200 Aug 20 05:51	0°♓44'52	8.96203 AU
	5200 Aug 30 09:46	30°♑♒	
direct	5200 Oct 29 19:58	27°♒25'31	
	5200 Dec 26 07:13	0°♓	
evening set	5201 Feb 08 07:02	4°♓32'43	
conjunction	5201 Feb 24 23:59	6°♓31'14	-0°33'11
minimum elong	5201 Feb 24 23:57	6°♓31'13	0°33'11
max. Earth dist.	5201 Feb 24 22:36	6°♓30'49	10.96282 AU
morning rise	5201 Mar 13 16:41	8°♓29'43	
retrograde	5201 Jun 23 03:17	15°♓37'15	
opposition	5201 Sep 01 13:07	12°♓18'23	-0°55'41
min. Earth dist.	5201 Sep 01 14:15	12°♓18'10	8.95916 AU
direct	5201 Nov 10 22:26	8°♓59'18	
evening set	5202 Feb 19 22:11	16°♓05'15	
conjunction	5202 Mar 08 14:19	18°♓03'43	-0°57'23
minimum elong	5202 Mar 08 14:17	18°♓03'43	0°57'23
max. Earth dist.	5202 Mar 08 12:21	18°♓03'08	10.95046 AU
morning rise	5202 Mar 25 07:14	20°♓02'24	
retrograde	5202 Jul 05 06:42	27°♓12'59	
opposition	5202 Sep 13 21:35	23°♓53'20	-1°24'08
min. Earth dist.	5202 Sep 13 22:54	23°♓53'06	8.93789 AU
direct	5202 Nov 22 23:58	20°♓34'25	
evening set	5203 Mar 03 14:14	27°♓40'24	
conjunction	5203 Mar 20 06:12	29°♓39'08	-1°19'20
minimum elong	5203 Mar 20 06:10	29°♓39'07	1°19'20
max. Earth dist.	5203 Mar 20 04:53	29°♓38'44	10.92012 AU
	5203 Mar 23 03:59	0°♈	
morning rise	5203 Apr 05 23:38	1°♈38'18	
retrograde	5203 Jul 17 14:07	8°♈53'08	
opposition	5203 Sep 26 07:13	5°♈32'30	-1°49'19
min. Earth dist.	5203 Sep 26 07:42	5°♈32'25	8.89927 AU
direct	5203 Dec 05 02:43	2°♈13'33	
evening set	5204 Mar 14 08:28	9°♈20'44	
conjunction	5204 Mar 31 00:52	11°♈20'07	-1°38'09
minimum elong	5204 Mar 31 00:50	11°♈20'06	1°38'09
max. Earth dist.	5204 Mar 31 00:40	11°♈20'03	10.87301 AU
morning rise	5204 Apr 16 19:14	13°♈20'08	
retrograde	5204 Jul 29 03:31	20°♈40'09	
opposition	5204 Oct 07 18:49	17°♈18'28	-2°10'14
min. Earth dist.	5204 Oct 07 18:31	17°♈18'31	8.84470 AU
direct	5204 Dec 16 04:39	13°♈59'18	
evening set	5205 Mar 26 06:22	21°♈08'54	
conjunction	5205 Apr 11 23:38	23°♈09'15	-1°53'01
minimum elong	5205 Apr 11 23:36	23°♈09'14	1°53'02
max. Earth dist.	5205 Apr 11 23:39	23°♈09'15	10.81095 AU
morning rise	5205 Apr 28 19:35	25°♈10'27	
	5205 Jun 13 22:54	0°♉	
retrograde	5205 Aug 10 19:18	2°♉36'31	
	5205 Oct 10 02:47	30°♑♈	
opposition	5205 Oct 20 09:05	29°♈13'41	-2°25'52
min. Earth dist.	5205 Oct 20 08:40	29°♈13'46	8.77629 AU
direct	5205 Dec 28 08:17	25°♈54'06	
	5206 Mar 10 12:17	0°♉	
evening set	5206 Apr 07 08:57	3°♉07'16	
conjunction	5206 Apr 24 03:47	5°♉08'58	-2°03'10
minimum elong	5206 Apr 24 03:46	5°♉08'58	2°03'12
max. Earth dist.	5206 Apr 24 03:19	5°♉08'49	10.73650 AU
morning rise	5206 May 11 02:07	7°♉11'44	
retrograde	5206 Aug 23 16:51	14°♉44'26	
opposition	5206 Nov 02 02:47	11°♉20'27	-2°35'21
min. Earth dist.	5206 Nov 02 02:42	11°♉20'28	8.69684 AU
direct	5207 Jan 09 16:20	8°♉00'15	
	5207 Apr 17 05:06	15°♉	
evening set	5207 Apr 19 17:09	15°♉17'56	
conjunction	5207 May 06 14:32	17°♉21'23	-2°07'58
minimum elong	5207 May 06 14:32	17°♉21'23	2°07'59
max. Earth dist.	5207 May 06 14:33	17°♉21'23	10.65263 AU
morning rise	5207 May 23 15:55	19°♉26'02	
retrograde	5207 Sep 05 20:34	27°♉05'41	
opposition	5207 Nov 15 00:07	23°♉40'35	-2°37'56
min. Earth dist.	5207 Nov 14 23:47	23°♉40'39	8.60951 AU
direct	5208 Jan 22 03:28	20°♉19'38	
evening set	5208 May 01 08:12	27°♉42'43	
conjunction	5208 May 18 09:00	29°♉48'13	-2°06'53
minimum elong	5208 May 18 09:01	29°♉48'13	2°06'54
max. Earth dist.	5208 May 18 09:57	29°♉48'31	10.56276 AU
	5208 May 19 23:05	0°♊	
morning rise	5208 Jun 04 13:54	1°♊55'02	
retrograde	5208 Sep 18 05:06	9°♊41'37	
opposition	5208 Nov 27 01:21	6°♊15'28	-2°33'04
min. Earth dist.	5208 Nov 27 00:19	6°♊15'40	8.51806 AU
direct	5209 Feb 02 20:16	2°♊53'39	
evening set	5209 May 14 06:52	10°♊22'47	
conjunction	5209 May 31 11:42	12°♊30'38	-1°59'39
minimum elong	5209 May 31 11:43	12°♊30'38	1°59'39
max. Earth dist.	5209 May 31 13:24	12°♊31'10	10.47103 AU
morning rise	5209 Jun 17 20:40	14°♊39'48	
retrograde	5209 Oct 01 20:40	22°♊32'59	

opposition	5209 Dec 10 07:01	19°♊05'54	-2°20'31
min. Earth dist.	5209 Dec 10 05:16	19°♊06'15	8.42687 AU
direct	5210 Feb 15 17:25	15°♊43'08	
evening set	5210 May 27 13:33	23°♊18'43	
conjunction	5210 Jun 13 22:50	25°♊29'02	-1°46'15
minimum elong	5210 Jun 13 22:52	25°♊29'03	1°46'15
max. Earth dist.	5210 Jun 14 00:27	25°♊29'33	10.38202 AU
morning rise	5210 Jul 01 12:19	27°♊40'42	
	5210 Jul 21 00:48	0°♋	
retrograde	5210 Oct 15 18:03	5°♋39'43	
opposition	5210 Dec 23 16:56	2°♋11'55	-2°00'27
min. Earth dist.	5210 Dec 23 15:15	2°♋12'16	8.34066 AU
	5211 Jan 22 16:26	30℞♊	
direct	5211 Feb 28 19:15	28°♊48'07	
	5211 Apr 06 09:16	0°♋	
evening set	5211 Jun 10 04:51	6°♋30'23	
conjunction	5211 Jun 27 18:44	8°♋43'10	-1°27'03
minimum elong	5211 Jun 27 18:47	8°♋43'11	1°27'04
max. Earth dist.	5211 Jun 27 20:00	8°♋43'34	10.30045 AU
morning rise	5211 Jul 15 12:40	10°♋57'13	
retrograde	5211 Oct 29 19:07	19°♋00'56	
opposition	5212 Jan 06 06:37	15°♋32'41	-1°33'33
min. Earth dist.	5212 Jan 06 05:19	15°♋32'57	8.26421 AU
direct	5212 Mar 13 04:24	12°♋07'49	
evening set	5212 Jun 23 04:19	19°♋56'41	
conjunction	5212 Jul 10 22:37	22°♋11'44	-1°02'50
minimum elong	5212 Jul 10 22:40	22°♋11'44	1°02'51
max. Earth dist.	5212 Jul 10 23:50	22°♋12'07	10.23088 AU
morning rise	5212 Jul 28 20:27	24°♋27'52	
	5212 Sep 17 08:56	0°♌	
retrograde	5212 Nov 11 21:44	2°♌34'57	
	5213 Jan 07 20:58	30℞♋	
opposition	5213 Jan 18 23:49	29°♋06'30	-1°00'59
min. Earth dist.	5213 Jan 18 22:37	29°♋06'45	8.20201 AU
direct	5213 Mar 26 20:14	25°♋40'39	
	5213 Jun 06 22:48	0°♌	
evening set	5213 Jul 07 11:07	3°♌35'35	
conjunction	5213 Jul 25 09:12	5°♌52'30	-0°34'48
minimum elong	5213 Jul 25 09:14	5°♌52'30	0°34'48
max. Earth dist.	5213 Jul 25 10:57	5°♌53'03	10.17748 AU
morning rise	5213 Aug 12 09:55	8°♌10'14	
	5213 Oct 18 09:12	15°♌	
retrograde	5213 Nov 26 03:08	16°♌19'06	
	5214 Jan 04 06:03	15℞♌	
opposition	5214 Feb 01 19:38	12°♌50'42	-0°24'31
min. Earth dist.	5214 Feb 01 18:02	12°♌51'01	8.15785 AU
direct	5214 Apr 09 16:14	9°♌23'58	
	5214 Jul 02 06:02	15°♌	
evening set	5214 Jul 22 00:23	17°♌24'09	
conjunction	5214 Aug 09 01:11	19°♌42'21	-0°04'34
minimum elong	5214 Aug 09 01:11	19°♌42'21	0°04'34
behind sun begin	5214 Aug 08 18:00	19°♌40'03	
behind sun end	5214 Aug 09 08:21	19°♌44'38	
max. Earth dist.	5214 Aug 09 03:32	19°♌43'04	10.14345 AU
morning rise	5214 Aug 27 03:25	22°♌01'01	
asc. node	5214 Oct 03 09:02	26°♌20'07	
	5214 Nov 27 00:32	0°♍	
retrograde	5214 Dec 10 09:38	0°♍09'53	
	5214 Dec 23 19:48	30℞♌	
opposition	5215 Feb 15 17:00	26°♌41'47	0°13'42
min. Earth dist.	5215 Feb 15 15:00	26°♌42'12	8.13439 AU
direct	5215 Apr 23 15:43	23°♌14'18	
	5215 Jul 26 04:46	0°♍	
evening set	5215 Aug 05 18:07	1°♍18'33	
conjunction	5215 Aug 23 20:09	3°♍37'18	0°26'14
minimum elong	5215 Aug 23 20:08	3°♍37'18	0°26'14
max. Earth dist.	5215 Aug 23 22:33	3°♍38'04	10.13078 AU
morning rise	5215 Sep 10 22:26	5°♍56'10	
retrograde	5215 Dec 24 15:20	14°♍03'16	
opposition	5216 Feb 29 15:10	10°♍35'42	0°51'13
min. Earth dist.	5216 Feb 29 13:15	10°♍36'06	8.13283 AU
direct	5216 May 06 18:54	7°♍07'38	
evening set	5216 Aug 19 13:42	15°♍14'25	
conjunction	5216 Sep 06 15:27	17°♍32'57	0°55'25
minimum elong	5216 Sep 06 15:24	17°♍32'56	0°55'25
max. Earth dist.	5216 Sep 06 17:21	17°♍33'34	10.13985 AU
morning rise	5216 Sep 24 16:17	19°♍51'14	
retrograde	5217 Jan 06 17:04	27°♍54'58	
opposition	5217 Mar 14 12:53	24°♍28'08	1°25'40
min. Earth dist.	5217 Mar 14 11:40	24°♍28'23	8.15266 AU
direct	5217 May 21 00:11	20°♍59'40	
evening set	5217 Sep 03 08:47	29°♍07'19	
	5217 Sep 10 07:22	0°♎	
conjunction	5217 Sep 21 08:53	1°♎24'57	1°21'16
minimum elong	5217 Sep 21 08:50	1°♎24'56	1°21'16
max. Earth dist.	5217 Sep 21 09:29	1°♎25'09	10.16929 AU
morning rise	5217 Oct 09 07:08	3°♎42'01	
retrograde	5218 Jan 20 14:52	11°♎41'03	
opposition	5218 Mar 28 09:00	8°♎15'08	1°54'54
min. Earth dist.	5218 Mar 28 09:04	8°♎15'07	8.19160 AU
direct	5218 Jun 04 05:26	4°♎46'32	
evening set	5218 Sep 18 00:54	12°♎53'27	
conjunction	5218 Oct 05 22:22	15°♎09'39	1°42'16
minimum elong	5218 Oct 05 22:19	15°♎09'38	1°42'17
max. Earth dist.	5218 Oct 05 21:18	15°♎09'19	10.21633 AU
morning rise	5218 Oct 23 17:10	17°♎25'01	
retrograde	5219 Feb 03 08:09	25°♎18'27	
opposition	5219 Apr 11 02:57	21°♎53'36	2°17'17
min. Earth dist.	5219 Apr 11 03:45	21°♎53'26	8.24676 AU
direct	5219 Jun 18 09:40	18°♎25'10	
evening set	5219 Oct 02 11:53	26°♎29'45	
conjunction	5219 Oct 20 06:01	28°♎44'08	1°57'19
minimum elong	5219 Oct 20 05:59	28°♎44'07	1°57'19
max. Earth dist.	5219 Oct 20 04:16	28°♎43'34	10.27845 AU
	5219 Oct 30 05:28	0°♏	
morning rise	5219 Nov 06 20:51	0°♏57'28	
retrograde	5220 Feb 16 19:31	8°♏44'38	
opposition	5220 Apr 23 17:57	5°♏20'53	2°31'44
min. Earth dist.	5220 Apr 23 18:43	5°♏20'44	8.31576 AU
direct	5220 Jul 01 12:28	1°♏52'54	
evening set	5220 Oct 15 15:59	9°♏53'29	
conjunction	5220 Nov 02 06:36	12°♏05'49	2°05'47
minimum elong	5220 Nov 02 06:35	12°♏05'48	2°05'47
max. Earth dist.	5220 Nov 02 04:58	12°♏05'18	10.35322 AU
morning rise	5220 Nov 19 17:21	14°♏16'58	
	5220 Nov 25 13:57	15°♏	
retrograde	5221 Mar 01 01:18	21°♏57'22	
opposition	5221 May 07 05:20	18°♏34'42	2°37'49
min. Earth dist.	5221 May 07 05:48	18°♏34'37	8.39563 AU
direct	5221 Jul 15 10:54	15°♏07'21	
evening set	5221 Oct 29 11:55	23°♏02'34	
conjunction	5221 Nov 15 23:05	25°♏12'45	2°07'30

minimum elong	5221 Nov 15 23:05	25°♏12'45	2°07'31
max. Earth dist.	5221 Nov 15 21:57	25°♏12'23	10.43709 AU
morning rise	5221 Dec 03 05:57	27°♏21'39	
	5221 Dec 25 17:44	0°♐	
retrograde	5222 Mar 14 02:39	4°♐55'09	
opposition	5222 May 20 12:48	1°♐33'31	2°35'39
min. Earth dist.	5222 May 20 13:24	1°♐33'24	8.48233 AU
	5222 Jun 10 03:40	30°℞♏	
direct	5222 Jul 29 03:50	28°♏06'56	
	5222 Sep 15 05:54	0°♐	
evening set	5222 Nov 11 23:07	5°♐55'44	
conjunction	5222 Nov 29 06:53	8°♐03'48	2°02'47
minimum elong	5222 Nov 29 06:55	8°♐03'48	2°02'47
max. Earth dist.	5222 Nov 29 05:54	8°♐03'29	10.52575 AU
morning rise	5222 Dec 16 10:19	10°♐10'35	
retrograde	5223 Mar 26 21:45	17°♐37'19	
opposition	5223 Jun 02 16:03	14°♐16'37	2°25'51
min. Earth dist.	5223 Jun 02 17:14	14°♐16'24	8.57156 AU
direct	5223 Aug 11 15:29	10°♐50'56	
evening set	5223 Nov 25 01:21	18°♐32'44	
conjunction	5223 Dec 12 06:00	20°♐38'46	1°52'11
minimum elong	5223 Dec 12 06:02	20°♐38'46	1°52'12
max. Earth dist.	5223 Dec 12 04:28	20°♐38'17	10.61487 AU
morning rise	5223 Dec 29 06:40	22°♐43'37	
	5224 Mar 29 14:15	0°♑	
retrograde	5224 Apr 07 09:37	0°♑04'08	
	5224 Apr 16 07:02	30°℞♐	
opposition	5224 Jun 14 15:03	26°♐44'14	2°09'20
min. Earth dist.	5224 Jun 14 16:31	26°♐43'57	8.65908 AU
direct	5224 Aug 23 23:24	23°♐19'29	
	5224 Nov 29 03:22	0°♑	
evening set	5224 Dec 06 18:53	0°♑54'07	
conjunction	5224 Dec 23 20:52	2°♑58'18	1°36'33
minimum elong	5224 Dec 23 20:54	2°♑58'19	1°36'34
max. Earth dist.	5224 Dec 23 19:00	2°♑57'44	10.70024 AU
morning rise	5225 Jan 09 19:20	5°♑01'25	
retrograde	5225 Apr 19 18:34	12°♑16'34	
opposition	5225 Jun 27 09:52	8°♑57'16	1°47'16
min. Earth dist.	5225 Jun 27 10:55	8°♑57'04	8.74077 AU
direct	5225 Sep 06 00:49	5°♑33'31	
evening set	5225 Dec 19 04:49	13°♑01'13	
conjunction	5226 Jan 05 04:33	15°♑03'48	1°16'50
minimum elong	5226 Jan 05 04:35	15°♑03'49	1°16'50
max. Earth dist.	5226 Jan 05 03:14	15°♑03'24	10.77792 AU
morning rise	5226 Jan 22 01:06	17°♑05'26	
retrograde	5226 May 01 23:46	24°♑16'16	
opposition	5226 Jul 10 00:59	20°♑57'23	1°20'52
min. Earth dist.	5226 Jul 10 01:14	20°♑57'20	8.81305 AU
direct	5226 Sep 18 19:38	17°♑34'38	
evening set	5226 Dec 31 08:12	24°♑56'00	
conjunction	5227 Jan 17 06:01	26°♑57'12	0°54'03
minimum elong	5227 Jan 17 06:03	26°♑57'12	0°54'04
max. Earth dist.	5227 Jan 17 05:42	26°♑57'06	10.84464 AU
morning rise	5227 Feb 03 01:01	28°♑57'38	
	5227 Feb 12 00:07	0°♒	
retrograde	5227 May 14 02:58	6°♒05'22	
opposition	5227 Jul 22 13:16	2°♒46'45	0°51'26
min. Earth dist.	5227 Jul 22 13:20	2°♒46'44	8.87311 AU
	5227 Sep 04 07:00	30°℞♑	
direct	5227 Oct 01 09:38	29°♑24'58	
	5227 Oct 28 04:25	0°♒	
evening set	5228 Jan 12 06:15	6°♒40'50	
conjunction	5228 Jan 29 02:18	8°♒40'56	0°29'16
minimum elong	5228 Jan 29 02:18	8°♒40'56	0°29'16
max. Earth dist.	5228 Jan 29 01:59	8°♒40'50	10.89780 AU
morning rise	5228 Feb 14 20:16	10°♒40'26	
	5228 Mar 27 00:24	15°♒	
retrograde	5228 May 25 04:18	17°♒46'23	
	5228 Jul 26 18:15	15°℞♒	
opposition	5228 Aug 02 23:11	14°♒27'52	0°20'13
min. Earth dist.	5228 Aug 02 23:37	14°♒27'47	8.91859 AU
direct	5228 Oct 12 18:04	11°♒06'58	
	5228 Dec 23 16:05	15°♒	
evening set	5229 Jan 23 00:35	18°♒18'25	
conjunction	5229 Feb 08 19:03	20°♒17'39	0°03'31
minimum elong	5229 Feb 08 19:04	20°♒17'39	0°03'32
behind sun begin	5229 Feb 08 12:07	20°♒15'36	
behind sun end	5229 Feb 09 02:01	20°♒19'42	
max. Earth dist.	5229 Feb 08 18:07	20°♒17'24	10.93529 AU
morning rise	5229 Feb 25 12:25	22°♒16'32	
desc. node	5229 Mar 30 22:38	25°♒52'43	
retrograde	5229 Jun 06 03:28	29°♒22'03	
opposition	5229 Aug 15 07:19	26°♒03'25	-0°11'34
min. Earth dist.	5229 Aug 15 07:44	26°♒03'21	8.94768 AU
direct	5229 Oct 25 00:06	22°♒43'18	
evening set	5230 Feb 03 16:24	29°♒51'31	
	5230 Feb 04 21:28	0°♓	
conjunction	5230 Feb 20 09:44	1°♓50'11	-0°22'22
minimum elong	5230 Feb 20 09:43	1°♓50'11	0°22'22
max. Earth dist.	5230 Feb 20 09:18	1°♓50'04	10.95563 AU
morning rise	5230 Mar 09 02:37	3°♓48'44	
retrograde	5230 Jun 18 05:43	10°♓55'14	
opposition	5230 Aug 27 14:52	7°♓36'17	-0°42'44
min. Earth dist.	5230 Aug 27 14:23	7°♓36'22	8.95921 AU
direct	5230 Nov 06 04:34	4°♓16'48	
evening set	5231 Feb 15 06:59	11°♓22'57	
conjunction	5231 Mar 03 23:33	13°♓21'23	-0°47'12
minimum elong	5231 Mar 03 23:32	13°♓21'22	0°47'11
max. Earth dist.	5231 Mar 04 00:13	13°♓21'35	10.95801 AU
morning rise	5231 Mar 20 16:14	15°♓19'53	
retrograde	5231 Jun 30 09:21	22°♓28'39	
opposition	5231 Sep 08 22:31	19°♓09'12	-1°12'11
min. Earth dist.	5231 Sep 08 21:21	19°♓09'26	8.95276 AU
direct	5231 Nov 18 04:45	15°♓50'12	
evening set	5232 Feb 26 22:07	22°♓55'35	
conjunction	5232 Mar 14 14:10	24°♓54'03	-1°10'09
minimum elong	5232 Mar 14 14:08	24°♓54'03	1°10'09
max. Earth dist.	5232 Mar 14 15:01	24°♓54'18	10.94239 AU
morning rise	5232 Mar 31 07:10	26°♓52'51	
	5232 Apr 28 17:41	0°♈	
retrograde	5232 Jul 11 14:58	4°♈05'04	
opposition	5232 Sep 20 06:56	0°♈44'59	-1°38'48
min. Earth dist.	5232 Sep 20 06:03	0°♈45'09	8.92864 AU
	5232 Sep 30 10:19	30°℞♓	
direct	5232 Nov 29 05:20	27°♓26'14	
	5233 Jan 24 23:53	0°♈	
evening set	5233 Mar 09 14:56	4°♈32'07	
conjunction	5233 Mar 26 06:52	6°♈30'59	-1°30'22
minimum elong	5233 Mar 26 06:50	6°♈30'58	1°30'21
max. Earth dist.	5233 Mar 26 07:05	6°♈31'02	10.90948 AU
morning rise	5233 Apr 12 00:45	8°♈30'24	
retrograde	5233 Jul 24 00:31	15°♈47'09	
opposition	5233 Oct 02 17:07	12°♈26'16	-2°01'35
min. Earth dist.	5233 Oct 02 16:32	12°♈26'23	8.88778 AU

direct	5233 Dec 11 06:42	9°♈07'35	
evening set	5234 Mar 21 10:27	16°♈15'09	
conjunction	5234 Apr 07 03:01	18°♈14'45	-1°46'58
minimum elong	5234 Apr 07 02:59	18°♈14'44	1°46'58
max. Earth dist.	5234 Apr 07 03:43	18°♈14'57	10.86054 AU
morning rise	5234 Apr 23 22:11	20°♈15'08	
retrograde	5234 Aug 05 13:05	27°♈37'22	
opposition	5234 Oct 15 05:38	24°♈15'33	-2°19'30
min. Earth dist.	5234 Oct 15 04:36	24°♈15'45	8.83173 AU
direct	5234 Dec 23 10:06	20°♈56'42	
evening set	5235 Apr 02 10:08	28°♈07'05	
	5235 Apr 18 02:20	0°♉	
conjunction	5235 Apr 19 04:08	0°♉07'48	-1°59'11
minimum elong	5235 Apr 19 04:07	0°♉07'48	1°59'12
max. Earth dist.	5235 Apr 19 05:53	0°♉08'20	10.79740 AU
morning rise	5235 May 06 01:08	2°♉09'29	
retrograde	5235 Aug 18 08:28	9°♉37'53	
opposition	5235 Oct 27 20:52	6°♉15'03	-2°31'41
min. Earth dist.	5235 Oct 27 19:06	6°♉15'23	8.76253 AU
direct	5236 Jan 04 15:59	2°♉55'49	
evening set	5236 Apr 13 15:05	10°♉10'02	
conjunction	5236 Apr 30 11:10	12°♉12'15	-2°06'21
minimum elong	5236 Apr 30 11:10	12°♉12'15	2°06'23
max. Earth dist.	5236 Apr 30 12:58	12°♉12'48	10.72233 AU
morning rise	5236 May 17 10:46	14°♉15'36	
	5236 May 23 17:07	15°♉	
retrograde	5236 Aug 30 09:36	21°♉50'34	
opposition	5236 Nov 08 15:36	18°♉26'40	-2°37'19
min. Earth dist.	5236 Nov 08 13:56	18°♉26'59	8.68248 AU
direct	5237 Jan 15 23:30	15°♉06'51	
evening set	5237 Apr 26 02:09	22°♉25'49	
conjunction	5237 May 13 01:00	24°♉29'53	-2°07'54
minimum elong	5237 May 13 01:01	24°♉29'53	2°07'55
max. Earth dist.	5237 May 13 01:53	24°♉30'09	10.63790 AU
morning rise	5237 May 30 03:58	26°♉35'13	
	5237 Jun 29 10:12	0°♊	
retrograde	5237 Sep 12 14:34	4°♊16'56	
opposition	5237 Nov 21 14:10	0°♊52'00	-2°35'48
min. Earth dist.	5237 Nov 21 13:17	0°♊52'11	8.59436 AU
	5237 Dec 02 21:38	30°℞♉	
direct	5238 Jan 28 12:34	27°♉31'21	
	5238 Mar 23 17:22	0°♊	
evening set	5238 May 08 20:13	4°♊55'58	
conjunction	5238 May 25 22:45	7°♊02'13	-2°03'27
minimum elong	5238 May 25 22:46	7°♊02'14	2°03'28
max. Earth dist.	5238 May 25 22:52	7°♊02'16	10.54721 AU
morning rise	5238 Jun 12 05:43	9°♊09'49	
retrograde	5238 Sep 26 01:30	16°♊58'16	
opposition	5238 Dec 04 16:49	13°♊32'21	-2°26'44
min. Earth dist.	5238 Dec 04 16:36	13°♊32'24	8.50187 AU
direct	5239 Feb 10 07:06	10°♊10'43	
evening set	5239 May 21 22:03	17°♊41'38	
conjunction	5239 Jun 08 04:59	19°♊50'20	-1°52'51
minimum elong	5239 Jun 08 05:01	19°♊50'21	1°52'52
max. Earth dist.	5239 Jun 08 05:20	19°♊50'27	10.45462 AU
morning rise	5239 Jun 25 16:17	22°♊00'23	
retrograde	5239 Oct 09 18:23	29°♊55'05	
opposition	5239 Dec 17 23:36	26°♊28'18	-2°10'08
min. Earth dist.	5239 Dec 17 23:16	26°♊28'22	8.41002 AU
direct	5240 Feb 23 06:32	23°♊05'34	
	5240 May 28 10:55	0°♋	
evening set	5240 Jun 03 08:09	0°♋43'09	
conjunction	5240 Jun 20 19:48	2°♋54'22	-1°36'19
minimum elong	5240 Jun 20 19:50	2°♋54'23	1°36'19
max. Earth dist.	5240 Jun 20 20:42	2°♋54'39	10.36543 AU
morning rise	5240 Jul 08 11:24	5°♋06'53	
retrograde	5240 Oct 22 15:57	13°♋06'59	
opposition	5240 Dec 30 10:19	9°♋39'27	-1°46'24
min. Earth dist.	5240 Dec 30 09:27	9°♋39'37	8.32427 AU
direct	5241 Mar 07 11:49	6°♋15'33	
evening set	5241 Jun 17 02:36	13°♋59'52	
conjunction	5241 Jul 04 18:49	16°♋13'30	-1°14'24
minimum elong	5241 Jul 04 18:52	16°♋13'31	1°14'24
max. Earth dist.	5241 Jul 04 19:51	16°♋13'50	10.28501 AU
morning rise	5241 Jul 22 14:33	18°♋28'17	
retrograde	5241 Nov 05 17:18	26°♋32'36	
opposition	5242 Jan 13 00:47	23°♋04'31	-1°16'26
min. Earth dist.	5242 Jan 12 23:46	23°♋04'44	8.24976 AU
direct	5242 Mar 20 22:27	19°♋39'25	
evening set	5242 Jul 01 04:51	27°♋30'11	
conjunction	5242 Jul 19 01:09	29°♋45'58	-0°48'05
minimum elong	5242 Jul 19 01:11	29°♋45'59	0°48'05
max. Earth dist.	5242 Jul 19 01:48	29°♋46'11	10.21804 AU
	5242 Jul 20 21:07	0°♌	
morning rise	5242 Aug 06 00:22	2°♌02'41	
retrograde	5242 Nov 19 21:57	10°♌09'42	
opposition	5243 Jan 26 18:20	6°♌41'21	-0°41'44
min. Earth dist.	5243 Jan 26 17:41	6°♌41'29	8.19080 AU
direct	5243 Apr 03 14:10	3°♌15'04	
evening set	5243 Jul 15 14:11	11°♌11'45	
conjunction	5243 Aug 02 13:37	13°♌29'10	-0°18'46
minimum elong	5243 Aug 02 13:38	13°♌29'10	0°18'46
max. Earth dist.	5243 Aug 02 13:28	13°♌29'07	10.16832 AU
	5243 Aug 14 09:43	15°♌	
morning rise	5243 Aug 20 15:11	15°♌47'14	
retrograde	5243 Dec 04 03:05	23°♌55'19	
opposition	5244 Feb 09 14:01	20°♌26'58	-0°04'13
min. Earth dist.	5244 Feb 09 14:01	20°♌26'58	8.15083 AU
asc. node	5244 Mar 22 09:21	17°♌34'08	
direct	5244 Apr 16 11:30	16°♌59'39	
evening set	5244 Jul 29 04:49	25°♌01'18	
conjunction	5244 Aug 16 06:11	27°♌19'41	0°11'55
minimum elong	5244 Aug 16 06:10	27°♌19'41	0°11'55
behind sun begin	5244 Aug 16 01:12	27°♌18'06	
behind sun end	5244 Aug 16 11:08	27°♌21'16	
max. Earth dist.	5244 Aug 16 05:43	27°♌19'32	10.13876 AU
morning rise	5244 Sep 03 08:39	29°♌38'25	
	5244 Sep 06 05:30	0°♍	
retrograde	5244 Dec 17 07:15	7°♍45'54	
opposition	5245 Feb 22 11:07	4°♍17'49	0°33'48
min. Earth dist.	5245 Feb 22 11:11	4°♍17'48	8.13220 AU
direct	5245 Apr 30 13:44	0°♍49'40	
evening set	5245 Aug 12 22:38	8°♍54'56	
conjunction	5245 Aug 31 00:35	11°♍13'35	0°41'57
minimum elong	5245 Aug 31 00:33	11°♍13'34	0°41'57
max. Earth dist.	5245 Aug 31 00:14	11°♍13'28	10.13103 AU
morning rise	5245 Sep 18 02:27	13°♍32'13	
retrograde	5245 Dec 31 08:54	21°♍37'29	
opposition	5246 Mar 08 08:27	18°♍09'54	1°09'54
min. Earth dist.	5246 Mar 08 08:18	18°♍09'56	8.13581 AU
direct	5246 May 14 17:47	14°♍41'09	
evening set	5246 Aug 27 17:39	22°♍48'29	

conjunction	5246 Sep 14 18:47	25°♍06'40	1°09'32
minimum elong	5246 Sep 14 18:44	25°♍06'39	1°09'32
max. Earth dist.	5246 Sep 14 18:37	25°♍06'37	10.14540 AU
morning rise	5246 Oct 02 18:32	27°♍24'27	
	5246 Oct 24 04:26	0°♎	
retrograde	5247 Jan 14 08:57	5°♎25'59	
opposition	5247 Mar 22 04:55	1°♎59'08	1°41'48
min. Earth dist.	5247 Mar 22 04:30	1°♎59'13	8.16127 AU
	5247 Apr 17 02:12	30°℞♍	
direct	5247 May 28 21:52	28°♍30'05	
	5247 Jul 09 07:57	0°♎	
evening set	5247 Sep 11 11:08	6°♎37'42	

conjunction	5247 Sep 29 10:10	8°♎54'46	1°32'58
minimum elong	5247 Sep 29 10:07	8°♎54'45	1°32'58
max. Earth dist.	5247 Sep 29 10:16	8°♎54'48	10.18091 AU
morning rise	5247 Oct 17 06:42	11°♎11'05	
retrograde	5248 Jan 28 05:18	19°♎07'36	
opposition	5248 Apr 03 23:52	15°♎41'40	2°07'36
min. Earth dist.	5248 Apr 03 23:30	15°♎41'45	8.20695 AU
direct	5248 Jun 11 01:47	12°♎12'38	
evening set	5248 Sep 25 00:27	20°♎18'41	

conjunction	5248 Oct 12 20:27	22°♎34'06	1°50'56
minimum elong	5248 Oct 12 20:25	22°♎34'06	1°50'56
max. Earth dist.	5248 Oct 12 20:26	22°♎34'06	10.23546 AU
morning rise	5248 Oct 30 13:10	24°♎48'33	
	5248 Dec 16 12:01	0°♏	
retrograde	5249 Feb 09 20:01	2°♏39'04	
	5249 Apr 08 03:29	30°℞♎	
opposition	5249 Apr 17 16:15	29°♎14'13	2°25'54
min. Earth dist.	5249 Apr 17 16:26	29°♎14'11	8.27015 AU
direct	5249 Jun 25 04:43	25°♎45'29	
	5249 Sep 06 10:12	0°♏	
evening set	5249 Oct 09 07:55	3°♏48'17	

conjunction	5249 Oct 27 00:22	6°♏01'42	2°02'34
minimum elong	5249 Oct 27 00:21	6°♏01'42	2°02'34
max. Earth dist.	5249 Oct 26 23:41	6°♏01'29	10.30590 AU
morning rise	5249 Nov 13 13:05	8°♏14'01	
	5250 Jan 21 11:42	15°♏	
retrograde	5250 Feb 23 03:55	15°♏57'49	
	5250 Mar 28 06:24	15°℞♏	
opposition	5250 May 01 05:11	12°♏34'11	2°35'58
min. Earth dist.	5250 May 01 05:54	12°♏34'02	8.34719 AU
direct	5250 Jul 09 05:06	9°♏06'02	
	5250 Oct 06 00:00	15°♏	
evening set	5250 Oct 23 07:51	17°♏04'04	

conjunction	5250 Nov 09 20:37	19°♏15'21	2°07'29
minimum elong	5250 Nov 09 20:37	19°♏15'21	2°07'29
max. Earth dist.	5250 Nov 09 19:20	19°♏14'57	10.38824 AU
morning rise	5250 Nov 27 05:27	21°♏25'24	
retrograde	5251 Mar 08 06:52	29°♏02'16	
opposition	5251 May 14 14:29	25°♏39'50	2°37'40
min. Earth dist.	5251 May 14 15:12	25°♏39'41	8.43380 AU
direct	5251 Jul 23 01:00	22°♏12'33	
evening set	5251 Nov 05 23:05	0°♐04'35	
	5251 Nov 05 08:01	0°♐	

conjunction	5251 Nov 23 08:22	2°♐13'42	2°05'46
minimum elong	5251 Nov 23 08:22	2°♐13'42	2°05'46
max. Earth dist.	5251 Nov 23 07:04	2°♐13'17	10.47802 AU
morning rise	5251 Dec 10 13:36	4°♐21'33	
retrograde	5252 Mar 20 04:00	11°♐51'33	
opposition	5252 May 26 19:39	8°♐30'14	2°31'22
min. Earth dist.	5252 May 26 19:43	8°♐30'13	8.52538 AU
direct	5252 Aug 04 16:05	5°♐04'00	
evening set	5252 Nov 18 05:32	12°♐49'16	

conjunction	5252 Dec 05 11:44	14°♐56'17	1°57'51
minimum elong	5252 Dec 05 11:46	14°♐56'17	1°57'52
max. Earth dist.	5252 Dec 05 11:17	14°♐56'08	10.57061 AU
morning rise	5252 Dec 22 13:48	17°♐02'04	
retrograde	5253 Apr 01 20:10	24°♐25'35	
opposition	5253 Jun 08 20:32	21°♐05'19	2°17'53
min. Earth dist.	5253 Jun 08 20:22	21°♐05'21	8.61737 AU
direct	5253 Aug 18 01:34	17°♐40'12	
evening set	5253 Dec 01 03:29	25°♐18'21	

conjunction	5253 Dec 18 06:54	27°♐23'26	1°44'29
minimum elong	5253 Dec 18 06:57	27°♐23'27	1°44'30
max. Earth dist.	5253 Dec 18 06:55	27°♐23'26	10.66144 AU
morning rise	5254 Jan 04 06:18	29°♐27'21	
	5254 Jan 08 19:59	0°♑	
retrograde	5254 Apr 14 08:43	6°♑45'03	
opposition	5254 Jun 21 17:35	3°♑25'41	1°58'16
min. Earth dist.	5254 Jun 21 17:45	3°♑25'39	8.70544 AU
direct	5254 Aug 31 04:07	0°♑01'43	
evening set	5254 Dec 13 17:24	7°♑32'47	

conjunction	5254 Dec 30 18:14	9°♑36'08	1°26'33
minimum elong	5254 Dec 30 18:17	9°♑36'08	1°26'35
max. Earth dist.	5254 Dec 30 18:00	9°♑36'03	10.74630 AU
morning rise	5255 Jan 16 15:34	11°♑38'26	
retrograde	5255 Apr 26 15:11	18°♑51'15	
opposition	5255 Jul 04 10:56	15°♑32'34	1°33'44
min. Earth dist.	5255 Jul 04 11:37	15°♑32'26	8.78566 AU
direct	5255 Sep 13 02:10	12°♑09'44	
evening set	5255 Dec 26 00:17	19°♑34'08	

conjunction	5256 Jan 11 22:52	21°♑35'56	1°05'05
minimum elong	5256 Jan 11 22:54	21°♑35'56	1°05'06
max. Earth dist.	5256 Jan 11 21:54	21°♑35'38	10.82147 AU
morning rise	5256 Jan 28 18:41	23°♑36'54	
	5256 Apr 07 16:42	0°♒	
retrograde	5256 May 07 18:41	0°♒45'58	
	5256 Jun 07 11:06	30°℞♑	
opposition	5256 Jul 16 00:49	27°♑27'42	1°05'34
min. Earth dist.	5256 Jul 16 01:19	27°♑27'37	8.85445 AU
direct	5256 Sep 24 20:01	24°♑05'55	
	5256 Dec 24 19:28	0°♒	
evening set	5257 Jan 06 01:09	1°♒24'21	

conjunction	5257 Jan 22 21:57	3°♒24'54	0°41'06
minimum elong	5257 Jan 22 21:59	3°♒24'55	0°41'07
max. Earth dist.	5257 Jan 22 21:12	3°♒24'41	10.88339 AU
morning rise	5257 Feb 08 16:31	5°♒24'47	
retrograde	5257 May 19 21:29	12°♒31'23	
opposition	5257 Jul 28 11:58	9°♒13'19	0°35'02
min. Earth dist.	5257 Jul 28 12:00	9°♒13'18	8.90832 AU
direct	5257 Oct 07 07:47	5°♒52'29	
evening set	5258 Jan 17 21:28	13°♒05'55	
	5258 Feb 02 22:21	15°♒	

conjunction	5258 Feb 03 16:44	15°♒05'29	0°15'40
minimum elong	5258 Feb 03 16:45	15°♒05'29	0°15'40
behind sun begin	5258 Feb 03 14:52	15°♒04'56	
behind sun end	5258 Feb 03 18:37	15°♒06'02	
max. Earth dist.	5258 Feb 03 16:27	15°♒05'24	10.92875 AU
morning rise	5258 Feb 20 10:14	17°♒04'34	
retrograde	5258 May 31 22:40	24°♒10'08	
opposition	5258 Aug 09 21:14	20°♒52'02	0°03'23
min. Earth dist.	5258 Aug 09 21:16	20°♒52'01	8.94445 AU

desc. node	5258 Sep 18 21:52	18°♒16'30	
direct	5258 Oct 19 15:21	17°♒32'01	
evening set	5259 Jan 29 14:45	24°♒41'41	
conjunction	5259 Feb 15 08:39	26°♒40'34	-0°10'19
minimum elong	5259 Feb 15 08:38	26°♒40'34	0°10'19
behind sun begin	5259 Feb 15 03:04	26°♒38'55	
behind sun end	5259 Feb 15 14:13	26°♒42'12	
max. Earth dist.	5259 Feb 15 07:57	26°♒40'22	10.95536 AU
morning rise	5259 Mar 04 01:34	28°♒39'12	
	5259 Mar 15 20:32	0°♓	
retrograde	5259 Jun 13 00:56	5°♓45'10	
opposition	5259 Aug 22 05:31	2°♓26'49	-0°28'14
min. Earth dist.	5259 Aug 22 06:18	2°♓26'40	8.96150 AU
	5259 Sep 28 08:10	30°℞♒	
direct	5259 Oct 31 19:43	29°♒07'26	
	5259 Dec 03 16:23	0°♓	
evening set	5260 Feb 10 06:16	6°♓14'36	
conjunction	5260 Feb 26 23:04	8°♓13'07	-0°35'42
minimum elong	5260 Feb 26 23:03	8°♓13'07	0°35'42
max. Earth dist.	5260 Feb 26 21:28	8°♓12'39	10.96267 AU
morning rise	5260 Mar 14 15:53	10°♓11'38	
retrograde	5260 Jun 24 02:06	17°♓19'23	
opposition	5260 Sep 02 13:29	14°♓00'31	-0°58'39
min. Earth dist.	5260 Sep 02 14:34	14°♓00'19	8.95939 AU
direct	5260 Nov 11 21:35	10°♓41'31	
evening set	5261 Feb 20 21:31	17°♓47'29	
conjunction	5261 Mar 09 13:41	19°♓45'56	-0°59'41
minimum elong	5261 Mar 09 13:39	19°♓45'56	0°59'41
max. Earth dist.	5261 Mar 09 12:16	19°♓45'31	10.95096 AU
morning rise	5261 Mar 26 06:36	21°♓44'37	
retrograde	5261 Jul 06 06:48	28°♓55'25	
opposition	5261 Sep 14 21:49	25°♓35'47	-1°26'45
min. Earth dist.	5261 Sep 14 22:19	25°♓35'42	8.93867 AU
direct	5261 Nov 24 01:04	22°♓16'58	
evening set	5262 Mar 04 13:41	29°♓22'56	
	5262 Mar 09 19:41	0°♈	
conjunction	5262 Mar 21 05:44	1°♈21'40	-1°21'18
minimum elong	5262 Mar 21 05:42	1°♈21'39	1°21'18
max. Earth dist.	5262 Mar 21 05:29	1°♈21'36	10.92106 AU
morning rise	5262 Apr 06 23:04	3°♈20'50	
retrograde	5262 Jul 18 15:57	10°♈35'48	
opposition	5262 Sep 27 07:31	7°♈15'13	-1°51'30
min. Earth dist.	5262 Sep 27 07:10	7°♈15'18	8.90044 AU
direct	5262 Dec 06 02:09	3°♈56'24	
evening set	5263 Mar 16 08:02	11°♈03'31	
conjunction	5263 Apr 02 00:24	13°♈02'52	-1°39'43
minimum elong	5263 Apr 02 00:22	13°♈02'51	1°39'43
max. Earth dist.	5263 Apr 02 00:21	13°♈02'51	10.87436 AU
morning rise	5263 Apr 18 18:48	15°♈02'54	
retrograde	5263 Jul 31 03:17	22°♈23'01	
opposition	5263 Oct 09 19:12	19°♈01'21	-2°11'51
min. Earth dist.	5263 Oct 09 18:52	19°♈01'25	8.84630 AU
direct	5263 Dec 18 03:27	15°♈42'16	
evening set	5264 Mar 27 06:03	22°♈51'47	
conjunction	5264 Apr 12 23:17	24°♈52'08	-1°54'06
minimum elong	5264 Apr 12 23:15	24°♈52'07	1°54'06
max. Earth dist.	5264 Apr 12 22:47	24°♈51'59	10.81279 AU
morning rise	5264 Apr 29 19:26	26°♈53'20	
	5264 May 27 17:18	0°♉	
retrograde	5264 Aug 11 19:30	4°♉19'24	
opposition	5264 Oct 21 09:19	0°♉56'37	-2°26'52
min. Earth dist.	5264 Oct 21 09:22	0°♉56'36	8.77835 AU
	5264 Nov 02 23:48	30°℞♈	
direct	5264 Dec 29 08:40	27°♈37'03	
	5265 Feb 21 03:57	0°♉	
evening set	5265 Apr 08 08:36	4°♉50'06	
conjunction	5265 Apr 25 03:33	6°♉51'48	-2°03'43
minimum elong	5265 Apr 25 03:33	6°♉51'47	2°03'44
max. Earth dist.	5265 Apr 25 03:16	6°♉51'43	10.73876 AU
morning rise	5265 May 12 02:03	8°♉54'33	
	5265 Jul 13 06:19	15°♉	
retrograde	5265 Aug 24 16:49	16°♉27'10	
	5265 Oct 06 23:40	15°℞♉	
opposition	5265 Nov 03 02:47	13°♉03'12	-2°35'40
min. Earth dist.	5265 Nov 03 02:38	13°♉03'14	8.69928 AU
direct	5266 Jan 10 16:08	9°♉43'02	
	5266 Apr 03 09:42	15°♉	
evening set	5266 Apr 20 16:42	17°♉00'33	
conjunction	5266 May 07 14:19	19°♉03'59	-2°07'57
minimum elong	5266 May 07 14:19	19°♉03'59	2°07'58
max. Earth dist.	5266 May 07 15:12	19°♉04'15	10.65520 AU
morning rise	5266 May 24 15:44	21°♉08'37	
retrograde	5266 Sep 06 19:35	28°♉48'07	
opposition	5266 Nov 15 23:54	25°♉22'59	-2°37'32
min. Earth dist.	5266 Nov 15 22:54	25°♉23'11	8.61224 AU
direct	5267 Jan 23 03:59	22°♉02'05	
evening set	5267 May 03 07:44	29°♉24'55	
	5267 May 08 03:06	0°♊	
conjunction	5267 May 20 08:44	1°♊30'25	-2°06'18
minimum elong	5267 May 20 08:45	1°♊30'26	2°06'19
max. Earth dist.	5267 May 20 10:10	1°♊30'52	10.56561 AU
morning rise	5267 Jun 06 13:46	3°♊37'13	
retrograde	5267 Sep 20 05:46	11°♊23'33	
opposition	5267 Nov 29 00:53	7°♊57'22	-2°31'59
min. Earth dist.	5267 Nov 28 23:26	7°♊57'39	8.52100 AU
direct	5268 Feb 04 19:25	4°♊35'34	
evening set	5268 May 15 06:20	12°♊04'25	
conjunction	5268 Jun 01 11:18	14°♊12'15	-1°58'31
minimum elong	5268 Jun 01 11:20	14°♊12'15	1°58'32
max. Earth dist.	5268 Jun 01 12:26	14°♊12'36	10.47405 AU
morning rise	5268 Jun 18 20:34	16°♊21'26	
retrograde	5268 Oct 02 21:10	24°♊14'14	
opposition	5268 Dec 11 06:15	20°♊47'09	-2°18'47
min. Earth dist.	5268 Dec 11 04:56	20°♊47'25	8.42985 AU
direct	5269 Feb 16 15:34	17°♊24'20	
evening set	5269 May 28 12:52	24°♊59'40	
conjunction	5269 Jun 14 22:15	27°♊09'57	-1°44'38
minimum elong	5269 Jun 14 22:18	27°♊09'58	1°44'39
max. Earth dist.	5269 Jun 14 22:56	27°♊10'10	10.38502 AU
morning rise	5269 Jul 02 12:02	29°♊21'36	
	5269 Jul 07 17:44	0°♋	
retrograde	5269 Oct 16 16:36	7°♋20'12	
opposition	5269 Dec 24 15:50	3°♋52'24	-1°58'11
min. Earth dist.	5269 Dec 24 14:57	3°♋52'35	8.34353 AU
direct	5270 Mar 01 18:55	0°♋28'31	
evening set	5270 Jun 11 03:52	8°♋10'32	
conjunction	5270 Jun 28 17:57	10°♋23'18	-1°25'02
minimum elong	5270 Jun 28 18:00	10°♋23'19	1°25'03
max. Earth dist.	5270 Jun 28 18:52	10°♋23'35	10.30324 AU
morning rise	5270 Jul 16 12:06	12°♋37'19	
retrograde	5270 Oct 30 15:58	20°♋40'38	
opposition	5271 Jan 07 05:11	17°♋12'21	-1°30'50

min. Earth dist.	5271 Jan 07 04:15	17°♋12'33	8.26679 AU
direct	5271 Mar 15 04:31	13°♋47'25	
evening set	5271 Jun 25 03:07	21°♋36'01	
conjunction	5271 Jul 12 21:42	23°♋51'04	-1°00'32
minimum elong	5271 Jul 12 21:44	23°♋51'05	1°00'33
max. Earth dist.	5271 Jul 12 23:10	23°♋51'32	10.23324 AU
morning rise	5271 Jul 30 19:37	26°♋07'10	
	5271 Sep 02 04:04	0°♌	
retrograde	5271 Nov 13 19:48	4°♌13'52	
opposition	5272 Jan 20 21:57	0°♌45'23	-0°57'59
min. Earth dist.	5272 Jan 20 20:36	0°♌45'39	8.20405 AU
	5272 Jan 30 07:19	30℞♋	
direct	5272 Mar 27 18:32	27°♋19'27	
	5272 May 22 06:30	0°♌	
evening set	5272 Jul 08 09:51	5°♌14'12	
conjunction	5272 Jul 26 08:08	7°♌31'06	-0°32'20
minimum elong	5272 Jul 26 08:09	7°♌31'07	0°32'20
max. Earth dist.	5272 Jul 26 10:16	7°♌31'47	10.17916 AU
morning rise	5272 Aug 13 08:47	9°♌48'48	
	5272 Sep 28 16:49	15°♌	
retrograde	5272 Nov 27 01:48	17°♌57'20	
	5273 Jan 27 08:30	15℞♌	
opposition	5273 Feb 02 17:25	14°♌28'54	-0°21'24
min. Earth dist.	5273 Feb 02 15:31	14°♌29'17	8.15917 AU
direct	5273 Apr 10 13:54	11°♌02'06	
	5273 Jun 18 09:10	15°♌	
evening set	5273 Jul 22 23:01	19°♌02'12	
conjunction	5273 Aug 09 23:49	21°♌20'22	-0°02'03
minimum elong	5273 Aug 09 23:50	21°♌20'22	0°02'03
behind sun begin	5273 Aug 09 16:29	21°♌18'02	
behind sun end	5273 Aug 10 07:10	21°♌22'42	
max. Earth dist.	5273 Aug 10 02:07	21°♌21'03	10.14442 AU
morning rise	5273 Aug 28 01:58	23°♌39'01	
asc. node	5273 Sep 03 13:19	24°♌27'25	
	5273 Oct 27 00:44	0°♍	
retrograde	5273 Dec 11 08:04	1°♍47'39	
	5274 Jan 26 05:52	30℞♌	
opposition	5274 Feb 16 14:42	28°♌19'33	0°16'46
min. Earth dist.	5274 Feb 16 12:53	28°♌19'55	8.13503 AU
direct	5274 Apr 24 13:39	24°♌52'00	
	5274 Jul 13 06:46	0°♍	
evening set	5274 Aug 06 16:39	2°♍56'17	
conjunction	5274 Aug 24 18:36	5°♍15'00	0°28'37
minimum elong	5274 Aug 24 18:34	5°♍15'00	0°28'37
max. Earth dist.	5274 Aug 24 20:18	5°♍15'33	10.13114 AU
morning rise	5274 Sep 11 20:48	7°♍33'50	
retrograde	5274 Dec 25 12:58	15°♍40'49	
opposition	5275 Mar 02 12:50	12°♍13'17	0°54'04
min. Earth dist.	5275 Mar 02 11:38	12°♍13'32	8.13300 AU
direct	5275 May 08 16:35	8°♍45'10	
evening set	5275 Aug 21 12:23	16°♍52'06	
conjunction	5275 Sep 08 13:55	19°♍10'37	0°57'34
minimum elong	5275 Sep 08 13:53	19°♍10'36	0°57'34
max. Earth dist.	5275 Sep 08 14:46	19°♍10'53	10.13990 AU
morning rise	5275 Sep 26 14:42	21°♍28'52	
retrograde	5276 Jan 08 15:10	29°♍32'32	
opposition	5276 Mar 15 10:33	26°♍05'46	1°28'07
min. Earth dist.	5276 Mar 15 10:04	26°♍05'52	8.15279 AU
direct	5276 May 21 21:49	22°♍37'17	
	5276 Aug 29 06:25	0°♎	
evening set	5276 Sep 04 07:27	0°♎45'07	

conjunction	5276 Sep 22 07:20	3°♎02'42	1°23'03
minimum elong	5276 Sep 22 07:17	3°♎02'41	1°23'03
max. Earth dist.	5276 Sep 22 07:10	3°♎02'39	10.16962 AU
morning rise	5276 Oct 10 05:29	5°♎19'44	
retrograde	5277 Jan 21 12:33	13°♎18'42	
opposition	5277 Mar 29 06:45	9°♎52'50	1°56'50
min. Earth dist.	5277 Mar 29 06:53	9°♎52'48	8.19235 AU
direct	5277 Jun 05 04:04	6°♎24'14	
evening set	5277 Sep 18 23:20	14°♎31'13	
conjunction	5277 Oct 06 20:38	16°♎47'21	1°43'35
minimum elong	5277 Oct 06 20:35	16°♎47'20	1°43'35
max. Earth dist.	5277 Oct 06 19:33	16°♎47'01	10.21742 AU
morning rise	5277 Oct 24 15:17	19°♎02'40	
retrograde	5278 Feb 04 04:55	26°♎55'59	
opposition	5278 Apr 12 00:37	23°♎31'10	2°18'35
min. Earth dist.	5278 Apr 12 00:57	23°♎31'06	8.24809 AU
direct	5278 Jun 19 08:56	20°♎02'46	
evening set	5278 Oct 03 10:09	28°♎07'19	
	5278 Oct 18 08:06	0°♏	
conjunction	5278 Oct 21 04:13	0°♏21'38	1°58'06
minimum elong	5278 Oct 21 04:11	0°♏21'37	1°58'06
max. Earth dist.	5278 Oct 21 02:55	0°♏21'13	10.27977 AU
morning rise	5278 Nov 07 18:48	2°♏34'54	
retrograde	5279 Feb 17 16:46	10°♏21'59	
opposition	5279 Apr 25 15:33	6°♏58'16	2°32'20
min. Earth dist.	5279 Apr 25 15:59	6°♏58'11	8.31688 AU
direct	5279 Jul 03 10:21	3°♏30'20	
evening set	5279 Oct 17 14:06	11°♏30'55	
conjunction	5279 Nov 04 04:39	13°♏43'13	2°05'59
minimum elong	5279 Nov 04 04:38	13°♏43'13	2°05'59
max. Earth dist.	5279 Nov 04 03:27	13°♏42'50	10.35400 AU
	5279 Nov 14 08:34	15°♏	
morning rise	5279 Nov 21 15:07	15°♏54'18	
retrograde	5280 Mar 02 00:40	23°♏34'42	
opposition	5280 May 08 03:09	20°♏12'07	2°37'43
min. Earth dist.	5280 May 08 03:52	20°♏11'58	8.39598 AU
direct	5280 Jul 16 07:08	16°♏44'48	
evening set	5280 Oct 30 09:51	24°♏40'03	
conjunction	5280 Nov 16 20:52	26°♏50'14	2°07'09
minimum elong	5280 Nov 16 20:52	26°♏50'14	2°07'09
max. Earth dist.	5280 Nov 16 19:37	26°♏49'50	10.43697 AU
morning rise	5280 Dec 04 03:34	28°♏59'08	
	5280 Dec 12 12:53	0°♐	
retrograde	5281 Mar 15 00:40	6°♐32'42	
opposition	5281 May 21 10:49	3°♐11'09	2°34'52
min. Earth dist.	5281 May 21 12:13	3°♐10'52	8.48175 AU
	5281 Jul 12 16:31	30℞♏	
direct	5281 Jul 30 01:17	29°♏44'37	
	5281 Aug 16 10:33	0°♐	
evening set	5281 Nov 12 21:04	7°♐33'32	
conjunction	5281 Nov 30 04:40	9°♐41'36	2°01'52
minimum elong	5281 Nov 30 04:42	9°♐41'36	2°01'52
max. Earth dist.	5281 Nov 30 02:44	9°♐40'59	10.52467 AU
morning rise	5281 Dec 17 08:07	11°♐48'25	
retrograde	5282 Mar 27 18:27	19°♐15'18	
opposition	5282 Jun 03 14:13	15°♐54'41	2°24'25
min. Earth dist.	5282 Jun 03 15:54	15°♐54'22	8.57001 AU
direct	5282 Aug 12 14:49	12°♐29'02	
evening set	5282 Nov 25 23:23	20°♐11'01	
conjunction	5282 Dec 13 03:56	22°♐17'05	1°50'46
minimum elong	5282 Dec 13 03:58	22°♐17'05	1°50'47

max. Earth dist.	5282 Dec 13 01:41	22°♐16'23	10.61285 AU
morning rise	5282 Dec 30 04:39	24°♐21'58	
	5283 Feb 23 13:36	0°♑	
retrograde	5283 Apr 09 08:26	1°♑42'45	
	5283 May 25 13:53	30°℞♐	
opposition	5283 Jun 16 13:30	28°♐22'53	2°07'20
min. Earth dist.	5283 Jun 16 14:40	28°♐22'39	8.65654 AU
direct	5283 Aug 25 21:56	24°♐58'12	
	5283 Nov 16 10:01	0°♑	
evening set	5283 Dec 08 17:00	2°♑32'59	
conjunction	5283 Dec 25 19:00	4°♑37'15	1°34'42
minimum elong	5283 Dec 25 19:03	4°♑37'16	1°34'43
max. Earth dist.	5283 Dec 25 17:28	4°♑36'47	10.69730 AU
morning rise	5284 Jan 11 17:25	6°♑40'26	
retrograde	5284 Apr 20 17:15	13°♑55'54	
opposition	5284 Jun 28 08:42	10°♑36'36	1°44'46
min. Earth dist.	5284 Jun 28 09:07	10°♑36'31	8.73734 AU
direct	5284 Sep 06 23:06	7°♑12'54	
evening set	5284 Dec 20 03:06	14°♑40'47	
conjunction	5285 Jan 06 02:56	16°♑43'26	1°14'37
minimum elong	5285 Jan 06 02:58	16°♑43'26	1°14'39
max. Earth dist.	5285 Jan 06 02:23	16°♑43'16	10.77418 AU
morning rise	5285 Jan 22 23:25	18°♑45'08	
retrograde	5285 May 02 23:13	25°♑56'18	
opposition	5285 Jul 11 00:09	22°♑37'25	1°18'00
min. Earth dist.	5285 Jul 11 00:29	22°♑37'21	8.80892 AU
direct	5285 Sep 19 18:36	19°♑14'42	
evening set	5286 Jan 01 06:50	26°♑36'15	
conjunction	5286 Jan 18 04:36	28°♑37'32	0°51'35
minimum elong	5286 Jan 18 04:37	28°♑37'32	0°51'37
max. Earth dist.	5286 Jan 18 04:08	28°♑37'23	10.84024 AU
	5286 Jan 29 15:20	0°♒	
morning rise	5286 Feb 03 23:39	0°♒38'02	
retrograde	5286 May 15 02:59	7°♒46'06	
opposition	5286 Jul 23 12:48	4°♒27'27	0°48'19
min. Earth dist.	5286 Jul 23 13:27	4°♒27'20	8.86844 AU
direct	5286 Oct 02 07:54	1°♒05'40	
evening set	5287 Jan 13 05:09	8°♒21'44	
conjunction	5287 Jan 30 01:03	10°♒21'53	0°26'39
minimum elong	5287 Jan 30 01:04	10°♒21'53	0°26'39
max. Earth dist.	5287 Jan 30 00:11	10°♒21'37	10.89293 AU
morning rise	5287 Feb 15 19:09	12°♒21'29	
	5287 Mar 11 11:30	15°♒	
retrograde	5287 May 27 02:27	19°♒27'48	
opposition	5287 Aug 04 23:02	16°♒09'11	0°16'58
min. Earth dist.	5287 Aug 04 23:31	16°♒09'06	8.91358 AU
	5287 Aug 20 17:15	15°℞♒	
direct	5287 Oct 14 17:56	12°♒48'15	
	5287 Dec 06 16:18	15°♒	
evening set	5288 Jan 24 23:37	19°♒59'54	
conjunction	5288 Feb 10 18:06	21°♒59'11	0°00'49
minimum elong	5288 Feb 10 18:06	21°♒59'11	0°00'49
behind sun begin	5288 Feb 10 11:07	21°♒57'08	
behind sun end	5288 Feb 11 01:06	22°♒01'15	
max. Earth dist.	5288 Feb 10 17:32	21°♒59'03	10.93019 AU
desc. node	5288 Feb 22 03:26	23°♒20'32	
morning rise	5288 Feb 27 11:29	23°♒58'09	
	5288 May 02 01:31	0°♓	
retrograde	5288 Jun 07 04:01	1°♓04'04	
	5288 Jul 14 03:01	30°℞♒	
opposition	5288 Aug 16 07:26	27°♒45'18	-0°14'49
min. Earth dist.	5288 Aug 16 07:00	27°♒45'23	8.94253 AU
direct	5288 Oct 26 01:05	24°♒25'08	
	5289 Jan 21 22:49	0°♓	
evening set	5289 Feb 04 15:37	1°♓33'31	
conjunction	5289 Feb 21 09:03	3°♓32'15	-0°24'58
minimum elong	5289 Feb 21 09:02	3°♓32'15	0°24'58
max. Earth dist.	5289 Feb 21 09:39	3°♓32'26	10.95045 AU
morning rise	5289 Mar 10 01:53	5°♓30'52	
retrograde	5289 Jun 19 06:24	12°♓37'43	
opposition	5289 Aug 28 15:10	9°♓18'38	-0°45'51
min. Earth dist.	5289 Aug 28 14:05	9°♓18'51	8.95405 AU
direct	5289 Nov 07 03:26	5°♓59'07	
evening set	5290 Feb 16 06:34	13°♓05'27	
conjunction	5290 Mar 04 23:04	15°♓03'55	-0°49'38
minimum elong	5290 Mar 04 23:03	15°♓03'54	0°49'38
max. Earth dist.	5290 Mar 04 23:56	15°♓04'10	10.95288 AU
morning rise	5290 Mar 21 15:46	17°♓02'29	
retrograde	5290 Jul 01 09:48	24°♓11'36	
opposition	5290 Sep 09 23:06	20°♓52'02	-1°15'01
min. Earth dist.	5290 Sep 09 22:07	20°♓52'13	8.94778 AU
direct	5290 Nov 19 04:45	17°♓32'58	
evening set	5291 Feb 27 21:56	24°♓38'31	
conjunction	5291 Mar 16 13:52	26°♓37'02	-1°12'20
minimum elong	5291 Mar 16 13:50	26°♓37'01	1°12'19
max. Earth dist.	5291 Mar 16 14:15	26°♓37'09	10.93756 AU
morning rise	5291 Apr 02 07:00	28°♓35'54	
	5291 Apr 14 13:11	0°♈	
retrograde	5291 Jul 13 15:33	5°♈48'28	
opposition	5291 Sep 22 07:47	2°♈28'15	-1°41'16
min. Earth dist.	5291 Sep 22 07:08	2°♈28'22	8.92407 AU
	5291 Oct 29 17:33	30°℞♓	
direct	5291 Dec 01 05:32	29°♓09'25	
	5292 Jan 02 03:13	0°♈	
evening set	5292 Mar 10 14:50	6°♈15'28	
conjunction	5292 Mar 27 06:50	8°♈14'22	-1°32'09
minimum elong	5292 Mar 27 06:48	8°♈14'21	1°32'09
max. Earth dist.	5292 Mar 27 07:30	8°♈14'33	10.90512 AU
morning rise	5292 Apr 13 00:48	10°♈13'51	
retrograde	5292 Jul 25 00:11	17°♈30'57	
opposition	5292 Oct 03 18:01	14°♈09'55	-2°03'31
min. Earth dist.	5292 Oct 03 16:52	14°♈10'08	8.88373 AU
direct	5292 Dec 12 07:34	10°♈51'10	
evening set	5293 Mar 22 10:36	17°♈58'53	
conjunction	5293 Apr 08 03:20	19°♈58'33	-1°48'18
minimum elong	5293 Apr 08 03:18	19°♈58'32	1°48'19
max. Earth dist.	5293 Apr 08 05:04	19°♈59'04	10.85669 AU
morning rise	5293 Apr 24 22:29	21°♈58'58	
retrograde	5293 Aug 06 15:12	29°♈21'31	
opposition	5293 Oct 16 06:29	25°♈59'35	-2°20'51
min. Earth dist.	5293 Oct 16 04:33	25°♈59'57	8.82826 AU
direct	5293 Dec 24 11:11	22°♈40'42	
evening set	5294 Apr 03 10:32	29°♈51'12	
	5294 Apr 04 16:14	0°♉	
conjunction	5294 Apr 20 04:37	1°♉51'59	-2°00'01
minimum elong	5294 Apr 20 04:35	1°♉51'59	2°00'02
max. Earth dist.	5294 Apr 20 06:48	1°♉52'39	10.79426 AU
morning rise	5294 May 07 01:42	3°♉53'44	
retrograde	5294 Aug 19 10:30	11°♉22'21	
opposition	5294 Oct 28 21:55	7°♉59'27	-2°32'21
min. Earth dist.	5294 Oct 28 19:45	7°♉59'52	8.75989 AU
direct	5295 Jan 05 15:11	4°♉40'13	
evening set	5295 Apr 15 15:37	11°♉54'31	

conjunction	5295 May 02	11:45	13°♉56'48	-2°06'36
minimum elong	5295 May 02	11:44	13°♉56'48	2°06'38
max. Earth dist.	5295 May 02	13:12	13°♉57'14	10.72028 AU
	5295 May 11	03:31	15°♉	
morning rise	5295 May 19	11:37	16°♉00'13	
retrograde	5295 Sep 01	10:01	23°♉35'19	
opposition	5295 Nov 10	16:43	20°♉11'24	-2°37'15
min. Earth dist.	5295 Nov 10	15:17	20°♉11'41	8.68113 AU
direct	5296 Jan 18	00:17	16°♉51'34	
evening set	5296 Apr 27	02:52	24°♉10'37	
conjunction	5296 May 14	01:54	26°♉14'44	-2°07'33
minimum elong	5296 May 14	01:55	26°♉14'44	2°07'34
max. Earth dist.	5296 May 14	02:53	26°♉15'02	10.63740 AU
morning rise	5296 May 31	05:09	28°♉20'08	
	5296 Jun 14	09:25	0°♊	
retrograde	5296 Sep 13	15:26	6°♊01'51	
opposition	5296 Nov 22	15:05	2°♊36'56	-2°34'59
min. Earth dist.	5296 Nov 22	14:14	2°♊37'06	8.59477 AU
	5296 Dec 31	09:57	30°℞♉	
direct	5297 Jan 29	13:47	29°♉16'17	
	5297 Feb 27	07:27	0°♊	
evening set	5297 May 09	20:59	6°♊40'51	
conjunction	5297 May 26	23:49	8°♊47'09	-2°02'30
minimum elong	5297 May 26	23:50	8°♊47'10	2°02'31
max. Earth dist.	5297 May 27	00:52	8°♊47'29	10.54854 AU
morning rise	5297 Jun 13	06:56	10°♊54'47	
retrograde	5297 Sep 27	02:27	18°♊43'04	
opposition	5297 Dec 05	17:31	15°♊17'11	-2°25'13
min. Earth dist.	5297 Dec 05	16:43	15°♊17'20	8.50402 AU
direct	5298 Feb 11	07:41	11°♊55'35	
evening set	5298 May 22	22:43	19°♊26'21	
conjunction	5298 Jun 09	05:58	21°♊35'04	-1°51'22
minimum elong	5298 Jun 09	06:01	21°♊35'04	1°51'22
max. Earth dist.	5298 Jun 09	07:19	21°♊35'29	10.45745 AU
morning rise	5298 Jun 26	17:22	23°♊45'07	
	5298 Aug 27	01:19	0°♋	
retrograde	5298 Oct 10	18:52	1°♋39'34	
	5298 Nov 25	05:39	30°℞♊	
opposition	5298 Dec 19	00:03	28°♊12'49	-2°07'58
min. Earth dist.	5298 Dec 18	22:56	28°♊13'02	8.41341 AU
direct	5299 Feb 24	07:20	24°♊50'09	
	5299 May 15	14:49	0°♋	
evening set	5299 Jun 05	08:53	2°♋27'33	
conjunction	5299 Jun 22	20:45	4°♋38'46	-1°34'21
minimum elong	5299 Jun 22	20:48	4°♋38'47	1°34'21
max. Earth dist.	5299 Jun 22	21:42	4°♋39'04	10.36928 AU
morning rise	5299 Jul 10	12:34	6°♋51'16	
retrograde	5299 Oct 24	16:37	14°♋51'01	
opposition	5300 Jan 01	10:28	11°♋23'34	-1°43'42
min. Earth dist.	5300 Jan 01	09:32	11°♋23'45	8.32844 AU
direct	5300 Mar 09	11:36	7°♋59'43	
evening set	5300 Jun 19	03:19	15°♋43'50	
conjunction	5300 Jul 06	19:39	17°♋57'28	-1°12'03
minimum elong	5300 Jul 06	19:41	17°♋57'29	1°12'04
max. Earth dist.	5300 Jul 06	19:53	17°♋57'32	10.28949 AU
morning rise	5300 Jul 24	15:37	20°♋12'14	
retrograde	5300 Nov 07	18:44	28°♋16'07	
opposition	5301 Jan 15	00:44	24°♋48'10	-1°13'21
min. Earth dist.	5301 Jan 15	00:18	24°♋48'15	8.25440 AU
direct	5301 Mar 22	21:26	21°♋23'06	
evening set	5301 Jul 03	05:22	29°♋13'41	
	5301 Jul 09	08:45	0°♌	

conjunction	5301 Jul 21	01:43	1°♌29'24	-0°45'30
minimum elong	5301 Jul 21	01:45	1°♌29'25	0°45'30
max. Earth dist.	5301 Jul 21	01:27	1°♌29'19	10.22290 AU
morning rise	5301 Aug 08	01:08	3°♌46'05	
retrograde	5301 Nov 21	21:53	11°♌52'38	
opposition	5302 Jan 28	18:00	8°♌24'26	-0°38'25
min. Earth dist.	5302 Jan 28	18:04	8°♌24'25	8.19577 AU
direct	5302 Apr 05	14:51	4°♌58'11	
evening set	5302 Jul 17	14:28	12°♌54'41	
	5302 Aug 03	00:31	15°♌	
conjunction	5302 Aug 04	14:00	15°♌12'01	-0°16'05
minimum elong	5302 Aug 04	14:00	15°♌12'01	0°16'06
max. Earth dist.	5302 Aug 04	13:28	15°♌11'51	10.17342 AU
morning rise	5302 Aug 22	15:39	17°♌30'00	
retrograde	5302 Dec 06	01:19	25°♌37'38	
opposition	5303 Feb 11	13:21	22°♌09'25	-0°00'53
min. Earth dist.	5303 Feb 11	13:34	22°♌09'23	8.15595 AU
asc. node	5303 Feb 20	09:02	21°♌26'28	
direct	5303 Apr 19	12:41	18°♌42'09	
evening set	5303 Aug 01	04:58	26°♌43'35	
conjunction	5303 Aug 19	06:26	29°♌01'54	0°14'32
minimum elong	5303 Aug 19	06:25	29°♌01'54	0°14'32
behind sun begin	5303 Aug 19	03:28	29°♌00'57	
behind sun end	5303 Aug 19	09:21	29°♌02'50	
max. Earth dist.	5303 Aug 19	06:09	29°♌01'49	10.14386 AU
	5303 Aug 26	19:22	0°♍	
morning rise	5303 Sep 06	08:48	1°♍20'30	
retrograde	5303 Dec 20	05:14	9°♍27'34	
opposition	5304 Feb 25	10:06	5°♍59'35	0°36'57
min. Earth dist.	5304 Feb 25	09:56	5°♍59'37	8.13721 AU
direct	5304 May 02	13:23	2°♍31'30	
evening set	5304 Aug 14	22:35	10°♍36'31	
conjunction	5304 Sep 02	00:32	12°♍55'05	0°44'22
minimum elong	5304 Sep 02	00:30	12°♍55'05	0°44'22
max. Earth dist.	5304 Sep 02	00:37	12°♍55'07	10.13590 AU
morning rise	5304 Sep 20	02:07	15°♍13'34	
retrograde	5305 Jan 02	08:35	23°♍18'27	
opposition	5305 Mar 10	07:12	19°♍50'57	1°12'43
min. Earth dist.	5305 Mar 10	06:49	19°♍51'01	8.14054 AU
direct	5305 May 16	15:46	16°♍22'15	
evening set	5305 Aug 29	17:20	24°♍29'21	
conjunction	5305 Sep 16	18:20	26°♍47'26	1°11'36
minimum elong	5305 Sep 16	18:17	26°♍47'25	1°11'36
max. Earth dist.	5305 Sep 16	18:23	26°♍47'27	10.14991 AU
morning rise	5305 Oct 04	17:48	29°♍05'05	
	5305 Oct 12	02:26	0°♎	
retrograde	5306 Jan 16	08:42	7°♎06'13	
opposition	5306 Mar 24	03:30	3°♎39'26	1°44'07
min. Earth dist.	5306 Mar 24	03:23	3°♎39'28	8.16556 AU
direct	5306 May 30	20:27	0°♎10'25	
evening set	5306 Sep 13	10:34	8°♎17'50	
conjunction	5306 Oct 01	09:22	10°♎34'46	1°34'36
minimum elong	5306 Oct 01	09:18	10°♎34'45	1°34'36
max. Earth dist.	5306 Oct 01	08:58	10°♎34'39	10.18488 AU
morning rise	5306 Oct 19	05:41	12°♎50'59	
retrograde	5307 Jan 30	03:29	20°♎47'07	
opposition	5307 Apr 06	22:17	17°♎21'16	2°09'17
min. Earth dist.	5307 Apr 06	22:51	17°♎21'09	8.21061 AU
direct	5307 Jun 14	01:09	13°♎52'13	
evening set	5307 Sep 27	23:39	21°♎58'06	
conjunction	5307 Oct 15	19:20	24°♎13'24	1°52'02

minimum elong	5307 Oct 15	19:17	24°♎13'23	1°52'02	
max. Earth dist.	5307 Oct 15	18:09	24°♎13'01	10.23866 AU	
morning rise	5307 Nov 02	11:54	26°♎27'44		
	5307 Dec 02	16:28	0°♏		
retrograde	5308 Feb 12	17:15	4°♏17'56		
opposition	5308 Apr 19	14:32	0°♏53'08	2°26'54	
min. Earth dist.	5308 Apr 19	15:30	0°♏52'56	8.27295 AU	
	5308 Apr 30	16:51	30°℞♎		
direct	5308 Jun 27	04:02	27°♎24'23		
	5308 Aug 22	04:44	0°♏		
evening set	5308 Oct 11	06:42	5°♏26'59		
conjunction	5308 Oct 28	22:52	7°♏40'19	2°03'05	
minimum elong	5308 Oct 28	22:51	7°♏40'18	2°03'05	
max. Earth dist.	5308 Oct 28	21:11	7°♏39'47	10.30818 AU	
morning rise	5308 Nov 15	11:28	9°♏52'32		
	5309 Jan 01	04:21	15°♏		
retrograde	5309 Feb 25	01:45	17°♏36'07		
	5309 Apr 23	03:06	15°℞♏		
opposition	5309 May 03	03:21	14°♏12'28	2°36'14	
min. Earth dist.	5309 May 03	04:10	14°♏12'18	8.34900 AU	
direct	5309 Jul 11	03:44	10°♏44'18		
	5309 Sep 23	00:37	15°♏		
evening set	5309 Oct 25	06:10	18°♏42'09		
conjunction	5309 Nov 11	18:50	20°♏53'22	2°07'25	
minimum elong	5309 Nov 11	18:50	20°♏53'22	2°07'25	
max. Earth dist.	5309 Nov 11	17:17	20°♏52'52	10.38948 AU	
morning rise	5309 Nov 29	03:33	23°♏03'22		
	5310 Feb 10	23:28	0°♐		
retrograde	5310 Mar 10	04:04	0°♐40'05		
	5310 Apr 06	17:13	30°℞♏		
opposition	5310 May 16	12:30	27°♏17'36	2°37'13	
min. Earth dist.	5310 May 16	12:49	27°♏17'32	8.43443 AU	
direct	5310 Jul 25	00:07	23°♏50'17		
	5310 Oct 24	13:55	0°♐		
evening set	5310 Nov 07	21:11	1°♐42'12		
conjunction	5310 Nov 25	06:28	3°♐51'16	2°05'08	
minimum elong	5310 Nov 25	06:29	3°♐51'16	2°05'08	
max. Earth dist.	5310 Nov 25	05:37	3°♐51'00	10.47805 AU	
morning rise	5310 Dec 12	11:30	5°♐59'05		
retrograde	5311 Mar 23	01:56	13°♐29'02		
opposition	5311 May 29	17:40	10°♐07'41	2°30'16	
min. Earth dist.	5311 May 29	17:41	10°♐07'41	8.52474 AU	
direct	5311 Aug 07	14:31	6°♐41'25		
evening set	5311 Nov 21	03:28	14°♐26'37		
conjunction	5311 Dec 08	09:38	16°♐33'38	1°56'42	
minimum elong	5311 Dec 08	09:40	16°♐33'39	1°56'43	
max. Earth dist.	5311 Dec 08	09:25	16°♐33'34	10.56938 AU	
morning rise	5311 Dec 25	11:32	18°♐39'25		
retrograde	5312 Apr 03	19:15	26°♐02'59		
opposition	5312 Jun 10	18:47	22°♐42'40	2°16'11	
min. Earth dist.	5312 Jun 10	19:11	22°♐42'35	8.61556 AU	
direct	5312 Aug 19	22:32	19°♐17'32		
evening set	5312 Dec 03	01:14	26°♐55'40		
conjunction	5312 Dec 20	04:32	29°♐00'47	1°42'52	
minimum elong	5312 Dec 20	04:35	29°♐00'48	1°42'53	
max. Earth dist.	5312 Dec 20	03:59	29°♐00'37	10.65908 AU	
	5312 Dec 28	06:07	0°♑		
morning rise	5313 Jan 06	03:58	1°♑04'45		
retrograde	5313 Apr 16	05:47	8°♑22'35		
opposition	5313 Jun 23	15:57	5°♑03'11	1°56'03	
min. Earth dist.	5313 Jun 23	16:45	5°♑03'02	8.70256 AU	
direct	5313 Sep 02	02:19	1°♑39'11		
evening set	5313 Dec 15	15:13	9°♑10'22		
conjunction	5314 Jan 01	15:57	11°♑13'44	1°24'33	
minimum elong	5314 Jan 01	15:59	11°♑13'45	1°24'35	
max. Earth dist.	5314 Jan 01	14:54	11°♑13'25	10.74293 AU	
morning rise	5314 Jan 18	13:24	13°♑16'07		
retrograde	5314 Apr 28	12:58	20°♑29'12		
opposition	5314 Jul 06	09:23	17°♑10'28	1°31'06	
min. Earth dist.	5314 Jul 06	09:58	17°♑10'21	8.78183 AU	
direct	5314 Sep 15	01:41	13°♑47'37		
evening set	5314 Dec 27	22:09	21°♑12'12		
conjunction	5315 Jan 13	20:46	23°♑14'05	1°02'47	
minimum elong	5315 Jan 13	20:48	23°♑14'05	1°02'49	
max. Earth dist.	5315 Jan 13	20:02	23°♑13'51	10.81730 AU	
morning rise	5315 Jan 30	16:36	25°♑15'06		
	5315 Mar 17	07:25	0°♒		
retrograde	5315 May 10	18:04	2°♒24'32		
	5315 Jul 06	21:53	30°℞♑		
opposition	5315 Jul 18	23:36	29°♑06'14	1°02'37	
min. Earth dist.	5315 Jul 18	23:18	29°♑06'17	8.84994 AU	
direct	5315 Sep 27	18:20	25°♑44'30		
	5315 Dec 12	09:08	0°♒		
evening set	5316 Jan 08	23:08	3°♒03'07		
conjunction	5316 Jan 25	20:01	5°♒03'44	0°38'37	
minimum elong	5316 Jan 25	20:03	5°♒03'45	0°38'37	
max. Earth dist.	5316 Jan 25	20:16	5°♒03'49	10.87879 AU	
morning rise	5316 Feb 11	14:30	7°♒03'42		
retrograde	5316 May 21	20:36	14°♒10'44		
opposition	5316 Jul 30	11:07	10°♒52'37	0°31'54	
min. Earth dist.	5316 Jul 30	10:42	10°♒52'42	8.90372 AU	
direct	5316 Oct 09	06:02	7°♒31'50		
evening set	5317 Jan 19	19:48	14°♒45'29		
	5317 Jan 21	21:19	15°♒		
conjunction	5317 Feb 05	15:02	16°♒45'07	0°13'05	
minimum elong	5317 Feb 05	15:03	16°♒45'07	0°13'05	
behind sun begin	5317 Feb 05	10:46	16°♒43'52		
behind sun end	5317 Feb 05	19:20	16°♒46'23		
max. Earth dist.	5317 Feb 05	15:04	16°♒45'08	10.92437 AU	
morning rise	5317 Feb 22	08:34	18°♒44'17		
retrograde	5317 Jun 02	22:42	25°♒50'14		
opposition	5317 Aug 11	20:37	22°♒32'07	0°00'11	
min. Earth dist.	5317 Aug 11	20:56	22°♒32'04	8.94040 AU	
desc. node	5317 Aug 14	02:43	22°♒22'03		
direct	5317 Oct 21	13:43	19°♒12'07		
evening set	5318 Jan 31	13:23	26°♒21'59		
conjunction	5318 Feb 17	07:09	28°♒20'55	-0°12'54	
minimum elong	5318 Feb 17	07:09	28°♒20'55	0°12'54	
behind sun begin	5318 Feb 17	02:45	28°♒19'37		
behind sun end	5318 Feb 17	11:33	28°♒22'13		
max. Earth dist.	5318 Feb 17	06:04	28°♒20'36	10.95168 AU	
	5318 Mar 03	05:09	0°♓		
morning rise	5318 Mar 06	00:12	0°♓19'38		
retrograde	5318 Jun 14	23:12	7°♓25'56		
opposition	5318 Aug 24	05:10	4°♓07'34	-0°31'20	
min. Earth dist.	5318 Aug 24	05:59	4°♓07'25	8.95815 AU	
direct	5318 Nov 02	18:16	0°♓48'12		
evening set	5319 Feb 12	05:02	7°♓55'34		
conjunction	5319 Feb 28	21:49	9°♓54'07	-0°38'10	
minimum elong	5319 Feb 28	21:47	9°♓54'06	0°38'10	
max. Earth dist.	5319 Feb 28	20:42	9°♓53'47	10.95958 AU	
morning rise	5319 Mar 17	14:38	11°♓52'40		
retrograde	5319 Jun 27	01:54	19°♓00'49		

opposition	5319 Sep 05 13:19	15°♓41'55	-1°01'33
min. Earth dist.	5319 Sep 05 13:37	15°♓41'52	8.95655 AU
direct	5319 Nov 14 22:34	12°♓22'58	
evening set	5320 Feb 23 20:30	19°♓29'06	
conjunction	5320 Mar 11 12:46	21°♓27'36	-1°01'55
minimum elong	5320 Mar 11 12:44	21°♓27'36	1°01'55
max. Earth dist.	5320 Mar 11 12:28	21°♓27'31	10.94829 AU
morning rise	5320 Mar 28 05:37	23°♓26'20	
	5320 Jun 10 14:58	0°♈	
retrograde	5320 Jul 08 08:11	0°♈37'29	
	5320 Aug 05 09:43	30°℞♓	
opposition	5320 Sep 16 21:48	27°♓17'51	-1°29'19
min. Earth dist.	5320 Sep 16 21:28	27°♓17'55	8.93623 AU
direct	5320 Nov 25 23:41	23°♓59'06	
	5321 Feb 25 02:35	0°♈	
evening set	5321 Mar 06 13:03	1°♈05'13	
conjunction	5321 Mar 23 05:05	3°♈03'59	-1°23'14
minimum elong	5321 Mar 23 05:03	3°♈03'59	1°23'13
max. Earth dist.	5321 Mar 23 05:07	3°♈04'00	10.91877 AU
morning rise	5321 Apr 08 22:27	5°♈03'13	
retrograde	5321 Jul 20 15:52	12°♈18'30	
opposition	5321 Sep 29 07:45	8°♈57'56	-1°53'37
min. Earth dist.	5321 Sep 29 07:24	8°♈58'00	8.89840 AU
direct	5321 Dec 08 00:50	5°♈39'09	
evening set	5322 Mar 18 07:43	12°♈46'27	
conjunction	5322 Apr 03 23:59	14°♈45'50	-1°41'14
minimum elong	5322 Apr 03 23:57	14°♈45'49	1°41'14
max. Earth dist.	5322 Apr 03 23:29	14°♈45'41	10.87256 AU
morning rise	5322 Apr 20 18:32	16°♈45'54	
retrograde	5322 Aug 02 03:59	24°♈06'18	
opposition	5322 Oct 11 19:41	20°♈44'39	-2°13'26
min. Earth dist.	5322 Oct 11 19:43	20°♈44'39	8.84479 AU
direct	5322 Dec 20 04:05	17°♈25'35	
evening set	5323 Mar 30 05:53	24°♈35'13	
conjunction	5323 Apr 15 23:11	26°♈35'36	-1°55'08
minimum elong	5323 Apr 15 23:09	26°♈35'35	1°55'09
max. Earth dist.	5323 Apr 15 22:57	26°♈35'32	10.81161 AU
morning rise	5323 May 02 19:29	28°♈36'52	
	5323 May 14 18:19	0°♉	
retrograde	5323 Aug 14 19:39	6°♉03'07	
opposition	5323 Oct 24 09:54	2°♉40'20	-2°27'48
min. Earth dist.	5323 Oct 24 09:44	2°♉40'22	8.77754 AU
	5323 Dec 04 08:14	30°℞♈	
direct	5324 Jan 01 08:31	29°♈20'48	
	5324 Jan 28 23:01	0°♉	
evening set	5324 Apr 10 08:36	6°♉33'53	
conjunction	5324 Apr 27 03:48	8°♉35'37	-2°04'13
minimum elong	5324 Apr 27 03:48	8°♉35'37	2°04'14
max. Earth dist.	5324 Apr 27 04:36	8°♉35'52	10.73827 AU
morning rise	5324 May 14 02:22	10°♉38'25	
	5324 Jun 23 12:36	15°♉	
retrograde	5324 Aug 26 17:02	18°♉11'08	
	5324 Nov 02 08:06	15°℞♉	
opposition	5324 Nov 05 03:18	14°♉47'08	-2°35'55
min. Earth dist.	5324 Nov 05 02:18	14°♉47'20	8.69919 AU
direct	5325 Jan 12 17:08	11°♉27'00	
	5325 Mar 19 22:34	15°♉	
evening set	5325 Apr 22 16:57	18°♉44'29	
conjunction	5325 May 09 14:45	20°♉47'58	-2°07'52
minimum elong	5325 May 09 14:45	20°♉47'58	2°07'53
max. Earth dist.	5325 May 09 16:12	20°♉48'24	10.65546 AU
morning rise	5325 May 26 16:16	22°♉52'37	
	5325 Aug 14 12:17	0°♊	
retrograde	5325 Sep 08 21:24	0°♊32'06	
	5325 Oct 04 09:39	30°℞♉	
opposition	5325 Nov 18 00:22	27°♉06'57	-2°37'04
min. Earth dist.	5325 Nov 17 22:50	27°♉07'15	8.61294 AU
direct	5326 Jan 25 03:57	23°♉46'03	
	5326 Apr 25 17:01	0°♊	
evening set	5326 May 05 08:05	1°♊08'46	
conjunction	5326 May 22 09:11	3°♊14'18	-2°05'38
minimum elong	5326 May 22 09:12	3°♊14'18	2°05'39
max. Earth dist.	5326 May 22 10:17	3°♊14'38	10.56678 AU
morning rise	5326 Jun 08 14:28	5°♊21'08	
retrograde	5326 Sep 22 07:00	13°♊07'18	
opposition	5326 Dec 01 01:20	9°♊41'07	-2°30'47
min. Earth dist.	5326 Dec 01 00:05	9°♊41'21	8.52263 AU
direct	5327 Feb 06 18:35	6°♊19'16	
evening set	5327 May 18 06:39	13°♊47'58	
conjunction	5327 Jun 04 11:46	15°♊55'48	-1°57'17
minimum elong	5327 Jun 04 11:48	15°♊55'48	1°57'18
max. Earth dist.	5327 Jun 04 12:23	15°♊55'59	10.47621 AU
morning rise	5327 Jun 21 21:22	18°♊05'00	
retrograde	5327 Oct 05 20:20	25°♊57'30	
opposition	5327 Dec 14 06:26	22°♊30'25	-2°16'56
min. Earth dist.	5327 Dec 14 05:39	22°♊30'35	8.43242 AU
direct	5328 Feb 19 16:44	19°♊07'33	
evening set	5328 May 30 13:09	26°♊42'40	
conjunction	5328 Jun 16 22:48	28°♊52'58	-1°42'54
minimum elong	5328 Jun 16 22:51	28°♊52'59	1°42'55
max. Earth dist.	5328 Jun 16 23:36	28°♊53'13	10.38801 AU
	5328 Jun 25 20:32	0°♋	
morning rise	5328 Jul 04 12:47	1°♋04'36	
retrograde	5328 Oct 18 15:28	9°♋02'47	
opposition	5328 Dec 26 15:33	5°♋34'59	-1°55'45
min. Earth dist.	5328 Dec 26 14:45	5°♋35'09	8.34685 AU
direct	5329 Mar 03 19:47	2°♋11'03	
evening set	5329 Jun 13 03:56	9°♋52'47	
conjunction	5329 Jun 30 18:19	12°♋05'32	-1°22'54
minimum elong	5329 Jun 30 18:22	12°♋05'33	1°22'55
max. Earth dist.	5329 Jun 30 19:53	12°♋06'02	10.30686 AU
morning rise	5329 Jul 18 12:32	14°♋19'31	
retrograde	5329 Nov 01 15:42	22°♋22'22	
opposition	5330 Jan 09 04:29	18°♋54'04	-1°27'59
min. Earth dist.	5330 Jan 09 03:06	18°♋54'20	8.27065 AU
direct	5330 Mar 17 03:52	15°♋29'05	
evening set	5330 Jun 27 02:53	23°♋17'22	
conjunction	5330 Jul 14 21:42	25°♋32'22	-0°58'07
minimum elong	5330 Jul 14 21:44	25°♋32'23	0°58'07
max. Earth dist.	5330 Jul 14 23:39	25°♋33'00	10.23727 AU
morning rise	5330 Aug 01 19:38	27°♋48'25	
	5330 Aug 19 22:58	0°♌	
retrograde	5330 Nov 15 19:14	5°♌54'36	
opposition	5331 Jan 22 20:50	2°♌26'06	-0°54'52
min. Earth dist.	5331 Jan 22 19:07	2°♌26'26	8.20817 AU
	5331 Feb 25 06:32	30°℞♋	
direct	5331 Mar 30 17:52	29°♋00'07	
	5331 May 02 21:04	0°♌	
evening set	5331 Jul 11 09:30	6°♌54'34	
conjunction	5331 Jul 29 07:51	9°♌11'25	-0°29'46
minimum elong	5331 Jul 29 07:52	9°♌11'25	0°29'46
max. Earth dist.	5331 Jul 29 09:42	9°♌12'00	10.18332 AU

morning rise	5331 Aug 16	08:30	11°♌29'01	
	5331 Sep 15	03:03	15°♌	
retrograde	5331 Nov 30	00:26	19°♌37'01	
opposition	5332 Feb 05	15:50	16°♌08'36	-0°18'11
min. Earth dist.	5332 Feb 05	14:15	16°♌08'55	8.16328 AU
	5332 Feb 19	22:36	15°℞♌	
direct	5332 Apr 12	12:31	12°♌41'45	
	5332 Jun 02	19:55	15°♌	
evening set	5332 Jul 24	22:19	20°♌41'36	
asc. node	5332 Aug 04	21:47	22°♌05'20	
conjunction	5332 Aug 11	23:02	22°♌59'41	0°00'35
minimum elong	5332 Aug 11	23:04	22°♌59'41	0°00'35
behind sun begin	5332 Aug 11	15:44	22°♌57'21	
behind sun end	5332 Aug 12	06:23	23°♌02'01	
max. Earth dist.	5332 Aug 12	00:19	23°♌00'01	10.14845 AU
morning rise	5332 Aug 30	01:13	25°♌18'14	
	5332 Oct 10	02:24	0°♍	
retrograde	5332 Dec 13	06:27	3°♍26'22	
opposition	5333 Feb 18	12:50	29°♌58'18	0°19'52
min. Earth dist.	5333 Feb 18	11:51	29°♌58'30	8.13894 AU
	5333 Feb 18	04:34	30°℞♌	
direct	5333 Apr 26	11:40	26°♌30'43	
	5333 Jun 29	18:52	0°♍	
evening set	5333 Aug 08	15:29	4°♍34'47	
conjunction	5333 Aug 26	17:17	6°♍53'25	0°31'02
minimum elong	5333 Aug 26	17:15	6°♍53'24	0°31'02
max. Earth dist.	5333 Aug 26	17:49	6°♍53'35	10.13489 AU
morning rise	5333 Sep 13	19:30	9°♍12'10	
retrograde	5333 Dec 27	11:05	17°♍18'43	
opposition	5334 Mar 04	10:37	13°♍51'15	0°56'54
min. Earth dist.	5334 Mar 04	10:07	13°♍51'21	8.13658 AU
direct	5334 May 10	14:49	10°♍23'08	
evening set	5334 Aug 23	10:54	18°♍29'55	
conjunction	5334 Sep 10	12:20	20°♍48'20	0°59'41
minimum elong	5334 Sep 10	12:17	20°♍48'19	0°59'41
max. Earth dist.	5334 Sep 10	12:26	20°♍48'22	10.14330 AU
morning rise	5334 Sep 28	13:04	23°♍06'31	
	5334 Dec 05	13:44	0°♎	
retrograde	5335 Jan 10	11:57	1°♎09'50	
	5335 Feb 15	18:06	30°℞♍	
opposition	5335 Mar 18	07:59	27°♍43'09	1°30'32
min. Earth dist.	5335 Mar 18	07:38	27°♍43'13	8.15608 AU
direct	5335 May 24	21:06	24°♍14'43	
	5335 Aug 18	16:06	0°♎	
evening set	5335 Sep 07	05:44	2°♎22'27	
conjunction	5335 Sep 25	05:32	4°♎39'57	1°24'47
minimum elong	5335 Sep 25	05:29	4°♎39'56	1°24'47
max. Earth dist.	5335 Sep 25	05:25	4°♎39'55	10.17283 AU
morning rise	5335 Oct 13	03:30	6°♎56'53	
retrograde	5336 Jan 24	08:48	14°♎55'37	
opposition	5336 Mar 31	04:04	11°♎29'49	1°58'42
min. Earth dist.	5336 Mar 31	03:39	11°♎29'54	8.19563 AU
direct	5336 Jun 07	02:24	8°♎01'18	
evening set	5336 Sep 20	21:14	16°♎08'07	
conjunction	5336 Oct 08	18:27	18°♎24'09	1°44'50
minimum elong	5336 Oct 08	18:24	18°♎24'09	1°44'50
max. Earth dist.	5336 Oct 08	18:11	18°♎24'04	10.22085 AU
morning rise	5336 Oct 26	12:47	20°♎39'20	
retrograde	5337 Feb 06	02:18	28°♎32'25	
opposition	5337 Apr 13	21:47	25°♎07'38	2°19'48
min. Earth dist.	5337 Apr 13	21:42	25°♎07'39	8.25168 AU
direct	5337 Jun 21	05:38	21°♎39'17	
evening set	5337 Oct 05	07:41	29°♎43'34	
	5337 Oct 07	12:26	0°♏	
conjunction	5337 Oct 23	01:39	1°♏57'48	1°58'49
minimum elong	5337 Oct 23	01:37	1°♏57'48	1°58'48
max. Earth dist.	5337 Oct 23	00:51	1°♏57'33	10.28338 AU
morning rise	5337 Nov 09	15:57	4°♏10'58	
retrograde	5338 Feb 19	14:58	11°♏57'45	
opposition	5338 Apr 27	12:30	8°♏34'05	2°32'53
min. Earth dist.	5338 Apr 27	13:22	8°♏33'55	8.32027 AU
direct	5338 Jul 05	06:10	5°♏06'10	
evening set	5338 Oct 19	11:21	13°♏06'32	
	5338 Nov 03	14:13	15°♏	
conjunction	5338 Nov 06	01:42	15°♏18'45	2°06'08
minimum elong	5338 Nov 06	01:41	15°♏18'45	2°06'08
max. Earth dist.	5338 Nov 06	00:02	15°♏18'13	10.35694 AU
morning rise	5338 Nov 23	12:00	17°♏29'46	
retrograde	5339 Mar 04	20:50	25°♏09'57	
opposition	5339 May 11	00:02	21°♏47'25	2°37'33
min. Earth dist.	5339 May 11	01:42	21°♏47'05	8.39832 AU
direct	5339 Jul 19	04:53	18°♏20'08	
evening set	5339 Nov 02	06:51	26°♏15'17	
conjunction	5339 Nov 19	17:36	28°♏25'23	2°06'44
minimum elong	5339 Nov 19	17:36	28°♏25'23	2°06'45
max. Earth dist.	5339 Nov 19	15:12	28°♏24'38	10.43855 AU
	5339 Dec 02	09:03	0°♐	
morning rise	5339 Dec 07	00:16	0°♐34'16	
retrograde	5340 Mar 16	20:33	8°♐07'46	
opposition	5340 May 23	07:44	4°♐46'17	2°34'02
min. Earth dist.	5340 May 23	09:43	4°♐45'53	8.48257 AU
direct	5340 Jul 31	23:15	1°♐19'47	
evening set	5340 Nov 14	17:50	9°♐08'40	
conjunction	5340 Dec 02	01:18	11°♐16'43	2°00'56
minimum elong	5340 Dec 02	01:19	11°♐16'44	2°00'57
max. Earth dist.	5340 Dec 01	22:31	11°♐15'52	10.52465 AU
morning rise	5340 Dec 19	04:47	13°♐23'32	
retrograde	5341 Mar 29	15:33	20°♐50'32	
opposition	5341 Jun 05	11:10	17°♐29'56	2°22'59
min. Earth dist.	5341 Jun 05	12:42	17°♐29'38	8.56914 AU
direct	5341 Aug 14	11:52	14°♐04'20	
evening set	5341 Nov 27	20:07	21°♐46'23	
conjunction	5341 Dec 15	00:44	23°♐52'29	1°49'22
minimum elong	5341 Dec 15	00:46	23°♐52'30	1°49'23
max. Earth dist.	5341 Dec 14	22:35	23°♐51'50	10.61113 AU
morning rise	5342 Jan 01	01:24	25°♐57'25	
	5342 Feb 06	17:03	0°♑	
retrograde	5342 Apr 11	05:24	3°♑18'24	
opposition	5342 Jun 18	10:42	29°♐58'33	2°05'21
min. Earth dist.	5342 Jun 18	11:34	29°♐58'23	8.65390 AU
	5342 Jun 18	03:09	30°℞♐	
direct	5342 Aug 27	18:59	26°♐33'56	
	5342 Nov 02	14:02	0°♑	
evening set	5342 Dec 10	13:57	4°♑08'54	
conjunction	5342 Dec 27	16:03	6°♑13'13	1°32'52
minimum elong	5342 Dec 27	16:05	6°♑13'14	1°32'54
max. Earth dist.	5342 Dec 27	14:56	6°♑12'52	10.69387 AU
morning rise	5343 Jan 13	14:21	8°♑16'27	
retrograde	5343 Apr 23	15:49	15°♑32'15	
opposition	5343 Jul 01	06:23	12°♑12'58	1°42'19
min. Earth dist.	5343 Jul 01	07:04	12°♑12'50	8.73308 AU
direct	5343 Sep 09	20:28	8°♑49'19	
evening set	5343 Dec 23	00:24	16°♑17'26	

conjunction	5344 Jan 09 00:10	18°♑20'10	1°12'28
minimum elong	5344 Jan 09 00:12	18°♑20'11	1°12'30
max. Earth dist.	5344 Jan 08 23:22	18°♑19'56	10.76924 AU
morning rise	5344 Jan 25 20:41	20°♑21'58	
retrograde	5344 May 04 21:49	27°♑33'33	
opposition	5344 Jul 12 22:24	24°♑14'39	1°15'12
min. Earth dist.	5344 Jul 12 23:29	24°♑14'27	8.80336 AU
direct	5344 Sep 21 15:13	20°♑51'55	
evening set	5345 Jan 03 04:24	28°♑13'47	
	5345 Jan 17 23:46	0°♒	
conjunction	5345 Jan 20 02:05	0°♒15'10	0°49'11
minimum elong	5345 Jan 20 02:07	0°♒15'10	0°49'12
max. Earth dist.	5345 Jan 20 00:46	0°♒14'46	10.83411 AU
morning rise	5345 Feb 05 21:19	2°♒15'48	
retrograde	5345 May 16 23:52	9°♒24'21	
opposition	5345 Jul 25 11:26	6°♒05'39	0°45'15
min. Earth dist.	5345 Jul 25 12:17	6°♒05'29	8.86180 AU
direct	5345 Oct 04 06:22	2°♒43'49	
evening set	5346 Jan 15 03:07	10°♒00'16	
conjunction	5346 Jan 31 23:03	12°♒00'30	0°24'05
minimum elong	5346 Jan 31 23:04	12°♒00'31	0°24'05
max. Earth dist.	5346 Jan 31 22:13	12°♒00'15	10.88583 AU
morning rise	5346 Feb 17 17:13	14°♒00'13	
	5346 Feb 26 07:56	15°♒	
retrograde	5346 May 29 02:19	21°♒07'06	
opposition	5346 Aug 06 22:05	17°♒48'23	0°13'46
min. Earth dist.	5346 Aug 06 21:57	17°♒48'25	8.90607 AU
	5346 Sep 20 13:55	15°℞♒	
direct	5346 Oct 16 17:43	14°♒27'25	
	5346 Nov 11 12:10	15°♒	
desc. node	5347 Jan 17 00:09	20°♒31'04	
evening set	5347 Jan 26 21:59	21°♒39'25	
conjunction	5347 Feb 12 16:34	23°♒38'50	-0°01'54
minimum elong	5347 Feb 12 16:34	23°♒38'50	0°01'53
behind sun begin	5347 Feb 12 09:34	23°♒36'46	
behind sun end	5347 Feb 12 23:34	23°♒40'54	
max. Earth dist.	5347 Feb 12 16:54	23°♒38'55	10.92237 AU
morning rise	5347 Mar 01 09:52	25°♒37'54	
	5347 Apr 12 03:46	0°♓	
retrograde	5347 Jun 10 04:06	2°♓44'25	
	5347 Aug 11 13:10	30°℞♒	
opposition	5347 Aug 19 07:05	29°♒25'32	-0°18'01
min. Earth dist.	5347 Aug 19 06:03	29°♒25'43	8.93449 AU
direct	5347 Oct 28 23:14	26°♒05'20	
	5348 Jan 08 22:54	0°♓	
evening set	5348 Feb 07 14:25	3°♓14'04	
conjunction	5348 Feb 24 07:50	5°♓12'55	-0°27'32
minimum elong	5348 Feb 24 07:49	5°♓12'54	0°27'32
max. Earth dist.	5348 Feb 24 08:45	5°♓13'11	10.94226 AU
morning rise	5348 Mar 12 00:41	7°♓11'38	
retrograde	5348 Jun 21 06:32	14°♓19'07	
opposition	5348 Aug 30 15:19	10°♓59'55	-0°48'56
min. Earth dist.	5348 Aug 30 14:24	11°♓00'05	8.94587 AU
direct	5348 Nov 09 02:39	7°♓40'18	
evening set	5349 Feb 18 05:54	14°♓47'02	
conjunction	5349 Mar 06 22:18	16°♓45'36	-0°52'03
minimum elong	5349 Mar 06 22:16	16°♓45'36	0°52'03
max. Earth dist.	5349 Mar 06 22:42	16°♓45'44	10.94470 AU
morning rise	5349 Mar 23 15:08	18°♓44'18	
retrograde	5349 Jul 03 10:03	25°♓54'00	
opposition	5349 Sep 11 23:33	22°♓34'19	-1°17'51
min. Earth dist.	5349 Sep 11 22:50	22°♓34'27	8.93977 AU
direct	5349 Nov 21 04:07	19°♓15'10	
evening set	5350 Mar 01 21:38	26°♓21'08	
conjunction	5350 Mar 18 13:35	28°♓19'44	-1°14'28
minimum elong	5350 Mar 18 13:32	28°♓19'43	1°14'28
max. Earth dist.	5350 Mar 18 14:11	28°♓19'55	10.92969 AU
	5350 Apr 01 14:58	0°♈	
morning rise	5350 Apr 04 06:47	0°♈18'43	
retrograde	5350 Jul 15 15:25	7°♈31'53	
opposition	5350 Sep 24 08:37	4°♈11'31	-1°43'42
min. Earth dist.	5350 Sep 24 07:24	4°♈11'44	8.91647 AU
direct	5350 Dec 03 06:24	0°♈52'37	
evening set	5351 Mar 13 14:49	7°♈59'02	
conjunction	5351 Mar 30 06:57	9°♈58'03	-1°33'56
minimum elong	5351 Mar 30 06:55	9°♈58'02	1°33'56
max. Earth dist.	5351 Mar 30 08:48	9°♈58'36	10.89776 AU
morning rise	5351 Apr 16 00:53	11°♈57'38	
retrograde	5351 Jul 28 02:28	19°♈15'19	
opposition	5351 Oct 06 19:06	15°♈54'09	-2°05'27
min. Earth dist.	5351 Oct 06 16:55	15°♈54'33	8.87676 AU
direct	5351 Dec 15 08:42	12°♈35'21	
evening set	5352 Mar 24 11:04	19°♈43'23	
conjunction	5352 Apr 10 03:53	21°♈43'09	-1°49'38
minimum elong	5352 Apr 10 03:52	21°♈43'08	1°49'38
max. Earth dist.	5352 Apr 10 06:10	21°♈43'50	10.85010 AU
morning rise	5352 Apr 26 23:07	23°♈43'42	
	5352 Jul 02 13:15	0°♉	
retrograde	5352 Aug 08 17:15	1°♉06'42	
	5352 Sep 15 11:40	30°℞♈	
opposition	5352 Oct 18 07:45	27°♈44'40	-2°22'10
min. Earth dist.	5352 Oct 18 05:26	27°♈45'06	8.82218 AU
direct	5352 Dec 26 10:11	24°♈25'44	
	5353 Mar 22 13:12	0°♉	
evening set	5353 Apr 05 11:23	1°♉36'33	
conjunction	5353 Apr 22 05:29	3°♉37'25	-2°00'48
minimum elong	5353 Apr 22 05:28	3°♉37'25	2°00'50
max. Earth dist.	5353 Apr 22 07:21	3°♉37'59	10.78873 AU
morning rise	5353 May 09 02:48	5°♉39'16	
retrograde	5353 Aug 21 11:34	13°♉08'16	
opposition	5353 Oct 30 23:25	9°♉45'18	-2°32'59
min. Earth dist.	5353 Oct 30 21:30	9°♉45'40	8.75500 AU
direct	5354 Jan 07 16:30	6°♉26'00	
evening set	5354 Apr 17 16:39	13°♉40'35	
	5354 Apr 28 15:59	15°♉	
conjunction	5354 May 04 12:54	15°♉42'57	-2°06'49
minimum elong	5354 May 04 12:54	15°♉42'57	2°06'50
max. Earth dist.	5354 May 04 14:30	15°♉43'26	10.71616 AU
morning rise	5354 May 21 13:01	17°♉46'28	
retrograde	5354 Sep 03 11:47	25°♉21'51	
opposition	5354 Nov 12 18:20	21°♉57'53	-2°37'09
min. Earth dist.	5354 Nov 12 16:49	21°♉58'11	8.67785 AU
direct	5355 Jan 20 01:51	18°♉38'01	
evening set	5355 Apr 30 04:06	25°♉57'14	
conjunction	5355 May 17 03:28	28°♉01'27	-2°07'09
minimum elong	5355 May 17 03:28	28°♉01'27	2°07'10
max. Earth dist.	5355 May 17 05:34	28°♉02'05	10.63509 AU
	5355 Jun 02 07:53	0°♊	
morning rise	5355 Jun 03 06:54	0°♊06'55	
retrograde	5355 Sep 16 17:07	7°♊48'47	
opposition	5355 Nov 25 16:36	4°♊23'49	-2°34'07
min. Earth dist.	5355 Nov 25 14:56	4°♊24'09	8.59355 AU
direct	5356 Feb 01 15:03	1°♊03'10	

evening set	5356 May 11	22:27	8°♊27'48		
conjunction	5356 May 29	01:37	10°♊34'10	-2°01'30	
minimum elong	5356 May 29	01:39	10°♊34'10	2°01'31	
max. Earth dist.	5356 May 29	03:53	10°♊34'52	10.54846 AU	
morning rise	5356 Jun 15	08:53	12°♊41'50		
retrograde	5356 Sep 29	03:52	20°♊30'02		
opposition	5356 Dec 07	18:53	17°♊04'08	-2°23'37	
min. Earth dist.	5356 Dec 07	17:08	17°♊04'28	8.50514 AU	
direct	5357 Feb 13	09:32	13°♊42'32		
evening set	5357 May 25	00:17	21°♊13'11		
conjunction	5357 Jun 11	07:43	23°♊21'56	-1°49'48	
minimum elong	5357 Jun 11	07:45	23°♊21'57	1°49'49	
max. Earth dist.	5357 Jun 11	09:21	23°♊22'27	10.45965 AU	
morning rise	5357 Jun 28	19:19	25°♊32'00		
	5357 Aug 07	22:59	0°♋		
retrograde	5357 Oct 12	21:23	3°♋26'09		
	5357 Dec 20	22:24	30°℞♊		
opposition	5357 Dec 21	01:14	29°♊59'26	-2°05'43	
min. Earth dist.	5357 Dec 20	23:52	29°♊59'43	8.41654 AU	
direct	5358 Feb 26	07:34	26°♊36'46		
	5358 Apr 30	20:37	0°♋		
evening set	5358 Jun 07	10:22	4°♋13'57		
conjunction	5358 Jun 24	22:21	6°♋25'09	-1°32'18	
minimum elong	5358 Jun 24	22:24	6°♋25'10	1°32'19	
max. Earth dist.	5358 Jun 24	22:45	6°♋25'17	10.37327 AU	
morning rise	5358 Jul 12	14:28	8°♋37'39		
retrograde	5358 Oct 26	18:41	16°♋36'57		
opposition	5359 Jan 03	11:25	13°♋09'35	-1°40'53	
min. Earth dist.	5359 Jan 03	10:59	13°♋09'40	8.33304 AU	
direct	5359 Mar 11	11:57	9°♋45'44		
evening set	5359 Jun 21	04:39	17°♋29'37		
conjunction	5359 Jul 08	21:09	19°♋43'11	-1°09'38	
minimum elong	5359 Jul 08	21:12	19°♋43'12	1°09'38	
max. Earth dist.	5359 Jul 08	20:50	19°♋43'05	10.29469 AU	
morning rise	5359 Jul 26	17:23	21°♋57'56		
	5359 Nov 04	21:50	0°♌		
retrograde	5359 Nov 09	18:37	0°♌01'15		
	5359 Nov 14	15:13	30°℞♋		
opposition	5360 Jan 17	01:16	26°♋33'25	-1°10'09	
min. Earth dist.	5360 Jan 17	01:23	26°♋33'23	8.25997 AU	
direct	5360 Mar 23	23:38	23°♋08'22		
	5360 Jun 26	08:11	0°♌		
evening set	5360 Jul 04	06:32	0°♌58'40		
conjunction	5360 Jul 22	03:04	3°♌14'19	-0°42'50	
minimum elong	5360 Jul 22	03:05	3°♌14'20	0°42'51	
max. Earth dist.	5360 Jul 22	02:47	3°♌14'14	10.22880 AU	
morning rise	5360 Aug 09	02:33	5°♌30'54		
retrograde	5360 Nov 22	20:36	13°♌36'54		
opposition	5361 Jan 29	18:07	10°♌08'48	-0°35'02	
min. Earth dist.	5361 Jan 29	18:11	10°♌08'47	8.20188 AU	
direct	5361 Apr 06	16:09	6°♌42'37		
evening set	5361 Jul 18	15:21	14°♌38'45		
	5361 Jul 21	10:58	15°♌		
conjunction	5361 Aug 05	15:01	16°♌56'01	-0°13'21	
minimum elong	5361 Aug 05	15:02	16°♌56'01	0°13'22	
behind sun begin	5361 Aug 05	11:00	16°♌54'44		
behind sun end	5361 Aug 05	19:04	16°♌57'17		
max. Earth dist.	5361 Aug 05	15:02	16°♌56'01	10.17969 AU	
morning rise	5361 Aug 23	16:34	19°♌13'53		
retrograde	5361 Dec 07	01:13	27°♌20'57		
asc. node	5362 Jan 18	16:01	25°♌47'42		
opposition	5362 Feb 12	13:04	23°♌52'49	0°02'30	
min. Earth dist.	5362 Feb 12	12:50	23°♌52'52	8.16232 AU	
direct	5362 Apr 20	12:19	20°♌25'37		
evening set	5362 Aug 02	05:35	28°♌26'41		
	5362 Aug 14	11:13	0°♍		
conjunction	5362 Aug 20	07:06	0°♍44'54	0°17'12	
minimum elong	5362 Aug 20	07:05	0°♍44'54	0°17'11	
max. Earth dist.	5362 Aug 20	07:17	0°♍44'57	10.15022 AU	
morning rise	5362 Sep 07	09:17	3°♍03'23		
retrograde	5362 Dec 21	05:46	11°♍09'52		
opposition	5363 Feb 26	09:28	7°♍41'58	0°40'08	
min. Earth dist.	5363 Feb 26	09:09	7°♍42'02	8.14353 AU	
direct	5363 May 04	12:26	4°♍13'56		
evening set	5363 Aug 16	23:03	12°♍18'40		
conjunction	5363 Sep 04	00:53	14°♍37'05	0°46'48	
minimum elong	5363 Sep 04	00:50	14°♍37'04	0°46'48	
max. Earth dist.	5363 Sep 04	00:43	14°♍37'02	10.14205 AU	
morning rise	5363 Sep 22	02:14	16°♍55'25		
retrograde	5364 Jan 04	08:12	24°♍59'44		
opposition	5364 Mar 11	06:15	21°♍32'21	1°15'31	
min. Earth dist.	5364 Mar 11	06:23	21°♍32'19	8.14652 AU	
direct	5364 May 17	15:36	18°♍03'42		
evening set	5364 Aug 30	17:27	26°♍10'31		
conjunction	5364 Sep 17	18:10	28°♍28'26	1°13'40	
minimum elong	5364 Sep 17	18:07	28°♍28'25	1°13'40	
max. Earth dist.	5364 Sep 17	17:19	28°♍28'10	10.15562 AU	
	5364 Sep 29	16:12	0°♎		
morning rise	5364 Oct 05	17:26	0°♎45'56		
retrograde	5365 Jan 17	07:01	8°♎46'36		
opposition	5365 Mar 25	02:22	5°♎19'56	1°46'23	
min. Earth dist.	5365 Mar 25	03:09	5°♎19'46	8.17103 AU	
direct	5365 May 31	19:52	1°♎50'55		
evening set	5365 Sep 14	10:11	9°♎58'04		
conjunction	5365 Oct 02	08:41	12°♎14'52	1°36'11	
minimum elong	5365 Oct 02	08:38	12°♎14'51	1°36'11	
max. Earth dist.	5365 Oct 02	07:03	12°♎14'21	10.18995 AU	
morning rise	5365 Oct 20	04:53	14°♎30'57		
retrograde	5366 Jan 31	01:48	22°♎26'40		
opposition	5366 Apr 07	20:51	19°♎00'55	2°10'55	
min. Earth dist.	5366 Apr 07	22:07	19°♎00'39	8.21529 AU	
direct	5366 Jun 15	00:19	15°♎31'52		
evening set	5366 Sep 28	22:56	23°♎37'32		
conjunction	5366 Oct 16	18:22	25°♎52'42	1°53'05	
minimum elong	5366 Oct 16	18:20	25°♎52'42	1°53'05	
max. Earth dist.	5366 Oct 16	16:13	25°♎52'01	10.24279 AU	
morning rise	5366 Nov 03	10:48	28°♎06'56		
	5366 Nov 18	23:01	0°♏		
retrograde	5367 Feb 13	15:06	5°♏56'46		
opposition	5367 Apr 21	12:47	2°♏32'02	2°27'50	
min. Earth dist.	5367 Apr 21	13:51	2°♏31'49	8.27654 AU	
	5367 May 26	21:17	30°℞♎		
direct	5367 Jun 29	03:24	29°♎03'17		
	5367 Aug 01	04:59	0°♏		
evening set	5367 Oct 13	05:33	7°♏05'42		
conjunction	5367 Oct 30	21:36	9°♏18'57	2°03'33	
minimum elong	5367 Oct 30	21:34	9°♏18'56	2°03'34	
max. Earth dist.	5367 Oct 30	19:46	9°♏18'22	10.31111 AU	
morning rise	5367 Nov 17	09:59	11°♏31'04		
	5367 Dec 17	08:02	15°♏		
retrograde	5368 Feb 26	23:01	19°♏14'25		
opposition	5368 May 04	01:33	15°♏50'47	2°36'27	

min. Earth dist.	5368 May 04	02:04	15°♏50'41	8.35127 AU
	5368 May 14	18:36	15°℞♏	
direct	5368 Jul 12	03:20	12°♏22'38	
	5368 Sep 06	20:06	15°♏	
evening set	5368 Oct 26	04:31	20°♏20'18	
conjunction	5368 Nov 12	17:08	22°♏31'28	2°07'18
minimum elong	5368 Nov 12	17:08	22°♏31'28	2°07'18
max. Earth dist.	5368 Nov 12	15:59	22°♏31'06	10.39105 AU
morning rise	5368 Nov 30	01:36	24°♏41'23	
	5369 Jan 18	12:07	0°♐	
retrograde	5369 Mar 11	02:53	2°♐18'00	
	5369 May 03	14:35	30°℞♏	
opposition	5369 May 17	10:38	28°♏55'31	2°36'44
min. Earth dist.	5369 May 17	11:01	28°♏55'26	8.43529 AU
direct	5369 Jul 25	21:47	25°♏28'12	
	5369 Oct 10	19:12	0°♐	
evening set	5369 Nov 08	19:19	3°♐19'59	
conjunction	5369 Nov 26	04:33	5°♐29'03	2°04'27
minimum elong	5369 Nov 26	04:34	5°♐29'03	2°04'27
max. Earth dist.	5369 Nov 26	03:46	5°♐28'48	10.47820 AU
morning rise	5369 Dec 13	09:25	7°♐36'50	
retrograde	5370 Mar 24	00:44	15°♐06'44	
opposition	5370 May 30	15:48	11°♐45'23	2°29'06
min. Earth dist.	5370 May 30	16:34	11°♐45'14	8.52418 AU
direct	5370 Aug 08	11:31	8°♐19'05	
evening set	5370 Nov 22	01:29	16°♐04'16	
conjunction	5370 Dec 09	07:30	18°♐11'17	1°55'30
minimum elong	5370 Dec 09	07:32	18°♐11'18	1°55'31
max. Earth dist.	5370 Dec 09	06:29	18°♐10'58	10.56812 AU
morning rise	5370 Dec 26	09:24	20°♐17'05	
retrograde	5371 Apr 05	16:09	27°♐40'42	
opposition	5371 Jun 12	17:04	24°♐20'23	2°14'25
min. Earth dist.	5371 Jun 12	18:11	24°♐20'10	8.61362 AU
direct	5371 Aug 21	21:12	20°♐55'12	
evening set	5371 Dec 04	23:03	28°♐33'25	
	5371 Dec 16	20:24	0°♑	
conjunction	5371 Dec 22	02:14	0°♑38'33	1°41'12
minimum elong	5371 Dec 22	02:16	0°♑38'33	1°41'14
max. Earth dist.	5371 Dec 22	00:47	0°♑38'06	10.65649 AU
morning rise	5372 Jan 08	01:45	2°♑42'34	
retrograde	5372 Apr 17	03:42	10°♑00'37	
opposition	5372 Jun 24	14:21	6°♑41'09	1°53'46
min. Earth dist.	5372 Jun 24	15:05	6°♑41'01	8.69934 AU
direct	5372 Sep 03	01:49	3°♑17'09	
evening set	5372 Dec 16	12:57	10°♑48'26	
conjunction	5373 Jan 02	13:44	12°♑51'52	1°22'31
minimum elong	5373 Jan 02	13:47	12°♑51'53	1°22'32
max. Earth dist.	5373 Jan 02	12:44	12°♑51'34	10.73918 AU
morning rise	5373 Jan 19	11:14	14°♑54'18	
retrograde	5373 Apr 29	11:39	22°♑07'41	
opposition	5373 Jul 07	07:52	18°♑48'53	1°28'25
min. Earth dist.	5373 Jul 07	07:49	18°♑48'54	8.77747 AU
direct	5373 Sep 15	23:29	15°♑26'03	
evening set	5373 Dec 28	20:02	22°♑50'49	
conjunction	5374 Jan 14	18:46	24°♑52'46	1°00'27
minimum elong	5374 Jan 14	18:48	24°♑52'47	1°00'28
max. Earth dist.	5374 Jan 14	18:49	24°♑52'47	10.81251 AU
morning rise	5374 Jan 31	14:32	26°♑53'53	
	5374 Feb 28	12:11	0°♒	
retrograde	5374 May 11	16:46	4°♒03'42	
opposition	5374 Jul 19	22:27	0°♒45'20	0°59'38
min. Earth dist.	5374 Jul 19	21:59	0°♒45'26	8.84469 AU
	5374 Jul 30	01:56	30°℞♑	
direct	5374 Sep 28	16:41	27°♑23'36	
	5374 Nov 25	15:07	0°♒	
evening set	5375 Jan 09	21:18	4°♒42'29	
conjunction	5375 Jan 26	18:09	6°♒43'11	0°36'05
minimum elong	5375 Jan 26	18:11	6°♒43'11	0°36'05
max. Earth dist.	5375 Jan 26	18:34	6°♒43'18	10.87331 AU
morning rise	5375 Feb 12	12:39	8°♒43'13	
	5375 Apr 21	23:54	15°♒	
retrograde	5375 May 23	20:51	15°♒50'42	
	5375 Jun 25	06:59	15°℞♒	
opposition	5375 Aug 01	10:28	12°♒32'34	0°28'44
min. Earth dist.	5375 Aug 01	10:24	12°♒32'34	8.89813 AU
direct	5375 Oct 11	04:33	9°♒11'47	
	5376 Jan 09	06:46	15°♒	
evening set	5376 Jan 21	18:17	16°♒25'41	
conjunction	5376 Feb 07	13:25	18°♒25'24	0°10'28
minimum elong	5376 Feb 07	13:25	18°♒25'24	0°10'28
behind sun begin	5376 Feb 07	07:53	18°♒23'46	
behind sun end	5376 Feb 07	18:57	18°♒27'02	
max. Earth dist.	5376 Feb 07	13:06	18°♒25'19	10.91890 AU
morning rise	5376 Feb 24	07:06	20°♒24'41	
retrograde	5376 Jun 03	20:51	27°♒31'04	
desc. node	5376 Jul 07	19:02	26°♒36'32	
opposition	5376 Aug 12	20:17	24°♒12'53	-0°03'02
min. Earth dist.	5376 Aug 12	20:37	24°♒12'50	8.93519 AU
direct	5376 Oct 22	12:11	20°♒52'53	
evening set	5377 Feb 01	12:05	28°♒03'01	
	5377 Feb 17	23:07	0°♓	
conjunction	5377 Feb 18	05:52	0°♓02'00	-0°15'30
minimum elong	5377 Feb 18	05:52	0°♓02'00	0°15'30
behind sun begin	5377 Feb 18	03:42	0°♓01'22	
behind sun end	5377 Feb 18	08:01	0°♓02'38	
max. Earth dist.	5377 Feb 18	05:09	0°♓01'48	10.94681 AU
morning rise	5377 Mar 06	22:59	2°♓00'47	
retrograde	5377 Jun 15	22:45	9°♓07'33	
opposition	5377 Aug 25	05:01	5°♓49'05	-0°34'29
min. Earth dist.	5377 Aug 25	05:02	5°♓49'05	8.95366 AU
direct	5377 Nov 03	19:07	2°♓29'43	
evening set	5378 Feb 13	04:03	9°♓37'17	
conjunction	5378 Mar 01	20:54	11°♓35'53	-0°40'40
minimum elong	5378 Mar 01	20:52	11°♓35'53	0°40'39
max. Earth dist.	5378 Mar 01	20:58	11°♓35'55	10.95538 AU
morning rise	5378 Mar 18	13:37	13°♓34'30	
retrograde	5378 Jun 28	03:22	20°♓43'02	
opposition	5378 Sep 06	13:28	17°♓24'04	-1°04'28
min. Earth dist.	5378 Sep 06	12:52	17°♓24'11	8.95265 AU
direct	5378 Nov 15	21:51	14°♓05'10	
evening set	5379 Feb 24	19:51	21°♓11'27	
conjunction	5379 Mar 13	12:05	23°♓10'00	-1°04'11
minimum elong	5379 Mar 13	12:03	23°♓09'59	1°04'10
max. Earth dist.	5379 Mar 13	12:19	23°♓10'04	10.94462 AU
morning rise	5379 Mar 30	04:54	25°♓08'47	
	5379 May 16	16:20	0°♈	
retrograde	5379 Jul 10	08:18	2°♈20'20	
	5379 Sep 05	10:33	30°℞♓	
opposition	5379 Sep 18	22:20	29°♓00'39	-1°31'55
min. Earth dist.	5379 Sep 18	21:52	29°♓00'44	8.93287 AU
direct	5379 Nov 27	22:40	25°♓41'56	
	5380 Feb 11	05:56	0°♈	
evening set	5380 Mar 07	12:44	2°♈48'14	

conjunction	5380 Mar 24 04:41	4°♈47'03	-1°25'09
minimum elong	5380 Mar 24 04:39	4°♈47'02	1°25'09
max. Earth dist.	5380 Mar 24 04:18	4°♈46'56	10.91564 AU
morning rise	5380 Apr 09 22:12	6°♈46'20	
retrograde	5380 Jul 21 16:44	14°♈01'58	
opposition	5380 Sep 30 08:30	10°♈41'23	-1°55'45
min. Earth dist.	5380 Sep 30 08:31	10°♈41'23	8.89556 AU
direct	5380 Dec 09 01:11	7°♈22'37	
evening set	5381 Mar 19 07:42	14°♈30'05	
conjunction	5381 Apr 04 23:59	16°♈29'31	-1°42'44
minimum elong	5381 Apr 04 23:57	16°♈29'30	1°42'45
max. Earth dist.	5381 Apr 04 23:39	16°♈29'24	10.86994 AU
morning rise	5381 Apr 21 18:39	18°♈29'39	
retrograde	5381 Aug 03 04:14	25°♈50'21	
opposition	5381 Oct 12 20:32	22°♈28'41	-2°14'59
min. Earth dist.	5381 Oct 12 20:17	22°♈28'44	8.84247 AU
direct	5381 Dec 21 04:17	19°♈09'39	
evening set	5382 Mar 31 06:07	26°♈19'26	
conjunction	5382 Apr 16 23:35	28°♈19'51	-1°56'09
minimum elong	5382 Apr 16 23:34	28°♈19'51	1°56'10
max. Earth dist.	5382 Apr 17 00:20	28°♈20'05	10.80951 AU
	5382 Apr 30 20:32	0°♉	
morning rise	5382 May 03 19:53	0°♉21'10	
retrograde	5382 Aug 15 20:42	7°♉47'43	
opposition	5382 Oct 25 10:57	4°♉24'52	-2°28'43
min. Earth dist.	5382 Oct 25 09:53	4°♉25'04	8.77579 AU
direct	5383 Jan 02 10:11	1°♉05'23	
evening set	5383 Apr 12 09:06	8°♉18'32	
conjunction	5383 Apr 29 04:27	10°♉20'20	-2°04'40
minimum elong	5383 Apr 29 04:26	10°♉20'20	2°04'42
max. Earth dist.	5383 Apr 29 05:56	10°♉20'47	10.73681 AU
morning rise	5383 May 16 03:06	12°♉23'11	
	5383 Jun 08 01:57	15°♉	
retrograde	5383 Aug 28 19:51	19°♉56'05	
opposition	5383 Nov 07 04:26	16°♉32'04	-2°36'07
min. Earth dist.	5383 Nov 07 02:51	16°♉32'22	8.69812 AU
	5383 Nov 27 23:59	15°℞♉	
direct	5384 Jan 14 17:02	13°♉11'56	
	5384 Feb 29 20:35	15°♉	
evening set	5384 Apr 23 17:49	20°♉29'28	
conjunction	5384 May 10 15:41	22°♉32'58	-2°07'44
minimum elong	5384 May 10 15:41	22°♉32'58	2°07'45
max. Earth dist.	5384 May 10 16:46	22°♉33'18	10.65478 AU
morning rise	5384 May 27 17:27	24°♉37'42	
	5384 Jul 18 07:55	0°♊	
retrograde	5384 Sep 09 22:56	2°♊17'12	
	5384 Nov 04 03:17	30°℞♉	
opposition	5384 Nov 19 01:27	28°♉52'04	-2°36'32
min. Earth dist.	5384 Nov 19 00:12	28°♉52'18	8.61267 AU
direct	5385 Jan 26 03:51	25°♉31'08	
	5385 Apr 11 03:07	0°♊	
evening set	5385 May 06 09:04	2°♊53'54	
conjunction	5385 May 23 10:17	4°♊59'27	-2°04'54
minimum elong	5385 May 23 10:18	4°♊59'27	2°04'55
max. Earth dist.	5385 May 23 10:58	4°♊59'39	10.56700 AU
morning rise	5385 Jun 09 15:52	7°♊06'19	
retrograde	5385 Sep 23 06:58	14°♊52'25	
opposition	5385 Dec 02 02:24	11°♊26'15	-2°29'31
min. Earth dist.	5385 Dec 02 01:34	11°♊26'25	8.52327 AU
direct	5386 Feb 07 20:32	8°♊04'23	
evening set	5386 May 19 07:33	15°♊33'00	
conjunction	5386 Jun 05 12:57	17°♊40'53	-1°55'59
minimum elong	5386 Jun 05 12:59	17°♊40'54	1°56'00
max. Earth dist.	5386 Jun 05 13:57	17°♊41'12	10.47734 AU
morning rise	5386 Jun 22 22:46	19°♊50'07	
retrograde	5386 Oct 06 21:19	27°♊42'28	
opposition	5386 Dec 15 07:17	24°♊15'23	-2°14'59
min. Earth dist.	5386 Dec 15 06:23	24°♊15'34	8.43397 AU
direct	5387 Feb 20 17:42	20°♊52'29	
evening set	5387 Jun 01 14:08	28°♊27'29	
	5387 Jun 13 23:43	0°♋	
conjunction	5387 Jun 19 00:08	0°♋37'48	-1°41'06
minimum elong	5387 Jun 19 00:11	0°♋37'49	1°41'06
max. Earth dist.	5387 Jun 19 01:47	0°♋38'20	10.38999 AU
morning rise	5387 Jul 06 14:15	2°♋49'27	
retrograde	5387 Oct 20 16:26	10°♋47'21	
opposition	5387 Dec 28 15:59	7°♋19'33	-1°53'13
min. Earth dist.	5387 Dec 28 14:36	7°♋19'50	8.34919 AU
direct	5388 Mar 04 20:23	3°♋55'36	
evening set	5388 Jun 14 04:54	11°♋37'11	
conjunction	5388 Jul 01 19:33	13°♋49'56	-1°20'40
minimum elong	5388 Jul 01 19:35	13°♋49'57	1°20'41
max. Earth dist.	5388 Jul 01 21:29	13°♋50'33	10.30952 AU
morning rise	5388 Jul 19 13:51	16°♋03'54	
retrograde	5388 Nov 02 16:06	24°♋06'22	
opposition	5389 Jan 10 04:38	20°♋38'05	-1°25'00
min. Earth dist.	5389 Jan 10 02:54	20°♋38'25	8.27357 AU
direct	5389 Mar 18 04:26	17°♋13'05	
evening set	5389 Jun 28 03:40	25°♋01'09	
conjunction	5389 Jul 15 22:33	27°♋16'08	-0°55'35
minimum elong	5389 Jul 15 22:36	27°♋16'09	0°55'36
max. Earth dist.	5389 Jul 16 00:05	27°♋16'37	10.24047 AU
morning rise	5389 Aug 02 20:36	29°♋32'08	
	5389 Aug 06 14:30	0°♌	
retrograde	5389 Nov 16 19:27	7°♌37'54	
opposition	5390 Jan 23 20:41	4°♌09'24	-0°51'36
min. Earth dist.	5390 Jan 23 19:18	4°♌09'41	8.21155 AU
direct	5390 Mar 31 17:09	0°♌43'23	
evening set	5390 Jul 12 10:04	8°♌37'37	
conjunction	5390 Jul 30 08:26	10°♌54'24	-0°27'05
minimum elong	5390 Jul 30 08:27	10°♌54'25	0°27'06
max. Earth dist.	5390 Jul 30 09:15	10°♌54'40	10.18690 AU
morning rise	5390 Aug 17 09:14	13°♌11'58	
	5390 Sep 01 02:32	15°♌	
retrograde	5390 Dec 01 00:50	21°♌19'28	
opposition	5391 Feb 06 15:17	17°♌51'05	-0°14'50
min. Earth dist.	5391 Feb 06 14:32	17°♌51'14	8.16693 AU
	5391 Mar 19 21:48	15°℞♌	
direct	5391 Apr 14 12:01	14°♌24'09	
	5391 May 10 01:01	15°♌	
asc. node	5391 Jul 04 19:13	19°♌43'28	
evening set	5391 Jul 26 22:38	22°♌23'49	
conjunction	5391 Aug 13 23:21	24°♌41'49	0°03'18
minimum elong	5391 Aug 13 23:21	24°♌41'49	0°03'18
behind sun begin	5391 Aug 13 16:04	24°♌39'30	
behind sun end	5391 Aug 14 06:39	24°♌44'08	
max. Earth dist.	5391 Aug 13 23:36	24°♌41'54	10.15215 AU
morning rise	5391 Sep 01 01:35	27°♌00'18	
	5391 Sep 26 00:46	0°♍	
retrograde	5391 Dec 15 05:20	5°♍07'56	
opposition	5392 Feb 20 11:53	1°♍39'55	0°23'07
min. Earth dist.	5392 Feb 20 11:31	1°♍40'00	8.14259 AU
	5392 Mar 12 17:43	30°℞♌	

direct	5392 Apr 27 12:17	28°♌12'18	
	5392 Jun 11 13:26	0°♍	
evening set	5392 Aug 09 15:24	6°♍16'11	
conjunction	5392 Aug 27 17:09	8°♍34'43	0°33'32
minimum elong	5392 Aug 27 17:08	8°♍34'42	0°33'32
max. Earth dist.	5392 Aug 27 17:21	8°♍34'47	10.13847 AU
morning rise	5392 Sep 14 19:16	10°♍53'21	
retrograde	5392 Dec 28 08:28	18°♍59'30	
opposition	5393 Mar 05 09:19	15°♍32'04	0°59'51
min. Earth dist.	5393 Mar 05 08:47	15°♍32'11	8.14007 AU
direct	5393 May 11 15:35	12°♍03'56	
evening set	5393 Aug 24 10:26	20°♍10'34	
conjunction	5393 Sep 11 11:52	22°♍28'53	1°01'54
minimum elong	5393 Sep 11 11:49	22°♍28'52	1°01'53
max. Earth dist.	5393 Sep 11 12:16	22°♍29'01	10.14667 AU
morning rise	5393 Sep 29 12:22	24°♍46'57	
	5393 Nov 15 01:59	0°♎	
retrograde	5394 Jan 11 09:33	2°♎49'57	
	5394 Mar 11 17:41	30°℞♍	
opposition	5394 Mar 19 06:22	29°♍23'18	1°33'02
min. Earth dist.	5394 Mar 19 05:39	29°♍23'27	8.15936 AU
direct	5394 May 25 19:35	25°♍54'53	
	5394 Aug 04 12:46	0°♎	
evening set	5394 Sep 08 05:03	4°♎02'28	
conjunction	5394 Sep 26 04:48	6°♎19'54	1°26'34
minimum elong	5394 Sep 26 04:45	6°♎19'53	1°26'34
max. Earth dist.	5394 Sep 26 05:13	6°♎20'02	10.17603 AU
morning rise	5394 Oct 14 02:27	8°♎36'43	
retrograde	5395 Jan 25 08:27	16°♎35'09	
opposition	5395 Apr 02 02:18	13°♎09'25	2°00'37
min. Earth dist.	5395 Apr 02 01:44	13°♎09'32	8.19885 AU
direct	5395 Jun 08 23:41	9°♎40'55	
evening set	5395 Sep 22 20:22	17°♎47'36	
conjunction	5395 Oct 10 17:23	20°♎03'34	1°46'07
minimum elong	5395 Oct 10 17:20	20°♎03'33	1°46'07
max. Earth dist.	5395 Oct 10 17:26	20°♎03'35	10.22420 AU
morning rise	5395 Oct 28 11:24	22°♎18'38	
	5396 Jan 24 17:13	0°♏	
retrograde	5396 Feb 08 01:13	0°♏11'24	
	5396 Feb 22 08:50	30°℞♎	
opposition	5396 Apr 14 19:57	26°♎46'40	2°21'03
min. Earth dist.	5396 Apr 14 20:12	26°♎46'37	8.25535 AU
direct	5396 Jun 22 03:49	23°♎18'20	
	5396 Sep 25 00:20	0°♏	
evening set	5396 Oct 06 06:25	1°♏22'24	
conjunction	5396 Oct 24 00:05	3°♏36'31	1°59'32
minimum elong	5396 Oct 24 00:03	3°♏36'30	1°59'32
max. Earth dist.	5396 Oct 23 22:57	3°♏36'09	10.28732 AU
morning rise	5396 Nov 10 14:12	5°♏49'33	
retrograde	5397 Feb 20 11:55	13°♏35'58	
opposition	5397 Apr 28 10:30	10°♏12'21	2°33'24
min. Earth dist.	5397 Apr 28 12:03	10°♏12'03	8.32445 AU
direct	5397 Jul 06 05:32	6°♏44'25	
evening set	5397 Oct 20 09:35	14°♏44'30	
	5397 Oct 22 11:46	15°♏	
conjunction	5397 Nov 06 23:40	16°♏56'35	2°06'17
minimum elong	5397 Nov 06 23:39	16°♏56'34	2°06'17
max. Earth dist.	5397 Nov 06 21:01	16°♏55'45	10.36102 AU
morning rise	5397 Nov 24 09:54	19°♏07'30	
retrograde	5398 Mar 05 17:30	26°♏47'20	
opposition	5398 May 11 21:43	23°♏24'50	2°37'22
min. Earth dist.	5398 May 11 23:48	23°♏24'25	8.40213 AU
direct	5398 Jul 20 03:28	19°♏57'33	
evening set	5398 Nov 03 04:41	27°♏52'24	
conjunction	5398 Nov 20 15:16	0°♐02'26	2°06'18
minimum elong	5398 Nov 20 15:16	0°♐02'26	2°06'19
	5398 Nov 20 07:29	0°♐	
max. Earth dist.	5398 Nov 20 12:10	0°♐01'28	10.44183 AU
morning rise	5398 Dec 07 21:51	2°♐11'14	
retrograde	5399 Mar 18 17:49	9°♐44'30	
opposition	5399 May 25 05:15	6°♐23'01	2°33'10
min. Earth dist.	5399 May 25 07:01	6°♐22'40	8.48519 AU
direct	5399 Aug 02 21:05	2°♐56'34	
evening set	5399 Nov 16 15:17	10°♐45'15	
conjunction	5399 Dec 03 22:43	12°♐53'15	1°59'58
minimum elong	5399 Dec 03 22:45	12°♐53'16	1°59'59
max. Earth dist.	5399 Dec 03 20:07	12°♐52'27	10.52653 AU
morning rise	5399 Dec 21 02:04	15°♐00'02	
retrograde	5400 Mar 31 12:38	22°♐26'57	
opposition	5400 Jun 07 08:45	19°♐06'22	2°21'28
min. Earth dist.	5400 Jun 07 09:58	19°♐06'08	8.57017 AU
direct	5400 Aug 16 09:54	15°♐40'49	
evening set	5400 Nov 29 17:20	23°♐22'45	
conjunction	5400 Dec 16 21:59	25°♐28'51	1°47'54
minimum elong	5400 Dec 16 22:02	25°♐28'52	1°47'56
max. Earth dist.	5400 Dec 16 20:17	25°♐28'19	10.61132 AU
morning rise	5401 Jan 02 22:32	27°♐33'46	
	5401 Jan 24 00:01	0°♑	
retrograde	5401 Apr 13 03:40	4°♑54'50	
opposition	5401 Jun 20 08:25	1°♑35'00	2°03'18
min. Earth dist.	5401 Jun 20 09:43	1°♑34'45	8.65318 AU
	5401 Jul 11 19:06	30°℞♐	
direct	5401 Aug 29 16:30	28°♐10'25	
	5401 Oct 16 10:21	0°♑	
evening set	5401 Dec 12 11:20	5°♑45'24	
conjunction	5401 Dec 29 13:21	7°♑49'45	1°31'01
minimum elong	5401 Dec 29 13:24	7°♑49'46	1°31'02
max. Earth dist.	5401 Dec 29 11:46	7°♑49'16	10.69225 AU
morning rise	5402 Jan 15 11:39	9°♑53'02	
retrograde	5402 Apr 25 13:52	17°♑09'00	
opposition	5402 Jul 03 04:21	13°♑49'45	1°39'49
min. Earth dist.	5402 Jul 03 05:56	13°♑49'27	8.73058 AU
direct	5402 Sep 11 16:53	10°♑26'07	
evening set	5402 Dec 24 21:56	17°♑54'23	
conjunction	5403 Jan 10 21:36	19°♑57'11	1°10'16
minimum elong	5403 Jan 10 21:38	19°♑57'11	1°10'18
max. Earth dist.	5403 Jan 10 19:44	19°♑56'37	10.76587 AU
morning rise	5403 Jan 27 18:14	21°♑59'04	
retrograde	5403 May 07 18:51	29°♑10'58	
opposition	5403 Jul 15 20:47	25°♑52'04	1°12'20
min. Earth dist.	5403 Jul 15 22:13	25°♑51'48	8.79913 AU
direct	5403 Sep 24 14:03	22°♑29'21	
evening set	5404 Jan 06 02:01	29°♑51'28	
	5404 Jan 07 06:56	0°♒	
conjunction	5404 Jan 22 23:44	1°♒52'55	0°46'44
minimum elong	5404 Jan 22 23:45	1°♒52'55	0°46'45
max. Earth dist.	5404 Jan 22 22:09	1°♒52'26	10.82908 AU
morning rise	5404 Feb 08 19:03	3°♒53'38	
retrograde	5404 May 18 23:07	11°♒02'41	
opposition	5404 Jul 27 10:09	7°♒43'55	0°42'09
min. Earth dist.	5404 Jul 27 10:32	7°♒43'51	8.85592 AU
direct	5404 Oct 06 05:40	4°♒22'06	

evening set	5405 Jan 17 01:05	11°♒38'51	
conjunction	5405 Feb 02 21:10	13°♒39'13	0°21'30
minimum elong	5405 Feb 02 21:11	13°♒39'13	0°21'29
max. Earth dist.	5405 Feb 02 20:55	13°♒39'09	10.87918 AU
	5405 Feb 14 03:09	15°♒	
morning rise	5405 Feb 19 15:18	15°♒39'02	
retrograde	5405 May 31 01:46	22°♒46'28	
opposition	5405 Aug 08 21:11	19°♒27'41	0°10'33
min. Earth dist.	5405 Aug 08 20:43	19°♒27'46	8.89866 AU
direct	5405 Oct 18 15:19	16°♒06'43	
desc. node	5405 Dec 11 17:56	18°♒24'25	
evening set	5406 Jan 28 20:28	23°♒19'08	
conjunction	5406 Feb 14 15:04	25°♒18'39	-0°04'32
minimum elong	5406 Feb 14 15:04	25°♒18'39	0°04'33
behind sun begin	5406 Feb 14 08:12	25°♒16'38	
behind sun end	5406 Feb 14 21:56	25°♒20'41	
max. Earth dist.	5406 Feb 14 15:34	25°♒18'47	10.91430 AU
morning rise	5406 Mar 03 08:22	27°♒17'51	
	5406 Mar 27 15:41	0°♓	
retrograde	5406 Jun 12 04:24	4°♓25'00	
opposition	5406 Aug 21 06:51	1°♓06'03	-0°21'13
min. Earth dist.	5406 Aug 21 06:12	1°♓06'10	8.92584 AU
	5406 Sep 05 08:06	30°℞♒	
direct	5406 Oct 30 22:08	27°♒45'48	
	5406 Dec 23 05:09	0°♓	
evening set	5407 Feb 09 13:22	4°♓55'01	
conjunction	5407 Feb 26 06:40	6°♓53'58	-0°30'07
minimum elong	5407 Feb 26 06:39	6°♓53'58	0°30'07
max. Earth dist.	5407 Feb 26 06:55	6°♓54'03	10.93313 AU
morning rise	5407 Mar 14 23:40	8°♓52'51	
retrograde	5407 Jun 24 06:42	16°♓01'01	
opposition	5407 Sep 02 15:40	12°♓41'43	-0°52'00
min. Earth dist.	5407 Sep 02 15:14	12°♓41'48	8.93638 AU
direct	5407 Nov 12 01:40	9°♓22'03	
evening set	5408 Feb 21 05:21	16°♓29'19	
conjunction	5408 Mar 08 21:46	18°♓28'00	-0°54'27
minimum elong	5408 Mar 08 21:44	18°♓27'59	0°54'27
max. Earth dist.	5408 Mar 08 22:05	18°♓28'06	10.93489 AU
morning rise	5408 Mar 25 14:44	20°♓26'51	
retrograde	5408 Jul 05 09:44	27°♓37'19	
opposition	5408 Sep 14 00:14	24°♓17'29	-1°20'40
min. Earth dist.	5408 Sep 13 23:12	24°♓17'41	8.92973 AU
direct	5408 Nov 23 04:42	20°♓58'15	
evening set	5409 Mar 03 21:34	28°♓04'47	
conjunction	5409 Mar 20 13:40	0°♈03'33	-1°16'37
minimum elong	5409 Mar 20 13:38	0°♈03'32	1°16'36
	5409 Mar 20 01:47	0°♈	
max. Earth dist.	5409 Mar 20 15:08	0°♈03'59	10.91942 AU
morning rise	5409 Apr 06 06:51	2°♈02'40	
retrograde	5409 Jul 17 18:16	9°♈16'37	
opposition	5409 Sep 26 09:47	5°♈56'07	-1°46'07
min. Earth dist.	5409 Sep 26 07:44	5°♈56'30	8.90612 AU
direct	5409 Dec 05 07:16	2°♈37'10	
evening set	5410 Mar 15 15:21	9°♈44'07	
conjunction	5410 Apr 01 07:33	11°♈43'17	-1°35'42
minimum elong	5410 Apr 01 07:31	11°♈43'17	1°35'42
max. Earth dist.	5410 Apr 01 09:57	11°♈44'00	10.88734 AU
morning rise	5410 Apr 18 01:31	13°♈43'02	
retrograde	5410 Jul 30 04:55	21°♈01'28	
opposition	5410 Oct 08 20:52	17°♈40'10	-2°07'23
min. Earth dist.	5410 Oct 08 18:21	17°♈40'38	8.86647 AU
direct	5410 Dec 17 08:14	14°♈21'17	
evening set	5411 Mar 27 12:11	21°♈29'53	
conjunction	5411 Apr 13 05:01	23°♈29'48	-1°50'56
minimum elong	5411 Apr 13 04:59	23°♈29'47	1°50'57
max. Earth dist.	5411 Apr 13 06:59	23°♈30'24	10.84001 AU
morning rise	5411 Apr 30 00:28	25°♈30'31	
	5411 Jun 11 11:28	0°♉	
retrograde	5411 Aug 11 19:06	2°♉54'14	
	5411 Oct 15 05:43	30°℞♈	
opposition	5411 Oct 21 10:00	29°♈32'04	-2°23'29
min. Earth dist.	5411 Oct 21 07:58	29°♈32'27	8.81242 AU
direct	5411 Dec 29 12:02	26°♈13'02	
	5412 Mar 07 17:23	0°♉	
evening set	5412 Apr 07 13:02	3°♉24'23	
conjunction	5412 Apr 24 07:15	5°♉25'26	-2°01'34
minimum elong	5412 Apr 24 07:14	5°♉25'25	2°01'35
max. Earth dist.	5412 Apr 24 09:04	5°♉25'59	10.77936 AU
morning rise	5412 May 11 04:51	7°♉27'28	
retrograde	5412 Aug 23 14:45	14°♉57'06	
opposition	5412 Nov 02 01:59	11°♉34'00	-2°33'35
min. Earth dist.	5412 Nov 02 00:06	11°♉34'22	8.74613 AU
direct	5413 Jan 09 18:16	8°♉14'36	
	5413 Apr 15 14:39	15°♉	
evening set	5413 Apr 19 18:44	15°♉29'40	
conjunction	5413 May 06 15:17	17°♉32'12	-2°06'58
minimum elong	5413 May 06 15:16	17°♉32'12	2°07'00
max. Earth dist.	5413 May 06 17:52	17°♉33'00	10.70785 AU
morning rise	5413 May 23 15:33	19°♉35'53	
retrograde	5413 Sep 05 14:27	27°♉11'50	
opposition	5413 Nov 14 21:11	23°♉47'45	-2°36'58
min. Earth dist.	5413 Nov 14 18:50	23°♉48'12	8.67029 AU
direct	5414 Jan 22 04:23	20°♉27'48	
evening set	5414 May 02 06:41	27°♉47'27	
conjunction	5414 May 19 06:22	29°♉51'49	-2°06'40
minimum elong	5414 May 19 06:23	29°♉51'49	2°06'42
max. Earth dist.	5414 May 19 09:41	29°♉52'50	10.62838 AU
	5414 May 20 08:59	0°♊	
morning rise	5414 Jun 05 09:58	1°♊57'26	
retrograde	5414 Sep 18 20:37	9°♊39'44	
opposition	5414 Nov 27 19:46	6°♊14'41	-2°33'08
min. Earth dist.	5414 Nov 27 17:01	6°♊15'13	8.58792 AU
direct	5415 Feb 03 18:16	2°♊53'59	
evening set	5415 May 15 01:34	10°♊18'54	
conjunction	5415 Jun 01 04:58	12°♊25'24	-2°00'23
minimum elong	5415 Jun 01 05:00	12°♊25'25	2°00'24
max. Earth dist.	5415 Jun 01 07:41	12°♊26'15	10.54407 AU
morning rise	5415 Jun 18 12:33	14°♊33'13	
retrograde	5415 Oct 02 09:12	22°♊21'37	
opposition	5415 Dec 10 22:12	18°♊55'39	-2°21'52
min. Earth dist.	5415 Dec 10 20:01	18°♊56'05	8.50213 AU
direct	5416 Feb 16 11:00	15°♊34'01	
evening set	5416 May 27 03:48	23°♊04'49	
conjunction	5416 Jun 13 11:25	25°♊13'38	-1°48'05
minimum elong	5416 Jun 13 11:28	25°♊13'39	1°48'05
max. Earth dist.	5416 Jun 13 12:53	25°♊14'05	10.45811 AU
morning rise	5416 Jun 30 23:23	27°♊23'48	
	5416 Jul 23 04:16	0°♋	
retrograde	5416 Oct 15 01:04	5°♋17'51	
opposition	5416 Dec 23 04:32	1°♋51'08	-2°03'15
min. Earth dist.	5416 Dec 23 03:22	1°♋51'22	8.41637 AU
	5417 Jan 16 22:51	30°℞♊	

direct	5417 Feb 28 10:42	28°♊28'24	
	5417 Apr 11 01:39	0°♋	
evening set	5417 Jun 09 13:59	6°♋05'35	
conjunction	5417 Jun 27 02:12	8°♋16'50	-1°30'03
minimum elong	5417 Jun 27 02:15	8°♋16'51	1°30'04
max. Earth dist.	5417 Jun 27 02:38	8°♋16'58	10.37441 AU
morning rise	5417 Jul 14 18:36	10°♋29'21	
retrograde	5417 Oct 28 20:42	18°♋28'23	
opposition	5418 Jan 05 14:35	15°♋01'02	-1°37'50
min. Earth dist.	5418 Jan 05 14:15	15°♋01'06	8.33531 AU
direct	5418 Mar 13 16:33	11°♋37'10	
evening set	5418 Jun 23 08:13	19°♋20'53	
conjunction	5418 Jul 11 01:01	21°♋34'29	-1°06'59
minimum elong	5418 Jul 11 01:03	21°♋34'30	1°07'00
max. Earth dist.	5418 Jul 11 01:22	21°♋34'36	10.29799 AU
morning rise	5418 Jul 28 21:24	23°♋49'12	
	5418 Sep 25 21:22	0°♌	
retrograde	5418 Nov 11 20:40	1°♌52'07	
	5418 Dec 29 14:20	30°℞♋	
opposition	5419 Jan 19 04:06	28°♋24'19	-1°06'41
min. Earth dist.	5419 Jan 19 03:47	28°♋24'23	8.26416 AU
direct	5419 Mar 27 03:11	24°♋59'17	
	5419 Jun 13 17:49	0°♌	
evening set	5419 Jul 07 10:10	2°♌49'20	
conjunction	5419 Jul 25 06:56	5°♌04'58	-0°39'57
minimum elong	5419 Jul 25 06:58	5°♌04'58	0°39'57
max. Earth dist.	5419 Jul 25 07:27	5°♌05'08	10.23377 AU
morning rise	5419 Aug 12 06:24	7°♌21'29	
	5419 Nov 03 13:52	15°♌	
retrograde	5419 Nov 25 23:59	15°♌26'56	
	5419 Dec 18 11:12	15°℞♌	
opposition	5420 Feb 01 20:29	11°♌58'53	-0°31'21
min. Earth dist.	5420 Feb 01 19:58	11°♌59'00	8.20756 AU
direct	5420 Apr 08 18:21	8°♌32'45	
	5420 Jul 08 18:30	15°♌	
evening set	5420 Jul 20 18:50	16°♌28'35	
conjunction	5420 Aug 07 18:34	18°♌45'45	-0°10'23
minimum elong	5420 Aug 07 18:35	18°♌45'45	0°10'24
behind sun begin	5420 Aug 07 12:53	18°♌43'57	
behind sun end	5420 Aug 08 00:17	18°♌47'33	
max. Earth dist.	5420 Aug 07 19:02	18°♌45'53	10.18597 AU
morning rise	5420 Aug 25 20:00	21°♌03'30	
retrograde	5420 Dec 09 04:06	29°♌09'57	
asc. node	5420 Dec 14 23:36	29°♌08'05	
opposition	5421 Feb 14 15:08	25°♌41'55	0°06'10
min. Earth dist.	5421 Feb 14 14:39	25°♌42'01	8.16917 AU
direct	5421 Apr 22 14:43	22°♌14'46	
	5421 Aug 02 07:17	0°♍	
evening set	5421 Aug 04 08:42	0°♍15'28	
conjunction	5421 Aug 22 10:07	2°♍33'32	0°20'04
minimum elong	5421 Aug 22 10:06	2°♍33'32	0°20'04
max. Earth dist.	5421 Aug 22 10:02	2°♍33'31	10.15754 AU
morning rise	5421 Sep 09 12:11	4°♍51'52	
retrograde	5421 Dec 23 07:32	12°♍57'41	
opposition	5422 Feb 28 11:10	9°♍29'55	0°43'34
min. Earth dist.	5422 Feb 28 11:17	9°♍29'54	8.15125 AU
direct	5422 May 06 14:44	6°♍01'56	
evening set	5422 Aug 19 01:54	14°♍06'16	
conjunction	5422 Sep 06 03:29	16°♍24'31	0°49'24
minimum elong	5422 Sep 06 03:27	16°♍24'31	0°49'24
max. Earth dist.	5422 Sep 06 02:20	16°♍24'09	10.15006 AU
morning rise	5422 Sep 24 04:43	18°♍42'40	
retrograde	5423 Jan 06 09:10	26°♍46'16	
opposition	5423 Mar 14 07:28	23°♍19'03	1°18'31
min. Earth dist.	5423 Mar 14 08:25	23°♍18'51	8.15475 AU
direct	5423 May 20 17:15	19°♍50'27	
evening set	5423 Sep 02 19:47	27°♍56'51	
	5423 Sep 18 22:46	0°♎	
conjunction	5423 Sep 20 20:14	0°♎14'35	1°15'52
minimum elong	5423 Sep 20 20:11	0°♎14'34	1°15'52
max. Earth dist.	5423 Sep 20 18:18	0°♎13'58	10.16390 AU
morning rise	5423 Oct 08 19:20	2°♎31'53	
retrograde	5424 Jan 20 07:45	10°♎31'51	
opposition	5424 Mar 27 03:09	7°♎05'20	1°48'48
min. Earth dist.	5424 Mar 27 04:25	7°♎05'04	8.17932 AU
direct	5424 Jun 02 21:40	3°♎36'24	
evening set	5424 Sep 16 11:47	11°♎43'06	
conjunction	5424 Oct 04 10:03	13°♎59'42	1°37'52
minimum elong	5424 Oct 04 10:00	13°♎59'41	1°37'52
max. Earth dist.	5424 Oct 04 07:52	13°♎59'00	10.19807 AU
morning rise	5424 Oct 22 06:01	16°♎15'35	
retrograde	5425 Feb 02 00:59	24°♎10'41	
opposition	5425 Apr 09 21:09	20°♎45'03	2°12'38
min. Earth dist.	5425 Apr 09 22:19	20°♎44'49	8.22318 AU
direct	5425 Jun 17 02:28	17°♎16'06	
evening set	5425 Sep 30 23:53	25°♎21'18	
conjunction	5425 Oct 18 19:12	27°♎36'18	1°54'10
minimum elong	5425 Oct 18 19:10	27°♎36'17	1°54'10
max. Earth dist.	5425 Oct 18 17:10	27°♎35'39	10.25030 AU
morning rise	5425 Nov 05 11:20	29°♎50'20	
	5425 Nov 06 18:26	0°♏	
retrograde	5426 Feb 15 14:11	7°♏39'38	
opposition	5426 Apr 23 12:36	4°♏14'59	2°28'47
min. Earth dist.	5426 Apr 23 13:23	4°♏14'49	8.28354 AU
direct	5426 Jul 01 04:19	0°♏46'20	
evening set	5426 Oct 15 05:56	8°♏48'18	
conjunction	5426 Nov 01 21:52	11°♏01'24	2°04'01
minimum elong	5426 Nov 01 21:51	11°♏01'23	2°04'01
max. Earth dist.	5426 Nov 01 20:23	11°♏00'56	10.31751 AU
morning rise	5426 Nov 19 09:55	13°♏13'20	
	5426 Dec 04 03:00	15°♏	
retrograde	5427 Feb 28 23:15	20°♏56'15	
opposition	5427 May 07 01:06	17°♏32'41	2°36'38
min. Earth dist.	5427 May 07 01:55	17°♏32'31	8.35695 AU
	5427 Jun 11 23:43	15°℞♏	
direct	5427 Jul 15 02:13	14°♏04'36	
	5427 Aug 17 00:54	15°♏	
evening set	5427 Oct 29 04:18	22°♏01'51	
conjunction	5427 Nov 15 16:43	24°♏12'54	2°07'09
minimum elong	5427 Nov 15 16:43	24°♏12'54	2°07'09
max. Earth dist.	5427 Nov 15 15:23	24°♏12'29	10.39595 AU
morning rise	5427 Dec 03 00:55	26°♏22'42	
	5428 Jan 03 14:11	0°♐	
retrograde	5428 Mar 13 02:26	3°♐58'56	
opposition	5428 May 19 09:58	0°♐36'30	2°36'10
min. Earth dist.	5428 May 19 11:13	0°♐36'15	8.43939 AU
	5428 May 27 03:43	30°℞♏	
direct	5428 Jul 27 20:39	27°♏09'12	
	5428 Sep 25 13:15	0°♐	
evening set	5428 Nov 10 18:34	5°♐00'41	
conjunction	5428 Nov 28 03:34	7°♐09'39	2°03'42
minimum elong	5428 Nov 28 03:35	7°♐09'39	2°03'43

max. Earth dist.	5428 Nov 28	01:48	7°♐09'06	10.48143 AU
morning rise	5428 Dec 15	08:23	9°♐17'23	
retrograde	5429 Mar 25	22:18	16°♐47'01	
opposition	5429 Jun 01	14:52	13°♐25'42	2°27'51
min. Earth dist.	5429 Jun 01	16:30	13°♐25'23	8.52654 AU
direct	5429 Aug 10	11:54	9°♐59'23	
evening set	5429 Nov 24	00:19	17°♐44'21	
conjunction	5429 Dec 11	06:10	19°♐51'19	1°54'13
minimum elong	5429 Dec 11	06:12	19°♐51'20	1°54'15
max. Earth dist.	5429 Dec 11	03:59	19°♐50'39	10.56952 AU
morning rise	5429 Dec 28	08:07	21°♐57'05	
retrograde	5430 Apr 07	14:28	29°♐20'37	
opposition	5430 Jun 14	15:57	26°♐00'17	2°12'34
min. Earth dist.	5430 Jun 14	17:13	26°♐00'02	8.61404 AU
direct	5430 Aug 23	21:13	22°♐35'05	
	5430 Dec 05	01:29	0°♑	
evening set	5430 Dec 06	21:34	0°♑13'11	
conjunction	5430 Dec 24	00:43	2°♑18'18	1°39'29
minimum elong	5430 Dec 24	00:46	2°♑18'19	1°39'30
max. Earth dist.	5430 Dec 23	23:05	2°♑17'48	10.65595 AU
morning rise	5431 Jan 10	00:12	4°♑22'19	
retrograde	5431 Apr 20	02:35	11°♑40'25	
opposition	5431 Jun 27	13:16	8°♑20'55	1°51'24
min. Earth dist.	5431 Jun 27	13:38	8°♑20'50	8.69777 AU
direct	5431 Sep 06	00:21	4°♑56'54	
evening set	5431 Dec 19	11:18	12°♑28'10	
conjunction	5432 Jan 05	12:10	14°♑31'38	1°20'25
minimum elong	5432 Jan 05	12:12	14°♑31'39	1°20'26
max. Earth dist.	5432 Jan 05	11:39	14°♑31'29	10.73671 AU
morning rise	5432 Jan 22	09:34	16°♑34'07	
retrograde	5432 May 01	10:47	23°♑47'41	
opposition	5432 Jul 09	06:56	20°♑28'50	1°25'38
min. Earth dist.	5432 Jul 09	06:57	20°♑28'50	8.77405 AU
direct	5432 Sep 17	22:39	17°♑05'58	
evening set	5432 Dec 30	18:27	24°♑30'50	
conjunction	5433 Jan 16	17:12	26°♑32'51	0°58'03
minimum elong	5433 Jan 16	17:14	26°♑32'52	0°58'05
max. Earth dist.	5433 Jan 16	17:11	26°♑32'51	10.80825 AU
morning rise	5433 Feb 02	12:58	28°♑34'01	
	5433 Feb 14	22:09	0°♒	
retrograde	5433 May 13	16:50	5°♒44'09	
opposition	5433 Jul 21	21:48	2°♒25'45	0°56'34
min. Earth dist.	5433 Jul 21	22:04	2°♒25'42	8.83965 AU
	5433 Aug 27	02:20	30°℞♑	
direct	5433 Sep 30	14:57	29°♑03'58	
	5433 Nov 03	15:02	0°♒	
evening set	5434 Jan 11	20:00	6°♒23'04	
conjunction	5434 Jan 28	16:45	8°♒23'51	0°33'29
minimum elong	5434 Jan 28	16:46	8°♒23'52	0°33'30
max. Earth dist.	5434 Jan 28	16:18	8°♒23'43	10.86760 AU
morning rise	5434 Feb 14	11:22	10°♒24'00	
	5434 Mar 30	14:33	15°♒	
retrograde	5434 May 25	18:59	17°♒31'53	
	5434 Jul 23	23:52	15°℞♒	
opposition	5434 Aug 03	10:10	14°♒13'41	0°25'29
min. Earth dist.	5434 Aug 03	10:29	14°♒13'37	8.89188 AU
direct	5434 Oct 13	03:10	10°♒52'52	
	5434 Dec 26	08:53	15°♒	
evening set	5435 Jan 23	17:13	18°♒07'07	
conjunction	5435 Feb 09	12:20	20°♒06'54	0°07'47
minimum elong	5435 Feb 09	12:20	20°♒06'54	0°07'47
behind sun begin	5435 Feb 09	06:00	20°♒05'02	
behind sun end	5435 Feb 09	18:39	20°♒08'46	
max. Earth dist.	5435 Feb 09	11:55	20°♒06'47	10.91227 AU
morning rise	5435 Feb 26	06:06	22°♒06'17	
desc. node	5435 Jun 01	16:25	29°♒11'51	
retrograde	5435 Jun 06	21:04	29°♒13'13	
opposition	5435 Aug 15	20:26	25°♒54'57	-0°06'20
min. Earth dist.	5435 Aug 15	20:09	25°♒55'00	8.92836 AU
direct	5435 Oct 25	13:28	22°♒34'55	
evening set	5436 Feb 04	11:17	29°♒45'22	
	5436 Feb 06	13:17	0°♓	
conjunction	5436 Feb 21	05:12	1°♓44'28	-0°18'10
minimum elong	5436 Feb 21	05:11	1°♓44'28	0°18'10
max. Earth dist.	5436 Feb 21	05:32	1°♓44'34	10.93993 AU
morning rise	5436 Mar 08	22:17	3°♓43'21	
retrograde	5436 Jun 18	00:21	10°♓50'40	
opposition	5436 Aug 27	05:33	7°♓32'06	-0°37'42
min. Earth dist.	5436 Aug 27	04:39	7°♓32'16	8.94688 AU
direct	5436 Nov 05	18:27	4°♓12'43	
evening set	5437 Feb 15	03:46	11°♓20'35	
conjunction	5437 Mar 03	20:38	13°♓19'17	-0°43'13
minimum elong	5437 Mar 03	20:37	13°♓19'16	0°43'12
max. Earth dist.	5437 Mar 03	21:19	13°♓19'29	10.94872 AU
morning rise	5437 Mar 20	13:21	15°♓18'00	
retrograde	5437 Jun 30	03:55	22°♓27'04	
opposition	5437 Sep 08	14:26	19°♓08'00	-1°07'29
min. Earth dist.	5437 Sep 08	13:45	19°♓08'08	8.94620 AU
direct	5437 Nov 17	21:14	15°♓49'04	
evening set	5438 Feb 26	20:04	22°♓55'42	
conjunction	5438 Mar 15	12:11	24°♓54'19	-1°06'30
minimum elong	5438 Mar 15	12:09	24°♓54'19	1°06'29
max. Earth dist.	5438 Mar 15	12:05	24°♓54'18	10.93831 AU
morning rise	5438 Apr 01	05:07	26°♓53'12	
	5438 Apr 29	13:34	0°♈	
retrograde	5438 Jul 12	10:15	4°♈05'18	
opposition	5438 Sep 20	23:51	0°♈45'33	-1°34'34
min. Earth dist.	5438 Sep 20	23:41	0°♈45'35	8.92678 AU
	5438 Oct 01	06:29	30°℞♓	
direct	5438 Nov 29	23:39	27°♓26'49	
	5439 Jan 25	16:39	0°♈	
evening set	5439 Mar 10	13:18	4°♈33'27	
conjunction	5439 Mar 27	05:14	6°♈32'21	-1°27'08
minimum elong	5439 Mar 27	05:12	6°♈32'20	1°27'08
max. Earth dist.	5439 Mar 27	04:56	6°♈32'15	10.90971 AU
morning rise	5439 Apr 12	22:54	8°♈31'45	
retrograde	5439 Jul 24	17:52	15°♈47'57	
opposition	5439 Oct 03	10:24	12°♈27'18	-1°57'56
min. Earth dist.	5439 Oct 03	10:09	12°♈27'21	8.88987 AU
direct	5439 Dec 12	02:13	9°♈08'32	
evening set	5440 Mar 21	08:48	16°♈16'22	
conjunction	5440 Apr 07	01:16	18°♈15'54	-1°44'17
minimum elong	5440 Apr 07	01:14	18°♈15'53	1°44'18
max. Earth dist.	5440 Apr 07	01:55	18°♈16'05	10.86440 AU
morning rise	5440 Apr 23	19:56	20°♈16'07	
retrograde	5440 Aug 05	06:36	27°♈37'23	
opposition	5440 Oct 14	22:39	24°♈15'40	-2°16'35
min. Earth dist.	5440 Oct 14	21:30	24°♈15'53	8.83721 AU
direct	5440 Dec 23	06:40	20°♈56'39	
evening set	5441 Apr 02	07:44	28°♈06'47	
	5441 Apr 18	01:11	0°♉	
conjunction	5441 Apr 19	01:21	0°♉07'18	-1°57'10

minimum elong	5441 Apr 19 01:20	0°♉07'18	1°57'12
max. Earth dist.	5441 Apr 19 02:49	0°♉07'45	10.80449 AU
morning rise	5441 May 05 21:42	2°♉08'43	
retrograde	5441 Aug 18 01:13	9°♉35'45	
opposition	5441 Oct 27 13:31	6°♉12'53	-2°29'38
min. Earth dist.	5441 Oct 27 11:50	6°♉13'12	8.77114 AU
direct	5442 Jan 04 11:03	2°♉53'26	
evening set	5442 Apr 14 11:11	10°♉06'53	
conjunction	5442 May 01 06:36	12°♉08'46	-2°05'07
minimum elong	5442 May 01 06:35	12°♉08'46	2°05'08
max. Earth dist.	5442 May 01 07:54	12°♉09'10	10.73259 AU
morning rise	5442 May 18 05:28	14°♉11'44	
	5442 May 25 01:13	15°♉	
retrograde	5442 Aug 30 22:43	21°♉45'01	
opposition	5442 Nov 09 07:22	18°♉21'00	-2°36'17
min. Earth dist.	5442 Nov 09 05:55	18°♉21'17	8.69440 AU
direct	5443 Jan 16 18:41	15°♉00'53	
evening set	5443 Apr 26 20:18	22°♉18'41	
conjunction	5443 May 13 18:20	24°♉22'17	-2°07'33
minimum elong	5443 May 13 18:20	24°♉22'17	2°07'34
max. Earth dist.	5443 May 13 19:09	24°♉22'32	10.65167 AU
morning rise	5443 May 30 20:27	26°♉27'07	
	5443 Jul 01 12:10	0°♊	
retrograde	5443 Sep 13 01:35	4°♊06'53	
opposition	5443 Nov 22 04:27	0°♊41'45	-2°35'54
min. Earth dist.	5443 Nov 22 03:31	0°♊41'56	8.61014 AU
	5443 Dec 01 05:37	30°℞♉	
direct	5444 Jan 29 07:07	27°♉20'49	
	5444 Mar 25 13:31	0°♊	
evening set	5444 May 08 11:51	4°♊43'46	
conjunction	5444 May 25 13:24	6°♊49'25	-2°04'05
minimum elong	5444 May 25 13:25	6°♊49'26	2°04'05
max. Earth dist.	5444 May 25 14:40	6°♊49'49	10.56513 AU
morning rise	5444 Jun 11 19:13	8°♊56'24	
retrograde	5444 Sep 25 10:29	16°♊42'37	
opposition	5444 Dec 04 05:22	13°♊16'26	-2°28'07
min. Earth dist.	5444 Dec 04 04:11	13°♊16'41	8.52205 AU
direct	5445 Feb 09 23:16	9°♊54'35	
evening set	5445 May 21 10:29	17°♊23'18	
conjunction	5445 Jun 07 16:15	19°♊31'15	-1°54'33
minimum elong	5445 Jun 07 16:17	19°♊31'16	1°54'34
max. Earth dist.	5445 Jun 07 18:18	19°♊31'54	10.47681 AU
morning rise	5445 Jun 25 02:13	21°♊40'33	
retrograde	5445 Oct 09 00:25	29°♊32'53	
opposition	5445 Dec 17 10:09	26°♊05'48	-2°12'52
min. Earth dist.	5445 Dec 17 08:27	26°♊06'08	8.43415 AU
direct	5446 Feb 22 20:49	22°♊42'55	
	5446 Jun 01 06:50	0°♋	
evening set	5446 Jun 03 17:14	0°♋17'53	
conjunction	5446 Jun 21 03:33	2°♋28'17	-1°39'07
minimum elong	5446 Jun 21 03:36	2°♋28'18	1°39'07
max. Earth dist.	5446 Jun 21 05:45	2°♋28'58	10.39090 AU
morning rise	5446 Jul 08 17:53	4°♋39'58	
retrograde	5446 Oct 22 19:43	12°♋37'40	
opposition	5446 Dec 30 18:41	9°♋09'52	-1°50'28
min. Earth dist.	5446 Dec 30 16:50	9°♋10'14	8.35077 AU
direct	5447 Mar 07 22:56	5°♋45'55	
evening set	5447 Jun 17 08:06	13°♋27'22	
conjunction	5447 Jul 04 22:55	15°♋40'10	-1°18'15
minimum elong	5447 Jul 04 22:58	15°♋40'11	1°18'15
max. Earth dist.	5447 Jul 05 00:27	15°♋40'39	10.31179 AU
morning rise	5447 Jul 22 17:30	17°♋54'08	
retrograde	5447 Nov 05 19:40	25°♋56'14	
opposition	5448 Jan 13 07:03	22°♋27'59	-1°21'46
min. Earth dist.	5448 Jan 13 05:40	22°♋28'15	8.27641 AU
direct	5448 Mar 20 06:06	19°♋02'56	
evening set	5448 Jun 30 06:44	26°♋50'49	
conjunction	5448 Jul 18 01:42	29°♋05'46	-0°52'51
minimum elong	5448 Jul 18 01:44	29°♋05'47	0°52'52
max. Earth dist.	5448 Jul 18 02:26	29°♋06'00	10.24390 AU
	5448 Jul 25 04:15	0°♌	
morning rise	5448 Aug 04 23:58	1°♌21'45	
retrograde	5448 Nov 18 22:17	9°♌27'00	
opposition	5449 Jan 25 22:44	5°♌58'33	-0°48'04
min. Earth dist.	5449 Jan 25 22:00	5°♌58'42	8.21544 AU
direct	5449 Apr 02 19:38	2°♌32'28	
evening set	5449 Jul 14 12:47	10°♌26'27	
conjunction	5449 Aug 01 11:13	12°♌43'10	-0°24'12
minimum elong	5449 Aug 01 11:14	12°♌43'10	0°24'13
max. Earth dist.	5449 Aug 01 11:36	12°♌43'17	10.19123 AU
morning rise	5449 Aug 19 12:09	15°♌00'40	
	5449 Aug 19 10:02	15°♌	
retrograde	5449 Dec 03 01:14	23°♌07'35	
opposition	5450 Feb 08 16:52	19°♌39'13	-0°11'14
min. Earth dist.	5450 Feb 08 16:26	19°♌39'19	8.17159 AU
direct	5450 Apr 16 15:40	16°♌12'15	
asc. node	5450 Jun 01 03:26	18°♌02'24	
evening set	5450 Jul 29 00:59	24°♌11'35	
conjunction	5450 Aug 16 01:48	26°♌29'31	0°06'10
minimum elong	5450 Aug 16 01:47	26°♌29'30	0°06'09
behind sun begin	5450 Aug 15 18:51	26°♌27'18	
behind sun end	5450 Aug 16 08:43	26°♌31'42	
max. Earth dist.	5450 Aug 16 02:07	26°♌29'36	10.15703 AU
morning rise	5450 Sep 03 03:58	28°♌47'51	
	5450 Sep 12 21:00	0°♍	
retrograde	5450 Dec 17 05:03	6°♍54'54	
opposition	5451 Feb 22 12:54	3°♍26'54	0°26'35
min. Earth dist.	5451 Feb 22 12:20	3°♍27'01	8.14760 AU
	5451 Apr 26 20:53	30°℞♌	
direct	5451 Apr 30 14:30	29°♌59'14	
	5451 May 04 07:54	0°♍	
evening set	5451 Aug 12 17:24	8°♍02'46	
conjunction	5451 Aug 30 19:09	10°♍21'11	0°36'13
minimum elong	5451 Aug 30 19:08	10°♍21'11	0°36'12
max. Earth dist.	5451 Aug 30 19:50	10°♍21'24	10.14347 AU
morning rise	5451 Sep 17 21:01	12°♍39'40	
retrograde	5451 Dec 31 09:04	20°♍45'15	
opposition	5452 Mar 07 09:50	17°♍17'49	1°02'59
min. Earth dist.	5452 Mar 07 08:55	17°♍18'00	8.14505 AU
direct	5452 May 13 15:57	13°♍49'40	
evening set	5452 Aug 26 11:58	21°♍55'57	
conjunction	5452 Sep 13 13:16	24°♍14'09	1°04'14
minimum elong	5452 Sep 13 13:13	24°♍14'08	1°04'14
max. Earth dist.	5452 Sep 13 14:01	24°♍14'23	10.15153 AU
morning rise	5452 Oct 01 13:27	26°♍32'03	
	5452 Oct 30 18:40	0°♎	
retrograde	5453 Jan 13 10:58	4°♎34'32	
opposition	5453 Mar 21 06:33	1°♎07'54	1°35'39
min. Earth dist.	5453 Mar 21 05:56	1°♎08'02	8.16413 AU
	5453 Apr 04 09:33	30°℞♍	
direct	5453 May 27 19:23	27°♍39'28	
	5453 Jul 19 04:03	0°♎	
evening set	5453 Sep 10 06:07	5°♎46'47	

conjunction	5453 Sep 28 05:39	8°♎04'04	1°28'27
minimum elong	5453 Sep 28 05:36	8°♎04'03	1°28'27
max. Earth dist.	5453 Sep 28 05:48	8°♎04'07	10.18064 AU
morning rise	5453 Oct 16 03:02	10°♎20'44	
retrograde	5454 Jan 27 08:19	18°♎18'42	
opposition	5454 Apr 04 02:12	14°♎53'02	2°02'36
min. Earth dist.	5454 Apr 04 02:18	14°♎53'01	8.20338 AU
direct	5454 Jun 11 00:36	11°♎24'32	
evening set	5454 Sep 24 21:11	19°♎31'00	
conjunction	5454 Oct 12 17:53	21°♎46'48	1°47'27
minimum elong	5454 Oct 12 17:50	21°♎46'47	1°47'27
max. Earth dist.	5454 Oct 12 17:06	21°♎46'33	10.22863 AU
morning rise	5454 Oct 30 11:41	24°♎01'44	
	5454 Dec 25 14:58	0°♏	
retrograde	5455 Feb 09 23:59	1°♏54'05	
	5455 Mar 29 10:21	30°℞♎	
opposition	5455 Apr 17 19:38	28°♎29'27	2°22'19
min. Earth dist.	5455 Apr 17 20:36	28°♎29'15	8.25988 AU
direct	5455 Jun 25 04:32	25°♎01'07	
	5455 Sep 13 04:17	0°♏	
evening set	5455 Oct 09 06:48	3°♏04'55	
conjunction	5455 Oct 27 00:09	5°♏18'53	2°00'16
minimum elong	5455 Oct 27 00:07	5°♏18'52	2°00'16
max. Earth dist.	5455 Oct 26 22:09	5°♏18'15	10.29199 AU
morning rise	5455 Nov 13 14:06	7°♏31'47	
	5456 Feb 05 11:53	15°♏	
retrograde	5456 Feb 23 10:43	15°♏17'47	
	5456 Mar 12 12:01	15°℞♏	
opposition	5456 Apr 30 09:58	11°♏54'12	2°33'55
min. Earth dist.	5456 Apr 30 11:35	11°♏53'53	8.32936 AU
direct	5456 Jul 08 05:49	8°♏26'17	
	5456 Oct 10 13:05	15°♏	
evening set	5456 Oct 22 09:19	16°♏25'58	
conjunction	5456 Nov 08 23:12	18°♏37'55	2°06'24
minimum elong	5456 Nov 08 23:11	18°♏37'55	2°06'24
max. Earth dist.	5456 Nov 08 20:19	18°♏37'01	10.36598 AU
morning rise	5456 Nov 26 09:18	20°♏48'42	
retrograde	5457 Mar 07 16:02	28°♏28'07	
opposition	5457 May 13 20:52	25°♏05'38	2°37'07
min. Earth dist.	5457 May 13 22:32	25°♏05'18	8.40692 AU
direct	5457 Jul 22 03:36	21°♏38'22	
evening set	5457 Nov 05 03:56	29°♏32'50	
	5457 Nov 08 20:23	0°♐	
conjunction	5457 Nov 22 14:28	1°♐42'45	2°05'49
minimum elong	5457 Nov 22 14:28	1°♐42'46	2°05'50
max. Earth dist.	5457 Nov 22 11:40	1°♐41'53	10.44622 AU
morning rise	5457 Dec 09 20:51	3°♐51'27	
retrograde	5458 Mar 20 16:02	11°♐24'23	
opposition	5458 May 27 04:07	8°♐02'56	2°32'12
min. Earth dist.	5458 May 27 05:42	8°♐02'37	8.48892 AU
direct	5458 Aug 04 20:58	4°♐36'31	
evening set	5458 Nov 18 14:10	12°♐24'54	
conjunction	5458 Dec 05 21:34	14°♐32'51	1°58'55
minimum elong	5458 Dec 05 21:36	14°♐32'51	1°58'56
max. Earth dist.	5458 Dec 05 19:15	14°♐32'07	10.52951 AU
morning rise	5458 Dec 23 00:41	16°♐39'32	
retrograde	5459 Apr 02 12:21	24°♐06'17	
opposition	5459 Jun 09 07:42	20°♐45'45	2°19'52
min. Earth dist.	5459 Jun 09 09:24	20°♐45'25	8.57226 AU
direct	5459 Aug 18 08:03	17°♐20'15	
evening set	5459 Dec 01 15:54	25°♐02'00	

conjunction	5459 Dec 18 20:27	27°♐08'05	1°46'22
minimum elong	5459 Dec 18 20:29	27°♐08'06	1°46'23
max. Earth dist.	5459 Dec 18 18:15	27°♐07'25	10.61249 AU
morning rise	5460 Jan 04 20:56	29°♐13'00	
	5460 Jan 11 10:33	0°♑	
retrograde	5460 Apr 14 02:31	6°♑34'03	
opposition	5460 Jun 21 07:26	3°♑14'16	2°01'08
min. Earth dist.	5460 Jun 21 09:39	3°♑13'51	8.65343 AU
	5460 Aug 16 06:24	30°℞♐	
direct	5460 Aug 30 14:28	29°♐49'43	
	5460 Sep 13 23:07	0°♑	
evening set	5460 Dec 13 09:51	7°♑24'43	
conjunction	5460 Dec 30 11:45	9°♑29'04	1°29'02
minimum elong	5460 Dec 30 11:47	9°♑29'05	1°29'04
max. Earth dist.	5460 Dec 30 09:00	9°♑28'14	10.69153 AU
morning rise	5461 Jan 16 10:09	11°♑32'24	
retrograde	5461 Apr 26 11:28	18°♑48'32	
opposition	5461 Jul 04 03:26	15°♑29'19	1°37'11
min. Earth dist.	5461 Jul 04 05:28	15°♑28'56	8.72887 AU
direct	5461 Sep 12 16:57	12°♑05'43	
evening set	5461 Dec 25 20:31	19°♑34'09	
conjunction	5462 Jan 11 20:10	21°♑36'59	1°07'58
minimum elong	5462 Jan 11 20:12	21°♑37'00	1°07'59
max. Earth dist.	5462 Jan 11 17:48	21°♑36'16	10.76319 AU
morning rise	5462 Jan 28 16:53	23°♑38'56	
	5462 Apr 07 02:31	0°♒	
retrograde	5462 May 08 18:47	0°♒51'11	
	5462 Jun 10 02:03	30°℞♑	
opposition	5462 Jul 16 20:10	27°♑32'18	1°09'21
min. Earth dist.	5462 Jul 16 21:15	27°♑32'06	8.79541 AU
direct	5462 Sep 25 13:26	24°♑09'39	
	5462 Dec 24 17:45	0°♒	
evening set	5463 Jan 07 00:45	1°♒31'59	
conjunction	5463 Jan 23 22:33	3°♒33'32	0°44'11
minimum elong	5463 Jan 23 22:35	3°♒33'32	0°44'12
max. Earth dist.	5463 Jan 23 21:30	3°♒33'13	10.82442 AU
morning rise	5463 Feb 09 17:49	5°♒34'21	
retrograde	5463 May 20 23:13	12°♒43'52	
opposition	5463 Jul 29 10:02	9°♒25'06	0°38'55
min. Earth dist.	5463 Jul 29 10:07	9°♒25'05	8.85029 AU
direct	5463 Oct 08 04:21	6°♒03'20	
evening set	5464 Jan 19 00:13	13°♒20'26	
	5464 Feb 01 22:44	15°♒	
conjunction	5464 Feb 04 20:20	15°♒20'53	0°18'48
minimum elong	5464 Feb 04 20:21	15°♒20'54	0°18'48
max. Earth dist.	5464 Feb 04 20:14	15°♒20'52	10.87272 AU
morning rise	5464 Feb 21 14:28	17°♒20'49	
retrograde	5464 Jun 01 02:48	24°♒28'51	
opposition	5464 Aug 09 21:31	21°♒10'02	0°07'13
min. Earth dist.	5464 Aug 09 21:33	21°♒10'02	8.89139 AU
direct	5464 Oct 19 15:01	17°♒49'04	
desc. node	5464 Nov 03 01:30	17°♒59'20	
evening set	5465 Jan 29 20:05	25°♒01'55	
conjunction	5465 Feb 15 14:36	27°♒01'34	-0°07'16
minimum elong	5465 Feb 15 14:36	27°♒01'34	0°07'16
behind sun begin	5465 Feb 15 08:09	26°♒59'39	
behind sun end	5465 Feb 15 21:03	27°♒03'28	
max. Earth dist.	5465 Feb 15 14:22	27°♒01'30	10.90629 AU
morning rise	5465 Mar 04 08:03	29°♒00'54	
	5465 Mar 12 20:44	0°♓	
retrograde	5465 Jun 13 04:59	6°♓08'42	
opposition	5465 Aug 22 07:41	2°♓49'41	-0°24'33

min. Earth dist.	5465 Aug 22 07:42	2°♓49'41	8.91718 AU
	5465 Oct 06 16:19	30°♓℞	
direct	5465 Oct 31 21:16	29°♒29'24	
	5465 Nov 25 20:42	0°♓	
evening set	5466 Feb 10 13:27	6°♓39'08	
conjunction	5466 Feb 27 06:43	8°♓38'13	-0°32'47
minimum elong	5466 Feb 27 06:41	8°♓38'13	0°32'47
max. Earth dist.	5466 Feb 27 06:36	8°♓38'11	10.92387 AU
morning rise	5466 Mar 15 23:49	10°♓37'14	
retrograde	5466 Jun 25 07:04	17°♓46'11	
opposition	5466 Sep 03 17:02	14°♓26'45	-0°55'12
min. Earth dist.	5466 Sep 03 16:23	14°♓26'52	8.92664 AU
direct	5466 Nov 13 03:07	11°♓07'02	
evening set	5467 Feb 22 05:53	18°♓14'51	
conjunction	5467 Mar 10 22:24	20°♓13'41	-0°56'57
minimum elong	5467 Mar 10 22:23	20°♓13'41	0°56'56
max. Earth dist.	5467 Mar 10 23:32	20°♓14'01	10.92471 AU
morning rise	5467 Mar 27 15:22	22°♓12'40	
retrograde	5467 Jul 07 13:21	29°♓23'57	
opposition	5467 Sep 16 02:07	26°♓03'58	-1°23'34
min. Earth dist.	5467 Sep 16 00:19	26°♓04'19	8.91925 AU
direct	5467 Nov 25 06:40	22°♓44'41	
evening set	5468 Mar 04 22:42	29°♓51'46	
	5468 Mar 06 02:48	0°♈	
conjunction	5468 Mar 21 14:53	1°♈50'41	-1°18'49
minimum elong	5468 Mar 21 14:51	1°♈50'40	1°18'48
max. Earth dist.	5468 Mar 21 16:55	1°♈51'17	10.90863 AU
morning rise	5468 Apr 07 08:06	3°♈49'58	
retrograde	5468 Jul 18 21:01	11°♈04'42	
opposition	5468 Sep 27 12:10	7°♈44'03	-1°48'37
min. Earth dist.	5468 Sep 27 09:54	7°♈44'28	8.89520 AU
direct	5468 Dec 06 07:11	4°♈25'00	
evening set	5469 Mar 16 17:09	11°♈32'34	
conjunction	5469 Apr 02 09:20	13°♈31'53	-1°37'31
minimum elong	5469 Apr 02 09:18	13°♈31'52	1°37'31
max. Earth dist.	5469 Apr 02 11:18	13°♈32'28	10.87630 AU
morning rise	5469 Apr 19 03:28	15°♈31'47	
retrograde	5469 Jul 31 07:49	22°♈51'01	
opposition	5469 Oct 09 23:51	19°♈29'34	-2°09'20
min. Earth dist.	5469 Oct 09 21:46	19°♈29'57	8.85550 AU
direct	5469 Dec 18 10:40	16°♈10'33	
evening set	5470 Mar 28 14:32	23°♈19'45	
conjunction	5470 Apr 14 07:25	25°♈19'49	-1°52'15
minimum elong	5470 Apr 14 07:23	25°♈19'49	1°52'17
max. Earth dist.	5470 Apr 14 09:12	25°♈20'22	10.82914 AU
morning rise	5470 May 01 03:06	27°♈20'43	
	5470 May 24 16:45	0°♉	
retrograde	5470 Aug 12 23:03	4°♉45'12	
opposition	5470 Oct 22 13:33	1°♉22'52	-2°24'47
min. Earth dist.	5470 Oct 22 11:33	1°♉23'15	8.80180 AU
	5470 Nov 10 09:26	30°♈℞	
direct	5470 Dec 30 14:55	28°♈03'41	
	5471 Feb 16 23:41	0°♉	
evening set	5471 Apr 09 15:51	5°♉15'36	
conjunction	5471 Apr 26 10:22	7°♉16'49	-2°02'19
minimum elong	5471 Apr 26 10:20	7°♉16'49	2°02'21
max. Earth dist.	5471 Apr 26 13:01	7°♉17'37	10.76901 AU
morning rise	5471 May 13 08:07	9°♉19'02	
	5471 Jul 08 23:00	15°♉	
retrograde	5471 Aug 25 18:09	16°♉49'23	
	5471 Oct 13 21:04	15°♈℞♉	

opposition	5471 Nov 04 05:55	13°♉26'06	-2°34'09
min. Earth dist.	5471 Nov 04 03:17	13°♉26'36	8.73618 AU
direct	5472 Jan 11 21:56	10°♉06'34	
	5472 Mar 31 06:51	15°♉	
evening set	5472 Apr 20 22:15	17°♉22'10	
conjunction	5472 May 07 19:07	19°♉24'53	-2°07'06
minimum elong	5472 May 07 19:06	19°♉24'53	2°07'07
max. Earth dist.	5472 May 07 22:41	19°♉25'59	10.69831 AU
morning rise	5472 May 24 19:32	21°♉28'44	
retrograde	5472 Sep 06 19:54	29°♉05'18	
opposition	5472 Nov 16 01:27	25°♉41'03	-2°36'44
min. Earth dist.	5472 Nov 15 22:12	25°♉41'40	8.66135 AU
direct	5473 Jan 23 08:19	22°♉21'00	
evening set	5473 May 03 10:48	29°♉41'05	
	5473 May 06 01:26	0°♊	
conjunction	5473 May 20 10:42	1°♊45'39	-2°06'08
minimum elong	5473 May 20 10:43	1°♊45'39	2°06'09
max. Earth dist.	5473 May 20 14:14	1°♊46'44	10.62015 AU
morning rise	5473 Jun 06 14:36	3°♊51'27	
retrograde	5473 Sep 20 03:10	11°♊34'13	
opposition	5473 Nov 29 00:31	8°♊09'03	-2°32'04
min. Earth dist.	5473 Nov 28 21:27	8°♊09'38	8.58057 AU
direct	5474 Feb 04 21:07	4°♊48'15	
evening set	5474 May 16 06:09	12°♊13'34	
conjunction	5474 Jun 02 09:47	14°♊20'12	-1°59'10
minimum elong	5474 Jun 02 09:49	14°♊20'13	1°59'11
max. Earth dist.	5474 Jun 02 12:20	14°♊21'00	10.53783 AU
morning rise	5474 Jun 19 17:48	16°♊28'12	
retrograde	5474 Oct 03 14:15	24°♊16'53	
opposition	5474 Dec 12 03:13	20°♊50'52	-2°19'58
min. Earth dist.	5474 Dec 12 01:08	20°♊51'17	8.49710 AU
direct	5475 Feb 17 15:45	17°♊29'08	
evening set	5475 May 29 08:54	25°♊00'13	
conjunction	5475 Jun 15 16:51	27°♊09'10	-1°46'14
minimum elong	5475 Jun 15 16:53	27°♊09'11	1°46'14
max. Earth dist.	5475 Jun 15 18:39	27°♊09'44	10.45453 AU
morning rise	5475 Jul 03 05:12	29°♊19'27	
	5475 Jul 08 18:56	0°♋	
retrograde	5475 Oct 17 05:11	7°♋13'34	
opposition	5475 Dec 25 09:30	3°♋46'48	-2°00'36
min. Earth dist.	5475 Dec 25 08:14	3°♋47'03	8.41421 AU
direct	5476 Mar 01 16:36	0°♋24'00	
evening set	5476 Jun 10 19:21	8°♋01'17	
conjunction	5476 Jun 28 07:57	10°♋12'37	-1°27'40
minimum elong	5476 Jun 28 08:00	10°♋12'38	1°27'40
max. Earth dist.	5476 Jun 28 09:24	10°♋13'04	10.37363 AU
morning rise	5476 Jul 16 00:34	12°♋25'12	
retrograde	5476 Oct 30 01:56	20°♋24'04	
opposition	5477 Jan 06 19:27	16°♋56'43	-1°34'35
min. Earth dist.	5477 Jan 06 18:27	16°♋56'55	8.33577 AU
direct	5477 Mar 14 21:26	13°♋32'48	
evening set	5477 Jun 24 13:38	21°♋16'29	
conjunction	5477 Jul 12 06:46	23°♋30'07	-1°04'10
minimum elong	5477 Jul 12 06:49	23°♋30'07	1°04'11
max. Earth dist.	5477 Jul 12 08:12	23°♋30'34	10.29953 AU
morning rise	5477 Jul 30 03:15	25°♋44'50	
	5477 Sep 05 09:52	0°♌	
retrograde	5477 Nov 13 02:21	3°♌47'28	
opposition	5478 Jan 20 08:45	0°♌19'41	-1°03'00
min. Earth dist.	5478 Jan 20 07:40	0°♌19'54	8.26669 AU
	5478 Jan 24 10:34	30°♋℞	

direct	5478 Mar 28 07:40	26°♋54'40	
	5478 May 27 11:09	0°♌	
evening set	5478 Jul 08 15:45	4°♌44'37	
conjunction	5478 Jul 26 12:43	7°♌00'14	-0°36'52
minimum elong	5478 Jul 26 12:45	7°♌00'14	0°36'52
max. Earth dist.	5478 Jul 26 13:33	7°♌00'30	10.23718 AU
morning rise	5478 Aug 13 12:15	9°♌16'42	
	5478 Oct 05 07:59	15°♌	
retrograde	5478 Nov 27 04:55	17°♌21'43	
	5479 Jan 20 04:53	15°℞♌	
opposition	5479 Feb 03 00:53	13°♌53'46	-0°27'27
min. Earth dist.	5479 Feb 03 00:11	13°♌53'54	8.21175 AU
direct	5479 Apr 10 23:05	10°♌27'39	
	5479 Jun 24 07:47	15°♌	
evening set	5479 Jul 23 00:27	18°♌23'20	
conjunction	5479 Aug 10 00:11	20°♌40'27	-0°07'14
minimum elong	5479 Aug 10 00:11	20°♌40'27	0°07'15
behind sun begin	5479 Aug 09 17:29	20°♌38'20	
behind sun end	5479 Aug 10 06:54	20°♌42'34	
max. Earth dist.	5479 Aug 10 00:09	20°♌40'26	10.19088 AU
morning rise	5479 Aug 28 01:38	22°♌58'07	
	5479 Nov 06 15:33	0°♍	
asc. node	5479 Nov 07 21:07	0°♍04'20	
retrograde	5479 Dec 11 08:41	1°♍04'02	
	5480 Jan 15 05:53	30°℞♌	
opposition	5480 Feb 16 19:19	27°♌36'08	0°10'04
min. Earth dist.	5480 Feb 16 19:18	27°♌36'09	8.17473 AU
direct	5480 Apr 23 18:40	24°♌09'02	
	5480 Jul 18 20:20	0°♍	
evening set	5480 Aug 05 14:03	2°♍09'31	
conjunction	5480 Aug 23 15:18	4°♍27'29	0°23'08
minimum elong	5480 Aug 23 15:17	4°♍27'28	0°23'08
max. Earth dist.	5480 Aug 23 14:19	4°♍27'10	10.16369 AU
morning rise	5480 Sep 10 17:20	6°♍45'41	
retrograde	5480 Dec 24 11:52	14°♍50'55	
opposition	5481 Mar 01 15:02	11°♍23'20	0°47'13
min. Earth dist.	5481 Mar 01 15:48	11°♍23'10	8.15794 AU
direct	5481 May 07 18:59	7°♍55'23	
evening set	5481 Aug 20 06:52	15°♍59'27	
conjunction	5481 Sep 07 08:18	18°♍17'33	0°52'11
minimum elong	5481 Sep 07 08:15	18°♍17'33	0°52'11
max. Earth dist.	5481 Sep 07 06:28	18°♍16'58	10.15720 AU
morning rise	5481 Sep 25 09:25	20°♍35'33	
retrograde	5482 Jan 07 12:20	28°♍38'32	
opposition	5482 Mar 15 10:52	25°♍11'28	1°21'42
min. Earth dist.	5482 Mar 15 12:02	25°♍11'14	8.16228 AU
direct	5482 May 21 22:16	21°♍42'58	
evening set	5482 Sep 04 00:21	29°♍49'03	
	5482 Sep 05 11:14	0°♎	
conjunction	5482 Sep 22 00:38	2°♎06'36	1°18'13
minimum elong	5482 Sep 22 00:35	2°♎06'35	1°18'13
max. Earth dist.	5482 Sep 21 22:37	2°♎05'57	10.17165 AU
morning rise	5482 Oct 09 23:29	4°♎23'43	
retrograde	5483 Jan 21 09:28	12°♎23'04	
opposition	5483 Mar 29 06:08	8°♎56'42	1°51'21
min. Earth dist.	5483 Mar 29 07:07	8°♎56'30	8.18724 AU
direct	5483 Jun 05 02:35	5°♎27'54	
evening set	5483 Sep 18 15:46	13°♎34'12	
conjunction	5483 Oct 06 13:51	15°♎50'37	1°39'39
minimum elong	5483 Oct 06 13:48	15°♎50'36	1°39'39
max. Earth dist.	5483 Oct 06 12:06	15°♎50'03	10.20601 AU
morning rise	5483 Oct 24 09:26	18°♎06'17	
retrograde	5484 Feb 04 03:26	26°♎00'49	
opposition	5484 Apr 10 23:45	22°♎35'19	2°14'26
min. Earth dist.	5484 Apr 11 00:34	22°♎35'08	8.23109 AU
direct	5484 Jun 18 05:02	19°♎06'29	
evening set	5484 Oct 02 03:13	27°♎11'12	
conjunction	5484 Oct 19 22:20	29°♎26'02	1°55'19
minimum elong	5484 Oct 19 22:17	29°♎26'02	1°55'19
max. Earth dist.	5484 Oct 19 20:45	29°♎25'32	10.25806 AU
	5484 Oct 24 09:09	0°♏	
morning rise	5484 Nov 06 14:04	1°♏39'52	
retrograde	5485 Feb 16 17:29	9°♏28'36	
opposition	5485 Apr 24 14:48	6°♏04'05	2°29'46
min. Earth dist.	5485 Apr 24 15:52	6°♏03'52	8.29107 AU
direct	5485 Jul 02 05:50	2°♏35'31	
evening set	5485 Oct 16 08:40	10°♏37'01	
conjunction	5485 Nov 03 00:20	12°♏49'57	2°04'29
minimum elong	5485 Nov 03 00:19	12°♏49'57	2°04'30
max. Earth dist.	5485 Nov 02 22:36	12°♏49'24	10.32466 AU
morning rise	5485 Nov 20 12:05	15°♏01'43	
	5485 Nov 20 06:31	15°♏	
retrograde	5486 Mar 02 00:58	22°♏44'04	
opposition	5486 May 08 02:57	19°♏20'37	2°36'47
min. Earth dist.	5486 May 08 04:41	19°♏20'17	8.36367 AU
direct	5486 Jul 16 04:37	15°♏52'35	
evening set	5486 Oct 30 06:29	23°♏49'24	
conjunction	5486 Nov 16 18:34	26°♏00'17	2°06'57
minimum elong	5486 Nov 16 18:34	26°♏00'17	2°06'58
max. Earth dist.	5486 Nov 16 16:12	25°♏59'32	10.40208 AU
morning rise	5486 Dec 04 02:36	28°♏09'57	
	5486 Dec 19 10:25	0°♐	
retrograde	5487 Mar 15 02:10	5°♐45'43	
opposition	5487 May 21 11:31	2°♐23'22	2°35'30
min. Earth dist.	5487 May 21 13:30	2°♐22'58	8.44493 AU
	5487 Jun 24 00:23	30°℞♏	
direct	5487 Jul 30 00:01	28°♏56'05	
	5487 Sep 03 15:46	0°♐	
evening set	5487 Nov 12 20:04	6°♐47'08	
conjunction	5487 Nov 30 04:48	8°♐55'58	2°02'53
minimum elong	5487 Nov 30 04:49	8°♐55'58	2°02'54
max. Earth dist.	5487 Nov 30 02:05	8°♐55'07	10.48625 AU
morning rise	5487 Dec 17 09:32	11°♐03'34	
retrograde	5488 Mar 26 23:09	18°♐32'52	
opposition	5488 Jun 02 16:04	15°♐11'33	2°26'28
min. Earth dist.	5488 Jun 02 17:45	15°♐11'14	8.53063 AU
direct	5488 Aug 11 13:38	11°♐45'15	
evening set	5488 Nov 25 01:10	19°♐29'49	
conjunction	5488 Dec 12 06:58	21°♐36'43	1°52'50
minimum elong	5488 Dec 12 07:00	21°♐36'43	1°52'52
max. Earth dist.	5488 Dec 12 04:37	21°♐35'59	10.57280 AU
morning rise	5488 Dec 29 08:49	23°♐42'24	
	5489 Mar 04 04:28	0°♑	
retrograde	5489 Apr 08 14:49	1°♑05'40	
	5489 May 14 19:29	30°℞♐	
opposition	5489 Jun 15 16:52	27°♐45'18	2°10'32
min. Earth dist.	5489 Jun 15 17:45	27°♐45'08	8.61639 AU
direct	5489 Aug 24 22:28	24°♐20'06	
	5489 Nov 21 00:51	0°♑	
evening set	5489 Dec 07 22:05	1°♑57'54	
conjunction	5489 Dec 25 01:16	4°♑02'59	1°37'36
minimum elong	5489 Dec 25 01:18	4°♑02'59	1°37'38

max. Earth dist.	5489 Dec 25 00:04	4°♒02'36	10.65740 AU
morning rise	5490 Jan 11 00:34	6°♒06'57	
retrograde	5490 Apr 21 02:52	13°♒24'56	
opposition	5490 Jun 28 14:05	10°♒05'22	1°48'51
min. Earth dist.	5490 Jun 28 14:38	10°♒05'16	8.69822 AU
direct	5490 Sep 07 01:48	6°♒41'20	
evening set	5490 Dec 20 11:36	14°♒12'24	
conjunction	5491 Jan 06 12:24	16°♒15'52	1°18'09
minimum elong	5491 Jan 06 12:26	16°♒15'52	1°18'11
max. Earth dist.	5491 Jan 06 11:44	16°♒15'39	10.73623 AU
morning rise	5491 Jan 23 09:43	18°♒18'19	
retrograde	5491 May 03 12:18	25°♒31'55	
opposition	5491 Jul 11 07:55	22°♒13'00	1°22'41
min. Earth dist.	5491 Jul 11 08:40	22°♒12'52	8.77265 AU
direct	5491 Sep 19 22:29	18°♒50'06	
evening set	5492 Jan 01 18:33	26°♒14'52	
conjunction	5492 Jan 18 17:11	28°♒16'55	0°55'31
minimum elong	5492 Jan 18 17:12	28°♒16'55	0°55'32
max. Earth dist.	5492 Jan 18 16:14	28°♒16'38	10.80594 AU
	5492 Feb 01 23:57	0°♓	
morning rise	5492 Feb 04 13:03	0°♓18'08	
retrograde	5492 May 14 16:09	7°♓28'24	
opposition	5492 Jul 22 22:47	4°♓09'55	0°53'19
min. Earth dist.	5492 Jul 22 23:38	4°♓09'46	8.83647 AU
direct	5492 Oct 01 15:37	0°♓48'04	
evening set	5493 Jan 12 20:08	8°♓07'16	
conjunction	5493 Jan 29 16:50	10°♓08'05	0°30'45
minimum elong	5493 Jan 29 16:51	10°♓08'05	0°30'46
max. Earth dist.	5493 Jan 29 15:52	10°♓07'47	10.86355 AU
morning rise	5493 Feb 15 11:33	12°♓08'17	
	5493 Mar 13 04:22	15°♓	
retrograde	5493 May 26 19:30	19°♓16'30	
opposition	5493 Aug 04 11:15	15°♓58'11	0°22'04
min. Earth dist.	5493 Aug 04 11:16	15°♓58'11	8.88701 AU
	5493 Aug 17 15:06	15°℞♓	
direct	5493 Oct 14 05:31	12°♓37'19	
	5493 Dec 08 08:38	15°♓	
evening set	5494 Jan 24 17:29	19°♓51'45	
conjunction	5494 Feb 10 12:41	21°♓51'37	0°04'59
minimum elong	5494 Feb 10 12:41	21°♓51'37	0°04'59
behind sun begin	5494 Feb 10 05:52	21°♓49'36	
behind sun end	5494 Feb 10 19:30	21°♓53'38	
max. Earth dist.	5494 Feb 10 12:51	21°♓51'40	10.90669 AU
morning rise	5494 Feb 27 06:24	23°♓51'04	
desc. node	5494 Apr 22 19:50	29°♓15'05	
	5494 May 04 13:35	0°♈	
retrograde	5494 Jun 07 23:26	0°♈58'28	
	5494 Jul 13 02:36	30°℞♓	
opposition	5494 Aug 16 21:56	27°♓40'05	-0°09'47
min. Earth dist.	5494 Aug 16 21:02	27°♓40'15	8.92216 AU
direct	5494 Oct 26 13:58	24°♓20'03	
	5495 Jan 23 05:54	0°♈	
evening set	5495 Feb 05 11:50	1°♈30'44	
conjunction	5495 Feb 22 05:46	3°♈29'56	-0°20'57
minimum elong	5495 Feb 22 05:45	3°♈29'55	0°20'57
max. Earth dist.	5495 Feb 22 06:41	3°♈30'12	10.93330 AU
morning rise	5495 Mar 10 22:49	5°♈28'55	
retrograde	5495 Jun 20 02:16	12°♈36'46	
opposition	5495 Aug 29 07:33	9°♈18'06	-0°41'03
min. Earth dist.	5495 Aug 29 06:36	9°♈18'17	8.94000 AU
direct	5495 Nov 07 19:11	5°♈58'42	
evening set	5496 Feb 17 04:50	13°♈06'54	

conjunction	5496 Mar 04 21:36	15°♈05'41	-0°45'51
minimum elong	5496 Mar 04 21:35	15°♈05'40	0°45'51
max. Earth dist.	5496 Mar 04 21:54	15°♈05'46	10.94172 AU
morning rise	5496 Mar 21 14:27	17°♈04'29	
retrograde	5496 Jul 01 06:27	24°♈14'07	
opposition	5496 Sep 09 16:45	20°♈54'59	-1°10'35
min. Earth dist.	5496 Sep 09 16:33	20°♈55'01	8.93917 AU
direct	5496 Nov 18 22:47	17°♈35'59	
evening set	5497 Feb 27 21:33	24°♈43'00	
conjunction	5497 Mar 16 13:37	26°♈41'43	-1°08'53
minimum elong	5497 Mar 16 13:35	26°♈41'42	1°08'53
max. Earth dist.	5497 Mar 16 13:20	26°♈41'38	10.93117 AU
morning rise	5497 Apr 02 06:41	28°♈40'43	
	5497 Apr 13 19:13	0°♈	
retrograde	5497 Jul 13 11:50	5°♈53'25	
opposition	5497 Sep 22 02:36	2°♈33'35	-1°37'18
min. Earth dist.	5497 Sep 22 02:18	2°♈33'38	8.91955 AU
	5497 Oct 31 09:39	30°℞♓	
direct	5497 Dec 01 01:28	29°♓14'50	
	5497 Dec 31 04:52	0°♈	
evening set	5498 Mar 11 15:11	6°♈21'54	
conjunction	5498 Mar 28 07:14	8°♈20'55	-1°29'10
minimum elong	5498 Mar 28 07:12	8°♈20'54	1°29'09
max. Earth dist.	5498 Mar 28 07:43	8°♈21'04	10.90230 AU
morning rise	5498 Apr 14 00:52	10°♈20'25	
retrograde	5498 Jul 25 21:52	17°♈37'21	
opposition	5498 Oct 04 13:37	14°♈16'37	-2°00'10
min. Earth dist.	5498 Oct 04 12:32	14°♈16'49	8.88237 AU
direct	5498 Dec 13 05:40	10°♈57'52	
evening set	5499 Mar 23 11:18	18°♈06'10	
conjunction	5499 Apr 09 03:54	20°♈05'51	-1°45'51
minimum elong	5499 Apr 09 03:52	20°♈05'50	1°45'52
max. Earth dist.	5499 Apr 09 05:15	20°♈06'15	10.85676 AU
morning rise	5499 Apr 25 22:38	22°♈06'13	
retrograde	5499 Aug 07 12:03	29°♈28'11	
opposition	5499 Oct 17 02:19	26°♈06'26	-2°18'13
min. Earth dist.	5499 Oct 17 00:40	26°♈06'44	8.82957 AU
direct	5499 Dec 25 08:22	22°♈47'27	
evening set	5500 Apr 04 10:56	29°♈58'06	
	5500 Apr 04 17:22	0°♉	
conjunction	5500 Apr 21 04:37	1°♉58'46	-1°58'12
minimum elong	5500 Apr 21 04:35	1°♉58'46	1°58'13
max. Earth dist.	5500 Apr 21 05:45	1°♉59'07	10.79684 AU
morning rise	5500 May 08 01:12	4°♉00'21	
retrograde	5500 Aug 20 05:26	11°♉28'04	
opposition	5500 Oct 29 17:43	8°♉05'11	-2°30'33
min. Earth dist.	5500 Oct 29 16:19	8°♉05'27	8.76359 AU
direct	5501 Jan 06 13:41	4°♉45'44	
evening set	5501 Apr 16 14:58	11°♉59'46	
conjunction	5501 May 03 10:30	14°♉01'48	-2°05'31
minimum elong	5501 May 03 10:29	14°♉01'48	2°05'33
max. Earth dist.	5501 May 03 11:26	14°♉02'05	10.72524 AU
	5501 May 11 09:54	15°♉	
morning rise	5501 May 20 09:42	16°♉04'56	
retrograde	5501 Sep 02 03:57	23°♉38'53	
opposition	5501 Nov 11 12:05	20°♉14'51	-2°36'24
min. Earth dist.	5501 Nov 11 10:56	20°♉15'04	8.68731 AU
direct	5502 Jan 18 23:06	16°♉54'44	
evening set	5502 Apr 29 00:38	24°♉13'03	
conjunction	5502 May 15 23:00	26°♉16'50	-2°07'17
minimum elong	5502 May 15 23:00	26°♉16'50	2°07'19

max. Earth dist.	5502 May 16 00:24	26°♉17'16	10.64499 AU	
morning rise	5502 Jun 02 01:23	28°♉21'50		
	5502 Jun 15 23:58	0°♊		
retrograde	5502 Sep 15 07:20	6°♊02'10		
opposition	5502 Nov 24 09:33	2°♊37'01	-2°35'11	
min. Earth dist.	5502 Nov 24 08:14	2°♊37'17	8.60393 AU	
	5503 Jan 02 05:05	30°℞♉		
direct	5503 Jan 31 11:24	29°♉16'04		
	5503 Mar 01 07:26	0°♊		
evening set	5503 May 11 16:47	6°♊39'29		
conjunction	5503 May 28 18:46	8°♊45'19	-2°03'08	
minimum elong	5503 May 28 18:48	8°♊45'20	2°03'09	
max. Earth dist.	5503 May 28 21:07	8°♊46'03	10.55945 AU	
morning rise	5503 Jun 15 00:50	10°♊52'27		
retrograde	5503 Sep 28 16:12	18°♊39'06		
opposition	5503 Dec 07 10:43	15°♊12'54	-2°26'34	
min. Earth dist.	5503 Dec 07 08:42	15°♊13'18	8.51699 AU	
direct	5504 Feb 13 04:32	11°♊51'02		
evening set	5504 May 23 16:03	19°♊20'08		
conjunction	5504 Jun 09 22:09	21°♊28'16	-1°52'57	
minimum elong	5504 Jun 09 22:11	21°♊28'16	1°52'58	
max. Earth dist.	5504 Jun 10 00:40	21°♊29'03	10.47244 AU	
morning rise	5504 Jun 27 08:24	23°♊37'42		
	5504 Aug 29 17:13	0°♋		
retrograde	5504 Oct 11 07:13	1°♋30'17		
	5504 Nov 23 10:35	30°℞♊		
opposition	5504 Dec 19 15:44	28°♊03'11	-2°10'30	
min. Earth dist.	5504 Dec 19 13:34	28°♊03'37	8.43054 AU	
direct	5505 Feb 25 01:37	24°♊40'17		
	5505 May 17 22:26	0°♋		
evening set	5505 Jun 05 23:13	2°♋15'31		
conjunction	5505 Jun 23 09:46	4°♋26'02	-1°36'55	
minimum elong	5505 Jun 23 09:49	4°♋26'03	1°36'55	
max. Earth dist.	5505 Jun 23 11:41	4°♋26'38	10.38818 AU	
morning rise	5505 Jul 11 00:28	6°♋37'51		
retrograde	5505 Oct 25 03:19	14°♋35'36		
opposition	5506 Jan 02 00:26	11°♋07'49	-1°47'25	
min. Earth dist.	5506 Jan 01 22:47	11°♋08'09	8.34893 AU	
direct	5506 Mar 10 03:17	7°♋43'47		
evening set	5506 Jun 19 14:20	15°♋25'25		
conjunction	5506 Jul 07 05:24	17°♋38'16	-1°15'33	
minimum elong	5506 Jul 07 05:26	17°♋38'17	1°15'34	
max. Earth dist.	5506 Jul 07 06:27	17°♋38'36	10.31095 AU	
morning rise	5506 Jul 25 00:22	19°♋52'20		
retrograde	5506 Nov 08 01:29	27°♋54'15		
opposition	5507 Jan 15 12:42	24°♋26'01	-1°18'10	
min. Earth dist.	5507 Jan 15 11:47	24°♋26'12	8.27647 AU	
direct	5507 Mar 23 12:29	21°♋00'53		
evening set	5507 Jul 03 13:08	28°♋48'50		
	5507 Jul 12 23:36	0°♌		
conjunction	5507 Jul 21 08:21	1°♌03'49	-0°49'48	
minimum elong	5507 Jul 21 08:23	1°♌03'49	0°49'49	
max. Earth dist.	5507 Jul 21 09:08	1°♌04'04	10.24489 AU	
morning rise	5507 Aug 08 06:50	3°♌19'48		
retrograde	5507 Nov 22 02:18	11°♌24'42		
opposition	5508 Jan 29 04:03	7°♌56'15	-0°44'09	
min. Earth dist.	5508 Jan 29 03:19	7°♌56'24	8.21730 AU	
direct	5508 Apr 05 02:58	4°♌30'07		
evening set	5508 Jul 16 19:05	12°♌23'58		
conjunction	5508 Aug 03 17:44	14°♌40'40	-0°20'59	
minimum elong	5508 Aug 03 17:45	14°♌40'41	0°21'00	
max. Earth dist.	5508 Aug 03 18:43	14°♌40'59	10.19392 AU	
	5508 Aug 06 06:11	15°♌		
morning rise	5508 Aug 21 18:39	16°♌58'06		
retrograde	5508 Dec 05 05:36	25°♌04'33		
opposition	5509 Feb 10 21:50	21°♌36'10	-0°07'13	
min. Earth dist.	5509 Feb 10 20:53	21°♌36'21	8.17508 AU	
direct	5509 Apr 18 20:55	18°♌09'08		
asc. node	5509 Apr 24 06:53	18°♌10'46		
evening set	5509 Jul 31 06:59	26°♌08'11		
conjunction	5509 Aug 18 07:55	28°♌26'02	0°09'20	
minimum elong	5509 Aug 18 07:54	28°♌26'02	0°09'20	
behind sun begin	5509 Aug 18 01:48	28°♌24'06		
behind sun end	5509 Aug 18 14:00	28°♌27'58		
max. Earth dist.	5509 Aug 18 08:59	28°♌26'22	10.16120 AU	
	5509 Aug 30 13:43	0°♍		
morning rise	5509 Sep 05 09:56	0°♍44'16		
retrograde	5509 Dec 19 10:38	8°♍50'44		
opposition	5510 Feb 24 17:25	5°♍22'41	0°30'27	
min. Earth dist.	5510 Feb 24 16:21	5°♍22'54	8.15242 AU	
direct	5510 May 02 18:55	1°♍54'57		
evening set	5510 Aug 14 23:11	9°♍58'09		
conjunction	5510 Sep 02 00:53	12°♍16'26	0°39'11	
minimum elong	5510 Sep 02 00:51	12°♍16'26	0°39'11	
max. Earth dist.	5510 Sep 02 01:47	12°♍16'44	10.14880 AU	
morning rise	5510 Sep 20 02:30	14°♍34'46		
retrograde	5511 Jan 02 13:46	22°♍39'38		
opposition	5511 Mar 10 13:50	19°♍12'13	1°06'28	
min. Earth dist.	5511 Mar 10 13:03	19°♍12'23	8.15085 AU	
direct	5511 May 16 20:40	15°♍44'00		
evening set	5511 Aug 29 17:16	23°♍49'54		
conjunction	5511 Sep 16 18:19	26°♍07'55	1°06'49	
minimum elong	5511 Sep 16 18:16	26°♍07'54	1°06'49	
max. Earth dist.	5511 Sep 16 18:34	26°♍08'00	10.15768 AU	
morning rise	5511 Oct 04 18:14	28°♍25'37		
	5511 Oct 17 12:50	0°♎		
retrograde	5512 Jan 16 14:04	6°♎27'24		
opposition	5512 Mar 23 10:11	3°♎00'49	1°38'34	
min. Earth dist.	5512 Mar 23 10:12	3°♎00'48	8.17062 AU	
	5512 May 07 08:56	30°℞♍		
direct	5512 May 30 00:20	29°♍32'20		
	5512 Jun 21 15:36	0°♎		
evening set	5512 Sep 12 10:42	7°♎39'12		
conjunction	5512 Sep 30 09:53	9°♎56'17	1°30'31	
minimum elong	5512 Sep 30 09:49	9°♎56'16	1°30'31	
max. Earth dist.	5512 Sep 30 09:07	9°♎56'03	10.18732 AU	
morning rise	5512 Oct 18 07:03	12°♎12'45		
retrograde	5513 Jan 29 10:35	20°♎10'04		
opposition	5513 Apr 06 05:21	16°♎44'27	2°04'47	
min. Earth dist.	5513 Apr 06 06:04	16°♎44'18	8.21029 AU	
direct	5513 Jun 13 04:28	13°♎15'57		
evening set	5513 Sep 27 01:09	21°♎21'57		
conjunction	5513 Oct 14 21:32	23°♎37'34	1°48'54	
minimum elong	5513 Oct 14 21:29	23°♎37'33	1°48'54	
max. Earth dist.	5513 Oct 14 19:57	23°♎37'04	10.23567 AU	
morning rise	5513 Nov 01 15:09	25°♎52'18		
	5513 Dec 07 10:46	0°♏		
retrograde	5514 Feb 12 02:14	3°♏44'01		
opposition	5514 Apr 19 22:15	0°♏19'27	2°23'41	
min. Earth dist.	5514 Apr 19 23:17	0°♏19'14	8.26711 AU	
	5514 Apr 23 22:51	30°℞♎		
direct	5514 Jun 27 08:14	26°♎51'10		
	5514 Aug 28 10:17	0°♏		

evening set	5514 Oct 11 10:07	4°♏54'29	
conjunction	5514 Oct 29 03:14	7°♏08'16	2°01'03
minimum elong	5514 Oct 29 03:12	7°♏08'16	2°01'03
max. Earth dist.	5514 Oct 29 01:11	7°♏07'38	10.29940 AU
morning rise	5514 Nov 15 16:55	9°♏20'59	
	5515 Jan 07 11:22	15°♏	
retrograde	5515 Feb 25 11:55	17°♏06'22	
	5515 Apr 17 00:31	15°℞♏	
opposition	5515 May 03 12:14	13°♏42'52	2°34'26
min. Earth dist.	5515 May 03 13:12	13°♏42'41	8.33701 AU
direct	5515 Jul 11 09:40	10°♏15'02	
	5515 Sep 27 17:46	15°♏	
evening set	5515 Oct 25 11:47	18°♏14'07	
conjunction	5515 Nov 12 01:32	20°♏25'53	2°06'30
minimum elong	5515 Nov 12 01:31	20°♏25'53	2°06'30
max. Earth dist.	5515 Nov 11 23:27	20°♏25'14	10.37392 AU
morning rise	5515 Nov 29 11:17	22°♏36'28	
	5516 Feb 22 00:53	0°♐	
retrograde	5516 Mar 09 17:05	0°♐15'17	
	5516 Mar 26 12:20	30°℞♏	
opposition	5516 May 15 22:42	26°♏52'50	2°36'49
min. Earth dist.	5516 May 15 23:58	26°♏52'35	8.41495 AU
direct	5516 Jul 24 06:24	23°♏25'39	
	5516 Oct 27 05:14	0°♐	
evening set	5516 Nov 07 05:39	1°♐19'27	
conjunction	5516 Nov 24 16:04	3°♐29'12	2°05'16
minimum elong	5516 Nov 24 16:04	3°♐29'12	2°05'17
max. Earth dist.	5516 Nov 24 13:46	3°♐28'29	10.45417 AU
morning rise	5516 Dec 11 22:10	5°♐37'42	
retrograde	5517 Mar 22 18:06	13°♐10'03	
opposition	5517 May 29 05:28	9°♐48'41	2°31'08
min. Earth dist.	5517 May 29 07:32	9°♐48'16	8.49646 AU
direct	5517 Aug 06 21:23	6°♐22'19	
evening set	5517 Nov 20 15:16	14°♐10'07	
conjunction	5517 Dec 07 22:29	16°♐17'56	1°57'47
minimum elong	5517 Dec 07 22:30	16°♐17'57	1°57'48
max. Earth dist.	5517 Dec 07 19:38	16°♐17'03	10.53642 AU
morning rise	5517 Dec 25 01:27	18°♐24'31	
retrograde	5518 Apr 04 12:23	25°♐50'47	
opposition	5518 Jun 11 08:46	22°♐30'21	2°18'07
min. Earth dist.	5518 Jun 11 11:26	22°♐29'50	8.57833 AU
direct	5518 Aug 20 09:17	19°♐04'56	
evening set	5518 Dec 03 16:30	26°♐46'15	
conjunction	5518 Dec 20 20:47	28°♐52'14	1°44'42
minimum elong	5518 Dec 20 20:50	28°♐52'15	1°44'44
max. Earth dist.	5518 Dec 20 17:24	28°♐51'11	10.61759 AU
	5518 Dec 30 01:26	0°♑	
morning rise	5519 Jan 06 21:16	0°♑57'04	
retrograde	5519 Apr 17 01:50	8°♑17'53	
opposition	5519 Jun 24 08:19	4°♑58'12	1°58'47
min. Earth dist.	5519 Jun 24 10:59	4°♑57'41	8.65745 AU
direct	5519 Sep 02 16:44	1°♑33'44	
evening set	5519 Dec 16 10:02	9°♑08'28	
conjunction	5520 Jan 02 11:50	11°♑12'46	1°26'57
minimum elong	5520 Jan 02 11:53	11°♑12'47	1°26'59
max. Earth dist.	5520 Jan 02 08:31	11°♑11'46	10.69441 AU
morning rise	5520 Jan 19 10:15	13°♑16'03	
retrograde	5520 Apr 28 12:30	20°♑32'11	
opposition	5520 Jul 06 04:09	17°♑13'01	1°34'23
min. Earth dist.	5520 Jul 06 05:59	17°♑12'40	8.73050 AU
direct	5520 Sep 14 17:55	13°♑49'32	
evening set	5520 Dec 27 20:33	21°♑17'51	
conjunction	5521 Jan 13 20:16	23°♑20'43	1°05'32
minimum elong	5521 Jan 13 20:18	23°♑20'43	1°05'33
max. Earth dist.	5521 Jan 13 18:06	23°♑20'03	10.76356 AU
morning rise	5521 Jan 30 16:53	25°♑22'40	
	5521 Mar 15 12:01	0°♒	
retrograde	5521 May 10 19:27	2°♒35'05	
	5521 Jul 09 03:30	30°℞♑	
opposition	5521 Jul 18 20:59	29°♑16'14	1°06'12
min. Earth dist.	5521 Jul 18 22:01	29°♑16'03	8.79442 AU
direct	5521 Sep 27 13:36	25°♑53'41	
	5521 Dec 10 12:01	0°♒	
evening set	5522 Jan 09 00:56	3°♒16'07	
conjunction	5522 Jan 25 22:44	5°♒17'42	0°41'31
minimum elong	5522 Jan 25 22:46	5°♒17'42	0°41'32
max. Earth dist.	5522 Jan 25 21:40	5°♒17'22	10.82214 AU
morning rise	5522 Feb 11 17:54	7°♒18'33	
retrograde	5522 May 23 01:04	14°♒28'26	
opposition	5522 Jul 31 11:13	11°♒09'42	0°35'33
min. Earth dist.	5522 Jul 31 12:00	11°♒09'33	8.84670 AU
direct	5522 Oct 10 04:58	7°♒47'59	
	5523 Jan 20 06:33	15°♒	
evening set	5523 Jan 21 00:39	15°♒05'19	
conjunction	5523 Feb 06 20:39	17°♒05'51	0°16'00
minimum elong	5523 Feb 06 20:40	17°♒05'51	0°16'00
behind sun begin	5523 Feb 06 19:28	17°♒05'30	
behind sun end	5523 Feb 06 21:51	17°♒06'13	
max. Earth dist.	5523 Feb 06 19:38	17°♒05'33	10.86791 AU
morning rise	5523 Feb 23 14:52	19°♒05'53	
retrograde	5523 Jun 04 04:16	26°♒14'23	
opposition	5523 Aug 12 23:08	22°♒55'34	0°03'44
min. Earth dist.	5523 Aug 13 00:02	22°♒55'24	8.88542 AU
desc. node	5523 Sep 26 00:13	20°♒08'35	
direct	5523 Oct 22 15:04	19°♒34'37	
evening set	5524 Feb 01 20:47	26°♒47'51	
conjunction	5524 Feb 18 15:15	28°♒47'35	-0°10'05
minimum elong	5524 Feb 18 15:15	28°♒47'35	0°10'05
behind sun begin	5524 Feb 18 09:35	28°♒45'54	
behind sun end	5524 Feb 18 20:55	28°♒49'15	
max. Earth dist.	5524 Feb 18 14:17	28°♒47'18	10.89915 AU
	5524 Feb 28 17:33	0°♓	
morning rise	5524 Mar 06 08:50	0°♓47'03	
retrograde	5524 Jun 15 05:53	7°♓55'31	
opposition	5524 Aug 24 09:39	4°♓36'25	-0°28'00
min. Earth dist.	5524 Aug 24 09:46	4°♓36'23	8.90897 AU
direct	5524 Nov 02 23:27	1°♓16'06	
evening set	5525 Feb 12 14:35	8°♓26'20	
conjunction	5525 Mar 01 07:57	10°♓25'33	-0°35'32
minimum elong	5525 Mar 01 07:55	10°♓25'33	0°35'32
max. Earth dist.	5525 Mar 01 08:10	10°♓25'37	10.91459 AU
morning rise	5525 Mar 18 01:01	12°♓24'42	
retrograde	5525 Jun 27 11:01	19°♓34'25	
opposition	5525 Sep 05 19:30	16°♓14'52	-0°58'29
min. Earth dist.	5525 Sep 05 18:19	16°♓15'06	8.91643 AU
direct	5525 Nov 15 05:22	12°♓55'07	
evening set	5526 Feb 24 07:37	20°♓03'28	
conjunction	5526 Mar 13 00:12	22°♓02'28	-0°59'31
minimum elong	5526 Mar 13 00:11	22°♓02'28	0°59'30
max. Earth dist.	5526 Mar 13 01:46	22°♓02'56	10.91361 AU
morning rise	5526 Mar 29 17:08	24°♓01'37	
	5526 May 31 16:06	0°♈	

retrograde	5526 Jul 09 16:57	1°♈13'46	
	5526 Aug 18 15:23	30°℞♓	
opposition	5526 Sep 18 05:21	27°♓53'38	-1°26'34
min. Earth dist.	5526 Sep 18 03:28	27°♓53'59	8.90747 AU
direct	5526 Nov 27 07:35	24°♓34'15	
	5527 Feb 21 03:37	0°♈	
evening set	5527 Mar 08 01:06	1°♈41'59	
conjunction	5527 Mar 24 17:15	3°♈41'03	-1°21'04
minimum elong	5527 Mar 24 17:12	3°♈41'03	1°21'04
max. Earth dist.	5527 Mar 24 18:49	3°♈41'32	10.89622 AU
morning rise	5527 Apr 10 10:37	5°♈40'32	
retrograde	5527 Jul 22 01:08	12°♈56'12	
opposition	5527 Sep 30 16:06	9°♈35'22	-1°51'11
min. Earth dist.	5527 Sep 30 14:20	9°♈35'42	8.88234 AU
direct	5527 Dec 09 10:36	6°♈16'11	
evening set	5528 Mar 18 20:20	13°♈24'27	
conjunction	5528 Apr 04 12:31	15°♈23'57	-1°39'22
minimum elong	5528 Apr 04 12:29	15°♈23'57	1°39'22
max. Earth dist.	5528 Apr 04 14:00	15°♈24'24	10.86304 AU
morning rise	5528 Apr 21 06:52	17°♈24'05	
retrograde	5528 Aug 02 12:35	24°♈44'14	
opposition	5528 Oct 12 04:20	21°♈22'35	-2°11'21
min. Earth dist.	5528 Oct 12 02:30	21°♈22'56	8.84200 AU
direct	5528 Dec 20 14:01	18°♈03'25	
evening set	5529 Mar 30 18:24	25°♈13'22	
conjunction	5529 Apr 16 11:29	27°♈13'39	-1°53'36
minimum elong	5529 Apr 16 11:27	27°♈13'38	1°53'37
max. Earth dist.	5529 Apr 16 13:50	27°♈14'22	10.81544 AU
morning rise	5529 May 03 07:17	29°♈14'45	
	5529 May 09 17:52	0°♉	
retrograde	5529 Aug 15 03:47	6°♉40'12	
opposition	5529 Oct 24 18:43	3°♉17'38	-2°26'07
min. Earth dist.	5529 Oct 24 16:05	3°♉18'08	8.78810 AU
	5529 Dec 27 02:38	30°℞♈	
direct	5530 Jan 01 19:39	29°♈58'19	
	5530 Jan 07 12:18	0°♉	
evening set	5530 Apr 11 20:27	7°♉10'58	
conjunction	5530 Apr 28 15:14	9°♉12'25	-2°03'04
minimum elong	5530 Apr 28 15:13	9°♉12'25	2°03'05
max. Earth dist.	5530 Apr 28 18:49	9°♉13'30	10.75534 AU
morning rise	5530 May 15 13:07	11°♉14'51	
	5530 Jun 18 15:36	15°♉	
retrograde	5530 Aug 28 01:25	18°♉46'08	
opposition	5530 Nov 06 11:44	15°♉22'37	-2°34'42
min. Earth dist.	5530 Nov 06 08:18	15°♉23'17	8.72277 AU
	5530 Nov 11 10:32	15°℞♉	
direct	5531 Jan 14 03:23	12°♉02'57	
	5531 Mar 15 03:54	15°♉	
evening set	5531 Apr 24 03:48	19°♉19'16	
conjunction	5531 May 11 00:53	21°♉22'13	-2°07'10
minimum elong	5531 May 11 00:53	21°♉22'13	2°07'11
max. Earth dist.	5531 May 11 04:33	21°♉23'21	10.68524 AU
morning rise	5531 May 28 01:37	23°♉26'20	
	5531 Aug 05 02:36	0°♊	
retrograde	5531 Sep 10 04:00	1°♊03'41	
	5531 Oct 16 14:43	30°℞♉	
opposition	5531 Nov 19 07:48	27°♉39'16	-2°36'25
min. Earth dist.	5531 Nov 19 04:25	27°♉39'55	8.64880 AU
direct	5532 Jan 26 12:19	24°♉19'02	
	5532 Apr 21 13:15	0°♊	
evening set	5532 May 05 17:08	1°♊39'52	
conjunction	5532 May 22 17:17	3°♊44'39	-2°05'29
minimum elong	5532 May 22 17:18	3°♊44'39	2°05'30
max. Earth dist.	5532 May 22 20:23	3°♊45'36	10.60830 AU
morning rise	5532 Jun 08 21:38	5°♊50'43	
retrograde	5532 Sep 22 10:00	13°♊34'10	
opposition	5532 Dec 01 07:29	10°♊08'52	-2°30'52
min. Earth dist.	5532 Dec 01 04:41	10°♊09'24	8.56953 AU
direct	5533 Feb 07 03:37	6°♊47'54	
evening set	5533 May 18 13:07	14°♊13'54	
conjunction	5533 Jun 04 17:08	16°♊20'47	-1°57'48
minimum elong	5533 Jun 04 17:10	16°♊20'48	1°57'49
max. Earth dist.	5533 Jun 04 20:03	16°♊21'42	10.52788 AU
morning rise	5533 Jun 22 01:35	18°♊29'01	
retrograde	5533 Oct 05 21:22	26°♊18'16	
opposition	5533 Dec 14 10:40	22°♊52'09	-2°17'53
min. Earth dist.	5533 Dec 14 08:20	22°♊52'36	8.48837 AU
direct	5534 Feb 19 23:37	19°♊30'18	
evening set	5534 May 31 16:34	27°♊01'56	
conjunction	5534 Jun 18 01:02	29°♊11'07	-1°44'12
minimum elong	5534 Jun 18 01:05	29°♊11'07	1°44'12
max. Earth dist.	5534 Jun 18 04:05	29°♊12'04	10.44729 AU
	5534 Jun 24 13:38	0°♋	
morning rise	5534 Jul 05 13:44	1°♋21'36	
retrograde	5534 Oct 19 14:00	9°♋16'03	
opposition	5534 Dec 27 17:09	5°♋49'13	-1°57'42
min. Earth dist.	5534 Dec 27 14:58	5°♋49'39	8.40860 AU
direct	5535 Mar 04 23:41	2°♋26'20	
evening set	5535 Jun 14 03:40	10°♋04'00	
conjunction	5535 Jul 01 16:44	12°♋15'29	-1°25'02
minimum elong	5535 Jul 01 16:47	12°♋15'30	1°25'03
max. Earth dist.	5535 Jul 01 19:29	12°♋16'21	10.36974 AU
morning rise	5535 Jul 19 09:36	14°♋28'13	
retrograde	5535 Nov 02 10:33	22°♋27'08	
opposition	5536 Jan 10 03:13	18°♋59'44	-1°31'01
min. Earth dist.	5536 Jan 10 01:15	19°♋00'08	8.33354 AU
direct	5536 Mar 17 05:12	15°♋35'47	
evening set	5536 Jun 26 22:20	23°♋19'39	
conjunction	5536 Jul 14 15:44	25°♋33'22	-1°01'05
minimum elong	5536 Jul 14 15:46	25°♋33'23	1°01'06
max. Earth dist.	5536 Jul 14 17:40	25°♋33'59	10.29886 AU
morning rise	5536 Aug 01 12:25	27°♋48'09	
	5536 Aug 19 19:40	0°♌	
retrograde	5536 Nov 15 10:49	5°♌50'36	
opposition	5537 Jan 22 16:33	2°♌22'52	-0°58'58
min. Earth dist.	5537 Jan 22 15:08	2°♌23'09	8.26743 AU
	5537 Feb 24 09:22	30°℞♋	
direct	5537 Mar 30 15:18	28°♋57'49	
	5537 May 03 12:36	0°♌	
evening set	5537 Jul 11 00:36	6°♌47'49	
conjunction	5537 Jul 28 21:41	9°♌03'27	-0°33'30
minimum elong	5537 Jul 28 21:42	9°♌03'28	0°33'31
max. Earth dist.	5537 Jul 28 22:13	9°♌03'37	10.23928 AU
morning rise	5537 Aug 15 21:26	11°♌19'56	
	5537 Sep 16 06:53	15°♌	
retrograde	5537 Nov 29 13:30	19°♌24'36	
opposition	5538 Feb 05 08:33	15°♌56'44	-0°23'10
min. Earth dist.	5538 Feb 05 08:12	15°♌56'49	8.21504 AU
	5538 Feb 17 03:35	15°℞♌	
direct	5538 Apr 13 06:13	12°♌30'37	
	5538 Jun 05 20:41	15°♌	
evening set	5538 Jul 25 09:19	20°♌26'15	

conjunction	5538 Aug 12 09:05	22°♌43'19	-0°03'48
minimum elong	5538 Aug 12 09:05	22°♌43'19	0°03'49
behind sun begin	5538 Aug 12 01:50	22°♌41'01	
behind sun end	5538 Aug 12 16:20	22°♌45'36	
max. Earth dist.	5538 Aug 12 08:27	22°♌43'08	10.19529 AU
morning rise	5538 Aug 30 10:40	25°♌00'56	
asc. node	5538 Sep 28 01:51	28°♌24'04	
	5538 Oct 13 18:29	0°♍	
retrograde	5538 Dec 13 16:52	3°♍06'20	
	5539 Feb 14 17:28	30°℞♌	
opposition	5539 Feb 19 02:40	29°♌38'35	0°14'18
min. Earth dist.	5539 Feb 19 03:07	29°♌38'29	8.18013 AU
direct	5539 Apr 27 02:49	26°♌11'30	
	5539 Jul 03 16:13	0°♍	
evening set	5539 Aug 08 22:42	4°♍11'51	
conjunction	5539 Aug 26 23:55	6°♍29'41	0°26'28
minimum elong	5539 Aug 26 23:53	6°♍29'40	0°26'27
max. Earth dist.	5539 Aug 26 22:40	6°♍29'17	10.16997 AU
morning rise	5539 Sep 14 01:52	8°♍47'45	
retrograde	5539 Dec 27 17:53	16°♍52'23	
opposition	5540 Mar 03 21:58	13°♍24'57	0°51'11
min. Earth dist.	5540 Mar 03 22:44	13°♍24'48	8.16505 AU
direct	5540 May 10 03:53	9°♍57'06	
evening set	5540 Aug 22 15:05	18°♍00'52	
conjunction	5540 Sep 09 16:25	20°♍18'49	0°55'12
minimum elong	5540 Sep 09 16:23	20°♍18'48	0°55'11
max. Earth dist.	5540 Sep 09 14:59	20°♍18'21	10.16498 AU
morning rise	5540 Sep 27 17:17	22°♍36'37	
	5540 Dec 14 02:22	0°♎	
retrograde	5541 Jan 09 17:48	0°♎38'57	
	5541 Feb 05 13:45	30°℞♍	
opposition	5541 Mar 17 17:20	27°♍12'03	1°25'09
min. Earth dist.	5541 Mar 17 18:00	27°♍11'54	8.17069 AU
direct	5541 May 24 05:55	23°♍43'39	
	5541 Aug 22 10:37	0°♎	
evening set	5541 Sep 06 08:03	1°♎49'18	
conjunction	5541 Sep 24 08:12	4°♎06'40	1°20'44
minimum elong	5541 Sep 24 08:09	4°♎06'39	1°20'44
max. Earth dist.	5541 Sep 24 06:51	4°♎06'15	10.18051 AU
morning rise	5541 Oct 12 06:40	6°♎23'33	
retrograde	5542 Jan 23 15:47	14°♎22'12	
opposition	5542 Mar 31 12:05	10°♎56'00	1°54'06
min. Earth dist.	5542 Mar 31 12:46	10°♎55'51	8.19646 AU
direct	5542 Jun 07 08:12	7°♎27'19	
evening set	5542 Sep 20 22:59	15°♎33'06	
conjunction	5542 Oct 08 20:48	17°♎49'19	1°41'33
minimum elong	5542 Oct 08 20:45	17°♎49'18	1°41'33
max. Earth dist.	5542 Oct 08 19:20	17°♎48'51	10.21542 AU
morning rise	5542 Oct 26 15:55	20°♎04'44	
retrograde	5543 Feb 06 10:07	27°♎58'31	
opposition	5543 Apr 14 05:16	24°♎33'10	2°16'20
min. Earth dist.	5543 Apr 14 06:24	24°♎32'56	8.24064 AU
direct	5543 Jun 21 10:28	21°♎04'27	
evening set	5543 Oct 05 09:42	29°♎08'38	
	5543 Oct 12 05:43	0°♏	
conjunction	5543 Oct 23 04:26	1°♏23'13	1°56'30
minimum elong	5543 Oct 23 04:24	1°♏23'13	1°56'31
max. Earth dist.	5543 Oct 23 02:27	1°♏22'35	10.26757 AU
morning rise	5543 Nov 09 19:47	3°♏36'49	
retrograde	5544 Feb 19 21:44	11°♏24'49	
opposition	5544 Apr 26 19:54	8°♏00'27	2°30'46
min. Earth dist.	5544 Apr 26 21:47	8°♏00'04	8.30050 AU
direct	5544 Jul 04 12:18	4°♏31'57	
evening set	5544 Oct 18 14:16	12°♏32'52	
conjunction	5544 Nov 05 05:34	14°♏45'34	2°04'57
minimum elong	5544 Nov 05 05:33	14°♏45'34	2°04'58
max. Earth dist.	5544 Nov 05 02:47	14°♏44'41	10.33381 AU
	5544 Nov 07 03:17	15°♏	
morning rise	5544 Nov 22 17:07	16°♏57'08	
retrograde	5545 Mar 04 04:08	24°♏38'48	
opposition	5545 May 10 07:32	21°♏15'28	2°36'52
min. Earth dist.	5545 May 10 09:54	21°♏15'00	8.37247 AU
direct	5545 Jul 18 10:49	17°♏47'28	
evening set	5545 Nov 01 11:21	25°♏43'41	
conjunction	5545 Nov 18 23:08	27°♏54'22	2°06'41
minimum elong	5545 Nov 18 23:08	27°♏54'23	2°06'42
max. Earth dist.	5545 Nov 18 19:49	27°♏53'20	10.41034 AU
	5545 Dec 05 18:28	0°♐	
morning rise	5545 Dec 06 07:00	0°♐03'51	
retrograde	5546 Mar 17 05:41	7°♐39'00	
opposition	5546 May 23 15:34	4°♐16'41	2°34'44
min. Earth dist.	5546 May 23 17:34	4°♐16'18	8.45256 AU
direct	5546 Aug 01 04:54	0°♐49'28	
evening set	5546 Nov 15 00:07	8°♐39'54	
conjunction	5546 Dec 02 08:42	10°♐48'35	2°01'57
minimum elong	5546 Dec 02 08:43	10°♐48'35	2°01'58
max. Earth dist.	5546 Dec 02 05:52	10°♐47'42	10.49314 AU
morning rise	5546 Dec 19 13:14	12°♐56'02	
retrograde	5547 Mar 30 01:50	20°♐24'49	
opposition	5547 Jun 05 19:49	17°♐03'31	2°24'55
min. Earth dist.	5547 Jun 05 21:10	17°♐03'15	8.53667 AU
direct	5547 Aug 14 18:26	13°♐37'14	
evening set	5547 Nov 28 04:24	21°♐21'13	
conjunction	5547 Dec 15 10:10	23°♐28'00	1°51'18
minimum elong	5547 Dec 15 10:12	23°♐28'01	1°51'20
max. Earth dist.	5547 Dec 15 08:14	23°♐27'24	10.57798 AU
morning rise	5548 Jan 01 11:47	25°♐33'35	
	5548 Feb 11 05:38	0°♑	
retrograde	5548 Apr 10 18:04	2°♑56'29	
	5548 Jun 12 16:17	30°℞♐	
opposition	5548 Jun 17 20:20	29°♐36'05	2°08'19
min. Earth dist.	5548 Jun 17 21:23	29°♐35'53	8.62059 AU
direct	5548 Aug 27 02:29	26°♐10'54	
	5548 Nov 05 17:57	0°♑	
evening set	5548 Dec 10 00:53	3°♑48'12	
conjunction	5548 Dec 27 03:58	5°♑53'13	1°35'34
minimum elong	5548 Dec 27 04:01	5°♑53'13	1°35'36
max. Earth dist.	5548 Dec 27 02:36	5°♑52'47	10.66062 AU
morning rise	5549 Jan 13 03:10	7°♑57'06	
retrograde	5549 Apr 23 06:18	15°♑14'49	
opposition	5549 Jun 30 17:19	11°♑55'14	1°46'05
min. Earth dist.	5549 Jun 30 18:43	11°♑54'58	8.70040 AU
direct	5549 Sep 09 04:17	8°♑31'10	
evening set	5549 Dec 22 14:04	16°♑01'55	
conjunction	5550 Jan 08 14:42	18°♑05'19	1°15'42
minimum elong	5550 Jan 08 14:44	18°♑05'20	1°15'44
max. Earth dist.	5550 Jan 08 13:00	18°♑04'48	10.73737 AU
morning rise	5550 Jan 25 12:03	20°♑07'46	
retrograde	5550 May 05 13:22	27°♑21'16	
opposition	5550 Jul 13 11:08	24°♑02'18	1°19'29
min. Earth dist.	5550 Jul 13 12:30	24°♑02'03	8.77272 AU
direct	5550 Sep 22 01:47	20°♑39'21	
evening set	5551 Jan 03 20:43	28°♑03'57	

	5551 Jan 19 23:29	0°♒	
conjunction	5551 Jan 20 19:14	0°♒05'58	0°52'46
minimum elong	5551 Jan 20 19:16	0°♒05'58	0°52'47
max. Earth dist.	5551 Jan 20 17:39	0°♒05'29	10.80496 AU
morning rise	5551 Feb 06 15:10	2°♒07'12	
retrograde	5551 May 17 18:50	9°♒17'37	
opposition	5551 Jul 26 02:01	5°♒59'02	0°49'49
min. Earth dist.	5551 Jul 26 02:39	5°♒58'55	8.83441 AU
direct	5551 Oct 04 20:03	2°♒37'09	
evening set	5552 Jan 15 22:13	9°♒56'17	
conjunction	5552 Feb 01 19:00	11°♒57'09	0°27'50
minimum elong	5552 Feb 01 19:01	11°♒57'09	0°27'50
max. Earth dist.	5552 Feb 01 18:24	11°♒56'58	10.86049 AU
morning rise	5552 Feb 18 13:40	13°♒57'23	
	5552 Feb 27 13:39	15°♒	
retrograde	5552 May 28 23:14	21°♒05'53	
opposition	5552 Aug 06 14:30	17°♒47'28	0°18'25
min. Earth dist.	5552 Aug 06 14:03	17°♒47'33	8.88292 AU
	5552 Sep 19 21:04	15°♑℞	
direct	5552 Oct 16 08:02	14°♒26'35	
	5552 Nov 11 10:42	15°♒	
evening set	5553 Jan 26 19:47	21°♒41'08	
conjunction	5553 Feb 12 15:00	23°♒41'04	0°01'59
minimum elong	5553 Feb 12 15:00	23°♒41'04	0°01'59
behind sun begin	5553 Feb 12 08:00	23°♒38'59	
behind sun end	5553 Feb 12 22:01	23°♒43'08	
max. Earth dist.	5553 Feb 12 15:34	23°♒41'12	10.90167 AU
morning rise	5553 Mar 01 08:39	25°♒40'35	
desc. node	5553 Mar 12 12:13	26°♒57'30	
	5553 Apr 11 10:43	0°♓	
retrograde	5553 Jun 10 02:45	2°♓48'25	
	5553 Aug 12 07:46	30°♑℞	
opposition	5553 Aug 19 01:34	29°♒29'58	-0°13'27
min. Earth dist.	5553 Aug 19 00:51	29°♒30'06	8.91631 AU
direct	5553 Oct 28 16:29	26°♒09'55	
	5554 Jan 07 21:31	0°♓	
evening set	5554 Feb 07 14:29	3°♓20'53	
conjunction	5554 Feb 24 08:16	5°♓20'08	-0°23'54
minimum elong	5554 Feb 24 08:15	5°♓20'08	0°23'54
max. Earth dist.	5554 Feb 24 08:45	5°♓20'17	10.92680 AU
morning rise	5554 Mar 13 01:23	7°♓19'13	
retrograde	5554 Jun 22 06:38	14°♓27'39	
opposition	5554 Aug 31 11:38	11°♓08'55	-0°44'36
min. Earth dist.	5554 Aug 31 11:12	11°♓09'00	8.93305 AU
direct	5554 Nov 09 22:07	7°♓49'30	
evening set	5555 Feb 19 07:50	14°♓58'03	
conjunction	5555 Mar 08 00:32	16°♓56'56	-0°48'39
minimum elong	5555 Mar 08 00:30	16°♓56'55	0°48'38
max. Earth dist.	5555 Mar 08 00:32	16°♓56'56	10.93448 AU
morning rise	5555 Mar 24 17:31	18°♓55'52	
retrograde	5555 Jul 04 09:45	26°♓06'08	
opposition	5555 Sep 12 21:10	22°♓46'54	-1°13'52
min. Earth dist.	5555 Sep 12 20:52	22°♓46'58	8.93181 AU
direct	5555 Nov 22 02:25	19°♓27'54	
evening set	5556 Mar 02 00:56	26°♓35'20	
conjunction	5556 Mar 18 17:06	28°♓34'09	-1°11'24
minimum elong	5556 Mar 18 17:04	28°♓34'09	1°11'23
max. Earth dist.	5556 Mar 18 17:33	28°♓34'17	10.92365 AU
	5556 Mar 30 17:05	0°♈	
morning rise	5556 Apr 04 10:10	0°♈33'16	
retrograde	5556 Jul 15 17:07	7°♈46'40	
opposition	5556 Sep 24 07:19	4°♈26'44	-1°40'10
min. Earth dist.	5556 Sep 24 06:15	4°♈26'56	8.91193 AU
direct	5556 Dec 03 06:39	1°♈07'59	
evening set	5557 Mar 13 19:05	8°♈15'31	
conjunction	5557 Mar 30 11:13	10°♈14'39	-1°31'17
minimum elong	5557 Mar 30 11:11	10°♈14'38	1°31'17
max. Earth dist.	5557 Mar 30 12:30	10°♈15'02	10.89445 AU
morning rise	5557 Apr 16 04:50	12°♈14'17	
retrograde	5557 Jul 28 04:35	19°♈31'56	
opposition	5557 Oct 06 18:50	16°♈11'09	-2°02'30
min. Earth dist.	5557 Oct 06 17:15	16°♈11'27	8.87443 AU
direct	5557 Dec 15 08:40	12°♈52'26	
evening set	5558 Mar 25 15:50	20°♈01'15	
conjunction	5558 Apr 11 08:26	22°♈01'03	-1°47'29
minimum elong	5558 Apr 11 08:24	22°♈01'02	1°47'30
max. Earth dist.	5558 Apr 11 09:38	22°♈01'24	10.84867 AU
morning rise	5558 Apr 28 03:19	24°♈01'34	
	5558 Jun 28 20:48	0°♉	
retrograde	5558 Aug 09 17:52	1°♉24'17	
	5558 Sep 21 13:33	30°♑℞	
opposition	5558 Oct 19 08:10	28°♈02'30	-2°19'53
min. Earth dist.	5558 Oct 19 06:46	28°♈02'46	8.82146 AU
direct	5558 Dec 27 12:43	24°♈43'31	
	5559 Mar 21 00:34	0°♉	
evening set	5559 Apr 06 16:06	1°♉54'46	
conjunction	5559 Apr 23 09:51	3°♉55'36	-1°59'14
minimum elong	5559 Apr 23 09:50	3°♉55'35	1°59'16
max. Earth dist.	5559 Apr 23 10:31	3°♉55'48	10.78871 AU
morning rise	5559 May 10 06:45	5°♉57'21	
retrograde	5559 Aug 22 12:11	13°♉25'49	
opposition	5559 Nov 01 00:03	10°♉02'55	-2°31'27
min. Earth dist.	5559 Oct 31 23:03	10°♉03'06	8.75553 AU
direct	5560 Jan 08 19:37	6°♉43'27	
evening set	5560 Apr 17 20:47	13°♉58'04	
	5560 Apr 26 10:32	15°♉	
conjunction	5560 May 04 16:35	16°♉00'17	-2°05'54
minimum elong	5560 May 04 16:34	16°♉00'17	2°05'56
max. Earth dist.	5560 May 04 17:56	16°♉00'42	10.71726 AU
morning rise	5560 May 21 16:00	18°♉03'37	
retrograde	5560 Sep 03 11:09	25°♉38'15	
opposition	5560 Nov 12 18:50	22°♉14'12	-2°36'28
min. Earth dist.	5560 Nov 12 17:21	22°♉14'29	8.67953 AU
direct	5561 Jan 20 04:43	18°♉54'04	
evening set	5561 Apr 30 07:06	26°♉12'57	
conjunction	5561 May 17 05:50	28°♉16'55	-2°06'58
minimum elong	5561 May 17 05:50	28°♉16'55	2°06'59
max. Earth dist.	5561 May 17 08:12	28°♉17'39	10.63746 AU
	5561 May 31 07:04	0°♊	
morning rise	5561 Jun 03 08:24	0°♊22'06	
retrograde	5561 Sep 16 15:00	8°♊03'05	
opposition	5561 Nov 25 16:48	4°♊37'53	-2°34'21
min. Earth dist.	5561 Nov 25 14:38	4°♊38'18	8.59680 AU
direct	5562 Feb 01 18:34	1°♊16'56	
evening set	5562 May 12 23:55	8°♊40'50	
conjunction	5562 May 30 02:15	10°♊46'52	-2°02'05
minimum elong	5562 May 30 02:17	10°♊46'52	2°02'07
max. Earth dist.	5562 May 30 05:01	10°♊47'43	10.55279 AU
morning rise	5562 Jun 16 08:39	12°♊54'11	
retrograde	5562 Sep 30 01:36	20°♊41'19	
opposition	5562 Dec 08 18:21	17°♊15'05	-2°24'50
min. Earth dist.	5562 Dec 08 15:55	17°♊15'34	8.51089 AU

direct	5563 Feb 14 11:00	13°♊53'11	
evening set	5563 May 25 23:57	21°♊22'43	
conjunction	5563 Jun 12 06:20	23°♊31'00	-1°51'12
minimum elong	5563 Jun 12 06:22	23°♊31'01	1°51'13
max. Earth dist.	5563 Jun 12 08:25	23°♊31'39	10.46703 AU
morning rise	5563 Jun 29 17:01	25°♊40'38	
	5563 Aug 07 10:22	0°♋	
retrograde	5563 Oct 13 16:52	3°♋33'29	
opposition	5563 Dec 21 23:35	0°♋06'23	-2°07'56
min. Earth dist.	5563 Dec 21 21:42	0°♋06'45	8.42583 AU
	5563 Dec 23 07:48	30°℞♊	
direct	5564 Feb 27 07:59	26°♊43'24	
	5564 Apr 29 19:01	0°♋	
evening set	5564 Jun 07 07:35	4°♋19'00	
conjunction	5564 Jun 24 18:26	6°♋29'40	-1°34'31
minimum elong	5564 Jun 24 18:29	6°♋29'40	1°34'32
max. Earth dist.	5564 Jun 24 19:57	6°♋30'08	10.38435 AU
morning rise	5564 Jul 12 09:34	8°♋41'38	
retrograde	5564 Oct 26 10:57	16°♋39'28	
opposition	5565 Jan 03 08:29	13°♋11'40	-1°44'07
min. Earth dist.	5565 Jan 03 07:11	13°♋11'56	8.34592 AU
direct	5565 Mar 11 12:15	9°♋47'34	
evening set	5565 Jun 20 22:59	17°♋29'26	
conjunction	5565 Jul 08 14:26	19°♋42'24	-1°12'38
minimum elong	5565 Jul 08 14:28	19°♋42'25	1°12'39
max. Earth dist.	5565 Jul 08 15:46	19°♋42'50	10.30890 AU
morning rise	5565 Jul 26 09:42	21°♋56'34	
retrograde	5565 Nov 09 08:52	29°♋58'25	
opposition	5566 Jan 16 20:43	26°♋30'09	-1°14'18
min. Earth dist.	5566 Jan 16 19:40	26°♋30'21	8.27531 AU
direct	5566 Mar 24 21:27	23°♋04'56	
	5566 Jun 27 18:07	0°♌	
evening set	5566 Jul 04 22:09	0°♌52'58	
conjunction	5566 Jul 22 17:45	3°♌08'02	-0°46'31
minimum elong	5566 Jul 22 17:47	3°♌08'03	0°46'32
max. Earth dist.	5566 Jul 22 19:19	3°♌08'32	10.24465 AU
morning rise	5566 Aug 09 16:21	5°♌24'03	
retrograde	5566 Nov 23 10:40	13°♌28'41	
opposition	5567 Jan 30 11:49	10°♌00'12	-0°39'56
min. Earth dist.	5567 Jan 30 10:30	10°♌00'28	8.21795 AU
direct	5567 Apr 07 10:43	6°♌33'58	
evening set	5567 Jul 19 04:15	14°♌27'49	
	5567 Jul 23 10:41	15°♌	
conjunction	5567 Aug 06 03:07	16°♌44'31	-0°17'32
minimum elong	5567 Aug 06 03:08	16°♌44'32	0°17'33
max. Earth dist.	5567 Aug 06 04:45	16°♌45'02	10.19540 AU
morning rise	5567 Aug 24 04:01	19°♌01'55	
retrograde	5567 Dec 07 14:33	27°♌07'56	
opposition	5568 Feb 13 05:26	23°♌39'31	-0°02'54
min. Earth dist.	5568 Feb 13 04:02	23°♌39'48	8.17739 AU
asc. node	5568 Mar 13 09:41	21°♌27'52	
direct	5568 Apr 20 04:34	20°♌12'24	
evening set	5568 Aug 01 15:59	28°♌11'20	
	5568 Aug 15 22:04	0°♍	
conjunction	5568 Aug 19 16:55	0°♍29'06	0°12'45
minimum elong	5568 Aug 19 16:54	0°♍29'06	0°12'45
behind sun begin	5568 Aug 19 12:26	0°♍27'41	
behind sun end	5568 Aug 19 21:23	0°♍30'31	
max. Earth dist.	5568 Aug 19 18:03	0°♍29'28	10.16426 AU
morning rise	5568 Sep 06 18:50	2°♍47'15	
retrograde	5568 Dec 20 18:12	10°♍53'09	

opposition	5569 Feb 26 00:44	7°♍25'06	0°34'35
min. Earth dist.	5569 Feb 25 23:49	7°♍25'18	8.15622 AU
direct	5569 May 04 03:01	3°♍57'17	
evening set	5569 Aug 16 07:56	12°♍00'15	
conjunction	5569 Sep 03 09:29	14°♍18'25	0°42'23
minimum elong	5569 Sep 03 09:27	14°♍18'24	0°42'22
max. Earth dist.	5569 Sep 03 09:42	14°♍18'29	10.15324 AU
morning rise	5569 Sep 21 11:00	16°♍36'36	
retrograde	5570 Jan 03 20:27	24°♍40'49	
opposition	5570 Mar 11 20:44	21°♍13'26	1°10'11
min. Earth dist.	5570 Mar 11 20:39	21°♍13'26	8.15590 AU
direct	5570 May 18 04:14	17°♍45'07	
evening set	5570 Aug 31 01:35	25°♍50'43	
conjunction	5570 Sep 18 02:22	28°♍08'34	1°09'36
minimum elong	5570 Sep 18 02:19	28°♍08'33	1°09'36
max. Earth dist.	5570 Sep 18 01:35	28°♍08'19	10.16318 AU
	5570 Oct 02 15:21	0°♎	
morning rise	5570 Oct 06 02:08	0°♎26'06	
retrograde	5571 Jan 17 20:15	8°♎27'11	
opposition	5571 Mar 25 16:38	5°♎00'39	1°41'40
min. Earth dist.	5571 Mar 25 17:13	5°♎00'32	8.17656 AU
direct	5571 Jun 01 07:42	1°♎32'07	
evening set	5571 Sep 14 18:18	9°♎38'37	
conjunction	5571 Oct 02 17:11	11°♎55'31	1°32'43
minimum elong	5571 Oct 02 17:08	11°♎55'30	1°32'43
max. Earth dist.	5571 Oct 02 15:50	11°♎55'05	10.19357 AU
morning rise	5571 Oct 20 14:07	14°♎11'48	
retrograde	5572 Jan 31 15:55	22°♎08'27	
opposition	5572 Apr 07 11:19	18°♎42'53	2°07'06
min. Earth dist.	5572 Apr 07 11:57	18°♎42'45	8.21685 AU
direct	5572 Jun 14 12:09	15°♎14'24	
evening set	5572 Sep 28 08:00	23°♎19'59	
conjunction	5572 Oct 16 04:11	25°♎35'24	1°50'26
minimum elong	5572 Oct 16 04:08	25°♎35'24	1°50'26
max. Earth dist.	5572 Oct 16 02:45	25°♎34'57	10.24244 AU
morning rise	5572 Nov 02 21:30	27°♎49'58	
	5572 Nov 20 19:35	0°♏	
retrograde	5573 Feb 13 06:27	5°♏41'04	
opposition	5573 Apr 21 03:43	2°♏16'35	2°25'07
min. Earth dist.	5573 Apr 21 04:16	2°♏16'28	8.27409 AU
	5573 May 22 01:24	30°℞♎	
direct	5573 Jun 28 15:23	28°♎48'22	
	5573 Aug 04 21:04	0°♏	
evening set	5573 Oct 12 16:19	6°♏51'14	
conjunction	5573 Oct 30 09:16	9°♏04'50	2°01'50
minimum elong	5573 Oct 30 09:15	9°♏04'50	2°01'51
max. Earth dist.	5573 Oct 30 07:56	9°♏04'25	10.30660 AU
morning rise	5573 Nov 16 22:35	11°♏17'22	
	5573 Dec 18 23:54	15°♏	
retrograde	5574 Feb 26 17:13	19°♏02'11	
opposition	5574 May 04 17:21	15°♏38'47	2°34'57
min. Earth dist.	5574 May 04 18:00	15°♏38'40	8.34444 AU
	5574 May 12 20:44	15°℞♏	
direct	5574 Jul 12 14:47	12°♏11'03	
	5574 Sep 09 11:46	15°♏	
evening set	5574 Oct 26 17:22	20°♏09'37	
conjunction	5574 Nov 13 06:53	22°♏21'13	2°06'33
minimum elong	5574 Nov 13 06:52	22°♏21'13	2°06'34
max. Earth dist.	5574 Nov 13 05:27	22°♏20'46	10.38171 AU
morning rise	5574 Nov 30 16:16	24°♏31'36	
	5575 Jan 20 23:02	0°♐	

retrograde	5575 Mar 11 22:27	2°♐09'49	
	5575 May 02 12:31	30°℞♏	
opposition	5575 May 18 03:32	28°♏47'29	2°36'25
min. Earth dist.	5575 May 18 05:02	28°♏47'12	8.42312 AU
direct	5575 Jul 26 10:39	25°♏20'24	
	5575 Oct 12 12:00	0°♐	
evening set	5575 Nov 09 10:27	3°♐13'33	
conjunction	5575 Nov 26 20:34	5°♐23'08	2°04'38
minimum elong	5575 Nov 26 20:34	5°♐23'08	2°04'39
max. Earth dist.	5575 Nov 26 18:07	5°♐22'22	10.46264 AU
morning rise	5575 Dec 14 02:27	7°♐31'28	
retrograde	5576 Mar 23 21:08	15°♐03'10	
opposition	5576 May 30 09:49	11°♐41'54	2°29'54
min. Earth dist.	5576 May 30 12:28	11°♐41'23	8.50502 AU
direct	5576 Aug 08 02:42	8°♐15'37	
evening set	5576 Nov 21 19:16	16°♐02'46	
conjunction	5576 Dec 09 02:12	18°♐10'24	1°56'29
minimum elong	5576 Dec 09 02:13	18°♐10'24	1°56'31
max. Earth dist.	5576 Dec 08 22:30	18°♐09'15	10.54478 AU
morning rise	5576 Dec 26 05:07	20°♐16'50	
retrograde	5577 Apr 05 14:53	27°♐42'33	
opposition	5577 Jun 12 12:35	24°♐22'13	2°16'09
min. Earth dist.	5577 Jun 12 15:33	24°♐21'39	8.58623 AU
direct	5577 Aug 21 14:40	20°♐56'53	
evening set	5577 Dec 04 19:48	28°♐37'37	
	5577 Dec 16 02:33	0°♑	
conjunction	5577 Dec 21 23:56	0°♑43'28	1°42'52
minimum elong	5577 Dec 21 23:58	0°♑43'29	1°42'54
max. Earth dist.	5577 Dec 21 20:04	0°♑42'17	10.62481 AU
morning rise	5578 Jan 08 00:20	2°♑48'10	
retrograde	5578 Apr 18 05:00	10°♑08'36	
opposition	5578 Jun 25 11:45	6°♑48'59	1°56'13
min. Earth dist.	5578 Jun 25 14:04	6°♑48'33	8.66379 AU
direct	5578 Sep 03 20:23	3°♑24'39	
evening set	5578 Dec 17 12:44	10°♑58'54	
conjunction	5579 Jan 03 14:31	13°♑03'08	1°24'39
minimum elong	5579 Jan 03 14:34	13°♑03'08	1°24'42
max. Earth dist.	5579 Jan 03 11:36	13°♑02'14	10.69980 AU
morning rise	5579 Jan 20 12:46	15°♑06'20	
retrograde	5579 Apr 30 15:06	22°♑22'15	
opposition	5579 Jul 08 07:27	19°♑03'09	1°31'20
min. Earth dist.	5579 Jul 08 09:07	19°♑02'50	8.73479 AU
direct	5579 Sep 16 21:02	15°♑39'47	
evening set	5579 Dec 29 22:53	23°♑07'47	
conjunction	5580 Jan 15 22:35	25°♑10'35	1°02'54
minimum elong	5580 Jan 15 22:37	25°♑10'36	1°02'55
max. Earth dist.	5580 Jan 15 20:34	25°♑09'58	10.76672 AU
morning rise	5580 Feb 01 19:05	27°♑12'30	
	5580 Feb 26 13:11	0°♒	
retrograde	5580 May 11 23:21	4°♒24'54	
opposition	5580 Jul 20 00:16	1°♒06'07	1°02'48
min. Earth dist.	5580 Jul 20 01:54	1°♒05'48	8.79636 AU
	5580 Aug 03 21:09	30°℞♑	
direct	5580 Sep 28 16:41	27°♑43'39	
	5580 Nov 21 11:11	0°♒	
evening set	5581 Jan 10 03:17	5°♒05'56	
conjunction	5581 Jan 27 00:56	7°♒07'30	0°38'39
minimum elong	5581 Jan 27 00:58	7°♒07'31	0°38'40
max. Earth dist.	5581 Jan 26 22:59	7°♒06'55	10.82282 AU
morning rise	5581 Feb 12 20:09	9°♒08'22	
	5581 Apr 14 11:48	15°♒	

retrograde	5581 May 24 03:45	16°♒18'22	
	5581 Jul 03 21:30	15°℞♒	
opposition	5581 Aug 01 14:33	12°♒59'41	0°31'57
min. Earth dist.	5581 Aug 01 16:15	12°♒59'22	8.84613 AU
direct	5581 Oct 11 06:51	9°♒38'02	
	5582 Jan 05 06:01	15°♒	
evening set	5582 Jan 22 03:01	16°♒55'22	
conjunction	5582 Feb 07 22:53	18°♒55'56	0°13'01
minimum elong	5582 Feb 07 22:54	18°♒55'56	0°13'01
behind sun begin	5582 Feb 07 18:34	18°♒54'39	
behind sun end	5582 Feb 08 03:13	18°♒57'13	
max. Earth dist.	5582 Feb 07 20:56	18°♒55'21	10.86605 AU
morning rise	5582 Feb 24 17:12	20°♒56'00	
retrograde	5582 Jun 05 06:16	28°♒04'51	
opposition	5582 Aug 14 02:46	24°♒46'01	0°00'03
min. Earth dist.	5582 Aug 14 03:48	24°♒45'49	8.88227 AU
desc. node	5582 Aug 14 17:38	24°♒43'14	
direct	5582 Oct 23 19:08	21°♒25'04	
evening set	5583 Feb 02 23:13	28°♒38'27	
	5583 Feb 14 10:07	0°♓	
conjunction	5583 Feb 19 17:43	0°♓38'15	-0°13'04
minimum elong	5583 Feb 19 17:43	0°♓38'15	0°13'04
behind sun begin	5583 Feb 19 13:25	0°♓36'58	
behind sun end	5583 Feb 19 22:01	0°♓39'31	
max. Earth dist.	5583 Feb 19 16:56	0°♓38'01	10.89472 AU
morning rise	5583 Mar 08 11:18	2°♓37'46	
retrograde	5583 Jun 17 11:07	9°♓46'45	
opposition	5583 Aug 26 13:34	6°♓27'34	-0°31'37
min. Earth dist.	5583 Aug 26 13:17	6°♓27'37	8.90326 AU
direct	5583 Nov 05 03:45	3°♓07'15	
evening set	5584 Feb 14 17:26	10°♓17'44	
conjunction	5584 Mar 02 10:51	12°♓17'04	-0°38'25
minimum elong	5584 Mar 02 10:49	12°♓17'03	0°38'25
max. Earth dist.	5584 Mar 02 11:25	12°♓17'14	10.90761 AU
morning rise	5584 Mar 19 03:52	14°♓16'19	
retrograde	5584 Jun 28 15:25	21°♓26'38	
opposition	5584 Sep 06 23:46	18°♓06'59	-1°01'54
min. Earth dist.	5584 Sep 06 22:38	18°♓07'11	8.90828 AU
direct	5584 Nov 16 07:38	14°♓47'10	
evening set	5585 Feb 25 11:01	21°♓55'57	
conjunction	5585 Mar 14 03:32	23°♓55'03	-1°02'10
minimum elong	5585 Mar 14 03:30	23°♓55'03	1°02'10
max. Earth dist.	5585 Mar 14 04:31	23°♓55'21	10.90431 AU
morning rise	5585 Mar 30 20:32	25°♓54'20	
	5585 May 08 07:50	0°♈	
retrograde	5585 Jul 10 21:45	3°♈07'13	
	5585 Sep 16 12:27	30°℞♓	
opposition	5585 Sep 19 10:17	29°♓46'57	-1°29'39
min. Earth dist.	5585 Sep 19 09:06	29°♓47'10	8.89718 AU
direct	5585 Nov 28 11:46	26°♓27'28	
	5586 Feb 04 01:49	0°♈	
evening set	5586 Mar 09 05:01	3°♈35'44	
conjunction	5586 Mar 25 21:05	5°♈34'57	-1°23'24
minimum elong	5586 Mar 25 21:03	5°♈34'56	1°23'24
max. Earth dist.	5586 Mar 25 21:55	5°♈35'12	10.88498 AU
morning rise	5586 Apr 11 14:38	7°♈34'36	
retrograde	5586 Jul 23 06:39	14°♈51'07	
opposition	5586 Oct 01 21:36	11°♈30'06	-1°53'48
min. Earth dist.	5586 Oct 01 20:16	11°♈30'21	8.87029 AU
direct	5586 Dec 10 15:06	8°♈10'47	
evening set	5587 Mar 21 00:53	15°♈19'42	

conjunction	5587 Apr 06 17:14	17°♈19'23	-1°41'15
minimum elong	5587 Apr 06 17:12	17°♈19'22	1°41'15
max. Earth dist.	5587 Apr 06 18:55	17°♈19'53	10.85020 AU
morning rise	5587 Apr 23 11:42	19°♈19'42	
retrograde	5587 Aug 04 18:05	26°♈40'48	
opposition	5587 Oct 14 10:16	23°♈18'55	-2°13'22
min. Earth dist.	5587 Oct 14 08:06	23°♈19'20	8.82851 AU
direct	5587 Dec 22 19:48	19°♈59'36	
evening set	5588 Mar 31 23:42	27°♈10'18	
conjunction	5588 Apr 17 17:02	29°♈10'49	-1°54'56
minimum elong	5588 Apr 17 17:00	29°♈10'48	1°54'57
max. Earth dist.	5588 Apr 17 20:03	29°♈11'43	10.80130 AU
	5588 Apr 24 11:46	0°♉	
morning rise	5588 May 04 12:55	1°♉12'08	
retrograde	5588 Aug 16 12:00	8°♉38'35	
opposition	5588 Oct 26 01:18	5°♉15'48	-2°27'25
min. Earth dist.	5588 Oct 25 22:06	5°♉16'24	8.77351 AU
direct	5589 Jan 03 01:31	1°♉56'19	
evening set	5589 Apr 13 02:37	9°♉09'46	
conjunction	5589 Apr 29 21:33	11°♉11'28	-2°03'46
minimum elong	5589 Apr 29 21:32	11°♉11'28	2°03'48
max. Earth dist.	5589 Apr 30 01:02	11°♉12'31	10.74038 AU
morning rise	5589 May 16 19:42	13°♉14'10	
	5589 Jun 01 00:48	15°♉	
retrograde	5589 Aug 29 10:19	20°♉46'28	
opposition	5589 Nov 07 19:08	17°♉22'45	-2°35'11
min. Earth dist.	5589 Nov 07 15:46	17°♉23'23	8.70762 AU
	5589 Dec 12 11:36	15°℞♉	
direct	5590 Jan 15 08:22	14°♉02'54	
	5590 Feb 17 14:37	15°♉	
evening set	5590 Apr 25 10:52	21°♉20'06	
conjunction	5590 May 12 08:10	23°♉23'19	-2°07'10
minimum elong	5590 May 12 08:10	23°♉23'19	2°07'12
max. Earth dist.	5590 May 12 11:15	23°♉24'16	10.67010 AU
morning rise	5590 May 29 09:21	25°♉27'43	
	5590 Jul 10 09:20	0°♊	
retrograde	5590 Sep 11 11:59	3°♊06'04	
	5590 Nov 16 15:44	30°℞♉	
opposition	5590 Nov 20 15:56	29°♉41'28	-2°36'01
min. Earth dist.	5590 Nov 20 13:01	29°♉42'02	8.63375 AU
direct	5591 Jan 27 20:00	26°♉21'03	
	5591 Apr 04 19:44	0°♊	
evening set	5591 May 08 01:07	3°♊42'48	
conjunction	5591 May 25 01:39	5°♊47'54	-2°04'45
minimum elong	5591 May 25 01:40	5°♊47'54	2°04'46
max. Earth dist.	5591 May 25 04:45	5°♊48'51	10.59357 AU
morning rise	5591 Jun 11 06:28	7°♊54'16	
retrograde	5591 Sep 24 19:30	15°♊38'40	
opposition	5591 Dec 03 16:16	12°♊13'12	-2°29'31
min. Earth dist.	5591 Dec 03 13:32	12°♊13'44	8.55521 AU
direct	5592 Feb 09 11:57	8°♊52'05	
evening set	5592 May 19 22:01	16°♊18'59	
conjunction	5592 Jun 06 02:33	18°♊26'11	-1°56'19
minimum elong	5592 Jun 06 02:35	18°♊26'12	1°56'20
max. Earth dist.	5592 Jun 06 06:25	18°♊27'23	10.51422 AU
morning rise	5592 Jun 23 11:21	20°♊34'43	
retrograde	5592 Oct 07 08:01	28°♊24'51	
opposition	5592 Dec 15 20:05	24°♊58'36	-2°15'37
min. Earth dist.	5592 Dec 15 17:00	24°♊59'12	8.47555 AU
direct	5593 Feb 21 08:12	21°♊36'37	
evening set	5593 Jun 02 02:26	29°♊09'08	
	5593 Jun 08 23:26	0°♋	

conjunction	5593 Jun 19 11:25	1°♋18'36	-1°41'59
minimum elong	5593 Jun 19 11:28	1°♋18'37	1°41'59
max. Earth dist.	5593 Jun 19 15:37	1°♋19'55	10.43560 AU
morning rise	5593 Jul 07 00:28	3°♋29'23	
retrograde	5593 Oct 21 01:01	11°♋24'34	
opposition	5593 Dec 29 03:12	7°♋57'37	-1°54'34
min. Earth dist.	5593 Dec 29 00:03	7°♋58'15	8.39830 AU
direct	5594 Mar 06 09:21	4°♋34'40	
evening set	5594 Jun 15 14:31	12°♋13'04	
conjunction	5594 Jul 03 03:59	14°♋24'50	-1°22'11
minimum elong	5594 Jul 03 04:02	14°♋24'50	1°22'12
max. Earth dist.	5594 Jul 03 07:17	14°♋25'52	10.36110 AU
morning rise	5594 Jul 20 21:15	16°♋37'47	
retrograde	5594 Nov 03 22:37	24°♋37'08	
opposition	5595 Jan 11 13:42	21°♋09'42	-1°27'10
min. Earth dist.	5595 Jan 11 11:19	21°♋10'11	8.32666 AU
direct	5595 Mar 19 14:26	17°♋45'39	
evening set	5595 Jun 29 09:59	25°♋30'05	
conjunction	5595 Jul 17 03:38	27°♋43'59	-0°57'45
minimum elong	5595 Jul 17 03:40	27°♋43'59	0°57'45
max. Earth dist.	5595 Jul 17 05:22	27°♋44'32	10.29378 AU
morning rise	5595 Aug 04 00:41	29°♋58'56	
	5595 Aug 04 04:09	0°♌	
retrograde	5595 Nov 17 23:12	8°♌01'29	
opposition	5596 Jan 25 03:17	4°♌33'46	-0°54'35
min. Earth dist.	5596 Jan 25 02:05	4°♌34'01	8.26405 AU
direct	5596 Apr 01 01:17	1°♌08'39	
evening set	5596 Jul 12 12:39	8°♌59'03	
conjunction	5596 Jul 30 09:55	11°♌14'45	-0°29'50
minimum elong	5596 Jul 30 09:56	11°♌14'46	0°29'52
max. Earth dist.	5596 Jul 30 10:12	11°♌14'51	10.23753 AU
morning rise	5596 Aug 17 09:54	13°♌31'20	
	5596 Aug 29 11:56	15°♌	
retrograde	5596 Dec 01 00:46	21°♌35'53	
opposition	5597 Feb 06 19:21	18°♌08'05	-0°18'32
min. Earth dist.	5597 Feb 06 19:11	18°♌08'07	8.21482 AU
	5597 Mar 27 15:29	15°℞♌	
direct	5597 Apr 14 18:00	14°♌41'56	
	5597 May 02 19:22	15°♌	
evening set	5597 Jul 26 21:35	22°♌37'48	
conjunction	5597 Aug 13 21:29	24°♌54'52	0°00'02
minimum elong	5597 Aug 13 21:30	24°♌54'52	0°00'01
behind sun begin	5597 Aug 13 17:03	24°♌53'29	
behind sun end	5597 Aug 14 01:57	24°♌56'15	
asc. node	5597 Aug 13 14:00	24°♌52'30	
max. Earth dist.	5597 Aug 13 21:08	24°♌54'47	10.19650 AU
morning rise	5597 Aug 31 23:09	27°♌12'29	
	5597 Sep 24 06:12	0°♍	
retrograde	5597 Dec 15 02:32	5°♍17'36	
opposition	5598 Feb 20 13:21	1°♍49'57	0°18'55
min. Earth dist.	5598 Feb 20 13:29	1°♍49'55	8.18271 AU
	5598 Mar 16 06:21	30°℞♌	
direct	5598 Apr 28 15:20	28°♌22'53	
	5598 Jun 10 08:13	0°♍	
evening set	5598 Aug 10 11:09	6°♍23'17	
conjunction	5598 Aug 28 12:26	8°♍41'04	0°30'05
minimum elong	5598 Aug 28 12:24	8°♍41'04	0°30'04
max. Earth dist.	5598 Aug 28 11:52	8°♍40'53	10.17377 AU
morning rise	5598 Sep 15 14:12	10°♍59'02	
retrograde	5598 Dec 29 04:13	19°♍03'13	
opposition	5599 Mar 06 08:22	15°♍35'54	0°55'30
min. Earth dist.	5599 Mar 06 08:30	15°♍35'52	8.17009 AU

direct	5599 May 12 14:25	12°♍08'07	
evening set	5599 Aug 25 03:22	20°♍11'44	
conjunction	5599 Sep 12 04:37	22°♍29'34	0°58'28
minimum elong	5599 Sep 12 04:34	22°♍29'33	0°58'27
max. Earth dist.	5599 Sep 12 03:58	22°♍29'21	10.17109 AU
morning rise	5599 Sep 30 05:06	24°♍47'11	
	5599 Nov 15 22:05	0°♎	
retrograde	5600 Jan 12 05:16	2°♎48'56	
	5600 Mar 11 09:07	30°℞♍	
opposition	5600 Mar 19 03:31	29°♍22'09	1°28'53
min. Earth dist.	5600 Mar 19 03:44	29°♍22'06	8.17790 AU
direct	5600 May 25 15:46	25°♍53'50	
	5600 Aug 04 13:57	0°♎	
evening set	5600 Sep 07 19:51	3°♎59'10	
conjunction	5600 Sep 25 19:46	6°♎16'21	1°23'27
minimum elong	5600 Sep 25 19:43	6°♎16'20	1°23'27
max. Earth dist.	5600 Sep 25 18:46	6°♎16'02	10.18863 AU
morning rise	5600 Oct 13 17:50	8°♎33'01	
retrograde	5601 Jan 25 02:23	16°♎30'56	
opposition	5601 Apr 01 21:55	13°♎04'53	1°57'03
min. Earth dist.	5601 Apr 01 22:48	13°♎04'42	8.20548 AU
direct	5601 Jun 08 18:42	9°♎36'16	
evening set	5601 Sep 22 10:17	17°♎41'37	
conjunction	5601 Oct 10 07:43	19°♎57'34	1°43'35
minimum elong	5601 Oct 10 07:41	19°♎57'33	1°43'35
max. Earth dist.	5601 Oct 10 05:49	19°♎56'57	10.22512 AU
morning rise	5601 Oct 28 02:29	22°♎12'45	