

opposition	14100 Jan 27 18:37	19° $\Omega$ 23'09	-2°07'08	max. Earth dist.	14105 Oct 06 08:15	27° $\Omega$ 44'35	10.64206 AU
min. Earth dist.	14100 Jan 27 13:36	19° $\Omega$ 24'07	8.57418 AU	morning rise	14105 Oct 23 00:16	29° $\Omega$ 46'11	
direct	14100 Apr 07 02:45	16° $\Omega$ 00'50			14105 Oct 24 22:30	0° $\mathbb{M}$	
evening set	14100 Jul 18 15:25	23° $\Omega$ 33'26		retrograde	14106 Feb 04 03:11	7° $\mathbb{M}$ 20'18	
				opposition	14106 Apr 14 23:00	3° $\mathbb{M}$ 56'00	-0°05'38
conjunction	14100 Aug 04 12:46	25° $\Omega$ 38'20	-1°39'46	min. Earth dist.	14106 Apr 14 10:48	3° $\mathbb{M}$ 58'22	8.64203 AU
minimum elong	14100 Aug 04 12:48	25° $\Omega$ 38'21	1°40'27	direct	14106 Jun 22 09:58	0° $\mathbb{M}$ 34'51	
max. Earth dist.	14100 Aug 04 19:40	25° $\Omega$ 40'29	10.58320 AU	asc. node	14106 Jun 28 22:25	0° $\mathbb{M}$ 37'06	
morning rise	14100 Aug 21 10:40	27° $\Omega$ 43'22		evening set	14106 Oct 01 04:52	7° $\mathbb{M}$ 55'48	
	14100 Sep 09 21:35	0° $\mathbb{M}$					
retrograde	14100 Dec 02 11:20	5° $\mathbb{M}$ 17'47		conjunction	14106 Oct 18 10:46	10° $\mathbb{M}$ 01'33	0°06'38
opposition	14101 Feb 09 23:48	1° $\mathbb{M}$ 55'16	-1°57'43	minimum elong	14106 Oct 18 10:45	10° $\mathbb{M}$ 01'33	0°07'14
min. Earth dist.	14101 Feb 09 16:49	1° $\mathbb{M}$ 56'37	8.59384 AU	behind sun begin	14106 Oct 18 04:12	9° $\mathbb{M}$ 59'34	
	14101 Mar 08 16:21	30° $\mathbb{R}$ $\Omega$		behind sun end	14106 Oct 18 17:19	10° $\mathbb{M}$ 03'32	
direct	14101 Apr 20 04:44	28° $\Omega$ 33'20		max. Earth dist.	14106 Oct 19 01:09	10° $\mathbb{M}$ 05'56	10.64055 AU
	14101 May 31 16:09	0° $\mathbb{M}$		morning rise	14106 Nov 04 19:32	12° $\mathbb{M}$ 08'07	
evening set	14101 Jul 31 06:53	6° $\mathbb{M}$ 02'54			14106 Nov 29 23:49	15° $\mathbb{M}$	
				retrograde	14107 Feb 17 01:03	19° $\mathbb{M}$ 42'40	
conjunction	14101 Aug 17 04:44	8° $\mathbb{M}$ 07'35	-1°29'55	opposition	14107 Apr 27 18:32	16° $\mathbb{M}$ 18'09	0°22'22
minimum elong	14101 Aug 17 04:47	8° $\mathbb{M}$ 07'36	1°30'25	min. Earth dist.	14107 Apr 27 06:47	16° $\mathbb{M}$ 20'25	8.63807 AU
max. Earth dist.	14101 Aug 17 14:07	8° $\mathbb{M}$ 10'29	10.60201 AU		14107 May 15 00:44	15° $\mathbb{R}$ $\mathbb{M}$	
morning rise	14101 Sep 03 03:47	10° $\mathbb{M}$ 12'35		direct	14107 Jul 05 02:03	12° $\mathbb{M}$ 56'50	
retrograde	14101 Dec 15 09:41	17° $\mathbb{M}$ 46'43			14107 Aug 23 13:39	15° $\mathbb{M}$	
opposition	14102 Feb 23 03:10	14° $\mathbb{M}$ 23'47	-1°42'47	evening set	14107 Oct 13 22:04	20° $\mathbb{M}$ 18'08	
min. Earth dist.	14102 Feb 22 17:53	14° $\mathbb{M}$ 25'34	8.61124 AU				
direct	14102 May 03 05:47	11° $\mathbb{M}$ 02'11		conjunction	14107 Oct 31 05:50	22° $\mathbb{M}$ 24'20	0°29'01
evening set	14102 Aug 12 20:50	18° $\mathbb{M}$ 28'56		minimum elong	14107 Oct 31 05:49	22° $\mathbb{M}$ 24'20	0°29'47
				max. Earth dist.	14107 Oct 31 19:49	22° $\mathbb{M}$ 28'37	10.63416 AU
conjunction	14102 Aug 29 19:52	20° $\mathbb{M}$ 33'36	-1°15'53	morning rise	14107 Nov 17 16:17	24° $\mathbb{M}$ 31'21	
minimum elong	14102 Aug 29 19:54	20° $\mathbb{M}$ 33'36	1°16'10		14108 Jan 09 21:24	0° $\mathbb{M}$	
max. Earth dist.	14102 Aug 30 08:13	20° $\mathbb{M}$ 37'24	10.61811 AU	retrograde	14108 Feb 29 23:02	2° $\mathbb{M}$ 06'33	
morning rise	14102 Sep 15 20:27	22° $\mathbb{M}$ 38'42			14108 Apr 22 09:02	30° $\mathbb{R}$ $\mathbb{M}$	
	14102 Dec 12 15:48	0° $\Omega$		opposition	14108 May 09 13:31	28° $\mathbb{M}$ 41'52	0°49'22
retrograde	14102 Dec 28 09:02	0° $\Omega$ 12'38		min. Earth dist.	14108 May 09 02:20	28° $\mathbb{M}$ 44'02	8.62951 AU
	14103 Jan 13 05:02	30° $\mathbb{R}$ $\mathbb{M}$		direct	14108 Jul 16 19:18	25° $\mathbb{M}$ 20'18	
opposition	14103 Mar 08 04:33	26° $\mathbb{M}$ 49'17	-1°23'05		14108 Oct 01 23:22	0° $\mathbb{M}$	
min. Earth dist.	14103 Mar 07 17:01	26° $\mathbb{M}$ 51'30	8.62539 AU	evening set	14108 Oct 25 17:31	2° $\mathbb{M}$ 42'40	
direct	14103 May 16 03:58	23° $\mathbb{M}$ 27'57					
	14103 Aug 18 02:31	0° $\Omega$		conjunction	14108 Nov 12 02:56	4° $\mathbb{M}$ 49'22	0°50'08
evening set	14103 Aug 25 10:12	0° $\Omega$ 52'17		minimum elong	14108 Nov 12 02:54	4° $\mathbb{M}$ 49'21	0°51'02
				max. Earth dist.	14108 Nov 12 15:48	4° $\mathbb{M}$ 53'17	10.62335 AU
conjunction	14103 Sep 11 10:45	2° $\Omega$ 57'05	-0°58'20	morning rise	14108 Nov 29 14:50	6° $\mathbb{M}$ 56'49	
minimum elong	14103 Sep 11 10:47	2° $\Omega$ 57'06	0°58'23	retrograde	14109 Mar 13 23:27	14° $\mathbb{M}$ 32'49	
max. Earth dist.	14103 Sep 12 01:14	3° $\Omega$ 01'32	10.63053 AU	opposition	14109 May 22 08:17	11° $\mathbb{M}$ 08'02	1°14'08
morning rise	14103 Sep 28 13:08	5° $\Omega$ 02'26		min. Earth dist.	14109 May 21 22:33	11° $\mathbb{M}$ 09'56	8.61689 AU
retrograde	14104 Jan 10 08:06	12° $\Omega$ 36'14		direct	14109 Jul 29 11:09	7° $\mathbb{M}$ 46'09	
opposition	14104 Mar 20 04:05	9° $\Omega$ 12'32	-0°59'35	evening set	14109 Nov 07 15:54	15° $\mathbb{M}$ 10'13	
min. Earth dist.	14104 Mar 19 15:19	9° $\Omega$ 14'59	8.63550 AU				
direct	14104 May 27 22:05	5° $\Omega$ 51'23		conjunction	14109 Nov 25 02:41	17° $\mathbb{M}$ 17'26	1°08'57
evening set	14104 Sep 05 23:36	13° $\Omega$ 13'54		minimum elong	14109 Nov 25 02:39	17° $\mathbb{M}$ 17'25	1°09'56
				max. Earth dist.	14109 Nov 25 12:45	17° $\mathbb{M}$ 20'31	10.60876 AU
conjunction	14104 Sep 23 01:47	15° $\Omega$ 18'55	-0°38'07	morning rise	14109 Dec 12 15:53	19° $\mathbb{M}$ 25'22	
minimum elong	14104 Sep 23 01:49	15° $\Omega$ 18'56	0°37'56	retrograde	14110 Mar 27 00:30	27° $\mathbb{M}$ 02'08	
max. Earth dist.	14104 Sep 23 17:01	15° $\Omega$ 23'35	10.63864 AU	opposition	14110 Jun 04 02:59	23° $\mathbb{M}$ 37'23	1°35'30
morning rise	14104 Oct 10 06:19	17° $\Omega$ 24'37		min. Earth dist.	14110 Jun 03 19:56	23° $\mathbb{M}$ 38'46	8.60092 AU
retrograde	14105 Jan 22 05:22	24° $\Omega$ 58'29		direct	14110 Aug 11 03:21	20° $\mathbb{M}$ 15'02	
opposition	14105 Apr 02 02:14	21° $\Omega$ 34'27	-0°33'22	evening set	14110 Nov 20 17:06	27° $\mathbb{M}$ 41'28	
min. Earth dist.	14105 Apr 01 13:24	21° $\Omega$ 36'56	8.64114 AU				
direct	14105 Jun 09 16:35	18° $\Omega$ 13'22		conjunction	14110 Dec 08 05:07	29° $\mathbb{M}$ 49'11	1°24'34
evening set	14105 Sep 18 13:31	25° $\Omega$ 34'44		minimum elong	14110 Dec 08 05:05	29° $\mathbb{M}$ 49'11	1°25'37
				max. Earth dist.	14110 Dec 08 11:48	29° $\mathbb{M}$ 51'14	10.59115 AU
conjunction	14105 Oct 05 17:30	27° $\Omega$ 40'04	-0°16'10		14110 Dec 09 16:25	0° $\mathbb{M}$	
minimum elong	14105 Oct 05 17:30	27° $\Omega$ 40'04	0°15'46	morning rise	14110 Dec 25 19:21	1° $\mathbb{M}$ 57'34	
behind sun begin	14105 Oct 05 16:06	27° $\Omega$ 39'39		retrograde	14111 Apr 09 00:05	9° $\mathbb{M}$ 35'06	
behind sun end	14105 Oct 05 18:54	27° $\Omega$ 40'30		opposition	14111 Jun 16 22:15	6° $\mathbb{M}$ 10'27	1°52'25

min. Earth dist.	14111 Jun 16 18:00	6° $\text{Z}$ 11'17	8.58231 AU	retrograde	14117 Jun 25 00:33	26° $\text{X}$ 13'28	
direct	14111 Aug 23 23:25	2° $\text{Z}$ 47'35		opposition	14117 Aug 31 17:08	22° $\text{X}$ 50'04	1°29'59
evening set	14111 Dec 03 20:59	10° $\text{Z}$ 16'44		min. Earth dist.	14117 Sep 01 04:01	22° $\text{X}$ 47'54	8.45165 AU
				direct	14117 Nov 08 08:32	19° $\text{X}$ 24'02	
conjunction	14111 Dec 21 10:10	12° $\text{Z}$ 25'00	1°36'12	evening set	14118 Feb 20 17:16	27° $\text{X}$ 10'12	
minimum elong	14111 Dec 21 10:09	12° $\text{Z}$ 25'00	1°37'15				
max. Earth dist.	14111 Dec 21 13:46	12° $\text{Z}$ 26'07	10.57128 AU	conjunction	14118 Mar 10 09:55	29° $\text{X}$ 21'31	1°03'36
morning rise	14112 Jan 08 01:07	14° $\text{Z}$ 33'48		minimum elong	14118 Mar 10 09:57	29° $\text{X}$ 21'32	1°03'44
retrograde	14112 Apr 21 01:59	22° $\text{Z}$ 12'03		max. Earth dist.	14118 Mar 09 19:11	29° $\text{X}$ 16'56	10.44311 AU
opposition	14112 Jun 28 18:15	18° $\text{Z}$ 47'30	2°04'01		14118 Mar 15 13:26	0° $\text{Y}$	
min. Earth dist.	14112 Jun 28 16:24	18° $\text{Z}$ 47'52	8.56178 AU	morning rise	14118 Mar 28 00:45	1° $\text{Y}$ 32'22	
direct	14112 Sep 04 20:13	15° $\text{Z}$ 24'05		retrograde	14118 Jul 08 06:59	9° $\text{Y}$ 11'16	
evening set	14112 Dec 16 03:37	22° $\text{Z}$ 56'08		opposition	14118 Sep 13 21:53	5° $\text{Y}$ 48'07	1°06'34
				min. Earth dist.	14118 Sep 14 09:23	5° $\text{Y}$ 45'50	8.43688 AU
conjunction	14113 Jan 02 17:57	25° $\text{Z}$ 04'59	1°43'14	direct	14118 Nov 21 17:16	2° $\text{Y}$ 21'51	
minimum elong	14113 Jan 02 17:56	25° $\text{Z}$ 04'59	1°44'14	evening set	14119 Mar 06 08:21	10° $\text{Y}$ 09'43	
max. Earth dist.	14113 Jan 02 18:52	25° $\text{Z}$ 05'16	10.54986 AU	max. Earth dist.	14119 Mar 23 09:16	12° $\text{Y}$ 16'26	10.43132 AU
morning rise	14113 Jan 20 09:19	27° $\text{Z}$ 14'11					
	14113 Feb 13 10:42	0° $\approx$		conjunction	14119 Mar 24 00:23	12° $\text{Y}$ 21'10	0°43'08
retrograde	14113 May 04 05:24	4° $\approx$ 52'55		minimum elong	14119 Mar 24 00:25	12° $\text{Y}$ 21'10	0°43'02
opposition	14113 Jul 11 15:04	1° $\approx$ 28'30	2°09'41	morning rise	14119 Apr 10 14:00	14° $\text{Y}$ 31'58	
min. Earth dist.	14113 Jul 11 15:26	1° $\approx$ 28'26	8.53990 AU	retrograde	14119 Jul 21 14:46	22° $\text{Y}$ 10'25	
	14113 Jul 30 22:36	30° $\text{R}$ $\text{Z}$		opposition	14119 Sep 27 04:17	18° $\text{Y}$ 47'32	0°39'41
direct	14113 Sep 17 17:59	28° $\text{Z}$ 04'29		min. Earth dist.	14119 Sep 27 16:02	18° $\text{Y}$ 45'12	8.42782 AU
	14113 Nov 04 13:25	0° $\approx$		direct	14119 Dec 05 02:47	15° $\text{Y}$ 21'08	
evening set	14113 Dec 29 12:41	5° $\approx$ 39'33		evening set	14120 Mar 18 23:01	23° $\text{Y}$ 10'04	
conjunction	14114 Jan 16 03:58	7° $\approx$ 48'58	1°45'16	conjunction	14120 Apr 05 13:49	25° $\text{Y}$ 21'23	0°20'27
minimum elong	14114 Jan 16 03:59	7° $\approx$ 48'59	1°46'10	minimum elong	14120 Apr 05 13:50	25° $\text{Y}$ 21'24	0°20'06
max. Earth dist.	14114 Jan 16 01:26	7° $\approx$ 48'12	10.52737 AU	max. Earth dist.	14120 Apr 04 22:37	25° $\text{Y}$ 16'38	10.42547 AU
morning rise	14114 Feb 02 19:38	9° $\approx$ 58'35		morning rise	14120 Apr 23 01:51	27° $\text{Y}$ 31'59	
	14114 Mar 21 20:15	15° $\approx$			14120 May 14 00:10	0° $\text{Z}$	
retrograde	14114 May 17 09:15	17° $\approx$ 37'34		retrograde	14120 Aug 02 21:17	5° $\text{Z}$ 09'52	
	14114 Jul 14 15:36	15° $\text{R}$ $\approx$		opposition	14120 Oct 09 12:04	1° $\text{Z}$ 47'13	0°10'44
opposition	14114 Jul 24 13:12	14° $\approx$ 13'21	2°09'01	min. Earth dist.	14120 Oct 10 00:12	1° $\text{Z}$ 44'50	8.42492 AU
min. Earth dist.	14114 Jul 24 16:31	14° $\approx$ 12'41	8.51696 AU		14120 Nov 02 08:24	30° $\text{R}$ $\text{Y}$	
direct	14114 Sep 30 18:10	10° $\approx$ 48'43		direct	14120 Dec 17 14:34	28° $\text{Y}$ 20'48	
	14114 Dec 12 13:43	15° $\approx$			14121 Jan 31 02:41	0° $\text{Z}$	
evening set	14115 Jan 11 23:41	18° $\approx$ 26'49		desc. node	14121 Feb 24 03:45	2° $\text{Z}$ 04'04	
				evening set	14121 Apr 01 12:50	6° $\text{Z}$ 10'12	
conjunction	14115 Jan 29 15:38	20° $\approx$ 36'48	1°42'06	max. Earth dist.	14121 Apr 18 10:26	8° $\text{Z}$ 16'20	10.42576 AU
minimum elong	14115 Jan 29 15:40	20° $\approx$ 36'49	1°42'52				
max. Earth dist.	14115 Jan 29 08:57	20° $\approx$ 34'44	10.50408 AU	conjunction	14121 Apr 19 01:45	8° $\text{Z}$ 21'07	-0°03'23
morning rise	14115 Feb 16 07:27	22° $\approx$ 46'48		minimum elong	14121 Apr 19 01:44	8° $\text{Z}$ 21'07	0°03'58
	14115 May 08 09:10	0° $\text{X}$		behind sun begin	14121 Apr 18 18:37	8° $\text{Z}$ 18'55	
retrograde	14115 May 30 14:10	0° $\text{X}$ 25'59		behind sun end	14121 Apr 19 08:50	8° $\text{Z}$ 23'19	
	14115 Jun 21 19:42	30° $\text{R}$ $\approx$		morning rise	14121 May 06 11:49	10° $\text{Z}$ 31'17	
opposition	14115 Aug 06 12:49	27° $\approx$ 02'00	2°01'57		14121 Jun 15 18:17	15° $\text{Z}$	
min. Earth dist.	14115 Aug 06 19:24	27° $\approx$ 00'42	8.49346 AU	retrograde	14121 Aug 16 02:54	18° $\text{Z}$ 08'33	
direct	14115 Oct 13 19:55	23° $\approx$ 36'48			14121 Oct 19 22:18	15° $\text{R}$ $\text{Z}$	
	14116 Jan 14 14:35	0° $\text{X}$		opposition	14121 Oct 22 20:51	14° $\text{Z}$ 46'08	-0°18'46
evening set	14116 Jan 25 12:23	1° $\text{X}$ 17'55		min. Earth dist.	14121 Oct 23 08:45	14° $\text{Z}$ 43'48	8.42832 AU
				direct	14121 Dec 31 03:39	11° $\text{Z}$ 19'50	
conjunction	14116 Feb 12 04:50	3° $\text{X}$ 28'27	1°33'49		14122 Mar 09 04:47	15° $\text{Z}$	
minimum elong	14116 Feb 12 04:53	3° $\text{X}$ 28'28	1°34'24	evening set	14122 Apr 15 01:00	19° $\text{Z}$ 08'59	
max. Earth dist.	14116 Feb 11 18:04	3° $\text{X}$ 25'07	10.48101 AU				
morning rise	14116 Feb 29 20:42	5° $\text{X}$ 38'50		conjunction	14122 May 02 11:33	21° $\text{Z}$ 19'18	-0°26'53
retrograde	14116 Jun 11 19:24	13° $\text{X}$ 18'05		minimum elong	14122 May 02 11:32	21° $\text{Z}$ 19'18	0°27'39
opposition	14116 Aug 18 14:04	9° $\text{X}$ 54'24	1°48'45	max. Earth dist.	14122 May 01 21:16	21° $\text{Z}$ 14'50	10.43218 AU
min. Earth dist.	14116 Aug 18 23:29	9° $\text{X}$ 52'32	8.47103 AU	morning rise	14122 May 19 19:25	23° $\text{Z}$ 28'51	
direct	14116 Oct 26 00:37	6° $\text{X}$ 28'44			14122 Jul 25 02:13	0° $\text{II}$	
evening set	14117 Feb 07 02:24	14° $\text{X}$ 12'37		retrograde	14122 Aug 29 08:52	1° $\text{II}$ 05'33	
					14122 Oct 04 06:45	30° $\text{R}$ $\text{Z}$	
conjunction	14117 Feb 24 19:09	16° $\text{X}$ 23'37	1°20'47	opposition	14122 Nov 05 06:25	27° $\text{Z}$ 43'17	-0°47'15
minimum elong	14117 Feb 24 19:11	16° $\text{X}$ 23'37	1°21'09	min. Earth dist.	14122 Nov 05 16:55	27° $\text{Z}$ 41'14	8.43784 AU
max. Earth dist.	14117 Feb 24 05:39	16° $\text{X}$ 19'25	10.46011 AU	direct	14123 Jan 13 16:12	24° $\text{Z}$ 17'14	
morning rise	14117 Mar 14 10:46	18° $\text{X}$ 34'19			14123 Apr 10 20:39	0° $\text{II}$	



























































































































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conjunction	14123 May 15 18:51	4°♊15'02 -0°49'00		conjunction	14129 Jul 30 10:25	20°♊31'40 -1°42'31	
minimum elong	14123 May 15 18:49	4°♊15'01 0°49'55		minimum elong	14129 Jul 30 10:27	20°♊31'40 1°43'17	
max. Earth dist.	14123 May 15 06:54	4°♊11'17 10.44440 AU		max. Earth dist.	14129 Jul 30 17:54	20°♊33'59 10.58771 AU	
morning rise	14123 Jun 02 00:16	6°♊23'50		morning rise	14129 Aug 16 07:52	22°♊36'32	
retrograde	14123 Sep 11 13:29	14°♊00'00			14129 Nov 13 04:17	0°♊	
opposition	14123 Nov 18 16:16	10°♊37'51 -1°13'16		retrograde	14129 Nov 27 04:56	0°♊10'07	
min. Earth dist.	14123 Nov 19 00:19	10°♊36'17 8.45289 AU			14129 Dec 11 06:41	30°♊♊	
direct	14124 Jan 27 05:01	7°♊12'13		opposition	14130 Feb 04 15:49	26°♊47'55 -2°02'21	
evening set	14124 May 10 18:19	14°♊58'58		min. Earth dist.	14130 Feb 04 07:50	26°♊49'27 8.60132 AU	
				direct	14130 Apr 14 23:08	23°♊26'04	
conjunction	14124 May 27 23:46	17°♊07'38 -1°08'36			14130 Jul 18 09:26	0°♊	
minimum elong	14124 May 27 23:44	17°♊07'37 1°09'36		evening set	14130 Jul 26 04:30	0°♊55'56	
max. Earth dist.	14124 May 27 15:09	17°♊04'56 10.46169 AU					
morning rise	14124 Jun 14 02:39	19°♊15'36		conjunction	14130 Aug 12 02:07	3°♊00'27 -1°34'38	
retrograde	14124 Sep 23 18:01	26°♊51'17		minimum elong	14130 Aug 12 02:09	3°♊00'27 1°35'13	
opposition	14124 Dec 01 02:00	23°♊29'14 -1°35'28		max. Earth dist.	14130 Aug 12 12:43	3°♊03'43 10.61230 AU	
min. Earth dist.	14124 Dec 01 07:25	23°♊28'11 8.47262 AU		morning rise	14130 Aug 29 00:21	5°♊05'10	
direct	14125 Feb 08 16:34	20°♊04'07		retrograde	14130 Dec 10 03:52	12°♊38'19	
evening set	14125 May 23 23:03	27°♊48'52		opposition	14131 Feb 17 19:00	9°♊15'56 -1°49'42	
				min. Earth dist.	14131 Feb 17 09:02	9°♊17'50 8.62445 AU	
conjunction	14125 Jun 10 01:57	29°♊56'36 -1°24'41		direct	14131 Apr 27 22:49	5°♊54'38	
minimum elong	14125 Jun 10 01:55	29°♊56'35 1°25'44		evening set	14131 Aug 07 18:27	13°♊21'30	
max. Earth dist.	14125 Jun 09 20:33	29°♊54'54 10.48317 AU					
	14125 Jun 10 12:49	0°♊		conjunction	14131 Aug 24 16:48	15°♊25'51 -1°22'20	
morning rise	14125 Jun 27 02:35	2°♊03'43		minimum elong	14131 Aug 24 16:50	15°♊25'52 1°22'43	
retrograde	14125 Oct 06 23:11	9°♊38'58		max. Earth dist.	14131 Aug 25 05:04	15°♊29'38 10.63405 AU	
opposition	14125 Dec 14 11:38	6°♊17'00 -1°52'49		morning rise	14131 Sep 10 16:29	17°♊30'35	
min. Earth dist.	14125 Dec 14 14:42	6°♊16'25 8.49603 AU		retrograde	14131 Dec 23 02:28	25°♊03'23	
direct	14126 Feb 22 01:32	2°♊52'30		opposition	14132 Mar 01 20:32	21°♊40'47 -1°32'00	
evening set	14126 Jun 06 00:44	10°♊34'44		min. Earth dist.	14132 Mar 01 09:35	21°♊42'53 8.64416 AU	
				direct	14132 May 09 20:32	18°♊19'55	
conjunction	14126 Jun 23 01:19	12°♊41'35 -1°36'31		evening set	14132 Aug 19 07:20	25°♊44'06	
minimum elong	14126 Jun 23 01:17	12°♊41'34 1°37'33					
max. Earth dist.	14126 Jun 22 22:46	12°♊40'47 10.50777 AU		conjunction	14132 Sep 05 06:51	27°♊48'28 -1°06'16	
morning rise	14126 Jul 10 00:16	14°♊47'57		minimum elong	14132 Sep 05 06:54	27°♊48'29 1°06'25	
retrograde	14126 Oct 20 01:50	22°♊22'46		max. Earth dist.	14132 Sep 05 20:20	27°♊52'36 10.65190 AU	
opposition	14126 Dec 27 20:34	19°♊00'51 -2°04'29		morning rise	14132 Sep 22 08:22	29°♊53'22	
min. Earth dist.	14126 Dec 27 21:23	19°♊00'41 8.52192 AU			14132 Sep 23 06:29	0°♊	
direct	14127 Mar 07 09:22	15°♊36'59		retrograde	14133 Jan 03 23:49	7°♊25'54	
evening set	14127 Jun 18 23:36	23°♊16'25		opposition	14133 Mar 14 20:18	4°♊03'03 -1°10'06	
				min. Earth dist.	14133 Mar 14 08:20	4°♊05'20 8.65946 AU	
conjunction	14127 Jul 05 22:23	25°♊22'25 -1°43'34		direct	14133 May 22 16:12	0°♊42'29	
minimum elong	14127 Jul 05 22:23	25°♊22'25 1°44'33		evening set	14133 Aug 31 19:54	8°♊04'30	
max. Earth dist.	14127 Jul 05 22:31	25°♊22'28 10.53426 AU					
morning rise	14127 Jul 22 20:17	27°♊28'08		conjunction	14133 Sep 17 21:06	10°♊09'01 -0°47'10	
	14127 Aug 13 11:03	0°♊		minimum elong	14133 Sep 17 21:08	10°♊09'01 0°47'06	
retrograde	14127 Nov 02 02:28	5°♊02'32		max. Earth dist.	14133 Sep 18 11:54	10°♊13'33 10.66480 AU	
opposition	14128 Jan 10 04:15	1°♊40'35 -2°10'02		morning rise	14133 Oct 05 00:36	12°♊14'10	
min. Earth dist.	14128 Jan 10 02:30	1°♊40'55 8.54895 AU		retrograde	14134 Jan 16 20:10	19°♊46'37	
	14128 Feb 01 23:49	30°♊♊		opposition	14134 Mar 27 18:13	16°♊23'28 -0°45'02	
direct	14128 Mar 19 16:57	28°♊17'24		min. Earth dist.	14134 Mar 27 05:24	16°♊25'55 8.66926 AU	
	14128 May 04 01:25	0°♊		direct	14134 Jun 04 11:35	13°♊03'03	
evening set	14128 Jun 30 19:39	5°♊53'45		evening set	14134 Sep 13 08:47	20°♊23'32	
conjunction	14128 Jul 17 17:22	7°♊59'05 -1°45'34		conjunction	14134 Sep 30 11:54	22°♊28'20 -0°25'56	
minimum elong	14128 Jul 17 17:23	7°♊59'05 1°46'28		minimum elong	14134 Sep 30 11:55	22°♊28'20 0°25'38	
max. Earth dist.	14128 Jul 17 20:56	8°♊00'12 10.56133 AU		max. Earth dist.	14134 Oct 01 03:32	22°♊33'06 10.67147 AU	
morning rise	14128 Aug 03 14:45	10°♊04'18		morning rise	14134 Oct 17 17:24	24°♊33'50	
	14128 Sep 18 08:27	15°♊			14134 Dec 09 13:29	0°♊	
retrograde	14128 Nov 14 03:43	17°♊38'17		retrograde	14135 Jan 29 18:14	2°♊06'26	
	14129 Jan 12 20:43	15°♊♊			14135 Mar 23 11:30	30°♊♊	
opposition	14129 Jan 22 10:47	14°♊16'14 -2°09'16		opposition	14135 Apr 09 14:39	28°♊42'58 -0°17'57	
min. Earth dist.	14129 Jan 22 05:47	14°♊17'12 8.57580 AU		min. Earth dist.	14135 Apr 09 01:39	28°♊45'28 8.67223 AU	
direct	14129 Apr 01 22:01	10°♊53'45		direct	14135 Jun 17 04:00	25°♊22'33	
	14129 Jun 13 04:44	15°♊			14135 Sep 02 04:49	0°♊	

evening set	14135 Sep 25 22:46	2°♄42'17		direct	14141 Aug 30 07:36	9°♄53'56	
				evening set	14141 Dec 10 10:43	17°♄24'18	
conjunction	14135 Oct 13 03:42	4°♄47'28	-0°03'34				
minimum elong	14135 Oct 13 03:41	4°♄47'28	0°03'02	conjunction	14141 Dec 28 00:27	19°♄32'51	1°40'40
behind sun begin	14135 Oct 12 20:35	4°♄45'20		minimum elong	14141 Dec 28 00:26	19°♄32'51	1°41'41
behind sun end	14135 Oct 13 10:47	4°♄49'37		max. Earth dist.	14141 Dec 28 00:56	19°♄33'00	10.55747 AU
max. Earth dist.	14135 Oct 13 18:36	4°♄52'01	10.67080 AU	morning rise	14142 Jan 14 15:37	21°♄41'51	
morning rise	14135 Oct 30 11:12	6°♄53'26		retrograde	14142 Apr 28 14:02	29°♄20'10	
asc. node	14135 Dec 11 04:11	11°♄22'49		opposition	14142 Jul 06 02:29	25°♄55'23	2°07'56
retrograde	14136 Feb 11 16:17	14°♄26'29		min. Earth dist.	14142 Jul 06 03:21	25°♄55'13	8.54500 AU
opposition	14136 Apr 21 10:03	11°♄02'44	0°09'58	direct	14142 Sep 12 04:40	22°♄31'15	
min. Earth dist.	14136 Apr 20 22:09	11°♄05'02	8.66788 AU	evening set	14142 Dec 23 18:09	0°♄04'53	
direct	14136 Jun 28 18:44	7°♄42'10			14142 Dec 23 01:53	0°♄	
evening set	14136 Oct 07 14:28	15°♄02'03					
	14136 Oct 07 07:36	15°♄		conjunction	14143 Jan 10 08:51	2°♄14'03	1°45'01
				minimum elong	14143 Jan 10 08:51	2°♄14'03	1°45'58
conjunction	14136 Oct 24 21:07	17°♄07'41	0°19'08	max. Earth dist.	14143 Jan 10 05:40	2°♄13'05	10.53034 AU
minimum elong	14136 Oct 24 21:06	17°♄07'41	0°19'50	morning rise	14143 Jan 28 00:32	4°♄23'32	
max. Earth dist.	14136 Oct 25 10:09	17°♄11'39	10.66315 AU	retrograde	14143 May 11 15:45	12°♄02'29	
morning rise	14136 Nov 11 06:38	19°♄14'09		opposition	14143 Jul 18 23:43	8°♄37'46	2°10'12
retrograde	14137 Feb 23 13:13	26°♄47'55		min. Earth dist.	14143 Jul 19 03:08	8°♄37'05	8.51813 AU
opposition	14137 May 04 04:46	23°♄23'54	0°37'29	direct	14143 Sep 25 04:52	5°♄12'56	
min. Earth dist.	14137 May 03 18:37	23°♄25'52	8.65721 AU	evening set	14144 Jan 06 03:41	12°♄49'47	
direct	14137 Jul 11 11:01	20°♄02'59					
evening set	14137 Oct 20 08:15	27°♄23'46		conjunction	14144 Jan 23 19:20	14°♄59'36	1°44'14
				minimum elong	14144 Jan 23 19:21	14°♄59'36	1°45'04
conjunction	14137 Nov 06 16:39	29°♄29'57	0°40'53		14144 Jan 23 20:38	15°♄	
minimum elong	14137 Nov 06 16:37	29°♄29'57	0°41'45	max. Earth dist.	14144 Jan 23 13:29	14°♄57'48	10.50394 AU
max. Earth dist.	14137 Nov 07 03:39	29°♄33'18	10.64963 AU	morning rise	14144 Feb 10 11:17	17°♄09'31	
	14137 Nov 10 19:10	0°♄		retrograde	14144 May 23 19:58	24°♄48'54	
morning rise	14137 Nov 24 03:56	1°♄36'56		opposition	14144 Jul 30 22:23	21°♄24'19	2°06'04
retrograde	14138 Mar 08 11:27	9°♄11'35		min. Earth dist.	14144 Jul 31 03:43	21°♄23'15	8.49250 AU
opposition	14138 May 16 23:01	5°♄47'18	1°03'19	direct	14144 Oct 07 05:35	17°♄58'52	
min. Earth dist.	14138 May 16 14:39	5°♄48'56	8.64128 AU	evening set	14145 Jan 18 15:21	25°♄38'48	
direct	14138 Jul 24 03:16	2°♄25'53					
evening set	14138 Nov 02 04:41	9°♄48'18		conjunction	14145 Feb 05 07:48	27°♄49'13	1°38'17
				minimum elong	14145 Feb 05 07:50	27°♄49'14	1°38'56
conjunction	14138 Nov 19 14:43	11°♄55'02	1°00'48	max. Earth dist.	14145 Feb 04 23:34	27°♄46'40	10.47949 AU
minimum elong	14138 Nov 19 14:41	11°♄55'01	1°01'46	morning rise	14145 Feb 22 23:44	29°♄59'33	
max. Earth dist.	14138 Nov 20 00:06	11°♄57'54	10.63125 AU		14145 Feb 23 01:14	0°♄	
morning rise	14138 Dec 07 03:17	14°♄02'31		retrograde	14145 Jun 06 01:29	7°♄39'03	
retrograde	14139 Mar 21 10:16	21°♄38'08		opposition	14145 Aug 12 22:32	4°♄14'41	1°55'37
opposition	14139 May 29 17:02	18°♄13'37	1°26'19	min. Earth dist.	14145 Aug 13 05:39	4°♄13'16	8.46936 AU
min. Earth dist.	14139 May 29 10:03	18°♄14'59	8.62107 AU	direct	14145 Oct 20 08:16	0°♄48'44	
direct	14139 Aug 05 19:59	14°♄51'37		evening set	14146 Feb 01 04:40	8°♄31'32	
evening set	14139 Nov 15 03:50	22°♄16'15					
				conjunction	14146 Feb 18 21:32	10°♄42'27	1°27'22
conjunction	14139 Dec 02 15:19	24°♄23'34	1°17'57	minimum elong	14146 Feb 18 21:34	10°♄42'27	1°27'50
minimum elong	14139 Dec 02 15:17	24°♄23'33	1°18'59	max. Earth dist.	14146 Feb 18 10:51	10°♄39'08	10.45826 AU
max. Earth dist.	14139 Dec 02 22:50	24°♄25'52	10.60904 AU	morning rise	14146 Mar 08 13:13	12°♄53'06	
morning rise	14139 Dec 20 04:54	26°♄31'33		retrograde	14146 Jun 19 06:59	20°♄32'32	
	14140 Jan 20 05:23	0°♄		opposition	14146 Aug 26 00:39	17°♄08'29	1°39'19
retrograde	14140 Apr 02 10:15	4°♄08'11		min. Earth dist.	14146 Aug 26 09:48	17°♄06'39	8.44997 AU
opposition	14140 Jun 10 11:28	0°♄43'29	1°45'21	direct	14146 Nov 02 13:48	13°♄42'10	
min. Earth dist.	14140 Jun 10 06:19	0°♄44'29	8.59761 AU	evening set	14147 Feb 14 18:54	21°♄27'25	
	14140 Jun 19 19:00	30°♄					
direct	14140 Aug 17 13:51	27°♄20'49		conjunction	14147 Mar 04 11:41	23°♄38'41	1°12'00
	14140 Oct 13 05:00	0°♄		minimum elong	14147 Mar 04 11:44	23°♄38'41	1°12'14
evening set	14140 Nov 27 05:47	4°♄48'07		max. Earth dist.	14147 Mar 03 22:29	23°♄34'34	10.44144 AU
				morning rise	14147 Mar 22 02:54	25°♄49'32	
conjunction	14140 Dec 14 18:29	6°♄56'04	1°31'28		14147 Apr 28 10:33	0°♄	
minimum elong	14140 Dec 14 18:28	6°♄56'03	1°32'31	retrograde	14147 Jul 02 13:11	3°♄28'44	
max. Earth dist.	14140 Dec 14 22:59	6°♄57'26	10.58410 AU	opposition	14147 Sep 08 04:35	0°♄05'04	1°17'54
morning rise	14141 Jan 01 08:56	9°♄04'33		min. Earth dist.	14147 Sep 08 15:31	0°♄02'54	8.43549 AU
retrograde	14141 Apr 15 12:34	16°♄42'07			14147 Sep 09 06:05	30°♄	
opposition	14141 Jun 23 06:34	13°♄17'20	1°59'29	direct	14147 Nov 15 21:15	26°♄38'33	
min. Earth dist.	14141 Jun 23 04:10	13°♄17'48	8.57189 AU		14148 Jan 19 12:17	0°♄	

evening set	14148 Feb 28 09:48	4°♈25'45		conjunction	14154 Jun 04 11:16	24°♊21'12	-1°17'41
max. Earth dist.	14148 Mar 16 11:10	6°♈32'33	10.42999 AU	minimum elong	14154 Jun 04 11:14	24°♊21'12	1°18'44
conjunction	14148 Mar 17 02:07	6°♈37'13	0°52'56	max. Earth dist.	14154 Jun 04 03:18	24°♊18'42	10.48196 AU
minimum elong	14148 Mar 17 02:09	6°♈37'14	0°52'56	morning rise	14154 Jun 21 13:02	26°♊28'40	
morning rise	14148 Apr 03 16:30	8°♈48'08			14154 Jul 22 06:13	0°♊	
retrograde	14148 Jul 14 19:48	16°♈26'53		retrograde	14154 Oct 01 07:14	4°♊04'02	
opposition	14148 Sep 20 10:02	13°♈03'39	0°52'26	opposition	14154 Dec 08 17:34	0°♊42'30	-1°45'21
min. Earth dist.	14148 Sep 20 21:55	13°♈01'18	8.42670 AU	min. Earth dist.	14154 Dec 08 22:32	0°♊41'33	8.49375 AU
direct	14148 Nov 28 06:41	9°♈37'06			14154 Dec 17 22:43	30°♋♊	
evening set	14149 Mar 13 00:45	17°♈25'43		direct	14155 Feb 16 07:33	27°♊18'08	
					14155 Apr 15 00:39	0°♊	
conjunction	14149 Mar 30 16:07	19°♈37'09	0°31'08	evening set	14155 May 31 10:47	5°♊01'34	
minimum elong	14149 Mar 30 16:08	19°♈37'09	0°30'53	conjunction	14155 Jun 17 12:22	7°♊08'46	-1°31'32
max. Earth dist.	14149 Mar 30 00:42	19°♈32'20	10.42441 AU	minimum elong	14155 Jun 17 12:21	7°♊08'45	1°32'35
morning rise	14149 Apr 17 05:09	21°♈47'55		max. Earth dist.	14155 Jun 17 07:29	7°♊07'14	10.50402 AU
retrograde	14149 Jul 28 01:42	29°♈26'10		morning rise	14155 Jul 04 12:08	9°♊15'26	
opposition	14149 Oct 03 17:09	26°♈03'21	0°24'15	retrograde	14155 Oct 14 11:11	16°♊50'30	
min. Earth dist.	14149 Oct 04 04:47	26°♈01'03	8.42401 AU	opposition	14155 Dec 22 03:04	13°♊28'58	-1°59'42
direct	14149 Dec 11 18:44	22°♈36'56		min. Earth dist.	14155 Dec 22 05:23	13°♊28'31	8.51602 AU
	14150 Mar 23 00:44	0°♈		direct	14156 Feb 29 16:53	10°♊05'12	
evening set	14150 Mar 26 15:03	0°♈26'17		evening set	14156 Jun 12 11:29	17°♊46'08	
conjunction	14150 Apr 13 04:56	2°♈37'26	0°07'45	conjunction	14156 Jun 29 11:10	19°♊52'32	-1°40'48
minimum elong	14150 Apr 13 04:55	2°♈37'26	0°07'17	minimum elong	14156 Jun 29 11:09	19°♊52'32	1°41'49
behind sun begin	14150 Apr 12 22:20	2°♈35'23		max. Earth dist.	14156 Jun 29 09:33	19°♊52'02	10.52590 AU
behind sun end	14150 Apr 13 11:31	2°♈39'29		morning rise	14156 Jul 16 09:22	21°♊58'32	
max. Earth dist.	14150 Apr 12 14:32	2°♈32'56	10.42493 AU	retrograde	14156 Oct 26 14:35	29°♊33'27	
morning rise	14150 Apr 30 16:02	4°♈47'50		opposition	14157 Jan 03 11:52	26°♊11'51	-2°08'05
retrograde	14150 Aug 10 08:46	12°♈25'33		min. Earth dist.	14157 Jan 03 11:35	26°♊11'54	8.53782 AU
desc. node	14150 Aug 13 11:28	12°♈25'01		direct	14157 Mar 14 00:49	22°♊48'40	
opposition	14150 Oct 17 01:38	9°♈03'07	-0°05'10		14157 Jun 21 16:51	0°♊	
min. Earth dist.	14150 Oct 17 12:18	9°♈01'01	8.42757 AU	evening set	14157 Jun 25 09:30	0°♊26'54	
direct	14150 Dec 25 06:53	5°♈36'58		conjunction	14157 Jul 12 07:45	2°♊32'38	-1°45'07
evening set	14151 Apr 09 04:14	13°♈26'22		minimum elong	14157 Jul 12 07:45	2°♊32'38	1°46'04
	14151 Apr 21 18:01	15°♈		max. Earth dist.	14157 Jul 12 09:09	2°♊33'04	10.54736 AU
conjunction	14151 Apr 26 16:05	15°♈37'00	-0°16'06	morning rise	14157 Jul 29 05:09	4°♊38'07	
minimum elong	14151 Apr 26 16:04	15°♈37'00	0°16'47	retrograde	14157 Nov 08 17:40	12°♊12'53	
max. Earth dist.	14151 Apr 26 03:09	15°♈32'58	10.43159 AU	opposition	14158 Jan 16 19:51	8°♊51'06	-2°10'12
morning rise	14151 May 14 00:56	17°♈46'51		min. Earth dist.	14158 Jan 16 17:26	8°♊51'34	8.55904 AU
retrograde	14151 Aug 23 16:39	25°♈23'57		direct	14158 Mar 27 06:09	5°♊28'28	
opposition	14151 Oct 30 11:05	22°♈01'52	-0°34'18	evening set	14158 Jul 08 04:51	13°♊03'43	
min. Earth dist.	14151 Oct 30 20:54	21°♈59'56	8.43727 AU		14158 Jul 23 21:35	15°♊	
direct	14152 Jan 07 18:05	18°♈36'03		conjunction	14158 Jul 25 02:19	15°♊08'56	-1°44'21
evening set	14152 Apr 21 15:44	26°♈24'50		minimum elong	14158 Jul 25 02:20	15°♊08'57	1°45'10
conjunction	14152 May 09 01:05	28°♈34'46	-0°39'01	max. Earth dist.	14158 Jul 25 06:05	15°♊10'06	10.56817 AU
minimum elong	14152 May 09 01:03	28°♈34'46	0°39'52	morning rise	14158 Aug 10 23:46	17°♊14'07	
max. Earth dist.	14152 May 08 13:28	28°♈31'08	10.44402 AU	retrograde	14158 Nov 21 18:34	24°♊48'40	
	14152 May 20 09:32	0°♊		opposition	14159 Jan 30 02:27	21°♊26'36	-2°06'02
morning rise	14152 May 26 07:32	0°♊43'54		min. Earth dist.	14159 Jan 29 21:54	21°♊27'28	8.57919 AU
retrograde	14152 Sep 04 22:19	8°♊20'21		direct	14159 Apr 09 09:42	18°♊04'23	
opposition	14152 Nov 11 21:14	4°♊58'34	-1°01'36	evening set	14159 Jul 20 22:02	25°♊36'39	
min. Earth dist.	14152 Nov 12 06:04	4°♊56'50	8.45243 AU	conjunction	14159 Aug 06 19:27	27°♊41'30	-1°38'36
direct	14153 Jan 20 07:08	1°♊33'10		minimum elong	14159 Aug 06 19:29	27°♊41'31	1°39'15
evening set	14153 May 05 00:57	9°♊20'43		max. Earth dist.	14159 Aug 07 01:59	27°♊43'32	10.58761 AU
conjunction	14153 May 22 07:30	11°♊29'45	-0°59'54	morning rise	14159 Aug 23 17:31	29°♊46'31	
minimum elong	14153 May 22 07:28	11°♊29'44	1°00'52		14159 Aug 25 14:02	0°♊	
max. Earth dist.	14153 May 21 21:21	11°♊26'34	10.46128 AU	retrograde	14159 Dec 04 17:26	7°♊20'50	
morning rise	14153 Jun 08 11:32	13°♊38'04		opposition	14160 Feb 12 07:14	3°♊58'23	-1°55'54
retrograde	14153 Sep 18 02:45	21°♊13'56		min. Earth dist.	14160 Feb 12 00:12	3°♊59'44	8.59750 AU
opposition	14153 Nov 25 07:33	17°♊52'20	-1°25'41	direct	14160 Apr 21 13:15	0°♊36'33	
min. Earth dist.	14153 Nov 25 14:54	17°♊50'54	8.47186 AU	evening set	14160 Aug 01 13:20	8°♊05'51	
direct	14154 Feb 02 20:15	14°♊27'25		conjunction	14160 Aug 18 11:25	10°♊10'34	-1°28'11
evening set	14154 May 18 07:24	22°♊13'07					

minimum elong	14160 Aug 18 11:27	10° $\mathbb{M}$ 10'34	1°28'39	evening set	14166 Oct 15 05:57	22° $\mathbb{M}$ 23'15	
max. Earth dist.	14160 Aug 18 21:12	10° $\mathbb{M}$ 13'35	10.60491 AU				
morning rise	14160 Sep 04 10:33	12° $\mathbb{M}$ 15'33		conjunction	14166 Nov 01 13:54	24° $\mathbb{M}$ 29'35	0°31'51
retrograde	14160 Dec 16 17:47	19° $\mathbb{M}$ 49'40		minimum elong	14166 Nov 01 13:53	24° $\mathbb{M}$ 29'35	0°32'39
opposition	14161 Feb 24 10:26	16° $\mathbb{M}$ 26'47	-1°40'20	max. Earth dist.	14166 Nov 02 03:56	24° $\mathbb{M}$ 33'52	10.62809 AU
min. Earth dist.	14161 Feb 24 00:41	16° $\mathbb{M}$ 28'39	8.61324 AU	morning rise	14166 Nov 19 00:27	26° $\mathbb{M}$ 36'42	
direct	14161 May 04 12:59	13° $\mathbb{M}$ 05'17			14166 Dec 19 05:16	0° $\mathbb{Z}$	
evening set	14161 Aug 14 03:16	20° $\mathbb{M}$ 31'50		retrograde	14167 Mar 03 08:56	4° $\mathbb{Z}$ 12'15	
				opposition	14167 May 11 21:18	0° $\mathbb{Z}$ 47'27	0°52'44
conjunction	14161 Aug 31 02:31	22° $\mathbb{M}$ 36'33	-1°13'41	min. Earth dist.	14167 May 11 10:18	0° $\mathbb{Z}$ 49'36	8.62295 AU
minimum elong	14161 Aug 31 02:33	22° $\mathbb{M}$ 36'33	1°13'56		14167 May 22 03:30	30° $\mathbb{R}$ $\mathbb{M}$	
max. Earth dist.	14161 Aug 31 15:13	22° $\mathbb{M}$ 40'28	10.61930 AU	direct	14167 Jul 19 01:50	27° $\mathbb{M}$ 25'46	
morning rise	14161 Sep 17 03:12	24° $\mathbb{M}$ 41'42			14167 Sep 12 18:52	0° $\mathbb{Z}$	
	14161 Nov 06 19:50	0° $\mathbb{Z}$		evening set	14167 Oct 28 02:00	4° $\mathbb{Z}$ 48'34	
retrograde	14161 Dec 29 17:18	2° $\mathbb{Z}$ 15'40					
	14162 Feb 22 12:32	30° $\mathbb{R}$ $\mathbb{M}$		conjunction	14167 Nov 14 11:26	6° $\mathbb{Z}$ 55'23	0°52'42
opposition	14162 Mar 09 11:49	28° $\mathbb{M}$ 52'21	-1°20'07	minimum elong	14167 Nov 14 11:24	6° $\mathbb{Z}$ 55'22	0°53'38
min. Earth dist.	14162 Mar 09 00:19	28° $\mathbb{M}$ 54'33	8.62569 AU	max. Earth dist.	14167 Nov 14 23:25	6° $\mathbb{Z}$ 59'03	10.61629 AU
direct	14162 May 17 09:27	25° $\mathbb{M}$ 31'05		morning rise	14167 Dec 01 23:30	9° $\mathbb{Z}$ 02'58	
	14162 Aug 01 02:31	0° $\mathbb{Z}$		retrograde	14168 Mar 15 08:31	16° $\mathbb{Z}$ 39'18	
evening set	14162 Aug 26 16:48	2° $\mathbb{Z}$ 55'22		opposition	14168 May 23 16:23	13° $\mathbb{Z}$ 14'26	1°17'06
				min. Earth dist.	14168 May 23 07:30	13° $\mathbb{Z}$ 16'10	8.60949 AU
conjunction	14162 Sep 12 17:29	5° $\mathbb{Z}$ 00'12	-0°55'46	direct	14168 Jul 30 18:16	9° $\mathbb{Z}$ 52'21	
minimum elong	14162 Sep 12 17:31	5° $\mathbb{Z}$ 00'13	0°55'47	evening set	14168 Nov 09 00:49	17° $\mathbb{Z}$ 17'00	
max. Earth dist.	14162 Sep 13 07:25	5° $\mathbb{Z}$ 04'29	10.63007 AU				
morning rise	14162 Sep 29 20:09	7° $\mathbb{Z}$ 05'38		conjunction	14168 Nov 26 11:38	19° $\mathbb{Z}$ 24'19	1°11'08
retrograde	14163 Jan 11 15:00	14° $\mathbb{Z}$ 39'32		minimum elong	14168 Nov 26 11:36	19° $\mathbb{Z}$ 24'18	1°12'08
opposition	14163 Mar 22 11:21	11° $\mathbb{Z}$ 15'50	-0°56'14	max. Earth dist.	14168 Nov 26 20:40	19° $\mathbb{Z}$ 27'05	10.60105 AU
min. Earth dist.	14163 Mar 21 23:21	11° $\mathbb{Z}$ 18'09	8.63421 AU	morning rise	14168 Dec 14 01:00	21° $\mathbb{Z}$ 32'22	
direct	14163 May 30 05:12	7° $\mathbb{Z}$ 54'40		retrograde	14169 Mar 28 08:06	29° $\mathbb{Z}$ 09'32	
evening set	14163 Sep 08 06:25	15° $\mathbb{Z}$ 17'17		opposition	14169 Jun 05 11:31	25° $\mathbb{Z}$ 44'40	1°37'55
				min. Earth dist.	14169 Jun 05 05:07	25° $\mathbb{Z}$ 45'55	8.59305 AU
conjunction	14163 Sep 25 08:45	17° $\mathbb{Z}$ 22'23	-0°35'17	direct	14169 Aug 12 12:56	22° $\mathbb{Z}$ 22'08	
minimum elong	14163 Sep 25 08:46	17° $\mathbb{Z}$ 22'23	0°35'05	evening set	14169 Nov 22 02:26	29° $\mathbb{Z}$ 49'08	
max. Earth dist.	14163 Sep 25 22:56	17° $\mathbb{Z}$ 26'44	10.63661 AU		14169 Nov 23 14:38	0° $\mathbb{Z}$	
morning rise	14163 Oct 12 13:36	19° $\mathbb{Z}$ 28'10					
retrograde	14164 Jan 24 13:08	27° $\mathbb{Z}$ 02'12		conjunction	14169 Dec 09 14:37	1° $\mathbb{Z}$ 57'00	1°26'15
opposition	14164 Apr 03 09:32	23° $\mathbb{Z}$ 38'09	-0°29'46	minimum elong	14169 Dec 09 14:36	1° $\mathbb{Z}$ 57'00	1°27'18
min. Earth dist.	14164 Apr 02 21:31	23° $\mathbb{Z}$ 40'28	8.63832 AU	max. Earth dist.	14169 Dec 09 21:08	1° $\mathbb{Z}$ 59'00	10.58314 AU
direct	14164 Jun 10 23:38	20° $\mathbb{Z}$ 17'00		morning rise	14169 Dec 27 04:57	4° $\mathbb{Z}$ 05'30	
evening set	14164 Sep 19 20:35	27° $\mathbb{Z}$ 38'34		retrograde	14170 Apr 10 09:33	11° $\mathbb{Z}$ 43'27	
				opposition	14170 Jun 18 07:05	8° $\mathbb{Z}$ 18'40	1°54'09
conjunction	14164 Oct 07 00:47	29° $\mathbb{Z}$ 44'00	-0°13'12	min. Earth dist.	14170 Jun 18 02:45	8° $\mathbb{Z}$ 19'31	8.57428 AU
minimum elong	14164 Oct 07 00:47	29° $\mathbb{Z}$ 44'00	0°12'47	direct	14170 Aug 25 08:21	4° $\mathbb{Z}$ 55'38	
behind sun begin	14164 Oct 06 20:19	29° $\mathbb{Z}$ 42'39		evening set	14170 Dec 05 06:54	12° $\mathbb{Z}$ 25'22	
behind sun end	14164 Oct 07 05:15	29° $\mathbb{Z}$ 45'21					
max. Earth dist.	14164 Oct 07 15:10	29° $\mathbb{Z}$ 48'24	10.63853 AU	conjunction	14170 Dec 22 20:18	14° $\mathbb{Z}$ 33'48	1°37'17
	14164 Oct 09 04:59	0° $\mathbb{M}$		minimum elong	14170 Dec 22 20:17	14° $\mathbb{Z}$ 33'48	1°38'20
morning rise	14164 Oct 24 07:45	1° $\mathbb{M}$ 50'13		max. Earth dist.	14170 Dec 23 00:24	14° $\mathbb{Z}$ 35'04	10.56328 AU
retrograde	14165 Feb 05 10:37	9° $\mathbb{M}$ 24'35		morning rise	14171 Jan 09 11:12	16° $\mathbb{Z}$ 42'42	
opposition	14165 Apr 16 06:24	6° $\mathbb{M}$ 00'13	-0°01'57	retrograde	14171 Apr 23 12:15	24° $\mathbb{Z}$ 21'20	
min. Earth dist.	14165 Apr 15 18:16	6° $\mathbb{M}$ 02'34	8.63780 AU	opposition	14171 Jul 01 03:23	20° $\mathbb{Z}$ 56'42	2°04'59
asc. node	14165 May 12 00:59	4° $\mathbb{M}$ 07'39		min. Earth dist.	14171 Jul 01 01:04	20° $\mathbb{Z}$ 57'10	8.55398 AU
direct	14165 Jun 23 17:06	2° $\mathbb{M}$ 38'59		direct	14171 Sep 07 05:04	17° $\mathbb{Z}$ 33'09	
evening set	14165 Oct 02 12:15	10° $\mathbb{M}$ 00'13		evening set	14171 Dec 18 14:03	25° $\mathbb{Z}$ 05'49	
conjunction	14165 Oct 19 18:25	12° $\mathbb{M}$ 06'04	0°09'35	conjunction	14172 Jan 05 04:30	27° $\mathbb{Z}$ 14'48	1°43'40
minimum elong	14165 Oct 19 18:25	12° $\mathbb{M}$ 06'04	0°10'13	minimum elong	14172 Jan 05 04:29	27° $\mathbb{Z}$ 14'48	1°44'39
behind sun begin	14165 Oct 19 12:44	12° $\mathbb{M}$ 04'21		max. Earth dist.	14172 Jan 05 05:43	27° $\mathbb{Z}$ 15'11	10.54238 AU
behind sun end	14165 Oct 20 00:06	12° $\mathbb{M}$ 07'48		morning rise	14172 Jan 22 19:50	29° $\mathbb{Z}$ 24'07	
max. Earth dist.	14165 Oct 20 09:12	12° $\mathbb{M}$ 10'35	10.63566 AU		14172 Jan 27 19:58	0° $\mathbb{Z}$	
morning rise	14165 Nov 06 03:17	14° $\mathbb{M}$ 12'44		retrograde	14172 May 05 15:43	7° $\mathbb{Z}$ 03'13	
	14165 Nov 12 18:48	15° $\mathbb{M}$		opposition	14172 Jul 13 00:43	3° $\mathbb{Z}$ 38'45	2°09'47
retrograde	14166 Feb 18 08:27	21° $\mathbb{M}$ 47'37		min. Earth dist.	14172 Jul 13 00:59	3° $\mathbb{Z}$ 38'42	8.53294 AU
opposition	14166 Apr 29 02:05	18° $\mathbb{M}$ 23'00	0°25'58	direct	14172 Sep 19 03:32	0° $\mathbb{Z}$ 14'38	
min. Earth dist.	14166 Apr 28 14:02	18° $\mathbb{M}$ 25'20	8.63259 AU	evening set	14172 Dec 30 23:31	7° $\mathbb{Z}$ 50'17	
direct	14166 Jul 06 10:20	15° $\mathbb{M}$ 01'35					

conjunction	14173 Jan 17 14:49	9° $\approx$ 59'49	1°44'59	conjunction	14179 Apr 08 00:42	27° $\Upsilon$ 33'52	0°17'15
minimum elong	14173 Jan 17 14:49	9° $\approx$ 59'49	1°45'52	minimum elong	14179 Apr 08 00:42	27° $\Upsilon$ 33'52	0°16'52
max. Earth dist.	14173 Jan 17 11:59	9° $\approx$ 58'57	10.52114 AU	morning rise	14179 Apr 25 12:37	29° $\Upsilon$ 44'25	
morning rise	14173 Feb 04 06:32	12° $\approx$ 09'32			14179 Apr 27 15:37	0° $\delta$	
	14173 Feb 28 23:15	15° $\approx$		retrograde	14179 Aug 05 07:24	7° $\delta$ 22'14	
retrograde	14173 May 18 20:22	19° $\approx$ 48'48		opposition	14179 Oct 11 22:58	3° $\delta$ 59'42	0°06'44
opposition	14173 Jul 25 23:17	16° $\approx$ 24'35	2°08'15	min. Earth dist.	14179 Oct 12 11:30	3° $\delta$ 57'13	8.42716 AU
min. Earth dist.	14173 Jul 26 02:56	16° $\approx$ 23'51	8.51164 AU	direct	14179 Dec 20 02:06	0° $\delta$ 33'22	
	14173 Aug 13 07:37	15° $\approx$		desc. node	14180 Jan 05 12:05	0° $\delta$ 47'23	
direct	14173 Oct 02 03:34	12° $\approx$ 59'52		evening set	14180 Apr 02 23:47	8° $\delta$ 22'41	
	14173 Nov 20 00:42	15° $\approx$					
evening set	14174 Jan 13 10:57	20° $\approx$ 38'25		conjunction	14180 Apr 20 12:26	10° $\delta$ 33'32	-0°06'35
				minimum elong	14180 Apr 20 12:25	10° $\delta$ 33'32	0°07'11
conjunction	14174 Jan 31 02:54	22° $\approx$ 48'30	1°41'07	behind sun begin	14180 Apr 20 05:49	10° $\delta$ 31'29	
minimum elong	14174 Jan 31 02:55	22° $\approx$ 48'30	1°41'51	behind sun end	14180 Apr 20 19:02	10° $\delta$ 35'35	
max. Earth dist.	14174 Jan 30 19:44	22° $\approx$ 46'17	10.49985 AU	max. Earth dist.	14180 Apr 19 20:47	10° $\delta$ 28'39	10.42829 AU
morning rise	14174 Feb 17 18:49	24° $\approx$ 58'35		morning rise	14180 May 07 22:25	12° $\delta$ 43'38	
	14174 Apr 05 15:15	0° $\kappa$			14180 May 27 02:42	15° $\delta$	
retrograde	14174 Jun 01 00:40	2° $\kappa$ 37'50		retrograde	14180 Aug 17 13:32	20° $\delta$ 20'50	
	14174 Jul 29 04:24	30° $\approx$		opposition	14180 Oct 24 07:41	16° $\delta$ 58'29	-0°22'40
opposition	14174 Aug 07 23:05	29° $\approx$ 13'53	2°00'20	min. Earth dist.	14180 Oct 24 19:22	16° $\delta$ 56'12	8.43110 AU
min. Earth dist.	14174 Aug 08 05:56	29° $\approx$ 12'31	8.49031 AU		14180 Nov 20 03:06	15° $\approx$ $\delta$	
direct	14174 Oct 15 06:42	25° $\approx$ 48'37		direct	14181 Jan 01 14:32	13° $\delta$ 32'18	
	14174 Dec 27 03:55	0° $\kappa$			14181 Feb 12 09:07	15° $\delta$	
evening set	14175 Jan 26 23:45	3° $\kappa$ 30'02		evening set	14181 Apr 16 11:44	21° $\delta$ 21'19	
conjunction	14175 Feb 13 16:14	5° $\kappa$ 40'36	1°32'11	conjunction	14181 May 03 22:07	23° $\delta$ 31'33	-0°29'56
minimum elong	14175 Feb 13 16:17	5° $\kappa$ 40'37	1°32'43	minimum elong	14181 May 03 22:06	23° $\delta$ 31'33	0°30'43
max. Earth dist.	14175 Feb 13 05:31	5° $\kappa$ 37'17	10.47888 AU	max. Earth dist.	14181 May 03 08:17	23° $\delta$ 27'13	10.43515 AU
morning rise	14175 Mar 03 08:08	7° $\kappa$ 51'02		morning rise	14181 May 21 05:46	25° $\delta$ 41'02	
retrograde	14175 Jun 14 04:50	15° $\kappa$ 30'16			14181 Jun 28 19:14	0° $\Pi$	
opposition	14175 Aug 21 00:30	12° $\kappa$ 06'36	1°46'21	retrograde	14181 Aug 30 18:46	3° $\Pi$ 17'38	
min. Earth dist.	14175 Aug 21 09:34	12° $\kappa$ 04'48	8.46971 AU		14181 Nov 05 17:54	30° $\approx$ $\delta$	
direct	14175 Oct 28 12:36	8° $\kappa$ 40'55		opposition	14181 Nov 06 17:13	29° $\delta$ 55'26	-0°50'52
evening set	14176 Feb 09 13:39	16° $\kappa$ 24'56		min. Earth dist.	14181 Nov 07 03:01	29° $\delta$ 53'31	8.44091 AU
				direct	14182 Jan 15 03:49	26° $\delta$ 29'30	
conjunction	14176 Feb 27 06:29	18° $\kappa$ 35'58	1°18'34		14182 Mar 22 13:55	0° $\Pi$	
minimum elong	14176 Feb 27 06:31	18° $\kappa$ 35'59	1°18'53	evening set	14182 Apr 29 21:21	4° $\Pi$ 17'33	
max. Earth dist.	14176 Feb 26 17:43	18° $\kappa$ 32'00	10.45951 AU				
morning rise	14176 Mar 15 21:59	20° $\kappa$ 46'39		conjunction	14182 May 17 05:12	6° $\Pi$ 27'00	-0°51'45
retrograde	14176 Jun 26 11:18	28° $\kappa$ 25'47		minimum elong	14182 May 17 05:11	6° $\Pi$ 26'59	0°52'41
opposition	14176 Sep 02 03:39	25° $\kappa$ 02'24	1°26'55	max. Earth dist.	14182 May 16 18:11	6° $\Pi$ 23'33	10.44755 AU
min. Earth dist.	14176 Sep 02 13:53	25° $\kappa$ 00'23	8.45159 AU	morning rise	14182 Jun 03 10:18	8° $\Pi$ 35'42	
direct	14176 Nov 09 19:13	21° $\kappa$ 36'25		retrograde	14182 Sep 13 00:05	16° $\Pi$ 11'48	
evening set	14177 Feb 22 04:32	29° $\kappa$ 22'39		opposition	14182 Nov 20 03:05	12° $\Pi$ 49'41	-1°16'24
	14177 Feb 27 06:26	0° $\Upsilon$		min. Earth dist.	14182 Nov 20 10:36	12° $\Pi$ 48'13	8.45609 AU
				direct	14183 Jan 28 16:12	9° $\Pi$ 24'08	
conjunction	14177 Mar 11 21:13	1° $\Upsilon$ 33'59	1°00'55	evening set	14183 May 13 04:33	17° $\Pi$ 10'37	
minimum elong	14177 Mar 11 21:15	1° $\Upsilon$ 34'00	1°01'00				
max. Earth dist.	14177 Mar 11 07:09	1° $\Upsilon$ 29'36	10.44357 AU	conjunction	14183 May 30 09:46	19° $\Pi$ 19'11	-1°10'54
morning rise	14177 Mar 29 11:53	3° $\Upsilon$ 44'48		minimum elong	14183 May 30 09:44	19° $\Pi$ 19'10	1°11'55
retrograde	14177 Jul 09 19:00	11° $\Upsilon$ 23'37		max. Earth dist.	14183 May 30 01:42	19° $\Pi$ 16'39	10.46490 AU
opposition	14177 Sep 15 08:29	8° $\Upsilon$ 00'32	1°03'00	morning rise	14183 Jun 16 12:23	21° $\Pi$ 27'02	
min. Earth dist.	14177 Sep 15 19:47	7° $\Upsilon$ 58'18	8.43773 AU	retrograde	14183 Sep 26 05:25	29° $\Pi$ 02'37	
direct	14177 Nov 23 02:47	4° $\Upsilon$ 34'20		opposition	14183 Dec 03 12:47	25° $\Pi$ 40'36	-1°37'59
evening set	14178 Mar 07 19:39	12° $\Upsilon$ 22'14		min. Earth dist.	14183 Dec 03 18:19	25° $\Pi$ 39'31	8.47586 AU
				direct	14184 Feb 11 02:20	22° $\Pi$ 15'31	
conjunction	14178 Mar 25 11:34	14° $\Upsilon$ 33'39	0°40'07	evening set	14184 May 25 09:03	29° $\Pi$ 59'57	
minimum elong	14178 Mar 25 11:35	14° $\Upsilon$ 33'40	0°39'58		14184 May 25 09:14	0° $\phi$	
max. Earth dist.	14178 Mar 24 20:25	14° $\Upsilon$ 28'56	10.43257 AU				
morning rise	14178 Apr 12 01:01	16° $\Upsilon$ 44'27		conjunction	14184 Jun 11 11:38	2° $\phi$ 07'35	-1°26'26
retrograde	14178 Jul 23 01:10	24° $\Upsilon$ 22'47		minimum elong	14184 Jun 11 11:36	2° $\phi$ 07'34	1°27'29
opposition	14178 Sep 28 15:05	21° $\Upsilon$ 00'00	0°35'48	max. Earth dist.	14184 Jun 11 05:57	2° $\phi$ 05'48	10.48632 AU
min. Earth dist.	14178 Sep 29 03:13	20° $\Upsilon$ 57'36	8.42939 AU	morning rise	14184 Jun 28 12:10	4° $\phi$ 14'37	
direct	14178 Dec 06 13:59	17° $\Upsilon$ 33'41		retrograde	14184 Oct 08 08:57	11° $\phi$ 49'43	
evening set	14179 Mar 21 10:10	25° $\Upsilon$ 22'37		opposition	14184 Dec 15 22:15	8° $\phi$ 27'45	-1°54'35
max. Earth dist.	14179 Apr 07 08:53	27° $\Upsilon$ 28'56	10.42738 AU	min. Earth dist.	14184 Dec 16 01:46	8° $\phi$ 27'04	8.49914 AU

direct	14185 Feb 23 11:37	5°  03'15	direct	14191 May 12 05:36	20°  27'13
evening set	14185 Jun 07 10:27	12°  45'10	evening set	14191 Aug 21 15:43	27°  51'19
conjunction	14185 Jun 24 10:45	14°  51'53 -1°37'37	conjunction	14191 Sep 07 15:31	29°  55'44 -1°03'44
minimum elong	14185 Jun 24 10:44	14°  51'53 1°38'40	minimum elong	14191 Sep 07 15:33	29°  55'45 1°03'51
max. Earth dist.	14185 Jun 24 07:46	14°  50'57 10.51071 AU	max. Earth dist.	14191 Sep 08 05:16	29°  59'57 10.65083 AU
morning rise	14185 Jul 11 09:40	16°  58'11		14191 Sep 08 05:25	0° 
retrograde	14185 Oct 21 10:11	24°  32'52	morning rise	14191 Sep 24 17:14	2°  00'41
opposition	14185 Dec 29 06:59	21°  10'54 -2°05'26	retrograde	14192 Jan 06 08:02	9°  33'18
min. Earth dist.	14185 Dec 29 07:47	21°  10'44 8.52472 AU	opposition	14192 Mar 16 05:25	6°  10'22 -1°06'45
direct	14186 Mar 08 21:13	17°  47'02	min. Earth dist.	14192 Mar 15 16:58	6°  12'45 8.65802 AU
evening set	14186 Jun 20 08:54	25°  26'06	direct	14192 May 24 02:15	2°  49'47
			evening set	14192 Sep 02 04:23	10°  11'48
conjunction	14186 Jul 07 07:36	27°  32'01 -1°44'00	conjunction	14192 Sep 19 05:54	12°  16'24 -0°44'18
minimum elong	14186 Jul 07 07:36	27°  32'01 1°44'58	minimum elong	14192 Sep 19 05:55	12°  16'24 0°44'11
max. Earth dist.	14186 Jul 07 08:03	27°  32'10 10.53683 AU	max. Earth dist.	14192 Sep 19 21:25	12°  21'09 10.66313 AU
morning rise	14186 Jul 24 05:26	29°  37'40	morning rise	14192 Oct 06 09:31	14°  21'37
	14186 Jul 27 06:57	0° 	retrograde	14193 Jan 18 06:56	21°  54'13
retrograde	14186 Nov 03 12:25	7°  11'58	opposition	14193 Mar 29 03:23	18°  31'00 -0°41'22
opposition	14187 Jan 11 14:27	3°  14'55 -2°10'07	min. Earth dist.	14193 Mar 28 14:00	18°  33'34 8.66742 AU
min. Earth dist.	14187 Jan 11 12:01	3°  15'02 8.55129 AU	direct	14193 Jun 05 19:50	15°  10'36
direct	14187 Mar 22 03:36	0°  12'44	evening set	14193 Sep 14 17:30	22°  31'07
evening set	14187 Jul 03 04:34	8°  02'41			
conjunction	14187 Jul 20 02:21	10°  10'58 -1°45'19	conjunction	14193 Oct 01 20:47	24°  36'00 -0°22'53
minimum elong	14187 Jul 20 02:22	10°  10'59 1°46'11	minimum elong	14193 Oct 01 20:48	24°  36'00 0°22'32
max. Earth dist.	14187 Jul 20 06:49	10°  10'22 10.56336 AU	max. Earth dist.	14193 Oct 02 12:38	24°  40'50 10.66967 AU
morning rise	14187 Aug 05 23:40	12°  13'08	morning rise	14193 Oct 19 02:29	26°  41'36
	14187 Aug 29 23:04	15° 		14193 Nov 17 13:13	0° 
retrograde	14187 Nov 16 13:51	19°  14'01	retrograde	14194 Jan 31 04:12	4°  14'19
opposition	14188 Jan 24 20:41	16°  12'52 -2°08'31	opposition	14194 Apr 10 23:54	0°  15'51 -0°14'07
min. Earth dist.	14188 Jan 24 15:05	16°  12'56 8.57748 AU	min. Earth dist.	14194 Apr 10 10:59	0°  15'32 8.67056 AU
	14188 Feb 12 21:25	15°  12'02		14194 Apr 22 03:18	30°  12'02
direct	14188 Apr 03 07:03	13°  12'02	direct	14194 Jun 18 11:46	27°  30'25
	14188 May 21 23:29	15° 		14194 Aug 12 12:00	0° 
evening set	14188 Jul 14 21:49	20°  13'50	evening set	14194 Sep 27 07:49	4°  15'18
conjunction	14188 Jul 31 19:15	22°  13'54 -1°41'36	conjunction	14194 Oct 14 12:50	6°  15'31 -0°00'22
minimum elong	14188 Jul 31 19:17	22°  13'55 1°42'19	minimum elong	14194 Oct 14 12:50	6°  15'31 0°00'11
max. Earth dist.	14188 Aug 01 03:03	22°  14'20 10.58900 AU	behind sun begin	14194 Oct 14 05:47	6°  15'32
morning rise	14188 Aug 17 16:44	24°  14'46	behind sun end	14194 Oct 14 19:54	6°  15'39
	14188 Oct 06 11:26	0° 	max. Earth dist.	14194 Oct 15 03:06	6°  15'52 10.66936 AU
retrograde	14188 Nov 28 13:56	2°  18'15	asc. node	14194 Oct 20 23:53	7°  16'49
	14189 Jan 22 21:15	30° 	morning rise	14194 Oct 31 20:38	9°  17'33
opposition	14189 Feb 06 01:28	28°  15'58 -2°00'49		14194 Dec 31 00:39	15° 
min. Earth dist.	14189 Feb 05 17:39	28°  15'28 8.60220 AU	retrograde	14195 Feb 13 00:57	16°  16'42
direct	14189 Apr 16 08:34	25°  13'40		14195 Mar 29 21:47	15° 
	14189 Jun 30 18:55	0° 	opposition	14195 Apr 23 19:14	13°  10'58 0°13'47
evening set	14189 Jul 27 13:06	3°  10'34	min. Earth dist.	14195 Apr 23 07:58	13°  10'59 8.66658 AU
			direct	14195 Jul 01 04:12	9°  10'22
conjunction	14189 Aug 13 10:44	5°  10'08 -1°33'05		14195 Sep 21 03:11	15° 
minimum elong	14189 Aug 13 10:46	5°  10'11 1°33'39	evening set	14195 Oct 09 23:46	17°  10'27
max. Earth dist.	14189 Aug 13 20:47	5°  11'17 10.61279 AU			
morning rise	14189 Aug 30 09:11	7°  12'54	conjunction	14195 Oct 27 06:34	19°  16'09 0°22'09
retrograde	14189 Dec 11 13:28	14°  12'46	minimum elong	14195 Oct 27 06:33	19°  16'08 0°22'53
opposition	14190 Feb 19 04:35	11°  12'33 -1°47'27	max. Earth dist.	14195 Oct 27 19:06	19°  19'58 10.66188 AU
min. Earth dist.	14190 Feb 18 19:11	11°  12'25 8.62452 AU	morning rise	14195 Nov 13 16:17	21°  16'40
direct	14190 Apr 29 07:46	8°  12'02	retrograde	14196 Feb 25 23:02	28°  16'34
evening set	14190 Aug 09 02:50	15°  12'28	opposition	14196 May 05 13:58	25°  16'35 0°41'06
			min. Earth dist.	14196 May 05 04:04	25°  16'36 8.65588 AU
conjunction	14190 Aug 26 01:17	17°  12'33 -1°20'15	direct	14196 Jul 12 19:59	22°  16'39
minimum elong	14190 Aug 26 01:19	17°  12'36 1°20'36	evening set	14196 Oct 21 17:45	29°  16'41
max. Earth dist.	14190 Aug 26 13:01	17°  12'36 10.63376 AU		14196 Oct 25 12:53	0° 
morning rise	14190 Sep 12 01:16	19°  12'38			
retrograde	14190 Dec 24 11:01	27°  12'40	conjunction	14196 Nov 08 02:21	1°  12'38 0°43'41
opposition	14191 Mar 04 05:55	23°  12'48 -1°29'08	minimum elong	14196 Nov 08 02:19	1°  12'38 0°44'34
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






























































































































morning rise	14196 Nov 25 13:39	3° $\mathbb{A}$ 45'57		morning rise	14203 Feb 12 22:46	19° $\approx$ 22'19	
retrograde	14197 Mar 09 20:57	11° $\mathbb{A}$ 20'47		retrograde	14203 May 27 07:40	27° $\approx$ 01'41	
opposition	14197 May 18 08:17	7° $\mathbb{A}$ 56'32	1°06'35	opposition	14203 Aug 03 08:45	23° $\approx$ 37'07	2°04'49
min. Earth dist.	14197 May 17 23:33	7° $\mathbb{A}$ 58'14	8.63968 AU	min. Earth dist.	14203 Aug 03 13:54	23° $\approx$ 36'05	8.49083 AU
direct	14197 Jul 25 12:34	4° $\mathbb{A}$ 35'09		direct	14203 Oct 10 15:35	20° $\approx$ 11'38	
evening set	14197 Nov 03 14:33	11° $\mathbb{A}$ 57'51		evening set	14204 Jan 22 02:56	27° $\approx$ 51'47	
conjunction	14197 Nov 21 00:46	14° $\mathbb{A}$ 04'39	1°03'15	conjunction	14204 Feb 08 19:23	0° $\mathbb{H}$ 02'13	1°36'56
minimum elong	14197 Nov 21 00:44	14° $\mathbb{A}$ 04'38	1°04'14	minimum elong	14204 Feb 08 19:25	0° $\mathbb{H}$ 02'14	1°37'34
max. Earth dist.	14197 Nov 21 10:35	14° $\mathbb{A}$ 07'39	10.62944 AU	max. Earth dist.	14204 Feb 08 11:02	29° $\approx$ 59'38	10.47803 AU
morning rise	14197 Dec 08 13:19	16° $\mathbb{A}$ 12'11			14204 Feb 08 12:12	0° $\mathbb{H}$	
retrograde	14198 Mar 22 20:22	23° $\mathbb{A}$ 48'00		morning rise	14204 Feb 26 11:15	2° $\mathbb{H}$ 12'34	
opposition	14198 May 31 02:24	20° $\mathbb{A}$ 23'31	1°29'03	retrograde	14204 Jun 08 12:07	9° $\mathbb{H}$ 52'01	
min. Earth dist.	14198 May 30 19:14	20° $\mathbb{A}$ 24'55	8.61914 AU	opposition	14204 Aug 15 09:07	6° $\mathbb{H}$ 27'40	1°53'33
direct	14198 Aug 07 05:26	17° $\mathbb{A}$ 01'33		min. Earth dist.	14204 Aug 15 16:39	6° $\mathbb{H}$ 26'10	8.46809 AU
evening set	14198 Nov 16 14:11	24° $\mathbb{A}$ 26'31		direct	14204 Oct 22 19:15	3° $\mathbb{H}$ 01'39	
				evening set	14205 Feb 03 16:14	10° $\mathbb{H}$ 44'34	
conjunction	14198 Dec 04 01:43	26° $\mathbb{A}$ 33'54	1°19'55	conjunction	14205 Feb 21 09:01	12° $\mathbb{H}$ 55'30	1°25'24
minimum elong	14198 Dec 04 01:41	26° $\mathbb{A}$ 33'54	1°20'57	minimum elong	14205 Feb 21 09:03	12° $\mathbb{H}$ 55'31	1°25'49
max. Earth dist.	14198 Dec 04 08:45	26° $\mathbb{A}$ 36'04	10.60693 AU	max. Earth dist.	14205 Feb 20 21:31	12° $\mathbb{H}$ 51'56	10.45724 AU
morning rise	14198 Dec 21 15:20	28° $\mathbb{A}$ 41'57		morning rise	14205 Mar 11 00:45	15° $\mathbb{H}$ 06'10	
	14199 Jan 01 16:57	0° $\mathbb{B}$		retrograde	14205 Jun 21 17:47	22° $\mathbb{H}$ 45'28	
retrograde	14199 Apr 04 21:48	6° $\mathbb{B}$ 18'44		opposition	14205 Aug 28 11:20	19° $\mathbb{H}$ 21'25	1°36'32
opposition	14199 Jun 12 21:03	2° $\mathbb{B}$ 54'07	1°47'26	min. Earth dist.	14205 Aug 28 21:13	19° $\mathbb{H}$ 19'27	8.44914 AU
min. Earth dist.	14199 Jun 12 16:28	2° $\mathbb{B}$ 55'01	8.59541 AU	direct	14205 Nov 05 00:42	15° $\mathbb{H}$ 55'01	
	14199 Jul 27 12:46	30° $\mathbb{R}$ $\mathbb{A}$		evening set	14206 Feb 17 06:28	23° $\mathbb{H}$ 40'19	
direct	14199 Aug 19 22:01	29° $\mathbb{A}$ 31'27					
	14199 Sep 12 05:45	0° $\mathbb{B}$		conjunction	14206 Mar 06 23:10	25° $\mathbb{H}$ 51'35	1°09'30
evening set	14199 Nov 29 16:29	6° $\mathbb{B}$ 59'08		minimum elong	14206 Mar 06 23:13	25° $\mathbb{H}$ 51'35	1°09'42
conjunction	14199 Dec 17 05:09	9° $\mathbb{B}$ 07'07	1°32'52	max. Earth dist.	14206 Mar 06 09:12	25° $\mathbb{H}$ 47'14	10.44083 AU
minimum elong	14199 Dec 17 05:07	9° $\mathbb{B}$ 07'06	1°33'55	morning rise	14206 Mar 24 14:24	28° $\mathbb{H}$ 02'26	
max. Earth dist.	14199 Dec 17 08:36	9° $\mathbb{B}$ 08'10	10.58184 AU		14206 Apr 10 03:17	0° $\mathbb{Y}$	
morning rise	14200 Jan 03 19:42	11° $\mathbb{B}$ 15'40		retrograde	14206 Jul 04 23:31	5° $\mathbb{Y}$ 41'26	
retrograde	14200 Apr 17 22:47	18° $\mathbb{B}$ 53'22		opposition	14206 Sep 10 15:13	2° $\mathbb{Y}$ 17'45	1°14'32
opposition	14200 Jun 25 16:25	15° $\mathbb{B}$ 28'39	2°00'48	min. Earth dist.	14206 Sep 11 02:22	2° $\mathbb{Y}$ 15'32	8.43506 AU
min. Earth dist.	14200 Jun 25 14:48	15° $\mathbb{B}$ 28'58	8.56963 AU		14206 Oct 12 08:22	30° $\mathbb{R}$ $\mathbb{H}$	
direct	14200 Sep 01 17:35	12° $\mathbb{B}$ 05'14		direct	14206 Nov 18 08:38	28° $\mathbb{H}$ 51'09	
evening set	14200 Dec 12 21:39	19° $\mathbb{B}$ 36'00			14206 Dec 25 00:59	0° $\mathbb{Y}$	
				evening set	14207 Mar 02 21:08	6° $\mathbb{Y}$ 38'21	
conjunction	14200 Dec 30 11:25	21° $\mathbb{B}$ 44'36	1°41'25	conjunction	14207 Mar 20 13:24	8° $\mathbb{Y}$ 49'47	0°50'02
minimum elong	14200 Dec 30 11:25	21° $\mathbb{B}$ 44'35	1°42'25	minimum elong	14207 Mar 20 13:26	8° $\mathbb{Y}$ 49'47	0°50'00
max. Earth dist.	14200 Dec 30 11:19	21° $\mathbb{B}$ 44'34	10.55527 AU	max. Earth dist.	14207 Mar 19 22:33	8° $\mathbb{Y}$ 45'09	10.42977 AU
morning rise	14201 Jan 17 02:41	23° $\mathbb{B}$ 53'38		morning rise	14207 Apr 07 03:41	11° $\mathbb{Y}$ 00'40	
	14201 Mar 19 05:57	0° $\approx$		retrograde	14207 Jul 18 05:05	18° $\mathbb{Y}$ 39'15	
retrograde	14201 Apr 30 23:24	1° $\approx$ 32'05		opposition	14207 Sep 23 20:42	15° $\mathbb{Y}$ 15'58	0°48'41
	14201 Jun 13 07:52	30° $\mathbb{R}$ $\mathbb{B}$		min. Earth dist.	14207 Sep 24 08:05	15° $\mathbb{Y}$ 13'43	8.42667 AU
opposition	14201 Jul 08 12:32	28° $\mathbb{B}$ 07'21	2°08'25	direct	14207 Dec 01 19:07	11° $\mathbb{Y}$ 49'22	
min. Earth dist.	14201 Jul 08 13:40	28° $\mathbb{B}$ 07'08	8.54288 AU	evening set	14208 Mar 15 11:45	19° $\mathbb{Y}$ 37'53	
direct	14201 Sep 14 16:06	24° $\mathbb{B}$ 43'12					
	14201 Dec 06 13:20	0° $\approx$		conjunction	14208 Apr 02 03:07	21° $\mathbb{Y}$ 49'16	0°28'00
evening set	14201 Dec 26 05:20	2° $\approx$ 17'09		minimum elong	14208 Apr 02 03:08	21° $\mathbb{Y}$ 49'17	0°27'42
conjunction	14202 Jan 12 20:13	4° $\approx$ 26'24	1°45'04	max. Earth dist.	14208 Apr 01 12:27	21° $\mathbb{Y}$ 44'41	10.42459 AU
minimum elong	14202 Jan 12 20:13	4° $\approx$ 26'24	1°46'00	morning rise	14208 Apr 19 15:56	23° $\mathbb{Y}$ 59'59	
max. Earth dist.	14202 Jan 12 17:15	4° $\approx$ 25'29	10.52832 AU		14208 Jun 17 03:08	0° $\mathbb{B}$	
morning rise	14202 Jan 30 11:53	6° $\approx$ 35'54		retrograde	14208 Jul 30 12:33	1° $\mathbb{B}$ 38'06	
retrograde	14202 May 14 02:49	14° $\approx$ 14'55			14208 Sep 12 21:50	30° $\mathbb{R}$ $\mathbb{Y}$	
opposition	14202 Jul 21 09:53	10° $\approx$ 50'14	2°09'49	opposition	14208 Oct 06 03:47	28° $\mathbb{Y}$ 15'14	0°20'18
min. Earth dist.	14202 Jul 21 13:01	10° $\approx$ 49'37	8.51621 AU	min. Earth dist.	14208 Oct 06 14:52	28° $\mathbb{Y}$ 13'03	8.42435 AU
direct	14202 Sep 27 15:05	7° $\approx$ 25'23		direct	14208 Dec 14 05:26	24° $\mathbb{Y}$ 48'47	
evening set	14203 Jan 08 15:08	15° $\approx$ 02'30			14209 Mar 06 15:28	0° $\mathbb{B}$	
	14203 Jan 08 06:52	15° $\approx$		evening set	14209 Mar 29 01:57	2° $\mathbb{B}$ 38'00	
conjunction	14203 Jan 26 06:56	17° $\approx$ 12'22	1°43'34	conjunction	14209 Apr 15 15:42	4° $\mathbb{B}$ 49'06	0°04'33
minimum elong	14203 Jan 26 06:57	17° $\approx$ 12'22	1°44'23	minimum elong	14209 Apr 15 15:42	4° $\mathbb{B}$ 49'06	0°04'02
max. Earth dist.	14203 Jan 26 01:31	17° $\approx$ 10'41	10.50213 AU	behind sun begin	14209 Apr 15 08:36	4° $\mathbb{B}$ 46'54	

behind sun end	14209 Apr 15 22:48	4°♄51'18		max. Earth dist.	14215 Jul 02 19:00	22°♄01'26	10.53143 AU
max. Earth dist.	14209 Apr 15 01:48	4°♄44'46	10.42545 AU	morning rise	14215 Jul 19 18:17	24°♄07'41	
morning rise	14209 May 03 02:34	6°♄59'26			14215 Sep 15 00:16	0°♄	
desc. node	14209 Jun 26 17:19	12°♄42'22		retrograde	14215 Oct 30 00:57	1°♄42'20	
retrograde	14209 Aug 12 20:07	14°♄37'00			14215 Dec 15 09:50	30°♄	
opposition	14209 Oct 19 12:15	11°♄14'33	-0°09'08	opposition	14216 Jan 06 21:53	28°♄20'48	-2°08'33
min. Earth dist.	14209 Oct 19 22:58	11°♄12'27	8.42825 AU	min. Earth dist.	14216 Jan 06 21:45	28°♄20'49	8.54380 AU
direct	14209 Dec 27 16:35	7°♄48'22		direct	14216 Mar 16 09:26	24°♄57'43	
	14210 Apr 06 11:12	15°♄			14216 Jun 05 13:45	0°♄	
evening set	14210 Apr 11 14:58	15°♄37'39		evening set	14216 Jun 27 18:18	2°♄35'26	
conjunction	14210 Apr 29 02:32	17°♄48'14	-0°19'14	conjunction	14216 Jul 14 16:23	4°♄41'03	-1°45'10
minimum elong	14210 Apr 29 02:32	17°♄48'13	0°19'57	minimum elong	14216 Jul 14 16:23	4°♄41'03	1°46'05
max. Earth dist.	14210 Apr 28 13:22	17°♄44'06	10.43245 AU	max. Earth dist.	14216 Jul 14 17:23	4°♄41'22	10.55359 AU
morning rise	14210 May 16 11:11	19°♄58'01		morning rise	14216 Jul 31 13:52	6°♄46'28	
retrograde	14210 Aug 26 02:27	27°♄35'00		retrograde	14216 Nov 11 01:55	14°♄20'56	
opposition	14210 Nov 01 21:49	24°♄12'56	-0°38'03	opposition	14217 Jan 19 05:30	10°♄59'14	-2°09'49
min. Earth dist.	14210 Nov 02 08:01	24°♄10'56	8.43835 AU	min. Earth dist.	14217 Jan 19 03:20	10°♄59'38	8.56535 AU
direct	14211 Jan 10 05:14	20°♄47'07		direct	14217 Mar 29 15:29	7°♄36'41	
evening set	14211 Apr 25 02:07	28°♄35'47			14217 Jul 08 23:22	15°♄	
	14211 May 06 09:34	0°♄		evening set	14217 Jul 10 13:13	15°♄11'29	
conjunction	14211 May 12 11:07	0°♄45'37	-0°41'54	conjunction	14217 Jul 27 10:38	17°♄16'35	-1°43'43
minimum elong	14211 May 12 11:06	0°♄45'36	0°42'47	minimum elong	14217 Jul 27 10:40	17°♄16'36	1°44'31
max. Earth dist.	14211 May 11 23:04	0°♄41'50	10.44529 AU	max. Earth dist.	14217 Jul 27 14:24	17°♄17'45	10.57443 AU
morning rise	14211 May 29 17:27	2°♄54'41		morning rise	14217 Aug 13 08:09	19°♄21'42	
retrograde	14211 Sep 08 07:49	10°♄31'07		retrograde	14217 Nov 24 02:04	26°♄56'01	
opposition	14211 Nov 15 07:55	7°♄09'20	-1°04'58	opposition	14218 Feb 01 11:45	23°♄34'00	-2°04'50
min. Earth dist.	14211 Nov 15 16:48	7°♄07'36	8.45400 AU	min. Earth dist.	14218 Feb 01 06:49	23°♄34'57	8.58528 AU
direct	14212 Jan 23 18:38	3°♄43'59		direct	14218 Apr 11 20:26	20°♄11'55	
evening set	14212 May 07 11:05	11°♄31'22		evening set	14218 Jul 23 06:02	27°♄43'42	
conjunction	14212 May 24 17:24	13°♄40'20	-1°02'24	conjunction	14218 Aug 09 03:36	29°♄48'31	-1°37'20
minimum elong	14212 May 24 17:22	13°♄40'19	1°03'23	minimum elong	14218 Aug 09 03:38	29°♄48'31	1°37'58
max. Earth dist.	14212 May 24 07:23	13°♄37'11	10.46313 AU	max. Earth dist.	14218 Aug 09 10:51	29°♄50'45	10.59346 AU
morning rise	14212 Jun 10 21:18	15°♄48'34			14218 Aug 10 16:40	0°♄	
retrograde	14212 Sep 20 12:57	23°♄24'25		morning rise	14218 Aug 26 01:42	1°♄53'28	
opposition	14212 Nov 27 18:04	20°♄02'51	-1°28'29	retrograde	14218 Dec 07 03:19	9°♄27'34	
min. Earth dist.	14212 Nov 28 00:43	20°♄01'33	8.47412 AU	opposition	14219 Feb 14 16:09	6°♄05'10	-1°53'57
direct	14213 Feb 05 06:47	16°♄38'01		min. Earth dist.	14219 Feb 14 08:27	6°♄06'38	8.60297 AU
evening set	14213 May 20 17:17	24°♄23'31		direct	14219 Apr 24 21:51	2°♄43'28	
				evening set	14219 Aug 04 21:07	10°♄12'19	
conjunction	14213 Jun 06 21:01	26°♄31'32	-1°19'41	conjunction	14219 Aug 21 19:24	12°♄17'00	-1°26'22
minimum elong	14213 Jun 06 20:59	26°♄31'32	1°20'44	minimum elong	14219 Aug 21 19:26	12°♄17'01	1°26'48
max. Earth dist.	14213 Jun 06 14:08	26°♄29'23	10.48471 AU	max. Earth dist.	14219 Aug 22 05:45	12°♄20'12	10.60998 AU
morning rise	14213 Jun 23 22:32	28°♄38'55		morning rise	14219 Sep 07 18:37	14°♄21'58	
	14213 Jul 05 03:54	0°♄		retrograde	14219 Dec 20 02:47	21°♄55'52	
retrograde	14213 Oct 03 17:13	6°♄14'15		opposition	14220 Feb 27 19:02	18°♄33'02	-1°37'45
opposition	14213 Dec 11 04:04	2°♄52'45	-1°47'28	min. Earth dist.	14220 Feb 27 09:09	18°♄34'55	8.61778 AU
min. Earth dist.	14213 Dec 11 07:55	2°♄52'00	8.49714 AU	direct	14220 May 06 20:13	15°♄11'37	
	14214 Jan 24 16:12	30°♄		evening set	14220 Aug 16 11:00	22°♄37'50	
direct	14214 Feb 18 17:58	29°♄28'30					
	14214 Mar 15 13:14	0°♄		conjunction	14220 Sep 02 10:20	24°♄42'31	-1°11'23
evening set	14214 Jun 02 20:21	7°♄11'36		minimum elong	14220 Sep 02 10:22	24°♄42'32	1°11'36
conjunction	14214 Jun 19 21:48	9°♄18'42	-1°32'56	max. Earth dist.	14220 Sep 02 22:40	24°♄46'19	10.62334 AU
minimum elong	14214 Jun 19 21:46	9°♄18'41	1°33'59	morning rise	14220 Sep 19 11:13	26°♄47'39	
max. Earth dist.	14214 Jun 19 18:13	9°♄17'35	10.50815 AU		14220 Oct 17 16:36	0°♄	
morning rise	14214 Jul 06 21:18	11°♄25'16		retrograde	14221 Jan 01 01:04	4°♄21'26	
retrograde	14214 Oct 16 21:12	19°♄00'12		opposition	14221 Mar 11 20:14	0°♄58'10	-1°17'02
opposition	14214 Dec 24 13:26	15°♄38'42	-2°01'01	min. Earth dist.	14221 Mar 11 09:20	1°♄00'16	8.62914 AU
min. Earth dist.	14214 Dec 24 15:07	15°♄38'22	8.52092 AU		14221 Mar 24 15:47	30°♄	
direct	14215 Mar 04 03:20	12°♄15'02		direct	14221 May 19 17:48	27°♄36'56	
evening set	14215 Jun 15 20:41	19°♄55'31			14221 Jul 12 11:54	0°♄	
				evening set	14221 Aug 29 00:25	5°♄00'58	
conjunction	14215 Jul 02 20:10	22°♄01'47	-1°41'33	conjunction	14221 Sep 15 01:10	7°♄05'47	-0°53'06
minimum elong	14215 Jul 02 20:10	22°♄01'47	1°42'33				

minimum elong	14221 Sep 15 01:12	7° $\Omega$ 05'48	0°53'05	evening set	14227 Nov 12 09:23	19° $\nearrow$ 22'38	
max. Earth dist.	14221 Sep 15 14:15	7° $\Omega$ 09'49	10.63300 AU				
morning rise	14221 Oct 02 04:08	9° $\Omega$ 11'13		conjunction	14227 Nov 29 20:20	21° $\nearrow$ 30'02	1°13'15
retrograde	14222 Jan 13 23:26	16° $\Omega$ 45'00		minimum elong	14227 Nov 29 20:18	21° $\nearrow$ 30'02	1°14'16
opposition	14222 Mar 24 19:36	13° $\Omega$ 21'19	-0°52'46	max. Earth dist.	14227 Nov 30 04:56	21° $\nearrow$ 32'40	10.59644 AU
min. Earth dist.	14222 Mar 24 08:13	13° $\Omega$ 23'30	8.63654 AU	morning rise	14227 Dec 17 09:44	23° $\nearrow$ 38'09	
direct	14222 Jun 01 13:18	10° $\Omega$ 00'09			14228 Feb 20 20:30	0° $\searrow$	
evening set	14222 Sep 10 13:56	17° $\Omega$ 22'34		retrograde	14228 Mar 30 16:30	1° $\searrow$ 15'31	
					14228 May 08 23:19	30° $\nwarrow$	
conjunction	14222 Sep 27 16:28	19° $\Omega$ 27'40	-0°32'23	opposition	14228 Jun 07 19:29	27° $\nwarrow$ 50'34	1°40'13
minimum elong	14222 Sep 27 16:30	19° $\Omega$ 27'40	0°32'08	min. Earth dist.	14228 Jun 07 13:11	27° $\nwarrow$ 51'48	8.58792 AU
max. Earth dist.	14222 Sep 28 06:23	19° $\Omega$ 31'56	10.63838 AU	direct	14228 Aug 14 21:13	24° $\nwarrow$ 27'54	
morning rise	14222 Oct 14 21:34	21° $\Omega$ 33'29			14228 Nov 07 23:38	0° $\searrow$	
retrograde	14223 Jan 26 20:24	29° $\Omega$ 07'25		evening set	14228 Nov 24 11:14	1° $\searrow$ 55'18	
opposition	14223 Apr 06 17:30	25° $\Omega$ 43'21	-0°26'06				
min. Earth dist.	14223 Apr 06 05:32	25° $\Omega$ 45'39	8.63944 AU	conjunction	14228 Dec 11 23:35	4° $\searrow$ 03'16	1°27'51
direct	14223 Jun 14 07:36	22° $\Omega$ 22'11		minimum elong	14228 Dec 11 23:34	4° $\searrow$ 03'15	1°28'54
evening set	14223 Sep 23 04:12	29° $\Omega$ 43'39		max. Earth dist.	14228 Dec 12 06:21	4° $\searrow$ 05'20	10.57746 AU
	14223 Sep 25 10:39	0° $\mathbb{M}$		morning rise	14228 Dec 29 13:52	6° $\searrow$ 11'50	
				retrograde	14229 Apr 12 18:32	13° $\searrow$ 50'04	
conjunction	14223 Oct 10 08:40	1° $\mathbb{M}$ 49'06	-0°10'13	opposition	14229 Jun 20 15:14	10° $\searrow$ 25'12	1°55'47
minimum elong	14223 Oct 10 08:40	1° $\mathbb{M}$ 49'06	0°09'44	min. Earth dist.	14229 Jun 20 10:40	10° $\searrow$ 26'05	8.56820 AU
behind sun begin	14223 Oct 10 02:50	1° $\mathbb{M}$ 47'20		direct	14229 Aug 27 16:27	7° $\searrow$ 02'02	
behind sun end	14223 Oct 10 14:31	1° $\mathbb{M}$ 50'53		evening set	14229 Dec 07 16:10	14° $\searrow$ 32'16	
max. Earth dist.	14223 Oct 10 23:29	1° $\mathbb{M}$ 53'38	10.63898 AU				
morning rise	14223 Oct 27 15:42	3° $\mathbb{M}$ 55'20		conjunction	14229 Dec 25 05:41	16° $\searrow$ 40'48	1°38'17
retrograde	14224 Feb 08 18:14	11° $\mathbb{M}$ 29'41		minimum elong	14229 Dec 25 05:40	16° $\searrow$ 40'48	1°39'19
asc. node	14224 Mar 26 10:32	9° $\mathbb{M}$ 47'42		max. Earth dist.	14229 Dec 25 09:41	16° $\searrow$ 42'02	10.55681 AU
opposition	14224 Apr 18 14:09	8° $\mathbb{M}$ 05'16	0°01'46	morning rise	14230 Jan 11 20:34	18° $\searrow$ 49'48	
min. Earth dist.	14224 Apr 18 01:40	8° $\mathbb{M}$ 07'40	8.63757 AU	retrograde	14230 Apr 25 21:36	26° $\searrow$ 28'45	
direct	14224 Jun 26 01:37	4° $\mathbb{M}$ 44'00		opposition	14230 Jul 03 11:46	23° $\searrow$ 04'03	2°05'49
evening set	14224 Oct 04 20:03	12° $\mathbb{M}$ 05'14		min. Earth dist.	14230 Jul 03 09:41	23° $\searrow$ 04'28	8.54725 AU
				direct	14230 Sep 09 13:12	19° $\searrow$ 40'23	
conjunction	14224 Oct 22 02:23	14° $\mathbb{M}$ 11'07	0°12'33	evening set	14230 Dec 20 23:47	27° $\searrow$ 13'38	
minimum elong	14224 Oct 22 02:22	14° $\mathbb{M}$ 11'07	0°13'13				
behind sun begin	14224 Oct 21 22:11	14° $\mathbb{M}$ 09'51		conjunction	14231 Jan 07 14:14	29° $\searrow$ 22'45	1°44'00
behind sun end	14224 Oct 22 06:32	14° $\mathbb{M}$ 12'23		minimum elong	14231 Jan 07 14:14	29° $\searrow$ 22'45	1°44'58
max. Earth dist.	14224 Oct 22 17:13	14° $\mathbb{M}$ 15'39	10.63475 AU	max. Earth dist.	14231 Jan 07 14:36	29° $\searrow$ 22'51	10.53549 AU
	14224 Oct 28 18:12	15° $\mathbb{M}$			14231 Jan 12 15:21	0° $\approx$	
morning rise	14224 Nov 08 11:17	16° $\mathbb{M}$ 17'48		morning rise	14231 Jan 25 05:39	1° $\approx$ 32'10	
retrograde	14225 Feb 20 17:51	23° $\mathbb{M}$ 52'43		retrograde	14231 May 09 02:00	9° $\approx$ 11'35	
opposition	14225 May 01 09:54	20° $\mathbb{M}$ 28'02	0°29'34	opposition	14231 Jul 16 09:33	5° $\approx$ 47'08	2°09'48
min. Earth dist.	14225 Apr 30 22:01	20° $\mathbb{M}$ 30'20	8.63105 AU	min. Earth dist.	14231 Jul 16 10:36	5° $\approx$ 46'55	8.52604 AU
direct	14225 Jul 08 17:13	17° $\mathbb{M}$ 06'33		direct	14231 Sep 22 11:27	2° $\approx$ 22'54	
evening set	14225 Oct 17 13:58	24° $\mathbb{M}$ 28'19		evening set	14232 Jan 03 09:34	9° $\approx$ 59'10	
conjunction	14225 Nov 03 21:57	26° $\mathbb{M}$ 34'41	0°34'40	conjunction	14232 Jan 21 00:51	12° $\approx$ 08'50	1°44'38
minimum elong	14225 Nov 03 21:55	26° $\mathbb{M}$ 34'40	0°35'30	minimum elong	14232 Jan 21 00:52	12° $\approx$ 08'50	1°45'29
max. Earth dist.	14225 Nov 04 11:07	26° $\mathbb{M}$ 38'42	10.62591 AU	max. Earth dist.	14232 Jan 20 21:07	12° $\approx$ 07'41	10.51443 AU
morning rise	14225 Nov 21 08:39	28° $\mathbb{M}$ 41'51		morning rise	14232 Feb 07 16:43	14° $\approx$ 18'40	
	14225 Dec 02 10:39	0° $\nearrow$			14232 Feb 13 10:45	15° $\approx$	
retrograde	14226 Mar 05 17:08	6° $\nearrow$ 17'28		retrograde	14232 May 21 05:51	21° $\approx$ 58'18	
opposition	14226 May 14 05:09	2° $\nearrow$ 52'37	0°56'03	opposition	14232 Jul 28 08:33	18° $\approx$ 34'05	2°07'24
min. Earth dist.	14226 May 13 19:02	2° $\nearrow$ 54'35	8.62016 AU	min. Earth dist.	14232 Jul 28 12:41	18° $\approx$ 33'16	8.50528 AU
	14226 Jun 27 15:57	30° $\nwarrow$		direct	14232 Oct 04 13:10	15° $\approx$ 09'18	
direct	14226 Jul 21 09:00	29° $\mathbb{M}$ 30'48		evening set	14233 Jan 15 21:22	22° $\approx$ 48'28	
	14226 Aug 13 23:38	0° $\nearrow$					
evening set	14226 Oct 30 10:20	6° $\nearrow$ 53'51		conjunction	14233 Feb 02 13:26	24° $\approx$ 58'39	1°40'05
				minimum elong	14233 Feb 02 13:28	24° $\approx$ 58'39	1°40'46
conjunction	14226 Nov 16 19:49	9° $\nearrow$ 00'43	0°55'14	max. Earth dist.	14233 Feb 02 06:15	24° $\approx$ 56'26	10.49410 AU
minimum elong	14226 Nov 16 19:47	9° $\nearrow$ 00'42	0°56'10	morning rise	14233 Feb 20 05:27	27° $\approx$ 08'51	
max. Earth dist.	14226 Nov 17 06:36	9° $\nearrow$ 04'01	10.61287 AU		14233 Mar 16 22:36	0° $\mathbb{H}$	
morning rise	14226 Dec 04 08:03	11° $\nearrow$ 08'21		retrograde	14233 Jun 03 09:28	4° $\mathbb{H}$ 48'24	
retrograde	14227 Mar 18 15:44	18° $\nearrow$ 44'49		opposition	14233 Aug 10 08:41	1° $\mathbb{H}$ 24'27	1°58'39
opposition	14227 May 27 00:12	15° $\nearrow$ 19'53	1°19'59	min. Earth dist.	14233 Aug 10 15:13	1° $\mathbb{H}$ 23'09	8.48525 AU
min. Earth dist.	14227 May 26 16:11	15° $\nearrow$ 21'27	8.60550 AU		14233 Aug 28 15:29	30° $\nwarrow$	
direct	14227 Aug 03 03:05	11° $\nearrow$ 57'39		direct	14233 Oct 17 17:42	27° $\approx$ 59'09	

	14233 Dec 05 17:42	0°♄	retrograde	14239 Aug 20 23:48	22°♄33'58	
evening set	14234 Jan 29 10:31	5°♄41'00	opposition	14239 Oct 27 18:48	19°♄11'40	-0°26'35
			min. Earth dist.	14239 Oct 28 05:41	19°♄09'32	8.43157 AU
conjunction	14234 Feb 16 03:11	7°♄51'41 1°30'30	direct	14240 Jan 05 02:30	15°♄45'34	
minimum elong	14234 Feb 16 03:13	7°♄51'42 1°31'00	evening set	14240 Apr 18 22:48	23°♄34'35	
max. Earth dist.	14234 Feb 15 17:14	7°♄48'36 10.47464 AU				
morning rise	14234 Mar 05 19:02	10°♄02'11	conjunction	14240 May 06 09:04	25°♄44'46	-0°32'59
retrograde	14234 Jun 16 15:52	17°♄41'35	minimum elong	14240 May 06 09:03	25°♄44'46	0°33'48
opposition	14234 Aug 23 10:25	14°♄17'55 1°43'54	max. Earth dist.	14240 May 05 20:14	25°♄40'45	10.43594 AU
min. Earth dist.	14234 Aug 23 18:50	14°♄16'15 8.46616 AU	morning rise	14240 May 23 16:25	27°♄54'11	
direct	14234 Oct 30 22:02	10°♄52'14		14240 Jun 10 07:13	0°♄	
evening set	14235 Feb 12 00:35	18°♄36'32	retrograde	14240 Sep 02 06:03	5°♄30'52	
			opposition	14240 Nov 09 04:29	2°♄08'42	-0°54'29
conjunction	14235 Mar 01 17:29	20°♄47'38 1°16'18	min. Earth dist.	14240 Nov 09 13:44	2°♄06'54	8.44204 AU
minimum elong	14235 Mar 01 17:31	20°♄47'39 1°16'35		14240 Dec 08 20:19	30°♄	
max. Earth dist.	14235 Mar 01 05:24	20°♄43'53 10.45660 AU	direct	14241 Jan 17 15:17	28°♄42'52	
morning rise	14235 Mar 19 08:51	22°♄58'22		14241 Feb 25 17:51	0°♄	
	14235 Jun 03 07:56	0°♄	evening set	14241 May 02 08:29	6°♄30'49	
retrograde	14235 Jun 29 22:42	0°♄37'35				
	14235 Jul 26 16:51	30°♄	conjunction	14241 May 19 16:07	8°♄40'13	-0°54'29
opposition	14235 Sep 05 13:54	27°♄14'14 1°23'49	minimum elong	14241 May 19 16:05	8°♄40'12	0°55'26
min. Earth dist.	14235 Sep 05 23:57	27°♄12'14 8.44916 AU	max. Earth dist.	14241 May 19 05:36	8°♄36'55	10.44897 AU
direct	14235 Nov 13 04:40	23°♄48'15	morning rise	14241 Jun 05 20:54	10°♄48'50	
	14236 Feb 12 09:54	0°♄	retrograde	14241 Sep 15 12:24	18°♄24'56	
evening set	14236 Feb 25 15:33	1°♄34'43	opposition	14241 Nov 22 14:30	15°♄02'52	-1°19'32
			min. Earth dist.	14241 Nov 22 22:06	15°♄01'23	8.45784 AU
conjunction	14236 Mar 14 08:10	3°♄46'05 0°58'12	direct	14242 Jan 31 02:05	11°♄37'23	
minimum elong	14236 Mar 14 08:12	3°♄46'05 0°58'15	evening set	14242 May 15 15:35	19°♄23'42	
max. Earth dist.	14236 Mar 13 18:01	3°♄41'40 10.44162 AU				
morning rise	14236 Mar 31 22:46	5°♄56'57	conjunction	14242 Jun 01 20:27	21°♄32'10	-1°13'11
retrograde	14236 Jul 12 05:07	13°♄35'49	minimum elong	14242 Jun 01 20:25	21°♄32'10	1°14'12
opposition	14236 Sep 17 18:58	10°♄12'48 0°59'24	max. Earth dist.	14242 Jun 01 12:11	21°♄29'35	10.46691 AU
min. Earth dist.	14236 Sep 18 06:43	10°♄10'28 8.43615 AU	morning rise	14242 Jun 18 22:54	23°♄39'58	
direct	14236 Nov 25 13:56	6°♄46'36		14242 Aug 21 12:37	0°♄	
evening set	14237 Mar 10 06:46	14°♄34'43	retrograde	14242 Sep 28 15:49	1°♄15'30	
				14242 Nov 06 15:36	30°♄	
conjunction	14237 Mar 27 22:31	16°♄46'09 0°37'04	opposition	14242 Dec 06 00:20	27°♄53'29	-1°40'28
minimum elong	14237 Mar 27 22:32	16°♄46'09 0°36'53	min. Earth dist.	14242 Dec 06 06:10	27°♄52'21	8.47821 AU
max. Earth dist.	14237 Mar 27 06:42	16°♄41'13 10.43136 AU	direct	14243 Feb 13 13:42	24°♄28'27	
morning rise	14237 Apr 14 11:57	18°♄56'57		14243 May 10 03:24	0°♄	
retrograde	14237 Jul 25 11:51	26°♄35'22	evening set	14243 May 28 19:43	2°♄12'37	
opposition	14237 Oct 01 01:48	23°♄12'39 0°31'54				
min. Earth dist.	14237 Oct 01 14:24	23°♄10'10 8.42850 AU	conjunction	14243 Jun 14 22:02	4°♄20'09	-1°28'08
direct	14237 Dec 09 00:47	19°♄46'22	minimum elong	14243 Jun 14 22:00	4°♄20'08	1°29'12
evening set	14238 Mar 23 21:22	27°♄35'27	max. Earth dist.	14243 Jun 14 16:06	4°♄18'17	10.48890 AU
			morning rise	14243 Jul 01 22:30	6°♄27'07	
conjunction	14238 Apr 10 11:41	29°♄46'42 0°14'03	retrograde	14243 Oct 11 18:21	14°♄02'09	
minimum elong	14238 Apr 10 11:42	29°♄46'42 0°13'37	opposition	14243 Dec 19 09:38	10°♄40'08	-1°56'18
behind sun begin	14238 Apr 10 07:49	29°♄45'30	min. Earth dist.	14243 Dec 19 12:56	10°♄39'30	8.50198 AU
behind sun end	14238 Apr 10 15:34	29°♄47'54	direct	14244 Feb 27 00:28	7°♄15'39	
max. Earth dist.	14238 Apr 09 19:32	29°♄41'39 10.42682 AU	evening set	14244 Jun 09 20:50	14°♄57'15	
	14238 Apr 12 06:10	0°♄				
morning rise	14238 Apr 27 23:31	1°♄57'14	conjunction	14244 Jun 26 21:02	17°♄03'52	-1°38'41
retrograde	14238 Aug 07 18:11	9°♄35'07	minimum elong	14244 Jun 26 21:01	17°♄03'52	1°39'43
opposition	14238 Oct 14 09:53	6°♄12'39 0°02'43	max. Earth dist.	14244 Jun 26 18:32	17°♄03'06	10.51368 AU
min. Earth dist.	14238 Oct 14 22:12	6°♄10'13 8.42694 AU	morning rise	14244 Jul 13 19:50	19°♄10'05	
desc. node	14238 Nov 17 13:48	3°♄47'27	retrograde	14244 Oct 23 21:13	26°♄44'39	
direct	14238 Dec 22 13:10	2°♄46'24	opposition	14244 Dec 31 18:05	23°♄22'37	-2°06'19
evening set	14239 Apr 06 10:54	10°♄35'47	min. Earth dist.	14244 Dec 31 18:06	23°♄22'37	8.52782 AU
			direct	14245 Mar 11 08:35	19°♄58'47	
conjunction	14239 Apr 23 23:23	12°♄46'37 -0°09'47	evening set	14245 Jun 22 18:56	27°♄37'25	
minimum elong	14239 Apr 23 23:23	12°♄46'37 0°10'25				
behind sun begin	14239 Apr 23 17:45	12°♄44'52	conjunction	14245 Jul 09 17:38	29°♄43'17	-1°44'22
behind sun end	14239 Apr 24 05:01	12°♄48'21	minimum elong	14245 Jul 09 17:38	29°♄43'16	1°45'20
max. Earth dist.	14239 Apr 23 08:20	12°♄41'54 10.42840 AU	max. Earth dist.	14245 Jul 09 19:06	29°♄43'44	10.53999 AU
morning rise	14239 May 11 09:10	14°♄56'41		14245 Jul 11 23:16	0°♄	
	14239 May 11 20:01	15°♄	morning rise	14245 Jul 26 15:19	1°♄48'51	

retrograde	14245 Nov 05 23:05	9°♏22'59	min. Earth dist.	14252 Mar 30 23:26	20°♑41'18	8.66737 AU
opposition	14246 Jan 14 01:26	6°♏00'52 -2°10'08	direct	14252 Jun 08 03:32	17°♑18'23	
min. Earth dist.	14246 Jan 13 22:13	6°♏01'29 8.55447 AU	evening set	14252 Sep 17 02:14	24°♑38'53	
direct	14246 Mar 24 14:01	2°♏37'42				
evening set	14246 Jul 05 14:11	10°♏13'12	conjunction	14252 Oct 04 05:35	26°♑43'47 -0°19'50	
			minimum elong	14252 Oct 04 05:36	26°♑43'48 0°19'27	
conjunction	14246 Jul 22 11:59	12°♏18'25 -1°44'59	max. Earth dist.	14252 Oct 04 20:46	26°♑48'25 10.66945 AU	
minimum elong	14246 Jul 22 12:00	12°♏18'25 1°45'50	morning rise	14252 Oct 21 11:34	28°♑49'26	
max. Earth dist.	14246 Jul 22 17:04	12°♏20'00 10.56652 AU		14252 Oct 31 11:24	0°♎	
morning rise	14246 Aug 08 09:16	14°♏23'31	retrograde	14253 Feb 02 13:00	6°♎22'13	
	14246 Aug 13 10:08	15°♏	opposition	14253 Apr 13 09:03	2°♎58'44 -0°10'18	
retrograde	14246 Nov 19 00:01	21°♏57'14	min. Earth dist.	14253 Apr 12 20:43	3°♎01'07 8.67024 AU	
opposition	14247 Jan 27 07:24	18°♏35'01 -2°07'41		14253 May 31 08:20	30°♎♑	
min. Earth dist.	14247 Jan 27 01:45	18°♏36'06 8.58058 AU	direct	14253 Jun 20 21:06	29°♑38'19	
direct	14247 Apr 06 17:32	15°♏12'31		14253 Jul 11 06:16	0°♎	
evening set	14247 Jul 18 07:11	22°♏44'48	asc. node	14253 Aug 31 09:49	3°♎41'14	
			evening set	14253 Sep 29 16:38	6°♎58'13	
conjunction	14247 Aug 04 04:35	24°♏49'34 -1°40'36	conjunction	14253 Oct 16 21:46	9°♎03'30 0°02'47	
minimum elong	14247 Aug 04 04:37	24°♏49'35 1°41'17	minimum elong	14253 Oct 16 21:47	9°♎03'30 0°03'22	
max. Earth dist.	14247 Aug 04 12:03	24°♏51'53 10.59198 AU	behind sun begin	14253 Oct 16 14:42	9°♎01'22	
morning rise	14247 Aug 21 02:15	26°♏54'24	behind sun end	14253 Oct 17 04:52	9°♎05'38	
	14247 Sep 17 02:04	0°♎	max. Earth dist.	14253 Oct 17 11:44	9°♎07'45 10.66911 AU	
retrograde	14247 Dec 02 00:13	4°♎27'41	morning rise	14253 Nov 03 05:50	11°♎09'35	
opposition	14248 Feb 09 11:48	1°♎05'20 -1°59'10		14253 Dec 08 01:25	15°♎	
min. Earth dist.	14248 Feb 09 04:26	1°♎06'45 8.60498 AU	retrograde	14254 Feb 15 10:16	18°♎42'46	
	14248 Feb 23 23:11	30°♎♑	opposition	14254 Apr 26 04:13	15°♎19'03 0°17'33	
direct	14248 Apr 18 18:23	27°♏43'26	min. Earth dist.	14254 Apr 25 17:08	15°♎21'11 8.66639 AU	
	14248 Jun 10 09:45	0°♎		14254 Apr 30 07:01	15°♎♎	
evening set	14248 Jul 29 22:10	5°♎12'38	direct	14254 Jul 03 13:03	11°♎58'26	
			evening set	14254 Sep 02 12:00	15°♎	
conjunction	14248 Aug 15 19:50	7°♎17'07 -1°31'29		14254 Oct 12 08:45	19°♎18'34	
minimum elong	14248 Aug 15 19:52	7°♎17'07 1°32'00	conjunction	14254 Oct 29 15:46	21°♎24'19 0°25'09	
max. Earth dist.	14248 Aug 16 05:24	7°♎20'04 10.61536 AU	minimum elong	14254 Oct 29 15:45	21°♎24'18 0°25'54	
morning rise	14248 Sep 01 18:32	9°♎21'51	max. Earth dist.	14254 Oct 30 04:42	21°♎28'15 10.66163 AU	
retrograde	14248 Dec 13 21:57	16°♎54'47	morning rise	14254 Nov 16 01:34	23°♎30'52	
opposition	14249 Feb 21 14:37	13°♎32'16 -1°45'06		14255 Jan 23 05:03	0°♎♑	
min. Earth dist.	14249 Feb 21 05:20	13°♎34'02 8.62675 AU	retrograde	14255 Feb 28 07:48	1°♎♑04'48	
direct	14249 May 01 17:41	10°♎10'53		14255 Apr 05 21:23	30°♎♎	
evening set	14249 Aug 11 11:33	17°♎37'13	opposition	14255 May 08 22:47	27°♎40'49 0°44'39	
			min. Earth dist.	14255 May 08 12:35	27°♎42'48 8.65550 AU	
conjunction	14249 Aug 28 10:12	19°♎41'35 -1°18'07	direct	14255 Jul 16 05:03	24°♎19'54	
minimum elong	14249 Aug 28 10:14	19°♎41'36 1°18'25		14255 Oct 10 15:53	0°♎♑	
max. Earth dist.	14249 Aug 28 22:14	19°♎45'18 10.63567 AU	evening set	14255 Oct 25 03:00	1°♎♑41'05	
morning rise	14249 Sep 14 10:21	21°♎46'23				
retrograde	14249 Dec 26 19:52	29°♎19'06	conjunction	14255 Nov 11 11:45	3°♎47'22 0°46'26	
opposition	14250 Mar 06 15:37	25°♎56'20 -1°26'12	minimum elong	14255 Nov 11 11:43	3°♎47'21 0°47'19	
min. Earth dist.	14250 Mar 06 04:17	25°♎58'30 8.64493 AU	max. Earth dist.	14255 Nov 11 23:27	3°♎50'56 10.64746 AU	
direct	14250 May 14 16:16	22°♎35'25	morning rise	14255 Nov 28 23:01	5°♎54'25	
evening set	14250 Aug 24 00:20	29°♎59'15	retrograde	14256 Mar 12 06:41	13°♎29'21	
	14250 Aug 24 02:50	0°♑	opposition	14256 May 20 17:08	10°♎05'07 1°09'45	
conjunction	14250 Sep 10 00:25	2°♑03'42 -1°01'10	min. Earth dist.	14256 May 20 08:14	10°♎06'51 8.63871 AU	
minimum elong	14250 Sep 10 00:27	2°♑03'42 1°01'14	direct	14256 Jul 27 21:31	6°♎43'45	
max. Earth dist.	14250 Sep 10 14:54	2°♑08'09 10.65195 AU	evening set	14256 Nov 06 00:06	14°♎06'40	
morning rise	14250 Sep 27 02:16	4°♑08'40				
retrograde	14251 Jan 08 18:35	11°♑41'14	conjunction	14256 Nov 23 10:20	16°♎13'31 1°05'38	
opposition	14251 Mar 19 14:45	8°♑18'15 -1°03'22	minimum elong	14256 Nov 23 10:18	16°♎13'31 1°06'37	
min. Earth dist.	14251 Mar 19 01:51	8°♑20'43 8.65869 AU	max. Earth dist.	14256 Nov 23 19:44	16°♎16'23 10.62810 AU	
direct	14251 May 27 10:55	4°♑57'40	morning rise	14256 Dec 10 22:56	18°♎21'05	
evening set	14251 Sep 05 13:03	12°♑19'31	retrograde	14257 Mar 25 07:24	25°♎57'01	
			opposition	14257 Jun 02 11:29	22°♎32'37 1°31'42	
conjunction	14251 Sep 22 14:44	14°♑24'09 -0°41'26	min. Earth dist.	14257 Jun 02 04:51	22°♎33'54 8.61752 AU	
minimum elong	14251 Sep 22 14:45	14°♑24'10 0°41'17	direct	14257 Aug 09 12:58	19°♎10'37	
max. Earth dist.	14251 Sep 23 06:17	14°♑28'55 10.66344 AU	evening set	14257 Nov 19 00:05	26°♎35'54	
morning rise	14251 Oct 09 18:33	16°♑29'26				
retrograde	14252 Jan 21 16:21	24°♑02'00	conjunction	14257 Dec 06 11:36	28°♎43'19 1°21'49	
opposition	14252 Mar 31 12:34	20°♑38'46 -0°37'41				

minimum elong	14257 Dec 06 11:34	28°  43'19	1°22'51	conjunction	14264 Feb 23 20:32	15°  08'15	1°23'22
max. Earth dist.	14257 Dec 06 17:29	28°  45'08	10.60500 AU	minimum elong	14264 Feb 23 20:35	15°  08'15	1°23'45
	14257 Dec 16 22:53	0°  3		max. Earth dist.	14264 Feb 23 08:23	15°  04'28	10.45525 AU
morning rise	14257 Dec 24 01:21	0°  35'26		morning rise	14264 Mar 12 12:21	17°  18'57	
retrograde	14258 Apr 07 07:18	8°  328'21		retrograde	14264 Jun 23 04:03	24°  58'13	
opposition	14258 Jun 15 06:19	5°  303'47	1°49'25	opposition	14264 Aug 29 22:02	21°  34'10	1°33'41
min. Earth dist.	14258 Jun 15 02:39	5°  304'30	8.59322 AU	min. Earth dist.	14264 Aug 30 08:06	21°  32'10	8.44740 AU
direct	14258 Aug 22 07:17	1°  341'05		direct	14264 Nov 06 12:26	18°  07'43	
evening set	14258 Dec 02 02:46	9°  309'10		evening set	14265 Feb 18 18:05	25°  53'10	
conjunction	14258 Dec 19 15:28	11°  317'12	1°34'11	conjunction	14265 Mar 08 10:50	28°  04'27	1°06'58
minimum elong	14258 Dec 19 15:27	11°  317'11	1°35'13	minimum elong	14265 Mar 08 10:53	28°  04'28	1°07'06
max. Earth dist.	14258 Dec 19 18:11	11°  318'02	10.57937 AU	max. Earth dist.	14265 Mar 07 21:00	28°  00'09	10.43941 AU
morning rise	14259 Jan 06 06:05	13°  325'47			14265 Mar 23 23:54	0°  Y	
retrograde	14259 Apr 20 07:24	21°  303'39		morning rise	14265 Mar 26 02:02	0°  Y15'19	
opposition	14259 Jun 28 01:50	17°  338'59	2°02'02	retrograde	14265 Jul 06 09:20	7°  Y54'15	
min. Earth dist.	14259 Jun 28 00:36	17°  339'14	8.56699 AU	opposition	14265 Sep 12 01:56	4°  Y30'32	1°11'07
direct	14259 Sep 04 04:23	14°  315'33		min. Earth dist.	14265 Sep 12 12:40	4°  Y28'24	8.43389 AU
evening set	14259 Dec 15 08:13	21°  346'41		direct	14265 Nov 19 20:59	1°  Y03'54	
conjunction	14260 Jan 01 22:07	23°  355'22	1°42'04	evening set	14266 Mar 04 08:43	8°  Y51'09	
minimum elong	14260 Jan 01 22:07	23°  355'22	1°43'04	max. Earth dist.	14266 Mar 21 10:52	10°  Y58'11	10.42892 AU
max. Earth dist.	14260 Jan 01 22:10	23°  355'23	10.55245 AU	conjunction	14266 Mar 22 01:01	11°  Y02'36	0°47'07
morning rise	14260 Jan 19 13:20	26°  304'26		minimum elong	14266 Mar 22 01:03	11°  Y02'36	0°47'01
	14260 Feb 23 21:11	0°  ≈		morning rise	14266 Apr 08 15:07	13°  Y13'27	
retrograde	14260 May 02 10:20	3°  ≈43'04		retrograde	14266 Jul 19 16:38	20°  Y51'58	
opposition	14260 Jul 09 22:13	0°  ≈18'22	2°08'48	opposition	14266 Sep 25 07:35	17°  Y28'38	0°44'53
min. Earth dist.	14260 Jul 09 23:04	0°  ≈18'12	8.54000 AU	min. Earth dist.	14266 Sep 25 18:29	17°  Y26'29	8.42608 AU
	14260 Jul 13 19:14	30°  R  3		direct	14266 Dec 03 05:41	14°  Y02'01	
direct	14260 Sep 16 01:24	26°  354'11		evening set	14267 Mar 17 23:08	21°  Y50'29	
	14260 Nov 16 15:36	0°  ≈		conjunction	14267 Apr 04 14:24	24°  Y01'52	0°24'50
evening set	14260 Dec 27 16:12	4°  ≈28'29		minimum elong	14267 Apr 04 14:25	24°  Y01'52	0°24'30
conjunction	14261 Jan 14 07:13	6°  ≈37'49	1°45'02	max. Earth dist.	14267 Apr 04 00:12	23°  Y57'26	10.42435 AU
minimum elong	14261 Jan 14 07:14	6°  ≈37'49	1°45'57	morning rise	14267 Apr 22 02:59	26°  Y12'33	
max. Earth dist.	14261 Jan 14 04:41	6°  ≈37'02	10.52540 AU		14267 May 25 10:45	0°  8	
morning rise	14261 Jan 31 22:49	8°  ≈47'22		retrograde	14267 Aug 02 00:07	3°  850'33	
	14261 Apr 04 08:32	15°  ≈		opposition	14267 Oct 08 14:47	0°  827'40	0°16'18
retrograde	14261 May 15 13:55	16°  ≈26'31		min. Earth dist.	14267 Oct 09 01:54	0°  825'28	8.42443 AU
	14261 Jun 26 07:10	15°  R  ≈			14267 Oct 14 11:12	30°  R  Y	
opposition	14261 Jul 22 19:52	13°  ≈01'51	2°09'20	direct	14267 Dec 16 15:44	27°  Y01'11	
min. Earth dist.	14261 Jul 22 22:50	13°  ≈01'16	8.51330 AU		14268 Feb 15 09:51	0°  8	
direct	14261 Sep 29 00:46	9°  ≈36'58		evening set	14268 Mar 30 13:08	4°  850'20	
	14261 Dec 21 21:42	15°  ≈		conjunction	14268 Apr 17 02:42	7°  801'23	0°01'17
evening set	14262 Jan 10 02:28	17°  ≈14'26		minimum elong	14268 Apr 17 02:41	7°  801'23	0°00'44
conjunction	14262 Jan 27 18:18	19°  ≈24'22	1°42'50	behind sun begin	14268 Apr 16 19:29	6°  859'09	
minimum elong	14262 Jan 27 18:19	19°  ≈24'23	1°43'36	behind sun end	14268 Apr 17 09:52	7°  803'36	
max. Earth dist.	14262 Jan 27 12:32	19°  ≈22'35	10.49931 AU	max. Earth dist.	14268 Apr 16 12:29	6°  856'57	10.42589 AU
morning rise	14262 Feb 14 10:06	21°  ≈34'22		morning rise	14268 May 04 13:23	9°  811'41	
retrograde	14262 May 28 18:05	29°  ≈13'47		desc. node	14268 May 07 13:12	9°  833'36	
opposition	14262 Aug 04 18:58	25°  ≈49'16	2°03'28		14268 Jun 29 08:32	15°  8	
min. Earth dist.	14262 Aug 05 00:38	25°  ≈48'08	8.48812 AU	retrograde	14268 Aug 14 06:03	16°  849'07	
direct	14262 Oct 12 02:16	22°  ≈23'44			14268 Sep 30 09:41	15°  R  8	
evening set	14263 Jan 23 14:30	0°  804'12		opposition	14268 Oct 20 23:09	13°  826'40	-0°13'06
	14263 Jan 23 00:39	0°  8		min. Earth dist.	14268 Oct 21 10:22	13°  824'28	8.42904 AU
conjunction	14263 Feb 10 06:54	2°  814'41	1°35'31	direct	14268 Dec 29 04:13	10°  800'28	
minimum elong	14263 Feb 10 06:56	2°  814'42	1°36'07		14269 Mar 19 21:36	15°  8	
max. Earth dist.	14263 Feb 09 21:38	2°  811'49	10.47553 AU	evening set	14269 Apr 13 01:56	17°  849'40	
morning rise	14263 Feb 27 22:49	4°  825'05		conjunction	14269 Apr 30 13:12	20°  800'09	-0°22'22
retrograde	14263 Jun 10 23:26	12°  804'32		minimum elong	14269 Apr 30 13:11	20°  800'09	0°23'06
opposition	14263 Aug 17 19:41	8°  840'12	1°51'25	max. Earth dist.	14269 Apr 29 23:26	19°  855'51	10.43354 AU
min. Earth dist.	14263 Aug 18 03:55	8°  838'34	8.46580 AU	morning rise	14269 May 17 21:45	22°  809'52	
direct	14263 Oct 25 05:33	5°  814'08		retrograde	14269 Aug 27 12:12	29°  846'47	
evening set	14264 Feb 06 03:48	12°  857'17		opposition	14269 Nov 03 08:41	26°  824'43	-0°41'48
				min. Earth dist.	14269 Nov 03 18:58	26°  822'42	8.43974 AU

direct	14270 Jan 11 17:03	22°♄58'55		direct	14276 Mar 31 02:26	9°♄45'04	
	14270 Apr 20 00:26	0°♄			14276 Jun 22 01:44	15°♄	
evening set	14270 Apr 26 12:43	0°♄47'26		evening set	14276 Jul 11 21:32	17°♄19'16	
conjunction	14270 May 13 21:27	2°♄57'11 -0°44'46		conjunction	14276 Jul 28 19:01	19°♄24'17 -1°43'02	
minimum elong	14270 May 13 21:25	2°♄57'10 0°45'40		minimum elong	14276 Jul 28 19:03	19°♄24'17 1°43'48	
max. Earth dist.	14270 May 13 09:32	2°♄53'27 10.44697 AU		max. Earth dist.	14276 Jul 28 23:38	19°♄25'43 10.58161 AU	
morning rise	14270 May 31 03:36	5°♄06'10		morning rise	14276 Aug 14 16:30	21°♄29'17	
retrograde	14270 Sep 09 18:13	12°♄42'33		retrograde	14276 Nov 25 11:40	29°♄03'15	
opposition	14270 Nov 16 18:41	9°♄20'46 -1°08'17		opposition	14277 Feb 02 20:50	25°♄41'16 -2°03'34	
min. Earth dist.	14270 Nov 17 02:56	9°♄19'10 8.45598 AU		min. Earth dist.	14277 Feb 02 15:06	25°♄42'22 8.59235 AU	
direct	14271 Jan 25 05:21	5°♄55'29		direct	14277 Apr 13 05:24	22°♄19'19	
evening set	14271 May 09 21:17	13°♄42'40		evening set	14277 Jul 24 13:57	29°♄50'30	
conjunction	14271 May 27 03:27	15°♄51'32 -1°04'52			14277 Jul 25 21:14	0°♄	
minimum elong	14271 May 27 03:25	15°♄51'32 1°05'51		conjunction	14277 Aug 10 11:38	1°♄55'14 -1°36'01	
max. Earth dist.	14271 May 26 18:25	15°♄48'42 10.46542 AU		minimum elong	14277 Aug 10 11:40	1°♄55'14 1°36'37	
morning rise	14271 Jun 13 07:06	17°♄59'42		max. Earth dist.	14277 Aug 10 19:38	1°♄57'42 10.60035 AU	
retrograde	14271 Sep 22 22:48	25°♄35'31		morning rise	14277 Aug 27 09:44	4°♄00'07	
opposition	14271 Nov 30 04:41	22°♄13'56 -1°31'14		retrograde	14277 Dec 08 12:02	11°♄33'53	
min. Earth dist.	14271 Nov 30 10:25	22°♄12'50 8.47677 AU		opposition	14278 Feb 16 01:00	8°♄11'31 -1°51'57	
direct	14272 Feb 07 17:53	18°♄49'12		min. Earth dist.	14278 Feb 15 17:01	8°♄13'03 8.60957 AU	
evening set	14272 May 22 03:14	26°♄34'28		direct	14278 Apr 26 05:21	4°♄49'57	
conjunction	14272 Jun 08 06:50	28°♄42'24 -1°21'38		evening set	14278 Aug 06 04:45	12°♄18'16	
minimum elong	14272 Jun 08 06:48	28°♄42'23 1°22'40		conjunction	14278 Aug 23 03:05	14°♄22'53 -1°24'30	
max. Earth dist.	14272 Jun 08 01:02	28°♄40'35 10.48775 AU		minimum elong	14278 Aug 23 03:08	14°♄22'53 1°24'54	
	14272 Jun 18 15:10	0°♄		max. Earth dist.	14278 Aug 23 13:15	14°♄26'01 10.61624 AU	
morning rise	14272 Jun 25 08:05	0°♄49'41		morning rise	14278 Sep 09 02:30	16°♄27'48	
retrograde	14272 Oct 05 03:49	8°♄24'58		retrograde	14278 Dec 21 10:52	24°♄01'23	
opposition	14272 Dec 12 14:35	5°♄03'30 -1°49'30		opposition	14279 Mar 01 03:32	20°♄38'37 -1°35'08	
min. Earth dist.	14272 Dec 12 18:00	5°♄02'50 8.50070 AU		min. Earth dist.	14279 Feb 28 18:10	20°♄40'25 8.62359 AU	
direct	14273 Feb 20 04:22	1°♄39'21		direct	14279 May 09 04:41	17°♄17'17	
evening set	14273 Jun 04 06:05	9°♄22'08		evening set	14279 Aug 18 18:29	24°♄43'03	
conjunction	14273 Jun 21 07:17	11°♄29'08 -1°34'16		conjunction	14279 Sep 04 17:52	26°♄47'41 -1°09'04	
minimum elong	14273 Jun 21 07:16	11°♄29'07 1°35'18		minimum elong	14279 Sep 04 17:54	26°♄47'42 1°09'14	
max. Earth dist.	14273 Jun 21 04:10	11°♄28'09 10.51234 AU		max. Earth dist.	14279 Sep 05 05:20	26°♄51'13 10.62870 AU	
morning rise	14273 Jul 08 06:38	13°♄35'36		morning rise	14279 Sep 21 19:03	28°♄52'48	
retrograde	14273 Oct 18 08:01	21°♄10'22			14279 Oct 01 05:27	0°♄	
opposition	14273 Dec 25 23:52	17°♄48'54 -2°02'14		retrograde	14280 Jan 03 09:08	6°♄26'18	
min. Earth dist.	14273 Dec 26 01:31	17°♄48'35 8.52590 AU		opposition	14280 Mar 13 04:22	3°♄03'05 -1°13'55	
direct	14274 Mar 05 12:31	14°♄25'20		min. Earth dist.	14280 Mar 12 18:05	3°♄05'03 8.63393 AU	
evening set	14274 Jun 17 06:00	22°♄05'21			14280 May 02 06:51	30°♄	
conjunction	14274 Jul 04 05:14	24°♄11'30 -1°42'13		direct	14280 May 21 01:38	29°♄41'54	
minimum elong	14274 Jul 04 05:14	24°♄11'30 1°43'12			14280 Jun 08 17:33	0°♄	
max. Earth dist.	14274 Jul 04 04:04	24°♄11'08 10.53718 AU		evening set	14280 Aug 30 07:42	7°♄05'33	
morning rise	14274 Jul 21 03:22	26°♄17'19		conjunction	14280 Sep 16 08:38	9°♄10'21 -0°50'26	
	14274 Aug 22 20:54	0°♄		minimum elong	14280 Sep 16 08:40	9°♄10'22 0°50'23	
retrograde	14274 Oct 31 09:08	3°♄51'39		max. Earth dist.	14280 Sep 16 21:28	9°♄14'18 10.63727 AU	
opposition	14275 Jan 08 07:58	0°♄30'08 -2°08'56		morning rise	14280 Oct 03 11:48	11°♄15'47	
min. Earth dist.	14275 Jan 08 07:49	0°♄30'10 8.55025 AU		retrograde	14281 Jan 15 06:20	18°♄49'20	
	14275 Jan 14 21:18	30°♄		opposition	14281 Mar 26 03:31	15°♄25'40 -0°49'19	
direct	14275 Mar 18 19:40	27°♄07'07		min. Earth dist.	14281 Mar 25 16:03	15°♄27'52 8.64019 AU	
	14275 May 17 14:24	0°♄		direct	14281 Jun 02 21:19	12°♄04'33	
evening set	14275 Jun 30 03:04	4°♄44'17		evening set	14281 Sep 11 21:04	19°♄26'40	
conjunction	14275 Jul 17 01:03	6°♄49'46 -1°45'09		conjunction	14281 Sep 28 23:53	21°♄31'46 -0°29'30	
minimum elong	14275 Jul 17 01:04	6°♄49'46 1°46'03		minimum elong	14281 Sep 28 23:54	21°♄31'47 0°29'13	
max. Earth dist.	14275 Jul 17 02:16	6°♄50'09 10.56048 AU		max. Earth dist.	14281 Sep 29 14:17	21°♄36'11 10.64143 AU	
morning rise	14275 Aug 02 22:35	8°♄55'05		morning rise	14281 Oct 16 05:04	23°♄37'34	
	14275 Oct 02 09:42	15°♄			14281 Dec 21 05:44	0°♄	
retrograde	14275 Nov 13 10:05	16°♄29'12		retrograde	14282 Jan 28 04:02	1°♄11'23	
	14275 Dec 26 16:05	15°♄			14282 Mar 07 17:59	30°♄	
opposition	14276 Jan 21 15:03	13°♄07'31 -2°09'21		opposition	14282 Apr 08 01:09	27°♄47'18 -0°22'28	
min. Earth dist.	14276 Jan 21 12:24	13°♄08'02 8.57249 AU		min. Earth dist.	14282 Apr 07 12:47	27°♄49'41 8.64184 AU	

direct	14282 Jun 15 16:04	24° <u>♄</u> 26'10	opposition	14288 Jun 21 22:40	12° <u>♄</u> 30'03	1°57'18
	14282 Sep 09 03:09	0° <u>♄</u>	min. Earth dist.	14288 Jun 21 18:24	12° <u>♄</u> 30'53	8.56341 AU
evening set	14282 Sep 24 11:31	1° <u>♄</u> 47'25	direct	14288 Aug 28 23:45	9° <u>♄</u> 06'48	
			evening set	14288 Dec 09 00:35	16° <u>♄</u> 37'26	
conjunction	14282 Oct 11 16:10	3° <u>♄</u> 52'54 -0°07'15	conjunction	14288 Dec 26 14:05	18° <u>♄</u> 46'03	1°39'13
minimum elong	14282 Oct 11 16:10	3° <u>♄</u> 52'54 0°06'44	minimum elong	14288 Dec 26 14:04	18° <u>♄</u> 46'03	1°40'14
behind sun begin	14282 Oct 11 09:31	3° <u>♄</u> 50'53	max. Earth dist.	14288 Dec 26 17:09	18° <u>♄</u> 47'00	10.55163 AU
behind sun end	14282 Oct 11 22:49	3° <u>♄</u> 54'55	morning rise	14289 Jan 13 05:03	20° <u>♄</u> 55'09	
max. Earth dist.	14282 Oct 12 07:07	3° <u>♄</u> 57'28 10.64074 AU	retrograde	14289 Apr 27 06:52	28° <u>♄</u> 34'19	
morning rise	14282 Oct 28 23:18	5° <u>♄</u> 59'08	opposition	14289 Jul 04 19:26	25° <u>♄</u> 09'36	2°06'35
asc. node	14283 Feb 08 12:03	13° <u>♄</u> 33'13	min. Earth dist.	14289 Jul 04 18:13	25° <u>♄</u> 09'51	8.54175 AU
retrograde	14283 Feb 10 03:14	13° <u>♄</u> 33'21	direct	14289 Sep 10 19:42	21° <u>♄</u> 45'48	
opposition	14283 Apr 20 21:32	10° <u>♄</u> 08'57 0°05'26	evening set	14289 Dec 22 08:31	29° <u>♄</u> 19'33	
min. Earth dist.	14283 Apr 20 09:12	10° <u>♄</u> 11'20 8.63868 AU		14289 Dec 27 21:55	0° <u>♄</u>	
direct	14283 Jun 28 07:46	6° <u>♄</u> 47'40	conjunction	14290 Jan 08 22:58	1° <u>♄</u> 28'46	1°44'16
evening set	14283 Oct 07 03:30	14° <u>♄</u> 08'50	minimum elong	14290 Jan 08 22:59	1° <u>♄</u> 28'46	1°45'13
	14283 Oct 14 05:02	15° <u>♄</u>	max. Earth dist.	14290 Jan 08 22:13	1° <u>♄</u> 28'32	10.52978 AU
conjunction	14283 Oct 24 09:51	16° <u>♄</u> 14'44 0°15'29	morning rise	14290 Jan 26 14:32	3° <u>♄</u> 38'18	
minimum elong	14283 Oct 24 09:51	16° <u>♄</u> 14'44 0°16'10	retrograde	14290 May 10 09:36	11° <u>♄</u> 17'58	
max. Earth dist.	14283 Oct 24 23:51	16° <u>♄</u> 19'01 10.63523 AU	opposition	14290 Jul 17 17:28	7° <u>♄</u> 53'30	2°09'43
morning rise	14283 Nov 10 18:56	18° <u>♄</u> 21'27	min. Earth dist.	14290 Jul 17 19:13	7° <u>♄</u> 53'09	8.52016 AU
retrograde	14284 Feb 23 01:23	25° <u>♄</u> 56'18	direct	14290 Sep 23 20:17	4° <u>♄</u> 29'10	
opposition	14284 May 02 17:16	22° <u>♄</u> 31'37 0°33'06	evening set	14291 Jan 04 18:35	12° <u>♄</u> 05'59	
min. Earth dist.	14284 May 02 06:13	22° <u>♄</u> 33'46 8.63090 AU	conjunction	14291 Jan 22 09:57	14° <u>♄</u> 15'45	1°44'14
direct	14284 Jul 09 23:56	19° <u>♄</u> 10'05	minimum elong	14291 Jan 22 09:58	14° <u>♄</u> 15'46	1°45'03
evening set	14284 Oct 18 21:28	26° <u>♄</u> 31'55	max. Earth dist.	14291 Jan 22 05:57	14° <u>♄</u> 14'31	10.50852 AU
conjunction	14284 Nov 05 05:28	28° <u>♄</u> 38'18 0°37'26	morning rise	14291 Jan 28 09:20	15° <u>♄</u>	
minimum elong	14284 Nov 05 05:27	28° <u>♄</u> 38'18 0°38'16	retrograde	14291 Feb 09 01:52	16° <u>♄</u> 25'41	
max. Earth dist.	14284 Nov 05 17:35	28° <u>♄</u> 42'00 10.62515 AU	opposition	14291 May 23 13:27	24° <u>♄</u> 05'38	
	14284 Nov 16 09:20	0° <u>♄</u>	min. Earth dist.	14291 Jul 30 16:46	20° <u>♄</u> 41'24	2°06'29
morning rise	14284 Nov 22 16:22	0° <u>♄</u> 45'30	direct	14291 Jul 30 20:46	20° <u>♄</u> 40'37	8.49947 AU
retrograde	14285 Mar 06 23:42	8° <u>♄</u> 21'09	evening set	14291 Oct 06 22:40	17° <u>♄</u> 16'35	
opposition	14285 May 15 12:29	4° <u>♄</u> 56'17 0°59'17	conjunction	14292 Jan 18 06:39	24° <u>♄</u> 56'15	
min. Earth dist.	14285 May 15 03:08	4° <u>♄</u> 58'07 8.61882 AU	minimum elong	14292 Feb 04 22:52	27° <u>♄</u> 06'33	1°39'00
direct	14285 Jul 22 17:14	1° <u>♄</u> 34'24	max. Earth dist.	14292 Feb 04 22:54	27° <u>♄</u> 06'34	1°39'40
evening set	14285 Oct 31 18:00	8° <u>♄</u> 57'37	morning rise	14292 Feb 04 16:22	27° <u>♄</u> 04'33	10.48861 AU
conjunction	14285 Nov 18 03:37	11° <u>♄</u> 04'31 0°57'41	retrograde	14292 Feb 22 14:51	29° <u>♄</u> 16'50	
minimum elong	14285 Nov 18 03:36	11° <u>♄</u> 04'31 0°58'38	opposition	14292 Feb 28 14:37	0° <u>♄</u>	
max. Earth dist.	14285 Nov 18 14:02	11° <u>♄</u> 07'42 10.61092 AU	min. Earth dist.	14292 Jun 04 19:27	6° <u>♄</u> 56'42	
morning rise	14285 Dec 05 15:56	13° <u>♄</u> 12'12	direct	14292 Aug 11 17:16	3° <u>♄</u> 32'44	1°56'56
retrograde	14286 Mar 19 23:34	20° <u>♄</u> 48'45	evening set	14292 Aug 11 23:12	3° <u>♄</u> 31'33	8.48023 AU
opposition	14286 May 28 07:23	17° <u>♄</u> 23'47 1°22'46	conjunction	14292 Oct 19 01:29	0° <u>♄</u> 07'25	
min. Earth dist.	14286 May 27 23:31	17° <u>♄</u> 25'19 8.60296 AU	minimum elong	14293 Jan 30 20:10	7° <u>♄</u> 49'40	
direct	14286 Aug 04 10:12	14° <u>♄</u> 01'28	max. Earth dist.	14293 Feb 17 12:57	10° <u>♄</u> 00'27	1°28'48
evening set	14286 Nov 13 17:17	21° <u>♄</u> 26'43	morning rise	14293 Feb 17 12:59	10° <u>♄</u> 00'28	1°29'16
conjunction	14286 Dec 01 04:25	23° <u>♄</u> 34'11 1°15'17	retrograde	14293 Feb 17 03:41	9° <u>♄</u> 57'35	10.47032 AU
minimum elong	14286 Dec 01 04:23	23° <u>♄</u> 34'10 1°16'18	opposition	14293 Mar 07 04:43	12° <u>♄</u> 11'02	
max. Earth dist.	14286 Dec 01 13:15	23° <u>♄</u> 36'53 10.59325 AU	min. Earth dist.	14293 Jun 18 01:48	19° <u>♄</u> 50'35	
morning rise	14286 Dec 18 17:46	25° <u>♄</u> 42'20	direct	14293 Aug 24 19:21	16° <u>♄</u> 26'54	1°41'27
	14287 Jan 27 01:32	0° <u>♄</u>	evening set	14293 Aug 25 03:33	16° <u>♄</u> 25'16	8.46253 AU
retrograde	14287 Apr 02 00:11	3° <u>♄</u> 19'51	conjunction	14293 Nov 01 06:39	13° <u>♄</u> 01'10	
	14287 Jun 09 00:29	30° <u>♄</u>	minimum elong	14294 Feb 13 10:34	20° <u>♄</u> 45'47	
opposition	14287 Jun 10 02:42	29° <u>♄</u> 54'51 1°42'26	max. Earth dist.	14294 Mar 03 03:24	22° <u>♄</u> 56'55	1°14'04
min. Earth dist.	14287 Jun 09 20:11	29° <u>♄</u> 56'08 8.58417 AU	morning rise	14294 Mar 03 03:27	22° <u>♄</u> 56'56	1°14'19
direct	14287 Aug 17 04:40	26° <u>♄</u> 32'06	retrograde	14294 Mar 02 15:11	22° <u>♄</u> 53'07	10.45369 AU
	14287 Oct 21 14:05	0° <u>♄</u>	opposition	14294 Mar 20 18:43	25° <u>♄</u> 07'42	
evening set	14287 Nov 26 19:22	3° <u>♄</u> 59'51	min. Earth dist.	14294 May 04 14:05	0° <u>♄</u>	
conjunction	14287 Dec 14 07:47	6° <u>♄</u> 07'53 1°29'22	direct	14294 Jul 01 07:37	2° <u>♄</u> 46'56	
minimum elong	14287 Dec 14 07:46	6° <u>♄</u> 07'53 1°30'25	evening set	14294 Aug 30 06:35	30° <u>♄</u>	
max. Earth dist.	14287 Dec 14 14:24	6° <u>♄</u> 09'55 10.57313 AU	conjunction	14294 Sep 06 23:06	29° <u>♄</u> 23'36	1°20'46
morning rise	14287 Dec 31 22:00	8° <u>♄</u> 16'30	minimum elong	14294 Sep 07 09:38	29° <u>♄</u> 21'31	8.44679 AU
retrograde	14288 Apr 14 02:42	15° <u>♄</u> 54'58				



direct	14294 Nov 14 14:26	25° $\text{X}$ 57'35		opposition	14300 Nov 25 01:08	17° $\text{II}$ 13'45	-1°22'31
	14295 Jan 25 03:30	0° $\text{Y}$		min. Earth dist.	14300 Nov 25 09:06	17° $\text{II}$ 12'11	8.45779 AU
evening set	14295 Feb 27 01:35	3° $\text{Y}$ 44'15		direct	14301 Feb 02 13:03	13° $\text{II}$ 48'18	
				evening set	14301 May 18 01:52	21° $\text{II}$ 34'39	
conjunction	14295 Mar 16 18:03	5° $\text{Y}$ 55'37	0°55'31				
minimum elong	14295 Mar 16 18:05	5° $\text{Y}$ 55'38	0°55'32	conjunction	14301 Jun 04 06:27	23° $\text{II}$ 43'04	-1°15'20
max. Earth dist.	14295 Mar 16 03:07	5° $\text{Y}$ 50'58	10.43970 AU	minimum elong	14301 Jun 04 06:25	23° $\text{II}$ 43'03	1°16'23
morning rise	14295 Apr 03 08:38	8° $\text{Y}$ 06'30		max. Earth dist.	14301 Jun 03 21:49	23° $\text{II}$ 40'22	10.46703 AU
retrograde	14295 Jul 14 14:23	15° $\text{Y}$ 45'24		morning rise	14301 Jun 21 08:49	25° $\text{II}$ 50'49	
opposition	14295 Sep 20 04:25	12° $\text{Y}$ 22'24	0°55'53		14301 Jul 28 07:25	0° $\text{S}$	
min. Earth dist.	14295 Sep 20 16:39	12° $\text{Y}$ 19'59	8.43455 AU	retrograde	14301 Oct 01 01:37	3° $\text{S}$ 26'30	
direct	14295 Nov 27 23:34	8° $\text{Y}$ 56'12		opposition	14301 Dec 08 11:12	0° $\text{S}$ 04'30	-1°42'49
evening set	14296 Mar 11 16:45	16° $\text{Y}$ 44'27		min. Earth dist.	14301 Dec 08 16:50	0° $\text{S}$ 03'24	8.47854 AU
					14301 Dec 09 10:20	30° $\text{R}$ $\text{II}$	
conjunction	14296 Mar 29 08:22	18° $\text{Y}$ 55'53	0°34'06	direct	14302 Feb 16 01:26	26° $\text{II}$ 39'31	
minimum elong	14296 Mar 29 08:23	18° $\text{Y}$ 55'54	0°33'52		14302 Apr 21 18:16	0° $\text{S}$	
max. Earth dist.	14296 Mar 28 16:11	18° $\text{Y}$ 50'50	10.43001 AU	evening set	14302 May 31 05:48	4° $\text{S}$ 23'36	
morning rise	14296 Apr 15 21:47	21° $\text{Y}$ 06'42					
retrograde	14296 Jul 26 21:10	28° $\text{Y}$ 45'09		conjunction	14302 Jun 17 07:57	6° $\text{S}$ 31'05	-1°29'45
opposition	14296 Oct 02 11:23	25° $\text{Y}$ 22'28	0°28'06	minimum elong	14302 Jun 17 07:55	6° $\text{S}$ 31'04	1°30'48
min. Earth dist.	14296 Oct 02 23:52	25° $\text{Y}$ 20'00	8.42730 AU	max. Earth dist.	14302 Jun 17 02:32	6° $\text{S}$ 29'23	10.48941 AU
direct	14296 Dec 10 10:49	21° $\text{Y}$ 56'12		morning rise	14302 Jul 04 08:17	8° $\text{S}$ 38'00	
evening set	14297 Mar 25 07:27	29° $\text{Y}$ 45'26		retrograde	14302 Oct 14 05:14	16° $\text{S}$ 13'10	
	14297 Mar 27 06:57	0° $\text{S}$		opposition	14302 Dec 21 20:33	12° $\text{S}$ 51'08	-1°57'54
				min. Earth dist.	14302 Dec 21 22:58	12° $\text{S}$ 50'40	8.50270 AU
conjunction	14297 Apr 11 21:42	1° $\text{S}$ 56'40	0°10'56	direct	14303 Mar 01 11:16	9° $\text{S}$ 26'43	
minimum elong	14297 Apr 11 21:43	1° $\text{S}$ 56'41	0°10'28	evening set	14303 Jun 13 06:47	17° $\text{S}$ 08'08	
behind sun begin	14297 Apr 11 16:06	1° $\text{S}$ 54'56					
behind sun end	14297 Apr 12 03:20	1° $\text{S}$ 58'25		conjunction	14303 Jun 30 06:57	19° $\text{S}$ 14'43	-1°39'39
max. Earth dist.	14297 Apr 11 05:56	1° $\text{S}$ 51'45	10.42574 AU	minimum elong	14303 Jun 30 06:56	19° $\text{S}$ 14'43	1°40'40
morning rise	14297 Apr 29 09:22	4° $\text{S}$ 07'12		max. Earth dist.	14303 Jun 30 05:34	19° $\text{S}$ 14'17	10.51458 AU
retrograde	14297 Aug 09 03:08	11° $\text{S}$ 45'10		morning rise	14303 Jul 17 05:36	21° $\text{S}$ 20'53	
desc. node	14297 Oct 01 02:35	9° $\text{S}$ 30'54		retrograde	14303 Oct 27 07:47	28° $\text{S}$ 55'31	
opposition	14297 Oct 15 19:40	8° $\text{S}$ 22'43	-0°01'10	opposition	14304 Jan 04 04:53	25° $\text{S}$ 33'26	-2°07'05
min. Earth dist.	14297 Oct 16 07:21	8° $\text{S}$ 20'25	8.42595 AU	min. Earth dist.	14304 Jan 04 04:09	25° $\text{S}$ 33'35	8.52891 AU
direct	14297 Dec 24 00:05	4° $\text{S}$ 56'31		direct	14304 Mar 13 18:52	22° $\text{S}$ 09'39	
evening set	14298 Apr 07 21:04	12° $\text{S}$ 46'02		evening set	14304 Jun 25 04:47	29° $\text{S}$ 48'05	
					14304 Jun 26 19:47	0° $\text{N}$	
conjunction	14298 Apr 25 09:27	14° $\text{S}$ 56'51	-0°12'53				
minimum elong	14298 Apr 25 09:26	14° $\text{S}$ 56'51	0°13'33	conjunction	14304 Jul 12 03:26	1° $\text{N}$ 53'54	-1°44'39
behind sun begin	14298 Apr 25 05:30	14° $\text{S}$ 55'37		minimum elong	14304 Jul 12 03:26	1° $\text{N}$ 53'54	1°45'35
behind sun end	14298 Apr 25 13:23	14° $\text{S}$ 58'04		max. Earth dist.	14304 Jul 12 05:36	1° $\text{N}$ 54'34	10.54126 AU
max. Earth dist.	14298 Apr 24 19:11	14° $\text{S}$ 52'23	10.42751 AU	morning rise	14304 Jul 29 01:02	3° $\text{N}$ 59'26	
	14298 Apr 25 19:33	15° $\text{S}$		retrograde	14304 Nov 08 09:56	11° $\text{N}$ 33'34	
morning rise	14298 May 12 18:56	17° $\text{S}$ 06'52		opposition	14305 Jan 16 12:13	8° $\text{N}$ 11'26	-2°10'03
retrograde	14298 Aug 22 10:28	24° $\text{S}$ 44'19		min. Earth dist.	14305 Jan 16 08:54	8° $\text{N}$ 12'04	8.55590 AU
opposition	14298 Oct 29 04:57	21° $\text{S}$ 22'03	-0°30'22	direct	14305 Mar 27 00:27	4° $\text{N}$ 48'18	
min. Earth dist.	14298 Oct 29 15:25	21° $\text{S}$ 20'00	8.43082 AU	evening set	14305 Jul 07 23:50	12° $\text{N}$ 23'31	
direct	14299 Jan 06 12:16	17° $\text{S}$ 56'01					
evening set	14299 Apr 21 08:58	25° $\text{S}$ 45'06		conjunction	14305 Jul 24 21:31	14° $\text{N}$ 28'42	-1°44'35
				minimum elong	14305 Jul 24 21:32	14° $\text{N}$ 28'43	1°45'24
conjunction	14299 May 08 19:02	27° $\text{S}$ 55'16	-0°35'56	max. Earth dist.	14305 Jul 25 02:29	14° $\text{N}$ 30'15	10.56813 AU
minimum elong	14299 May 08 19:00	27° $\text{S}$ 55'16	0°36'46		14305 Jul 29 02:17	15° $\text{N}$	
max. Earth dist.	14299 May 08 06:33	27° $\text{S}$ 51'22	10.43533 AU	morning rise	14305 Aug 10 18:55	16° $\text{N}$ 33'48	
	14299 May 25 11:01	0° $\text{II}$		retrograde	14305 Nov 21 10:37	24° $\text{N}$ 07'27	
morning rise	14299 May 26 02:07	0° $\text{II}$ 04'39		opposition	14306 Jan 29 18:06	20° $\text{N}$ 45'13	-2°06'45
retrograde	14299 Sep 04 17:23	7° $\text{II}$ 41'29		min. Earth dist.	14306 Jan 29 12:46	20° $\text{N}$ 46'14	8.58235 AU
opposition	14299 Nov 11 14:58	4° $\text{II}$ 19'22	-0°57'57	direct	14306 Apr 09 03:09	17° $\text{N}$ 22'43	
min. Earth dist.	14299 Nov 12 00:23	4° $\text{II}$ 17'31	8.44162 AU	evening set	14306 Jul 20 16:34	24° $\text{N}$ 54'43	
direct	14300 Jan 20 00:16	0° $\text{II}$ 53'35					
evening set	14300 May 04 18:47	8° $\text{II}$ 41'36		conjunction	14306 Aug 06 13:58	26° $\text{N}$ 59'27	-1°39'31
				minimum elong	14306 Aug 06 14:00	26° $\text{N}$ 59'27	1°40'11
conjunction	14300 May 22 02:07	10° $\text{II}$ 50'56	-0°57'06	max. Earth dist.	14306 Aug 06 21:09	27° $\text{N}$ 01'40	10.59394 AU
minimum elong	14300 May 22 02:05	10° $\text{II}$ 50'56	0°58'04	morning rise	14306 Aug 23 11:51	29° $\text{N}$ 04'17	
max. Earth dist.	14300 May 21 15:14	10° $\text{II}$ 47'32	10.44870 AU		14306 Aug 31 05:55	0° $\text{N}$	
morning rise	14300 Jun 08 06:46	12° $\text{II}$ 59'32		retrograde	14306 Dec 04 08:58	6° $\text{N}$ 37'28	
retrograde	14300 Sep 17 21:54	20° $\text{II}$ 35'46		opposition	14307 Feb 11 22:08	3° $\text{N}$ 15'04	-1°57'27

min. Earth dist.	14307 Feb 11 14:42	3° $\mathbb{M}$ 16'30	8.60701 AU		14312 Nov 20 08:10	15° $\mathbb{M}$	
	14307 Apr 10 16:30	30° $\mathbb{R}$ 8		retrograde	14313 Feb 17 18:23	20° $\mathbb{M}$ 50'13	
direct	14307 Apr 22 04:44	29° $\mathbb{J}$ 53'10		opposition	14313 Apr 28 12:57	17° $\mathbb{M}$ 26'28	0°21'16
	14307 May 03 16:16	0° $\mathbb{M}$		min. Earth dist.	14313 Apr 28 01:14	17° $\mathbb{M}$ 28'44	8.66841 AU
evening set	14307 Aug 02 07:17	7° $\mathbb{M}$ 22'05			14313 Jun 03 01:35	15° $\mathbb{R}$ $\mathbb{M}$	
				direct	14313 Jul 05 22:13	14° $\mathbb{M}$ 05'52	
conjunction	14307 Aug 19 05:09	9° $\mathbb{M}$ 26'33	-1°29'48		14313 Aug 07 06:36	15° $\mathbb{M}$	
minimum elong	14307 Aug 19 05:11	9° $\mathbb{M}$ 26'33	1°30'17	evening set	14313 Oct 14 17:19	21° $\mathbb{M}$ 25'52	
max. Earth dist.	14307 Aug 19 15:10	9° $\mathbb{M}$ 29'38	10.61746 AU				
morning rise	14307 Sep 05 04:00	11° $\mathbb{M}$ 31'17		conjunction	14313 Nov 01 00:33	23° $\mathbb{M}$ 31'36	0°28'04
retrograde	14307 Dec 17 07:14	19° $\mathbb{M}$ 04'07		minimum elong	14313 Nov 01 00:32	23° $\mathbb{M}$ 31'36	0°28'51
opposition	14308 Feb 25 00:35	15° $\mathbb{M}$ 41'31	-1°42'41	max. Earth dist.	14313 Nov 01 14:16	23° $\mathbb{M}$ 35'47	10.66382 AU
min. Earth dist.	14308 Feb 24 14:40	15° $\mathbb{M}$ 43'25	8.62879 AU	morning rise	14313 Nov 18 10:21	25° $\mathbb{M}$ 38'08	
direct	14308 May 04 04:59	12° $\mathbb{M}$ 20'10			14313 Dec 28 18:47	0° $\mathbb{J}$	
evening set	14308 Aug 13 20:27	19° $\mathbb{M}$ 46'10		retrograde	14314 Mar 02 16:36	3° $\mathbb{J}$ 11'55	
					14314 May 08 16:53	30° $\mathbb{R}$ $\mathbb{M}$	
conjunction	14308 Aug 30 19:21	21° $\mathbb{M}$ 50'34	-1°15'55	opposition	14314 May 11 07:15	29° $\mathbb{M}$ 47'55	0°48'06
minimum elong	14308 Aug 30 19:24	21° $\mathbb{M}$ 50'35	1°16'11	min. Earth dist.	14314 May 10 20:39	29° $\mathbb{M}$ 49'59	8.65784 AU
max. Earth dist.	14308 Aug 31 08:17	21° $\mathbb{M}$ 54'33	10.63769 AU	direct	14314 Jul 18 13:57	26° $\mathbb{M}$ 27'00	
morning rise	14308 Sep 16 19:36	23° $\mathbb{M}$ 55'21			14314 Sep 23 00:12	0° $\mathbb{J}$	
	14308 Nov 17 01:50	0° $\mathbb{J}$		evening set	14314 Oct 27 11:47	3° $\mathbb{J}$ 48'04	
retrograde	14308 Dec 29 06:43	1° $\mathbb{J}$ 27'57					
	14309 Feb 10 10:30	30° $\mathbb{R}$ $\mathbb{M}$		conjunction	14314 Nov 13 20:32	5° $\mathbb{J}$ 54'19	0°49'05
opposition	14309 Mar 09 01:20	28° $\mathbb{M}$ 05'08	-1°23'12	minimum elong	14314 Nov 13 20:31	5° $\mathbb{J}$ 54'19	0°50'00
min. Earth dist.	14309 Mar 08 13:20	28° $\mathbb{M}$ 07'26	8.64683 AU	max. Earth dist.	14314 Nov 14 07:57	5° $\mathbb{J}$ 57'48	10.64971 AU
direct	14309 May 17 00:53	24° $\mathbb{M}$ 44'14		morning rise	14314 Dec 01 07:51	8° $\mathbb{J}$ 01'21	
	14309 Aug 08 01:04	0° $\mathbb{J}$		retrograde	14315 Mar 15 16:36	15° $\mathbb{J}$ 36'05	
evening set	14309 Aug 26 09:06	2° $\mathbb{J}$ 07'45		opposition	14315 May 24 01:23	12° $\mathbb{J}$ 11'54	1°12'48
				min. Earth dist.	14315 May 23 16:58	12° $\mathbb{J}$ 13'32	8.64084 AU
conjunction	14309 Sep 12 09:22	4° $\mathbb{J}$ 12'13	-0°58'34	direct	14315 Jul 31 04:12	8° $\mathbb{J}$ 50'30	
minimum elong	14309 Sep 12 09:24	4° $\mathbb{J}$ 12'13	0°58'36	evening set	14315 Nov 09 08:55	16° $\mathbb{J}$ 13'25	
max. Earth dist.	14309 Sep 13 00:11	4° $\mathbb{J}$ 16'46	10.65381 AU				
morning rise	14309 Sep 29 11:24	6° $\mathbb{J}$ 17'12		conjunction	14315 Nov 26 19:04	18° $\mathbb{J}$ 20'13	1°07'54
retrograde	14310 Jan 11 04:02	13° $\mathbb{J}$ 49'38		minimum elong	14315 Nov 26 19:02	18° $\mathbb{J}$ 20'13	1°08'54
min. Earth dist.	14310 Mar 21 11:25	10° $\mathbb{J}$ 29'03	8.66044 AU	max. Earth dist.	14315 Nov 27 03:23	18° $\mathbb{J}$ 22'46	10.62996 AU
opposition	14310 Mar 22 00:14	10° $\mathbb{J}$ 26'36	-0°59'57	morning rise	14315 Dec 14 07:46	20° $\mathbb{J}$ 27'46	
direct	14310 May 29 19:17	7° $\mathbb{J}$ 06'01		retrograde	14316 Mar 27 15:05	28° $\mathbb{J}$ 03'34	
evening set	14310 Sep 07 21:44	14° $\mathbb{J}$ 27'39		opposition	14316 Jun 04 19:42	24° $\mathbb{J}$ 39'12	1°34'12
				min. Earth dist.	14316 Jun 04 13:56	24° $\mathbb{J}$ 40'20	8.61910 AU
conjunction	14310 Sep 24 23:32	16° $\mathbb{J}$ 32'17	-0°38'33	direct	14316 Aug 11 21:40	21° $\mathbb{J}$ 17'11	
minimum elong	14310 Sep 24 23:33	16° $\mathbb{J}$ 32'17	0°38'21	evening set	14316 Nov 21 08:52	28° $\mathbb{J}$ 42'32	
max. Earth dist.	14310 Sep 25 14:31	16° $\mathbb{J}$ 36'51	10.66515 AU		14316 Dec 02 01:01	0° $\mathbb{J}$	
morning rise	14310 Oct 12 03:40	18° $\mathbb{J}$ 37'34					
retrograde	14311 Jan 24 00:54	26° $\mathbb{J}$ 10'00		conjunction	14316 Dec 08 20:24	0° $\mathbb{J}$ 49'57	1°23'35
opposition	14311 Apr 03 21:46	22° $\mathbb{J}$ 46'46	-0°34'00	minimum elong	14316 Dec 08 20:22	0° $\mathbb{J}$ 49'56	1°24'38
min. Earth dist.	14311 Apr 03 09:12	22° $\mathbb{J}$ 49'10	8.66899 AU	max. Earth dist.	14316 Dec 09 01:35	0° $\mathbb{J}$ 51'32	10.60620 AU
direct	14311 Jun 11 13:14	19° $\mathbb{J}$ 26'20		morning rise	14316 Dec 26 10:14	2° $\mathbb{J}$ 58'01	
evening set	14311 Sep 20 10:51	26° $\mathbb{J}$ 46'41		retrograde	14317 Apr 09 14:44	10° $\mathbb{J}$ 34'52	
				opposition	14317 Jun 17 14:28	7° $\mathbb{J}$ 10'21	1°51'16
conjunction	14311 Oct 07 14:21	28° $\mathbb{J}$ 51'36	-0°16'48	min. Earth dist.	14317 Jun 17 11:11	7° $\mathbb{J}$ 11'00	8.59405 AU
minimum elong	14311 Oct 07 14:21	28° $\mathbb{J}$ 51'36	0°16'22	direct	14317 Aug 24 16:44	3° $\mathbb{J}$ 47'38	
max. Earth dist.	14311 Oct 08 05:08	28° $\mathbb{J}$ 56'07	10.67106 AU	evening set	14317 Dec 04 11:45	11° $\mathbb{J}$ 15'50	
	14311 Oct 16 22:39	0° $\mathbb{M}$					
morning rise	14311 Oct 24 20:35	0° $\mathbb{M}$ 57'16		conjunction	14317 Dec 22 00:35	13° $\mathbb{J}$ 23'53	1°35'22
retrograde	14312 Feb 05 22:11	8° $\mathbb{M}$ 29'55		minimum elong	14317 Dec 22 00:34	13° $\mathbb{J}$ 23'53	1°36'25
opposition	14312 Apr 15 17:59	5° $\mathbb{M}$ 06'26	-0°06'31	max. Earth dist.	14317 Dec 22 03:19	13° $\mathbb{J}$ 24'44	10.57974 AU
min. Earth dist.	14312 Apr 15 05:46	5° $\mathbb{M}$ 08'47	8.67189 AU	morning rise	14318 Jan 08 15:09	15° $\mathbb{J}$ 32'28	
direct	14312 Jun 23 05:34	1° $\mathbb{M}$ 46'01		retrograde	14318 Apr 22 16:31	23° $\mathbb{J}$ 10'17	
asc. node	14312 Jul 12 13:00	2° $\mathbb{M}$ 05'29		opposition	14318 Jun 30 09:51	19° $\mathbb{J}$ 45'40	2°03'07
evening set	14312 Oct 02 01:12	9° $\mathbb{M}$ 05'47		min. Earth dist.	14318 Jun 30 08:30	19° $\mathbb{J}$ 45'56	8.56695 AU
				direct	14318 Sep 06 12:14	16° $\mathbb{J}$ 22'13	
conjunction	14312 Oct 19 06:35	11° $\mathbb{M}$ 11'04	0°05'49	evening set	14318 Dec 17 17:24	23° $\mathbb{J}$ 53'32	
minimum elong	14312 Oct 19 06:34	11° $\mathbb{M}$ 11'04	0°06'26				
behind sun begin	14312 Oct 18 23:52	11° $\mathbb{M}$ 09'02		conjunction	14319 Jan 04 07:25	26° $\mathbb{J}$ 02'14	1°42'37
behind sun end	14312 Oct 19 13:17	11° $\mathbb{M}$ 13'05		minimum elong	14319 Jan 04 07:25	26° $\mathbb{J}$ 02'14	1°43'37
max. Earth dist.	14312 Oct 19 21:06	11° $\mathbb{M}$ 15'29	10.67089 AU	max. Earth dist.	14319 Jan 04 07:35	26° $\mathbb{J}$ 02'18	10.55197 AU
morning rise	14312 Nov 05 14:43	13° $\mathbb{M}$ 17'08		morning rise	14319 Jan 21 22:31	28° $\mathbb{J}$ 11'20	

	14319 Feb 06 09:36	0°♊		minimum elong	14325 Mar 24 11:05	13°♑12'01	0°44'07
retrograde	14319 May 05 19:17	5°♊49'56		max. Earth dist.	14325 Mar 23 21:04	13°♑07'38	10.42632 AU
opposition	14319 Jul 13 06:26	2°♊25'17	2°09'05	morning rise	14325 Apr 11 01:00	15°♑22'54	
min. Earth dist.	14319 Jul 13 07:15	2°♊25'07	8.53912 AU	retrograde	14325 Jul 22 02:53	23°♑01'29	
	14319 Aug 16 10:07	30°♊		opposition	14325 Sep 27 17:11	19°♑38'10	0°41'11
direct	14319 Sep 19 09:39	29°♊01'07		min. Earth dist.	14325 Sep 28 04:22	19°♑35'57	8.42352 AU
	14319 Oct 23 01:48	0°♊		direct	14325 Dec 05 14:47	16°♑11'31	
evening set	14319 Dec 31 01:31	6°♊35'39		evening set	14326 Mar 20 09:17	24°♑00'11	
				max. Earth dist.	14326 Apr 06 09:38	26°♑06'58	10.42192 AU
conjunction	14320 Jan 17 16:33	8°♊45'00	1°44'55				
minimum elong	14320 Jan 17 16:33	8°♊45'00	1°45'48	conjunction	14326 Apr 07 00:20	26°♑11'33	0°21'46
max. Earth dist.	14320 Jan 17 13:31	8°♊44'04	10.52418 AU	minimum elong	14326 Apr 07 00:21	26°♑11'34	0°21'24
morning rise	14320 Feb 04 08:06	10°♊54'35		morning rise	14326 Apr 24 12:47	28°♑22'15	
	14320 Mar 12 05:25	15°♊			14326 May 08 03:15	0°♊	
retrograde	14320 May 17 23:04	18°♊33'45		retrograde	14326 Aug 04 09:03	6°♊00'21	
opposition	14320 Jul 25 04:20	15°♊09'09	2°08'46	opposition	14326 Oct 11 00:37	2°♊37'28	0°12'26
min. Earth dist.	14320 Jul 25 07:54	15°♊08'27	8.51177 AU	min. Earth dist.	14326 Oct 11 12:15	2°♊35'10	8.42220 AU
	14320 Jul 27 02:29	15°♊			14326 Nov 17 22:32	30°♊	
direct	14320 Oct 01 09:00	11°♊44'15		direct	14326 Dec 19 02:25	29°♑10'57	
	14320 Dec 03 18:58	15°♊			14327 Jan 19 00:37	0°♊	
evening set	14321 Jan 12 12:02	19°♊22'00		desc. node	14327 Mar 20 20:41	5°♊26'00	
				evening set	14327 Apr 02 23:13	7°♊00'15	
conjunction	14321 Jan 30 03:50	21°♊31'59	1°42'03				
minimum elong	14321 Jan 30 03:51	21°♊31'59	1°42'47	conjunction	14327 Apr 20 12:29	9°♊11'17	-0°01'56
max. Earth dist.	14321 Jan 29 20:52	21°♊29'50	10.49757 AU	minimum elong	14327 Apr 20 12:29	9°♊11'17	0°02'31
morning rise	14321 Feb 16 19:44	23°♊42'01		behind sun begin	14327 Apr 20 05:18	9°♊09'03	
	14321 Apr 21 07:25	0°♊		behind sun end	14327 Apr 20 19:40	9°♊13'30	
retrograde	14321 May 31 03:32	1°♊21'28		max. Earth dist.	14327 Apr 19 21:45	9°♊06'40	10.42390 AU
	14321 Jul 10 09:44	30°♊		morning rise	14327 May 07 23:07	11°♊21'34	
opposition	14321 Aug 07 03:36	27°♊57'01	2°02'06		14327 Jun 08 18:15	15°♊	
min. Earth dist.	14321 Aug 07 10:11	27°♊55'42	8.48613 AU	retrograde	14327 Aug 17 15:43	18°♊59'07	
direct	14321 Oct 14 10:34	24°♊31'27		opposition	14327 Oct 24 09:06	15°♊36'40	-0°16'57
	14322 Jan 07 04:53	0°♊		min. Earth dist.	14327 Oct 24 20:25	15°♊34'26	8.42734 AU
evening set	14322 Jan 26 00:15	2°♊12'13			14327 Nov 01 04:18	15°♊	
				direct	14328 Jan 01 14:24	12°♊10'26	
conjunction	14322 Feb 12 16:39	4°♊22'46	1°34'05		14328 Feb 29 16:11	15°♊	
minimum elong	14322 Feb 12 16:41	4°♊22'46	1°34'38	evening set	14328 Apr 15 11:53	19°♊59'42	
max. Earth dist.	14322 Feb 12 06:29	4°♊19'37	10.47339 AU				
morning rise	14322 Mar 02 08:40	6°♊33'13		conjunction	14328 May 02 22:58	22°♊10'11	-0°25'24
retrograde	14322 Jun 13 07:42	14°♊12'42		minimum elong	14328 May 02 22:57	22°♊10'11	0°26'10
opposition	14322 Aug 20 04:33	10°♊48'26	1°49'16	max. Earth dist.	14328 May 02 09:18	22°♊05'54	10.43212 AU
min. Earth dist.	14322 Aug 20 13:09	10°♊46'44	8.46345 AU	morning rise	14328 May 20 07:22	24°♊19'53	
direct	14322 Oct 27 15:39	7°♊22'22			14328 Jul 13 07:28	0°♊	
evening set	14323 Feb 08 13:34	15°♊05'48		retrograde	14328 Aug 29 21:47	1°♊56'53	
					14328 Oct 18 01:22	30°♊	
conjunction	14323 Feb 26 06:23	17°♊16'48	1°21'21	opposition	14328 Nov 05 18:38	28°♊34'47	-0°45'25
minimum elong	14323 Feb 26 06:26	17°♊16'49	1°21'42	min. Earth dist.	14328 Nov 06 04:21	28°♊32'53	8.43862 AU
max. Earth dist.	14323 Feb 25 18:17	17°♊13'03	10.45281 AU	direct	14329 Jan 14 03:17	25°♊09'00	
morning rise	14323 Mar 15 22:10	19°♊27'33			14329 Apr 03 13:40	0°♊	
retrograde	14323 Jun 26 12:45	27°♊06'56		evening set	14329 Apr 28 22:36	2°♊57'33	
opposition	14323 Sep 02 07:07	23°♊42'54	1°30'52				
min. Earth dist.	14323 Sep 02 16:52	23°♊40'58	8.44483 AU	conjunction	14329 May 16 07:12	5°♊07'15	-0°47'33
direct	14323 Nov 09 22:24	20°♊16'27		minimum elong	14329 May 16 07:10	5°♊07'15	0°48'27
evening set	14324 Feb 22 03:57	28°♊02'07		max. Earth dist.	14329 May 15 20:10	5°♊03'48	10.44613 AU
	14324 Mar 09 01:33	0°♑		morning rise	14329 Jun 02 13:04	7°♊16'12	
				retrograde	14329 Sep 12 03:22	14°♊52'41	
conjunction	14324 Mar 10 20:48	0°♑13'29	1°04'28	opposition	14329 Nov 19 04:44	11°♊30'52	-1°11'30
minimum elong	14324 Mar 10 20:51	0°♑13'29	1°04'34	min. Earth dist.	14329 Nov 19 12:10	11°♊29'26	8.45550 AU
max. Earth dist.	14324 Mar 10 07:35	0°♑09'22	10.43683 AU	direct	14330 Jan 27 16:12	8°♊05'37	
morning rise	14324 Mar 28 11:52	2°♑24'23		evening set	14330 May 12 07:02	15°♊52'46	
retrograde	14324 Jul 08 19:49	10°♑03'25					
opposition	14324 Sep 14 11:14	6°♑39'42	1°07'47	conjunction	14330 May 29 13:01	18°♊01'35	-1°07'14
min. Earth dist.	14324 Sep 14 21:39	6°♑37'38	8.43124 AU	minimum elong	14330 May 29 12:59	18°♊01'34	1°08'14
direct	14324 Nov 22 05:33	3°♑13'04		max. Earth dist.	14330 May 29 04:58	17°♊59'03	10.46531 AU
evening set	14325 Mar 06 18:47	11°♑00'31		morning rise	14330 Jun 15 16:21	20°♊09'41	
				retrograde	14330 Sep 25 09:41	27°♊45'36	
conjunction	14325 Mar 24 11:04	13°♑12'00	0°44'15	opposition	14330 Dec 02 14:51	24°♊24'00	-1°33'52

min. Earth dist.	14330 Dec 02 20:12	24° $\Pi$ 22'58	8.47715 AU	morning rise	14336 Aug 29 17:41	6° $\Pi$ 06'03	
direct	14331 Feb 10 03:22	20° $\Pi$ 59'19		retrograde	14336 Dec 10 19:57	13° $\Pi$ 39'22	
evening set	14331 May 25 12:48	28° $\Pi$ 44'27		opposition	14337 Feb 18 09:39	10° $\Pi$ 17'04	-1°49'55
	14331 Jun 04 16:52	0° $\mathfrak{E}$		min. Earth dist.	14337 Feb 18 01:54	10° $\Pi$ 18'33	8.61748 AU
				direct	14337 Apr 28 14:09	6° $\Pi$ 55'36	
conjunction	14331 Jun 11 16:10	0° $\mathfrak{E}$ 52'20	-1°23'29	evening set	14337 Aug 08 12:09	14° $\Pi$ 23'17	
minimum elong	14331 Jun 11 16:08	0° $\mathfrak{E}$ 52'19	1°24'32				
max. Earth dist.	14331 Jun 11 10:43	0° $\mathfrak{E}$ 50'37	10.48862 AU	conjunction	14337 Aug 25 10:29	16° $\Pi$ 27'47	-1°22'37
morning rise	14331 Jun 28 17:16	2° $\mathfrak{E}$ 59'33		minimum elong	14337 Aug 25 10:32	16° $\Pi$ 27'48	1°22'58
retrograde	14331 Oct 08 14:17	10° $\mathfrak{E}$ 34'51		max. Earth dist.	14337 Aug 25 20:08	16° $\Pi$ 30'46	10.62418 AU
opposition	14331 Dec 16 00:48	7° $\mathfrak{E}$ 13'24	-1°51'25	morning rise	14337 Sep 11 10:08	18° $\Pi$ 32'39	
min. Earth dist.	14331 Dec 16 04:18	7° $\mathfrak{E}$ 12'43	8.50223 AU	retrograde	14337 Dec 23 18:48	26° $\Pi$ 05'47	
direct	14332 Feb 23 13:08	3° $\mathfrak{E}$ 49'17		opposition	14338 Mar 03 11:44	22° $\Pi$ 43'04	-1°32'30
evening set	14332 Jun 06 15:33	11° $\mathfrak{E}$ 31'55		min. Earth dist.	14338 Mar 03 02:43	22° $\Pi$ 44'48	8.63138 AU
				direct	14338 May 11 12:19	19° $\Pi$ 21'50	
conjunction	14332 Jun 23 16:28	13° $\mathfrak{E}$ 38'49	-1°35'31	evening set	14338 Aug 21 01:32	26° $\Pi$ 47'01	
minimum elong	14332 Jun 23 16:27	13° $\mathfrak{E}$ 38'48	1°36'33				
max. Earth dist.	14332 Jun 23 13:13	13° $\mathfrak{E}$ 37'48	10.51457 AU	conjunction	14338 Sep 07 01:05	28° $\Pi$ 51'34	-1°06'44
morning rise	14332 Jul 10 15:48	15° $\mathfrak{E}$ 45'15		minimum elong	14338 Sep 07 01:07	28° $\Pi$ 51'35	1°06'52
retrograde	14332 Oct 20 16:16	23° $\mathfrak{E}$ 19'56		max. Earth dist.	14338 Sep 07 12:25	28° $\Pi$ 55'03	10.63632 AU
opposition	14332 Dec 28 09:57	19° $\mathfrak{E}$ 58'29	-2°03'22		14338 Sep 16 07:56	0° $\mathfrak{A}$	
min. Earth dist.	14332 Dec 28 11:27	19° $\mathfrak{E}$ 58'12	8.52903 AU	morning rise	14338 Sep 24 02:28	0° $\mathfrak{A}$ 56'37	
direct	14333 Mar 07 22:56	16° $\mathfrak{E}$ 34'58		retrograde	14339 Jan 05 15:23	8° $\mathfrak{A}$ 29'41	
evening set	14333 Jun 19 15:08	24° $\mathfrak{E}$ 14'41		opposition	14339 Mar 16 11:56	5° $\mathfrak{A}$ 06'31	-1°10'49
				min. Earth dist.	14339 Mar 16 01:30	5° $\mathfrak{A}$ 08'31	8.64118 AU
conjunction	14333 Jul 06 14:13	26° $\mathfrak{E}$ 20'43	-1°42'48	direct	14339 May 24 09:48	1° $\mathfrak{A}$ 45'26	
minimum elong	14333 Jul 06 14:13	26° $\mathfrak{E}$ 20'43	1°43'47	evening set	14339 Sep 02 14:29	9° $\mathfrak{A}$ 08'35	
max. Earth dist.	14333 Jul 06 13:35	26° $\mathfrak{E}$ 20'31	10.54128 AU				
morning rise	14333 Jul 23 12:20	28° $\mathfrak{E}$ 26'27		conjunction	14339 Sep 19 15:40	11° $\mathfrak{A}$ 13'20	-0°47'48
	14333 Aug 05 13:44	0° $\mathfrak{O}$		minimum elong	14339 Sep 19 15:42	11° $\mathfrak{A}$ 13'20	0°47'42
retrograde	14333 Nov 02 17:42	6° $\mathfrak{O}$ 00'36		max. Earth dist.	14339 Sep 20 05:04	11° $\mathfrak{A}$ 17'26	10.64414 AU
opposition	14334 Jan 10 17:55	2° $\mathfrak{O}$ 39'04	-2°09'13	morning rise	14339 Oct 06 18:56	13° $\mathfrak{A}$ 18'40	
min. Earth dist.	14334 Jan 10 16:49	2° $\mathfrak{O}$ 39'16	8.55538 AU	retrograde	14340 Jan 18 13:23	20° $\mathfrak{A}$ 51'51	
	14334 Feb 19 11:58	30° $\mathfrak{R}$ $\mathfrak{E}$		opposition	14340 Mar 28 10:39	17° $\mathfrak{A}$ 28'14	-0°45'55
direct	14334 Mar 21 07:09	29° $\mathfrak{E}$ 16'08		min. Earth dist.	14340 Mar 27 22:41	17° $\mathfrak{A}$ 30'32	8.64652 AU
	14334 Apr 19 14:48	0° $\mathfrak{O}$		direct	14340 Jun 05 05:14	14° $\mathfrak{A}$ 07'13	
evening set	14334 Jul 02 11:39	6° $\mathfrak{O}$ 52'44		evening set	14340 Sep 14 03:39	21° $\mathfrak{A}$ 28'53	
conjunction	14334 Jul 19 09:41	8° $\mathfrak{O}$ 58'07	-1°45'04	conjunction	14340 Oct 01 06:38	23° $\mathfrak{A}$ 33'56	-0°26'41
minimum elong	14334 Jul 19 09:41	8° $\mathfrak{O}$ 58'07	1°45'57	minimum elong	14340 Oct 01 06:39	23° $\mathfrak{A}$ 33'57	0°26'21
max. Earth dist.	14334 Jul 19 12:11	8° $\mathfrak{O}$ 58'54	10.56652 AU	max. Earth dist.	14340 Oct 01 21:18	23° $\mathfrak{A}$ 38'26	10.64725 AU
morning rise	14334 Aug 05 07:09	11° $\mathfrak{O}$ 03'20		morning rise	14340 Oct 18 11:53	25° $\mathfrak{A}$ 39'41	
	14334 Sep 09 11:35	15° $\mathfrak{O}$			14340 Nov 27 09:42	0° $\mathfrak{M}$	
retrograde	14334 Nov 15 19:55	18° $\mathfrak{O}$ 37'07		retrograde	14341 Jan 30 12:17	3° $\mathfrak{M}$ 13'10	
opposition	14335 Jan 24 00:33	15° $\mathfrak{O}$ 15'24	-2°08'48		14341 Apr 07 23:35	30° $\mathfrak{R}$ $\mathfrak{A}$	
min. Earth dist.	14335 Jan 23 20:44	15° $\mathfrak{O}$ 16'08	8.57925 AU	opposition	14341 Apr 10 07:58	29° $\mathfrak{A}$ 49'08	-0°18'55
	14335 Jan 27 09:01	15° $\mathfrak{R}$ $\mathfrak{O}$		min. Earth dist.	14341 Apr 09 19:39	29° $\mathfrak{A}$ 51'31	8.64708 AU
direct	14335 Apr 03 11:21	11° $\mathfrak{O}$ 53'03		direct	14341 Jun 17 21:31	26° $\mathfrak{A}$ 28'04	
	14335 Jun 04 17:54	15° $\mathfrak{O}$			14341 Aug 23 04:54	0° $\mathfrak{M}$	
evening set	14335 Jul 15 05:45	19° $\mathfrak{O}$ 26'35		evening set	14341 Sep 26 18:01	3° $\mathfrak{M}$ 49'00	
conjunction	14335 Aug 01 03:19	21° $\mathfrak{O}$ 31'30	-1°42'17	conjunction	14341 Oct 13 22:43	5° $\mathfrak{M}$ 54'25	-0°04'22
minimum elong	14335 Aug 01 03:20	21° $\mathfrak{O}$ 31'30	1°43'01	minimum elong	14341 Oct 13 22:44	5° $\mathfrak{M}$ 54'26	0°03'50
max. Earth dist.	14335 Aug 01 09:01	21° $\mathfrak{O}$ 33'16	10.58889 AU	behind sun begin	14341 Oct 13 15:41	5° $\mathfrak{M}$ 52'18	
morning rise	14335 Aug 18 00:45	23° $\mathfrak{O}$ 36'24		behind sun end	14341 Oct 14 05:47	5° $\mathfrak{M}$ 56'34	
	14335 Oct 22 14:44	0° $\mathfrak{M}$		max. Earth dist.	14341 Oct 14 12:58	5° $\mathfrak{M}$ 58'46	10.64542 AU
retrograde	14335 Nov 28 20:16	1° $\mathfrak{M}$ 09'55		morning rise	14341 Oct 31 06:04	8° $\mathfrak{M}$ 00'38	
	14336 Jan 05 20:47	30° $\mathfrak{R}$ $\mathfrak{O}$		asc. node	14341 Dec 25 10:48	13° $\mathfrak{M}$ 38'17	
opposition	14336 Feb 06 05:48	27° $\mathfrak{O}$ 47'58	-2°02'14		14342 Jan 17 03:54	15° $\mathfrak{M}$	
min. Earth dist.	14336 Feb 05 23:35	27° $\mathfrak{O}$ 49'09	8.59997 AU	retrograde	14342 Feb 12 09:23	15° $\mathfrak{M}$ 34'34	
direct	14336 Apr 15 13:40	24° $\mathfrak{O}$ 26'07			14342 Mar 10 18:55	15° $\mathfrak{R}$ $\mathfrak{M}$	
	14336 Jul 10 08:47	0° $\mathfrak{M}$		opposition	14342 Apr 23 04:02	12° $\mathfrak{M}$ 10'13	0°08'58
evening set	14336 Jul 26 21:49	1° $\mathfrak{M}$ 56'39		min. Earth dist.	14342 Apr 22 16:32	12° $\mathfrak{M}$ 12'27	8.64273 AU
				direct	14342 Jun 30 14:01	8° $\mathfrak{M}$ 48'58	
conjunction	14336 Aug 12 19:29	4° $\mathfrak{M}$ 01'16	-1°34'40		14342 Sep 29 12:18	15° $\mathfrak{M}$	
minimum elong	14336 Aug 12 19:31	4° $\mathfrak{M}$ 01'17	1°35'14	evening set	14342 Oct 09 09:57	16° $\mathfrak{M}$ 09'57	
max. Earth dist.	14336 Aug 13 03:33	4° $\mathfrak{M}$ 03'46	10.60819 AU				

conjunction	14342 Oct 26 16:21	18° $\mathbb{M}$ 15'50	0°18'18	conjunction	14349 Jan 11 05:57	3° $\approx$ 30'49	1°44'28
minimum elong	14342 Oct 26 16:21	18° $\mathbb{M}$ 15'49	0°19'01	minimum elong	14349 Jan 11 05:58	3° $\approx$ 30'49	1°45'24
max. Earth dist.	14342 Oct 27 05:14	18° $\mathbb{M}$ 19'45	10.63863 AU	max. Earth dist.	14349 Jan 11 04:45	3° $\approx$ 30'27	10.52470 AU
morning rise	14342 Nov 13 01:40	20° $\mathbb{M}$ 22'31		morning rise	14349 Jan 28 21:35	5° $\approx$ 40'26	
retrograde	14343 Feb 25 07:11	27° $\mathbb{M}$ 57'09		retrograde	14349 May 12 15:38	13° $\approx$ 20'22	
opposition	14343 May 05 23:29	24° $\mathbb{M}$ 32'32	0°36'28	opposition	14349 Jul 19 23:41	9° $\approx$ 55'50	2°09'34
min. Earth dist.	14343 May 05 13:17	24° $\mathbb{M}$ 34'30	8.63359 AU	min. Earth dist.	14349 Jul 20 01:31	9° $\approx$ 55'29	8.51463 AU
direct	14343 Jul 13 06:50	21° $\mathbb{M}$ 10'59		direct	14349 Sep 26 03:14	6° $\approx$ 31'25	
evening set	14343 Oct 22 03:47	28° $\mathbb{M}$ 32'44		evening set	14350 Jan 07 01:49	14° $\approx$ 08'41	
	14343 Nov 03 04:01	0° $\mathbb{A}$			14350 Jan 14 02:24	15° $\approx$	
conjunction	14343 Nov 08 11:55	0° $\mathbb{A}$ 39'07	0°40'03	conjunction	14350 Jan 24 17:22	16° $\approx$ 18'34	1°43'46
minimum elong	14343 Nov 08 11:54	0° $\mathbb{A}$ 39'06	0°40'54	minimum elong	14350 Jan 24 17:23	16° $\approx$ 18'35	1°44'35
max. Earth dist.	14343 Nov 08 23:41	0° $\mathbb{A}$ 42'42	10.62711 AU	max. Earth dist.	14350 Jan 24 13:41	16° $\approx$ 17'26	10.50263 AU
morning rise	14343 Nov 25 22:52	2° $\mathbb{A}$ 46'18		morning rise	14350 Feb 11 09:13	18° $\approx$ 28'35	
retrograde	14344 Mar 09 06:06	10° $\mathbb{A}$ 21'51		retrograde	14350 May 25 21:23	26° $\approx$ 08'49	
opposition	14344 May 17 18:29	6° $\mathbb{A}$ 57'00	1°02'20	opposition	14350 Aug 01 23:14	22° $\approx$ 44'33	2°05'32
min. Earth dist.	14344 May 17 09:15	6° $\mathbb{A}$ 58'47	8.62005 AU	min. Earth dist.	14350 Aug 02 02:53	22° $\approx$ 43'50	8.49334 AU
direct	14344 Jul 24 23:14	3° $\mathbb{A}$ 35'06		direct	14350 Oct 09 04:23	19° $\approx$ 19'39	
evening set	14344 Nov 03 00:18	10° $\mathbb{A}$ 58'20		evening set	14351 Jan 20 14:15	26° $\approx$ 59'49	
conjunction	14344 Nov 20 10:06	13° $\mathbb{A}$ 05'15	1°00'00	conjunction	14351 Feb 07 06:35	29° $\approx$ 10'15	1°37'55
minimum elong	14344 Nov 20 10:04	13° $\mathbb{A}$ 05'14	1°00'57	minimum elong	14351 Feb 07 06:37	29° $\approx$ 10'15	1°38'33
max. Earth dist.	14344 Nov 20 20:45	13° $\mathbb{A}$ 08'30	10.61135 AU	max. Earth dist.	14351 Feb 07 00:20	29° $\approx$ 08'19	10.48242 AU
morning rise	14344 Dec 07 22:22	15° $\mathbb{A}$ 12'55			14351 Feb 13 23:18	0° $\mathbb{H}$	
retrograde	14345 Mar 22 05:27	22° $\mathbb{A}$ 49'28		morning rise	14351 Feb 24 22:28	1° $\mathbb{H}$ 20'38	
opposition	14345 May 30 13:13	19° $\mathbb{A}$ 24'29	1°25'22	retrograde	14351 Jun 08 03:20	9° $\mathbb{H}$ 00'48	
min. Earth dist.	14345 May 30 05:13	19° $\mathbb{A}$ 26'03	8.60266 AU	opposition	14351 Aug 15 00:16	5° $\mathbb{H}$ 36'49	1°55'13
direct	14345 Aug 06 16:36	16° $\mathbb{A}$ 02'08		min. Earth dist.	14351 Aug 15 06:11	5° $\mathbb{H}$ 35'38	8.47418 AU
evening set	14345 Nov 15 23:44	23° $\mathbb{A}$ 27'31		direct	14351 Oct 22 08:07	2° $\mathbb{H}$ 11'26	
				evening set	14352 Feb 03 04:07	9° $\mathbb{H}$ 54'12	
conjunction	14345 Dec 03 10:57	25° $\mathbb{A}$ 35'00	1°17'11	conjunction	14352 Feb 20 20:53	12° $\mathbb{H}$ 05'04	1°27'07
minimum elong	14345 Dec 03 10:55	25° $\mathbb{A}$ 35'00	1°18'12	minimum elong	14352 Feb 20 20:55	12° $\mathbb{H}$ 05'05	1°27'33
max. Earth dist.	14345 Dec 03 19:33	25° $\mathbb{A}$ 37'39	10.59212 AU	max. Earth dist.	14352 Feb 20 11:21	12° $\mathbb{H}$ 02'07	10.46467 AU
morning rise	14345 Dec 21 00:16	27° $\mathbb{A}$ 43'10		morning rise	14352 Mar 09 12:41	14° $\mathbb{H}$ 15'45	
	14346 Jan 09 17:38	0° $\mathbb{B}$		retrograde	14352 Jun 20 09:11	21° $\mathbb{H}$ 55'34	
retrograde	14346 Apr 04 07:21	5° $\mathbb{B}$ 20'44		opposition	14352 Aug 27 02:49	18° $\mathbb{H}$ 31'53	1°39'03
opposition	14346 Jun 12 08:30	1° $\mathbb{B}$ 55'44	1°44'28	min. Earth dist.	14352 Aug 27 11:25	18° $\mathbb{H}$ 30'11	8.45745 AU
min. Earth dist.	14346 Jun 12 02:25	1° $\mathbb{B}$ 56'55	8.58228 AU	direct	14352 Nov 03 14:20	15° $\mathbb{H}$ 06'05	
	14346 Jul 08 12:31	30° $\mathbb{R}$ $\mathbb{A}$		evening set	14353 Feb 15 18:55	22° $\mathbb{H}$ 51'04	
direct	14346 Aug 19 09:57	28° $\mathbb{A}$ 32'54					
	14346 Sep 29 14:31	0° $\mathbb{B}$					
evening set	14346 Nov 29 02:01	6° $\mathbb{B}$ 00'53		conjunction	14353 Mar 05 11:41	25° $\mathbb{H}$ 02'18	1°11'52
conjunction	14346 Dec 16 14:23	8° $\mathbb{B}$ 08'58	1°30'46	minimum elong	14353 Mar 05 11:43	25° $\mathbb{H}$ 02'18	1°12'04
minimum elong	14346 Dec 16 14:22	8° $\mathbb{B}$ 08'57	1°31'48	max. Earth dist.	14353 Mar 04 22:51	24° $\mathbb{H}$ 58'18	10.44936 AU
max. Earth dist.	14346 Dec 16 19:50	8° $\mathbb{B}$ 10'38	10.57046 AU	morning rise	14353 Mar 23 03:04	27° $\mathbb{H}$ 13'08	
morning rise	14347 Jan 03 04:39	10° $\mathbb{B}$ 17'37			14353 Apr 16 00:31	0° $\mathbb{Y}$	
retrograde	14347 Apr 17 09:57	17° $\mathbb{B}$ 56'10		retrograde	14353 Jul 03 15:45	4° $\mathbb{Y}$ 52'30	
opposition	14347 Jun 25 04:34	14° $\mathbb{B}$ 31'14	1°58'40	opposition	14353 Sep 09 06:49	1° $\mathbb{Y}$ 29'10	1°17'47
min. Earth dist.	14347 Jun 25 01:18	14° $\mathbb{B}$ 31'53	8.56006 AU	min. Earth dist.	14353 Sep 09 17:43	1° $\mathbb{Y}$ 27'00	8.44314 AU
direct	14347 Sep 01 04:40	11° $\mathbb{B}$ 07'52			14353 Sep 28 15:56	30° $\mathbb{R}$ $\mathbb{H}$	
evening set	14347 Dec 12 07:19	18° $\mathbb{B}$ 38'51		direct	14353 Nov 16 22:07	28° $\mathbb{H}$ 03'03	
conjunction	14347 Dec 29 20:47	20° $\mathbb{B}$ 47'32	1°40'02	evening set	14354 Jan 04 06:11	0° $\mathbb{Y}$	
minimum elong	14347 Dec 29 20:46	20° $\mathbb{B}$ 47'31	1°41'02	max. Earth dist.	14354 Mar 01 10:04	5° $\mathbb{Y}$ 49'58	
max. Earth dist.	14347 Dec 29 22:36	20° $\mathbb{B}$ 48'05	10.54762 AU		14354 Mar 18 11:20	7° $\mathbb{Y}$ 56'41	10.43667 AU
morning rise	14348 Jan 16 11:51	22° $\mathbb{B}$ 56'41		conjunction	14354 Mar 19 02:28	8° $\mathbb{Y}$ 01'24	0°52'55
	14348 Apr 03 02:31	0° $\approx$		minimum elong	14354 Mar 19 02:30	8° $\mathbb{Y}$ 01'25	0°52'53
retrograde	14348 Apr 29 12:05	0° $\approx$ 36'02		morning rise	14354 Apr 05 17:03	10° $\mathbb{Y}$ 12'19	
	14348 May 26 00:25	30° $\mathbb{R}$ $\mathbb{B}$		retrograde	14354 Jul 16 21:51	17° $\mathbb{Y}$ 51'17	
opposition	14348 Jul 07 01:30	27° $\mathbb{B}$ 11'17	2°07'12	opposition	14354 Sep 22 12:26	14° $\mathbb{Y}$ 28'16	0°52'29
min. Earth dist.	14348 Jul 07 01:04	27° $\mathbb{B}$ 11'22	8.53719 AU	min. Earth dist.	14354 Sep 23 00:24	14° $\mathbb{Y}$ 25'54	8.43194 AU
direct	14348 Sep 13 02:54	23° $\mathbb{B}$ 47'22		direct	14354 Nov 30 08:27	11° $\mathbb{Y}$ 02'02	
	14348 Dec 13 03:53	0° $\approx$		evening set	14355 Mar 15 01:11	18° $\mathbb{Y}$ 50'27	
evening set	14348 Dec 24 15:23	1° $\approx$ 21'32		conjunction	14355 Apr 01 16:47	21° $\mathbb{Y}$ 01'55	0°31'14
				minimum elong	14355 Apr 01 16:49	21° $\mathbb{Y}$ 01'55	0°30'57

max. Earth dist.	14355 Apr 01 01:12	20° $\Upsilon$ 57'02	10.42775 AU	evening set	14361 Jun 01 14:43	6° $\text{♄}$ 31'35	
morning rise	14355 Apr 19 06:05	23° $\Upsilon$ 12'44					
	14355 Jun 29 03:21	0° $\text{♄}$		conjunction	14361 Jun 18 16:46	8° $\text{♄}$ 39'02	-1°31'13
retrograde	14355 Jul 30 04:30	0° $\text{♄}$ 51'19		minimum elong	14361 Jun 18 16:45	8° $\text{♄}$ 39'01	1°32'16
	14355 Aug 30 15:53	30° $\text{♄}$		max. Earth dist.	14361 Jun 18 12:29	8° $\text{♄}$ 37'41	10.48987 AU
opposition	14355 Oct 05 19:37	27° $\Upsilon$ 28'37	0°24'26	morning rise	14361 Jul 05 16:52	10° $\text{♄}$ 45'55	
min. Earth dist.	14355 Oct 06 07:27	27° $\Upsilon$ 26'16	8.42528 AU	retrograde	14361 Oct 15 14:34	18° $\text{♄}$ 21'14	
direct	14355 Dec 13 20:14	24° $\Upsilon$ 02'21		opposition	14361 Dec 23 06:12	14° $\text{♄}$ 59'12	-1°59'20
	14356 Mar 12 01:18	0° $\text{♄}$		min. Earth dist.	14361 Dec 23 07:52	14° $\text{♄}$ 58'53	8.50341 AU
evening set	14356 Mar 27 16:03	1° $\text{♄}$ 51'44		direct	14362 Mar 02 20:45	11° $\text{♄}$ 34'53	
				evening set	14362 Jun 14 15:36	19° $\text{♄}$ 16'11	
conjunction	14356 Apr 14 06:17	4° $\text{♄}$ 02'59	0°07'57				
minimum elong	14356 Apr 14 06:16	4° $\text{♄}$ 02'59	0°07'26	conjunction	14362 Jul 01 15:39	21° $\text{♄}$ 22'44	-1°40'30
behind sun begin	14356 Apr 13 23:43	4° $\text{♄}$ 00'57		minimum elong	14362 Jul 01 15:38	21° $\text{♄}$ 22'44	1°41'30
behind sun end	14356 Apr 14 12:50	4° $\text{♄}$ 05'01		max. Earth dist.	14362 Jul 01 15:02	21° $\text{♄}$ 22'33	10.51554 AU
max. Earth dist.	14356 Apr 13 15:16	3° $\text{♄}$ 58'18	10.42393 AU	morning rise	14362 Jul 18 14:10	23° $\text{♄}$ 28'52	
morning rise	14356 May 01 17:42	6° $\text{♄}$ 13'30			14362 Sep 23 13:56	0° $\text{♄}$	
retrograde	14356 Aug 11 12:47	13° $\text{♄}$ 51'37		retrograde	14362 Oct 28 17:36	1° $\text{♄}$ 03'35	
desc. node	14356 Aug 17 18:24	13° $\text{♄}$ 49'30			14362 Dec 03 13:58	30° $\text{♄}$	
opposition	14356 Oct 18 04:09	10° $\text{♄}$ 29'11	-0°04'54	opposition	14363 Jan 05 14:32	27° $\text{♄}$ 41'31	-2°07'43
min. Earth dist.	14356 Oct 18 15:31	10° $\text{♄}$ 26'57	8.42431 AU	min. Earth dist.	14363 Jan 05 13:43	27° $\text{♄}$ 41'40	8.53015 AU
direct	14356 Dec 26 07:34	7° $\text{♄}$ 03'01		direct	14363 Mar 16 04:08	24° $\text{♄}$ 17'47	
evening set	14357 Apr 10 05:53	14° $\text{♄}$ 52'40			14363 Jun 11 05:37	0° $\text{♄}$	
	14357 Apr 11 05:45	15° $\text{♄}$		evening set	14363 Jun 27 13:29	1° $\text{♄}$ 56'02	
conjunction	14357 Apr 27 18:06	17° $\text{♄}$ 03'29	-0°15'51	conjunction	14363 Jul 14 11:59	4° $\text{♄}$ 01'49	-1°44'50
minimum elong	14357 Apr 27 18:05	17° $\text{♄}$ 03'29	0°16'33	minimum elong	14363 Jul 14 11:59	4° $\text{♄}$ 01'49	1°45'45
max. Earth dist.	14357 Apr 27 04:04	16° $\text{♄}$ 59'06	10.42605 AU	max. Earth dist.	14363 Jul 14 14:03	4° $\text{♄}$ 02'27	10.54273 AU
morning rise	14357 May 15 03:20	19° $\text{♄}$ 13'31		morning rise	14363 Jul 31 09:38	6° $\text{♄}$ 07'20	
retrograde	14357 Aug 24 19:58	26° $\text{♄}$ 51'06		retrograde	14363 Nov 10 19:40	13° $\text{♄}$ 41'27	
opposition	14357 Oct 31 13:54	23° $\text{♄}$ 28'53	-0°33'58	opposition	14364 Jan 18 21:46	10° $\text{♄}$ 19'19	-2°09'51
min. Earth dist.	14357 Nov 01 00:36	23° $\text{♄}$ 26'47	8.42956 AU	min. Earth dist.	14364 Jan 18 18:46	10° $\text{♄}$ 19'53	8.55763 AU
direct	14358 Jan 08 20:09	20° $\text{♄}$ 02'54		direct	14364 Mar 28 08:43	6° $\text{♄}$ 56'13	
evening set	14358 Apr 23 17:52	27° $\text{♄}$ 52'07		evening set	14364 Jul 09 08:21	14° $\text{♄}$ 31'12	
	14358 May 10 20:22	0° $\text{♄}$			14364 Jul 13 06:38	15° $\text{♄}$	
conjunction	14358 May 11 03:36	0° $\text{♄}$ 02'16	-0°38'43	conjunction	14364 Jul 26 05:56	16° $\text{♄}$ 36'21	-1°44'06
minimum elong	14358 May 11 03:35	0° $\text{♄}$ 02'15	0°39'35	minimum elong	14364 Jul 26 05:57	16° $\text{♄}$ 36'21	1°44'54
max. Earth dist.	14358 May 10 14:43	29° $\text{♄}$ 58'14	10.43427 AU	max. Earth dist.	14364 Jul 26 10:38	16° $\text{♄}$ 37'49	10.57008 AU
morning rise	14358 May 28 10:33	2° $\text{♄}$ 11'38		morning rise	14364 Aug 12 03:27	18° $\text{♄}$ 41'26	
retrograde	14358 Sep 07 01:30	9° $\text{♄}$ 48'40		retrograde	14364 Nov 22 18:06	26° $\text{♄}$ 15'02	
opposition	14358 Nov 14 00:14	6° $\text{♄}$ 26'36	-1°01'15	opposition	14365 Jan 31 03:27	22° $\text{♄}$ 52'45	-2°05'45
min. Earth dist.	14358 Nov 14 10:00	6° $\text{♄}$ 24'42	8.44086 AU	min. Earth dist.	14365 Jan 30 22:01	22° $\text{♄}$ 53'48	8.58449 AU
direct	14359 Jan 22 09:57	3° $\text{♄}$ 00'53		direct	14365 Apr 10 13:01	19° $\text{♄}$ 30'16	
evening set	14359 May 07 03:44	10° $\text{♄}$ 49'01		evening set	14365 Jul 22 00:44	27° $\text{♄}$ 01'59	
conjunction	14359 May 24 10:47	12° $\text{♄}$ 58'20	-0°59'35	conjunction	14365 Aug 07 22:14	29° $\text{♄}$ 06'42	-1°38'25
minimum elong	14359 May 24 10:45	12° $\text{♄}$ 58'19	1°00'33	minimum elong	14365 Aug 07 22:16	29° $\text{♄}$ 06'42	1°39'03
max. Earth dist.	14359 May 23 23:34	12° $\text{♄}$ 54'49	10.44819 AU	max. Earth dist.	14365 Aug 08 05:56	29° $\text{♄}$ 09'05	10.59625 AU
morning rise	14359 Jun 10 15:21	15° $\text{♄}$ 06'54			14365 Aug 15 02:32	0° $\text{♄}$	
retrograde	14359 Sep 20 06:30	22° $\text{♄}$ 43'20		morning rise	14365 Aug 24 20:13	1° $\text{♄}$ 11'30	
opposition	14359 Nov 27 10:31	19° $\text{♄}$ 21'22	-1°25'19	retrograde	14365 Dec 05 17:23	8° $\text{♄}$ 44'37	
min. Earth dist.	14359 Nov 27 18:16	19° $\text{♄}$ 19'51	8.45757 AU	opposition	14366 Feb 13 07:14	5° $\text{♄}$ 22'10	-1°55'42
direct	14360 Feb 04 23:09	15° $\text{♄}$ 56'00		min. Earth dist.	14366 Feb 12 23:02	5° $\text{♄}$ 23'44	8.60943 AU
evening set	14360 May 19 10:50	23° $\text{♄}$ 42'25		direct	14366 Apr 23 14:54	2° $\text{♄}$ 00'17	
				evening set	14366 Aug 03 15:10	9° $\text{♄}$ 28'49	
conjunction	14360 Jun 05 15:15	25° $\text{♄}$ 50'48	-1°17'22	conjunction	14366 Aug 20 13:15	11° $\text{♄}$ 33'17	-1°28'07
minimum elong	14360 Jun 05 15:13	25° $\text{♄}$ 50'47	1°18'24	minimum elong	14366 Aug 20 13:18	11° $\text{♄}$ 33'18	1°28'34
max. Earth dist.	14360 Jun 05 07:06	25° $\text{♄}$ 48'14	10.46704 AU	max. Earth dist.	14366 Aug 21 00:17	11° $\text{♄}$ 36'42	10.61996 AU
morning rise	14360 Jun 22 17:28	27° $\text{♄}$ 58'31		morning rise	14366 Sep 06 12:11	13° $\text{♄}$ 38'01	
	14360 Jul 09 17:27	0° $\text{♄}$		retrograde	14366 Dec 18 17:07	21° $\text{♄}$ 10'42	
retrograde	14360 Oct 02 11:11	5° $\text{♄}$ 34'23		opposition	14367 Feb 26 09:18	17° $\text{♄}$ 48'02	-1°40'17
opposition	14360 Dec 09 20:43	2° $\text{♄}$ 12'24	-1°45'00	min. Earth dist.	14367 Feb 25 22:42	17° $\text{♄}$ 50'04	8.63128 AU
min. Earth dist.	14360 Dec 10 01:32	2° $\text{♄}$ 11'28	8.47878 AU	direct	14367 May 06 12:45	14° $\text{♄}$ 26'42	
	14361 Jan 09 19:51	30° $\text{♄}$		evening set	14367 Aug 16 04:14	21° $\text{♄}$ 52'20	
direct	14361 Feb 17 10:34	28° $\text{♄}$ 47'31					
	14361 Mar 27 08:29	0° $\text{♄}$					

conjunction	14367 Sep 02 03:16	23° $\mathbb{M}$ 56'43	-1°13'45	min. Earth dist.	14373 May 12 03:59	1° $\mathbb{Z}$ 53'19	8.66037 AU
minimum elong	14367 Sep 02 03:19	23° $\mathbb{M}$ 56'44	1°13'59		14373 Jun 06 23:58	30° $\mathbb{R}$ $\mathbb{M}$	
max. Earth dist.	14367 Sep 02 16:34	24° $\mathbb{M}$ 00'49	10.64016 AU	direct	14373 Jul 19 19:45	28° $\mathbb{M}$ 30'22	
morning rise	14367 Sep 19 03:39	26° $\mathbb{M}$ 01'31			14373 Aug 30 19:03	0° $\mathbb{Z}$	
	14367 Oct 25 02:01	0° $\mathbb{Z}$		evening set	14373 Oct 28 19:10	5° $\mathbb{Z}$ 51'19	
retrograde	14367 Dec 31 14:35	3° $\mathbb{Z}$ 33'54					
opposition	14368 Mar 10 09:43	0° $\mathbb{Z}$ 11'02	-1°20'16	conjunction	14373 Nov 15 03:55	7° $\mathbb{Z}$ 57'31	0°51'36
min. Earth dist.	14368 Mar 09 21:48	0° $\mathbb{Z}$ 13'19	8.64922 AU	minimum elong	14373 Nov 15 03:53	7° $\mathbb{Z}$ 57'30	0°52'32
	14368 Mar 12 19:21	30° $\mathbb{R}$ $\mathbb{M}$		max. Earth dist.	14373 Nov 15 14:29	8° $\mathbb{Z}$ 00'44	10.65239 AU
direct	14368 May 18 08:27	26° $\mathbb{M}$ 50'07		morning rise	14373 Dec 02 15:23	10° $\mathbb{Z}$ 04'31	
	14368 Jul 20 00:17	0° $\mathbb{Z}$		retrograde	14374 Mar 16 22:40	17° $\mathbb{Z}$ 38'58	
evening set	14368 Aug 27 16:42	4° $\mathbb{Z}$ 13'20		opposition	14374 May 25 08:12	14° $\mathbb{Z}$ 14'49	1°15'40
				min. Earth dist.	14374 May 25 00:33	14° $\mathbb{Z}$ 16'19	8.64356 AU
conjunction	14368 Sep 13 17:01	6° $\mathbb{Z}$ 17'46	-0°56'01	direct	14374 Aug 01 11:38	10° $\mathbb{Z}$ 53'23	
minimum elong	14368 Sep 13 17:03	6° $\mathbb{Z}$ 17'47	0°56'01	evening set	14374 Nov 10 16:17	18° $\mathbb{Z}$ 16'15	
max. Earth dist.	14368 Sep 14 07:17	6° $\mathbb{Z}$ 22'08	10.65617 AU				
morning rise	14368 Sep 30 19:20	8° $\mathbb{Z}$ 22'45		conjunction	14374 Nov 28 02:29	20° $\mathbb{Z}$ 23'01	1°10'02
retrograde	14369 Jan 12 11:44	15° $\mathbb{Z}$ 54'59		minimum elong	14374 Nov 28 02:27	20° $\mathbb{Z}$ 23'01	1°11'02
opposition	14369 Mar 23 08:26	12° $\mathbb{Z}$ 31'54	-0°56'37	max. Earth dist.	14374 Nov 28 10:10	20° $\mathbb{Z}$ 25'22	10.63253 AU
min. Earth dist.	14369 Mar 22 20:10	12° $\mathbb{Z}$ 34'16	8.66270 AU	morning rise	14374 Dec 15 15:15	22° $\mathbb{Z}$ 30'32	
direct	14369 May 31 03:41	9° $\mathbb{Z}$ 11'17			14375 Mar 18 23:58	0° $\mathbb{Z}$	
evening set	14369 Sep 09 05:04	16° $\mathbb{Z}$ 32'37		retrograde	14375 Mar 29 21:26	0° $\mathbb{Z}$ 06'07	
					14375 Apr 09 20:02	30° $\mathbb{R}$ $\mathbb{Z}$	
conjunction	14369 Sep 26 07:01	18° $\mathbb{Z}$ 37'15	-0°35'44	opposition	14375 Jun 07 02:22	26° $\mathbb{Z}$ 41'48	1°36'32
minimum elong	14369 Sep 26 07:02	18° $\mathbb{Z}$ 37'15	0°35'30	min. Earth dist.	14375 Jun 06 20:58	26° $\mathbb{Z}$ 42'51	8.62146 AU
max. Earth dist.	14369 Sep 26 21:33	18° $\mathbb{Z}$ 41'41	10.66735 AU	direct	14375 Aug 14 05:13	23° $\mathbb{Z}$ 19'46	
morning rise	14369 Oct 13 11:26	20° $\mathbb{Z}$ 42'33			14375 Nov 17 07:53	0° $\mathbb{Z}$	
retrograde	14370 Jan 25 08:35	28° $\mathbb{Z}$ 14'46		evening set	14375 Nov 23 16:08	0° $\mathbb{Z}$ 45'06	
opposition	14370 Apr 05 05:35	24° $\mathbb{Z}$ 51'29	-0°30'26				
min. Earth dist.	14370 Apr 04 17:09	24° $\mathbb{Z}$ 53'52	8.67108 AU	conjunction	14375 Dec 11 03:47	2° $\mathbb{Z}$ 52'30	1°25'14
direct	14370 Jun 12 20:53	21° $\mathbb{Z}$ 31'01		minimum elong	14375 Dec 11 03:45	2° $\mathbb{Z}$ 52'30	1°26'16
evening set	14370 Sep 21 18:07	28° $\mathbb{Z}$ 51'08		max. Earth dist.	14375 Dec 11 09:09	2° $\mathbb{Z}$ 54'09	10.60821 AU
	14370 Oct 01 06:14	0° $\mathbb{M}$		morning rise	14375 Dec 28 17:33	5° $\mathbb{Z}$ 00'32	
conjunction	14370 Oct 08 21:52	0° $\mathbb{M}$ 56'03	-0°13'52	retrograde	14376 Apr 10 22:04	12° $\mathbb{Z}$ 37'15	
minimum elong	14370 Oct 08 21:53	0° $\mathbb{M}$ 56'03	0°13'24	opposition	14376 Jun 18 21:02	9° $\mathbb{Z}$ 12'47	1°52'56
behind sun begin	14370 Oct 08 17:49	0° $\mathbb{M}$ 54'49		min. Earth dist.	14376 Jun 18 17:29	9° $\mathbb{Z}$ 13'29	8.59573 AU
behind sun end	14370 Oct 09 01:56	0° $\mathbb{M}$ 57'16		direct	14376 Aug 25 23:12	5° $\mathbb{Z}$ 50'06	
max. Earth dist.	14370 Oct 09 13:02	1° $\mathbb{M}$ 00'40	10.67307 AU	evening set	14376 Dec 05 19:07	13° $\mathbb{Z}$ 18'20	
morning rise	14370 Oct 26 04:14	3° $\mathbb{M}$ 01'43		conjunction	14376 Dec 23 08:05	15° $\mathbb{Z}$ 26'23	1°36'27
retrograde	14371 Feb 07 04:36	10° $\mathbb{M}$ 34'10		minimum elong	14376 Dec 23 08:04	15° $\mathbb{Z}$ 26'23	1°37'29
opposition	14371 Apr 18 01:21	7° $\mathbb{M}$ 10'39	-0°02'53	max. Earth dist.	14376 Dec 23 11:03	15° $\mathbb{Z}$ 27'18	10.58101 AU
min. Earth dist.	14371 Apr 17 12:39	7° $\mathbb{M}$ 13'05	8.67382 AU	morning rise	14377 Jan 09 22:33	17° $\mathbb{Z}$ 34'57	
asc. node	14371 May 26 12:53	4° $\mathbb{M}$ 35'35		retrograde	14377 Apr 23 23:38	25° $\mathbb{Z}$ 12'40	
direct	14371 Jun 25 13:45	3° $\mathbb{M}$ 50'12		opposition	14377 Jul 01 16:22	21° $\mathbb{Z}$ 48'07	2°04'04
evening set	14371 Oct 04 08:28	11° $\mathbb{M}$ 09'48		min. Earth dist.	14377 Jul 01 14:59	21° $\mathbb{Z}$ 48'24	8.56783 AU
				direct	14377 Sep 07 18:49	18° $\mathbb{Z}$ 24'42	
conjunction	14371 Oct 21 14:03	13° $\mathbb{M}$ 15'05	0°08'44	evening set	14377 Dec 19 00:56	25° $\mathbb{Z}$ 56'10	
minimum elong	14371 Oct 21 14:03	13° $\mathbb{M}$ 15'05	0°09'23				
behind sun begin	14371 Oct 21 08:05	13° $\mathbb{M}$ 13'17		conjunction	14378 Jan 05 14:58	28° $\mathbb{Z}$ 04'53	1°43'05
behind sun end	14371 Oct 21 20:01	13° $\mathbb{M}$ 16'53		minimum elong	14378 Jan 05 14:58	28° $\mathbb{Z}$ 04'53	1°44'04
max. Earth dist.	14371 Oct 22 05:16	13° $\mathbb{M}$ 19'43	10.67283 AU	max. Earth dist.	14378 Jan 05 14:32	28° $\mathbb{Z}$ 04'44	10.55244 AU
	14371 Nov 04 23:35	15° $\mathbb{M}$			14378 Jan 21 07:44	0° $\mathbb{Z}$	
morning rise	14371 Nov 07 22:12	15° $\mathbb{M}$ 21'08		morning rise	14378 Jan 23 06:03	0° $\mathbb{Z}$ 13'57	
retrograde	14372 Feb 20 02:31	22° $\mathbb{M}$ 54'03		retrograde	14378 May 07 02:53	7° $\mathbb{Z}$ 52'31	
opposition	14372 Apr 29 20:10	19° $\mathbb{M}$ 30'17	0°24'48	opposition	14378 Jul 14 13:05	4° $\mathbb{Z}$ 27'58	2°09'15
min. Earth dist.	14372 Apr 29 07:57	19° $\mathbb{M}$ 32'39	8.67048 AU	min. Earth dist.	14378 Jul 14 14:34	4° $\mathbb{Z}$ 27'40	8.53920 AU
direct	14372 Jul 07 05:29	16° $\mathbb{M}$ 09'41		direct	14378 Sep 20 15:44	1° $\mathbb{Z}$ 03'48	
evening set	14372 Oct 16 00:37	23° $\mathbb{M}$ 29'31		evening set	14379 Jan 01 09:09	8° $\mathbb{Z}$ 38'32	
conjunction	14372 Nov 02 07:53	25° $\mathbb{M}$ 35'14	0°30'51	conjunction	14379 Jan 19 00:06	10° $\mathbb{Z}$ 47'55	1°44'44
minimum elong	14372 Nov 02 07:52	25° $\mathbb{M}$ 35'14	0°31'40	minimum elong	14379 Jan 19 00:07	10° $\mathbb{Z}$ 47'55	1°45'36
max. Earth dist.	14372 Nov 02 21:38	25° $\mathbb{M}$ 39'25	10.66610 AU	max. Earth dist.	14379 Jan 18 19:53	10° $\mathbb{Z}$ 46'36	10.52393 AU
morning rise	14372 Nov 19 17:47	27° $\mathbb{M}$ 41'44		morning rise	14379 Feb 05 15:44	12° $\mathbb{Z}$ 57'31	
	14372 Dec 09 19:10	0° $\mathbb{Z}$			14379 Feb 23 02:36	15° $\mathbb{Z}$	
retrograde	14373 Mar 04 00:59	5° $\mathbb{Z}$ 15'18		retrograde	14379 May 20 06:39	20° $\mathbb{Z}$ 36'40	
opposition	14373 May 12 14:20	1° $\mathbb{Z}$ 51'19	0°51'23	opposition	14379 Jul 27 11:08	17° $\mathbb{Z}$ 12'11	2°08'09

min. Earth dist.	14379 Jul 27 15:36	17° $\approx$ 11'18	8.51122 AU	min. Earth dist.	14385 Oct 12 20:21	4° $\approx$ 8'40"31	8.41997 AU
	14379 Aug 26 17:16	15° $\approx$		direct	14385 Dec 20 10:20	1° $\approx$ 8'16"19	
direct	14379 Oct 03 15:33	13° $\approx$ 47'17		desc. node	14386 Feb 01 16:35	2° $\approx$ 8'50"26	
	14379 Nov 10 05:34	15° $\approx$		evening set	14386 Apr 04 07:19	9° $\approx$ 8'05"44	
evening set	14380 Jan 14 19:42	21° $\approx$ 25'16					
conjunction	14380 Feb 01 11:30	23° $\approx$ 35'17	1°41'13	conjunction	14386 Apr 21 20:24	11° $\approx$ 8'16"46	-0°04'54
minimum elong	14380 Feb 01 11:32	23° $\approx$ 35'17	1°41'56	minimum elong	14386 Apr 21 20:25	11° $\approx$ 8'16"46	0°05'31
max. Earth dist.	14380 Feb 01 03:45	23° $\approx$ 32'53	10.49679 AU	behind sun begin	14386 Apr 21 13:30	11° $\approx$ 8'14"37	
morning rise	14380 Feb 19 03:30	25° $\approx$ 45'22		behind sun end	14386 Apr 22 03:20	11° $\approx$ 8'18"55	
	14380 Mar 28 11:36	0° $\approx$		max. Earth dist.	14386 Apr 21 05:40	11° $\approx$ 8'12"09	10.42168 AU
retrograde	14380 Jun 01 09:42	3° $\approx$ 24'51		morning rise	14386 May 09 06:55	13° $\approx$ 8'27"03	
opposition	14380 Aug 08 10:30	0° $\approx$ 00'28	2°00'42		14386 May 22 04:13	15° $\approx$	
	14380 Aug 08 12:53	30° $\approx$		retrograde	14386 Aug 18 22:57	21° $\approx$ 8'04"44	
min. Earth dist.	14380 Aug 08 17:27	29° $\approx$ 59'06	8.48508 AU	opposition	14386 Oct 25 17:08	17° $\approx$ 8'42"12	-0°20'35
direct	14380 Oct 15 18:49	26° $\approx$ 34'56		min. Earth dist.	14386 Oct 26 03:55	17° $\approx$ 8'40"05	8.42519 AU
	14380 Dec 19 20:05	0° $\approx$			14386 Dec 04 09:34	15° $\approx$	
evening set	14381 Jan 27 08:03	4° $\approx$ 15'58		direct	14387 Jan 02 23:06	14° $\approx$ 8'15"57	
					14387 Feb 01 06:14	15° $\approx$	
conjunction	14381 Feb 14 00:34	6° $\approx$ 26'33	1°32'39	evening set	14387 Apr 17 19:49	22° $\approx$ 8'05"18	
minimum elong	14381 Feb 14 00:36	6° $\approx$ 26'34	1°33'11				
max. Earth dist.	14381 Feb 13 14:27	6° $\approx$ 23'25	10.47215 AU	conjunction	14387 May 05 06:49	24° $\approx$ 8'15"46	-0°28'15
morning rise	14381 Mar 03 16:35	8° $\approx$ 37'02		minimum elong	14387 May 05 06:47	24° $\approx$ 8'15"45	0°29'02
retrograde	14381 Jun 14 14:33	16° $\approx$ 16'37		max. Earth dist.	14387 May 04 17:58	24° $\approx$ 8'11"44	10.43001 AU
opposition	14381 Aug 21 11:35	12° $\approx$ 52'24	1°47'09	morning rise	14387 May 22 14:59	26° $\approx$ 8'25"27	
min. Earth dist.	14381 Aug 21 19:58	12° $\approx$ 50'44	8.46194 AU		14387 Jun 22 18:32	0° $\approx$	
direct	14381 Oct 28 23:29	9° $\approx$ 26'22		retrograde	14387 Sep 01 05:17	4° $\approx$ 12'02"37	
evening set	14382 Feb 09 21:32	17° $\approx$ 10'00		opposition	14387 Nov 08 02:47	0° $\approx$ 12'40"26	-0°48'49
				min. Earth dist.	14387 Nov 08 11:47	0° $\approx$ 12'38"40	8.43659 AU
conjunction	14382 Feb 27 14:27	19° $\approx$ 21'05	1°19'23		14387 Nov 16 18:40	30° $\approx$	
minimum elong	14382 Feb 27 14:29	19° $\approx$ 21'06	1°19'42	direct	14388 Jan 16 12:10	27° $\approx$ 8'14"37	
max. Earth dist.	14382 Feb 27 02:46	19° $\approx$ 17'27	10.45113 AU		14388 Mar 14 19:08	0° $\approx$	
morning rise	14382 Mar 17 06:05	21° $\approx$ 31'51		evening set	14388 Apr 30 06:36	5° $\approx$ 12'03"14	
retrograde	14382 Jun 27 21:43	29° $\approx$ 11'19					
opposition	14382 Sep 03 14:23	25° $\approx$ 47'20	1°28'09	conjunction	14388 May 17 15:03	7° $\approx$ 12'12"55	-0°50'08
min. Earth dist.	14382 Sep 03 23:56	25° $\approx$ 45'26	8.44294 AU	minimum elong	14388 May 17 15:01	7° $\approx$ 12'12"54	0°51'04
direct	14382 Nov 11 04:35	22° $\approx$ 20'55		max. Earth dist.	14388 May 17 04:46	7° $\approx$ 12'09"41	10.44417 AU
	14383 Feb 22 13:41	0° $\approx$		morning rise	14388 Jun 03 20:38	9° $\approx$ 12'21"50	
evening set	14383 Feb 23 12:01	0° $\approx$ 06'48		retrograde	14388 Sep 13 12:19	16° $\approx$ 12'58"29	
				opposition	14388 Nov 20 13:03	13° $\approx$ 12'36"36	-1°14'30
conjunction	14383 Mar 13 04:50	2° $\approx$ 18'12	1°02'03	min. Earth dist.	14388 Nov 20 20:21	13° $\approx$ 12'35"11	8.45368 AU
minimum elong	14383 Mar 13 04:52	2° $\approx$ 18'12	1°02'07	direct	14389 Jan 28 23:52	10° $\approx$ 12'11"19	
max. Earth dist.	14383 Mar 12 15:40	2° $\approx$ 14'05	10.43485 AU	evening set	14389 May 13 15:04	17° $\approx$ 12'58"30	
morning rise	14383 Mar 30 19:47	4° $\approx$ 29'08					
retrograde	14383 Jul 11 03:41	12° $\approx$ 08'14		conjunction	14389 May 30 20:47	20° $\approx$ 12'07"17	-1°09'26
opposition	14383 Sep 16 18:47	8° $\approx$ 44'34	1°04'35	minimum elong	14389 May 30 20:45	20° $\approx$ 12'07"17	1°10'27
min. Earth dist.	14383 Sep 17 05:35	8° $\approx$ 42'25	8.42915 AU	max. Earth dist.	14389 May 30 12:45	20° $\approx$ 12'04"46	10.46363 AU
direct	14383 Nov 24 13:03	5° $\approx$ 17'55		morning rise	14389 Jun 16 23:56	22° $\approx$ 12'15"22	
evening set	14384 Mar 08 02:53	13° $\approx$ 05'34		retrograde	14389 Sep 26 18:25	29° $\approx$ 12'51"26	
				opposition	14389 Dec 03 23:29	26° $\approx$ 12'29"48	-1°36'18
conjunction	14384 Mar 25 19:02	15° $\approx$ 17'04	0°41'31	min. Earth dist.	14389 Dec 04 05:05	26° $\approx$ 12'28"42	8.47572 AU
minimum elong	14384 Mar 25 19:04	15° $\approx$ 17'05	0°41'21	direct	14390 Feb 11 10:39	23° $\approx$ 12'05"05	
max. Earth dist.	14384 Mar 25 04:21	15° $\approx$ 12'29	10.42418 AU		14390 May 19 22:57	0° $\approx$	
morning rise	14384 Apr 12 08:56	17° $\approx$ 27'59		evening set	14390 May 26 20:42	0° $\approx$ 50'13	
retrograde	14384 Jul 23 09:58	25° $\approx$ 06'39					
opposition	14384 Sep 29 00:55	21° $\approx$ 04'32	0°37'39	conjunction	14390 Jun 12 23:46	2° $\approx$ 58'03	-1°25'11
min. Earth dist.	14384 Sep 29 12:50	21° $\approx$ 04'10	8.42134 AU	minimum elong	14390 Jun 12 23:44	2° $\approx$ 58'02	1°26'14
direct	14384 Dec 06 23:17	18° $\approx$ 16'39		max. Earth dist.	14390 Jun 12 18:01	2° $\approx$ 56'15	10.48746 AU
evening set	14385 Mar 21 17:30	26° $\approx$ 05'30		morning rise	14390 Jun 30 00:49	5° $\approx$ 50'17	
				retrograde	14390 Oct 09 21:10	12° $\approx$ 54'40"43	
conjunction	14385 Apr 08 08:20	28° $\approx$ 16'53	0°18'50	opposition	14390 Dec 17 09:30	9° $\approx$ 51'19"13	-1°53'10
minimum elong	14385 Apr 08 08:21	28° $\approx$ 16'54	0°18'26	min. Earth dist.	14390 Dec 17 13:00	9° $\approx$ 51'18"33	8.50147 AU
max. Earth dist.	14385 Apr 07 16:50	28° $\approx$ 12'03	10.41969 AU	direct	14391 Feb 24 22:37	5° $\approx$ 55'07	
	14385 Apr 22 03:07	0° $\approx$		evening set	14391 Jun 08 23:24	13° $\approx$ 53'37"42	
morning rise	14385 Apr 25 20:46	0° $\approx$ 27'35					
retrograde	14385 Aug 05 16:50	8° $\approx$ 05'47		conjunction	14391 Jun 26 00:10	15° $\approx$ 54'44"33	-1°36'38
opposition	14385 Oct 12 08:28	4° $\approx$ 42'52	0°08'45	minimum elong	14391 Jun 26 00:09	15° $\approx$ 54'44"33	1°37'39
				max. Earth dist.	14391 Jun 25 21:09	15° $\approx$ 54'43"37	10.51426 AU



morning rise	14391 Jul 12 23:28	17°☾50'58	max. Earth dist.	14397 Sep 08 19:59	0°☾57'43	10.64312 AU
retrograde	14391 Oct 23 00:06	25°☾25'46	morning rise	14397 Sep 25 09:16	2°☾58'58	
opposition	14391 Dec 30 18:35	22°☾04'18 -2°04'22	retrograde	14398 Jan 06 22:57	10°☾31'42	
min. Earth dist.	14391 Dec 30 19:19	22°☾04'09 8.52931 AU	opposition	14398 Mar 17 18:56	7°☾08'36 -1°07'45	
direct	14392 Mar 09 08:29	18°☾40'49	min. Earth dist.	14398 Mar 17 07:45	7°☾10'45 8.64800 AU	
evening set	14392 Jun 20 22:53	26°☾20'22	direct	14398 May 25 17:07	3°☾47'40	
			evening set	14398 Sep 03 20:47	11°☾10'20	
conjunction	14392 Jul 07 21:58	28°☾26'23 -1°43'17	conjunction	14398 Sep 20 22:10	13°☾15'02 -0°45'11	
minimum elong	14392 Jul 07 21:58	28°☾26'23 1°44'15	minimum elong	14398 Sep 20 22:12	13°☾15'03 0°45'03	
max. Earth dist.	14392 Jul 07 22:33	28°☾26'34 10.54230 AU	max. Earth dist.	14398 Sep 21 12:08	13°☾19'19 10.65094 AU	
	14392 Jul 20 11:20	0°☾	morning rise	14398 Oct 08 01:31	15°☾20'20	
morning rise	14392 Jul 24 19:58	0°☾32'04	retrograde	14399 Jan 19 21:04	22°☾53'08	
retrograde	14392 Nov 04 02:49	8°☾06'16	opposition	14399 Mar 30 17:14	19°☾29'37 -0°42'33	
opposition	14393 Jan 12 02:34	4°☾44'41 -2°09'24	min. Earth dist.	14399 Mar 30 05:07	19°☾31'57 8.65321 AU	
min. Earth dist.	14393 Jan 12 00:13	4°☾45'08 8.55725 AU	direct	14399 Jun 07 10:30	16°☾08'43	
direct	14393 Mar 22 15:11	1°☾21'49	evening set	14399 Sep 16 09:48	23°☾29'59	
evening set	14393 Jul 03 19:13	8°☾58'06				
conjunction	14393 Jul 20 17:16	11°☾03'26 -1°44'54	conjunction	14399 Oct 03 12:49	25°☾34'58 -0°23'54	
minimum elong	14393 Jul 20 17:16	11°☾03'26 1°45'45	minimum elong	14399 Oct 03 12:50	25°☾34'58 0°23'32	
max. Earth dist.	14393 Jul 20 21:10	11°☾04'39 10.56936 AU	max. Earth dist.	14399 Oct 04 03:03	25°☾39'18 10.65384 AU	
morning rise	14393 Aug 06 14:38	13°☾08'36	morning rise	14399 Oct 20 18:16	27°☾40'40	
	14393 Aug 22 07:12	15°☾		14399 Nov 09 21:36	0°☾	
retrograde	14393 Nov 17 03:52	20°☾42'14	retrograde	14400 Feb 01 17:55	5°☾13'45	
opposition	14394 Jan 25 09:04	17°☾20'30 -2°08'10	opposition	14400 Apr 11 14:13	1°☾49'50 -0°15'26	
min. Earth dist.	14394 Jan 25 04:30	17°☾21'23 8.58301 AU	min. Earth dist.	14400 Apr 11 02:28	1°☾52'06 8.65349 AU	
	14394 Feb 28 05:02	15°☾		14400 May 06 17:57	30°☾	
direct	14394 Apr 04 19:21	13°☾58'13	direct	14400 Jun 19 03:36	28°☾28'51	
	14394 May 09 17:47	15°☾		14400 Jul 31 12:47	0°☾	
evening set	14394 Jul 16 13:06	21°☾31'19	evening set	14400 Sep 27 23:56	5°☾49'26	
conjunction	14394 Aug 02 10:39	23°☾36'09 -1°41'29	conjunction	14400 Oct 15 04:41	7°☾54'48 -0°01'31	
minimum elong	14394 Aug 02 10:40	23°☾36'10 1°42'11	minimum elong	14400 Oct 15 04:40	7°☾54'48 0°00'57	
max. Earth dist.	14394 Aug 02 16:48	23°☾38'04 10.59347 AU	behind sun begin	14400 Oct 14 21:32	7°☾52'39	
morning rise	14394 Aug 19 08:10	25°☾40'59	behind sun end	14400 Oct 15 11:47	7°☾56'57	
	14394 Sep 27 12:41	0°☾	max. Earth dist.	14400 Oct 15 18:09	7°☾58'54 10.65168 AU	
retrograde	14394 Nov 30 04:18	3°☾14'15	morning rise	14400 Nov 01 12:13	10°☾00'57	
	14395 Feb 05 21:51	30°☾	asc. node	14400 Nov 09 08:50	10°☾56'41	
opposition	14395 Feb 07 13:58	29°☾52'19 -2°00'50		14400 Dec 18 18:00	15°☾	
min. Earth dist.	14395 Feb 07 07:51	29°☾53'29 8.60520 AU	retrograde	14401 Feb 13 15:12	17°☾34'31	
direct	14395 Apr 17 21:26	26°☾30'32		14401 Apr 13 13:51	15°☾	
	14395 Jun 23 02:14	0°☾	opposition	14401 Apr 24 09:55	14°☾10'16 0°12'25	
evening set	14395 Jul 29 04:55	4°☾00'36	min. Earth dist.	14401 Apr 23 22:59	14°☾12'23 8.64876 AU	
			direct	14401 Jul 01 20:19	10°☾49'04	
conjunction	14395 Aug 15 02:33	6°☾05'09 -1°33'16		14401 Sep 12 13:51	15°☾	
minimum elong	14395 Aug 15 02:35	6°☾05'10 1°33'48	evening set	14401 Oct 10 15:36	18°☾09'44	
max. Earth dist.	14395 Aug 15 10:17	6°☾07'33 10.61396 AU				
morning rise	14395 Sep 01 00:58	8°☾09'53	conjunction	14401 Oct 27 22:09	20°☾15'33 0°21'02	
retrograde	14395 Dec 13 03:18	15°☾42'52	minimum elong	14401 Oct 27 22:08	20°☾15'33 0°21'46	
opposition	14396 Feb 20 17:29	12°☾20'38 -1°47'50	max. Earth dist.	14401 Oct 28 10:53	20°☾19'26 10.64437 AU	
min. Earth dist.	14396 Feb 20 09:55	12°☾22'05 8.62362 AU	morning rise	14401 Nov 14 07:33	22°☾22'11	
direct	14396 Apr 29 21:27	8°☾59'15	retrograde	14402 Feb 26 12:31	29°☾56'28	
evening set	14396 Aug 09 18:55	16°☾26'28	opposition	14402 May 07 04:50	26°☾31'54 0°39'43	
			min. Earth dist.	14402 May 06 18:38	26°☾33'53 8.63900 AU	
conjunction	14396 Aug 26 17:21	18°☾30'54 -1°20'42	direct	14402 Jul 14 12:18	23°☾10'25	
minimum elong	14396 Aug 26 17:23	18°☾30'55 1°21'02		14402 Oct 18 21:51	0°☾	
max. Earth dist.	14396 Aug 27 03:10	18°☾33'56 10.63065 AU	evening set	14402 Oct 23 09:18	0°☾31'55	
morning rise	14396 Sep 12 17:09	20°☾35'42				
retrograde	14396 Dec 25 00:35	28°☾08'31	conjunction	14402 Nov 09 17:35	2°☾38'13 0°42'34	
opposition	14397 Mar 04 19:11	24°☾45'52 -1°29'51	minimum elong	14402 Nov 09 17:34	2°☾38'13 0°43'27	
min. Earth dist.	14397 Mar 04 09:43	24°☾47'41 8.63802 AU	max. Earth dist.	14402 Nov 10 05:48	2°☾41'57 10.63206 AU	
direct	14397 May 12 20:30	21°☾24'46	morning rise	14402 Nov 27 04:28	4°☾45'19	
evening set	14397 Aug 22 07:59	28°☾49'28	retrograde	14403 Mar 11 10:42	12°☾20'33	
	14397 Sep 01 00:07	0°☾	opposition	14403 May 19 23:23	8°☾55'45 1°05'15	
			min. Earth dist.	14403 May 19 13:52	8°☾57'36 8.62455 AU	
conjunction	14397 Sep 08 07:47	0°☾53'58 -1°04'25	direct	14403 Jul 27 05:00	5°☾33'53	
minimum elong	14397 Sep 08 07:49	0°☾53'59 1°04'31	evening set	14403 Nov 05 05:42	12°☾56'55	

conjunction	14403 Nov 22 15:31	15° $\mathbb{A}$ 03'46	1°02'11	conjunction	14410 Feb 08 11:38	1° $\mathbb{H}$ 07'21	1°36'50
minimum elong	14403 Nov 22 15:29	15° $\mathbb{A}$ 03'46	1°03'10	minimum elong	14410 Feb 08 11:40	1° $\mathbb{H}$ 07'22	1°37'27
max. Earth dist.	14403 Nov 23 02:04	15° $\mathbb{A}$ 07'00	10.61531 AU	max. Earth dist.	14410 Feb 08 04:30	1° $\mathbb{H}$ 05'08	10.47892 AU
morning rise	14403 Dec 10 03:42	17° $\mathbb{A}$ 11'22		morning rise	14410 Feb 26 03:34	3° $\mathbb{H}$ 17'47	
retrograde	14404 Mar 23 11:22	24° $\mathbb{A}$ 47'38		retrograde	14410 Jun 09 07:54	10° $\mathbb{H}$ 58'03	
opposition	14404 May 31 17:56	21° $\mathbb{A}$ 22'40	1°27'49	opposition	14410 Aug 16 04:40	7° $\mathbb{H}$ 34'04	1°53'33
min. Earth dist.	14404 May 31 10:13	21° $\mathbb{A}$ 24'11	8.60612 AU	min. Earth dist.	14410 Aug 16 11:25	7° $\mathbb{H}$ 32'43	8.47029 AU
direct	14404 Aug 07 20:51	18° $\mathbb{A}$ 00'19		direct	14410 Oct 23 12:35	4° $\mathbb{H}$ 08'36	
evening set	14404 Nov 17 04:58	25° $\mathbb{A}$ 25'32		evening set	14411 Feb 04 09:16	11° $\mathbb{H}$ 51'40	
conjunction	14404 Dec 04 16:07	27° $\mathbb{A}$ 32'59	1°18'57	conjunction	14411 Feb 22 01:58	14° $\mathbb{H}$ 02'38	1°25'30
minimum elong	14404 Dec 04 16:05	27° $\mathbb{A}$ 32'58	1°19'59	minimum elong	14411 Feb 22 02:01	14° $\mathbb{H}$ 02'38	1°25'54
max. Earth dist.	14404 Dec 04 23:41	27° $\mathbb{A}$ 35'18	10.59499 AU	max. Earth dist.	14411 Feb 21 15:26	13° $\mathbb{H}$ 59'21	10.46065 AU
morning rise	14404 Dec 22 05:30	29° $\mathbb{A}$ 41'06		morning rise	14411 Mar 11 17:53	16° $\mathbb{H}$ 13'23	
	14404 Dec 24 20:52	0° $\mathbb{B}$		retrograde	14411 Jun 22 14:22	23° $\mathbb{H}$ 53'22	
retrograde	14405 Apr 05 12:37	7° $\mathbb{B}$ 18'23		opposition	14411 Aug 29 07:32	20° $\mathbb{H}$ 29'40	1°36'45
opposition	14405 Jun 13 12:58	3° $\mathbb{B}$ 53'24	1°46'21	min. Earth dist.	14411 Aug 29 16:38	20° $\mathbb{H}$ 27'52	8.45343 AU
min. Earth dist.	14405 Jun 13 07:52	3° $\mathbb{B}$ 54'24	8.58457 AU	direct	14411 Nov 05 18:48	17° $\mathbb{H}$ 03'49	
direct	14405 Aug 20 13:46	0° $\mathbb{B}$ 30'29		evening set	14412 Feb 18 00:15	24° $\mathbb{H}$ 49'07	
evening set	14405 Nov 30 07:13	7° $\mathbb{B}$ 58'27		conjunction	14412 Mar 06 17:03	27° $\mathbb{H}$ 00'25	1°09'47
conjunction	14405 Dec 17 19:31	10° $\mathbb{B}$ 06'28	1°32'02	minimum elong	14412 Mar 06 17:05	27° $\mathbb{H}$ 00'25	1°09'57
minimum elong	14405 Dec 17 19:30	10° $\mathbb{B}$ 06'28	1°33'04	max. Earth dist.	14412 Mar 06 04:00	26° $\mathbb{H}$ 56'21	10.44559 AU
max. Earth dist.	14405 Dec 17 23:39	10° $\mathbb{B}$ 07'44	10.57207 AU	morning rise	14412 Mar 24 08:31	29° $\mathbb{H}$ 11'20	
morning rise	14406 Jan 04 09:52	12° $\mathbb{B}$ 15'05			14412 Mar 31 01:45	0° $\mathbb{Y}$	
retrograde	14406 Apr 18 12:57	19° $\mathbb{B}$ 53'24		retrograde	14412 Jul 04 19:45	6° $\mathbb{Y}$ 50'51	
opposition	14406 Jun 26 08:44	16° $\mathbb{B}$ 28'28	1°59'53	opposition	14412 Sep 10 11:44	3° $\mathbb{Y}$ 27'28	1°14'58
min. Earth dist.	14406 Jun 26 06:23	16° $\mathbb{B}$ 28'56	8.56102 AU	min. Earth dist.	14412 Sep 10 22:25	3° $\mathbb{Y}$ 25'21	8.43967 AU
direct	14406 Sep 02 10:27	13° $\mathbb{B}$ 05'00		direct	14412 Nov 18 04:23	0° $\mathbb{Y}$ 01'20	
evening set	14406 Dec 13 12:20	20° $\mathbb{B}$ 36'01		evening set	14413 Mar 02 15:37	7° $\mathbb{Y}$ 48'29	
conjunction	14406 Dec 31 01:51	22° $\mathbb{B}$ 44'41	1°40'44	conjunction	14413 Mar 20 08:05	9° $\mathbb{Y}$ 59'58	0°50'29
minimum elong	14406 Dec 31 01:50	22° $\mathbb{B}$ 44'40	1°41'44	minimum elong	14413 Mar 20 08:07	9° $\mathbb{Y}$ 59'58	0°50'24
max. Earth dist.	14406 Dec 31 03:10	22° $\mathbb{B}$ 45'05	10.54786 AU	max. Earth dist.	14413 Mar 19 17:34	9° $\mathbb{Y}$ 55'26	10.43356 AU
morning rise	14407 Jan 17 16:54	24° $\mathbb{B}$ 53'47		morning rise	14413 Apr 06 22:36	12° $\mathbb{Y}$ 10'55	
	14407 Mar 06 18:51	0° $\mathbb{Z}$		retrograde	14413 Jul 18 02:47	19° $\mathbb{Y}$ 50'01	
retrograde	14407 May 01 15:40	2° $\mathbb{Z}$ 33'00		opposition	14413 Sep 23 17:39	16° $\mathbb{Y}$ 26'58	0°49'17
	14407 Jun 28 04:28	30° $\mathbb{R}$ $\mathbb{B}$		min. Earth dist.	14413 Sep 24 05:00	16° $\mathbb{Y}$ 24'43	8.42900 AU
opposition	14407 Jul 09 05:34	29° $\mathbb{B}$ 08'13	2°07'43	direct	14413 Dec 01 14:17	13° $\mathbb{Y}$ 00'43	
min. Earth dist.	14407 Jul 09 05:16	29° $\mathbb{B}$ 08'16	8.53673 AU	evening set	14414 Mar 16 06:49	20° $\mathbb{Y}$ 49'19	
direct	14407 Sep 15 08:09	25° $\mathbb{B}$ 44'12		conjunction	14414 Apr 02 22:25	23° $\mathbb{Y}$ 00'48	0°28'33
	14407 Nov 27 16:50	0° $\mathbb{Z}$		minimum elong	14414 Apr 02 22:27	23° $\mathbb{Y}$ 00'49	0°28'14
evening set	14407 Dec 26 20:11	3° $\mathbb{Z}$ 18'24		max. Earth dist.	14414 Apr 02 07:33	22° $\mathbb{Y}$ 56'10	10.42492 AU
conjunction	14408 Jan 13 10:54	5° $\mathbb{Z}$ 27'44	1°44'34	morning rise	14414 Apr 20 11:31	25° $\mathbb{Y}$ 11'39	
minimum elong	14408 Jan 13 10:55	5° $\mathbb{Z}$ 27'44	1°45'30		14414 Jun 03 07:30	0° $\mathbb{B}$	
max. Earth dist.	14408 Jan 13 09:51	5° $\mathbb{Z}$ 27'24	10.52353 AU	retrograde	14414 Jul 31 11:10	2° $\mathbb{B}$ 50'25	
morning rise	14408 Jan 31 02:27	7° $\mathbb{Z}$ 37'20			14414 Sep 30 04:59	30° $\mathbb{R}$ $\mathbb{Y}$	
	14408 Apr 25 18:36	15° $\mathbb{Z}$		opposition	14414 Oct 07 01:11	29° $\mathbb{Y}$ 27'41	0°21'01
retrograde	14408 May 13 20:59	15° $\mathbb{Z}$ 17'13		min. Earth dist.	14414 Oct 07 12:50	29° $\mathbb{Y}$ 25'23	8.42242 AU
	14408 May 31 23:53	15° $\mathbb{R}$ $\mathbb{Z}$		direct	14414 Dec 15 00:38	26° $\mathbb{Y}$ 01'27	
opposition	14408 Jul 21 03:43	11° $\mathbb{Z}$ 52'37	2°09'20		14415 Feb 24 01:11	0° $\mathbb{B}$	
min. Earth dist.	14408 Jul 21 05:24	11° $\mathbb{Z}$ 52'18	8.51278 AU	evening set	14415 Mar 29 21:50	3° $\mathbb{B}$ 51'01	
direct	14408 Sep 27 06:46	8° $\mathbb{Z}$ 28'07		conjunction	14415 Apr 16 11:57	6° $\mathbb{B}$ 02'19	0°05'11
	14408 Dec 30 02:54	15° $\mathbb{Z}$		minimum elong	14415 Apr 16 11:57	6° $\mathbb{B}$ 02'19	0°04'39
evening set	14409 Jan 08 06:44	16° $\mathbb{Z}$ 05'31		behind sun begin	14415 Apr 16 04:54	6° $\mathbb{B}$ 00'08	
conjunction	14409 Jan 25 22:23	18° $\mathbb{Z}$ 15'27	1°43'17	behind sun end	14415 Apr 16 18:59	6° $\mathbb{B}$ 04'30	
minimum elong	14409 Jan 25 22:25	18° $\mathbb{Z}$ 15'28	1°44'04	max. Earth dist.	14415 Apr 15 20:55	5° $\mathbb{B}$ 57'37	10.42103 AU
max. Earth dist.	14409 Jan 25 18:33	18° $\mathbb{Z}$ 14'16	10.50017 AU	morning rise	14415 May 03 23:14	8° $\mathbb{B}$ 12'52	
morning rise	14409 Feb 12 14:11	20° $\mathbb{Z}$ 25'31		desc. node	14415 Jul 07 10:59	14° $\mathbb{B}$ 37'56	
retrograde	14409 May 27 01:53	28° $\mathbb{Z}$ 05'44			14415 Jul 13 17:19	15° $\mathbb{B}$	
opposition	14409 Aug 03 03:18	24° $\mathbb{Z}$ 41'26	2°04'34	retrograde	14415 Aug 13 19:02	15° $\mathbb{B}$ 51'13	
min. Earth dist.	14409 Aug 03 07:19	24° $\mathbb{Z}$ 40'38	8.49028 AU		14415 Sep 14 05:08	15° $\mathbb{R}$ $\mathbb{B}$	
direct	14409 Oct 10 08:39	21° $\mathbb{Z}$ 16'26		opposition	14415 Oct 20 10:03	12° $\mathbb{B}$ 28'49	-0°08'21
evening set	14410 Jan 21 19:19	28° $\mathbb{Z}$ 56'52		min. Earth dist.	14415 Oct 20 21:53	12° $\mathbb{B}$ 26'29	8.42133 AU
	14410 Jan 30 09:49	0° $\mathbb{H}$		direct	14415 Dec 28 12:47	9° $\mathbb{B}$ 02'40	

	14416 Mar 26 18:40	15°♄	conjunction	14422 Jul 15 18:58	6°♄06'13 -1°44'55
evening set	14416 Apr 11 11:56	16°♄52'37	minimum elong	14422 Jul 15 18:58	6°♄06'13 1°45'50
			max. Earth dist.	14422 Jul 15 20:54	6°♄06'49 10.54181 AU
conjunction	14416 Apr 28 23:55	19°♄03'27 -0°18'36	morning rise	14422 Aug 01 16:45	8°♄11'47
minimum elong	14416 Apr 28 23:54	19°♄03'27 0°19'19		14422 Oct 13 04:00	15°♄
max. Earth dist.	14416 Apr 28 09:13	18°♄58'51 10.42297 AU	retrograde	14422 Nov 12 01:46	15°♄46'05
morning rise	14416 May 16 09:05	21°♄13'31		14422 Dec 12 12:11	15°♄♄
retrograde	14416 Aug 26 01:26	28°♄51'26	opposition	14423 Jan 20 05:55	12°♄23'54 -2°09'34
opposition	14416 Nov 01 20:11	25°♄29'16 -0°37'17	min. Earth dist.	14423 Jan 20 02:39	12°♄24'32 8.55715 AU
min. Earth dist.	14416 Nov 02 07:26	25°♄27'04 8.42643 AU	direct	14423 Mar 30 17:24	9°♄00'49
direct	14417 Jan 10 02:57	22°♄03'19		14423 Jun 28 05:13	15°♄
evening set	14417 Apr 25 00:10	29°♄52'54	evening set	14423 Jul 11 15:26	16°♄35'44
	14417 Apr 25 23:17	0°♄			
conjunction	14417 May 12 09:39	2°♄03'03 -0°41'18	conjunction	14423 Jul 28 13:05	18°♄40'53 -1°43'33
minimum elong	14417 May 12 09:37	2°♄03'03 0°42'10	minimum elong	14423 Jul 28 13:06	18°♄40'53 1°44'19
max. Earth dist.	14417 May 11 20:17	1°♄58'52 10.43108 AU	max. Earth dist.	14423 Jul 28 18:23	18°♄42'32 10.57000 AU
morning rise	14417 May 29 16:31	4°♄12'27	morning rise	14423 Aug 14 10:40	20°♄45'58
retrograde	14417 Sep 08 07:58	11°♄49'54	retrograde	14423 Nov 25 02:04	28°♄19'39
opposition	14417 Nov 15 06:54	8°♄27'53 -1°04'16	opposition	14424 Feb 02 11:27	24°♄57'19 -2°04'41
min. Earth dist.	14417 Nov 15 16:31	8°♄26'00 8.43773 AU	min. Earth dist.	14424 Feb 02 05:08	24°♄58'31 8.58481 AU
direct	14418 Jan 23 16:42	5°♄02'14	direct	14424 Apr 11 21:51	21°♄34'51
evening set	14418 May 08 10:11	12°♄50'42	evening set	14424 Jul 23 07:42	29°♄06'21
				14424 Jul 30 15:22	0°♄
conjunction	14418 May 25 17:05	15°♄00'02 -1°01'51	conjunction	14424 Aug 09 05:22	1°♄11'04 -1°37'16
minimum elong	14418 May 25 17:03	15°♄00'01 1°02'49	minimum elong	14424 Aug 09 05:23	1°♄11'05 1°37'52
max. Earth dist.	14418 May 25 06:21	14°♄56'40 10.44510 AU	max. Earth dist.	14424 Aug 09 14:15	1°♄13'49 10.59698 AU
morning rise	14418 Jun 11 21:30	17°♄08'38	morning rise	14424 Aug 26 03:20	3°♄15'53
retrograde	14418 Sep 21 13:43	24°♄45'31	retrograde	14424 Dec 07 02:03	10°♄48'58
opposition	14418 Nov 28 17:35	21°♄23'34 -1°27'53	opposition	14425 Feb 14 15:09	7°♄26'26 -1°53'55
min. Earth dist.	14418 Nov 29 00:32	21°♄22'13 8.45463 AU	min. Earth dist.	14425 Feb 14 06:03	7°♄28'11 8.61053 AU
direct	14419 Feb 06 05:42	17°♄58'19	direct	14425 Apr 24 21:39	4°♄04'34
evening set	14419 May 21 17:30	25°♄45'00	evening set	14425 Aug 04 21:57	11°♄32'48
conjunction	14419 Jun 07 21:52	27°♄53'24 -1°19'12	conjunction	14425 Aug 21 20:10	13°♄37'16 -1°26'25
minimum elong	14419 Jun 07 21:50	27°♄53'24 1°20'14	minimum elong	14425 Aug 21 20:12	13°♄37'16 1°26'50
max. Earth dist.	14419 Jun 07 14:43	27°♄51'10 10.46424 AU	max. Earth dist.	14425 Aug 22 07:52	13°♄40'52 10.62145 AU
morning rise	14419 Jun 24 23:52	0°♄01'10	morning rise	14425 Sep 07 19:12	15°♄41'59
	14419 Jun 24 20:03	0°♄	retrograde	14425 Dec 20 00:09	23°♄14'33
retrograde	14419 Oct 04 18:29	7°♄37'27	opposition	14426 Feb 27 17:01	19°♄51'49 -1°37'53
opposition	14419 Dec 12 04:07	4°♄15'31 -1°46'58	min. Earth dist.	14426 Feb 27 06:16	19°♄53'52 8.63309 AU
min. Earth dist.	14419 Dec 12 08:17	4°♄14'42 8.47618 AU	direct	14426 May 07 19:42	16°♄30'27
direct	14420 Feb 19 17:55	0°♄50'43	evening set	14426 Aug 17 10:56	23°♄55'46
evening set	14420 Jun 02 21:41	8°♄35'01			
conjunction	14420 Jun 19 23:37	10°♄42'28 -1°32'32	conjunction	14426 Sep 03 10:02	26°♄00'08 -1°11'36
minimum elong	14420 Jun 19 23:36	10°♄42'28 1°33'34	minimum elong	14426 Sep 03 10:04	26°♄00'08 1°11'47
max. Earth dist.	14420 Jun 19 20:00	10°♄41'20 10.48748 AU	max. Earth dist.	14426 Sep 03 23:01	26°♄04'07 10.64230 AU
morning rise	14420 Jul 06 23:33	12°♄49'23	morning rise	14426 Sep 20 10:40	28°♄04'55
retrograde	14420 Oct 16 23:23	20°♄25'03		14426 Oct 06 20:42	0°♄
opposition	14420 Dec 24 14:01	17°♄03'04 -2°00'37	retrograde	14427 Jan 01 21:34	5°♄37'05
min. Earth dist.	14420 Dec 24 15:37	17°♄02'45 8.50132 AU	opposition	14427 Mar 12 17:01	2°♄14'09 -1°17'23
direct	14421 Mar 04 03:21	13°♄38'48	min. Earth dist.	14427 Mar 12 05:28	2°♄16'22 8.65160 AU
evening set	14421 Jun 15 22:44	21°♄20'14	direct	14427 Apr 13 17:00	30°♄♄
				14427 May 20 16:09	28°♄53'11
conjunction	14421 Jul 02 22:36	23°♄26'48 -1°41'13	evening set	14427 Jun 25 21:35	0°♄
minimum elong	14421 Jul 02 22:35	23°♄26'48 1°42'13		14427 Aug 29 23:11	6°♄16'03
max. Earth dist.	14421 Jul 02 21:55	23°♄26'35 10.51378 AU	conjunction	14427 Sep 15 23:37	8°♄20'28 -0°53'31
morning rise	14421 Jul 19 21:06	25°♄32'57	minimum elong	14427 Sep 15 23:39	8°♄20'28 0°53'29
	14421 Aug 29 02:27	0°♄	max. Earth dist.	14427 Sep 16 13:32	8°♄24'44 10.65879 AU
retrograde	14421 Oct 30 01:46	3°♄07'56	morning rise	14427 Oct 03 02:11	10°♄25'27
	14422 Jan 03 21:22	30°♄♄	retrograde	14428 Jan 14 18:08	17°♄57'23
opposition	14422 Jan 06 22:41	29°♄45'52 -2°08'14	opposition	14428 Mar 24 15:24	14°♄34'15 -0°53'23
min. Earth dist.	14422 Jan 06 22:06	29°♄45'59 8.52882 AU	min. Earth dist.	14428 Mar 24 03:09	14°♄36'36 8.66546 AU
direct	14422 Mar 17 10:50	26°♄22'11	direct	14428 Jun 01 10:25	11°♄13'34
	14422 May 24 03:18	0°♄	evening set	14428 Sep 10 11:15	18°♄34'33
evening set	14422 Jun 28 20:34	4°♄00'27			

conjunction	14428 Sep 27 13:25	20° $\Omega$ 39'08	-0°33'01	opposition	14434 Jun 08 07:10	28° $\Upsilon$ 39'57	1°38'39
minimum elong	14428 Sep 27 13:26	20° $\Omega$ 39'09	0°32'45	min. Earth dist.	14434 Jun 08 01:31	28° $\Upsilon$ 41'04	8.62550 AU
max. Earth dist.	14428 Sep 28 04:29	20° $\Omega$ 43'45	10.67027 AU	direct	14434 Aug 15 10:08	25° $\Upsilon$ 17'58	
morning rise	14428 Oct 14 17:58	22° $\Omega$ 44'25			14434 Nov 01 01:40	0° $\Upsilon$	
	14429 Jan 08 14:47	0° $\mathcal{M}$		evening set	14434 Nov 24 21:38	2° $\Upsilon$ 43'11	
retrograde	14429 Jan 26 13:59	0° $\mathcal{M}$ 16'23					
	14429 Feb 13 17:23	30° $\mathcal{R}$ $\Omega$		conjunction	14434 Dec 12 09:21	4° $\Upsilon$ 50'32	1°26'43
opposition	14429 Apr 06 12:08	26° $\Omega$ 53'00	-0°27'00	minimum elong	14434 Dec 12 09:20	4° $\Upsilon$ 50'31	1°27'45
min. Earth dist.	14429 Apr 05 23:04	26° $\Omega$ 55'30	8.67406 AU	max. Earth dist.	14434 Dec 12 14:58	4° $\Upsilon$ 52'15	10.61186 AU
direct	14429 Jun 14 04:20	23° $\Omega$ 32'30		morning rise	14434 Dec 29 22:58	6° $\Upsilon$ 58'29	
	14429 Sep 15 15:13	0° $\mathcal{M}$		retrograde	14435 Apr 13 03:04	14° $\Upsilon$ 34'58	
evening set	14429 Sep 23 00:12	0° $\mathcal{M}$ 52'17		opposition	14435 Jun 21 01:38	11° $\Upsilon$ 10'36	1°54'26
				min. Earth dist.	14435 Jun 20 22:04	11° $\Upsilon$ 11'18	8.59900 AU
conjunction	14429 Oct 10 04:12	2° $\mathcal{M}$ 57'10	-0°11'03	direct	14435 Aug 28 04:07	7° $\Upsilon$ 47'57	
minimum elong	14429 Oct 10 04:12	2° $\mathcal{M}$ 57'10	0°10'34	evening set	14435 Dec 08 00:35	15° $\Upsilon$ 16'10	
behind sun begin	14429 Oct 09 22:39	2° $\mathcal{M}$ 55'30					
behind sun end	14429 Oct 10 09:44	2° $\mathcal{M}$ 58'50		conjunction	14435 Dec 25 13:29	17° $\Upsilon$ 32'41	1°37'24
max. Earth dist.	14429 Oct 10 20:08	3° $\mathcal{M}$ 02'01	10.67612 AU	minimum elong	14435 Dec 25 13:28	17° $\Upsilon$ 32'41	1°38'25
morning rise	14429 Oct 27 10:36	5° $\mathcal{M}$ 02'47		max. Earth dist.	14435 Dec 25 15:52	17° $\Upsilon$ 32'45	10.58380 AU
retrograde	14430 Feb 08 11:23	12° $\mathcal{M}$ 34'57		morning rise	14436 Jan 12 03:56	19° $\Upsilon$ 32'42	
asc. node	14430 Apr 11 09:05	9° $\mathcal{M}$ 47'49		retrograde	14436 Apr 25 05:25	27° $\Upsilon$ 10'15	
opposition	14430 Apr 19 07:26	9° $\mathcal{M}$ 11'22	0°00'36	opposition	14436 Jul 02 20:59	23° $\Upsilon$ 45'49	2°04'51
min. Earth dist.	14430 Apr 18 18:16	9° $\mathcal{M}$ 13'54	8.67692 AU	min. Earth dist.	14436 Jul 02 20:19	23° $\Upsilon$ 45'57	8.57017 AU
direct	14430 Jun 26 20:11	5° $\mathcal{M}$ 50'54		direct	14436 Sep 08 22:45	20° $\Upsilon$ 22'26	
evening set	14430 Oct 05 14:31	13° $\mathcal{M}$ 10'13		evening set	14436 Dec 20 06:25	27° $\Upsilon$ 53'57	
	14430 Oct 20 17:27	15° $\mathcal{M}$					
conjunction	14430 Oct 22 20:10	15° $\mathcal{M}$ 15'28	0°11'31	conjunction	14437 Jan 06 20:23	0° $\approx$ 02'39	1°43'27
minimum elong	14430 Oct 22 20:10	15° $\mathcal{M}$ 15'28	0°12'12	minimum elong	14437 Jan 06 20:23	0° $\approx$ 02'39	1°44'24
behind sun begin	14430 Oct 22 15:23	15° $\mathcal{M}$ 14'01			14437 Jan 06 11:46	0° $\approx$	
behind sun end	14430 Oct 23 00:57	15° $\mathcal{M}$ 16'54		max. Earth dist.	14437 Jan 06 18:38	0° $\approx$ 02'07	10.55428 AU
max. Earth dist.	14430 Oct 23 11:23	15° $\mathcal{M}$ 20'05	10.67601 AU	morning rise	14437 Jan 24 11:33	2° $\approx$ 11'43	
morning rise	14430 Nov 09 04:26	17° $\mathcal{M}$ 21'29		retrograde	14437 May 08 08:12	9° $\approx$ 50'09	
retrograde	14431 Feb 21 09:15	24° $\mathcal{M}$ 54'05		opposition	14437 Jul 15 17:40	6° $\approx$ 25'44	2°09'18
opposition	14431 May 02 01:59	21° $\mathcal{M}$ 30'19	0°28'10	min. Earth dist.	14437 Jul 15 20:10	6° $\approx$ 25'14	8.54053 AU
min. Earth dist.	14431 May 01 14:00	21° $\mathcal{M}$ 32'37	8.67377 AU	direct	14437 Sep 21 20:07	3° $\approx$ 01'36	
direct	14431 Jul 09 09:55	18° $\mathcal{M}$ 09'41		evening set	14438 Jan 02 14:41	10° $\approx$ 36'30	
evening set	14431 Oct 18 06:31	25° $\mathcal{M}$ 29'19					
conjunction	14431 Nov 04 13:45	27° $\mathcal{M}$ 34'58	0°33'29	conjunction	14438 Jan 20 05:38	12° $\approx$ 45'52	1°44'29
minimum elong	14431 Nov 04 13:44	27° $\mathcal{M}$ 34'57	0°34'18	minimum elong	14438 Jan 20 05:39	12° $\approx$ 45'52	1°45'20
max. Earth dist.	14431 Nov 05 02:48	27° $\mathcal{M}$ 38'56	10.66962 AU	max. Earth dist.	14438 Jan 20 00:29	12° $\approx$ 44'17	10.52475 AU
morning rise	14431 Nov 21 23:48	29° $\mathcal{M}$ 41'25		morning rise	14438 Feb 06 21:19	14° $\approx$ 55'28	
	14431 Nov 24 14:21	0° $\Upsilon$			14438 Feb 07 12:20	15° $\approx$	
retrograde	14432 Mar 05 05:37	7° $\Upsilon$ 14'40		retrograde	14438 May 21 10:09	22° $\approx$ 34'36	
opposition	14432 May 13 19:55	3° $\Upsilon$ 50'43	0°54'28	opposition	14438 Jul 28 15:45	19° $\approx$ 10'13	2°07'27
min. Earth dist.	14432 May 13 10:09	3° $\Upsilon$ 52'36	8.66419 AU	min. Earth dist.	14438 Jul 28 20:41	19° $\approx$ 09'14	8.51152 AU
direct	14432 Jul 21 01:56	0° $\Upsilon$ 29'44		direct	14438 Oct 04 21:45	15° $\approx$ 45'22	
evening set	14432 Oct 30 00:54	7° $\Upsilon$ 50'29		evening set	14439 Jan 16 01:13	23° $\approx$ 23'33	
conjunction	14432 Nov 16 09:42	9° $\Upsilon$ 56'38	0°53'58	conjunction	14439 Feb 02 17:08	25° $\approx$ 33'35	1°40'22
minimum elong	14432 Nov 16 09:40	9° $\Upsilon$ 56'37	0°54'54	minimum elong	14439 Feb 02 17:10	25° $\approx$ 33'36	1°41'04
max. Earth dist.	14432 Nov 16 19:58	9° $\Upsilon$ 59'46	10.65650 AU	max. Earth dist.	14439 Feb 02 09:23	25° $\approx$ 31'12	10.49663 AU
morning rise	14432 Dec 03 21:16	12° $\Upsilon$ 03'34		morning rise	14439 Feb 20 09:05	27° $\approx$ 43'41	
retrograde	14433 Mar 18 03:20	19° $\Upsilon$ 37'41			14439 Mar 11 19:38	0° $\mathcal{H}$	
opposition	14433 May 26 13:23	16° $\Upsilon$ 13'34	1°18'20	retrograde	14439 Jun 03 14:59	5° $\mathcal{H}$ 23'13	
min. Earth dist.	14433 May 26 05:54	16° $\Upsilon$ 15'02	8.64784 AU	opposition	14439 Aug 10 15:15	1° $\mathcal{H}$ 58'55	1°59'17
direct	14433 Aug 02 17:51	12° $\Upsilon$ 52'08		min. Earth dist.	14439 Aug 10 21:58	1° $\mathcal{H}$ 57'35	8.48447 AU
evening set	14433 Nov 11 21:53	20° $\Upsilon$ 14'48			14439 Sep 06 06:52	30° $\mathcal{R}$ $\approx$	
				direct	14439 Oct 17 23:39	28° $\approx$ 33'27	
conjunction	14433 Nov 29 08:13	22° $\Upsilon$ 21'31	1°12'00		14439 Nov 28 02:48	0° $\mathcal{H}$	
minimum elong	14433 Nov 29 08:11	22° $\Upsilon$ 21'31	1°13'00	evening set	14440 Jan 29 13:37	6° $\mathcal{H}$ 14'39	
max. Earth dist.	14433 Nov 29 16:12	22° $\Upsilon$ 23'58	10.63674 AU	conjunction	14440 Feb 16 06:17	8° $\mathcal{H}$ 25'18	1°31'14
morning rise	14433 Dec 16 20:56	24° $\Upsilon$ 28'57		minimum elong	14440 Feb 16 06:19	8° $\mathcal{H}$ 25'19	1°31'44
	14434 Feb 08 15:13	0° $\Upsilon$		max. Earth dist.	14440 Feb 15 20:32	8° $\mathcal{H}$ 22'17	10.47113 AU
retrograde	14434 Mar 31 02:45	2° $\Upsilon$ 04'13		morning rise	14440 Mar 04 22:12	10° $\mathcal{H}$ 35'49	
	14434 May 21 17:41	30° $\mathcal{R}$ $\Upsilon$		retrograde	14440 Jun 15 21:07	18° $\mathcal{H}$ 15'28	
				opposition	14440 Aug 22 16:32	14° $\mathcal{H}$ 51'19	1°45'05

min. Earth dist.	14440 Aug 23 00:49	14° $\text{K}$ 49'41	8.46051 AU	morning rise	14446 May 23 20:45	28° $\text{S}$ 26'25	
direct	14440 Oct 30 03:21	11° $\text{K}$ 25'20			14446 Jun 05 20:00	0° $\text{II}$	
evening set	14441 Feb 11 03:23	19° $\text{K}$ 09'13		retrograde	14446 Sep 02 12:51	6° $\text{II}$ 03'47	
				opposition	14446 Nov 09 09:14	2° $\text{II}$ 41'32	-0°52'00
conjunction	14441 Feb 28 20:20	21° $\text{K}$ 20'21	1°17'28	min. Earth dist.	14446 Nov 09 18:09	2° $\text{II}$ 39'47	8.43370 AU
minimum elong	14441 Feb 28 20:22	21° $\text{K}$ 20'21	1°17'45		14446 Dec 19 00:32	30° $\text{R}$ 8	
max. Earth dist.	14441 Feb 28 08:21	21° $\text{K}$ 16'37	10.44937 AU	direct	14447 Jan 17 17:15	29° $\text{S}$ 15'39	
morning rise	14441 Mar 18 11:53	23° $\text{K}$ 31'10			14447 Feb 16 04:34	0° $\text{II}$	
	14441 May 23 08:33	0° $\text{Y}$		evening set	14447 May 02 12:49	7° $\text{II}$ 04'20	
retrograde	14441 Jun 29 02:59	1° $\text{Y}$ 10'42					
	14441 Aug 05 07:26	30° $\text{R}$ 8		conjunction	14447 May 19 21:04	9° $\text{II}$ 14'01	-0°52'33
opposition	14441 Sep 04 19:33	27° $\text{K}$ 46'47	1°25'31	minimum elong	14447 May 19 21:02	9° $\text{II}$ 14'01	0°53'30
min. Earth dist.	14441 Sep 05 05:40	27° $\text{K}$ 44'46	8.44084 AU	max. Earth dist.	14447 May 19 10:40	9° $\text{II}$ 10'46	10.44142 AU
direct	14441 Nov 12 10:06	24° $\text{K}$ 20'22		morning rise	14447 Jun 06 02:30	11° $\text{II}$ 22'56	
	14442 Feb 06 21:33	0° $\text{Y}$		retrograde	14447 Sep 15 18:45	18° $\text{II}$ 59'44	
evening set	14442 Feb 24 18:00	2° $\text{Y}$ 06'31		opposition	14447 Nov 22 19:39	15° $\text{II}$ 37'48	-1°17'17
				min. Earth dist.	14447 Nov 23 03:22	15° $\text{II}$ 36'18	8.45114 AU
conjunction	14442 Mar 14 10:42	4° $\text{Y}$ 17'57	0°59'44	direct	14448 Jan 31 05:44	12° $\text{II}$ 12'27	
minimum elong	14442 Mar 14 10:45	4° $\text{Y}$ 17'58	0°59'46	evening set	14448 May 14 21:20	19° $\text{II}$ 59'43	
max. Earth dist.	14442 Mar 13 20:37	4° $\text{Y}$ 13'33	10.43251 AU				
morning rise	14442 Apr 01 01:39	6° $\text{Y}$ 28'56		conjunction	14448 Jun 01 02:47	22° $\text{II}$ 08'28	-1°11'28
retrograde	14442 Jul 12 09:10	14° $\text{Y}$ 08'10		minimum elong	14448 Jun 01 02:44	22° $\text{II}$ 08'28	1°12'29
opposition	14442 Sep 18 00:18	10° $\text{Y}$ 44'31	1°01'30	max. Earth dist.	14448 May 31 18:14	22° $\text{II}$ 05'48	10.46129 AU
min. Earth dist.	14442 Sep 18 11:53	10° $\text{Y}$ 42'13	8.42659 AU	morning rise	14448 Jun 18 05:53	24° $\text{II}$ 16'33	
direct	14442 Nov 25 18:39	7° $\text{Y}$ 17'51			14448 Aug 12 01:29	0° $\text{S}$	
evening set	14443 Mar 10 08:52	15° $\text{Y}$ 05'43		retrograde	14448 Sep 27 23:14	1° $\text{S}$ 52'47	
max. Earth dist.	14443 Mar 27 09:22	17° $\text{Y}$ 12'26	10.42147 AU		14448 Nov 15 11:46	30° $\text{R}$ II	
				opposition	14448 Dec 05 06:16	28° $\text{II}$ 31'05	-1°38'32
conjunction	14443 Mar 28 00:52	17° $\text{Y}$ 17'16	0°38'54	min. Earth dist.	14448 Dec 05 11:57	28° $\text{II}$ 29'59	8.47366 AU
minimum elong	14443 Mar 28 00:54	17° $\text{Y}$ 17'17	0°38'41	direct	14449 Feb 12 18:36	25° $\text{II}$ 06'20	
morning rise	14443 Apr 14 14:49	19° $\text{Y}$ 28'14			14449 May 03 15:09	0° $\text{S}$	
retrograde	14443 Jul 25 15:44	27° $\text{Y}$ 07'02		evening set	14449 May 28 02:51	2° $\text{S}$ 51'31	
opposition	14443 Oct 01 06:37	23° $\text{Y}$ 43'43	0°34'17				
min. Earth dist.	14443 Oct 01 18:48	23° $\text{Y}$ 41'19	8.41848 AU	conjunction	14449 Jun 14 05:44	4° $\text{S}$ 59'18	-1°26'44
direct	14443 Dec 09 05:05	20° $\text{Y}$ 16'59		minimum elong	14449 Jun 14 05:42	4° $\text{S}$ 59'18	1°27'46
evening set	14444 Mar 22 23:34	28° $\text{Y}$ 06'02		max. Earth dist.	14449 Jun 14 00:09	4° $\text{S}$ 57'33	10.48568 AU
	14444 Apr 07 06:41	0° $\text{S}$		morning rise	14449 Jul 01 06:43	7° $\text{S}$ 06'31	
				retrograde	14449 Oct 11 03:44	14° $\text{S}$ 42'10	
conjunction	14444 Apr 09 14:21	0° $\text{S}$ 17'26	0°16'04	opposition	14449 Dec 18 16:24	11° $\text{S}$ 20'36	-1°54'45
minimum elong	14444 Apr 09 14:22	0° $\text{S}$ 17'27	0°15'37	min. Earth dist.	14449 Dec 18 19:12	11° $\text{S}$ 20'03	8.50007 AU
behind sun begin	14444 Apr 09 12:53	0° $\text{S}$ 16'59		direct	14450 Feb 26 05:53	7° $\text{S}$ 56'29	
behind sun end	14444 Apr 09 15:52	0° $\text{S}$ 17'54		evening set	14450 Jun 10 05:26	15° $\text{S}$ 39'01	
max. Earth dist.	14444 Apr 08 22:51	0° $\text{S}$ 12'35	10.41673 AU				
morning rise	14444 Apr 27 02:43	2° $\text{S}$ 28'10		conjunction	14450 Jun 27 06:11	17° $\text{S}$ 45'52	-1°37'37
retrograde	14444 Aug 06 21:56	10° $\text{S}$ 06'30		minimum elong	14450 Jun 27 06:10	17° $\text{S}$ 45'52	1°38'37
opposition	14444 Oct 13 14:18	6° $\text{S}$ 43'32	0°05'16	max. Earth dist.	14450 Jun 27 04:16	17° $\text{S}$ 45'16	10.51329 AU
min. Earth dist.	14444 Oct 14 01:46	6° $\text{S}$ 41'17	8.41694 AU	morning rise	14450 Jul 14 05:23	19° $\text{S}$ 52'16	
desc. node	14444 Dec 19 14:34	3° $\text{S}$ 17'10		retrograde	14450 Oct 24 07:11	27° $\text{S}$ 27'14	
direct	14444 Dec 21 17:14	3° $\text{S}$ 16'56		opposition	14451 Jan 01 01:29	24° $\text{S}$ 05'41	-2°05'12
evening set	14445 Apr 05 13:28	11° $\text{S}$ 06'32		min. Earth dist.	14451 Jan 01 01:08	24° $\text{S}$ 05'46	8.52884 AU
				direct	14451 Mar 11 14:43	20° $\text{S}$ 42'15	
conjunction	14445 Apr 23 02:33	13° $\text{S}$ 17'35	-0°07'42	evening set	14451 Jun 23 04:55	28° $\text{S}$ 21'43	
minimum elong	14445 Apr 23 02:32	13° $\text{S}$ 17'34	0°08'20		14451 Jul 06 11:07	0° $\text{S}$	
behind sun begin	14445 Apr 22 20:13	13° $\text{S}$ 15'37					
behind sun end	14445 Apr 23 08:52	13° $\text{S}$ 19'32		conjunction	14451 Jul 10 04:02	0° $\text{S}$ 27'43	-1°43'39
max. Earth dist.	14445 Apr 22 12:28	13° $\text{S}$ 13'10	10.41861 AU	minimum elong	14451 Jul 10 04:02	0° $\text{S}$ 27'43	1°44'36
	14445 May 06 18:25	15° $\text{S}$		max. Earth dist.	14451 Jul 10 05:52	0° $\text{S}$ 28'17	10.54246 AU
morning rise	14445 May 10 12:50	15° $\text{S}$ 27'52		morning rise	14451 Jul 27 01:56	2° $\text{S}$ 33'24	
retrograde	14445 Aug 20 04:46	23° $\text{S}$ 05'44		retrograde	14451 Nov 06 09:28	10° $\text{S}$ 07'40	
opposition	14445 Oct 26 23:19	19° $\text{S}$ 43'08	-0°24'00	opposition	14452 Jan 14 09:32	6° $\text{S}$ 46'04	-2°09'28
min. Earth dist.	14445 Oct 27 09:30	19° $\text{S}$ 41'07	8.42211 AU	min. Earth dist.	14452 Jan 14 06:33	6° $\text{S}$ 46'38	8.55816 AU
direct	14446 Jan 04 05:52	16° $\text{S}$ 16'50		direct	14452 Mar 23 21:40	3° $\text{S}$ 23'16	
evening set	14446 Apr 19 01:57	24° $\text{S}$ 06'17		evening set	14452 Jul 05 01:14	10° $\text{S}$ 59'22	
conjunction	14446 May 06 12:50	26° $\text{S}$ 16'45	-0°30'55	conjunction	14452 Jul 21 23:12	13° $\text{S}$ 04'39	-1°44'39
minimum elong	14446 May 06 12:48	26° $\text{S}$ 16'45	0°31'44	minimum elong	14452 Jul 21 23:13	13° $\text{S}$ 04'39	1°45'29
max. Earth dist.	14446 May 06 00:38	26° $\text{S}$ 12'56	10.42699 AU	max. Earth dist.	14452 Jul 22 03:42	13° $\text{S}$ 06'03	10.57121 AU

	14452 Aug 06 12:28	15°♎	morning rise	14458 Oct 21 23:06	29°♊38'04	
morning rise	14452 Aug 07 20:36	15°♎09'47		14458 Oct 25 00:45	0°♌	
retrograde	14452 Nov 18 11:01	22°♎43'23	retrograde	14459 Feb 02 22:16	7°♌10'45	
opposition	14453 Jan 26 16:04	19°♎21'39 -2°07'28	opposition	14459 Apr 13 18:49	3°♌46'57 -0°12'07	
min. Earth dist.	14453 Jan 26 11:22	19°♎22'34 8.58587 AU	min. Earth dist.	14459 Apr 13 07:35	3°♌49'07 8.66047 AU	
direct	14453 Apr 06 01:46	15°♎59'26	direct	14459 Jun 21 08:40	0°♌26'03	
evening set	14453 Jul 17 18:57	23°♎32'11	asc. node	14459 Sep 26 16:44	7°♌21'26	
			evening set	14459 Sep 30 04:13	7°♌46'15	
conjunction	14453 Aug 03 16:24	25°♎36'58 -1°40'38				
minimum elong	14453 Aug 03 16:26	25°♎36'58 1°41'18	conjunction	14459 Oct 17 09:06	9°♌51'32 0°01'15	
max. Earth dist.	14453 Aug 03 22:38	25°♎38'54 10.59737 AU	minimum elong	14459 Oct 17 09:05	9°♌51'32 0°01'51	
morning rise	14453 Aug 20 14:06	27°♎41'47	behind sun begin	14459 Oct 17 01:58	9°♌49'23	
	14453 Sep 09 07:24	0°♐	behind sun end	14459 Oct 17 16:13	9°♌53'41	
retrograde	14453 Dec 01 10:09	5°♐14'49	max. Earth dist.	14459 Oct 17 22:33	9°♌55'38 10.65852 AU	
opposition	14454 Feb 08 20:43	1°♐52'55 -1°59'25	morning rise	14459 Nov 03 16:43	11°♌57'37	
min. Earth dist.	14454 Feb 08 14:31	1°♐54'06 8.60997 AU		14459 Nov 30 13:49	15°♌	
	14454 Mar 06 23:43	30°♐♌	retrograde	14460 Feb 15 19:02	19°♌30'48	
direct	14454 Apr 19 03:29	28°♐31'12	opposition	14460 Apr 25 14:07	16°♌06'37 0°15'40	
	14454 May 31 05:29	0°♐	min. Earth dist.	14460 Apr 25 03:01	16°♌08'46 8.65540 AU	
evening set	14454 Jul 30 10:25	6°♐00'51		14460 May 10 05:32	15°♐♌	
			direct	14460 Jul 03 00:29	12°♌45'30	
conjunction	14454 Aug 16 08:08	8°♐05'20 -1°31'52		14460 Aug 23 22:10	15°♌	
minimum elong	14454 Aug 16 08:10	8°♐05'21 1°32'22	evening set	14460 Oct 11 19:36	20°♌05'48	
max. Earth dist.	14454 Aug 16 16:14	8°♐07'50 10.61945 AU				
morning rise	14454 Sep 02 06:44	10°♐10'01	conjunction	14460 Oct 29 02:20	22°♌11'33 0°23'36	
retrograde	14454 Dec 14 08:03	17°♐42'44	minimum elong	14460 Oct 29 02:19	22°♌11'32 0°24'22	
opposition	14455 Feb 21 23:45	14°♐20'33 -1°45'47	max. Earth dist.	14460 Oct 29 15:39	22°♌15'36 10.65074 AU	
min. Earth dist.	14455 Feb 21 15:37	14°♐22'06 8.62963 AU	morning rise	14460 Nov 15 11:41	24°♌18'05	
direct	14455 May 02 04:41	10°♐59'16		14461 Jan 10 17:35	0°♐	
evening set	14455 Aug 12 00:10	18°♐26'02	retrograde	14461 Feb 27 15:59	1°♐52'00	
				14461 Apr 17 17:16	30°♐♌	
conjunction	14455 Aug 28 22:47	20°♐30'25 -1°18'49	opposition	14461 May 08 08:36	28°♌27'30 0°42'46	
minimum elong	14455 Aug 28 22:49	20°♐30'26 1°19'07	min. Earth dist.	14461 May 07 21:57	28°♌29'33 8.64509 AU	
max. Earth dist.	14455 Aug 29 09:36	20°♐33'45 10.63706 AU	direct	14461 Jul 15 17:04	25°♌06'04	
morning rise	14455 Sep 14 22:38	22°♐35'09		14461 Oct 03 03:42	0°♐	
	14455 Dec 15 01:01	0°♊	evening set	14461 Oct 24 13:17	2°♐27'14	
retrograde	14455 Dec 27 06:55	0°♊07'41				
	14456 Jan 08 14:25	30°♐♐	conjunction	14461 Nov 10 21:36	4°♐33'29 0°44'56	
opposition	14456 Mar 06 01:02	26°♐45'06 -1°27'16	minimum elong	14461 Nov 10 21:35	4°♐33'28 0°45'49	
min. Earth dist.	14456 Mar 05 14:40	26°♐47'05 8.64470 AU	max. Earth dist.	14461 Nov 11 09:49	4°♐37'12 10.63776 AU	
direct	14456 May 14 02:47	23°♐24'09	morning rise	14461 Nov 28 08:27	6°♐40'29	
	14456 Aug 16 18:28	0°♊	retrograde	14462 Mar 12 15:22	14°♐15'18	
evening set	14456 Aug 23 13:00	0°♊48'21	opposition	14462 May 21 02:41	10°♐50'34 1°07'58	
			min. Earth dist.	14462 May 20 17:25	10°♐52'23 8.62989 AU	
conjunction	14456 Sep 09 12:56	2°♊52'48 -1°02'10	direct	14462 Jul 28 07:47	7°♐28'43	
minimum elong	14456 Sep 09 12:59	2°♊52'49 1°02'14	evening set	14462 Nov 06 09:31	14°♐51'29	
max. Earth dist.	14456 Sep 10 01:54	2°♊56'47 10.65002 AU				
morning rise	14456 Sep 26 14:28	4°♊57'45	conjunction	14462 Nov 23 19:14	16°♐58'15 1°04'13	
retrograde	14457 Jan 08 05:16	12°♊30'08	minimum elong	14462 Nov 23 19:12	16°♐58'14 1°05'12	
opposition	14457 Mar 19 00:28	9°♊07'08 -1°04'46	max. Earth dist.	14462 Nov 24 04:48	17°♐01'10 10.62021 AU	
min. Earth dist.	14457 Mar 18 12:57	9°♊09'21 8.65503 AU	morning rise	14462 Dec 11 07:28	19°♐05'46	
direct	14457 May 26 20:55	5°♊46'21	retrograde	14463 Mar 25 15:00	26°♐41'37	
evening set	14457 Sep 05 01:34	13°♊08'34	opposition	14463 Jun 02 21:00	23°♐16'44 1°30'04	
			min. Earth dist.	14463 Jun 02 14:10	23°♐18'04 8.61059 AU	
conjunction	14457 Sep 22 03:01	15°♊13'11 -0°42'40	direct	14463 Aug 09 23:19	19°♐54'21	
minimum elong	14457 Sep 22 03:02	15°♊13'12 0°42'30	evening set	14463 Nov 19 08:28	27°♐19'22	
max. Earth dist.	14457 Sep 22 16:43	15°♊17'23 10.65807 AU				
morning rise	14457 Oct 09 06:34	17°♊18'26	conjunction	14463 Dec 06 19:31	29°♐26'42 1°20'34	
retrograde	14458 Jan 21 01:34	24°♊50'51	minimum elong	14463 Dec 06 19:30	29°♐26'42 1°21'36	
opposition	14458 Mar 31 22:20	21°♊27'27 -0°39'20	max. Earth dist.	14463 Dec 07 02:02	29°♐28'42 10.59895 AU	
min. Earth dist.	14458 Mar 31 10:43	21°♊29'41 8.66034 AU		14463 Dec 11 08:22	0°♑	
direct	14458 Jun 08 15:34	18°♊06'40	morning rise	14463 Dec 24 08:58	1°♑34'45	
evening set	14458 Sep 17 14:24	25°♊27'31	retrograde	14464 Apr 06 13:47	9°♑11'41	
			opposition	14464 Jun 14 15:43	5°♑46'44 1°48'02	
conjunction	14458 Oct 04 17:27	27°♊32'26 -0°21'14	min. Earth dist.	14464 Jun 14 11:23	5°♑47'35 8.58802 AU	
minimum elong	14458 Oct 04 17:28	27°♊32'26 0°20'50	direct	14464 Aug 21 18:14	2°♑23'46	
max. Earth dist.	14458 Oct 05 06:54	27°♊36'32 10.66093 AU	evening set	14464 Dec 01 10:30	9°♑51'33	

conjunction	14464 Dec 18 22:53	11° $\mathfrak{Z}$ 59'32	1°33'10	conjunction	14471 Mar 08 20:12	28° $\mathfrak{H}$ 52'44	1°07'48
minimum elong	14464 Dec 18 22:51	11° $\mathfrak{Z}$ 59'31	1°34'11	minimum elong	14471 Mar 08 20:15	28° $\mathfrak{H}$ 52'44	1°07'57
max. Earth dist.	14464 Dec 19 02:38	12° $\mathfrak{Z}$ 00'41	10.57494 AU	max. Earth dist.	14471 Mar 08 07:46	28° $\mathfrak{H}$ 48'51	10.44254 AU
morning rise	14465 Jan 05 13:12	14° $\mathfrak{Z}$ 08'04			14471 Mar 17 20:28	0° $\mathfrak{Y}$	
retrograde	14465 Apr 19 15:25	21° $\mathfrak{Z}$ 46'04		morning rise	14471 Mar 26 11:36	1° $\mathfrak{Y}$ 03'42	
opposition	14465 Jun 27 11:04	18° $\mathfrak{Z}$ 21'08	2°00'57	retrograde	14471 Jul 06 22:48	8° $\mathfrak{Y}$ 43'24	
min. Earth dist.	14465 Jun 27 08:51	18° $\mathfrak{Z}$ 21'34	8.56327 AU	opposition	14471 Sep 12 14:25	5° $\mathfrak{Y}$ 20'01	1°12'18
direct	14465 Sep 03 13:29	14° $\mathfrak{Z}$ 57'35		min. Earth dist.	14471 Sep 13 00:30	5° $\mathfrak{Y}$ 18'01	8.43678 AU
evening set	14465 Dec 14 15:27	22° $\mathfrak{Z}$ 28'28		direct	14471 Nov 20 06:56	1° $\mathfrak{Y}$ 53'53	
				evening set	14472 Mar 03 18:52	9° $\mathfrak{Y}$ 41'15	
conjunction	14466 Jan 01 05:05	24° $\mathfrak{Z}$ 37'07	1°41'20	conjunction	14472 Mar 21 11:24	11° $\mathfrak{Y}$ 52'47	0°48'11
minimum elong	14466 Jan 01 05:05	24° $\mathfrak{Z}$ 37'06	1°42'19	minimum elong	14472 Mar 21 11:26	11° $\mathfrak{Y}$ 52'48	0°48'04
max. Earth dist.	14466 Jan 01 06:36	24° $\mathfrak{Z}$ 37'35	10.54940 AU	max. Earth dist.	14472 Mar 20 21:36	11° $\mathfrak{Y}$ 48'29	10.43103 AU
morning rise	14466 Jan 18 20:01	26° $\mathfrak{Z}$ 46'10		morning rise	14472 Apr 08 01:46	14° $\mathfrak{Y}$ 03'46	
	14466 Feb 16 07:05	0° $\approx$		retrograde	14472 Jul 19 07:06	21° $\mathfrak{Y}$ 42'59	
retrograde	14466 May 02 18:43	4° $\approx$ 25'08		opposition	14472 Sep 24 20:36	18° $\mathfrak{Y}$ 19'56	0°46'18
opposition	14466 Jul 10 07:43	1° $\approx$ 00'17	2°08'06	min. Earth dist.	14472 Sep 25 07:46	18° $\mathfrak{Y}$ 17'43	8.42680 AU
min. Earth dist.	14466 Jul 10 07:16	1° $\approx$ 00'23	8.53759 AU	direct	14472 Dec 02 16:06	14° $\mathfrak{Y}$ 53'40	
	14466 Jul 23 05:29	30° $\mathfrak{R}$ $\mathfrak{Z}$		evening set	14473 Mar 17 10:15	22° $\mathfrak{Y}$ 42'26	
direct	14466 Sep 16 10:10	27° $\mathfrak{Z}$ 36'13		max. Earth dist.	14473 Apr 03 10:47	24° $\mathfrak{Y}$ 49'17	10.42298 AU
	14466 Nov 09 01:16	0° $\approx$					
evening set	14466 Dec 27 23:08	5° $\approx$ 10'22		conjunction	14473 Apr 04 01:45	24° $\mathfrak{Y}$ 53'57	0°26'03
conjunction	14467 Jan 14 13:52	7° $\approx$ 19'39	1°44'37	minimum elong	14473 Apr 04 01:46	24° $\mathfrak{Y}$ 53'58	0°25'42
minimum elong	14467 Jan 14 13:53	7° $\approx$ 19'40	1°45'31	morning rise	14473 Apr 21 14:42	27° $\mathfrak{Y}$ 04'49	
max. Earth dist.	14467 Jan 14 12:35	7° $\approx$ 19'15	10.52371 AU		14473 May 16 15:25	0° $\mathfrak{B}$	
morning rise	14467 Feb 01 05:18	9° $\approx$ 29'14		retrograde	14473 Aug 01 14:17	4° $\mathfrak{B}$ 43'39	
	14467 Mar 26 02:19	15° $\approx$		opposition	14473 Oct 08 04:21	1° $\mathfrak{B}$ 20'58	0°17'51
retrograde	14467 May 15 22:59	17° $\approx$ 08'56		min. Earth dist.	14473 Oct 08 16:32	1° $\mathfrak{B}$ 18'33	8.42061 AU
	14467 Jul 06 22:16	15° $\mathfrak{R}$ $\approx$			14473 Oct 25 17:54	30° $\mathfrak{R}$ $\mathfrak{Y}$	
opposition	14467 Jul 23 05:50	13° $\approx$ 44'19	2°09'02	direct	14473 Dec 16 03:49	27° $\mathfrak{Y}$ 54'43	
min. Earth dist.	14467 Jul 23 07:54	13° $\approx$ 43'54	8.51231 AU		14474 Feb 04 09:22	0° $\mathfrak{B}$	
direct	14467 Sep 29 09:22	10° $\approx$ 19'42		evening set	14474 Mar 31 01:16	5° $\mathfrak{B}$ 44'29	
	14467 Dec 15 16:53	15° $\approx$					
evening set	14468 Jan 10 09:38	17° $\approx$ 57'09		conjunction	14474 Apr 17 15:08	7° $\mathfrak{B}$ 55'46	0°02'35
conjunction	14468 Jan 28 01:14	20° $\approx$ 07'06	1°42'45	minimum elong	14474 Apr 17 15:08	7° $\mathfrak{B}$ 55'46	0°02'02
minimum elong	14468 Jan 28 01:16	20° $\approx$ 07'06	1°43'31	behind sun begin	14474 Apr 17 07:55	7° $\mathfrak{B}$ 53'32	
max. Earth dist.	14468 Jan 27 20:22	20° $\approx$ 05'35	10.49913 AU	behind sun end	14474 Apr 17 22:20	7° $\mathfrak{B}$ 58'00	
morning rise	14468 Feb 14 17:04	22° $\approx$ 17'09		max. Earth dist.	14474 Apr 16 23:20	7° $\mathfrak{B}$ 50'50	10.41920 AU
retrograde	14468 May 28 04:38	29° $\approx$ 57'17		morning rise	14474 May 05 02:22	10° $\mathfrak{B}$ 06'20	
opposition	14468 Aug 04 05:26	26° $\approx$ 32'57	2°03'35	desc. node	14474 May 28 14:04	12° $\mathfrak{B}$ 51'41	
min. Earth dist.	14468 Aug 04 10:26	26° $\approx$ 31'58	8.48865 AU		14474 Jun 18 19:47	15° $\mathfrak{B}$	
direct	14468 Oct 11 10:26	23° $\approx$ 07'51		retrograde	14474 Aug 14 21:31	17° $\mathfrak{B}$ 44'52	
	14469 Jan 16 04:48	0° $\mathfrak{H}$			14474 Oct 13 13:47	15° $\mathfrak{R}$ $\mathfrak{B}$	
evening set	14469 Jan 22 22:15	0° $\mathfrak{H}$ 48'25		opposition	14474 Oct 21 13:28	14° $\mathfrak{B}$ 22'30	-0°11'32
				min. Earth dist.	14474 Oct 22 01:51	14° $\mathfrak{B}$ 20'04	8.41943 AU
conjunction	14469 Feb 09 14:32	2° $\mathfrak{H}$ 58'57	1°35'46	direct	14474 Dec 29 16:51	10° $\mathfrak{B}$ 56'22	
minimum elong	14469 Feb 09 14:34	2° $\mathfrak{H}$ 58'58	1°36'21		14475 Mar 11 13:41	15° $\mathfrak{B}$	
max. Earth dist.	14469 Feb 09 06:07	2° $\mathfrak{H}$ 56'21	10.47683 AU	evening set	14475 Apr 13 15:20	18° $\mathfrak{B}$ 46'32	
morning rise	14469 Feb 27 06:35	5° $\mathfrak{H}$ 09'26		max. Earth dist.	14475 Apr 30 11:54	20° $\mathfrak{B}$ 52'36	10.42088 AU
retrograde	14469 Jun 10 10:13	12° $\mathfrak{H}$ 49'40					
opposition	14469 Aug 17 06:53	9° $\mathfrak{H}$ 25'41	1°51'55	conjunction	14475 May 01 03:08	20° $\mathfrak{B}$ 57'23	-0°21'07
min. Earth dist.	14469 Aug 17 14:24	9° $\mathfrak{H}$ 24'11	8.46772 AU	minimum elong	14475 May 01 03:07	20° $\mathfrak{B}$ 57'23	0°21'52
direct	14469 Oct 24 15:12	6° $\mathfrak{H}$ 00'09		morning rise	14475 May 18 12:17	23° $\mathfrak{B}$ 07'28	
evening set	14470 Feb 05 12:14	13° $\mathfrak{H}$ 43'27			14475 Jul 29 22:13	0° $\mathfrak{I}$	
				retrograde	14475 Aug 28 05:13	0° $\mathfrak{I}$ 45'39	
conjunction	14470 Feb 23 04:58	15° $\mathfrak{H}$ 54'28	1°23'56		14475 Sep 26 21:20	30° $\mathfrak{R}$ $\mathfrak{B}$	
minimum elong	14470 Feb 23 05:00	15° $\mathfrak{H}$ 54'28	1°24'18	opposition	14475 Nov 03 23:46	27° $\mathfrak{B}$ 23'32	-0°40'19
max. Earth dist.	14470 Feb 22 18:02	15° $\mathfrak{H}$ 51'04	10.45778 AU	min. Earth dist.	14475 Nov 04 10:59	27° $\mathfrak{B}$ 21'20	8.42416 AU
morning rise	14470 Mar 12 20:54	18° $\mathfrak{H}$ 05'16		direct	14476 Jan 12 06:10	23° $\mathfrak{B}$ 57'38	
retrograde	14470 Jun 23 15:47	25° $\mathfrak{H}$ 45'22			14476 Apr 11 04:53	0° $\mathfrak{I}$	
opposition	14470 Aug 30 09:57	22° $\mathfrak{H}$ 21'40	1°34'33	evening set	14476 Apr 26 03:45	1° $\mathfrak{I}$ 47'28	
min. Earth dist.	14470 Aug 30 18:57	22° $\mathfrak{H}$ 19'53	8.45034 AU				
direct	14470 Nov 06 22:45	18° $\mathfrak{H}$ 55'48		conjunction	14476 May 13 13:08	3° $\mathfrak{I}$ 57'39	-0°43'38
evening set	14471 Feb 19 03:18	26° $\mathfrak{H}$ 41'22		minimum elong	14476 May 13 13:06	3° $\mathfrak{I}$ 57'39	0°44'31
				max. Earth dist.	14476 May 13 00:01	3° $\mathfrak{I}$ 53'32	10.42854 AU
				morning rise	14476 May 30 19:51	6° $\mathfrak{I}$ 07'05	

retrograde	14476 Sep 09 11:35	13° $\Pi$ 44'52			14482 Nov 07 03:45	0° $\mathbb{N}$	
opposition	14476 Nov 16 10:47	10° $\Pi$ 22'53	-1°07'00	retrograde	14482 Nov 26 08:47	0° $\mathbb{N}$ 19'00	
min. Earth dist.	14476 Nov 16 19:46	10° $\Pi$ 21'08	8.43496 AU		14482 Dec 15 16:44	30° $\mathbb{R}$ $\mathcal{L}$	
direct	14477 Jan 24 20:43	6° $\Pi$ 57'20		opposition	14483 Feb 03 17:13	26° $\mathcal{L}$ 56'34	-2°03'35
evening set	14477 May 09 13:59	14° $\Pi$ 46'05		min. Earth dist.	14483 Feb 03 10:07	26° $\mathcal{L}$ 57'56	8.58250 AU
				direct	14483 Apr 14 02:12	23° $\mathcal{L}$ 34'06	
conjunction	14477 May 26 20:49	16° $\Pi$ 55'26	-1°03'53		14483 Jul 16 09:08	0° $\mathbb{N}$	
minimum elong	14477 May 26 20:47	16° $\Pi$ 55'26	1°04'52	evening set	14483 Jul 25 12:40	1° $\mathbb{N}$ 05'35	
max. Earth dist.	14477 May 26 10:55	16° $\Pi$ 52'20	10.44210 AU				
morning rise	14477 Jun 13 00:59	19° $\Pi$ 04'05		conjunction	14483 Aug 11 10:27	3° $\mathbb{N}$ 10'20	-1°36'06
retrograde	14477 Sep 22 18:06	26° $\Pi$ 41'24		minimum elong	14483 Aug 11 10:29	3° $\mathbb{N}$ 10'21	1°36'40
opposition	14477 Nov 29 21:59	23° $\Pi$ 19'29	-1°30'10	max. Earth dist.	14483 Aug 11 20:00	3° $\mathbb{N}$ 13'18	10.59500 AU
min. Earth dist.	14477 Nov 30 04:27	23° $\Pi$ 18'13	8.45149 AU	morning rise	14483 Aug 28 08:31	5° $\mathbb{N}$ 15'13	
direct	14478 Feb 07 10:02	19° $\Pi$ 54'19		retrograde	14483 Dec 09 07:37	12° $\mathbb{N}$ 48'25	
evening set	14478 May 22 21:29	27° $\Pi$ 41'16		opposition	14484 Feb 16 21:06	9° $\mathbb{N}$ 25'48	-1°52'09
				min. Earth dist.	14484 Feb 16 11:51	9° $\mathbb{N}$ 27'35	8.60885 AU
conjunction	14478 Jun 09 01:45	29° $\Pi$ 49'43	-1°20'50	direct	14484 Apr 26 03:02	6° $\mathbb{N}$ 03'54	
minimum elong	14478 Jun 09 01:43	29° $\Pi$ 49'43	1°21'52	evening set	14484 Aug 06 02:59	13° $\mathbb{N}$ 32'03	
max. Earth dist.	14478 Jun 08 19:00	29° $\Pi$ 47'36	10.46095 AU				
	14478 Jun 10 10:29	0° $\mathcal{E}$		conjunction	14484 Aug 23 01:13	15° $\mathbb{N}$ 36'33	-1°24'45
morning rise	14478 Jun 26 03:35	1° $\mathcal{E}$ 57'31		minimum elong	14484 Aug 23 01:15	15° $\mathbb{N}$ 36'33	1°25'07
retrograde	14478 Oct 06 00:35	9° $\mathcal{E}$ 34'16		max. Earth dist.	14484 Aug 23 12:43	15° $\mathbb{N}$ 40'06	10.62018 AU
opposition	14478 Dec 13 08:58	6° $\mathcal{E}$ 12'20	-1°48'42	morning rise	14484 Sep 09 00:30	17° $\mathbb{N}$ 41'19	
min. Earth dist.	14478 Dec 13 13:17	6° $\mathcal{E}$ 11'30	8.47285 AU	retrograde	14484 Dec 21 05:55	25° $\mathbb{N}$ 13'56	
direct	14479 Feb 20 21:11	2° $\mathcal{E}$ 47'37		opposition	14485 Feb 28 23:01	21° $\mathbb{N}$ 51'07	-1°35'32
evening set	14479 Jun 05 02:03	10° $\mathcal{E}$ 32'11		min. Earth dist.	14485 Feb 28 12:35	21° $\mathbb{N}$ 53'07	8.63220 AU
				direct	14485 May 09 01:31	18° $\mathbb{N}$ 29'41	
conjunction	14479 Jun 22 03:48	12° $\mathcal{E}$ 39'41	-1°33'40	evening set	14485 Aug 18 15:59	25° $\mathbb{N}$ 54'52	
minimum elong	14479 Jun 22 03:47	12° $\mathcal{E}$ 39'40	1°34'42				
max. Earth dist.	14479 Jun 21 23:49	12° $\mathcal{E}$ 38'26	10.48410 AU	conjunction	14485 Sep 04 15:12	27° $\mathbb{N}$ 59'15	-1°09'30
morning rise	14479 Jul 09 03:44	14° $\mathcal{E}$ 46'39		minimum elong	14485 Sep 04 15:14	27° $\mathbb{N}$ 59'16	1°09'39
retrograde	14479 Oct 19 04:24	22° $\mathcal{E}$ 22'43		max. Earth dist.	14485 Sep 05 04:00	28° $\mathbb{N}$ 03'11	10.64186 AU
opposition	14479 Dec 26 19:11	19° $\mathcal{E}$ 00'45	-2°01'41	morning rise	14485 Sep 21 16:08	0° $\mathcal{L}$ 04'06	
min. Earth dist.	14479 Dec 26 21:13	19° $\mathcal{E}$ 00'21	8.49796 AU		14485 Sep 21 02:32	0° $\mathcal{L}$	
direct	14480 Mar 05 07:16	15° $\mathcal{E}$ 36'31		retrograde	14486 Jan 03 02:45	7° $\mathcal{L}$ 36'12	
evening set	14480 Jun 17 03:19	23° $\mathcal{E}$ 18'12		opposition	14486 Mar 13 22:48	4° $\mathcal{L}$ 13'11	-1°14'33
				min. Earth dist.	14486 Mar 13 11:09	4° $\mathcal{L}$ 15'24	8.65152 AU
conjunction	14480 Jul 04 03:03	25° $\mathcal{E}$ 24'47	-1°41'48	direct	14486 May 21 21:34	0° $\mathcal{L}$ 52'09	
minimum elong	14480 Jul 04 03:02	25° $\mathcal{E}$ 24'47	1°42'47	evening set	14486 Aug 31 04:11	8° $\mathcal{L}$ 14'50	
max. Earth dist.	14480 Jul 04 01:58	25° $\mathcal{E}$ 24'27	10.51049 AU				
morning rise	14480 Jul 21 01:39	27° $\mathcal{E}$ 31'01		conjunction	14486 Sep 17 04:52	10° $\mathcal{L}$ 19'17	-0°51'05
	14480 Aug 11 04:42	0° $\mathcal{L}$		minimum elong	14486 Sep 17 04:54	10° $\mathcal{L}$ 19'17	0°51'01
retrograde	14480 Oct 31 05:46	5° $\mathcal{L}$ 06'23		max. Earth dist.	14486 Sep 17 19:25	10° $\mathcal{L}$ 23'44	10.65908 AU
opposition	14481 Jan 08 04:14	1° $\mathcal{L}$ 44'18	-2°08'35	morning rise	14486 Oct 04 07:36	12° $\mathcal{L}$ 24'17	
min. Earth dist.	14481 Jan 08 03:30	1° $\mathcal{L}$ 44'26	8.52564 AU	retrograde	14487 Jan 15 22:37	19° $\mathcal{L}$ 56'08	
	14481 Jan 31 20:33	30° $\mathbb{R}$ $\mathcal{E}$		opposition	14487 Mar 26 20:55	16° $\mathcal{L}$ 32'53	-0°50'14
direct	14481 Mar 18 17:10	28° $\mathcal{E}$ 20'37		min. Earth dist.	14487 Mar 26 07:57	16° $\mathcal{L}$ 35'22	8.66604 AU
	14481 May 02 07:11	0° $\mathcal{L}$		direct	14487 Jun 03 17:04	13° $\mathcal{L}$ 12'10	
evening set	14481 Jun 30 01:12	5° $\mathcal{L}$ 59'02		evening set	14487 Sep 12 16:13	20° $\mathcal{L}$ 32'56	
conjunction	14481 Jul 16 23:38	8° $\mathcal{L}$ 04'51	-1°44'55	conjunction	14487 Sep 29 18:37	22° $\mathcal{L}$ 37'33	-0°30'23
minimum elong	14481 Jul 16 23:38	8° $\mathcal{L}$ 04'51	1°45'47	minimum elong	14487 Sep 29 18:38	22° $\mathcal{L}$ 37'33	0°30'04
max. Earth dist.	14481 Jul 17 02:05	8° $\mathcal{L}$ 05'37	10.53880 AU	max. Earth dist.	14487 Sep 30 10:40	22° $\mathcal{L}$ 42'27	10.67116 AU
morning rise	14481 Aug 02 21:27	10° $\mathcal{L}$ 10'28		morning rise	14487 Oct 16 23:12	24° $\mathcal{L}$ 42'49	
	14481 Sep 16 08:15	15° $\mathcal{L}$			14487 Dec 06 22:21	0° $\mathbb{N}$	
retrograde	14481 Nov 13 07:32	17° $\mathcal{L}$ 45'07		retrograde	14488 Jan 28 20:14	2° $\mathbb{N}$ 14'39	
	14482 Jan 13 09:20	15° $\mathbb{R}$ $\mathcal{L}$			14488 Mar 23 11:53	30° $\mathbb{R}$ $\mathcal{L}$	
opposition	14482 Jan 21 11:39	14° $\mathcal{L}$ 22'51	-2°09'11	opposition	14488 Apr 07 17:27	28° $\mathcal{L}$ 51'11	-0°23'40
min. Earth dist.	14482 Jan 21 07:32	14° $\mathcal{L}$ 23'39	8.55433 AU	min. Earth dist.	14488 Apr 07 03:41	28° $\mathcal{L}$ 53'50	8.67526 AU
direct	14482 Mar 31 23:45	10° $\mathcal{L}$ 59'47		direct	14488 Jun 15 09:23	25° $\mathcal{L}$ 30'40	
	14482 Jun 11 06:41	15° $\mathcal{L}$			14488 Aug 30 05:06	0° $\mathbb{N}$	
evening set	14482 Jul 12 20:12	18° $\mathcal{L}$ 34'44		evening set	14488 Sep 24 05:07	2° $\mathbb{N}$ 50'12	
conjunction	14482 Jul 29 18:02	20° $\mathcal{L}$ 39'57	-1°42'57	conjunction	14488 Oct 11 09:13	4° $\mathbb{N}$ 55'05	-0°08'20
minimum elong	14482 Jul 29 18:03	20° $\mathcal{L}$ 39'57	1°43'41	minimum elong	14488 Oct 11 09:13	4° $\mathbb{N}$ 55'05	0°07'50
max. Earth dist.	14482 Jul 30 00:26	20° $\mathcal{L}$ 41'56	10.56744 AU	behind sun begin	14488 Oct 11 02:48	4° $\mathbb{N}$ 53'09	
morning rise	14482 Aug 15 15:37	22° $\mathcal{L}$ 45'05		behind sun end	14488 Oct 11 15:37	4° $\mathbb{N}$ 57'01	



max. Earth dist.	14488 Oct 12 01:24	5° $\mathbb{M}$ 00'01	10.67766 AU	minimum elong	14494 Dec 26 17:26	19° $\mathbb{Z}$ 18'45	1°39'15
morning rise	14488 Oct 28 15:45	7° $\mathbb{M}$ 00'42		max. Earth dist.	14494 Dec 26 18:39	19° $\mathbb{Z}$ 19'07	10.58917 AU
retrograde	14489 Feb 09 17:10	14° $\mathbb{M}$ 32'40		morning rise	14495 Jan 13 07:54	21° $\mathbb{Z}$ 27'11	
asc. node	14489 Feb 27 02:48	14° $\mathbb{M}$ 17'27		retrograde	14495 Apr 27 08:23	29° $\mathbb{Z}$ 04'21	
opposition	14489 Apr 20 12:31	11° $\mathbb{M}$ 09'03	0°03'57	opposition	14495 Jul 05 00:08	25° $\mathbb{Z}$ 40'03	2°05'31
min. Earth dist.	14489 Apr 19 23:27	11° $\mathbb{M}$ 11'34	8.67881 AU	min. Earth dist.	14495 Jul 05 00:21	25° $\mathbb{Z}$ 40'01	8.57531 AU
direct	14489 Jun 27 23:55	7° $\mathbb{M}$ 48'33		direct	14495 Sep 11 02:16	22° $\mathbb{Z}$ 16'43	
	14489 Oct 05 17:34	15° $\mathbb{M}$		evening set	14495 Dec 22 10:09	29° $\mathbb{Z}$ 48'05	
evening set	14489 Oct 06 19:24	15° $\mathbb{M}$ 07'41			14495 Dec 24 01:45	0° $\approx$	
conjunction	14489 Oct 24 01:05	17° $\mathbb{M}$ 12'54	0°14'12	conjunction	14496 Jan 09 00:05	1° $\approx$ 56'43	1°43'43
minimum elong	14489 Oct 24 01:04	17° $\mathbb{M}$ 12'54	0°14'53	minimum elong	14496 Jan 09 00:05	1° $\approx$ 56'43	1°44'39
behind sun begin	14489 Oct 23 22:20	17° $\mathbb{M}$ 12'04		max. Earth dist.	14496 Jan 08 21:40	1° $\approx$ 55'58	10.55910 AU
behind sun end	14489 Oct 24 03:48	17° $\mathbb{M}$ 13'43		morning rise	14496 Jan 26 15:17	4° $\approx$ 05'43	
max. Earth dist.	14489 Oct 24 15:44	17° $\mathbb{M}$ 17'21	10.67828 AU	retrograde	14496 May 09 09:39	11° $\approx$ 43'50	
morning rise	14489 Nov 10 09:33	19° $\mathbb{M}$ 18'55		opposition	14496 Jul 16 20:32	8° $\approx$ 19'32	2°09'16
retrograde	14490 Feb 22 13:02	26° $\mathbb{M}$ 51'16		min. Earth dist.	14496 Jul 16 23:21	8° $\approx$ 18'58	8.54496 AU
opposition	14490 May 03 06:45	23° $\mathbb{M}$ 27'30	0°31'22	direct	14496 Sep 23 00:56	4° $\approx$ 55'27	
min. Earth dist.	14490 May 02 19:15	23° $\mathbb{M}$ 29'43	8.67644 AU	evening set	14497 Jan 03 18:18	12° $\approx$ 30'14	
direct	14490 Jul 10 15:25	20° $\mathbb{M}$ 06'51		conjunction	14497 Jan 21 09:20	14° $\approx$ 39'34	1°44'10
evening set	14490 Oct 19 11:17	27° $\mathbb{M}$ 26'19		minimum elong	14497 Jan 21 09:21	14° $\approx$ 39'34	1°45'00
conjunction	14490 Nov 05 18:34	29° $\mathbb{M}$ 31'56	0°36'00	max. Earth dist.	14497 Jan 21 04:13	14° $\approx$ 37'59	10.52871 AU
minimum elong	14490 Nov 05 18:32	29° $\mathbb{M}$ 31'56	0°36'50		14497 Jan 24 03:40	15° $\approx$	
max. Earth dist.	14490 Nov 06 07:26	29° $\mathbb{M}$ 35'51	10.67273 AU	morning rise	14497 Feb 08 00:56	16° $\approx$ 49'06	
	14490 Nov 09 14:43	0° $\mathbb{Z}$		retrograde	14497 May 22 13:31	24° $\approx$ 27'58	
morning rise	14490 Nov 23 04:43	1° $\mathbb{Z}$ 38'21		opposition	14497 Jul 29 18:19	21° $\approx$ 03'41	2°06'43
retrograde	14491 Mar 07 10:01	9° $\mathbb{Z}$ 11'21		min. Earth dist.	14497 Jul 29 23:06	21° $\approx$ 02'44	8.51497 AU
opposition	14491 May 16 00:19	5° $\mathbb{Z}$ 47'26	0°57'24	direct	14497 Oct 06 00:12	17° $\approx$ 38'55	
min. Earth dist.	14491 May 15 14:31	5° $\mathbb{Z}$ 49'20	8.66786 AU	evening set	14498 Jan 17 04:42	25° $\approx$ 16'59	
direct	14491 Jul 23 06:42	2° $\mathbb{Z}$ 26'28		conjunction	14498 Feb 03 20:41	27° $\approx$ 27'01	1°39'31
evening set	14491 Nov 01 05:30	9° $\mathbb{Z}$ 47'02		minimum elong	14498 Feb 03 20:43	27° $\approx$ 27'02	1°40'10
conjunction	14491 Nov 18 14:24	11° $\mathbb{Z}$ 53'07	0°56'11	max. Earth dist.	14498 Feb 03 13:06	27° $\approx$ 24'41	10.49956 AU
minimum elong	14491 Nov 18 14:22	11° $\mathbb{Z}$ 53'07	0°57'08	morning rise	14498 Feb 21 12:29	29° $\approx$ 37'04	
max. Earth dist.	14491 Nov 19 01:28	11° $\mathbb{Z}$ 56'30	10.66071 AU		14498 Feb 24 16:42	0° $\mathbb{H}$	
morning rise	14491 Dec 06 01:54	13° $\mathbb{Z}$ 59'59		retrograde	14498 Jun 04 18:42	7° $\mathbb{H}$ 16'23	
retrograde	14492 Mar 19 07:28	21° $\mathbb{Z}$ 33'48		opposition	14498 Aug 11 17:51	3° $\mathbb{H}$ 52'11	1°57'53
opposition	14492 May 27 17:27	18° $\mathbb{Z}$ 09'43	1°20'51	min. Earth dist.	14498 Aug 12 00:33	3° $\mathbb{H}$ 50'51	8.48683 AU
min. Earth dist.	14492 May 27 09:17	18° $\mathbb{Z}$ 11'18	8.65267 AU	direct	14498 Oct 19 01:47	0° $\mathbb{H}$ 26'46	
direct	14492 Aug 03 22:13	14° $\mathbb{Z}$ 48'19		evening set	14499 Jan 30 16:55	8° $\mathbb{H}$ 07'56	
evening set	14492 Nov 13 02:18	22° $\mathbb{Z}$ 10'45		conjunction	14499 Feb 17 09:34	10° $\mathbb{H}$ 18'34	1°29'52
conjunction	14492 Nov 30 12:43	24° $\mathbb{Z}$ 17'23	1°13'50	minimum elong	14499 Feb 17 09:37	10° $\mathbb{H}$ 18'35	1°30'19
minimum elong	14492 Nov 30 12:41	24° $\mathbb{Z}$ 17'23	1°14'51	max. Earth dist.	14499 Feb 16 23:22	10° $\mathbb{H}$ 15'25	10.47299 AU
max. Earth dist.	14492 Nov 30 21:25	24° $\mathbb{Z}$ 20'02	10.64196 AU	morning rise	14499 Mar 07 01:25	12° $\mathbb{H}$ 29'04	
morning rise	14492 Dec 18 01:19	26° $\mathbb{Z}$ 24'43		retrograde	14499 Jun 17 23:42	20° $\mathbb{H}$ 08'34	
	14493 Jan 19 07:29	0° $\mathbb{Z}$		opposition	14499 Aug 24 19:12	16° $\mathbb{H}$ 44'31	1°43'06
retrograde	14493 Apr 01 06:29	3° $\mathbb{Z}$ 59'37		min. Earth dist.	14499 Aug 25 04:09	16° $\mathbb{H}$ 42'44	8.46180 AU
opposition	14493 Jun 09 10:51	0° $\mathbb{Z}$ 35'25	1°40'37	direct	14499 Nov 01 06:28	13° $\mathbb{H}$ 18'32	
min. Earth dist.	14493 Jun 09 04:54	0° $\mathbb{Z}$ 36'35	8.63102 AU	evening set	14500 Feb 13 06:45	21° $\mathbb{H}$ 02'28	
	14493 Jun 17 01:18	30° $\mathbb{R}$ $\mathbb{Z}$		conjunction	14500 Mar 02 23:36	23° $\mathbb{H}$ 13'35	1°15'39
direct	14493 Aug 16 14:24	27° $\mathbb{Z}$ 13'29		minimum elong	14500 Mar 02 23:38	23° $\mathbb{H}$ 13'36	1°15'53
	14493 Oct 13 16:52	0° $\mathbb{Z}$		max. Earth dist.	14500 Mar 02 10:24	23° $\mathbb{H}$ 09'29	10.45017 AU
evening set	14493 Nov 26 01:59	4° $\mathbb{Z}$ 38'27		morning rise	14500 Mar 20 15:13	25° $\mathbb{H}$ 24'24	
conjunction	14493 Dec 13 13:37	6° $\mathbb{Z}$ 45'43	1°28'05		14500 May 01 09:39	0° $\mathbb{Y}$	
minimum elong	14493 Dec 13 13:36	6° $\mathbb{Z}$ 45'43	1°29'07	retrograde	14500 Jul 01 05:40	3° $\mathbb{Y}$ 03'49	
max. Earth dist.	14493 Dec 13 18:50	6° $\mathbb{Z}$ 47'19	10.61741 AU		14500 Sep 02 17:20	30° $\mathbb{R}$ $\mathbb{H}$	
morning rise	14493 Dec 31 03:11	8° $\mathbb{Z}$ 53'35		opposition	14500 Sep 06 22:15	29° $\mathbb{H}$ 39'59	1°23'01
retrograde	14494 Apr 14 07:53	16° $\mathbb{Z}$ 29'39		min. Earth dist.	14500 Sep 07 09:19	29° $\mathbb{H}$ 37'47	8.44107 AU
opposition	14494 Jun 22 04:59	13° $\mathbb{Z}$ 05'24	1°55'47	direct	14500 Nov 14 12:59	26° $\mathbb{H}$ 13'34	
min. Earth dist.	14494 Jun 22 01:58	13° $\mathbb{Z}$ 06'00	8.60453 AU		14501 Jan 22 09:24	0° $\mathbb{Y}$	
direct	14494 Aug 29 06:21	9° $\mathbb{Z}$ 42'48		evening set	14501 Feb 26 21:22	3° $\mathbb{Y}$ 59'48	
evening set	14494 Dec 09 04:40	17° $\mathbb{Z}$ 10'49		conjunction	14501 Mar 16 13:59	6° $\mathbb{Y}$ 11'14	0°57'33
conjunction	14494 Dec 26 17:26	19° $\mathbb{Z}$ 18'45	1°38'14	minimum elong	14501 Mar 16 14:02	6° $\mathbb{Y}$ 11'15	0°57'33

max. Earth dist.	14501 Mar 15 22:52	6° $\Upsilon$ 06'31	10.43225 AU	minimum elong	14507 Jun 04 06:17	24° $\Pi$ 03'16	1°14'19
morning rise	14501 Apr 03 04:59	8° $\Upsilon$ 22'13		max. Earth dist.	14507 Jun 03 21:45	24° $\Pi$ 00'35	10.45694 AU
retrograde	14501 Jul 14 12:02	16° $\Upsilon$ 01'24		morning rise	14507 Jun 21 09:23	26° $\Pi$ 11'23	
opposition	14501 Sep 20 03:08	12° $\Upsilon$ 37'48	0°58'38		14507 Jul 24 20:04	0° $\mathfrak{E}$	
min. Earth dist.	14501 Sep 20 15:09	12° $\Upsilon$ 35'25	8.42575 AU	retrograde	14507 Oct 01 03:21	3° $\mathfrak{E}$ 47'59	
direct	14501 Nov 27 21:49	9° $\Upsilon$ 11'07		opposition	14507 Dec 08 10:28	0° $\mathfrak{E}$ 26'11	-1°40'33
evening set	14502 Mar 12 12:07	16° $\Upsilon$ 59'06		min. Earth dist.	14507 Dec 08 15:37	0° $\mathfrak{E}$ 25'11	8.46934 AU
					14507 Dec 14 01:40	30° $\mathfrak{R}$ $\Pi$	
conjunction	14502 Mar 30 04:06	19° $\Upsilon$ 10'39	0°36'28	direct	14508 Feb 15 23:01	27° $\Pi$ 01'24	
minimum elong	14502 Mar 30 04:08	19° $\Upsilon$ 10'39	0°36'13		14508 Apr 16 17:45	0° $\mathfrak{E}$	
max. Earth dist.	14502 Mar 29 12:28	19° $\Upsilon$ 05'46	10.42013 AU	evening set	14508 May 30 06:40	4° $\mathfrak{E}$ 46'48	
morning rise	14502 Apr 16 18:00	21° $\Upsilon$ 21'37					
retrograde	14502 Jul 27 17:45	29° $\Upsilon$ 00'29		conjunction	14508 Jun 16 09:31	6° $\mathfrak{E}$ 54'38	-1°28'06
opposition	14502 Oct 03 09:37	25° $\Upsilon$ 37'09	0°31'10	minimum elong	14508 Jun 16 09:29	6° $\mathfrak{E}$ 54'37	1°29'08
min. Earth dist.	14502 Oct 03 21:29	25° $\Upsilon$ 34'48	8.41662 AU	max. Earth dist.	14508 Jun 16 04:46	6° $\mathfrak{E}$ 53'08	10.48140 AU
direct	14502 Dec 11 09:22	22° $\Upsilon$ 10'23		morning rise	14508 Jul 03 10:21	9° $\mathfrak{E}$ 01'53	
evening set	14503 Mar 26 02:51	29° $\Upsilon$ 59'33		retrograde	14508 Oct 13 08:19	16° $\mathfrak{E}$ 37'54	
	14503 Mar 26 04:21	0° $\mathfrak{E}$		opposition	14508 Dec 20 20:55	13° $\mathfrak{E}$ 16'15	-1°56'09
conjunction	14503 Apr 12 17:40	2° $\mathfrak{E}$ 10'59	0°13'30	min. Earth dist.	14508 Dec 20 22:52	13° $\mathfrak{E}$ 15'52	8.49594 AU
minimum elong	14503 Apr 12 17:41	2° $\mathfrak{E}$ 10'59	0°13'02	direct	14509 Feb 28 09:51	9° $\mathfrak{E}$ 52'09	
behind sun begin	14503 Apr 12 13:23	2° $\mathfrak{E}$ 09'39		evening set	14509 Jun 12 09:23	17° $\mathfrak{E}$ 34'52	
behind sun end	14503 Apr 12 21:58	2° $\mathfrak{E}$ 12'19		conjunction	14509 Jun 29 10:08	19° $\mathfrak{E}$ 41'46	-1°38'27
max. Earth dist.	14503 Apr 12 02:42	2° $\mathfrak{E}$ 06'18	10.41440 AU	minimum elong	14509 Jun 29 10:07	19° $\mathfrak{E}$ 41'46	1°39'27
morning rise	14503 Apr 30 05:52	4° $\mathfrak{E}$ 21'43		max. Earth dist.	14509 Jun 29 09:14	19° $\mathfrak{E}$ 41'29	10.50941 AU
retrograde	14503 Aug 10 01:11	12° $\mathfrak{E}$ 00'11		morning rise	14509 Jul 16 09:11	21° $\mathfrak{E}$ 48'13	
opposition	14503 Oct 16 17:28	8° $\mathfrak{E}$ 37'10	0°02'04	retrograde	14509 Oct 26 12:19	29° $\mathfrak{E}$ 23'33	
min. Earth dist.	14503 Oct 17 04:37	8° $\mathfrak{E}$ 34'57	8.41414 AU	opposition	14510 Jan 03 06:21	26° $\mathfrak{E}$ 01'58	-2°05'54
desc. node	14503 Nov 11 20:26	6° $\mathfrak{E}$ 40'45		min. Earth dist.	14510 Jan 03 05:32	26° $\mathfrak{E}$ 02'07	8.52536 AU
direct	14503 Dec 24 20:39	5° $\mathfrak{E}$ 10'31		direct	14510 Mar 13 19:03	22° $\mathfrak{E}$ 38'32	
evening set	14504 Apr 07 16:55	13° $\mathfrak{E}$ 00'15			14510 Jun 22 21:22	0° $\mathfrak{E}$	
	14504 Apr 23 17:49	15° $\mathfrak{E}$		evening set	14510 Jun 25 09:02	0° $\mathfrak{E}$ 18'09	
conjunction	14504 Apr 25 05:56	15° $\mathfrak{E}$ 11'20	-0°10'15	conjunction	14510 Jul 12 08:05	2° $\mathfrak{E}$ 24'12	-1°43'55
minimum elong	14504 Apr 25 05:55	15° $\mathfrak{E}$ 11'19	0°10'55	minimum elong	14510 Jul 12 08:05	2° $\mathfrak{E}$ 24'12	1°44'51
behind sun begin	14504 Apr 25 00:30	15° $\mathfrak{E}$ 09'38		max. Earth dist.	14510 Jul 12 10:17	2° $\mathfrak{E}$ 24'53	10.53947 AU
behind sun end	14504 Apr 25 11:20	15° $\mathfrak{E}$ 13'00		morning rise	14510 Jul 29 06:02	4° $\mathfrak{E}$ 29'56	
max. Earth dist.	14504 Apr 24 16:04	15° $\mathfrak{E}$ 06'59	10.41539 AU	retrograde	14510 Nov 08 15:11	12° $\mathfrak{E}$ 04'30	
morning rise	14504 May 12 16:00	17° $\mathfrak{E}$ 21'37		opposition	14511 Jan 16 14:38	8° $\mathfrak{E}$ 42'54	-2°09'26
retrograde	14504 Aug 22 09:30	24° $\mathfrak{E}$ 59'39		min. Earth dist.	14511 Jan 16 11:44	8° $\mathfrak{E}$ 43'27	8.55584 AU
opposition	14504 Oct 29 02:48	21° $\mathfrak{E}$ 36'59	-0°27'08	direct	14511 Mar 27 01:28	5° $\mathfrak{E}$ 20'08	
min. Earth dist.	14504 Oct 29 13:17	21° $\mathfrak{E}$ 34'55	8.41854 AU	evening set	14511 Jul 08 05:33	12° $\mathfrak{E}$ 56'20	
direct	14505 Jan 06 07:50	18° $\mathfrak{E}$ 10'38			14511 Jul 24 22:08	15° $\mathfrak{E}$	
evening set	14505 Apr 21 05:31	26° $\mathfrak{E}$ 00'16		conjunction	14511 Jul 25 03:26	15° $\mathfrak{E}$ 01'39	-1°44'19
conjunction	14505 May 08 16:10	28° $\mathfrak{E}$ 10'45	-0°33'22	minimum elong	14511 Jul 25 03:27	15° $\mathfrak{E}$ 01'39	1°45'08
minimum elong	14505 May 08 16:08	28° $\mathfrak{E}$ 10'44	0°34'12	max. Earth dist.	14511 Jul 25 07:50	15° $\mathfrak{E}$ 03'01	10.56973 AU
max. Earth dist.	14505 May 08 03:30	28° $\mathfrak{E}$ 06'46	10.42310 AU	morning rise	14511 Aug 11 01:00	17° $\mathfrak{E}$ 06'51	
	14505 May 23 05:40	0° $\mathfrak{E}$		retrograde	14511 Nov 21 15:25	24° $\mathfrak{E}$ 40'37	
morning rise	14505 May 25 23:57	0° $\mathfrak{E}$ 20'27		opposition	14512 Jan 29 21:16	21° $\mathfrak{E}$ 18'54	-2°06'43
retrograde	14505 Sep 04 15:59	7° $\mathfrak{E}$ 58'02		min. Earth dist.	14512 Jan 29 16:23	21° $\mathfrak{E}$ 19'50	8.58539 AU
opposition	14505 Nov 11 13:02	4° $\mathfrak{E}$ 35'43	-0°54'54	direct	14512 Apr 08 06:09	17° $\mathfrak{E}$ 56'44	
min. Earth dist.	14505 Nov 11 22:34	4° $\mathfrak{E}$ 33'51	8.42964 AU	evening set	14512 Jul 19 23:13	25° $\mathfrak{E}$ 29'26	
direct	14506 Jan 19 21:05	1° $\mathfrak{E}$ 09'46		conjunction	14512 Aug 05 20:43	27° $\mathfrak{E}$ 34'13	-1°39'44
evening set	14506 May 04 16:25	8° $\mathfrak{E}$ 58'40		minimum elong	14512 Aug 05 20:45	27° $\mathfrak{E}$ 34'13	1°40'24
conjunction	14506 May 22 00:24	11° $\mathfrak{E}$ 08'22	-0°54'45	max. Earth dist.	14512 Aug 06 03:33	27° $\mathfrak{E}$ 36'20	10.59803 AU
minimum elong	14506 May 22 00:22	11° $\mathfrak{E}$ 08'21	0°55'42	morning rise	14512 Aug 22 18:34	29° $\mathfrak{E}$ 39'03	
max. Earth dist.	14506 May 21 13:20	11° $\mathfrak{E}$ 04'53	10.43719 AU		14512 Aug 25 15:56	0° $\mathfrak{E}$	
morning rise	14506 Jun 08 05:50	13° $\mathfrak{E}$ 17'19		retrograde	14512 Dec 03 13:59	7° $\mathfrak{E}$ 12'10	
retrograde	14506 Sep 17 21:34	20° $\mathfrak{E}$ 54'25		opposition	14513 Feb 11 01:55	3° $\mathfrak{E}$ 50'14	-1°57'58
opposition	14506 Nov 24 23:39	17° $\mathfrak{E}$ 32'25	-1°19'48	min. Earth dist.	14513 Feb 10 18:49	3° $\mathfrak{E}$ 51'35	8.61175 AU
min. Earth dist.	14506 Nov 25 07:35	17° $\mathfrak{E}$ 30'52	8.44687 AU	direct	14513 Apr 21 09:50	0° $\mathfrak{E}$ 28'36	
direct	14507 Feb 02 10:39	14° $\mathfrak{E}$ 06'59		evening set	14513 Aug 01 14:28	7° $\mathfrak{E}$ 58'00	
evening set	14507 May 18 01:00	21° $\mathfrak{E}$ 54'29		conjunction	14513 Aug 18 12:24	10° $\mathfrak{E}$ 02'29	-1°30'27
conjunction	14507 Jun 04 06:19	24° $\mathfrak{E}$ 03'16	-1°13'18	minimum elong	14513 Aug 18 12:26	10° $\mathfrak{E}$ 02'30	1°30'55

max. Earth dist.	14513 Aug 18 21:52	10° $\mathbb{M}$ 05'24	10.62226 AU	conjunction	14519 Nov 01 05:21	24° $\mathbb{M}$ 04'41	0°26'03
morning rise	14513 Sep 04 11:03	12° $\mathbb{M}$ 07'10		minimum elong	14519 Nov 01 05:20	24° $\mathbb{M}$ 04'40	0°26'50
retrograde	14513 Dec 16 13:49	19° $\mathbb{M}$ 39'47		max. Earth dist.	14519 Nov 01 18:57	24° $\mathbb{M}$ 08'49	10.65822 AU
opposition	14514 Feb 24 04:41	16° $\mathbb{M}$ 17'36	-1°43'44	morning rise	14519 Nov 18 14:40	26° $\mathbb{M}$ 11'06	
min. Earth dist.	14514 Feb 23 19:21	16° $\mathbb{M}$ 19'23	8.63329 AU		14519 Dec 23 04:28	0° $\mathbb{Z}$	
direct	14514 May 04 09:16	12° $\mathbb{M}$ 56'26		retrograde	14520 Mar 01 20:13	3° $\mathbb{Z}$ 44'31	
evening set	14514 Aug 14 04:10	20° $\mathbb{M}$ 22'51		opposition	14520 May 10 11:15	0° $\mathbb{Z}$ 20'05	0°45'40
				min. Earth dist.	14520 May 10 00:37	0° $\mathbb{Z}$ 22'08	8.65252 AU
conjunction	14514 Aug 31 02:58	22° $\mathbb{M}$ 27'13	-1°16'58		14520 May 14 18:55	30° $\mathbb{R}$ $\mathbb{M}$	
minimum elong	14514 Aug 31 03:01	22° $\mathbb{M}$ 27'14	1°17'13	direct	14520 Jul 17 18:39	26° $\mathbb{M}$ 58'42	
max. Earth dist.	14514 Aug 31 14:51	22° $\mathbb{M}$ 30'53	10.64146 AU		14520 Sep 16 15:52	0° $\mathbb{Z}$	
morning rise	14514 Sep 17 02:53	24° $\mathbb{M}$ 31'56		evening set	14520 Oct 26 16:01	4° $\mathbb{Z}$ 19'24	
	14514 Nov 08 23:55	0° $\mathbb{Z}$					
retrograde	14514 Dec 29 12:06	2° $\mathbb{Z}$ 04'14		conjunction	14520 Nov 13 00:17	6° $\mathbb{Z}$ 25'32	0°47'09
	14515 Feb 19 17:11	30° $\mathbb{R}$ $\mathbb{M}$		minimum elong	14520 Nov 13 00:15	6° $\mathbb{Z}$ 25'31	0°48'03
opposition	14515 Mar 09 05:39	28° $\mathbb{M}$ 41'43	-1°24'43	max. Earth dist.	14520 Nov 13 11:43	6° $\mathbb{Z}$ 29'01	10.64509 AU
min. Earth dist.	14515 Mar 08 18:48	28° $\mathbb{M}$ 43'47	8.64973 AU	morning rise	14520 Nov 30 11:12	8° $\mathbb{Z}$ 32'26	
direct	14515 May 17 05:53	25° $\mathbb{M}$ 20'53		retrograde	14521 Mar 14 17:20	16° $\mathbb{Z}$ 06'41	
	14515 Aug 02 17:20	0° $\mathbb{Z}$		opposition	14521 May 23 04:49	12° $\mathbb{Z}$ 42'02	1°10'30
evening set	14515 Aug 26 16:56	2° $\mathbb{Z}$ 44'44		min. Earth dist.	14521 May 22 20:22	12° $\mathbb{Z}$ 43'41	8.63705 AU
				direct	14521 Jul 30 09:42	9° $\mathbb{Z}$ 20'10	
conjunction	14515 Sep 12 16:55	4° $\mathbb{Z}$ 49'08	-0°59'57	evening set	14521 Nov 08 11:57	16° $\mathbb{Z}$ 42'33	
minimum elong	14515 Sep 12 16:57	4° $\mathbb{Z}$ 49'08	0°59'58				
max. Earth dist.	14515 Sep 13 05:53	4° $\mathbb{Z}$ 53'06	10.65563 AU	conjunction	14521 Nov 25 21:36	18° $\mathbb{Z}$ 49'12	1°06'07
morning rise	14515 Sep 29 18:37	6° $\mathbb{Z}$ 54'02		minimum elong	14521 Nov 25 21:35	18° $\mathbb{Z}$ 49'11	1°07'06
retrograde	14516 Jan 11 08:54	14° $\mathbb{Z}$ 26'07		max. Earth dist.	14521 Nov 26 06:12	18° $\mathbb{Z}$ 51'49	10.62711 AU
opposition	14516 Mar 21 04:55	11° $\mathbb{Z}$ 03'13	-1°01'51	morning rise	14521 Dec 13 09:55	20° $\mathbb{Z}$ 56'36	
min. Earth dist.	14516 Mar 20 17:36	11° $\mathbb{Z}$ 05'24	8.66111 AU	retrograde	14522 Mar 27 15:03	28° $\mathbb{Z}$ 31'54	
direct	14516 May 29 01:33	7° $\mathbb{Z}$ 42'32		opposition	14522 Jun 04 22:37	25° $\mathbb{Z}$ 07'04	1°32'09
evening set	14516 Sep 07 05:13	15° $\mathbb{Z}$ 04'20		min. Earth dist.	14522 Jun 04 16:28	25° $\mathbb{Z}$ 08'16	8.61714 AU
				direct	14522 Aug 12 02:43	21° $\mathbb{Z}$ 44'40	
conjunction	14516 Sep 24 06:42	17° $\mathbb{Z}$ 08'55	-0°40'12	evening set	14522 Nov 21 10:26	29° $\mathbb{Z}$ 09'18	
minimum elong	14516 Sep 24 06:44	17° $\mathbb{Z}$ 08'55	0°40'00		14522 Nov 28 10:39	0° $\mathbb{Z}$	
max. Earth dist.	14516 Sep 24 20:01	17° $\mathbb{Z}$ 12'59	10.66461 AU				
morning rise	14516 Oct 11 10:30	19° $\mathbb{Z}$ 14'06		conjunction	14522 Dec 08 21:32	1° $\mathbb{Z}$ 16'33	1°22'03
retrograde	14517 Jan 23 05:47	26° $\mathbb{Z}$ 46'10		minimum elong	14522 Dec 08 21:30	1° $\mathbb{Z}$ 16'32	1°23'05
opposition	14517 Apr 03 02:27	23° $\mathbb{Z}$ 22'52	-0°36'12	max. Earth dist.	14522 Dec 09 03:54	1° $\mathbb{Z}$ 18'30	10.60507 AU
min. Earth dist.	14517 Apr 02 15:03	23° $\mathbb{Z}$ 25'03	8.66721 AU	morning rise	14522 Dec 26 10:54	3° $\mathbb{Z}$ 24'28	
direct	14517 Jun 10 19:29	20° $\mathbb{Z}$ 02'10		retrograde	14523 Apr 09 15:04	11° $\mathbb{Z}$ 00'55	
evening set	14517 Sep 19 17:53	27° $\mathbb{Z}$ 22'35		opposition	14523 Jun 17 16:51	7° $\mathbb{Z}$ 35'58	1°49'34
				min. Earth dist.	14523 Jun 17 12:31	7° $\mathbb{Z}$ 36'49	8.59367 AU
conjunction	14517 Oct 06 21:05	29° $\mathbb{Z}$ 27'25	-0°18'39	direct	14523 Aug 24 19:57	4° $\mathbb{Z}$ 13'00	
minimum elong	14517 Oct 06 21:06	29° $\mathbb{Z}$ 27'25	0°18'14	evening set	14523 Dec 04 12:05	11° $\mathbb{Z}$ 40'25	
max. Earth dist.	14517 Oct 07 10:43	29° $\mathbb{Z}$ 31'35	10.66810 AU				
	14517 Oct 11 07:40	0° $\mathbb{M}$		conjunction	14523 Dec 22 00:33	13° $\mathbb{Z}$ 48'18	1°34'10
morning rise	14517 Oct 24 02:52	1° $\mathbb{M}$ 32'59		minimum elong	14523 Dec 22 00:32	13° $\mathbb{Z}$ 48'18	1°35'11
retrograde	14518 Feb 05 01:08	9° $\mathbb{M}$ 05'14		max. Earth dist.	14523 Dec 22 04:39	13° $\mathbb{Z}$ 49'33	10.57999 AU
opposition	14518 Apr 15 22:20	5° $\mathbb{M}$ 41'31	-0°08'54	morning rise	14524 Jan 08 14:44	15° $\mathbb{Z}$ 56'45	
min. Earth dist.	14518 Apr 15 10:45	5° $\mathbb{M}$ 43'44	8.66782 AU	retrograde	14524 Apr 21 16:27	23° $\mathbb{Z}$ 34'18	
direct	14518 Jun 23 12:25	2° $\mathbb{M}$ 20'42		opposition	14524 Jun 29 11:48	20° $\mathbb{Z}$ 09'21	2°01'52
asc. node	14518 Aug 15 08:04	4° $\mathbb{M}$ 39'24		min. Earth dist.	14524 Jun 29 09:24	20° $\mathbb{Z}$ 09'49	8.56771 AU
evening set	14518 Oct 02 07:28	9° $\mathbb{M}$ 40'28		direct	14524 Sep 05 14:34	16° $\mathbb{Z}$ 45'47	
				evening set	14524 Dec 16 16:49	24° $\mathbb{Z}$ 16'23	
conjunction	14518 Oct 19 12:31	11° $\mathbb{M}$ 45'40	0°03'51				
minimum elong	14518 Oct 19 12:31	11° $\mathbb{M}$ 45'39	0°04'28	conjunction	14525 Jan 03 06:27	26° $\mathbb{Z}$ 24'57	1°41'50
behind sun begin	14518 Oct 19 05:32	11° $\mathbb{M}$ 43'33		minimum elong	14525 Jan 03 06:27	26° $\mathbb{Z}$ 24'57	1°42'48
behind sun end	14518 Oct 19 19:30	11° $\mathbb{M}$ 47'46		max. Earth dist.	14525 Jan 03 07:40	26° $\mathbb{Z}$ 25'19	10.55313 AU
max. Earth dist.	14518 Oct 20 02:45	11° $\mathbb{M}$ 50'00	10.66597 AU	morning rise	14525 Jan 20 21:17	28° $\mathbb{Z}$ 33'55	
morning rise	14518 Nov 05 20:07	13° $\mathbb{M}$ 51'37			14525 Feb 02 01:27	0° $\mathbb{Z}$	
	14518 Nov 15 12:45	15° $\mathbb{M}$		retrograde	14525 May 04 19:18	6° $\mathbb{Z}$ 12'29	
retrograde	14519 Feb 17 21:31	21° $\mathbb{M}$ 24'21		opposition	14525 Jul 12 08:09	2° $\mathbb{Z}$ 47'39	2°08'22
opposition	14519 Apr 28 17:11	18° $\mathbb{M}$ 00'14	0°18'47	min. Earth dist.	14525 Jul 12 08:14	2° $\mathbb{Z}$ 47'38	8.54059 AU
min. Earth dist.	14519 Apr 28 05:28	18° $\mathbb{M}$ 02'30	8.66289 AU		14525 Aug 22 22:54	30° $\mathbb{R}$ $\mathbb{Z}$	
	14519 Jun 16 02:10	15° $\mathbb{R}$ $\mathbb{M}$		direct	14525 Sep 18 11:00	29° $\mathbb{Z}$ 23'30	
direct	14519 Jul 06 04:43	14° $\mathbb{M}$ 39'13			14525 Oct 14 19:43	0° $\mathbb{Z}$	
	14519 Jul 26 01:58	15° $\mathbb{M}$		evening set	14525 Dec 30 00:16	6° $\mathbb{Z}$ 57'28	
evening set	14519 Oct 14 22:35	21° $\mathbb{M}$ 59'02					

conjunction	14526 Jan 16 14:53	9° $\approx$ 06'43	1°44'35	conjunction	14532 Apr 06 02:51	26° $\Upsilon$ 42'06	0°23'42
minimum elong	14526 Jan 16 14:54	9° $\approx$ 06'43	1°45'28	minimum elong	14532 Apr 06 02:51	26° $\Upsilon$ 42'06	0°23'19
max. Earth dist.	14526 Jan 16 12:22	9° $\approx$ 05'57	10.52593 AU	morning rise	14532 Apr 23 15:48	28° $\Upsilon$ 53'00	
morning rise	14526 Feb 03 06:19	11° $\approx$ 16'14			14532 May 02 21:32	0° $\mathcal{B}$	
	14526 Mar 08 12:06	15° $\approx$		retrograde	14532 Aug 03 15:02	6° $\mathcal{B}$ 32'00	
retrograde	14526 May 17 23:47	18° $\approx$ 55'38		opposition	14532 Oct 10 05:23	3° $\mathcal{B}$ 09'20	0°14'53
opposition	14526 Jul 25 06:06	15° $\approx$ 31'01	2°08'39	min. Earth dist.	14532 Oct 10 18:03	3° $\mathcal{B}$ 06'50	8.41813 AU
min. Earth dist.	14526 Jul 25 09:13	15° $\approx$ 30'24	8.51377 AU		14532 Nov 30 03:22	30° $\mathcal{R}\Upsilon$	
	14526 Jul 31 19:06	15° $\mathcal{R}\approx$		direct	14532 Dec 18 05:08	29° $\Upsilon$ 43'04	
direct	14526 Oct 01 09:22	12° $\approx$ 06'20			14533 Jan 05 05:52	0° $\mathcal{B}$	
	14526 Nov 29 19:27	15° $\approx$		evening set	14533 Apr 02 02:36	7° $\mathcal{B}$ 33'03	
evening set	14527 Jan 12 10:27	19° $\approx$ 43'41					
conjunction	14527 Jan 30 01:58	21° $\approx$ 53'36	1°42'12	conjunction	14533 Apr 19 16:19	9° $\mathcal{B}$ 44'22	0°00'07
minimum elong	14527 Jan 30 02:00	21° $\approx$ 53'37	1°42'56	minimum elong	14533 Apr 19 16:19	9° $\mathcal{B}$ 44'22	0°00'28
max. Earth dist.	14527 Jan 29 19:51	21° $\approx$ 51'43	10.49986 AU	behind sun begin	14533 Apr 19 09:08	9° $\mathcal{B}$ 42'08	
morning rise	14527 Feb 16 17:53	24° $\approx$ 03'39		behind sun end	14533 Apr 19 23:30	9° $\mathcal{B}$ 46'36	
	14527 Apr 16 00:14	0° $\mathcal{H}$		max. Earth dist.	14533 Apr 19 00:05	9° $\mathcal{B}$ 39'17	10.41678 AU
retrograde	14527 May 31 04:14	1° $\mathcal{H}$ 43'36		desc. node	14533 Apr 21 19:26	10° $\mathcal{B}$ 00'24	
	14527 Jul 16 01:58	30° $\mathcal{R}\approx$		morning rise	14533 May 07 03:31	11° $\mathcal{B}$ 54'57	
opposition	14527 Aug 07 05:36	28° $\approx$ 19'16	2°02'34		14533 Jun 02 15:11	15° $\mathcal{B}$	
min. Earth dist.	14527 Aug 07 11:22	28° $\approx$ 18'07	8.48864 AU	retrograde	14533 Aug 16 22:46	19° $\mathcal{B}$ 33'41	
direct	14527 Oct 14 11:33	24° $\approx$ 54'06		opposition	14533 Oct 23 14:45	16° $\mathcal{B}$ 11'19	-0°14'30
	14528 Jan 03 18:44	0° $\mathcal{H}$		min. Earth dist.	14533 Oct 24 02:57	16° $\mathcal{B}$ 08'55	8.41695 AU
evening set	14528 Jan 25 22:52	2° $\mathcal{H}$ 34'42			14533 Nov 08 00:43	15° $\mathcal{R}\mathcal{B}$	
				direct	14533 Dec 31 18:05	12° $\mathcal{B}$ 45'13	
conjunction	14528 Feb 12 15:12	4° $\mathcal{H}$ 45'14	1°34'43		14534 Feb 21 23:36	15° $\mathcal{B}$	
minimum elong	14528 Feb 12 15:14	4° $\mathcal{H}$ 45'15	1°35'16	evening set	14534 Apr 15 16:38	20° $\mathcal{B}$ 35'35	
max. Earth dist.	14528 Feb 12 06:17	4° $\mathcal{H}$ 42'29	10.47612 AU				
morning rise	14528 Mar 01 07:18	6° $\mathcal{H}$ 55'44		conjunction	14534 May 03 04:22	22° $\mathcal{B}$ 46'28	-0°23'27
retrograde	14528 Jun 12 09:19	14° $\mathcal{H}$ 35'57		minimum elong	14534 May 03 04:21	22° $\mathcal{B}$ 46'27	0°24'13
opposition	14528 Aug 19 06:57	11° $\mathcal{H}$ 11'57	1°50'19	max. Earth dist.	14534 May 02 13:33	22° $\mathcal{B}$ 41'49	10.41822 AU
min. Earth dist.	14528 Aug 19 14:31	11° $\mathcal{H}$ 10'26	8.46629 AU	morning rise	14534 May 20 13:23	24° $\mathcal{B}$ 56'35	
direct	14528 Oct 26 16:37	7° $\mathcal{H}$ 46'23			14534 Jul 06 01:02	0° $\mathcal{I}$	
evening set	14529 Feb 07 12:54	15° $\mathcal{H}$ 29'50		retrograde	14534 Aug 30 06:07	2° $\mathcal{I}$ 35'03	
					14534 Oct 26 23:09	30° $\mathcal{R}\mathcal{B}$	
conjunction	14529 Feb 25 05:45	17° $\mathcal{H}$ 40'54	1°22'26	opposition	14534 Nov 06 01:18	29° $\mathcal{B}$ 12'56	-0°43'08
minimum elong	14529 Feb 25 05:47	17° $\mathcal{H}$ 40'55	1°22'46	min. Earth dist.	14534 Nov 06 11:56	29° $\mathcal{B}$ 10'51	8.42127 AU
max. Earth dist.	14529 Feb 24 19:08	17° $\mathcal{H}$ 37'36	10.45572 AU	direct	14535 Jan 14 08:25	25° $\mathcal{B}$ 47'05	
morning rise	14529 Mar 14 21:36	19° $\mathcal{H}$ 51'43			14535 Mar 28 16:58	0° $\mathcal{I}$	
retrograde	14529 Jun 25 16:42	27° $\mathcal{H}$ 31'56		evening set	14535 Apr 29 05:17	3° $\mathcal{I}$ 37'10	
opposition	14529 Sep 01 10:06	24° $\mathcal{H}$ 08'15	1°32'26				
min. Earth dist.	14529 Sep 01 18:47	24° $\mathcal{H}$ 06'31	8.44771 AU	conjunction	14535 May 16 14:39	5° $\mathcal{I}$ 47'24	-0°45'47
direct	14529 Nov 08 22:30	20° $\mathcal{H}$ 42'23		minimum elong	14535 May 16 14:37	5° $\mathcal{I}$ 47'23	0°46'41
evening set	14530 Feb 21 04:06	28° $\mathcal{H}$ 28'12		max. Earth dist.	14535 May 16 02:12	5° $\mathcal{I}$ 43'29	10.42538 AU
	14530 Mar 05 13:50	0° $\Upsilon$		morning rise	14535 Jun 02 21:08	7° $\mathcal{I}$ 56'51	
				retrograde	14535 Sep 12 14:09	15° $\mathcal{I}$ 35'01	
conjunction	14530 Mar 10 21:03	0° $\Upsilon$ 39'37	1°05'55	opposition	14535 Nov 19 12:37	12° $\mathcal{I}$ 13'03	-1°09'30
minimum elong	14530 Mar 10 21:05	0° $\Upsilon$ 39'38	1°06'02	min. Earth dist.	14535 Nov 19 21:19	12° $\mathcal{I}$ 11'21	8.43156 AU
max. Earth dist.	14530 Mar 10 08:54	0° $\Upsilon$ 35'50	10.43955 AU	direct	14536 Jan 27 22:08	8° $\mathcal{I}$ 47'32	
morning rise	14530 Mar 28 12:18	2° $\Upsilon$ 50'38		evening set	14536 May 11 15:51	16° $\mathcal{I}$ 36'35	
retrograde	14530 Jul 09 00:41	10° $\Upsilon$ 30'32					
opposition	14530 Sep 14 14:56	7° $\Upsilon$ 07'11	1°09'47	conjunction	14536 May 28 22:33	18° $\mathcal{I}$ 46'00	-1°05'44
min. Earth dist.	14530 Sep 15 01:04	7° $\Upsilon$ 05'10	8.43358 AU	minimum elong	14536 May 28 22:31	18° $\mathcal{I}$ 46'00	1°06'44
direct	14530 Nov 22 06:15	3° $\Upsilon$ 41'04		max. Earth dist.	14536 May 28 12:50	18° $\mathcal{I}$ 42'57	10.43846 AU
evening set	14531 Mar 06 19:49	11° $\Upsilon$ 28'44		morning rise	14536 Jun 15 02:33	20° $\mathcal{I}$ 54'40	
				retrograde	14536 Sep 24 21:49	28° $\mathcal{I}$ 32'24	
conjunction	14531 Mar 24 12:17	13° $\Upsilon$ 40'20	0°46'01	opposition	14536 Dec 02 00:24	25° $\mathcal{I}$ 10'31	-1°32'15
minimum elong	14531 Mar 24 12:19	13° $\Upsilon$ 40'20	0°45'52	min. Earth dist.	14536 Dec 02 07:11	25° $\mathcal{I}$ 09'12	8.44770 AU
max. Earth dist.	14531 Mar 23 22:15	13° $\Upsilon$ 35'57	10.42789 AU	direct	14537 Feb 09 10:39	21° $\mathcal{I}$ 45'24	
morning rise	14531 Apr 11 02:37	15° $\Upsilon$ 51'23		evening set	14537 May 24 23:36	29° $\mathcal{I}$ 32'40	
retrograde	14531 Jul 22 07:34	23° $\Upsilon$ 30'48			14537 May 28 16:08	0° $\mathcal{E}$	
opposition	14531 Sep 27 21:26	20° $\Upsilon$ 07'47	0°43'29	conjunction	14537 Jun 11 03:38	1° $\mathcal{E}$ 41'10	-1°22'17
min. Earth dist.	14531 Sep 28 09:06	20° $\Upsilon$ 05'28	8.42385 AU	minimum elong	14537 Jun 11 03:36	1° $\mathcal{E}$ 41'09	1°23'19
direct	14531 Dec 05 17:18	16° $\Upsilon$ 41'31		max. Earth dist.	14537 Jun 10 20:23	1° $\mathcal{E}$ 38'53	10.45702 AU
evening set	14532 Mar 19 11:31	24° $\Upsilon$ 30'33		morning rise	14537 Jun 28 05:27	3° $\mathcal{E}$ 49'01	
max. Earth dist.	14532 Apr 05 11:07	26° $\Upsilon$ 37'11	10.42031 AU	retrograde	14537 Oct 08 03:01	11° $\mathcal{E}$ 26'11	

opposition	14537 Dec 15 11:50	8° <del>0</del> 04'18 -1°50'14	opposition	14544 Mar 03 03:10	23° <del>1</del> 45'54 -1°33'14
min. Earth dist.	14537 Dec 15 16:36	8° <del>0</del> 03'22 8.46891 AU	min. Earth dist.	14544 Mar 02 16:35	23° <del>1</del> 47'55 8.63098 AU
direct	14538 Feb 22 23:11	4° <del>0</del> 39'36	direct	14544 May 11 05:30	20° <del>1</del> 24'25
evening set	14538 Jun 07 04:25	12° <del>0</del> 24'29	evening set	14544 Aug 20 19:20	27° <del>1</del> 49'31
conjunction	14538 Jun 24 06:02	14° <del>0</del> 32'01 -1°34'39	conjunction	14544 Sep 06 18:47	29° <del>1</del> 53'56 -1°07'27
minimum elong	14538 Jun 24 06:01	14° <del>0</del> 32'01 1°35'40	minimum elong	14544 Sep 06 18:49	29° <del>1</del> 53'57 1°07'34
max. Earth dist.	14538 Jun 24 01:36	14° <del>0</del> 30'38 10.48013 AU	max. Earth dist.	14544 Sep 07 08:17	29° <del>1</del> 58'06 10.64108 AU
morning rise	14538 Jul 11 06:02	16° <del>0</del> 39'04		14544 Sep 07 14:29	0° <del>0</del>
retrograde	14538 Oct 21 06:08	24° <del>0</del> 15'34	morning rise	14544 Sep 23 19:51	1° <del>0</del> 58'49
opposition	14538 Dec 28 22:20	20° <del>0</del> 53'35 -2°02'36	retrograde	14545 Jan 05 05:49	9° <del>0</del> 30'58
min. Earth dist.	14538 Dec 29 00:16	20° <del>0</del> 53'12 8.49405 AU	opposition	14545 Mar 16 02:49	6° <del>0</del> 07'50 -1°11'49
direct	14539 Mar 08 11:33	17° <del>0</del> 29'22	min. Earth dist.	14545 Mar 15 14:22	6° <del>0</del> 10'13 8.65112 AU
evening set	14539 Jun 20 05:56	25° <del>0</del> 11'19	direct	14545 May 24 02:35	2° <del>0</del> 46'46
			evening set	14545 Sep 02 07:31	10° <del>0</del> 09'19
conjunction	14539 Jul 07 05:41	27° <del>0</del> 17'58 -1°42'15	conjunction	14545 Sep 19 08:29	12° <del>0</del> 13'48 -0°48'44
minimum elong	14539 Jul 07 05:41	27° <del>0</del> 17'58 1°43'13	minimum elong	14545 Sep 19 08:31	12° <del>0</del> 13'49 0°48'38
max. Earth dist.	14539 Jul 07 05:01	27° <del>0</del> 17'46 10.50663 AU	max. Earth dist.	14545 Sep 20 00:02	12° <del>0</del> 18'34 10.65907 AU
morning rise	14539 Jul 24 04:18	29° <del>0</del> 24'16	morning rise	14545 Oct 06 11:18	14° <del>0</del> 18'50
	14539 Jul 29 01:52	0° <del>0</del>	retrograde	14546 Jan 18 03:52	21° <del>0</del> 50'38
retrograde	14539 Nov 03 09:52	7° <del>0</del> 00'02	min. Earth dist.	14546 Mar 28 11:04	18° <del>0</del> 29'55 8.66636 AU
opposition	14540 Jan 11 07:43	3° <del>0</del> 37'54 -2°08'49	opposition	14546 Mar 29 00:43	18° <del>0</del> 27'18 -0°47'12
min. Earth dist.	14540 Jan 11 06:11	3° <del>0</del> 38'11 8.52187 AU	direct	14546 Jun 05 20:15	15° <del>0</del> 06'34
direct	14540 Mar 20 20:27	0° <del>0</del> 14'15	evening set	14546 Sep 14 19:39	22° <del>0</del> 27'10
evening set	14540 Jul 02 04:02	7° <del>0</del> 52'49			
conjunction	14540 Jul 19 02:34	9° <del>0</del> 58'42 -1°44'49	conjunction	14546 Oct 01 22:09	24° <del>0</del> 31'48 -0°27'51
minimum elong	14540 Jul 19 02:35	9° <del>0</del> 58'42 1°45'40	minimum elong	14546 Oct 01 22:11	24° <del>0</del> 31'48 0°27'31
max. Earth dist.	14540 Jul 19 06:10	9° <del>0</del> 59'50 10.53519 AU	max. Earth dist.	14546 Oct 02 14:28	24° <del>0</del> 36'47 10.67181 AU
morning rise	14540 Aug 05 00:20	12° <del>0</del> 04'22	morning rise	14546 Oct 19 02:53	26° <del>0</del> 37'05
	14540 Aug 30 06:14	15° <del>0</del>		14546 Nov 18 07:32	0° <del>0</del>
retrograde	14540 Nov 15 11:59	19° <del>0</del> 39'22	retrograde	14547 Jan 31 00:04	4° <del>0</del> 08'46
opposition	14541 Jan 23 15:30	16° <del>0</del> 17'02 -2°08'44	opposition	14547 Apr 10 21:04	0° <del>0</del> 45'16 -0°20'29
min. Earth dist.	14541 Jan 23 10:36	16° <del>0</del> 17'58 8.55092 AU	min. Earth dist.	14547 Apr 10 07:24	0° <del>0</del> 47'54 8.67622 AU
	14541 Feb 09 18:28	15° <del>0</del> 8		14547 Apr 20 18:52	30° <del>0</del> 8
direct	14541 Apr 03 02:21	12° <del>0</del> 53'58	direct	14547 Jun 18 11:53	27° <del>0</del> 24'42
	14541 May 23 13:24	15° <del>0</del>		14547 Aug 13 16:13	0° <del>0</del>
evening set	14541 Jul 14 23:17	20° <del>0</del> 29'00	evening set	14547 Sep 27 08:30	4° <del>0</del> 04'08
conjunction	14541 Jul 31 21:11	22° <del>0</del> 34'16 -1°42'18	conjunction	14547 Oct 14 12:36	6° <del>0</del> 04'00 -0°05'46
minimum elong	14541 Jul 31 21:13	22° <del>0</del> 34'17 1°43'01	minimum elong	14547 Oct 14 12:36	6° <del>0</del> 04'00 0°05'13
max. Earth dist.	14541 Aug 01 04:16	22° <del>0</del> 36'28 10.56434 AU	behind sun begin	14547 Oct 14 05:42	6° <del>0</del> 04'55
morning rise	14541 Aug 17 18:51	24° <del>0</del> 39'29	behind sun end	14547 Oct 14 19:30	6° <del>0</del> 05'10
	14541 Oct 07 11:32	0° <del>0</del>	max. Earth dist.	14547 Oct 15 04:11	6° <del>0</del> 05'44 10.67897 AU
retrograde	14541 Nov 28 12:26	2° <del>0</del> 13'39	morning rise	14547 Oct 31 19:22	8° <del>0</del> 05'37
	14542 Jan 21 15:15	30° <del>0</del> 8		14548 Jan 01 19:59	15° <del>0</del>
opposition	14542 Feb 05 21:16	28° <del>0</del> 51'08 -2°02'27	asc. node	14548 Jan 18 17:10	15° <del>0</del> 05'48
min. Earth dist.	14542 Feb 05 14:06	28° <del>0</del> 52'31 8.57970 AU	retrograde	14548 Feb 12 19:47	16° <del>0</del> 06'26
direct	14542 Apr 16 05:48	25° <del>0</del> 28'38		14548 Mar 26 14:03	15° <del>0</del> 08
	14542 Jul 01 12:28	0° <del>0</del>	opposition	14548 Apr 22 16:01	13° <del>0</del> 02'47 0°07'07
evening set	14542 Jul 27 15:59	3° <del>0</del> 00'09	min. Earth dist.	14548 Apr 22 03:26	13° <del>0</del> 05'13 8.68046 AU
			direct	14548 Jun 30 03:53	9° <del>0</del> 04'21
conjunction	14542 Aug 13 13:46	5° <del>0</del> 04'58 -1°34'55		14548 Sep 21 10:36	15° <del>0</del>
minimum elong	14542 Aug 13 13:48	5° <del>0</del> 04'59 1°35'27	evening set	14548 Oct 08 22:34	17° <del>0</del> 01'14
max. Earth dist.	14542 Aug 13 23:07	5° <del>0</del> 07'52 10.59258 AU			
morning rise	14542 Aug 30 12:04	7° <del>0</del> 09'55	conjunction	14548 Oct 26 04:22	19° <del>0</del> 06'26 0°16'43
retrograde	14542 Dec 11 12:06	14° <del>0</del> 04'31	minimum elong	14548 Oct 26 04:21	19° <del>0</del> 06'26 0°17'26
opposition	14543 Feb 19 01:15	11° <del>0</del> 02'34 -1°50'23	max. Earth dist.	14548 Oct 26 18:50	19° <del>0</del> 10'50 10.68027 AU
min. Earth dist.	14543 Feb 18 16:20	11° <del>0</del> 02'17 8.60681 AU	morning rise	14548 Nov 12 13:00	21° <del>0</del> 12'26
direct	14543 Apr 29 06:31	7° <del>0</del> 05'37	retrograde	14549 Feb 24 16:16	28° <del>0</del> 04'37
evening set	14543 Aug 09 06:22	15° <del>0</del> 06'45	opposition	14549 May 05 09:55	25° <del>0</del> 02'51 0°34'24
			min. Earth dist.	14549 May 04 22:22	25° <del>0</del> 02'51 8.67877 AU
conjunction	14543 Aug 26 04:40	17° <del>0</del> 03'17 -1°23'05	direct	14549 Jul 12 18:45	22° <del>0</del> 00'11
minimum elong	14543 Aug 26 04:42	17° <del>0</del> 03'18 1°23'26	evening set	14549 Oct 21 14:25	29° <del>0</del> 01'31
max. Earth dist.	14543 Aug 26 15:58	17° <del>0</del> 03'46 10.61857 AU		14549 Oct 27 05:29	0° <del>0</del>
morning rise	14543 Sep 12 04:12	19° <del>0</del> 03'07			
retrograde	14543 Dec 24 09:08	27° <del>0</del> 08'48	conjunction	14549 Nov 07 21:52	1° <del>0</del> 02'57 0°38'21

minimum elong	14549 Nov 07 21:51	1°♏25'06	0°39'12	minimum elong	14556 Jan 24 11:19	16°♏29'19	1°44'36
max. Earth dist.	14549 Nov 08 11:24	1°♏29'14	10.67539 AU	max. Earth dist.	14556 Jan 24 06:25	16°♏27'49	10.53303 AU
morning rise	14549 Nov 25 08:01	3°♏31'30		morning rise	14556 Feb 11 02:46	18°♏38'47	
retrograde	14550 Mar 09 12:27	11°♏04'17		retrograde	14556 May 24 15:23	26°♏17'19	
opposition	14550 May 18 03:05	7°♏40'23	1°00'08	opposition	14556 Jul 31 19:21	22°♏53'07	2°05'55
min. Earth dist.	14550 May 17 16:37	7°♏42'24	8.67093 AU	min. Earth dist.	14556 Aug 01 00:09	22°♏52'10	8.51885 AU
direct	14550 Jul 25 09:59	4°♏19'27		direct	14556 Oct 08 01:02	19°♏28'25	
evening set	14550 Nov 03 08:33	11°♏39'53		evening set	14557 Jan 19 06:30	27°♏06'21	
conjunction	14550 Nov 20 17:32	13°♏45'55	0°58'15	conjunction	14557 Feb 05 22:27	29°♏16'19	1°38'37
minimum elong	14550 Nov 20 17:30	13°♏45'55	0°59'13	minimum elong	14557 Feb 05 22:29	29°♏16'20	1°39'15
max. Earth dist.	14550 Nov 21 05:26	13°♏49'33	10.66421 AU	max. Earth dist.	14557 Feb 05 14:18	29°♏13'48	10.50300 AU
morning rise	14550 Dec 08 04:57	15°♏52'42			14557 Feb 11 19:56	0°♏	
retrograde	14551 Mar 22 10:27	23°♏26'18		morning rise	14557 Feb 23 14:12	1°♏26'19	
opposition	14551 May 30 20:01	20°♏02'15	1°23'10	retrograde	14557 Jun 06 19:35	9°♏05'21	
min. Earth dist.	14551 May 30 11:19	20°♏03'57	8.65675 AU	opposition	14557 Aug 13 18:52	5°♏41'15	1°56'28
direct	14551 Aug 07 01:02	16°♏40'54		min. Earth dist.	14557 Aug 14 02:16	5°♏39'47	8.48978 AU
evening set	14551 Nov 16 05:12	24°♏03'07		direct	14557 Oct 21 03:08	2°♏15'53	
conjunction	14551 Dec 03 15:33	26°♏09'41	1°15'31	evening set	14558 Feb 01 18:33	9°♏56'56	
minimum elong	14551 Dec 03 15:31	26°♏09'41	1°16'32	conjunction	14558 Feb 19 11:05	12°♏07'32	1°28'30
max. Earth dist.	14551 Dec 04 00:10	26°♏12'19	10.64656 AU	minimum elong	14558 Feb 19 11:07	12°♏07'33	1°28'55
morning rise	14551 Dec 21 04:08	28°♏16'57		max. Earth dist.	14558 Feb 18 23:39	12°♏04'00	10.47551 AU
	14552 Jan 04 22:45	0°♏		morning rise	14558 Mar 09 02:57	14°♏17'59	
retrograde	14552 Apr 03 10:04	5°♏51'29		retrograde	14558 Jun 20 01:00	21°♏57'16	
opposition	14552 Jun 11 13:08	2°♏27'22	1°42'25	opposition	14558 Aug 26 20:14	18°♏33'19	1°41'08
min. Earth dist.	14552 Jun 11 07:31	2°♏28'27	8.63610 AU	min. Earth dist.	14558 Aug 27 06:06	18°♏31'21	8.46383 AU
	14552 Jul 16 21:05	30°♏♏		direct	14558 Nov 03 07:24	15°♏07'22	
direct	14552 Aug 18 15:37	29°♏05'26		evening set	14559 Feb 15 08:12	22°♏51'13	
	14552 Sep 20 02:56	0°♏		max. Earth dist.	14559 Mar 04 10:58	24°♏57'57	10.45180 AU
evening set	14552 Nov 28 04:44	6°♏30'11		conjunction	14559 Mar 05 01:00	25°♏02'19	1°13'52
conjunction	14552 Dec 15 16:15	8°♏37'21	1°29'19	minimum elong	14559 Mar 05 01:02	25°♏02'20	1°14'04
minimum elong	14552 Dec 15 16:14	8°♏37'20	1°30'21	morning rise	14559 Mar 22 16:41	27°♏13'07	
max. Earth dist.	14552 Dec 15 20:37	8°♏38'40	10.62276 AU		14559 Apr 15 14:47	0°♏	
morning rise	14553 Jan 02 05:53	10°♏45'08		retrograde	14559 Jul 03 06:16	4°♏52'23	
retrograde	14553 Apr 16 09:06	18°♏20'46		opposition	14559 Sep 08 23:13	1°♏28'36	1°20'36
opposition	14553 Jun 24 06:50	14°♏56'37	1°56'58	min. Earth dist.	14559 Sep 09 10:37	1°♏26'20	8.44219 AU
min. Earth dist.	14553 Jun 24 04:33	14°♏57'04	8.61001 AU		14559 Sep 28 04:26	30°♏♏	
direct	14553 Aug 31 08:58	11°♏34'02		direct	14559 Nov 16 14:42	28°♏02'12	
evening set	14553 Dec 11 07:06	19°♏01'51			14560 Jan 04 01:45	0°♏	
conjunction	14553 Dec 28 19:51	21°♏09'41	1°38'57	evening set	14560 Feb 28 22:46	5°♏48'25	
minimum elong	14553 Dec 28 19:50	21°♏09'41	1°39'57	conjunction	14560 Mar 17 15:27	7°♏59'51	0°55'27
max. Earth dist.	14553 Dec 28 20:32	21°♏09'54	10.59459 AU	minimum elong	14560 Mar 17 15:29	7°♏59'51	0°55'25
morning rise	14554 Jan 15 10:19	23°♏18'01		max. Earth dist.	14560 Mar 17 00:19	7°♏55'08	10.43290 AU
	14554 Mar 27 14:19	0°♏		morning rise	14560 Apr 04 06:24	10°♏10'50	
retrograde	14554 Apr 29 08:53	0°♏54'48		retrograde	14560 Jul 15 11:57	17°♏49'57	
	14554 Jun 01 10:16	30°♏♏		opposition	14560 Sep 21 04:08	14°♏26'22	0°55'52
opposition	14554 Jul 07 01:40	27°♏30'36	2°06'03	min. Earth dist.	14560 Sep 21 15:55	14°♏24'02	8.42584 AU
min. Earth dist.	14554 Jul 07 02:06	27°♏30'31	8.58058 AU	direct	14560 Nov 29 00:23	10°♏59'42	
direct	14554 Sep 13 05:19	24°♏07'19		evening set	14561 Mar 13 13:32	18°♏47'41	
	14554 Dec 10 12:27	0°♏		conjunction	14561 Mar 31 05:33	20°♏59'14	0°34'09
evening set	14554 Dec 24 12:11	1°♏38'27		minimum elong	14561 Mar 31 05:34	20°♏59'15	0°33'52
conjunction	14555 Jan 11 02:12	3°♏47'01	1°43'53	max. Earth dist.	14561 Mar 30 14:22	20°♏54'30	10.41972 AU
minimum elong	14555 Jan 11 02:12	3°♏47'01	1°44'48	morning rise	14561 Apr 17 19:14	23°♏10'11	
max. Earth dist.	14555 Jan 11 00:05	3°♏46'22	10.56411 AU		14561 Jun 28 10:47	0°♏	
morning rise	14555 Jan 28 17:17	5°♏55'55		retrograde	14561 Jul 28 19:50	0°♏49'05	
retrograde	14555 May 12 11:37	13°♏33'42			14561 Aug 28 12:22	30°♏♏	
opposition	14555 Jul 19 21:46	10°♏09'29	2°09'07	opposition	14561 Oct 04 10:47	27°♏25'44	0°28'13
min. Earth dist.	14555 Jul 20 00:15	10°♏08'59	8.54965 AU	min. Earth dist.	14561 Oct 04 22:27	27°♏23'26	8.41568 AU
direct	14555 Sep 26 02:04	6°♏45'28		direct	14561 Dec 12 09:54	23°♏58'59	
evening set	14556 Jan 06 20:10	14°♏20'02			14562 Mar 12 01:53	0°♏	
	14556 Jan 12 08:06	15°♏		evening set	14562 Mar 27 04:17	1°♏48'10	
conjunction	14556 Jan 24 11:18	16°♏29'19	1°43'48	conjunction	14562 Apr 13 19:01	3°♏59'37	0°11'05

minimum elong	14562 Apr 13 19:01	3° <b>8</b> 59'37	0°10'36	evening set	14568 Jun 13 11:24	19° <b>9</b> 25'48	
behind sun begin	14562 Apr 13 13:28	3° <b>8</b> 57'54					
behind sun end	14562 Apr 14 00:35	4° <b>8</b> 01'21		conjunction	14568 Jun 30 12:01	21° <b>9</b> 32'46	-1°39'10
max. Earth dist.	14562 Apr 13 04:11	3° <b>8</b> 54'59	10.41301 AU	minimum elong	14568 Jun 30 12:00	21° <b>9</b> 32'45	1°40'10
morning rise	14562 May 01 07:01	6° <b>8</b> 10'21		max. Earth dist.	14568 Jun 30 11:03	21° <b>9</b> 32'27	10.50489 AU
retrograde	14562 Aug 11 03:28	13° <b>8</b> 48'53		morning rise	14568 Jul 17 11:02	23° <b>9</b> 39'16	
desc. node	14562 Oct 05 21:03	11° <b>8</b> 21'35			14568 Sep 19 09:41	0° <b>9</b>	
opposition	14562 Oct 17 18:51	10° <b>8</b> 25'51	-0°00'57	retrograde	14568 Oct 27 16:00	1° <b>9</b> 15'00	
min. Earth dist.	14562 Oct 18 06:26	10° <b>8</b> 23'34	8.41232 AU		14568 Dec 05 17:54	30° <b>8</b> 25	
direct	14562 Dec 25 20:58	6° <b>8</b> 59'10		opposition	14569 Jan 04 09:11	27° <b>9</b> 53'22	-2°06'28
evening set	14563 Apr 09 18:24	14° <b>8</b> 49'00		min. Earth dist.	14569 Jan 04 08:43	27° <b>9</b> 53'28	8.52094 AU
	14563 Apr 11 06:12	15° <b>8</b>		direct	14569 Mar 14 20:01	24° <b>9</b> 29'56	
					14569 Jun 08 03:29	0° <b>9</b>	
conjunction	14563 Apr 27 07:13	17° <b>8</b> 00'05	-0°12'39	evening set	14569 Jun 26 11:07	2° <b>9</b> 09'47	
minimum elong	14563 Apr 27 07:13	17° <b>8</b> 00'04	0°13'20				
behind sun begin	14563 Apr 27 03:07	16° <b>8</b> 58'48		conjunction	14569 Jul 13 10:04	4° <b>9</b> 15'54	-1°44'05
behind sun end	14563 Apr 27 11:18	17° <b>8</b> 01'21		minimum elong	14569 Jul 13 10:04	4° <b>9</b> 15'54	1°45'00
max. Earth dist.	14563 Apr 26 16:40	16° <b>8</b> 55'31	10.41314 AU	max. Earth dist.	14569 Jul 13 11:50	4° <b>9</b> 16'27	10.53523 AU
morning rise	14563 May 14 17:13	19° <b>8</b> 10'24		morning rise	14569 Jul 30 08:09	6° <b>9</b> 21'43	
retrograde	14563 Aug 24 10:14	26° <b>8</b> 48'33		retrograde	14569 Nov 09 17:06	13° <b>9</b> 56'40	
opposition	14563 Oct 31 04:21	23° <b>8</b> 25'52	-0°30'03	opposition	14570 Jan 17 17:41	10° <b>9</b> 35'02	-2°09'19
min. Earth dist.	14563 Oct 31 15:36	23° <b>8</b> 23'39	8.41594 AU	min. Earth dist.	14570 Jan 17 14:51	10° <b>9</b> 35'35	8.55191 AU
direct	14564 Jan 08 09:58	19° <b>8</b> 59'26		direct	14570 Mar 28 04:12	7° <b>9</b> 12'16	
evening set	14564 Apr 22 07:09	27° <b>8</b> 49'15		evening set	14570 Jul 09 07:49	14° <b>9</b> 48'42	
					14570 Jul 10 20:55	15° <b>9</b>	
conjunction	14564 May 09 17:32	29° <b>8</b> 59'43	-0°35'38				
minimum elong	14564 May 09 17:31	29° <b>8</b> 59'43	0°36'29	conjunction	14570 Jul 26 05:44	16° <b>9</b> 54'04	-1°43'56
max. Earth dist.	14564 May 09 04:01	29° <b>8</b> 55'29	10.42012 AU	minimum elong	14570 Jul 26 05:45	16° <b>9</b> 54'05	1°44'43
	14564 May 09 18:26	0° <b>8</b>		max. Earth dist.	14570 Jul 26 10:24	16° <b>9</b> 55'31	10.56623 AU
morning rise	14564 May 27 01:17	2° <b>8</b> 09'26		morning rise	14570 Aug 12 03:27	18° <b>9</b> 59'21	
retrograde	14564 Sep 05 16:53	9° <b>8</b> 47'14		retrograde	14570 Nov 22 17:31	26° <b>9</b> 33'29	
opposition	14564 Nov 12 14:46	6° <b>8</b> 24'52	-0°57'35	opposition	14571 Jan 31 00:24	23° <b>9</b> 11'43	-2°05'54
min. Earth dist.	14564 Nov 13 00:36	6° <b>8</b> 22'57	8.42637 AU	min. Earth dist.	14571 Jan 30 18:45	23° <b>9</b> 12'48	8.58247 AU
direct	14565 Jan 20 23:33	2° <b>8</b> 58'52		direct	14571 Apr 10 10:24	19° <b>9</b> 49'35	
evening set	14565 May 05 18:02	10° <b>8</b> 47'58		evening set	14571 Jul 22 01:37	27° <b>9</b> 22'25	
conjunction	14565 May 23 01:51	12° <b>8</b> 57'40	-0°56'46	conjunction	14571 Aug 07 23:19	29° <b>9</b> 27'16	-1°38'48
minimum elong	14565 May 23 01:49	12° <b>8</b> 57'40	0°57'43	minimum elong	14571 Aug 07 23:21	29° <b>9</b> 27'17	1°39'26
max. Earth dist.	14565 May 22 14:39	12° <b>8</b> 54'09	10.43361 AU	max. Earth dist.	14571 Aug 08 07:23	29° <b>9</b> 29'46	10.59589 AU
morning rise	14565 Jun 09 07:11	15° <b>8</b> 06'38			14571 Aug 12 08:57	0° <b>8</b>	
retrograde	14565 Sep 18 23:26	22° <b>8</b> 44'03		morning rise	14571 Aug 24 21:12	1° <b>8</b> 32'10	
opposition	14565 Nov 26 01:36	19° <b>8</b> 21'57	-1°22'06	retrograde	14571 Dec 05 18:38	9° <b>8</b> 05'30	
min. Earth dist.	14565 Nov 26 09:03	19° <b>8</b> 20'30	8.44308 AU	opposition	14572 Feb 13 05:14	5° <b>8</b> 43'32	-1°56'31
direct	14566 Feb 03 12:28	15° <b>8</b> 56'30		min. Earth dist.	14572 Feb 12 20:57	5° <b>8</b> 45'07	8.61046 AU
evening set	14566 May 19 02:36	23° <b>8</b> 44'12		direct	14572 Apr 22 12:29	2° <b>8</b> 21'58	
				evening set	14572 Aug 02 16:58	9° <b>8</b> 51'18	
conjunction	14566 Jun 05 07:53	25° <b>8</b> 53'02	-1°14'58				
minimum elong	14566 Jun 05 07:51	25° <b>8</b> 53'01	1°15'59	conjunction	14572 Aug 19 15:02	11° <b>8</b> 55'50	-1°29'02
max. Earth dist.	14566 Jun 05 00:04	25° <b>8</b> 50'34	10.45290 AU	minimum elong	14572 Aug 19 15:05	11° <b>8</b> 55'50	1°29'28
morning rise	14566 Jun 22 10:47	28° <b>8</b> 01'10		max. Earth dist.	14572 Aug 20 01:44	11° <b>8</b> 59'08	10.62194 AU
	14566 Jul 09 00:51	0° <b>8</b>		morning rise	14572 Sep 05 13:45	14° <b>8</b> 00'33	
retrograde	14566 Oct 02 05:21	5° <b>8</b> 38'07		retrograde	14572 Dec 17 17:20	21° <b>8</b> 33'14	
opposition	14566 Dec 09 12:37	2° <b>8</b> 16'15	-1°42'21	opposition	14573 Feb 25 08:04	18° <b>8</b> 11'02	-1°41'42
min. Earth dist.	14566 Dec 09 17:05	2° <b>8</b> 15'23	8.46512 AU	min. Earth dist.	14573 Feb 24 22:06	18° <b>8</b> 12'56	8.63382 AU
	14567 Jan 10 13:29	30° <b>8</b> 22		direct	14573 May 05 11:12	14° <b>8</b> 49'55	
direct	14567 Feb 17 01:04	28° <b>8</b> 51'26		evening set	14573 Aug 15 06:48	22° <b>8</b> 16'13	
	14567 Mar 25 20:39	0° <b>8</b>					
evening set	14567 Jun 01 08:29	6° <b>8</b> 37'05		conjunction	14573 Sep 01 05:40	24° <b>8</b> 20'35	-1°15'07
				minimum elong	14573 Sep 01 05:42	24° <b>8</b> 20'36	1°15'20
conjunction	14567 Jun 18 11:17	8° <b>8</b> 44'57	-1°29'19	max. Earth dist.	14573 Sep 01 17:44	24° <b>8</b> 24'17	10.64282 AU
minimum elong	14567 Jun 18 11:16	8° <b>8</b> 44'57	1°30'21	morning rise	14573 Sep 18 05:48	26° <b>8</b> 25'19	
max. Earth dist.	14567 Jun 18 07:13	8° <b>8</b> 43'40	10.47700 AU		14573 Oct 20 03:29	0° <b>8</b>	
morning rise	14567 Jul 05 11:57	10° <b>8</b> 52'15		retrograde	14573 Dec 30 14:54	3° <b>8</b> 57'33	
retrograde	14567 Oct 15 11:03	18° <b>8</b> 28'40		opposition	14574 Mar 10 08:54	0° <b>8</b> 35'04	-1°22'13
opposition	14567 Dec 22 23:19	15° <b>8</b> 06'57	-1°57'22	min. Earth dist.	14574 Mar 09 22:15	0° <b>8</b> 37'06	8.65176 AU
min. Earth dist.	14567 Dec 23 01:11	15° <b>8</b> 06'35	8.49146 AU		14574 Mar 18 01:09	30° <b>8</b> 22	
direct	14568 Mar 01 11:55	11° <b>8</b> 42'49		direct	14574 May 18 09:03	27° <b>8</b> 14'16	

	14574 Jul 15 15:21	0°♄	retrograde	14580 Mar 15 18:06	17°♄56'34	
evening set	14574 Aug 27 19:36	4°♄37'58	opposition	14580 May 24 06:32	14°♄31'58	1°12'56
			min. Earth dist.	14580 May 23 22:27	14°♄33'32	8.64375 AU
conjunction	14574 Sep 13 19:38	6°♄42'21 -0°57'46	direct	14580 Jul 31 12:38	11°♄10'08	
minimum elong	14574 Sep 13 19:40	6°♄42'22 0°57'46	evening set	14580 Nov 09 13:47	18°♄32'08	
max. Earth dist.	14574 Sep 14 08:14	6°♄46'13 10.65832 AU				
morning rise	14574 Sep 30 21:36	8°♄47'16	conjunction	14580 Nov 26 23:33	20°♄38'41	1°07'55
retrograde	14575 Jan 12 12:09	16°♄19'12	minimum elong	14580 Nov 26 23:31	20°♄38'40	1°08'55
opposition	14575 Mar 23 08:03	12°♄56'22 -0°59'00	max. Earth dist.	14580 Nov 27 08:20	20°♄41'22	10.63391 AU
min. Earth dist.	14575 Mar 22 20:52	12°♄58'30 8.66433 AU	morning rise	14580 Dec 14 11:50	22°♄45'58	
direct	14575 May 31 04:29	9°♄35'44		14581 Mar 08 12:55	0°♄	
evening set	14575 Sep 09 07:47	16°♄57'19	retrograde	14581 Mar 28 16:23	0°♄20'45	
				14581 Apr 17 22:13	30°♄	
conjunction	14575 Sep 26 09:26	19°♄01'51 -0°37'49	opposition	14581 Jun 05 23:47	26°♄55'58	1°34'06
minimum elong	14575 Sep 26 09:27	19°♄01'52 0°37'34	min. Earth dist.	14581 Jun 05 17:23	26°♄57'13	8.62402 AU
max. Earth dist.	14575 Sep 26 23:05	19°♄06'02 10.66837 AU	direct	14581 Aug 13 04:22	23°♄33'36	
morning rise	14575 Oct 13 13:22	21°♄07'03		14581 Nov 14 08:03	0°♄	
retrograde	14576 Jan 25 07:37	28°♄38'55	evening set	14581 Nov 22 12:01	0°♄57'51	
opposition	14576 Apr 04 05:23	25°♄15'39 -0°33'09				
min. Earth dist.	14576 Apr 03 17:26	25°♄17'56 8.67141 AU	conjunction	14581 Dec 09 23:10	3°♄04'58	1°23'27
direct	14576 Jun 11 22:37	21°♄55'02	minimum elong	14581 Dec 09 23:09	3°♄04'58	1°24'29
evening set	14576 Sep 20 20:24	29°♄15'10	max. Earth dist.	14581 Dec 10 06:08	3°♄07'06	10.61185 AU
	14576 Sep 27 01:22	0°♄	morning rise	14581 Dec 27 12:23	5°♄12'45	
			retrograde	14582 Apr 10 15:47	12°♄48'41	
conjunction	14576 Oct 07 23:51	1°♄19'59 -0°16'09	opposition	14582 Jun 18 17:31	9°♄23'47	1°50'58
minimum elong	14576 Oct 07 23:51	1°♄19'59 0°15'42	min. Earth dist.	14582 Jun 18 12:49	9°♄24'42	8.60038 AU
behind sun begin	14576 Oct 07 22:17	1°♄19'31	direct	14582 Aug 25 21:09	6°♄00'50	
behind sun end	14576 Oct 08 01:26	1°♄20'28	evening set	14582 Dec 05 13:18	13°♄27'52	
max. Earth dist.	14576 Oct 08 14:29	1°♄24'27 10.67274 AU				
morning rise	14576 Oct 25 05:40	3°♄25'29	conjunction	14582 Dec 23 01:42	15°♄35'38	1°35'05
retrograde	14577 Feb 06 03:53	10°♄57'29	minimum elong	14582 Dec 23 01:41	15°♄35'38	1°36'07
opposition	14577 Apr 17 00:57	7°♄33'48 -0°05'48	max. Earth dist.	14582 Dec 23 05:43	15°♄36'52	10.58649 AU
min. Earth dist.	14577 Apr 16 12:34	7°♄36'11 8.67283 AU	morning rise	14583 Jan 09 15:45	17°♄43'56	
direct	14577 Jun 24 15:44	4°♄13'05	retrograde	14583 Apr 23 17:12	25°♄20'58	
asc. node	14577 Jul 04 12:07	4°♄18'12	opposition	14583 Jul 01 12:07	21°♄56'04	2°02'40
evening set	14577 Oct 03 10:00	11°♄32'31	min. Earth dist.	14583 Jul 01 10:01	21°♄56'29	8.57401 AU
			direct	14583 Sep 07 14:48	18°♄32'30	
conjunction	14577 Oct 20 15:10	13°♄37'40 0°06'20	evening set	14583 Dec 18 17:34	26°♄02'43	
minimum elong	14577 Oct 20 15:10	13°♄37'40 0°06'59				
behind sun begin	14577 Oct 20 08:33	13°♄35'41	conjunction	14584 Jan 05 07:05	28°♄11'10	1°42'15
behind sun end	14577 Oct 20 21:46	13°♄39'40	minimum elong	14584 Jan 05 07:05	28°♄11'10	1°43'13
max. Earth dist.	14577 Oct 21 05:51	13°♄42'08 10.67131 AU	max. Earth dist.	14584 Jan 05 07:16	28°♄11'14	10.55912 AU
	14577 Oct 31 21:46	15°♄		14584 Jan 20 03:27	0°♄	
morning rise	14577 Nov 06 22:48	15°♄43'34	morning rise	14584 Jan 22 21:56	0°♄20'02	
retrograde	14578 Feb 19 01:19	23°♄15'56	retrograde	14584 May 05 19:39	7°♄58'04	
opposition	14578 Apr 29 19:30	19°♄51'53 0°21'49	opposition	14584 Jul 13 08:02	4°♄33'17	2°08'33
min. Earth dist.	14578 Apr 29 07:42	19°♄54'10 8.66855 AU	min. Earth dist.	14584 Jul 13 09:04	4°♄33'05	8.54622 AU
direct	14578 Jul 07 06:03	16°♄30'55	direct	14584 Sep 19 10:39	1°♄09'06	
evening set	14578 Oct 16 01:01	23°♄50'24	evening set	14584 Dec 31 00:38	8°♄42'45	
conjunction	14578 Nov 02 07:44	25°♄55'57 0°28'26	conjunction	14585 Jan 17 15:09	10°♄51'53	1°44'29
minimum elong	14578 Nov 02 07:43	25°♄55'57 0°29'14	minimum elong	14585 Jan 17 15:10	10°♄51'53	1°45'20
max. Earth dist.	14578 Nov 02 20:50	25°♄59'56 10.66417 AU	max. Earth dist.	14585 Jan 17 11:29	10°♄50'45	10.53110 AU
morning rise	14578 Nov 19 17:10	28°♄02'18	morning rise	14585 Feb 04 06:37	13°♄01'18	
	14578 Dec 06 16:06	0°♄		14585 Feb 21 04:18	15°♄	
retrograde	14579 Mar 03 21:49	5°♄35'17	retrograde	14585 May 18 22:00	20°♄40'12	
opposition	14579 May 12 13:19	2°♄10'55 0°48'27	opposition	14585 Jul 26 05:27	17°♄15'38	2°08'12
min. Earth dist.	14579 May 12 03:14	2°♄12'53 8.65875 AU	min. Earth dist.	14585 Jul 26 09:15	17°♄14'52	8.51842 AU
	14579 Jun 12 05:40	30°♄		14585 Aug 26 11:23	15°♄	
direct	14579 Jul 19 20:33	28°♄49'35	direct	14585 Oct 02 10:15	13°♄50'54	
	14579 Aug 25 21:47	0°♄		14585 Nov 07 23:46	15°♄	
evening set	14579 Oct 28 18:11	6°♄09'57	evening set	14586 Jan 13 10:17	21°♄28'00	
conjunction	14579 Nov 15 02:25	8°♄15'58 0°49'17	conjunction	14586 Jan 31 01:50	23°♄37'50	1°41'36
minimum elong	14579 Nov 15 02:24	8°♄15'57 0°50'12	minimum elong	14586 Jan 31 01:51	23°♄37'50	1°42'19
max. Earth dist.	14579 Nov 15 13:18	8°♄19'17 10.65157 AU	max. Earth dist.	14586 Jan 30 19:24	23°♄35'51	10.50394 AU
morning rise	14579 Dec 02 13:28	10°♄22'46	morning rise	14586 Feb 17 17:41	25°♄47'47	



	14586 Mar 27 16:22	0°♄	morning rise	14592 May 08 02:18	13°♄38'09
retrograde	14586 Jun 01 02:05	3°♄27'21		14592 May 19 09:36	15°♄
opposition	14586 Aug 08 04:36	0°♄03'02 2°01'31	retrograde	14592 Aug 17 20:54	21°♄16'57
min. Earth dist.	14586 Aug 08 10:18	0°♄01'54 8.49210 AU	opposition	14592 Oct 24 13:42	17°♄54'34 -0°17'13
	14586 Aug 08 19:54	30°♄	min. Earth dist.	14592 Oct 25 01:20	17°♄52'16 8.41591 AU
direct	14586 Oct 15 11:59	26°♄37'52		14592 Dec 07 20:22	15°♄
	14586 Dec 19 00:20	0°♄	direct	14593 Jan 01 18:03	14°♄28'28
evening set	14587 Jan 26 22:10	4°♄18'12		14593 Jan 26 10:15	15°♄
			evening set	14593 Apr 16 15:30	22°♄18'53
conjunction	14587 Feb 13 14:36	6°♄28'43 1°33'39			
minimum elong	14587 Feb 13 14:39	6°♄28'43 1°34'10	conjunction	14593 May 04 03:12	24°♄29'45 -0°25'35
max. Earth dist.	14587 Feb 13 06:00	6°♄26'03 10.47894 AU	minimum elong	14593 May 04 03:10	24°♄29'45 0°26'22
morning rise	14587 Mar 03 06:35	8°♄39'08	max. Earth dist.	14593 May 03 13:00	24°♄25'18 10.41680 AU
retrograde	14587 Jun 14 09:10	16°♄19'06	morning rise	14593 May 21 11:58	26°♄39'51
opposition	14587 Aug 21 05:40	12°♄55'05 1°48'44		14593 Jun 19 07:06	0°♄
min. Earth dist.	14587 Aug 21 13:00	12°♄53'38 8.46842 AU	retrograde	14593 Aug 31 05:53	4°♄18'31
direct	14587 Oct 28 14:40	9°♄29'32	opposition	14593 Nov 07 00:29	0°♄56'22 -0°45'40
evening set	14588 Feb 09 12:03	17°♄12'50	min. Earth dist.	14593 Nov 07 11:03	0°♄54'18 8.41938 AU
				14593 Nov 19 03:41	30°♄
conjunction	14588 Feb 27 04:57	19°♄23'53 1°20'58	direct	14594 Jan 15 07:01	27°♄30'32
minimum elong	14588 Feb 27 05:00	19°♄23'54 1°21'16		14594 Mar 11 11:38	0°♄
max. Earth dist.	14588 Feb 26 18:17	19°♄20'34 10.45720 AU	evening set	14594 Apr 30 04:18	5°♄20'45
morning rise	14588 Mar 15 20:41	21°♄34'41			
retrograde	14588 Jun 26 15:51	29°♄14'42	conjunction	14594 May 17 13:31	7°♄31'00 -0°47'43
opposition	14588 Sep 02 08:41	25°♄51'03 1°30'24	minimum elong	14594 May 17 13:29	7°♄30'59 0°48'38
min. Earth dist.	14588 Sep 02 17:45	25°♄49'15 8.44850 AU	max. Earth dist.	14594 May 17 00:58	7°♄27'03 10.42295 AU
direct	14588 Nov 09 20:52	22°♄25'12	morning rise	14594 Jun 03 19:52	9°♄40'27
	14589 Feb 20 14:57	0°♄	retrograde	14594 Sep 13 14:40	17°♄18'53
evening set	14589 Feb 22 03:10	0°♄11'01	opposition	14594 Nov 20 12:04	13°♄56'56 -1°11'45
			min. Earth dist.	14594 Nov 20 21:23	13°♄55'07 8.42861 AU
conjunction	14589 Mar 11 20:01	2°♄22'25 1°04'07	direct	14595 Jan 28 19:45	10°♄31'25
minimum elong	14589 Mar 11 20:04	2°♄22'26 1°04'11	evening set	14595 May 13 15:09	18°♄20'44
max. Earth dist.	14589 Mar 11 07:02	2°♄18'23 10.43978 AU			
morning rise	14589 Mar 29 11:15	4°♄33'26	conjunction	14595 May 30 21:38	20°♄30'10 -1°07'23
retrograde	14589 Jul 09 22:49	12°♄13'17	minimum elong	14595 May 30 21:36	20°♄30'10 1°08'22
opposition	14589 Sep 15 13:39	8°♄50'00 1°07'23	max. Earth dist.	14595 May 30 11:02	20°♄26'50 10.43491 AU
min. Earth dist.	14589 Sep 16 00:35	8°♄47'49 8.43332 AU	morning rise	14595 Jun 17 01:36	22°♄38'54
direct	14589 Nov 23 05:36	5°♄23'53		14595 Sep 09 00:14	0°♄
evening set	14590 Mar 07 18:44	13°♄11'38	retrograde	14595 Sep 26 20:40	0°♄16'59
				14595 Oct 14 20:28	30°♄
conjunction	14590 Mar 25 11:04	15°♄23'13 0°43'58	opposition	14595 Dec 04 00:14	26°♄55'07 -1°34'05
minimum elong	14590 Mar 25 11:05	15°♄23'14 0°43'47	min. Earth dist.	14595 Dec 04 07:44	26°♄53'40 8.44366 AU
max. Earth dist.	14590 Mar 24 20:05	15°♄18'33 10.42732 AU	direct	14596 Feb 11 10:40	23°♄30'00
morning rise	14590 Apr 12 01:27	17°♄34'17		14596 May 15 06:13	0°♄
retrograde	14590 Jul 23 06:34	25°♄13'46	evening set	14596 May 25 23:13	1°♄17'38
opposition	14590 Sep 28 20:15	21°♄50'47 0°40'50			
min. Earth dist.	14590 Sep 29 08:22	21°♄48'23 8.42311 AU	conjunction	14596 Jun 12 03:04	3°♄26'10 -1°23'34
direct	14590 Dec 06 15:48	18°♄24'32	minimum elong	14596 Jun 12 03:02	3°♄26'09 1°24'35
evening set	14591 Mar 21 10:26	26°♄13'39	max. Earth dist.	14596 Jun 11 19:08	3°♄23'40 10.45247 AU
max. Earth dist.	14591 Apr 07 09:42	28°♄20'13 10.41957 AU	morning rise	14596 Jun 29 04:53	5°♄34'05
			retrograde	14596 Oct 09 02:16	13°♄11'45
conjunction	14591 Apr 08 01:41	28°♄25'13 0°21'31	opposition	14596 Dec 16 12:08	9°♄49'51 -1°51'33
minimum elong	14591 Apr 08 01:42	28°♄25'13 0°21'06	min. Earth dist.	14596 Dec 16 16:52	9°♄48'56 8.46396 AU
	14591 Apr 20 17:29	0°♄	direct	14597 Feb 24 00:29	6°♄25'10
morning rise	14591 Apr 25 14:41	0°♄36'07	evening set	14597 Jun 08 04:20	14°♄10'26
retrograde	14591 Aug 05 13:21	8°♄15'10			
opposition	14591 Oct 12 04:11	4°♄52'30 0°12'08	conjunction	14597 Jun 25 05:56	16°♄18'04 -1°35'29
min. Earth dist.	14591 Oct 12 16:38	4°♄50'02 8.41741 AU	minimum elong	14597 Jun 25 05:55	16°♄18'03 1°36'29
direct	14591 Dec 20 04:33	1°♄26'14	max. Earth dist.	14597 Jun 25 01:50	16°♄16'46 10.47482 AU
desc. node	14592 Mar 17 11:16	7°♄17'36	morning rise	14597 Jul 12 05:54	18°♄25'11
evening set	14592 Apr 03 01:32	9°♄16'16	retrograde	14597 Oct 22 07:44	26°♄02'14
			opposition	14597 Dec 29 23:04	22°♄40'13 -2°03'20
conjunction	14592 Apr 20 15:14	11°♄27'34 -0°02'09	min. Earth dist.	14597 Dec 30 00:22	22°♄39'58 8.48845 AU
minimum elong	14592 Apr 20 15:14	11°♄27'34 0°02'46	direct	14598 Mar 09 11:42	19°♄16'02
behind sun begin	14592 Apr 20 08:03	11°♄25'20	evening set	14598 Jun 21 06:16	26°♄58'21
behind sun end	14592 Apr 20 22:24	11°♄29'48			
max. Earth dist.	14592 Apr 19 23:32	11°♄22'39 10.41600 AU	conjunction	14598 Jul 08 06:08	29°♄05'07 -1°42'36

minimum elong	14598 Jul 08 06:07	29° $\mathring{O}$ 05'07	1°43'33
max. Earth dist.	14598 Jul 08 06:16	29° $\mathring{O}$ 05'10	10.50081 AU
	14598 Jul 15 13:35	0° $\mathring{O}$	
morning rise	14598 Jul 25 04:40	1° $\mathring{O}$ 11'31	
retrograde	14598 Nov 04 11:32	8° $\mathring{O}$ 47'49	
opposition	14599 Jan 12 08:55	5° $\mathring{O}$ 25'38	-2°08'56
min. Earth dist.	14599 Jan 12 06:53	5° $\mathring{O}$ 26'02	8.51588 AU
direct	14599 Mar 22 20:39	2° $\mathring{O}$ 02'00	
evening set	14599 Jul 04 04:52	9° $\mathring{O}$ 40'57	
conjunction	14599 Jul 21 03:27	11° $\mathring{O}$ 46'57	-1°44'38
minimum elong	14599 Jul 21 03:27	11° $\mathring{O}$ 46'57	1°45'29
max. Earth dist.	14599 Jul 21 07:28	11° $\mathring{O}$ 48'12	10.52914 AU
morning rise	14599 Aug 07 01:13	13° $\mathring{O}$ 52'44	
	14599 Aug 16 08:50	15° $\mathring{O}$	
retrograde	14599 Nov 17 14:06	21° $\mathring{O}$ 28'14	
opposition	14600 Jan 25 17:14	18° $\mathring{O}$ 05'52	-2°08'12
min. Earth dist.	14600 Jan 25 12:28	18° $\mathring{O}$ 06'47	8.54489 AU
	14600 Mar 17 17:48	15° $\mathring{R}$ $\mathring{O}$	
direct	14600 Apr 05 03:24	14° $\mathring{O}$ 42'47	
	14600 Apr 23 10:04	15° $\mathring{O}$	
evening set	14600 Jul 17 00:32	22° $\mathring{O}$ 18'10	
conjunction	14600 Aug 02 22:25	24° $\mathring{O}$ 23'32	-1°41'35
minimum elong	14600 Aug 02 22:26	24° $\mathring{O}$ 23'33	1°42'17
max. Earth dist.	14600 Aug 03 05:10	24° $\mathring{O}$ 25'39	10.55848 AU
morning rise	14600 Aug 19 20:16	26° $\mathring{O}$ 28'53	
	14600 Sep 19 19:11	0° $\mathring{O}$	
retrograde	14600 Nov 30 15:09	4° $\mathring{O}$ 03'30	
opposition	14601 Feb 07 23:31	0° $\mathring{O}$ 40'56	-2°01'16
min. Earth dist.	14601 Feb 07 16:43	0° $\mathring{O}$ 42'14	8.57410 AU
	14601 Feb 16 21:56	30° $\mathring{R}$ $\mathring{O}$	
direct	14601 Apr 18 06:59	27° $\mathring{O}$ 18'24	
	14601 Jun 14 19:39	0° $\mathring{O}$	
evening set	14601 Jul 29 17:29	4° $\mathring{O}$ 50'12	
conjunction	14601 Aug 15 15:21	6° $\mathring{O}$ 55'07	-1°33'42
minimum elong	14601 Aug 15 15:23	6° $\mathring{O}$ 55'08	1°34'13
max. Earth dist.	14601 Aug 16 00:29	6° $\mathring{O}$ 57'57	10.58731 AU
morning rise	14601 Sep 01 13:56	9° $\mathring{O}$ 00'12	
retrograde	14601 Dec 13 13:24	16° $\mathring{O}$ 33'56	