

opposition	10100 Feb 18 23:19	4° <u>mp</u> 10'18	-1°09'20			10105 Nov 02 07:02	15° <u>ml</u>	
min. Earth dist.	10100 Feb 18 15:58	4° <u>mp</u> 11'44	8.63462 AU	morning rise		10105 Nov 15 23:36	16° <u>ml</u> 41'54	
direct	10100 Apr 28 02:52	0° <u>mp</u> 49'31		retrograde		10106 Feb 28 09:57	24° <u>ml</u> 33'04	
evening set	10100 Aug 06 13:36	8° <u>mp</u> 10'50		opposition		10106 May 07 08:49	21° <u>ml</u> 07'06	1°46'11
				min. Earth dist.		10106 May 07 10:51	21° <u>ml</u> 06'42	8.36665 AU
conjunction	10100 Aug 23 21:02	10° <u>mp</u> 17'19	-0°45'06	direct		10106 Jul 13 23:56	17° <u>ml</u> 41'39	
minimum elong	10100 Aug 23 21:04	10° <u>mp</u> 17'19	0°45'17	evening set		10106 Oct 25 07:36	25° <u>ml</u> 29'08	
max. Earth dist.	10100 Aug 24 06:07	10° <u>mp</u> 20'06	10.61241 AU					
morning rise	10100 Sep 10 07:56	12° <u>mp</u> 24'51		conjunction		10106 Nov 12 03:12	27° <u>ml</u> 42'27	1°33'57
retrograde	10100 Dec 24 06:56	20° <u>mp</u> 04'27		minimum elong		10106 Nov 12 03:10	27° <u>ml</u> 42'26	1°34'19
opposition	10101 Mar 03 20:16	16° <u>mp</u> 39'30	-0°40'42	max. Earth dist.		10106 Nov 11 23:20	27° <u>ml</u> 41'14	10.35100 AU
min. Earth dist.	10101 Mar 03 13:21	16° <u>mp</u> 40'51	8.58968 AU	morning rise		10106 Nov 29 23:03	29° <u>ml</u> 55'55	
direct	10101 May 10 18:07	13° <u>mp</u> 18'10				10106 Nov 30 12:20	0° <u>z</u>	
evening set	10101 Aug 19 11:24	20° <u>mp</u> 42'44		retrograde		10107 Mar 14 01:30	7° <u>z</u> 47'42	
				opposition		10107 May 20 17:05	4° <u>z</u> 21'55	2°05'24
conjunction	10101 Sep 05 22:02	22° <u>mp</u> 50'38	-0°20'49	min. Earth dist.		10107 May 20 20:26	4° <u>z</u> 21'14	8.33973 AU
minimum elong	10101 Sep 05 22:03	22° <u>mp</u> 50'39	0°20'55	direct		10107 Jul 27 10:29	0° <u>z</u> 55'41	
max. Earth dist.	10101 Sep 06 05:47	22° <u>mp</u> 53'01	10.56620 AU	evening set		10107 Nov 08 09:40	8° <u>z</u> 47'10	
morning rise	10101 Sep 23 11:59	24° <u>mp</u> 59'35						
	10101 Nov 09 10:14	0° <u>z</u>		conjunction		10107 Nov 26 05:09	11° <u>z</u> 00'49	1°46'51
retrograde	10102 Jan 06 13:14	2° <u>z</u> 42'01		minimum elong		10107 Nov 26 05:07	11° <u>z</u> 00'49	1°47'15
	10102 Mar 07 12:27	30° <u>R</u> <u>mp</u>		max. Earth dist.		10107 Nov 25 23:14	10° <u>z</u> 58'58	10.32912 AU
opposition	10102 Mar 16 18:53	29° <u>mp</u> 16'39	-0°09'48	morning rise		10107 Dec 14 00:06	13° <u>z</u> 14'24	
min. Earth dist.	10102 Mar 16 13:19	29° <u>mp</u> 17'45	8.54227 AU	retrograde		10108 Mar 26 17:28	21° <u>z</u> 05'50	
direct	10102 May 23 11:47	25° <u>mp</u> 54'36		opposition		10108 Jun 02 02:58	17° <u>z</u> 40'21	2°17'59
asc. node	10102 Jul 11 03:33	27° <u>mp</u> 55'39		min. Earth dist.		10108 Jun 02 08:02	17° <u>z</u> 39'20	8.32382 AU
	10102 Aug 02 18:09	0° <u>z</u>		direct		10108 Aug 08 23:53	14° <u>z</u> 13'28	
evening set	10102 Sep 01 14:33	3° <u>z</u> 23'05		evening set		10108 Nov 21 12:53	22° <u>z</u> 07'58	
conjunction	10102 Sep 19 04:03	5° <u>z</u> 32'23	0°04'47	conjunction		10108 Dec 09 07:46	24° <u>z</u> 21'41	1°54'03
minimum elong	10102 Sep 19 04:02	5° <u>z</u> 32'23	0°04'48	minimum elong		10108 Dec 09 07:45	24° <u>z</u> 21'40	1°54'29
behind sun begin	10102 Sep 18 20:59	5° <u>z</u> 30'14		max. Earth dist.		10108 Dec 08 23:45	24° <u>z</u> 19'09	10.31890 AU
behind sun end	10102 Sep 19 11:04	5° <u>z</u> 34'32		morning rise		10108 Dec 27 01:29	26° <u>z</u> 35'05	
max. Earth dist.	10102 Sep 19 09:06	5° <u>z</u> 33'55	10.51817 AU			10109 Jan 25 09:39	0° <u>z</u>	
morning rise	10102 Oct 06 20:40	7° <u>z</u> 42'38		retrograde		10109 Apr 09 07:41	4° <u>z</u> 25'13	
retrograde	10103 Jan 19 21:10	15° <u>z</u> 27'45		opposition		10109 Jun 15 13:47	1° <u>z</u> 00'11	2°23'12
opposition	10103 Mar 29 19:19	12° <u>z</u> 02'03	0°21'56	min. Earth dist.		10109 Jun 15 20:25	0° <u>z</u> 58'51	8.31975 AU
min. Earth dist.	10103 Mar 29 16:08	12° <u>z</u> 02'41	8.49385 AU			10109 Jun 28 05:12	30° <u>R</u> <u>z</u>	
direct	10103 Jun 05 09:41	8° <u>z</u> 39'11		direct		10109 Aug 22 17:07	27° <u>z</u> 32'48	
evening set	10103 Sep 14 23:17	16° <u>z</u> 12'10				10109 Oct 15 20:49	0° <u>z</u>	
				evening set		10109 Dec 05 16:03	5° <u>z</u> 29'10	
conjunction	10103 Oct 02 15:08	18° <u>z</u> 22'46	0°30'17					
minimum elong	10103 Oct 02 15:07	18° <u>z</u> 22'45	0°30'24	conjunction		10109 Dec 23 10:01	7° <u>z</u> 42'39	1°55'08
max. Earth dist.	10103 Oct 02 16:57	18° <u>z</u> 23'19	10.46982 AU	minimum elong		10109 Dec 23 10:01	7° <u>z</u> 42'39	1°55'34
morning rise	10103 Oct 20 09:46	20° <u>z</u> 34'12		max. Earth dist.		10109 Dec 23 00:25	7° <u>z</u> 39'37	10.32076 AU
retrograde	10104 Feb 02 07:51	28° <u>z</u> 21'47		morning rise		10110 Jan 10 02:12	9° <u>z</u> 55'38	
opposition	10104 Apr 10 21:43	24° <u>z</u> 55'54	0°52'55	retrograde		10110 Apr 22 19:05	17° <u>z</u> 43'34	
min. Earth dist.	10104 Apr 10 20:58	24° <u>z</u> 56'02	8.44637 AU	opposition		10110 Jun 29 00:52	14° <u>z</u> 19'03	2°20'42
direct	10104 Jun 17 10:19	21° <u>z</u> 32'09		min. Earth dist.		10110 Jun 29 08:25	14° <u>z</u> 17'33	8.32753 AU
evening set	10104 Sep 27 13:22	29° <u>z</u> 10'03		direct		10110 Sep 05 11:51	10° <u>z</u> 51'22	
	10104 Oct 04 08:03	0° <u>ml</u>		evening set		10110 Dec 19 17:32	18° <u>z</u> 48'18	
conjunction	10104 Oct 15 07:06	1° <u>ml</u> 21'47	0°54'31	conjunction		10111 Jan 06 10:19	21° <u>z</u> 01'20	1°50'03
minimum elong	10104 Oct 15 07:04	1° <u>ml</u> 21'47	0°54'44	minimum elong		10111 Jan 06 10:20	21° <u>z</u> 01'20	1°50'28
max. Earth dist.	10104 Oct 15 06:38	1° <u>ml</u> 21'38	10.42373 AU	max. Earth dist.		10111 Jan 06 00:08	20° <u>z</u> 58'07	10.33441 AU
morning rise	10104 Nov 02 02:56	3° <u>ml</u> 34'12		morning rise		10111 Jan 24 00:41	23° <u>z</u> 13'39	
retrograde	10105 Feb 14 20:31	11° <u>ml</u> 23'54				10111 Apr 03 04:48	0° <u>z</u>	
opposition	10105 Apr 24 02:16	7° <u>ml</u> 57'54	1°21'32	retrograde		10111 May 06 06:01	0° <u>z</u> 58'41	
min. Earth dist.	10105 Apr 24 03:05	7° <u>ml</u> 57'44	8.40298 AU			10111 Jun 08 17:13	30° <u>R</u> <u>z</u>	
direct	10105 Jun 30 15:07	4° <u>ml</u> 33'17		opposition		10111 Jul 12 11:58	27° <u>z</u> 34'45	2°10'41
evening set	10105 Oct 11 08:20	12° <u>ml</u> 16'08		min. Earth dist.		10111 Jul 12 19:24	27° <u>z</u> 33'16	8.34660 AU
				direct		10111 Sep 19 06:00	24° <u>z</u> 07'01	
conjunction	10105 Oct 29 03:22	14° <u>ml</u> 28'48	1°16'09			10111 Dec 16 12:10	0° <u>z</u>	
minimum elong	10105 Oct 29 03:20	14° <u>ml</u> 28'47	1°16'27	evening set		10112 Jan 02 15:52	2° <u>z</u> 03'09	
max. Earth dist.	10105 Oct 29 01:11	14° <u>ml</u> 28'07	10.38322 AU					

conjunction	10112 Jan 20 07:15	4° $\approx$ 15'31	1°39'08	direct	10117 Dec 07 08:03	11° $\Upsilon$ 20'26	
minimum elong	10112 Jan 20 07:17	4° $\approx$ 15'32	1°39'31	evening set	10118 Mar 21 07:41	18° $\Upsilon$ 55'26	
max. Earth dist.	10112 Jan 19 21:42	4° $\approx$ 12'30	10.35899 AU				
morning rise	10112 Feb 06 19:36	6° $\approx$ 27'00		conjunction	10118 Apr 07 09:18	21° $\Upsilon$ 00'42	-0°35'15
retrograde	10112 May 18 14:54	14° $\approx$ 08'37		minimum elong	10118 Apr 07 09:16	21° $\Upsilon$ 00'41	0°35'22
opposition	10112 Jul 24 22:29	10° $\approx$ 45'17	1°53'49	max. Earth dist.	10118 Apr 07 07:55	21° $\Upsilon$ 00'16	10.63275 AU
min. Earth dist.	10112 Jul 25 05:27	10° $\approx$ 43'54	8.37584 AU	morning rise	10118 Apr 24 08:20	23° $\Upsilon$ 05'14	
direct	10112 Oct 01 23:15	7° $\approx$ 17'44			10118 Jul 10 21:50	0° $\mathcal{B}$	
	10113 Jan 13 19:31	15° $\approx$		retrograde	10118 Aug 03 09:47	0° $\mathcal{B}$ 28'33	
evening set	10113 Jan 15 10:27	15° $\approx$ 11'56			10118 Aug 27 03:18	30° $\kappa$ $\Upsilon$	
				opposition	10118 Oct 11 07:11	27° $\Upsilon$ 08'16	-0°57'41
conjunction	10113 Feb 02 00:10	17° $\approx$ 23'25	1°23'06	min. Earth dist.	10118 Oct 11 07:12	27° $\Upsilon$ 08'16	8.65599 AU
minimum elong	10113 Feb 02 00:12	17° $\approx$ 23'26	1°23'25	direct	10118 Dec 20 09:06	23° $\Upsilon$ 45'20	
max. Earth dist.	10113 Feb 01 15:24	17° $\approx$ 20'40	10.39311 AU		10119 Mar 23 04:03	0° $\mathcal{B}$	
morning rise	10113 Feb 19 10:24	19° $\approx$ 33'56		evening set	10119 Apr 02 22:15	1° $\mathcal{B}$ 16'08	
retrograde	10113 May 31 20:33	27° $\approx$ 11'50					
opposition	10113 Aug 07 07:52	23° $\approx$ 49'09	1°31'11	conjunction	10119 Apr 19 21:15	3° $\mathcal{B}$ 20'08	-0°58'03
min. Earth dist.	10113 Aug 07 14:37	23° $\approx$ 47'49	8.41371 AU	minimum elong	10119 Apr 19 21:14	3° $\mathcal{B}$ 20'08	0°58'16
direct	10113 Oct 15 15:24	20° $\approx$ 21'59		max. Earth dist.	10119 Apr 19 21:48	3° $\mathcal{B}$ 20'18	10.67776 AU
evening set	10114 Jan 29 00:37	28° $\approx$ 13'20		morning rise	10119 May 06 18:20	5° $\mathcal{B}$ 23'36	
	10114 Feb 12 08:19	0° $\mathcal{H}$		retrograde	10119 Aug 16 00:57	12° $\mathcal{B}$ 45'39	
				opposition	10119 Oct 24 06:32	9° $\mathcal{B}$ 25'31	-1°24'08
conjunction	10114 Feb 15 12:16	0° $\mathcal{H}$ 23'46	1°02'55	min. Earth dist.	10119 Oct 24 05:28	9° $\mathcal{B}$ 25'43	8.69858 AU
minimum elong	10114 Feb 15 12:18	0° $\mathcal{H}$ 23'47	1°03'10	direct	10120 Jan 02 08:03	6° $\mathcal{B}$ 03'28	
max. Earth dist.	10114 Feb 15 04:03	0° $\mathcal{H}$ 21'12	10.43492 AU	evening set	10120 Apr 14 09:07	13° $\mathcal{B}$ 30'23	
morning rise	10114 Mar 04 20:21	2° $\mathcal{H}$ 33'10			10120 Apr 26 16:58	15° $\mathcal{B}$	
retrograde	10114 Jun 13 23:47	10° $\mathcal{H}$ 07'22					
opposition	10114 Aug 20 16:04	6° $\mathcal{H}$ 45'20	1°04'06	conjunction	10120 May 01 05:48	15° $\mathcal{B}$ 33'16	-1°18'01
min. Earth dist.	10114 Aug 20 22:33	6° $\mathcal{H}$ 44'03	8.45825 AU	minimum elong	10120 May 01 05:46	15° $\mathcal{B}$ 33'16	1°18'19
direct	10114 Oct 29 05:10	3° $\mathcal{H}$ 18'47		max. Earth dist.	10120 May 01 07:32	15° $\mathcal{B}$ 33'48	10.71682 AU
evening set	10115 Feb 11 09:43	11° $\mathcal{H}$ 06'32		morning rise	10120 May 18 01:25	17° $\mathcal{B}$ 35'50	
				retrograde	10120 Aug 27 15:41	24° $\mathcal{B}$ 57'15	
conjunction	10115 Feb 28 18:59	13° $\mathcal{H}$ 15'45	0°39'44	opposition	10120 Nov 05 04:14	21° $\mathcal{B}$ 37'07	-1°46'34
minimum elong	10115 Feb 28 19:01	13° $\mathcal{H}$ 15'46	0°39'54	min. Earth dist.	10120 Nov 05 01:47	21° $\mathcal{B}$ 37'35	8.73427 AU
max. Earth dist.	10115 Feb 28 11:22	13° $\mathcal{H}$ 13'23	10.48224 AU	direct	10121 Jan 14 04:48	18° $\mathcal{B}$ 15'51	
morning rise	10115 Mar 18 00:55	15° $\mathcal{H}$ 23'58		evening set	10121 Apr 26 17:00	25° $\mathcal{B}$ 39'17	
retrograde	10115 Jun 26 23:22	22° $\mathcal{H}$ 54'43					
opposition	10115 Sep 02 22:37	19° $\mathcal{H}$ 33'16	0°34'07	conjunction	10121 May 13 11:53	27° $\mathcal{B}$ 41'17	-1°34'22
min. Earth dist.	10115 Sep 03 04:14	19° $\mathcal{H}$ 32'10	8.50723 AU	minimum elong	10121 May 13 11:51	27° $\mathcal{B}$ 41'17	1°34'44
direct	10115 Nov 11 16:57	16° $\mathcal{H}$ 07'30		max. Earth dist.	10121 May 13 15:23	27° $\mathcal{B}$ 42'21	10.74804 AU
evening set	10116 Feb 24 13:51	23° $\mathcal{H}$ 51'11		morning rise	10121 May 30 06:24	29° $\mathcal{B}$ 43'09	
					10121 Jun 01 15:04	0° $\Pi$	
conjunction	10116 Mar 12 20:36	25° $\mathcal{H}$ 59'06	0°14'50	retrograde	10121 Sep 09 04:56	7° $\Pi$ 04'34	
minimum elong	10116 Mar 12 20:37	25° $\mathcal{H}$ 59'06	0°14'55	opposition	10121 Nov 18 00:23	3° $\Pi$ 44'16	-2°04'06
behind sun begin	10116 Mar 12 17:52	25° $\mathcal{H}$ 58'15		min. Earth dist.	10121 Nov 17 20:05	3° $\Pi$ 45'05	8.76128 AU
behind sun end	10116 Mar 12 23:22	25° $\mathcal{H}$ 59'57		direct	10122 Jan 26 22:07	0° $\Pi$ 23'41	
max. Earth dist.	10116 Mar 12 14:18	25° $\mathcal{H}$ 57'09	10.53270 AU	evening set	10122 May 08 22:32	7° $\Pi$ 44'08	
morning rise	10116 Mar 30 00:19	28° $\mathcal{H}$ 06'06					
	10116 Apr 15 01:52	0° $\Upsilon$		conjunction	10122 May 25 16:22	9° $\Pi$ 45'31	-1°46'27
retrograde	10116 Jul 08 19:47	5° $\Upsilon$ 33'47		minimum elong	10122 May 25 16:20	9° $\Pi$ 45'30	1°46'51
opposition	10116 Sep 15 03:12	2° $\Upsilon$ 12'50	0°02'48	max. Earth dist.	10122 May 25 22:11	9° $\Pi$ 47'17	10.76982 AU
min. Earth dist.	10116 Sep 15 07:03	2° $\Upsilon$ 12'06	8.55818 AU	morning rise	10122 Jun 11 10:18	11° $\Pi$ 46'57	
	10116 Oct 16 08:45	30° $\kappa$ $\mathcal{H}$		retrograde	10122 Sep 21 18:58	19° $\Pi$ 08'59	
desc. node	10116 Oct 18 12:37	29° $\mathcal{H}$ 52'35		opposition	10122 Nov 30 19:23	15° $\Pi$ 48'21	-2°16'04
direct	10116 Nov 24 02:31	28° $\mathcal{H}$ 47'59		min. Earth dist.	10122 Nov 30 13:17	15° $\Pi$ 49'30	8.77799 AU
	10117 Jan 01 04:09	0° $\Upsilon$		direct	10123 Feb 08 13:47	12° $\Pi$ 28'17	
evening set	10117 Mar 08 13:03	6° $\Upsilon$ 27'21		evening set	10123 May 21 02:30	19° $\Pi$ 46'23	
conjunction	10117 Mar 25 17:17	8° $\Upsilon$ 33'56	-0°10'38	conjunction	10123 Jun 06 19:56	21° $\Pi$ 47'28	-1°53'48
minimum elong	10117 Mar 25 17:17	8° $\Upsilon$ 33'56	0°10'39	minimum elong	10123 Jun 06 19:55	21° $\Pi$ 47'27	1°54'14
behind sun begin	10117 Mar 25 11:47	8° $\Upsilon$ 32'15		max. Earth dist.	10123 Jun 07 03:10	21° $\Pi$ 49'39	10.78057 AU
behind sun end	10117 Mar 25 22:47	8° $\Upsilon$ 35'37		morning rise	10123 Jun 23 14:08	23° $\Pi$ 48'48	
max. Earth dist.	10117 Mar 25 13:18	8° $\Upsilon$ 32'43	10.58369 AU		10123 Aug 27 02:38	0° $\mathcal{B}$	
morning rise	10117 Apr 11 18:39	10° $\Upsilon$ 39'40		retrograde	10123 Oct 04 10:58	1° $\mathcal{B}$ 12'00	
retrograde	10117 Jul 21 15:56	18° $\Upsilon$ 04'53			10123 Nov 12 13:27	30° $\kappa$ $\Pi$	
opposition	10117 Sep 28 06:03	14° $\Upsilon$ 44'19	-0°28'16	opposition	10123 Dec 13 13:29	27° $\Pi$ 50'58	-2°22'03
min. Earth dist.	10117 Sep 28 07:49	14° $\Upsilon$ 43'59	8.60853 AU	min. Earth dist.	10123 Dec 13 06:53	27° $\Pi$ 52'13	8.78286 AU

direct	10124 Feb 21 02:15	24° $\Pi$ 31'14	min. Earth dist.	10130 Feb 25 22:55	11° $\Pi$ 05'24	8.59879 AU
	10124 May 16 16:59	0° $\mathfrak{D}$	direct	10130 May 05 04:28	7° $\Pi$ 42'45	
evening set	10124 Jun 01 06:04	1° $\mathfrak{D}$ 47'45	evening set	10130 Aug 13 18:59	15° $\Pi$ 06'04	
conjunction	10124 Jun 17 23:47	3° $\mathfrak{D}$ 48'53 -1°56'09	conjunction	10130 Aug 31 04:04	17° $\Pi$ 13'27 -0°32'24	
minimum elong	10124 Jun 17 23:47	3° $\mathfrak{D}$ 48'53 1°56'35	minimum elong	10130 Aug 31 04:05	17° $\Pi$ 13'27 0°32'32	
max. Earth dist.	10124 Jun 18 07:02	3° $\mathfrak{D}$ 51'06 10.77918 AU	max. Earth dist.	10130 Aug 31 10:17	17° $\Pi$ 15'21 10.57351 AU	
morning rise	10124 Jul 04 19:06	5° $\mathfrak{D}$ 50'29	morning rise	10130 Sep 17 16:51	19° $\Pi$ 21'55	
retrograde	10124 Oct 16 01:37	13° $\mathfrak{D}$ 15'25	retrograde	10130 Dec 31 15:56	27° $\Pi$ 03'27	
opposition	10124 Dec 25 07:04	9° $\mathfrak{D}$ 53'53 -2°21'48	opposition	10131 Mar 11 02:28	23° $\Pi$ 37'44 -0°24'26	
min. Earth dist.	10124 Dec 25 00:32	9° $\mathfrak{D}$ 55'07 8.77543 AU	min. Earth dist.	10131 Mar 10 21:54	23° $\Pi$ 38'37 8.54781 AU	
direct	10125 Mar 04 13:03	6° $\mathfrak{D}$ 34'18	direct	10131 May 17 22:24	20° $\Pi$ 15'23	
evening set	10125 Jun 13 09:58	13° $\mathfrak{D}$ 50'05	evening set	10131 Aug 26 19:34	27° $\Pi$ 42'31	
conjunction	10125 Jun 30 04:50	15° $\mathfrak{D}$ 51'37 -1°53'24	conjunction	10131 Sep 13 07:53	29° $\Pi$ 51'22 -0°07'20	
minimum elong	10125 Jun 30 04:51	15° $\mathfrak{D}$ 51'37 1°53'50	minimum elong	10131 Sep 13 07:53	29° $\Pi$ 51'22 0°07'22	
max. Earth dist.	10125 Jun 30 12:09	15° $\mathfrak{D}$ 53'50 10.76605 AU	behind sun begin	10131 Sep 13 01:18	29° $\Pi$ 49'22	
morning rise	10125 Jul 17 02:02	17° $\mathfrak{D}$ 53'48	behind sun end	10131 Sep 13 14:27	29° $\Pi$ 53'23	
retrograde	10125 Oct 28 17:41	25° $\mathfrak{D}$ 20'59	max. Earth dist.	10131 Sep 13 13:10	29° $\Pi$ 52'59 10.52215 AU	
opposition	10126 Jan 07 00:43	21° $\mathfrak{D}$ 58'48 -2°15'18		10131 Sep 14 11:50	0° $\mathfrak{D}$	
min. Earth dist.	10126 Jan 06 18:00	22° $\mathfrak{D}$ 00'04 8.75671 AU	morning rise	10131 Sep 30 23:27	2° $\mathfrak{D}$ 01'14	
direct	10126 Mar 17 01:51	18° $\mathfrak{D}$ 39'09	asc. node	10131 Dec 30 03:57	9° $\mathfrak{D}$ 34'22	
evening set	10126 Jun 25 15:00	25° $\mathfrak{D}$ 54'54	retrograde	10132 Jan 13 22:54	9° $\mathfrak{D}$ 45'45	
conjunction	10126 Jul 12 11:56	27° $\mathfrak{D}$ 57'10 -1°45'37	opposition	10132 Mar 23 02:11	6° $\mathfrak{D}$ 19'31 0°07'07	
minimum elong	10126 Jul 12 11:58	27° $\mathfrak{D}$ 57'10 1°46'01	min. Earth dist.	10132 Mar 22 22:25	6° $\mathfrak{D}$ 20'16 8.49648 AU	
max. Earth dist.	10126 Jul 12 20:18	27° $\mathfrak{D}$ 59'42 10.74240 AU	direct	10132 May 29 19:13	2° $\mathfrak{D}$ 56'23	
morning rise	10126 Jul 29 11:36	0° $\mathfrak{D}$ 00'14	evening set	10132 Sep 08 01:39	10° $\mathfrak{D}$ 27'49	
retrograde	10126 Jul 29 10:50	0° $\mathfrak{D}$	conjunction	10132 Sep 25 16:40	12° $\mathfrak{D}$ 38'05 0°18'27	
opposition	10126 Nov 10 13:16	7° $\mathfrak{D}$ 29'59	minimum elong	10132 Sep 25 16:39	12° $\mathfrak{D}$ 38'04 0°18'32	
min. Earth dist.	10127 Jan 19 18:31	4° $\mathfrak{D}$ 07'03 -2°02'47	max. Earth dist.	10132 Sep 25 20:50	12° $\mathfrak{D}$ 39'22 10.47149 AU	
direct	10127 Jan 19 11:03	4° $\mathfrak{D}$ 08'28 8.72805 AU	morning rise	10132 Oct 13 10:26	14° $\mathfrak{D}$ 49'13	
evening set	10127 Mar 29 13:32	0° $\mathfrak{D}$ 47'10	retrograde	10133 Jan 26 09:44	22° $\mathfrak{D}$ 36'27	
conjunction	10127 Jul 07 22:28	8° $\mathfrak{D}$ 03'36	opposition	10133 Apr 05 03:57	19° $\mathfrak{D}$ 09'54 0°38'42	
minimum elong	10127 Jul 24 22:04	10° $\mathfrak{D}$ 06'54 -1°33'04	min. Earth dist.	10133 Apr 05 01:09	19° $\mathfrak{D}$ 10'27 8.44724 AU	
max. Earth dist.	10127 Jul 24 22:06	10° $\mathfrak{D}$ 06'54 1°33'26	direct	10133 Jun 11 17:41	15° $\mathfrak{D}$ 45'54	
morning rise	10127 Jul 25 07:10	10° $\mathfrak{D}$ 09'40 10.70959 AU	evening set	10133 Sep 21 13:31	23° $\mathfrak{D}$ 22'07	
retrograde	10127 Aug 11 00:39	12° $\mathfrak{D}$ 11'06	conjunction	10133 Oct 09 06:37	25° $\mathfrak{D}$ 33'35 0°43'29	
opposition	10127 Sep 04 20:22	15° $\mathfrak{D}$	minimum elong	10133 Oct 09 06:36	25° $\mathfrak{D}$ 33'35 0°43'39	
min. Earth dist.	10127 Nov 23 10:27	19° $\mathfrak{D}$ 43'36	max. Earth dist.	10133 Oct 09 08:34	25° $\mathfrak{D}$ 34'12 10.42408 AU	
direct	10128 Feb 01 12:41	16° $\mathfrak{D}$ 19'55 -1°44'39	morning rise	10133 Oct 27 01:58	27° $\mathfrak{D}$ 45'48	
evening set	10128 Feb 01 05:01	16° $\mathfrak{D}$ 21'23 8.69095 AU		10133 Nov 15 01:14	0° $\mathfrak{D}$	
conjunction	10128 Feb 19 09:03	15° $\mathfrak{R}$ $\mathfrak{D}$	retrograde	10134 Feb 08 22:22	5° $\mathfrak{D}$ 35'19	
minimum elong	10128 Apr 10 00:35	12° $\mathfrak{D}$ 59'37	opposition	10134 Apr 18 07:46	2° $\mathfrak{D}$ 08'38 1°08'40	
max. Earth dist.	10128 May 28 22:49	15° $\mathfrak{D}$	min. Earth dist.	10134 Apr 18 06:52	2° $\mathfrak{D}$ 08'49 8.40265 AU	
morning rise	10128 Jul 19 09:09	20° $\mathfrak{D}$ 17'35		10134 May 17 08:15	30° $\mathfrak{R}$ $\mathfrak{D}$	
retrograde	10128 Aug 05 11:42	22° $\mathfrak{D}$ 22'06 -1°16'13	direct	10134 Jun 24 20:07	28° $\mathfrak{D}$ 43'47	
opposition	10128 Aug 05 11:45	22° $\mathfrak{D}$ 22'07 1°16'32		10134 Aug 01 21:51	0° $\mathfrak{D}$	
min. Earth dist.	10128 Aug 05 20:24	22° $\mathfrak{D}$ 24'45 10.66925 AU	evening set	10134 Oct 05 06:40	6° $\mathfrak{D}$ 24'57	
morning rise	10128 Aug 22 17:38	24° $\mathfrak{D}$ 27'37	conjunction	10134 Oct 23 01:12	8° $\mathfrak{D}$ 37'26 1°06'30	
retrograde	10128 Oct 15 19:49	0° $\mathfrak{D}$	minimum elong	10134 Oct 23 01:09	8° $\mathfrak{D}$ 37'25 1°06'46	
opposition	10128 Dec 05 10:01	2° $\mathfrak{D}$ 03'05	max. Earth dist.	10134 Oct 23 00:21	8° $\mathfrak{D}$ 37'10 10.38242 AU	
min. Earth dist.	10129 Jan 26 06:40	30° $\mathfrak{R}$ $\mathfrak{D}$	morning rise	10134 Nov 09 21:25	10° $\mathfrak{D}$ 50'28	
direct	10129 Feb 13 07:59	28° $\mathfrak{D}$ 38'38 -1°21'34		10134 Dec 16 18:29	15° $\mathfrak{D}$	
evening set	10129 Feb 13 00:58	28° $\mathfrak{D}$ 40'00 8.64720 AU	retrograde	10135 Feb 22 11:44	18° $\mathfrak{D}$ 41'41	
conjunction	10129 Apr 22 13:49	25° $\mathfrak{D}$ 17'47	opposition	10135 May 01 13:45	15° $\mathfrak{D}$ 15'04 1°35'22	
minimum elong	10129 Jul 08 23:48	0° $\mathfrak{D}$	min. Earth dist.	10135 May 01 14:57	15° $\mathfrak{D}$ 14'50 8.36504 AU	
max. Earth dist.	10129 Jul 31 23:39	2° $\mathfrak{D}$ 38'02		10135 May 04 16:48	15° $\mathfrak{R}$ $\mathfrak{D}$	
morning rise	10129 Aug 18 05:24	4° $\mathfrak{D}$ 43'56 -0°55'43	direct	10135 Jul 08 03:12	11° $\mathfrak{D}$ 49'26	
retrograde	10129 Aug 18 05:25	4° $\mathfrak{D}$ 43'57 0°55'57		10135 Sep 07 21:59	15° $\mathfrak{D}$	
opposition	10129 Aug 18 12:41	4° $\mathfrak{D}$ 46'10 10.62323 AU	evening set	10135 Oct 19 04:18	19° $\mathfrak{D}$ 35'25	
min. Earth dist.	10129 Sep 04 14:51	6° $\mathfrak{D}$ 50'55	conjunction	10135 Nov 05 23:36	21° $\mathfrak{D}$ 48'39 1°26'14	
morning rise	10129 Dec 18 12:12	14° $\mathfrak{D}$ 29'26	minimum elong	10135 Nov 05 23:33	21° $\mathfrak{D}$ 48'38 1°26'34	
retrograde	10130 Feb 26 04:34	11° $\mathfrak{D}$ 04'18 -0°54'27	max. Earth dist.	10135 Nov 05 20:21	21° $\mathfrak{D}$ 47'37 10.34877 AU	

morning rise	10135 Nov 23 19:53	24° $\mathbb{M}$ 02'11		retrograde	10142 May 26 06:12	21° $\approx$ 33'49	
	10136 Jan 19 20:45	0° $\mathbb{A}$		opposition	10142 Aug 01 15:40	18° $\approx$ 11'20	1°41'52
retrograde	10136 Mar 07 02:42	1° $\mathbb{A}$ 54'24		min. Earth dist.	10142 Aug 01 22:59	18° $\approx$ 09'54	8.40095 AU
	10136 Apr 24 03:45	30° $\mathbb{R}\mathbb{M}$			10142 Sep 22 11:13	15° $\mathbb{R}\approx$	
opposition	10136 May 13 21:41	28° $\mathbb{M}$ 28'03	1°57'15	direct	10142 Oct 09 19:57	14° $\approx$ 44'28	
min. Earth dist.	10136 May 14 00:33	28° $\mathbb{M}$ 27'29	8.33653 AU		10142 Oct 27 01:52	15° $\approx$	
direct	10136 Jul 20 13:19	25° $\mathbb{M}$ 01'45		evening set	10143 Jan 23 06:48	22° $\approx$ 37'31	
	10136 Oct 07 20:18	0° $\mathbb{A}$					
evening set	10136 Nov 01 05:25	2° $\mathbb{A}$ 52'03		conjunction	10143 Feb 09 19:21	24° $\approx$ 48'27	1°12'21
				minimum elong	10143 Feb 09 19:23	24° $\approx$ 48'28	1°12'38
conjunction	10136 Nov 19 00:58	5° $\mathbb{A}$ 05'45	1°41'30	max. Earth dist.	10143 Feb 09 10:00	24° $\approx$ 45'31	10.42071 AU
minimum elong	10136 Nov 19 00:56	5° $\mathbb{A}$ 05'45	1°41'54	morning rise	10143 Feb 27 04:34	26° $\approx$ 58'24	
max. Earth dist.	10136 Nov 18 20:05	5° $\mathbb{A}$ 04'13	10.32517 AU		10143 Mar 25 04:01	0° $\mathbb{H}$	
morning rise	10136 Dec 06 20:38	7° $\mathbb{A}$ 19'31		retrograde	10143 Jun 08 11:22	4° $\mathbb{H}$ 34'34	
retrograde	10137 Mar 20 18:15	15° $\mathbb{A}$ 11'51		opposition	10143 Aug 15 00:56	1° $\mathbb{H}$ 12'43	1°16'36
opposition	10137 May 27 07:12	11° $\mathbb{A}$ 45'56	2°13'00	min. Earth dist.	10143 Aug 15 07:39	1° $\mathbb{H}$ 11'23	8.44246 AU
min. Earth dist.	10137 May 27 11:00	11° $\mathbb{A}$ 45'10	8.31882 AU		10143 Aug 30 19:18	30° $\mathbb{R}\approx$	
direct	10137 Aug 03 02:44	8° $\mathbb{A}$ 19'08		direct	10143 Oct 23 11:22	27° $\approx$ 46'21	
evening set	10137 Nov 15 08:43	16° $\mathbb{A}$ 12'58			10143 Dec 14 16:23	0° $\mathbb{H}$	
				evening set	10144 Feb 05 18:37	5° $\mathbb{H}$ 36'06	
conjunction	10137 Dec 03 04:04	18° $\mathbb{A}$ 26'51	1°51'23				
minimum elong	10137 Dec 03 04:03	18° $\mathbb{A}$ 26'50	1°51'49	conjunction	10144 Feb 23 05:07	7° $\mathbb{H}$ 45'57	0°50'21
max. Earth dist.	10137 Dec 02 22:16	18° $\mathbb{A}$ 25'01	10.31301 AU	minimum elong	10144 Feb 23 05:09	7° $\mathbb{H}$ 45'57	0°50'33
morning rise	10137 Dec 20 22:33	20° $\mathbb{A}$ 40'32		max. Earth dist.	10144 Feb 22 20:48	7° $\mathbb{H}$ 43'21	10.46414 AU
retrograde	10138 Apr 03 09:40	28° $\mathbb{A}$ 32'03		morning rise	10144 Mar 11 12:06	9° $\mathbb{H}$ 54'45	
opposition	10138 Jun 09 18:04	25° $\mathbb{A}$ 06'43	2°21'39	retrograde	10144 Jun 20 14:05	17° $\mathbb{H}$ 27'29	
min. Earth dist.	10138 Jun 09 22:35	25° $\mathbb{A}$ 05'48	8.31280 AU	opposition	10144 Aug 27 08:45	14° $\mathbb{H}$ 06'11	0°47'42
direct	10138 Aug 16 18:49	21° $\mathbb{A}$ 39'35		min. Earth dist.	10144 Aug 27 14:42	14° $\mathbb{H}$ 05'01	8.48672 AU
evening set	10138 Nov 29 12:48	29° $\mathbb{A}$ 35'50		direct	10144 Nov 05 00:04	10° $\mathbb{H}$ 40'28	
	10138 Dec 02 18:43	0° $\mathbb{B}$		evening set	10145 Feb 18 01:49	18° $\mathbb{H}$ 26'32	
conjunction	10138 Dec 17 07:25	1° $\mathbb{B}$ 49'37	1°55'17	conjunction	10145 Mar 07 09:59	20° $\mathbb{H}$ 35'10	0°26'01
minimum elong	10138 Dec 17 07:25	1° $\mathbb{B}$ 49'37	1°55'44	minimum elong	10145 Mar 07 09:59	20° $\mathbb{H}$ 35'11	0°26'08
max. Earth dist.	10138 Dec 17 00:37	1° $\mathbb{B}$ 47'28	10.31289 AU	max. Earth dist.	10145 Mar 07 02:56	20° $\mathbb{H}$ 32'59	10.50945 AU
morning rise	10139 Jan 04 00:17	4° $\mathbb{B}$ 02'56		morning rise	10145 Mar 24 14:36	22° $\mathbb{H}$ 42'49	
retrograde	10139 Apr 17 00:38	11° $\mathbb{B}$ 52'40			10145 Jun 18 06:11	0° $\mathbb{Y}$	
opposition	10139 Jun 23 05:43	8° $\mathbb{B}$ 28'02	2°22'38	retrograde	10145 Jul 03 13:21	0° $\mathbb{Y}$ 12'28	
min. Earth dist.	10139 Jun 23 11:13	8° $\mathbb{B}$ 26'56	8.31882 AU		10145 Jul 18 22:15	30° $\mathbb{R}\mathbb{H}$	
direct	10139 Aug 30 11:33	5° $\mathbb{B}$ 00'44		opposition	10145 Sep 09 14:59	26° $\mathbb{H}$ 51'38	0°16'44
evening set	10139 Dec 13 15:59	12° $\mathbb{B}$ 58'06		min. Earth dist.	10145 Sep 09 20:23	26° $\mathbb{H}$ 50'35	8.53235 AU
				direct	10145 Nov 18 10:47	23° $\mathbb{H}$ 26'39	
conjunction	10139 Dec 31 09:27	15° $\mathbb{B}$ 11'31	1°52'58		10146 Feb 21 14:19	0° $\mathbb{Y}$	
minimum elong	10139 Dec 31 09:28	15° $\mathbb{B}$ 11'31	1°53'25	evening set	10146 Mar 03 04:18	1° $\mathbb{Y}$ 08'43	
max. Earth dist.	10139 Dec 31 01:34	15° $\mathbb{B}$ 09'01	10.32491 AU				
morning rise	10140 Jan 18 00:34	17° $\mathbb{B}$ 24'15		conjunction	10146 Mar 20 09:48	3° $\mathbb{Y}$ 16'04	0°00'38
retrograde	10140 Apr 29 14:18	25° $\mathbb{B}$ 11'18		minimum elong	10146 Mar 20 09:47	3° $\mathbb{Y}$ 16'04	0°00'39
opposition	10140 Jul 05 17:41	21° $\mathbb{B}$ 47'25	2°15'57	behind sun begin	10146 Mar 20 02:41	3° $\mathbb{Y}$ 13'53	
min. Earth dist.	10140 Jul 06 00:15	21° $\mathbb{B}$ 46'06	8.33655 AU	behind sun end	10146 Mar 20 16:53	3° $\mathbb{Y}$ 18'15	
direct	10140 Sep 12 05:36	18° $\mathbb{B}$ 20'05		max. Earth dist.	10146 Mar 20 03:40	3° $\mathbb{Y}$ 14'12	10.55537 AU
evening set	10140 Dec 26 16:42	26° $\mathbb{B}$ 17'13		desc. node	10146 Mar 29 13:08	4° $\mathbb{Y}$ 24'00	
				morning rise	10146 Apr 06 12:10	5° $\mathbb{Y}$ 22'31	
conjunction	10141 Jan 13 08:46	28° $\mathbb{B}$ 30'00	1°44'38	retrograde	10146 Jul 16 10:30	12° $\mathbb{Y}$ 49'35	
minimum elong	10141 Jan 13 08:48	28° $\mathbb{B}$ 30'01	1°45'02	opposition	10146 Sep 22 19:44	9° $\mathbb{Y}$ 29'04	-0°14'42
max. Earth dist.	10141 Jan 12 23:44	28° $\mathbb{B}$ 27'09	10.34826 AU	min. Earth dist.	10146 Sep 23 00:11	9° $\mathbb{Y}$ 28'12	8.57802 AU
	10141 Jan 25 07:01	0° $\approx$		direct	10146 Dec 01 18:54	6° $\mathbb{Y}$ 04'49	
morning rise	10141 Jan 30 22:05	0° $\approx$ 41'59		evening set	10147 Mar 16 01:54	13° $\mathbb{Y}$ 42'40	
retrograde	10141 May 13 00:01	8° $\approx$ 25'39					
opposition	10141 Jul 19 05:13	5° $\approx$ 02'30	2°02'04	conjunction	10147 Apr 02 04:38	15° $\mathbb{Y}$ 48'43	-0°24'36
min. Earth dist.	10141 Jul 19 12:35	5° $\approx$ 01'02	8.36468 AU	minimum elong	10147 Apr 02 04:37	15° $\mathbb{Y}$ 48'43	0°24'40
direct	10141 Sep 26 01:00	1° $\approx$ 35'19		max. Earth dist.	10147 Apr 01 23:55	15° $\mathbb{Y}$ 47'16	10.60033 AU
evening set	10142 Jan 09 14:00	9° $\approx$ 30'56		morning rise	10147 Apr 19 04:53	17° $\mathbb{Y}$ 54'01	
				retrograde	10147 Jul 29 04:41	25° $\mathbb{Y}$ 19'01	
conjunction	10142 Jan 27 04:23	11° $\approx$ 42'52	1°30'48	opposition	10147 Oct 05 22:36	21° $\mathbb{Y}$ 58'37	-0°45'07
minimum elong	10142 Jan 27 04:26	11° $\approx$ 42'53	1°31'09	min. Earth dist.	10147 Oct 06 01:20	21° $\mathbb{Y}$ 58'05	8.62190 AU
max. Earth dist.	10142 Jan 26 18:41	11° $\approx$ 39'49	10.38110 AU	direct	10147 Dec 14 23:47	18° $\mathbb{Y}$ 35'07	
morning rise	10142 Feb 13 15:45	13° $\approx$ 53'54		evening set	10148 Mar 27 19:09	26° $\mathbb{Y}$ 08'46	
	10142 Feb 22 17:23	15° $\approx$					

conjunction	10148 Apr 13 19:21	28° $\Upsilon$ 13'34	-0°48'24	conjunction	10154 Jun 25 09:32	11° $\mathfrak{C}$ 00'50	-1°55'14
minimum elong	10148 Apr 13 19:20	28° $\Upsilon$ 13'34	0°48'34	minimum elong	10154 Jun 25 09:33	11° $\mathfrak{C}$ 00'50	1°55'41
max. Earth dist.	10148 Apr 13 16:52	28° $\Upsilon$ 12'48	10.64240 AU	max. Earth dist.	10154 Jun 25 19:04	11° $\mathfrak{C}$ 03'44	10.74988 AU
	10148 Apr 28 06:45	0° $\mathfrak{B}$		morning rise	10154 Jul 12 05:50	13° $\mathfrak{C}$ 02'58	
morning rise	10148 Apr 30 17:32	0° $\mathfrak{B}$ 17'46		retrograde	10154 Oct 23 18:05	20° $\mathfrak{C}$ 29'59	
retrograde	10148 Aug 09 21:05	7° $\mathfrak{B}$ 41'17		opposition	10155 Jan 02 00:09	17° $\mathfrak{C}$ 07'28	-2°18'54
opposition	10148 Oct 17 23:24	4° $\mathfrak{B}$ 20'51	-1°13'07	min. Earth dist.	10155 Jan 01 15:26	17° $\mathfrak{C}$ 09'07	8.74557 AU
min. Earth dist.	10148 Oct 17 23:44	4° $\mathfrak{B}$ 20'47	8.66203 AU	direct	10155 Mar 12 04:10	13° $\mathfrak{C}$ 47'21	
direct	10148 Dec 27 02:18	0° $\mathfrak{B}$ 58'03		evening set	10155 Jun 20 19:53	21° $\mathfrak{C}$ 03'43	
evening set	10149 Apr 09 08:26	8° $\mathfrak{B}$ 27'44					
conjunction	10149 Apr 26 06:21	10° $\mathfrak{B}$ 31'23	-1°09'47	conjunction	10155 Jul 07 15:58	23° $\mathfrak{C}$ 05'51	-1°49'31
minimum elong	10149 Apr 26 06:19	10° $\mathfrak{B}$ 31'22	1°10'03	minimum elong	10155 Jul 07 16:00	23° $\mathfrak{C}$ 05'52	1°49'57
max. Earth dist.	10149 Apr 26 06:53	10° $\mathfrak{B}$ 31'33	10.67969 AU	max. Earth dist.	10155 Jul 08 01:56	23° $\mathfrak{C}$ 08'53	10.73617 AU
morning rise	10149 May 13 02:39	12° $\mathfrak{B}$ 34'36		morning rise	10155 Jul 24 14:32	25° $\mathfrak{C}$ 08'43	
	10149 Jun 03 03:03	15° $\mathfrak{B}$			10155 Sep 08 16:31	0° $\mathfrak{Q}$	
retrograde	10149 Aug 22 13:51	19° $\mathfrak{B}$ 57'16		retrograde	10155 Nov 05 13:06	2° $\mathfrak{Q}$ 37'53	
opposition	10149 Oct 30 22:38	16° $\mathfrak{B}$ 36'40	-1°37'31		10156 Jan 04 19:28	30° $\mathfrak{R}$ $\mathfrak{C}$	
min. Earth dist.	10149 Oct 30 20:50	16° $\mathfrak{B}$ 37'01	8.69662 AU	opposition	10156 Jan 14 18:11	29° $\mathfrak{C}$ 14'51	-2°08'49
	10149 Nov 22 01:56	15° $\mathfrak{R}$ $\mathfrak{B}$		min. Earth dist.	10156 Jan 14 09:34	29° $\mathfrak{C}$ 16'30	8.72711 AU
direct	10150 Jan 09 00:39	13° $\mathfrak{B}$ 14'33		direct	10156 Mar 23 14:39	25° $\mathfrak{C}$ 54'45	
	10150 Feb 24 11:28	15° $\mathfrak{B}$			10156 Jun 03 15:51	0° $\mathfrak{Q}$	
evening set	10150 Apr 21 18:16	20° $\mathfrak{B}$ 40'33		evening set	10156 Jul 02 02:33	3° $\mathfrak{Q}$ 11'20	
conjunction	10150 May 08 14:09	22° $\mathfrak{B}$ 43'14	-1°27'51	conjunction	10156 Jul 19 00:49	5° $\mathfrak{Q}$ 14'16	-1°38'54
minimum elong	10150 May 08 14:07	22° $\mathfrak{B}$ 43'13	1°28'12	minimum elong	10156 Jul 19 00:51	5° $\mathfrak{Q}$ 14'17	1°39'17
max. Earth dist.	10150 May 08 16:58	22° $\mathfrak{B}$ 44'06	10.71061 AU	max. Earth dist.	10156 Jul 19 10:27	5° $\mathfrak{Q}$ 17'12	10.71362 AU
morning rise	10150 May 25 09:03	24° $\mathfrak{B}$ 45'41		morning rise	10156 Aug 05 02:13	7° $\mathfrak{Q}$ 18'06	
	10150 Jul 14 23:52	0° $\mathfrak{I}$		retrograde	10156 Nov 17 08:15	14° $\mathfrak{Q}$ 49'45	
retrograde	10150 Sep 04 04:59	2° $\mathfrak{I}$ 08'07		opposition	10157 Jan 26 12:31	11° $\mathfrak{Q}$ 26'11	-1°52'54
	10150 Oct 27 11:24	30° $\mathfrak{R}$ $\mathfrak{B}$		min. Earth dist.	10157 Jan 26 04:14	11° $\mathfrak{Q}$ 27'46	8.70023 AU
opposition	10150 Nov 12 20:23	28° $\mathfrak{B}$ 47'17	-1°57'20	direct	10157 Apr 05 02:19	8° $\mathfrak{Q}$ 05'57	
min. Earth dist.	10150 Nov 12 17:07	28° $\mathfrak{B}$ 47'54	8.72425 AU		10157 Jul 11 04:44	15° $\mathfrak{Q}$	
direct	10151 Jan 21 18:36	25° $\mathfrak{B}$ 25'45		evening set	10157 Jul 14 11:50	15° $\mathfrak{Q}$ 23'30	
	10151 Apr 09 07:24	0° $\mathfrak{I}$					
evening set	10151 May 04 01:32	2° $\mathfrak{I}$ 48'34		conjunction	10157 Jul 31 13:00	17° $\mathfrak{Q}$ 27'31	-1°23'45
conjunction	10151 May 20 19:51	4° $\mathfrak{I}$ 50'31	-1°41'53	minimum elong	10157 Jul 31 13:02	17° $\mathfrak{Q}$ 27'32	1°24'05
minimum elong	10151 May 20 19:49	4° $\mathfrak{I}$ 50'30	1°42'17	max. Earth dist.	10157 Jul 31 22:55	17° $\mathfrak{Q}$ 30'33	10.68334 AU
max. Earth dist.	10151 May 21 00:03	4° $\mathfrak{I}$ 51'48	10.73398 AU	morning rise	10157 Aug 17 17:35	19° $\mathfrak{Q}$ 32'31	
morning rise	10151 Jun 06 14:08	6° $\mathfrak{I}$ 52'27		retrograde	10157 Nov 30 06:26	27° $\mathfrak{Q}$ 06'53	
retrograde	10151 Sep 16 18:28	14° $\mathfrak{I}$ 15'14		opposition	10158 Feb 08 07:33	23° $\mathfrak{Q}$ 42'47	-1°31'45
opposition	10151 Nov 25 16:35	10° $\mathfrak{I}$ 54'05	-2°11'49	min. Earth dist.	10158 Feb 07 23:15	23° $\mathfrak{Q}$ 44'23	8.66626 AU
min. Earth dist.	10151 Nov 25 12:15	10° $\mathfrak{I}$ 54'54	8.74374 AU	direct	10158 Apr 17 16:32	20° $\mathfrak{Q}$ 22'17	
direct	10152 Feb 03 12:09	7° $\mathfrak{I}$ 33'02		evening set	10158 Jul 27 00:38	27° $\mathfrak{Q}$ 41'33	
evening set	10152 May 15 06:49	14° $\mathfrak{I}$ 53'17					
conjunction	10152 Jun 01 00:23	16° $\mathfrak{I}$ 54'48	-1°51'20	conjunction	10158 Aug 13 05:06	29° $\mathfrak{Q}$ 46'51	-1°04'39
minimum elong	10152 Jun 01 00:21	16° $\mathfrak{I}$ 54'47	1°51'46	minimum elong	10158 Aug 13 05:09	29° $\mathfrak{Q}$ 46'51	1°04'55
max. Earth dist.	10152 Jun 01 05:54	16° $\mathfrak{I}$ 56'29	10.74876 AU	max. Earth dist.	10158 Aug 13 15:23	29° $\mathfrak{Q}$ 49'59	10.64668 AU
morning rise	10152 Jun 17 18:41	18° $\mathfrak{I}$ 56'29			10158 Aug 15 00:05	0° $\mathfrak{N}$	
retrograde	10152 Sep 28 09:11	26° $\mathfrak{I}$ 20'12		morning rise	10158 Aug 30 13:00	1° $\mathfrak{N}$ 53'10	
opposition	10152 Dec 07 11:44	22° $\mathfrak{I}$ 58'38	-2°20'25	retrograde	10158 Dec 13 08:28	9° $\mathfrak{N}$ 30'20	
min. Earth dist.	10152 Dec 07 05:51	22° $\mathfrak{I}$ 59'45	8.75407 AU	opposition	10159 Feb 21 03:31	6° $\mathfrak{N}$ 05'44	-1°06'10
direct	10153 Feb 15 03:18	19° $\mathfrak{I}$ 38'02		min. Earth dist.	10159 Feb 20 19:14	6° $\mathfrak{N}$ 07'20	8.62669 AU
evening set	10153 May 27 10:57	26° $\mathfrak{I}$ 56'18		direct	10159 Apr 30 05:52	2° $\mathfrak{N}$ 44'50	
conjunction	10153 Jun 13 04:36	28° $\mathfrak{I}$ 57'40	-1°55'51	evening set	10159 Aug 08 18:01	10° $\mathfrak{N}$ 06'36	
minimum elong	10153 Jun 13 04:35	28° $\mathfrak{I}$ 57'40	1°56'17				
max. Earth dist.	10153 Jun 13 12:21	29° $\mathfrak{I}$ 00'02	10.75414 AU	conjunction	10159 Aug 26 01:44	12° $\mathfrak{N}$ 13'15	-0°42'24
	10153 Jun 21 17:40	0° $\mathfrak{C}$		minimum elong	10159 Aug 26 01:46	12° $\mathfrak{N}$ 13'16	0°42'35
morning rise	10153 Jun 29 23:30	0° $\mathfrak{C}$ 59'26		max. Earth dist.	10159 Aug 26 11:16	12° $\mathfrak{N}$ 16'11	10.60521 AU
retrograde	10153 Oct 11 00:36	8° $\mathfrak{C}$ 24'35		morning rise	10159 Sep 12 12:53	14° $\mathfrak{N}$ 20'58	
opposition	10153 Dec 20 06:10	5° $\mathfrak{C}$ 02'34	-2°22'49	retrograde	10159 Dec 26 12:15	22° $\mathfrak{N}$ 00'55	
min. Earth dist.	10153 Dec 19 22:28	5° $\mathfrak{C}$ 04'01	8.75467 AU	opposition	10160 Mar 05 00:41	18° $\mathfrak{N}$ 35'53	-0°37'14
direct	10154 Feb 27 16:06	1° $\mathfrak{C}$ 42'17		min. Earth dist.	10160 Mar 04 17:26	18° $\mathfrak{N}$ 37'18	8.58328 AU
evening set	10154 Jun 08 15:00	8° $\mathfrak{C}$ 59'14		direct	10160 May 11 21:31	15° $\mathfrak{N}$ 14'28	
				evening set	10160 Aug 20 16:21	22° $\mathfrak{N}$ 39'27	
				conjunction	10160 Sep 07 03:08	24° $\mathfrak{N}$ 47'30	-0°17'57
				minimum elong	10160 Sep 07 03:09	24° $\mathfrak{N}$ 47'30	0°18'01

max. Earth dist.	10160 Sep 07 10:36	24° $\mathring{M}$ 49'47	10.56078 AU	evening set	10166 Nov 09 14:37	10° $\mathring{A}$ 42'28	
morning rise	10160 Sep 24 17:22	26° $\mathring{M}$ 56'34					
	10160 Oct 21 12:01	0° $\mathring{A}$		conjunction	10166 Nov 27 09:54	12° $\mathring{A}$ 55'59	1°47'47
retrograde	10161 Jan 07 18:07	4° $\mathring{A}$ 39'14		minimum elong	10166 Nov 27 09:52	12° $\mathring{A}$ 55'58	1°48'12
opposition	10161 Mar 17 23:36	1° $\mathring{A}$ 13'50	-0°06'12	max. Earth dist.	10166 Nov 27 03:02	12° $\mathring{A}$ 53'49	10.33532 AU
min. Earth dist.	10161 Mar 17 18:14	1° $\mathring{A}$ 14'53	8.53794 AU	morning rise	10166 Dec 15 04:47	15° $\mathring{A}$ 09'26	
	10161 Apr 03 00:30	30° $\mathring{R}$ $\mathring{M}$		retrograde	10167 Mar 28 20:22	23° $\mathring{A}$ 00'17	
direct	10161 May 24 16:33	27° $\mathring{M}$ 51'42		opposition	10167 Jun 04 06:37	19° $\mathring{A}$ 34'56	2°18'44
asc. node	10161 May 30 09:59	27° $\mathring{M}$ 53'29		min. Earth dist.	10167 Jun 04 12:25	19° $\mathring{A}$ 33'46	8.33031 AU
	10161 Jul 13 20:20	0° $\mathring{A}$		direct	10167 Aug 11 05:11	16° $\mathring{A}$ 08'05	
evening set	10161 Sep 02 19:49	5° $\mathring{A}$ 20'30		evening set	10167 Nov 23 17:25	24° $\mathring{A}$ 02'16	
conjunction	10161 Sep 20 09:25	7° $\mathring{A}$ 29'53	0°07'41	conjunction	10167 Dec 11 12:07	26° $\mathring{A}$ 15'49	1°54'20
minimum elong	10161 Sep 20 09:24	7° $\mathring{A}$ 29'53	0°07'43	minimum elong	10167 Dec 11 12:06	26° $\mathring{A}$ 15'49	1°54'47
behind sun begin	10161 Sep 20 02:54	7° $\mathring{A}$ 27'54		max. Earth dist.	10167 Dec 11 03:26	26° $\mathring{A}$ 13'05	10.32555 AU
behind sun end	10161 Sep 20 15:55	7° $\mathring{A}$ 31'52		morning rise	10167 Dec 29 05:44	28° $\mathring{A}$ 29'05	
max. Earth dist.	10161 Sep 20 14:23	7° $\mathring{A}$ 31'24	10.51513 AU		10168 Jan 10 18:11	0° $\mathring{B}$	
morning rise	10161 Oct 08 02:16	9° $\mathring{A}$ 40'14		retrograde	10168 Apr 10 09:30	6° $\mathring{B}$ 18'39	
retrograde	10162 Jan 21 02:40	17° $\mathring{A}$ 25'24		opposition	10168 Jun 16 17:06	2° $\mathring{B}$ 53'45	2°23'07
opposition	10162 Mar 31 00:10	13° $\mathring{A}$ 59'42	0°25'28	min. Earth dist.	10168 Jun 16 23:52	2° $\mathring{B}$ 52'23	8.32651 AU
min. Earth dist.	10162 Mar 30 21:00	14° $\mathring{A}$ 00'19	8.49223 AU		10168 Jul 29 14:45	30° $\mathring{R}$ $\mathring{A}$	
direct	10162 Jun 06 14:14	10° $\mathring{A}$ 36'45		direct	10168 Aug 23 21:53	29° $\mathring{A}$ 26'25	
evening set	10162 Sep 16 04:47	18° $\mathring{A}$ 09'53			10168 Sep 18 02:12	0° $\mathring{B}$	
				evening set	10168 Dec 06 20:01	7° $\mathring{B}$ 22'23	
conjunction	10162 Oct 03 20:49	20° $\mathring{A}$ 20'30	0°33'04	conjunction	10168 Dec 24 13:53	9° $\mathring{B}$ 35'45	1°54'46
minimum elong	10162 Oct 03 20:47	20° $\mathring{A}$ 20'30	0°33'11	minimum elong	10168 Dec 24 13:53	9° $\mathring{B}$ 35'45	1°55'13
max. Earth dist.	10162 Oct 03 23:19	20° $\mathring{A}$ 21'17	10.46962 AU	max. Earth dist.	10168 Dec 24 04:24	9° $\mathring{B}$ 32'45	10.32754 AU
morning rise	10162 Oct 21 15:31	22° $\mathring{A}$ 31'57		morning rise	10169 Jan 11 05:54	11° $\mathring{B}$ 48'34	
	10163 Jan 15 06:24	0° $\mathring{M}$		retrograde	10169 Apr 23 22:14	19° $\mathring{B}$ 35'59	
retrograde	10163 Feb 03 12:18	0° $\mathring{M}$ 19'23		opposition	10169 Jun 30 03:50	16° $\mathring{B}$ 11'35	2°19'50
	10163 Feb 22 20:04	30° $\mathring{R}$ $\mathring{A}$		min. Earth dist.	10169 Jun 30 10:59	16° $\mathring{B}$ 10'09	8.33424 AU
opposition	10163 Apr 13 02:23	26° $\mathring{A}$ 53'28	0°56'12	direct	10169 Sep 06 15:08	12° $\mathring{B}$ 43'59	
min. Earth dist.	10163 Apr 13 01:07	26° $\mathring{A}$ 53'43	8.44755 AU	evening set	10169 Dec 20 20:58	20° $\mathring{B}$ 40'28	
direct	10163 Jun 19 15:57	23° $\mathring{A}$ 29'41					
	10163 Sep 20 10:01	0° $\mathring{M}$		conjunction	10170 Jan 07 13:45	22° $\mathring{B}$ 53'24	1°49'03
evening set	10163 Sep 29 18:59	1° $\mathring{M}$ 07'35		minimum elong	10170 Jan 07 13:46	22° $\mathring{B}$ 53'25	1°49'29
conjunction	10163 Oct 17 12:50	3° $\mathring{M}$ 19'17	0°57'01	max. Earth dist.	10170 Jan 07 04:06	22° $\mathring{B}$ 50'22	10.34098 AU
minimum elong	10163 Oct 17 12:48	3° $\mathring{M}$ 19'16	0°57'15	morning rise	10170 Jan 25 03:54	25° $\mathring{B}$ 05'35	
max. Earth dist.	10163 Oct 17 13:22	3° $\mathring{M}$ 19'27	10.42601 AU		10170 Mar 10 14:42	0° $\mathring{A}$	
morning rise	10163 Nov 04 08:33	5° $\mathring{M}$ 31'37		retrograde	10170 May 07 08:47	2° $\mathring{A}$ 50'07	
retrograde	10164 Feb 17 00:20	13° $\mathring{M}$ 21'00			10170 Jul 06 13:08	30° $\mathring{R}$ $\mathring{B}$	
opposition	10164 Apr 25 06:42	9° $\mathring{M}$ 55'02	1°24'23	opposition	10170 Jul 13 14:38	29° $\mathring{B}$ 26'17	2°09'06
min. Earth dist.	10164 Apr 25 06:49	9° $\mathring{M}$ 55'00	8.40626 AU	min. Earth dist.	10170 Jul 13 21:50	29° $\mathring{B}$ 24'50	8.35287 AU
direct	10164 Jul 01 20:44	6° $\mathring{M}$ 30'25		direct	10170 Sep 20 09:05	25° $\mathring{B}$ 58'38	
evening set	10164 Oct 12 13:49	14° $\mathring{M}$ 13'07			10170 Nov 30 15:00	0° $\mathring{A}$	
	10164 Oct 18 22:00	15° $\mathring{M}$		evening set	10171 Jan 03 18:56	3° $\mathring{A}$ 54'22	
conjunction	10164 Oct 30 08:49	16° $\mathring{M}$ 25'42	1°18'14	conjunction	10171 Jan 21 10:14	6° $\mathring{A}$ 06'37	1°37'36
minimum elong	10164 Oct 30 08:47	16° $\mathring{M}$ 25'42	1°18'33	minimum elong	10171 Jan 21 10:17	6° $\mathring{A}$ 06'38	1°37'59
max. Earth dist.	10164 Oct 30 07:12	16° $\mathring{M}$ 25'12	10.38726 AU	max. Earth dist.	10171 Jan 21 00:53	6° $\mathring{A}$ 03'40	10.36496 AU
morning rise	10164 Nov 17 04:51	18° $\mathring{M}$ 38'41		morning rise	10171 Feb 07 22:22	8° $\mathring{A}$ 17'59	
retrograde	10165 Mar 01 15:24	26° $\mathring{M}$ 29'27			10171 Apr 17 11:11	15° $\mathring{A}$	
opposition	10165 May 08 13:03	23° $\mathring{M}$ 03'32	1°48'26	retrograde	10171 May 20 17:03	15° $\mathring{A}$ 59'09	
min. Earth dist.	10165 May 08 14:50	23° $\mathring{M}$ 03'10	8.37142 AU		10171 Jun 23 09:24	15° $\mathring{R}$ $\mathring{A}$	
direct	10165 Jul 15 03:13	19° $\mathring{M}$ 38'06		opposition	10171 Jul 27 00:55	12° $\mathring{A}$ 35'56	1°51'37
evening set	10165 Oct 26 12:52	27° $\mathring{M}$ 25'21		min. Earth dist.	10171 Jul 27 08:21	12° $\mathring{A}$ 34'27	8.38136 AU
				direct	10171 Oct 04 02:07	9° $\mathring{A}$ 08'27	
conjunction	10165 Nov 13 08:18	29° $\mathring{M}$ 38'33	1°35'30		10171 Dec 31 10:51	15° $\mathring{A}$	
minimum elong	10165 Nov 13 08:16	29° $\mathring{M}$ 38'32	1°35'52	evening set	10172 Jan 17 13:04	17° $\mathring{A}$ 02'17	
max. Earth dist.	10165 Nov 13 04:08	29° $\mathring{M}$ 37'15	10.35632 AU				
	10165 Nov 16 04:38	0° $\mathring{A}$		conjunction	10172 Feb 04 02:34	19° $\mathring{A}$ 13'40	1°21'08
morning rise	10165 Dec 01 04:01	1° $\mathring{A}$ 51'54		minimum elong	10172 Feb 04 02:37	19° $\mathring{A}$ 13'41	1°21'27
retrograde	10166 Mar 15 06:28	9° $\mathring{A}$ 43'10		max. Earth dist.	10172 Feb 03 17:12	19° $\mathring{A}$ 10'43	10.39819 AU
opposition	10166 May 21 21:04	6° $\mathring{A}$ 17'28	2°06'55	morning rise	10172 Feb 21 12:42	21° $\mathring{A}$ 24'04	
min. Earth dist.	10166 May 22 00:55	6° $\mathring{A}$ 16'42	8.34556 AU	retrograde	10172 Jun 01 23:04	29° $\mathring{A}$ 01'37	
direct	10166 Jul 28 14:21	2° $\mathring{A}$ 51'15		opposition	10172 Aug 08 10:09	25° $\mathring{A}$ 39'00	1°28'29

min. Earth dist.	10172 Aug 08 17:43	25° $\approx$ 37'31	8.41828 AU	morning rise	10178 May 07 19:24	7° $\mathcal{B}$ 12'08	
direct	10172 Oct 16 17:15	22° $\approx$ 11'54		retrograde	10178 Aug 17 02:44	14° $\mathcal{B}$ 34'31	
	10173 Jan 29 17:13	0° $\mathcal{H}$		opposition	10178 Oct 25 08:39	11° $\mathcal{B}$ 14'19	-1°26'40
evening set	10173 Jan 30 02:41	0° $\mathcal{H}$ 02'54		min. Earth dist.	10178 Oct 25 07:56	11° $\mathcal{B}$ 14'27	8.69447 AU
				direct	10179 Jan 03 10:24	7° $\mathcal{B}$ 52'14	
conjunction	10173 Feb 16 14:07	2° $\mathcal{H}$ 13'15	1°00'36		10179 Apr 13 17:33	15° $\mathcal{B}$	
minimum elong	10173 Feb 16 14:10	2° $\mathcal{H}$ 13'15	1°00'51	evening set	10179 Apr 16 10:23	15° $\mathcal{B}$ 19'20	
max. Earth dist.	10173 Feb 16 04:55	2° $\mathcal{H}$ 10'22	10.43892 AU				
morning rise	10173 Mar 05 22:13	4° $\mathcal{H}$ 22'35		conjunction	10179 May 03 06:58	17° $\mathcal{B}$ 22'15	-1°19'52
retrograde	10173 Jun 15 00:43	11° $\mathcal{H}$ 56'30		minimum elong	10179 May 03 06:56	17° $\mathcal{B}$ 22'15	1°20'12
opposition	10173 Aug 21 18:05	8° $\mathcal{H}$ 34'30	1°01'04	max. Earth dist.	10179 May 03 08:36	17° $\mathcal{B}$ 22'45	10.71204 AU
min. Earth dist.	10173 Aug 22 01:04	8° $\mathcal{H}$ 33'08	8.46162 AU	morning rise	10179 May 20 02:34	19° $\mathcal{B}$ 24'53	
direct	10173 Oct 30 07:50	5° $\mathcal{H}$ 07'59		retrograde	10179 Aug 29 17:19	26° $\mathcal{B}$ 46'45	
evening set	10174 Feb 12 11:27	12° $\mathcal{H}$ 55'28		opposition	10179 Nov 07 06:32	23° $\mathcal{B}$ 26'30	-1°48'37
				min. Earth dist.	10179 Nov 07 03:37	23° $\mathcal{B}$ 27'04	8.72895 AU
conjunction	10174 Mar 01 20:35	15° $\mathcal{H}$ 04'37	0°37'12	direct	10180 Jan 16 06:28	20° $\mathcal{B}$ 05'13	
minimum elong	10174 Mar 01 20:37	15° $\mathcal{H}$ 04'37	0°37'21	evening set	10180 Apr 27 18:28	27° $\mathcal{B}$ 28'54	
max. Earth dist.	10174 Mar 01 12:23	15° $\mathcal{H}$ 02'04	10.48491 AU				
morning rise	10174 Mar 19 02:28	17° $\mathcal{H}$ 12'47		conjunction	10180 May 14 13:26	29° $\mathcal{B}$ 30'59	-1°35'47
retrograde	10174 Jun 27 23:42	24° $\mathcal{H}$ 43'23		minimum elong	10180 May 14 13:24	29° $\mathcal{B}$ 30'58	1°36'10
opposition	10174 Sep 04 00:24	21° $\mathcal{H}$ 21'56	0°30'54	max. Earth dist.	10180 May 14 17:39	29° $\mathcal{B}$ 32'16	10.74221 AU
min. Earth dist.	10174 Sep 04 05:48	21° $\mathcal{H}$ 20'53	8.50915 AU		10180 May 18 12:31	0° $\mathcal{I}$	
direct	10174 Nov 12 20:23	17° $\mathcal{H}$ 56'12		morning rise	10180 May 31 07:52	1° $\mathcal{I}$ 32'55	
evening set	10175 Feb 25 15:15	25° $\mathcal{H}$ 39'41		retrograde	10180 Sep 10 07:45	8° $\mathcal{I}$ 54'51	
				opposition	10180 Nov 19 02:54	5° $\mathcal{I}$ 34'27	-2°05'35
conjunction	10175 Mar 14 21:58	27° $\mathcal{H}$ 47'32	0°12'13	min. Earth dist.	10180 Nov 18 21:57	5° $\mathcal{I}$ 35'23	8.75507 AU
minimum elong	10175 Mar 14 21:59	27° $\mathcal{H}$ 47'33	0°12'17	direct	10181 Jan 28 00:52	2° $\mathcal{I}$ 13'50	
behind sun begin	10175 Mar 14 17:13	27° $\mathcal{H}$ 46'05		evening set	10181 May 10 00:22	9° $\mathcal{I}$ 34'37	
behind sun end	10175 Mar 15 02:44	27° $\mathcal{H}$ 49'00					
max. Earth dist.	10175 Mar 14 15:59	27° $\mathcal{H}$ 45'42	10.53386 AU	conjunction	10181 May 26 18:14	11° $\mathcal{I}$ 36'05	-1°47'23
morning rise	10175 Apr 01 01:29	29° $\mathcal{H}$ 54'28		minimum elong	10181 May 26 18:13	11° $\mathcal{I}$ 36'05	1°47'48
	10175 Apr 01 19:42	0° $\mathcal{Y}$		max. Earth dist.	10181 May 27 00:34	11° $\mathcal{I}$ 38'01	10.76335 AU
retrograde	10175 Jul 10 22:06	7° $\mathcal{Y}$ 22'12		morning rise	10181 Jun 12 12:11	13° $\mathcal{I}$ 37'37	
desc. node	10175 Sep 11 22:19	4° $\mathcal{Y}$ 25'38		retrograde	10181 Sep 22 23:22	21° $\mathcal{I}$ 00'10	
opposition	10175 Sep 17 05:01	4° $\mathcal{Y}$ 01'12	-0°00'27	opposition	10181 Dec 01 22:19	17° $\mathcal{I}$ 39'29	-2°16'54
min. Earth dist.	10175 Sep 17 08:26	4° $\mathcal{Y}$ 00'32	8.55855 AU	min. Earth dist.	10181 Dec 01 16:11	17° $\mathcal{I}$ 40'38	8.77145 AU
direct	10175 Nov 26 04:28	0° $\mathcal{Y}$ 36'22		direct	10182 Feb 09 15:18	14° $\mathcal{I}$ 19'23	
evening set	10176 Mar 09 14:12	8° $\mathcal{Y}$ 15'35		evening set	10182 May 22 04:44	21° $\mathcal{I}$ 37'48	
conjunction	10176 Mar 26 18:23	10° $\mathcal{Y}$ 22'09	-0°13'13	conjunction	10182 Jun 07 22:08	23° $\mathcal{I}$ 38'58	-1°54'12
minimum elong	10176 Mar 26 18:22	10° $\mathcal{Y}$ 22'09	0°13'15	minimum elong	10182 Jun 07 22:07	23° $\mathcal{I}$ 38'58	1°54'38
behind sun begin	10176 Mar 26 14:12	10° $\mathcal{Y}$ 20'52		max. Earth dist.	10182 Jun 08 05:06	23° $\mathcal{I}$ 41'05	10.77418 AU
behind sun end	10176 Mar 26 22:33	10° $\mathcal{Y}$ 23'26		morning rise	10182 Jun 24 16:30	25° $\mathcal{I}$ 40'26	
max. Earth dist.	10176 Mar 26 14:52	10° $\mathcal{Y}$ 21'05	10.58328 AU		10182 Aug 03 22:19	0° $\mathcal{E}$	
morning rise	10176 Apr 12 19:33	12° $\mathcal{Y}$ 27'52		retrograde	10182 Oct 05 13:42	3° $\mathcal{E}$ 04'07	
retrograde	10176 Jul 22 18:06	19° $\mathcal{Y}$ 53'11			10182 Dec 10 22:48	30° $\mathcal{R}$ $\mathcal{I}$	
opposition	10176 Sep 29 07:55	16° $\mathcal{Y}$ 32'35	-0°31'25	opposition	10182 Dec 14 16:54	29° $\mathcal{I}$ 43'00	-2°22'12
min. Earth dist.	10176 Sep 29 09:52	16° $\mathcal{Y}$ 32'13	8.60734 AU	min. Earth dist.	10182 Dec 14 10:35	29° $\mathcal{I}$ 44'12	8.77678 AU
direct	10176 Dec 08 08:10	13° $\mathcal{Y}$ 08'41		direct	10183 Feb 22 04:01	26° $\mathcal{I}$ 23'14	
evening set	10177 Mar 22 08:53	20° $\mathcal{Y}$ 43'41			10183 May 01 00:23	0° $\mathcal{E}$	
				evening set	10183 Jun 03 08:38	3° $\mathcal{E}$ 40'03	
conjunction	10177 Apr 08 10:19	22° $\mathcal{Y}$ 48'56	-0°37'42				
minimum elong	10177 Apr 08 10:18	22° $\mathcal{Y}$ 48'55	0°37'51	conjunction	10183 Jun 20 02:26	5° $\mathcal{E}$ 41'16	-1°55'58
max. Earth dist.	10177 Apr 08 08:34	22° $\mathcal{Y}$ 48'23	10.63077 AU	minimum elong	10183 Jun 20 02:26	5° $\mathcal{E}$ 41'17	1°56'25
morning rise	10177 Apr 25 09:16	24° $\mathcal{Y}$ 53'29		max. Earth dist.	10183 Jun 20 09:38	5° $\mathcal{E}$ 43'28	10.77351 AU
	10177 Jun 12 22:44	0° $\mathcal{B}$		morning rise	10183 Jul 06 22:00	7° $\mathcal{E}$ 43'00	
retrograde	10177 Aug 04 10:44	2° $\mathcal{B}$ 17'00		retrograde	10183 Oct 18 04:32	15° $\mathcal{E}$ 08'22	
	10177 Sep 28 07:19	30° $\mathcal{R}$ $\mathcal{Y}$		opposition	10183 Dec 27 10:42	11° $\mathcal{E}$ 46'44	-2°21'14
opposition	10177 Oct 12 09:04	28° $\mathcal{Y}$ 56'41	-1°00'34	min. Earth dist.	10183 Dec 27 04:05	11° $\mathcal{E}$ 48'00	8.77012 AU
min. Earth dist.	10177 Oct 12 09:52	28° $\mathcal{Y}$ 56'32	8.65330 AU	direct	10184 Mar 05 17:28	8° $\mathcal{E}$ 27'06	
direct	10177 Dec 21 11:02	25° $\mathcal{Y}$ 33'42		evening set	10184 Jun 14 12:52	15° $\mathcal{E}$ 43'08	
	10178 Mar 07 20:26	0° $\mathcal{B}$					
evening set	10178 Apr 03 23:31	3° $\mathcal{B}$ 04'38		conjunction	10184 Jul 01 08:01	17° $\mathcal{E}$ 44'48	-1°52'38
				minimum elong	10184 Jul 01 08:02	17° $\mathcal{E}$ 44'48	1°53'05
conjunction	10178 Apr 20 22:18	5° $\mathcal{B}$ 08'38	-1°00'15	max. Earth dist.	10184 Jul 01 16:06	17° $\mathcal{E}$ 47'15	10.76103 AU
minimum elong	10178 Apr 20 22:17	5° $\mathcal{B}$ 08'38	1°00'29	morning rise	10184 Jul 18 05:24	19° $\mathcal{E}$ 47'06	
max. Earth dist.	10178 Apr 20 21:53	5° $\mathcal{B}$ 08'31	10.67431 AU	retrograde	10184 Oct 29 22:29	27° $\mathcal{E}$ 14'40	

opposition	10185 Jan 08 04:32	23° $\overline{52}$ '25	-2°14'02	max. Earth dist.	10190 Sep 14 19:24	1° $\overline{50}$ '25	10.52168 AU
min. Earth dist.	10185 Jan 07 21:04	23° $\overline{53}$ '50	8.75193 AU	morning rise	10190 Oct 02 05:05	3° $\overline{58}$ '31	
direct	10185 Mar 18 05:09	20° $\overline{32}$ '45		asc. node	10190 Nov 18 04:43	9° $\overline{00}$ '26	
evening set	10185 Jun 26 18:21	27° $\overline{48}$ '44		retrograde	10191 Jan 15 05:45	11° $\overline{43}$ '00	
				opposition	10191 Mar 25 07:03	8° $\overline{16}$ '49	0°10'43
conjunction	10185 Jul 13 15:35	29° $\overline{51}$ '08	-1°44'18	min. Earth dist.	10191 Mar 25 02:48	8° $\overline{17}$ '39	8.49660 AU
minimum elong	10185 Jul 13 15:36	29° $\overline{51}$ '08	1°44'43	direct	10191 May 31 22:44	4° $\overline{53}$ '40	
max. Earth dist.	10185 Jul 14 00:51	29° $\overline{53}$ '57	10.73783 AU	evening set	10191 Sep 10 07:22	12° $\overline{25}$ '14	
	10185 Jul 14 20:44	0° $\overline{0}$					
morning rise	10185 Jul 30 15:23	1° $\overline{54}$ '19		conjunction	10191 Sep 27 22:27	14° $\overline{35}$ '30	0°21'19
retrograde	10185 Nov 11 17:57	9° $\overline{24}$ '25		minimum elong	10191 Sep 27 22:26	14° $\overline{35}$ '30	0°21'25
opposition	10186 Jan 20 22:39	6° $\overline{01}$ '27	-2°00'50	max. Earth dist.	10191 Sep 28 02:21	14° $\overline{36}$ '42	10.47216 AU
min. Earth dist.	10186 Jan 20 14:33	6° $\overline{03}$ '00	8.72371 AU	morning rise	10191 Oct 15 16:17	16° $\overline{46}$ '39	
direct	10186 Mar 30 16:30	2° $\overline{41}$ '35		retrograde	10192 Jan 28 15:05	24° $\overline{33}$ '44	
evening set	10186 Jul 09 02:18	9° $\overline{58}$ '16		opposition	10192 Apr 06 08:42	21° $\overline{07}$ '14	0°42'08
				min. Earth dist.	10192 Apr 06 06:13	21° $\overline{07}$ '44	8.44851 AU
conjunction	10186 Jul 26 02:05	12° $\overline{01}$ '41	-1°31'14	direct	10192 Jun 12 22:28	17° $\overline{43}$ '14	
minimum elong	10186 Jul 26 02:08	12° $\overline{01}$ '41	1°31'37	evening set	10192 Sep 22 19:18	25° $\overline{19}$ '31	
max. Earth dist.	10186 Jul 26 11:13	12° $\overline{04}$ '27	10.70555 AU				
morning rise	10186 Aug 12 04:58	14° $\overline{06}$ '01		conjunction	10192 Oct 10 12:21	27° $\overline{30}$ '58	0°46'08
	10186 Aug 19 20:15	15° $\overline{0}$		minimum elong	10192 Oct 10 12:19	27° $\overline{30}$ '57	0°46'19
retrograde	10186 Nov 24 15:46	21° $\overline{38}$ '50		max. Earth dist.	10192 Oct 10 13:27	27° $\overline{31}$ '19	10.42591 AU
opposition	10187 Feb 02 17:12	18° $\overline{15}$ '07	-1°42'07	morning rise	10192 Oct 28 07:46	29° $\overline{43}$ '09	
min. Earth dist.	10187 Feb 02 09:38	18° $\overline{16}$ '34	8.68721 AU		10192 Oct 30 15:14	0° $\overline{0}$	
	10187 Apr 02 05:07	15° $\overline{38}$ ' $\overline{0}$		retrograde	10193 Feb 10 02:37	7° $\overline{32}$ '25	
direct	10187 Apr 12 04:27	14° $\overline{54}$ '49		opposition	10193 Apr 19 12:27	4° $\overline{05}$ '48	1°11'44
	10187 Apr 22 02:47	15° $\overline{0}$		min. Earth dist.	10193 Apr 19 12:11	4° $\overline{05}$ '52	8.40505 AU
evening set	10187 Jul 21 13:24	22° $\overline{13}$ '01		direct	10193 Jun 26 01:37	0° $\overline{40}$ '56	
				evening set	10193 Oct 06 12:15	8° $\overline{22}$ '04	
conjunction	10187 Aug 07 16:10	24° $\overline{17}$ '40	-1°13'56				
minimum elong	10187 Aug 07 16:13	24° $\overline{17}$ '40	1°14'15	conjunction	10193 Oct 24 06:45	10° $\overline{34}$ '30	1°08'48
max. Earth dist.	10187 Aug 08 00:19	24° $\overline{20}$ '09	10.66593 AU	minimum elong	10193 Oct 24 06:42	10° $\overline{34}$ '29	1°09'05
morning rise	10187 Aug 24 22:30	26° $\overline{23}$ '19		max. Earth dist.	10193 Oct 24 05:30	10° $\overline{34}$ '07	10.38530 AU
	10187 Sep 26 09:18	0° $\overline{0}$		morning rise	10193 Nov 11 02:58	12° $\overline{47}$ '28	
retrograde	10187 Dec 07 15:25	3° $\overline{59}$ '00			10193 Nov 29 18:21	15° $\overline{0}$	
opposition	10188 Feb 15 12:41	0° $\overline{34}$ '34	-1°18'32	retrograde	10194 Feb 23 16:16	20° $\overline{38}$ '21	
min. Earth dist.	10188 Feb 15 06:08	0° $\overline{35}$ '50	8.64423 AU	opposition	10194 May 02 18:09	17° $\overline{11}$ '47	1°37'55
	10188 Feb 23 00:13	30° $\overline{38}$ ' $\overline{0}$		min. Earth dist.	10194 May 02 19:33	17° $\overline{11}$ '31	8.36840 AU
direct	10188 Apr 23 17:27	27° $\overline{13}$ '41			10194 Jun 01 11:54	15° $\overline{38}$ ' $\overline{0}$	
	10188 Jun 20 15:18	0° $\overline{0}$		direct	10194 Jul 09 07:52	13° $\overline{46}$ '08	
evening set	10188 Aug 02 04:20	4° $\overline{34}$ '12			10194 Aug 15 19:01	15° $\overline{0}$	
				evening set	10194 Oct 20 09:43	21° $\overline{31}$ '59	
conjunction	10188 Aug 19 10:22	6° $\overline{40}$ '12	-0°53'05				
minimum elong	10188 Aug 19 10:24	6° $\overline{40}$ '12	0°53'19	conjunction	10194 Nov 07 05:02	23° $\overline{45}$ '08	1°28'03
max. Earth dist.	10188 Aug 19 17:41	6° $\overline{42}$ '26	10.62072 AU	minimum elong	10194 Nov 07 04:59	23° $\overline{45}$ '08	1°28'24
morning rise	10188 Sep 05 20:07	8° $\overline{47}$ '17		max. Earth dist.	10194 Nov 07 02:01	23° $\overline{44}$ '12	10.35246 AU
retrograde	10188 Dec 19 16:18	16° $\overline{25}$ '57		morning rise	10194 Nov 25 01:10	25° $\overline{58}$ '35	
opposition	10189 Feb 27 09:20	13° $\overline{00}$ '50	-0°51'04		10194 Dec 30 10:15	0° $\overline{37}$ ' $\overline{0}$	
min. Earth dist.	10189 Feb 27 03:37	13° $\overline{01}$ '57	8.59672 AU	retrograde	10195 Mar 09 06:29	3° $\overline{50}$ '22	
direct	10189 May 06 09:48	9° $\overline{39}$ '17		opposition	10195 May 16 01:39	0° $\overline{24}$ '03	1°59'09
evening set	10189 Aug 14 23:59	17° $\overline{02}$ '49		min. Earth dist.	10195 May 16 04:11	0° $\overline{23}$ '33	8.34055 AU
					10195 May 21 01:28	30° $\overline{38}$ ' $\overline{0}$	
conjunction	10189 Sep 01 09:24	19° $\overline{10}$ '17	-0°29'33	direct	10195 Jul 22 18:36	26° $\overline{57}$ '44	
minimum elong	10189 Sep 01 09:25	19° $\overline{10}$ '17	0°29'41		10195 Sep 21 03:19	0° $\overline{37}$ ' $\overline{0}$	
max. Earth dist.	10189 Sep 01 16:26	19° $\overline{12}$ '26	10.57195 AU	evening set	10195 Nov 03 10:29	4° $\overline{47}$ '51	
morning rise	10189 Sep 18 22:18	21° $\overline{18}$ '48					
retrograde	10190 Jan 01 21:00	29° $\overline{00}$ '28		conjunction	10195 Nov 21 06:02	7° $\overline{01}$ '27	1°42'44
opposition	10190 Mar 12 07:19	25° $\overline{34}$ '44	-0°20'51	minimum elong	10195 Nov 21 06:00	7° $\overline{01}$ '26	1°43'09
min. Earth dist.	10190 Mar 12 02:03	25° $\overline{35}$ '46	8.54680 AU	max. Earth dist.	10195 Nov 21 01:43	7° $\overline{00}$ '05	10.32937 AU
direct	10190 May 19 03:46	22° $\overline{12}$ '25		morning rise	10195 Dec 09 01:26	9° $\overline{15}$ '04	
evening set	10190 Aug 28 00:54	29° $\overline{39}$ '40		retrograde	10196 Mar 21 21:30	17° $\overline{06}$ '57	
	10190 Aug 30 19:58	0° $\overline{4}$		opposition	10196 May 28 10:51	13° $\overline{41}$ '03	2°14'08
conjunction	10190 Sep 14 13:26	1° $\overline{48}$ '36	-0°04'25	min. Earth dist.	10196 May 28 14:16	13° $\overline{40}$ '22	8.32319 AU
minimum elong	10190 Sep 14 13:27	1° $\overline{48}$ '36	0°04'26	direct	10196 Aug 04 07:21	10° $\overline{14}$ '14	
behind sun begin	10190 Sep 14 06:22	1° $\overline{46}$ '26		evening set	10196 Nov 16 13:13	18° $\overline{07}$ '46	
behind sun end	10190 Sep 14 20:31	1° $\overline{50}$ '45		conjunction	10196 Dec 04 08:29	20° $\overline{21}$ '32	1°51'59



minimum elong	10196 Dec 04 08:27	20° $\mathbb{A}$ 21'32	1°52'26	conjunction	10203 Feb 25 06:45	9° $\mathbb{H}$ 34'53	0°47'55
max. Earth dist.	10196 Dec 04 02:50	20° $\mathbb{A}$ 19'45	10.31747 AU	minimum elong	10203 Feb 25 06:47	9° $\mathbb{H}$ 34'53	0°48'07
morning rise	10196 Dec 22 02:42	22° $\mathbb{A}$ 35'04		max. Earth dist.	10203 Feb 24 22:50	9° $\mathbb{H}$ 32'25	10.46892 AU
	10197 Mar 13 14:21	0° $\mathbb{B}$		morning rise	10203 Mar 14 13:31	11° $\mathbb{H}$ 43'35	
retrograde	10197 Apr 04 13:21	0° $\mathbb{B}$ 26'07		retrograde	10203 Jun 23 15:01	19° $\mathbb{H}$ 15'55	
	10197 Apr 26 13:48	30° $\mathbb{R}$ $\mathbb{A}$		opposition	10203 Aug 30 10:33	15° $\mathbb{H}$ 54'39	0°44'35
opposition	10197 Jun 10 21:23	27° $\mathbb{A}$ 00'48	2°21'58	min. Earth dist.	10203 Aug 30 16:55	15° $\mathbb{H}$ 53'24	8.49153 AU
min. Earth dist.	10197 Jun 11 02:09	26° $\mathbb{A}$ 59'51	8.31733 AU	direct	10203 Nov 08 02:19	12° $\mathbb{H}$ 28'57	
direct	10197 Aug 17 21:46	23° $\mathbb{A}$ 33'38		evening set	10204 Feb 21 03:08	20° $\mathbb{H}$ 14'34	
	10197 Nov 18 09:06	0° $\mathbb{B}$					
evening set	10197 Nov 30 16:51	1° $\mathbb{B}$ 29'33		conjunction	10204 Mar 09 11:02	22° $\mathbb{H}$ 23'04	0°23'27
				minimum elong	10204 Mar 09 11:03	22° $\mathbb{H}$ 23'05	0°23'34
conjunction	10197 Dec 18 11:17	3° $\mathbb{B}$ 43'13	1°55'14	max. Earth dist.	10204 Mar 09 03:25	22° $\mathbb{H}$ 20'42	10.51411 AU
minimum elong	10197 Dec 18 11:17	3° $\mathbb{B}$ 43'13	1°55'41	morning rise	10204 Mar 26 15:36	24° $\mathbb{H}$ 30'37	
max. Earth dist.	10197 Dec 18 03:50	3° $\mathbb{B}$ 40'52	10.31745 AU		10204 May 18 03:23	0° $\mathbb{Y}$	
morning rise	10198 Jan 05 04:02	5° $\mathbb{B}$ 56'26		retrograde	10204 Jul 05 14:17	1° $\mathbb{Y}$ 59'58	
retrograde	10198 Apr 18 04:25	13° $\mathbb{B}$ 45'38			10204 Aug 24 18:34	30° $\mathbb{R}$ $\mathbb{H}$	
opposition	10198 Jun 24 08:40	10° $\mathbb{B}$ 21'03	2°22'10	opposition	10204 Sep 11 16:31	28° $\mathbb{H}$ 39'09	0°13'32
min. Earth dist.	10198 Jun 24 14:55	10° $\mathbb{B}$ 19'47	8.32333 AU	min. Earth dist.	10204 Sep 11 22:35	28° $\mathbb{H}$ 37'58	8.53669 AU
direct	10198 Aug 31 14:23	6° $\mathbb{B}$ 53'42		direct	10204 Nov 20 12:30	25° $\mathbb{H}$ 14'11	
evening set	10198 Dec 14 19:32	14° $\mathbb{B}$ 50'45			10205 Feb 07 18:43	0° $\mathbb{Y}$	
				desc. node	10205 Feb 20 22:13	1° $\mathbb{Y}$ 28'15	
conjunction	10199 Jan 01 12:48	17° $\mathbb{B}$ 04'03	1°52'17	evening set	10205 Mar 05 05:12	2° $\mathbb{Y}$ 55'53	
minimum elong	10199 Jan 01 12:49	17° $\mathbb{B}$ 04'03	1°52'44				
max. Earth dist.	10199 Jan 01 03:54	17° $\mathbb{B}$ 01'14	10.32936 AU	conjunction	10205 Mar 22 10:28	5° $\mathbb{Y}$ 03'08	-0°02'01
morning rise	10199 Jan 19 03:54	19° $\mathbb{B}$ 16'42		minimum elong	10205 Mar 22 10:27	5° $\mathbb{Y}$ 03'08	0°02'01
retrograde	10199 May 01 15:40	27° $\mathbb{B}$ 03'15		behind sun begin	10205 Mar 22 03:20	5° $\mathbb{Y}$ 00'57	
opposition	10199 Jul 07 20:20	23° $\mathbb{B}$ 39'25	2°14'44	behind sun end	10205 Mar 22 17:34	5° $\mathbb{Y}$ 05'19	
min. Earth dist.	10199 Jul 08 03:29	23° $\mathbb{B}$ 37'59	8.34085 AU	max. Earth dist.	10205 Mar 22 03:33	5° $\mathbb{Y}$ 01'01	10.55915 AU
direct	10199 Sep 14 10:05	20° $\mathbb{B}$ 12'04		morning rise	10205 Apr 08 12:50	7° $\mathbb{Y}$ 09'31	
evening set	10199 Dec 28 19:40	28° $\mathbb{B}$ 08'53		retrograde	10205 Jul 18 10:41	14° $\mathbb{Y}$ 36'24	
	10200 Jan 12 15:12	0° $\mathbb{A}$		opposition	10205 Sep 24 21:00	11° $\mathbb{Y}$ 15'53	-0°17'50
conjunction	10200 Jan 15 11:35	0° $\mathbb{A}$ 21'33	1°43'22	min. Earth dist.	10205 Sep 25 01:33	11° $\mathbb{Y}$ 15'01	8.58114 AU
minimum elong	10200 Jan 15 11:37	0° $\mathbb{A}$ 21'34	1°43'46	direct	10205 Dec 03 20:22	7° $\mathbb{Y}$ 51'42	
max. Earth dist.	10200 Jan 15 02:00	0° $\mathbb{A}$ 18'32	10.35248 AU	evening set	10206 Mar 18 02:35	15° $\mathbb{Y}$ 29'19	
morning rise	10200 Feb 02 00:51	2° $\mathbb{A}$ 33'26		conjunction	10206 Apr 04 05:13	17° $\mathbb{Y}$ 35'18	-0°27'04
retrograde	10200 May 15 00:50	10° $\mathbb{A}$ 16'44		minimum elong	10206 Apr 04 05:12	17° $\mathbb{Y}$ 35'18	0°27'10
opposition	10200 Jul 21 07:36	6° $\mathbb{A}$ 53'37	2°00'10	max. Earth dist.	10206 Apr 04 00:30	17° $\mathbb{Y}$ 33'51	10.60262 AU
min. Earth dist.	10200 Jul 21 14:47	6° $\mathbb{A}$ 52'11	8.36877 AU	morning rise	10206 Apr 21 05:19	19° $\mathbb{Y}$ 40'32	
direct	10200 Sep 28 05:06	3° $\mathbb{A}$ 26'27		retrograde	10206 Jul 31 05:07	27° $\mathbb{Y}$ 05'34	
evening set	10201 Jan 11 16:27	11° $\mathbb{A}$ 21'44		opposition	10206 Oct 07 23:50	23° $\mathbb{Y}$ 45'10	-0°48'03
				min. Earth dist.	10206 Oct 08 02:08	23° $\mathbb{Y}$ 44'44	8.62334 AU
conjunction	10201 Jan 29 06:49	13° $\mathbb{A}$ 33'35	1°29'02	direct	10206 Dec 17 02:09	20° $\mathbb{Y}$ 21'45	
minimum elong	10201 Jan 29 06:51	13° $\mathbb{A}$ 33'36	1°29'23	evening set	10207 Mar 30 19:44	27° $\mathbb{Y}$ 55'18	
max. Earth dist.	10201 Jan 28 21:32	13° $\mathbb{A}$ 30'40	10.38522 AU				
	10201 Feb 09 18:23	15° $\mathbb{A}$		conjunction	10207 Apr 16 19:53	0° $\mathbb{B}$ 00'05	-0°50'39
morning rise	10201 Feb 15 18:04	15° $\mathbb{A}$ 44'30		minimum elong	10207 Apr 16 19:51	0° $\mathbb{B}$ 00'04	0°50'51
retrograde	10201 May 28 08:32	23° $\mathbb{A}$ 24'06			10207 Apr 16 19:38	0° $\mathbb{B}$	
opposition	10201 Aug 03 17:48	20° $\mathbb{A}$ 01'38	1°39'25	max. Earth dist.	10207 Apr 16 17:57	29° $\mathbb{Y}$ 59'29	10.64291 AU
min. Earth dist.	10201 Aug 04 00:27	20° $\mathbb{A}$ 00'19	8.40509 AU	morning rise	10207 May 03 17:51	2° $\mathbb{B}$ 04'14	
direct	10201 Oct 11 22:05	16° $\mathbb{A}$ 34'50		retrograde	10207 Aug 12 23:37	9° $\mathbb{B}$ 27'57	
evening set	10202 Jan 25 08:54	24° $\mathbb{A}$ 27'30		opposition	10207 Oct 21 00:50	6° $\mathbb{B}$ 07'32	-1°15'44
				min. Earth dist.	10207 Oct 21 01:01	6° $\mathbb{B}$ 07'30	8.66164 AU
conjunction	10202 Feb 11 21:27	26° $\mathbb{A}$ 38'21	1°10'11	direct	10207 Dec 30 02:51	2° $\mathbb{B}$ 44'49	
minimum elong	10202 Feb 11 21:29	26° $\mathbb{A}$ 38'22	1°10'28	evening set	10208 Apr 11 09:06	10° $\mathbb{B}$ 14'31	
max. Earth dist.	10202 Feb 11 13:00	26° $\mathbb{A}$ 35'43	10.42508 AU				
morning rise	10202 Mar 01 06:29	28° $\mathbb{A}$ 48'12		conjunction	10208 Apr 28 06:55	12° $\mathbb{B}$ 18'11	-1°11'44
	10202 Mar 11 04:11	0° $\mathbb{H}$		minimum elong	10208 Apr 28 06:53	12° $\mathbb{B}$ 18'10	1°12'02
retrograde	10202 Jun 10 13:36	6° $\mathbb{H}$ 24'00		max. Earth dist.	10208 Apr 28 07:22	12° $\mathbb{B}$ 18'19	10.67832 AU
opposition	10202 Aug 17 02:54	3° $\mathbb{H}$ 02'10	1°13'44	morning rise	10208 May 15 03:06	14° $\mathbb{B}$ 21'25	
min. Earth dist.	10202 Aug 17 09:18	3° $\mathbb{H}$ 00'54	8.44700 AU		10208 May 20 12:40	15° $\mathbb{B}$	
	10202 Oct 03 18:28	30° $\mathbb{R}$ $\mathbb{A}$		retrograde	10208 Aug 24 15:41	21° $\mathbb{B}$ 44'24	
direct	10202 Oct 25 12:58	29° $\mathbb{A}$ 35'51		opposition	10208 Nov 02 00:19	18° $\mathbb{B}$ 23'49	-1°39'42
	10202 Nov 16 06:06	0° $\mathbb{H}$		min. Earth dist.	10208 Nov 01 23:08	18° $\mathbb{B}$ 24'03	8.69434 AU
evening set	10203 Feb 07 20:24	7° $\mathbb{H}$ 25'10		direct	10209 Jan 11 00:29	15° $\mathbb{B}$ 01'45	
				evening set	10209 Apr 23 19:13	22° $\mathbb{B}$ 27'56	

conjunction	10209 May 10 14:56	24° <b>8</b> 30'39	-1°29'25	conjunction	10215 Jul 22 04:44	7° <b>0</b> 09'08	-1°37'17
minimum elong	10209 May 10 14:53	24° <b>8</b> 30'38	1°29'47	minimum elong	10215 Jul 22 04:47	7° <b>0</b> 09'09	1°37'40
max. Earth dist.	10209 May 10 16:48	24° <b>8</b> 31'13	10.70735 AU	max. Earth dist.	10215 Jul 22 14:32	7° <b>0</b> 12'07	10.70305 AU
morning rise	10209 May 27 09:54	26° <b>8</b> 33'09		morning rise	10215 Aug 08 06:27	9° <b>0</b> 13'10	
	10209 Jun 27 05:51	0° <b>II</b>			10215 Oct 04 20:15	15° <b>0</b>	
retrograde	10209 Sep 06 06:04	3° <b>II</b> 56'01		retrograde	10215 Nov 20 12:42	16° <b>0</b> 45'31	
opposition	10209 Nov 14 22:18	0° <b>II</b> 35'12	-1°59'01		10216 Jan 07 09:55	15° <b>R</b> <b>0</b>	
min. Earth dist.	10209 Nov 14 19:47	0° <b>II</b> 35'40	8.72010 AU	opposition	10216 Jan 29 16:53	13° <b>0</b> 21'48	-1°50'38
	10209 Nov 22 16:54	30° <b>R</b> <b>8</b>		min. Earth dist.	10216 Jan 29 08:20	13° <b>0</b> 23'26	8.68949 AU
direct	10210 Jan 23 20:43	27° <b>8</b> 13'40		direct	10216 Apr 07 07:36	10° <b>0</b> 01'26	
	10210 Mar 23 20:30	0° <b>II</b>			10216 Jun 26 10:42	15° <b>0</b>	
evening set	10210 May 06 02:44	4° <b>II</b> 36'49		evening set	10216 Jul 16 16:03	17° <b>0</b> 19'35	
conjunction	10210 May 22 20:59	6° <b>II</b> 38'50	-1°43'00	conjunction	10216 Aug 02 17:39	19° <b>0</b> 23'50	-1°21'39
minimum elong	10210 May 22 20:58	6° <b>II</b> 38'49	1°43'25	minimum elong	10216 Aug 02 17:41	19° <b>0</b> 23'51	1°21'59
max. Earth dist.	10210 May 23 00:36	6° <b>II</b> 39'56	10.72892 AU	max. Earth dist.	10216 Aug 03 04:17	19° <b>0</b> 27'05	10.67256 AU
morning rise	10210 Jun 08 15:21	8° <b>II</b> 40'51		morning rise	10216 Aug 19 22:27	21° <b>0</b> 29'04	
retrograde	10210 Sep 18 20:59	16° <b>II</b> 04'11		retrograde	10216 Dec 02 13:12	29° <b>0</b> 04'04	
opposition	10210 Nov 27 18:54	12° <b>II</b> 42'59	-2°12'54	opposition	10217 Feb 10 12:21	25° <b>0</b> 39'48	-1°28'55
min. Earth dist.	10210 Nov 27 14:35	12° <b>II</b> 43'48	8.73785 AU	min. Earth dist.	10217 Feb 10 03:25	25° <b>0</b> 41'32	8.65548 AU
direct	10211 Feb 05 14:02	9° <b>II</b> 21'57		direct	10217 Apr 19 19:51	22° <b>0</b> 19'11	
evening set	10211 May 18 08:14	16° <b>II</b> 42'33		evening set	10217 Jul 29 05:33	29° <b>0</b> 39'03	
					10217 Aug 01 03:14	0° <b>II</b>	
conjunction	10211 Jun 04 01:55	18° <b>II</b> 44'10	-1°51'56	conjunction	10217 Aug 15 10:20	1° <b>II</b> 44'34	-1°02'09
minimum elong	10211 Jun 04 01:54	18° <b>II</b> 44'10	1°52'23	minimum elong	10217 Aug 15 10:22	1° <b>II</b> 44'34	1°02'25
max. Earth dist.	10211 Jun 04 07:56	18° <b>II</b> 46'01	10.74205 AU	max. Earth dist.	10217 Aug 15 20:53	1° <b>II</b> 47'47	10.63608 AU
morning rise	10211 Jun 20 20:14	20° <b>II</b> 45'59		morning rise	10217 Sep 01 18:29	3° <b>II</b> 51'06	
retrograde	10211 Oct 01 11:53	28° <b>II</b> 10'20		retrograde	10217 Dec 15 14:28	11° <b>II</b> 28'52	
opposition	10211 Dec 10 14:23	24° <b>II</b> 48'41	-2°20'51	opposition	10218 Feb 23 08:51	8° <b>II</b> 04'07	-1°02'53
min. Earth dist.	10211 Dec 10 07:54	24° <b>II</b> 49'55	8.74661 AU	min. Earth dist.	10218 Feb 23 00:25	8° <b>II</b> 05'45	8.61633 AU
direct	10212 Feb 18 05:12	21° <b>II</b> 28'04		direct	10218 May 02 10:22	4° <b>II</b> 43'05	
evening set	10212 May 29 12:53	28° <b>II</b> 46'47		evening set	10218 Aug 10 23:39	12° <b>II</b> 05'28	
	10212 Jun 08 15:58	0° <b>III</b>					
conjunction	10212 Jun 15 06:42	0° <b>III</b> 48'18	-1°55'54	conjunction	10218 Aug 28 07:36	14° <b>II</b> 12'20	-0°39'35
minimum elong	10212 Jun 15 06:42	0° <b>III</b> 48'18	1°56'21	minimum elong	10218 Aug 28 07:37	14° <b>II</b> 12'20	0°39'46
max. Earth dist.	10212 Jun 15 14:54	0° <b>III</b> 50'48	10.74597 AU	max. Earth dist.	10218 Aug 28 16:36	14° <b>II</b> 15'05	10.59531 AU
morning rise	10212 Jul 02 01:40	2° <b>III</b> 50'13		morning rise	10218 Sep 14 19:08	16° <b>II</b> 20'15	
retrograde	10212 Oct 13 04:40	10° <b>III</b> 16'02		retrograde	10218 Dec 28 18:34	24° <b>II</b> 00'44	
opposition	10212 Dec 22 09:08	6° <b>III</b> 53'55	-2°22'34	opposition	10219 Mar 08 06:30	20° <b>II</b> 35'34	-0°33'38
min. Earth dist.	10212 Dec 22 01:22	6° <b>III</b> 55'23	8.74588 AU	min. Earth dist.	10219 Mar 07 23:41	20° <b>II</b> 36'54	8.57388 AU
direct	10213 Mar 01 18:40	3° <b>III</b> 33'34		direct	10219 May 15 03:02	17° <b>II</b> 13'59	
evening set	10213 Jun 10 17:30	10° <b>III</b> 51'02		evening set	10219 Aug 23 22:39	24° <b>II</b> 39'34	
conjunction	10213 Jun 27 12:08	12° <b>III</b> 52'48	-1°54'43	conjunction	10219 Sep 10 09:41	26° <b>II</b> 47'48	-0°14'58
minimum elong	10213 Jun 27 12:08	12° <b>III</b> 52'49	1°55'10	minimum elong	10219 Sep 10 09:41	26° <b>II</b> 47'48	0°15'02
max. Earth dist.	10213 Jun 27 21:11	12° <b>III</b> 55'34	10.74055 AU	behind sun begin	10219 Sep 10 07:13	26° <b>II</b> 47'03	
morning rise	10213 Jul 14 08:40	14° <b>III</b> 55'08		behind sun end	10219 Sep 10 12:10	26° <b>II</b> 48'34	
retrograde	10213 Oct 25 22:50	22° <b>III</b> 22'49		max. Earth dist.	10219 Sep 10 16:47	26° <b>II</b> 49'58	10.55210 AU
opposition	10214 Jan 04 03:43	19° <b>III</b> 00'12	-2°17'57	morning rise	10219 Sep 28 00:16	28° <b>II</b> 57'04	
min. Earth dist.	10214 Jan 03 19:32	19° <b>III</b> 01'45	8.73577 AU		10219 Oct 06 19:53	0° <b>III</b>	
direct	10214 Mar 14 05:27	15° <b>III</b> 39'59		retrograde	10220 Jan 11 01:12	6° <b>III</b> 40'09	
evening set	10214 Jun 22 22:51	22° <b>III</b> 56'55		opposition	10220 Mar 20 05:45	3° <b>III</b> 14'40	-0°02'28
				min. Earth dist.	10220 Mar 20 00:37	3° <b>III</b> 15'40	8.53004 AU
conjunction	10214 Jul 09 19:05	24° <b>III</b> 59'14	-1°48'27	asc. node	10220 Apr 18 09:44	1° <b>III</b> 07'34	
minimum elong	10214 Jul 09 19:07	24° <b>III</b> 59'15	1°48'52		10220 May 15 01:07	30° <b>R</b> <b>II</b>	
max. Earth dist.	10214 Jul 10 04:20	25° <b>III</b> 02'03	10.72606 AU	direct	10220 May 26 22:01	29° <b>II</b> 52'24	
morning rise	10214 Jul 26 18:01	27° <b>III</b> 02'18			10220 Jun 07 19:15	0° <b>III</b>	
	10214 Aug 21 23:27	0° <b>0</b>		evening set	10220 Sep 05 02:43	7° <b>III</b> 21'46	
retrograde	10214 Nov 07 16:12	4° <b>0</b> 32'11					
opposition	10215 Jan 16 22:14	1° <b>0</b> 09'01	-2°07'11	conjunction	10220 Sep 22 16:34	9° <b>III</b> 31'18	0°10'41
min. Earth dist.	10215 Jan 16 14:05	1° <b>0</b> 10'35	8.71670 AU	minimum elong	10220 Sep 22 16:34	9° <b>III</b> 31'18	0°10'44
	10215 Feb 01 07:17	30° <b>R</b> <b>III</b>		behind sun begin	10220 Sep 22 11:03	9° <b>III</b> 29'37	
direct	10215 Mar 26 18:15	27° <b>III</b> 48'48		behind sun end	10220 Sep 22 22:04	9° <b>III</b> 32'59	
	10215 May 17 03:17	0° <b>0</b>		max. Earth dist.	10220 Sep 22 22:09	9° <b>III</b> 33'00	10.50822 AU
evening set	10215 Jul 05 06:06	5° <b>0</b> 05'58		morning rise	10220 Oct 10 09:34	11° <b>III</b> 41'47	
				retrograde	10221 Jan 23 08:38	19° <b>III</b> 27'17	

opposition	10221 Apr 02 06:37	16° $\Omega$ 01'30	0°29'09	retrograde	10227 Apr 13 15:56	8° $\Omega$ 19'12	
min. Earth dist.	10221 Apr 02 02:52	16° $\Omega$ 02'15	8.48652 AU	opposition	10227 Jun 19 23:11	4° $\Omega$ 54'24	2°22'56
direct	10221 Jun 08 21:39	12° $\Omega$ 38'29		min. Earth dist.	10227 Jun 20 05:26	4° $\Omega$ 53'09	8.33245 AU
evening set	10221 Sep 18 12:12	20° $\Omega$ 12'03		direct	10227 Aug 27 04:31	1° $\Omega$ 27'11	
				evening set	10227 Dec 10 03:05	9° $\Omega$ 22'50	
conjunction	10221 Oct 06 04:27	22° $\Omega$ 22'47	0°35'57				
minimum elong	10221 Oct 06 04:25	22° $\Omega$ 22'46	0°36'05	conjunction	10227 Dec 27 20:55	11° $\Omega$ 36'05	1°54'17
max. Earth dist.	10221 Oct 06 08:16	22° $\Omega$ 23'58	10.46523 AU	minimum elong	10227 Dec 27 20:55	11° $\Omega$ 36'06	1°54'45
morning rise	10221 Oct 23 23:07	24° $\Omega$ 34'17		max. Earth dist.	10227 Dec 27 12:05	11° $\Omega$ 33'19	10.33388 AU
	10221 Dec 14 05:07	0° $\mathcal{M}$		morning rise	10228 Jan 14 12:38	13° $\Omega$ 48'47	
retrograde	10222 Feb 05 19:15	2° $\mathcal{M}$ 21'53		retrograde	10228 Apr 26 03:58	21° $\Omega$ 35'40	
	10222 Apr 01 17:16	30° $\mathcal{R}\Omega$		opposition	10228 Jul 02 09:44	18° $\Omega$ 11'24	2°18'48
opposition	10222 Apr 15 09:02	28° $\Omega$ 55'54	0°59'37	min. Earth dist.	10228 Jul 02 16:33	18° $\Omega$ 10'02	8.34089 AU
min. Earth dist.	10222 Apr 15 06:48	28° $\Omega$ 56'21	8.44466 AU	direct	10228 Sep 08 21:45	14° $\Omega$ 43'56	
direct	10222 Jun 21 22:55	25° $\Omega$ 32'03		evening set	10228 Dec 23 03:26	22° $\Omega$ 40'01	
	10222 Sep 04 14:50	0° $\mathcal{M}$					
evening set	10222 Oct 02 02:50	3° $\mathcal{M}$ 10'11		conjunction	10229 Jan 09 20:07	24° $\Omega$ 52'49	1°47'55
				minimum elong	10229 Jan 09 20:08	24° $\Omega$ 52'50	1°48'21
conjunction	10222 Oct 19 20:46	5° $\mathcal{M}$ 21'57	0°59'37	max. Earth dist.	10229 Jan 09 10:45	24° $\Omega$ 49'52	10.34791 AU
minimum elong	10222 Oct 19 20:44	5° $\mathcal{M}$ 21'56	0°59'51	morning rise	10229 Jan 27 10:03	27° $\Omega$ 04'52	
max. Earth dist.	10222 Oct 19 22:01	5° $\mathcal{M}$ 22'20	10.42446 AU		10229 Feb 21 05:50	0° $\approx$	
morning rise	10222 Nov 06 16:25	7° $\mathcal{M}$ 34'17		retrograde	10229 May 09 14:43	4° $\approx$ 48'52	
	10223 Jan 29 04:32	15° $\mathcal{M}$		opposition	10229 Jul 15 20:15	1° $\approx$ 25'11	2°07'18
retrograde	10223 Feb 19 08:40	15° $\mathcal{M}$ 23'35		min. Earth dist.	10229 Jul 16 03:47	1° $\approx$ 23'41	8.35993 AU
	10223 Mar 12 12:53	15° $\mathcal{R}\mathcal{M}$			10229 Aug 03 04:26	30° $\mathcal{R}\Omega$	
opposition	10223 Apr 28 13:26	11° $\mathcal{M}$ 57'36	1°27'20	direct	10229 Sep 22 14:29	27° $\Omega$ 57'39	
min. Earth dist.	10223 Apr 28 13:15	11° $\mathcal{M}$ 57'38	8.40601 AU		10229 Nov 11 01:58	0° $\approx$	
direct	10223 Jul 05 02:24	8° $\mathcal{M}$ 32'56		evening set	10230 Jan 06 00:58	5° $\approx$ 52'56	
	10223 Oct 05 10:11	15° $\mathcal{M}$					
evening set	10223 Oct 15 21:58	16° $\mathcal{M}$ 15'46		conjunction	10230 Jan 23 16:05	8° $\approx$ 05'04	1°35'53
				minimum elong	10230 Jan 23 16:07	8° $\approx$ 05'05	1°36'16
conjunction	10223 Nov 02 16:50	18° $\mathcal{M}$ 28'19	1°20'23	max. Earth dist.	10230 Jan 23 06:08	8° $\approx$ 01'56	10.37213 AU
minimum elong	10223 Nov 02 16:47	18° $\mathcal{M}$ 28'18	1°20'43	morning rise	10230 Feb 10 04:07	10° $\approx$ 16'18	
max. Earth dist.	10223 Nov 02 14:56	18° $\mathcal{M}$ 27'43	10.38807 AU		10230 Mar 24 21:02	15° $\approx$	
morning rise	10223 Nov 20 12:47	20° $\mathcal{M}$ 41'16		retrograde	10230 May 22 22:33	17° $\approx$ 56'54	
retrograde	10224 Mar 03 22:54	28° $\mathcal{M}$ 31'46			10230 Jul 23 18:01	15° $\mathcal{R}\approx$	
opposition	10224 May 10 19:47	25° $\mathcal{M}$ 05'54	1°50'45	opposition	10230 Jul 29 06:11	14° $\approx$ 33'50	1°49'10
min. Earth dist.	10224 May 10 21:57	25° $\mathcal{M}$ 05'28	8.37328 AU	min. Earth dist.	10230 Jul 29 14:22	14° $\approx$ 32'12	8.38849 AU
direct	10224 Jul 17 10:22	21° $\mathcal{M}$ 40'26		direct	10230 Oct 06 07:12	11° $\approx$ 06'27	
evening set	10224 Oct 28 20:55	29° $\mathcal{M}$ 27'44			10230 Dec 15 13:24	15° $\approx$	
	10224 Nov 02 05:31	0° $\mathcal{X}$		evening set	10231 Jan 19 18:31	18° $\approx$ 59'49	
conjunction	10224 Nov 15 16:09	1° $\mathcal{X}$ 40'51	1°37'04	conjunction	10231 Feb 06 07:48	21° $\approx$ 11'04	1°18'56
minimum elong	10224 Nov 15 16:07	1° $\mathcal{X}$ 40'50	1°37'28	minimum elong	10231 Feb 06 07:51	21° $\approx$ 11'05	1°19'15
max. Earth dist.	10224 Nov 15 11:20	1° $\mathcal{X}$ 39'20	10.35903 AU	max. Earth dist.	10231 Feb 05 21:29	21° $\approx$ 07'49	10.40523 AU
morning rise	10224 Dec 03 11:49	3° $\mathcal{X}$ 54'08		morning rise	10231 Feb 23 17:53	23° $\approx$ 21'21	
retrograde	10225 Mar 17 12:17	11° $\mathcal{X}$ 45'03			10231 May 03 00:21	0° $\mathcal{H}$	
opposition	10225 May 24 03:44	8° $\mathcal{X}$ 19'27	2°08'28	retrograde	10231 Jun 05 02:36	0° $\mathcal{H}$ 58'23	
min. Earth dist.	10225 May 24 08:02	8° $\mathcal{X}$ 18'35	8.34915 AU		10231 Jul 08 16:51	30° $\mathcal{R}\approx$	
direct	10225 Jul 30 22:20	4° $\mathcal{X}$ 53'14		opposition	10231 Aug 11 15:08	27° $\approx$ 35'53	1°25'32
evening set	10225 Nov 11 22:23	12° $\mathcal{X}$ 44'22		min. Earth dist.	10231 Aug 11 22:58	27° $\approx$ 34'20	8.42507 AU
				direct	10231 Oct 19 23:30	24° $\approx$ 08'52	
conjunction	10225 Nov 29 17:33	14° $\mathcal{X}$ 57'48	1°48'42		10232 Jan 16 13:32	0° $\mathcal{H}$	
minimum elong	10225 Nov 29 17:31	14° $\mathcal{X}$ 57'47	1°49'09	evening set	10232 Feb 02 07:23	1° $\mathcal{H}$ 59'23	
max. Earth dist.	10225 Nov 29 10:25	14° $\mathcal{X}$ 55'33	10.33960 AU				
morning rise	10225 Dec 17 12:21	17° $\mathcal{X}$ 11'08		conjunction	10232 Feb 19 18:41	4° $\mathcal{H}$ 09'35	0°58'04
retrograde	10226 Mar 31 02:20	25° $\mathcal{X}$ 01'35		minimum elong	10232 Feb 19 18:43	4° $\mathcal{H}$ 09'35	0°58'18
opposition	10226 Jun 06 13:01	21° $\mathcal{X}$ 36'20	2°19'26	max. Earth dist.	10232 Feb 19 09:12	4° $\mathcal{H}$ 06'37	10.44541 AU
min. Earth dist.	10226 Jun 06 18:44	21° $\mathcal{X}$ 35'12	8.33526 AU	morning rise	10232 Mar 08 02:41	6° $\mathcal{H}$ 18'48	
direct	10226 Aug 13 12:30	18° $\mathcal{X}$ 09'32		retrograde	10232 Jun 17 03:52	13° $\mathcal{H}$ 52'20	
evening set	10226 Nov 26 00:56	26° $\mathcal{X}$ 03'31		opposition	10232 Aug 23 22:41	10° $\mathcal{H}$ 30'22	0°57'47
				min. Earth dist.	10232 Aug 24 05:18	10° $\mathcal{H}$ 29'04	8.46767 AU
conjunction	10226 Dec 13 19:35	28° $\mathcal{X}$ 16'59	1°54'33	direct	10232 Nov 01 14:15	7° $\mathcal{H}$ 03'56	
minimum elong	10226 Dec 13 19:35	28° $\mathcal{X}$ 16'58	1°55'01	evening set	10233 Feb 14 15:36	14° $\mathcal{H}$ 50'55	
max. Earth dist.	10226 Dec 13 11:17	28° $\mathcal{X}$ 14'22	10.33102 AU				
	10226 Dec 27 11:50	0° $\Omega$		conjunction	10233 Mar 04 00:41	16° $\mathcal{H}$ 59'57	0°34'28
morning rise	10226 Dec 31 13:00	0° $\Omega$ 30'06		minimum elong	10233 Mar 04 00:42	16° $\mathcal{H}$ 59'57	0°34'37

max. Earth dist.	10233 Mar 03 16:55	16° $\text{X}$ 57'32	10.49048 AU	direct	10239 Jan 18 10:47	21° $\text{S}$ 57'56	
morning rise	10233 Mar 21 06:22	19° $\text{X}$ 07'59		evening set	10239 Apr 30 21:16	29° $\text{S}$ 21'42	
retrograde	10233 Jun 30 04:31	26° $\text{X}$ 38'15			10239 May 06 04:44	0° $\text{II}$	
opposition	10233 Sep 06 04:36	23° $\text{X}$ 16'49	0°27'27				
min. Earth dist.	10233 Sep 06 09:37	23° $\text{X}$ 15'50	8.51409 AU	conjunction	10239 May 17 16:12	1° $\text{II}$ 23'48	-1°37'13
direct	10233 Nov 15 00:15	19° $\text{X}$ 51'08		minimum elong	10239 May 17 16:10	1° $\text{II}$ 23'48	1°37'37
evening set	10234 Feb 27 18:58	27° $\text{X}$ 34'09		max. Earth dist.	10239 May 17 20:46	1° $\text{II}$ 25'12	10.73813 AU
				morning rise	10239 Jun 03 10:34	3° $\text{II}$ 25'47	
conjunction	10234 Mar 17 01:36	29° $\text{X}$ 41'56	0°09'25	retrograde	10239 Sep 13 13:01	10° $\text{II}$ 48'05	
minimum elong	10234 Mar 17 01:36	29° $\text{X}$ 41'56	0°09'28	opposition	10239 Nov 22 06:53	7° $\text{II}$ 27'35	-2°07'01
behind sun begin	10234 Mar 16 19:39	29° $\text{X}$ 40'06		min. Earth dist.	10239 Nov 22 02:08	7° $\text{II}$ 28'29	8.75030 AU
behind sun end	10234 Mar 17 07:32	29° $\text{X}$ 43'45		direct	10240 Jan 31 03:09	4° $\text{II}$ 06'56	
max. Earth dist.	10234 Mar 16 20:02	29° $\text{X}$ 40'13	10.53813 AU	evening set	10240 May 12 03:27	11° $\text{II}$ 27'53	
	10234 Mar 19 11:47	0° $\text{Y}$					
morning rise	10234 Apr 03 04:52	1° $\text{Y}$ 48'45		conjunction	10240 May 28 21:14	13° $\text{II}$ 29'26	-1°48'16
retrograde	10234 Jul 13 02:01	9° $\text{Y}$ 16'12		minimum elong	10240 May 28 21:13	13° $\text{II}$ 29'25	1°48'43
desc. node	10234 Aug 03 22:03	8° $\text{Y}$ 51'28		max. Earth dist.	10240 May 29 03:00	13° $\text{II}$ 31'11	10.75793 AU
opposition	10234 Sep 19 09:05	5° $\text{Y}$ 55'12	-0°03'53	morning rise	10240 Jun 14 15:19	15° $\text{II}$ 31'04	
min. Earth dist.	10234 Sep 19 12:46	5° $\text{Y}$ 54'30	8.56209 AU	retrograde	10240 Sep 25 02:45	22° $\text{II}$ 54'02	
direct	10234 Nov 28 07:36	2° $\text{Y}$ 30'24		opposition	10240 Dec 04 02:36	19° $\text{II}$ 33'16	-2°17'41
evening set	10235 Mar 12 17:32	10° $\text{Y}$ 09'15		min. Earth dist.	10240 Dec 03 21:06	19° $\text{II}$ 34'18	8.76557 AU
				direct	10241 Feb 11 18:19	16° $\text{II}$ 13'06	
conjunction	10235 Mar 29 21:27	12° $\text{Y}$ 15'43	-0°15'57	evening set	10241 May 24 08:08	23° $\text{II}$ 31'50	
minimum elong	10235 Mar 29 21:27	12° $\text{Y}$ 15'43	0°16'00				
behind sun begin	10235 Mar 29 20:36	12° $\text{Y}$ 15'27		conjunction	10241 Jun 10 01:32	25° $\text{II}$ 33'05	-1°54'31
behind sun end	10235 Mar 29 22:18	12° $\text{Y}$ 15'58		minimum elong	10241 Jun 10 01:31	25° $\text{II}$ 33'05	1°54'59
max. Earth dist.	10235 Mar 29 17:33	12° $\text{Y}$ 14'31	10.58604 AU	max. Earth dist.	10241 Jun 10 08:05	25° $\text{II}$ 35'05	10.76796 AU
morning rise	10235 Apr 15 22:28	14° $\text{Y}$ 21'21		morning rise	10241 Jun 26 20:05	27° $\text{II}$ 34'40	
retrograde	10235 Jul 25 20:39	21° $\text{Y}$ 46'33			10241 Jul 18 00:59	0° $\text{S}$	
opposition	10235 Oct 02 11:51	18° $\text{Y}$ 25'55	-0°34'42	retrograde	10241 Oct 07 17:25	4° $\text{S}$ 58'52	
min. Earth dist.	10235 Oct 02 14:31	18° $\text{Y}$ 25'24	8.60936 AU	opposition	10241 Dec 16 21:29	1° $\text{S}$ 37'40	-2°22'15
direct	10235 Dec 11 12:49	15° $\text{Y}$ 02'00		min. Earth dist.	10241 Dec 16 15:09	1° $\text{S}$ 38'51	8.77043 AU
evening set	10236 Mar 24 11:53	22° $\text{Y}$ 36'44			10242 Jan 08 10:00	30° $\text{R}$ $\text{II}$	
				direct	10242 Feb 24 09:14	28° $\text{II}$ 17'49	
conjunction	10236 Apr 10 13:04	24° $\text{Y}$ 41'54	-0°40'16		10242 Apr 10 19:34	0° $\text{S}$	
minimum elong	10236 Apr 10 13:03	24° $\text{Y}$ 41'54	0°40'25	evening set	10242 Jun 05 12:21	5° $\text{S}$ 34'58	
max. Earth dist.	10236 Apr 10 10:25	24° $\text{Y}$ 41'05	10.63195 AU				
morning rise	10236 Apr 27 12:01	26° $\text{Y}$ 46'25		conjunction	10242 Jun 22 06:20	7° $\text{S}$ 36'19	-1°55'42
	10236 May 25 22:58	0° $\text{S}$		minimum elong	10242 Jun 22 06:21	7° $\text{S}$ 36'19	1°56'10
retrograde	10236 Aug 06 14:06	4° $\text{S}$ 09'56		max. Earth dist.	10242 Jun 22 14:15	7° $\text{S}$ 38'43	10.76718 AU
opposition	10236 Oct 14 12:46	0° $\text{S}$ 49'33	-1°03'34	morning rise	10242 Jul 09 02:02	9° $\text{S}$ 38'09	
min. Earth dist.	10236 Oct 14 14:00	0° $\text{S}$ 49'19	8.65367 AU	retrograde	10242 Oct 20 10:15	17° $\text{S}$ 04'02	
	10236 Oct 25 10:56	30° $\text{R}$ $\text{Y}$		opposition	10242 Dec 29 15:38	13° $\text{S}$ 42'18	-2°20'33
direct	10236 Dec 23 14:42	27° $\text{Y}$ 26'32		min. Earth dist.	10242 Dec 29 08:15	13° $\text{S}$ 43'41	8.76389 AU
	10237 Feb 18 06:28	0° $\text{S}$		direct	10243 Mar 08 21:43	10° $\text{S}$ 22'38	
evening set	10237 Apr 06 02:17	4° $\text{S}$ 57'18		evening set	10243 Jun 17 16:57	17° $\text{S}$ 38'57	
conjunction	10237 Apr 23 00:57	7° $\text{S}$ 01'17	-1°02'31	conjunction	10243 Jul 04 12:23	19° $\text{S}$ 40'44	-1°51'46
minimum elong	10237 Apr 23 00:55	7° $\text{S}$ 01'16	1°02'46	minimum elong	10243 Jul 04 12:24	19° $\text{S}$ 40'45	1°52'14
max. Earth dist.	10237 Apr 23 00:12	7° $\text{S}$ 01'03	10.67376 AU	max. Earth dist.	10243 Jul 04 21:24	19° $\text{S}$ 43'29	10.75488 AU
morning rise	10237 May 09 22:00	9° $\text{S}$ 04'46		morning rise	10243 Jul 21 09:54	21° $\text{S}$ 43'11	
	10237 Jul 08 13:37	15° $\text{S}$		retrograde	10243 Nov 02 04:09	29° $\text{S}$ 11'14	
retrograde	10237 Aug 19 05:16	16° $\text{S}$ 27'16		opposition	10244 Jan 11 09:43	25° $\text{S}$ 48'54	-2°12'38
	10237 Oct 01 03:21	15° $\text{R}$ $\text{S}$		min. Earth dist.	10244 Jan 11 01:39	25° $\text{S}$ 50'26	8.74582 AU
opposition	10237 Oct 27 12:15	13° $\text{S}$ 06'58	-1°29'14	direct	10244 Mar 20 09:27	22° $\text{S}$ 29'13	
min. Earth dist.	10237 Oct 27 11:14	13° $\text{S}$ 07'10	8.69302 AU	evening set	10244 Jun 28 23:03	29° $\text{S}$ 45'33	
direct	10238 Jan 05 14:04	9° $\text{S}$ 44'51			10244 Jun 30 23:24	0° $\text{Q}$	
	10238 Mar 30 12:24	15° $\text{S}$					
evening set	10238 Apr 18 13:06	17° $\text{S}$ 11'55		conjunction	10244 Jul 15 20:28	1° $\text{Q}$ 48'06	-1°42'51
				minimum elong	10244 Jul 15 20:30	1° $\text{Q}$ 48'07	1°43'16
conjunction	10238 May 05 09:40	19° $\text{S}$ 14'50	-1°21'45	max. Earth dist.	10244 Jul 16 05:43	1° $\text{Q}$ 50'55	10.73175 AU
minimum elong	10238 May 05 09:38	19° $\text{S}$ 14'50	1°22'06	morning rise	10244 Aug 01 20:33	3° $\text{Q}$ 51'27	
max. Earth dist.	10238 May 05 11:52	19° $\text{S}$ 15'31	10.70966 AU	retrograde	10244 Nov 14 00:35	11° $\text{Q}$ 22'01	
morning rise	10238 May 22 05:05	21° $\text{S}$ 17'28		opposition	10245 Jan 23 04:11	7° $\text{Q}$ 59'01	-1°58'45
retrograde	10238 Aug 31 20:45	28° $\text{S}$ 39'37		min. Earth dist.	10245 Jan 22 20:16	8° $\text{Q}$ 00'32	8.71766 AU
opposition	10238 Nov 09 10:17	25° $\text{S}$ 19'16	-1°50'40	direct	10245 Apr 01 21:01	4° $\text{Q}$ 39'08	
min. Earth dist.	10238 Nov 09 06:54	25° $\text{S}$ 19'54	8.72570 AU	evening set	10245 Jul 11 07:31	11° $\text{Q}$ 56'14	

conjunction	10245 Jul 28 07:29	13°♏59'47	-1°29'16	direct	10251 Jun 16 05:35	19°♑46'42	
minimum elong	10245 Jul 28 07:31	13°♏59'48	1°29'38	evening set	10251 Sep 26 03:30	27°♑23'14	
max. Earth dist.	10245 Jul 28 15:58	14°♏02'22	10.69964 AU				
	10245 Aug 05 13:16	15°♏		conjunction	10251 Oct 13 20:37	29°♑34'43	0°48'55
morning rise	10245 Aug 14 10:45	16°♏04'18		minimum elong	10251 Oct 13 20:35	29°♑34'42	0°49'08
retrograde	10245 Nov 26 22:26	23°♏37'35		max. Earth dist.	10251 Oct 13 21:31	29°♑34'59	10.42571 AU
opposition	10246 Feb 04 23:12	20°♏13'52	-1°39'24		10251 Oct 17 05:49	0°♐	
min. Earth dist.	10246 Feb 04 16:06	20°♏15'14	8.68141 AU	morning rise	10251 Oct 31 16:06	1°♐46'54	
direct	10246 Apr 14 08:59	16°♏53'34		retrograde	10252 Feb 13 10:07	9°♐36'04	
evening set	10246 Jul 23 19:04	24°♏12'12		opposition	10252 Apr 21 19:29	6°♐09'30	1°14'58
				min. Earth dist.	10252 Apr 21 19:16	6°♐09'33	8.40561 AU
conjunction	10246 Aug 09 22:10	26°♏17'00	-1°11'31	direct	10252 Jun 28 08:58	2°♐44'36	
minimum elong	10246 Aug 09 22:12	26°♏17'00	1°11'49	evening set	10252 Oct 08 20:27	10°♐25'51	
max. Earth dist.	10246 Aug 10 06:18	26°♏19'29	10.66038 AU				
morning rise	10246 Aug 27 04:51	28°♏22'50		conjunction	10252 Oct 26 15:01	12°♐38'15	1°11'12
	10246 Sep 10 01:30	0°♐		minimum elong	10252 Oct 26 14:58	12°♐38'15	1°11'29
retrograde	10246 Dec 09 20:58	5°♐58'58		max. Earth dist.	10252 Oct 26 14:21	12°♐38'03	10.38654 AU
opposition	10247 Feb 17 19:00	2°♐34'32	-1°15'19	morning rise	10252 Nov 13 11:06	14°♐51'10	
min. Earth dist.	10247 Feb 17 12:23	2°♐35'49	8.63890 AU		10252 Nov 14 16:00	15°♐	
	10247 Mar 27 19:43	30°♐♏		retrograde	10253 Feb 25 22:53	22°♐41'51	
direct	10247 Apr 27 00:18	29°♏13'39		opposition	10253 May 05 01:02	19°♐15'18	1°40'35
	10247 May 26 18:05	0°♐		min. Earth dist.	10253 May 05 01:54	19°♐15'07	8.37038 AU
evening set	10247 Aug 05 10:40	6°♐34'36		direct	10253 Jul 11 16:11	15°♐49'37	
				evening set	10253 Oct 22 17:50	23°♐35'27	
conjunction	10247 Aug 22 17:07	8°♐40'47	-0°50'18				
minimum elong	10247 Aug 22 17:09	8°♐40'47	0°50'31	conjunction	10253 Nov 09 13:12	25°♐48'33	1°29'55
max. Earth dist.	10247 Aug 23 01:13	8°♐43'15	10.61571 AU	minimum elong	10253 Nov 09 13:09	25°♐48'32	1°30'17
morning rise	10247 Sep 09 03:04	10°♐48'00		max. Earth dist.	10253 Nov 09 10:53	25°♐47'49	10.35506 AU
retrograde	10247 Dec 22 23:55	18°♐27'04		morning rise	10253 Nov 27 09:07	28°♐01'53	
opposition	10248 Mar 01 15:48	15°♐01'57	-0°47'28		10253 Dec 13 20:31	0°♑	
min. Earth dist.	10248 Mar 01 09:25	15°♐03'12	8.59207 AU	retrograde	10254 Mar 11 13:01	5°♑53'19	
direct	10248 May 08 16:03	11°♐40'25		opposition	10254 May 18 08:15	2°♑27'01	2°01'05
evening set	10248 Aug 17 06:57	19°♐04'22		min. Earth dist.	10254 May 18 10:24	2°♑26'35	8.34378 AU
					10254 Jun 21 07:21	30°♐♐	
conjunction	10248 Sep 03 16:40	21°♐11'59	-0°26'32	direct	10254 Jul 25 01:40	29°♐00'39	
minimum elong	10248 Sep 03 16:41	21°♐11'59	0°26'39		10254 Aug 27 13:30	0°♑	
max. Earth dist.	10248 Sep 04 00:17	21°♐14'19	10.56773 AU	evening set	10254 Nov 05 18:27	6°♑50'36	
morning rise	10248 Sep 21 05:43	23°♐20'38					
	10248 Nov 29 21:15	0°♑		conjunction	10254 Nov 23 13:55	9°♑04'07	1°43'59
retrograde	10249 Jan 04 05:46	1°♑02'35		minimum elong	10254 Nov 23 13:53	9°♑04'06	1°44'25
	10249 Feb 08 20:40	30°♐♐		max. Earth dist.	10254 Nov 23 09:40	9°♑02'47	10.33308 AU
opposition	10249 Mar 14 14:07	27°♐36'53	-0°17'04	morning rise	10254 Dec 11 09:06	11°♑17'37	
min. Earth dist.	10249 Mar 14 08:23	27°♐38'00	8.54310 AU	retrograde	10255 Mar 25 05:10	19°♑08'59	
direct	10249 May 21 08:58	24°♐14'35		opposition	10255 May 31 17:13	15°♑43'07	2°15'16
	10249 Aug 15 21:32	0°♑		min. Earth dist.	10255 May 31 20:55	15°♑42'22	8.32738 AU
evening set	10249 Aug 30 08:21	1°♑42'13		direct	10255 Aug 07 13:07	12°♑16'13	
				evening set	10255 Nov 19 20:46	20°♑09'29	
conjunction	10249 Sep 16 21:00	3°♑51'14	-0°01'18				
minimum elong	10249 Sep 16 21:01	3°♑51'14	0°01'17	conjunction	10255 Dec 07 15:48	22°♑23'08	1°52'33
behind sun begin	10249 Sep 16 13:48	3°♑49'02		minimum elong	10255 Dec 07 15:47	22°♑23'07	1°53'01
behind sun end	10249 Sep 17 04:14	3°♑53'26		max. Earth dist.	10255 Dec 07 09:26	22°♑21'07	10.32202 AU
max. Earth dist.	10249 Sep 17 02:47	3°♑52'59	10.51859 AU	morning rise	10255 Dec 25 09:53	24°♑36'32	
morning rise	10249 Oct 04 12:52	6°♑01'15			10256 Feb 13 04:47	0°♒	
asc. node	10249 Oct 05 12:56	6°♑08'31		retrograde	10256 Apr 06 19:43	2°♒26'58	
retrograde	10250 Jan 17 13:08	13°♑45'56			10256 May 31 21:32	30°♐♑	
opposition	10250 Mar 27 14:06	10°♑19'47	0°14'32	opposition	10256 Jun 13 03:27	29°♑01'41	2°22'14
min. Earth dist.	10250 Mar 27 10:05	10°♑20'34	8.49418 AU	min. Earth dist.	10256 Jun 13 08:56	29°♑00'35	8.32223 AU
direct	10250 Jun 03 05:47	6°♑56'37		direct	10256 Aug 20 04:29	25°♑34'27	
evening set	10250 Sep 12 15:19	14°♑28'31			10256 Nov 02 19:49	0°♒	
				evening set	10256 Dec 02 23:44	3°♒30'00	
conjunction	10250 Sep 30 06:27	16°♑38'51	0°24'21				
minimum elong	10250 Sep 30 06:26	16°♑38'51	0°24'27	conjunction	10256 Dec 20 17:58	5°♒43'31	1°55'06
max. Earth dist.	10250 Sep 30 09:41	16°♑39'51	10.47048 AU	minimum elong	10256 Dec 20 17:58	5°♒43'31	1°55'34
morning rise	10250 Oct 18 00:30	18°♑50'03		max. Earth dist.	10256 Dec 20 09:36	5°♒40'53	10.32260 AU
retrograde	10251 Jan 30 22:37	26°♑37'11		morning rise	10257 Jan 07 10:39	7°♒56'36	
opposition	10251 Apr 09 15:47	23°♑10'45	0°45'45	retrograde	10257 Apr 20 08:18	15°♒45'10	
min. Earth dist.	10251 Apr 09 13:51	23°♑11'08	8.44758 AU	opposition	10257 Jun 26 14:17	12°♒20'36	2°21'34

min. Earth dist.	10257 Jun 26 20:59	12°♄19'15	8.32866 AU	desc. node	10264 Jan 13 00:34	29°♄15'06	
direct	10257 Sep 02 22:22	8°♄53'12			10264 Jan 21 21:44	0°♄	
evening set	10257 Dec 17 01:45	16°♄49'50		evening set	10264 Mar 06 08:12	4°♄48'23	
conjunction	10258 Jan 03 18:55	19°♄02'59	1°51'29	conjunction	10264 Mar 23 13:21	6°♄55'32	-0°04'46
minimum elong	10258 Jan 03 18:57	19°♄02'59	1°51'56	minimum elong	10264 Mar 23 13:21	6°♄55'31	0°04'47
max. Earth dist.	10258 Jan 03 09:37	19°♄00'03	10.33478 AU	behind sun begin	10264 Mar 23 06:24	6°♄53'24	
morning rise	10258 Jan 21 09:56	21°♄15'30		behind sun end	10264 Mar 23 20:17	6°♄57'39	
retrograde	10258 May 03 19:40	29°♄01'27		max. Earth dist.	10264 Mar 23 06:39	6°♄53'28	10.56409 AU
opposition	10258 Jul 10 01:27	25°♄37'38	2°13'19	morning rise	10264 Apr 09 15:35	9°♄01'48	
min. Earth dist.	10258 Jul 10 08:28	25°♄36'14	8.34623 AU	retrograde	10264 Jul 19 13:12	16°♄28'30	
direct	10258 Sep 16 16:26	22°♄10'16		opposition	10264 Sep 26 00:29	13°♄08'00	-0°21'09
	10258 Dec 30 03:48	0°♄		min. Earth dist.	10264 Sep 26 04:29	13°♄07'14	8.58547 AU
evening set	10258 Dec 31 01:17	0°♄06'37		direct	10264 Dec 05 01:06	9°♄43'54	
				evening set	10265 Mar 19 05:19	17°♄21'12	
conjunction	10259 Jan 17 17:09	2°♄19'11	1°41'56	conjunction	10265 Apr 05 07:53	19°♄27'06	-0°29'40
minimum elong	10259 Jan 17 17:11	2°♄19'11	1°42'21	minimum elong	10265 Apr 05 07:52	19°♄27'06	0°29'47
max. Earth dist.	10259 Jan 17 07:55	2°♄16'16	10.35780 AU	max. Earth dist.	10265 Apr 05 03:43	19°♄25'49	10.60617 AU
morning rise	10259 Feb 04 06:14	4°♄30'55		morning rise	10265 Apr 22 07:46	21°♄32'15	
retrograde	10259 May 17 05:55	12°♄13'41		retrograde	10265 Aug 01 09:40	28°♄57'14	
opposition	10259 Jul 23 12:23	8°♄50'34	1°58'03	opposition	10265 Oct 09 03:10	25°♄36'53	-0°51'07
min. Earth dist.	10259 Jul 23 19:04	8°♄49'14	8.37393 AU	min. Earth dist.	10265 Oct 09 05:22	25°♄36'28	8.62606 AU
direct	10259 Sep 30 10:00	5°♄23'27		direct	10265 Dec 18 04:22	22°♄13'34	
evening set	10260 Jan 13 21:27	13°♄18'15		evening set	10266 Mar 31 22:23	29°♄46'57	
	10260 Jan 27 12:19	15°♄			10266 Apr 02 17:36	0°♄	
conjunction	10260 Jan 31 11:47	15°♄30'00	1°27'05	conjunction	10266 Apr 17 22:23	1°♄51'41	-0°53'01
minimum elong	10260 Jan 31 11:49	15°♄30'01	1°27'27	minimum elong	10266 Apr 17 22:21	1°♄51'40	0°53'14
max. Earth dist.	10260 Jan 31 03:12	15°♄27'18	10.39031 AU	max. Earth dist.	10266 Apr 17 20:23	1°♄51'04	10.64467 AU
morning rise	10260 Feb 17 22:47	17°♄40'48		morning rise	10266 May 04 20:10	3°♄55'48	
retrograde	10260 May 29 13:01	25°♄19'56		retrograde	10266 Aug 14 02:39	11°♄19'38	
opposition	10260 Aug 04 22:22	21°♄57'31	1°36'44	opposition	10266 Oct 22 04:22	7°♄59'16	-1°18'27
min. Earth dist.	10260 Aug 05 04:55	21°♄56'13	8.41008 AU	min. Earth dist.	10266 Oct 22 05:09	7°♄59'07	8.66250 AU
direct	10260 Oct 13 02:44	18°♄30'46		direct	10266 Dec 31 05:03	4°♄36'39	
evening set	10261 Jan 26 13:24	26°♄23'00		evening set	10267 Apr 13 11:41	12°♄06'20	
conjunction	10261 Feb 13 01:50	28°♄33'45	1°07'50	conjunction	10267 Apr 30 09:16	14°♄09'58	-1°13'45
minimum elong	10261 Feb 13 01:52	28°♄33'45	1°08'07	minimum elong	10267 Apr 30 09:14	14°♄09'58	1°14'04
max. Earth dist.	10261 Feb 12 17:33	28°♄31'09	10.43013 AU	max. Earth dist.	10267 Apr 30 08:49	14°♄09'50	10.67818 AU
	10261 Feb 24 13:51	0°♄			10267 May 07 04:22	15°♄	
morning rise	10261 Mar 02 10:42	0°♄43'29		morning rise	10267 May 17 05:29	16°♄13'13	
retrograde	10261 Jun 11 17:14	8°♄18'53		retrograde	10267 Aug 26 18:28	23°♄36'29	
opposition	10261 Aug 18 07:15	4°♄57'06	1°10'38	opposition	10267 Nov 04 04:00	20°♄15'58	-1°41'57
min. Earth dist.	10261 Aug 18 14:03	4°♄55'46	8.45216 AU	min. Earth dist.	10267 Nov 04 03:31	20°♄16'03	8.69329 AU
direct	10261 Oct 26 17:52	1°♄30'50		direct	10268 Jan 13 04:17	16°♄53'57	
evening set	10262 Feb 09 00:34	9°♄19'42		evening set	10268 Apr 24 21:56	24°♄20'17	
conjunction	10262 Feb 26 10:41	11°♄29'18	0°45'18	conjunction	10268 May 11 17:32	26°♄23'01	-1°31'01
minimum elong	10262 Feb 26 10:43	11°♄29'19	0°45'29	minimum elong	10268 May 11 17:30	26°♄23'00	1°31'24
max. Earth dist.	10262 Feb 26 02:17	11°♄26'41	10.47429 AU	max. Earth dist.	10268 May 11 18:46	26°♄23'23	10.70529 AU
morning rise	10262 Mar 15 17:23	13°♄37'54		morning rise	10268 May 28 12:35	28°♄25'34	
retrograde	10262 Jun 24 18:46	21°♄09'49			10268 Jun 10 23:05	0°♄	
opposition	10262 Aug 31 14:37	17°♄48'35	0°41'14	retrograde	10268 Sep 07 10:02	5°♄48'50	
min. Earth dist.	10262 Aug 31 21:23	17°♄47'15	8.49707 AU	opposition	10268 Nov 16 02:03	2°♄28'01	-2°00'42
direct	10262 Nov 09 06:21	14°♄22'56		min. Earth dist.	10268 Nov 15 23:34	2°♄28'29	8.71707 AU
evening set	10263 Feb 22 06:46	22°♄08'03			10268 Dec 22 17:13	30°♄	
conjunction	10263 Mar 11 14:25	24°♄16'26	0°20'43	direct	10269 Jan 25 00:07	29°♄06'33	
minimum elong	10263 Mar 11 14:26	24°♄16'26	0°20'48		10269 Feb 26 16:46	0°♄	
max. Earth dist.	10263 Mar 11 06:16	24°♄13'54	10.51967 AU	evening set	10269 May 07 05:37	6°♄29'55	
morning rise	10263 Mar 28 18:56	26°♄23'52		conjunction	10269 May 23 23:58	8°♄32'00	-1°44'06
	10263 Apr 29 13:05	0°♄		minimum elong	10269 May 23 23:56	8°♄31'59	1°44'32
retrograde	10263 Jul 07 16:26	3°♄52'51		max. Earth dist.	10269 May 24 03:52	8°♄33'12	10.72490 AU
opposition	10263 Sep 13 20:19	0°♄32'03	0°10'08	morning rise	10269 Jun 09 18:17	10°♄34'06	
min. Earth dist.	10263 Sep 14 02:13	0°♄30'54	8.54206 AU	retrograde	10269 Sep 20 00:48	17°♄57'57	
	10263 Sep 20 18:35	30°♄		opposition	10269 Nov 28 23:00	14°♄36'43	-2°13'57
direct	10263 Nov 22 17:13	27°♄07'09					

min. Earth dist.	10269 Nov 28 18:11	14° $\Pi$ 37'38	8.73287 AU		10275 Oct 29 10:41	0° $\Pi$
direct	10270 Feb 06 17:43	11° $\Pi$ 15'43		retrograde	10275 Dec 04 20:06	1° $\Pi$ 05'20
evening set	10270 May 19 11:27	18° $\Pi$ 36'38			10276 Jan 10 16:22	30° $\mathbb{R}$ $\mathcal{L}$
				opposition	10276 Feb 12 18:56	27° $\mathcal{L}$ 40'54 -1°25'53
conjunction	10270 Jun 05 05:14	20° $\Pi$ 38'22	-1°52'29	min. Earth dist.	10276 Feb 12 09:58	27° $\mathcal{L}$ 42'38 8.64511 AU
minimum elong	10270 Jun 05 05:13	20° $\Pi$ 38'21	1°52'57	direct	10276 Apr 21 01:38	24° $\mathcal{L}$ 20'07
max. Earth dist.	10270 Jun 05 11:45	20° $\Pi$ 40'21	10.73618 AU		10276 Jul 16 04:22	0° $\Pi$
morning rise	10270 Jun 21 23:33	22° $\Pi$ 40'16		evening set	10276 Jul 30 12:13	1° $\Pi$ 40'34
	10270 Sep 22 13:38	0° $\mathcal{E}$				
retrograde	10270 Oct 02 17:35	0° $\mathcal{E}$ 05'14		conjunction	10276 Aug 16 17:13	3° $\Pi$ 46'17 -0°59'29
	10270 Oct 12 22:07	30° $\mathbb{R}$ $\Pi$		minimum elong	10276 Aug 16 17:15	3° $\Pi$ 46'18 0°59'45
opposition	10270 Dec 11 18:57	26° $\Pi$ 43'31	-2°21'12	max. Earth dist.	10276 Aug 17 03:09	3° $\Pi$ 49'20 10.62582 AU
min. Earth dist.	10270 Dec 11 12:21	26° $\Pi$ 44'46	8.73993 AU	morning rise	10276 Sep 03 01:46	5° $\Pi$ 53'03
direct	10271 Feb 19 09:09	23° $\Pi$ 22'54		retrograde	10276 Dec 16 22:30	13° $\Pi$ 31'21
	10271 May 25 18:39	0° $\mathcal{E}$		opposition	10277 Feb 24 15:54	10° $\Pi$ 06'27 -0°59'25
evening set	10271 May 31 16:35	0° $\mathcal{E}$ 41'58		min. Earth dist.	10277 Feb 24 07:58	10° $\Pi$ 08'00 8.60624 AU
				direct	10277 May 03 16:38	6° $\Pi$ 45'14
conjunction	10271 Jun 17 10:28	2° $\mathcal{E}$ 43'38	-1°55'52	evening set	10277 Aug 12 06:54	14° $\Pi$ 08'11
minimum elong	10271 Jun 17 10:28	2° $\mathcal{E}$ 43'38	1°56'20			
max. Earth dist.	10271 Jun 17 18:16	2° $\mathcal{E}$ 46'01	10.73858 AU	conjunction	10277 Aug 29 15:06	16° $\Pi$ 15'15 -0°36'38
morning rise	10271 Jul 04 05:39	4° $\mathcal{E}$ 45'42		minimum elong	10277 Aug 29 15:07	16° $\Pi$ 15'16 0°36'48
retrograde	10271 Oct 15 10:45	12° $\mathcal{E}$ 12'07		max. Earth dist.	10277 Aug 29 23:40	16° $\Pi$ 17'53 10.58559 AU
opposition	10271 Dec 24 14:06	8° $\mathcal{E}$ 49'55	-2°22'11	morning rise	10277 Sep 16 03:01	18° $\Pi$ 23'23
min. Earth dist.	10271 Dec 24 06:56	8° $\mathcal{E}$ 51'17	8.73784 AU	retrograde	10277 Dec 30 02:32	26° $\Pi$ 04'21
direct	10272 Mar 02 21:35	5° $\mathcal{E}$ 29'31		opposition	10278 Mar 09 13:59	22° $\Pi$ 39'03 -0°29'52
evening set	10272 Jun 11 21:43	12° $\mathcal{E}$ 47'27		min. Earth dist.	10278 Mar 09 07:27	22° $\Pi$ 40'20 8.56457 AU
				direct	10278 May 16 09:59	19° $\Pi$ 17'17
conjunction	10272 Jun 28 16:27	14° $\mathcal{E}$ 49'22	-1°54'06	evening set	10278 Aug 25 06:30	26° $\Pi$ 43'28
minimum elong	10272 Jun 28 16:28	14° $\mathcal{E}$ 49'22	1°54'33			
max. Earth dist.	10272 Jun 29 00:45	14° $\mathcal{E}$ 51'53	10.73197 AU	conjunction	10278 Sep 11 17:53	28° $\Pi$ 51'52 -0°11'51
morning rise	10272 Jul 15 13:20	16° $\mathcal{E}$ 51'53		minimum elong	10278 Sep 11 17:53	28° $\Pi$ 51'52 0°11'54
retrograde	10272 Oct 27 02:52	24° $\mathcal{E}$ 20'11		behind sun begin	10278 Sep 11 12:56	28° $\Pi$ 50'22
opposition	10273 Jan 05 09:05	20° $\mathcal{E}$ 57'27	-2°16'51	behind sun end	10278 Sep 11 22:50	28° $\Pi$ 53'23
min. Earth dist.	10273 Jan 05 01:26	20° $\mathcal{E}$ 58'55	8.72667 AU	max. Earth dist.	10278 Sep 12 01:26	28° $\Pi$ 54'11 10.54334 AU
direct	10273 Mar 15 10:31	17° $\mathcal{E}$ 37'09			10278 Sep 20 23:10	0° $\mathcal{L}$
evening set	10273 Jun 24 03:31	24° $\mathcal{E}$ 54'35		morning rise	10278 Sep 29 08:42	1° $\mathcal{L}$ 01'19
				retrograde	10279 Jan 12 08:27	8° $\mathcal{L}$ 44'51
conjunction	10273 Jul 11 00:02	26° $\mathcal{E}$ 57'05	-1°47'14	asc. node	10279 Mar 05 21:35	6° $\mathcal{L}$ 35'56
minimum elong	10273 Jul 11 00:04	26° $\mathcal{E}$ 57'06	1°47'40	opposition	10279 Mar 22 13:30	5° $\mathcal{L}$ 19'13 0°01'25
max. Earth dist.	10273 Jul 11 09:21	26° $\mathcal{E}$ 59'56	10.71657 AU	min. Earth dist.	10279 Mar 22 07:56	5° $\mathcal{L}$ 20'19 8.52193 AU
morning rise	10273 Jul 27 23:13	29° $\mathcal{E}$ 00'21		direct	10279 May 29 06:45	1° $\mathcal{L}$ 56'49
	10273 Aug 05 09:49	0° $\mathcal{L}$		evening set	10279 Sep 07 11:18	9° $\mathcal{L}$ 26'45
retrograde	10273 Nov 08 22:26	6° $\mathcal{L}$ 30'54				
opposition	10274 Jan 18 04:02	3° $\mathcal{L}$ 07'35	-2°05'22	conjunction	10279 Sep 25 01:27	11° $\mathcal{L}$ 36'27 0°13'48
min. Earth dist.	10274 Jan 17 19:37	3° $\mathcal{L}$ 09'11	8.70685 AU	minimum elong	10279 Sep 25 01:27	11° $\mathcal{L}$ 36'27 0°13'53
	10274 Mar 12 05:51	30° $\mathbb{R}$ $\mathcal{E}$		behind sun begin	10279 Sep 24 21:48	11° $\mathcal{L}$ 35'20
direct	10274 Mar 28 00:25	29° $\mathcal{E}$ 47'15		behind sun end	10279 Sep 25 05:05	11° $\mathcal{L}$ 37'34
	10274 Apr 12 14:43	0° $\mathcal{L}$		max. Earth dist.	10279 Sep 25 07:56	11° $\mathcal{L}$ 38'26 10.50084 AU
evening set	10274 Jul 06 11:21	7° $\mathcal{L}$ 04'55		morning rise	10279 Oct 12 18:30	13° $\mathcal{L}$ 47'03
				retrograde	10280 Jan 25 17:37	21° $\mathcal{L}$ 32'56
conjunction	10274 Jul 23 10:23	9° $\mathcal{L}$ 08'18	-1°35'31	opposition	10280 Apr 03 14:37	18° $\mathcal{L}$ 07'03 0°32'57
minimum elong	10274 Jul 23 10:25	9° $\mathcal{L}$ 08'18	1°35'55	min. Earth dist.	10280 Apr 03 10:07	18° $\mathcal{L}$ 07'57 8.48011 AU
max. Earth dist.	10274 Jul 23 21:01	9° $\mathcal{L}$ 11'33	10.69297 AU	direct	10280 Jun 10 05:19	14° $\mathcal{L}$ 43'57
morning rise	10274 Aug 09 12:19	11° $\mathcal{L}$ 12'33		evening set	10280 Sep 19 21:25	22° $\mathcal{L}$ 18'01
	10274 Sep 12 20:07	15° $\mathcal{L}$				
retrograde	10274 Nov 21 20:25	18° $\mathcal{L}$ 45'32		conjunction	10280 Oct 07 13:46	24° $\mathcal{L}$ 28'51 0°38'55
opposition	10275 Jan 30 23:03	15° $\mathcal{L}$ 21'38	-1°48'10	minimum elong	10280 Oct 07 13:44	24° $\mathcal{L}$ 28'51 0°39'05
min. Earth dist.	10275 Jan 30 13:51	15° $\mathcal{L}$ 23'24	8.67923 AU	max. Earth dist.	10280 Oct 07 18:11	24° $\mathcal{L}$ 30'14 10.45991 AU
	10275 Feb 04 16:01	15° $\mathbb{R}$ $\mathcal{L}$		morning rise	10280 Oct 25 08:26	26° $\mathcal{L}$ 40'27
direct	10275 Apr 09 12:26	12° $\mathcal{L}$ 01'08			10280 Nov 23 09:07	0° $\mathbb{L}$
	10275 Jun 08 21:21	15° $\mathcal{L}$		retrograde	10281 Feb 07 05:33	4° $\mathbb{L}$ 28'15
evening set	10275 Jul 18 22:00	19° $\mathcal{L}$ 19'50		opposition	10281 Apr 16 17:24	1° $\mathbb{L}$ 02'15 1°03'08
				min. Earth dist.	10281 Apr 16 14:46	1° $\mathbb{L}$ 02'46 8.44070 AU
conjunction	10275 Aug 04 23:55	21° $\mathcal{L}$ 24'18	-1°19'23		10281 Apr 29 23:25	30° $\mathbb{R}$ $\mathcal{L}$
minimum elong	10275 Aug 04 23:58	21° $\mathcal{L}$ 24'18	1°19'44	direct	10281 Jun 23 06:04	27° $\mathcal{L}$ 38'19
max. Earth dist.	10275 Aug 05 10:46	21° $\mathcal{L}$ 27'37	10.66222 AU		10281 Aug 15 00:47	0° $\mathbb{L}$
morning rise	10275 Aug 22 05:02	23° $\mathcal{L}$ 29'44		evening set	10281 Oct 03 12:27	5° $\mathbb{L}$ 16'50

conjunction	10281 Oct 21 06:20	7° $\mathbb{M}$ 28'37	1°02'15	conjunction	10288 Jan 12 04:35	26° $\mathfrak{Z}$ 57'41	1°46'38
minimum elong	10281 Oct 21 06:18	7° $\mathbb{M}$ 28'36	1°02'32	minimum elong	10288 Jan 12 04:37	26° $\mathfrak{Z}$ 57'42	1°47'04
max. Earth dist.	10281 Oct 21 07:27	7° $\mathbb{M}$ 28'58	10.42186 AU	max. Earth dist.	10288 Jan 11 18:35	26° $\mathfrak{Z}$ 54'32	10.35362 AU
morning rise	10281 Nov 08 02:01	9° $\mathbb{M}$ 41'00		morning rise	10288 Jan 29 18:23	29° $\mathfrak{Z}$ 09'37	
	10281 Dec 27 16:52	15° $\mathbb{M}$			10288 Feb 05 15:28	0° $\approx$	
retrograde	10282 Feb 20 17:39	17° $\mathbb{M}$ 30'18		retrograde	10288 May 10 22:52	6° $\approx$ 53'10	
	10282 Apr 18 03:46	15° $\mathbb{R}$ $\mathbb{M}$		opposition	10288 Jul 17 04:02	3° $\approx$ 29'38	2°05'18
opposition	10282 Apr 29 21:58	14° $\mathbb{M}$ 04'19	1°30'21	min. Earth dist.	10288 Jul 17 12:11	3° $\approx$ 28'01	8.36584 AU
min. Earth dist.	10282 Apr 29 22:04	14° $\mathbb{M}$ 04'17	8.40482 AU	direct	10288 Sep 23 22:23	0° $\approx$ 02'12	
direct	10282 Jul 06 11:21	10° $\mathbb{M}$ 39'34		evening set	10289 Jan 07 09:10	7° $\approx$ 57'10	
	10282 Sep 18 00:04	15° $\mathbb{M}$					
evening set	10282 Oct 17 07:52	18° $\mathbb{M}$ 22'39		conjunction	10289 Jan 25 00:05	10° $\approx$ 09'11	1°34'00
				minimum elong	10289 Jan 25 00:07	10° $\approx$ 09'11	1°34'22
conjunction	10282 Nov 04 02:38	20° $\mathbb{M}$ 35'11	1°22'33	max. Earth dist.	10289 Jan 24 13:20	10° $\approx$ 05'48	10.37823 AU
minimum elong	10282 Nov 04 02:36	20° $\mathbb{M}$ 35'10	1°22'54	morning rise	10289 Feb 11 12:05	12° $\approx$ 20'19	
max. Earth dist.	10282 Nov 04 00:10	20° $\mathbb{M}$ 34'25	10.38804 AU		10289 Mar 06 01:43	15° $\approx$	
morning rise	10282 Nov 21 22:35	22° $\mathbb{M}$ 48'06		retrograde	10289 May 24 04:27	20° $\approx$ 00'27	
	10283 Feb 07 07:24	0° $\mathfrak{Z}$		opposition	10289 Jul 30 13:38	16° $\approx$ 37'31	1°46'29
retrograde	10283 Mar 06 06:36	0° $\mathfrak{Z}$ 38'25		min. Earth dist.	10289 Jul 30 22:01	16° $\approx$ 35'51	8.39462 AU
	10283 Apr 02 08:21	30° $\mathbb{R}$ $\mathbb{M}$			10289 Aug 20 21:58	15° $\mathbb{R}$ $\approx$	
opposition	10283 May 13 04:12	27° $\mathbb{M}$ 12'37	1°53'05	direct	10289 Oct 07 16:29	13° $\approx$ 10'14	
min. Earth dist.	10283 May 13 06:47	27° $\mathbb{M}$ 12'06	8.37433 AU		10289 Nov 23 13:20	15° $\approx$	
direct	10283 Jul 19 19:54	23° $\mathbb{M}$ 47'07		evening set	10290 Jan 21 02:12	21° $\approx$ 03'13	
	10283 Oct 18 04:05	0° $\mathfrak{Z}$					
evening set	10283 Oct 31 06:46	1° $\mathfrak{Z}$ 34'32		conjunction	10290 Feb 07 15:22	23° $\approx$ 14'20	1°16'33
				minimum elong	10290 Feb 07 15:25	23° $\approx$ 14'21	1°16'52
conjunction	10283 Nov 18 01:56	3° $\mathfrak{Z}$ 47'36	1°38'38	max. Earth dist.	10290 Feb 07 04:53	23° $\approx$ 11'03	10.41139 AU
minimum elong	10283 Nov 18 01:54	3° $\mathfrak{Z}$ 47'36	1°39'03	morning rise	10290 Feb 25 01:22	25° $\approx$ 24'31	
max. Earth dist.	10283 Nov 17 20:59	3° $\mathfrak{Z}$ 46'03	10.36092 AU		10290 Apr 07 12:03	0° $\mathfrak{H}$	
morning rise	10283 Dec 05 21:29	6° $\mathfrak{Z}$ 00'49		retrograde	10290 Jun 06 08:35	3° $\mathfrak{H}$ 01'07	
retrograde	10284 Mar 18 20:53	13° $\mathfrak{Z}$ 51'29			10290 Aug 08 10:05	30° $\mathbb{R}$ $\approx$	
opposition	10284 May 25 12:04	10° $\mathfrak{Z}$ 25'58	2°09'59	opposition	10290 Aug 12 22:18	29° $\approx$ 38'43	1°22'20
min. Earth dist.	10284 May 25 16:13	10° $\mathfrak{Z}$ 25'08	8.35182 AU	min. Earth dist.	10290 Aug 13 05:44	29° $\approx$ 37'15	8.43105 AU
direct	10284 Aug 01 07:03	6° $\mathfrak{Z}$ 59'46		direct	10290 Oct 21 08:21	26° $\approx$ 11'49	
evening set	10284 Nov 13 07:58	14° $\mathfrak{Z}$ 50'53			10290 Dec 29 20:56	0° $\mathfrak{H}$	
				evening set	10291 Feb 03 14:29	4° $\mathfrak{H}$ 01'52	
conjunction	10284 Dec 01 03:06	17° $\mathfrak{Z}$ 04'15	1°49'34				
minimum elong	10284 Dec 01 03:05	17° $\mathfrak{Z}$ 04'15	1°50'02	conjunction	10291 Feb 21 01:42	6° $\mathfrak{H}$ 11'57	0°55'20
max. Earth dist.	10284 Nov 30 20:32	17° $\mathfrak{Z}$ 02'11	10.34290 AU	minimum elong	10291 Feb 21 01:44	6° $\mathfrak{H}$ 11'58	0°55'33
morning rise	10284 Dec 18 21:41	19° $\mathfrak{Z}$ 17'30		max. Earth dist.	10291 Feb 20 16:49	6° $\mathfrak{H}$ 09'10	10.45126 AU
retrograde	10285 Apr 01 10:40	27° $\mathfrak{Z}$ 07'38		morning rise	10291 Mar 10 09:29	8° $\mathfrak{H}$ 21'02	
opposition	10285 Jun 07 21:12	23° $\mathfrak{Z}$ 42'30	2°20'03	retrograde	10291 Jun 19 11:40	15° $\mathfrak{H}$ 54'11	
min. Earth dist.	10285 Jun 08 02:20	23° $\mathfrak{Z}$ 41'28	8.33913 AU	opposition	10291 Aug 26 05:39	12° $\mathfrak{H}$ 32'16	0°54'14
direct	10285 Aug 14 21:31	20° $\mathfrak{Z}$ 15'46		min. Earth dist.	10291 Aug 26 11:50	12° $\mathfrak{H}$ 31'04	8.47321 AU
evening set	10285 Nov 27 10:21	28° $\mathfrak{Z}$ 09'39		direct	10291 Nov 03 20:35	9° $\mathfrak{H}$ 05'56	
	10285 Dec 12 03:51	0° $\mathfrak{Z}$		evening set	10292 Feb 16 22:10	16° $\mathfrak{H}$ 52'24	
conjunction	10285 Dec 15 04:59	0° $\mathfrak{Z}$ 23'02	1°54'41				
minimum elong	10285 Dec 15 04:59	0° $\mathfrak{Z}$ 23'02	1°55'09	conjunction	10292 Mar 05 07:09	19° $\mathfrak{H}$ 01'20	0°31'31
max. Earth dist.	10285 Dec 14 21:19	0° $\mathfrak{Z}$ 20'37	10.33538 AU	minimum elong	10292 Mar 05 07:10	19° $\mathfrak{H}$ 01'20	0°31'39
morning rise	10286 Jan 01 22:08	2° $\mathfrak{Z}$ 36'03		max. Earth dist.	10292 Mar 04 23:57	18° $\mathfrak{H}$ 59'06	10.49575 AU
retrograde	10286 Apr 14 23:55	10° $\mathfrak{Z}$ 24'46		morning rise	10292 Mar 22 12:36	21° $\mathfrak{H}$ 09'15	
opposition	10286 Jun 21 07:10	7° $\mathfrak{Z}$ 00'06	2°22'38	retrograde	10292 Jul 01 10:41	28° $\mathfrak{H}$ 39'10	
min. Earth dist.	10286 Jun 21 13:13	6° $\mathfrak{Z}$ 58'53	8.33721 AU	opposition	10292 Sep 07 11:18	25° $\mathfrak{H}$ 17'44	0°23'44
direct	10286 Aug 28 13:11	3° $\mathfrak{Z}$ 32'58		min. Earth dist.	10292 Sep 07 16:31	25° $\mathfrak{H}$ 16'44	8.51898 AU
evening set	10286 Dec 11 12:15	11° $\mathfrak{Z}$ 28'28		direct	10292 Nov 16 06:41	21° $\mathfrak{H}$ 52'06	
				evening set	10293 Mar 01 01:08	29° $\mathfrak{H}$ 34'40	
conjunction	10286 Dec 29 05:57	13° $\mathfrak{Z}$ 41'37	1°53'41		10293 Mar 04 12:16	0° $\mathfrak{Y}$	
minimum elong	10286 Dec 29 05:58	13° $\mathfrak{Z}$ 41'37	1°54'09	conjunction	10293 Mar 18 07:32	1° $\mathfrak{Y}$ 42'19	0°06'25
max. Earth dist.	10286 Dec 28 21:08	13° $\mathfrak{Z}$ 38'50	10.33901 AU	minimum elong	10293 Mar 18 07:32	1° $\mathfrak{Y}$ 42'19	0°06'27
morning rise	10287 Jan 15 21:27	15° $\mathfrak{Z}$ 54'11		behind sun begin	10293 Mar 18 00:50	1° $\mathfrak{Y}$ 40'16	
retrograde	10287 Apr 28 12:31	23° $\mathfrak{Z}$ 40'39		behind sun end	10293 Mar 18 14:14	1° $\mathfrak{Y}$ 44'22	
opposition	10287 Jul 04 17:41	20° $\mathfrak{Z}$ 16'33	2°17'36	max. Earth dist.	10293 Mar 18 01:41	1° $\mathfrak{Y}$ 40'32	10.54259 AU
min. Earth dist.	10287 Jul 05 00:53	20° $\mathfrak{Z}$ 15'06	8.34630 AU	morning rise	10293 Apr 04 10:40	3° $\mathfrak{Y}$ 49'03	
direct	10287 Sep 11 05:05	16° $\mathfrak{Z}$ 49'10		desc. node	10293 Jun 21 17:10	10° $\mathfrak{Y}$ 49'16	
evening set	10287 Dec 25 12:08	24° $\mathfrak{Z}$ 44'59		retrograde	10293 Jul 14 07:20	11° $\mathfrak{Y}$ 16'12	
				opposition	10293 Sep 20 15:33	7° $\mathfrak{Y}$ 55'12	-0°07'35



min. Earth dist.	10293 Sep 20 19:58	7°♈54'21	8.56609 AU	retrograde	10299 Sep 27 08:24	24°♊52'12	
direct	10293 Nov 29 14:45	4°♈30'23		opposition	10299 Dec 06 08:44	21°♊31'19	-2°18'24
evening set	10294 Mar 13 23:20	12°♈08'51		min. Earth dist.	10299 Dec 06 03:23	21°♊32'19	8.76157 AU
				direct	10300 Feb 14 00:54	18°♊11'06	
conjunction	10294 Mar 31 02:57	14°♈15'11	-0°18'53	evening set	10300 May 26 13:09	25°♊29'59	
minimum elong	10294 Mar 31 02:56	14°♈15'11	0°18'57				
max. Earth dist.	10294 Mar 30 22:11	14°♈13'43	10.58948 AU	conjunction	10300 Jun 12 06:42	27°♊31'20	-1°54'47
morning rise	10294 Apr 17 03:53	16°♈20'44		minimum elong	10300 Jun 12 06:41	27°♊31'20	1°55'16
retrograde	10294 Jul 27 02:13	23°♈45'43		max. Earth dist.	10300 Jun 12 13:37	27°♊33'26	10.76346 AU
opposition	10294 Oct 03 18:05	20°♈25'03	-0°38'12	morning rise	10300 Jun 29 01:21	29°♊33'00	
min. Earth dist.	10294 Oct 03 21:03	20°♈24'29	8.61227 AU		10300 Jul 02 20:36	0°♊	
direct	10294 Dec 12 19:21	17°♈01'07		retrograde	10300 Oct 10 00:01	6°♊57'36	
evening set	10295 Mar 26 17:14	24°♈35'30		opposition	10300 Dec 19 03:41	3°♊36'19	-2°22'13
				min. Earth dist.	10300 Dec 18 20:43	3°♊37'38	8.76557 AU
conjunction	10295 Apr 12 18:12	26°♈40'34	-0°42'58	direct	10301 Feb 26 14:50	0°♊16'28	
minimum elong	10295 Apr 12 18:11	26°♈40'33	0°43'09	evening set	10301 Jun 07 17:38	7°♊33'49	
max. Earth dist.	10295 Apr 12 15:23	26°♈39'42	10.63421 AU				
morning rise	10295 Apr 29 17:03	28°♈45'00		conjunction	10301 Jun 24 11:51	9°♊35'16	-1°55'21
	10295 May 10 06:12	0°♊		minimum elong	10301 Jun 24 11:52	9°♊35'16	1°55'49
retrograde	10295 Aug 08 18:28	6°♊08'26		max. Earth dist.	10301 Jun 24 20:41	9°♊37'57	10.76210 AU
opposition	10295 Oct 16 18:48	2°♊47'57	-1°06'43	morning rise	10301 Jul 11 07:38	11°♊37'13	
min. Earth dist.	10295 Oct 16 19:36	2°♊47'48	8.65532 AU	retrograde	10301 Oct 22 16:54	19°♊03'34	
	10295 Nov 29 02:55	30°♋		opposition	10301 Dec 31 22:12	15°♊41'44	-2°19'45
direct	10295 Dec 25 21:14	29°♈24'55		min. Earth dist.	10301 Dec 31 14:08	15°♊43'16	8.75874 AU
	10296 Jan 21 08:02	0°♊		direct	10302 Mar 11 03:30	12°♊22'04	
evening set	10296 Apr 07 07:16	6°♊55'25		evening set	10302 Jun 19 22:36	19°♊38'37	
conjunction	10296 Apr 24 05:53	8°♊59'19	-1°04'54	conjunction	10302 Jul 06 18:11	21°♊40'32	-1°50'48
minimum elong	10296 Apr 24 05:51	8°♊59'19	1°05'10	minimum elong	10302 Jul 06 18:12	21°♊40'32	1°51'15
max. Earth dist.	10296 Apr 24 05:44	8°♊59'17	10.67465 AU	max. Earth dist.	10302 Jul 07 03:23	21°♊43'20	10.74974 AU
morning rise	10296 May 11 02:45	11°♊02'45		morning rise	10302 Jul 23 15:57	23°♊43'06	
	10296 Jun 15 23:41	15°♊			10302 Sep 27 05:06	0°♋	
retrograde	10296 Aug 20 11:06	18°♊25'18		retrograde	10302 Nov 04 12:22	1°♋11'35	
opposition	10296 Oct 28 18:07	15°♊04'53	-1°31'56		10302 Dec 13 10:44	30°♋	
min. Earth dist.	10296 Oct 28 16:36	15°♊05'10	8.69320 AU	opposition	10303 Jan 13 16:36	27°♊49'12	-2°11'04
	10296 Oct 29 19:49	15°♋		min. Earth dist.	10303 Jan 13 08:39	27°♊50'42	8.74065 AU
direct	10297 Jan 06 20:30	11°♊42'44		direct	10303 Mar 23 14:54	24°♊29'30	
	10297 Mar 12 14:25	15°♊			10303 Jun 16 23:13	0°♋	
evening set	10297 Apr 19 18:00	19°♊09'37		evening set	10303 Jul 02 05:10	1°♋46'07	
conjunction	10297 May 06 14:29	21°♊12'31	-1°23'43	conjunction	10303 Jul 19 02:45	3°♋48'47	-1°41'17
minimum elong	10297 May 06 14:27	21°♊12'30	1°24'04	minimum elong	10303 Jul 19 02:47	3°♋48'48	1°41'43
max. Earth dist.	10297 May 06 17:01	21°♊13'18	10.70901 AU	max. Earth dist.	10303 Jul 19 11:20	3°♋51'24	10.72655 AU
morning rise	10297 May 23 09:45	23°♊15'06		morning rise	10303 Aug 05 03:14	5°♋52'18	
	10297 Aug 05 23:03	0°♋		retrograde	10303 Nov 17 07:45	13°♋23'17	
retrograde	10297 Sep 02 03:24	0°♋37'22		opposition	10304 Jan 26 11:14	10°♋00'16	-1°56'29
	10297 Sep 29 15:46	30°♋		min. Earth dist.	10304 Jan 26 03:55	10°♋01'40	8.71231 AU
opposition	10297 Nov 10 16:10	27°♊16'56	-1°52'47	direct	10304 Apr 04 02:41	6°♋40'22	
min. Earth dist.	10297 Nov 10 13:01	27°♊17'32	8.72433 AU	evening set	10304 Jul 13 14:05	13°♋57'51	
direct	10298 Jan 19 15:24	23°♊55'34			10304 Jul 22 04:21	15°♋	
	10298 Apr 20 19:43	0°♋					
evening set	10298 May 02 02:10	1°♋19'15		conjunction	10304 Jul 30 14:21	16°♋01'34	-1°27'10
				minimum elong	10304 Jul 30 14:23	16°♋01'34	1°27'32
conjunction	10298 May 18 20:56	3°♋21'21	-1°38'39	max. Earth dist.	10304 Jul 30 22:40	16°♋04'06	10.69420 AU
minimum elong	10298 May 18 20:54	3°♋21'21	1°39'05	morning rise	10304 Aug 16 17:58	18°♋06'14	
max. Earth dist.	10298 May 19 00:56	3°♋22'35	10.73599 AU	retrograde	10304 Nov 29 04:54	25°♋39'59	
morning rise	10298 Jun 04 15:19	5°♋23'22		opposition	10305 Feb 07 06:33	22°♋16'16	-1°36'31
retrograde	10298 Sep 14 17:43	12°♋45'54		min. Earth dist.	10305 Feb 06 23:27	22°♋17'38	8.67578 AU
opposition	10298 Nov 23 12:58	9°♋25'18	-2°08'28	direct	10305 Apr 16 16:53	18°♋55'58	
min. Earth dist.	10298 Nov 23 08:48	9°♋26'05	8.74751 AU	evening set	10305 Jul 26 02:05	26°♋15'01	
direct	10299 Feb 01 08:17	6°♋04'35					
evening set	10299 May 14 08:17	13°♋25'36		conjunction	10305 Aug 12 05:35	28°♋20'00	-1°08'57
				minimum elong	10305 Aug 12 05:37	28°♋20'01	1°09'15
conjunction	10299 May 31 02:01	15°♋27'10	-1°49'09	max. Earth dist.	10305 Aug 12 14:22	28°♋22'42	10.65467 AU
minimum elong	10299 May 31 02:00	15°♋27'10	1°49'37		10305 Aug 25 21:54	0°♌	
max. Earth dist.	10299 May 31 07:13	15°♋28'45	10.75449 AU	morning rise	10305 Aug 29 12:30	0°♌26'00	
morning rise	10299 Jun 16 20:16	17°♋28'52		retrograde	10305 Dec 12 06:10	8°♌02'39	

opposition	10306 Feb 20 02:40	4° $\mathbb{M}$ 38'12	-1°11'56	retrograde	10312 Feb 29 08:30	24° $\mathbb{M}$ 50'56	
min. Earth dist.	10306 Feb 19 19:29	4° $\mathbb{M}$ 39'35	8.63310 AU	opposition	10312 May 07 10:08	21° $\mathbb{M}$ 24'23	1°43'18
direct	10306 Apr 29 07:22	1° $\mathbb{M}$ 17'21		min. Earth dist.	10312 May 07 10:36	21° $\mathbb{M}$ 24'17	8.36955 AU
evening set	10306 Aug 07 18:24	8° $\mathbb{M}$ 38'44		direct	10312 Jul 14 01:19	17° $\mathbb{M}$ 58'39	
				evening set	10312 Oct 25 04:25	25° $\mathbb{M}$ 44'39	
conjunction	10306 Aug 25 01:13	10° $\mathbb{M}$ 45'06	-0°47'24				
minimum elong	10306 Aug 25 01:15	10° $\mathbb{M}$ 45'06	0°47'36	conjunction	10312 Nov 11 23:41	27° $\mathbb{M}$ 57'44	1°31'49
max. Earth dist.	10306 Aug 25 09:47	10° $\mathbb{M}$ 47'43	10.60995 AU	minimum elong	10312 Nov 11 23:38	27° $\mathbb{M}$ 57'43	1°32'12
morning rise	10306 Sep 11 11:25	12° $\mathbb{M}$ 52'30		max. Earth dist.	10312 Nov 11 21:24	27° $\mathbb{M}$ 57'01	10.35488 AU
retrograde	10306 Dec 25 09:37	20° $\mathbb{M}$ 32'01			10312 Nov 28 07:32	0° $\mathbb{Z}$	
opposition	10307 Mar 04 23:44	17° $\mathbb{M}$ 06'55	-0°43'44	morning rise	10312 Nov 29 19:26	0° $\mathbb{Z}$ 11'02	
min. Earth dist.	10307 Mar 04 17:02	17° $\mathbb{M}$ 08'13	8.58635 AU	retrograde	10313 Mar 13 23:48	8° $\mathbb{Z}$ 02'17	
direct	10307 May 11 22:24	13° $\mathbb{M}$ 45'22		opposition	10313 May 20 17:24	4° $\mathbb{Z}$ 35'59	2°03'03
evening set	10307 Aug 20 15:24	21° $\mathbb{M}$ 09'50		min. Earth dist.	10313 May 20 19:47	4° $\mathbb{Z}$ 35'30	8.34437 AU
				direct	10313 Jul 27 09:53	1° $\mathbb{Z}$ 09'32	
conjunction	10307 Sep 07 01:21	23° $\mathbb{M}$ 17'37	-0°23'25	evening set	10313 Nov 08 05:00	8° $\mathbb{Z}$ 59'32	
minimum elong	10307 Sep 07 01:22	23° $\mathbb{M}$ 17'37	0°23'30				
max. Earth dist.	10307 Sep 07 08:32	23° $\mathbb{M}$ 19'49	10.56219 AU	conjunction	10313 Nov 26 00:17	11° $\mathbb{Z}$ 12'59	1°45'14
morning rise	10307 Sep 24 14:41	25° $\mathbb{M}$ 26'25		minimum elong	10313 Nov 26 00:15	11° $\mathbb{Z}$ 12'58	1°45'40
	10307 Nov 05 12:37	0° $\mathbb{Z}$		max. Earth dist.	10313 Nov 25 19:22	11° $\mathbb{Z}$ 11'26	10.33433 AU
retrograde	10308 Jan 07 14:39	3° $\mathbb{Z}$ 08'46		morning rise	10313 Dec 13 19:23	13° $\mathbb{Z}$ 26'26	
	10308 Mar 13 08:19	30° $\mathbb{R}$ $\mathbb{M}$		retrograde	10314 Mar 27 14:11	21° $\mathbb{Z}$ 17'26	
opposition	10308 Mar 16 22:26	29° $\mathbb{M}$ 43'05	-0°13'07	opposition	10314 Jun 03 02:15	17° $\mathbb{Z}$ 51'35	2°16'21
min. Earth dist.	10308 Mar 16 17:05	29° $\mathbb{M}$ 44'08	8.53778 AU	min. Earth dist.	10314 Jun 03 06:36	17° $\mathbb{Z}$ 50'42	8.32933 AU
direct	10308 May 23 17:02	26° $\mathbb{M}$ 20'46		direct	10314 Aug 09 23:26	14° $\mathbb{Z}$ 24'35	
	10308 Jul 29 15:04	0° $\mathbb{Z}$		evening set	10314 Nov 22 07:09	22° $\mathbb{Z}$ 17'47	
asc. node	10308 Aug 21 01:44	2° $\mathbb{Z}$ 25'59					
evening set	10308 Sep 01 17:24	3° $\mathbb{Z}$ 48'55		conjunction	10314 Dec 10 01:58	24° $\mathbb{Z}$ 31'19	1°53'04
				minimum elong	10314 Dec 10 01:57	24° $\mathbb{Z}$ 31'19	1°53'32
conjunction	10308 Sep 19 06:13	5° $\mathbb{Z}$ 58'05	0°02'01	max. Earth dist.	10314 Dec 09 18:50	24° $\mathbb{Z}$ 29'04	10.32454 AU
minimum elong	10308 Sep 19 06:12	5° $\mathbb{Z}$ 58'04	0°02'02	morning rise	10314 Dec 27 19:57	26° $\mathbb{Z}$ 44'38	
behind sun begin	10308 Sep 18 22:59	5° $\mathbb{Z}$ 55'52			10315 Jan 24 17:20	0° $\mathbb{Z}$	
behind sun end	10308 Sep 19 13:25	6° $\mathbb{Z}$ 00'17		retrograde	10315 Apr 10 03:04	4° $\mathbb{Z}$ 34'35	
max. Earth dist.	10308 Sep 19 11:12	5° $\mathbb{Z}$ 59'35	10.51364 AU	opposition	10315 Jun 16 12:12	1° $\mathbb{Z}$ 09'19	2°22'24
morning rise	10308 Oct 06 22:19	8° $\mathbb{Z}$ 08'13		min. Earth dist.	10315 Jun 16 18:00	1° $\mathbb{Z}$ 08'09	8.32535 AU
retrograde	10309 Jan 19 22:29	15° $\mathbb{Z}$ 53'14			10315 Jul 01 03:23	30° $\mathbb{R}$ $\mathbb{Z}$	
opposition	10309 Mar 29 22:48	12° $\mathbb{Z}$ 27'06	0°18'28	direct	10315 Aug 23 15:16	27° $\mathbb{Z}$ 42'00	
min. Earth dist.	10309 Mar 29 19:20	12° $\mathbb{Z}$ 27'47	8.48965 AU		10315 Oct 14 21:43	0° $\mathbb{Z}$	
direct	10309 Jun 05 14:08	9° $\mathbb{Z}$ 03'55		evening set	10315 Dec 06 09:35	5° $\mathbb{Z}$ 37'19	
evening set	10309 Sep 15 00:51	16° $\mathbb{Z}$ 36'17					
				conjunction	10315 Dec 24 03:41	7° $\mathbb{Z}$ 50'44	1°54'52
conjunction	10309 Oct 02 16:10	18° $\mathbb{Z}$ 46'43	0°27'28	minimum elong	10315 Dec 24 03:41	7° $\mathbb{Z}$ 50'44	1°55'21
minimum elong	10309 Oct 02 16:09	18° $\mathbb{Z}$ 46'43	0°27'35	max. Earth dist.	10315 Dec 23 19:14	7° $\mathbb{Z}$ 48'04	10.32624 AU
max. Earth dist.	10309 Oct 02 19:17	18° $\mathbb{Z}$ 47'41	10.46647 AU	morning rise	10316 Jan 10 20:12	10° $\mathbb{Z}$ 03'41	
morning rise	10309 Oct 20 10:23	20° $\mathbb{Z}$ 58'02		retrograde	10316 Apr 22 16:00	17° $\mathbb{Z}$ 51'44	
retrograde	10310 Feb 02 08:11	28° $\mathbb{Z}$ 45'22		opposition	10316 Jun 28 22:44	14° $\mathbb{Z}$ 27'09	2°20'48
opposition	10310 Apr 12 00:41	25° $\mathbb{Z}$ 18'57	0°49'29	min. Earth dist.	10316 Jun 29 05:04	14° $\mathbb{Z}$ 25'53	8.33276 AU
min. Earth dist.	10310 Apr 11 22:48	25° $\mathbb{Z}$ 19'20	8.44416 AU	direct	10316 Sep 05 07:53	10° $\mathbb{Z}$ 59'42	
direct	10310 Jun 18 14:31	21° $\mathbb{Z}$ 54'52		evening set	10316 Dec 19 10:57	18° $\mathbb{Z}$ 55'57	
evening set	10310 Sep 28 13:32	29° $\mathbb{Z}$ 31'49					
	10310 Oct 02 09:39	0° $\mathbb{M}$		conjunction	10317 Jan 06 04:06	21° $\mathbb{Z}$ 09'00	1°50'31
conjunction	10310 Oct 16 06:51	1° $\mathbb{M}$ 43'22	0°51'47	minimum elong	10317 Jan 06 04:07	21° $\mathbb{Z}$ 09'01	1°50'59
minimum elong	10310 Oct 16 06:49	1° $\mathbb{M}$ 43'21	0°52'01	max. Earth dist.	10317 Jan 05 19:23	21° $\mathbb{Z}$ 06'15	10.33931 AU
max. Earth dist.	10310 Oct 16 08:22	1° $\mathbb{M}$ 43'50	10.42286 AU	morning rise	10317 Jan 23 18:54	23° $\mathbb{Z}$ 21'23	
morning rise	10310 Nov 03 02:19	3° $\mathbb{M}$ 55'36			10317 Mar 31 19:08	0° $\mathbb{Z}$	
retrograde	10311 Feb 15 18:55	11° $\mathbb{M}$ 44'52		retrograde	10317 May 06 04:03	1° $\mathbb{Z}$ 06'47	
opposition	10311 Apr 25 04:29	8° $\mathbb{M}$ 18'18	1°18'17		10317 Jun 10 23:45	30° $\mathbb{R}$ $\mathbb{Z}$	
min. Earth dist.	10311 Apr 25 03:45	8° $\mathbb{M}$ 18'27	8.40344 AU	opposition	10317 Jul 12 09:33	27° $\mathbb{Z}$ 42'57	2°11'42
direct	10311 Jul 01 19:04	4° $\mathbb{M}$ 53'22		min. Earth dist.	10317 Jul 12 16:02	27° $\mathbb{Z}$ 41'39	8.35104 AU
evening set	10311 Oct 12 06:53	12° $\mathbb{M}$ 34'57		direct	10317 Sep 19 01:01	24° $\mathbb{Z}$ 15'35	
					10317 Dec 15 01:04	0° $\mathbb{Z}$	
conjunction	10311 Oct 30 01:30	14° $\mathbb{M}$ 47'23	1°13'39	evening set	10318 Jan 02 10:01	2° $\mathbb{Z}$ 11'29	
minimum elong	10311 Oct 30 01:28	14° $\mathbb{M}$ 47'22	1°13'58				
max. Earth dist.	10311 Oct 30 01:31	14° $\mathbb{M}$ 47'23	10.38497 AU	conjunction	10318 Jan 20 01:50	4° $\mathbb{Z}$ 23'56	1°40'19
	10311 Oct 31 17:52	15° $\mathbb{M}$		minimum elong	10318 Jan 20 01:53	4° $\mathbb{Z}$ 23'57	1°40'44
morning rise	10311 Nov 16 21:25	17° $\mathbb{M}$ 00'16		max. Earth dist.	10318 Jan 19 17:11	4° $\mathbb{Z}$ 21'13	10.36292 AU
				morning rise	10318 Feb 06 14:40	6° $\mathbb{Z}$ 35'33	

retrograde	10318 May 19 13:17	14° $\approx$ 17'44		morning rise	10324 Apr 24 12:28	23° $\Upsilon$ 30'02
opposition	10318 Jul 25 20:07	10° $\approx$ 54'40	1°55'41		10324 Jul 01 23:57	0° $\mathcal{B}$
min. Earth dist.	10318 Jul 26 02:47	10° $\approx$ 53'20	8.37920 AU	retrograde	10324 Aug 03 14:19	0° $\mathcal{R}$ 54'42
direct	10318 Oct 02 18:27	7° $\approx$ 27'33			10324 Sep 05 19:13	30° $\mathcal{R}$ $\Upsilon$
	10319 Jan 13 06:02	15° $\approx$		opposition	10324 Oct 11 08:50	27° $\Upsilon$ 34'26 -0°54'22
evening set	10319 Jan 16 05:39	15° $\approx$ 21'55		min. Earth dist.	10324 Oct 11 11:34	27° $\Upsilon$ 33'55 8.63232 AU
				direct	10324 Dec 20 09:22	24° $\Upsilon$ 11'14
conjunction	10319 Feb 02 19:48	17° $\approx$ 33'33	1°24'55		10325 Mar 19 07:45	0° $\mathcal{B}$
minimum elong	10319 Feb 02 19:51	17° $\approx$ 33'33	1°25'16	evening set	10325 Apr 03 03:09	1° $\mathcal{B}$ 44'13
max. Earth dist.	10319 Feb 02 11:13	17° $\approx$ 30'51	10.39582 AU			
morning rise	10319 Feb 20 06:37	19° $\approx$ 44'13		conjunction	10325 Apr 20 02:51	3° $\mathcal{B}$ 48'48 -0°55'29
retrograde	10319 Jun 01 20:20	27° $\approx$ 22'50		minimum elong	10325 Apr 20 02:49	3° $\mathcal{B}$ 48'47 0°55'43
opposition	10319 Aug 08 05:56	24° $\approx$ 00'29	1°33'45	max. Earth dist.	10325 Apr 20 00:02	3° $\mathcal{B}$ 47'56 10.65014 AU
min. Earth dist.	10319 Aug 08 12:59	23° $\approx$ 59'06	8.41575 AU	morning rise	10325 May 07 00:34	5° $\mathcal{B}$ 52'49
direct	10319 Oct 16 10:27	20° $\approx$ 33'46		retrograde	10325 Aug 16 07:27	13° $\mathcal{B}$ 16'31
evening set	10320 Jan 29 20:55	28° $\approx$ 25'32		opposition	10325 Oct 24 09:50	9° $\mathcal{B}$ 56'14 -1°21'15
	10320 Feb 11 13:35	0° $\mathcal{H}$		min. Earth dist.	10325 Oct 24 11:17	9° $\mathcal{B}$ 55'58 8.66715 AU
conjunction	10320 Feb 16 09:06	0° $\mathcal{H}$ 36'09	1°05'15	direct	10326 Jan 02 11:05	6° $\mathcal{B}$ 33'43
minimum elong	10320 Feb 16 09:08	0° $\mathcal{H}$ 36'10	1°05'31	evening set	10326 Apr 15 16:08	14° $\mathcal{B}$ 03'08
max. Earth dist.	10320 Feb 16 00:15	0° $\mathcal{H}$ 33'23	10.43606 AU		10326 Apr 23 11:55	15° $\mathcal{B}$
morning rise	10320 Mar 04 17:54	2° $\mathcal{H}$ 45'47		conjunction	10326 May 02 13:30	16° $\mathcal{B}$ 06'41 -1°15'50
retrograde	10320 Jun 14 00:03	10° $\mathcal{H}$ 20'43		minimum elong	10326 May 02 13:28	16° $\mathcal{B}$ 06'40 1°16'10
opposition	10320 Aug 20 14:30	6° $\mathcal{H}$ 59'01	1°07'14	max. Earth dist.	10326 May 02 12:23	16° $\mathcal{B}$ 06'20 10.68184 AU
min. Earth dist.	10320 Aug 20 21:36	6° $\mathcal{H}$ 57'37	8.45836 AU	morning rise	10326 May 19 09:39	18° $\mathcal{B}$ 09'51
direct	10320 Oct 29 01:09	3° $\mathcal{H}$ 32'50		retrograde	10326 Aug 28 23:23	25° $\mathcal{B}$ 33'09
evening set	10321 Feb 11 07:33	11° $\mathcal{H}$ 21'13		opposition	10326 Nov 06 09:21	22° $\mathcal{B}$ 12'41 -1°44'14
conjunction	10321 Feb 28 17:27	13° $\mathcal{H}$ 30'40	0°42'26	min. Earth dist.	10326 Nov 06 08:54	22° $\mathcal{B}$ 12'46 8.69598 AU
minimum elong	10321 Feb 28 17:28	13° $\mathcal{H}$ 30'41	0°42'37	direct	10327 Jan 15 09:18	18° $\mathcal{B}$ 50'47
max. Earth dist.	10321 Feb 28 08:45	13° $\mathcal{H}$ 27'58	10.48088 AU	evening set	10327 Apr 28 02:11	26° $\mathcal{B}$ 16'56
morning rise	10321 Mar 18 00:05	15° $\mathcal{H}$ 39'09		conjunction	10327 May 14 21:47	28° $\mathcal{B}$ 19'38 -1°32'37
retrograde	10321 Jun 26 23:34	23° $\mathcal{H}$ 10'37		minimum elong	10327 May 14 21:44	28° $\mathcal{B}$ 19'37 1°33'01
opposition	10321 Sep 02 21:25	19° $\mathcal{H}$ 49'27	0°37'36	max. Earth dist.	10327 May 14 23:16	28° $\mathcal{B}$ 20'05 10.70689 AU
min. Earth dist.	10321 Sep 03 03:47	19° $\mathcal{H}$ 48'12	8.50406 AU		10327 May 28 15:01	0° $\mathcal{H}$
direct	10321 Nov 11 14:47	16° $\mathcal{H}$ 23'54		morning rise	10327 May 31 16:43	0° $\mathcal{H}$ 22'10
evening set	10322 Feb 24 13:08	24° $\mathcal{H}$ 08'28		retrograde	10327 Sep 10 14:31	7° $\mathcal{H}$ 45'36
conjunction	10322 Mar 13 20:38	26° $\mathcal{H}$ 16'40	0°17'44	opposition	10327 Nov 19 07:18	4° $\mathcal{H}$ 24'47 -2°02'21
minimum elong	10322 Mar 13 20:39	26° $\mathcal{H}$ 16'41	0°17'49	min. Earth dist.	10327 Nov 19 04:24	4° $\mathcal{H}$ 25'20 8.71758 AU
max. Earth dist.	10322 Mar 13 13:02	26° $\mathcal{H}$ 14'20	10.52706 AU	direct	10328 Jan 28 05:18	1° $\mathcal{H}$ 03'25
morning rise	10322 Mar 31 00:58	28° $\mathcal{H}$ 23'57		evening set	10328 May 09 09:55	8° $\mathcal{H}$ 26'46
	10322 Apr 13 11:56	0° $\Upsilon$		conjunction	10328 May 26 04:18	10° $\mathcal{H}$ 28'51 -1°45'10
retrograde	10322 Jul 09 22:18	5° $\Upsilon$ 52'30		minimum elong	10328 May 26 04:17	10° $\mathcal{H}$ 28'51 1°45'37
opposition	10322 Sep 16 02:45	2° $\Upsilon$ 31'44	0°06'27	max. Earth dist.	10328 May 26 08:33	10° $\mathcal{H}$ 30'09 10.72423 AU
min. Earth dist.	10322 Sep 16 07:49	2° $\Upsilon$ 30'46	8.54963 AU	morning rise	10328 Jun 11 22:34	12° $\mathcal{H}$ 30'57
	10322 Oct 23 01:15	30° $\mathcal{R}$ $\mathcal{H}$		retrograde	10328 Sep 22 07:31	19° $\mathcal{H}$ 55'05
direct	10322 Nov 25 00:43	29° $\mathcal{H}$ 06'58		opposition	10328 Dec 01 04:21	16° $\mathcal{H}$ 33'51 -2°14'55
desc. node	10322 Dec 02 03:58	29° $\mathcal{H}$ 09'34		min. Earth dist.	10328 Nov 30 23:36	16° $\mathcal{H}$ 34'45 8.73106 AU
	10322 Dec 27 13:12	0° $\Upsilon$		direct	10329 Feb 08 22:49	13° $\mathcal{H}$ 12'54
evening set	10323 Mar 09 13:50	6° $\Upsilon$ 47'33		evening set	10329 May 21 15:58	20° $\mathcal{H}$ 33'54
conjunction	10323 Mar 26 18:50	8° $\Upsilon$ 54'32	-0°07'41	conjunction	10329 Jun 07 09:43	22° $\mathcal{H}$ 35'41 -1°52'59
minimum elong	10323 Mar 26 18:50	8° $\Upsilon$ 54'32	0°07'43	minimum elong	10329 Jun 07 09:42	22° $\mathcal{H}$ 35'40 1°53'27
behind sun begin	10323 Mar 26 12:25	8° $\Upsilon$ 52'34		max. Earth dist.	10329 Jun 07 15:43	22° $\mathcal{H}$ 37'31 10.73323 AU
behind sun end	10323 Mar 27 01:15	8° $\Upsilon$ 56'30		morning rise	10329 Jun 24 04:08	24° $\mathcal{H}$ 37'40
max. Earth dist.	10323 Mar 26 13:06	8° $\Upsilon$ 52'47	10.57166 AU		10329 Aug 15 13:07	0° $\mathcal{G}$
morning rise	10323 Apr 12 20:47	11° $\Upsilon$ 00'39		retrograde	10329 Oct 04 23:43	2° $\mathcal{G}$ 02'57
retrograde	10323 Jul 22 19:45	18° $\Upsilon$ 26'57			10329 Nov 26 05:17	30° $\mathcal{R}$ $\mathcal{H}$
opposition	10323 Sep 29 06:34	15° $\Upsilon$ 06'30	-0°24'42	opposition	10329 Dec 14 00:36	28° $\mathcal{H}$ 41'14 -2°21'27
min. Earth dist.	10323 Sep 29 10:16	15° $\Upsilon$ 05'47	8.59278 AU	min. Earth dist.	10329 Dec 13 18:47	28° $\mathcal{H}$ 42'21 8.73591 AU
direct	10323 Dec 08 06:14	11° $\Upsilon$ 42'32		direct	10330 Feb 21 12:39	25° $\mathcal{H}$ 20'35
evening set	10324 Mar 21 10:26	19° $\Upsilon$ 19'15			10330 May 10 11:39	0° $\mathcal{G}$
conjunction	10324 Apr 07 12:48	21° $\Upsilon$ 25'00	-0°32'26	evening set	10330 Jun 02 21:21	2° $\mathcal{G}$ 39'52
minimum elong	10324 Apr 07 12:47	21° $\Upsilon$ 25'00	0°32'34	conjunction	10330 Jun 19 15:14	4° $\mathcal{G}$ 41'37 -1°55'45
max. Earth dist.	10324 Apr 07 08:45	21° $\Upsilon$ 23'45	10.61302 AU	minimum elong	10330 Jun 19 15:14	4° $\mathcal{G}$ 41'37 1°56'14

max. Earth dist.	10330 Jun 19 22:05	4°♄43'42	10.73358 AU	max. Earth dist.	10336 Sep 01 08:36	18°♄23'17	10.57418 AU
morning rise	10330 Jul 06 10:42	6°♄43'48		morning rise	10336 Sep 18 12:00	20°♄28'57	
retrograde	10330 Oct 17 15:19	14°♄10'41		retrograde	10337 Jan 01 10:50	28°♄10'36	
opposition	10330 Dec 26 20:05	10°♄48'25	-2°21'41	opposition	10337 Mar 11 22:34	24°♄45'07	-0°25'58
min. Earth dist.	10330 Dec 26 13:35	10°♄49'39	8.73188 AU	min. Earth dist.	10337 Mar 11 15:42	24°♄46'28	8.55329 AU
direct	10331 Mar 06 03:16	7°♄27'56		direct	10337 May 18 19:11	21°♄23'11	
evening set	10331 Jun 15 02:46	14°♄46'11		evening set	10337 Aug 27 15:31	28°♄50'05	
					10337 Sep 06 04:48	0°♄	
conjunction	10331 Jul 01 21:45	16°♄48'14	-1°53'22	conjunction	10337 Sep 14 03:18	0°♄58'45	-0°08'38
minimum elong	10331 Jul 01 21:46	16°♄48'15	1°53'51	minimum elong	10337 Sep 14 03:18	0°♄58'44	0°08'40
max. Earth dist.	10331 Jul 02 05:53	16°♄50'43	10.72513 AU	behind sun begin	10337 Sep 13 21:04	0°♄56'50	
morning rise	10331 Jul 18 18:54	18°♄50'54		behind sun end	10337 Sep 14 09:31	1°♄00'39	
retrograde	10331 Oct 30 09:33	26°♄19'45		max. Earth dist.	10337 Sep 14 11:40	1°♄01'18	10.53231 AU
opposition	10332 Jan 08 15:18	22°♄56'54	-2°15'36	morning rise	10337 Oct 01 18:16	3°♄08'23	
min. Earth dist.	10332 Jan 08 07:36	22°♄58'22	8.71894 AU	retrograde	10338 Jan 14 18:52	10°♄52'35	
direct	10332 Mar 17 17:27	19°♄36'29		asc. node	10338 Jan 19 20:20	10°♄51'15	
evening set	10332 Jun 26 09:05	26°♄54'19		opposition	10338 Mar 24 22:34	7°♄26'48	0°05'25
				min. Earth dist.	10338 Mar 24 16:19	7°♄28'02	8.51132 AU
conjunction	10332 Jul 13 05:57	28°♄57'01	-1°45'55	direct	10338 May 31 15:07	4°♄04'16	
minimum elong	10332 Jul 13 05:59	28°♄57'01	1°46'21	evening set	10338 Sep 09 21:18	11°♄34'57	
max. Earth dist.	10332 Jul 13 15:46	29°♄00'01	10.70805 AU				
	10332 Jul 21 20:39	0°♄		conjunction	10338 Sep 27 11:41	13°♄44'51	0°17'01
morning rise	10332 Jul 30 05:19	1°♄00'27		minimum elong	10338 Sep 27 11:41	13°♄44'51	0°17'07
retrograde	10332 Nov 11 06:07	8°♄31'35		max. Earth dist.	10338 Sep 27 18:24	13°♄46'55	10.49078 AU
opposition	10333 Jan 20 10:36	5°♄08'07	-2°03'25	morning rise	10338 Oct 15 04:53	15°♄55'40	
min. Earth dist.	10333 Jan 20 01:45	5°♄09'48	8.69758 AU	retrograde	10339 Jan 28 05:13	23°♄42'06	
direct	10333 Mar 30 05:38	1°♄47'40		opposition	10339 Apr 07 00:06	20°♄16'08	0°36'51
evening set	10333 Jul 08 17:30	9°♄05'49		min. Earth dist.	10339 Apr 06 19:27	20°♄17'03	8.47081 AU
				direct	10339 Jun 13 13:17	16°♄52'54	
conjunction	10333 Jul 25 16:50	11°♄09'24	-1°33'38	evening set	10339 Sep 23 08:13	24°♄27'46	
minimum elong	10333 Jul 25 16:53	11°♄09'25	1°34'02				
max. Earth dist.	10333 Jul 26 03:34	11°♄12'41	10.68310 AU	conjunction	10339 Oct 11 00:38	26°♄38'45	0°41'58
morning rise	10333 Aug 11 19:04	13°♄13'51		minimum elong	10339 Oct 11 00:36	26°♄38'45	0°42'09
	10333 Aug 26 23:48	15°♄		max. Earth dist.	10339 Oct 11 04:40	26°♄40'00	10.45154 AU
retrograde	10333 Nov 24 04:06	20°♄47'29		morning rise	10339 Oct 28 19:27	28°♄50'30	
opposition	10334 Feb 02 06:13	17°♄23'26	-1°45'33		10339 Nov 07 11:25	0°♄	
min. Earth dist.	10334 Feb 01 21:04	17°♄25'11	8.66882 AU	retrograde	10340 Feb 10 15:58	6°♄38'46	
	10334 Mar 08 22:18	15°♄		opposition	10340 Apr 19 03:25	3°♄12'44	1°06'43
direct	10334 Apr 11 18:43	14°♄02'47		min. Earth dist.	10340 Apr 19 01:03	3°♄13'13	8.43353 AU
	10334 May 15 00:52	15°♄			10340 Jun 11 05:18	30°♄	
evening set	10334 Jul 21 04:49	21°♄22'01		direct	10340 Jun 25 16:17	29°♄48'43	
					10340 Jul 10 02:55	0°♄	
conjunction	10334 Aug 07 07:00	23°♄26'43	-1°17'01	evening set	10340 Oct 05 23:48	7°♄27'55	
minimum elong	10334 Aug 07 07:02	23°♄26'44	1°17'21				
max. Earth dist.	10334 Aug 07 17:07	23°♄29'49	10.65145 AU	conjunction	10340 Oct 23 17:41	9°♄39'49	1°04'58
morning rise	10334 Aug 24 12:35	25°♄32'24		minimum elong	10340 Oct 23 17:39	9°♄39'48	1°05'15
	10334 Oct 04 17:48	0°♄		max. Earth dist.	10340 Oct 23 18:33	9°♄40'05	10.41606 AU
retrograde	10334 Dec 07 04:48	3°♄08'39		morning rise	10340 Nov 10 13:28	11°♄52'17	
	10335 Feb 11 16:08	30°♄			10340 Dec 07 14:11	15°♄	
opposition	10335 Feb 15 02:37	29°♄44'03	-1°22'43	retrograde	10341 Feb 23 04:10	19°♄41'51	
min. Earth dist.	10335 Feb 14 18:17	29°♄45'40	8.63399 AU	opposition	10341 May 02 08:19	16°♄15'53	1°33'25
direct	10335 Apr 24 08:28	26°♄23'05		min. Earth dist.	10341 May 02 08:32	16°♄15'50	8.40058 AU
	10335 Jun 30 04:53	0°♄			10341 May 18 13:03	15°♄	
evening set	10335 Aug 02 19:49	3°♄44'10		direct	10341 Jul 08 22:02	12°♄51'03	
					10341 Aug 28 02:32	15°♄	
conjunction	10335 Aug 20 01:07	5°♄50'07	-0°56'42	evening set	10341 Oct 19 19:39	20°♄34'36	
minimum elong	10335 Aug 20 01:09	5°♄50'08	0°56'57				
max. Earth dist.	10335 Aug 20 10:23	5°♄52'58	10.61453 AU	conjunction	10341 Nov 06 14:27	22°♄47'12	1°24'45
morning rise	10335 Sep 06 10:07	7°♄57'09		minimum elong	10341 Nov 06 14:25	22°♄47'11	1°25'07
retrograde	10335 Dec 20 06:50	15°♄36'05		max. Earth dist.	10341 Nov 06 12:21	22°♄46'32	10.38527 AU
opposition	10336 Feb 27 23:59	12°♄11'01	-0°55'48	morning rise	10341 Nov 24 10:22	25°♄00'08	
min. Earth dist.	10336 Feb 27 16:31	12°♄12'29	8.59481 AU		10342 Jan 09 03:45	0°♄	
direct	10336 May 06 00:04	8°♄49'37		retrograde	10342 Mar 08 17:32	2°♄50'29	
evening set	10336 Aug 14 15:12	16°♄13'17			10342 May 08 05:42	30°♄	
				opposition	10342 May 15 14:36	29°♄24'43	1°55'26
conjunction	10336 Aug 31 23:48	18°♄20'35	-0°33'34	min. Earth dist.	10342 May 15 16:48	29°♄24'16	8.37297 AU
minimum elong	10336 Aug 31 23:50	18°♄20'36	0°33'42				

direct	10342 Jul 22 06:41	25° $\mathbb{M}$ 59'10		conjunction	10349 Feb 10 01:13	25° $\approx$ 23'17	1°13'58
	10342 Sep 30 16:57	0° $\mathbb{A}$		minimum elong	10349 Feb 10 01:15	25° $\approx$ 23'17	1°14'16
evening set	10342 Nov 02 18:44	3° $\mathbb{A}$ 46'53		max. Earth dist.	10349 Feb 09 15:26	25° $\approx$ 20'13	10.41821 AU
				morning rise	10349 Feb 27 10:59	27° $\approx$ 33'18	
conjunction	10342 Nov 20 13:56	5° $\mathbb{A}$ 59'57	1°40'12		10349 Mar 20 03:59	0° $\mathbb{H}$	
minimum elong	10342 Nov 20 13:54	5° $\mathbb{A}$ 59'56	1°40'38	retrograde	10349 Jun 08 18:34	5° $\mathbb{H}$ 09'24	
max. Earth dist.	10342 Nov 20 09:47	5° $\mathbb{A}$ 58'39	10.36070 AU	opposition	10349 Aug 15 07:45	1° $\mathbb{H}$ 47'05	1°18'53
morning rise	10342 Dec 08 09:18	8° $\mathbb{A}$ 13'08		min. Earth dist.	10349 Aug 15 14:46	1° $\mathbb{H}$ 45'42	8.43781 AU
retrograde	10343 Mar 22 07:25	16° $\mathbb{A}$ 03'40			10349 Sep 08 04:00	30° $\mathbb{R}$ $\approx$	
opposition	10343 May 28 22:30	12° $\mathbb{A}$ 38'12	2°11'29	direct	10349 Oct 23 17:28	28° $\approx$ 20'17	
min. Earth dist.	10343 May 29 02:00	12° $\mathbb{A}$ 37'30	8.35267 AU		10349 Dec 07 11:54	0° $\mathbb{H}$	
direct	10343 Aug 04 18:36	9° $\mathbb{A}$ 12'02		evening set	10350 Feb 05 23:57	6° $\mathbb{H}$ 09'47	
evening set	10343 Nov 16 19:52	17° $\mathbb{A}$ 03'16					
				conjunction	10350 Feb 23 11:02	8° $\mathbb{H}$ 19'45	0°52'23
conjunction	10343 Dec 04 14:57	19° $\mathbb{A}$ 16'36	1°50'24	minimum elong	10350 Feb 23 11:04	8° $\mathbb{H}$ 19'45	0°52'36
minimum elong	10343 Dec 04 14:56	19° $\mathbb{A}$ 16'35	1°50'52	max. Earth dist.	10350 Feb 23 02:40	8° $\mathbb{H}$ 17'08	10.45798 AU
max. Earth dist.	10343 Dec 04 09:07	19° $\mathbb{A}$ 14'45	10.34464 AU	morning rise	10350 Mar 12 18:33	10° $\mathbb{H}$ 28'41	
morning rise	10343 Dec 22 09:15	21° $\mathbb{A}$ 29'46		retrograde	10350 Jun 21 20:07	18° $\mathbb{H}$ 01'20	
retrograde	10344 Apr 03 21:27	29° $\mathbb{A}$ 19'41		opposition	10350 Aug 28 14:52	14° $\mathbb{H}$ 39'30	0°50'26
opposition	10344 Jun 10 07:39	25° $\mathbb{A}$ 54'38	2°20'35	min. Earth dist.	10350 Aug 28 21:17	14° $\mathbb{H}$ 38'15	8.47971 AU
min. Earth dist.	10344 Jun 10 12:28	25° $\mathbb{A}$ 53'40	8.34174 AU	direct	10350 Nov 06 06:04	11° $\mathbb{H}$ 13'15	
direct	10344 Aug 17 07:59	22° $\mathbb{A}$ 27'56		evening set	10351 Feb 19 07:07	18° $\mathbb{H}$ 59'10	
	10344 Nov 26 23:04	0° $\mathbb{B}$					
evening set	10344 Nov 29 22:04	0° $\mathbb{B}$ 21'47		conjunction	10351 Mar 08 15:49	21° $\mathbb{H}$ 07'56	0°28'23
				minimum elong	10351 Mar 08 15:50	21° $\mathbb{H}$ 07'56	0°28'30
conjunction	10344 Dec 17 16:34	2° $\mathbb{B}$ 35'07	1°54'44	max. Earth dist.	10351 Mar 08 08:20	21° $\mathbb{H}$ 05'37	10.50203 AU
minimum elong	10344 Dec 17 16:34	2° $\mathbb{B}$ 35'07	1°55'13	morning rise	10351 Mar 25 21:04	23° $\mathbb{H}$ 15'43	
max. Earth dist.	10344 Dec 17 08:59	2° $\mathbb{B}$ 32'44	10.33876 AU		10351 Jun 05 12:27	0° $\mathbb{V}$	
morning rise	10345 Jan 04 09:31	4° $\mathbb{B}$ 48'02		retrograde	10351 Jul 04 18:50	0° $\mathbb{V}$ 45'12	
retrograde	10345 Apr 17 11:26	12° $\mathbb{B}$ 36'24			10351 Aug 03 10:54	30° $\mathbb{R}$ $\mathbb{H}$	
opposition	10345 Jun 23 17:33	9° $\mathbb{B}$ 11'52	2°22'12	opposition	10351 Sep 10 20:18	27° $\mathbb{H}$ 23'49	0°19'48
min. Earth dist.	10345 Jun 23 23:57	9° $\mathbb{B}$ 10'35	8.34129 AU	min. Earth dist.	10351 Sep 11 02:08	27° $\mathbb{H}$ 22'41	8.52497 AU
direct	10345 Aug 30 22:54	5° $\mathbb{B}$ 44'46		direct	10351 Nov 19 16:19	23° $\mathbb{H}$ 58'13	
evening set	10345 Dec 13 23:43	13° $\mathbb{B}$ 40'07			10352 Feb 18 06:47	0° $\mathbb{V}$	
				evening set	10352 Mar 03 09:28	1° $\mathbb{V}$ 40'14	
conjunction	10345 Dec 31 17:13	15° $\mathbb{B}$ 53'11	1°52'57				
minimum elong	10345 Dec 31 17:14	15° $\mathbb{B}$ 53'12	1°53'25	conjunction	10352 Mar 20 15:33	3° $\mathbb{V}$ 47'44	0°03'15
max. Earth dist.	10345 Dec 31 07:44	15° $\mathbb{B}$ 50'12	10.34373 AU	minimum elong	10352 Mar 20 15:33	3° $\mathbb{V}$ 47'44	0°03'16
morning rise	10346 Jan 18 08:37	18° $\mathbb{B}$ 05'40		behind sun begin	10352 Mar 20 08:28	3° $\mathbb{V}$ 45'34	
retrograde	10346 Apr 30 22:59	25° $\mathbb{B}$ 51'40		behind sun end	10352 Mar 20 22:38	3° $\mathbb{V}$ 49'54	
opposition	10346 Jul 07 03:55	22° $\mathbb{B}$ 27'42	2°16'14	max. Earth dist.	10352 Mar 20 08:57	3° $\mathbb{V}$ 45'43	10.54817 AU
min. Earth dist.	10346 Jul 07 11:43	22° $\mathbb{B}$ 26'09	8.35155 AU	morning rise	10352 Apr 06 18:36	5° $\mathbb{V}$ 54'20	
direct	10346 Sep 13 15:58	19° $\mathbb{B}$ 00'23		desc. node	10352 May 07 14:37	9° $\mathbb{V}$ 24'05	
evening set	10346 Dec 27 23:11	26° $\mathbb{B}$ 55'58		retrograde	10352 Jul 16 15:04	13° $\mathbb{V}$ 21'08	
				opposition	10352 Sep 23 00:09	10° $\mathbb{V}$ 00'08	-0°11'28
conjunction	10347 Jan 14 15:24	29° $\mathbb{B}$ 08'32	1°45'10	min. Earth dist.	10352 Sep 23 04:51	9° $\mathbb{V}$ 59'13	8.57124 AU
minimum elong	10347 Jan 14 15:26	29° $\mathbb{B}$ 08'32	1°45'37	direct	10352 Dec 01 23:35	6° $\mathbb{V}$ 35'19	
max. Earth dist.	10347 Jan 14 04:46	29° $\mathbb{B}$ 05'11	10.35936 AU	evening set	10353 Mar 16 07:11	14° $\mathbb{V}$ 13'18	
	10347 Jan 21 11:04	0° $\approx$					
morning rise	10347 Feb 01 05:07	1° $\approx$ 20'22		conjunction	10353 Apr 02 10:35	16° $\mathbb{V}$ 19'30	-0°21'57
retrograde	10347 May 14 06:54	9° $\approx$ 03'25		minimum elong	10353 Apr 02 10:34	16° $\mathbb{V}$ 19'30	0°22'02
opposition	10347 Jul 20 14:04	5° $\approx$ 40'01	2°03'04	max. Earth dist.	10353 Apr 02 05:33	16° $\mathbb{V}$ 17'57	10.59406 AU
min. Earth dist.	10347 Jul 20 22:16	5° $\approx$ 38'23	8.37195 AU	morning rise	10353 Apr 19 11:23	18° $\mathbb{V}$ 24'56	
direct	10347 Sep 27 10:38	2° $\approx$ 12'41		retrograde	10353 Jul 29 08:46	25° $\mathbb{V}$ 49'39	
evening set	10348 Jan 10 19:36	10° $\approx$ 07'15		opposition	10353 Oct 06 02:19	22° $\mathbb{V}$ 28'56	-0°41'51
				min. Earth dist.	10353 Oct 06 04:53	22° $\mathbb{V}$ 28'26	8.61626 AU
conjunction	10348 Jan 28 10:23	12° $\approx$ 19'08	1°31'54	direct	10353 Dec 15 04:35	19° $\mathbb{V}$ 05'01	
minimum elong	10348 Jan 28 10:26	12° $\approx$ 19'08	1°32'18	evening set	10354 Mar 29 00:37	26° $\mathbb{V}$ 38'58	
max. Earth dist.	10348 Jan 27 23:43	12° $\approx$ 15'46	10.38471 AU				
morning rise	10348 Feb 14 22:15	14° $\approx$ 30'08		conjunction	10354 Apr 15 01:28	28° $\mathbb{V}$ 43'56	-0°45'47
	10348 Feb 18 23:53	15° $\approx$		minimum elong	10354 Apr 15 01:26	28° $\mathbb{V}$ 43'55	0°45'59
retrograde	10348 May 26 13:41	22° $\approx$ 09'48		max. Earth dist.	10354 Apr 14 23:11	28° $\mathbb{V}$ 43'14	10.63750 AU
opposition	10348 Aug 01 23:22	18° $\approx$ 46'57	1°43'34		10354 Apr 25 09:04	0° $\mathbb{B}$	
min. Earth dist.	10348 Aug 02 07:13	18° $\approx$ 45'24	8.40127 AU	morning rise	10354 May 02 00:03	0° $\mathbb{B}$ 48'15	
direct	10348 Oct 10 03:02	15° $\approx$ 19'47		retrograde	10354 Aug 11 02:29	8° $\mathbb{B}$ 11'34	
evening set	10349 Jan 23 12:06	23° $\approx$ 12'16		opposition	10354 Oct 19 02:53	4° $\mathbb{B}$ 51'00	-1°09'59
				min. Earth dist.	10354 Oct 19 03:12	4° $\mathbb{B}$ 50'57	8.65793 AU

direct	10354 Dec 28 06:06	1°♄28'00	direct	10361 Mar 12 10:33	14°♄26'04
evening set	10355 Apr 10 14:14	8°♄58'07	evening set	10361 Jun 21 06:00	21°♄42'53
conjunction	10355 Apr 27 12:43	11°♄01'57 -1°07'21	conjunction	10361 Jul 08 01:42	23°♄44'55 -1°49'41
minimum elong	10355 Apr 27 12:41	11°♄01'57 1°07'39	minimum elong	10361 Jul 08 01:43	23°♄44'55 1°50'09
max. Earth dist.	10355 Apr 27 13:00	11°♄02'03 10.67649 AU	max. Earth dist.	10361 Jul 08 10:27	23°♄47'35 10.74457 AU
morning rise	10355 May 14 09:23	13°♄05'18	morning rise	10361 Jul 24 23:50	25°♄47'39
	10355 May 30 18:54	15°♄		10361 Sep 01 19:30	0°♄
retrograde	10355 Aug 23 19:24	20°♄27'49	retrograde	10361 Nov 05 20:43	3°♄16'33
opposition	10355 Nov 01 02:04	17°♄07'21 -1°34'40		10362 Jan 13 18:15	30°♄
min. Earth dist.	10355 Nov 01 00:44	17°♄07'36 8.69431 AU	opposition	10362 Jan 15 01:11	29°♄54'07 -2°09'20
	10355 Dec 01 08:29	15°♄♄	min. Earth dist.	10362 Jan 14 17:38	29°♄55'33 8.73551 AU
direct	10356 Jan 10 02:52	13°♄45'11	direct	10362 Mar 24 21:55	26°♄34'24
	10356 Feb 18 01:53	15°♄		10362 May 29 09:18	0°♄
evening set	10356 Apr 22 00:50	21°♄11'50	evening set	10362 Jul 03 12:55	3°♄51'18
conjunction	10356 May 08 21:08	23°♄14'41 -1°25'41	conjunction	10362 Jul 20 10:47	5°♄54'07 -1°39'34
minimum elong	10356 May 08 21:06	23°♄14'41 1°26'04	minimum elong	10362 Jul 20 10:49	5°♄54'08 1°39'59
max. Earth dist.	10356 May 08 23:07	23°♄15'18 10.70929 AU	max. Earth dist.	10362 Jul 20 19:18	5°♄56'43 10.72153 AU
morning rise	10356 May 25 16:22	25°♄17'15	morning rise	10362 Aug 06 11:38	7°♄57'47
	10356 Jul 08 23:10	0°♄♄		10362 Oct 25 11:49	15°♄
retrograde	10356 Sep 04 09:54	2°♄♄39'35	retrograde	10362 Nov 18 15:50	15°♄29'11
	10356 Nov 03 22:19	30°♄♄		10362 Dec 13 02:24	15°♄♄
opposition	10356 Nov 12 23:58	29°♄19'05 -1°54'54	opposition	10363 Jan 27 19:56	12°♄06'08 -1°54'02
min. Earth dist.	10356 Nov 12 21:33	29°♄19'33 8.72386 AU	min. Earth dist.	10363 Jan 27 12:38	12°♄07'31 8.70724 AU
direct	10357 Jan 21 22:42	25°♄57'41	direct	10363 Apr 06 12:00	8°♄46'12
	10357 Apr 04 08:31	0°♄♄		10363 Jul 06 20:49	15°♄
evening set	10357 May 04 08:53	3°♄♄21'19	evening set	10363 Jul 15 22:16	16°♄04'01
conjunction	10357 May 21 03:29	5°♄♄23'23 -1°40'05	conjunction	10363 Aug 01 22:59	18°♄07'55 -1°24'54
minimum elong	10357 May 21 03:27	5°♄♄23'23 1°40'32	minimum elong	10363 Aug 01 23:01	18°♄07'55 1°25'16
max. Earth dist.	10357 May 21 06:44	5°♄♄24'23 10.73469 AU	max. Earth dist.	10363 Aug 02 07:59	18°♄10'39 10.68908 AU
morning rise	10357 Jun 06 21:58	7°♄♄25'24	morning rise	10363 Aug 19 02:52	20°♄12'44
retrograde	10357 Sep 17 00:51	14°♄♄48'09	retrograde	10363 Dec 01 15:14	27°♄46'55
opposition	10357 Nov 25 20:50	11°♄♄27'29 -2°09'53	opposition	10364 Feb 09 15:27	24°♄23'10 -1°33'26
min. Earth dist.	10357 Nov 25 16:52	11°♄♄28'14 8.74546 AU	min. Earth dist.	10364 Feb 09 07:48	24°♄24'38 8.67055 AU
direct	10358 Feb 03 16:47	8°♄♄06'44	direct	10364 Apr 18 01:16	21°♄02'52
evening set	10358 May 16 14:52	15°♄♄27'46	evening set	10364 Jul 27 10:52	28°♄22'18
conjunction	10358 Jun 02 08:39	17°♄♄29'23 -1°49'59		10364 Aug 09 21:02	0°♄♄
minimum elong	10358 Jun 02 08:38	17°♄♄29'22 1°50'27	conjunction	10364 Aug 13 14:44	0°♄♄27'27 -1°06'14
max. Earth dist.	10358 Jun 02 14:04	17°♄♄31'02 10.75167 AU	minimum elong	10364 Aug 13 14:47	0°♄♄27'27 1°06'31
morning rise	10358 Jun 19 02:56	19°♄♄31'07	max. Earth dist.	10364 Aug 14 00:01	0°♄♄30'17 10.64936 AU
retrograde	10358 Sep 29 16:11	26°♄♄54'48	morning rise	10364 Aug 30 21:54	2°♄♄33'37
opposition	10358 Dec 08 16:39	23°♄♄33'50 -2°19'03	retrograde	10364 Dec 13 16:52	10°♄♄10'40
min. Earth dist.	10358 Dec 08 10:46	23°♄♄34'56 8.75806 AU	opposition	10365 Feb 21 11:56	6°♄♄46'13 -1°08'21
direct	10359 Feb 16 08:00	20°♄♄13'37	min. Earth dist.	10365 Feb 21 04:24	6°♄♄47'40 8.62774 AU
evening set	10359 May 28 19:54	27°♄♄32'37	direct	10365 Apr 30 14:54	3°♄♄25'23
conjunction	10359 Jun 14 13:38	29°♄♄34'02 -1°54'58	evening set	10365 Aug 09 03:49	10°♄♄47'11
minimum elong	10359 Jun 14 13:37	29°♄♄34'02 1°55'27	conjunction	10365 Aug 26 10:53	12°♄♄53'42 -0°44'20
max. Earth dist.	10359 Jun 14 21:18	29°♄♄36'22 10.75933 AU	minimum elong	10365 Aug 26 10:54	12°♄♄53'43 0°44'31
	10359 Jun 18 02:53	0°♄♄	max. Earth dist.	10365 Aug 26 19:05	12°♄♄56'13 10.60467 AU
morning rise	10359 Jul 01 08:20	1°♄♄35'47	morning rise	10365 Sep 12 21:25	15°♄♄01'17
retrograde	10359 Oct 12 08:16	9°♄♄00'49	retrograde	10365 Dec 26 19:51	22°♄♄41'11
opposition	10359 Dec 21 11:39	5°♄♄39'27 -2°22'03	opposition	10366 Mar 06 09:27	19°♄♄16'05 -0°39'48
min. Earth dist.	10359 Dec 21 04:10	5°♄♄40'52 8.76092 AU	min. Earth dist.	10366 Mar 06 03:06	19°♄♄17'20 8.58116 AU
direct	10360 Feb 28 22:21	2°♄♄19'36	direct	10366 May 13 07:41	15°♄♄54'31
evening set	10360 Jun 09 00:43	9°♄♄37'11	evening set	10366 Aug 22 01:28	23°♄♄19'26
conjunction	10360 Jun 25 19:04	11°♄♄38'45 -1°54'53	conjunction	10366 Sep 08 11:38	25°♄♄27'22 -0°20'08
minimum elong	10360 Jun 25 19:04	11°♄♄38'46 1°55'22	minimum elong	10366 Sep 08 11:39	25°♄♄27'23 0°20'13
max. Earth dist.	10360 Jun 26 04:00	11°♄♄41'29 10.75711 AU	max. Earth dist.	10366 Sep 08 18:01	25°♄♄29'20 10.55722 AU
morning rise	10360 Jul 12 15:03	13°♄♄40'50	morning rise	10366 Sep 26 01:22	27°♄♄36'21
retrograde	10360 Oct 24 02:28	21°♄♄07'37		10366 Oct 16 16:38	0°♄♄
opposition	10361 Jan 02 06:28	17°♄♄45'45 -2°18'47	retrograde	10367 Jan 09 01:43	5°♄♄19'00
min. Earth dist.	10361 Jan 01 22:33	17°♄♄47'15 8.75354 AU	opposition	10367 Mar 19 08:27	1°♄♄53'21 -0°09'01

min. Earth dist.	10367 Mar 19 03:44	1° $\underline{\text{D}}$ 54'17	8.53303 AU	morning rise	10372 Dec 15 07:16	15° $\text{J}$ 38'52	
	10367 Apr 13 21:25	30° $\text{R}$ $\text{M}$		retrograde	10373 Mar 28 23:42	23° $\text{J}$ 29'34	
direct	10367 May 26 02:20	28° $\text{M}$ 30'59		opposition	10373 Jun 04 12:51	20° $\text{J}$ 03'43	2°17'21
asc. node	10367 Jul 04 21:44	29° $\text{M}$ 53'31		min. Earth dist.	10373 Jun 04 17:27	20° $\text{J}$ 02'47	8.33116 AU
	10367 Jul 06 12:02	0° $\underline{\text{D}}$		direct	10373 Aug 11 11:23	16° $\text{J}$ 36'39	
evening set	10367 Sep 04 04:04	5° $\underline{\text{D}}$ 59'36		evening set	10373 Nov 23 19:03	24° $\text{J}$ 29'47	
conjunction	10367 Sep 21 17:07	8° $\underline{\text{D}}$ 08'53	0°05'21	conjunction	10373 Dec 11 13:49	26° $\text{J}$ 43'15	1°53'29
minimum elong	10367 Sep 21 17:07	8° $\underline{\text{D}}$ 08'53	0°05'23	minimum elong	10373 Dec 11 13:48	26° $\text{J}$ 43'15	1°53'58
behind sun begin	10367 Sep 21 10:09	8° $\underline{\text{D}}$ 06'45		max. Earth dist.	10373 Dec 11 06:39	26° $\text{J}$ 41'00	10.32687 AU
behind sun end	10367 Sep 22 00:04	8° $\underline{\text{D}}$ 11'00		morning rise	10373 Dec 29 07:38	28° $\text{J}$ 56'28	
max. Earth dist.	10367 Sep 21 21:58	8° $\underline{\text{D}}$ 10'21	10.50920 AU		10374 Jan 07 00:15	0° $\text{Z}$	
morning rise	10367 Oct 09 09:27	10° $\underline{\text{D}}$ 19'09		retrograde	10374 Apr 11 13:27	6° $\text{Z}$ 46'00	
retrograde	10368 Jan 22 09:07	18° $\underline{\text{D}}$ 04'25		opposition	10374 Jun 17 22:30	3° $\text{Z}$ 20'44	2°22'26
opposition	10368 Mar 31 09:01	14° $\underline{\text{D}}$ 38'18	0°22'32	min. Earth dist.	10374 Jun 18 03:58	3° $\text{Z}$ 19'38	8.32815 AU
min. Earth dist.	10368 Mar 31 05:36	14° $\underline{\text{D}}$ 38'59	8.48561 AU		10374 Aug 13 23:03	30° $\text{R}$ $\text{J}$	
direct	10368 Jun 07 00:27	11° $\underline{\text{D}}$ 15'04		direct	10374 Aug 25 02:19	29° $\text{J}$ 53'21	
evening set	10368 Sep 16 12:01	18° $\underline{\text{D}}$ 47'53			10374 Sep 05 05:10	0° $\text{Z}$	
				evening set	10374 Dec 07 21:06	7° $\text{Z}$ 48'29	
conjunction	10368 Oct 04 03:35	20° $\underline{\text{D}}$ 58'25	0°30'40	conjunction	10374 Dec 25 15:10	10° $\text{Z}$ 01'49	1°54'30
minimum elong	10368 Oct 04 03:34	20° $\underline{\text{D}}$ 58'25	0°30'49	minimum elong	10374 Dec 25 15:10	10° $\text{Z}$ 01'49	1°54'59
max. Earth dist.	10368 Oct 04 07:18	20° $\underline{\text{D}}$ 59'34	10.46285 AU	max. Earth dist.	10374 Dec 25 07:18	9° $\text{Z}$ 59'21	10.32944 AU
morning rise	10368 Oct 21 21:50	23° $\underline{\text{D}}$ 09'48		morning rise	10375 Jan 12 07:26	12° $\text{Z}$ 14'39	
	10369 Jan 01 08:22	0° $\text{M}$		retrograde	10375 Apr 25 02:12	20° $\text{Z}$ 02'14	
retrograde	10369 Feb 03 18:19	0° $\text{M}$ 57'21		opposition	10375 Jul 01 08:51	16° $\text{Z}$ 37'39	2°19'53
	10369 Mar 09 10:44	30° $\text{R}$ $\underline{\text{D}}$		min. Earth dist.	10375 Jul 01 14:40	16° $\text{Z}$ 36'29	8.33630 AU
opposition	10369 Apr 13 11:07	27° $\underline{\text{D}}$ 30'55	0°53'18	direct	10375 Sep 07 18:44	13° $\text{Z}$ 10'11	
min. Earth dist.	10369 Apr 13 08:43	27° $\underline{\text{D}}$ 31'24	8.44110 AU	evening set	10375 Dec 21 21:51	21° $\text{Z}$ 06'07	
direct	10369 Jun 20 02:00	24° $\underline{\text{D}}$ 06'48					
	10369 Sep 15 11:08	0° $\text{M}$		conjunction	10376 Jan 08 14:55	23° $\text{Z}$ 19'05	1°49'24
evening set	10369 Sep 30 01:09	1° $\text{M}$ 44'06		minimum elong	10376 Jan 08 14:57	23° $\text{Z}$ 19'05	1°49'52
conjunction	10369 Oct 17 18:38	3° $\text{M}$ 55'43	0°54'42	max. Earth dist.	10376 Jan 08 06:44	23° $\text{Z}$ 16'30	10.34319 AU
minimum elong	10369 Oct 17 18:36	3° $\text{M}$ 55'43	0°54'58	morning rise	10376 Jan 26 05:27	25° $\text{Z}$ 31'20	
max. Earth dist.	10369 Oct 17 20:43	3° $\text{M}$ 56'23	10.42030 AU		10376 Mar 06 02:46	0° $\approx$	
morning rise	10369 Nov 04 14:02	6° $\text{M}$ 07'59		retrograde	10376 May 07 13:28	3° $\approx$ 16'16	
retrograde	10370 Feb 17 07:01	13° $\text{M}$ 57'21			10376 Jul 12 05:41	30° $\text{R}$ $\text{Z}$	
opposition	10370 Apr 26 15:04	10° $\text{M}$ 30'47	1°21'39	opposition	10376 Jul 13 19:25	29° $\text{Z}$ 52'27	2°09'53
min. Earth dist.	10370 Apr 26 13:59	10° $\text{M}$ 31'00	8.40151 AU	min. Earth dist.	10376 Jul 14 01:57	29° $\text{Z}$ 51'09	8.35515 AU
direct	10370 Jul 03 04:53	7° $\text{M}$ 05'47		direct	10376 Sep 20 11:36	26° $\text{Z}$ 25'04	
evening set	10370 Oct 13 19:00	14° $\text{M}$ 47'39			10376 Nov 26 07:21	0° $\approx$	
	10370 Oct 15 11:17	15° $\text{M}$		evening set	10377 Jan 03 20:25	4° $\approx$ 20'38	
conjunction	10370 Oct 31 13:36	17° $\text{M}$ 00'07	1°16'07	conjunction	10377 Jan 21 12:05	6° $\approx$ 32'58	1°38'32
minimum elong	10370 Oct 31 13:33	17° $\text{M}$ 00'06	1°16'28	minimum elong	10377 Jan 21 12:07	6° $\approx$ 32'59	1°38'57
max. Earth dist.	10370 Oct 31 13:26	17° $\text{M}$ 00'04	10.38361 AU	max. Earth dist.	10377 Jan 21 03:13	6° $\approx$ 30'11	10.36729 AU
morning rise	10370 Nov 18 09:26	19° $\text{M}$ 13'01		morning rise	10377 Feb 08 00:45	8° $\approx$ 44'28	
retrograde	10371 Mar 02 20:50	27° $\text{M}$ 03'34			10377 Apr 10 13:11	15° $\approx$	
opposition	10371 May 09 20:47	23° $\text{M}$ 37'03	1°46'01	retrograde	10377 May 20 23:07	16° $\approx$ 26'10	
min. Earth dist.	10371 May 09 21:35	23° $\text{M}$ 36'54	8.36887 AU		10377 Jul 01 01:59	15° $\text{R}$ $\approx$	
direct	10371 Jul 16 11:22	20° $\text{M}$ 11'15		opposition	10377 Jul 27 05:40	13° $\approx$ 03'09	1°53'06
evening set	10371 Oct 27 16:41	27° $\text{M}$ 57'29		min. Earth dist.	10377 Jul 27 12:55	13° $\approx$ 01'43	8.38371 AU
	10371 Nov 13 02:15	0° $\text{J}$		direct	10377 Oct 04 03:40	9° $\approx$ 36'03	
conjunction	10371 Nov 14 11:46	0° $\text{J}$ 10'31	1°33'42		10377 Dec 27 11:28	15° $\approx$	
minimum elong	10371 Nov 14 11:44	0° $\text{J}$ 10'30	1°34'07	evening set	10378 Jan 17 15:32	17° $\approx$ 30'02	
max. Earth dist.	10371 Nov 14 08:42	0° $\text{J}$ 09'33	10.35481 AU	conjunction	10378 Feb 04 05:27	19° $\approx$ 41'34	1°22'35
morning rise	10371 Dec 02 07:29	2° $\text{J}$ 23'47		minimum elong	10378 Feb 04 05:30	19° $\approx$ 41'35	1°22'55
retrograde	10372 Mar 15 10:24	10° $\text{J}$ 14'49		max. Earth dist.	10378 Feb 03 20:06	19° $\approx$ 38'38	10.40050 AU
opposition	10372 May 22 04:08	6° $\text{J}$ 48'33	2°04'58	morning rise	10378 Feb 21 16:12	21° $\approx$ 52'08	
min. Earth dist.	10372 May 22 07:09	6° $\text{J}$ 47'56	8.34500 AU	retrograde	10378 Jun 03 04:59	29° $\approx$ 30'19	
direct	10372 Jul 28 21:55	3° $\text{J}$ 22'01		opposition	10378 Aug 09 15:16	26° $\approx$ 08'02	1°30'34
evening set	10372 Nov 09 17:06	11° $\text{J}$ 12'06		min. Earth dist.	10378 Aug 09 22:44	26° $\approx$ 06'34	8.42050 AU
				direct	10378 Oct 17 20:24	22° $\approx$ 41'22	
conjunction	10372 Nov 27 12:14	13° $\text{J}$ 25'29	1°46'25		10379 Jan 26 18:25	0° $\text{K}$	
minimum elong	10372 Nov 27 12:12	13° $\text{J}$ 25'29	1°46'52	evening set	10379 Jan 31 06:11	0° $\text{K}$ 32'45	
max. Earth dist.	10372 Nov 27 06:41	13° $\text{J}$ 23'45	10.33555 AU				

conjunction	10379 Feb 17 18:08	2° $\text{X}$ 43'16	1°02'29	min. Earth dist.	10384 Oct 25 18:38	11° $\text{S}$ 58'08	8.67296 AU
minimum elong	10379 Feb 17 18:10	2° $\text{X}$ 43'16	1°02'44	direct	10385 Jan 03 18:13	8° $\text{S}$ 35'59	
max. Earth dist.	10379 Feb 17 08:54	2° $\text{X}$ 40'22	10.44097 AU		10385 Apr 07 18:45	15° $\text{S}$	
morning rise	10379 Mar 07 02:52	4° $\text{X}$ 52'48		evening set	10385 Apr 16 22:34	16° $\text{S}$ 04'59	
retrograde	10379 Jun 16 07:14	12° $\text{X}$ 27'23					
opposition	10379 Aug 22 23:34	9° $\text{X}$ 05'45	1°03'36	conjunction	10385 May 03 19:48	18° $\text{S}$ 08'25	-1°17'59
min. Earth dist.	10379 Aug 23 06:19	9° $\text{X}$ 04'26	8.46339 AU	minimum elong	10385 May 03 19:46	18° $\text{S}$ 08'25	1°18'20
direct	10379 Oct 31 12:02	5° $\text{X}$ 39'40		max. Earth dist.	10385 May 03 19:03	18° $\text{S}$ 08'11	10.68694 AU
evening set	10380 Feb 13 16:15	13° $\text{X}$ 27'39		morning rise	10385 May 20 15:46	20° $\text{S}$ 11'30	
				retrograde	10385 Aug 30 05:38	27° $\text{S}$ 34'42	
conjunction	10380 Mar 02 02:02	15° $\text{X}$ 36'59	0°39'24	opposition	10385 Nov 07 16:35	24° $\text{S}$ 14'15	-1°46'34
minimum elong	10380 Mar 02 02:04	15° $\text{X}$ 37'00	0°39'34	min. Earth dist.	10385 Nov 07 15:32	24° $\text{S}$ 14'27	8.70035 AU
max. Earth dist.	10380 Mar 01 17:56	15° $\text{X}$ 34'28	10.48620 AU	direct	10386 Jan 16 17:08	20° $\text{S}$ 52'28	
morning rise	10380 Mar 19 08:31	17° $\text{X}$ 45'21		evening set	10386 Apr 29 08:22	28° $\text{S}$ 18'19	
retrograde	10380 Jun 28 08:02	25° $\text{X}$ 16'32			10386 May 13 07:29	0° $\text{II}$	
opposition	10380 Sep 04 06:11	21° $\text{X}$ 55'25	0°33'44	conjunction	10386 May 16 03:53	0° $\text{II}$ 20'56	-1°34'15
min. Earth dist.	10380 Sep 04 11:42	21° $\text{X}$ 54'20	8.50964 AU	minimum elong	10386 May 16 03:51	0° $\text{II}$ 20'56	1°34'40
direct	10380 Nov 13 00:22	18° $\text{X}$ 30'00		max. Earth dist.	10386 May 16 05:59	0° $\text{II}$ 21'35	10.71040 AU
evening set	10381 Feb 25 21:25	26° $\text{X}$ 14'06		morning rise	10386 Jun 01 22:39	2° $\text{II}$ 23'23	
				retrograde	10386 Sep 11 22:28	9° $\text{II}$ 46'51	
conjunction	10381 Mar 15 04:50	28° $\text{X}$ 22'12	0°14'35	opposition	10386 Nov 20 14:30	6° $\text{II}$ 26'04	-2°04'01
minimum elong	10381 Mar 15 04:50	28° $\text{X}$ 22'12	0°14'39	min. Earth dist.	10386 Nov 20 11:30	6° $\text{II}$ 26'38	8.72027 AU
behind sun begin	10381 Mar 15 01:48	28° $\text{X}$ 21'16		direct	10387 Jan 29 12:14	3° $\text{II}$ 04'46	
behind sun end	10381 Mar 15 07:51	28° $\text{X}$ 23'08		evening set	10387 May 11 15:58	10° $\text{II}$ 27'53	
max. Earth dist.	10381 Mar 14 22:20	28° $\text{X}$ 20'12	10.53311 AU				
	10381 Mar 28 08:47	0° $\text{Y}$		conjunction	10387 May 28 10:17	12° $\text{II}$ 29'57	-1°46'13
morning rise	10381 Apr 01 08:52	0° $\text{Y}$ 29'20		minimum elong	10387 May 28 10:15	12° $\text{II}$ 29'56	1°46'41
retrograde	10381 Jul 11 07:21	7° $\text{Y}$ 57'32		max. Earth dist.	10387 May 28 14:12	12° $\text{II}$ 31'09	10.72599 AU
opposition	10381 Sep 17 11:18	4° $\text{Y}$ 36'50	0°02'33	morning rise	10387 Jun 14 04:34	14° $\text{II}$ 32'02	
min. Earth dist.	10381 Sep 17 15:51	4° $\text{Y}$ 35'58	8.55607 AU	retrograde	10387 Sep 24 14:55	21° $\text{II}$ 56'15	
desc. node	10381 Oct 17 23:07	2° $\text{Y}$ 26'38		opposition	10387 Dec 03 11:33	18° $\text{II}$ 35'01	-2°15'50
direct	10381 Nov 26 08:09	1° $\text{Y}$ 12'11		min. Earth dist.	10387 Dec 03 07:27	18° $\text{II}$ 35'48	8.73191 AU
evening set	10382 Mar 10 21:41	8° $\text{Y}$ 52'13		direct	10388 Feb 11 04:03	15° $\text{II}$ 14'06	
				evening set	10388 May 22 22:06	22° $\text{II}$ 35'01	
conjunction	10382 Mar 28 02:27	10° $\text{Y}$ 59'03	-0°10'47	conjunction	10388 Jun 08 15:47	24° $\text{II}$ 36'47	-1°53'25
minimum elong	10382 Mar 28 02:26	10° $\text{Y}$ 59'02	0°10'50	minimum elong	10388 Jun 08 15:46	24° $\text{II}$ 36'46	1°53'54
behind sun begin	10382 Mar 27 21:00	10° $\text{Y}$ 57'23		max. Earth dist.	10388 Jun 08 20:52	24° $\text{II}$ 38'20	10.73312 AU
behind sun end	10382 Mar 28 07:52	11° $\text{Y}$ 00'42		morning rise	10388 Jun 25 10:23	26° $\text{II}$ 38'48	
max. Earth dist.	10382 Mar 27 21:15	10° $\text{Y}$ 57'27	10.57845 AU		10388 Jul 25 10:02	0° $\text{S}$	
morning rise	10382 Apr 14 04:07	13° $\text{Y}$ 05'00		retrograde	10388 Oct 06 05:28	4° $\text{S}$ 04'15	
retrograde	10382 Jul 24 02:47	20° $\text{Y}$ 30'56		opposition	10388 Dec 15 07:47	0° $\text{S}$ 42'30	-2°21'36
opposition	10382 Sep 30 14:51	17° $\text{Y}$ 10'33	-0°28'25	min. Earth dist.	10388 Dec 15 02:38	0° $\text{S}$ 43'29	8.73486 AU
min. Earth dist.	10382 Sep 30 18:47	17° $\text{Y}$ 09'47	8.59976 AU		10388 Dec 24 17:39	30° $\text{R}$ $\text{II}$	
direct	10382 Dec 09 14:32	13° $\text{Y}$ 46'40		direct	10389 Feb 22 20:07	27° $\text{II}$ 21'50	
evening set	10383 Mar 23 17:45	21° $\text{Y}$ 22'50		evening set	10389 Apr 20 23:20	0° $\text{S}$	
					10389 Jun 04 03:30	4° $\text{S}$ 41'09	
conjunction	10383 Apr 09 19:47	23° $\text{Y}$ 28'25	-0°35'20	conjunction	10389 Jun 20 21:31	6° $\text{S}$ 42'57	-1°55'33
minimum elong	10383 Apr 09 19:45	23° $\text{Y}$ 28'24	0°35'29	minimum elong	10389 Jun 20 21:31	6° $\text{S}$ 42'57	1°56'03
max. Earth dist.	10383 Apr 09 15:18	23° $\text{Y}$ 27'02	10.61995 AU	max. Earth dist.	10389 Jun 21 04:05	6° $\text{S}$ 44'57	10.73158 AU
morning rise	10383 Apr 26 19:20	25° $\text{Y}$ 33'17		morning rise	10389 Jul 07 17:08	8° $\text{S}$ 45'11	
	10383 Jun 06 15:48	0° $\text{S}$		retrograde	10389 Oct 18 22:46	16° $\text{S}$ 12'20	
retrograde	10383 Aug 05 21:03	2° $\text{S}$ 57'39		opposition	10389 Dec 28 03:25	12° $\text{S}$ 49'59	-2°21'03
	10383 Oct 08 18:19	30° $\text{R}$ $\text{Y}$		min. Earth dist.	10389 Dec 27 20:51	12° $\text{S}$ 51'14	8.72896 AU
opposition	10383 Oct 13 16:42	29° $\text{Y}$ 37'26	-0°57'46	direct	10390 Mar 07 10:59	9° $\text{S}$ 29'29	
min. Earth dist.	10383 Oct 13 19:52	29° $\text{Y}$ 36'50	8.63908 AU	evening set	10390 Jun 16 09:02	16° $\text{S}$ 47'47	
direct	10383 Dec 22 18:02	26° $\text{Y}$ 14'19					
	10384 Mar 01 10:34	0° $\text{S}$		conjunction	10390 Jul 03 04:18	18° $\text{S}$ 49'57	-1°52'32
evening set	10384 Apr 04 09:57	3° $\text{S}$ 46'49		minimum elong	10390 Jul 03 04:20	18° $\text{S}$ 49'57	1°53'01
				max. Earth dist.	10390 Jul 03 13:00	18° $\text{S}$ 52'36	10.72130 AU
conjunction	10384 Apr 21 09:22	5° $\text{S}$ 51'15	-0°58'04	morning rise	10390 Jul 20 01:36	20° $\text{S}$ 52'43	
minimum elong	10384 Apr 21 09:20	5° $\text{S}$ 51'14	0°58'19	retrograde	10390 Oct 31 17:42	28° $\text{S}$ 21'54	
max. Earth dist.	10384 Apr 21 06:08	5° $\text{S}$ 50'15	10.65645 AU	opposition	10391 Jan 09 22:44	24° $\text{S}$ 58'56	-2°14'13
morning rise	10384 May 08 07:01	7° $\text{S}$ 55'09		min. Earth dist.	10391 Jan 09 14:36	25° $\text{S}$ 00'29	8.71421 AU
	10384 Jul 29 14:39	15° $\text{S}$		direct	10391 Mar 19 23:51	21° $\text{S}$ 38'29	
retrograde	10384 Aug 17 14:05	15° $\text{S}$ 18'37					
	10384 Sep 05 18:23	15° $\text{R}$ $\text{S}$					
opposition	10384 Oct 25 17:18	11° $\text{S}$ 58'23	-1°24'11				



evening set	10391 Jun 28 15:48	28° $\mathfrak{D}$ 56'31	retrograde	10397 Jan 16 06:03	13° $\mathfrak{D}$ 01'36	
	10391 Jul 07 10:19	0° $\mathfrak{Q}$	opposition	10397 Mar 26 08:05	9° $\mathfrak{D}$ 35'42	0°09'27
			min. Earth dist.	10397 Mar 26 01:56	9° $\mathfrak{D}$ 36'55	8.50070 AU
conjunction	10391 Jul 15 12:57	0° $\mathfrak{Q}$ 59'19 -1°44'28	direct	10397 Jun 01 23:23	6° $\mathfrak{D}$ 13'01	
minimum elong	10391 Jul 15 12:58	0° $\mathfrak{Q}$ 59'20 1°44'55	evening set	10397 Sep 11 07:47	13° $\mathfrak{D}$ 44'31	
max. Earth dist.	10391 Jul 15 22:49	1° $\mathfrak{Q}$ 02'20 10.70248 AU				
morning rise	10391 Aug 01 12:33	3° $\mathfrak{Q}$ 02'54	conjunction	10397 Sep 28 22:20	15° $\mathfrak{D}$ 54'38	0°20'15
retrograde	10391 Nov 13 14:11	10° $\mathfrak{Q}$ 34'25	minimum elong	10397 Sep 28 22:20	15° $\mathfrak{D}$ 54'37	0°20'21
opposition	10392 Jan 22 18:10	7° $\mathfrak{Q}$ 10'50 -2°01'18	max. Earth dist.	10397 Sep 29 04:18	15° $\mathfrak{D}$ 56'28	10.48035 AU
min. Earth dist.	10392 Jan 22 09:28	7° $\mathfrak{Q}$ 12'30 8.69118 AU	morning rise	10397 Oct 16 15:50	18° $\mathfrak{D}$ 05'38	
direct	10392 Mar 31 12:40	3° $\mathfrak{Q}$ 50'18	retrograde	10398 Jan 29 15:42	25° $\mathfrak{D}$ 52'41	
evening set	10392 Jul 10 00:41	11° $\mathfrak{Q}$ 08'46	opposition	10398 Apr 08 10:10	22° $\mathfrak{D}$ 26'40	0°40'46
			min. Earth dist.	10398 Apr 08 06:08	22° $\mathfrak{D}$ 27'28	8.46070 AU
conjunction	10392 Jul 27 00:13	13° $\mathfrak{Q}$ 12'31 -1°31'38	direct	10398 Jun 14 23:28	19° $\mathfrak{D}$ 03'16	
minimum elong	10392 Jul 27 00:15	13° $\mathfrak{Q}$ 12'31 1°32'02	evening set	10398 Sep 24 19:31	26° $\mathfrak{D}$ 39'00	
max. Earth dist.	10392 Jul 27 10:04	13° $\mathfrak{Q}$ 15'31 10.67601 AU				
	10392 Aug 10 17:40	15° $\mathfrak{Q}$	conjunction	10398 Oct 12 12:04	28° $\mathfrak{D}$ 50'11	0°45'00
morning rise	10392 Aug 13 02:50	15° $\mathfrak{Q}$ 17'09	minimum elong	10398 Oct 12 12:02	28° $\mathfrak{D}$ 50'11	0°45'13
retrograde	10392 Nov 25 13:06	22° $\mathfrak{Q}$ 51'12	max. Earth dist.	10398 Oct 12 15:27	28° $\mathfrak{D}$ 51'14	10.44193 AU
opposition	10393 Feb 03 14:11	19° $\mathfrak{Q}$ 27'03 -1°42'48		10398 Oct 21 20:52	0° $\mathfrak{M}$	
min. Earth dist.	10393 Feb 03 05:49	19° $\mathfrak{Q}$ 28'39 8.66100 AU	morning rise	10398 Oct 30 07:07	1° $\mathfrak{M}$ 02'08	
direct	10393 Apr 13 01:23	16° $\mathfrak{Q}$ 06'16	retrograde	10399 Feb 12 03:26	8° $\mathfrak{M}$ 50'57	
evening set	10393 Jul 22 12:25	23° $\mathfrak{Q}$ 25'56	opposition	10399 Apr 21 13:59	5° $\mathfrak{M}$ 24'54	1°10'17
			min. Earth dist.	10399 Apr 21 12:00	5° $\mathfrak{M}$ 25'18	8.42461 AU
conjunction	10393 Aug 08 14:52	25° $\mathfrak{Q}$ 30'49 -1°14'32	direct	10399 Jun 28 02:22	2° $\mathfrak{M}$ 00'46	
minimum elong	10393 Aug 08 14:55	25° $\mathfrak{Q}$ 30'50 1°14'51	evening set	10399 Oct 08 11:46	9° $\mathfrak{M}$ 40'47	
max. Earth dist.	10393 Aug 09 00:11	25° $\mathfrak{Q}$ 33'40 10.64309 AU				
morning rise	10393 Aug 25 20:53	27° $\mathfrak{Q}$ 36'43	conjunction	10399 Oct 26 05:47	11° $\mathfrak{M}$ 52'51	1°07'38
	10393 Sep 15 14:09	0° $\mathfrak{M}$	minimum elong	10399 Oct 26 05:45	11° $\mathfrak{M}$ 52'50	1°07'56
retrograde	10393 Dec 08 12:56	5° $\mathfrak{M}$ 13'28	max. Earth dist.	10399 Oct 26 06:55	11° $\mathfrak{M}$ 53'12	10.40802 AU
opposition	10394 Feb 16 10:55	1° $\mathfrak{M}$ 48'45 -1°19'24	morning rise	10399 Nov 13 01:36	14° $\mathfrak{M}$ 05'27	
min. Earth dist.	10394 Feb 16 03:11	1° $\mathfrak{M}$ 50'14 8.62502 AU		10399 Nov 20 14:08	15° $\mathfrak{M}$	
	10394 Mar 13 04:43	30° $\mathfrak{R}$ 0 $\mathfrak{Q}$	retrograde	10400 Feb 25 15:55	21° $\mathfrak{M}$ 55'30	
direct	10394 Apr 25 16:14	28° $\mathfrak{Q}$ 27'37	opposition	10400 May 03 19:21	18° $\mathfrak{M}$ 29'30	1°36'26
	10394 Jun 07 02:28	0° $\mathfrak{M}$	min. Earth dist.	10400 May 03 19:08	18° $\mathfrak{M}$ 29'33	8.39372 AU
evening set	10394 Aug 04 04:02	5° $\mathfrak{M}$ 49'16	direct	10400 Jul 10 09:20	15° $\mathfrak{M}$ 04'37	
			evening set	10400 Oct 21 08:10	22° $\mathfrak{M}$ 48'50	
conjunction	10394 Aug 21 09:46	7° $\mathfrak{M}$ 55'26 -0°53'50				
minimum elong	10394 Aug 21 09:48	7° $\mathfrak{M}$ 55'26 0°54'04	conjunction	10400 Nov 08 03:05	25° $\mathfrak{M}$ 01'32	1°26'54
max. Earth dist.	10394 Aug 21 19:03	7° $\mathfrak{M}$ 58'17 10.60513 AU	minimum elong	10400 Nov 08 03:03	25° $\mathfrak{M}$ 01'31	1°27'17
morning rise	10394 Sep 07 19:05	10° $\mathfrak{M}$ 02'39	max. Earth dist.	10400 Nov 08 02:05	25° $\mathfrak{M}$ 01'13	10.37967 AU
retrograde	10394 Dec 21 15:03	17° $\mathfrak{M}$ 42'10	morning rise	10400 Nov 25 22:53	27° $\mathfrak{M}$ 14'33	
opposition	10395 Mar 01 08:30	14° $\mathfrak{M}$ 16'58 -0°52'05		10400 Dec 19 11:03	0° $\mathfrak{J}$	
min. Earth dist.	10395 Mar 01 00:58	14° $\mathfrak{M}$ 18'26 8.58495 AU	retrograde	10401 Mar 10 05:00	5° $\mathfrak{J}$ 05'10	
direct	10395 May 08 09:30	10° $\mathfrak{M}$ 55'24	opposition	10401 May 17 01:56	1° $\mathfrak{J}$ 39'22	1°57'43
evening set	10395 Aug 17 00:08	18° $\mathfrak{M}$ 19'43	min. Earth dist.	10401 May 17 03:19	1° $\mathfrak{J}$ 39'05	8.36874 AU
				10401 Jun 07 15:21	30° $\mathfrak{R}$ $\mathfrak{M}$	
conjunction	10395 Sep 03 09:10	20° $\mathfrak{M}$ 27'16 -0°30'25	direct	10401 Jul 23 18:52	28° $\mathfrak{M}$ 13'46	
minimum elong	10395 Sep 03 09:12	20° $\mathfrak{M}$ 27'16 0°30'33		10401 Sep 07 02:41	0° $\mathfrak{J}$	
max. Earth dist.	10395 Sep 03 18:22	20° $\mathfrak{M}$ 30'05 10.56397 AU	evening set	10401 Nov 04 07:39	6° $\mathfrak{J}$ 01'56	
morning rise	10395 Sep 20 21:35	22° $\mathfrak{M}$ 35'50				
	10395 Dec 16 02:22	0° $\mathfrak{D}$	conjunction	10401 Nov 22 02:54	8° $\mathfrak{J}$ 15'04	1°41'41
retrograde	10396 Jan 03 21:49	0° $\mathfrak{D}$ 18'06	minimum elong	10401 Nov 22 02:51	8° $\mathfrak{J}$ 15'03	1°42'08
	10396 Jan 22 18:16	30° $\mathfrak{R}$ $\mathfrak{M}$	max. Earth dist.	10401 Nov 21 23:30	8° $\mathfrak{J}$ 14'00	10.35763 AU
opposition	10396 Mar 13 07:32	26° $\mathfrak{M}$ 52'29 -0°22'00	morning rise	10401 Dec 09 22:04	10° $\mathfrak{J}$ 28'15	
min. Earth dist.	10396 Mar 13 00:17	26° $\mathfrak{M}$ 53'54 8.54280 AU	retrograde	10402 Mar 23 19:34	18° $\mathfrak{J}$ 18'51	
direct	10396 May 20 02:55	23° $\mathfrak{M}$ 30'24	opposition	10402 May 30 10:03	14° $\mathfrak{J}$ 53'24	2°12'52
	10396 Aug 20 22:53	0° $\mathfrak{D}$	min. Earth dist.	10402 May 30 13:18	14° $\mathfrak{J}$ 52'45	8.35072 AU
evening set	10396 Aug 29 01:12	0° $\mathfrak{D}$ 58'01	direct	10402 Aug 06 05:50	11° $\mathfrak{J}$ 27'12	
			evening set	10402 Nov 18 09:03	19° $\mathfrak{J}$ 18'44	
conjunction	10396 Sep 15 13:15	3° $\mathfrak{D}$ 06'54 -0°05'24				
minimum elong	10396 Sep 15 13:15	3° $\mathfrak{D}$ 06'54 0°05'24	conjunction	10402 Dec 06 04:00	21° $\mathfrak{J}$ 32'04	1°51'08
behind sun begin	10396 Sep 15 06:18	3° $\mathfrak{D}$ 04'47	minimum elong	10402 Dec 06 03:59	21° $\mathfrak{J}$ 32'03	1°51'37
behind sun end	10396 Sep 15 20:12	3° $\mathfrak{D}$ 09'01	max. Earth dist.	10402 Dec 05 22:06	21° $\mathfrak{J}$ 30'12	10.34360 AU
max. Earth dist.	10396 Sep 15 21:32	3° $\mathfrak{D}$ 09'26 10.52169 AU	morning rise	10402 Dec 23 22:07	23° $\mathfrak{J}$ 45'12	
morning rise	10396 Oct 03 04:26	5° $\mathfrak{D}$ 16'46		10403 Feb 22 18:03	0° $\mathfrak{Z}$	
asc. node	10396 Dec 04 01:54	11° $\mathfrak{D}$ 28'52	retrograde	10403 Apr 06 10:47	1° $\mathfrak{Z}$ 35'02	

	10403 May 19 16:39	30° $\mathbb{R}$ 27	direct	10409 Nov 07 17:57	13° $\mathbb{H}$ 25'26	
opposition	10403 Jun 12 19:24	28° $\mathbb{H}$ 10'03 2°21'00	evening set	10410 Feb 20 18:07	21° $\mathbb{H}$ 10'51	
min. Earth dist.	10403 Jun 13 00:34	28° $\mathbb{H}$ 09'01 8.34160 AU				
direct	10403 Aug 19 18:52	24° $\mathbb{H}$ 43'20	conjunction	10410 Mar 10 02:30	23° $\mathbb{H}$ 19'28 0°25'03	
	10403 Nov 10 07:02	0° $\mathbb{B}$	minimum elong	10410 Mar 10 02:31	23° $\mathbb{H}$ 19'28 0°25'09	
evening set	10403 Dec 02 11:12	2° $\mathbb{B}$ 37'21	max. Earth dist.	10410 Mar 09 18:27	23° $\mathbb{H}$ 16'58 10.50835 AU	
			morning rise	10410 Mar 27 07:40	25° $\mathbb{H}$ 27'07	
conjunction	10403 Dec 20 05:28	4° $\mathbb{B}$ 50'38 1°54'39		10410 May 07 19:33	0° $\mathbb{Y}$	
minimum elong	10403 Dec 20 05:28	4° $\mathbb{B}$ 50'38 1°55'09	retrograde	10410 Jul 06 05:00	2° $\mathbb{Y}$ 56'11	
max. Earth dist.	10403 Dec 19 21:16	4° $\mathbb{B}$ 48'03 10.33944 AU		10410 Sep 06 21:34	30° $\mathbb{R}$ 28	
morning rise	10404 Jan 06 22:19	7° $\mathbb{B}$ 03'32	opposition	10410 Sep 12 07:27	29° $\mathbb{H}$ 34'51 0°15'38	
retrograde	10404 Apr 18 23:05	14° $\mathbb{B}$ 51'41	min. Earth dist.	10410 Sep 12 13:21	29° $\mathbb{H}$ 33'42 8.53131 AU	
opposition	10404 Jun 25 05:23	11° $\mathbb{B}$ 27'15 2°21'36	direct	10410 Nov 21 03:38	26° $\mathbb{H}$ 09'19	
min. Earth dist.	10404 Jun 25 12:17	11° $\mathbb{B}$ 25'52 8.34276 AU		10411 Jan 30 12:45	0° $\mathbb{Y}$	
direct	10404 Sep 01 11:52	8° $\mathbb{B}$ 00'09	evening set	10411 Mar 05 19:47	3° $\mathbb{Y}$ 50'46	
evening set	10404 Dec 15 12:38	15° $\mathbb{B}$ 55'32	desc. node	10411 Mar 20 09:48	5° $\mathbb{Y}$ 38'20	
conjunction	10405 Jan 02 05:58	18° $\mathbb{B}$ 08'33 1°52'04	conjunction	10411 Mar 23 01:39	5° $\mathbb{Y}$ 58'07 -0°00'11	
minimum elong	10405 Jan 02 05:59	18° $\mathbb{B}$ 08'33 1°52'33	minimum elong	10411 Mar 23 01:37	5° $\mathbb{Y}$ 58'07 0°00'11	
max. Earth dist.	10405 Jan 01 20:00	18° $\mathbb{B}$ 05'24 10.34593 AU	behind sun begin	10411 Mar 22 18:34	5° $\mathbb{Y}$ 55'57	
morning rise	10405 Jan 19 21:19	20° $\mathbb{B}$ 20'58	behind sun end	10411 Mar 23 08:40	6° $\mathbb{Y}$ 00'16	
retrograde	10405 May 02 09:18	28° $\mathbb{B}$ 06'41	max. Earth dist.	10411 Mar 22 19:02	5° $\mathbb{Y}$ 56'06 10.55446 AU	
opposition	10405 Jul 08 15:43	24° $\mathbb{B}$ 42'50 2°14'40	morning rise	10411 Apr 09 04:32	8° $\mathbb{Y}$ 04'35	
min. Earth dist.	10405 Jul 08 23:29	24° $\mathbb{B}$ 41'16 8.35440 AU	retrograde	10411 Jul 18 24:00	15° $\mathbb{Y}$ 31'02	
direct	10405 Sep 15 05:49	21° $\mathbb{B}$ 15'33	opposition	10411 Sep 25 10:56	12° $\mathbb{Y}$ 10'01 -0°15'33	
evening set	10405 Dec 29 11:55	29° $\mathbb{B}$ 11'00	min. Earth dist.	10411 Sep 25 15:01	12° $\mathbb{Y}$ 09'14 8.57739 AU	
	10406 Jan 05 02:01	0° $\approx$	direct	10411 Dec 04 11:49	8° $\mathbb{Y}$ 45'17	
			evening set	10412 Mar 17 16:58	16° $\mathbb{Y}$ 22'41	
conjunction	10406 Jan 16 04:02	1° $\approx$ 23'30 1°43'33				
minimum elong	10406 Jan 16 04:04	1° $\approx$ 23'31 1°44'00	conjunction	10412 Apr 03 20:13	18° $\mathbb{Y}$ 28'44 -0°25'09	
max. Earth dist.	10406 Jan 15 17:38	1° $\approx$ 20'14 10.36284 AU	minimum elong	10412 Apr 03 20:12	18° $\mathbb{Y}$ 28'44 0°25'16	
morning rise	10406 Feb 02 17:36	3° $\approx$ 35'14	max. Earth dist.	10412 Apr 03 15:58	18° $\mathbb{Y}$ 27'26 10.59997 AU	
retrograde	10406 May 15 18:23	11° $\approx$ 17'57	morning rise	10412 Apr 20 20:45	20° $\mathbb{Y}$ 34'01	
opposition	10406 Jul 22 01:46	7° $\approx$ 54'39 2°00'38	retrograde	10412 Jul 30 18:58	27° $\mathbb{Y}$ 58'27	
min. Earth dist.	10406 Jul 22 09:23	7° $\approx$ 53'08 8.37594 AU	opposition	10412 Oct 07 12:41	24° $\mathbb{Y}$ 37'42 -0°45'40	
direct	10406 Sep 28 22:53	4° $\approx$ 27'24	min. Earth dist.	10412 Oct 07 14:37	24° $\mathbb{Y}$ 37'20 8.62186 AU	
evening set	10407 Jan 12 07:57	12° $\approx$ 21'41	direct	10412 Dec 16 15:30	21° $\mathbb{Y}$ 13'51	
			evening set	10413 Mar 30 09:58	28° $\mathbb{Y}$ 47'16	
				10413 Apr 09 09:11	0° $\mathbb{B}$	
conjunction	10407 Jan 29 22:41	14° $\approx$ 33'29 1°29'38				
minimum elong	10407 Jan 29 22:43	14° $\approx$ 33'30 1°30'01	conjunction	10413 Apr 16 10:38	0° $\mathbb{B}$ 52'05 -0°48'43	
max. Earth dist.	10407 Jan 29 12:48	14° $\approx$ 30'23 10.38926 AU	minimum elong	10413 Apr 16 10:36	0° $\mathbb{B}$ 52'05 0°48'57	
	10407 Feb 02 11:04	15° $\approx$	max. Earth dist.	10413 Apr 16 08:58	0° $\mathbb{B}$ 51'35 10.64269 AU	
morning rise	10407 Feb 16 10:17	16° $\approx$ 44'23	morning rise	10413 May 03 08:55	2° $\mathbb{B}$ 56'16	
retrograde	10407 May 29 01:56	24° $\approx$ 23'39	retrograde	10413 Aug 12 12:41	10° $\mathbb{B}$ 19'21	
opposition	10407 Aug 04 11:03	21° $\approx$ 00'54 1°40'24	opposition	10413 Oct 20 13:03	6° $\mathbb{B}$ 58'46 -1°13'22	
min. Earth dist.	10407 Aug 04 18:20	20° $\approx$ 59'27 8.40624 AU	min. Earth dist.	10413 Oct 20 13:25	6° $\mathbb{B}$ 58'42 8.66269 AU	
direct	10407 Oct 12 14:31	17° $\approx$ 33'50	direct	10413 Dec 29 14:57	3° $\mathbb{B}$ 35'48	
evening set	10408 Jan 25 23:57	25° $\approx$ 25'55	evening set	10414 Apr 11 23:08	11° $\mathbb{B}$ 05'27	
conjunction	10408 Feb 12 12:58	27° $\approx$ 36'49 1°11'10				
minimum elong	10408 Feb 12 13:00	27° $\approx$ 36'50 1°11'28	conjunction	10414 Apr 28 21:19	13° $\mathbb{B}$ 09'09 -1°09'52	
max. Earth dist.	10408 Feb 12 03:51	27° $\approx$ 33'58 10.42365 AU	minimum elong	10414 Apr 28 21:17	13° $\mathbb{B}$ 09'08 1°10'11	
morning rise	10408 Feb 29 22:29	29° $\approx$ 46'44	max. Earth dist.	10414 Apr 28 21:20	13° $\mathbb{B}$ 09'09 10.68072 AU	
	10408 Mar 02 17:53	0° $\mathbb{H}$		10414 May 14 00:39	15° $\mathbb{B}$	
retrograde	10408 Jun 10 05:35	7° $\mathbb{H}$ 22'25	morning rise	10414 May 15 17:50	15° $\mathbb{B}$ 12'24	
opposition	10408 Aug 16 19:19	4° $\mathbb{H}$ 00'11 1°15'10	retrograde	10414 Aug 25 03:39	22° $\mathbb{B}$ 34'46	
min. Earth dist.	10408 Aug 17 02:23	3° $\mathbb{H}$ 58'48 8.44353 AU	opposition	10414 Nov 02 11:58	19° $\mathbb{B}$ 14'16 -1°37'28	
direct	10408 Oct 25 05:28	0° $\mathbb{H}$ 33'29	min. Earth dist.	10414 Nov 02 11:09	19° $\mathbb{B}$ 14'25 8.69805 AU	
evening set	10409 Feb 07 11:28	8° $\mathbb{H}$ 22'32	direct	10415 Jan 11 12:50	15° $\mathbb{B}$ 52'07	
			evening set	10415 Apr 24 09:21	23° $\mathbb{B}$ 18'24	
conjunction	10409 Feb 24 22:19	10° $\mathbb{H}$ 32'21 0°49'14				
minimum elong	10409 Feb 24 22:21	10° $\mathbb{H}$ 32'21 0°49'26	conjunction	10415 May 11 05:24	25° $\mathbb{B}$ 21'08 -1°27'42	
max. Earth dist.	10409 Feb 24 13:47	10° $\mathbb{H}$ 29'41 10.46401 AU	minimum elong	10415 May 11 05:22	25° $\mathbb{B}$ 21'08 1°28'05	
morning rise	10409 Mar 14 05:40	12° $\mathbb{H}$ 41'10	max. Earth dist.	10415 May 11 06:44	25° $\mathbb{B}$ 21'33 10.71240 AU	
retrograde	10409 Jun 23 06:44	20° $\mathbb{H}$ 13'23	morning rise	10415 May 28 00:38	27° $\mathbb{B}$ 23'38	
opposition	10409 Aug 30 02:11	16° $\mathbb{H}$ 51'38 0°46'24		10415 Jun 19 19:23	0° $\mathbb{H}$	
min. Earth dist.	10409 Aug 30 09:07	16° $\mathbb{H}$ 50'16 8.48591 AU	retrograde	10415 Sep 06 18:38	4° $\mathbb{H}$ 45'54	

opposition	10415 Nov 15 09:26	1° $\Pi$ 25'22	-1°57'01		10422 Jan 19 00:09	15° $\mathbb{R}$ $\mathcal{O}$	
min. Earth dist.	10415 Nov 15 07:13	1° $\Pi$ 25'47	8.72636 AU	opposition	10422 Jan 29 05:13	14° $\mathcal{O}$ 13'33	-1°51'26
	10415 Dec 04 19:08	30° $\mathbb{R}$ $\mathcal{B}$		min. Earth dist.	10422 Jan 28 21:20	14° $\mathcal{O}$ 15'04	8.70353 AU
direct	10416 Jan 24 08:38	28° $\mathcal{B}$ 03'58		direct	10422 Apr 07 20:30	10° $\mathcal{O}$ 53'37	
	10416 Mar 13 04:05	0° $\Pi$			10422 Jun 18 21:04	15° $\mathcal{O}$	
evening set	10416 May 05 17:01	5° $\Pi$ 27'18		evening set	10422 Jul 17 06:59	18° $\mathcal{O}$ 11'36	
conjunction	10416 May 22 11:35	7° $\Pi$ 29'20	-1°41'30	conjunction	10422 Aug 03 08:04	20° $\mathcal{O}$ 15'38	-1°22'31
minimum elong	10416 May 22 11:33	7° $\Pi$ 29'19	1°41'57	minimum elong	10422 Aug 03 08:06	20° $\mathcal{O}$ 15'38	1°22'53
max. Earth dist.	10416 May 22 14:55	7° $\Pi$ 30'21	10.73643 AU	max. Earth dist.	10422 Aug 03 17:35	20° $\mathcal{O}$ 18'32	10.68515 AU
morning rise	10416 Jun 08 06:00	9° $\Pi$ 31'18		morning rise	10422 Aug 20 12:13	22° $\mathcal{O}$ 20'36	
retrograde	10416 Sep 18 09:28	16° $\Pi$ 54'05		retrograde	10422 Dec 03 01:35	29° $\mathcal{O}$ 55'04	
opposition	10416 Nov 27 05:59	13° $\Pi$ 33'21	-2°11'14	opposition	10423 Feb 11 00:52	26° $\mathcal{O}$ 31'17	-1°30'14
min. Earth dist.	10416 Nov 27 01:34	13° $\Pi$ 34'11	8.74645 AU	min. Earth dist.	10423 Feb 10 16:56	26° $\mathcal{O}$ 32'48	8.66630 AU
direct	10417 Feb 05 01:40	10° $\Pi$ 12'37		direct	10423 Apr 20 09:22	23° $\mathcal{O}$ 10'58	
evening set	10417 May 17 22:47	17° $\Pi$ 33'28			10423 Jul 25 13:06	0° $\mathbb{M}$	
				evening set	10423 Jul 29 20:11	0° $\mathbb{M}$ 30'42	
conjunction	10417 Jun 03 16:38	19° $\Pi$ 35'03	-1°50'45	conjunction	10423 Aug 16 00:18	2° $\mathbb{M}$ 35'59	-1°03'25
minimum elong	10417 Jun 03 16:36	19° $\Pi$ 35'03	1°51'14	minimum elong	10423 Aug 16 00:20	2° $\mathbb{M}$ 36'00	1°03'41
max. Earth dist.	10417 Jun 03 22:43	19° $\Pi$ 36'54	10.75186 AU	max. Earth dist.	10423 Aug 16 09:03	2° $\mathbb{M}$ 38'40	10.64483 AU
morning rise	10417 Jun 20 10:50	21° $\Pi$ 36'47		morning rise	10423 Sep 02 07:49	4° $\mathbb{M}$ 42'18	
retrograde	10417 Oct 01 01:03	29° $\Pi$ 00'37		retrograde	10423 Dec 16 02:54	12° $\mathbb{M}$ 19'41	
opposition	10417 Dec 10 01:42	25° $\Pi$ 39'34	-2°19'35	opposition	10424 Feb 23 21:36	8° $\mathbb{M}$ 55'13	-1°04'40
min. Earth dist.	10417 Dec 09 19:23	25° $\Pi$ 40'46	8.75749 AU	min. Earth dist.	10424 Feb 23 14:34	8° $\mathbb{M}$ 56'35	8.62289 AU
direct	10418 Feb 17 17:09	22° $\Pi$ 19'22		direct	10424 May 02 00:19	5° $\mathbb{M}$ 34'20	
evening set	10418 May 30 03:46	29° $\Pi$ 38'17		evening set	10424 Aug 10 13:39	12° $\mathbb{M}$ 56'32	
	10418 Jun 02 04:24	0° $\mathcal{E}$					
conjunction	10418 Jun 15 21:33	1° $\mathcal{E}$ 39'44	-1°55'04	conjunction	10424 Aug 27 20:56	15° $\mathbb{M}$ 03'13	-0°41'11
minimum elong	10418 Jun 15 21:33	1° $\mathcal{E}$ 39'44	1°55'34	minimum elong	10424 Aug 27 20:58	15° $\mathbb{M}$ 03'13	0°41'22
max. Earth dist.	10418 Jun 16 05:20	1° $\mathcal{E}$ 42'06	10.75804 AU	max. Earth dist.	10424 Aug 28 04:14	15° $\mathbb{M}$ 05'27	10.59964 AU
morning rise	10418 Jul 02 16:22	3° $\mathcal{E}$ 41'31		morning rise	10424 Sep 14 07:53	17° $\mathbb{M}$ 10'57	
retrograde	10418 Oct 13 18:33	11° $\mathcal{E}$ 06'45		retrograde	10424 Dec 28 07:09	24° $\mathbb{M}$ 51'12	
opposition	10418 Dec 22 20:41	7° $\mathcal{E}$ 45'21	-2°21'46	opposition	10425 Mar 07 19:31	21° $\mathbb{M}$ 26'06	-0°35'47
min. Earth dist.	10418 Dec 22 13:29	7° $\mathcal{E}$ 46'43	8.75898 AU	min. Earth dist.	10425 Mar 07 13:51	21° $\mathbb{M}$ 27'13	8.57593 AU
direct	10419 Mar 02 05:50	4° $\mathcal{E}$ 25'30		direct	10425 May 14 16:43	18° $\mathbb{M}$ 04'30	
evening set	10419 Jun 11 08:41	11° $\mathcal{E}$ 43'06		evening set	10425 Aug 23 11:50	25° $\mathbb{M}$ 29'52	
conjunction	10419 Jun 28 03:06	13° $\mathcal{E}$ 44'44	-1°54'18	conjunction	10425 Sep 09 22:20	27° $\mathbb{M}$ 37'57	-0°16'48
minimum elong	10419 Jun 28 03:07	13° $\mathcal{E}$ 44'44	1°54'48	minimum elong	10425 Sep 09 22:20	27° $\mathbb{M}$ 37'57	0°16'52
max. Earth dist.	10419 Jun 28 11:18	13° $\mathcal{E}$ 47'14	10.75463 AU	max. Earth dist.	10425 Sep 10 04:26	27° $\mathbb{M}$ 39'49	10.55193 AU
morning rise	10419 Jul 14 23:24	15° $\mathcal{E}$ 46'54		morning rise	10425 Sep 27 12:22	29° $\mathbb{M}$ 47'05	
retrograde	10419 Oct 26 11:00	23° $\mathcal{E}$ 13'55			10425 Sep 29 07:20	0° $\mathcal{A}$	
opposition	10420 Jan 04 15:32	19° $\mathcal{E}$ 52'02	-2°17'40	retrograde	10426 Jan 10 12:05	7° $\mathcal{A}$ 30'06	
min. Earth dist.	10420 Jan 04 08:16	19° $\mathcal{E}$ 53'24	8.75058 AU	opposition	10426 Mar 20 18:49	4° $\mathcal{A}$ 04'26	-0°04'52
direct	10420 Mar 13 18:14	16° $\mathcal{E}$ 32'20		min. Earth dist.	10426 Mar 20 14:16	4° $\mathcal{A}$ 05'20	8.52770 AU
evening set	10420 Jun 22 14:08	23° $\mathcal{E}$ 49'17		asc. node	10426 May 17 11:58	0° $\mathcal{A}$ 47'26	
				direct	10426 May 27 12:55	0° $\mathcal{A}$ 42'01	
conjunction	10420 Jul 09 10:02	25° $\mathcal{E}$ 51'24	-1°48'27	evening set	10426 Sep 05 15:13	8° $\mathcal{A}$ 11'10	
minimum elong	10420 Jul 09 10:03	25° $\mathcal{E}$ 51'25	1°48'56				
max. Earth dist.	10420 Jul 09 18:34	25° $\mathcal{E}$ 54'00	10.74135 AU	conjunction	10426 Sep 23 04:37	10° $\mathcal{A}$ 20'36	0°08'42
morning rise	10420 Jul 26 08:28	27° $\mathcal{E}$ 54'14		minimum elong	10426 Sep 23 04:36	10° $\mathcal{A}$ 20'36	0°08'45
	10420 Aug 13 13:05	0° $\mathcal{O}$		behind sun begin	10426 Sep 22 22:24	10° $\mathcal{A}$ 18'41	
retrograde	10420 Nov 07 04:42	5° $\mathcal{O}$ 23'26		behind sun end	10426 Sep 23 10:49	10° $\mathcal{A}$ 22'30	
opposition	10421 Jan 16 10:20	2° $\mathcal{O}$ 00'57	-2°07'26	max. Earth dist.	10426 Sep 23 09:54	10° $\mathcal{A}$ 22'12	10.50390 AU
min. Earth dist.	10421 Jan 16 02:47	2° $\mathcal{O}$ 02'23	8.73208 AU	morning rise	10426 Oct 10 21:04	12° $\mathcal{A}$ 30'58	
	10421 Feb 13 21:33	30° $\mathbb{R}$ $\mathcal{E}$		retrograde	10427 Jan 23 19:52	20° $\mathcal{A}$ 16'35	
direct	10421 Mar 26 08:01	28° $\mathcal{E}$ 41'13		opposition	10427 Apr 02 19:35	16° $\mathcal{A}$ 50'28	0°26'38
	10421 May 04 17:42	0° $\mathcal{O}$		min. Earth dist.	10427 Apr 02 15:47	16° $\mathcal{A}$ 51'13	8.48044 AU
evening set	10421 Jul 04 21:15	5° $\mathcal{O}$ 58'15		direct	10427 Jun 09 11:42	13° $\mathcal{A}$ 27'11	
				evening set	10427 Sep 18 23:53	21° $\mathcal{A}$ 00'32	
conjunction	10421 Jul 21 19:28	8° $\mathcal{O}$ 01'12	-1°37'44	conjunction	10427 Oct 06 15:40	23° $\mathcal{A}$ 11'12	0°33'54
minimum elong	10421 Jul 21 19:31	8° $\mathcal{O}$ 01'13	1°38'10	minimum elong	10427 Oct 06 15:39	23° $\mathcal{A}$ 11'12	0°34'04
max. Earth dist.	10421 Jul 22 04:43	8° $\mathcal{O}$ 04'01	10.71799 AU	max. Earth dist.	10427 Oct 06 19:44	23° $\mathcal{A}$ 12'28	10.45787 AU
morning rise	10421 Aug 07 20:34	10° $\mathcal{O}$ 04'59		morning rise	10427 Oct 24 09:55	25° $\mathcal{A}$ 22'41	
	10421 Sep 23 12:42	15° $\mathcal{O}$			10427 Dec 05 11:33	0° $\mathbb{M}$	
retrograde	10421 Nov 20 02:29	17° $\mathcal{O}$ 36'41					

retrograde	10428 Feb 06 07:11	3° $\mathbb{M}$ 10'32		retrograde	10434 Apr 26 14:00	22° $\mathcal{Z}$ 16'33	
	10428 Apr 11 14:12	30° $\mathbb{R}$ $\mathcal{A}$		opposition	10434 Jul 02 20:26	18° $\mathcal{Z}$ 52'00	2°18'48
opposition	10428 Apr 14 22:09	29° $\mathcal{A}$ 44'06	0°57'08	min. Earth dist.	10434 Jul 03 02:20	18° $\mathcal{Z}$ 50'49	8.33879 AU
min. Earth dist.	10428 Apr 14 19:28	29° $\mathcal{A}$ 44'38	8.43646 AU	direct	10434 Sep 09 06:35	15° $\mathcal{Z}$ 24'29	
direct	10428 Jun 21 11:51	26° $\mathcal{A}$ 19'56		evening set	10434 Dec 23 10:22	23° $\mathcal{Z}$ 20'14	
	10428 Aug 27 09:29	0° $\mathbb{M}$					
evening set	10428 Oct 01 13:37	3° $\mathbb{M}$ 57'45		conjunction	10435 Jan 10 03:15	25° $\mathcal{Z}$ 33'07	1°48'09
				minimum elong	10435 Jan 10 03:17	25° $\mathcal{Z}$ 33'07	1°48'37
conjunction	10428 Oct 19 07:07	6° $\mathbb{M}$ 09'27	0°57'38	max. Earth dist.	10435 Jan 09 18:51	25° $\mathcal{Z}$ 30'28	10.34623 AU
minimum elong	10428 Oct 19 07:05	6° $\mathbb{M}$ 09'27	0°57'54	morning rise	10435 Jan 27 17:36	27° $\mathcal{Z}$ 45'16	
max. Earth dist.	10428 Oct 19 08:54	6° $\mathbb{M}$ 10'01	10.41606 AU		10435 Feb 15 13:18	0° $\approx$	
morning rise	10428 Nov 06 02:33	8° $\mathbb{M}$ 21'49		retrograde	10435 May 10 01:20	5° $\approx$ 29'47	
	10429 Jan 12 13:28	15° $\mathbb{M}$		opposition	10435 Jul 16 06:52	2° $\approx$ 06'00	2°07'54
retrograde	10429 Feb 18 20:03	16° $\mathbb{M}$ 11'22		min. Earth dist.	10435 Jul 16 13:54	2° $\approx$ 04'36	8.35866 AU
	10429 Mar 28 07:52	15° $\mathbb{R}$ $\mathbb{M}$			10435 Aug 13 14:36	30° $\mathbb{R}$ $\mathcal{Z}$	
opposition	10429 Apr 28 02:28	12° $\mathbb{M}$ 44'49	1°25'01	direct	10435 Sep 22 22:49	28° $\mathcal{Z}$ 38'36	
min. Earth dist.	10429 Apr 28 01:45	12° $\mathbb{M}$ 44'58	8.39780 AU		10435 Nov 01 22:16	0° $\approx$	
direct	10429 Jul 04 15:40	9° $\mathbb{M}$ 19'45		evening set	10436 Jan 06 08:21	6° $\approx$ 33'51	
	10429 Sep 28 04:48	15° $\mathbb{M}$					
evening set	10429 Oct 15 08:02	17° $\mathbb{M}$ 02'08		conjunction	10436 Jan 23 23:48	8° $\approx$ 46'06	1°36'36
				minimum elong	10436 Jan 23 23:50	8° $\approx$ 46'06	1°37'01
conjunction	10429 Nov 02 02:35	19° $\mathbb{M}$ 14'38	1°18'34	max. Earth dist.	10436 Jan 23 14:17	8° $\approx$ 43'06	10.37130 AU
minimum elong	10429 Nov 02 02:32	19° $\mathbb{M}$ 14'37	1°18'56	morning rise	10436 Feb 10 12:24	10° $\approx$ 57'30	
max. Earth dist.	10429 Nov 02 01:30	19° $\mathbb{M}$ 14'18	10.38044 AU		10436 Mar 17 02:06	15° $\approx$	
morning rise	10429 Nov 19 22:28	21° $\mathbb{M}$ 27'35		retrograde	10436 May 22 09:27	18° $\approx$ 38'44	
retrograde	10430 Mar 04 08:25	29° $\mathbb{M}$ 18'13		opposition	10436 Jul 28 16:47	15° $\approx$ 15'45	1°50'19
opposition	10430 May 11 08:23	25° $\mathbb{M}$ 51'45	1°48'42	min. Earth dist.	10436 Jul 29 00:22	15° $\approx$ 14'15	8.38807 AU
min. Earth dist.	10430 May 11 09:54	25° $\mathbb{M}$ 51'27	8.36635 AU		10436 Aug 01 00:12	15° $\mathbb{R}$ $\approx$	
direct	10430 Jul 17 23:54	22° $\mathbb{M}$ 25'52		direct	10436 Oct 05 15:53	11° $\approx$ 48'39	
	10430 Oct 27 13:07	0° $\mathcal{A}$			10436 Dec 07 15:22	15° $\approx$	
evening set	10430 Oct 29 06:00	0° $\mathcal{A}$ 12'31		evening set	10437 Jan 19 02:52	19° $\approx$ 42'17	
conjunction	10430 Nov 16 01:02	2° $\mathcal{A}$ 25'35	1°35'32	conjunction	10437 Feb 05 16:37	21° $\approx$ 53'41	1°20'04
minimum elong	10430 Nov 16 01:00	2° $\mathcal{A}$ 25'34	1°35'58	minimum elong	10437 Feb 05 16:39	21° $\approx$ 53'42	1°20'25
max. Earth dist.	10430 Nov 15 21:22	2° $\mathcal{A}$ 24'26	10.35290 AU	max. Earth dist.	10437 Feb 05 06:55	21° $\approx$ 50'38	10.40523 AU
morning rise	10430 Dec 03 20:44	4° $\mathcal{A}$ 38'51		morning rise	10437 Feb 23 03:18	24° $\approx$ 04'10	
retrograde	10431 Mar 17 21:54	12° $\mathcal{A}$ 29'51			10437 Apr 21 11:28	0° $\mathbb{H}$	
opposition	10431 May 24 15:53	9° $\mathcal{A}$ 03'38	2°06'48	retrograde	10437 Jun 04 13:52	1° $\mathbb{H}$ 41'53	
min. Earth dist.	10431 May 24 19:07	9° $\mathcal{A}$ 02'59	8.34378 AU		10437 Jul 19 21:12	30° $\mathbb{R}$ $\approx$	
direct	10431 Jul 31 10:36	5° $\mathcal{A}$ 37'03		opposition	10437 Aug 11 02:02	28° $\approx$ 19'39	1°27'10
evening set	10431 Nov 12 06:22	13° $\mathcal{A}$ 27'23		min. Earth dist.	10437 Aug 11 09:13	28° $\approx$ 18'14	8.42541 AU
				direct	10437 Oct 19 09:14	24° $\approx$ 53'02	
conjunction	10431 Nov 30 01:29	15° $\mathcal{A}$ 40'46	1°47'31		10438 Jan 09 08:32	0° $\mathbb{H}$	
minimum elong	10431 Nov 30 01:27	15° $\mathcal{A}$ 40'46	1°47'59	evening set	10438 Feb 01 16:56	2° $\mathbb{H}$ 43'59	
max. Earth dist.	10431 Nov 29 20:11	15° $\mathcal{A}$ 39'06	10.33497 AU				
morning rise	10431 Dec 17 20:23	17° $\mathcal{A}$ 54'07		conjunction	10438 Feb 19 04:46	4° $\mathbb{H}$ 54'22	0°59'33
retrograde	10432 Mar 30 11:57	25° $\mathcal{A}$ 44'41		minimum elong	10438 Feb 19 04:48	4° $\mathbb{H}$ 54'23	0°59'48
opposition	10432 Jun 06 00:38	22° $\mathcal{A}$ 18'52	2°18'15	max. Earth dist.	10438 Feb 18 20:01	4° $\mathbb{H}$ 51'38	10.44613 AU
min. Earth dist.	10432 Jun 06 04:49	22° $\mathcal{A}$ 18'01	8.33127 AU	morning rise	10438 Mar 08 13:18	7° $\mathbb{H}$ 03'46	
direct	10432 Aug 12 23:40	18° $\mathcal{A}$ 51'46		retrograde	10438 Jun 17 17:36	14° $\mathbb{H}$ 37'59	
evening set	10432 Nov 25 08:13	26° $\mathcal{A}$ 44'59		opposition	10438 Aug 24 10:04	11° $\mathbb{H}$ 16'23	0°59'47
				min. Earth dist.	10438 Aug 24 16:03	11° $\mathbb{H}$ 15'13	8.46867 AU
conjunction	10432 Dec 13 03:00	28° $\mathcal{A}$ 58'26	1°53'48	direct	10438 Nov 01 22:56	7° $\mathbb{H}$ 50'23	
minimum elong	10432 Dec 13 02:59	28° $\mathcal{A}$ 58'26	1°54'18	evening set	10439 Feb 15 02:24	15° $\mathbb{H}$ 37'53	
max. Earth dist.	10432 Dec 12 20:31	28° $\mathcal{A}$ 56'24	10.32763 AU				
	10432 Dec 21 06:36	0° $\mathcal{Z}$		conjunction	10439 Mar 04 12:05	17° $\mathbb{H}$ 47'07	0°36'12
morning rise	10432 Dec 30 20:36	1° $\mathcal{Z}$ 11'36		minimum elong	10439 Mar 04 12:06	17° $\mathbb{H}$ 47'08	0°36'22
retrograde	10433 Apr 13 01:12	9° $\mathcal{Z}$ 00'52		max. Earth dist.	10439 Mar 04 05:01	17° $\mathbb{H}$ 44'55	10.49172 AU
opposition	10433 Jun 19 10:09	5° $\mathcal{Z}$ 35'37	2°22'19	morning rise	10439 Mar 21 18:17	19° $\mathbb{H}$ 55'21	
min. Earth dist.	10433 Jun 19 15:10	5° $\mathcal{Z}$ 34'37	8.32953 AU	retrograde	10439 Jun 30 18:41	27° $\mathbb{H}$ 26'11	
direct	10433 Aug 26 14:55	2° $\mathcal{Z}$ 08'12		opposition	10439 Sep 06 16:28	24° $\mathbb{H}$ 05'06	0°29'43
evening set	10433 Dec 09 10:03	10° $\mathcal{Z}$ 03'18		min. Earth dist.	10439 Sep 06 21:34	24° $\mathbb{H}$ 04'07	8.51539 AU
				direct	10439 Nov 15 09:37	20° $\mathbb{H}$ 39'48	
conjunction	10433 Dec 27 04:04	12° $\mathcal{Z}$ 16'34	1°54'01	evening set	10440 Feb 28 07:05	28° $\mathbb{H}$ 23'23	
minimum elong	10433 Dec 27 04:04	12° $\mathcal{Z}$ 16'34	1°54'31		10440 Mar 12 09:15	0° $\mathbb{Y}$	
max. Earth dist.	10433 Dec 26 20:38	12° $\mathcal{Z}$ 14'14	10.33141 AU				
morning rise	10434 Jan 13 20:05	14° $\mathcal{Z}$ 29'19		conjunction	10440 Mar 16 14:17	0° $\mathbb{Y}$ 31'21	0°11'19

minimum elong	10440 Mar 16 14:17	0° $\Upsilon$ 31'21	0°11'22	min. Earth dist.	10445 Nov 21 20:35	8° $\Pi$ 30'19	8.72418 AU
behind sun begin	10440 Mar 16 09:05	0° $\Upsilon$ 29'45		direct	10446 Jan 30 19:06	5° $\Pi$ 08'39	
behind sun end	10440 Mar 16 19:30	0° $\Upsilon$ 32'57		evening set	10446 May 12 23:09	12° $\Pi$ 31'27	
max. Earth dist.	10440 Mar 16 08:20	0° $\Upsilon$ 29'31	10.53921 AU				
morning rise	10440 Apr 02 18:06	2° $\Upsilon$ 38'23		conjunction	10446 May 29 17:17	14° $\Pi$ 33'27	-1°47'13
retrograde	10440 Jul 12 16:02	10° $\Upsilon$ 06'13		minimum elong	10446 May 29 17:16	14° $\Pi$ 33'26	1°47'42
desc. node	10440 Sep 01 03:43	8° $\Upsilon$ 05'27		max. Earth dist.	10446 May 29 20:22	14° $\Pi$ 34'23	10.72903 AU
opposition	10440 Sep 18 21:19	6° $\Upsilon$ 45'34	-0°01'29	morning rise	10446 Jun 15 11:41	16° $\Pi$ 35'31	
min. Earth dist.	10440 Sep 19 01:59	6° $\Upsilon$ 44'40	8.56259 AU	retrograde	10446 Sep 25 21:30	23° $\Pi$ 59'44	
direct	10440 Nov 27 18:39	3° $\Upsilon$ 21'00		opposition	10446 Dec 04 19:58	20° $\Pi$ 38'32	-2°16'40
evening set	10441 Mar 12 06:57	11° $\Upsilon$ 00'30		min. Earth dist.	10446 Dec 04 16:27	20° $\Pi$ 39'12	8.73408 AU
				direct	10447 Feb 12 12:38	17° $\Pi$ 17'40	
				evening set	10447 May 25 05:13	24° $\Pi$ 38'25	
conjunction	10441 Mar 29 11:22	13° $\Upsilon$ 07'08	-0°13'59				
minimum elong	10441 Mar 29 11:21	13° $\Upsilon$ 07'08	0°14'03				
behind sun begin	10441 Mar 29 07:46	13° $\Upsilon$ 06'02		conjunction	10447 Jun 10 22:56	26° $\Pi$ 40'10	-1°53'46
behind sun end	10441 Mar 29 14:57	13° $\Upsilon$ 08'14		minimum elong	10447 Jun 10 22:56	26° $\Pi$ 40'09	1°54'16
max. Earth dist.	10441 Mar 29 05:59	13° $\Upsilon$ 05'29	10.58540 AU	max. Earth dist.	10447 Jun 11 03:42	26° $\Pi$ 41'37	10.73434 AU
morning rise	10441 Apr 15 12:54	15° $\Upsilon$ 12'57		morning rise	10447 Jun 27 17:39	28° $\Pi$ 42'11	
retrograde	10441 Jul 25 11:37	22° $\Upsilon$ 38'29			10447 Jul 08 19:01	0° $\Theta$	
opposition	10441 Oct 02 00:30	19° $\Upsilon$ 18'08	-0°32'16	retrograde	10447 Oct 08 13:52	6° $\Theta$ 07'45	
min. Earth dist.	10441 Oct 02 04:38	19° $\Upsilon$ 17'20	8.60710 AU	opposition	10447 Dec 17 15:59	2° $\Theta$ 46'00	-2°21'38
direct	10441 Dec 11 00:41	15° $\Upsilon$ 54'19		min. Earth dist.	10447 Dec 17 10:47	2° $\Theta$ 46'59	8.73511 AU
evening set	10442 Mar 25 02:24	23° $\Upsilon$ 29'51			10448 Jan 29 17:23	30° $\mathcal{R}$ $\Pi$	
				direct	10448 Feb 25 04:37	29° $\Pi$ 25'22	
conjunction	10442 Apr 11 04:05	25° $\Upsilon$ 35'16	-0°38'19		10448 Mar 22 06:12	0° $\Theta$	
minimum elong	10442 Apr 11 04:04	25° $\Upsilon$ 35'15	0°38'29	evening set	10448 Jun 05 10:37	6° $\Theta$ 44'36	
max. Earth dist.	10442 Apr 10 23:26	25° $\Upsilon$ 33'50	10.62744 AU				
morning rise	10442 Apr 28 03:31	27° $\Upsilon$ 39'59		conjunction	10448 Jun 22 04:51	8° $\Theta$ 46'26	-1°55'15
	10442 May 18 05:51	0° $\mathcal{B}$		minimum elong	10448 Jun 22 04:51	8° $\Theta$ 46'26	1°55'45
retrograde	10442 Aug 07 05:06	5° $\mathcal{B}$ 03'58		max. Earth dist.	10448 Jun 22 11:54	8° $\Theta$ 48'35	10.73088 AU
opposition	10442 Oct 15 02:00	1° $\mathcal{B}$ 43'45	-1°01'14	morning rise	10448 Jul 09 00:31	10° $\Theta$ 48'43	
min. Earth dist.	10442 Oct 15 04:47	1° $\mathcal{B}$ 43'13	8.64658 AU	retrograde	10448 Oct 20 07:12	18° $\Theta$ 16'04	
	10442 Nov 07 20:57	30° $\mathcal{R}$ $\Upsilon$		opposition	10448 Dec 29 11:39	14° $\Theta$ 53'42	-2°20'17
direct	10442 Dec 24 03:27	28° $\Upsilon$ 20'44		min. Earth dist.	10448 Dec 29 04:36	14° $\Theta$ 55'02	8.72727 AU
	10443 Feb 07 04:53	0° $\mathcal{B}$		direct	10449 Mar 08 18:26	11° $\Theta$ 33'13	
evening set	10443 Apr 06 17:55	5° $\mathcal{B}$ 52'35		evening set	10449 Jun 17 16:18	18° $\Theta$ 51'33	
conjunction	10443 Apr 23 17:11	7° $\mathcal{B}$ 56'52	-1°00'41	conjunction	10449 Jul 04 11:47	20° $\Theta$ 53'48	-1°51'35
minimum elong	10443 Apr 23 17:09	7° $\mathcal{B}$ 56'51	1°00'58	minimum elong	10449 Jul 04 11:48	20° $\Theta$ 53'48	1°52'04
max. Earth dist.	10443 Apr 23 14:31	7° $\mathcal{B}$ 56'03	10.66365 AU	max. Earth dist.	10449 Jul 04 20:39	20° $\Theta$ 56'30	10.71871 AU
morning rise	10443 May 10 14:38	10° $\mathcal{B}$ 00'37		morning rise	10449 Jul 21 09:13	22° $\Theta$ 56'39	
	10443 Jun 26 21:06	15° $\mathcal{B}$			10449 Oct 10 05:29	0° $\mathcal{Q}$	
retrograde	10443 Aug 19 21:27	17° $\mathcal{B}$ 23'48		retrograde	10449 Nov 02 02:31	0° $\mathcal{Q}$ 26'08	
	10443 Oct 15 13:18	15° $\mathcal{R}$ $\mathcal{B}$			10449 Nov 25 03:43	30° $\mathcal{R}$ $\Theta$	
opposition	10443 Oct 28 02:09	14° $\mathcal{B}$ 03'35	-1°27'08	opposition	10450 Jan 11 07:08	27° $\Theta$ 03'07	-2°12'39
min. Earth dist.	10443 Oct 28 02:47	14° $\mathcal{B}$ 03'27	8.67976 AU	min. Earth dist.	10450 Jan 10 23:06	27° $\Theta$ 04'39	8.71073 AU
direct	10444 Jan 06 04:03	10° $\mathcal{B}$ 41'17		direct	10450 Mar 21 07:37	23° $\Theta$ 42'39	
	10444 Mar 21 06:17	15° $\mathcal{B}$			10450 Jun 21 09:05	0° $\mathcal{Q}$	
evening set	10444 Apr 18 06:11	18° $\mathcal{B}$ 09'45		evening set	10450 Jun 29 23:25	1° $\mathcal{Q}$ 00'49	
conjunction	10444 May 05 03:18	20° $\mathcal{B}$ 13'03	-1°20'08	conjunction	10450 Jul 16 20:44	3° $\mathcal{Q}$ 03'45	-1°42'54
minimum elong	10444 May 05 03:16	20° $\mathcal{B}$ 13'03	1°20'31	minimum elong	10450 Jul 16 20:46	3° $\mathcal{Q}$ 03'46	1°43'21
max. Earth dist.	10444 May 05 03:14	20° $\mathcal{B}$ 13'02	10.69310 AU	max. Earth dist.	10450 Jul 17 05:51	3° $\mathcal{Q}$ 06'32	10.69825 AU
morning rise	10444 May 21 23:02	22° $\mathcal{B}$ 16'00		morning rise	10450 Aug 02 20:43	5° $\mathcal{Q}$ 07'28	
retrograde	10444 Aug 31 15:05	29° $\mathcal{B}$ 39'01		retrograde	10450 Nov 14 23:54	12° $\mathcal{Q}$ 39'18	
opposition	10444 Nov 09 01:07	26° $\mathcal{B}$ 18'36	-1°48'53	opposition	10451 Jan 24 02:41	9° $\mathcal{Q}$ 15'41	-1°59'01
min. Earth dist.	10444 Nov 08 23:53	26° $\mathcal{B}$ 18'50	8.70585 AU	min. Earth dist.	10451 Jan 23 18:46	9° $\mathcal{Q}$ 17'12	8.68615 AU
direct	10445 Jan 18 01:17	22° $\mathcal{B}$ 56'56		direct	10451 Apr 02 19:45	5° $\mathcal{Q}$ 55'05	
	10445 Apr 27 12:50	0° $\Pi$		evening set	10451 Jul 12 08:40	13° $\mathcal{Q}$ 13'50	
evening set	10445 Apr 30 15:47	0° $\Pi$ 22'20			10451 Jul 26 22:32	15° $\mathcal{Q}$	
conjunction	10445 May 17 11:07	2° $\Pi$ 24'52	-1°35'51	conjunction	10451 Jul 29 08:28	15° $\mathcal{Q}$ 17'43	-1°29'30
minimum elong	10445 May 17 11:05	2° $\Pi$ 24'52	1°36'18	minimum elong	10451 Jul 29 08:30	15° $\mathcal{Q}$ 17'44	1°29'54
max. Earth dist.	10445 May 17 13:03	2° $\Pi$ 25'27	10.71510 AU	max. Earth dist.	10451 Jul 29 17:28	15° $\mathcal{Q}$ 20'28	10.67033 AU
morning rise	10445 Jun 03 05:47	4° $\Pi$ 27'14		morning rise	10451 Aug 15 11:30	17° $\mathcal{Q}$ 22'32	
retrograde	10445 Sep 13 06:44	11° $\Pi$ 50'36		retrograde	10451 Nov 27 21:08	24° $\mathcal{Q}$ 56'58	
opposition	10445 Nov 21 23:03	8° $\Pi$ 29'51	-2°05'37	opposition	10452 Feb 05 22:54	21° $\mathcal{Q}$ 32'45	-1°39'52

min. Earth dist.	10452 Feb 05 15:10	21° $\Omega$ 34'14	8.65460 AU	opposition	10458 Apr 23 00:45	7° $\mathbb{M}$ 38'02	1°13'49
direct	10452 Apr 14 09:49	18° $\Omega$ 11'53		min. Earth dist.	10458 Apr 22 22:34	7° $\mathbb{M}$ 38'28	8.41675 AU
evening set	10452 Jul 23 20:47	25° $\Omega$ 31'57		direct	10458 Jun 29 13:39	4° $\mathbb{M}$ 13'47	
				evening set	10458 Oct 10 00:05	11° $\mathbb{M}$ 54'33	
conjunction	10452 Aug 09 23:38	27° $\Omega$ 37'01	-1°11'55				
minimum elong	10452 Aug 09 23:40	27° $\Omega$ 37'01	1°12'15	conjunction	10458 Oct 27 18:16	14° $\mathbb{M}$ 06'44	1°10'15
max. Earth dist.	10452 Aug 10 08:58	27° $\Omega$ 39'52	10.63613 AU	minimum elong	10458 Oct 27 18:14	14° $\mathbb{M}$ 06'43	1°10'35
morning rise	10452 Aug 27 05:56	29° $\Omega$ 43'04		max. Earth dist.	10458 Oct 27 20:07	14° $\mathbb{M}$ 07'18	10.40077 AU
	10452 Aug 29 14:36	0° $\mathbb{M}$			10458 Nov 03 20:50	15° $\mathbb{M}$	
retrograde	10452 Dec 09 21:48	7° $\mathbb{M}$ 20'19		morning rise	10458 Nov 14 14:00	16° $\mathbb{M}$ 19'27	
opposition	10453 Feb 17 19:52	3° $\mathbb{M}$ 55'29	-1°15'57	retrograde	10459 Feb 27 03:12	24° $\mathbb{M}$ 09'53	
min. Earth dist.	10453 Feb 17 12:02	3° $\mathbb{M}$ 57'01	8.61749 AU	opposition	10459 May 06 06:27	20° $\mathbb{M}$ 43'51	1°39'22
direct	10453 Apr 27 01:50	0° $\mathbb{M}$ 34'17		min. Earth dist.	10459 May 06 05:36	20° $\mathbb{M}$ 44'01	8.38741 AU
evening set	10453 Aug 05 12:56	7° $\mathbb{M}$ 56'23		direct	10459 Jul 12 21:05	17° $\mathbb{M}$ 18'53	
				evening set	10459 Oct 23 21:04	25° $\mathbb{M}$ 03'44	
conjunction	10453 Aug 22 19:07	10° $\mathbb{M}$ 02'45	-0°50'51				
minimum elong	10453 Aug 22 19:09	10° $\mathbb{M}$ 02'46	0°51'05	conjunction	10459 Nov 10 16:01	27° $\mathbb{M}$ 16'31	1°28'58
max. Earth dist.	10453 Aug 23 04:55	10° $\mathbb{M}$ 05'46	10.59715 AU	minimum elong	10459 Nov 10 15:59	27° $\mathbb{M}$ 16'31	1°29'23
morning rise	10453 Sep 09 04:41	12° $\mathbb{M}$ 10'10		max. Earth dist.	10459 Nov 10 15:42	27° $\mathbb{M}$ 16'25	10.37439 AU
retrograde	10453 Dec 23 02:16	19° $\mathbb{M}$ 50'12		morning rise	10459 Nov 28 11:39	29° $\mathbb{M}$ 29'35	
opposition	10454 Mar 02 17:43	16° $\mathbb{M}$ 24'52	-0°48'15		10459 Dec 02 15:27	0° $\mathbb{M}$	
min. Earth dist.	10454 Mar 02 09:50	16° $\mathbb{M}$ 26'25	8.57655 AU	retrograde	10460 Mar 11 18:00	7° $\mathbb{M}$ 20'26	
direct	10454 May 09 17:32	13° $\mathbb{M}$ 03'12		opposition	10460 May 18 13:30	3° $\mathbb{M}$ 54'37	1°59'53
evening set	10454 Aug 18 09:46	20° $\mathbb{M}$ 28'05		min. Earth dist.	10460 May 18 14:31	3° $\mathbb{M}$ 54'25	8.36479 AU
				direct	10460 Jul 25 05:37	0° $\mathbb{M}$ 28'56	
conjunction	10454 Sep 04 19:07	22° $\mathbb{M}$ 35'49	-0°27'12	evening set	10460 Nov 05 20:54	8° $\mathbb{M}$ 17'30	
minimum elong	10454 Sep 04 19:08	22° $\mathbb{M}$ 35'50	0°27'19				
max. Earth dist.	10454 Sep 05 04:09	22° $\mathbb{M}$ 38'36	10.55525 AU	conjunction	10460 Nov 23 16:02	10° $\mathbb{M}$ 30'40	1°43'05
morning rise	10454 Sep 22 07:48	24° $\mathbb{M}$ 44'36		minimum elong	10460 Nov 23 16:00	10° $\mathbb{M}$ 30'40	1°43'33
	10454 Nov 11 02:37	0° $\mathbb{M}$		max. Earth dist.	10460 Nov 23 12:39	10° $\mathbb{M}$ 29'36	10.35495 AU
retrograde	10455 Jan 05 08:33	2° $\mathbb{M}$ 27'21		morning rise	10460 Dec 11 11:06	12° $\mathbb{M}$ 43'52	
	10455 Mar 03 03:32	30° $\mathbb{R}$ $\mathbb{M}$		retrograde	10461 Mar 25 08:52	20° $\mathbb{M}$ 34'26	
opposition	10455 Mar 15 17:05	29° $\mathbb{M}$ 01'39	-0°17'57	opposition	10461 May 31 21:51	17° $\mathbb{M}$ 09'00	2°14'08
min. Earth dist.	10455 Mar 15 10:04	29° $\mathbb{M}$ 03'01	8.53383 AU	min. Earth dist.	10461 Jun 01 01:25	17° $\mathbb{M}$ 08'17	8.34925 AU
direct	10455 May 22 11:29	25° $\mathbb{M}$ 39'26		direct	10461 Aug 07 17:11	13° $\mathbb{M}$ 42'42	
	10455 Aug 04 02:51	0° $\mathbb{M}$		evening set	10461 Nov 19 22:30	21° $\mathbb{M}$ 34'29	
evening set	10455 Aug 31 11:32	3° $\mathbb{M}$ 07'43					
conjunction	10455 Sep 17 23:44	5° $\mathbb{M}$ 16'47	-0°02'04	conjunction	10461 Dec 07 17:16	23° $\mathbb{M}$ 47'47	1°51'45
minimum elong	10455 Sep 17 23:44	5° $\mathbb{M}$ 16'47	0°02'04	minimum elong	10461 Dec 07 17:15	23° $\mathbb{M}$ 47'47	1°52'15
behind sun begin	10455 Sep 17 16:32	5° $\mathbb{M}$ 14'35		max. Earth dist.	10461 Dec 07 10:40	23° $\mathbb{M}$ 45'43	10.34312 AU
behind sun end	10455 Sep 18 06:57	5° $\mathbb{M}$ 18'59		morning rise	10461 Dec 25 11:20	26° $\mathbb{M}$ 00'55	
max. Earth dist.	10455 Sep 18 07:05	5° $\mathbb{M}$ 19'02	10.51258 AU		10462 Jan 29 09:12	0° $\mathbb{M}$	
morning rise	10455 Oct 05 15:14	7° $\mathbb{M}$ 26'50		retrograde	10462 Apr 07 22:14	3° $\mathbb{M}$ 50'31	
asc. node	10455 Oct 18 01:50	8° $\mathbb{M}$ 55'22		opposition	10462 Jun 14 07:14	0° $\mathbb{M}$ 25'36	2°21'17
retrograde	10456 Jan 18 16:31	15° $\mathbb{M}$ 12'11		min. Earth dist.	10462 Jun 14 12:56	0° $\mathbb{M}$ 24'27	8.34200 AU
opposition	10456 Mar 27 18:05	11° $\mathbb{M}$ 46'12	0°13'33		10462 Jun 19 14:55	30° $\mathbb{R}$ $\mathbb{M}$	
min. Earth dist.	10456 Mar 27 12:40	11° $\mathbb{M}$ 47'16	8.49157 AU	direct	10462 Aug 21 08:20	26° $\mathbb{M}$ 58'49	
direct	10456 Jun 03 09:16	8° $\mathbb{M}$ 23'21			10462 Oct 20 20:42	0° $\mathbb{M}$	
evening set	10456 Sep 12 18:43	15° $\mathbb{M}$ 55'34		evening set	10462 Dec 04 00:29	4° $\mathbb{M}$ 52'58	
conjunction	10456 Sep 30 09:25	18° $\mathbb{M}$ 05'52	0°23'30	conjunction	10462 Dec 21 18:37	7° $\mathbb{M}$ 06'12	1°54'28
minimum elong	10456 Sep 30 09:24	18° $\mathbb{M}$ 05'51	0°23'37	minimum elong	10462 Dec 21 18:37	7° $\mathbb{M}$ 06'12	1°54'59
max. Earth dist.	10456 Sep 30 14:37	18° $\mathbb{M}$ 07'28	10.47135 AU	max. Earth dist.	10462 Dec 21 09:54	7° $\mathbb{M}$ 03'27	10.34054 AU
morning rise	10456 Oct 18 03:10	20° $\mathbb{M}$ 17'03		morning rise	10463 Jan 08 11:23	9° $\mathbb{M}$ 19'02	
retrograde	10457 Jan 31 02:55	28° $\mathbb{M}$ 04'36		retrograde	10463 Apr 21 09:51	17° $\mathbb{M}$ 06'56	
opposition	10457 Apr 09 20:35	24° $\mathbb{M}$ 38'30	0°44'40	opposition	10463 Jun 27 17:16	13° $\mathbb{M}$ 42'33	2°20'52
min. Earth dist.	10457 Apr 09 17:03	24° $\mathbb{M}$ 39'12	8.45195 AU	min. Earth dist.	10463 Jun 28 00:10	13° $\mathbb{M}$ 41'10	8.34449 AU
direct	10457 Jun 16 09:32	21° $\mathbb{M}$ 14'57		direct	10463 Sep 04 01:07	10° $\mathbb{M}$ 15'28	
evening set	10457 Sep 26 07:05	28° $\mathbb{M}$ 51'25		evening set	10463 Dec 18 01:33	18° $\mathbb{M}$ 10'48	
	10457 Oct 05 14:04	0° $\mathbb{M}$					
conjunction	10457 Oct 13 23:51	1° $\mathbb{M}$ 02'46	0°48'01	conjunction	10464 Jan 04 18:50	20° $\mathbb{M}$ 23'45	1°51'05
minimum elong	10457 Oct 13 23:50	1° $\mathbb{M}$ 02'46	0°48'15	minimum elong	10464 Jan 04 18:51	20° $\mathbb{M}$ 23'46	1°51'34
max. Earth dist.	10457 Oct 14 03:20	1° $\mathbb{M}$ 03'51	10.43353 AU	max. Earth dist.	10464 Jan 04 09:07	20° $\mathbb{M}$ 20'42	10.34821 AU
morning rise	10457 Oct 31 19:01	3° $\mathbb{M}$ 14'52		morning rise	10464 Jan 22 10:02	22° $\mathbb{M}$ 36'06	
retrograde	10458 Feb 13 14:45	11° $\mathbb{M}$ 04'09			10464 Apr 14 00:19	0° $\mathbb{M}$	
				retrograde	10464 May 03 21:21	0° $\mathbb{M}$ 21'33	
					10464 May 23 21:38	30° $\mathbb{R}$ $\mathbb{M}$	

opposition	10464 Jul 10 03:33	26° $\mathfrak{Z}$ 57'44	2°12'58	morning rise	10470 Apr 10 14:57	10° $\Upsilon$ 16'10
min. Earth dist.	10464 Jul 10 10:45	26° $\mathfrak{Z}$ 56'18	8.35711 AU	retrograde	10470 Jul 20 11:49	17° $\Upsilon$ 42'27
direct	10464 Sep 16 17:56	23° $\mathfrak{Z}$ 30'30		opposition	10470 Sep 26 22:20	14° $\Upsilon$ 21'27 -0°19'41
	10464 Dec 19 04:30	0° $\approx$		min. Earth dist.	10470 Sep 27 01:44	14° $\Upsilon$ 20'48 8.58196 AU
evening set	10464 Dec 31 00:36	1° $\approx$ 25'48		direct	10470 Dec 05 23:13	10° $\Upsilon$ 56'51
				evening set	10471 Mar 20 03:25	18° $\Upsilon$ 33'48
conjunction	10465 Jan 17 16:44	3° $\approx$ 38'16	1°41'49	conjunction	10471 Apr 06 06:29	20° $\Upsilon$ 39'45 -0°28'25
minimum elong	10465 Jan 17 16:46	3° $\approx$ 38'17	1°42'16	minimum elong	10471 Apr 06 06:28	20° $\Upsilon$ 39'44 0°28'32
max. Earth dist.	10465 Jan 17 07:03	3° $\approx$ 35'13	10.36599 AU	max. Earth dist.	10471 Apr 06 03:01	20° $\Upsilon$ 38'41 10.60439 AU
morning rise	10465 Feb 04 06:04	5° $\approx$ 49'55		morning rise	10471 Apr 23 06:44	22° $\Upsilon$ 44'55
retrograde	10465 May 17 06:42	13° $\approx$ 32'18			10471 Jul 20 00:07	0° $\mathfrak{B}$
opposition	10465 Jul 23 13:32	10° $\approx$ 09'05	1°58'05	retrograde	10471 Aug 02 06:05	0° $\mathfrak{B}$ 09'11
min. Earth dist.	10465 Jul 23 20:46	10° $\approx$ 07'38	8.37938 AU		10471 Aug 15 12:52	30° $\mathfrak{R}$ $\Upsilon$
direct	10465 Sep 30 10:42	6° $\approx$ 41'54		opposition	10471 Oct 09 23:51	26° $\Upsilon$ 48'27 -0°49'31
evening set	10466 Jan 13 20:23	14° $\approx$ 35'59		min. Earth dist.	10471 Oct 10 01:45	26° $\Upsilon$ 48'05 8.62612 AU
	10466 Jan 17 02:19	15° $\approx$		direct	10471 Dec 19 01:23	23° $\Upsilon$ 24'41
conjunction	10466 Jan 31 11:02	16° $\approx$ 47'42	1°27'16		10472 Mar 23 17:51	0° $\mathfrak{B}$
minimum elong	10466 Jan 31 11:04	16° $\approx$ 47'43	1°27'39	evening set	10472 Mar 31 20:05	0° $\mathfrak{B}$ 57'41
max. Earth dist.	10466 Jan 31 01:35	16° $\approx$ 44'44	10.39306 AU	conjunction	10472 Apr 17 20:27	3° $\mathfrak{B}$ 02'23 -0°51'40
morning rise	10466 Feb 17 22:24	18° $\approx$ 58'31		minimum elong	10472 Apr 17 20:26	3° $\mathfrak{B}$ 02'23 0°51'55
retrograde	10466 May 30 13:18	26° $\approx$ 37'28		max. Earth dist.	10472 Apr 17 18:41	3° $\mathfrak{B}$ 01'51 10.64669 AU
opposition	10466 Aug 05 22:56	23° $\approx$ 14'49	1°37'07	morning rise	10472 May 04 18:36	5° $\mathfrak{B}$ 06'29
min. Earth dist.	10466 Aug 06 06:22	23° $\approx$ 13'21	8.41026 AU	retrograde	10472 Aug 13 22:04	12° $\mathfrak{B}$ 29'25
direct	10466 Oct 14 02:51	19° $\approx$ 47'50		opposition	10472 Oct 21 24:00	9° $\mathfrak{B}$ 08'51 -1°16'45
evening set	10467 Jan 27 12:00	27° $\approx$ 39'38		min. Earth dist.	10472 Oct 22 00:51	9° $\mathfrak{B}$ 08'41 8.66648 AU
conjunction	10467 Feb 14 00:48	29° $\approx$ 50'27	1°08'18	direct	10472 Dec 31 02:03	5° $\mathfrak{B}$ 45'56
minimum elong	10467 Feb 14 00:50	29° $\approx$ 50'28	1°08'35	evening set	10473 Apr 13 08:54	13° $\mathfrak{B}$ 15'14
max. Earth dist.	10467 Feb 13 15:26	29° $\approx$ 47'31	10.42796 AU		10473 Apr 27 17:26	15° $\mathfrak{B}$
	10467 Feb 15 07:19	0° $\mathfrak{H}$		conjunction	10473 Apr 30 06:46	15° $\mathfrak{B}$ 18'48 -1°12'23
morning rise	10467 Mar 03 10:10	2° $\mathfrak{H}$ 00'16		minimum elong	10473 Apr 30 06:43	15° $\mathfrak{B}$ 18'47 1°12'43
retrograde	10467 Jun 12 17:23	9° $\mathfrak{H}$ 35'40		max. Earth dist.	10473 Apr 30 06:15	15° $\mathfrak{B}$ 18'39 10.68415 AU
opposition	10467 Aug 19 07:10	6° $\mathfrak{H}$ 13'32	1°11'22	morning rise	10473 May 17 03:13	17° $\mathfrak{B}$ 21'58
min. Earth dist.	10467 Aug 19 14:44	6° $\mathfrak{H}$ 12'03	8.44803 AU	retrograde	10473 Aug 26 13:45	24° $\mathfrak{B}$ 44'16
direct	10467 Oct 27 17:05	2° $\mathfrak{H}$ 46'55		opposition	10473 Nov 03 22:41	21° $\mathfrak{B}$ 23'44 -1°40'15
evening set	10468 Feb 09 23:10	10° $\mathfrak{H}$ 35'39		min. Earth dist.	10473 Nov 03 21:56	21° $\mathfrak{B}$ 23'53 8.70120 AU
conjunction	10468 Feb 27 09:46	12° $\mathfrak{H}$ 45'22	0°46'01	direct	10474 Jan 13 00:03	18° $\mathfrak{B}$ 01'38
minimum elong	10468 Feb 27 09:48	12° $\mathfrak{H}$ 45'23	0°46'12	evening set	10474 Apr 25 18:40	25° $\mathfrak{B}$ 27'33
max. Earth dist.	10468 Feb 27 00:34	12° $\mathfrak{H}$ 42'30	10.46871 AU	conjunction	10474 May 12 14:34	27° $\mathfrak{B}$ 30'13 -1°29'41
morning rise	10468 Mar 15 17:03	14° $\mathfrak{H}$ 54'06		minimum elong	10474 May 12 14:31	27° $\mathfrak{B}$ 30'12 1°30'06
retrograde	10468 Jun 24 17:27	22° $\mathfrak{H}$ 26'01		max. Earth dist.	10474 May 12 16:09	27° $\mathfrak{B}$ 30'42 10.71514 AU
opposition	10468 Aug 31 13:50	19° $\mathfrak{H}$ 04'21	0°42'16	morning rise	10474 May 29 09:43	29° $\mathfrak{B}$ 32'38
min. Earth dist.	10468 Aug 31 20:52	19° $\mathfrak{H}$ 02'59	8.49068 AU		10474 Jun 02 05:41	0° $\mathfrak{I}$
direct	10468 Nov 09 06:02	15° $\mathfrak{H}$ 38'16		retrograde	10474 Sep 08 04:00	6° $\mathfrak{I}$ 54'54
evening set	10469 Feb 22 05:26	23° $\mathfrak{H}$ 23'20		opposition	10474 Nov 16 19:52	3° $\mathfrak{I}$ 34'17 -1°59'05
conjunction	10469 Mar 11 13:37	25° $\mathfrak{H}$ 31'50	0°21'39	min. Earth dist.	10474 Nov 16 17:02	3° $\mathfrak{I}$ 34'49 8.72872 AU
minimum elong	10469 Mar 11 13:38	25° $\mathfrak{H}$ 31'51	0°21'44	direct	10475 Jan 25 18:44	0° $\mathfrak{I}$ 12'55
max. Earth dist.	10469 Mar 11 05:31	25° $\mathfrak{H}$ 29'20	10.51319 AU	evening set	10475 May 08 02:00	7° $\mathfrak{I}$ 35'57
morning rise	10469 Mar 28 18:39	27° $\mathfrak{H}$ 39'24		conjunction	10475 May 24 20:36	9° $\mathfrak{I}$ 37'55 -1°42'52
	10469 Apr 17 18:21	0° $\Upsilon$		minimum elong	10475 May 24 20:34	9° $\mathfrak{I}$ 37'54 1°43'21
retrograde	10469 Jul 07 14:48	5° $\Upsilon$ 08'14		max. Earth dist.	10475 May 25 00:48	9° $\mathfrak{I}$ 39'12 10.73829 AU
opposition	10469 Sep 13 18:58	1° $\Upsilon$ 46'57	0°11'24	morning rise	10475 Jun 10 14:55	11° $\mathfrak{I}$ 39'50
min. Earth dist.	10469 Sep 14 00:18	1° $\Upsilon$ 45'55	8.53607 AU	retrograde	10475 Sep 20 19:15	19° $\mathfrak{I}$ 02'40
	10469 Oct 07 23:21	30° $\mathfrak{R}$ $\mathfrak{H}$		opposition	10475 Nov 29 16:10	15° $\mathfrak{I}$ 41'51 -2°12'31
direct	10469 Nov 22 16:47	28° $\mathfrak{H}$ 21'32		min. Earth dist.	10475 Nov 29 11:10	15° $\mathfrak{I}$ 42'47 8.74781 AU
	10470 Jan 06 09:32	0° $\Upsilon$		direct	10476 Feb 07 12:08	12° $\mathfrak{I}$ 21'08
desc. node	10470 Jan 29 05:11	1° $\Upsilon$ 55'35		evening set	10476 May 19 07:39	19° $\mathfrak{I}$ 41'44
evening set	10470 Mar 07 06:38	6° $\Upsilon$ 02'36		conjunction	10476 Jun 05 01:29	21° $\mathfrak{I}$ 43'17 -1°51'27
conjunction	10470 Mar 24 12:19	8° $\Upsilon$ 09'49	-0°03'39	minimum elong	10476 Jun 05 01:28	21° $\mathfrak{I}$ 43'17 1°51'57
minimum elong	10470 Mar 24 12:18	8° $\Upsilon$ 09'49	0°03'41	max. Earth dist.	10476 Jun 05 07:49	21° $\mathfrak{I}$ 45'13 10.75265 AU
behind sun begin	10470 Mar 24 05:16	8° $\Upsilon$ 07'39		morning rise	10476 Jun 21 19:41	23° $\mathfrak{I}$ 45'00
behind sun end	10470 Mar 24 19:21	8° $\Upsilon$ 11'58			10476 Aug 26 02:49	0° $\mathfrak{E}$
max. Earth dist.	10470 Mar 24 06:32	8° $\Upsilon$ 08'03	10.55917 AU			

retrograde	10476 Oct 02 12:04	1°☾08'53		max. Earth dist.	10482 Aug 17 17:55	4°♊47'14	10.64265 AU
	10476 Nov 09 14:46	30°♊II		morning rise	10482 Sep 03 18:01	6°♊51'16	
opposition	10476 Dec 11 11:47	27°♊II47'47	-2°20'02	retrograde	10482 Dec 17 13:27	14°♊28'45	
min. Earth dist.	10476 Dec 11 05:37	27°♊II48'57	8.75777 AU	opposition	10483 Feb 25 07:24	11°♊04'17	-1°00'54
direct	10477 Feb 19 02:13	24°♊II27'35		min. Earth dist.	10483 Feb 25 01:09	11°♊05'30	8.62042 AU
	10477 May 16 05:44	0°☾		direct	10483 May 04 09:19	7°♊43'21	
evening set	10477 May 31 12:34	1°☾46'18		evening set	10483 Aug 12 23:34	15°♊05'47	
conjunction	10477 Jun 17 06:18	3°☾47'45	-1°55'05	conjunction	10483 Aug 30 07:11	17°♊12'34	-0°38'00
minimum elong	10477 Jun 17 06:18	3°☾47'45	1°55'36	minimum elong	10483 Aug 30 07:12	17°♊12'34	0°38'09
max. Earth dist.	10477 Jun 17 13:32	3°☾49'57	10.75782 AU	max. Earth dist.	10483 Aug 30 14:08	17°♊14'42	10.59692 AU
morning rise	10477 Jul 04 01:19	5°☾49'35		morning rise	10483 Sep 16 18:25	19°♊20'25	
retrograde	10477 Oct 15 03:27	13°☾14'54		retrograde	10483 Dec 30 16:36	27°♊00'50	
opposition	10477 Dec 24 06:46	9°☾53'25	-2°21'21	opposition	10484 Mar 09 05:28	23°♊35'44	-0°31'44
min. Earth dist.	10477 Dec 24 00:04	9°☾54'41	8.75830 AU	min. Earth dist.	10484 Mar 09 00:00	23°♊36'48	8.57289 AU
direct	10478 Mar 03 14:39	6°☾33'32		direct	10484 May 16 03:05	20°♊14'06	
evening set	10478 Jun 12 17:20	13°☾51'02		evening set	10484 Aug 24 22:09	27°♊39'47	
conjunction	10478 Jun 29 11:53	15°☾52'42	-1°53'38	conjunction	10484 Sep 11 09:00	29°♊47'59	-0°13'28
minimum elong	10478 Jun 29 11:54	15°☾52'42	1°54'08	minimum elong	10484 Sep 11 09:01	29°♊47'59	0°13'31
max. Earth dist.	10478 Jun 29 19:48	15°☾55'07	10.75356 AU	behind sun begin	10484 Sep 11 05:04	29°♊46'47	
morning rise	10478 Jul 16 08:28	17°☾54'56		behind sun end	10484 Sep 11 12:57	29°♊49'12	
retrograde	10478 Oct 27 19:52	25°☾22'07		max. Earth dist.	10484 Sep 11 15:29	29°♊49'58	10.54863 AU
opposition	10479 Jan 06 01:26	22°☾00'08	-2°16'26		10484 Sep 12 23:58	0°♊	
min. Earth dist.	10479 Jan 05 18:11	22°☾01'31	8.74914 AU	morning rise	10484 Sep 28 23:11	1°♊57'13	
direct	10479 Mar 16 04:59	18°☾40'24		retrograde	10485 Jan 11 22:38	9°♊40'30	
evening set	10479 Jun 24 22:54	25°☾57'19		opposition	10485 Mar 22 04:57	6°♊14'49	-0°00'43
conjunction	10479 Jul 11 19:06	27°☾59'31	-1°47'07	min. Earth dist.	10485 Mar 22 00:05	6°♊15'47	8.52416 AU
minimum elong	10479 Jul 11 19:08	27°☾59'32	1°47'36	asc. node	10485 Mar 30 15:15	5°♊35'19	
max. Earth dist.	10479 Jul 12 04:17	28°☾02'19	10.73965 AU	direct	10485 May 28 23:23	2°♊52'23	
morning rise	10479 Jul 28 17:45	0°♊02'26		evening set	10485 Sep 07 02:11	10°♊21'55	
	10479 Jul 28 09:36	0°♊		conjunction	10485 Sep 24 15:51	12°♊31'29	0°12'01
retrograde	10479 Nov 09 15:23	7°♊031'47		minimum elong	10485 Sep 24 15:51	12°♊31'28	0°12'06
opposition	10480 Jan 18 20:03	4°♊09'13	-2°05'25	behind sun begin	10485 Sep 24 11:00	12°♊30'00	
min. Earth dist.	10480 Jan 18 11:50	4°♊10'47	8.73021 AU	behind sun end	10485 Sep 24 20:41	12°♊32'57	
direct	10480 Mar 27 17:30	0°♊49'28		max. Earth dist.	10485 Sep 24 21:19	12°♊33'09	10.50018 AU
evening set	10480 Jul 06 06:11	8°♊06'30		morning rise	10485 Oct 12 08:24	14°♊41'58	
conjunction	10480 Jul 23 04:44	10°♊09'31	-1°35'47	retrograde	10486 Jan 25 08:21	22°♊27'49	
minimum elong	10480 Jul 23 04:46	10°♊09'32	1°36'13	opposition	10486 Apr 04 05:56	19°♊01'43	0°30'41
max. Earth dist.	10480 Jul 23 14:43	10°♊12'34	10.71611 AU	min. Earth dist.	10486 Apr 04 02:02	19°♊02'29	8.47661 AU
morning rise	10480 Aug 09 06:01	12°♊13'24		direct	10486 Jun 10 20:45	15°♊38'25	
	10480 Sep 02 16:54	15°♊		evening set	10486 Sep 20 11:31	23°♊12'15	
retrograde	10480 Nov 21 12:32	19°♊45'13		conjunction	10486 Oct 08 03:24	25°♊23'01	0°37'04
opposition	10481 Jan 30 15:00	16°♊22'01	-1°48'42	minimum elong	10486 Oct 08 03:22	25°♊23'00	0°37'15
min. Earth dist.	10481 Jan 30 06:37	16°♊23'37	8.70163 AU	max. Earth dist.	10486 Oct 08 06:49	25°♊24'04	10.45396 AU
	10481 Feb 18 00:49	15°♊II		morning rise	10486 Oct 25 21:45	27°♊34'35	
direct	10481 Apr 09 05:10	13°♊02'03			10486 Nov 15 14:24	0°♊II	
	10481 May 27 16:34	15°♊		retrograde	10487 Feb 07 19:17	5°♊22'39	
evening set	10481 Jul 18 16:09	20°♊20'03		opposition	10487 Apr 17 08:51	1°♊56'17	1°00'53
conjunction	10481 Aug 04 17:28	22°♊24'10	-1°20'03	min. Earth dist.	10487 Apr 17 06:44	1°♊56'42	8.43259 AU
minimum elong	10481 Aug 04 17:30	22°♊24'10	1°20'25		10487 May 13 06:40	30°♊♊	
max. Earth dist.	10481 Aug 05 02:48	22°♊27'01	10.68326 AU	direct	10487 Jun 23 22:01	28°♊32'04	
morning rise	10481 Aug 21 21:58	24°♊29'14			10487 Aug 03 22:57	0°♊II	
	10481 Oct 14 17:14	0°♊II		evening set	10487 Oct 04 01:43	6°♊10'26	
retrograde	10481 Dec 04 11:55	2°♊03'48		conjunction	10487 Oct 21 19:12	8°♊22'13	1°00'28
	10482 Jan 25 15:08	30°♊II		minimum elong	10487 Oct 21 19:10	8°♊22'13	1°00'45
opposition	10482 Feb 12 10:42	28°♊039'58	-1°26'55	max. Earth dist.	10487 Oct 21 19:57	8°♊22'27	10.41228 AU
min. Earth dist.	10482 Feb 12 03:07	28°♊041'26	8.66426 AU	morning rise	10487 Nov 08 14:44	10°♊34'39	
direct	10482 Apr 21 18:41	25°♊19'37			10487 Dec 18 08:05	15°♊II	
	10482 Jul 08 00:13	0°♊II		retrograde	10488 Feb 21 07:01	18°♊24'25	
evening set	10482 Jul 31 05:45	2°♊39'27		opposition	10488 Apr 29 13:31	14°♊57'57	1°28'14
conjunction	10482 Aug 17 10:06	4°♊44'50	-1°00'31		10488 Apr 29 03:16	15°♊II	
minimum elong	10482 Aug 17 10:08	4°♊44'51	1°00'47	min. Earth dist.	10488 Apr 29 13:33	14°♊57'56	8.39425 AU
				direct	10488 Jul 06 03:20	11°♊32'51	



	10488 Sep 08 20:09	15°♄		conjunction	10495 Jan 25 12:03	11°♊00'32	1°34'32
evening set	10488 Oct 16 20:32	19°♄15'44		minimum elong	10495 Jan 25 12:05	11°♊00'32	1°34'58
				max. Earth dist.	10495 Jan 25 02:15	10°♊57'27	10.37324 AU
conjunction	10488 Nov 03 15:06	21°♄28'19	1°20'55	morning rise	10495 Feb 12 00:35	13°♊11'52	
minimum elong	10488 Nov 03 15:03	21°♄28'19	1°21'17		10495 Feb 27 00:44	15°♊	
max. Earth dist.	10488 Nov 03 13:24	21°♄27'48	10.37714 AU	retrograde	10495 May 24 19:12	20°♊52'47	
morning rise	10488 Nov 21 11:02	23°♄41'20		opposition	10495 Jul 31 04:20	17°♊29'49	1°47'24
	10489 Jan 22 12:53	0°♊		min. Earth dist.	10495 Jul 31 11:34	17°♊28'23	8.39041 AU
retrograde	10489 Mar 05 20:19	1°♊32'08			10495 Sep 04 11:14	15°♊	
	10489 Apr 17 15:43	30°♋		direct	10495 Oct 08 05:35	14°♊02'42	
opposition	10489 May 12 19:38	28°♋05'44	1°51'14		10495 Nov 10 15:53	15°♊	
min. Earth dist.	10489 May 12 21:29	28°♋05'22	8.36339 AU	evening set	10496 Jan 21 14:41	21°♊56'03	
direct	10489 Jul 19 11:16	24°♋39'48					
	10489 Oct 10 02:04	0°♊		conjunction	10496 Feb 08 04:24	24°♊07'23	1°17'27
evening set	10489 Oct 30 18:54	2°♊26'56		minimum elong	10496 Feb 08 04:26	24°♊07'24	1°17'47
				max. Earth dist.	10496 Feb 07 19:14	24°♊04'31	10.40801 AU
conjunction	10489 Nov 17 14:00	4°♊40'04	1°37'15	morning rise	10496 Feb 25 14:55	26°♊17'47	
minimum elong	10489 Nov 17 13:57	4°♊40'03	1°37'42		10496 Mar 28 23:54	0°♋	
max. Earth dist.	10489 Nov 17 10:27	4°♊38'57	10.35027 AU	retrograde	10496 Jun 06 01:37	3°♋55'11	
morning rise	10489 Dec 05 09:35	6°♊53'22		opposition	10496 Aug 12 13:23	0°♋32'57	1°23'38
retrograde	10490 Mar 19 09:57	14°♊44'28		min. Earth dist.	10496 Aug 12 19:52	0°♋31'40	8.42847 AU
opposition	10490 May 26 03:19	11°♊18'17	2°08'30		10496 Aug 19 13:14	30°♋	
min. Earth dist.	10490 May 26 06:16	11°♊17'41	8.34154 AU	direct	10496 Oct 20 20:28	27°♊06'21	
direct	10490 Aug 01 22:38	7°♊51'41			10496 Dec 19 19:24	0°♋	
evening set	10490 Nov 13 19:29	15°♊42'25		evening set	10497 Feb 03 04:23	4°♋56'56	
conjunction	10490 Dec 01 14:37	17°♊55'49	1°48'30	conjunction	10497 Feb 20 16:09	7°♋07'15	0°56'31
minimum elong	10490 Dec 01 14:36	17°♊55'49	1°48'59	minimum elong	10497 Feb 20 16:11	7°♋07'16	0°56'45
max. Earth dist.	10490 Dec 01 09:54	17°♊54'20	10.33310 AU	max. Earth dist.	10497 Feb 20 08:15	7°♋04'47	10.44955 AU
morning rise	10490 Dec 19 09:16	20°♊09'10		morning rise	10497 Mar 10 00:25	9°♋16'34	
retrograde	10491 Apr 01 23:45	27°♊59'45		retrograde	10497 Jun 19 04:54	16°♋50'26	
opposition	10491 Jun 08 12:14	24°♊33'58	2°18'59	opposition	10497 Aug 25 21:15	13°♋28'50	0°55'51
min. Earth dist.	10491 Jun 08 16:05	24°♊33'11	8.32986 AU	min. Earth dist.	10497 Aug 26 02:56	13°♋27'44	8.47234 AU
direct	10491 Aug 15 12:07	21°♊06'51		direct	10497 Nov 03 09:46	10°♋02'53	
evening set	10491 Nov 27 21:23	29°♊00'20		evening set	10498 Feb 16 13:25	17°♋50'00	
	10491 Dec 05 21:24	0°♋					
				conjunction	10498 Mar 05 22:54	19°♋59'08	0°32'55
conjunction	10491 Dec 15 16:06	1°♋13'47	1°54'00	minimum elong	10498 Mar 05 22:56	19°♋59'08	0°33'04
minimum elong	10491 Dec 15 16:06	1°♋13'47	1°54'30	max. Earth dist.	10498 Mar 05 16:14	19°♋57'03	10.49574 AU
max. Earth dist.	10491 Dec 15 09:54	1°♋11'50	10.32667 AU	morning rise	10498 Mar 23 04:52	22°♋07'15	
morning rise	10492 Jan 02 09:29	3°♋26'55		retrograde	10498 Jul 02 04:42	29°♋37'47	
retrograde	10492 Apr 14 13:46	11°♋16'06		opposition	10498 Sep 08 03:37	26°♋16'45	0°25'34
opposition	10492 Jun 20 21:56	7°♋50'53	2°22'04	min. Earth dist.	10498 Sep 08 08:55	26°♋15'43	8.51976 AU
min. Earth dist.	10492 Jun 21 03:08	7°♋49'51	8.32908 AU	direct	10498 Nov 16 21:18	22°♋51'30	
direct	10492 Aug 28 02:05	4°♋23'26			10499 Feb 24 22:37	0°♌	
evening set	10492 Dec 10 23:09	12°♋18'38		evening set	10499 Mar 01 17:36	0°♌34'40	
conjunction	10492 Dec 28 17:02	14°♋31'54	1°53'24	conjunction	10499 Mar 19 00:30	2°♌42'29	0°07'57
minimum elong	10492 Dec 28 17:02	14°♋31'54	1°53'54	minimum elong	10499 Mar 19 00:30	2°♌42'29	0°07'59
max. Earth dist.	10492 Dec 28 09:09	14°♋29'25	10.33145 AU	behind sun begin	10499 Mar 18 18:07	2°♌40'32	
morning rise	10493 Jan 15 08:56	16°♋44'37		behind sun end	10499 Mar 19 06:52	2°♌44'27	
retrograde	10493 Apr 28 02:45	24°♋31'37		max. Earth dist.	10499 Mar 18 18:22	2°♌40'37	10.54403 AU
opposition	10493 Jul 04 08:15	21°♋07'07	2°17'33	morning rise	10499 Apr 05 04:13	4°♌49'24	
min. Earth dist.	10493 Jul 04 14:48	21°♋05'48	8.33932 AU	retrograde	10499 Jul 15 02:19	12°♌16'57	
direct	10493 Sep 10 18:13	17°♋39'32		desc. node	10499 Jul 15 20:26	12°♌16'56	
evening set	10493 Dec 24 23:17	25°♋35'18		opposition	10499 Sep 21 08:17	8°♌56'21	-0°05'37
				min. Earth dist.	10499 Sep 21 13:00	8°♌55'26	8.56796 AU
conjunction	10494 Jan 11 15:58	27°♋48'07	1°46'47	direct	10499 Nov 30 05:57	5°♌31'51	
minimum elong	10494 Jan 11 15:59	27°♋48'08	1°47'15	evening set	10500 Mar 14 17:04	13°♌10'51	
max. Earth dist.	10494 Jan 11 06:43	27°♋45'13	10.34723 AU				
morning rise	10494 Jan 29 06:14	0°♌00'15		conjunction	10500 Mar 31 21:11	15°♌17'21	-0°17'16
	10494 Jan 29 05:27	0°♌		minimum elong	10500 Mar 31 21:11	15°♌17'21	0°17'21
retrograde	10494 May 11 12:05	7°♌44'26		max. Earth dist.	10500 Mar 31 15:50	15°♌15'42	10.59138 AU
opposition	10494 Jul 17 18:36	4°♌20'41	2°05'45	morning rise	10500 Apr 17 22:37	17°♌23'02	
min. Earth dist.	10494 Jul 18 01:59	4°♌19'13	8.36012 AU	retrograde	10500 Jul 27 20:40	24°♌48'13	
direct	10494 Sep 24 12:10	0°♌53'14		opposition	10500 Oct 04 11:04	21°♌27'52	-0°36'11
evening set	10495 Jan 07 20:46	8°♌48'22		min. Earth dist.	10500 Oct 04 14:36	21°♌27'12	8.61375 AU

direct	10500 Dec 13 11:32	18° $\Upsilon$ 04'09		min. Earth dist.	10506 Dec 19 18:47	4° $\mathfrak{E}$ 51'13	8.73882 AU
evening set	10501 Mar 27 11:59	25° $\Upsilon$ 39'05		direct	10507 Feb 27 12:31	1° $\mathfrak{E}$ 29'38	
				evening set	10507 Jun 08 17:59	8° $\mathfrak{E}$ 48'35	
conjunction	10501 Apr 13 13:28	27° $\Upsilon$ 44'19	-0°41'21	conjunction	10507 Jun 25 12:21	10° $\mathfrak{E}$ 50'25	-1°54'51
minimum elong	10501 Apr 13 13:27	27° $\Upsilon$ 44'18	0°41'33	minimum elong	10507 Jun 25 12:21	10° $\mathfrak{E}$ 50'25	1°55'21
max. Earth dist.	10501 Apr 13 09:41	27° $\Upsilon$ 43'09	10.63468 AU	max. Earth dist.	10507 Jun 25 19:41	10° $\mathfrak{E}$ 52'39	10.73373 AU
morning rise	10501 Apr 30 12:40	29° $\Upsilon$ 48'52		morning rise	10507 Jul 12 08:07	12° $\mathfrak{E}$ 52'41	
	10501 May 02 01:40	0° $\mathfrak{B}$		retrograde	10507 Oct 23 16:21	20° $\mathfrak{E}$ 20'02	
retrograde	10501 Aug 09 13:57	7° $\mathfrak{B}$ 12'29		opposition	10508 Jan 01 19:59	16° $\mathfrak{E}$ 57'41	-2°19'23
opposition	10501 Oct 17 12:16	3° $\mathfrak{B}$ 52'16	-1°04'45	min. Earth dist.	10508 Jan 01 13:02	16° $\mathfrak{E}$ 59'01	8.72920 AU
min. Earth dist.	10501 Oct 17 13:58	3° $\mathfrak{B}$ 51'56	8.65425 AU	direct	10508 Mar 11 02:22	13° $\mathfrak{E}$ 37'17	
direct	10501 Dec 26 14:52	0° $\mathfrak{B}$ 29'20		evening set	10508 Jun 19 23:40	20° $\mathfrak{E}$ 55'27	
evening set	10502 Apr 09 02:51	8° $\mathfrak{B}$ 00'30					
conjunction	10502 Apr 26 01:58	10° $\mathfrak{B}$ 04'36	-1°03'20	conjunction	10508 Jul 06 19:13	22° $\mathfrak{E}$ 57'43	-1°50'32
minimum elong	10502 Apr 26 01:56	10° $\mathfrak{B}$ 04'36	1°03'39	minimum elong	10508 Jul 06 19:14	22° $\mathfrak{E}$ 57'44	1°51'02
max. Earth dist.	10502 Apr 26 00:28	10° $\mathfrak{B}$ 04'09	10.67152 AU	max. Earth dist.	10508 Jul 07 03:24	23° $\mathfrak{E}$ 00'13	10.71980 AU
morning rise	10502 May 12 23:07	12° $\mathfrak{B}$ 08'11		morning rise	10508 Jul 23 16:56	25° $\mathfrak{E}$ 00'37	
	10502 Jun 07 01:15	15° $\mathfrak{B}$			10508 Sep 09 06:02	0° $\mathfrak{Q}$	
retrograde	10502 Aug 22 07:40	19° $\mathfrak{B}$ 31'01		retrograde	10508 Nov 04 11:32	2° $\mathfrak{Q}$ 30'09	
opposition	10502 Oct 30 12:02	16° $\mathfrak{B}$ 10'47	-1°30'06		10509 Jan 01 23:09	30° $\mathfrak{R}$ $\mathfrak{E}$	
min. Earth dist.	10502 Oct 30 12:09	16° $\mathfrak{B}$ 10'46	8.68768 AU	opposition	10509 Jan 13 15:29	29° $\mathfrak{E}$ 07'10	-2°10'59
	10502 Nov 15 08:55	15° $\mathfrak{R}$ $\mathfrak{B}$		min. Earth dist.	10509 Jan 13 08:13	29° $\mathfrak{E}$ 08'33	8.71091 AU
direct	10503 Jan 08 13:45	12° $\mathfrak{B}$ 48'37		direct	10509 Mar 23 14:27	25° $\mathfrak{E}$ 46'43	
	10503 Mar 01 17:30	15° $\mathfrak{B}$			10509 Jun 04 23:05	0° $\mathfrak{Q}$	
evening set	10503 Apr 21 14:42	20° $\mathfrak{B}$ 16'25		evening set	10509 Jul 02 06:49	3° $\mathfrak{Q}$ 04'50	
conjunction	10503 May 08 11:36	22° $\mathfrak{B}$ 19'33	-1°22'17	conjunction	10509 Jul 19 04:18	5° $\mathfrak{Q}$ 07'49	-1°41'15
minimum elong	10503 May 08 11:34	22° $\mathfrak{B}$ 19'33	1°22'41	minimum elong	10509 Jul 19 04:20	5° $\mathfrak{Q}$ 07'50	1°41'43
max. Earth dist.	10503 May 08 11:43	22° $\mathfrak{B}$ 19'36	10.70083 AU	max. Earth dist.	10509 Jul 19 12:35	5° $\mathfrak{Q}$ 10'21	10.69765 AU
morning rise	10503 May 25 07:10	24° $\mathfrak{B}$ 22'22		morning rise	10509 Aug 05 04:39	7° $\mathfrak{Q}$ 11'38	
	10503 Jul 19 21:55	0° $\mathfrak{I}$		retrograde	10509 Nov 17 07:00	14° $\mathfrak{Q}$ 43'36	
retrograde	10503 Sep 03 23:44	1° $\mathfrak{I}$ 45'01		opposition	10510 Jan 26 10:59	11° $\mathfrak{Q}$ 19'58	-1°56'39
	10503 Oct 21 13:43	30° $\mathfrak{R}$ $\mathfrak{B}$		min. Earth dist.	10510 Jan 26 03:43	11° $\mathfrak{Q}$ 21'21	8.68467 AU
opposition	10503 Nov 12 10:33	28° $\mathfrak{B}$ 24'40	-1°51'10	direct	10510 Apr 05 03:44	7° $\mathfrak{Q}$ 59'21	
min. Earth dist.	10503 Nov 12 09:38	28° $\mathfrak{B}$ 24'50	8.71336 AU		10510 Jul 12 03:12	15° $\mathfrak{Q}$	
direct	10504 Jan 21 09:12	25° $\mathfrak{B}$ 03'06		evening set	10510 Jul 14 16:10	15° $\mathfrak{Q}$ 18'11	
	10504 Apr 11 11:46	0° $\mathfrak{I}$					
evening set	10504 May 02 23:54	2° $\mathfrak{I}$ 27'58		conjunction	10510 Jul 31 16:19	17° $\mathfrak{Q}$ 22'10	-1°27'19
conjunction	10504 May 19 19:00	4° $\mathfrak{I}$ 30'21	-1°37'25	minimum elong	10510 Jul 31 16:22	17° $\mathfrak{Q}$ 22'11	1°27'43
minimum elong	10504 May 19 18:58	4° $\mathfrak{I}$ 30'20	1°37'53	max. Earth dist.	10510 Aug 01 01:17	17° $\mathfrak{Q}$ 24'55	10.66806 AU
max. Earth dist.	10504 May 19 20:18	4° $\mathfrak{I}$ 30'45	10.72215 AU	morning rise	10510 Aug 17 19:40	19° $\mathfrak{Q}$ 27'05	
morning rise	10504 Jun 05 13:40	6° $\mathfrak{I}$ 32'36		retrograde	10510 Nov 30 05:30	27° $\mathfrak{Q}$ 01'45	
retrograde	10504 Sep 15 14:19	13° $\mathfrak{I}$ 55'43		opposition	10511 Feb 08 07:05	23° $\mathfrak{Q}$ 37'28	-1°36'54
opposition	10504 Nov 24 08:10	10° $\mathfrak{I}$ 35'02	-2°07'09	min. Earth dist.	10511 Feb 07 23:22	23° $\mathfrak{Q}$ 38'57	8.65145 AU
min. Earth dist.	10504 Nov 24 06:08	10° $\mathfrak{I}$ 35'26	8.73076 AU	direct	10511 Apr 17 18:50	20° $\mathfrak{Q}$ 16'34	
direct	10505 Feb 02 04:45	7° $\mathfrak{I}$ 13'57		evening set	10511 Jul 27 04:36	27° $\mathfrak{Q}$ 36'49	
evening set	10505 May 15 06:52	14° $\mathfrak{I}$ 36'18		conjunction	10511 Aug 13 07:50	29° $\mathfrak{Q}$ 42'01	-1°09'17
conjunction	10505 Jun 01 00:54	16° $\mathfrak{I}$ 38'11	-1°48'09	minimum elong	10511 Aug 13 07:52	29° $\mathfrak{Q}$ 42'01	1°09'36
minimum elong	10505 Jun 01 00:53	16° $\mathfrak{I}$ 38'11	1°48'39	max. Earth dist.	10511 Aug 13 17:34	29° $\mathfrak{Q}$ 44'59	10.63217 AU
max. Earth dist.	10505 Jun 01 03:47	16° $\mathfrak{I}$ 39'04	10.73498 AU		10511 Aug 15 18:29	0° $\mathfrak{P}$	
morning rise	10505 Jun 17 19:19	18° $\mathfrak{I}$ 40'10		morning rise	10511 Aug 30 14:21	1° $\mathfrak{P}$ 48'12	
retrograde	10505 Sep 28 06:00	26° $\mathfrak{I}$ 04'15		retrograde	10511 Dec 13 07:41	9° $\mathfrak{P}$ 25'42	
opposition	10505 Dec 07 04:47	22° $\mathfrak{I}$ 43'06	-2°17'24	opposition	10512 Feb 21 04:05	6° $\mathfrak{P}$ 00'49	-1°12'29
min. Earth dist.	10505 Dec 07 01:03	22° $\mathfrak{I}$ 43'48	8.73936 AU	min. Earth dist.	10512 Feb 20 19:58	6° $\mathfrak{P}$ 02'24	8.61272 AU
direct	10506 Feb 14 21:47	19° $\mathfrak{I}$ 22'21		direct	10512 Apr 29 08:49	2° $\mathfrak{P}$ 39'33	
evening set	10506 May 27 12:38	26° $\mathfrak{I}$ 42'41		evening set	10512 Aug 07 21:10	10° $\mathfrak{P}$ 01'57	
conjunction	10506 Jun 13 06:29	28° $\mathfrak{I}$ 44'24	-1°54'02	conjunction	10512 Aug 25 03:36	12° $\mathfrak{P}$ 08'28	-0°47'53
minimum elong	10506 Jun 13 06:28	28° $\mathfrak{I}$ 44'24	1°54'33	minimum elong	10512 Aug 25 03:38	12° $\mathfrak{P}$ 08'28	0°48'06
max. Earth dist.	10506 Jun 13 11:49	28° $\mathfrak{I}$ 46'02	10.73888 AU	max. Earth dist.	10512 Aug 25 13:08	12° $\mathfrak{P}$ 11'24	10.59167 AU
	10506 Jun 23 14:55	0° $\mathfrak{E}$		morning rise	10512 Sep 11 13:25	14° $\mathfrak{P}$ 16'01	
morning rise	10506 Jun 30 01:12	0° $\mathfrak{E}$ 46'23		retrograde	10512 Dec 25 11:27	21° $\mathfrak{P}$ 56'23	
retrograde	10506 Oct 10 22:07	8° $\mathfrak{E}$ 11'53		opposition	10513 Mar 05 02:11	18° $\mathfrak{P}$ 30'59	-0°44'26
opposition	10506 Dec 20 00:29	4° $\mathfrak{E}$ 50'09	-2°21'32	min. Earth dist.	10513 Mar 04 18:35	18° $\mathfrak{P}$ 32'28	8.57039 AU
				direct	10513 May 12 01:06	15° $\mathfrak{P}$ 09'13	

evening set	10513 Aug 20 18:28	22° $\mathring{\text{M}}$ 34'31	retrograde	10519 Mar 15 06:10	9° $\text{X}$ 33'13	
			opposition	10519 May 22 00:14	6° $\text{X}$ 07'24	2°01'54
conjunction	10513 Sep 07 04:01	24° $\mathring{\text{M}}$ 42'25 -0°24'02	min. Earth dist.	10519 May 22 01:37	6° $\text{X}$ 07'08	8.35876 AU
minimum elong	10513 Sep 07 04:02	24° $\mathring{\text{M}}$ 42'25 0°24'07	direct	10519 Jul 28 16:04	2° $\text{X}$ 41'36	
max. Earth dist.	10513 Sep 07 11:59	24° $\mathring{\text{M}}$ 44'52 10.54853 AU	evening set	10519 Nov 09 09:15	10° $\text{X}$ 30'47	
morning rise	10513 Sep 24 17:03	26° $\mathring{\text{M}}$ 51'21				
	10513 Oct 22 06:19	0° $\underline{\text{A}}$	conjunction	10519 Nov 27 04:16	12° $\text{X}$ 44'00	1°44'21
retrograde	10514 Jan 07 17:37	4° $\underline{\text{A}}$ 34'29	minimum elong	10519 Nov 27 04:14	12° $\text{X}$ 44'00	1°44'50
opposition	10514 Mar 18 01:49	1° $\underline{\text{A}}$ 08'41 -0°13'57	max. Earth dist.	10519 Nov 27 00:19	12° $\text{X}$ 42'46	10.35005 AU
min. Earth dist.	10514 Mar 17 19:40	1° $\underline{\text{A}}$ 09'54 8.52655 AU	morning rise	10519 Dec 14 23:19	14° $\text{X}$ 57'16	
	10514 Apr 01 22:41	30° $\mathring{\text{R}}$ $\mathring{\text{M}}$	retrograde	10520 Mar 27 19:27	22° $\text{X}$ 47'57	
direct	10514 May 24 20:12	27° $\mathring{\text{M}}$ 46'19	opposition	10520 Jun 03 08:56	19° $\text{X}$ 22'31	2°15'16
	10514 Jul 15 01:32	0° $\underline{\text{A}}$	min. Earth dist.	10520 Jun 03 12:51	19° $\text{X}$ 21'44	8.34562 AU
asc. node	10514 Sep 01 20:13	5° $\underline{\text{A}}$ 07'42	direct	10520 Aug 10 05:40	15° $\text{X}$ 56'07	
evening set	10514 Sep 02 20:51	5° $\underline{\text{A}}$ 15'09	evening set	10520 Nov 22 11:05	23° $\text{X}$ 48'18	
conjunction	10514 Sep 20 09:15	7° $\underline{\text{A}}$ 24'23 0°01'17	conjunction	10520 Dec 10 05:48	26° $\text{X}$ 01'37	1°52'15
minimum elong	10514 Sep 20 09:15	7° $\underline{\text{A}}$ 24'23 0°01'19	minimum elong	10520 Dec 10 05:47	26° $\text{X}$ 01'37	1°52'46
behind sun begin	10514 Sep 20 02:02	7° $\underline{\text{A}}$ 22'10	max. Earth dist.	10520 Dec 09 23:00	25° $\text{X}$ 59'29	10.34063 AU
behind sun end	10514 Sep 20 16:27	7° $\underline{\text{A}}$ 26'35	morning rise	10520 Dec 27 23:49	28° $\text{X}$ 14'45	
max. Earth dist.	10514 Sep 20 15:35	7° $\underline{\text{A}}$ 26'19 10.50485 AU		10521 Jan 11 13:41	0° $\text{Z}$	
morning rise	10514 Oct 08 01:01	9° $\underline{\text{A}}$ 34'36	retrograde	10521 Apr 10 08:36	6° $\text{Z}$ 04'18	
retrograde	10515 Jan 21 02:32	17° $\underline{\text{A}}$ 20'20	opposition	10521 Jun 16 18:24	2° $\text{Z}$ 39'23	2°21'25
opposition	10515 Mar 31 03:02	13° $\underline{\text{A}}$ 54'17 0°17'32	min. Earth dist.	10521 Jun 16 23:59	2° $\text{Z}$ 38'16	8.34049 AU
min. Earth dist.	10515 Mar 30 22:19	13° $\underline{\text{A}}$ 55'13 8.48346 AU		10521 Jul 24 15:50	30° $\mathring{\text{R}}$ $\text{X}$	
direct	10515 Jun 06 17:40	10° $\underline{\text{A}}$ 31'16	direct	10521 Aug 23 20:43	29° $\text{X}$ 12'33	
evening set	10515 Sep 16 04:34	18° $\underline{\text{A}}$ 04'06		10521 Sep 22 21:10	0° $\text{Z}$	
			evening set	10521 Dec 06 13:08	7° $\text{Z}$ 06'54	
conjunction	10515 Oct 03 19:32	20° $\underline{\text{A}}$ 14'34 0°26'39	conjunction	10521 Dec 24 07:15	9° $\text{Z}$ 20'08	1°54'10
minimum elong	10515 Oct 03 19:30	20° $\underline{\text{A}}$ 14'33 0°26'48	minimum elong	10521 Dec 24 07:16	9° $\text{Z}$ 20'08	1°54'41
max. Earth dist.	10515 Oct 04 00:34	20° $\underline{\text{A}}$ 16'07 10.46296 AU	max. Earth dist.	10521 Dec 23 22:57	9° $\text{Z}$ 17'31	10.33985 AU
morning rise	10515 Oct 21 13:23	22° $\underline{\text{A}}$ 25'54	morning rise	10522 Jan 10 23:52	11° $\text{Z}$ 32'57	
	10516 Jan 18 05:12	0° $\mathring{\text{M}}$	retrograde	10522 Apr 23 21:49	19° $\text{Z}$ 20'43	
retrograde	10516 Feb 03 12:17	0° $\mathring{\text{M}}$ 13'55	opposition	10522 Jun 30 04:37	15° $\text{Z}$ 56'22	2°20'01
	10516 Feb 19 21:17	30° $\mathring{\text{R}}$ $\underline{\text{A}}$	min. Earth dist.	10522 Jun 30 10:57	15° $\text{Z}$ 55'06	8.34446 AU
opposition	10516 Apr 12 05:54	26° $\underline{\text{A}}$ 47'42 0°48'27	direct	10522 Sep 06 12:40	12° $\text{Z}$ 29'16	
min. Earth dist.	10516 Apr 12 02:19	26° $\underline{\text{A}}$ 48'25 8.44343 AU	evening set	10522 Dec 20 14:02	20° $\text{Z}$ 24'41	
direct	10516 Jun 18 19:30	23° $\underline{\text{A}}$ 24'01				
	10516 Sep 20 06:24	0° $\mathring{\text{M}}$	conjunction	10523 Jan 07 07:18	22° $\text{Z}$ 37'38	1°50'00
evening set	10516 Sep 28 17:32	1° $\mathring{\text{M}}$ 01'10	minimum elong	10523 Jan 07 07:19	22° $\text{Z}$ 37'38	1°50'29
			max. Earth dist.	10523 Jan 06 22:22	22° $\text{Z}$ 34'49	10.34881 AU
conjunction	10516 Oct 16 10:32	3° $\mathring{\text{M}}$ 12'41 0°50'55	morning rise	10523 Jan 24 22:15	24° $\text{Z}$ 49'56	
minimum elong	10516 Oct 16 10:30	3° $\mathring{\text{M}}$ 12'40 0°51'11		10523 Mar 13 07:47	0° $\approx$	
max. Earth dist.	10516 Oct 16 14:30	3° $\mathring{\text{M}}$ 13'55 10.42494 AU	retrograde	10523 May 07 09:05	2° $\approx$ 35'13	
morning rise	10516 Nov 03 05:41	5° $\mathring{\text{M}}$ 24'54		10523 Jul 03 09:46	30° $\mathring{\text{R}}$ $\text{Z}$	
retrograde	10517 Feb 16 00:36	13° $\mathring{\text{M}}$ 14'41	opposition	10523 Jul 13 15:03	29° $\text{Z}$ 11'28	2°11'10
opposition	10517 Apr 25 10:28	9° $\mathring{\text{M}}$ 48'27 1°17'12	min. Earth dist.	10523 Jul 13 21:50	29° $\text{Z}$ 10'07	8.35822 AU
min. Earth dist.	10517 Apr 25 07:52	9° $\mathring{\text{M}}$ 48'59 8.40831 AU	direct	10523 Sep 20 05:49	25° $\text{Z}$ 44'16	
direct	10517 Jul 01 23:55	6° $\mathring{\text{M}}$ 24'05		10523 Dec 02 18:02	0° $\approx$	
evening set	10517 Oct 12 11:22	14° $\mathring{\text{M}}$ 05'33	evening set	10524 Jan 03 12:57	3° $\approx$ 39'33	
	10517 Oct 19 19:56	15° $\mathring{\text{M}}$				
conjunction	10517 Oct 30 05:40	16° $\mathring{\text{M}}$ 17'54 1°12'45	conjunction	10524 Jan 21 05:01	5° $\approx$ 51'59	1°40'00
minimum elong	10517 Oct 30 05:37	16° $\mathring{\text{M}}$ 17'53 1°13'06	minimum elong	10524 Jan 21 05:04	5° $\approx$ 52'00	1°40'27
max. Earth dist.	10517 Oct 30 07:40	16° $\mathring{\text{M}}$ 18'32 10.39257 AU	max. Earth dist.	10524 Jan 20 19:44	5° $\approx$ 49'04	10.36766 AU
morning rise	10517 Nov 17 01:19	18° $\mathring{\text{M}}$ 30'44	morning rise	10524 Feb 07 18:10	8° $\approx$ 03'35	
retrograde	10518 Mar 01 15:26	26° $\mathring{\text{M}}$ 21'35		10524 Apr 20 14:01	15° $\approx$	
opposition	10518 May 08 16:36	22° $\mathring{\text{M}}$ 55'31 1°42'10	retrograde	10524 May 19 18:18	15° $\approx$ 45'46	
min. Earth dist.	10518 May 08 15:43	22° $\mathring{\text{M}}$ 55'41 8.37972 AU		10524 Jun 18 05:17	15° $\mathring{\text{R}}$ $\approx$	
direct	10518 Jul 15 05:43	19° $\mathring{\text{M}}$ 30'25	opposition	10524 Jul 26 01:07	12° $\approx$ 22'39	1°55'25
evening set	10518 Oct 26 09:02	27° $\mathring{\text{M}}$ 16'00	min. Earth dist.	10524 Jul 26 08:34	12° $\approx$ 21'10	8.38148 AU
			direct	10524 Oct 02 22:30	8° $\approx$ 55'31	
				10525 Jan 01 02:38	15° $\approx$	
conjunction	10518 Nov 13 03:56	29° $\mathring{\text{M}}$ 28'54 1°30'55	evening set	10525 Jan 16 08:37	16° $\approx$ 49'32	
minimum elong	10518 Nov 13 03:53	29° $\mathring{\text{M}}$ 28'53 1°31'20				
max. Earth dist.	10518 Nov 13 03:14	29° $\mathring{\text{M}}$ 28'41 10.36737 AU	conjunction	10525 Feb 02 23:05	19° $\approx$ 01'12	1°24'49
	10518 Nov 17 07:08	0° $\text{X}$	minimum elong	10525 Feb 02 23:08	19° $\approx$ 01'13	1°25'12
morning rise	10518 Nov 30 23:31	1° $\text{X}$ 42'04				

max. Earth dist.	10525 Feb 02 13:17	18° $\approx$ 58'08	10.39564 AU	minimum elong	10531 Apr 21 06:11	5° $\mathcal{B}$ 13'00	0°54'51
morning rise	10525 Feb 20 10:21	21° $\approx$ 11'58		max. Earth dist.	10531 Apr 21 03:57	5° $\mathcal{B}$ 12'19	10.65089 AU
retrograde	10525 Jun 02 01:16	28° $\approx$ 50'41		morning rise	10531 May 08 04:18	7° $\mathcal{B}$ 16'59	
opposition	10525 Aug 08 10:36	25° $\approx$ 28'10	1°33'46	retrograde	10531 Aug 17 08:15	14° $\mathcal{B}$ 39'48	
min. Earth dist.	10525 Aug 08 18:33	25° $\approx$ 26'35	8.41319 AU	opposition	10531 Oct 25 10:54	11° $\mathcal{B}$ 19'13	-1°20'04
direct	10525 Oct 16 14:11	22° $\approx$ 01'16		min. Earth dist.	10531 Oct 25 11:48	11° $\mathcal{B}$ 19'03	8.67054 AU
evening set	10526 Jan 29 23:58	29° $\approx$ 52'55		direct	10532 Jan 03 13:19	7° $\mathcal{B}$ 56'20	
	10526 Jan 30 23:04	0° $\mathcal{H}$			10532 Apr 12 05:56	15° $\mathcal{B}$	
				evening set	10532 Apr 15 18:36	15° $\mathcal{B}$ 25'15	
conjunction	10526 Feb 16 12:30	2° $\mathcal{H}$ 03'39	1°05'22	conjunction	10532 May 02 16:16	17° $\mathcal{B}$ 28'43	-1°14'50
minimum elong	10526 Feb 16 12:33	2° $\mathcal{H}$ 03'40	1°05'39	minimum elong	10532 May 02 16:14	17° $\mathcal{B}$ 28'42	1°15'12
max. Earth dist.	10526 Feb 16 02:35	2° $\mathcal{H}$ 00'33	10.43131 AU	max. Earth dist.	10532 May 02 15:55	17° $\mathcal{B}$ 28'36	10.68789 AU
morning rise	10526 Mar 05 21:49	4° $\mathcal{H}$ 13'26		morning rise	10532 May 19 12:36	19° $\mathcal{B}$ 31'47	
retrograde	10526 Jun 15 03:56	11° $\mathcal{H}$ 48'36		retrograde	10532 Aug 28 23:05	26° $\mathcal{B}$ 53'58	
opposition	10526 Aug 21 18:51	8° $\mathcal{H}$ 26'35	1°07'30	opposition	10532 Nov 06 09:15	23° $\mathcal{B}$ 33'23	-1°42'57
min. Earth dist.	10526 Aug 22 02:27	8° $\mathcal{H}$ 25'06	8.45170 AU	min. Earth dist.	10532 Nov 06 07:53	23° $\mathcal{B}$ 33'38	8.70466 AU
direct	10526 Oct 30 05:32	5° $\mathcal{H}$ 00'06		direct	10533 Jan 15 10:34	20° $\mathcal{B}$ 11'19	
evening set	10527 Feb 12 10:43	12° $\mathcal{H}$ 48'35		evening set	10533 Apr 28 03:58	27° $\mathcal{B}$ 36'52	
conjunction	10527 Mar 01 21:08	14° $\mathcal{H}$ 58'13	0°42'45	conjunction	10533 May 14 23:49	29° $\mathcal{B}$ 39'26	-1°31'35
minimum elong	10527 Mar 01 21:10	14° $\mathcal{H}$ 58'14	0°42'56	minimum elong	10533 May 14 23:47	29° $\mathcal{B}$ 39'25	1°32'01
max. Earth dist.	10527 Mar 01 12:00	14° $\mathcal{H}$ 55'22	10.47272 AU	max. Earth dist.	10533 May 15 02:13	29° $\mathcal{B}$ 40'10	10.71819 AU
morning rise	10527 Mar 19 04:19	17° $\mathcal{H}$ 06'53			10533 May 17 19:05	0° $\mathcal{I}$	
retrograde	10527 Jun 28 03:42	24° $\mathcal{H}$ 38'37		morning rise	10533 May 31 18:46	1° $\mathcal{I}$ 41'46	
opposition	10527 Sep 04 01:21	21° $\mathcal{H}$ 17'03	0°38'06	retrograde	10533 Sep 10 14:06	9° $\mathcal{I}$ 03'59	
min. Earth dist.	10527 Sep 04 07:46	21° $\mathcal{H}$ 15'48	8.49489 AU	opposition	10533 Nov 19 06:17	5° $\mathcal{I}$ 43'17	-2°01'03
direct	10527 Nov 12 19:01	17° $\mathcal{H}$ 51'06		min. Earth dist.	10533 Nov 19 02:46	5° $\mathcal{I}$ 43'57	8.73140 AU
evening set	10528 Feb 25 16:36	25° $\mathcal{H}$ 35'52		direct	10534 Jan 28 05:48	2° $\mathcal{I}$ 21'57	
				evening set	10534 May 10 10:59	9° $\mathcal{I}$ 44'36	
conjunction	10528 Mar 14 00:41	27° $\mathcal{H}$ 44'17	0°18'13	conjunction	10534 May 27 05:30	11° $\mathcal{I}$ 46'31	-1°44'09
minimum elong	10528 Mar 14 00:41	27° $\mathcal{H}$ 44'17	0°18'18	minimum elong	10534 May 27 05:28	11° $\mathcal{I}$ 46'30	1°44'39
max. Earth dist.	10528 Mar 13 17:24	27° $\mathcal{H}$ 42'02	10.51760 AU	max. Earth dist.	10534 May 27 10:11	11° $\mathcal{I}$ 47'56	10.74048 AU
morning rise	10528 Mar 31 05:29	29° $\mathcal{H}$ 51'44		morning rise	10534 Jun 12 23:45	13° $\mathcal{I}$ 48'23	
	10528 Apr 01 08:43	0° $\mathcal{Y}$		retrograde	10534 Sep 23 06:12	21° $\mathcal{I}$ 11'09	
retrograde	10528 Jul 10 02:40	7° $\mathcal{Y}$ 20'24		opposition	10534 Dec 02 02:21	17° $\mathcal{I}$ 50'16	-2°13'41
opposition	10528 Sep 16 06:22	3° $\mathcal{Y}$ 59'11	0°07'09	min. Earth dist.	10534 Dec 01 21:26	17° $\mathcal{I}$ 51'12	8.74956 AU
min. Earth dist.	10528 Sep 16 11:02	3° $\mathcal{Y}$ 58'17	8.54053 AU	direct	10535 Feb 09 21:04	14° $\mathcal{I}$ 29'33	
direct	10528 Nov 25 04:07	0° $\mathcal{Y}$ 33'55		evening set	10535 May 22 16:30	21° $\mathcal{I}$ 49'50	
desc. node	10528 Dec 11 04:13	0° $\mathcal{Y}$ 46'59					
evening set	10529 Mar 09 17:31	8° $\mathcal{Y}$ 14'37					
conjunction	10529 Mar 26 23:01	10° $\mathcal{Y}$ 21'44	-0°07'03	conjunction	10535 Jun 08 10:14	23° $\mathcal{I}$ 51'21	-1°52'04
minimum elong	10529 Mar 26 23:01	10° $\mathcal{Y}$ 21'44	0°07'06	minimum elong	10535 Jun 08 10:13	23° $\mathcal{I}$ 51'21	1°52'35
behind sun begin	10529 Mar 26 16:27	10° $\mathcal{Y}$ 19'43		max. Earth dist.	10535 Jun 08 16:01	23° $\mathcal{I}$ 53'07	10.75388 AU
behind sun end	10529 Mar 27 05:35	10° $\mathcal{Y}$ 23'45		morning rise	10535 Jun 25 04:34	25° $\mathcal{I}$ 53'04	
max. Earth dist.	10529 Mar 26 18:02	10° $\mathcal{Y}$ 20'13	10.56366 AU		10535 Aug 02 01:35	0° $\mathcal{E}$	
morning rise	10529 Apr 13 01:21	12° $\mathcal{Y}$ 27'58		retrograde	10535 Oct 05 20:44	3° $\mathcal{E}$ 16'54	
retrograde	10529 Jul 22 23:01	19° $\mathcal{Y}$ 54'05			10535 Dec 13 23:06	30° $\mathcal{R}$ $\mathcal{I}$	
opposition	10529 Sep 29 09:39	16° $\mathcal{Y}$ 33'08	-0°23'49	opposition	10535 Dec 14 21:42	29° $\mathcal{I}$ 55'43	-2°20'21
min. Earth dist.	10529 Sep 29 13:01	16° $\mathcal{Y}$ 32'30	8.58644 AU	min. Earth dist.	10535 Dec 14 16:08	29° $\mathcal{I}$ 56'47	8.75851 AU
direct	10529 Dec 08 09:13	13° $\mathcal{Y}$ 08'39		direct	10536 Feb 22 11:02	26° $\mathcal{I}$ 35'29	
evening set	10530 Mar 22 13:56	20° $\mathcal{Y}$ 45'13			10536 Apr 28 05:04	0° $\mathcal{E}$	
				evening set	10536 Jun 02 21:12	3° $\mathcal{E}$ 54'00	
conjunction	10530 Apr 08 16:41	22° $\mathcal{Y}$ 51'02	-0°31'38	conjunction	10536 Jun 19 14:58	5° $\mathcal{E}$ 55'26	-1°55'00
minimum elong	10530 Apr 08 16:40	22° $\mathcal{Y}$ 51'02	0°31'48	minimum elong	10536 Jun 19 14:58	5° $\mathcal{E}$ 55'26	1°55'31
max. Earth dist.	10530 Apr 08 13:14	22° $\mathcal{Y}$ 49'58	10.60880 AU	max. Earth dist.	10536 Jun 19 21:45	5° $\mathcal{E}$ 57'30	10.75806 AU
morning rise	10530 Apr 25 16:45	24° $\mathcal{Y}$ 56'06		morning rise	10536 Jul 06 10:12	7° $\mathcal{E}$ 57'16	
	10530 Jun 12 15:08	0° $\mathcal{B}$		retrograde	10536 Oct 17 12:03	15° $\mathcal{E}$ 22'39	
retrograde	10530 Aug 04 16:00	2° $\mathcal{B}$ 20'13		opposition	10536 Dec 26 16:36	12° $\mathcal{E}$ 01'04	-2°20'49
	10530 Sep 29 02:14	30° $\mathcal{R}$ $\mathcal{Y}$		min. Earth dist.	10536 Dec 26 09:57	12° $\mathcal{E}$ 02'19	8.75802 AU
opposition	10530 Oct 12 11:04	28° $\mathcal{Y}$ 59'31	-0°53'19	direct	10537 Mar 06 01:33	8° $\mathcal{E}$ 41'08	
min. Earth dist.	10530 Oct 12 13:22	28° $\mathcal{Y}$ 59'04	8.63050 AU	evening set	10537 Jun 15 01:47	15° $\mathcal{E}$ 58'28	
direct	10530 Dec 21 13:01	25° $\mathcal{Y}$ 35'48					
	10531 Mar 07 13:42	0° $\mathcal{B}$		conjunction	10537 Jul 01 20:35	18° $\mathcal{E}$ 00'11	-1°52'51
evening set	10531 Apr 04 06:10	3° $\mathcal{B}$ 08'26		minimum elong	10537 Jul 01 20:36	18° $\mathcal{E}$ 00'11	1°53'22
conjunction	10531 Apr 21 06:13	5° $\mathcal{B}$ 13'00	-0°54'35	max. Earth dist.	10537 Jul 02 05:01	18° $\mathcal{E}$ 02'45	10.75283 AU

morning rise	10537 Jul 18 17:19	20° $\Omega$ 02'27	max. Earth dist.	10543 Sep 15 02:06	1° $\Omega$ 59'13	10.54630 AU
retrograde	10537 Oct 30 06:08	27° $\Omega$ 29'44	morning rise	10543 Oct 02 09:39	4° $\Omega$ 06'29	
opposition	10538 Jan 08 11:08	24° $\Omega$ 07'39 -2°15'04	retrograde	10544 Jan 15 10:39	11° $\Omega$ 49'57	
min. Earth dist.	10538 Jan 08 03:14	24° $\Omega$ 09'09 8.74795 AU	asc. node	10544 Feb 12 23:42	11° $\Omega$ 08'54	
direct	10538 Mar 18 14:07	20° $\Omega$ 47'54	opposition	10544 Mar 24 14:45	8° $\Omega$ 24'19 0°03'25	
evening set	10538 Jun 27 07:28	28° $\Omega$ 04'42	min. Earth dist.	10544 Mar 24 09:43	8° $\Omega$ 25'19 8.52168 AU	
	10538 Jul 13 05:07	0° $\Omega$	direct	10544 May 31 07:32	5° $\Omega$ 01'54	
			evening set	10544 Sep 09 12:46	12° $\Omega$ 31'47	
conjunction	10538 Jul 14 04:00	0° $\Omega$ 06'58 -1°45'41				
minimum elong	10538 Jul 14 04:02	0° $\Omega$ 06'59 1°46'10	conjunction	10544 Sep 27 02:33	14° $\Omega$ 41'26 0°15'19	
max. Earth dist.	10538 Jul 14 13:55	0° $\Omega$ 09'59 10.73814 AU	minimum elong	10544 Sep 27 02:33	14° $\Omega$ 41'26 0°15'25	
morning rise	10538 Jul 31 02:51	2° $\Omega$ 09'57	behind sun begin	10544 Sep 27 00:42	14° $\Omega$ 40'52	
retrograde	10538 Nov 12 01:11	9° $\Omega$ 39'25	behind sun end	10544 Sep 27 04:23	14° $\Omega$ 41'59	
opposition	10539 Jan 21 05:36	6° $\Omega$ 16'47 -2°03'17	max. Earth dist.	10544 Sep 27 07:29	14° $\Omega$ 42'57 10.49761 AU	
min. Earth dist.	10539 Jan 20 20:55	6° $\Omega$ 18'26 8.72842 AU	morning rise	10544 Oct 14 19:17	16° $\Omega$ 52'01	
direct	10539 Mar 31 02:06	2° $\Omega$ 57'01	retrograde	10545 Jan 27 19:13	24° $\Omega$ 38'04	
evening set	10539 Jul 09 15:02	10° $\Omega$ 14'02	opposition	10545 Apr 06 15:59	21° $\Omega$ 12'02 0°34'41	
			min. Earth dist.	10545 Apr 06 12:36	21° $\Omega$ 12'42 8.47402 AU	
conjunction	10539 Jul 26 13:48	12° $\Omega$ 17'08 -1°33'46	direct	10545 Jun 13 06:26	17° $\Omega$ 48'43	
minimum elong	10539 Jul 26 13:51	12° $\Omega$ 17'09 1°34'11	evening set	10545 Sep 22 22:37	25° $\Omega$ 23'00	
max. Earth dist.	10539 Jul 26 23:41	12° $\Omega$ 20'09 10.71428 AU				
morning rise	10539 Aug 12 15:26	14° $\Omega$ 21'06	conjunction	10545 Oct 10 14:33	27° $\Omega$ 33'51 0°40'10	
	10539 Aug 18 03:00	15° $\Omega$	minimum elong	10545 Oct 10 14:31	27° $\Omega$ 33'50 0°40'23	
retrograde	10539 Nov 24 22:37	21° $\Omega$ 53'02	max. Earth dist.	10545 Oct 10 16:53	27° $\Omega$ 34'34 10.45140 AU	
opposition	10540 Feb 03 00:39	18° $\Omega$ 29'47 -1°45'53	morning rise	10545 Oct 28 09:06	29° $\Omega$ 45'29	
min. Earth dist.	10540 Feb 02 16:28	18° $\Omega$ 31'21 8.69978 AU		10545 Oct 30 08:55	0° $\Omega$	
direct	10540 Apr 11 14:27	15° $\Omega$ 09'47	retrograde	10546 Feb 10 05:45	7° $\Omega$ 33'44	
evening set	10540 Jul 21 01:11	22° $\Omega$ 27'47	opposition	10546 Apr 19 19:06	4° $\Omega$ 07'28 1°04'32	
			min. Earth dist.	10546 Apr 19 17:50	4° $\Omega$ 07'43 8.43011 AU	
conjunction	10540 Aug 07 02:42	24° $\Omega$ 31'59 -1°17'31	direct	10546 Jun 26 08:36	0° $\Omega$ 43'14	
minimum elong	10540 Aug 07 02:44	24° $\Omega$ 32'00 1°17'52	evening set	10546 Oct 06 13:17	8° $\Omega$ 22'04	
max. Earth dist.	10540 Aug 07 11:28	24° $\Omega$ 34'40 10.68158 AU				
morning rise	10540 Aug 24 07:36	26° $\Omega$ 37'10	conjunction	10546 Oct 24 06:48	10° $\Omega$ 33'55 1°03'12	
	10540 Sep 23 12:11	0° $\Omega$	minimum elong	10546 Oct 24 06:46	10° $\Omega$ 33'55 1°03'31	
retrograde	10540 Dec 06 22:05	4° $\Omega$ 11'49	max. Earth dist.	10546 Oct 24 07:00	10° $\Omega$ 33'59 10.40991 AU	
opposition	10541 Feb 14 20:25	0° $\Omega$ 47'57 -1°23'31	morning rise	10546 Nov 11 02:22	12° $\Omega$ 46'24	
min. Earth dist.	10541 Feb 14 13:22	0° $\Omega$ 49'19 8.66260 AU		10546 Nov 29 22:37	15° $\Omega$	
	10541 Feb 25 07:40	30° $\Omega$ 8'02	retrograde	10547 Feb 23 18:08	20° $\Omega$ 36'20	
direct	10541 Apr 24 03:20	27° $\Omega$ 27'33	opposition	10547 May 02 23:56	17° $\Omega$ 09'57 1°31'21	
	10541 Jun 18 12:03	0° $\Omega$	min. Earth dist.	10547 May 03 00:15	17° $\Omega$ 09'53 8.39210 AU	
evening set	10541 Aug 02 15:02	4° $\Omega$ 47'27		10547 Jun 01 08:12	15° $\Omega$ 44'51	
			direct	10547 Jul 09 13:42	13° $\Omega$ 44'51	
conjunction	10541 Aug 19 19:42	6° $\Omega$ 52'56 -0°57'35		10547 Aug 16 09:08	15° $\Omega$	
minimum elong	10541 Aug 19 19:44	6° $\Omega$ 52'57 0°57'50	evening set	10547 Oct 20 08:23	21° $\Omega$ 28'11	
max. Earth dist.	10541 Aug 20 03:25	6° $\Omega$ 55'18 10.64103 AU				
morning rise	10541 Sep 06 04:00	8° $\Omega$ 59'28	conjunction	10547 Nov 07 03:01	23° $\Omega$ 40'48 1°23'09	
retrograde	10541 Dec 19 22:22	16° $\Omega$ 37'03	minimum elong	10547 Nov 07 02:59	23° $\Omega$ 40'47 1°23'33	
opposition	10542 Feb 27 17:01	13° $\Omega$ 12'34 -0°57'05	max. Earth dist.	10547 Nov 07 01:35	23° $\Omega$ 40'21 10.37519 AU	
min. Earth dist.	10542 Feb 27 10:54	13° $\Omega$ 13'45 8.61867 AU	morning rise	10547 Nov 24 22:51	25° $\Omega$ 53'50	
direct	10542 May 06 19:27	9° $\Omega$ 51'37		10547 Dec 31 05:21	0° $\Omega$	
evening set	10542 Aug 15 09:13	17° $\Omega$ 14'13	retrograde	10548 Mar 08 07:18	3° $\Omega$ 44'45	
			opposition	10548 May 15 06:15	0° $\Omega$ 18'25 1°53'38	
conjunction	10542 Sep 01 17:13	19° $\Omega$ 21'07 -0°34'47	min. Earth dist.	10548 May 15 07:46	0° $\Omega$ 18'07 8.36178 AU	
minimum elong	10542 Sep 01 17:14	19° $\Omega$ 21'07 0°34'56		10548 May 19 02:06	30° $\Omega$ 8'02	
max. Earth dist.	10542 Sep 02 00:39	19° $\Omega$ 23'24 10.59500 AU	direct	10548 Jul 21 22:46	26° $\Omega$ 52'30	
morning rise	10542 Sep 19 04:39	21° $\Omega$ 29'03		10548 Sep 21 05:57	0° $\Omega$	
retrograde	10543 Jan 02 02:39	29° $\Omega$ 09'38	evening set	10548 Nov 02 07:02	4° $\Omega$ 40'01	
opposition	10543 Mar 12 15:06	25° $\Omega$ 44'33 -0°27'40				
min. Earth dist.	10543 Mar 12 09:15	25° $\Omega$ 45'41 8.57076 AU	conjunction	10548 Nov 20 02:11	6° $\Omega$ 53'10 1°38'51	
direct	10543 May 19 13:04	22° $\Omega$ 22'55	minimum elong	10548 Nov 20 02:09	6° $\Omega$ 53'10 1°39'19	
evening set	10543 Aug 28 08:15	29° $\Omega$ 48'51	max. Earth dist.	10548 Nov 19 23:10	6° $\Omega$ 52'13 10.34894 AU	
	10543 Aug 29 21:08	0° $\Omega$	morning rise	10548 Dec 07 21:35	9° $\Omega$ 06'28	
			retrograde	10549 Mar 21 21:04	16° $\Omega$ 57'36	
conjunction	10543 Sep 14 19:22	1° $\Omega$ 57'10 -0°10'09	opposition	10549 Mar 28 14:05	13° $\Omega$ 31'30 2°10'02	
minimum elong	10543 Sep 14 19:22	1° $\Omega$ 57'10 0°10'10	min. Earth dist.	10549 May 28 16:45	13° $\Omega$ 30'57 8.34058 AU	
behind sun begin	10543 Sep 14 13:39	1° $\Omega$ 55'25	direct	10549 Aug 04 09:48	10° $\Omega$ 04'53	
behind sun end	10543 Sep 15 01:06	1° $\Omega$ 58'55	evening set	10549 Nov 16 07:55	17° $\Omega$ 55'55	

conjunction	10549 Dec 04 02:59	20° $\nearrow$ 09'20	1°49'22	conjunction	10556 Feb 24 02:35	9° $\nwarrow$ 17'43	0°53'29
minimum elong	10549 Dec 04 02:57	20° $\nearrow$ 09'20	1°49'53	minimum elong	10556 Feb 24 02:37	9° $\nwarrow$ 17'43	0°53'43
max. Earth dist.	10549 Dec 03 22:16	20° $\nearrow$ 07'51	10.33245 AU	max. Earth dist.	10556 Feb 23 18:51	9° $\nwarrow$ 15'17	10.45237 AU
morning rise	10549 Dec 21 21:25	22° $\nearrow$ 22'38		morning rise	10556 Mar 12 10:40	11° $\nwarrow$ 26'56	
	10550 Mar 19 22:18	0° $\searrow$		retrograde	10556 Jun 21 14:28	19° $\nwarrow$ 00'29	
retrograde	10550 Apr 04 11:50	0° $\searrow$ 13'09		opposition	10556 Aug 28 07:38	15° $\nwarrow$ 38'54	0°51'55
	10550 Apr 20 01:16	30° $\nwarrow$		min. Earth dist.	10556 Aug 28 13:45	15° $\nwarrow$ 37'42	8.47524 AU
opposition	10550 Jun 10 23:07	26° $\nwarrow$ 47'26	2°19'35	direct	10556 Nov 05 20:44	12° $\nwarrow$ 12'56	
min. Earth dist.	10550 Jun 11 03:17	26° $\nwarrow$ 46'36	8.32960 AU	evening set	10557 Feb 18 23:40	19° $\nwarrow$ 59'44	
direct	10550 Aug 17 22:22	23° $\nwarrow$ 20'17					
	10550 Nov 20 06:05	0° $\searrow$		conjunction	10557 Mar 08 08:53	22° $\nwarrow$ 08'45	0°29'40
evening set	10550 Nov 30 09:48	1° $\searrow$ 13'57		minimum elong	10557 Mar 08 08:54	22° $\nwarrow$ 08'45	0°29'47
				max. Earth dist.	10557 Mar 08 01:41	22° $\nwarrow$ 06'31	10.49879 AU
conjunction	10550 Dec 18 04:19	3° $\searrow$ 27'23	1°54'05	morning rise	10557 Mar 25 14:44	24° $\nwarrow$ 16'47	
minimum elong	10550 Dec 18 04:18	3° $\searrow$ 27'23	1°54'36		10557 May 20 00:08	0° $\nwarrow$	
max. Earth dist.	10550 Dec 17 21:27	3° $\searrow$ 25'13	10.32679 AU	retrograde	10557 Jul 04 14:27	1° $\nwarrow$ 47'03	
morning rise	10551 Jan 04 21:33	5° $\searrow$ 40'28			10557 Aug 20 14:13	30° $\nwarrow$	
retrograde	10551 Apr 18 01:45	13° $\searrow$ 29'28		opposition	10557 Sep 10 13:57	28° $\nwarrow$ 26'02	0°21'28
opposition	10551 Jun 24 08:56	10° $\searrow$ 04'19	2°21'41	min. Earth dist.	10557 Sep 10 19:34	28° $\nwarrow$ 24'57	8.52293 AU
min. Earth dist.	10551 Jun 24 14:48	10° $\searrow$ 03'08	8.32960 AU	direct	10557 Nov 19 07:46	25° $\nwarrow$ 00'49	
direct	10551 Aug 31 13:10	6° $\searrow$ 36'48			10558 Feb 08 14:38	0° $\nwarrow$	
evening set	10551 Dec 14 11:17	14° $\searrow$ 32'03		evening set	10558 Mar 04 03:22	2° $\nwarrow$ 43'38	
conjunction	10552 Jan 01 04:57	16° $\searrow$ 45'16	1°52'42	conjunction	10558 Mar 21 09:59	4° $\nwarrow$ 51'21	0°04'39
minimum elong	10552 Jan 01 04:58	16° $\searrow$ 45'16	1°53'12	minimum elong	10558 Mar 21 09:59	4° $\nwarrow$ 51'21	0°04'39
max. Earth dist.	10551 Dec 31 20:15	16° $\searrow$ 42'32	10.33235 AU	behind sun begin	10558 Mar 21 03:01	4° $\nwarrow$ 49'13	
morning rise	10552 Jan 18 20:49	18° $\searrow$ 57'57		behind sun end	10558 Mar 21 16:57	4° $\nwarrow$ 53'30	
retrograde	10552 Apr 30 12:24	26° $\searrow$ 44'40		max. Earth dist.	10558 Mar 21 03:36	4° $\nwarrow$ 49'24	10.54739 AU
opposition	10552 Jul 06 19:11	23° $\searrow$ 20'11	2°16'12	morning rise	10558 Apr 07 13:36	6° $\nwarrow$ 58'11	
min. Earth dist.	10552 Jul 07 02:08	23° $\searrow$ 18'48	8.34057 AU	desc. node	10558 May 29 17:39	12° $\nwarrow$ 24'47	
direct	10552 Sep 13 07:08	19° $\searrow$ 52'34		retrograde	10558 Jul 17 11:04	14° $\nwarrow$ 25'33	
evening set	10552 Dec 27 11:09	27° $\searrow$ 48'15		opposition	10558 Sep 23 18:28	11° $\nwarrow$ 04'56	-0°09'41
				min. Earth dist.	10558 Sep 23 22:42	11° $\nwarrow$ 04'07	8.57157 AU
conjunction	10553 Jan 14 03:43	0° $\approx$ 01'01	1°45'19	direct	10558 Dec 02 16:34	7° $\nwarrow$ 40'31	
minimum elong	10553 Jan 14 03:44	0° $\approx$ 01'01	1°45'48	evening set	10559 Mar 17 02:26	15° $\nwarrow$ 19'10	
max. Earth dist.	10553 Jan 13 18:05	29° $\searrow$ 57'59	10.34881 AU				
	10553 Jan 14 00:30	0° $\approx$		conjunction	10559 Apr 03 06:24	17° $\nwarrow$ 25'33	-0°20'29
morning rise	10553 Jan 31 17:54	2° $\approx$ 13'04		minimum elong	10559 Apr 03 06:23	17° $\nwarrow$ 25'33	0°20'36
retrograde	10553 May 13 21:44	9° $\approx$ 56'56		max. Earth dist.	10559 Apr 03 01:48	17° $\nwarrow$ 24'08	10.59535 AU
opposition	10553 Jul 20 05:20	6° $\approx$ 33'11	2°03'31	morning rise	10559 Apr 20 07:39	19° $\nwarrow$ 31'09	
min. Earth dist.	10553 Jul 20 12:28	6° $\approx$ 31'45	8.36194 AU	retrograde	10559 Jul 30 05:34	26° $\nwarrow$ 56'10	
direct	10553 Sep 27 00:26	3° $\approx$ 05'42		opposition	10559 Oct 06 20:59	23° $\nwarrow$ 35'50	-0°40'02
evening set	10554 Jan 10 08:13	11° $\approx$ 00'36		min. Earth dist.	10559 Oct 06 23:29	23° $\nwarrow$ 35'21	8.61818 AU
				direct	10559 Dec 15 22:45	20° $\nwarrow$ 12'13	
conjunction	10554 Jan 27 23:28	13° $\approx$ 12'43	1°32'26	evening set	10560 Mar 28 21:01	27° $\nwarrow$ 46'43	
minimum elong	10554 Jan 27 23:30	13° $\approx$ 12'44	1°32'51				
max. Earth dist.	10554 Jan 27 14:06	13° $\approx$ 09'46	10.37535 AU	conjunction	10560 Apr 14 22:23	29° $\nwarrow$ 51'50	-0°44'19
	10554 Feb 11 06:10	15° $\approx$		minimum elong	10560 Apr 14 22:21	29° $\nwarrow$ 51'49	0°44'33
morning rise	10554 Feb 14 11:47	15° $\approx$ 23'58		max. Earth dist.	10560 Apr 14 19:52	29° $\nwarrow$ 51'03	10.63964 AU
retrograde	10554 May 27 06:12	23° $\approx$ 04'33			10560 Apr 16 00:55	0° $\searrow$	
opposition	10554 Aug 02 15:02	19° $\approx$ 41'33	1°44'26	morning rise	10560 May 01 21:18	1° $\searrow$ 56'15	
min. Earth dist.	10554 Aug 02 21:38	19° $\approx$ 40'14	8.39268 AU	retrograde	10560 Aug 11 00:18	9° $\searrow$ 19'39	
direct	10554 Oct 10 16:18	16° $\approx$ 14'26		opposition	10560 Oct 18 22:01	5° $\searrow$ 59'27	-1°08'12
evening set	10555 Jan 24 01:36	24° $\approx$ 07'27		min. Earth dist.	10560 Oct 18 23:03	5° $\searrow$ 59'15	8.65975 AU
				direct	10560 Dec 27 23:53	2° $\searrow$ 36'38	
conjunction	10555 Feb 10 15:15	26° $\approx$ 18'43	1°14'48	evening set	10561 Apr 10 11:32	10° $\searrow$ 07'17	
minimum elong	10555 Feb 10 15:18	26° $\approx$ 18'44	1°15'08				
max. Earth dist.	10555 Feb 10 06:52	26° $\approx$ 16'05	10.41052 AU	conjunction	10561 Apr 27 10:24	12° $\searrow$ 11'15	-1°05'55
morning rise	10555 Feb 28 01:32	28° $\approx$ 29'02		minimum elong	10561 Apr 27 10:21	12° $\searrow$ 11'14	1°06'15
	10555 Mar 12 16:04	0° $\nwarrow$		max. Earth dist.	10561 Apr 27 09:29	12° $\searrow$ 10'59	10.67745 AU
retrograde	10555 Jun 09 12:05	6° $\nwarrow$ 06'06		morning rise	10561 May 14 07:20	14° $\searrow$ 14'42	
opposition	10555 Aug 15 23:56	2° $\nwarrow$ 43'50	1°20'06		10561 May 20 15:41	15° $\searrow$	
min. Earth dist.	10555 Aug 16 06:15	2° $\nwarrow$ 42'35	8.43110 AU	retrograde	10561 Aug 23 16:26	21° $\searrow$ 37'16	
	10555 Sep 25 04:12	30° $\nwarrow$		opposition	10561 Oct 31 21:35	18° $\searrow$ 17'05	-1°32'58
direct	10555 Oct 24 07:01	29° $\nwarrow$ 17'13		min. Earth dist.	10561 Oct 31 21:49	18° $\searrow$ 17'03	8.69395 AU
	10555 Nov 22 05:59	0° $\nwarrow$			10561 Dec 30 23:23	15° $\searrow$	
evening set	10556 Feb 06 14:57	7° $\nwarrow$ 07'29		direct	10562 Jan 09 22:10	14° $\searrow$ 55'01	

	10562 Jan 19 21:15	15°♄			10568 May 15 00:29	0°♄
evening set	10562 Apr 22 22:57	22°♄22'19		evening set	10568 Jul 03 13:51	5°♄08'24
conjunction	10562 May 09 19:34	24°♄25'19 -1°24'22		conjunction	10568 Jul 20 11:36	7°♄11'25 -1°39'32
minimum elong	10562 May 09 19:31	24°♄25'18 1°24'46		minimum elong	10568 Jul 20 11:38	7°♄11'26 1°40'00
max. Earth dist.	10562 May 09 19:24	24°♄25'16 10.70722 AU		max. Earth dist.	10568 Jul 20 19:56	7°♄13'58 10.69926 AU
morning rise	10562 May 26 15:06	26°♄28'00		morning rise	10568 Aug 06 12:12	9°♄15'15
	10562 Jun 27 07:26	0°♄			10568 Oct 02 13:29	15°♄
retrograde	10562 Sep 05 07:22	3°♄50'27		retrograde	10568 Nov 18 14:37	16°♄47'14
opposition	10562 Nov 13 19:44	0°♄30'09 -1°53'22			10569 Jan 05 22:04	15°♄
min. Earth dist.	10562 Nov 13 19:04	0°♄30'16 8.71981 AU		opposition	10569 Jan 27 18:47	13°♄23'35 -1°54'12
	10562 Nov 20 11:25	30°♄		min. Earth dist.	10569 Jan 27 11:20	13°♄25'01 8.68564 AU
direct	10563 Jan 22 19:01	27°♄08'41		direct	10569 Apr 06 12:30	10°♄02'59
	10563 Mar 23 19:00	0°♄			10569 Jun 25 10:38	15°♄
evening set	10563 May 05 07:45	4°♄33'07		evening set	10569 Jul 15 23:11	17°♄21'41
conjunction	10563 May 22 02:42	6°♄35'23 -1°38'55		conjunction	10569 Aug 01 23:43	19°♄25'44 -1°25'06
minimum elong	10563 May 22 02:40	6°♄35'22 1°39'23		minimum elong	10569 Aug 01 23:45	19°♄25'45 1°25'29
max. Earth dist.	10563 May 22 03:56	6°♄35'45 10.72845 AU		max. Earth dist.	10569 Aug 02 09:13	19°♄28'39 10.66845 AU
morning rise	10563 Jun 07 21:22	8°♄37'32		morning rise	10569 Aug 19 03:16	21°♄30'43
retrograde	10563 Sep 17 22:47	16°♄00'29		retrograde	10569 Dec 01 14:38	29°♄05'24
opposition	10563 Nov 26 16:58	12°♄39'52 -2°08'35		opposition	10570 Feb 09 14:42	25°♄41'04 -1°33'52
min. Earth dist.	10563 Nov 26 14:37	12°♄40'19 8.73685 AU		min. Earth dist.	10570 Feb 09 06:36	25°♄42'38 8.65119 AU
direct	10564 Feb 04 13:23	9°♄18'55		direct	10570 Apr 19 01:14	22°♄20'11
evening set	10564 May 16 14:24	16°♄40'51		evening set	10570 Jul 28 11:53	29°♄40'23
					10570 Jul 31 05:05	0°♄
conjunction	10564 Jun 02 08:28	18°♄42'40 -1°49'00		conjunction	10570 Aug 14 15:24	1°♄45'39 -1°06'39
minimum elong	10564 Jun 02 08:27	18°♄42'39 1°49'31		minimum elong	10570 Aug 14 15:26	1°♄45'39 1°06'56
max. Earth dist.	10564 Jun 02 12:05	18°♄43'46 10.74070 AU		max. Earth dist.	10570 Aug 15 00:59	1°♄48'35 10.63131 AU
morning rise	10564 Jun 19 02:47	20°♄44'34		morning rise	10570 Aug 31 22:10	3°♄51'55
retrograde	10564 Sep 29 14:00	28°♄08'33		retrograde	10570 Dec 14 15:25	11°♄29'26
opposition	10564 Dec 08 13:19	24°♄47'27 -2°18'02		opposition	10571 Feb 22 11:34	8°♄04'30 -1°09'01
min. Earth dist.	10564 Dec 08 08:49	24°♄48'18 8.74469 AU		min. Earth dist.	10571 Feb 22 03:42	8°♄06'02 8.61122 AU
direct	10565 Feb 16 06:03	21°♄26'51		direct	10571 May 01 15:52	4°♄43'11
evening set	10565 May 28 19:57	28°♄46'51		evening set	10571 Aug 10 04:41	12°♄05'39
	10565 Jun 07 22:38	0°♄				
conjunction	10565 Jun 14 13:52	0°♄48'30 -1°54'13		conjunction	10571 Aug 27 11:18	14°♄12'15 -0°44'56
minimum elong	10565 Jun 14 13:51	0°♄48'30 1°54'45		minimum elong	10571 Aug 27 11:19	14°♄12'16 0°45'08
max. Earth dist.	10565 Jun 14 19:49	0°♄50'19 10.74375 AU		max. Earth dist.	10571 Aug 27 19:46	14°♄14'51 10.58962 AU
morning rise	10565 Jul 01 08:34	2°♄50'25		morning rise	10571 Sep 13 21:27	16°♄19'54
retrograde	10565 Oct 12 07:00	10°♄15'52		retrograde	10571 Dec 27 19:23	24°♄00'19
opposition	10565 Dec 21 08:52	6°♄54'11 -2°21'20		opposition	10572 Mar 06 09:46	20°♄34'52 -0°40'40
min. Earth dist.	10565 Dec 21 03:00	6°♄55'18 8.74321 AU		min. Earth dist.	10572 Mar 06 03:03	20°♄36'11 8.56774 AU
direct	10566 Feb 28 20:38	3°♄33'48		direct	10572 May 13 08:30	17°♄12'59
evening set	10566 Jun 10 01:10	10°♄52'26		evening set	10572 Aug 22 02:08	24°♄38'27
conjunction	10566 Jun 26 19:35	12°♄54'15 -1°54'22		conjunction	10572 Sep 08 11:53	26°♄46'26 -0°20'54
minimum elong	10566 Jun 26 19:35	12°♄54'15 1°54'54		minimum elong	10572 Sep 08 11:54	26°♄46'26 0°20'59
max. Earth dist.	10566 Jun 27 02:29	12°♄56'21 10.73761 AU		max. Earth dist.	10572 Sep 08 18:58	26°♄48'36 10.54537 AU
morning rise	10566 Jul 13 15:34	14°♄56'32		morning rise	10572 Sep 26 01:14	28°♄55'28
retrograde	10566 Oct 25 01:09	22°♄23'47			10572 Oct 05 02:05	0°♄
opposition	10567 Jan 03 04:10	19°♄01'30 -2°18'22		retrograde	10573 Jan 09 01:46	6°♄38'43
min. Earth dist.	10567 Jan 02 21:47	19°♄02'43 8.73252 AU		opposition	10573 Mar 19 09:25	3°♄12'50 -0°10'03
direct	10567 Mar 13 08:38	15°♄41'10		min. Earth dist.	10573 Mar 19 03:58	3°♄13'55 8.52282 AU
evening set	10567 Jun 22 06:48	22°♄59'08			10573 May 12 17:30	30°♄
				direct	10573 May 26 03:24	29°♄50'20
conjunction	10567 Jul 09 02:27	25°♄01'23 -1°49'25			10573 Jun 08 13:03	0°♄
minimum elong	10567 Jul 09 02:28	25°♄01'23 1°49'55		asc. node	10573 Jul 17 21:29	2°♄11'37
max. Earth dist.	10567 Jul 09 09:52	25°♄03'39 10.72258 AU		evening set	10573 Sep 04 04:53	7°♄19'26
morning rise	10567 Jul 26 00:28	27°♄04'19				
	10567 Aug 20 21:36	0°♄		conjunction	10573 Sep 21 17:34	9°♄28'45 0°04'27
retrograde	10567 Nov 06 18:04	4°♄33'47		minimum elong	10573 Sep 21 17:34	9°♄28'45 0°04'30
opposition	10568 Jan 15 23:25	1°♄10'50 -2°09'13		behind sun begin	10573 Sep 21 10:30	9°♄26'35
min. Earth dist.	10568 Jan 15 16:41	1°♄12'07 8.71307 AU		behind sun end	10573 Sep 22 00:38	9°♄30'55
	10568 Jan 31 18:54	30°♄		max. Earth dist.	10573 Sep 21 23:44	9°♄30'38 10.50061 AU
direct	10568 Mar 24 22:31	27°♄50'25		morning rise	10573 Oct 09 09:31	11°♄39'04

retrograde	10574 Jan 22 09:24	19° <u>♄</u> 24'58		morning rise	10579 Dec 30 10:08	0° <u>♄</u> 23'33	
opposition	10574 Apr 01 10:33	15° <u>♄</u> 58'48	0°21'22	retrograde	10580 Apr 11 18:33	8° <u>♄</u> 13'12	
min. Earth dist.	10574 Apr 01 05:56	15° <u>♄</u> 59'42	8.47872 AU	opposition	10580 Jun 18 03:43	4° <u>♄</u> 48'16	2°21'25
direct	10574 Jun 08 02:26	12° <u>♄</u> 35'38		min. Earth dist.	10580 Jun 18 08:39	4° <u>♄</u> 47'17	8.33797 AU
evening set	10574 Sep 17 12:59	20° <u>♄</u> 08'51		direct	10580 Aug 25 06:17	1° <u>♄</u> 21'24	
				evening set	10580 Dec 07 23:43	9° <u>♄</u> 16'01	
conjunction	10574 Oct 05 04:12	22° <u>♄</u> 19'25	0°29'41	conjunction	10580 Dec 25 17:52	11° <u>♄</u> 29'17	1°53'47
minimum elong	10574 Oct 05 04:10	22° <u>♄</u> 19'25	0°29'51	minimum elong	10580 Dec 25 17:52	11° <u>♄</u> 29'17	1°54'18
max. Earth dist.	10574 Oct 05 09:29	22° <u>♄</u> 21'03	10.45771 AU	max. Earth dist.	10580 Dec 25 10:19	11° <u>♄</u> 26'54	10.33802 AU
morning rise	10574 Oct 22 22:03	24° <u>♄</u> 30'50		morning rise	10581 Jan 12 10:16	13° <u>♄</u> 42'06	
	10574 Dec 13 19:13	0° <u>♄</u>		retrograde	10581 Apr 25 07:32	21° <u>♄</u> 29'51	
retrograde	10575 Feb 04 20:34	2° <u>♄</u> 19'04		opposition	10581 Jul 01 14:08	18° <u>♄</u> 05'32	2°19'04
	10575 Mar 31 04:57	30° <u>♄</u>		min. Earth dist.	10581 Jul 01 20:12	18° <u>♄</u> 04'19	8.34312 AU
opposition	10575 Apr 14 13:36	28° <u>♄</u> 52'45	0°52'03	direct	10581 Sep 07 22:43	14° <u>♄</u> 38'27	
min. Earth dist.	10575 Apr 14 09:46	28° <u>♄</u> 53'31	8.43778 AU	evening set	10581 Dec 22 00:41	22° <u>♄</u> 34'03	
direct	10575 Jun 21 03:18	25° <u>♄</u> 28'55					
	10575 Sep 04 04:52	0° <u>♄</u>		conjunction	10582 Jan 08 17:52	24° <u>♄</u> 47'00	1°48'51
evening set	10575 Oct 01 02:20	3° <u>♄</u> 06'30		minimum elong	10582 Jan 08 17:53	24° <u>♄</u> 47'00	1°49'21
conjunction	10575 Oct 18 19:26	5° <u>♄</u> 18'08	0°53'40	max. Earth dist.	10582 Jan 08 09:07	24° <u>♄</u> 44'15	10.34790 AU
minimum elong	10575 Oct 18 19:24	5° <u>♄</u> 18'07	0°53'57	morning rise	10582 Jan 26 08:37	26° <u>♄</u> 59'17	
max. Earth dist.	10575 Oct 18 23:15	5° <u>♄</u> 19'19	10.41893 AU		10582 Feb 21 00:42	0° <u>♄</u>	
morning rise	10575 Nov 05 14:34	7° <u>♄</u> 30'26		retrograde	10582 May 08 19:31	4° <u>♄</u> 44'33	
	10576 Jan 29 16:44	15° <u>♄</u>		opposition	10582 Jul 15 00:49	1° <u>♄</u> 20'53	2°09'18
retrograde	10576 Feb 18 10:28	15° <u>♄</u> 20'29		min. Earth dist.	10582 Jul 15 07:56	1° <u>♄</u> 19'28	8.35764 AU
	10576 Mar 09 03:56	15° <u>♄</u>			10582 Aug 01 09:16	30° <u>♄</u>	
opposition	10576 Apr 26 18:28	11° <u>♄</u> 54'10	1°20'22	direct	10582 Sep 21 14:59	27° <u>♄</u> 53'43	
min. Earth dist.	10576 Apr 26 16:05	11° <u>♄</u> 54'39	8.40210 AU		10582 Nov 10 20:56	0° <u>♄</u>	
direct	10576 Jul 03 06:38	8° <u>♄</u> 29'39		evening set	10583 Jan 04 23:31	5° <u>♄</u> 49'08	
	10576 Oct 03 22:54	15° <u>♄</u>					
evening set	10576 Oct 13 20:41	16° <u>♄</u> 11'40		conjunction	10583 Jan 22 15:24	8° <u>♄</u> 01'34	1°38'10
conjunction	10576 Oct 31 14:57	18° <u>♄</u> 24'06	1°15'04	minimum elong	10583 Jan 22 15:26	8° <u>♄</u> 01'34	1°38'37
minimum elong	10576 Oct 31 14:55	18° <u>♄</u> 24'05	1°15'27	max. Earth dist.	10583 Jan 22 05:38	7° <u>♄</u> 58'29	10.36742 AU
max. Earth dist.	10576 Oct 31 16:06	18° <u>♄</u> 24'28	10.38626 AU	morning rise	10583 Feb 09 04:27	10° <u>♄</u> 13'10	
morning rise	10576 Nov 18 10:40	20° <u>♄</u> 37'02			10583 Mar 24 09:42	15° <u>♄</u>	
retrograde	10577 Mar 03 00:50	28° <u>♄</u> 28'10		retrograde	10583 May 22 04:48	17° <u>♄</u> 55'19	
opposition	10577 May 10 00:56	25° <u>♄</u> 02'03	1°44'44		10583 Jul 22 15:16	15° <u>♄</u>	
min. Earth dist.	10577 May 10 00:47	25° <u>♄</u> 02'05	8.37346 AU	opposition	10583 Jul 28 11:06	14° <u>♄</u> 32'18	1°52'46
direct	10577 Jul 16 14:09	21° <u>♄</u> 36'49		min. Earth dist.	10583 Jul 28 19:09	14° <u>♄</u> 30'42	8.38153 AU
evening set	10577 Oct 27 18:52	29° <u>♄</u> 23'02		direct	10583 Oct 05 08:05	11° <u>♄</u> 05'13	
	10577 Nov 01 18:39	0° <u>♄</u>			10583 Dec 14 17:00	15° <u>♄</u>	
conjunction	10577 Nov 14 13:42	1° <u>♄</u> 36'01	1°32'41	evening set	10584 Jan 18 19:06	18° <u>♄</u> 59'19	
minimum elong	10577 Nov 14 13:40	1° <u>♄</u> 36'00	1°33'07	conjunction	10584 Feb 05 09:22	21° <u>♄</u> 10'59	1°22'23
max. Earth dist.	10577 Nov 14 12:02	1° <u>♄</u> 35'30	10.36130 AU	minimum elong	10584 Feb 05 09:25	21° <u>♄</u> 11'00	1°22'46
morning rise	10577 Dec 02 09:21	3° <u>♄</u> 49'16		max. Earth dist.	10584 Feb 04 22:52	21° <u>♄</u> 07'41	10.39599 AU
retrograde	10578 Mar 16 14:28	11° <u>♄</u> 40'43		morning rise	10584 Feb 22 20:37	23° <u>♄</u> 21'45	
opposition	10578 May 23 08:58	8° <u>♄</u> 14'54	2°03'43		10584 Apr 30 18:09	0° <u>♄</u>	
min. Earth dist.	10578 May 23 10:56	8° <u>♄</u> 14'30	8.35309 AU	retrograde	10584 Jun 03 10:20	1° <u>♄</u> 00'27	
direct	10578 Jul 30 01:44	4° <u>♄</u> 49'00			10584 Jul 07 14:48	30° <u>♄</u>	
evening set	10578 Nov 10 19:27	12° <u>♄</u> 38'47		opposition	10584 Aug 09 20:43	27° <u>♄</u> 38'02	1°30'27
conjunction	10578 Nov 28 14:24	14° <u>♄</u> 52'04	1°45'27	min. Earth dist.	10584 Aug 10 04:45	27° <u>♄</u> 36'26	8.41378 AU
minimum elong	10578 Nov 28 14:22	14° <u>♄</u> 52'04	1°45'57	direct	10584 Oct 18 01:25	24° <u>♄</u> 11'13	
max. Earth dist.	10578 Nov 28 10:17	14° <u>♄</u> 50'47	10.34497 AU		10585 Jan 14 04:43	0° <u>♄</u>	
morning rise	10578 Dec 16 09:25	17° <u>♄</u> 05'23		evening set	10585 Jan 31 10:24	2° <u>♄</u> 02'56	
retrograde	10579 Mar 30 04:40	24° <u>♄</u> 56'19		conjunction	10585 Feb 17 22:48	4° <u>♄</u> 13'38	1°02'28
opposition	10579 Jun 05 18:02	21° <u>♄</u> 30'54	2°16'12	minimum elong	10585 Feb 17 22:50	4° <u>♄</u> 13'39	1°02'45
min. Earth dist.	10579 Jun 05 21:45	21° <u>♄</u> 30'09	8.34137 AU	max. Earth dist.	10585 Feb 17 12:52	4° <u>♄</u> 10'32	10.43216 AU
direct	10579 Aug 12 15:11	18° <u>♄</u> 04'25		morning rise	10585 Mar 07 08:00	6° <u>♄</u> 23'24	
evening set	10579 Nov 24 21:31	25° <u>♄</u> 57'01		retrograde	10585 Jun 16 13:06	13° <u>♄</u> 58'35	
conjunction	10579 Dec 12 16:15	28° <u>♄</u> 10'24	1°52'38	opposition	10585 Aug 23 05:06	10° <u>♄</u> 36'40	1°03'42
minimum elong	10579 Dec 12 16:14	28° <u>♄</u> 10'24	1°53'09	min. Earth dist.	10585 Aug 23 12:06	10° <u>♄</u> 35'17	8.45274 AU
max. Earth dist.	10579 Dec 12 10:09	28° <u>♄</u> 08'29	10.33727 AU	direct	10585 Oct 31 17:13	7° <u>♄</u> 10'18	
	10579 Dec 27 05:57	0° <u>♄</u>		evening set	10586 Feb 13 21:00	14° <u>♄</u> 58'45	
				conjunction	10586 Mar 03 07:20	17° <u>♄</u> 08'22	0°39'32



minimum elong	10586 Mar 03 07:22	17° $\text{X}$ 08'22	0°39'43	min. Earth dist.	10591 Nov 08 17:13	25° $\text{B}$ 42'28	8.70744 AU
max. Earth dist.	10586 Mar 02 23:00	17° $\text{X}$ 05'46	10.47403 AU	direct	10592 Jan 17 21:28	22° $\text{B}$ 20'00	
morning rise	10586 Mar 20 14:17	19° $\text{X}$ 16'58		evening set	10592 Apr 29 12:58	29° $\text{B}$ 45'12	
retrograde	10586 Jun 29 15:08	26° $\text{X}$ 48'45			10592 May 01 14:22	0° $\text{II}$	
opposition	10586 Sep 05 11:50	23° $\text{X}$ 27'15	0°34'00				
min. Earth dist.	10586 Sep 05 17:31	23° $\text{X}$ 26'09	8.49639 AU	conjunction	10592 May 16 08:42	1° $\text{II}$ 47'40	-1°33'24
direct	10586 Nov 14 04:34	20° $\text{X}$ 01'27		minimum elong	10592 May 16 08:40	1° $\text{II}$ 47'40	1°33'52
evening set	10587 Feb 27 02:43	27° $\text{X}$ 46'05		max. Earth dist.	10592 May 16 11:47	1° $\text{II}$ 48'37	10.72088 AU
				morning rise	10592 Jun 02 03:30	3° $\text{II}$ 49'56	
conjunction	10587 Mar 16 10:41	29° $\text{X}$ 54'28	0°14'52	retrograde	10592 Sep 12 00:51	11° $\text{II}$ 12'03	
minimum elong	10587 Mar 16 10:42	29° $\text{X}$ 54'28	0°14'55	opposition	10592 Nov 20 16:21	7° $\text{II}$ 51'17	-2°02'55
behind sun begin	10587 Mar 16 07:58	29° $\text{X}$ 53'38		min. Earth dist.	10592 Nov 20 12:43	7° $\text{II}$ 51'58	8.73406 AU
behind sun end	10587 Mar 16 13:25	29° $\text{X}$ 55'19		direct	10593 Jan 29 14:42	4° $\text{II}$ 29'57	
max. Earth dist.	10587 Mar 16 04:15	29° $\text{X}$ 52'29	10.51935 AU	evening set	10593 May 11 19:41	11° $\text{II}$ 52'12	
	10587 Mar 17 04:30	0° $\text{Y}$					
morning rise	10587 Apr 02 15:15	2° $\text{Y}$ 01'52		conjunction	10593 May 28 14:01	13° $\text{II}$ 54'02	-1°45'21
retrograde	10587 Jul 12 13:15	9° $\text{Y}$ 30'33		minimum elong	10593 May 28 14:00	13° $\text{II}$ 54'01	1°45'51
opposition	10587 Sep 18 16:56	6° $\text{Y}$ 09'24	0°02'59	max. Earth dist.	10593 May 28 18:29	13° $\text{II}$ 55'24	10.74303 AU
min. Earth dist.	10587 Sep 18 21:31	6° $\text{Y}$ 08'31	8.54245 AU	morning rise	10593 Jun 14 08:18	15° $\text{II}$ 55'52	
desc. node	10587 Oct 24 09:08	3° $\text{Y}$ 41'20		retrograde	10593 Sep 24 14:27	23° $\text{II}$ 18'31	
direct	10587 Nov 27 13:43	2° $\text{Y}$ 44'14		opposition	10593 Dec 03 12:13	19° $\text{II}$ 57'33	-2°14'44
evening set	10588 Mar 11 03:38	10° $\text{Y}$ 24'48		min. Earth dist.	10593 Dec 03 07:40	19° $\text{II}$ 58'25	8.75204 AU
				direct	10594 Feb 11 06:08	16° $\text{II}$ 36'48	
conjunction	10588 Mar 28 08:52	12° $\text{Y}$ 31'50	-0°10'23	evening set	10594 May 24 00:55	23° $\text{II}$ 56'44	
minimum elong	10588 Mar 28 08:52	12° $\text{Y}$ 31'50	0°10'27				
behind sun begin	10588 Mar 28 03:16	12° $\text{Y}$ 30'07		conjunction	10594 Jun 09 18:36	25° $\text{II}$ 58'11	-1°52'35
behind sun end	10588 Mar 28 14:27	12° $\text{Y}$ 33'33		minimum elong	10594 Jun 09 18:35	25° $\text{II}$ 58'11	1°53'06
max. Earth dist.	10588 Mar 28 03:54	12° $\text{Y}$ 30'19	10.56576 AU	max. Earth dist.	10594 Jun 10 00:02	25° $\text{II}$ 59'51	10.75621 AU
morning rise	10588 Apr 14 11:02	14° $\text{Y}$ 38'01		morning rise	10594 Jun 26 13:05	27° $\text{II}$ 59'51	
retrograde	10588 Jul 24 08:24	22° $\text{Y}$ 04'06			10594 Jul 13 21:24	0° $\text{B}$	
opposition	10588 Sep 30 20:15	18° $\text{Y}$ 43'13	-0°27'51	retrograde	10594 Oct 07 04:50	5° $\text{B}$ 23'35	
min. Earth dist.	10588 Sep 30 23:58	18° $\text{Y}$ 42'30	8.58872 AU	opposition	10594 Dec 16 07:08	2° $\text{B}$ 02'19	-2°20'34
direct	10588 Dec 09 20:27	15° $\text{Y}$ 18'47		min. Earth dist.	10594 Dec 16 01:33	2° $\text{B}$ 03'22	8.76065 AU
evening set	10589 Mar 23 23:51	22° $\text{Y}$ 55'11			10595 Jan 14 07:52	30° $\text{R}$ $\text{II}$	
				direct	10595 Feb 23 21:31	28° $\text{II}$ 42'01	
conjunction	10589 Apr 10 02:16	25° $\text{Y}$ 00'54	-0°34'48		10595 Apr 04 10:09	0° $\text{B}$	
minimum elong	10589 Apr 10 02:15	25° $\text{Y}$ 00'53	0°34'59	evening set	10595 Jun 05 05:21	6° $\text{B}$ 00'12	
max. Earth dist.	10589 Apr 09 22:26	24° $\text{Y}$ 59'43	10.61120 AU				
morning rise	10589 Apr 27 02:14	27° $\text{Y}$ 05'53		conjunction	10595 Jun 21 23:16	8° $\text{B}$ 01'38	-1°54'50
	10589 May 22 09:57	0° $\text{B}$		minimum elong	10595 Jun 21 23:17	8° $\text{B}$ 01'38	1°55'22
retrograde	10589 Aug 06 02:17	4° $\text{B}$ 29'59		max. Earth dist.	10595 Jun 22 06:33	8° $\text{B}$ 03'51	10.75996 AU
opposition	10589 Oct 13 21:42	1° $\text{B}$ 09'17	-0°57'03	morning rise	10595 Jul 08 18:35	10° $\text{B}$ 03'27	
min. Earth dist.	10589 Oct 13 23:57	1° $\text{B}$ 08'51	8.63308 AU	retrograde	10595 Oct 19 21:24	17° $\text{B}$ 28'43	
	10589 Oct 29 06:50	30° $\text{R}$ $\text{Y}$		opposition	10595 Dec 29 01:41	14° $\text{B}$ 07'02	-2°20'11
direct	10589 Dec 22 23:34	27° $\text{Y}$ 45'38		min. Earth dist.	10595 Dec 28 18:25	14° $\text{B}$ 08'25	8.75961 AU
	10590 Feb 13 18:39	0° $\text{B}$		direct	10596 Mar 07 10:38	10° $\text{B}$ 47'06	
evening set	10590 Apr 05 15:41	5° $\text{B}$ 17'57		evening set	10596 Jun 16 09:44	18° $\text{B}$ 04'07	
conjunction	10590 Apr 22 15:31	7° $\text{B}$ 22'27	-0°57'25	conjunction	10596 Jul 03 04:45	20° $\text{B}$ 05'49	-1°52'00
minimum elong	10590 Apr 22 15:29	7° $\text{B}$ 22'26	0°57'42	minimum elong	10596 Jul 03 04:46	20° $\text{B}$ 05'50	1°52'31
max. Earth dist.	10590 Apr 22 13:31	7° $\text{B}$ 21'50	10.65354 AU	max. Earth dist.	10596 Jul 03 13:58	20° $\text{B}$ 08'37	10.75415 AU
morning rise	10590 May 09 13:28	9° $\text{B}$ 26'21		morning rise	10596 Jul 20 01:35	22° $\text{B}$ 08'06	
	10590 Jul 03 01:01	15° $\text{B}$		retrograde	10596 Oct 31 14:50	29° $\text{B}$ 35'18	
retrograde	10590 Aug 18 17:18	16° $\text{B}$ 49'08		opposition	10597 Jan 09 20:01	26° $\text{B}$ 13'08	-2°13'37
	10590 Oct 06 02:37	15° $\text{R}$ $\text{B}$		min. Earth dist.	10597 Jan 09 11:36	26° $\text{B}$ 14'44	8.74898 AU
opposition	10590 Oct 26 21:21	13° $\text{B}$ 28'30	-1°23'18	direct	10597 Mar 19 22:33	22° $\text{B}$ 53'22	
min. Earth dist.	10590 Oct 26 21:28	13° $\text{B}$ 28'28	8.67330 AU		10597 Jun 27 05:58	0° $\text{Q}$	
direct	10591 Jan 04 23:55	10° $\text{B}$ 05'39		evening set	10597 Jun 28 15:23	0° $\text{Q}$ 09'56	
	10591 Mar 26 17:58	15° $\text{B}$					
evening set	10591 Apr 18 03:51	17° $\text{B}$ 34'13		conjunction	10597 Jul 15 12:05	2° $\text{Q}$ 12'14	-1°44'12
				minimum elong	10597 Jul 15 12:07	2° $\text{Q}$ 12'15	1°44'41
conjunction	10591 May 05 01:26	19° $\text{B}$ 37'36	-1°17'13	max. Earth dist.	10597 Jul 15 22:00	2° $\text{Q}$ 15'15	10.73900 AU
minimum elong	10591 May 05 01:24	19° $\text{B}$ 37'35	1°17'36	morning rise	10597 Aug 01 11:13	4° $\text{Q}$ 15'15	
max. Earth dist.	10591 May 05 02:06	19° $\text{B}$ 37'48	10.69064 AU	retrograde	10597 Nov 13 10:30	11° $\text{Q}$ 44'39	
morning rise	10591 May 21 21:33	21° $\text{B}$ 40'34		opposition	10598 Jan 22 14:18	8° $\text{Q}$ 21'58	-2°01'05
retrograde	10591 Aug 31 08:36	29° $\text{B}$ 02'43		min. Earth dist.	10598 Jan 22 05:51	8° $\text{Q}$ 23'35	8.72909 AU
opposition	10591 Nov 08 19:23	25° $\text{B}$ 42'03	-1°45'33	direct	10598 Apr 01 10:07	5° $\text{Q}$ 02'10	

evening set	10598 Jul 10 22:58	12°♏19'02	
conjunction	10598 Jul 27 21:55	14°♏22'11	-1°31'42
minimum elong	10598 Jul 27 21:58	14°♏22'12	1°32'08
max. Earth dist.	10598 Jul 28 07:09	14°♏25'00	10.71494 AU
	10598 Aug 02 02:07	15°♏	
morning rise	10598 Aug 13 23:57	16°♏26'13	
retrograde	10598 Nov 26 07:19	23°♏58'03	
opposition	10599 Feb 04 09:10	20°♏34'48	-1°43'02
min. Earth dist.	10599 Feb 04 01:32	20°♏36'16	8.70042 AU
direct	10599 Apr 13 22:01	17°♏14'48	
evening set	10599 Jul 23 09:07	24°♏32'43	
conjunction	10599 Aug 09 10:55	26°♏36'57	-1°14'59
minimum elong	10599 Aug 09 10:57	26°♏36'58	1°15'20
max. Earth dist.	10599 Aug 09 19:41	26°♏39'38	10.68240 AU
morning rise	10599 Aug 26 16:09	28°♏42'11	
	10599 Sep 06 17:28	0°♏	
retrograde	10599 Dec 09 05:05	6°♏16'46	
opposition	10600 Feb 17 04:44	2°♏52'53	-1°20'09
min. Earth dist.	10600 Feb 16 21:40	2°♏54'15	8.66351 AU
	10600 Apr 03 09:20	30°♏♏	
direct	10600 Apr 26 12:34	29°♏32'29	
	10600 May 19 09:26	0°♏	
evening set	10600 Aug 04 23:00	6°♏52'19	
conjunction	10600 Aug 22 04:03	8°♏57'51	-0°54'41
minimum elong	10600 Aug 22 04:05	8°♏57'52	0°54'56
max. Earth dist.	10600 Aug 22 12:28	9°♏00'26	10.64203 AU
morning rise	10600 Sep 08 12:32	11°♏04'25	
retrograde	10600 Dec 22 07:22	18°♏41'57	
opposition	10601 Mar 02 01:11	15°♏17'29	-0°53'21
min. Earth dist.	10601 Mar 01 18:34	15°♏18'46	8.61959 AU
direct	10601 May 09 03:33	11°♏56'33	
evening set	10601 Aug 17 17:23	19°♏19'08	
conjunction	10601 Sep 04 01:42	21°♏26'05	-0°31'40
minimum elong	10601 Sep 04 01:43	21°♏26'06	0°31'48
max. Earth dist.	10601 Sep 04 09:27	21°♏28'28	10.59574 AU
morning rise	10601 Sep 21 13:19	23°♏34'04	
	10601 Nov 26 17:40	0°♏	
retrograde	10602 Jan 04 12:23	1°♏14'37	