

evening set	5100 Jan 29 09:44	23° 59 '30	conjunction	5106 Mar 11 05:32	19° 59 '26 -0°46'28
			minimum elong	5106 Mar 11 05:32	19° 59 '26 0°46'28
conjunction	5100 Feb 14 02:24	24° 55 '31 -0°37'54	max. Earth dist.	5106 Mar 11 21:02	20° 01 '43 20.72311 AU
minimum elong	5100 Feb 14 02:24	24° 55 '31 0°37'54	morning rise	5106 Mar 26 21:41	20° 54 '19
max. Earth dist.	5100 Feb 14 12:17	24° 57 '00 20.38552 AU	retrograde	5106 Jun 27 12:51	24° 02 '35
morning rise	5100 Mar 01 18:23	25° 51 '27	opposition	5106 Sep 12 19:54	22° 03 '57 -0°51'46
retrograde	5100 Jun 01 17:22	29° 02 '08	min. Earth dist.	5106 Sep 12 03:47	22° 05 '34 18.74608 AU
opposition	5100 Aug 17 05:21	27° 02 '57 -0°43'09	direct	5106 Nov 28 15:13	20° 05 '47
min. Earth dist.	5100 Aug 16 18:23	27° 04 '04 18.41665 AU	evening set	5107 Feb 27 21:00	23° 10 '56
direct	5100 Nov 02 10:11	25° 02 '52			
evening set	5101 Feb 02 19:59	28° 13 '46	conjunction	5107 Mar 15 12:26	24° 05 '33 -0°47'03
			minimum elong	5107 Mar 15 12:25	24° 05 '33 0°47'04
conjunction	5101 Feb 18 12:15	29° 09 '33 -0°39'54	max. Earth dist.	5107 Mar 16 04:55	24° 07 '58 20.76763 AU
minimum elong	5101 Feb 18 12:15	29° 09 '33 0°39'53	morning rise	5107 Mar 31 04:48	25° 00 '19
max. Earth dist.	5101 Feb 18 23:28	29° 11 '13 20.44753 AU	retrograde	5107 Jul 01 21:17	28° 08 '15
	5101 Mar 04 16:03	0° 00 '	opposition	5107 Sep 17 08:30	26° 09 '36 -0°52'17
morning rise	5101 Mar 06 04:06	0° 05 '16	min. Earth dist.	5107 Sep 16 16:47	26° 11 '10 18.78877 AU
retrograde	5101 Jun 06 04:36	3° 15 '29	direct	5107 Dec 03 01:22	24° 11 '38
opposition	5101 Aug 21 21:06	1° 16 '27 -0°45'14	evening set	5108 Mar 03 03:12	27° 15 '57
min. Earth dist.	5101 Aug 21 10:01	1° 17 '34 18.47813 AU			
	5101 Sep 24 23:20	30° 00 '	conjunction	5108 Mar 18 18:44	28° 10 '25 -0°47'24
direct	5101 Nov 06 23:41	29° 16 '44	minimum elong	5108 Mar 18 18:44	28° 10 '25 0°47'24
	5101 Dec 18 12:21	0° 00 '	max. Earth dist.	5108 Mar 19 11:33	28° 12 '53 20.80855 AU
evening set	5102 Feb 07 05:34	2° 26 '37	morning rise	5108 Apr 03 11:30	29° 05 '05
				5108 Apr 20 03:39	0° 00 '
conjunction	5102 Feb 22 21:32	3° 22 '10 -0°41'41	retrograde	5108 Jul 05 07:47	2° 12 '42
minimum elong	5102 Feb 22 21:32	3° 22 '10 0°41'41	opposition	5108 Sep 20 20:19	0° 14 '01 -0°52'31
max. Earth dist.	5102 Feb 23 09:50	3° 23 '59 20.50819 AU	min. Earth dist.	5108 Sep 20 02:58	0° 15 '45 18.82795 AU
morning rise	5102 Mar 10 13:18	4° 17 '41		5108 Sep 26 16:35	30° 00 '
retrograde	5102 Jun 10 17:32	7° 27 '28	direct	5108 Dec 06 11:51	28° 16 '14
opposition	5102 Aug 26 12:18	5° 28 '34 -0°47'03		5109 Feb 10 09:35	0° 00 '
min. Earth dist.	5102 Aug 25 23:08	5° 29 '53 18.53776 AU	evening set	5109 Mar 07 09:03	1° 19 '45
direct	5102 Nov 11 14:34	3° 29 '13			
evening set	5103 Feb 11 14:29	6° 38 '06	conjunction	5109 Mar 23 00:46	2° 14 '06 -0°47'31
			minimum elong	5109 Mar 23 00:46	2° 14 '06 0°47'31
conjunction	5103 Feb 27 06:10	7° 33 '25 -0°43'14	max. Earth dist.	5109 Mar 23 18:41	2° 16 '43 20.84598 AU
minimum elong	5103 Feb 27 06:10	7° 33 '25 0°43'13	morning rise	5109 Apr 07 17:51	3° 08 '41
max. Earth dist.	5103 Feb 27 19:43	7° 35 '26 20.56658 AU	retrograde	5109 Jul 09 15:26	6° 16 '01
morning rise	5103 Mar 14 21:54	8° 28 '46	opposition	5109 Sep 25 07:33	4° 17 '18 -0°52'30
retrograde	5103 Jun 15 03:44	11° 38 '09	min. Earth dist.	5109 Sep 24 14:33	4° 19 '00 18.86391 AU
opposition	5103 Aug 31 03:11	9° 39 '21 -0°48'38	direct	5109 Dec 10 20:38	2° 19 '42
min. Earth dist.	5103 Aug 30 14:07	9° 40 '40 18.59496 AU	evening set	5110 Mar 11 14:31	5° 22 '29
direct	5103 Nov 16 02:41	7° 40 '21			
evening set	5104 Feb 15 22:56	10° 48 '15	conjunction	5110 Mar 27 06:24	6° 16 '45 -0°47'23
			minimum elong	5110 Mar 27 06:24	6° 16 '45 0°47'22
conjunction	5104 Mar 02 14:26	11° 43 '23 -0°44'33	max. Earth dist.	5110 Mar 28 00:35	6° 19 '23 20.88053 AU
minimum elong	5104 Mar 02 14:26	11° 43 '23 0°44'33	morning rise	5110 Apr 11 23:58	7° 11 '15
max. Earth dist.	5104 Mar 03 04:39	11° 45 '29 20.62232 AU	retrograde	5110 Jul 14 01:33	10° 18 '22
morning rise	5104 Mar 18 06:15	12° 38 '33	opposition	5110 Sep 29 18:19	8° 19 '37 -0°52'13
retrograde	5104 Jun 18 16:09	15° 47 '32	min. Earth dist.	5110 Sep 28 23:40	8° 21 '29 18.89705 AU
opposition	5104 Sep 03 17:14	13° 48 '50 -0°49'57	direct	5110 Dec 15 05:43	6° 22 '12
min. Earth dist.	5104 Sep 03 02:21	13° 50 '19 18.64910 AU	evening set	5111 Mar 15 19:31	9° 24 '20
direct	5104 Nov 19 16:03	11° 50 '09			
evening set	5105 Feb 19 06:49	14° 57 '06	conjunction	5111 Mar 31 11:43	10° 18 '30 -0°47'01
			minimum elong	5111 Mar 31 11:43	10° 18 '30 0°47'01
conjunction	5105 Mar 06 22:14	15° 52 '03 -0°45'37	max. Earth dist.	5111 Apr 01 07:05	10° 21 '19 20.91216 AU
minimum elong	5105 Mar 06 22:14	15° 52 '03 0°45'37	morning rise	5111 Apr 16 05:42	11° 12 '57
max. Earth dist.	5105 Mar 07 13:25	15° 54 '17 20.67458 AU	retrograde	5111 Jul 18 08:54	14° 19 '54
morning rise	5105 Mar 22 14:10	16° 47 '04	min. Earth dist.	5111 Oct 03 10:24	12° 22 '59 18.92730 AU
retrograde	5105 Jun 23 01:26	19° 55 '41	opposition	5111 Oct 04 04:46	12° 21 '08 -0°51'40
opposition	5105 Sep 08 06:57	17° 57 '02 -0°50'59	direct	5111 Dec 19 13:02	10° 23 '55
min. Earth dist.	5105 Sep 07 16:29	17° 58 '29 18.69956 AU	evening set	5112 Mar 19 00:23	13° 25 '27
direct	5105 Nov 24 03:11	15° 58 '37			
evening set	5106 Feb 23 14:10	19° 04 '40	conjunction	5112 Apr 03 16:55	14° 19 '33 -0°46'25
			minimum elong	5112 Apr 03 16:55	14° 19 '33 0°46'25

max. Earth dist.	5112 Apr 04 12:21	14° Υ 22'22	20.94101 AU	min. Earth dist.	5118 Nov 01 01:38	10° 8 23'35	19.03424 AU
morning rise	5112 Apr 19 11:31	15° Υ 13'58		direct	5119 Jan 16 12:50	8° 8 25'22	
retrograde	5112 Jul 21 19:04	18° Υ 20'47		evening set	5119 Apr 16 09:26	11° 8 24'35	
opposition	5112 Oct 07 14:31	16° Υ 22'02	-0°50'52				
min. Earth dist.	5112 Oct 06 18:50	16° Υ 24'00	18.95463 AU	conjunction	5119 May 02 05:58	12° 8 18'47	-0°36'17
direct	5112 Dec 22 21:14	14° Υ 24'59		minimum elong	5119 May 02 05:58	12° 8 18'47	0°36'17
evening set	5113 Mar 23 05:05	17° Υ 26'00		max. Earth dist.	5119 May 03 01:30	12° 8 21'35	21.03223 AU
				morning rise	5119 May 18 05:32	13° 8 13'26	
conjunction	5113 Apr 07 22:04	18° Υ 20'05	-0°45'36		5119 Jun 22 10:04	15° 8	
minimum elong	5113 Apr 07 22:05	18° Υ 20'05	0°45'36	retrograde	5119 Aug 20 07:43	16° 8 20'24	
max. Earth dist.	5113 Apr 08 18:27	18° Υ 23'01	20.96663 AU		5119 Oct 20 20:51	15° 8	
morning rise	5113 Apr 23 17:13	19° Υ 14'29		min. Earth dist.	5119 Nov 05 11:15	14° 8 23'11	19.02948 AU
retrograde	5113 Jul 26 02:29	22° Υ 21'12		opposition	5119 Nov 06 04:45	14° 8 21'26	-0°38'51
min. Earth dist.	5113 Oct 11 05:01	20° Υ 24'22	18.97855 AU	direct	5120 Jan 20 19:28	12° 8 25'04	
opposition	5113 Oct 12 00:08	20° Υ 22'27	-0°49'50		5120 Apr 12 07:09	15° 8	
direct	5113 Dec 27 03:09	18° Υ 25'36		evening set	5120 Apr 19 14:40	15° 8 24'11	
evening set	5114 Mar 27 09:36	21° Υ 26'10					
				conjunction	5120 May 05 11:56	16° 8 18'27	-0°34'03
conjunction	5114 Apr 12 03:00	22° Υ 20'12	-0°44'33	minimum elong	5120 May 05 11:56	16° 8 18'27	0°34'04
minimum elong	5114 Apr 12 03:00	22° Υ 20'12	0°44'34	max. Earth dist.	5120 May 06 06:08	16° 8 21'04	21.02487 AU
max. Earth dist.	5114 Apr 12 23:11	22° Υ 23'07	20.98886 AU	morning rise	5120 May 21 12:28	17° 8 13'12	
morning rise	5114 Apr 27 22:50	23° Υ 14'36		retrograde	5120 Aug 23 17:01	20° 8 20'17	
retrograde	5114 Jul 30 12:23	26° Υ 21'17		opposition	5120 Nov 09 12:42	18° 8 21'09	-0°36'18
opposition	5114 Oct 16 09:23	24° Υ 22'33	-0°48'34	min. Earth dist.	5120 Nov 08 19:20	18° 8 22'54	19.01942 AU
min. Earth dist.	5114 Oct 15 13:17	24° Υ 24'34	18.99889 AU	direct	5121 Jan 24 01:42	16° 8 24'42	
direct	5114 Dec 31 11:13	22° Υ 25'51		evening set	5121 Apr 23 20:00	19° 8 23'46	
evening set	5115 Mar 31 14:10	25° Υ 26'02					
				conjunction	5121 May 09 18:07	20° 8 18'09	-0°31'40
conjunction	5115 Apr 16 08:08	26° Υ 20'05	-0°43'18	minimum elong	5121 May 09 18:07	20° 8 18'09	0°31'41
minimum elong	5115 Apr 16 08:08	26° Υ 20'05	0°43'18	max. Earth dist.	5121 May 10 12:21	20° 8 20'46	21.01224 AU
max. Earth dist.	5115 Apr 17 05:03	26° Υ 23'05	21.00715 AU	morning rise	5121 May 25 19:26	21° 8 13'00	
morning rise	5115 May 02 04:35	27° Υ 14'30		retrograde	5121 Aug 28 00:36	24° 8 20'13	
	5115 Jul 05 08:01	0° 8		opposition	5121 Nov 13 20:42	22° 8 20'56	-0°33'34
retrograde	5115 Aug 03 20:26	0° 8 21'10		min. Earth dist.	5121 Nov 13 04:26	22° 8 22'35	19.00442 AU
	5115 Sep 02 22:24	30° 8		direct	5122 Jan 28 08:09	20° 8 24'22	
opposition	5115 Oct 20 18:30	28° Υ 22'27	-0°47'03	evening set	5122 Apr 28 01:26	23° 8 23'27	
min. Earth dist.	5115 Oct 19 23:13	28° Υ 24'22	19.01510 AU				
direct	5116 Jan 04 16:41	26° Υ 25'54		conjunction	5122 May 14 00:18	24° 8 17'57	-0°29'07
evening set	5116 Apr 03 18:46	29° Υ 25'45		minimum elong	5122 May 14 00:18	24° 8 17'57	0°29'07
	5116 Apr 13 19:39	0° 8		max. Earth dist.	5122 May 14 17:22	24° 8 20'23	20.99519 AU
				morning rise	5122 May 30 02:36	25° 8 12'55	
conjunction	5116 Apr 19 13:17	0° 8 19'48	-0°41'50	retrograde	5122 Sep 01 10:21	28° 8 20'20	
minimum elong	5116 Apr 19 13:17	0° 8 19'48	0°41'52	opposition	5122 Nov 18 04:34	26° 8 20'52	-0°30'40
max. Earth dist.	5116 Apr 20 09:36	0° 8 22'43	21.02123 AU	min. Earth dist.	5122 Nov 17 12:21	26° 8 22'30	18.98533 AU
morning rise	5116 May 05 10:34	1° 8 14'15		direct	5123 Feb 01 14:23	24° 8 24'10	
retrograde	5116 Aug 07 06:05	4° 8 20'58		evening set	5123 May 02 07:15	27° 8 23'21	
min. Earth dist.	5116 Oct 23 07:32	2° 8 24'12	19.02679 AU				
opposition	5116 Oct 24 03:16	2° 8 22'13	-0°45'19	conjunction	5123 May 18 07:02	28° 8 17'59	-0°26'25
direct	5117 Jan 08 00:11	0° 8 25'48		minimum elong	5123 May 18 07:02	28° 8 17'59	0°26'27
evening set	5117 Apr 07 23:33	3° 8 25'23		max. Earth dist.	5123 May 19 00:18	28° 8 20'27	20.97413 AU
				morning rise	5123 Jun 03 10:09	29° 8 13'06	
conjunction	5117 Apr 23 18:42	4° 8 19'28	-0°40'11		5123 Jun 17 20:11	0° II	
minimum elong	5117 Apr 23 18:42	4° 8 19'28	0°40'11	retrograde	5123 Sep 05 18:04	2° II 20'44	
max. Earth dist.	5117 Apr 24 15:18	4° 8 22'26	21.03029 AU	opposition	5123 Nov 22 12:19	0° II 21'06	-0°27'37
morning rise	5117 May 09 16:38	5° 8 13'58		min. Earth dist.	5123 Nov 21 21:06	0° II 22'39	18.96247 AU
retrograde	5117 Aug 11 14:17	8° 8 20'44			5123 Dec 01 06:02	30° R	
opposition	5117 Oct 28 11:51	6° 8 21'58	-0°43'22	direct	5124 Feb 05 20:11	28° 8 24'16	
min. Earth dist.	5117 Oct 27 17:17	6° 8 23'50	19.03322 AU		5124 Apr 08 18:15	0° II	
direct	5118 Jan 12 06:11	4° 8 25'37		evening set	5124 May 05 13:27	1° II 23'38	
evening set	5118 Apr 12 04:30	7° 8 25'00					
				conjunction	5124 May 21 14:03	2° II 18'24	-0°23'35
conjunction	5118 Apr 28 00:15	8° 8 19'08	-0°38'19	minimum elong	5124 May 21 14:03	2° II 18'24	0°23'36
minimum elong	5118 Apr 28 00:15	8° 8 19'08	0°38'20	max. Earth dist.	5124 May 22 06:01	2° II 20'41	20.94969 AU
max. Earth dist.	5118 Apr 28 19:45	8° 8 21'56	21.03412 AU	morning rise	5124 Jun 06 18:12	3° II 13'40	
morning rise	5118 May 13 23:03	9° 8 13'42		retrograde	5124 Sep 09 04:40	6° II 21'36	
retrograde	5118 Aug 15 23:46	12° 8 20'33		opposition	5124 Nov 25 20:04	4° II 21'48	-0°24'25
opposition	5118 Nov 01 20:21	10° 8 21'42	-0°41'13	min. Earth dist.	5124 Nov 25 05:04	4° II 23'20	18.93636 AU

direct	5125 Feb 09 02:28	2°II24'49			5130 Nov 18 06:16	30°RII
evening set	5125 May 09 19:59	5°II24'27		opposition	5130 Dec 20 21:48	28°II45'23 -0°03'04
				min. Earth dist.	5130 Dec 20 12:39	28°II46'19 18.71486 AU
conjunction	5125 May 25 21:32	6°II19'24 -0°20'39		direct	5131 Mar 05 18:17	26°II47'27
minimum elong	5125 May 25 21:32	6°II19'24 0°20'40		evening set	5131 Jun 03 23:56	29°II50'16
max. Earth dist.	5125 May 26 13:38	6°II21'42 20.92190 AU			5131 Jun 06 20:35	0°☾
morning rise	5125 Jun 11 02:27	7°II14'50				
retrograde	5125 Sep 13 12:50	10°II23'05		conjunction	5131 Jun 20 07:06	0°☾46'29 -0°01'08
opposition	5125 Nov 30 03:52	8°II23'10 -0°21'06		minimum elong	5131 Jun 20 07:06	0°☾46'29 0°01'08
min. Earth dist.	5125 Nov 29 13:51	8°II24'35 18.90702 AU		behind sun begin	5131 Jun 20 00:24	0°☾45'33
direct	5126 Feb 13 08:07	6°II26'03		behind sun end	5131 Jun 20 13:47	0°☾47'26
evening set	5126 May 14 03:02	9°II26'01		max. Earth dist.	5131 Jun 20 16:54	0°☾47'54 20.69086 AU
				morning rise	5131 Jul 06 17:22	1°☾43'11
conjunction	5126 May 30 05:26	10°II21'08 -0°17'35		retrograde	5131 Oct 09 08:24	4°☾54'12
minimum elong	5126 May 30 05:26	10°II21'08 0°17'36		asc. node	5131 Oct 15 22:30	4°☾53'08
max. Earth dist.	5126 May 30 20:05	10°II23'14 20.89124 AU		opposition	5131 Dec 25 07:00	2°☾53'40 0°00'43
morning rise	5126 Jun 15 11:23	11°II16'45		min. Earth dist.	5131 Dec 24 23:16	2°☾54'28 18.66577 AU
retrograde	5126 Sep 18 00:05	14°II25'23		direct	5132 Mar 09 02:21	0°☾55'29
opposition	5126 Dec 04 11:49	12°II25'20 -0°17'40		evening set	5132 Jun 07 11:19	3°☾59'02
min. Earth dist.	5126 Dec 03 22:13	12°II26'44 18.87489 AU				
direct	5127 Feb 17 14:39	10°II28'04		conjunction	5132 Jun 23 19:17	4°☾55'31 0°02'24
evening set	5127 May 18 10:32	13°II28'28		minimum elong	5132 Jun 23 19:17	4°☾55'31 0°02'23
				behind sun begin	5132 Jun 23 12:36	4°☾54'35
conjunction	5127 Jun 03 13:58	14°II23'47 -0°14'26		behind sun end	5132 Jun 24 01:59	4°☾56'28
minimum elong	5127 Jun 03 13:58	14°II23'47 0°14'27		max. Earth dist.	5132 Jun 24 02:23	4°☾56'31 20.63992 AU
behind sun begin	5127 Jun 03 11:02	14°II23'23		morning rise	5132 Jul 10 06:33	5°☾52'28
behind sun end	5127 Jun 03 16:54	14°II24'12		retrograde	5132 Oct 12 21:27	9°☾04'00
max. Earth dist.	5127 Jun 04 04:40	14°II25'54 20.85760 AU		opposition	5132 Dec 28 16:39	7°☾03'18 0°04'32
morning rise	5127 Jun 19 20:45	15°II19'36		min. Earth dist.	5132 Dec 28 10:29	7°☾03'56 18.61293 AU
retrograde	5127 Sep 22 09:35	18°II28'39		direct	5133 Mar 13 10:57	5°☾04'48
opposition	5127 Dec 08 19:59	16°II28'31 -0°14'07		evening set	5133 Jun 11 23:11	8°☾09'08
min. Earth dist.	5127 Dec 08 07:27	16°II29'48 18.83968 AU				
direct	5128 Feb 21 20:48	14°II31'07		conjunction	5133 Jun 28 08:11	9°☾05'52 0°05'51
evening set	5128 May 21 18:52	17°II32'01		minimum elong	5133 Jun 28 08:11	9°☾05'52 0°05'50
				behind sun begin	5133 Jun 28 01:46	9°☾04'58
conjunction	5128 Jun 06 23:07	18°II27'32 -0°11'13		behind sun end	5133 Jun 28 14:35	9°☾06'46
minimum elong	5128 Jun 06 23:08	18°II27'32 0°11'14		max. Earth dist.	5133 Jun 28 14:42	9°☾06'47 20.58525 AU
behind sun begin	5128 Jun 06 18:14	18°II26'51		morning rise	5133 Jul 14 20:03	10°☾03'03
behind sun end	5128 Jun 07 04:01	18°II28'13		retrograde	5133 Oct 17 10:26	13°☾15'07
max. Earth dist.	5128 Jun 07 12:00	18°II29'23 20.82101 AU		opposition	5134 Jan 02 02:36	11°☾14'13 0°08'20
morning rise	5128 Jun 23 06:57	19°II23'34		min. Earth dist.	5134 Jan 01 21:38	11°☾14'44 18.55658 AU
retrograde	5128 Sep 25 21:06	22°II33'04		direct	5134 Mar 17 20:00	9°☾15'24
opposition	5128 Dec 12 04:11	20°II32'50 -0°10'30		evening set	5134 Jun 16 11:58	12°☾20'31
min. Earth dist.	5128 Dec 11 16:31	20°II34'02 18.80152 AU				
direct	5129 Feb 25 03:41	18°II35'17		conjunction	5134 Jul 02 21:43	13°☾17'31 0°09'15
evening set	5129 May 26 03:47	21°II36'46		minimum elong	5134 Jul 02 21:43	13°☾17'31 0°09'14
				behind sun begin	5134 Jul 02 16:05	13°☾16'43
conjunction	5129 Jun 11 09:04	22°II32'31 -0°07'55		behind sun end	5134 Jul 03 03:21	13°☾18'19
minimum elong	5129 Jun 11 09:03	22°II32'31 0°07'55		max. Earth dist.	5134 Jul 03 01:36	13°☾18'04 20.52760 AU
behind sun begin	5129 Jun 11 03:05	22°II31'40		morning rise	5134 Jul 19 10:32	14°☾14'58
behind sun end	5129 Jun 11 15:02	22°II33'21		retrograde	5134 Oct 22 00:26	17°☾27'33
max. Earth dist.	5129 Jun 11 21:42	22°II34'20 20.78117 AU		opposition	5135 Jan 06 12:52	15°☾26'26 0°12'07
morning rise	5129 Jun 27 17:37	23°II28'45		min. Earth dist.	5135 Jan 06 09:30	15°☾26'48 18.49771 AU
retrograde	5129 Sep 30 08:08	26°II38'44		direct	5135 Mar 22 05:30	13°☾27'14
opposition	5129 Dec 16 12:48	24°II38'26 -0°06'49		evening set	5135 Jun 21 01:22	16°☾33'13
min. Earth dist.	5129 Dec 16 02:24	24°II39'30 18.75994 AU				
direct	5130 Mar 01 10:40	22°II40'43		conjunction	5135 Jul 07 12:10	17°☾30'30 0°12'38
evening set	5130 May 30 13:26	25°II42'50		minimum elong	5135 Jul 07 12:10	17°☾30'30 0°12'37
				behind sun begin	5135 Jul 07 07:58	17°☾29'54
conjunction	5130 Jun 15 19:31	26°II38'49 -0°04'34		behind sun end	5135 Jul 07 16:23	17°☾31'06
minimum elong	5130 Jun 15 19:32	26°II38'49 0°04'35		max. Earth dist.	5135 Jul 07 15:40	17°☾31'00 20.46762 AU
behind sun begin	5130 Jun 15 12:59	26°II37'54		morning rise	5135 Jul 24 01:33	18°☾28'12
behind sun end	5130 Jun 16 02:04	26°II39'44		retrograde	5135 Oct 26 14:49	21°☾41'19
max. Earth dist.	5130 Jun 16 05:57	26°II40'18 20.73795 AU		opposition	5136 Jan 10 23:28	19°☾40'00 0°15'52
morning rise	5130 Jul 02 05:06	27°II35'17		min. Earth dist.	5136 Jan 10 21:07	19°☾40'15 18.43676 AU
	5130 Aug 22 07:39	0°☾		direct	5136 Mar 25 15:39	17°☾40'24
retrograde	5130 Oct 04 20:14	0°☾45'48		evening set	5136 Jun 24 15:45	20°☾47'18

conjunction	5136 Jul 11 03:12	21° \mathring{O} 44'51	0°15'59	minimum elong	5142 Aug 07 15:05	17° \mathring{O} 44'35	0°33'50
minimum elong	5136 Jul 11 03:12	21° \mathring{O} 44'51	0°15'59	max. Earth dist.	5142 Aug 07 07:58	17° \mathring{O} 43'31	20.03446 AU
max. Earth dist.	5136 Jul 11 04:07	21° \mathring{O} 44'59	20.40600 AU	morning rise	5142 Aug 24 08:01	18° \mathring{O} 44'03	
morning rise	5136 Jul 27 17:24	22° \mathring{O} 42'48		retrograde	5142 Nov 26 11:09	22° \mathring{O} 01'20	
retrograde	5136 Oct 30 05:33	25° \mathring{O} 56'29		opposition	5143 Feb 09 15:54	19° \mathring{O} 59'00	0°39'00
opposition	5137 Jan 14 10:28	23° \mathring{O} 54'56	0°19'32	min. Earth dist.	5143 Feb 09 22:27	19° \mathring{O} 58'18	18.00459 AU
min. Earth dist.	5137 Jan 14 09:45	23° \mathring{O} 55'01	18.37465 AU	direct	5143 Apr 25 06:35	17° \mathring{O} 56'59	
direct	5137 Mar 30 01:45	21° \mathring{O} 54'57		evening set	5143 Jul 26 20:12	21° \mathring{O} 11'30	
evening set	5137 Jun 29 06:46	25° \mathring{O} 02'49					
conjunction	5137 Jul 15 19:09	26° \mathring{O} 00'39	0°19'15	conjunction	5143 Aug 12 12:22	22° \mathring{O} 11'03	0°36'18
minimum elong	5137 Jul 15 19:09	26° \mathring{O} 00'39	0°19'13	minimum elong	5143 Aug 12 12:22	22° \mathring{O} 11'02	0°36'18
max. Earth dist.	5137 Jul 15 19:52	26° \mathring{O} 00'45	20.34345 AU	max. Earth dist.	5143 Aug 12 04:36	22° \mathring{O} 09'53	19.97494 AU
morning rise	5137 Aug 01 09:47	26° \mathring{O} 58'51		morning rise	5143 Aug 29 05:24	23° \mathring{O} 10'45	
	5137 Oct 12 05:25	0° \mathring{O}		retrograde	5143 Dec 01 07:31	26° \mathring{O} 28'38	
retrograde	5137 Nov 03 21:33	0° \mathring{O} 13'05		opposition	5144 Feb 14 06:57	24° \mathring{O} 26'15	0°41'38
	5137 Nov 26 15:47	30° \mathring{R} \mathring{O}		min. Earth dist.	5144 Feb 14 14:02	24° \mathring{O} 25'30	17.94531 AU
opposition	5138 Jan 18 21:57	28° \mathring{O} 11'21	0°23'07	direct	5144 Apr 28 23:19	22° \mathring{O} 23'57	
min. Earth dist.	5138 Jan 18 21:53	28° \mathring{O} 11'22	18.31187 AU	evening set	5144 Jul 30 17:55	25° \mathring{O} 39'39	
direct	5138 Apr 03 13:28	26° \mathring{O} 11'00		conjunction	5144 Aug 16 10:20	26° \mathring{O} 39'28	0°38'34
evening set	5138 Jul 03 22:39	29° \mathring{O} 19'51		minimum elong	5144 Aug 16 10:20	26° \mathring{O} 39'27	0°38'33
	5138 Jul 15 09:54	0° \mathring{O}		max. Earth dist.	5144 Aug 16 00:00	26° \mathring{O} 37'54	19.91581 AU
conjunction	5138 Jul 20 11:39	0° \mathring{O} 17'58	0°22'25	morning rise	5144 Sep 02 03:33	27° \mathring{O} 39'24	
minimum elong	5138 Jul 20 11:39	0° \mathring{O} 17'58	0°22'25		5144 Oct 18 12:32	0° \mathring{O} \mathring{O}	
max. Earth dist.	5138 Jul 20 09:54	0° \mathring{O} 17'42	20.28062 AU	retrograde	5144 Dec 05 01:50	0° \mathring{O} \mathring{O} 57'52	
morning rise	5138 Aug 06 03:02	1° \mathring{O} 16'26			5145 Jan 22 14:35	30° \mathring{R} \mathring{O}	
retrograde	5138 Nov 08 12:57	4° \mathring{O} 31'15		opposition	5145 Feb 17 22:53	28° \mathring{O} 55'26	0°44'02
opposition	5139 Jan 23 10:02	2° \mathring{O} 29'20	0°26'35	min. Earth dist.	5145 Feb 18 08:15	28° \mathring{O} 54'25	17.88655 AU
min. Earth dist.	5139 Jan 23 11:39	2° \mathring{O} 29'10	18.24914 AU	direct	5145 May 03 15:04	26° \mathring{O} 52'47	
direct	5139 Apr 08 00:15	0° \mathring{O} 28'36			5145 Aug 01 22:19	0° \mathring{O} \mathring{O}	
evening set	5139 Jul 08 15:27	3° \mathring{O} 38'30		evening set	5145 Aug 04 16:23	0° \mathring{O} \mathring{O} 09'41	
conjunction	5139 Jul 25 05:21	4° \mathring{O} 36'55	0°25'29	conjunction	5145 Aug 21 09:15	1° \mathring{O} \mathring{O} 09'45	0°40'36
minimum elong	5139 Jul 25 05:21	4° \mathring{O} 36'55	0°25'28	minimum elong	5145 Aug 21 09:15	1° \mathring{O} \mathring{O} 09'45	0°40'36
max. Earth dist.	5139 Jul 25 03:22	4° \mathring{O} 36'37	20.21797 AU	max. Earth dist.	5145 Aug 20 21:57	1° \mathring{O} \mathring{O} 08'02	19.85734 AU
morning rise	5139 Aug 10 21:03	5° \mathring{O} 35'37		morning rise	5145 Sep 07 02:28	2° \mathring{O} \mathring{O} 09'54	
retrograde	5139 Nov 13 06:38	8° \mathring{O} 51'02		retrograde	5145 Dec 09 23:07	5° \mathring{O} \mathring{O} 28'55	
opposition	5140 Jan 27 22:27	6° \mathring{O} 48'59	0°29'56	opposition	5146 Feb 22 15:17	3° \mathring{O} \mathring{O} 26'24	0°46'11
min. Earth dist.	5140 Jan 28 00:37	6° \mathring{O} 48'45	18.18671 AU	min. Earth dist.	5146 Feb 23 01:02	3° \mathring{O} \mathring{O} 25'21	17.82842 AU
direct	5140 Apr 11 13:44	4° \mathring{O} 47'53		direct	5146 May 08 09:45	1° \mathring{O} \mathring{O} 23'26	
evening set	5140 Jul 12 09:19	7° \mathring{O} 58'54		evening set	5146 Aug 09 15:44	4° \mathring{O} \mathring{O} 41'28	
conjunction	5140 Jul 28 23:42	8° \mathring{O} 57'35	0°28'26	conjunction	5146 Aug 26 08:49	5° \mathring{O} \mathring{O} 41'47	0°42'24
minimum elong	5140 Jul 28 23:42	8° \mathring{O} 57'35	0°28'24	minimum elong	5146 Aug 26 08:49	5° \mathring{O} \mathring{O} 41'47	0°42'24
max. Earth dist.	5140 Jul 28 19:14	8° \mathring{O} 56'56	20.15591 AU	max. Earth dist.	5146 Aug 25 19:20	5° \mathring{O} \mathring{O} 39'44	19.79959 AU
morning rise	5140 Aug 14 15:59	9° \mathring{O} 56'34		morning rise	5146 Sep 12 02:05	6° \mathring{O} \mathring{O} 42'08	
retrograde	5140 Nov 16 22:44	13° \mathring{O} 12'35		retrograde	5146 Dec 14 18:17	10° \mathring{O} \mathring{O} 01'40	
opposition	5141 Jan 31 11:42	11° \mathring{O} 10'25	0°33'08	opposition	5147 Feb 27 08:32	7° \mathring{O} \mathring{O} 59'03	0°48'03
min. Earth dist.	5141 Jan 31 15:40	11° \mathring{O} 09'59	18.12514 AU	min. Earth dist.	5147 Feb 27 20:33	7° \mathring{O} \mathring{O} 57'45	17.77132 AU
direct	5141 Apr 16 01:47	9° \mathring{O} 08'59		direct	5147 May 13 03:36	5° \mathring{O} \mathring{O} 55'44	
evening set	5141 Jul 17 03:46	12° \mathring{O} 21'08		evening set	5147 Aug 14 15:53	9° \mathring{O} \mathring{O} 14'55	
conjunction	5141 Aug 02 18:55	13° \mathring{O} 20'07	0°31'13	conjunction	5147 Aug 31 09:13	10° \mathring{O} \mathring{O} 15'27	0°43'56
minimum elong	5141 Aug 02 18:55	13° \mathring{O} 20'07	0°31'13	minimum elong	5147 Aug 31 09:13	10° \mathring{O} \mathring{O} 15'27	0°43'56
max. Earth dist.	5141 Aug 02 14:17	13° \mathring{O} 19'25	20.09475 AU	max. Earth dist.	5147 Aug 30 18:35	10° \mathring{O} \mathring{O} 13'14	19.74324 AU
morning rise	5141 Aug 19 11:25	14° \mathring{O} 19'20		morning rise	5147 Sep 17 02:23	11° \mathring{O} \mathring{O} 16'00	
	5141 Aug 31 10:10	15° \mathring{O}		retrograde	5147 Dec 19 16:11	14° \mathring{O} \mathring{O} 35'59	
retrograde	5141 Nov 21 17:50	17° \mathring{O} 35'59		opposition	5148 Mar 03 02:07	12° \mathring{O} \mathring{O} 33'17	0°49'38
opposition	5142 Feb 05 01:27	15° \mathring{O} 33'43	0°36'10	min. Earth dist.	5148 Mar 03 14:20	12° \mathring{O} \mathring{O} 31'58	17.71584 AU
min. Earth dist.	5142 Feb 05 05:51	15° \mathring{O} 33'15	18.06439 AU	direct	5148 May 17 00:06	10° \mathring{O} \mathring{O} 29'36	
	5142 Feb 18 09:02	15° \mathring{R} \mathring{O}		evening set	5148 Aug 18 16:43	13° \mathring{O} \mathring{O} 49'53	
direct	5142 Apr 20 16:49	13° \mathring{O} 32'01		conjunction	5148 Sep 04 10:09	14° \mathring{O} \mathring{O} 50'39	0°45'13
	5142 Jun 18 22:01	15° \mathring{O}		minimum elong	5148 Sep 04 10:09	14° \mathring{O} \mathring{O} 50'39	0°45'13
evening set	5142 Jul 21 23:33	16° \mathring{O} 45'19		max. Earth dist.	5148 Sep 03 18:04	14° \mathring{O} \mathring{O} 48'12	19.68876 AU
conjunction	5142 Aug 07 15:05	17° \mathring{O} 44'35	0°33'51	morning rise	5148 Sep 21 03:05	15° \mathring{O} \mathring{O} 51'22	
				retrograde	5148 Dec 23 12:21	19° \mathring{O} \mathring{O} 11'47	

opposition	5149 Mar 07 20:33	17° <u>0</u> 08'59	0°50'54	max. Earth dist.	5155 Oct 08 07:42	17° <u>0</u> 28'30	19.41805 AU
min. Earth dist.	5149 Mar 08 10:44	17° <u>0</u> 07'26	17.66273 AU				
direct	5149 May 21 19:31	15° <u>0</u> 04'57		conjunction	5155 Oct 09 04:19	17° <u>0</u> 31'42	0°45'40
evening set	5149 Aug 23 17:57	18° <u>0</u> 26'17		minimum elong	5155 Oct 09 04:19	17° <u>0</u> 31'42	0°45'41
				morning rise	5155 Oct 25 18:03	18° <u>0</u> 33'07	
conjunction	5149 Sep 09 11:25	19° <u>0</u> 27'14	0°46'12	retrograde	5156 Jan 26 05:58	21° <u>0</u> 55'24	
minimum elong	5149 Sep 09 11:25	19° <u>0</u> 27'14	0°46'11	opposition	5156 Apr 08 20:31	19° <u>0</u> 52'33	0°50'18
max. Earth dist.	5149 Sep 08 18:15	19° <u>0</u> 24'37	19.63713 AU	min. Earth dist.	5156 Apr 09 13:21	19° <u>0</u> 50'43	17.40857 AU
morning rise	5149 Sep 26 04:12	20° <u>0</u> 28'07		direct	5156 Jun 23 09:35	17° <u>0</u> 46'57	
retrograde	5149 Dec 28 11:21	23° <u>0</u> 48'57		evening set	5156 Sep 26 16:40	21° <u>0</u> 14'13	
opposition	5150 Mar 12 15:23	21° <u>0</u> 46'03	0°51'51				
min. Earth dist.	5150 Mar 13 05:29	21° <u>0</u> 44'30	17.61269 AU	conjunction	5156 Oct 13 08:10	22° <u>0</u> 15'59	0°44'30
direct	5150 May 26 17:32	19° <u>0</u> 41'40		minimum elong	5156 Oct 13 08:10	22° <u>0</u> 15'59	0°44'31
evening set	5150 Aug 28 19:57	23° <u>0</u> 04'01		max. Earth dist.	5156 Oct 12 12:33	22° <u>0</u> 12'56	19.39960 AU
				morning rise	5156 Oct 29 20:59	23° <u>0</u> 17'24	
conjunction	5150 Sep 14 13:25	24° <u>0</u> 05'09	0°46'53	retrograde	5157 Jan 30 05:00	26° <u>0</u> 39'46	
minimum elong	5150 Sep 14 13:25	24° <u>0</u> 05'09	0°46'53	opposition	5157 Apr 13 19:18	24° <u>0</u> 37'02	0°48'50
max. Earth dist.	5150 Sep 13 19:36	24° <u>0</u> 02'25	19.58875 AU	min. Earth dist.	5157 Apr 14 12:32	24° <u>0</u> 35'09	17.39248 AU
morning rise	5150 Oct 01 05:46	25° <u>0</u> 06'11		direct	5157 Jun 28 10:29	22° <u>0</u> 31'24	
retrograde	5151 Jan 02 08:22	28° <u>0</u> 27'19		evening set	5157 Oct 01 21:08	25° <u>0</u> 59'12	
opposition	5151 Mar 17 10:50	26° <u>0</u> 24'22	0°52'28				
min. Earth dist.	5151 Mar 18 02:35	26° <u>0</u> 22'39	17.56633 AU	conjunction	5157 Oct 18 11:53	27° <u>0</u> 00'58	0°43'01
direct	5151 May 31 13:41	24° <u>0</u> 19'40		minimum elong	5157 Oct 18 11:53	27° <u>0</u> 00'58	0°43'01
evening set	5151 Sep 02 22:30	27° <u>0</u> 43'00		max. Earth dist.	5157 Oct 17 14:58	26° <u>0</u> 57'42	19.38585 AU
				morning rise	5157 Nov 04 00:03	28° <u>0</u> 02'22	
conjunction	5151 Sep 19 15:45	28° <u>0</u> 44'17	0°47'16		5157 Dec 09 15:09	0° <u>0</u>	
minimum elong	5151 Sep 19 15:45	28° <u>0</u> 44'17	0°47'16	retrograde	5158 Feb 04 04:45	1° <u>0</u> 24'46	
max. Earth dist.	5151 Sep 18 20:41	28° <u>0</u> 41'21	19.54452 AU		5158 Apr 04 01:59	30° <u>0</u> 42'46	
morning rise	5151 Oct 06 07:49	29° <u>0</u> 45'26		opposition	5158 Apr 18 18:31	29° <u>0</u> 22'09	0°47'01
	5151 Oct 10 09:26	0° <u>0</u>		min. Earth dist.	5158 Apr 19 11:58	29° <u>0</u> 20'14	17.38101 AU
retrograde	5152 Jan 07 08:35	3° <u>0</u> 06'53		direct	5158 Jul 03 12:41	27° <u>0</u> 16'26	
opposition	5152 Mar 21 06:49	1° <u>0</u> 03'52	0°52'44		5158 Sep 24 12:50	0° <u>0</u>	
min. Earth dist.	5152 Mar 21 22:16	1° <u>0</u> 02'11	17.52439 AU	evening set	5158 Oct 07 01:38	0° <u>0</u> 44'41	
	5152 Apr 15 20:20	30° <u>0</u> 47'16					
direct	5152 Jun 04 12:43	28° <u>0</u> 58'53		conjunction	5158 Oct 23 15:52	1° <u>0</u> 46'27	0°41'14
	5152 Jul 23 01:55	0° <u>0</u>		minimum elong	5158 Oct 23 15:52	1° <u>0</u> 46'27	0°41'15
evening set	5152 Sep 07 01:17	2° <u>0</u> 23'07		max. Earth dist.	5158 Oct 22 19:52	1° <u>0</u> 43'19	19.37647 AU
				morning rise	5158 Nov 09 03:03	2° <u>0</u> 47'48	
conjunction	5152 Sep 23 18:24	3° <u>0</u> 24'33	0°47'20	retrograde	5159 Feb 09 04:32	6° <u>0</u> 10'09	
minimum elong	5152 Sep 23 18:24	3° <u>0</u> 24'33	0°47'20	opposition	5159 Apr 23 18:03	4° <u>0</u> 07'38	0°44'53
max. Earth dist.	5152 Sep 22 23:36	3° <u>0</u> 21'39	19.50486 AU	min. Earth dist.	5159 Apr 24 11:28	4° <u>0</u> 05'44	17.37365 AU
morning rise	5152 Oct 10 09:49	4° <u>0</u> 25'48		direct	5159 Jul 08 15:29	2° <u>0</u> 01'54	
retrograde	5153 Jan 11 06:32	7° <u>0</u> 47'31		evening set	5159 Oct 12 06:15	5° <u>0</u> 30'28	
opposition	5153 Mar 26 03:32	5° <u>0</u> 44'29	0°52'39				
min. Earth dist.	5153 Mar 26 20:02	5° <u>0</u> 42'41	17.48732 AU	conjunction	5159 Oct 28 19:35	6° <u>0</u> 32'11	0°39'10
direct	5153 Jun 09 09:49	3° <u>0</u> 39'17		minimum elong	5159 Oct 28 19:35	6° <u>0</u> 32'11	0°39'10
evening set	5153 Sep 12 04:39	7° <u>0</u> 04'22		max. Earth dist.	5159 Oct 27 22:36	6° <u>0</u> 28'54	19.37122 AU
				morning rise	5159 Nov 14 05:57	7° <u>0</u> 33'28	
conjunction	5153 Sep 28 21:22	8° <u>0</u> 05'55	0°47'06	retrograde	5160 Feb 14 03:50	10° <u>0</u> 55'43	
minimum elong	5153 Sep 28 21:22	8° <u>0</u> 05'55	0°47'06	opposition	5160 Apr 27 18:03	8° <u>0</u> 53'18	0°42'26
max. Earth dist.	5153 Sep 28 01:18	8° <u>0</u> 02'48	19.47052 AU	min. Earth dist.	5160 Apr 28 11:50	8° <u>0</u> 51'22	17.37057 AU
morning rise	5153 Oct 15 12:23	9° <u>0</u> 07'14		direct	5160 Jul 12 17:56	6° <u>0</u> 47'31	
retrograde	5154 Jan 16 07:05	12° <u>0</u> 29'11		evening set	5160 Oct 16 10:20	10° <u>0</u> 16'18	
opposition	5154 Mar 31 00:34	10° <u>0</u> 26'10	0°52'13				
min. Earth dist.	5154 Mar 31 16:44	10° <u>0</u> 24'24	17.45574 AU	conjunction	5160 Nov 01 22:59	11° <u>0</u> 17'56	0°36'50
direct	5154 Jun 14 09:41	8° <u>0</u> 20'46		minimum elong	5160 Nov 01 22:59	11° <u>0</u> 17'56	0°36'51
evening set	5154 Sep 17 08:18	11° <u>0</u> 46'40		max. Earth dist.	5160 Nov 01 03:00	11° <u>0</u> 14'49	19.37025 AU
max. Earth dist.	5154 Oct 03 05:31	12° <u>0</u> 45'19	19.44159 AU	morning rise	5160 Nov 18 08:22	12° <u>0</u> 19'08	
					5161 Jan 10 11:48	15° <u>0</u>	
conjunction	5154 Oct 04 00:49	12° <u>0</u> 48'19	0°46'32	retrograde	5161 Feb 18 04:07	15° <u>0</u> 41'14	
minimum elong	5154 Oct 04 00:49	12° <u>0</u> 48'19	0°46'32		5161 Mar 29 18:53	15° <u>0</u> 41'14	
morning rise	5154 Oct 20 15:05	13° <u>0</u> 49'41		opposition	5161 May 02 18:10	13° <u>0</u> 38'54	0°39'41
retrograde	5155 Jan 21 05:37	17° <u>0</u> 11'49		min. Earth dist.	5161 May 03 11:17	13° <u>0</u> 37'02	17.37160 AU
opposition	5155 Apr 04 22:21	15° <u>0</u> 08'53	0°51'26	direct	5161 Jul 17 21:41	11° <u>0</u> 33'06	
min. Earth dist.	5155 Apr 05 15:15	15° <u>0</u> 07'02	17.42948 AU	evening set	5161 Oct 21 14:24	15° <u>0</u> 01'58	
direct	5155 Jun 19 08:21	13° <u>0</u> 03'23			5161 Oct 21 01:30	15° <u>0</u>	
evening set	5155 Sep 22 12:27	16° <u>0</u> 30'00		max. Earth dist.	5161 Nov 06 05:49	16° <u>0</u> 00'21	19.37346 AU

conjunction	5161 Nov 07 02:08	16° \mathbb{M} 03'31	0°34'15	opposition	5168 Jun 04 20:09	16° \mathbb{X} 41'29	0°14'17
minimum elong	5161 Nov 07 02:08	16° \mathbb{M} 03'31	0°34'16	min. Earth dist.	5168 Jun 05 08:13	16° \mathbb{X} 40'11	17.51448 AU
morning rise	5161 Nov 23 10:36	17° \mathbb{M} 04'37		direct	5168 Aug 20 14:48	14° \mathbb{X} 36'19	
retrograde	5162 Feb 23 02:41	20° \mathbb{M} 26'29		evening set	5168 Nov 24 03:19	18° \mathbb{X} 03'06	
opposition	5162 May 07 18:23	18° \mathbb{M} 24'14	0°36'40				
min. Earth dist.	5162 May 08 12:00	18° \mathbb{M} 22'20	17.37705 AU	conjunction	5168 Dec 10 08:09	19° \mathbb{X} 03'24	0°10'57
direct	5162 Jul 22 23:53	16° \mathbb{M} 18'24		minimum elong	5168 Dec 10 08:09	19° \mathbb{X} 03'24	0°10'59
evening set	5162 Oct 26 18:03	19° \mathbb{M} 47'17		behind sun begin	5168 Dec 10 03:08	19° \mathbb{X} 02'38	
max. Earth dist.	5162 Nov 11 09:29	20° \mathbb{M} 45'40	19.38120 AU	behind sun end	5168 Dec 10 13:10	19° \mathbb{X} 04'10	
				max. Earth dist.	5168 Dec 09 19:20	19° \mathbb{X} 01'24	19.53460 AU
conjunction	5162 Nov 12 04:57	20° \mathbb{M} 48'43	0°31'26	morning rise	5168 Dec 26 09:44	20° \mathbb{X} 03'12	
minimum elong	5162 Nov 12 04:57	20° \mathbb{M} 48'43	0°31'26	retrograde	5169 Mar 27 15:41	23° \mathbb{X} 22'22	
morning rise	5162 Nov 28 12:27	21° \mathbb{M} 49'41		opposition	5169 Jun 09 19:56	21° \mathbb{X} 21'04	0°10'06
retrograde	5163 Feb 28 02:55	25° \mathbb{M} 11'15		min. Earth dist.	5169 Jun 10 05:48	21° \mathbb{X} 20'01	17.55580 AU
opposition	5163 May 12 18:44	23° \mathbb{M} 09'06	0°33'24	direct	5169 Aug 25 17:03	19° \mathbb{X} 16'11	
min. Earth dist.	5163 May 13 11:05	23° \mathbb{M} 07'20	17.38695 AU	evening set	5169 Nov 29 02:28	22° \mathbb{X} 42'21	
direct	5163 Jul 28 03:48	21° \mathbb{M} 03'17					
evening set	5163 Oct 31 21:09	24° \mathbb{M} 32'02		conjunction	5169 Dec 15 06:25	23° \mathbb{X} 42'24	0°07'12
				minimum elong	5169 Dec 15 06:25	23° \mathbb{X} 42'24	0°07'13
conjunction	5163 Nov 17 07:05	25° \mathbb{M} 33'20	0°28'23	behind sun begin	5169 Dec 15 00:18	23° \mathbb{X} 41'28	
minimum elong	5163 Nov 17 07:05	25° \mathbb{M} 33'20	0°28'25	behind sun end	5169 Dec 15 12:32	23° \mathbb{X} 43'20	
max. Earth dist.	5163 Nov 16 12:15	25° \mathbb{M} 30'23	19.39347 AU	max. Earth dist.	5169 Dec 14 19:59	23° \mathbb{X} 40'47	19.57808 AU
morning rise	5163 Dec 03 13:32	26° \mathbb{M} 34'09		morning rise	5169 Dec 31 06:52	24° \mathbb{X} 41'57	
retrograde	5164 Mar 04 01:03	29° \mathbb{M} 55'24		retrograde	5170 Apr 01 11:47	28° \mathbb{X} 00'37	
opposition	5164 May 16 19:14	27° \mathbb{M} 53'20	0°29'54	opposition	5170 Jun 14 19:34	25° \mathbb{X} 59'34	0°05'53
min. Earth dist.	5164 May 17 11:49	27° \mathbb{M} 51'32	17.40173 AU	min. Earth dist.	5170 Jun 15 05:07	25° \mathbb{X} 58'33	17.60120 AU
direct	5164 Aug 01 05:48	25° \mathbb{M} 47'32		direct	5170 Aug 30 18:36	23° \mathbb{X} 54'59	
evening set	5164 Nov 04 23:42	29° \mathbb{M} 16'04		evening set	5170 Dec 04 01:04	27° \mathbb{X} 20'27	
	5164 Nov 16 18:58	0° \mathbb{X}					
conjunction	5164 Nov 21 08:39	0° \mathbb{X} 17'13	0°25'10	conjunction	5170 Dec 20 03:49	28° \mathbb{X} 20'13	0°03'25
minimum elong	5164 Nov 21 08:39	0° \mathbb{X} 17'13	0°25'11	minimum elong	5170 Dec 20 03:48	28° \mathbb{X} 20'13	0°03'26
max. Earth dist.	5164 Nov 20 14:42	0° \mathbb{X} 14'24	19.41088 AU	behind sun begin	5170 Dec 19 21:12	28° \mathbb{X} 19'13	
morning rise	5164 Dec 07 14:10	1° \mathbb{X} 17'52		behind sun end	5170 Dec 20 10:23	28° \mathbb{X} 21'13	
retrograde	5165 Mar 09 00:37	4° \mathbb{X} 38'44		max. Earth dist.	5170 Dec 19 17:41	28° \mathbb{X} 18'40	19.62537 AU
opposition	5165 May 21 19:28	2° \mathbb{X} 36'45	0°26'13	morning rise	5171 Jan 05 03:29	29° \mathbb{X} 19'32	
min. Earth dist.	5165 May 22 10:12	2° \mathbb{X} 35'10	17.42169 AU		5171 Jan 16 11:53	0° \mathbb{X}	
direct	5165 Aug 06 09:01	0° \mathbb{X} 31'02		retrograde	5171 Apr 06 08:06	2° \mathbb{X} 37'42	
evening set	5165 Nov 10 01:34	3° \mathbb{X} 59'15		opposition	5171 Jun 19 18:59	0° \mathbb{X} 36'50	0°01'39
				min. Earth dist.	5171 Jun 20 02:33	0° \mathbb{X} 36'02	17.65012 AU
conjunction	5165 Nov 26 09:36	5° \mathbb{X} 00'13	0°21'47		5171 Jul 04 12:28	30° \mathbb{R} \mathbb{X}	
minimum elong	5165 Nov 26 09:36	5° \mathbb{X} 00'13	0°21'48	direct	5171 Sep 04 20:10	28° \mathbb{X} 32'34	
max. Earth dist.	5165 Nov 25 17:11	4° \mathbb{X} 57'39	19.43352 AU	desc. node	5171 Nov 03 03:27	0° \mathbb{X}	
morning rise	5165 Dec 12 14:02	6° \mathbb{X} 00'40		evening set	5171 Dec 08 22:33	1° \mathbb{X} 57'15	
retrograde	5166 Mar 13 22:23	9° \mathbb{X} 21'09					
opposition	5166 May 26 19:52	7° \mathbb{X} 19'17	0°22'21	conjunction	5171 Dec 25 00:26	2° \mathbb{X} 56'45	-0°00'28
min. Earth dist.	5166 May 27 10:31	7° \mathbb{X} 17'42	17.44710 AU	minimum elong	5171 Dec 25 00:25	2° \mathbb{X} 56'45	0°00'27
direct	5166 Aug 11 10:31	5° \mathbb{X} 13'41		behind sun begin	5171 Dec 24 17:49	2° \mathbb{X} 55'45	
evening set	5166 Nov 15 02:55	8° \mathbb{X} 41'31		behind sun end	5171 Dec 25 07:01	2° \mathbb{X} 57'44	
				max. Earth dist.	5171 Dec 24 16:50	2° \mathbb{X} 55'35	19.67572 AU
conjunction	5166 Dec 01 09:49	9° \mathbb{X} 42'16	0°18'16	morning rise	5172 Jan 09 23:01	3° \mathbb{X} 55'47	
minimum elong	5166 Dec 01 09:49	9° \mathbb{X} 42'16	0°18'17	retrograde	5172 Apr 10 03:17	7° \mathbb{X} 13'25	
max. Earth dist.	5166 Nov 30 18:11	9° \mathbb{X} 39'49	19.46179 AU	opposition	5172 Jun 23 18:15	5° \mathbb{X} 12'46	-0°02'34
morning rise	5166 Dec 17 13:20	10° \mathbb{X} 42'31		min. Earth dist.	5172 Jun 24 01:12	5° \mathbb{X} 12'02	17.70173 AU
retrograde	5167 Mar 18 21:08	14° \mathbb{X} 02'34		direct	5172 Sep 08 20:39	3° \mathbb{X} 08'49	
opposition	5167 May 31 19:57	12° \mathbb{X} 00'52	0°18'22	evening set	5172 Dec 12 19:30	6° \mathbb{X} 32'38	
min. Earth dist.	5167 Jun 01 08:22	11° \mathbb{X} 59'32	17.47808 AU				
direct	5167 Aug 16 13:19	9° \mathbb{X} 55'27		conjunction	5172 Dec 28 20:11	7° \mathbb{X} 31'50	-0°04'18
evening set	5167 Nov 20 03:30	13° \mathbb{X} 22'48		minimum elong	5172 Dec 28 20:12	7° \mathbb{X} 31'50	0°04'18
				behind sun begin	5172 Dec 28 13:41	7° \mathbb{X} 30'51	
conjunction	5167 Dec 06 09:29	14° \mathbb{X} 23'20	0°14'39	behind sun end	5172 Dec 29 02:43	7° \mathbb{X} 32'49	
minimum elong	5167 Dec 06 09:29	14° \mathbb{X} 23'20	0°14'40	max. Earth dist.	5172 Dec 28 12:48	7° \mathbb{X} 30'42	19.72853 AU
behind sun begin	5167 Dec 06 06:41	14° \mathbb{X} 22'55		morning rise	5173 Jan 13 18:07	8° \mathbb{X} 30'37	
behind sun end	5167 Dec 06 12:16	14° \mathbb{X} 23'46		retrograde	5173 Apr 14 22:46	11° \mathbb{X} 47'40	
max. Earth dist.	5167 Dec 05 20:02	14° \mathbb{X} 21'15	19.49555 AU	opposition	5173 Jun 28 16:51	9° \mathbb{X} 47'12	-0°06'46
morning rise	5167 Dec 22 11:51	15° \mathbb{X} 23'22		min. Earth dist.	5173 Jun 28 22:09	9° \mathbb{X} 46'39	17.75560 AU
retrograde	5168 Mar 22 18:07	18° \mathbb{X} 42'59		direct	5173 Sep 13 20:32	7° \mathbb{X} 43'32	

evening set	5173 Dec 17 15:25	11°30'26"	evening set	5180 Jan 13 18:58	7°45'21"
conjunction	5174 Jan 02 15:20	12°30'52" -0°08'02"	conjunction	5180 Jan 29 13:54	8°47'28" -0°28'12"
minimum elong	5174 Jan 02 15:20	12°30'52" 0°08'00"	minimum elong	5180 Jan 29 13:54	8°47'28" 0°28'12"
behind sun begin	5174 Jan 02 09:25	12°30'42"	max. Earth dist.	5180 Jan 29 17:47	8°48'03" 20.13526 AU
behind sun end	5174 Jan 02 21:15	12°30'14"	morning rise	5180 Feb 14 07:08	9°44'20"
max. Earth dist.	5174 Jan 02 10:17	12°30'43" 19.78322 AU	retrograde	5180 May 15 20:36	12°57'03"
morning rise	5174 Jan 18 12:16	13°30'51"	opposition	5180 Jul 30 17:26	10°57'21" -0°32'52"
retrograde	5174 Apr 19 17:04	16°32'01"	min. Earth dist.	5180 Jul 30 12:41	10°57'50" 18.16637 AU
opposition	5174 Jul 03 15:15	14°32'01" -0°10'53"	direct	5180 Oct 16 00:28	8°55'44"
min. Earth dist.	5174 Jul 03 19:42	14°31'33" 17.81094 AU	evening set	5181 Jan 17 08:21	12°10'56"
direct	5174 Sep 18 19:35	12°31'40"			
evening set	5174 Dec 22 10:34	15°38'33"	conjunction	5181 Feb 02 02:34	13°07'46" -0°31'01"
			minimum elong	5181 Feb 02 02:34	13°07'46" 0°31'00"
conjunction	5175 Jan 07 09:22	16°37'09" -0°11'41"	max. Earth dist.	5181 Feb 02 07:34	13°08'31" 20.19796 AU
minimum elong	5175 Jan 07 09:22	16°37'09" 0°11'41"	morning rise	5181 Feb 17 19:27	14°04'23"
behind sun begin	5175 Jan 07 04:39	16°36'27"		5181 Mar 06 02:24	15°
behind sun end	5175 Jan 07 14:05	16°37'52"	retrograde	5181 May 20 09:57	17°16'33"
max. Earth dist.	5175 Jan 07 04:32	16°36'26" 19.83923 AU	opposition	5181 Aug 04 11:31	15°16'58" -0°35'53"
morning rise	5175 Jan 23 05:39	17°35'23"	min. Earth dist.	5181 Aug 04 05:50	15°17'33" 18.22964 AU
retrograde	5175 Apr 24 11:25	20°51'14"		5181 Aug 11 09:30	15°R
opposition	5175 Jul 08 13:07	18°51'04" -0°14'56"	direct	5181 Oct 20 16:47	13°15'43"
min. Earth dist.	5175 Jul 08 16:07	18°50'46" 17.86758 AU		5181 Dec 25 11:20	15°
direct	5175 Sep 23 17:57	16°34'00"	evening set	5182 Jan 21 20:49	16°29'50"
evening set	5175 Dec 27 04:35	20°30'51"			
			conjunction	5182 Feb 06 14:32	17°26'23" -0°33'38"
conjunction	5176 Jan 12 02:40	21°30'09" -0°15'16"	minimum elong	5182 Feb 06 14:32	17°26'23" 0°33'38"
minimum elong	5176 Jan 12 02:39	21°30'09" 0°15'14"	max. Earth dist.	5182 Feb 06 21:36	18°27'27" 20.26156 AU
behind sun begin	5176 Jan 12 00:22	21°30'49"	morning rise	5182 Feb 22 07:00	18°22'45"
behind sun end	5176 Jan 12 04:57	21°30'30"	retrograde	5182 May 25 00:49	21°34'23"
max. Earth dist.	5176 Jan 12 00:12	21°30'47" 19.89639 AU	opposition	5182 Aug 09 05:02	19°34'58" -0°38'40"
morning rise	5176 Jan 27 22:06	22°30'07"	min. Earth dist.	5182 Aug 08 21:06	19°35'46" 18.29333 AU
retrograde	5176 Apr 28 04:56	25°32'01"	direct	5182 Oct 25 11:19	17°34'07"
opposition	5176 Jul 12 10:24	23°32'01" -0°18'51"	evening set	5183 Jan 26 08:28	20°47'08"
min. Earth dist.	5176 Jul 12 12:07	23°32'06" 17.92514 AU			
direct	5176 Sep 27 16:03	21°31'28"	conjunction	5183 Feb 11 01:35	21°43'25" -0°36'03"
evening set	5176 Dec 30 21:41	24°37'13"	minimum elong	5183 Feb 11 01:35	21°43'25" 0°36'03"
			max. Earth dist.	5183 Feb 11 09:51	21°44'40" 20.32523 AU
conjunction	5177 Jan 15 18:47	25°35'13" -0°18'43"	morning rise	5183 Feb 26 17:49	22°39'34"
minimum elong	5177 Jan 15 18:47	25°35'13" 0°18'42"	retrograde	5183 May 29 13:30	25°50'43"
max. Earth dist.	5177 Jan 15 16:51	25°34'55" 19.95445 AU	opposition	5183 Aug 13 22:10	23°51'26" -0°41'13"
morning rise	5177 Jan 31 13:45	26°32'54"	min. Earth dist.	5183 Aug 13 13:36	23°52'19" 18.35697 AU
retrograde	5177 May 02 21:34	29°34'29"	direct	5183 Oct 30 01:57	21°50'59"
opposition	5177 Jul 17 07:07	27°34'30" -0°22'37"	evening set	5184 Jan 30 19:23	25°02'58"
min. Earth dist.	5177 Jul 17 07:36	27°34'27" 17.98374 AU			
direct	5177 Oct 02 12:36	25°34'58"	conjunction	5184 Feb 15 12:07	25°58'59" -0°38'15"
evening set	5178 Jan 04 13:43	29°30'35"	minimum elong	5184 Feb 15 12:07	25°58'59" 0°38'14"
			max. Earth dist.	5184 Feb 15 22:05	26°00'29" 20.38856 AU
conjunction	5178 Jan 20 10:09	0°01'17" -0°22'02"	morning rise	5184 Mar 02 04:06	26°54'55"
minimum elong	5178 Jan 20 10:09	0°01'17" 0°22'02"		5184 May 18 09:06	0°H
max. Earth dist.	5178 Jan 20 10:36	0°01'21" 20.01352 AU	retrograde	5184 Jun 02 03:09	0°H05'35"
	5178 Jan 20 01:40	0°		5184 Jun 16 23:05	30°R
morning rise	5178 Feb 05 04:23	0°58'41"	opposition	5184 Aug 17 14:25	28°06'28" -0°43'31"
retrograde	5178 May 07 14:01	4°12'37"	min. Earth dist.	5184 Aug 17 03:43	28°07'33" 18.41976 AU
opposition	5178 Jul 22 03:05	2°12'44" -0°26'14"	direct	5184 Nov 02 19:06	26°06'25"
min. Earth dist.	5178 Jul 22 01:48	2°12'52" 18.04326 AU	evening set	5185 Feb 03 05:41	29°17'21"
direct	5178 Oct 07 10:01	0°10'28"		5185 Feb 15 06:03	0°H
evening set	5179 Jan 09 04:56	3°27'57"			
			conjunction	5185 Feb 18 21:58	0°H13'08" -0°40'14"
conjunction	5179 Jan 25 00:28	4°25'21" -0°25'13"	minimum elong	5185 Feb 18 21:58	0°H13'08" 0°40'15"
minimum elong	5179 Jan 25 00:28	4°25'21" 0°25'12"	max. Earth dist.	5185 Feb 19 08:57	0°H14'47" 20.45059 AU
max. Earth dist.	5179 Jan 25 01:54	4°25'34" 20.07367 AU	morning rise	5185 Mar 06 13:52	1°H08'52"
morning rise	5179 Feb 09 18:15	5°22'29"	retrograde	5185 Jun 06 15:01	4°H19'05"
retrograde	5179 May 12 04:49	8°35'48"	opposition	5185 Aug 22 06:20	2°H20'06" -0°45'35"
opposition	5179 Jul 26 22:39	6°35'59" -0°29'39"	min. Earth dist.	5185 Aug 21 19:28	2°H21'12" 18.48105 AU
min. Earth dist.	5179 Jul 26 20:07	6°36'14" 18.10422 AU	direct	5185 Nov 07 08:27	0°H20'27"
direct	5179 Oct 12 04:32	4°34'01"	evening set	5186 Feb 07 15:16	3°H30'22"

conjunction	5186 Feb 23 07:16	4° $\mathbf{\text{H}}$ 25'55 -0°42'00	opposition	5192 Sep 21 04:50	1° $\mathbf{\text{Y}}$ 17'37 -0°52'40
minimum elong	5186 Feb 23 07:16	4° $\mathbf{\text{H}}$ 25'55 0°41'59		5192 Oct 26 09:59	30° $\mathbf{\text{R}}$ $\mathbf{\text{H}}$
max. Earth dist.	5186 Feb 23 19:27	4° $\mathbf{\text{H}}$ 27'44 20.51082 AU	direct	5192 Dec 06 21:19	29° $\mathbf{\text{H}}$ 19'45
morning rise	5186 Mar 10 23:01	5° $\mathbf{\text{H}}$ 21'26		5193 Jan 15 22:56	0° $\mathbf{\text{Y}}$
retrograde	5186 Jun 11 03:27	8° $\mathbf{\text{H}}$ 31'14	evening set	5193 Mar 07 18:23	2° $\mathbf{\text{Y}}$ 23'16
opposition	5186 Aug 26 21:33	6° $\mathbf{\text{H}}$ 32'23 -0°47'24			
min. Earth dist.	5186 Aug 26 08:41	6° $\mathbf{\text{H}}$ 33'41 18.54006 AU	conjunction	5193 Mar 23 10:04	3° $\mathbf{\text{Y}}$ 17'37 -0°47'38
direct	5186 Nov 11 23:58	4° $\mathbf{\text{H}}$ 33'05	minimum elong	5193 Mar 23 10:04	3° $\mathbf{\text{Y}}$ 17'37 0°47'37
evening set	5187 Feb 12 00:22	7° $\mathbf{\text{H}}$ 42'01	max. Earth dist.	5193 Mar 24 03:56	3° $\mathbf{\text{Y}}$ 20'13 20.84480 AU
			morning rise	5193 Apr 08 03:09	4° $\mathbf{\text{Y}}$ 12'11
conjunction	5187 Feb 27 16:03	8° $\mathbf{\text{H}}$ 37'21 -0°43'31	retrograde	5193 Jul 09 23:57	7° $\mathbf{\text{Y}}$ 19'27
minimum elong	5187 Feb 27 16:03	8° $\mathbf{\text{H}}$ 37'21 0°43'32	opposition	5193 Sep 25 16:06	5° $\mathbf{\text{Y}}$ 20'41 -0°52'36
max. Earth dist.	5187 Feb 28 05:06	8° $\mathbf{\text{H}}$ 39'17 20.56843 AU	min. Earth dist.	5193 Sep 24 23:04	5° $\mathbf{\text{Y}}$ 22'24 18.86329 AU
morning rise	5187 Mar 15 07:48	9° $\mathbf{\text{H}}$ 32'41	direct	5193 Dec 11 05:19	3° $\mathbf{\text{Y}}$ 23'02
retrograde	5187 Jun 15 14:17	12° $\mathbf{\text{H}}$ 42'04	evening set	5194 Mar 11 23:38	6° $\mathbf{\text{Y}}$ 25'48
opposition	5187 Aug 31 12:25	10° $\mathbf{\text{H}}$ 43'19 -0°48'57			
min. Earth dist.	5187 Aug 30 23:41	10° $\mathbf{\text{H}}$ 44'36 18.59634 AU	conjunction	5194 Mar 27 15:32	7° $\mathbf{\text{Y}}$ 20'03 -0°47'28
direct	5187 Nov 16 12:11	8° $\mathbf{\text{H}}$ 44'22	minimum elong	5194 Mar 27 15:32	7° $\mathbf{\text{Y}}$ 20'03 0°47'29
evening set	5188 Feb 16 08:43	11° $\mathbf{\text{H}}$ 52'18	max. Earth dist.	5194 Mar 28 09:57	7° $\mathbf{\text{Y}}$ 22'44 20.88049 AU
			morning rise	5194 Apr 12 09:02	8° $\mathbf{\text{Y}}$ 14'32
conjunction	5188 Mar 03 00:17	12° $\mathbf{\text{H}}$ 47'26 -0°44'49	retrograde	5194 Jul 14 09:51	11° $\mathbf{\text{Y}}$ 21'35
minimum elong	5188 Mar 03 00:17	12° $\mathbf{\text{H}}$ 47'26 0°44'48	min. Earth dist.	5194 Sep 29 08:01	9° $\mathbf{\text{Y}}$ 24'42 18.89763 AU
max. Earth dist.	5188 Mar 03 14:08	12° $\mathbf{\text{H}}$ 49'29 20.62309 AU	opposition	5194 Sep 30 02:48	9° $\mathbf{\text{Y}}$ 22'49 -0°52'17
morning rise	5188 Mar 18 16:06	13° $\mathbf{\text{H}}$ 42'37	direct	5194 Dec 15 14:46	7° $\mathbf{\text{Y}}$ 25'21
retrograde	5188 Jun 19 01:40	16° $\mathbf{\text{H}}$ 51'36	evening set	5195 Mar 16 04:42	10° $\mathbf{\text{Y}}$ 27'28
min. Earth dist.	5188 Sep 03 11:58	14° $\mathbf{\text{H}}$ 54'22 18.64923 AU			
opposition	5188 Sep 04 02:30	14° $\mathbf{\text{H}}$ 52'55 -0°50'14	conjunction	5195 Mar 31 20:52	11° $\mathbf{\text{Y}}$ 21'38 -0°47'04
direct	5188 Nov 20 02:03	12° $\mathbf{\text{H}}$ 54'14	minimum elong	5195 Mar 31 20:52	11° $\mathbf{\text{Y}}$ 21'38 0°47'04
evening set	5189 Feb 19 16:39	16° $\mathbf{\text{H}}$ 01'13	max. Earth dist.	5195 Apr 01 16:17	11° $\mathbf{\text{Y}}$ 24'27 20.91338 AU
			morning rise	5195 Apr 16 14:51	12° $\mathbf{\text{Y}}$ 16'04
conjunction	5189 Mar 07 08:05	16° $\mathbf{\text{H}}$ 56'10 -0°45'52	retrograde	5195 Jul 18 17:37	15° $\mathbf{\text{Y}}$ 22'56
minimum elong	5189 Mar 07 08:05	16° $\mathbf{\text{H}}$ 56'10 0°45'52	opposition	5195 Oct 04 13:10	13° $\mathbf{\text{Y}}$ 24'10 -0°51'43
max. Earth dist.	5189 Mar 07 22:38	16° $\mathbf{\text{H}}$ 58'19 20.67409 AU	min. Earth dist.	5195 Oct 03 18:49	13° $\mathbf{\text{Y}}$ 26'00 18.92915 AU
morning rise	5189 Mar 23 00:00	17° $\mathbf{\text{H}}$ 51'11	direct	5195 Dec 19 22:01	11° $\mathbf{\text{Y}}$ 26'55
retrograde	5189 Jun 23 11:09	20° $\mathbf{\text{H}}$ 59'47	evening set	5196 Mar 19 09:27	14° $\mathbf{\text{Y}}$ 28'26
opposition	5189 Sep 08 16:00	19° $\mathbf{\text{H}}$ 01'07 -0°51'15			
min. Earth dist.	5189 Sep 08 01:54	19° $\mathbf{\text{H}}$ 02'32 18.69848 AU	conjunction	5196 Apr 04 02:01	15° $\mathbf{\text{Y}}$ 22'32 -0°46'27
direct	5189 Nov 24 12:46	17° $\mathbf{\text{H}}$ 02'41	minimum elong	5196 Apr 04 02:01	15° $\mathbf{\text{Y}}$ 22'32 0°46'27
evening set	5190 Feb 23 23:56	20° $\mathbf{\text{H}}$ 08'45	max. Earth dist.	5196 Apr 04 21:40	15° $\mathbf{\text{Y}}$ 25'22 20.94344 AU
			morning rise	5196 Apr 19 20:35	16° $\mathbf{\text{Y}}$ 16'56
conjunction	5190 Mar 11 15:20	21° $\mathbf{\text{H}}$ 03'31 -0°46'40	retrograde	5196 Jul 22 03:25	19° $\mathbf{\text{Y}}$ 23'40
minimum elong	5190 Mar 11 15:20	21° $\mathbf{\text{H}}$ 03'31 0°46'40	opposition	5196 Oct 07 23:02	17° $\mathbf{\text{Y}}$ 24'55 -0°50'53
max. Earth dist.	5190 Mar 12 06:30	21° $\mathbf{\text{H}}$ 05'45 20.72159 AU	min. Earth dist.	5196 Oct 07 03:17	17° $\mathbf{\text{Y}}$ 26'53 18.95753 AU
morning rise	5190 Mar 27 07:28	21° $\mathbf{\text{H}}$ 58'24	direct	5196 Dec 23 06:04	15° $\mathbf{\text{Y}}$ 27'51
retrograde	5190 Jun 27 21:43	25° $\mathbf{\text{H}}$ 06'37	evening set	5197 Mar 23 14:09	18° $\mathbf{\text{Y}}$ 28'51
opposition	5190 Sep 13 04:53	23° $\mathbf{\text{H}}$ 07'57 -0°51'59			
min. Earth dist.	5190 Sep 12 13:00	23° $\mathbf{\text{H}}$ 09'32 18.74418 AU	conjunction	5197 Apr 08 07:05	19° $\mathbf{\text{Y}}$ 22'54 -0°45'36
direct	5190 Nov 29 01:15	21° $\mathbf{\text{H}}$ 09'44	minimum elong	5197 Apr 08 07:05	19° $\mathbf{\text{Y}}$ 22'54 0°45'36
evening set	5191 Feb 28 06:30	24° $\mathbf{\text{H}}$ 14'53	max. Earth dist.	5197 Apr 09 03:27	19° $\mathbf{\text{Y}}$ 25'51 20.96998 AU
			morning rise	5197 Apr 24 02:12	20° $\mathbf{\text{Y}}$ 17'17
conjunction	5191 Mar 15 21:55	25° $\mathbf{\text{H}}$ 09'30 -0°47'14	retrograde	5197 Jul 26 10:54	23° $\mathbf{\text{Y}}$ 23'55
minimum elong	5191 Mar 15 21:55	25° $\mathbf{\text{H}}$ 09'30 0°47'14	opposition	5197 Oct 12 08:38	21° $\mathbf{\text{Y}}$ 25'12 -0°49'49
max. Earth dist.	5191 Mar 16 14:05	25° $\mathbf{\text{H}}$ 11'52 20.76556 AU	min. Earth dist.	5197 Oct 11 13:36	21° $\mathbf{\text{Y}}$ 27'06 18.98228 AU
morning rise	5191 Mar 31 14:18	26° $\mathbf{\text{H}}$ 04'15	direct	5197 Dec 27 12:56	19° $\mathbf{\text{Y}}$ 28'20
retrograde	5191 Jul 02 06:05	29° $\mathbf{\text{H}}$ 12'07	evening set	5198 Mar 27 18:45	22° $\mathbf{\text{Y}}$ 28'52
opposition	5191 Sep 17 17:20	27° $\mathbf{\text{H}}$ 13'25 -0°52'28			
min. Earth dist.	5191 Sep 17 01:46	27° $\mathbf{\text{H}}$ 14'59 18.78667 AU	conjunction	5198 Apr 12 12:09	23° $\mathbf{\text{Y}}$ 22'54 -0°44'32
direct	5191 Dec 03 10:28	25° $\mathbf{\text{H}}$ 15'23	minimum elong	5198 Apr 12 12:09	23° $\mathbf{\text{Y}}$ 22'54 0°44'32
evening set	5192 Mar 03 12:40	28° $\mathbf{\text{H}}$ 19'41	max. Earth dist.	5198 Apr 13 08:25	23° $\mathbf{\text{Y}}$ 25'50 20.99291 AU
			morning rise	5198 Apr 28 07:55	24° $\mathbf{\text{Y}}$ 17'17
conjunction	5192 Mar 19 04:12	29° $\mathbf{\text{H}}$ 14'09 -0°47'33	retrograde	5198 Jul 30 20:59	27° $\mathbf{\text{Y}}$ 23'53
minimum elong	5192 Mar 19 04:12	29° $\mathbf{\text{H}}$ 14'09 0°47'33	opposition	5198 Oct 16 17:57	25° $\mathbf{\text{Y}}$ 25'10 -0°48'31
max. Earth dist.	5192 Mar 19 21:02	29° $\mathbf{\text{H}}$ 16'37 20.80660 AU	min. Earth dist.	5198 Oct 15 21:51	25° $\mathbf{\text{Y}}$ 27'11 19.00314 AU
	5192 Apr 01 07:21	0° $\mathbf{\text{Y}}$	direct	5198 Dec 31 20:04	23° $\mathbf{\text{Y}}$ 28'29
morning rise	5192 Apr 03 20:56	0° $\mathbf{\text{Y}}$ 08'48	evening set	5199 Mar 31 23:17	26° $\mathbf{\text{Y}}$ 28'38
retrograde	5192 Jul 05 16:14	3° $\mathbf{\text{Y}}$ 16'21			
min. Earth dist.	5192 Sep 20 11:31	1° $\mathbf{\text{Y}}$ 19'21 18.82633 AU	conjunction	5199 Apr 16 17:12	27° $\mathbf{\text{Y}}$ 22'39 -0°43'15

minimum elong	5199 Apr 16 17:12	27° Υ 22'39	0°43'16	max. Earth dist.	5205 May 10 21:04	21° ♄ 22'08	21.01517 AU
max. Earth dist.	5199 Apr 17 13:55	27° Υ 25'38	21.01150 AU	morning rise	5205 May 26 03:56	22° ♄ 14'20	
morning rise	5199 May 02 13:38	28° Υ 17'03		retrograde	5205 Aug 28 08:50	25° ♄ 21'28	
	5199 Jun 05 05:58	0° ♄		opposition	5205 Nov 14 04:59	23° ♄ 22'11	-0°33'20
retrograde	5199 Aug 04 04:18	1° ♄ 23'39		min. Earth dist.	5205 Nov 13 12:41	23° ♄ 23'49	19.00788 AU
	5199 Oct 06 06:39	30° ♄ 17		direct	5206 Jan 28 15:50	21° ♄ 25'36	
min. Earth dist.	5199 Oct 20 08:03	29° Υ 26'51	19.01943 AU	evening set	5206 Apr 28 10:06	24° ♄ 24'39	
opposition	5199 Oct 21 03:07	29° Υ 24'57	-0°46'59				
direct	5200 Jan 05 02:26	27° Υ 28'25		conjunction	5206 May 14 08:54	25° ♄ 19'07	-0°28'54
	5200 Mar 26 15:16	0° ♄		minimum elong	5206 May 14 08:54	25° ♄ 19'07	0°28'55
evening set	5200 Apr 04 04:01	0° ♄ 28'13		max. Earth dist.	5206 May 15 02:21	25° ♄ 21'37	20.99928 AU
				morning rise	5206 May 30 11:04	26° ♄ 14'04	
conjunction	5200 Apr 19 22:30	1° ♄ 22'15	-0°41'46	retrograde	5206 Sep 01 18:25	29° ♄ 21'24	
minimum elong	5200 Apr 19 22:30	1° ♄ 22'15	0°41'46	opposition	5206 Nov 18 12:43	27° ♄ 21'58	-0°30'25
max. Earth dist.	5200 Apr 20 18:36	1° ♄ 25'09	21.02542 AU	min. Earth dist.	5206 Nov 17 20:13	27° ♄ 23'38	18.99015 AU
morning rise	5200 May 05 19:40	2° ♄ 16'41		direct	5207 Feb 01 22:29	25° ♄ 25'17	
retrograde	5200 Aug 07 14:38	5° ♄ 23'19		evening set	5207 May 02 15:45	28° ♄ 24'27	
opposition	5200 Oct 24 11:45	3° ♄ 24'36	-0°45'13				
min. Earth dist.	5200 Oct 23 16:11	3° ♄ 26'33	19.03076 AU	conjunction	5207 May 18 15:26	29° ♄ 19'03	-0°26'11
direct	5201 Jan 08 09:20	1° ♄ 28'09		minimum elong	5207 May 18 15:26	29° ♄ 19'03	0°26'11
evening set	5201 Apr 08 08:50	4° ♄ 27'43		max. Earth dist.	5207 May 19 08:56	29° ♄ 21'33	20.97970 AU
					5207 May 30 14:02	0° ♄	
conjunction	5201 Apr 24 03:56	5° ♄ 21'47	-0°40'05	morning rise	5207 Jun 03 18:27	0° ♄ 14'08	
minimum elong	5201 Apr 24 03:56	5° ♄ 21'47	0°40'06	retrograde	5207 Sep 06 02:52	3° ♄ 21'44	
max. Earth dist.	5201 Apr 25 00:02	5° ♄ 24'40	21.03397 AU	opposition	5207 Nov 22 20:27	1° ♄ 22'09	-0°27'20
morning rise	5201 May 10 01:48	6° ♄ 16'16		min. Earth dist.	5207 Nov 22 05:04	1° ♄ 23'42	18.96884 AU
retrograde	5201 Aug 11 21:49	9° ♄ 22'56			5207 Dec 30 08:45	30° ♄	
opposition	5201 Oct 28 20:30	7° ♄ 24'10	-0°43'15	direct	5208 Feb 06 04:09	29° ♄ 25'22	
min. Earth dist.	5201 Oct 28 02:11	7° ♄ 26'00	19.03655 AU		5208 Mar 14 02:07	0° ♄	
direct	5202 Jan 12 14:56	5° ♄ 27'48		evening set	5208 May 05 21:50	2° ♄ 24'43	
evening set	5202 Apr 12 13:36	8° ♄ 27'08					
				conjunction	5208 May 21 22:21	3° ♄ 19'28	-0°23'20
conjunction	5202 Apr 28 09:20	9° ♄ 21'15	-0°38'12	minimum elong	5208 May 21 22:21	3° ♄ 19'28	0°23'21
minimum elong	5202 Apr 28 09:20	9° ♄ 21'15	0°38'12	max. Earth dist.	5208 May 22 14:41	3° ♄ 21'48	20.95682 AU
max. Earth dist.	5202 Apr 29 04:34	9° ♄ 24'00	21.03709 AU	morning rise	5208 Jun 07 02:21	4° ♄ 14'43	
morning rise	5202 May 14 08:03	10° ♄ 15'47		retrograde	5208 Sep 09 12:30	7° ♄ 22'35	
retrograde	5202 Aug 16 08:03	13° ♄ 22'33		opposition	5208 Nov 26 03:59	5° ♄ 22'53	-0°24'08
min. Earth dist.	5202 Nov 01 10:20	11° ♄ 25'33	19.03685 AU	min. Earth dist.	5208 Nov 25 12:40	5° ♄ 24'26	18.94429 AU
opposition	5202 Nov 02 04:58	11° ♄ 23'41	-0°41'03	direct	5209 Feb 09 10:07	3° ♄ 25'59	
direct	5203 Jan 16 22:16	9° ♄ 27'19		evening set	5209 May 10 04:20	6° ♄ 25'36	
evening set	5203 Apr 16 18:32	12° ♄ 26'29					
				conjunction	5209 May 26 05:47	7° ♄ 20'31	-0°20'23
conjunction	5203 May 02 15:01	13° ♄ 20'40	-0°36'07	minimum elong	5209 May 26 05:47	7° ♄ 20'31	0°20'23
minimum elong	5203 May 02 15:01	13° ♄ 20'40	0°36'09	max. Earth dist.	5209 May 26 22:01	7° ♄ 22'50	20.93060 AU
max. Earth dist.	5203 May 03 10:13	13° ♄ 23'25	21.03464 AU	morning rise	5209 Jun 11 10:36	8° ♄ 15'56	
morning rise	5203 May 18 14:32	14° ♄ 15'17		retrograde	5209 Sep 13 21:37	11° ♄ 24'08	
	5203 Jun 01 07:38	15° ♄		opposition	5209 Nov 30 11:52	9° ♄ 24'20	-0°20'48
retrograde	5203 Aug 20 15:24	17° ♄ 22'08		min. Earth dist.	5209 Nov 29 21:40	9° ♄ 25'47	18.91643 AU
opposition	5203 Nov 06 13:10	15° ♄ 23'09	-0°38'40	direct	5210 Feb 13 16:14	7° ♄ 27'20	
min. Earth dist.	5203 Nov 05 19:53	15° ♄ 24'53	19.03179 AU	evening set	5210 May 14 11:13	10° ♄ 27'17	
	5203 Nov 16 05:32	15° ♄					
direct	5204 Jan 21 03:17	13° ♄ 26'44		conjunction	5210 May 30 13:32	11° ♄ 22'22	-0°17'19
	5204 Mar 23 09:06	15° ♄		minimum elong	5210 May 30 13:32	11° ♄ 22'22	0°17'20
evening set	5204 Apr 19 23:34	16° ♄ 25'48		max. Earth dist.	5210 May 31 04:28	11° ♄ 24'31	20.90129 AU
				morning rise	5210 Jun 15 19:23	12° ♄ 17'58	
conjunction	5204 May 05 20:48	17° ♄ 20'03	-0°33'53	retrograde	5210 Sep 18 08:06	15° ♄ 26'34	
minimum elong	5204 May 05 20:49	17° ♄ 20'03	0°33'54	opposition	5210 Dec 04 19:50	13° ♄ 26'39	-0°17'21
max. Earth dist.	5204 May 06 15:05	17° ♄ 22'40	21.02724 AU	min. Earth dist.	5210 Dec 04 05:56	13° ♄ 28'04	18.88543 AU
morning rise	5204 May 21 21:15	18° ♄ 14'47		direct	5211 Feb 17 22:30	11° ♄ 29'31	
retrograde	5204 Aug 24 01:05	21° ♄ 21'45		evening set	5211 May 18 18:51	14° ♄ 29'53	
opposition	5204 Nov 09 21:07	19° ♄ 22'37	-0°36'05				
min. Earth dist.	5204 Nov 09 03:39	19° ♄ 24'22	19.02200 AU	conjunction	5211 Jun 03 22:08	15° ♄ 25'11	-0°14'09
direct	5205 Jan 24 10:41	17° ♄ 26'07		minimum elong	5211 Jun 03 22:09	15° ♄ 25'11	0°14'10
evening set	5205 Apr 24 04:42	20° ♄ 25'08		behind sun begin	5211 Jun 03 18:58	15° ♄ 24'44	
				behind sun end	5211 Jun 04 01:20	15° ♄ 25'38	
conjunction	5205 May 10 02:43	21° ♄ 19'30	-0°31'28	max. Earth dist.	5211 Jun 04 12:49	15° ♄ 27'17	20.86856 AU
minimum elong	5205 May 10 02:43	21° ♄ 19'30	0°31'29	morning rise	5211 Jun 20 04:50	16° ♄ 20'58	

retrograde	5211 Sep 22 17:50	19° Π 29'58	direct	5217 Mar 13 19:29	6° \ominus 05'44	
opposition	5211 Dec 09 03:54	17° Π 29'59 -0°13'48	evening set	5217 Jun 12 07:19	9° \ominus 09'54	
min. Earth dist.	5211 Dec 08 15:26	17° Π 31'15 18.85093 AU				
direct	5212 Feb 22 04:50	15° Π 32'42	conjunction	5217 Jun 28 16:12	10° \ominus 06'36	0°06'12
evening set	5212 May 22 03:11	18° Π 33'35	minimum elong	5217 Jun 28 16:12	10° \ominus 06'36	0°06'11
			behind sun begin	5217 Jun 28 09:51	10° \ominus 05'42	
conjunction	5212 Jun 07 07:22	19° Π 29'04 -0°10'54	behind sun end	5217 Jun 28 22:33	10° \ominus 07'30	
minimum elong	5212 Jun 07 07:21	19° Π 29'04 0°10'56	max. Earth dist.	5217 Jun 28 22:32	10° \ominus 07'30	20.59127 AU
behind sun begin	5212 Jun 07 02:20	19° Π 28'22	morning rise	5217 Jul 15 03:59	11° \ominus 03'44	
behind sun end	5212 Jun 07 12:22	19° Π 29'47	retrograde	5217 Oct 17 18:01	14° \ominus 15'39	
max. Earth dist.	5212 Jun 07 20:14	19° Π 30'55 20.83239 AU	opposition	5218 Jan 02 10:40	12° \ominus 14'43	0°08'45
morning rise	5212 Jun 23 15:03	20° Π 25'04	min. Earth dist.	5218 Jan 02 05:57	12° \ominus 15'13	18.56217 AU
retrograde	5212 Sep 26 05:41	23° Π 34'31	direct	5218 Mar 18 04:34	10° \ominus 15'51	
opposition	5212 Dec 12 12:16	21° Π 34'26 -0°10'10	evening set	5218 Jun 16 19:51	13° \ominus 20'49	
min. Earth dist.	5212 Dec 12 00:35	21° Π 35'37 18.81284 AU				
direct	5213 Feb 25 11:47	19° Π 36'59	conjunction	5218 Jul 03 05:32	14° \ominus 17'47	0°09'37
evening set	5213 May 26 12:05	22° Π 38'25	minimum elong	5218 Jul 03 05:31	14° \ominus 17'47	0°09'37
			behind sun begin	5218 Jul 03 00:00	14° \ominus 17'00	
conjunction	5213 Jun 11 17:13	23° Π 34'09 -0°07'36	behind sun end	5218 Jul 03 11:02	14° \ominus 18'34	
minimum elong	5213 Jun 11 17:13	23° Π 34'09 0°07'37	max. Earth dist.	5218 Jul 03 09:28	14° \ominus 18'20	20.53290 AU
behind sun begin	5213 Jun 11 11:10	23° Π 33'18	morning rise	5218 Jul 19 18:15	15° \ominus 15'11	
behind sun end	5213 Jun 11 23:15	23° Π 34'59	retrograde	5218 Oct 22 07:58	18° \ominus 27'39	
max. Earth dist.	5213 Jun 12 05:36	23° Π 35'55 20.79224 AU	opposition	5219 Jan 06 20:54	16° \ominus 26'29	0°12'32
morning rise	5213 Jun 28 01:39	24° Π 30'21	min. Earth dist.	5219 Jan 06 17:30	16° \ominus 26'50	18.50276 AU
retrograde	5213 Sep 30 16:00	27° Π 40'17	direct	5219 Mar 22 14:11	14° \ominus 27'14	
opposition	5213 Dec 16 21:01	25° Π 40'05 -0°06'27	evening set	5219 Jun 21 09:12	17° \ominus 33'05	
min. Earth dist.	5213 Dec 16 10:53	25° Π 41'07 18.77062 AU				
direct	5214 Mar 01 18:46	23° Π 42'27	conjunction	5219 Jul 07 19:52	18° \ominus 30'19	0°13'00
evening set	5214 May 30 21:53	26° Π 44'30	minimum elong	5219 Jul 07 19:52	18° \ominus 30'19	0°13'00
			behind sun begin	5219 Jul 07 15:54	18° \ominus 29'45	
conjunction	5214 Jun 16 03:53	27° Π 40'26 -0°04'14	behind sun end	5219 Jul 07 23:51	18° \ominus 30'53	
minimum elong	5214 Jun 16 03:52	27° Π 40'26 0°04'15	max. Earth dist.	5219 Jul 07 23:24	18° \ominus 30'49	20.47253 AU
behind sun begin	5214 Jun 15 21:18	27° Π 39'31	morning rise	5219 Jul 24 09:09	19° \ominus 27'58	
behind sun end	5214 Jun 16 10:26	27° Π 41'21	retrograde	5219 Oct 26 21:40	22° \ominus 40'58	
max. Earth dist.	5214 Jun 16 14:02	27° Π 41'53 20.74806 AU	opposition	5220 Jan 11 07:20	20° \ominus 39'37	0°16'16
morning rise	5214 Jul 02 13:19	28° Π 36'52	min. Earth dist.	5220 Jan 11 05:04	20° \ominus 39'51	18.44167 AU
	5214 Jul 28 19:53	0° \ominus	direct	5220 Mar 26 00:12	18° \ominus 40'00	
retrograde	5214 Oct 05 04:57	1° \ominus 47'17	evening set	5220 Jun 24 23:26	21° \ominus 46'47	
	5214 Dec 15 22:42	30° \Re Π				
opposition	5214 Dec 21 05:59	29° Π 46'56 -0°02'41	conjunction	5220 Jul 11 10:47	22° \ominus 44'18	0°16'21
min. Earth dist.	5214 Dec 20 21:00	29° Π 47'51 18.72432 AU	minimum elong	5220 Jul 11 10:47	22° \ominus 44'18	0°16'19
direct	5215 Mar 06 02:39	27° Π 49'03	max. Earth dist.	5220 Jul 11 11:52	22° \ominus 44'27	20.41097 AU
	5215 May 19 12:20	0° \ominus	morning rise	5220 Jul 28 00:53	23° \ominus 42'12	
evening set	5215 Jun 04 08:18	0° \ominus 51'45	retrograde	5220 Oct 30 12:42	26° \ominus 55'47	
			opposition	5221 Jan 14 18:23	24° \ominus 54'14	0°19'56
conjunction	5215 Jun 20 15:21	1° \ominus 47'57 -0°00'46	min. Earth dist.	5221 Jan 14 17:26	24° \ominus 54'20	18.37977 AU
minimum elong	5215 Jun 20 15:22	1° \ominus 47'57 0°00'48	direct	5221 Mar 30 10:38	22° \ominus 54'15	
behind sun begin	5215 Jun 20 08:41	1° \ominus 47'01	evening set	5221 Jun 29 14:12	26° \ominus 02'00	
behind sun end	5215 Jun 20 22:02	1° \ominus 48'53				
max. Earth dist.	5215 Jun 21 00:44	1° \ominus 49'17 20.69956 AU	conjunction	5221 Jul 16 02:30	26° \ominus 59'49	0°19'36
morning rise	5215 Jul 07 01:33	2° \ominus 44'37	minimum elong	5221 Jul 16 02:29	26° \ominus 59'49	0°19'36
asc. node	5215 Sep 08 18:23	5° \ominus 31'55	max. Earth dist.	5221 Jul 16 03:24	26° \ominus 59'56	20.34872 AU
retrograde	5215 Oct 09 16:17	5° \ominus 55'31	morning rise	5221 Aug 01 17:02	27° \ominus 57'59	
opposition	5215 Dec 25 15:18	3° \ominus 55'00 0°01'07		5221 Sep 10 17:11	0° \Re	
min. Earth dist.	5215 Dec 25 07:55	3° \ominus 55'45 18.67369 AU	retrograde	5221 Nov 04 03:57	1° \Re 12'10	
direct	5216 Mar 09 10:42	1° \ominus 56'49		5221 Dec 30 01:35	30° \Re \ominus	
evening set	5216 Jun 07 19:31	5° \ominus 00'14	opposition	5222 Jan 19 05:53	29° \ominus 10'26	0°23'31
			min. Earth dist.	5222 Jan 19 05:44	29° \ominus 10'27	18.31737 AU
conjunction	5216 Jun 24 03:24	5° \ominus 56'40 0°02'46	direct	5222 Apr 03 21:28	27° \ominus 10'07	
minimum elong	5216 Jun 24 03:23	5° \ominus 56'40 0°02'46		5222 Jun 28 17:17	0° \Re	
behind sun begin	5216 Jun 23 20:43	5° \ominus 55'43	evening set	5222 Jul 04 06:08	0° \Re 18'54	
behind sun end	5216 Jun 24 10:04	5° \ominus 57'36				
max. Earth dist.	5216 Jun 24 10:17	5° \ominus 57'38 20.64713 AU	conjunction	5222 Jul 20 19:02	1° \Re 16'59	0°22'47
morning rise	5216 Jul 10 14:31	6° \ominus 53'34	minimum elong	5222 Jul 20 19:02	1° \Re 16'59	0°22'45
retrograde	5216 Oct 13 05:32	10° \ominus 04'58	max. Earth dist.	5222 Jul 20 17:29	1° \Re 16'46	20.28637 AU
opposition	5216 Dec 29 00:48	8° \ominus 04'15 0°04'56	morning rise	5222 Aug 06 10:18	2° \Re 15'25	
min. Earth dist.	5216 Dec 28 18:44	8° \ominus 04'52 18.61946 AU	retrograde	5222 Nov 08 20:28	5° \Re 30'14	

opposition	5223 Jan 23 17:49	3°Ω28'21	0°26'59	direct	5229 May 03 22:36	27°Ω53'12	
min. Earth dist.	5223 Jan 23 19:09	3°Ω28'13	18.25516 AU		5229 Jul 15 04:06	0°♊	
direct	5223 Apr 08 09:00	1°Ω27'41		evening set	5229 Aug 04 23:47	1°♊10'03	
evening set	5223 Jul 08 22:51	4°Ω37'33					
				conjunction	5229 Aug 21 16:37	2°♊10'07	0°40'54
conjunction	5223 Jul 25 12:39	5°Ω35'56	0°25'50	minimum elong	5229 Aug 21 16:37	2°♊10'07	0°40'53
minimum elong	5223 Jul 25 12:39	5°Ω35'56	0°25'49	max. Earth dist.	5229 Aug 21 05:09	2°♊08'23	19.85822 AU
max. Earth dist.	5223 Jul 25 10:53	5°Ω35'41	20.22423 AU	morning rise	5229 Sep 07 09:48	3°♊10'15	
morning rise	5223 Aug 11 04:15	6°Ω34'38		retrograde	5229 Dec 10 06:45	6°♊29'18	
retrograde	5223 Nov 13 13:21	9°Ω50'03		opposition	5230 Feb 22 23:21	4°♊26'45	0°46'30
opposition	5224 Jan 28 06:22	7°Ω48'05	0°30'19	min. Earth dist.	5230 Feb 23 09:18	4°♊25'41	17.82836 AU
min. Earth dist.	5224 Jan 28 08:23	7°Ω47'52	18.19317 AU	direct	5230 May 08 17:45	2°♊23'47	
direct	5224 Apr 11 20:53	5°Ω47'07		evening set	5230 Aug 09 23:10	5°♊41'46	
evening set	5224 Jul 12 16:38	8°Ω58'06					
				conjunction	5230 Aug 26 16:11	6°♊42'04	0°42'40
conjunction	5224 Jul 29 06:53	9°Ω56'46	0°28'46	minimum elong	5230 Aug 26 16:11	6°♊42'04	0°42'39
minimum elong	5224 Jul 29 06:53	9°Ω56'46	0°28'46	max. Earth dist.	5230 Aug 26 02:25	6°♊39'59	19.79874 AU
max. Earth dist.	5224 Jul 29 02:35	9°Ω56'08	20.16251 AU	morning rise	5230 Sep 12 09:26	7°♊42'25	
morning rise	5224 Aug 14 23:04	10°Ω55'44		retrograde	5230 Dec 15 01:48	11°♊01'57	
retrograde	5224 Nov 17 07:15	14°Ω11'48		opposition	5231 Feb 27 16:23	8°♊59'16	0°48'21
opposition	5225 Jan 31 19:34	12°Ω09'45	0°33'31	min. Earth dist.	5231 Feb 28 04:34	8°♊57'57	17.76970 AU
min. Earth dist.	5225 Jan 31 23:18	12°Ω09'21	18.13176 AU	direct	5231 May 13 11:20	6°♊55'54	
direct	5225 Apr 16 09:43	10°Ω08'28		evening set	5231 Aug 14 23:09	10°♊15'00	
evening set	5225 Jul 17 11:14	13°Ω20'37					
				conjunction	5231 Aug 31 16:28	11°♊15'32	0°44'11
conjunction	5225 Aug 03 02:16	14°Ω19'35	0°31'34	minimum elong	5231 Aug 31 16:28	11°♊15'32	0°44'11
minimum elong	5225 Aug 03 02:16	14°Ω19'35	0°31'33	max. Earth dist.	5231 Aug 31 01:54	11°♊13'19	19.74100 AU
max. Earth dist.	5225 Aug 02 21:41	14°Ω18'54	20.10129 AU	morning rise	5231 Sep 17 09:36	12°♊16'04	
	5225 Aug 14 10:19	15°Ω		retrograde	5231 Dec 19 23:35	15°♊36'03	
morning rise	5225 Aug 19 18:40	15°Ω18'48		opposition	5232 Mar 03 09:59	13°♊33'15	0°49'54
retrograde	5225 Nov 22 01:32	18°Ω35'31		min. Earth dist.	5232 Mar 03 22:17	13°♊31'54	17.71303 AU
opposition	5226 Feb 05 09:18	16°Ω33'23	0°36'32	direct	5232 May 17 08:19	11°♊29'30	
min. Earth dist.	5226 Feb 05 13:45	16°Ω32'54	18.07069 AU	evening set	5232 Aug 18 23:45	14°♊49'40	
	5226 Mar 18 22:37	15°♊Ω					
direct	5226 Apr 20 23:39	14°Ω31'48		conjunction	5232 Sep 04 17:06	15°♊50'25	0°45'26
	5226 May 23 16:27	15°Ω		minimum elong	5232 Sep 04 17:06	15°♊50'25	0°45'25
evening set	5226 Jul 22 07:03	17°Ω45'08		max. Earth dist.	5232 Sep 04 01:01	15°♊47'58	19.68551 AU
				morning rise	5232 Sep 21 10:03	16°♊51'08	
conjunction	5226 Aug 07 22:29	18°Ω44'23	0°34'11	retrograde	5232 Dec 23 19:30	20°♊11'32	
minimum elong	5226 Aug 07 22:29	18°Ω44'23	0°34'12	opposition	5233 Mar 08 04:19	18°♊08'36	0°51'08
max. Earth dist.	5226 Aug 07 15:09	18°Ω43'18	20.04033 AU	min. Earth dist.	5233 Mar 08 18:31	18°♊07'04	17.65913 AU
morning rise	5226 Aug 24 15:21	19°Ω43'52		direct	5233 May 22 03:09	16°♊04'28	
retrograde	5226 Nov 26 20:03	23°Ω01'12		evening set	5233 Aug 24 00:58	19°♊25'43	
opposition	5227 Feb 09 23:53	20°Ω59'00	0°39'22				
min. Earth dist.	5227 Feb 10 06:28	20°Ω58'17	18.00987 AU	conjunction	5233 Sep 09 18:25	20°♊26'39	0°46'23
direct	5227 Apr 25 13:53	18°Ω57'06		minimum elong	5233 Sep 09 18:25	20°♊26'39	0°46'23
evening set	5227 Jul 27 03:46	22°Ω11'37		max. Earth dist.	5233 Sep 09 01:32	20°♊24'04	19.63327 AU
				morning rise	5233 Sep 26 11:11	21°♊27'31	
conjunction	5227 Aug 12 19:50	23°Ω11'09	0°36'38	retrograde	5233 Dec 28 18:16	24°♊48'18	
minimum elong	5227 Aug 12 19:50	23°Ω11'09	0°36'37	opposition	5234 Mar 12 22:58	22°♊45'16	0°52'03
max. Earth dist.	5227 Aug 12 11:49	23°Ω09'57	19.97944 AU	min. Earth dist.	5234 Mar 13 12:59	22°♊43'45	17.60870 AU
morning rise	5227 Aug 29 12:45	24°Ω10'51		direct	5234 May 27 01:10	20°♊40'48	
retrograde	5227 Dec 01 15:36	27°Ω28'48		evening set	5234 Aug 29 02:51	24°♊03'03	
opposition	5228 Feb 14 14:57	25°Ω26'30	0°41'59				
min. Earth dist.	5228 Feb 14 22:15	25°Ω25'43	17.94897 AU	conjunction	5234 Sep 14 20:18	25°♊04'10	0°47'03
direct	5228 Apr 29 06:37	23°Ω24'16		minimum elong	5234 Sep 14 20:17	25°♊04'10	0°47'03
evening set	5228 Jul 31 01:32	26°Ω39'58		max. Earth dist.	5234 Sep 14 02:37	25°♊01'28	19.58470 AU
				morning rise	5234 Oct 01 12:41	26°♊05'11	
conjunction	5228 Aug 16 17:51	27°Ω39'46	0°38'53	retrograde	5235 Jan 02 15:33	29°♊26'19	
minimum elong	5228 Aug 16 17:51	27°Ω39'46	0°38'53	opposition	5235 Mar 17 18:29	27°♊23'13	0°52'38
max. Earth dist.	5228 Aug 16 07:06	27°Ω38'09	19.91858 AU	min. Earth dist.	5235 Mar 18 10:06	27°♊21'31	17.56233 AU
morning rise	5228 Sep 02 11:01	28°Ω39'42		direct	5235 May 31 21:24	25°♊18'25	
	5228 Sep 26 14:41	0°♊		evening set	5235 Sep 03 05:16	28°♊41'39	
retrograde	5228 Dec 05 10:12	1°♊58'13					
	5229 Feb 16 15:57	30°♊Ω		conjunction	5235 Sep 19 22:30	29°♊42'56	0°47'24
opposition	5229 Feb 18 06:55	29°Ω55'48	0°44'22	minimum elong	5235 Sep 19 22:30	29°♊42'56	0°47'24
min. Earth dist.	5229 Feb 18 16:26	29°Ω54'47	17.88837 AU	max. Earth dist.	5235 Sep 19 03:55	29°♊40'05	19.54060 AU

	5235 Sep 24 13:15	0° <u>♏</u>		min. Earth dist.	5242 Apr 19 19:49	0° <u>♏</u> 19'21	17.37485 AU
morning rise	5235 Oct 06 14:34	0° <u>♏</u> 44'05			5242 Apr 27 06:08	30° <u>♏</u> <u>♏</u>	
retrograde	5236 Jan 07 14:57	4° <u>♏</u> 05'32		direct	5242 Jul 03 19:46	28° <u>♏</u> 15'33	
opposition	5236 Mar 21 14:24	2° <u>♏</u> 02'24	0°52'52		5242 Sep 06 13:07	0° <u>♏</u>	
min. Earth dist.	5236 Mar 22 05:33	2° <u>♏</u> 00'44	17.52066 AU	evening set	5242 Oct 07 08:54	1° <u>♏</u> 43'54	
	5236 May 25 21:26	30° <u>♏</u> <u>♏</u>					
direct	5236 Jun 04 20:22	29° <u>♏</u> 57'21		conjunction	5242 Oct 23 23:11	2° <u>♏</u> 45'41	0°41'10
	5236 Jun 14 16:45	0° <u>♏</u>		minimum elong	5242 Oct 23 23:11	2° <u>♏</u> 45'41	0°41'10
evening set	5236 Sep 07 08:07	3° <u>♏</u> 21'31		max. Earth dist.	5242 Oct 23 03:02	2° <u>♏</u> 42'32	19.36958 AU
max. Earth dist.	5236 Sep 23 06:41	4° <u>♏</u> 20'05	19.50137 AU	morning rise	5242 Nov 09 10:26	3° <u>♏</u> 47'05	
				retrograde	5243 Feb 09 12:52	7° <u>♏</u> 09'35	
conjunction	5236 Sep 24 01:14	4° <u>♏</u> 22'57	0°47'26	opposition	5243 Apr 24 02:01	5° <u>♏</u> 07'03	0°44'47
minimum elong	5236 Sep 24 01:14	4° <u>♏</u> 22'57	0°47'27	min. Earth dist.	5243 Apr 24 19:38	5° <u>♏</u> 05'07	17.36607 AU
morning rise	5236 Oct 10 16:41	5° <u>♏</u> 24'11		direct	5243 Jul 08 22:15	3° <u>♏</u> 01'17	
retrograde	5237 Jan 11 13:25	8° <u>♏</u> 45'56		evening set	5243 Oct 12 13:29	6° <u>♏</u> 29'57	
opposition	5237 Mar 26 11:06	6° <u>♏</u> 42'49	0°52'45	max. Earth dist.	5243 Oct 28 05:40	7° <u>♏</u> 28'23	19.36300 AU
min. Earth dist.	5237 Mar 27 03:25	6° <u>♏</u> 41'02	17.48410 AU				
direct	5237 Jun 09 17:39	4° <u>♏</u> 37'34		conjunction	5243 Oct 29 02:52	7° <u>♏</u> 31'42	0°39'04
evening set	5237 Sep 12 11:23	8° <u>♏</u> 02'37		minimum elong	5243 Oct 29 02:52	7° <u>♏</u> 31'42	0°39'05
max. Earth dist.	5237 Sep 28 08:30	9° <u>♏</u> 01'08	19.46751 AU	morning rise	5243 Nov 14 13:20	8° <u>♏</u> 33'02	
				retrograde	5244 Feb 14 11:52	11° <u>♏</u> 55'27	
conjunction	5237 Sep 29 04:09	9° <u>♏</u> 04'10	0°47'10	opposition	5244 Apr 28 02:00	9° <u>♏</u> 52'59	0°42'18
minimum elong	5237 Sep 29 04:09	9° <u>♏</u> 04'10	0°47'10	min. Earth dist.	5244 Apr 28 19:44	9° <u>♏</u> 51'03	17.36177 AU
morning rise	5237 Oct 15 19:15	10° <u>♏</u> 05'30		direct	5244 Jul 13 01:30	7° <u>♏</u> 47'10	
retrograde	5238 Jan 16 13:37	13° <u>♏</u> 27'31		evening set	5244 Oct 16 17:45	11° <u>♏</u> 16'03	
opposition	5238 Mar 31 08:13	11° <u>♏</u> 24'27	0°52'17	max. Earth dist.	5244 Nov 01 10:28	12° <u>♏</u> 14'36	19.36098 AU
min. Earth dist.	5238 Apr 01 00:07	11° <u>♏</u> 22'43	17.45280 AU				
direct	5238 Jun 14 17:32	9° <u>♏</u> 19'04		conjunction	5244 Nov 02 06:30	12° <u>♏</u> 17'44	0°36'42
evening set	5238 Sep 17 15:09	12° <u>♏</u> 44'57		minimum elong	5244 Nov 02 06:30	12° <u>♏</u> 17'44	0°36'43
				morning rise	5244 Nov 18 15:57	13° <u>♏</u> 18'59	
conjunction	5238 Oct 04 07:41	13° <u>♏</u> 46'37	0°46'35		5244 Dec 18 10:42	15° <u>♏</u>	
minimum elong	5238 Oct 04 07:41	13° <u>♏</u> 46'37	0°46'36	retrograde	5245 Feb 18 11:46	16° <u>♏</u> 41'13	
max. Earth dist.	5238 Oct 03 12:34	13° <u>♏</u> 43'39	19.43869 AU		5245 Apr 24 22:41	15° <u>♏</u> <u>♏</u>	
morning rise	5238 Oct 20 22:00	14° <u>♏</u> 48'00		opposition	5245 May 03 02:02	14° <u>♏</u> 38'50	0°39'31
retrograde	5239 Jan 21 13:09	18° <u>♏</u> 10'13		min. Earth dist.	5245 May 03 19:14	14° <u>♏</u> 36'58	17.36197 AU
opposition	5239 Apr 05 05:59	16° <u>♏</u> 07'17	0°51'28	direct	5245 Jul 18 05:12	12° <u>♏</u> 32'59	
min. Earth dist.	5239 Apr 05 22:55	16° <u>♏</u> 05'25	17.42646 AU		5245 Oct 04 08:23	15° <u>♏</u>	
direct	5239 Jun 19 16:07	14° <u>♏</u> 01'47		evening set	5245 Oct 21 21:50	16° <u>♏</u> 01'58	
evening set	5239 Sep 22 19:24	17° <u>♏</u> 28'26					
				conjunction	5245 Nov 07 09:40	17° <u>♏</u> 03'34	0°34'05
conjunction	5239 Oct 09 11:19	18° <u>♏</u> 30'10	0°45'41	minimum elong	5245 Nov 07 09:40	17° <u>♏</u> 03'34	0°34'06
minimum elong	5239 Oct 09 11:19	18° <u>♏</u> 30'10	0°45'42	max. Earth dist.	5245 Nov 06 13:13	17° <u>♏</u> 00'21	19.36361 AU
max. Earth dist.	5239 Oct 08 14:49	18° <u>♏</u> 26'59	19.41481 AU	morning rise	5245 Nov 23 18:16	18° <u>♏</u> 04'42	
morning rise	5239 Oct 26 01:07	19° <u>♏</u> 31'36		retrograde	5246 Feb 23 10:26	21° <u>♏</u> 26'42	
retrograde	5240 Jan 26 13:25	22° <u>♏</u> 54'00		opposition	5246 May 08 02:22	19° <u>♏</u> 24'23	0°36'28
opposition	5240 Apr 09 04:16	20° <u>♏</u> 51'09	0°50'18	min. Earth dist.	5246 May 08 19:44	19° <u>♏</u> 22'30	17.36709 AU
min. Earth dist.	5240 Apr 09 21:01	20° <u>♏</u> 49'19	17.40494 AU	direct	5246 Jul 23 07:48	17° <u>♏</u> 18'30	
direct	5240 Jun 23 16:59	18° <u>♏</u> 45'35		evening set	5246 Oct 27 01:27	20° <u>♏</u> 47'29	
evening set	5240 Sep 26 23:35	22° <u>♏</u> 12'54					
				conjunction	5246 Nov 12 12:28	21° <u>♏</u> 48'57	0°31'14
conjunction	5240 Oct 13 15:08	23° <u>♏</u> 14'41	0°44'29	minimum elong	5246 Nov 12 12:28	21° <u>♏</u> 48'57	0°31'15
minimum elong	5240 Oct 13 15:08	23° <u>♏</u> 14'41	0°44'29	max. Earth dist.	5246 Nov 11 17:15	21° <u>♏</u> 45'57	19.37128 AU
max. Earth dist.	5240 Oct 12 19:30	23° <u>♏</u> 11'37	19.39543 AU	morning rise	5246 Nov 28 20:03	22° <u>♏</u> 49'58	
morning rise	5240 Oct 30 04:01	24° <u>♏</u> 16'07		retrograde	5247 Feb 28 10:42	26° <u>♏</u> 11'40	
retrograde	5241 Jan 30 13:28	27° <u>♏</u> 38'38		opposition	5247 May 13 02:39	24° <u>♏</u> 09'26	0°33'10
opposition	5241 Apr 14 03:11	25° <u>♏</u> 35'54	0°48'48	min. Earth dist.	5247 May 13 18:47	24° <u>♏</u> 07'41	17.37725 AU
min. Earth dist.	5241 Apr 14 20:35	25° <u>♏</u> 34'00	17.38772 AU	direct	5247 Jul 28 11:48	22° <u>♏</u> 03'33	
direct	5241 Jun 28 17:22	23° <u>♏</u> 30'16		evening set	5247 Nov 01 04:39	25° <u>♏</u> 32'23	
evening set	5241 Oct 02 04:17	26° <u>♏</u> 58'08					
				conjunction	5247 Nov 17 14:40	26° <u>♏</u> 33'43	0°28'10
conjunction	5241 Oct 18 19:04	27° <u>♏</u> 59'56	0°42'58	minimum elong	5247 Nov 17 14:40	26° <u>♏</u> 33'43	0°28'10
minimum elong	5241 Oct 18 19:04	27° <u>♏</u> 59'56	0°42'59	max. Earth dist.	5247 Nov 16 20:00	26° <u>♏</u> 30'48	19.38418 AU
max. Earth dist.	5241 Oct 17 21:59	27° <u>♏</u> 56'39	19.38040 AU	morning rise	5247 Dec 03 21:15	27° <u>♏</u> 34'35	
morning rise	5241 Nov 04 07:19	29° <u>♏</u> 01'22			5248 Jan 19 02:32	0° <u>♏</u> <u>♏</u>	
	5241 Nov 20 22:00	0° <u>♏</u>		retrograde	5248 Mar 04 08:42	0° <u>♏</u> <u>♏</u> 55'56	
retrograde	5242 Feb 04 13:03	2° <u>♏</u> 23'55			5248 Apr 20 04:43	30° <u>♏</u> <u>♏</u>	
opposition	5242 Apr 19 02:20	0° <u>♏</u> 21'16	0°46'57	opposition	5248 May 17 03:09	28° <u>♏</u> 53'47	0°29'38

min. Earth dist.	5248 May 17 19:16	28° 11 52'03	17.39303 AU	min. Earth dist.	5254 Jun 15 13:28	26° 27 59'56	17.60123 AU
direct	5248 Aug 01 13:00	26° 11 47'56		direct	5254 Aug 31 01:44	24° 27 56'23	
	5248 Oct 31 17:58	0° 27		evening set	5254 Dec 04 09:16	28° 27 21'53	
evening set	5248 Nov 05 07:04	0° 27 16'32					
				conjunction	5254 Dec 20 12:06	29° 27 21'39	0°03'04
conjunction	5248 Nov 21 16:09	1° 27 17'43	0°24'55	minimum elong	5254 Dec 20 12:06	29° 27 21'39	0°03'05
minimum elong	5248 Nov 21 16:09	1° 27 17'43	0°24'56	behind sun begin	5254 Dec 20 05:29	29° 27 20'39	
max. Earth dist.	5248 Nov 20 22:46	1° 27 14'59	19.40288 AU	behind sun end	5254 Dec 20 18:42	29° 27 22'39	
morning rise	5248 Dec 07 21:47	2° 27 18'24		max. Earth dist.	5254 Dec 20 02:01	29° 27 20'06	19.62542 AU
retrograde	5249 Mar 09 09:08	5° 27 39'22			5254 Dec 30 18:54	0° 28	
opposition	5249 May 22 03:28	3° 27 37'20	0°25'55	morning rise	5255 Jan 05 11:52	0° 28 20'59	
min. Earth dist.	5249 May 22 17:42	3° 27 35'48	17.41452 AU	retrograde	5255 Apr 06 17:28	3° 28 39'09	
direct	5249 Aug 06 17:02	1° 27 31'34		opposition	5255 Jun 20 03:20	1° 28 38'19	0°01'15
evening set	5249 Nov 10 09:07	4° 27 59'51		min. Earth dist.	5255 Jun 20 10:56	1° 28 37'30	17.65012 AU
					5255 Aug 03 20:29	30° 28 34'21	
conjunction	5249 Nov 26 17:13	6° 27 00'50	0°21'31	direct	5255 Sep 05 04:11	29° 27 34'02	
minimum elong	5249 Nov 26 17:13	6° 27 00'50	0°21'32		5255 Oct 06 20:14	0° 28	
max. Earth dist.	5249 Nov 26 01:08	5° 27 58'19	19.42731 AU	desc. node	5255 Oct 07 02:35	0° 28 00'26	
morning rise	5249 Dec 12 21:46	7° 27 01'20		evening set	5255 Dec 09 06:59	2° 28 58'44	
retrograde	5250 Mar 14 05:59	10° 27 21'53					
opposition	5250 May 27 03:47	8° 27 20'00	0°22'03	conjunction	5255 Dec 25 08:58	3° 28 58'14	-0°00'51
min. Earth dist.	5250 May 27 17:54	8° 27 18'29	17.44189 AU	minimum elong	5255 Dec 25 08:57	3° 28 58'14	0°00'50
direct	5250 Aug 11 17:40	6° 27 14'23		behind sun begin	5255 Dec 25 02:20	3° 28 57'14	
evening set	5250 Nov 15 10:35	9° 27 42'16		behind sun end	5255 Dec 25 15:35	3° 28 59'15	
				max. Earth dist.	5255 Dec 25 01:12	3° 28 57'04	19.67554 AU
conjunction	5250 Dec 01 17:36	10° 27 43'03	0°17'59	morning rise	5256 Jan 10 07:39	4° 28 57'18	
minimum elong	5250 Dec 01 17:36	10° 27 43'03	0°18'00	retrograde	5256 Apr 10 12:06	8° 28 14'55	
max. Earth dist.	5250 Dec 01 02:30	10° 27 40'41	19.45765 AU	opposition	5256 Jun 24 02:36	6° 28 14'16	-0°02'59
morning rise	5250 Dec 17 21:14	11° 27 43'20		min. Earth dist.	5256 Jun 24 09:51	6° 28 13'30	17.70135 AU
retrograde	5251 Mar 19 05:44	15° 27 03'28		direct	5256 Sep 09 04:16	4° 28 10'19	
opposition	5251 Jun 01 04:00	13° 27 01'45	0°18'02	evening set	5256 Dec 13 03:57	7° 28 34'08	
min. Earth dist.	5251 Jun 01 15:55	13° 27 00'28	17.47486 AU				
direct	5251 Aug 16 21:29	10° 27 56'21		conjunction	5256 Dec 29 04:47	8° 28 33'21	-0°04'41
evening set	5251 Nov 20 11:11	14° 27 23'45		minimum elong	5256 Dec 29 04:46	8° 28 33'21	0°04'40
				behind sun begin	5256 Dec 28 22:17	8° 28 32'22	
conjunction	5251 Dec 06 17:15	15° 27 24'19	0°14'21	behind sun end	5256 Dec 29 11:15	8° 28 34'19	
minimum elong	5251 Dec 06 17:15	15° 27 24'19	0°14'23	max. Earth dist.	5256 Dec 28 21:09	8° 28 32'11	19.72782 AU
behind sun begin	5251 Dec 06 14:12	15° 27 23'51		morning rise	5257 Jan 14 02:47	9° 28 32'08	
behind sun end	5251 Dec 06 20:19	15° 27 24'47		retrograde	5257 Apr 15 07:59	12° 28 49'11	
max. Earth dist.	5251 Dec 06 04:08	15° 27 22'16	19.49325 AU	opposition	5257 Jun 29 01:21	10° 28 48'43	-0°07'11
morning rise	5251 Dec 22 19:46	16° 27 24'23		min. Earth dist.	5257 Jun 29 06:47	10° 28 48'08	17.75451 AU
retrograde	5252 Mar 23 01:54	19° 27 44'03		direct	5257 Sep 14 04:58	8° 28 45'02	
opposition	5252 Jun 05 04:14	17° 27 42'34	0°13'56	evening set	5257 Dec 17 23:56	12° 28 07'56	
min. Earth dist.	5252 Jun 05 16:01	17° 27 41'18	17.51291 AU				
direct	5252 Aug 20 21:59	15° 27 37'25		conjunction	5258 Jan 02 23:57	13° 28 06'52	-0°08'25
evening set	5252 Nov 24 11:17	19° 27 04'16		minimum elong	5258 Jan 02 23:57	13° 28 06'52	0°08'24
				behind sun begin	5258 Jan 02 18:08	13° 28 05'59	
conjunction	5252 Dec 10 16:13	20° 27 04'34	0°10'38	behind sun end	5258 Jan 03 05:46	13° 28 07'44	
minimum elong	5252 Dec 10 16:13	20° 27 04'34	0°10'39	max. Earth dist.	5258 Jan 02 18:42	13° 28 06'04	19.78171 AU
behind sun begin	5252 Dec 10 11:04	20° 27 03'47		morning rise	5258 Jan 18 20:58	14° 28 05'22	
behind sun end	5252 Dec 10 21:22	20° 27 05'21		retrograde	5258 Apr 20 01:45	17° 28 21'49	
max. Earth dist.	5252 Dec 10 03:42	20° 27 02'38	19.53366 AU	opposition	5258 Jul 03 23:43	15° 28 21'31	-0°11'19
morning rise	5252 Dec 26 17:54	21° 27 04'24		min. Earth dist.	5258 Jul 04 04:28	15° 28 21'01	17.80905 AU
retrograde	5253 Mar 28 00:33	24° 27 23'36		direct	5258 Sep 19 04:22	13° 28 18'08	
opposition	5253 Jun 10 03:59	22° 27 22'19	0°09'44	evening set	5258 Dec 22 19:10	16° 28 40'02	
min. Earth dist.	5253 Jun 10 13:43	22° 27 21'17	17.55531 AU				
direct	5253 Aug 26 01:25	20° 27 17'27		conjunction	5259 Jan 07 18:04	17° 28 38'39	-0°12'04
evening set	5253 Nov 29 10:38	23° 27 43'40		minimum elong	5259 Jan 07 18:04	17° 28 38'39	0°12'03
				behind sun begin	5259 Jan 07 13:31	17° 28 37'58	
conjunction	5253 Dec 15 14:40	24° 27 43'44	0°06'52	behind sun end	5259 Jan 07 22:37	17° 28 39'20	
minimum elong	5253 Dec 15 14:40	24° 27 43'44	0°06'54	max. Earth dist.	5259 Jan 07 13:03	17° 28 37'54	19.83704 AU
behind sun begin	5253 Dec 15 08:30	24° 27 42'47		morning rise	5259 Jan 23 14:29	18° 28 36'54	
behind sun end	5253 Dec 15 20:51	24° 27 44'40		retrograde	5259 Apr 24 20:05	21° 28 52'45	
max. Earth dist.	5253 Dec 15 04:17	24° 27 42'08	19.57791 AU	opposition	5259 Jul 08 21:35	19° 28 52'33	-0°15'21
morning rise	5253 Dec 31 15:14	25° 27 43'19		min. Earth dist.	5259 Jul 09 00:39	19° 28 52'14	17.86511 AU
retrograde	5254 Apr 01 19:57	29° 27 02'00		direct	5259 Sep 24 02:53	17° 28 49'26	
opposition	5254 Jun 15 03:51	27° 27 00'57	0°05'30	evening set	5259 Dec 27 13:04	21° 28 10'18	

conjunction	5260 Jan 12 11:16	22°308'37 -0°15'39	conjunction	5266 Feb 06 23:23	18°329'03 -0°33'58
minimum elong	5260 Jan 12 11:16	22°308'37 0°15'38	minimum elong	5266 Feb 06 23:23	18°329'03 0°33'57
behind sun begin	5260 Jan 12 09:31	22°308'22	max. Earth dist.	5266 Feb 07 06:35	18°330'08 20.26458 AU
behind sun end	5260 Jan 12 13:00	22°308'53	morning rise	5266 Feb 22 15:53	19°325'26
max. Earth dist.	5260 Jan 12 08:50	22°308'15 19.89375 AU	retrograde	5266 May 25 09:56	22°337'07
morning rise	5260 Jan 28 06:49	23°306'35	opposition	5266 Aug 09 13:31	20°337'49 -0°39'01
retrograde	5260 Apr 28 12:53	26°321'48	min. Earth dist.	5266 Aug 09 05:33	20°338'38 18.29671 AU
opposition	5260 Jul 12 18:53	24°321'43 -0°19'16	direct	5266 Oct 25 18:47	18°337'04
min. Earth dist.	5260 Jul 12 20:47	24°321'31 17.92241 AU	evening set	5267 Jan 26 17:29	21°350'12
direct	5260 Sep 28 00:56	22°318'53			
evening set	5260 Dec 31 06:16	25°338'39	conjunction	5267 Feb 11 10:38	22°346'29 -0°36'22
			minimum elong	5267 Feb 11 10:37	22°346'29 0°36'22
conjunction	5261 Jan 16 03:27	26°336'40 -0°19'06	max. Earth dist.	5267 Feb 11 18:42	22°347'42 20.32889 AU
minimum elong	5261 Jan 16 03:27	26°336'40 0°19'05	morning rise	5267 Feb 27 02:55	23°342'39
max. Earth dist.	5261 Jan 16 01:33	26°336'23 19.95182 AU	retrograde	5267 May 29 23:00	26°353'50
morning rise	5261 Jan 31 22:30	27°334'22	opposition	5267 Aug 14 06:40	24°354'40 -0°41'34
	5261 Mar 21 02:24	0°3	min. Earth dist.	5267 Aug 13 22:05	24°355'32 18.36080 AU
retrograde	5261 May 03 05:55	0°348'57	direct	5267 Oct 30 10:39	22°354'18
	5261 Jun 17 02:43	30°33	evening set	5268 Jan 31 04:25	26°306'21
opposition	5261 Jul 17 15:23	28°348'57 -0°23'02			
min. Earth dist.	5261 Jul 17 15:46	28°348'55 17.98134 AU	conjunction	5268 Feb 15 21:13	27°302'23 -0°38'34
direct	5261 Oct 02 21:26	26°346'23	minimum elong	5268 Feb 15 21:13	27°302'23 0°38'34
	5262 Jan 03 12:20	0°3	max. Earth dist.	5268 Feb 16 07:06	27°303'52 20.39241 AU
evening set	5262 Jan 04 22:20	0°305'03	morning rise	5268 Mar 02 13:14	27°358'19
				5268 Apr 10 21:29	0°3
conjunction	5262 Jan 20 18:51	1°302'46 -0°22'25	retrograde	5268 Jun 02 12:41	1°309'00
minimum elong	5262 Jan 20 18:51	1°302'46 0°22'24		5268 Jul 27 18:36	30°3
max. Earth dist.	5262 Jan 20 19:36	1°302'53 20.01151 AU	opposition	5268 Aug 17 23:06	29°309'59 -0°43'51
morning rise	5262 Feb 05 13:09	2°300'12	min. Earth dist.	5268 Aug 17 12:37	29°311'03 18.42352 AU
retrograde	5262 May 07 21:48	5°314'08	direct	5268 Nov 03 03:13	27°310'00
opposition	5262 Jul 22 11:29	3°314'16 -0°26'38		5269 Jan 28 13:12	0°3
min. Earth dist.	5262 Jul 22 10:07	3°314'24 18.04182 AU	evening set	5269 Feb 03 14:55	0°320'59
direct	5262 Oct 07 17:45	1°312'01			
evening set	5263 Jan 09 13:30	4°329'33	conjunction	5269 Feb 19 07:13	1°316'46 -0°40'32
			minimum elong	5269 Feb 19 07:13	1°316'46 0°40'31
conjunction	5263 Jan 25 09:05	5°326'58 -0°25'34	max. Earth dist.	5269 Feb 19 17:47	1°318'21 20.45414 AU
minimum elong	5263 Jan 25 09:05	5°326'58 0°25'34	morning rise	5269 Mar 06 23:07	2°312'30
max. Earth dist.	5263 Jan 25 10:43	5°327'13 20.07285 AU	retrograde	5269 Jun 06 23:53	5°322'42
morning rise	5263 Feb 10 02:56	6°324'07	opposition	5269 Aug 22 14:58	3°323'47 -0°45'54
retrograde	5263 May 12 13:56	9°337'29	min. Earth dist.	5269 Aug 22 04:22	3°324'52 18.48431 AU
opposition	5263 Jul 27 07:00	7°337'43 -0°30'03	direct	5269 Nov 07 17:18	1°324'09
min. Earth dist.	5263 Jul 27 04:05	7°338'01 18.10411 AU	evening set	5270 Feb 08 00:39	4°334'06
direct	5263 Oct 12 12:43	5°335'48			
evening set	5264 Jan 14 03:41	8°352'14	conjunction	5270 Feb 23 16:42	5°329'39 -0°42'16
			minimum elong	5270 Feb 23 16:42	5°329'39 0°42'17
conjunction	5264 Jan 29 22:43	9°349'21 -0°28'34	max. Earth dist.	5270 Feb 24 04:35	5°331'25 20.51370 AU
minimum elong	5264 Jan 29 22:43	9°349'21 0°28'32	morning rise	5270 Mar 11 08:26	6°325'10
max. Earth dist.	5264 Jan 30 02:51	9°349'59 20.13588 AU	retrograde	5270 Jun 11 12:50	9°334'55
morning rise	5264 Feb 14 15:58	10°346'15	opposition	5270 Aug 27 06:17	7°336'06 -0°47'41
retrograde	5264 May 16 04:53	13°359'01	min. Earth dist.	5270 Aug 26 17:52	7°337'21 18.54247 AU
opposition	5264 Jul 31 01:40	11°359'24 -0°33'15	direct	5270 Nov 12 08:40	5°336'47
min. Earth dist.	5264 Jul 30 20:48	11°359'54 18.16770 AU	evening set	5271 Feb 12 09:43	8°345'42
direct	5264 Oct 16 07:35	9°357'51			
evening set	5265 Jan 17 17:07	13°313'11	conjunction	5271 Feb 28 01:26	9°341'02 -0°43'47
			minimum elong	5271 Feb 28 01:26	9°341'02 0°43'46
conjunction	5265 Feb 02 11:24	14°310'01 -0°31'22	max. Earth dist.	5271 Feb 28 13:57	9°342'53 20.57030 AU
minimum elong	5265 Feb 02 11:24	14°310'01 0°31'21	morning rise	5271 Mar 15 17:13	10°336'22
max. Earth dist.	5265 Feb 02 16:24	14°310'46 20.19996 AU	retrograde	5271 Jun 15 22:51	13°345'40
	5265 Feb 16 07:27	15°3	opposition	5271 Aug 31 21:08	11°346'55 -0°49'13
morning rise	5265 Feb 18 04:22	15°306'39	min. Earth dist.	5271 Aug 31 08:50	11°348'09 18.59762 AU
retrograde	5265 May 20 19:46	18°318'53	direct	5271 Nov 16 21:03	9°347'53
opposition	5265 Aug 04 19:55	16°319'24 -0°36'15	evening set	5272 Feb 16 18:09	12°355'48
min. Earth dist.	5265 Aug 04 13:58	16°320'01 18.23220 AU			
	5265 Sep 09 01:02	15°3	conjunction	5272 Mar 03 09:46	13°350'55 -0°45'03
direct	5265 Oct 21 00:54	14°318'15	minimum elong	5272 Mar 03 09:46	13°350'55 0°45'03
	5265 Nov 30 18:41	15°3	max. Earth dist.	5272 Mar 03 23:17	13°352'55 20.62379 AU
evening set	5266 Jan 22 05:36	17°332'29	morning rise	5272 Mar 19 01:34	14°346'05

retrograde	5272 Jun 19 10:39	17° ✕ 54'56	evening set	5279 Mar 16 13:27	11° Υ 28'46
opposition	5272 Sep 04 11:00	15° ✕ 56'12 -0°50'28			
min. Earth dist.	5272 Sep 03 21:00	15° ✕ 57'37 18.64936 AU	conjunction	5279 Apr 01 05:37	12° Υ 22'56 -0°47'05
direct	5272 Nov 20 10:59	13° ✕ 57'26	minimum elong	5279 Apr 01 05:37	12° Υ 22'56 0°47'06
evening set	5273 Feb 20 01:59	17° ✕ 04'21	max. Earth dist.	5279 Apr 02 00:55	12° Υ 25'44 20.91651 AU
			morning rise	5279 Apr 16 23:35	13° Υ 17'22
conjunction	5273 Mar 07 17:26	17° ✕ 59'18 -0°46'04	retrograde	5279 Jul 19 01:53	16° Υ 24'12
minimum elong	5273 Mar 07 17:26	17° ✕ 59'18 0°46'04	opposition	5279 Oct 04 21:25	14° Υ 25'30 -0°51'43
max. Earth dist.	5273 Mar 08 07:33	18° ✕ 01'22 20.67381 AU	min. Earth dist.	5279 Oct 04 03:00	14° Υ 27'20 18.93265 AU
morning rise	5273 Mar 23 09:25	18° ✕ 54'18	direct	5279 Dec 20 06:25	12° Υ 28'17
retrograde	5273 Jun 23 19:36	22° ✕ 02'45	evening set	5280 Mar 19 18:16	15° Υ 29'50
min. Earth dist.	5273 Sep 08 10:48	20° ✕ 05'23 18.69785 AU			
opposition	5273 Sep 09 00:33	20° ✕ 04'00 -0°51'27	conjunction	5280 Apr 04 10:49	16° Υ 23'56 -0°46'26
direct	5273 Nov 24 22:01	18° ✕ 05'27	minimum elong	5280 Apr 04 10:49	16° Υ 23'56 0°46'26
evening set	5274 Feb 24 09:00	21° ✕ 11'26	max. Earth dist.	5280 Apr 05 06:29	16° Υ 26'47 20.94726 AU
			morning rise	5280 Apr 20 05:19	17° Υ 18'19
conjunction	5274 Mar 12 00:27	22° ✕ 06'11 -0°46'51	retrograde	5280 Jul 22 11:38	20° Υ 25'02
minimum elong	5274 Mar 12 00:27	22° ✕ 06'11 0°46'51	min. Earth dist.	5280 Oct 07 11:22	18° Υ 28'20 18.96156 AU
max. Earth dist.	5274 Mar 12 15:36	22° ✕ 08'25 20.72078 AU	opposition	5280 Oct 08 07:06	18° Υ 26'22 -0°50'52
morning rise	5274 Mar 27 16:35	23° ✕ 01'03	direct	5280 Dec 23 14:56	16° Υ 29'22
retrograde	5274 Jun 28 06:22	26° ✕ 09'07	evening set	5281 Mar 23 23:00	19° Υ 30'25
opposition	5274 Sep 13 13:21	24° ✕ 10'21 -0°52'10			
min. Earth dist.	5274 Sep 12 21:40	24° ✕ 11'55 18.74335 AU	conjunction	5281 Apr 08 15:54	20° Υ 24'29 -0°45'33
direct	5274 Nov 29 10:26	22° ✕ 12'01	minimum elong	5281 Apr 08 15:54	20° Υ 24'29 0°45'34
evening set	5275 Feb 28 15:35	25° ✕ 17'05	max. Earth dist.	5281 Apr 09 12:01	20° Υ 27'23 20.97418 AU
			morning rise	5281 Apr 24 10:58	21° Υ 18'51
conjunction	5275 Mar 16 07:01	26° ✕ 11'41 -0°47'23	retrograde	5281 Jul 26 19:12	24° Υ 25'30
minimum elong	5275 Mar 16 07:01	26° ✕ 11'41 0°47'23	opposition	5281 Oct 12 16:49	22° Υ 26'52 -0°49'46
max. Earth dist.	5275 Mar 16 23:03	26° ✕ 14'02 20.76487 AU	min. Earth dist.	5281 Oct 11 21:58	22° Υ 28'45 18.98650 AU
morning rise	5275 Mar 31 23:25	27° ✕ 06'25	direct	5281 Dec 27 20:32	20° Υ 30'04
	5275 Jun 08 20:14	0° Υ	evening set	5282 Mar 28 03:30	23° Υ 30'40
retrograde	5275 Jul 02 14:38	0° Υ 14'09			
	5275 Jul 26 20:41	30° ✕	conjunction	5282 Apr 12 20:52	24° Υ 24'41 -0°44'28
min. Earth dist.	5275 Sep 17 10:07	28° ✕ 16'55 18.78632 AU	minimum elong	5282 Apr 12 20:52	24° Υ 24'41 0°44'28
opposition	5275 Sep 18 01:38	28° ✕ 15'21 -0°52'36	max. Earth dist.	5282 Apr 13 17:04	24° Υ 27'36 20.99704 AU
direct	5275 Dec 03 19:58	26° ✕ 17'14	morning rise	5282 Apr 28 16:34	25° Υ 19'04
evening set	5276 Mar 03 21:35	29° ✕ 21'28	retrograde	5282 Jul 31 05:02	28° Υ 25'40
	5276 Mar 15 00:14	0° Υ	min. Earth dist.	5282 Oct 16 06:18	26° Υ 29'02 19.00704 AU
			opposition	5282 Oct 17 02:08	26° Υ 27'03 -0°48'26
conjunction	5276 Mar 19 13:09	0° Υ 15'55 -0°47'40	direct	5283 Jan 01 04:41	24° Υ 30'26
minimum elong	5276 Mar 19 13:09	0° Υ 15'55 0°47'40	evening set	5283 Apr 01 08:12	27° Υ 30'37
max. Earth dist.	5276 Mar 20 06:08	0° Υ 18'24 20.80663 AU			
morning rise	5276 Apr 04 05:52	1° Υ 10'33	conjunction	5283 Apr 17 02:03	28° Υ 24'39 -0°43'09
retrograde	5276 Jul 06 00:37	4° Υ 17'59	minimum elong	5283 Apr 17 02:03	28° Υ 24'39 0°43'10
opposition	5276 Sep 21 13:11	2° Υ 19'12 -0°52'46	max. Earth dist.	5283 Apr 17 22:20	28° Υ 27'34 21.01507 AU
min. Earth dist.	5276 Sep 20 19:44	2° Υ 20'56 18.82685 AU	morning rise	5283 May 02 22:25	29° Υ 19'02
direct	5276 Dec 07 06:39	0° Υ 21'17		5283 May 15 09:47	0° ♄
evening set	5277 Mar 08 03:15	3° Υ 24'45	retrograde	5283 Aug 04 12:56	2° ♄ 25'38
			opposition	5283 Oct 21 11:12	0° ♄ 27'00 -0°46'52
conjunction	5277 Mar 23 18:54	4° Υ 19'06 -0°47'42	min. Earth dist.	5283 Oct 20 16:37	0° ♄ 28'51 19.02258 AU
minimum elong	5277 Mar 23 18:54	4° Υ 19'06 0°47'43		5283 Nov 01 19:57	30° ✕ Υ
max. Earth dist.	5277 Mar 24 12:43	4° Υ 21'41 20.84582 AU	direct	5284 Jan 05 10:11	28° Υ 30'29
morning rise	5277 Apr 08 11:57	5° Υ 13'38		5284 Mar 06 09:07	0° ♄
retrograde	5277 Jul 10 08:30	8° Υ 20'49	evening set	5284 Apr 04 12:53	1° ♄ 30'21
min. Earth dist.	5277 Sep 25 07:10	6° Υ 23'46 18.86488 AU			
opposition	5277 Sep 26 00:22	6° Υ 22'03 -0°52'40	conjunction	5284 Apr 20 07:20	2° ♄ 24'23 -0°41'39
direct	5277 Dec 11 14:33	4° Υ 24'22	minimum elong	5284 Apr 20 07:20	2° ♄ 24'23 0°41'40
evening set	5278 Mar 12 08:31	7° Υ 27'08	max. Earth dist.	5284 Apr 21 03:07	2° ♄ 27'13 21.02800 AU
			morning rise	5284 May 06 04:25	3° ♄ 18'48
conjunction	5278 Mar 28 00:25	8° Υ 21'23 -0°47'31	retrograde	5284 Aug 07 22:24	6° ♄ 25'24
minimum elong	5278 Mar 28 00:25	8° Υ 21'23 0°47'30	opposition	5284 Oct 24 19:57	4° ♄ 26'43 -0°45'04
max. Earth dist.	5278 Mar 28 18:58	8° Υ 24'04 20.88263 AU	min. Earth dist.	5284 Oct 24 00:46	4° ♄ 28'38 19.03272 AU
morning rise	5278 Apr 12 17:53	9° Υ 15'51	direct	5285 Jan 08 17:41	2° ♄ 30'17
retrograde	5278 Jul 14 18:12	12° Υ 22'50	evening set	5285 Apr 08 17:33	5° ♄ 29'51
opposition	5278 Sep 30 11:01	10° Υ 24'06 -0°52'19			
min. Earth dist.	5278 Sep 29 16:04	10° Υ 25'59 18.90029 AU	conjunction	5285 Apr 24 12:34	6° ♄ 23'54 -0°39'56
direct	5278 Dec 15 23:57	8° Υ 26'39	minimum elong	5285 Apr 24 12:34	6° ♄ 23'54 0°39'56

max. Earth dist.	5285 Apr 25 08:10	6°8'26"43	21.03528 AU	morning rise	5291 Jun 04 02:16	1°II'14'09	
morning rise	5285 May 10 10:23	7°8'18"22		retrograde	5291 Sep 06 09:07	4°II'21'37	
retrograde	5285 Aug 12 06:10	10°8'24"59		opposition	5291 Nov 23 03:51	2°II'22'01	-0°27'02
min. Earth dist.	5285 Oct 28 10:47	8°8'28"00	19.03724 AU	min. Earth dist.	5291 Nov 22 12:19	2°II'23'36	18.97197 AU
opposition	5285 Oct 29 04:38	8°8'26"13	-0°43'04	direct	5292 Feb 06 11:30	0°II'25'12	
direct	5286 Jan 12 23:44	6°8'29"48		evening set	5292 May 06 05:45	3°II'24'29	
evening set	5286 Apr 12 22:16	9°8'29"06					
conjunction	5286 Apr 28 17:58	10°8'23"12	-0°38'01	conjunction	5292 May 22 06:13	4°II'19'12	-0°23'03
minimum elong	5286 Apr 28 17:59	10°8'23"12	0°38'03	minimum elong	5292 May 22 06:13	4°II'19'12	0°23'04
max. Earth dist.	5286 Apr 29 12:59	10°8'25"56	21.03729 AU	max. Earth dist.	5292 May 22 22:52	4°II'21'35	20.96066 AU
morning rise	5286 May 14 16:36	11°8'17"44		morning rise	5292 Jun 07 10:06	5°II'14'26	
retrograde	5286 Aug 16 15:31	14°8'24"24		retrograde	5292 Sep 09 20:02	8°II'22'12	
opposition	5286 Nov 02 12:54	12°8'25"29	-0°40'51	opposition	5292 Nov 26 11:33	6°II'22'30	-0°23'48
min. Earth dist.	5286 Nov 01 18:32	12°8'27"20	19.03665 AU	min. Earth dist.	5292 Nov 25 19:52	6°II'24'06	18.94879 AU
direct	5287 Jan 17 06:27	10°8'29"02		direct	5293 Feb 09 18:14	4°II'25'36	
evening set	5287 Apr 17 02:58	13°8'28"09		evening set	5293 May 10 12:06	7°II'25'10	
conjunction	5287 May 02 23:23	14°8'22"18	-0°35'55	conjunction	5293 May 26 13:26	8°II'20'03	-0°20'05
minimum elong	5287 May 02 23:23	14°8'22"18	0°35'56	minimum elong	5293 May 26 13:26	8°II'20'03	0°20'07
max. Earth dist.	5287 May 03 18:17	14°8'25"01	21.03421 AU	max. Earth dist.	5293 May 27 05:53	8°II'22'24	20.93575 AU
	5287 May 13 22:53	15°8'		morning rise	5293 Jun 11 18:11	9°II'15'26	
morning rise	5287 May 18 22:51	15°8'16"55		retrograde	5293 Sep 14 04:33	12°II'23'34	
retrograde	5287 Aug 20 22:39	18°8'23"39		opposition	5293 Nov 30 19:29	10°II'23'48	-0°20'27
opposition	5287 Nov 06 21:02	16°8'24"36	-0°38'26	min. Earth dist.	5293 Nov 30 05:12	10°II'25'15	18.92216 AU
min. Earth dist.	5287 Nov 06 03:57	16°8'26"19	19.03126 AU	direct	5294 Feb 13 23:02	8°II'26'49	
	5287 Dec 16 03:33	15°8'		evening set	5294 May 14 19:07	11°II'26'44	
direct	5288 Jan 21 12:39	14°8'28"05		conjunction	5294 May 30 21:20	12°II'21'48	-0°17'00
	5288 Feb 26 01:24	15°8'		minimum elong	5294 May 30 21:21	12°II'21'48	0°17'01
evening set	5288 Apr 20 07:52	17°8'27"04		max. Earth dist.	5294 May 31 12:38	12°II'23'59	20.90755 AU
conjunction	5288 May 06 05:02	18°8'21"18	-0°33'39	morning rise	5294 Jun 16 03:05	13°II'17'22	
minimum elong	5288 May 06 05:02	18°8'21"18	0°33'40	retrograde	5294 Sep 18 16:07	16°II'25'54	
max. Earth dist.	5288 May 06 23:20	18°8'23"56	21.02677 AU	opposition	5294 Dec 05 03:24	14°II'26'03	-0°17'00
morning rise	5288 May 22 05:21	19°8'16"00		min. Earth dist.	5294 Dec 04 13:23	14°II'27'29	18.89212 AU
retrograde	5288 Aug 24 08:18	22°8'22"51		direct	5295 Feb 18 06:04	12°II'28'58	
min. Earth dist.	5288 Nov 09 11:10	20°8'25"24	19.02177 AU	evening set	5295 May 19 02:45	15°II'29'19	
opposition	5288 Nov 10 04:44	20°8'23"38	-0°35'50	conjunction	5295 Jun 04 05:57	16°II'24'35	-0°13'50
direct	5289 Jan 24 18:55	18°8'27"03		minimum elong	5295 Jun 04 05:56	16°II'24'35	0°13'51
evening set	5289 Apr 24 12:55	21°8'25"59		behind sun begin	5295 Jun 04 02:30	16°II'24'06	
conjunction	5289 May 10 10:50	22°8'20"19	-0°31'13	behind sun end	5295 Jun 04 09:22	16°II'25'04	
minimum elong	5289 May 10 10:50	22°8'20"19	0°31'14	max. Earth dist.	5295 Jun 04 20:40	16°II'26'42	20.87554 AU
max. Earth dist.	5289 May 11 05:05	22°8'22"56	21.01532 AU	morning rise	5295 Jun 20 12:32	17°II'20'21	
morning rise	5289 May 26 11:58	23°8'15"07		retrograde	5295 Sep 23 01:55	20°II'29'19	
retrograde	5289 Aug 28 15:17	26°8'22"07		opposition	5295 Dec 09 11:39	18°II'29'24	-0°13'26
opposition	5289 Nov 14 12:35	24°8'22"46	-0°33'03	min. Earth dist.	5295 Dec 08 23:20	18°II'30'39	18.85806 AU
min. Earth dist.	5289 Nov 13 20:09	24°8'24"26	19.00853 AU	direct	5296 Feb 22 11:50	16°II'32'12	
direct	5290 Jan 29 00:26	22°8'26"07		evening set	5296 May 22 11:05	19°II'33'03	
evening set	5290 Apr 28 18:05	25°8'25"04		conjunction	5296 Jun 07 15:08	20°II'28'31	-0°10'34
conjunction	5290 May 14 16:49	26°8'19"31	-0°28'38	minimum elong	5296 Jun 07 15:08	20°II'28'31	0°10'35
minimum elong	5290 May 14 16:49	26°8'19"31	0°28'38	behind sun begin	5296 Jun 07 09:59	20°II'27'48	
max. Earth dist.	5290 May 15 10:29	26°8'22"03	21.00046 AU	behind sun end	5296 Jun 07 20:17	20°II'29'14	
morning rise	5290 May 30 18:53	27°8'14"26		max. Earth dist.	5296 Jun 08 04:07	20°II'30'23	20.83948 AU
	5290 Aug 03 02:05	0°II'		morning rise	5296 Jun 23 22:40	21°II'24'30	
retrograde	5290 Sep 02 01:39	0°II'21'40		retrograde	5296 Sep 26 13:43	24°II'33'55	
	5290 Oct 02 09:15	30°8'		opposition	5296 Dec 12 20:00	22°II'33'54	-0°09'47
opposition	5290 Nov 18 20:15	28°8'22"10	-0°30'07	min. Earth dist.	5296 Dec 12 08:22	22°II'35'05	18.81980 AU
min. Earth dist.	5290 Nov 18 03:25	28°8'23"52	18.99194 AU	direct	5297 Feb 25 19:13	20°II'36'32	
direct	5291 Feb 02 06:49	26°8'25"25		evening set	5297 May 26 20:06	23°II'37'57	
evening set	5291 May 02 23:44	29°8'24"30		conjunction	5297 Jun 12 01:06	24°II'33'39	-0°07'15
	5291 May 13 10:09	0°II'		minimum elong	5297 Jun 12 01:06	24°II'33'39	0°07'16
conjunction	5291 May 18 23:19	0°II'19'05	-0°25'55	behind sun begin	5297 Jun 11 18:59	24°II'32'47	
minimum elong	5291 May 18 23:20	0°II'19'05	0°25'56	behind sun end	5297 Jun 12 07:13	24°II'34'30	
max. Earth dist.	5291 May 19 16:52	0°II'21'36	20.98214 AU	max. Earth dist.	5297 Jun 12 13:11	24°II'35'23	20.79891 AU
				morning rise	5297 Jun 28 09:26	25°II'29'50	

retrograde	5297 Oct 01 00:40	28° Π 39'44	direct	5303 Mar 23 21:56	15° \mathfrak{D} 26'31	
opposition	5297 Dec 17 04:47	26° Π 39'35 -0°06'04	evening set	5303 Jun 22 16:25	18° \mathfrak{D} 32'19	
min. Earth dist.	5297 Dec 16 18:57	26° Π 40'36 18.77693 AU				
direct	5298 Mar 02 02:20	24° Π 42'01	conjunction	5303 Jul 09 02:58	19° \mathfrak{D} 29'32	0°13'22
evening set	5298 May 31 05:43	27° Π 44'02	minimum elong	5303 Jul 09 02:57	19° \mathfrak{D} 29'32	0°13'20
			behind sun begin	5303 Jul 08 23:12	19° \mathfrak{D} 29'00	
conjunction	5298 Jun 16 11:39	28° Π 39'57 -0°03'53	behind sun end	5303 Jul 09 06:43	19° \mathfrak{D} 30'04	
minimum elong	5298 Jun 16 11:38	28° Π 39'57 0°03'54	max. Earth dist.	5303 Jul 09 06:37	19° \mathfrak{D} 30'03	20.47714 AU
behind sun begin	5298 Jun 16 05:03	28° Π 39'02	morning rise	5303 Jul 25 16:08	20° \mathfrak{D} 27'10	
behind sun end	5298 Jun 16 18:14	28° Π 40'53	retrograde	5303 Oct 28 04:39	23° \mathfrak{D} 40'08	
max. Earth dist.	5298 Jun 16 21:37	28° Π 41'23 20.75391 AU	opposition	5304 Jan 12 14:46	21° \mathfrak{D} 38'49	0°16'39
morning rise	5298 Jul 02 20:58	29° Π 36'22	min. Earth dist.	5304 Jan 12 12:20	21° \mathfrak{D} 39'04	18.44660 AU
	5298 Jul 09 22:55	0° \mathfrak{D}	direct	5304 Mar 27 07:39	19° \mathfrak{D} 39'16	
retrograde	5298 Oct 05 12:37	2° \mathfrak{D} 46'45	evening set	5304 Jun 26 06:27	22° \mathfrak{D} 45'59	
opposition	5298 Dec 21 13:46	0° \mathfrak{D} 46'27 -0°02'17				
min. Earth dist.	5298 Dec 21 04:51	0° \mathfrak{D} 47'22 18.72965 AU	conjunction	5304 Jul 12 17:40	23° \mathfrak{D} 43'28	0°16'41
	5299 Jan 09 21:45	30° \mathfrak{R} Π	minimum elong	5304 Jul 12 17:40	23° \mathfrak{D} 43'28	0°16'41
direct	5299 Mar 06 10:29	28° Π 48'36	max. Earth dist.	5304 Jul 12 19:08	23° \mathfrak{D} 43'41	20.41621 AU
	5299 Apr 28 21:18	0° \mathfrak{D}	morning rise	5304 Jul 29 07:38	24° \mathfrak{D} 41'22	
evening set	5299 Jun 04 16:06	1° \mathfrak{D} 51'16	retrograde	5304 Oct 31 19:40	27° \mathfrak{D} 54'56	
			opposition	5305 Jan 16 01:45	25° \mathfrak{D} 53'25	0°20'19
conjunction	5299 Jun 20 23:00	2° \mathfrak{D} 47'26 -0°00'24	min. Earth dist.	5305 Jan 16 00:23	25° \mathfrak{D} 53'34	18.38538 AU
minimum elong	5299 Jun 20 23:01	2° \mathfrak{D} 47'26 0°00'24	direct	5305 Mar 31 17:52	23° \mathfrak{D} 53'30	
behind sun begin	5299 Jun 20 16:22	2° \mathfrak{D} 46'30	evening set	5305 Jun 30 21:19	27° \mathfrak{D} 01'12	
behind sun end	5299 Jun 21 05:41	2° \mathfrak{D} 48'22				
max. Earth dist.	5299 Jun 21 08:02	2° \mathfrak{D} 48'43 20.70447 AU	conjunction	5305 Jul 17 09:28	27° \mathfrak{D} 58'59	0°19'57
morning rise	5299 Jul 07 09:06	3° \mathfrak{D} 44'05	minimum elong	5305 Jul 17 09:28	27° \mathfrak{D} 58'59	0°19'55
asc. node	5299 Aug 01 00:01	5° \mathfrak{D} 02'34	max. Earth dist.	5305 Jul 17 10:39	27° \mathfrak{D} 59'09	20.35469 AU
retrograde	5299 Oct 10 00:08	6° \mathfrak{D} 54'56	morning rise	5305 Aug 02 23:54	28° \mathfrak{D} 57'08	
opposition	5299 Dec 25 22:53	4° \mathfrak{D} 54'27 0°01'31		5305 Aug 22 01:41	0° \mathfrak{D}	
min. Earth dist.	5299 Dec 25 15:45	4° \mathfrak{D} 55'11 18.67822 AU	retrograde	5305 Nov 05 11:15	2° \mathfrak{D} 11'18	
direct	5300 Mar 10 18:38	2° \mathfrak{D} 56'18	opposition	5306 Jan 20 13:13	0° \mathfrak{D} 09'38	0°23'53
evening set	5300 Jun 09 03:09	5° \mathfrak{D} 59'40	min. Earth dist.	5306 Jan 20 12:54	0° \mathfrak{D} 09'40	18.32373 AU
				5306 Jan 24 08:36	30° \mathfrak{R} \mathfrak{D}	
conjunction	5300 Jun 25 10:55	6° \mathfrak{D} 56'05 0°03'08	direct	5306 Apr 05 04:53	28° \mathfrak{D} 09'23	
minimum elong	5300 Jun 25 10:55	6° \mathfrak{D} 56'05 0°03'07		5306 Jun 11 11:51	0° \mathfrak{D}	
behind sun begin	5300 Jun 25 04:15	6° \mathfrak{D} 55'09	evening set	5306 Jul 05 13:11	1° \mathfrak{D} 18'07	
behind sun end	5300 Jun 25 17:35	6° \mathfrak{D} 57'01				
max. Earth dist.	5300 Jun 25 17:45	6° \mathfrak{D} 57'03 20.65143 AU	conjunction	5306 Jul 22 01:59	2° \mathfrak{D} 16'11	0°23'07
morning rise	5300 Jul 11 21:57	7° \mathfrak{D} 52'58	minimum elong	5306 Jul 22 01:59	2° \mathfrak{D} 16'11	0°23'06
retrograde	5300 Oct 14 12:50	11° \mathfrak{D} 04'20	max. Earth dist.	5306 Jul 22 00:46	2° \mathfrak{D} 16'00	20.29308 AU
opposition	5300 Dec 30 08:22	9° \mathfrak{D} 03'37 0°05'20	morning rise	5306 Aug 07 17:11	3° \mathfrak{D} 14'36	
min. Earth dist.	5300 Dec 30 02:11	9° \mathfrak{D} 04'15 18.62358 AU	retrograde	5306 Nov 10 03:30	6° \mathfrak{D} 29'24	
direct	5301 Mar 15 03:33	7° \mathfrak{D} 05'08	opposition	5307 Jan 25 01:18	4° \mathfrak{D} 27'36	0°27'21
evening set	5301 Jun 13 14:40	10° \mathfrak{D} 09'15	min. Earth dist.	5307 Jan 25 02:18	4° \mathfrak{D} 27'29	18.26213 AU
			direct	5307 Apr 09 15:57	2° \mathfrak{D} 27'01	
conjunction	5301 Jun 29 23:25	11° \mathfrak{D} 05'56 0°06'34	evening set	5307 Jul 10 05:58	5° \mathfrak{D} 36'50	
minimum elong	5301 Jun 29 23:26	11° \mathfrak{D} 05'56 0°06'33				
behind sun begin	5301 Jun 29 17:09	11° \mathfrak{D} 05'02	conjunction	5307 Jul 26 19:38	6° \mathfrak{D} 35'12	0°26'10
behind sun end	5301 Jun 30 05:43	11° \mathfrak{D} 06'49	minimum elong	5307 Jul 26 19:37	6° \mathfrak{D} 35'12	0°26'09
max. Earth dist.	5301 Jun 30 05:42	11° \mathfrak{D} 06'49 20.59533 AU	max. Earth dist.	5307 Jul 26 18:06	6° \mathfrak{D} 34'58	20.23139 AU
morning rise	5301 Jul 16 11:08	12° \mathfrak{D} 03'03	morning rise	5307 Aug 12 11:08	7° \mathfrak{D} 33'52	
retrograde	5301 Oct 19 01:03	15° \mathfrak{D} 14'56	retrograde	5307 Nov 14 20:55	10° \mathfrak{D} 49'17	
opposition	5302 Jan 03 18:12	13° \mathfrak{D} 14'01 0°09'09	opposition	5308 Jan 29 13:50	8° \mathfrak{D} 47'24	0°30'41
min. Earth dist.	5302 Jan 03 13:29	13° \mathfrak{D} 14'31 18.56625 AU	min. Earth dist.	5308 Jan 29 15:53	8° \mathfrak{D} 47'11	18.20040 AU
direct	5302 Mar 19 12:23	11° \mathfrak{D} 15'11	direct	5308 Apr 13 04:41	6° \mathfrak{D} 46'31	
evening set	5302 Jun 18 03:10	14° \mathfrak{D} 20'07	evening set	5308 Jul 13 23:51	9° \mathfrak{D} 57'28	
conjunction	5302 Jul 04 12:44	15° \mathfrak{D} 17'03 0°09'59	conjunction	5308 Jul 30 14:00	10° \mathfrak{D} 56'07	0°29'06
minimum elong	5302 Jul 04 12:44	15° \mathfrak{D} 17'03 0°09'58	minimum elong	5308 Jul 30 14:00	10° \mathfrak{D} 56'07	0°29'05
behind sun begin	5302 Jul 04 07:20	15° \mathfrak{D} 16'17	max. Earth dist.	5308 Jul 30 09:51	10° \mathfrak{D} 55'30	20.16973 AU
behind sun end	5302 Jul 04 18:08	15° \mathfrak{D} 17'49	morning rise	5308 Aug 16 06:07	11° \mathfrak{D} 55'03	
max. Earth dist.	5302 Jul 04 16:52	15° \mathfrak{D} 17'38 20.53708 AU		5308 Oct 28 21:00	15° \mathfrak{D}	
morning rise	5302 Jul 21 01:20	16° \mathfrak{D} 14'25	retrograde	5308 Nov 18 14:06	15° \mathfrak{D} 11'08	
retrograde	5302 Oct 23 15:00	19° \mathfrak{D} 26'51		5308 Dec 09 09:34	15° \mathfrak{R} \mathfrak{D}	
opposition	5303 Jan 08 04:14	17° \mathfrak{D} 25'43 0°12'55	opposition	5309 Feb 02 03:09	13° \mathfrak{D} 09'08	0°33'52
min. Earth dist.	5303 Jan 08 00:33	17° \mathfrak{D} 26'06 18.50715 AU	min. Earth dist.	5309 Feb 02 06:52	13° \mathfrak{D} 08'45	18.13877 AU

direct	5309 Apr 17 17:12	11°♈07'56	conjunction	5315 Sep 01 23:26	12°♏14'06	0°44'25
evening set	5309 Jul 18 18:29	14°♈20'03	minimum elong	5315 Sep 01 23:26	12°♏14'06	0°44'24
	5309 Jul 30 01:53	15°♈	max. Earth dist.	5315 Sep 01 09:01	12°♏11'54	19.73960 AU
conjunction	5309 Aug 04 09:25	15°♈18'59 0°31'53	morning rise	5315 Sep 18 16:31	13°♏14'38	
minimum elong	5309 Aug 04 09:25	15°♈18'59 0°31'53	retrograde	5315 Dec 21 06:59	16°♏34'37	
max. Earth dist.	5309 Aug 04 04:50	15°♈18'18 20.10790 AU	opposition	5316 Mar 04 17:41	14°♏31'46	0°50'08
morning rise	5309 Aug 21 01:45	16°♈18'11	min. Earth dist.	5316 Mar 05 05:51	14°♏30'26	17.71146 AU
retrograde	5309 Nov 23 09:04	19°♈34'53	direct	5316 May 18 15:01	12°♏27'59	
opposition	5310 Feb 06 17:05	17°♈32'49 0°36'53	evening set	5316 Aug 20 06:45	15°♏48'07	
min. Earth dist.	5310 Feb 06 21:50	17°♈32'19 18.07673 AU	max. Earth dist.	5316 Sep 05 07:59	16°♏46'25	19.68386 AU
direct	5310 Apr 22 07:40	15°♈31'18	conjunction	5316 Sep 06 00:03	16°♏48'52	0°45'37
evening set	5310 Jul 23 14:28	18°♈44'35	minimum elong	5316 Sep 06 00:03	16°♏48'52	0°45'38
conjunction	5310 Aug 09 05:48	19°♈43'48 0°34'30	morning rise	5316 Sep 22 17:01	17°♏49'35	
minimum elong	5310 Aug 09 05:48	19°♈43'48 0°34'29	retrograde	5316 Dec 25 03:01	21°♏10'01	
max. Earth dist.	5310 Aug 08 22:13	19°♈42'40 20.04567 AU	opposition	5317 Mar 09 11:56	19°♏07'02	0°51'20
morning rise	5310 Aug 25 22:35	20°♈43'15	min. Earth dist.	5317 Mar 10 01:53	19°♏05'31	17.65752 AU
retrograde	5310 Nov 28 03:09	24°♈00'35	direct	5317 May 23 10:34	17°♏02'55	
opposition	5311 Feb 11 07:39	21°♈58'23 0°39'42	evening set	5317 Aug 25 07:48	20°♏24'07	
min. Earth dist.	5311 Feb 11 14:28	21°♈57'40 18.01441 AU	max. Earth dist.	5317 Sep 10 08:43	21°♏22'32	19.63175 AU
direct	5311 Apr 26 22:16	19°♈56'31	conjunction	5317 Sep 11 01:15	21°♏25'04	0°46'33
evening set	5311 Jul 28 11:11	23°♈10'58	minimum elong	5317 Sep 11 01:15	21°♏25'04	0°46'33
conjunction	5311 Aug 14 03:11	24°♈10'29 0°36'56	morning rise	5317 Sep 27 18:01	22°♏25'56	
minimum elong	5311 Aug 14 03:11	24°♈10'29 0°36'56	retrograde	5317 Dec 30 01:29	25°♏46'47	
max. Earth dist.	5311 Aug 13 18:56	24°♈09'15 19.98311 AU	opposition	5318 Mar 14 06:41	23°♏43'44	0°52'13
morning rise	5311 Aug 30 20:03	25°♈10'10	min. Earth dist.	5318 Mar 14 20:20	23°♏42'14	17.60735 AU
retrograde	5311 Dec 02 23:00	28°♈28'04	direct	5318 May 28 08:19	21°♏39'16	
opposition	5312 Feb 15 22:52	26°♈25'46 0°42'19	evening set	5318 Aug 30 09:41	25°♏01'31	
min. Earth dist.	5312 Feb 16 06:29	26°♈24'57 17.95176 AU	max. Earth dist.	5318 Sep 15 09:34	25°♏59'58	19.58359 AU
direct	5312 Apr 30 14:24	24°♈23'33	conjunction	5318 Sep 16 03:04	26°♏02'39	0°47'11
evening set	5312 Aug 01 08:45	27°♈39'09	minimum elong	5318 Sep 16 03:04	26°♏02'39	0°47'11
conjunction	5312 Aug 18 01:00	28°♈38'55 0°39'10	morning rise	5318 Oct 02 19:28	27°♏03'40	
minimum elong	5312 Aug 18 01:00	28°♈38'55 0°39'09		5318 Dec 04 16:40	0°♏	
max. Earth dist.	5312 Aug 17 13:59	28°♈37'16 19.92054 AU	retrograde	5319 Jan 03 22:25	0°♏24'53	
morning rise	5312 Sep 03 18:09	29°♈38'50		5319 Feb 03 14:19	30°♏	
	5312 Sep 09 19:53	0°♏	opposition	5319 Mar 19 02:06	28°♏21'48	0°52'46
retrograde	5312 Dec 06 17:52	2°♏57'20	min. Earth dist.	5319 Mar 19 17:20	28°♏20'08	17.56156 AU
opposition	5313 Feb 19 14:48	0°♏54'53 0°44'41	direct	5319 Jun 02 04:42	26°♏17'03	
min. Earth dist.	5313 Feb 20 00:27	0°♏53'50 17.88951 AU	evening set	5319 Sep 04 12:04	29°♏40'18	
	5313 Mar 13 14:51	30°♏	max. Earth dist.	5319 Sep 09 22:25	0°♏	
direct	5313 May 05 06:52	28°♈52'15		5319 Sep 20 11:10	0°♏38'48	19.54021 AU
	5313 Jun 25 17:27	0°♏	conjunction	5319 Sep 21 05:19	0°♏41'36	0°47'30
evening set	5313 Aug 06 07:04	2°♏09'01	minimum elong	5319 Sep 21 05:19	0°♏41'36	0°47'30
conjunction	5313 Aug 22 23:52	3°♏09'03 0°41'10	morning rise	5319 Oct 07 21:23	1°♏42'45	
minimum elong	5313 Aug 22 23:52	3°♏09'03 0°41'09	retrograde	5320 Jan 08 22:37	5°♏04'18	
max. Earth dist.	5313 Aug 22 12:17	3°♏07'19 19.85867 AU	opposition	5320 Mar 22 22:05	3°♏01'12	0°52'58
morning rise	5313 Sep 08 17:00	4°♏09'12	min. Earth dist.	5320 Mar 23 12:46	2°♏59'36	17.52060 AU
retrograde	5313 Dec 11 14:23	7°♏28'12	direct	5320 Jun 06 03:39	0°♏56'15	
opposition	5314 Feb 24 07:05	5°♏25'37 0°46'47	evening set	5320 Sep 08 14:49	4°♏20'27	
min. Earth dist.	5314 Feb 24 17:12	5°♏24'31 17.82820 AU	conjunction	5320 Sep 25 07:56	5°♏21'53	0°47'31
direct	5314 May 10 00:52	3°♏22'37	minimum elong	5320 Sep 25 07:56	5°♏21'53	0°47'30
evening set	5314 Aug 11 06:21	6°♏40'31	max. Earth dist.	5320 Sep 24 13:36	5°♏19'04	19.50165 AU
conjunction	5314 Aug 27 23:19	7°♏40'48 0°42'55	morning rise	5320 Oct 11 23:27	6°♏23'09	
minimum elong	5314 Aug 27 23:19	7°♏40'48 0°42'55	retrograde	5321 Jan 12 20:45	9°♏45'01	
max. Earth dist.	5314 Aug 27 09:20	7°♏38'41 19.79808 AU	opposition	5321 Mar 27 18:50	7°♏41'58	0°52'49
morning rise	5314 Sep 13 16:34	8°♏41'09	min. Earth dist.	5321 Mar 28 10:54	7°♏40'13	17.48455 AU
retrograde	5314 Dec 16 09:45	12°♏00'40	direct	5321 Jun 11 00:48	5°♏36'50	
opposition	5315 Mar 01 00:11	9°♏57'56 0°48'36	evening set	5321 Sep 13 18:17	9°♏01'56	
min. Earth dist.	5315 Mar 01 12:18	9°♏56'37 17.76864 AU	conjunction	5321 Sep 30 11:04	10°♏03'30	0°47'13
direct	5315 May 14 18:59	7°♏54'32	minimum elong	5321 Sep 30 11:04	10°♏03'30	0°47'13
evening set	5315 Aug 16 06:10	11°♏13'34	max. Earth dist.	5321 Sep 29 15:43	10°♏00'30	19.46808 AU
			morning rise	5321 Oct 17 02:12	11°♏04'51	

retrograde	5322 Jan 17 21:51	14° <u>♂</u> 26'59		evening set	5328 Oct 18 00:50	12° <u>♂</u> 15'26	
opposition	5322 Apr 01 15:52	12° <u>♂</u> 23'59	0°52'19				
min. Earth dist.	5322 Apr 02 07:37	12° <u>♂</u> 22'16	17.45329 AU	conjunction	5328 Nov 03 13:42	13° <u>♂</u> 17'08	0°36'31
direct	5322 Jun 16 00:34	10° <u>♂</u> 18'42		minimum elong	5328 Nov 03 13:42	13° <u>♂</u> 17'08	0°36'32
evening set	5322 Sep 18 22:13	13° <u>♂</u> 44'38		max. Earth dist.	5328 Nov 02 17:43	13° <u>♂</u> 14'00	19.35368 AU
				morning rise	5328 Nov 19 23:16	14° <u>♂</u> 18'24	
conjunction	5322 Oct 05 14:44	14° <u>♂</u> 46'19	0°46'36		5328 Dec 01 13:33	15° <u>♂</u>	
minimum elong	5322 Oct 05 14:44	14° <u>♂</u> 46'19	0°46'36	retrograde	5329 Feb 19 19:13	17° <u>♂</u> 40'36	
max. Earth dist.	5322 Oct 04 19:35	14° <u>♂</u> 43'20	19.43897 AU	opposition	5329 May 04 09:46	15° <u>♂</u> 38'04	0°39'17
morning rise	5322 Oct 22 05:06	15° <u>♂</u> 47'44		min. Earth dist.	5329 May 05 03:07	15° <u>♂</u> 36'10	17.35428 AU
retrograde	5323 Jan 22 20:52	19° <u>♂</u> 10'03			5329 May 19 04:45	15° <u>♂</u>	
opposition	5323 Apr 06 13:48	17° <u>♂</u> 07'10	0°51'28	direct	5329 Jul 19 12:46	13° <u>♂</u> 32'03	
min. Earth dist.	5323 Apr 07 06:52	17° <u>♂</u> 05'18	17.42639 AU		5329 Sep 16 13:32	15° <u>♂</u>	
direct	5323 Jun 20 23:17	15° <u>♂</u> 01'44		evening set	5329 Oct 23 04:55	17° <u>♂</u> 00'58	
evening set	5323 Sep 24 02:27	18° <u>♂</u> 28'25					
				conjunction	5329 Nov 08 16:49	18° <u>♂</u> 02'34	0°33'52
conjunction	5323 Oct 10 18:22	19° <u>♂</u> 30'09	0°45'40	minimum elong	5329 Nov 08 16:50	18° <u>♂</u> 02'34	0°33'53
minimum elong	5323 Oct 10 18:22	19° <u>♂</u> 30'09	0°45'41	max. Earth dist.	5329 Nov 07 20:23	17° <u>♂</u> 59'22	19.35569 AU
max. Earth dist.	5323 Oct 09 21:53	19° <u>♂</u> 26'58	19.41421 AU	morning rise	5329 Nov 25 01:33	19° <u>♂</u> 03'44	
morning rise	5323 Oct 27 08:12	20° <u>♂</u> 31'36		retrograde	5330 Feb 24 17:47	22° <u>♂</u> 25'42	
retrograde	5324 Jan 27 21:47	23° <u>♂</u> 54'06		opposition	5330 May 09 09:53	20° <u>♂</u> 23'13	0°36'12
opposition	5324 Apr 10 12:09	21° <u>♂</u> 51'16	0°50'16	min. Earth dist.	5330 May 10 03:10	20° <u>♂</u> 21'21	17.35905 AU
min. Earth dist.	5324 Apr 11 04:57	21° <u>♂</u> 49'25	17.40374 AU	direct	5330 Jul 24 15:23	18° <u>♂</u> 17'10	
direct	5324 Jun 25 00:27	19° <u>♂</u> 45'43		evening set	5330 Oct 28 08:29	21° <u>♂</u> 46'06	
evening set	5324 Sep 28 06:52	23° <u>♂</u> 13'02					
				conjunction	5330 Nov 13 19:36	22° <u>♂</u> 47'35	0°30'59
conjunction	5324 Oct 14 22:26	24° <u>♂</u> 14'50	0°44'26	minimum elong	5330 Nov 13 19:36	22° <u>♂</u> 47'35	0°30'59
minimum elong	5324 Oct 14 22:26	24° <u>♂</u> 14'50	0°44'26	max. Earth dist.	5330 Nov 13 00:44	22° <u>♂</u> 44'38	19.36328 AU
max. Earth dist.	5324 Oct 14 02:34	24° <u>♂</u> 11'44	19.39352 AU	morning rise	5330 Nov 30 03:17	23° <u>♂</u> 48'37	
morning rise	5324 Oct 31 11:21	25° <u>♂</u> 16'17		retrograde	5331 Mar 01 17:31	27° <u>♂</u> 10'18	
retrograde	5325 Jan 31 20:48	28° <u>♂</u> 38'51		opposition	5331 May 14 10:12	25° <u>♂</u> 07'55	0°32'52
opposition	5325 Apr 15 11:00	26° <u>♂</u> 36'05	0°48'43	min. Earth dist.	5331 May 15 02:15	25° <u>♂</u> 06'10	17.36942 AU
min. Earth dist.	5325 Apr 16 04:44	26° <u>♂</u> 34'08	17.38509 AU	direct	5331 Jul 29 19:15	23° <u>♂</u> 01'54	
direct	5325 Jun 30 01:11	24° <u>♂</u> 30'25		evening set	5331 Nov 02 11:30	26° <u>♂</u> 30'42	
evening set	5325 Oct 03 11:34	27° <u>♂</u> 58'16					
max. Earth dist.	5325 Oct 19 05:04	28° <u>♂</u> 56'45	19.37699 AU	conjunction	5331 Nov 18 21:36	27° <u>♂</u> 32'03	0°27'54
				minimum elong	5331 Nov 18 21:36	27° <u>♂</u> 32'03	0°27'55
conjunction	5325 Oct 20 02:24	29° <u>♂</u> 00'05	0°42'53	max. Earth dist.	5331 Nov 18 03:12	27° <u>♂</u> 29'10	19.37666 AU
minimum elong	5325 Oct 20 02:25	29° <u>♂</u> 00'05	0°42'53	morning rise	5331 Dec 05 04:19	28° <u>♂</u> 32'56	
morning rise	5325 Nov 05 14:44	0° <u>♂</u> 01'32			5331 Dec 30 10:08	0° <u>♂</u>	
	5325 Nov 05 04:44	0° <u>♂</u>		retrograde	5332 Mar 05 15:46	1° <u>♂</u> 54'19	
retrograde	5326 Feb 05 20:55	3° <u>♂</u> 24'06			5332 May 15 09:00	30° <u>♂</u>	
opposition	5326 Apr 20 10:15	1° <u>♂</u> 21'23	0°46'50	opposition	5332 May 18 10:38	29° <u>♂</u> 52'02	0°29'20
min. Earth dist.	5326 Apr 21 03:50	1° <u>♂</u> 19'27	17.37065 AU	min. Earth dist.	5332 May 19 02:24	29° <u>♂</u> 50'20	17.38593 AU
	5326 May 24 05:30	30° <u>♂</u>		direct	5332 Aug 02 21:15	27° <u>♂</u> 46'05	
direct	5326 Jul 05 03:33	29° <u>♂</u> 15'36			5332 Oct 16 04:16	0° <u>♂</u>	
	5326 Aug 15 09:18	0° <u>♂</u>		evening set	5332 Nov 06 14:04	1° <u>♂</u> 14'42	
evening set	5326 Oct 08 16:09	2° <u>♂</u> 43'53					
max. Earth dist.	5326 Oct 24 10:09	3° <u>♂</u> 42'31	19.36460 AU	conjunction	5332 Nov 22 23:16	2° <u>♂</u> 15'54	0°24'38
				minimum elong	5332 Nov 22 23:16	2° <u>♂</u> 15'54	0°24'39
conjunction	5326 Oct 25 06:29	3° <u>♂</u> 45'42	0°41'02	max. Earth dist.	5332 Nov 22 06:22	2° <u>♂</u> 13'15	19.39630 AU
minimum elong	5326 Oct 25 06:29	3° <u>♂</u> 45'42	0°41'03	morning rise	5332 Dec 09 05:00	3° <u>♂</u> 16'37	
morning rise	5326 Nov 10 17:48	4° <u>♂</u> 47'06		retrograde	5333 Mar 10 15:23	6° <u>♂</u> 37'38	
retrograde	5327 Feb 10 20:17	8° <u>♂</u> 09'36		opposition	5333 May 23 10:49	4° <u>♂</u> 35'32	0°25'36
opposition	5327 Apr 25 09:52	6° <u>♂</u> 06'57	0°44'37	min. Earth dist.	5333 May 24 00:48	4° <u>♂</u> 34'01	17.40850 AU
min. Earth dist.	5327 Apr 26 03:45	6° <u>♂</u> 05'00	17.36038 AU	direct	5333 Aug 08 00:14	2° <u>♂</u> 29'43	
direct	5327 Jul 10 06:19	4° <u>♂</u> 01'05		evening set	5333 Nov 11 16:11	5° <u>♂</u> 58'04	
evening set	5327 Oct 13 20:46	7° <u>♂</u> 29'41		max. Earth dist.	5333 Nov 27 08:33	6° <u>♂</u> 56'37	19.42189 AU
conjunction	5327 Oct 30 10:13	8° <u>♂</u> 31'27	0°38'55	conjunction	5333 Nov 28 00:24	6° <u>♂</u> 59'05	0°21'13
minimum elong	5327 Oct 30 10:13	8° <u>♂</u> 31'27	0°38'55	minimum elong	5333 Nov 28 00:24	6° <u>♂</u> 59'05	0°21'14
max. Earth dist.	5327 Oct 29 12:49	8° <u>♂</u> 28'06	19.35671 AU	morning rise	5333 Dec 14 05:05	7° <u>♂</u> 59'37	
morning rise	5327 Nov 15 20:47	9° <u>♂</u> 32'48		retrograde	5334 Mar 15 13:43	11° <u>♂</u> 20'16	
retrograde	5328 Feb 15 19:33	12° <u>♂</u> 55'11		opposition	5334 May 28 11:15	9° <u>♂</u> 18'22	0°21'42
opposition	5328 Apr 29 09:43	10° <u>♂</u> 52'35	0°42'06	min. Earth dist.	5334 May 29 01:02	9° <u>♂</u> 16'53	17.43700 AU
min. Earth dist.	5328 Apr 30 03:29	10° <u>♂</u> 50'38	17.35492 AU	direct	5334 Aug 13 01:27	7° <u>♂</u> 12'45	
direct	5328 Jul 14 09:04	8° <u>♂</u> 46'37		evening set	5334 Nov 16 17:37	10° <u>♂</u> 40'45	

max. Earth dist.	5334 Dec 02 10:09	11° \nearrow 39'16	19.45324 AU	max. Earth dist.	5339 Dec 26 08:54	4° \searrow 57'46	19.67129 AU
conjunction	5334 Dec 03 00:47	11° \nearrow 41'34	0°17'40	morning rise	5340 Jan 11 15:39	5° \searrow 58'04	
minimum elong	5334 Dec 03 00:47	11° \nearrow 41'34	0°17'41	retrograde	5340 Apr 11 20:38	9° \searrow 15'47	
morning rise	5334 Dec 19 04:31	12° \nearrow 41'53		opposition	5340 Jun 25 10:34	7° \searrow 15'09	-0°03'26
retrograde	5335 Mar 20 13:02	16° \nearrow 02'08		min. Earth dist.	5340 Jun 25 17:54	7° \searrow 14'23	17.69687 AU
opposition	5335 Jun 02 11:31	14° \nearrow 00'28	0°17'40	direct	5340 Sep 10 12:00	5° \searrow 11'12	
min. Earth dist.	5335 Jun 02 23:15	13° \nearrow 59'12	17.47081 AU	evening set	5340 Dec 14 11:54	8° \searrow 35'06	
direct	5335 Aug 18 04:06	11° \nearrow 55'07		conjunction	5340 Dec 30 12:50	9° \searrow 34'21	-0°05'05
evening set	5335 Nov 21 18:29	15° \nearrow 22'39		minimum elong	5340 Dec 30 12:50	9° \searrow 34'21	0°05'05
max. Earth dist.	5335 Dec 07 11:39	16° \nearrow 21'13	19.48950 AU	behind sun begin	5340 Dec 30 06:24	9° \searrow 33'22	
				behind sun end	5340 Dec 30 19:16	9° \searrow 35'19	
conjunction	5335 Dec 08 00:40	16° \nearrow 23'15	0°14'01	max. Earth dist.	5340 Dec 30 05:02	9° \searrow 33'09	19.72312 AU
minimum elong	5335 Dec 08 00:40	16° \nearrow 23'15	0°14'02	morning rise	5341 Jan 15 10:56	10° \searrow 33'10	
behind sun begin	5335 Dec 07 21:20	16° \nearrow 22'44		retrograde	5341 Apr 16 16:12	13° \searrow 50'16	
behind sun end	5335 Dec 08 04:00	16° \nearrow 23'45		opposition	5341 Jun 30 09:10	11° \searrow 49'47	-0°07'39
morning rise	5335 Dec 24 03:19	17° \nearrow 23'21		min. Earth dist.	5341 Jun 30 14:35	11° \searrow 49'12	17.74961 AU
retrograde	5336 Mar 24 10:32	20° \nearrow 43'10		direct	5341 Sep 15 12:55	9° \searrow 46'04	
opposition	5336 Jun 06 11:46	18° \nearrow 41'44	0°13'32	evening set	5341 Dec 19 07:58	13° \searrow 09'02	
min. Earth dist.	5336 Jun 06 23:28	18° \nearrow 40'29	17.50937 AU				
direct	5336 Aug 22 05:01	16° \nearrow 36'39		conjunction	5342 Jan 04 08:06	14° \searrow 07'59	-0°08'50
evening set	5336 Nov 25 18:40	20° \nearrow 03'38		minimum elong	5342 Jan 04 08:06	14° \searrow 07'58	0°08'48
				behind sun begin	5342 Jan 04 02:22	14° \searrow 07'07	
conjunction	5336 Dec 11 23:45	21° \nearrow 03'59	0°10'17	behind sun end	5342 Jan 04 13:49	14° \searrow 08'50	
minimum elong	5336 Dec 11 23:45	21° \nearrow 03'59	0°10'18	max. Earth dist.	5342 Jan 04 02:40	14° \searrow 07'10	19.77672 AU
behind sun begin	5336 Dec 11 18:29	21° \nearrow 03'11		morning rise	5342 Jan 20 05:12	15° \searrow 06'31	
behind sun end	5336 Dec 12 05:01	21° \nearrow 04'48		retrograde	5342 Apr 21 09:40	18° \searrow 22'59	
max. Earth dist.	5336 Dec 11 11:25	21° \nearrow 02'04	19.53019 AU	opposition	5342 Jul 05 07:35	16° \searrow 22'37	-0°11'47
morning rise	5336 Dec 28 01:33	22° \nearrow 03'52		min. Earth dist.	5342 Jul 05 12:29	16° \searrow 22'06	17.80400 AU
retrograde	5337 Mar 29 08:54	25° \nearrow 23'12		direct	5342 Sep 20 12:14	14° \searrow 19'10	
opposition	5337 Jun 11 11:45	23° \nearrow 22'00	0°09'20	evening set	5342 Dec 24 03:03	17° \searrow 41'05	
min. Earth dist.	5337 Jun 11 21:24	23° \nearrow 20'58	17.55182 AU				
direct	5337 Aug 27 07:35	21° \nearrow 17'11		conjunction	5343 Jan 09 02:04	18° \searrow 39'43	-0°12'29
evening set	5337 Nov 30 18:11	24° \nearrow 43'33		minimum elong	5343 Jan 09 02:04	18° \searrow 39'43	0°12'29
				behind sun begin	5343 Jan 08 21:44	18° \searrow 39'04	
conjunction	5337 Dec 16 22:18	25° \nearrow 43'39	0°06'30	behind sun end	5343 Jan 09 06:24	18° \searrow 40'23	
minimum elong	5337 Dec 16 22:19	25° \nearrow 43'39	0°06'30	max. Earth dist.	5343 Jan 08 21:00	18° \searrow 38'58	19.83204 AU
behind sun begin	5337 Dec 16 16:03	25° \nearrow 42'42		morning rise	5343 Jan 24 22:35	19° \searrow 37'59	
behind sun end	5337 Dec 17 04:34	25° \nearrow 44'36		retrograde	5343 Apr 26 04:05	22° \searrow 53'49	
max. Earth dist.	5337 Dec 16 11:51	25° \nearrow 42'02	19.57433 AU	opposition	5343 Jul 10 05:22	20° \searrow 53'32	-0°15'49
morning rise	5338 Jan 01 22:59	26° \nearrow 43'16		min. Earth dist.	5343 Jul 10 08:20	20° \searrow 53'14	17.86022 AU
	5338 Mar 25 11:46	0° \searrow		direct	5343 Sep 25 11:03	18° \searrow 50'20	
retrograde	5338 Apr 03 05:00	0° \searrow 02'06		evening set	5343 Dec 28 21:02	22° \searrow 11'11	
	5338 Apr 11 22:10	30° \nearrow					
opposition	5338 Jun 16 11:40	28° \nearrow 01'06	0°05'05	conjunction	5344 Jan 13 19:19	23° \searrow 09'31	-0°16'03
min. Earth dist.	5338 Jun 16 21:18	28° \nearrow 00'05	17.59755 AU	minimum elong	5344 Jan 13 19:19	23° \searrow 09'31	0°16'02
direct	5338 Sep 01 09:01	25° \nearrow 56'35		behind sun begin	5344 Jan 13 18:27	23° \searrow 09'23	
evening set	5338 Dec 05 17:02	29° \nearrow 22'13		behind sun end	5344 Jan 13 20:12	23° \searrow 09'39	
	5338 Dec 15 22:36	0° \searrow		max. Earth dist.	5344 Jan 13 16:58	23° \searrow 09'10	19.88913 AU
conjunction	5338 Dec 21 19:57	0° \searrow 22'02	0°02'41	morning rise	5344 Jan 29 14:58	24° \searrow 07'30	
minimum elong	5338 Dec 21 19:58	0° \searrow 22'02	0°02'42	retrograde	5344 Apr 29 20:39	27° \searrow 22'39	
behind sun begin	5338 Dec 21 13:21	0° \searrow 21'02		opposition	5344 Jul 14 02:29	25° \searrow 22'29	-0°19'44
behind sun end	5338 Dec 22 02:36	0° \searrow 23'02		min. Earth dist.	5344 Jul 14 04:26	25° \searrow 22'17	17.91821 AU
max. Earth dist.	5338 Dec 21 09:50	0° \searrow 20'28	19.62158 AU	direct	5344 Sep 29 08:51	23° \searrow 19'33	
morning rise	5339 Jan 06 19:50	1° \searrow 21'23		evening set	5345 Jan 01 14:11	26° \searrow 39'18	
retrograde	5339 Apr 08 01:51	4° \searrow 39'41		conjunction	5345 Jan 17 11:28	27° \searrow 37'19	-0°19'30
opposition	5339 Jun 21 11:14	2° \searrow 38'53	0°00'49	minimum elong	5345 Jan 17 11:27	27° \searrow 37'19	0°19'30
min. Earth dist.	5339 Jun 21 18:46	2° \searrow 38'05	17.64610 AU	max. Earth dist.	5345 Jan 17 09:39	27° \searrow 37'03	19.94812 AU
desc. node	5339 Aug 31 01:19	0° \searrow 35'42		morning rise	5345 Feb 02 06:36	28° \searrow 35'02	
direct	5339 Sep 06 11:16	0° \searrow 34'38			5345 Feb 27 13:30	0° \approx	
evening set	5339 Dec 10 14:45	3° \searrow 59'27		retrograde	5345 May 04 13:35	1° \approx 49'33	
					5345 Jul 14 17:32	30° \nearrow	
conjunction	5339 Dec 26 16:50	4° \searrow 58'59	-0°01'16	opposition	5345 Jul 18 23:05	29° \searrow 49'29	-0°23'29
minimum elong	5339 Dec 26 16:50	4° \searrow 58'59	0°01'15	min. Earth dist.	5345 Jul 18 23:08	29° \searrow 49'28	17.97827 AU
behind sun begin	5339 Dec 26 10:12	4° \searrow 57'59		direct	5345 Oct 04 05:18	27° \searrow 46'49	
behind sun end	5339 Dec 26 23:28	4° \searrow 59'59			5345 Dec 18 02:36	0° \approx	

evening set	5346 Jan 06 06:13	1°05'29"			5352 Mar 21 23:52	0°00'
				retrograde	5352 Jun 03 20:50	2°09'55"
conjunction	5346 Jan 22 02:48	2°03'12" -0°22'49"		opposition	5352 Aug 19 07:01	0°10'58" -0°44'13"
minimum elong	5346 Jan 22 02:48	2°03'12" 0°22'48"		min. Earth dist.	5352 Aug 18 21:02	0°11'59" 18.42422 AU
max. Earth dist.	5346 Jan 22 03:47	2°03'21" 20.00911 AU			5352 Aug 23 19:14	30°00'
morning rise	5346 Feb 06 21:08	3°00'37"		direct	5352 Nov 04 10:49	28°11'02"
retrograde	5346 May 09 05:34	6°14'31"			5353 Jan 10 21:32	0°00'
opposition	5346 Jul 23 19:08	4°14'36" -0°27'04"		evening set	5353 Feb 04 23:40	1°22'07"
min. Earth dist.	5346 Jul 23 17:38	4°14'45" 18.04016 AU				
direct	5346 Oct 09 02:08	2°12'17"		conjunction	5353 Feb 20 16:01	2°17'56" -0°40'51"
evening set	5347 Jan 10 21:30	5°29'50"		minimum elong	5353 Feb 20 16:01	2°17'56" 0°40'51"
				max. Earth dist.	5353 Feb 21 02:04	2°19'25" 20.45436 AU
conjunction	5347 Jan 26 17:10	6°27'15" -0°25'57"		morning rise	5353 Mar 08 07:58	3°13'40"
minimum elong	5347 Jan 26 17:10	6°27'15" 0°25'56"		retrograde	5353 Jun 08 09:37	6°23'54"
max. Earth dist.	5347 Jan 26 18:53	6°27'31" 20.07193 AU		opposition	5353 Aug 23 23:06	4°25'04" -0°46'15"
morning rise	5347 Feb 11 11:05	7°24'24"		min. Earth dist.	5353 Aug 23 12:51	4°26'06" 18.48398 AU
retrograde	5347 May 13 21:17	10°37'44"		direct	5353 Nov 09 00:41	2°25'28"
opposition	5347 Jul 28 14:34	8°37'57" -0°30'28"		evening set	5354 Feb 09 09:24	5°35'31"
min. Earth dist.	5347 Jul 28 11:24	8°38'16" 18.10387 AU				
direct	5347 Oct 13 20:12	6°36'00"		conjunction	5354 Feb 25 01:31	6°31'05" -0°42'35"
evening set	5348 Jan 15 11:39	9°52'27"		minimum elong	5354 Feb 25 01:31	6°31'05" 0°42'34"
				max. Earth dist.	5354 Feb 25 13:01	6°32'48" 20.51272 AU
conjunction	5348 Jan 31 06:48	10°49'35" -0°28'56"		morning rise	5354 Mar 12 17:16	7°26'37"
minimum elong	5348 Jan 31 06:48	10°49'35" 0°28'56"		retrograde	5354 Jun 12 21:31	10°36'25"
max. Earth dist.	5348 Jan 31 11:08	10°50'15" 20.13625 AU		opposition	5354 Aug 28 14:31	8°37'39" -0°48'01"
morning rise	5348 Feb 16 00:07	11°46'29"		min. Earth dist.	5354 Aug 28 02:32	8°38'52" 18.54084 AU
retrograde	5348 May 17 12:40	14°59'14"		direct	5354 Nov 13 16:38	6°38'22"
opposition	5348 Aug 01 09:23	12°59'38" -0°33'40"		evening set	5355 Feb 13 18:38	9°47'23"
min. Earth dist.	5348 Aug 01 04:34	13°00'08" 18.16853 AU				
direct	5348 Oct 17 15:46	10°58'06"		conjunction	5355 Mar 01 10:24	10°42'44" -0°44'04"
evening set	5349 Jan 19 01:14	14°13'28"		minimum elong	5355 Mar 01 10:24	10°42'44" 0°44'04"
	5349 Jan 31 23:32	15°00'		max. Earth dist.	5355 Mar 01 22:17	10°44'29" 20.56804 AU
conjunction	5349 Feb 03 19:34	15°10'18" -0°31'44"		morning rise	5355 Mar 17 02:13	11°38'05"
minimum elong	5349 Feb 03 19:34	15°10'18" 0°31'43"		retrograde	5355 Jun 17 08:39	14°47'25"
max. Earth dist.	5349 Feb 04 00:33	15°11'03" 20.20117 AU		opposition	5355 Sep 02 05:18	12°48'41" -0°49'31"
morning rise	5349 Feb 19 12:35	16°06'57"		min. Earth dist.	5355 Sep 01 17:19	12°49'54" 18.59477 AU
retrograde	5349 May 22 03:11	19°19'10"		direct	5355 Nov 18 05:22	10°49'40"
opposition	5349 Aug 06 03:35	17°19'44" -0°36'39"		evening set	5356 Feb 18 02:59	13°57'40"
min. Earth dist.	5349 Aug 05 21:40	17°20'21" 18.23366 AU		conjunction	5356 Mar 04 18:41	14°52'49" -0°45'19"
direct	5349 Oct 22 08:09	15°18'37"		minimum elong	5356 Mar 04 18:41	14°52'49" 0°45'18"
evening set	5350 Jan 23 13:54	18°32'54"		max. Earth dist.	5356 Mar 05 07:52	14°54'46" 20.62044 AU
conjunction	5350 Feb 08 07:47	19°29'28" -0°34'20"		morning rise	5356 Mar 20 10:31	15°48'00"
minimum elong	5350 Feb 08 07:47	19°29'28" 0°34'19"		retrograde	5356 Jun 20 19:28	18°56'53"
max. Earth dist.	5350 Feb 08 15:02	19°30'34" 20.26622 AU		opposition	5356 Sep 05 19:18	16°58'10" -0°50'45"
morning rise	5350 Feb 24 00:18	20°25'52"		min. Earth dist.	5356 Sep 05 05:35	16°59'32" 18.64561 AU
retrograde	5350 May 26 17:48	23°37'33"		direct	5356 Nov 21 19:29	14°59'23"
opposition	5350 Aug 10 21:22	21°38'19" -0°39'25"		evening set	5357 Feb 21 10:45	18°06'23"
min. Earth dist.	5350 Aug 10 13:42	21°39'06" 18.29838 AU		conjunction	5357 Mar 09 02:14	19°01'20" -0°46'18"
direct	5350 Oct 27 02:31	19°37'37"		minimum elong	5357 Mar 09 02:14	19°01'20" 0°46'19"
evening set	5351 Jan 28 01:50	22°50'48"		max. Earth dist.	5357 Mar 09 16:00	19°03'22" 20.66982 AU
conjunction	5351 Feb 12 19:02	23°47'07" -0°36'43"		morning rise	5357 Mar 24 18:13	19°56'21"
minimum elong	5351 Feb 12 19:02	23°47'07" 0°36'43"		retrograde	5357 Jun 25 04:46	23°04'50"
max. Earth dist.	5351 Feb 13 02:55	23°48'17" 20.33050 AU		opposition	5357 Sep 10 08:48	21°06'05" -0°51'42"
morning rise	5351 Feb 28 11:23	24°43'17"		min. Earth dist.	5357 Sep 09 19:07	21°07'28" 18.69380 AU
retrograde	5351 May 31 07:34	27°54'29"		direct	5357 Nov 26 06:38	19°07'31"
opposition	5351 Aug 15 14:37	25°55'24" -0°41'56"		evening set	5358 Feb 25 17:51	22°13'35"
min. Earth dist.	5351 Aug 15 06:15	25°56'15" 18.36221 AU		conjunction	5358 Mar 13 09:20	23°08'21" -0°47'03"
direct	5351 Oct 31 17:34	23°55'05"		minimum elong	5358 Mar 13 09:20	23°08'21" 0°47'03"
evening set	5352 Feb 01 13:01	27°07'13"		max. Earth dist.	5358 Mar 14 00:30	23°10'35" 20.71683 AU
conjunction	5352 Feb 17 05:53	28°03'16" -0°38'54"		morning rise	5358 Mar 29 01:26	24°03'14"
minimum elong	5352 Feb 17 05:53	28°03'16" 0°38'53"		retrograde	5358 Jun 29 15:03	27°11'20"
max. Earth dist.	5352 Feb 17 15:34	28°04'43" 20.39350 AU		opposition	5358 Sep 14 21:35	25°12'34" -0°52'23"
morning rise	5352 Mar 03 21:55	28°59'12"		min. Earth dist.	5358 Sep 14 05:55	25°14'08" 18.73968 AU
				direct	5358 Nov 30 19:05	23°14'13"

evening set	5359 Mar 02 00:23	26° H 19'22		max. Earth dist.	5365 Apr 10 20:50	21° Y 30'32	20.97387 AU
				morning rise	5365 Apr 25 20:05	22° Y 22'03	
conjunction	5359 Mar 17 15:49	27° H 13'59 -0°47'33		retrograde	5365 Jul 28 04:08	25° Y 28'41	
minimum elong	5359 Mar 17 15:49	27° H 13'59 0°47'33		min. Earth dist.	5365 Oct 13 06:57	23° Y 31'54	18.98591 AU
max. Earth dist.	5359 Mar 18 07:46	27° H 16'19 20.76154 AU		opposition	5365 Oct 14 01:28	23° Y 30'03	-0°49'44
morning rise	5359 Apr 02 08:13	28° H 08'45		direct	5365 Dec 29 06:18	21° Y 33'15	
	5359 May 08 13:36	0° Y		evening set	5366 Mar 29 12:55	24° Y 33'52	
retrograde	5359 Jul 03 23:19	1° Y 16'31					
	5359 Sep 01 10:49	30° R H		conjunction	5366 Apr 14 06:16	25° Y 27'53	-0°44'25
opposition	5359 Sep 19 09:55	29° H 17'44 -0°52'47		minimum elong	5366 Apr 14 06:16	25° Y 27'53	0°44'26
min. Earth dist.	5359 Sep 18 18:18	29° H 19'18 18.78342 AU		max. Earth dist.	5366 Apr 15 02:08	25° Y 30'45	20.99602 AU
direct	5359 Dec 05 04:15	27° H 19'36		morning rise	5366 Apr 30 01:53	26° Y 22'15	
	5360 Feb 27 04:16	0° Y		retrograde	5366 Aug 01 14:00	29° Y 28'50	
evening set	5360 Mar 05 06:28	0° Y 23'56		opposition	5366 Oct 18 10:47	27° Y 30'12	-0°48'22
				min. Earth dist.	5366 Oct 17 15:19	27° Y 32'08	19.00553 AU
conjunction	5360 Mar 20 22:04	1° Y 18'24 -0°47'48		direct	5367 Jan 02 14:11	25° Y 33'31	
minimum elong	5360 Mar 20 22:03	1° Y 18'24 0°47'49		evening set	5367 Apr 02 17:38	28° Y 33'44	
max. Earth dist.	5360 Mar 21 15:09	1° Y 20'54 20.80417 AU					
morning rise	5360 Apr 05 14:42	2° Y 13'03		conjunction	5367 Apr 18 11:27	29° Y 27'45	-0°43'05
retrograde	5360 Jul 07 09:19	5° Y 20'30		minimum elong	5367 Apr 18 11:27	29° Y 27'45	0°43'06
opposition	5360 Sep 22 21:22	3° Y 21'45 -0°52'55		max. Earth dist.	5367 Apr 19 07:04	29° Y 30'35	21.01294 AU
min. Earth dist.	5360 Sep 22 03:55	3° Y 23'30 18.82485 AU			5367 Apr 27 19:41	0° R	
direct	5360 Dec 08 14:58	1° Y 23'51		morning rise	5367 May 04 07:47	0° R 22'08	
evening set	5361 Mar 09 12:13	4° Y 27'25		retrograde	5367 Aug 05 21:17	3° R 28'41	
				opposition	5367 Oct 22 20:00	1° R 30'00	-0°46'46
conjunction	5361 Mar 25 03:52	5° Y 21'46 -0°47'49		min. Earth dist.	5367 Oct 22 01:49	1° R 31'49	19.01978 AU
minimum elong	5361 Mar 25 03:52	5° Y 21'46 0°47'49			5367 Dec 04 16:06	30° R Y	
max. Earth dist.	5361 Mar 25 21:37	5° Y 24'21 20.84433 AU		direct	5368 Jan 06 20:07	29° Y 33'26	
morning rise	5361 Apr 09 20:55	6° Y 16'20			5368 Feb 08 06:36	0° R	
retrograde	5361 Jul 11 17:03	9° Y 23'32		evening set	5368 Apr 05 22:18	2° R 33'17	
opposition	5361 Sep 27 08:41	7° Y 24'48 -0°52'47					
min. Earth dist.	5361 Sep 26 15:30	7° Y 26'31 18.86380 AU		conjunction	5368 Apr 21 16:44	3° R 27'18	-0°41'32
direct	5361 Dec 12 22:54	5° Y 27'09		minimum elong	5368 Apr 21 16:44	3° R 27'18	0°41'32
evening set	5362 Mar 13 17:24	8° Y 29'59		max. Earth dist.	5368 Apr 22 12:04	3° R 30'05	21.02452 AU
				morning rise	5368 May 07 13:44	4° R 21'43	
conjunction	5362 Mar 29 09:21	9° Y 24'14 -0°47'36		retrograde	5368 Aug 09 06:57	7° R 28'15	
minimum elong	5362 Mar 29 09:21	9° Y 24'14 0°47'36		min. Earth dist.	5368 Oct 25 09:45	5° R 31'23	19.02858 AU
max. Earth dist.	5362 Mar 30 04:04	9° Y 26'58 20.88193 AU		opposition	5368 Oct 26 04:38	5° R 29'30	-0°44'56
morning rise	5362 Apr 14 02:47	10° Y 18'43		direct	5369 Jan 10 03:49	3° R 32'57	
retrograde	5362 Jul 16 03:04	13° Y 25'43		evening set	5369 Apr 10 02:57	6° R 32'30	
opposition	5362 Oct 01 19:25	11° Y 27'01 -0°52'24					
min. Earth dist.	5362 Oct 01 00:34	11° Y 28'55 18.89985 AU		conjunction	5369 Apr 25 21:56	7° R 26'33	-0°39'47
direct	5362 Dec 17 08:12	9° Y 29'36		minimum elong	5369 Apr 25 21:56	7° R 26'33	0°39'48
evening set	5363 Mar 17 22:33	12° Y 31'48		max. Earth dist.	5369 Apr 26 17:00	7° R 29'18	21.03068 AU
				morning rise	5369 May 11 19:43	8° R 21'01	
conjunction	5363 Apr 02 14:42	13° Y 25'58 -0°47'09		retrograde	5369 Aug 13 13:49	11° R 27'34	
minimum elong	5363 Apr 02 14:42	13° Y 25'58 0°47'08		opposition	5369 Oct 30 13:18	9° R 28'42	-0°42'53
max. Earth dist.	5363 Apr 03 09:51	13° Y 28'44 20.91631 AU		min. Earth dist.	5369 Oct 29 19:42	9° R 30'28	19.03224 AU
morning rise	5363 Apr 18 08:40	14° Y 20'24		direct	5370 Jan 14 08:55	7° R 32'10	
retrograde	5363 Jul 20 10:42	17° Y 27'14		evening set	5370 Apr 14 07:24	10° R 31'27	
min. Earth dist.	5363 Oct 05 11:34	15° Y 30'23 18.93259 AU					
opposition	5363 Oct 06 05:45	15° Y 28'34 -0°51'46		conjunction	5370 Apr 30 03:07	11° R 25'33	-0°37'50
direct	5363 Dec 21 15:20	13° Y 31'22		minimum elong	5370 Apr 30 03:07	11° R 25'33	0°37'51
evening set	5364 Mar 21 03:25	16° Y 32'58		max. Earth dist.	5370 Apr 30 22:03	11° R 28'16	21.03209 AU
				morning rise	5370 May 16 01:42	12° R 20'04	
conjunction	5364 Apr 05 19:58	17° Y 27'04 -0°46'27			5370 Jul 15 17:00	15° R	
minimum elong	5364 Apr 05 19:59	17° Y 27'04 0°46'28		retrograde	5370 Aug 17 23:20	15° R 26'41	
max. Earth dist.	5364 Apr 06 15:37	17° Y 29'55 20.94723 AU			5370 Sep 20 20:59	15° R R	
morning rise	5364 Apr 21 14:26	18° Y 21'28		opposition	5370 Nov 03 21:30	13° R 27'41	-0°40'38
retrograde	5364 Jul 23 20:35	21° Y 28'10		min. Earth dist.	5370 Nov 03 03:12	13° R 29'31	19.03135 AU
opposition	5364 Oct 09 15:40	19° Y 29'32 -0°50'52		direct	5371 Jan 18 16:24	11° R 31'07	
min. Earth dist.	5364 Oct 08 20:12	19° Y 31'29 18.96145 AU		evening set	5371 Apr 18 12:07	14° R 30'14	
direct	5364 Dec 24 23:39	17° Y 32'32			5371 Apr 27 06:20	15° R	
evening set	5365 Mar 25 08:13	20° Y 33'38					
				conjunction	5371 May 04 08:29	15° R 24'23	-0°35'43
conjunction	5365 Apr 10 01:03	21° Y 27'41 -0°45'33		minimum elong	5371 May 04 08:29	15° R 24'23	0°35'44
minimum elong	5365 Apr 10 01:03	21° Y 27'41 0°45'34		max. Earth dist.	5371 May 05 03:14	15° R 27'04	21.02903 AU

morning rise	5371 May 20 07:54	16° 8 18'59	direct	5378 Feb 15 07:49	9° II 29'35
retrograde	5371 Aug 22 06:31	19° 8 25'40	evening set	5378 May 16 03:57	12° II 29'34
opposition	5371 Nov 08 05:27	17° 8 26'33 -0°38'11			
min. Earth dist.	5371 Nov 07 12:26	17° 8 28'15 19.02634 AU	conjunction	5378 Jun 01 06:07	13° II 24'38 -0°16'38
direct	5372 Jan 22 20:50	15° 8 29'57	minimum elong	5378 Jun 01 06:07	13° II 24'38 0°16'39
evening set	5372 Apr 21 16:53	18° 8 28'58	max. Earth dist.	5378 Jun 01 21:28	13° II 26'50 20.90875 AU
			morning rise	5378 Jun 17 11:45	14° II 20'12
conjunction	5372 May 07 14:01	19° 8 23'12 -0°33'25	retrograde	5378 Sep 20 01:12	17° II 28'48
minimum elong	5372 May 07 14:01	19° 8 23'12 0°33'25	opposition	5378 Dec 06 12:04	15° II 29'01 -0°16'34
max. Earth dist.	5372 May 08 08:32	19° 8 25'51 21.02222 AU	min. Earth dist.	5378 Dec 05 22:00	15° II 30'27 18.89332 AU
morning rise	5372 May 23 14:15	20° 8 17'53	direct	5379 Feb 19 14:30	13° II 31'59
retrograde	5372 Aug 25 15:52	23° 8 24'43	evening set	5379 May 20 11:45	16° II 32'23
opposition	5372 Nov 11 13:13	21° 8 25'28 -0°35'33			
min. Earth dist.	5372 Nov 10 19:31	21° 8 27'15 19.01770 AU	conjunction	5379 Jun 05 14:48	17° II 27'39 -0°13'26
direct	5373 Jan 26 03:51	19° 8 28'50	minimum elong	5379 Jun 05 14:48	17° II 27'39 0°13'27
evening set	5373 Apr 25 21:45	22° 8 27'48	behind sun begin	5379 Jun 05 11:05	17° II 27'08
			behind sun end	5379 Jun 05 18:31	17° II 28'10
conjunction	5373 May 11 19:36	23° 8 22'08 -0°30'57	max. Earth dist.	5379 Jun 06 05:12	17° II 29'43 20.87660 AU
minimum elong	5373 May 11 19:36	23° 8 22'08 0°30'58	morning rise	5379 Jun 21 21:17	18° II 23'25
max. Earth dist.	5373 May 12 13:59	23° 8 24'46 21.01176 AU	retrograde	5379 Sep 24 10:30	21° II 32'24
morning rise	5373 May 27 20:41	24° 8 16'56	opposition	5379 Dec 10 20:16	19° II 32'32 -0°13'00
retrograde	5373 Aug 29 23:59	27° 8 23'58	min. Earth dist.	5379 Dec 10 08:09	19° II 33'46 18.85890 AU
opposition	5373 Nov 15 21:05	25° 8 24'36 -0°32'45	direct	5380 Feb 23 20:34	17° II 35'21
min. Earth dist.	5373 Nov 15 04:35	25° 8 26'16 19.00557 AU	evening set	5380 May 23 20:06	20° II 36'14
direct	5374 Jan 30 08:29	23° 8 27'55			
evening set	5374 Apr 30 02:57	26° 8 26'57	conjunction	5380 Jun 09 00:04	21° II 31'42 -0°10'10
			minimum elong	5380 Jun 09 00:04	21° II 31'42 0°10'11
conjunction	5374 May 16 01:39	27° 8 21'24 -0°28'21	behind sun begin	5380 Jun 08 18:46	21° II 30'57
minimum elong	5374 May 16 01:39	27° 8 21'24 0°28'22	behind sun end	5380 Jun 09 05:22	21° II 32'26
max. Earth dist.	5374 May 16 19:39	27° 8 23'58 20.99809 AU	max. Earth dist.	5380 Jun 09 12:52	21° II 33'32 20.83999 AU
morning rise	5374 Jun 01 03:38	28° 8 16'19	morning rise	5380 Jun 25 07:29	22° II 27'40
	5374 Jul 05 05:54	0° II	retrograde	5380 Sep 27 22:49	25° II 37'05
retrograde	5374 Sep 03 09:42	1° II 23'34	opposition	5380 Dec 14 04:44	23° II 37'04 -0°09'20
	5374 Nov 05 03:15	30° R8	min. Earth dist.	5380 Dec 13 17:08	23° II 38'15 18.81991 AU
min. Earth dist.	5374 Nov 19 11:39	29° 8 25'50 18.99020 AU	direct	5381 Feb 27 04:27	21° II 39'41
opposition	5374 Nov 20 04:39	29° 8 24'07 -0°29'47	evening set	5381 May 28 04:57	24° II 41'04
direct	5375 Feb 03 14:42	27° 8 27'23			
	5375 Apr 26 07:36	0° II	conjunction	5381 Jun 13 09:52	25° II 36'45 -0°06'50
evening set	5375 May 04 08:33	0° II 26'32	minimum elong	5381 Jun 13 09:51	25° II 36'45 0°06'52
			behind sun begin	5381 Jun 13 03:39	25° II 35'53
conjunction	5375 May 20 08:04	1° II 21'07 -0°25'36	behind sun end	5381 Jun 13 16:03	25° II 37'38
minimum elong	5375 May 20 08:04	1° II 21'07 0°25'37	max. Earth dist.	5381 Jun 13 21:37	25° II 38'26 20.79862 AU
max. Earth dist.	5375 May 21 01:41	1° II 23'38 20.98099 AU	morning rise	5381 Jun 29 18:07	26° II 32'56
morning rise	5375 Jun 05 10:58	2° II 16'12	retrograde	5381 Oct 02 08:26	29° II 42'47
retrograde	5375 Sep 07 18:18	5° II 23'42	opposition	5381 Dec 18 13:33	27° II 42'36 -0°05'36
opposition	5375 Nov 24 12:25	3° II 24'10 -0°26'41	min. Earth dist.	5381 Dec 18 03:53	27° II 43'36 18.77624 AU
min. Earth dist.	5375 Nov 23 20:47	3° II 25'45 18.97138 AU	direct	5382 Mar 03 11:03	25° II 44'58
direct	5376 Feb 07 20:00	1° II 27'23	evening set	5382 Jun 01 14:34	28° II 46'55
evening set	5376 May 07 14:29	4° II 26'45			
			conjunction	5382 Jun 17 20:25	29° II 42'49 -0°03'27
conjunction	5376 May 23 14:52	5° II 21'28 -0°22'43	minimum elong	5382 Jun 17 20:25	29° II 42'50 0°03'28
minimum elong	5376 May 23 14:52	5° II 21'28 0°22'45	behind sun begin	5382 Jun 17 13:48	29° II 41'54
max. Earth dist.	5376 May 24 07:48	5° II 23'54 20.96057 AU	behind sun end	5382 Jun 18 03:03	29° II 43'45
morning rise	5376 Jun 08 18:39	6° II 16'42	max. Earth dist.	5382 Jun 18 06:24	29° II 44'15 20.75298 AU
retrograde	5376 Sep 11 04:46	9° II 24'32		5382 Jun 22 19:12	0° III
opposition	5376 Nov 27 20:06	7° II 24'55 -0°23'26	morning rise	5382 Jul 04 05:39	0° III 39'13
min. Earth dist.	5376 Nov 27 04:13	7° II 26'31 18.94914 AU	retrograde	5382 Oct 06 21:21	3° III 49'31
direct	5377 Feb 11 01:56	5° II 28'04	opposition	5382 Dec 22 22:19	1° III 49'08 -0°01'49
evening set	5377 May 11 20:59	8° II 27'43	min. Earth dist.	5382 Dec 22 13:24	1° III 50'03 18.72857 AU
				5383 Feb 17 07:41	30° RII
conjunction	5377 May 27 22:13	9° II 22'36 -0°19'44	direct	5383 Mar 07 19:49	29° II 51'12
minimum elong	5377 May 27 22:13	9° II 22'36 0°19'45		5383 Mar 26 02:29	0° III
max. Earth dist.	5377 May 28 14:37	9° II 24'57 20.93651 AU	evening set	5383 Jun 06 00:49	2° III 53'47
morning rise	5377 Jun 13 02:53	10° II 18'00	asc. node	5383 Jun 16 07:25	3° III 29'03
retrograde	5377 Sep 15 13:42	13° II 26'11			
opposition	5377 Dec 02 04:04	11° II 26'30 -0°20'03	conjunction	5383 Jun 22 07:38	3° III 49'55 0°00'04
min. Earth dist.	5377 Dec 01 13:47	11° II 27'57 18.92321 AU	minimum elong	5383 Jun 22 07:38	3° III 49'56 0°00'02

behind sun begin	5383 Jun 22 02:24	3° $\overline{54}$ '12		conjunction	5389 Jul 17 17:24	28° $\overline{59}$ '24	0°20'22
behind sun end	5383 Jun 22 12:51	3° $\overline{50}$ '39		minimum elong	5389 Jul 17 17:24	28° $\overline{59}$ '24	0°20'22
max. Earth dist.	5383 Jun 22 16:40	3° $\overline{51}$ '13	20.70343 AU	max. Earth dist.	5389 Jul 17 18:56	28° $\overline{59}$ '37	20.36196 AU
morning rise	5383 Jul 08 17:38	4° $\overline{46}$ '33		morning rise	5389 Aug 03 07:46	29° $\overline{57}$ '31	
retrograde	5383 Oct 11 07:46	7° $\overline{57}$ '18			5389 Aug 04 01:06	0° Ω	
opposition	5383 Dec 27 07:29	5° $\overline{56}$ '43	0°02'00	retrograde	5389 Nov 05 18:46	3° Ω 11'39	
min. Earth dist.	5383 Dec 27 00:22	5° $\overline{57}$ '27	18.67735 AU	opposition	5390 Jan 20 21:38	1° Ω 10'04	0°24'21
direct	5384 Mar 11 03:14	3° $\overline{58}$ '28		min. Earth dist.	5390 Jan 20 21:00	1° Ω 10'08	18.33173 AU
evening set	5384 Jun 09 11:36	7° $\overline{01}$ '43			5390 Feb 19 11:10	30° \overline{R} $\overline{5}$	
				direct	5390 Apr 05 13:12	29° $\overline{09}$ '56	
conjunction	5384 Jun 25 19:16	7° $\overline{58}$ '07	0°03'35		5390 May 19 14:53	0° Ω	
minimum elong	5384 Jun 25 19:17	7° $\overline{58}$ '07	0°03'34	evening set	5390 Jul 05 21:16	2° Ω 18'37	
behind sun begin	5384 Jun 25 12:39	7° $\overline{57}$ '10					
behind sun end	5384 Jun 26 01:55	7° $\overline{59}$ '03		conjunction	5390 Jul 22 09:59	3° Ω 16'39	0°23'32
max. Earth dist.	5384 Jun 26 02:33	7° $\overline{59}$ '09	20.65087 AU	minimum elong	5390 Jul 22 09:59	3° Ω 16'39	0°23'30
morning rise	5384 Jul 12 06:11	8° $\overline{54}$ '58		max. Earth dist.	5390 Jul 22 09:07	3° Ω 16'32	20.30174 AU
retrograde	5384 Oct 14 21:08	12° $\overline{06}$ '13		morning rise	5390 Aug 08 01:05	4° Ω 15'02	
opposition	5384 Dec 30 16:52	10° $\overline{05}$ '25	0°05'49	retrograde	5390 Nov 10 11:40	7° Ω 29'50	
min. Earth dist.	5384 Dec 30 10:24	10° $\overline{06}$ '05	18.62349 AU	opposition	5391 Jan 25 09:36	5° Ω 28'09	0°27'48
direct	5385 Mar 15 12:31	8° $\overline{06}$ '50		min. Earth dist.	5391 Jan 25 10:15	5° Ω 28'05	18.27126 AU
evening set	5385 Jun 13 23:10	11° $\overline{10}$ '50		direct	5391 Apr 10 00:55	3° Ω 27'42	
				evening set	5391 Jul 10 14:06	6° Ω 37'31	
conjunction	5385 Jun 30 07:48	12° $\overline{07}$ '29	0°07'01				
minimum elong	5385 Jun 30 07:47	12° $\overline{07}$ '29	0°06'59	conjunction	5391 Jul 27 03:39	7° Ω 35'51	0°26'35
behind sun begin	5385 Jun 30 01:35	12° $\overline{06}$ '37		minimum elong	5391 Jul 27 03:39	7° Ω 35'51	0°26'34
behind sun end	5385 Jun 30 14:00	12° $\overline{08}$ '22		max. Earth dist.	5391 Jul 27 02:16	7° Ω 35'39	20.24087 AU
max. Earth dist.	5385 Jun 30 14:24	12° $\overline{08}$ '26	20.59582 AU	morning rise	5391 Aug 12 19:05	8° Ω 34'30	
morning rise	5385 Jul 16 19:24	13° $\overline{04}$ '35		retrograde	5391 Nov 15 04:35	11° Ω 49'57	
retrograde	5385 Oct 19 09:01	16° $\overline{16}$ '21		opposition	5392 Jan 29 22:18	9° Ω 48'12	0°31'08
opposition	5386 Jan 04 02:34	14° $\overline{15}$ '21	0°09'38	min. Earth dist.	5392 Jan 30 00:19	9° Ω 47'59	18.21003 AU
min. Earth dist.	5386 Jan 03 21:40	14° $\overline{15}$ '52	18.56748 AU	direct	5392 Apr 13 12:43	7° Ω 47'29	
direct	5386 Mar 19 20:52	12° $\overline{16}$ '27		evening set	5392 Jul 14 07:54	10° Ω 58'25	
evening set	5386 Jun 18 11:30	15° $\overline{21}$ '16					
				conjunction	5392 Jul 30 21:57	11° Ω 57'02	0°29'30
conjunction	5386 Jul 04 20:58	16° $\overline{18}$ '10	0°10'25	minimum elong	5392 Jul 30 21:56	11° Ω 57'02	0°29'29
minimum elong	5386 Jul 04 20:58	16° $\overline{18}$ '10	0°10'24	max. Earth dist.	5392 Jul 30 17:52	11° Ω 56'26	20.17928 AU
behind sun begin	5386 Jul 04 15:44	16° $\overline{17}$ '26		morning rise	5392 Aug 16 13:58	12° Ω 55'57	
behind sun end	5386 Jul 05 02:12	16° $\overline{18}$ '55			5392 Sep 25 21:31	15° Ω	
max. Earth dist.	5386 Jul 05 01:38	16° $\overline{18}$ '50	20.53906 AU	retrograde	5392 Nov 18 22:52	16° Ω 12'04	
morning rise	5386 Jul 21 09:28	17° $\overline{15}$ '31			5393 Jan 13 08:52	15° \overline{R} $\overline{\Omega}$	
retrograde	5386 Oct 23 23:08	20° $\overline{27}$ '51		opposition	5393 Feb 02 11:42	14° Ω 10'13	0°34'19
opposition	5387 Jan 08 12:38	18° $\overline{26}$ '39	0°13'24	min. Earth dist.	5393 Feb 02 15:19	14° Ω 09'50	18.14807 AU
min. Earth dist.	5387 Jan 08 08:28	18° $\overline{27}$ '05	18.50997 AU	direct	5393 Apr 18 01:50	12° Ω 09'10	
direct	5387 Mar 24 06:43	16° $\overline{27}$ '25			5393 Jul 12 22:34	15° Ω	
evening set	5387 Jun 23 00:38	19° $\overline{33}$ '07		evening set	5393 Jul 19 02:42	15° Ω 21'16	
conjunction	5387 Jul 09 11:02	20° $\overline{30}$ '18	0°13'48	conjunction	5393 Aug 04 17:31	16° Ω 20'11	0°32'17
minimum elong	5387 Jul 09 11:02	20° $\overline{30}$ '18	0°13'47	minimum elong	5393 Aug 04 17:31	16° Ω 20'11	0°32'15
behind sun begin	5387 Jul 09 07:35	20° $\overline{29}$ '48		max. Earth dist.	5393 Aug 04 12:47	16° Ω 19'29	20.11676 AU
behind sun end	5387 Jul 09 14:28	20° $\overline{30}$ '47		morning rise	5393 Aug 21 09:46	17° Ω 19'21	
max. Earth dist.	5387 Jul 09 15:05	20° $\overline{30}$ '53	20.48080 AU	retrograde	5393 Nov 23 17:19	20° Ω 36'05	
morning rise	5387 Jul 26 00:05	21° $\overline{27}$ '54		opposition	5394 Feb 07 01:36	18° Ω 34'08	0°37'19
retrograde	5387 Oct 28 12:28	24° $\overline{40}$ '47		min. Earth dist.	5394 Feb 07 06:30	18° Ω 33'36	18.08509 AU
opposition	5388 Jan 12 23:05	22° $\overline{39}$ '26	0°17'08	direct	5394 Apr 22 15:48	16° Ω 32'44	
min. Earth dist.	5388 Jan 12 20:19	22° $\overline{39}$ '44	18.45120 AU	evening set	5394 Jul 23 22:36	19° Ω 45'59	
direct	5388 Mar 27 16:07	20° $\overline{39}$ '54					
evening set	5388 Jun 26 14:38	23° $\overline{46}$ '32		conjunction	5394 Aug 09 13:51	20° Ω 45'11	0°34'53
				minimum elong	5394 Aug 09 13:51	20° Ω 45'11	0°34'53
conjunction	5388 Jul 13 01:46	24° $\overline{44}$ '00	0°17'07	max. Earth dist.	5394 Aug 09 06:04	20° Ω 44'01	20.05341 AU
minimum elong	5388 Jul 13 01:45	24° $\overline{44}$ '00	0°17'06	morning rise	5394 Aug 26 06:35	21° Ω 44'37	
max. Earth dist.	5388 Jul 13 03:43	24° $\overline{44}$ '16	20.42172 AU	retrograde	5394 Nov 28 12:03	25° Ω 01'57	
morning rise	5388 Jul 29 15:37	25° $\overline{41}$ '51		opposition	5395 Feb 11 16:15	22° Ω 59'51	0°40'07
retrograde	5388 Nov 01 03:44	28° $\overline{55}$ '22		min. Earth dist.	5395 Feb 11 23:02	22° Ω 59'08	18.02149 AU
opposition	5389 Jan 16 10:04	26° $\overline{53}$ '52	0°20'47	direct	5395 Apr 27 06:11	20° Ω 58'04	
min. Earth dist.	5389 Jan 16 08:09	26° $\overline{54}$ '04	18.39180 AU	evening set	5395 Jul 28 19:09	24° Ω 12'28	
direct	5389 Apr 01 02:43	24° $\overline{54}$ '00					
evening set	5389 Jul 01 05:20	28° $\overline{01}$ '39		conjunction	5395 Aug 14 11:03	25° Ω 11'57	0°37'18

minimum elong	5395 Aug 14 11:03	25° <u>Ω</u> 11'57	0°37'17	opposition	5402 Mar 15 14:43	24° <u>Π</u> 43'56	0°52'26
max. Earth dist.	5395 Aug 14 02:42	25° <u>Ω</u> 10'42	19.98955 AU	min. Earth dist.	5402 Mar 16 04:06	24° <u>Π</u> 42'28	17.61267 AU
morning rise	5395 Aug 31 03:50	26° <u>Ω</u> 11'37		direct	5402 May 29 16:17	22° <u>Π</u> 39'30	
retrograde	5395 Dec 03 07:37	29° <u>Ω</u> 29'32		evening set	5402 Aug 31 17:04	26° <u>Π</u> 01'37	
opposition	5396 Feb 16 07:23	27° <u>Ω</u> 27'16	0°42'43				
min. Earth dist.	5396 Feb 16 15:05	27° <u>Ω</u> 26'27	17.95760 AU	conjunction	5402 Sep 17 10:24	27° <u>Π</u> 02'43	0°47'22
direct	5396 Apr 30 22:48	25° <u>Ω</u> 25'06		minimum elong	5402 Sep 17 10:24	27° <u>Π</u> 02'43	0°47'21
evening set	5396 Aug 01 16:42	28° <u>Ω</u> 40'38		max. Earth dist.	5402 Sep 16 17:10	27° <u>Π</u> 00'05	19.58931 AU
				morning rise	5402 Oct 04 02:49	28° <u>Π</u> 03'43	
conjunction	5396 Aug 18 08:52	29° <u>Ω</u> 40'23	0°39'31		5402 Nov 08 22:25	0° <u>Ω</u>	
minimum elong	5396 Aug 18 08:52	29° <u>Ω</u> 40'23	0°39'31	retrograde	5403 Jan 05 06:21	1° <u>Ω</u> 24'53	
max. Earth dist.	5396 Aug 17 21:45	29° <u>Ω</u> 38'43	19.92590 AU		5403 Mar 05 14:13	30° <u>℞</u> <u>Π</u>	
	5396 Aug 23 19:14	0° <u>Π</u>		opposition	5403 Mar 20 10:14	29° <u>Π</u> 21'48	0°52'57
morning rise	5396 Sep 04 01:59	0° <u>Π</u> 40'17		min. Earth dist.	5403 Mar 21 01:11	29° <u>Π</u> 20'10	17.56763 AU
retrograde	5396 Dec 07 02:04	3° <u>Π</u> 58'45		direct	5403 Jun 03 12:16	27° <u>Π</u> 17'07	
opposition	5397 Feb 19 23:10	1° <u>Π</u> 56'19	0°45'03		5403 Aug 25 08:52	0° <u>Ω</u>	
min. Earth dist.	5397 Feb 20 08:46	1° <u>Π</u> 55'17	17.89445 AU	evening set	5403 Sep 05 19:19	0° <u>Ω</u> 40'15	
	5397 Apr 20 08:32	30° <u>℞</u> <u>Ω</u>					
direct	5397 May 05 14:32	29° <u>Ω</u> 53'44		conjunction	5403 Sep 22 12:34	1° <u>Ω</u> 41'31	0°47'39
	5397 May 20 21:52	0° <u>Π</u>		minimum elong	5403 Sep 22 12:34	1° <u>Ω</u> 41'31	0°47'39
evening set	5397 Aug 06 14:50	3° <u>Π</u> 10'24		max. Earth dist.	5403 Sep 21 18:56	1° <u>Ω</u> 38'48	19.54658 AU
				morning rise	5403 Oct 09 04:38	2° <u>Ω</u> 42'39	
conjunction	5397 Aug 23 07:34	4° <u>Π</u> 10'25	0°41'29	retrograde	5404 Jan 10 06:14	6° <u>Ω</u> 04'11	
minimum elong	5397 Aug 23 07:34	4° <u>Π</u> 10'25	0°41'29	opposition	5404 Mar 24 06:13	4° <u>Ω</u> 01'07	0°53'07
max. Earth dist.	5397 Aug 22 20:08	4° <u>Π</u> 08'41	19.86327 AU	min. Earth dist.	5404 Mar 24 20:41	3° <u>Ω</u> 59'32	17.52713 AU
morning rise	5397 Sep 09 00:39	5° <u>Π</u> 10'31		direct	5404 Jun 07 11:21	1° <u>Ω</u> 56'14	
retrograde	5397 Dec 11 22:39	8° <u>Π</u> 29'30		evening set	5404 Sep 09 22:18	5° <u>Ω</u> 20'20	
opposition	5398 Feb 24 15:28	6° <u>Π</u> 26'54	0°47'08				
min. Earth dist.	5398 Feb 25 01:36	6° <u>Π</u> 25'48	17.83251 AU	conjunction	5404 Sep 26 15:22	6° <u>Ω</u> 21'45	0°47'38
direct	5398 May 10 09:26	4° <u>Π</u> 23'55		minimum elong	5404 Sep 26 15:22	6° <u>Ω</u> 21'45	0°47'39
evening set	5398 Aug 11 14:01	7° <u>Π</u> 41'42		max. Earth dist.	5404 Sep 25 21:10	6° <u>Ω</u> 18'57	19.50826 AU
				morning rise	5404 Oct 13 06:55	7° <u>Ω</u> 23'00	
conjunction	5398 Aug 28 06:53	8° <u>Π</u> 41'58	0°43'13	retrograde	5405 Jan 14 04:30	10° <u>Ω</u> 44'51	
minimum elong	5398 Aug 28 06:53	8° <u>Π</u> 41'58	0°43'13	opposition	5405 Mar 29 02:53	8° <u>Ω</u> 41'51	0°52'56
max. Earth dist.	5398 Aug 27 17:03	8° <u>Π</u> 39'52	19.80223 AU	min. Earth dist.	5405 Mar 29 18:58	8° <u>Ω</u> 40'06	17.49108 AU
morning rise	5398 Sep 14 00:05	9° <u>Π</u> 42'17		direct	5405 Jun 12 08:35	6° <u>Ω</u> 36'48	
retrograde	5398 Dec 16 17:19	13° <u>Π</u> 01'45		evening set	5405 Sep 15 01:50	10° <u>Ω</u> 01'50	
opposition	5399 Mar 01 08:21	10° <u>Π</u> 59'00	0°48'55				
min. Earth dist.	5399 Mar 01 20:21	10° <u>Π</u> 57'42	17.77272 AU	conjunction	5405 Oct 01 18:37	11° <u>Ω</u> 03'23	0°47'18
direct	5399 May 15 02:56	8° <u>Π</u> 55'35		minimum elong	5405 Oct 01 18:37	11° <u>Ω</u> 03'23	0°47'19
evening set	5399 Aug 16 13:44	12° <u>Π</u> 14'30		max. Earth dist.	5405 Sep 30 23:26	11° <u>Ω</u> 00'24	19.47434 AU
				morning rise	5405 Oct 18 09:45	12° <u>Ω</u> 04'43	
conjunction	5399 Sep 02 06:57	13° <u>Π</u> 15'00	0°44'41	retrograde	5406 Jan 19 05:23	15° <u>Ω</u> 26'51	
minimum elong	5399 Sep 02 06:57	13° <u>Π</u> 15'00	0°44'41	opposition	5406 Apr 03 00:06	13° <u>Ω</u> 23'55	0°52'24
max. Earth dist.	5399 Sep 01 16:56	13° <u>Π</u> 12'52	19.74371 AU	min. Earth dist.	5406 Apr 03 15:53	13° <u>Ω</u> 22'11	17.45913 AU
morning rise	5399 Sep 18 23:59	14° <u>Π</u> 15'30		direct	5406 Jun 17 09:06	11° <u>Ω</u> 18'41	
retrograde	5399 Dec 21 14:52	17° <u>Π</u> 35'26		evening set	5406 Sep 20 05:49	14° <u>Ω</u> 44'34	
opposition	5400 Mar 06 01:52	15° <u>Π</u> 32'32	0°50'25				
min. Earth dist.	5400 Mar 06 13:53	15° <u>Π</u> 31'14	17.71568 AU	conjunction	5406 Oct 06 22:18	15° <u>Ω</u> 46'13	0°46'40
direct	5400 May 19 23:33	13° <u>Π</u> 28'46		minimum elong	5406 Oct 06 22:18	15° <u>Ω</u> 46'13	0°46'41
evening set	5400 Aug 21 14:06	16° <u>Π</u> 48'45		max. Earth dist.	5406 Oct 06 02:56	15° <u>Ω</u> 43'13	19.44420 AU
				morning rise	5406 Oct 23 12:40	16° <u>Ω</u> 47'37	
conjunction	5400 Sep 07 07:20	17° <u>Π</u> 49'28	0°45'52	retrograde	5407 Jan 24 04:25	20° <u>Ω</u> 09'58	
minimum elong	5400 Sep 07 07:20	17° <u>Π</u> 49'28	0°45'51	opposition	5407 Apr 07 22:03	18° <u>Ω</u> 07'06	0°51'31
max. Earth dist.	5400 Sep 06 15:35	17° <u>Π</u> 47'04	19.68827 AU	min. Earth dist.	5407 Apr 08 15:17	18° <u>Ω</u> 05'13	17.43098 AU
morning rise	5400 Sep 24 00:19	18° <u>Π</u> 50'09		direct	5407 Jun 22 07:34	16° <u>Ω</u> 01'44	
retrograde	5400 Dec 26 10:31	22° <u>Π</u> 10'32		evening set	5407 Sep 25 10:09	19° <u>Ω</u> 28'21	
opposition	5401 Mar 10 20:06	20° <u>Π</u> 07'31	0°51'35	max. Earth dist.	5407 Oct 11 05:24	20° <u>Ω</u> 26'52	19.41804 AU
min. Earth dist.	5401 Mar 11 09:46	20° <u>Π</u> 06'02	17.66218 AU				
direct	5401 May 24 18:21	18° <u>Π</u> 03'23		conjunction	5407 Oct 12 02:05	20° <u>Ω</u> 30'05	0°45'42
evening set	5401 Aug 26 15:11	21° <u>Π</u> 24'27		minimum elong	5407 Oct 12 02:05	20° <u>Ω</u> 30'05	0°45'42
				morning rise	5407 Oct 28 15:57	21° <u>Ω</u> 31'32	
conjunction	5401 Sep 12 08:37	22° <u>Π</u> 25'22	0°46'46	retrograde	5408 Jan 29 05:35	24° <u>Ω</u> 54'02	
minimum elong	5401 Sep 12 08:36	22° <u>Π</u> 25'22	0°46'46	opposition	5408 Apr 11 20:23	22° <u>Ω</u> 51'12	0°50'17
max. Earth dist.	5401 Sep 11 16:36	22° <u>Π</u> 22'55	19.63671 AU	min. Earth dist.	5408 Apr 12 13:15	22° <u>Ω</u> 49'22	17.40677 AU
morning rise	5401 Sep 29 01:20	23° <u>Π</u> 26'13		direct	5408 Jun 26 09:09	20° <u>Ω</u> 45'41	
retrograde	5401 Dec 31 09:19	26° <u>Π</u> 47'00		evening set	5408 Sep 29 14:27	24° <u>Ω</u> 12'57	

max. Earth dist.	5408 Oct 15 09:50	25° <u>♁</u> 11'35	19.39571 AU	minimum elong	5414 Nov 15 02:42	23° <u>♁</u> 47'17	0°30'47
				morning rise	5414 Dec 01 10:27	24° <u>♁</u> 48'20	
conjunction	5408 Oct 16 06:04	25° <u>♁</u> 14'44	0°44'25	retrograde	5415 Mar 03 00:51	28° <u>♁</u> 10'04	
minimum elong	5408 Oct 16 06:04	25° <u>♁</u> 14'44	0°44'25	opposition	5415 May 15 17:55	26° <u>♁</u> 07'38	0°32'36
morning rise	5408 Nov 01 19:04	26° <u>♁</u> 16'12		min. Earth dist.	5415 May 16 09:45	26° <u>♁</u> 05'55	17.36651 AU
retrograde	5409 Feb 02 05:01	29° <u>♁</u> 38'46		direct	5415 Jul 31 02:41	24° <u>♁</u> 01'36	
opposition	5409 Apr 16 19:18	27° <u>♁</u> 36'01	0°48'41	evening set	5415 Nov 03 18:38	27° <u>♁</u> 30'24	
min. Earth dist.	5409 Apr 17 13:13	27° <u>♁</u> 34'03	17.38642 AU	max. Earth dist.	5415 Nov 19 10:28	28° <u>♁</u> 28'54	19.37403 AU
direct	5409 Jul 01 08:52	25° <u>♁</u> 30'22					
evening set	5409 Oct 04 19:10	28° <u>♁</u> 58'10		conjunction	5415 Nov 20 04:48	28° <u>♁</u> 31'46	0°27'38
				minimum elong	5415 Nov 20 04:48	28° <u>♁</u> 31'46	0°27'39
conjunction	5409 Oct 21 10:03	29° <u>♁</u> 59'59	0°42'50	morning rise	5415 Dec 06 11:38	29° <u>♁</u> 32'40	
minimum elong	5409 Oct 21 10:03	29° <u>♁</u> 59'59	0°42'51		5415 Dec 14 00:32	0° <u>♁</u>	
max. Earth dist.	5409 Oct 20 12:26	29° <u>♁</u> 56'36	19.37749 AU	retrograde	5416 Mar 06 23:13	2° <u>♁</u> 54'06	
	5409 Oct 21 10:11	0° <u>♁</u>		opposition	5416 May 19 18:13	0° <u>♁</u> 51'48	0°29'02
morning rise	5409 Nov 06 22:27	1° <u>♁</u> 01'26		min. Earth dist.	5416 May 20 09:37	0° <u>♁</u> 50'08	17.38364 AU
retrograde	5410 Feb 07 05:25	4° <u>♁</u> 24'01			5416 Jun 09 06:57	30° <u>♁</u>	
opposition	5410 Apr 21 18:21	2° <u>♁</u> 21'17	0°46'46	direct	5416 Aug 04 04:18	28° <u>♁</u> 45'51	
min. Earth dist.	5410 Apr 22 11:59	2° <u>♁</u> 19'22	17.37037 AU		5416 Sep 27 05:13	0° <u>♁</u>	
direct	5410 Jul 06 11:42	0° <u>♁</u> 15'30		evening set	5416 Nov 07 21:10	2° <u>♁</u> 14'29	
evening set	5410 Oct 09 23:41	3° <u>♁</u> 43'46		conjunction	5416 Nov 24 06:30	3° <u>♁</u> 15'42	0°24'21
conjunction	5410 Oct 26 14:06	4° <u>♁</u> 45'34	0°40'57	minimum elong	5416 Nov 24 06:30	3° <u>♁</u> 15'42	0°24'23
minimum elong	5410 Oct 26 14:06	4° <u>♁</u> 45'34	0°40'57	max. Earth dist.	5416 Nov 23 13:51	3° <u>♁</u> 13'06	19.39431 AU
max. Earth dist.	5410 Oct 25 17:32	4° <u>♁</u> 42'21	19.36364 AU	morning rise	5416 Dec 10 12:20	4° <u>♁</u> 16'26	
morning rise	5410 Nov 12 01:29	5° <u>♁</u> 46'59		retrograde	5417 Mar 11 23:33	7° <u>♁</u> 37'31	
retrograde	5411 Feb 12 04:26	9° <u>♁</u> 09'31		opposition	5417 May 24 18:31	5° <u>♁</u> 35'25	0°25'16
opposition	5411 Apr 26 17:57	7° <u>♁</u> 06'50	0°44'30	min. Earth dist.	5417 May 25 08:22	5° <u>♁</u> 33'55	17.40671 AU
min. Earth dist.	5411 Apr 27 12:00	7° <u>♁</u> 04'51	17.35880 AU	direct	5417 Aug 09 07:45	3° <u>♁</u> 29'37	
direct	5411 Jul 11 12:59	5° <u>♁</u> 00'57		evening set	5417 Nov 12 23:22	6° <u>♁</u> 57'59	
evening set	5411 Oct 15 04:03	8° <u>♁</u> 29'31		conjunction	5417 Nov 29 07:39	7° <u>♁</u> 59'02	0°20'54
conjunction	5411 Oct 31 17:34	9° <u>♁</u> 31'17	0°38'47	minimum elong	5417 Nov 29 07:39	7° <u>♁</u> 59'02	0°20'55
minimum elong	5411 Oct 31 17:35	9° <u>♁</u> 31'17	0°38'48	max. Earth dist.	5417 Nov 28 15:48	7° <u>♁</u> 56'33	19.42026 AU
max. Earth dist.	5411 Oct 30 20:04	9° <u>♁</u> 27'55	19.35460 AU	morning rise	5417 Dec 15 12:27	8° <u>♁</u> 59'35	
morning rise	5411 Nov 17 04:16	10° <u>♁</u> 32'39		retrograde	5418 Mar 16 21:07	12° <u>♁</u> 20'17	
retrograde	5412 Feb 17 04:00	13° <u>♁</u> 55'05		opposition	5418 May 29 18:54	10° <u>♁</u> 18'23	0°21'21
opposition	5412 Apr 30 17:41	11° <u>♁</u> 52'25	0°41'56	min. Earth dist.	5418 May 30 08:36	10° <u>♁</u> 16'55	17.43538 AU
min. Earth dist.	5412 May 01 11:22	11° <u>♁</u> 50'29	17.35234 AU	direct	5418 Aug 14 08:26	8° <u>♁</u> 12'48	
direct	5412 Jul 15 16:55	9° <u>♁</u> 46'26		evening set	5418 Nov 18 00:58	11° <u>♁</u> 40'49	
evening set	5412 Oct 19 08:07	13° <u>♁</u> 15'13		conjunction	5418 Dec 04 08:15	12° <u>♁</u> 41'39	0°17'20
conjunction	5412 Nov 04 21:04	14° <u>♁</u> 16'56	0°36'21	minimum elong	5418 Dec 04 08:14	12° <u>♁</u> 41'39	0°17'21
minimum elong	5412 Nov 04 21:04	14° <u>♁</u> 16'56	0°36'21	max. Earth dist.	5418 Dec 03 17:41	12° <u>♁</u> 39'22	19.45154 AU
max. Earth dist.	5412 Nov 04 01:06	14° <u>♁</u> 13'48	19.35074 AU	morning rise	5418 Dec 20 12:04	13° <u>♁</u> 41'59	
	5412 Nov 16 08:32	15° <u>♁</u>		retrograde	5419 Mar 21 21:15	17° <u>♁</u> 02'17	
morning rise	5412 Nov 21 06:44	15° <u>♁</u> 18'12		opposition	5419 Jun 03 19:12	15° <u>♁</u> 00'37	0°17'17
retrograde	5413 Feb 21 02:39	18° <u>♁</u> 40'26		min. Earth dist.	5419 Jun 04 07:04	14° <u>♁</u> 59'20	17.46890 AU
opposition	5413 May 05 17:31	16° <u>♁</u> 37'50	0°39'05	direct	5419 Aug 19 11:54	12° <u>♁</u> 55'15	
min. Earth dist.	5413 May 06 10:55	16° <u>♁</u> 35'56	17.35112 AU	evening set	5419 Nov 23 01:50	16° <u>♁</u> 22'48	
	5413 Jun 17 15:42	15° <u>♁</u>		conjunction	5419 Dec 09 08:07	17° <u>♁</u> 23'25	0°13'39
direct	5413 Jul 20 19:49	14° <u>♁</u> 31'48		minimum elong	5419 Dec 09 08:07	17° <u>♁</u> 23'25	0°13'41
	5413 Aug 22 13:10	15° <u>♁</u>		behind sun begin	5419 Dec 09 04:31	17° <u>♁</u> 22'52	
evening set	5413 Oct 24 12:07	18° <u>♁</u> 00'41		behind sun end	5419 Dec 09 11:42	17° <u>♁</u> 23'58	
max. Earth dist.	5413 Nov 09 03:39	18° <u>♁</u> 59'07	19.35243 AU	max. Earth dist.	5419 Dec 08 18:51	17° <u>♁</u> 21'21	19.48726 AU
conjunction	5413 Nov 10 00:05	19° <u>♁</u> 02'19	0°33'40	morning rise	5419 Dec 25 10:54	18° <u>♁</u> 23'33	
minimum elong	5413 Nov 10 00:05	19° <u>♁</u> 02'19	0°33'41	retrograde	5420 Mar 25 17:54	21° <u>♁</u> 43'24	
morning rise	5413 Nov 26 08:56	20° <u>♁</u> 03'29		opposition	5420 Jun 07 19:32	19° <u>♁</u> 41'56	0°13'08
retrograde	5414 Feb 26 01:28	23° <u>♁</u> 25'30		min. Earth dist.	5420 Jun 08 07:26	19° <u>♁</u> 40'40	17.50670 AU
opposition	5414 May 10 17:40	21° <u>♁</u> 22'57	0°35'58	direct	5420 Aug 23 12:33	17° <u>♁</u> 36'49	
min. Earth dist.	5414 May 11 10:39	21° <u>♁</u> 21'06	17.35581 AU	evening set	5420 Nov 27 02:14	21° <u>♁</u> 03'49	
direct	5414 Jul 25 23:14	19° <u>♁</u> 16'52		conjunction	5420 Dec 13 07:25	22° <u>♁</u> 04'11	0°09'54
evening set	5414 Oct 29 15:30	22° <u>♁</u> 45'47		minimum elong	5420 Dec 13 07:25	22° <u>♁</u> 04'11	0°09'55
max. Earth dist.	5414 Nov 14 08:06	23° <u>♁</u> 44'22	19.36012 AU	behind sun begin	5420 Dec 13 02:00	22° <u>♁</u> 03'22	
conjunction	5414 Nov 15 02:42	23° <u>♁</u> 47'17	0°30'45	behind sun end	5420 Dec 13 12:50	22° <u>♁</u> 05'01	

max. Earth dist.	5420 Dec 12 18:54	22° \mathbb{A} 02'14	19.52698 AU	opposition	5426 Jul 06 15:14	17° \mathbb{B} 22'05	-0°12'16
morning rise	5420 Dec 29 09:18	23° \mathbb{A} 04'04		min. Earth dist.	5426 Jul 06 20:16	17° \mathbb{B} 21'33	17.79544 AU
retrograde	5421 Mar 30 16:42	26° \mathbb{A} 23'26		direct	5426 Sep 21 19:56	15° \mathbb{B} 18'30	
opposition	5421 Jun 12 19:27	24° \mathbb{A} 22'11	0°08'54	evening set	5426 Dec 25 10:50	18° \mathbb{B} 40'28	
min. Earth dist.	5421 Jun 13 05:25	24° \mathbb{A} 21'07	17.54805 AU				
direct	5421 Aug 28 15:58	22° \mathbb{A} 17'19		conjunction	5427 Jan 10 09:58	19° \mathbb{B} 39'08	-0°12'55
evening set	5421 Dec 02 01:54	25° \mathbb{A} 43'40		minimum elong	5427 Jan 10 09:57	19° \mathbb{B} 39'08	0°12'53
				behind sun begin	5427 Jan 10 05:50	19° \mathbb{B} 38'31	
conjunction	5421 Dec 18 06:07	26° \mathbb{A} 43'48	0°06'06	behind sun end	5427 Jan 10 14:05	19° \mathbb{B} 39'45	
minimum elong	5421 Dec 18 06:06	26° \mathbb{A} 43'48	0°06'08	max. Earth dist.	5427 Jan 10 05:02	19° \mathbb{B} 38'23	19.82363 AU
behind sun begin	5421 Dec 17 23:47	26° \mathbb{A} 42'50		morning rise	5427 Jan 26 06:35	20° \mathbb{B} 37'25	
behind sun end	5421 Dec 18 12:25	26° \mathbb{A} 44'45		retrograde	5427 Apr 27 11:50	23° \mathbb{B} 53'16	
max. Earth dist.	5421 Dec 17 19:14	26° \mathbb{A} 42'07	19.56994 AU	opposition	5427 Jul 11 12:52	21° \mathbb{B} 52'54	-0°16'18
morning rise	5422 Jan 03 06:53	27° \mathbb{A} 43'26		min. Earth dist.	5427 Jul 11 15:38	21° \mathbb{B} 52'36	17.85218 AU
	5422 Feb 15 08:09	0° \mathbb{B}		direct	5427 Sep 26 19:07	19° \mathbb{B} 49'35	
retrograde	5422 Apr 04 12:25	1° \mathbb{B} 02'16		evening set	5427 Dec 30 04:42	23° \mathbb{B} 10'31	
	5422 May 24 17:54	30° \mathbb{R} \mathbb{A}					
opposition	5422 Jun 17 19:29	29° \mathbb{A} 01'12	0°04'38	conjunction	5428 Jan 15 03:07	24° \mathbb{B} 08'52	-0°16'29
min. Earth dist.	5422 Jun 18 05:27	29° \mathbb{A} 00'08	17.59254 AU	minimum elong	5428 Jan 15 03:06	24° \mathbb{B} 08'52	0°16'28
direct	5422 Sep 02 16:21	26° \mathbb{A} 56'36		max. Earth dist.	5428 Jan 15 01:01	24° \mathbb{B} 08'33	19.88159 AU
	5422 Nov 30 20:39	0° \mathbb{B}		morning rise	5428 Jan 30 22:51	25° \mathbb{B} 06'52	
evening set	5422 Dec 07 00:41	0° \mathbb{B} 22'13		retrograde	5428 May 01 04:14	28° \mathbb{B} 22'05	
				opposition	5428 Jul 15 10:04	26° \mathbb{B} 21'51	-0°20'12
conjunction	5422 Dec 23 03:45	1° \mathbb{B} 22'04	0°02'16	min. Earth dist.	5428 Jul 15 11:48	26° \mathbb{B} 21'40	17.91139 AU
minimum elong	5422 Dec 23 03:44	1° \mathbb{B} 22'04	0°02'17	direct	5428 Sep 30 16:35	24° \mathbb{B} 18'52	
behind sun begin	5422 Dec 22 21:06	1° \mathbb{B} 21'03		evening set	5429 Jan 02 21:55	27° \mathbb{B} 38'43	
behind sun end	5422 Dec 23 10:22	1° \mathbb{B} 23'04					
max. Earth dist.	5422 Dec 22 17:24	1° \mathbb{B} 20'28	19.61589 AU	conjunction	5429 Jan 18 19:16	28° \mathbb{B} 36'46	-0°19'55
morning rise	5423 Jan 08 03:42	2° \mathbb{B} 21'27		minimum elong	5429 Jan 18 19:16	28° \mathbb{B} 36'46	0°19'54
retrograde	5423 Apr 09 09:59	5° \mathbb{B} 39'44		max. Earth dist.	5429 Jan 18 17:47	28° \mathbb{B} 36'32	19.94210 AU
opposition	5423 Jun 22 19:02	3° \mathbb{B} 38'51	0°00'21	morning rise	5429 Feb 03 14:29	29° \mathbb{B} 34'29	
min. Earth dist.	5423 Jun 23 02:52	3° \mathbb{B} 38'01	17.63974 AU		5429 Feb 10 19:14	0° \mathbb{B}	
desc. node	5423 Jul 23 05:18	2° \mathbb{B} 26'25		retrograde	5429 May 05 21:19	2° \mathbb{B} 49'05	
direct	5423 Sep 07 19:12	1° \mathbb{B} 34'30		opposition	5429 Jul 20 06:34	0° \mathbb{B} 49'00	-0°23'56
evening set	5423 Dec 11 22:36	4° \mathbb{B} 59'18		min. Earth dist.	5429 Jul 20 06:07	0° \mathbb{B} 49'03	17.97317 AU
					5429 Aug 09 11:53	30° \mathbb{R} \mathbb{B}	
conjunction	5423 Dec 28 00:48	5° \mathbb{B} 58'53	-0°01'41	direct	5429 Oct 05 13:26	28° \mathbb{B} 46'21	
minimum elong	5423 Dec 28 00:46	5° \mathbb{B} 58'52	0°01'40		5429 Nov 29 00:05	0° \mathbb{B}	
behind sun begin	5423 Dec 27 18:08	5° \mathbb{B} 57'52		evening set	5430 Jan 07 14:02	2° \mathbb{B} 05'08	
behind sun end	5423 Dec 28 07:24	5° \mathbb{B} 59'53					
max. Earth dist.	5423 Dec 27 16:30	5° \mathbb{B} 57'37	19.66432 AU	conjunction	5430 Jan 23 10:44	3° \mathbb{B} 02'53	-0°23'13
morning rise	5424 Jan 12 23:41	6° \mathbb{B} 57'59		minimum elong	5430 Jan 23 10:44	3° \mathbb{B} 02'53	0°23'12
retrograde	5424 Apr 13 04:28	10° \mathbb{B} 15'41		max. Earth dist.	5430 Jan 23 12:05	3° \mathbb{B} 03'05	20.00500 AU
opposition	5424 Jun 26 18:12	8° \mathbb{B} 14'57	-0°03'55	morning rise	5430 Feb 08 05:09	4° \mathbb{B} 00'20	
min. Earth dist.	5424 Jun 27 01:56	8° \mathbb{B} 14'08	17.68937 AU	retrograde	5430 May 10 13:01	7° \mathbb{B} 14'19	
direct	5424 Sep 11 19:11	6° \mathbb{B} 10'52		opposition	5430 Jul 25 02:41	5° \mathbb{B} 14'26	-0°27'31
evening set	5424 Dec 15 19:44	9° \mathbb{B} 34'48		min. Earth dist.	5430 Jul 25 00:54	5° \mathbb{B} 14'37	18.03702 AU
				direct	5430 Oct 10 08:50	3° \mathbb{B} 12'11	
conjunction	5424 Dec 31 20:47	10° \mathbb{B} 34'04	-0°05'31	evening set	5431 Jan 12 05:17	6° \mathbb{B} 29'51	
minimum elong	5424 Dec 31 20:48	10° \mathbb{B} 34'04	0°05'29				
behind sun begin	5424 Dec 31 14:25	10° \mathbb{B} 33'06		conjunction	5431 Jan 28 01:03	7° \mathbb{B} 27'18	-0°26'21
behind sun end	5425 Jan 01 03:11	10° \mathbb{B} 35'02		minimum elong	5431 Jan 28 01:03	7° \mathbb{B} 27'18	0°26'21
max. Earth dist.	5424 Dec 31 12:50	10° \mathbb{B} 32'51	19.71517 AU	max. Earth dist.	5431 Jan 28 03:03	7° \mathbb{B} 27'37	20.06975 AU
morning rise	5425 Jan 16 19:01	11° \mathbb{B} 32'55		morning rise	5431 Feb 12 19:05	8° \mathbb{B} 24'29	
retrograde	5425 Apr 18 00:21	14° \mathbb{B} 50'01		retrograde	5431 May 15 05:30	11° \mathbb{B} 37'55	
opposition	5425 Jul 01 16:52	12° \mathbb{B} 49'24	-0°08'08	opposition	5431 Jul 29 22:11	9° \mathbb{B} 38'12	-0°30'54
min. Earth dist.	5425 Jul 01 22:28	12° \mathbb{B} 48'49	17.74129 AU	min. Earth dist.	5431 Jul 29 18:36	9° \mathbb{B} 38'34	18.10248 AU
direct	5425 Sep 16 20:36	10° \mathbb{B} 45'34		direct	5431 Oct 15 04:01	7° \mathbb{B} 36'20	
evening set	5425 Dec 20 15:42	14° \mathbb{B} 08'33		evening set	5432 Jan 16 19:38	10° \mathbb{B} 52'56	
conjunction	5426 Jan 05 15:55	15° \mathbb{B} 07'31	-0°09'15	conjunction	5432 Feb 01 14:53	11° \mathbb{B} 50'05	-0°29'19
minimum elong	5426 Jan 05 15:56	15° \mathbb{B} 07'31	0°09'15	minimum elong	5432 Feb 01 14:52	11° \mathbb{B} 50'05	0°29'18
behind sun begin	5426 Jan 05 10:20	15° \mathbb{B} 06'41		max. Earth dist.	5432 Feb 01 19:28	11° \mathbb{B} 50'47	20.13563 AU
behind sun end	5426 Jan 05 21:31	15° \mathbb{B} 08'22		morning rise	5432 Feb 17 08:16	12° \mathbb{B} 47'00	
max. Earth dist.	5426 Jan 05 10:28	15° \mathbb{B} 06'42	19.76819 AU		5432 Mar 31 14:19	15° \mathbb{B}	
morning rise	5426 Jan 21 13:09	16° \mathbb{B} 06'05		retrograde	5432 May 18 20:36	15° \mathbb{B} 59'50	
retrograde	5426 Apr 22 17:46	19° \mathbb{B} 22'33			5432 Jul 08 09:03	15° \mathbb{R} \mathbb{B}	

opposition	5432 Aug 02 16:57	14°00'21" -0°34'05"	evening set	5439 Feb 15 03:02	10°48'48"
min. Earth dist.	5432 Aug 02 12:06	14°00'51" 18.16856 AU			
direct	5432 Oct 18 22:06	11°58'53"	conjunction	5439 Mar 02 18:50	11°44'08" -0°44'21"
	5433 Jan 16 07:12	15°	minimum elong	5439 Mar 02 18:50	11°44'08" 0°44'20"
evening set	5433 Jan 20 09:23	15°14'23"	max. Earth dist.	5439 Mar 03 06:27	11°45'51" 20.56765 AU
			morning rise	5439 Mar 18 10:43	12°39'29"
conjunction	5433 Feb 05 03:47	16°11'15" -0°32'06"	retrograde	5439 Jun 18 15:53	15°48'43"
minimum elong	5433 Feb 05 03:47	16°11'15" 0°32'06"	opposition	5439 Sep 03 13:08	13°49'54" -0°49'49"
max. Earth dist.	5433 Feb 05 08:47	16°12'00" 20.20179 AU	min. Earth dist.	5439 Sep 03 01:22	13°51'06" 18.59421 AU
morning rise	5433 Feb 20 20:53	17°07'55"	direct	5439 Nov 19 13:20	11°50'47"
retrograde	5433 May 23 11:53	20°20'12"	evening set	5440 Feb 19 11:21	14°58'43"
opposition	5433 Aug 07 11:22	18°20'52" -0°37'04"			
min. Earth dist.	5433 Aug 07 05:15	18°21'30" 18.23470 AU	conjunction	5440 Mar 06 03:05	15°53'51" -0°45'34"
direct	5433 Oct 23 15:49	16°19'49"	minimum elong	5440 Mar 06 03:05	15°53'51" 0°45'34"
evening set	5434 Jan 24 22:04	19°34'12"	max. Earth dist.	5440 Mar 06 16:18	15°55'48" 20.61987 AU
			morning rise	5440 Mar 21 18:54	16°49'01"
conjunction	5434 Feb 09 16:00	20°30'48" -0°34'42"	retrograde	5440 Jun 22 03:00	19°57'46"
minimum elong	5434 Feb 09 16:00	20°30'48" 0°34'41"	opposition	5440 Sep 07 02:57	17°58'58" -0°51'00"
max. Earth dist.	5434 Feb 09 23:18	20°31'54" 20.26756 AU	min. Earth dist.	5440 Sep 06 13:27	18°00'20" 18.64518 AU
morning rise	5434 Feb 25 08:34	21°27'13"	direct	5440 Nov 23 03:39	16°00'05"
retrograde	5434 May 28 02:23	24°38'57"	evening set	5441 Feb 22 19:08	19°07'02"
opposition	5434 Aug 12 05:13	22°39'48" -0°39'49"			
min. Earth dist.	5434 Aug 11 21:42	22°40'34" 18.29994 AU	conjunction	5441 Mar 10 10:37	20°01'58" -0°46'32"
direct	5434 Oct 28 09:33	20°39'09"	minimum elong	5441 Mar 10 10:37	20°01'58" 0°46'31"
evening set	5435 Jan 29 10:14	23°52'26"	max. Earth dist.	5441 Mar 11 00:21	20°04'00" 20.66971 AU
			morning rise	5441 Mar 26 02:37	20°56'59"
conjunction	5435 Feb 14 03:29	24°48'44" -0°37'05"	retrograde	5441 Jun 26 12:30	24°05'21"
minimum elong	5435 Feb 14 03:29	24°48'44" 0°37'04"	opposition	5441 Sep 11 16:27	22°06'32" -0°51'56"
max. Earth dist.	5435 Feb 14 11:05	24°49'53" 20.33213 AU	min. Earth dist.	5441 Sep 11 02:42	22°07'55" 18.69415 AU
morning rise	5435 Mar 01 19:53	25°44'55"	direct	5441 Nov 27 14:22	20°07'54"
retrograde	5435 Jun 01 15:52	28°56'08"	evening set	5442 Feb 27 02:05	23°13'54"
opposition	5435 Aug 16 22:24	26°57'06" -0°42'19"			
min. Earth dist.	5435 Aug 16 14:08	26°57'57" 18.36384 AU	conjunction	5442 Mar 14 17:36	24°08'40" -0°47'15"
direct	5435 Nov 02 01:39	24°56'49"	minimum elong	5442 Mar 14 17:36	24°08'40" 0°47'15"
evening set	5436 Feb 02 21:28	28°09'00"	max. Earth dist.	5442 Mar 15 08:58	24°10'56" 20.71767 AU
			morning rise	5442 Mar 30 09:40	25°03'32"
conjunction	5436 Feb 18 14:25	29°05'04" -0°39'14"	retrograde	5442 Jun 30 22:48	28°11'32"
minimum elong	5436 Feb 18 14:24	29°05'04" 0°39'14"	opposition	5442 Sep 16 05:12	26°12'45" -0°52'34"
max. Earth dist.	5436 Feb 18 23:51	29°06'29" 20.39495 AU	min. Earth dist.	5442 Sep 15 13:29	26°14'20" 18.74109 AU
	5436 Mar 04 23:35	0°	direct	5442 Dec 02 02:57	24°14'22"
morning rise	5436 Mar 05 06:27	0°01'00"	evening set	5443 Mar 03 08:43	27°19'30"
retrograde	5436 Jun 05 05:38	3°11'42"			
opposition	5436 Aug 20 14:59	1°12'47" -0°44'35"	conjunction	5443 Mar 19 00:08	28°14'07" -0°47'43"
min. Earth dist.	5436 Aug 20 05:20	1°13'46" 18.42544 AU	minimum elong	5443 Mar 19 00:08	28°14'07" 0°47'43"
	5436 Sep 21 17:21	30°	max. Earth dist.	5443 Mar 19 16:02	28°16'26" 20.76353 AU
direct	5436 Nov 05 18:31	29°12'51"	morning rise	5443 Apr 03 16:33	29°08'52"
	5436 Dec 19 04:32	0°		5443 Apr 19 02:59	0°
evening set	5437 Feb 06 08:09	2°23'57"	retrograde	5443 Jul 05 07:51	2°16'33"
			opposition	5443 Sep 20 17:22	0°17'47" -0°52'57"
conjunction	5437 Feb 22 00:31	3°19'45" -0°41'11"	min. Earth dist.	5443 Sep 20 01:39	0°19'22" 18.78601 AU
minimum elong	5437 Feb 22 00:31	3°19'45" 0°41'10"		5443 Sep 28 03:27	30°
max. Earth dist.	5437 Feb 22 10:09	3°21'11" 20.45524 AU	direct	5443 Dec 06 12:04	28°19'40"
morning rise	5437 Mar 09 16:29	4°15'29"		5444 Feb 09 05:32	0°
retrograde	5437 Jun 09 17:06	7°25'41"	evening set	5444 Mar 06 14:48	1°24'01"
opposition	5437 Aug 25 07:03	5°26'50" -0°46'36"			
min. Earth dist.	5437 Aug 24 21:00	5°27'51" 18.48450 AU	conjunction	5444 Mar 22 06:25	2°18'29" -0°47'57"
direct	5437 Nov 10 09:04	3°27'12"	minimum elong	5444 Mar 22 06:25	2°18'29" 0°47'57"
evening set	5438 Feb 10 17:57	6°37'13"	max. Earth dist.	5444 Mar 22 23:36	2°21'00" 20.80730 AU
			morning rise	5444 Apr 06 23:02	3°13'08"
conjunction	5438 Feb 26 10:08	7°32'47" -0°42'53"	retrograde	5444 Jul 08 17:32	6°20'32"
minimum elong	5438 Feb 26 10:08	7°32'47" 0°42'53"	min. Earth dist.	5444 Sep 23 11:29	4°23'36" 18.82844 AU
max. Earth dist.	5438 Feb 26 21:25	7°34'28" 20.51289 AU	opposition	5444 Sep 24 04:58	4°21'51" -0°53'03"
morning rise	5438 Mar 14 01:53	8°28'18"	direct	5444 Dec 09 22:58	2°24'00"
retrograde	5438 Jun 14 05:46	11°38'00"	evening set	5445 Mar 10 20:29	5°27'36"
opposition	5438 Aug 29 22:23	9°39'12" -0°48'20"			
min. Earth dist.	5438 Aug 29 10:49	9°40'22" 18.54068 AU	conjunction	5445 Mar 26 12:07	6°21'57" -0°47'56"
direct	5438 Nov 15 00:48	7°39'51"	minimum elong	5445 Mar 26 12:07	6°21'57" 0°47'57"

max. Earth dist.	5445 Mar 27 05:43	6° Υ 24'31	20.84832 AU	opposition	5451 Oct 24 04:01	2° \mathcal{B} 32'04	-0°46'41
morning rise	5445 Apr 11 05:10	7° Υ 16'30		direct	5452 Jan 08 04:32	0° \mathcal{B} 35'28	
retrograde	5445 Jul 13 02:05	10° Υ 23'42		evening set	5452 Apr 07 07:03	3° \mathcal{B} 35'22	
opposition	5445 Sep 28 16:21	8° Υ 25'03	-0°52'54				
min. Earth dist.	5445 Sep 27 23:09	8° Υ 26'47	18.86809 AU	conjunction	5452 Apr 23 01:29	4° \mathcal{B} 29'24	-0°41'26
direct	5445 Dec 14 06:49	6° Υ 27'29		minimum elong	5452 Apr 23 01:29	4° \mathcal{B} 29'24	0°41'28
evening set	5446 Mar 15 01:51	9° Υ 30'23		max. Earth dist.	5452 Apr 23 20:31	4° \mathcal{B} 32'08	21.02329 AU
				morning rise	5452 May 08 22:26	5° \mathcal{B} 23'48	
conjunction	5446 Mar 30 17:48	10° Υ 24'39	-0°47'41	retrograde	5452 Aug 10 14:34	8° \mathcal{B} 30'19	
minimum elong	5446 Mar 30 17:48	10° Υ 24'39	0°47'41	opposition	5452 Oct 27 12:43	6° \mathcal{B} 31'33	-0°44'49
max. Earth dist.	5446 Mar 31 12:28	10° Υ 27'21	20.88645 AU	min. Earth dist.	5452 Oct 26 18:15	6° \mathcal{B} 33'24	19.02675 AU
morning rise	5446 Apr 15 11:11	11° Υ 19'07		direct	5453 Jan 11 11:58	4° \mathcal{B} 34'58	
retrograde	5446 Jul 17 11:34	14° Υ 26'08		evening set	5453 Apr 11 11:29	7° \mathcal{B} 34'32	
min. Earth dist.	5446 Oct 02 08:24	12° Υ 29'25	18.90447 AU				
opposition	5446 Oct 03 03:07	12° Υ 27'33	-0°52'29	conjunction	5453 Apr 27 06:25	8° \mathcal{B} 28'35	-0°39'39
direct	5446 Dec 18 16:36	10° Υ 30'14		minimum elong	5453 Apr 27 06:25	8° \mathcal{B} 28'35	0°39'40
evening set	5447 Mar 19 07:03	13° Υ 32'31		max. Earth dist.	5453 Apr 28 01:09	8° \mathcal{B} 31'16	21.02847 AU
				morning rise	5453 May 13 04:11	9° \mathcal{B} 23'02	
conjunction	5447 Apr 03 23:11	14° Υ 26'41	-0°47'12	retrograde	5453 Aug 14 21:45	12° \mathcal{B} 29'33	
minimum elong	5447 Apr 03 23:11	14° Υ 26'41	0°47'14	opposition	5453 Oct 31 21:20	10° \mathcal{B} 30'38	-0°42'44
max. Earth dist.	5447 Apr 04 17:59	14° Υ 29'24	20.92093 AU	min. Earth dist.	5453 Oct 31 04:01	10° \mathcal{B} 32'22	19.02978 AU
morning rise	5447 Apr 19 17:08	15° Υ 21'07		direct	5454 Jan 15 17:49	8° \mathcal{B} 34'03	
retrograde	5447 Jul 21 19:39	18° Υ 27'59		evening set	5454 Apr 15 15:57	11° \mathcal{B} 33'20	
opposition	5447 Oct 07 13:39	16° Υ 29'27	-0°51'49				
min. Earth dist.	5447 Oct 06 19:41	16° Υ 31'14	18.93705 AU	conjunction	5454 May 01 11:37	12° \mathcal{B} 27'25	-0°37'41
direct	5447 Dec 22 23:11	14° Υ 32'21		minimum elong	5454 May 01 11:37	12° \mathcal{B} 27'25	0°37'42
evening set	5448 Mar 22 12:02	17° Υ 34'04		max. Earth dist.	5454 May 02 06:31	12° \mathcal{B} 30'08	21.02951 AU
				morning rise	5454 May 17 10:07	13° \mathcal{B} 21'56	
conjunction	5448 Apr 07 04:34	18° Υ 28'10	-0°46'30		5454 Jun 18 08:50	15° \mathcal{B}	
minimum elong	5448 Apr 07 04:34	18° Υ 28'10	0°46'30	retrograde	5454 Aug 19 06:58	16° \mathcal{B} 28'29	
max. Earth dist.	5448 Apr 07 23:59	18° Υ 30'59	20.95138 AU		5454 Oct 23 08:55	15° \mathcal{B}	
morning rise	5448 Apr 22 22:56	19° Υ 22'33		min. Earth dist.	5454 Nov 04 11:10	14° \mathcal{B} 31'15	19.02883 AU
retrograde	5448 Jul 25 05:05	22° Υ 29'19		opposition	5454 Nov 05 05:21	14° \mathcal{B} 29'26	-0°40'26
opposition	5448 Oct 10 23:36	20° Υ 30'48	-0°50'54	direct	5455 Jan 20 00:30	12° \mathcal{B} 32'48	
min. Earth dist.	5448 Oct 10 04:30	20° Υ 32'42	18.96520 AU	evening set	5455 Apr 10 03:53	15° \mathcal{B}	
direct	5448 Dec 26 08:13	18° Υ 33'55			5455 Apr 19 20:33	15° \mathcal{B} 31'54	
evening set	5449 Mar 26 17:02	21° Υ 35'06		conjunction	5455 May 05 16:51	16° \mathcal{B} 26'03	-0°35'31
				minimum elong	5455 May 05 16:51	16° \mathcal{B} 26'03	0°35'32
conjunction	5449 Apr 11 09:50	22° Υ 29'10	-0°45'33	max. Earth dist.	5455 May 06 11:24	16° \mathcal{B} 28'42	21.02663 AU
minimum elong	5449 Apr 11 09:50	22° Υ 29'10	0°45'34	morning rise	5455 May 21 16:12	17° \mathcal{B} 20'38	
max. Earth dist.	5449 Apr 12 05:03	22° Υ 31'56	20.97711 AU	retrograde	5455 Aug 23 13:55	20° \mathcal{B} 27'16	
morning rise	5449 Apr 27 04:49	23° Υ 23'32		opposition	5455 Nov 09 13:24	18° \mathcal{B} 28'05	-0°37'57
retrograde	5449 Jul 29 12:43	26° Υ 30'13		min. Earth dist.	5455 Nov 08 20:22	18° \mathcal{B} 29'48	19.02419 AU
opposition	5449 Oct 15 09:32	24° Υ 31'42	-0°49'44	direct	5456 Jan 24 05:52	16° \mathcal{B} 31'26	
min. Earth dist.	5449 Oct 14 15:29	24° Υ 33'30	18.98853 AU	evening set	5456 Apr 23 01:10	19° \mathcal{B} 30'25	
direct	5449 Dec 30 14:17	22° Υ 34'57					
evening set	5450 Mar 30 21:42	25° Υ 35'40		conjunction	5456 May 08 22:14	20° \mathcal{B} 24'39	-0°33'12
				minimum elong	5456 May 08 22:14	20° \mathcal{B} 24'39	0°33'13
conjunction	5450 Apr 15 15:03	26° Υ 29'42	-0°44'24	max. Earth dist.	5456 May 09 16:52	20° \mathcal{B} 27'19	21.02031 AU
minimum elong	5450 Apr 15 15:03	26° Υ 29'42	0°44'24	morning rise	5456 May 24 22:21	21° \mathcal{B} 19'19	
max. Earth dist.	5450 Apr 16 10:31	26° Υ 32'30	20.99788 AU	retrograde	5456 Aug 26 23:51	24° \mathcal{B} 26'06	
morning rise	5450 May 01 10:37	27° Υ 24'04		opposition	5456 Nov 12 21:08	22° \mathcal{B} 26'48	-0°35'18
	5450 Jun 28 08:27	0° \mathcal{B}		min. Earth dist.	5456 Nov 12 03:15	22° \mathcal{B} 28'36	19.01611 AU
retrograde	5450 Aug 02 22:13	0° \mathcal{B} 30'40		direct	5457 Jan 27 12:23	20° \mathcal{B} 30'06	
	5450 Sep 08 09:48	30° $\mathcal{R}\Upsilon$		evening set	5457 Apr 27 06:07	23° \mathcal{B} 29'04	
opposition	5450 Oct 19 18:57	28° Υ 32'07	-0°48'19				
min. Earth dist.	5450 Oct 19 00:00	28° Υ 34'00	19.00655 AU	conjunction	5457 May 13 03:53	24° \mathcal{B} 23'23	-0°30'43
direct	5451 Jan 03 22:34	26° Υ 35'29		minimum elong	5457 May 13 03:53	24° \mathcal{B} 23'23	0°30'44
evening set	5451 Apr 04 02:30	29° Υ 35'45		max. Earth dist.	5457 May 13 22:08	24° \mathcal{B} 26'00	21.01052 AU
	5451 Apr 11 05:19	0° \mathcal{B}		morning rise	5457 May 29 04:53	25° \mathcal{B} 18'11	
conjunction	5451 Apr 19 20:17	0° \mathcal{B} 29'47	-0°43'01	retrograde	5457 Aug 31 06:55	28° \mathcal{B} 25'09	
minimum elong	5451 Apr 19 20:17	0° \mathcal{B} 29'47	0°43'02	opposition	5457 Nov 17 04:58	26° \mathcal{B} 25'45	-0°32'28
max. Earth dist.	5451 Apr 20 15:15	0° \mathcal{B} 32'30	21.01316 AU	min. Earth dist.	5457 Nov 16 12:22	26° \mathcal{B} 27'25	19.00467 AU
morning rise	5451 May 05 16:35	1° \mathcal{B} 24'10		direct	5458 Jan 31 17:00	24° \mathcal{B} 29'01	
retrograde	5451 Aug 07 05:30	4° \mathcal{B} 30'42		evening set	5458 May 01 11:12	27° \mathcal{B} 28'02	
min. Earth dist.	5451 Oct 23 10:23	2° \mathcal{B} 33'49	19.01919 AU				

conjunction	5458 May 17 09:52	28° 8 22'28	-0°28'05	behind sun begin	5464 Jun 10 02:56	22° II 31'44	
minimum elong	5458 May 17 09:52	28° 8 22'28	0°28'06	behind sun end	5464 Jun 10 13:48	22° II 33'15	
max. Earth dist.	5458 May 18 03:59	28° 8 25'04	20.99751 AU	max. Earth dist.	5464 Jun 10 20:52	22° II 34'17	20.83602 AU
morning rise	5458 Jun 02 11:45	29° 8 17'23		morning rise	5464 Jun 26 15:40	23° II 28'27	
	5458 Jun 15 13:06	0° II		retrograde	5464 Sep 29 06:40	26° II 37'53	
retrograde	5458 Sep 04 17:34	2° II 24'35		opposition	5464 Dec 15 12:57	24° II 37'50	-0°08'52
opposition	5458 Nov 21 12:37	0° II 25'06	-0°29'28	min. Earth dist.	5464 Dec 15 01:39	24° II 38'59	18.81513 AU
min. Earth dist.	5458 Nov 20 19:27	0° II 26'50	18.98984 AU	direct	5465 Feb 28 12:14	22° II 40'23	
	5458 Dec 01 23:30	30° 8 8		evening set	5465 May 29 13:22	25° II 41'48	
direct	5459 Feb 04 23:39	28° 8 28'20					
	5459 Apr 07 11:52	0° II		conjunction	5465 Jun 14 18:10	26° II 37'29	-0°06'25
evening set	5459 May 05 16:52	1° II 27'29		minimum elong	5465 Jun 14 18:11	26° II 37'29	0°06'27
				behind sun begin	5465 Jun 14 11:54	26° II 36'36	
conjunction	5459 May 21 16:16	2° II 22'03	-0°25'18	behind sun end	5465 Jun 15 00:27	26° II 38'22	
minimum elong	5459 May 21 16:17	2° II 22'03	0°25'20	max. Earth dist.	5465 Jun 15 05:28	26° II 39'06	20.79318 AU
max. Earth dist.	5459 May 22 09:46	2° II 24'34	20.98084 AU	morning rise	5465 Jul 01 02:22	27° II 33'40	
morning rise	5459 Jun 06 19:04	3° II 17'07			5465 Aug 22 04:56	0° 8	
retrograde	5459 Sep 09 01:17	6° II 24'35		retrograde	5465 Oct 03 17:11	0° 8 43'31	
opposition	5459 Nov 25 20:17	4° II 25'03	-0°26'20		5465 Nov 16 00:43	30° 8 II	
min. Earth dist.	5459 Nov 25 04:42	4° II 26'37	18.97136 AU	opposition	5465 Dec 19 21:39	28° II 43'17	-0°05'07
direct	5460 Feb 09 03:44	2° II 28'15		min. Earth dist.	5465 Dec 19 12:20	28° II 44'14	18.77024 AU
evening set	5460 May 08 22:50	5° II 27'37		direct	5466 Mar 04 19:26	26° II 45'35	
				evening set	5466 Jun 02 22:48	29° II 47'34	
conjunction	5460 May 24 23:09	6° II 22'20	-0°22'24		5466 Jun 06 14:36	0° 8	
minimum elong	5460 May 24 23:09	6° II 22'20	0°22'25				
max. Earth dist.	5460 May 25 16:09	6° II 24'46	20.96062 AU	conjunction	5466 Jun 19 04:36	0° 8 43'29	-0°03'01
morning rise	5460 Jun 10 02:49	7° II 17'32		minimum elong	5466 Jun 19 04:35	0° 8 43'28	0°03'03
retrograde	5460 Sep 12 12:17	10° II 25'21		behind sun begin	5466 Jun 18 21:57	0° 8 42'32	
opposition	5460 Nov 29 04:03	8° II 25'44	-0°23'04	behind sun end	5466 Jun 19 11:14	0° 8 44'25	
min. Earth dist.	5460 Nov 28 12:15	8° II 27'20	18.94912 AU	max. Earth dist.	5466 Jun 19 14:27	0° 8 44'53	20.74656 AU
direct	5461 Feb 12 10:48	6° II 28'53		morning rise	5466 Jul 05 13:43	1° 8 39'52	
evening set	5461 May 13 05:19	9° II 28'32		retrograde	5466 Oct 08 05:12	4° 8 50'12	
				opposition	5466 Dec 24 06:26	2° 8 49'45	-0°01'20
conjunction	5461 May 29 06:27	10° II 23'25	-0°19'23	min. Earth dist.	5466 Dec 23 21:31	2° 8 50'40	18.72183 AU
minimum elong	5461 May 29 06:27	10° II 23'25	0°19'25	direct	5467 Mar 09 03:38	0° 8 51'45	
max. Earth dist.	5461 May 29 22:37	10° II 25'44	20.93630 AU	asc. node	5467 May 02 00:26	2° 8 04'11	
morning rise	5461 Jun 14 11:03	11° II 18'48		evening set	5467 Jun 07 08:55	3° 8 54'22	
retrograde	5461 Sep 16 21:24	14° II 27'00					
opposition	5461 Dec 03 12:07	12° II 27'19	-0°19'40	conjunction	5467 Jun 23 15:36	4° 8 50'31	0°00'31
min. Earth dist.	5461 Dec 02 22:11	12° II 28'44	18.92266 AU	minimum elong	5467 Jun 23 15:36	4° 8 50'31	0°00'30
direct	5462 Feb 16 15:23	10° II 30'23		behind sun begin	5467 Jun 23 08:56	4° 8 49'35	
evening set	5462 May 17 12:27	13° II 30'24		behind sun end	5467 Jun 23 22:16	4° 8 51'27	
				max. Earth dist.	5467 Jun 24 00:27	4° 8 51'47	20.69652 AU
conjunction	5462 Jun 02 14:32	14° II 25'27	-0°16'16	morning rise	5467 Jul 10 01:31	5° 8 47'09	
minimum elong	5462 Jun 02 14:32	14° II 25'28	0°16'17	retrograde	5467 Oct 12 16:09	8° 8 57'56	
max. Earth dist.	5462 Jun 03 05:42	14° II 27'38	20.90771 AU	opposition	5467 Dec 28 15:29	6° 8 57'18	0°02'29
morning rise	5462 Jun 18 20:02	15° II 21'02		min. Earth dist.	5467 Dec 28 08:22	6° 8 58'02	18.67045 AU
retrograde	5462 Sep 21 08:52	18° II 29'36		direct	5468 Mar 12 11:29	4° 8 59'00	
opposition	5462 Dec 07 20:03	16° II 29'50	-0°16'10	evening set	5468 Jun 10 19:40	8° 8 02'18	
min. Earth dist.	5462 Dec 07 06:22	16° II 31'14	18.89167 AU				
direct	5463 Feb 20 22:43	14° II 32'47		conjunction	5468 Jun 27 03:16	8° 8 58'42	0°04'01
evening set	5463 May 21 20:17	17° II 33'13		minimum elong	5468 Jun 27 03:15	8° 8 58'42	0°03'59
				behind sun begin	5468 Jun 26 20:39	8° 8 57'46	
conjunction	5463 Jun 06 23:14	18° II 28'29	-0°13'03	behind sun end	5468 Jun 27 09:51	8° 8 59'38	
minimum elong	5463 Jun 06 23:14	18° II 28'29	0°13'05	max. Earth dist.	5468 Jun 27 10:40	8° 8 59'45	20.64409 AU
behind sun begin	5463 Jun 06 19:17	18° II 27'56		morning rise	5468 Jul 13 14:03	9° 8 55'34	
behind sun end	5463 Jun 07 03:11	18° II 29'02		retrograde	5468 Oct 16 05:08	13° 8 06'53	
max. Earth dist.	5463 Jun 07 13:05	18° II 30'28	20.87423 AU	opposition	5469 Jan 01 00:49	11° 8 06'01	0°06'19
morning rise	5463 Jun 23 05:38	19° II 24'15		min. Earth dist.	5468 Dec 31 18:03	11° 8 06'43	18.61696 AU
retrograde	5463 Sep 25 18:56	22° II 33'14		direct	5469 Mar 16 20:34	9° 8 07'25	
opposition	5463 Dec 12 04:28	20° II 33'21	-0°12'33	evening set	5469 Jun 15 07:03	12° 8 11'28	
min. Earth dist.	5463 Dec 11 16:51	20° II 34'32	18.85575 AU				
direct	5464 Feb 25 04:33	18° II 36'08		conjunction	5469 Jul 01 15:35	13° 8 08'08	0°07'27
evening set	5464 May 25 04:28	21° II 37'01		minimum elong	5469 Jul 01 15:35	13° 8 08'08	0°07'26
				behind sun begin	5469 Jul 01 09:29	13° 8 07'16	
conjunction	5464 Jun 10 08:22	22° II 32'29	-0°09'46	behind sun end	5469 Jul 01 21:41	13° 8 09'00	
minimum elong	5464 Jun 10 08:22	22° II 32'29	0°09'47	max. Earth dist.	5469 Jul 01 22:14	13° 8 09'05	20.58958 AU

morning rise	5469 Jul 18 03:07	14° $\mathring{\text{O}}$ 05'14	opposition	5476 Jan 31 06:50	10° $\mathring{\text{O}}$ 50'04	0°31'36
retrograde	5469 Oct 20 16:50	17° $\mathring{\text{O}}$ 17'05	min. Earth dist.	5476 Jan 31 08:56	10° $\mathring{\text{O}}$ 49'50	18.20881 AU
opposition	5470 Jan 05 10:36	15° $\mathring{\text{O}}$ 16'03	0°10'07	direct	5476 Apr 14 21:15	8° $\mathring{\text{O}}$ 49'21
min. Earth dist.	5470 Jan 05 05:29	15° $\mathring{\text{O}}$ 16'35	18.56164 AU	evening set	5476 Jul 15 16:09	12° $\mathring{\text{O}}$ 00'18
direct	5470 Mar 21 04:49	13° $\mathring{\text{O}}$ 17'08				
evening set	5470 Jun 19 19:23	16° $\mathring{\text{O}}$ 22'01		conjunction	5476 Aug 01 06:06	12° $\mathring{\text{O}}$ 58'55
				minimum elong	5476 Aug 01 06:05	12° $\mathring{\text{O}}$ 58'55
conjunction	5470 Jul 06 04:47	17° $\mathring{\text{O}}$ 18'56	0°10'51	max. Earth dist.	5476 Aug 01 02:04	12° $\mathring{\text{O}}$ 58'19
minimum elong	5470 Jul 06 04:47	17° $\mathring{\text{O}}$ 18'56	0°10'50	morning rise	5476 Aug 17 22:01	13° $\mathring{\text{O}}$ 57'49
behind sun begin	5470 Jul 05 23:42	17° $\mathring{\text{O}}$ 18'13			5476 Sep 05 13:38	15° $\mathring{\text{O}}$
behind sun end	5470 Jul 06 09:51	17° $\mathring{\text{O}}$ 19'39		retrograde	5476 Nov 20 06:53	17° $\mathring{\text{O}}$ 13'59
max. Earth dist.	5470 Jul 06 09:46	17° $\mathring{\text{O}}$ 19'38	20.53366 AU	opposition	5477 Feb 03 20:14	15° $\mathring{\text{O}}$ 12'06
morning rise	5470 Jul 22 17:09	18° $\mathring{\text{O}}$ 16'17		min. Earth dist.	5477 Feb 03 23:49	15° $\mathring{\text{O}}$ 11'43
retrograde	5470 Oct 25 07:16	21° $\mathring{\text{O}}$ 28'42			5477 Feb 08 14:07	15° $\mathring{\text{R}}$ $\mathring{\text{O}}$
opposition	5471 Jan 09 20:33	19° $\mathring{\text{O}}$ 27'29	0°13'53	direct	5477 Apr 19 10:44	13° $\mathring{\text{O}}$ 11'01
min. Earth dist.	5471 Jan 09 15:59	19° $\mathring{\text{O}}$ 27'58	18.50510 AU		5477 Jun 25 00:20	15° $\mathring{\text{O}}$
direct	5471 Mar 25 14:48	17° $\mathring{\text{O}}$ 28'15		evening set	5477 Jul 20 10:55	16° $\mathring{\text{O}}$ 23'05
evening set	5471 Jun 24 08:31	20° $\mathring{\text{O}}$ 34'01				
				conjunction	5477 Aug 06 01:40	17° $\mathring{\text{O}}$ 22'00
conjunction	5471 Jul 10 18:48	21° $\mathring{\text{O}}$ 31'13	0°14'14	minimum elong	5477 Aug 06 01:39	17° $\mathring{\text{O}}$ 22'00
minimum elong	5471 Jul 10 18:48	21° $\mathring{\text{O}}$ 31'13	0°14'12	max. Earth dist.	5477 Aug 05 20:48	17° $\mathring{\text{O}}$ 21'17
behind sun begin	5471 Jul 10 15:43	21° $\mathring{\text{O}}$ 30'47		morning rise	5477 Aug 22 17:50	18° $\mathring{\text{O}}$ 21'10
behind sun end	5471 Jul 10 21:54	21° $\mathring{\text{O}}$ 31'40		retrograde	5477 Nov 25 01:00	21° $\mathring{\text{O}}$ 37'55
max. Earth dist.	5471 Jul 10 23:07	21° $\mathring{\text{O}}$ 31'50	20.47650 AU	opposition	5478 Feb 08 10:17	19° $\mathring{\text{O}}$ 35'54
morning rise	5471 Jul 27 07:48	22° $\mathring{\text{O}}$ 28'50		min. Earth dist.	5478 Feb 08 15:19	19° $\mathring{\text{O}}$ 35'21
retrograde	5471 Oct 29 20:13	25° $\mathring{\text{O}}$ 41'49		direct	5478 Apr 24 00:47	17° $\mathring{\text{O}}$ 34'27
opposition	5472 Jan 14 07:12	23° $\mathring{\text{O}}$ 40'29	0°17'37	evening set	5478 Jul 25 06:49	20° $\mathring{\text{O}}$ 47'39
min. Earth dist.	5472 Jan 14 04:10	23° $\mathring{\text{O}}$ 40'48	18.44749 AU			
direct	5472 Mar 28 23:53	21° $\mathring{\text{O}}$ 40'57		conjunction	5478 Aug 10 21:59	21° $\mathring{\text{O}}$ 46'50
evening set	5472 Jun 27 22:22	24° $\mathring{\text{O}}$ 47'39		minimum elong	5478 Aug 10 21:59	21° $\mathring{\text{O}}$ 46'50
				max. Earth dist.	5478 Aug 10 14:10	21° $\mathring{\text{O}}$ 45'40
conjunction	5472 Jul 14 09:25	25° $\mathring{\text{O}}$ 45'07	0°17'33	morning rise	5478 Aug 27 14:38	22° $\mathring{\text{O}}$ 46'15
minimum elong	5472 Jul 14 09:25	25° $\mathring{\text{O}}$ 45'07	0°17'32	retrograde	5478 Nov 29 19:42	26° $\mathring{\text{O}}$ 03'35
max. Earth dist.	5472 Jul 14 11:56	25° $\mathring{\text{O}}$ 45'29	20.41861 AU	opposition	5479 Feb 13 00:49	24° $\mathring{\text{O}}$ 01'24
morning rise	5472 Jul 30 23:12	26° $\mathring{\text{O}}$ 42'59		min. Earth dist.	5479 Feb 13 07:30	24° $\mathring{\text{O}}$ 00'41
retrograde	5472 Nov 02 12:00	29° $\mathring{\text{O}}$ 56'36		direct	5479 Apr 28 16:00	21° $\mathring{\text{O}}$ 59'33
opposition	5473 Jan 17 18:17	27° $\mathring{\text{O}}$ 55'08	0°21'16	evening set	5479 Jul 30 03:22	25° $\mathring{\text{O}}$ 13'53
min. Earth dist.	5473 Jan 17 15:57	27° $\mathring{\text{O}}$ 55'22	18.38922 AU			
direct	5473 Apr 02 10:42	25° $\mathring{\text{O}}$ 55'19		conjunction	5479 Aug 15 19:11	26° $\mathring{\text{O}}$ 13'22
evening set	5473 Jul 02 13:17	29° $\mathring{\text{O}}$ 03'00		minimum elong	5479 Aug 15 19:11	26° $\mathring{\text{O}}$ 13'21
	5473 Jul 18 19:57	0° $\mathring{\text{O}}$		max. Earth dist.	5479 Aug 15 10:52	26° $\mathring{\text{O}}$ 12'07
conjunction	5473 Jul 19 01:14	0° $\mathring{\text{O}}$ 00'46	0°20'48	morning rise	5479 Sep 01 11:55	27° $\mathring{\text{O}}$ 13'01
minimum elong	5473 Jul 19 01:14	0° $\mathring{\text{O}}$ 00'46	0°20'45		5479 Oct 31 02:04	0° $\mathring{\text{O}}$ $\mathring{\text{P}}$
max. Earth dist.	5473 Jul 19 03:08	0° $\mathring{\text{O}}$ 01'03	20.35989 AU	retrograde	5479 Dec 04 14:49	0° $\mathring{\text{O}}$ $\mathring{\text{P}}$ 30'54
morning rise	5473 Aug 04 15:32	0° $\mathring{\text{O}}$ 58'54			5480 Jan 08 11:26	30° $\mathring{\text{R}}$ $\mathring{\text{O}}$
retrograde	5473 Nov 07 03:03	4° $\mathring{\text{O}}$ 13'08		opposition	5480 Feb 17 15:59	28° $\mathring{\text{O}}$ 28'34
opposition	5474 Jan 22 05:51	2° $\mathring{\text{O}}$ 11'34	0°24'49	min. Earth dist.	5480 Feb 17 23:41	28° $\mathring{\text{O}}$ 27'44
min. Earth dist.	5474 Jan 22 05:09	2° $\mathring{\text{O}}$ 11'39	18.33009 AU	direct	5480 May 02 07:24	26° $\mathring{\text{O}}$ 26'20
direct	5474 Apr 06 21:08	0° $\mathring{\text{O}}$ 11'28		evening set	5480 Aug 03 00:43	29° $\mathring{\text{O}}$ 41'48
evening set	5474 Jul 07 05:17	3° $\mathring{\text{O}}$ 20'13			5480 Aug 08 03:58	0° $\mathring{\text{O}}$ $\mathring{\text{P}}$
				conjunction	5480 Aug 19 16:50	0° $\mathring{\text{O}}$ $\mathring{\text{P}}$ 41'32
conjunction	5474 Jul 23 17:54	4° $\mathring{\text{O}}$ 18'15	0°23'57	minimum elong	5480 Aug 19 16:50	0° $\mathring{\text{O}}$ $\mathring{\text{P}}$ 41'32
minimum elong	5474 Jul 23 17:54	4° $\mathring{\text{O}}$ 18'15	0°23'56	max. Earth dist.	5480 Aug 19 05:52	0° $\mathring{\text{O}}$ $\mathring{\text{P}}$ 39'53
max. Earth dist.	5474 Jul 23 17:27	4° $\mathring{\text{O}}$ 18'12	20.30041 AU	morning rise	5480 Sep 05 09:56	1° $\mathring{\text{O}}$ $\mathring{\text{P}}$ 41'25
morning rise	5474 Aug 09 08:55	5° $\mathring{\text{O}}$ 16'39		retrograde	5480 Dec 08 10:27	4° $\mathring{\text{O}}$ $\mathring{\text{P}}$ 59'53
retrograde	5474 Nov 11 20:05	8° $\mathring{\text{O}}$ 31'32		opposition	5481 Feb 21 07:46	2° $\mathring{\text{O}}$ $\mathring{\text{P}}$ 57'22
opposition	5475 Jan 26 18:01	6° $\mathring{\text{O}}$ 29'52	0°28'16	min. Earth dist.	5481 Feb 21 17:06	2° $\mathring{\text{O}}$ $\mathring{\text{P}}$ 56'22
min. Earth dist.	5475 Jan 26 18:29	6° $\mathring{\text{O}}$ 29'50	18.27012 AU	direct	5481 May 07 00:11	0° $\mathring{\text{O}}$ $\mathring{\text{P}}$ 54'43
direct	5475 Apr 11 09:01	4° $\mathring{\text{O}}$ 29'28		evening set	5481 Aug 07 22:54	4° $\mathring{\text{O}}$ $\mathring{\text{P}}$ 11'20
evening set	5475 Jul 11 22:09	7° $\mathring{\text{O}}$ 39'19				
				conjunction	5481 Aug 24 15:35	5° $\mathring{\text{O}}$ $\mathring{\text{P}}$ 11'20
conjunction	5475 Jul 28 11:34	8° $\mathring{\text{O}}$ 37'39	0°27'00	minimum elong	5481 Aug 24 15:34	5° $\mathring{\text{O}}$ $\mathring{\text{P}}$ 11'20
minimum elong	5475 Jul 28 11:34	8° $\mathring{\text{O}}$ 37'39	0°26'59	max. Earth dist.	5481 Aug 24 04:23	5° $\mathring{\text{O}}$ $\mathring{\text{P}}$ 09'39
max. Earth dist.	5475 Jul 28 10:20	8° $\mathring{\text{O}}$ 37'28	20.23971 AU	morning rise	5481 Sep 10 08:37	6° $\mathring{\text{O}}$ $\mathring{\text{P}}$ 11'27
morning rise	5475 Aug 14 02:53	9° $\mathring{\text{O}}$ 36'18		retrograde	5481 Dec 13 06:22	9° $\mathring{\text{O}}$ $\mathring{\text{P}}$ 30'26
retrograde	5475 Nov 16 12:51	12° $\mathring{\text{O}}$ 51'49		opposition	5482 Feb 25 23:57	7° $\mathring{\text{O}}$ $\mathring{\text{P}}$ 27'46

min. Earth dist.	5482 Feb 26 09:55	7° \mathring{M} 26'42	17.82986 AU	conjunction	5488 Sep 26 23:43	7° \mathring{A} 24'29	0°47'46
direct	5482 May 11 17:19	5° \mathring{M} 24'44		minimum elong	5488 Sep 26 23:44	7° \mathring{A} 24'29	0°47'46
evening set	5482 Aug 12 22:02	8° \mathring{M} 42'30		max. Earth dist.	5488 Sep 26 05:30	7° \mathring{A} 21'40	19.51060 AU
				morning rise	5488 Oct 13 15:19	8° \mathring{A} 25'45	
conjunction	5482 Aug 29 14:50	9° \mathring{M} 42'45	0°43'31	retrograde	5489 Jan 14 13:47	11° \mathring{A} 47'46	
minimum elong	5482 Aug 29 14:50	9° \mathring{M} 42'45	0°43'30	opposition	5489 Mar 29 12:01	9° \mathring{A} 44'52	0°53'04
max. Earth dist.	5482 Aug 29 01:14	9° \mathring{M} 40'41	19.79990 AU	min. Earth dist.	5489 Mar 30 04:06	9° \mathring{A} 43'07	17.49317 AU
morning rise	5482 Sep 15 08:02	10° \mathring{M} 43'05		direct	5489 Jun 12 17:07	7° \mathring{A} 39'57	
retrograde	5482 Dec 18 02:29	14° \mathring{M} 02'35		evening set	5489 Sep 15 10:23	11° \mathring{A} 05'03	
opposition	5483 Mar 02 16:57	11° \mathring{M} 59'47	0°49'14	max. Earth dist.	5489 Oct 01 08:01	12° \mathring{A} 03'39	19.47603 AU
min. Earth dist.	5483 Mar 03 04:30	11° \mathring{M} 58'31	17.77078 AU				
direct	5483 May 16 11:23	9° \mathring{M} 56'22		conjunction	5489 Oct 02 03:10	12° \mathring{A} 06'37	0°47'24
evening set	5483 Aug 17 21:33	13° \mathring{M} 15'15		minimum elong	5489 Oct 02 03:10	12° \mathring{A} 06'37	0°47'25
				morning rise	5489 Oct 18 18:18	13° \mathring{A} 07'58	
conjunction	5483 Sep 03 14:43	14° \mathring{M} 15'45	0°44'57	retrograde	5490 Jan 19 14:50	16° \mathring{A} 30'14	
minimum elong	5483 Sep 03 14:43	14° \mathring{M} 15'45	0°44'56	opposition	5490 Apr 03 09:16	14° \mathring{A} 27'22	0°52'30
max. Earth dist.	5483 Sep 03 01:10	14° \mathring{M} 13'42	19.74217 AU	min. Earth dist.	5490 Apr 04 01:06	14° \mathring{A} 25'39	17.46036 AU
morning rise	5483 Sep 20 07:43	15° \mathring{M} 16'16		direct	5490 Jun 17 17:30	12° \mathring{A} 22'15	
retrograde	5483 Dec 22 23:21	18° \mathring{M} 36'16		evening set	5490 Sep 20 14:29	15° \mathring{A} 48'11	
opposition	5484 Mar 06 10:29	16° \mathring{M} 33'22	0°50'42	max. Earth dist.	5490 Oct 06 11:23	16° \mathring{A} 46'48	19.44492 AU
min. Earth dist.	5484 Mar 06 22:06	16° \mathring{M} 32'06	17.71466 AU				
direct	5484 May 20 06:49	14° \mathring{M} 29'37		conjunction	5490 Oct 07 06:58	16° \mathring{A} 49'51	0°46'43
evening set	5484 Aug 21 22:04	17° \mathring{M} 49'38		minimum elong	5490 Oct 07 06:58	16° \mathring{A} 49'51	0°46'43
				morning rise	5490 Oct 23 21:24	17° \mathring{A} 51'16	
conjunction	5484 Sep 07 15:15	18° \mathring{M} 50'21	0°46'07	retrograde	5491 Jan 24 14:01	21° \mathring{A} 13'42	
minimum elong	5484 Sep 07 15:15	18° \mathring{M} 50'21	0°46'07	opposition	5491 Apr 08 07:23	19° \mathring{A} 10'53	0°51'34
max. Earth dist.	5484 Sep 06 23:47	18° \mathring{M} 47'59	19.68779 AU	min. Earth dist.	5491 Apr 09 00:45	19° \mathring{A} 08'59	17.43114 AU
morning rise	5484 Sep 24 08:13	19° \mathring{M} 51'03		direct	5491 Jun 22 16:35	17° \mathring{A} 05'34	
retrograde	5484 Dec 26 19:48	23° \mathring{M} 11'31		evening set	5491 Sep 25 18:41	20° \mathring{A} 32'11	
opposition	5485 Mar 11 04:41	21° \mathring{M} 08'32	0°51'51				
min. Earth dist.	5485 Mar 11 17:51	21° \mathring{M} 07'06	17.66230 AU	conjunction	5491 Oct 12 10:41	21° \mathring{A} 33'56	0°45'43
direct	5485 May 25 02:12	19° \mathring{M} 04'29		minimum elong	5491 Oct 12 10:41	21° \mathring{A} 33'56	0°45'44
evening set	5485 Aug 26 23:11	22° \mathring{M} 25'36		max. Earth dist.	5491 Oct 11 14:02	21° \mathring{A} 30'43	19.41762 AU
				morning rise	5491 Oct 29 00:35	22° \mathring{A} 35'23	
conjunction	5485 Sep 12 16:35	23° \mathring{M} 26'32	0°46'59	retrograde	5492 Jan 29 14:54	25° \mathring{A} 57'57	
minimum elong	5485 Sep 12 16:35	23° \mathring{M} 26'32	0°46'58	opposition	5492 Apr 12 05:44	23° \mathring{A} 55'08	0°50'17
max. Earth dist.	5485 Sep 12 01:04	23° \mathring{M} 24'10	19.63740 AU	min. Earth dist.	5492 Apr 12 22:40	23° \mathring{A} 53'17	17.40576 AU
morning rise	5485 Sep 29 09:18	24° \mathring{M} 27'24		direct	5492 Jun 26 17:55	21° \mathring{A} 49'38	
retrograde	5485 Dec 31 18:04	27° \mathring{M} 48'18		evening set	5492 Sep 29 23:09	25° \mathring{A} 16'52	
opposition	5486 Mar 15 23:29	25° \mathring{M} 45'19	0°52'40				
min. Earth dist.	5486 Mar 16 12:28	25° \mathring{M} 43'54	17.61389 AU	conjunction	5492 Oct 16 14:47	26° \mathring{A} 18'40	0°44'24
direct	5486 May 29 23:40	23° \mathring{M} 41'00		minimum elong	5492 Oct 16 14:47	26° \mathring{A} 18'40	0°44'25
evening set	5486 Sep 01 01:07	27° \mathring{M} 03'12		max. Earth dist.	5492 Oct 15 18:27	26° \mathring{A} 15'30	19.39419 AU
				morning rise	5492 Nov 02 03:51	27° \mathring{A} 20'08	
conjunction	5486 Sep 17 18:24	28° \mathring{M} 04'19	0°47'33		5492 Dec 25 00:22	0° \mathring{M}	
minimum elong	5486 Sep 17 18:24	28° \mathring{M} 04'19	0°47'34	retrograde	5493 Feb 02 13:59	0° \mathring{M} 42'44	
max. Earth dist.	5486 Sep 17 01:27	28° \mathring{M} 01'43	19.59101 AU		5493 Mar 14 22:18	30° \mathring{R} \mathring{A}	
morning rise	5486 Oct 04 10:49	29° \mathring{M} 05'20		opposition	5493 Apr 17 04:33	28° \mathring{A} 39'56	0°48'39
	5486 Oct 20 04:09	0° \mathring{A}		min. Earth dist.	5493 Apr 17 22:40	28° \mathring{A} 37'57	17.38444 AU
retrograde	5487 Jan 05 15:23	2° \mathring{A} 26'39		direct	5493 Jul 01 18:28	26° \mathring{A} 34'15	
opposition	5487 Mar 20 19:02	0° \mathring{A} 23'41	0°53'09		5493 Oct 04 14:33	0° \mathring{M}	
min. Earth dist.	5487 Mar 21 09:38	0° \mathring{A} 22'05	17.56969 AU	evening set	5493 Oct 05 03:51	0° \mathring{M} 02'01	
	5487 Mar 29 21:17	30° \mathring{R} \mathring{M}					
direct	5487 Jun 03 20:18	28° \mathring{M} 19'09		conjunction	5493 Oct 21 18:47	1° \mathring{M} 03'50	0°42'47
	5487 Aug 06 06:46	0° \mathring{A}		minimum elong	5493 Oct 21 18:47	1° \mathring{M} 03'50	0°42'47
evening set	5487 Sep 06 03:35	1° \mathring{A} 42'23		max. Earth dist.	5493 Oct 20 21:17	1° \mathring{M} 00'28	19.37516 AU
				morning rise	5493 Nov 07 07:15	2° \mathring{M} 05'18	
conjunction	5487 Sep 22 20:50	2° \mathring{A} 43'40	0°47'49	retrograde	5494 Feb 07 14:14	5° \mathring{M} 27'53	
minimum elong	5487 Sep 22 20:50	2° \mathring{A} 43'40	0°47'49	opposition	5494 Apr 22 03:40	3° \mathring{M} 25'05	0°46'40
max. Earth dist.	5487 Sep 22 03:34	2° \mathring{A} 41'00	19.54890 AU	min. Earth dist.	5494 Apr 22 21:15	3° \mathring{M} 23'09	17.36772 AU
morning rise	5487 Oct 09 12:53	3° \mathring{A} 44'49		direct	5494 Jul 06 20:50	1° \mathring{M} 19'15	
retrograde	5488 Jan 10 15:25	7° \mathring{A} 06'30		evening set	5494 Oct 10 08:15	4° \mathring{M} 47'25	
opposition	5488 Mar 24 15:06	5° \mathring{A} 03'34	0°53'17				
min. Earth dist.	5488 Mar 25 05:27	5° \mathring{A} 02'00	17.52955 AU	conjunction	5494 Oct 26 22:41	5° \mathring{M} 49'14	0°40'51
direct	5488 Jun 07 19:27	2° \mathring{A} 58'51		minimum elong	5494 Oct 26 22:41	5° \mathring{M} 49'14	0°40'53
evening set	5488 Sep 10 06:40	6° \mathring{A} 23'03		max. Earth dist.	5494 Oct 26 02:18	5° \mathring{M} 46'03	19.36080 AU
				morning rise	5494 Nov 12 10:08	6° \mathring{M} 50'39	

retrograde	5495 Feb 12 13:18	10° \mathbb{M} 13'10	direct	5501 Aug 10 16:35	4° \mathbb{A} 32'25	
opposition	5495 Apr 27 03:13	8° \mathbb{M} 10'23 0°44'22	evening set	5501 Nov 14 08:16	8° \mathbb{A} 00'49	
min. Earth dist.	5495 Apr 27 21:18	8° \mathbb{M} 08'24 17.35586 AU				
direct	5495 Jul 11 23:04	6° \mathbb{M} 04'25	conjunction	5501 Nov 30 16:36	9° \mathbb{A} 01'52 0°20'34	
evening set	5495 Oct 15 12:42	9° \mathbb{M} 32'54	minimum elong	5501 Nov 30 16:36	9° \mathbb{A} 01'52 0°20'35	
max. Earth dist.	5495 Oct 31 05:01	10° \mathbb{M} 31'20 19.35169 AU	max. Earth dist.	5501 Nov 30 00:47	8° \mathbb{A} 59'23 19.42237 AU	
			morning rise	5501 Dec 16 21:32	10° \mathbb{A} 02'25	
conjunction	5495 Nov 01 02:16	10° \mathbb{M} 34'40 0°38'39	retrograde	5502 Mar 18 06:33	13° \mathbb{A} 23'11	
minimum elong	5495 Nov 01 02:16	10° \mathbb{M} 34'40 0°38'39	opposition	5502 May 31 04:07	11° \mathbb{A} 21'21 0°20'57	
morning rise	5495 Nov 17 13:03	11° \mathbb{M} 36'02	min. Earth dist.	5502 May 31 17:43	11° \mathbb{A} 19'53 17.43748 AU	
retrograde	5496 Feb 17 12:35	14° \mathbb{M} 58'25	direct	5502 Aug 15 18:02	9° \mathbb{A} 15'49	
opposition	5496 May 01 02:49	12° \mathbb{M} 55'39 0°41'46	evening set	5502 Nov 19 09:49	12° \mathbb{A} 43'52	
min. Earth dist.	5496 May 01 20:15	12° \mathbb{M} 53'45 17.34957 AU				
direct	5496 Jul 16 01:46	10° \mathbb{M} 49'34	conjunction	5502 Dec 05 17:11	13° \mathbb{A} 44'43 0°16'58	
evening set	5496 Oct 19 16:43	14° \mathbb{M} 18'16	minimum elong	5502 Dec 05 17:11	13° \mathbb{A} 44'43 0°16'59	
	5496 Oct 30 22:13	15° \mathbb{M}	max. Earth dist.	5502 Dec 05 02:45	13° \mathbb{A} 42'28 19.45347 AU	
max. Earth dist.	5496 Nov 04 10:09	15° \mathbb{M} 16'55 19.34822 AU	morning rise	5502 Dec 21 21:05	14° \mathbb{A} 45'05	
			retrograde	5503 Mar 23 06:01	18° \mathbb{A} 05'26	
conjunction	5496 Nov 05 05:44	15° \mathbb{M} 19'59 0°36'10	opposition	5503 Jun 05 04:29	16° \mathbb{A} 03'49 0°16'51	
minimum elong	5496 Nov 05 05:44	15° \mathbb{M} 19'59 0°36'12	min. Earth dist.	5503 Jun 05 16:26	16° \mathbb{A} 02'32 17.47057 AU	
morning rise	5496 Nov 21 15:29	16° \mathbb{M} 21'16	direct	5503 Aug 20 20:53	13° \mathbb{A} 58'31	
retrograde	5497 Feb 21 11:56	19° \mathbb{M} 43'28	evening set	5503 Nov 24 10:55	17° \mathbb{A} 26'07	
opposition	5497 May 06 02:46	17° \mathbb{M} 40'46 0°38'52				
min. Earth dist.	5497 May 06 19:59	17° \mathbb{M} 38'53 17.34899 AU	conjunction	5503 Dec 10 17:15	18° \mathbb{A} 26'44 0°13'15	
direct	5497 Jul 21 05:01	15° \mathbb{M} 34'39	minimum elong	5503 Dec 10 17:15	18° \mathbb{A} 26'45 0°13'16	
evening set	5497 Oct 24 20:43	19° \mathbb{M} 03'27	behind sun begin	5503 Dec 10 13:23	18° \mathbb{A} 26'09	
			behind sun end	5503 Dec 10 21:07	18° \mathbb{A} 27'20	
conjunction	5497 Nov 10 08:43	20° \mathbb{M} 05'04 0°33'27	max. Earth dist.	5503 Dec 10 03:43	18° \mathbb{A} 24'38 19.48854 AU	
minimum elong	5497 Nov 10 08:43	20° \mathbb{M} 05'04 0°33'28	morning rise	5503 Dec 26 20:08	19° \mathbb{A} 26'53	
max. Earth dist.	5497 Nov 09 12:42	20° \mathbb{M} 01'56 19.35074 AU	retrograde	5504 Mar 27 03:32	22° \mathbb{A} 46'47	
morning rise	5497 Nov 26 17:38	21° \mathbb{M} 06'15	opposition	5504 Jun 09 04:41	20° \mathbb{A} 45'22 0°12'40	
retrograde	5498 Feb 26 10:35	24° \mathbb{M} 28'14	min. Earth dist.	5504 Jun 09 16:42	20° \mathbb{A} 44'05 17.50754 AU	
opposition	5498 May 11 02:50	22° \mathbb{M} 25'37 0°35'43	direct	5504 Aug 24 21:34	18° \mathbb{A} 40'17	
min. Earth dist.	5498 May 11 19:20	22° \mathbb{M} 23'49 17.35470 AU	evening set	5504 Nov 28 11:21	22° \mathbb{A} 07'20	
direct	5498 Jul 26 07:48	20° \mathbb{M} 19'30				
evening set	5498 Oct 30 00:11	23° \mathbb{M} 48'21	conjunction	5504 Dec 14 16:38	23° \mathbb{A} 07'43 0°09'29	
			minimum elong	5504 Dec 14 16:38	23° \mathbb{A} 07'43 0°09'31	
conjunction	5498 Nov 15 11:27	24° \mathbb{M} 49'52 0°30'30	behind sun begin	5504 Dec 14 11:06	23° \mathbb{A} 06'53	
minimum elong	5498 Nov 15 11:27	24° \mathbb{M} 49'52 0°30'31	behind sun end	5504 Dec 14 22:11	23° \mathbb{A} 08'34	
max. Earth dist.	5498 Nov 14 17:22	24° \mathbb{M} 47'02 19.35966 AU	max. Earth dist.	5504 Dec 14 03:58	23° \mathbb{A} 05'45 19.52728 AU	
morning rise	5498 Dec 01 19:16	25° \mathbb{M} 50'54	morning rise	5504 Dec 30 18:35	24° \mathbb{A} 07'38	
retrograde	5499 Mar 03 10:02	29° \mathbb{M} 12'38	retrograde	5505 Apr 01 02:20	27° \mathbb{A} 27'01	
opposition	5499 May 16 03:05	27° \mathbb{M} 10'10 0°32'18	opposition	5505 Jun 14 04:42	25° \mathbb{A} 25'48 0°08'25	
min. Earth dist.	5499 May 16 18:38	27° \mathbb{M} 08'29 17.36670 AU	min. Earth dist.	5505 Jun 14 14:52	25° \mathbb{A} 24'43 17.54777 AU	
direct	5499 Jul 31 11:18	25° \mathbb{M} 04'09	direct	5505 Aug 30 00:30	23° \mathbb{A} 20'56	
evening set	5499 Nov 04 03:15	28° \mathbb{M} 32'55	evening set	5505 Dec 03 10:58	26° \mathbb{A} 47'20	
conjunction	5499 Nov 20 13:30	29° \mathbb{M} 34'18 0°27'22	conjunction	5505 Dec 19 15:14	27° \mathbb{A} 47'28 0°05'40	
minimum elong	5499 Nov 20 13:30	29° \mathbb{M} 34'18 0°27'23	minimum elong	5505 Dec 19 15:14	27° \mathbb{A} 47'28 0°05'40	
max. Earth dist.	5499 Nov 19 19:30	29° \mathbb{M} 31'29 19.37486 AU	behind sun begin	5505 Dec 19 08:51	27° \mathbb{A} 46'30	
	5499 Nov 27 09:24	0° \mathbb{A}	behind sun end	5505 Dec 19 21:37	27° \mathbb{A} 48'26	
morning rise	5499 Dec 06 20:28	0° \mathbb{A} 35'12	max. Earth dist.	5505 Dec 19 03:58	27° \mathbb{A} 45'43 19.56901 AU	
retrograde	5500 Mar 08 08:30	3° \mathbb{A} 56'39	morning rise	5506 Jan 04 16:06	28° \mathbb{A} 47'07	
opposition	5500 May 21 03:24	1° \mathbb{A} 54'22 0°28'42		5506 Jan 25 15:19	0° \mathbb{B}	
min. Earth dist.	5500 May 21 18:26	1° \mathbb{A} 52'45 17.38494 AU	retrograde	5506 Apr 05 22:07	2° \mathbb{B} 05'59	
	5500 Jul 15 11:56	30° $\mathbb{R}\mathbb{M}$	opposition	5506 Jun 19 04:38	0° \mathbb{B} 04'56 0°04'07	
direct	5500 Aug 05 13:27	29° \mathbb{M} 48'28	min. Earth dist.	5506 Jun 19 14:48	0° \mathbb{B} 03'51 17.59101 AU	
	5500 Aug 26 09:48	0° \mathbb{A}		5506 Jun 21 02:56	30° $\mathbb{R}\mathbb{A}$	
evening set	5500 Nov 09 05:55	3° \mathbb{A} 17'06	direct	5506 Sep 04 01:16	28° \mathbb{A} 00'18	
				5506 Nov 13 06:50	0° \mathbb{B}	
conjunction	5500 Nov 25 15:20	4° \mathbb{A} 18'20 0°24'02	evening set	5506 Dec 08 09:46	1° \mathbb{B} 25'57	
minimum elong	5500 Nov 25 15:20	4° \mathbb{A} 18'20 0°24'03				
max. Earth dist.	5500 Nov 24 23:04	4° \mathbb{A} 15'47 19.39603 AU	conjunction	5506 Dec 24 12:57	2° \mathbb{B} 25'49 0°01'47	
morning rise	5500 Dec 11 21:15	5° \mathbb{A} 19'04	minimum elong	5506 Dec 24 12:57	2° \mathbb{B} 25'49 0°01'49	
retrograde	5501 Mar 13 08:05	8° \mathbb{A} 40'11	behind sun begin	5506 Dec 24 06:19	2° \mathbb{B} 24'48	
opposition	5501 May 26 03:38	6° \mathbb{A} 38'08 0°24'54	behind sun end	5506 Dec 24 19:35	2° \mathbb{B} 26'49	
min. Earth dist.	5501 May 26 17:25	6° \mathbb{A} 36'39 17.40866 AU	max. Earth dist.	5506 Dec 24 02:20	2° \mathbb{B} 24'10 19.61374 AU	

morning rise	5507 Jan 09 13:00	3° $\overline{3}$ 25'12	minimum elong	5513 Jan 20 03:58	29° $\overline{3}$ 39'14	0°20'22
retrograde	5507 Apr 10 19:24	6° $\overline{3}$ 43'30	max. Earth dist.	5513 Jan 20 02:36	29° $\overline{3}$ 39'02	19.94020 AU
desc. node	5507 Jun 08 22:03	5° $\overline{3}$ 20'43		5513 Jan 25 19:21	0° \approx	
opposition	5507 Jun 24 03:59	4° $\overline{3}$ 42'34 -0°00'11	morning rise	5513 Feb 04 23:15	0° \approx 36'58	
min. Earth dist.	5507 Jun 24 12:02	4° $\overline{3}$ 41'43 17.63704 AU	retrograde	5513 May 07 06:05	3° \approx 51'31	
direct	5507 Sep 09 03:49	2° $\overline{3}$ 38'11	opposition	5513 Jul 21 14:59	1° \approx 51'24 -0°24'27	
evening set	5507 Dec 13 07:32	6° $\overline{3}$ 03'00	min. Earth dist.	5513 Jul 21 14:21	1° \approx 51'28 17.97174 AU	
				5513 Sep 15 15:55	30° \overline{R} $\overline{3}$	
conjunction	5507 Dec 29 09:50	7° $\overline{3}$ 02'34 -0°02'11	direct	5513 Oct 06 21:45	29° $\overline{3}$ 48'41	
minimum elong	5507 Dec 29 09:50	7° $\overline{3}$ 02'34 0°02'09		5513 Oct 27 20:13	0° \approx	
behind sun begin	5507 Dec 29 03:12	7° $\overline{3}$ 01'34	evening set	5514 Jan 08 22:33	3° \approx 07'27	
behind sun end	5507 Dec 29 16:28	7° $\overline{3}$ 03'35				
max. Earth dist.	5507 Dec 29 01:08	7° $\overline{3}$ 01'15 19.66111 AU	conjunction	5514 Jan 24 19:20	4° \approx 05'13 -0°23'41	
morning rise	5508 Jan 14 08:53	8° $\overline{3}$ 01'42	minimum elong	5514 Jan 24 19:20	4° \approx 05'13 0°23'39	
retrograde	5508 Apr 14 13:35	11° $\overline{3}$ 19'23	max. Earth dist.	5514 Jan 24 20:50	4° \approx 05'26 20.00402 AU	
opposition	5508 Jun 28 03:08	9° $\overline{3}$ 18'35 -0°04'27	morning rise	5514 Feb 09 13:49	5° \approx 02'40	
min. Earth dist.	5508 Jun 28 11:02	9° $\overline{3}$ 17'45 17.68571 AU	retrograde	5514 May 11 21:39	8° \approx 16'37	
direct	5508 Sep 13 04:06	7° $\overline{3}$ 14'25	opposition	5514 Jul 26 11:07	6° \approx 16'42 -0°28'01	
evening set	5508 Dec 17 04:31	10° $\overline{3}$ 38'20	min. Earth dist.	5514 Jul 26 09:25	6° \approx 16'53 18.03637 AU	
			direct	5514 Oct 11 17:53	4° \approx 14'25	
conjunction	5509 Jan 02 05:42	11° $\overline{3}$ 37'37 -0°06'00	evening set	5515 Jan 13 13:59	7° \approx 32'06	
minimum elong	5509 Jan 02 05:42	11° $\overline{3}$ 37'36 0°05'59				
behind sun begin	5509 Jan 01 23:23	11° $\overline{3}$ 36'39	conjunction	5515 Jan 29 09:50	8° \approx 29'33 -0°26'48	
behind sun end	5509 Jan 02 12:00	11° $\overline{3}$ 38'34	minimum elong	5515 Jan 29 09:49	8° \approx 29'33 0°26'47	
max. Earth dist.	5509 Jan 01 21:35	11° $\overline{3}$ 36'22 19.71118 AU	max. Earth dist.	5515 Jan 29 11:51	8° \approx 29'51 20.06938 AU	
morning rise	5509 Jan 18 04:01	12° $\overline{3}$ 36'27	morning rise	5515 Feb 14 03:56	9° \approx 26'44	
retrograde	5509 Apr 19 09:16	15° $\overline{3}$ 53'31	retrograde	5515 May 16 14:06	12° \approx 40'07	
opposition	5509 Jul 03 01:36	13° $\overline{3}$ 52'49 -0°08'40	opposition	5515 Jul 31 06:28	10° \approx 40'25 -0°31'24	
min. Earth dist.	5509 Jul 03 07:13	13° $\overline{3}$ 52'14 17.73709 AU	min. Earth dist.	5515 Jul 31 02:56	10° \approx 40'46 18.10228 AU	
direct	5509 Sep 18 05:45	11° $\overline{3}$ 48'53	direct	5515 Oct 16 12:20	8° \approx 38'31	
evening set	5509 Dec 22 00:25	15° $\overline{3}$ 11'49	evening set	5516 Jan 18 04:24	11° \approx 55'08	
conjunction	5510 Jan 07 00:44	16° $\overline{3}$ 10'48 -0°09'44	conjunction	5516 Feb 02 23:43	12° \approx 52'17 -0°29'46	
minimum elong	5510 Jan 07 00:44	16° $\overline{3}$ 10'48 0°09'43	minimum elong	5516 Feb 02 23:42	12° \approx 52'17 0°29'46	
behind sun begin	5510 Jan 06 19:17	16° $\overline{3}$ 09'59	max. Earth dist.	5516 Feb 03 04:17	12° \approx 52'59 20.13549 AU	
behind sun end	5510 Jan 07 06:12	16° $\overline{3}$ 11'38	morning rise	5516 Feb 18 17:09	13° \approx 49'13	
max. Earth dist.	5510 Jan 06 19:10	16° $\overline{3}$ 09'58 19.76397 AU		5516 Mar 10 16:08	15° \approx	
morning rise	5510 Jan 22 22:04	17° $\overline{3}$ 09'22	retrograde	5516 May 20 04:56	17° \approx 02'01	
retrograde	5510 Apr 24 01:57	20° $\overline{3}$ 25'48	opposition	5516 Aug 04 01:27	15° \approx 02'31 -0°34'35	
opposition	5510 Jul 07 23:53	18° $\overline{3}$ 25'13 -0°12'48	min. Earth dist.	5516 Aug 03 20:52	15° \approx 02'59 18.16840 AU	
min. Earth dist.	5510 Jul 08 04:54	18° $\overline{3}$ 24'41 17.79136 AU		5516 Aug 05 01:58	15° \overline{R} \approx	
direct	5510 Sep 23 04:36	16° $\overline{3}$ 21'31	direct	5516 Oct 20 07:29	13° \approx 01'03	
evening set	5510 Dec 26 19:19	19° $\overline{3}$ 43'26		5516 Dec 29 20:50	15° \approx	
			evening set	5517 Jan 21 18:11	16° \approx 16'34	
conjunction	5511 Jan 11 18:33	20° $\overline{3}$ 42'06 -0°13'24				
minimum elong	5511 Jan 11 18:33	20° $\overline{3}$ 42'06 0°13'24	conjunction	5517 Feb 06 12:38	17° \approx 13'26 -0°32'33	
behind sun begin	5511 Jan 11 14:44	20° $\overline{3}$ 41'32	minimum elong	5517 Feb 06 12:38	17° \approx 13'26 0°32'32	
behind sun end	5511 Jan 11 22:22	20° $\overline{3}$ 42'41	max. Earth dist.	5517 Feb 06 17:30	17° \approx 14'10 20.20150 AU	
max. Earth dist.	5511 Jan 11 13:45	20° $\overline{3}$ 41'23 19.81980 AU	morning rise	5517 Feb 22 05:46	18° \approx 10'06	
morning rise	5511 Jan 27 15:16	21° $\overline{3}$ 40'24	retrograde	5517 May 24 20:19	21° \approx 22'23	
retrograde	5511 Apr 28 20:38	24° $\overline{3}$ 56'11	opposition	5517 Aug 08 19:52	19° \approx 23'03 -0°37'32	
opposition	5511 Jul 12 21:26	22° $\overline{3}$ 55'43 -0°16'50	min. Earth dist.	5517 Aug 08 13:52	19° \approx 23'40 18.23425 AU	
min. Earth dist.	5511 Jul 12 23:58	22° $\overline{3}$ 55'27 17.84872 AU	direct	5517 Oct 25 00:28	17° \approx 21'59	
direct	5511 Sep 28 03:51	20° $\overline{3}$ 52'19	evening set	5518 Jan 26 07:04	20° \approx 36'25	
evening set	5511 Dec 31 13:17	24° $\overline{3}$ 13'12				
			conjunction	5518 Feb 11 01:03	21° \approx 33'00 -0°35'07	
conjunction	5512 Jan 16 11:46	25° $\overline{3}$ 11'34 -0°16'57	minimum elong	5518 Feb 11 01:03	21° \approx 33'00 0°35'07	
minimum elong	5512 Jan 16 11:46	25° $\overline{3}$ 11'34 0°16'56	max. Earth dist.	5518 Feb 11 08:13	21° \approx 34'05 20.26684 AU	
max. Earth dist.	5512 Jan 16 09:46	25° $\overline{3}$ 11'16 19.87860 AU	morning rise	5518 Feb 26 17:39	22° \approx 29'25	
morning rise	5512 Feb 01 07:34	26° $\overline{3}$ 09'34	retrograde	5518 May 29 10:17	25° \approx 41'09	
retrograde	5512 May 02 12:28	29° $\overline{3}$ 24'43	opposition	5518 Aug 13 13:44	23° \approx 42'00 -0°40'17	
opposition	5512 Jul 16 18:27	27° $\overline{3}$ 24'25 -0°20'43	min. Earth dist.	5518 Aug 13 06:36	23° \approx 42'44 18.29896 AU	
min. Earth dist.	5512 Jul 16 20:07	27° $\overline{3}$ 24'15 17.90892 AU	direct	5518 Oct 29 18:19	21° \approx 41'20	
direct	5512 Oct 02 01:04	25° $\overline{3}$ 21'21	evening set	5519 Jan 30 19:13	24° \approx 54'39	
evening set	5513 Jan 04 06:31	28° $\overline{3}$ 41'11				
			conjunction	5519 Feb 15 12:32	25° \approx 50'58 -0°37'29	
conjunction	5513 Jan 20 03:58	29° $\overline{3}$ 39'14 -0°20'23	minimum elong	5519 Feb 15 12:32	25° \approx 50'58 0°37'29	

max. Earth dist.	5519 Feb 15 19:48	25° \approx 52'03	20.33077 AU	evening set	5526 Feb 28 10:54	24° \approx 16'13	
morning rise	5519 Mar 03 04:59	26° \approx 47'09					
retrograde	5519 Jun 03 00:41	29° \approx 58'22		conjunction	5526 Mar 16 02:27	25° \approx 11'00	-0°47'29
opposition	5519 Aug 18 06:59	27° \approx 59'20	-0°42'46	minimum elong	5526 Mar 16 02:27	25° \approx 11'00	0°47'29
min. Earth dist.	5519 Aug 17 22:55	28° \approx 00'09	18.36207 AU	max. Earth dist.	5526 Mar 16 18:03	25° \approx 13'17	20.71844 AU
direct	5519 Nov 03 10:06	25° \approx 59'01		morning rise	5526 Mar 31 18:30	26° \approx 05'52	
evening set	5520 Feb 04 06:34	29° \approx 11'15		retrograde	5526 Jul 02 07:57	29° \approx 13'52	
	5520 Feb 17 22:48	0° \approx		opposition	5526 Sep 17 13:16	27° \approx 15'08	-0°52'49
				min. Earth dist.	5526 Sep 16 21:29	27° \approx 16'43	18.74263 AU
conjunction	5520 Feb 19 23:34	0° \approx 07'19	-0°39'38	direct	5526 Dec 03 10:57	25° \approx 16'48	
minimum elong	5520 Feb 19 23:34	0° \approx 07'19	0°39'37	evening set	5527 Mar 04 17:29	28° \approx 22'00	
max. Earth dist.	5520 Feb 20 08:44	0° \approx 08'41	20.39275 AU				
morning rise	5520 Mar 06 15:36	1° \approx 03'16		conjunction	5527 Mar 20 08:57	29° \approx 16'37	-0°47'56
retrograde	5520 Jun 06 13:22	4° \approx 13'57		minimum elong	5527 Mar 20 08:57	29° \approx 16'37	0°47'56
opposition	5520 Aug 21 23:28	2° \approx 15'02	-0°45'01	max. Earth dist.	5527 Mar 21 00:52	29° \approx 18'57	20.76579 AU
min. Earth dist.	5520 Aug 21 14:13	2° \approx 15'59	18.42285 AU		5527 Apr 01 18:15	0° \approx	
direct	5520 Nov 07 02:49	0° \approx 15'04		morning rise	5527 Apr 05 01:22	0° \approx 11'22	
evening set	5521 Feb 07 17:18	3° \approx 26'12		retrograde	5527 Jul 06 16:25	3° \approx 19'04	
				min. Earth dist.	5527 Sep 21 09:44	1° \approx 21'58	18.78886 AU
conjunction	5521 Feb 23 09:44	4° \approx 22'01	-0°41'33	opposition	5527 Sep 22 01:35	1° \approx 20'23	-0°53'10
minimum elong	5521 Feb 23 09:44	4° \approx 22'01	0°41'33		5527 Oct 28 19:00	30° \approx	
max. Earth dist.	5521 Feb 23 18:57	4° \approx 23'23	20.45236 AU	direct	5527 Dec 07 20:16	29° \approx 22'20	
morning rise	5521 Mar 11 01:44	5° \approx 17'45			5528 Jan 15 14:36	0° \approx	
retrograde	5521 Jun 11 02:31	8° \approx 27'56		evening set	5528 Mar 07 23:34	2° \approx 26'44	
opposition	5521 Aug 26 15:31	6° \approx 29'04	-0°47'00				
min. Earth dist.	5521 Aug 26 05:35	6° \approx 30'05	18.48137 AU	conjunction	5528 Mar 23 15:12	3° \approx 21'12	-0°48'08
direct	5521 Nov 11 17:21	4° \approx 29'23		minimum elong	5528 Mar 23 15:12	3° \approx 21'12	0°48'09
evening set	5522 Feb 12 02:54	7° \approx 39'26		max. Earth dist.	5528 Mar 24 08:36	3° \approx 23'45	20.81067 AU
				morning rise	5528 Apr 08 07:47	4° \approx 15'50	
conjunction	5522 Feb 27 19:09	8° \approx 35'01	-0°43'14	retrograde	5528 Jul 10 02:34	7° \approx 23'15	
minimum elong	5522 Feb 27 19:09	8° \approx 35'01	0°43'13	opposition	5528 Sep 25 13:13	5° \approx 24'39	-0°53'15
max. Earth dist.	5522 Feb 28 06:19	8° \approx 36'41	20.50965 AU	min. Earth dist.	5528 Sep 24 19:50	5° \approx 26'23	18.83222 AU
morning rise	5522 Mar 15 10:57	9° \approx 30'33		direct	5528 Dec 11 07:07	3° \approx 26'52	
retrograde	5522 Jun 15 13:54	12° \approx 40'14		evening set	5529 Mar 12 05:27	6° \approx 30'31	
opposition	5522 Aug 31 06:48	10° \approx 41'24	-0°48'43				
min. Earth dist.	5522 Aug 30 19:24	10° \approx 42'33	18.53744 AU	conjunction	5529 Mar 27 21:05	7° \approx 24'53	-0°48'06
direct	5522 Nov 16 08:50	8° \approx 42'00		minimum elong	5529 Mar 27 21:05	7° \approx 24'53	0°48'06
evening set	5523 Feb 16 12:01	11° \approx 50'59		max. Earth dist.	5529 Mar 28 14:36	7° \approx 27'26	20.85246 AU
				morning rise	5529 Apr 12 14:07	8° \approx 19'25	
conjunction	5523 Mar 04 03:52	12° \approx 46'20	-0°44'40	retrograde	5529 Jul 14 10:41	11° \approx 26'37	
minimum elong	5523 Mar 04 03:51	12° \approx 46'20	0°44'40	min. Earth dist.	5529 Sep 29 07:36	9° \approx 29'46	18.87244 AU
max. Earth dist.	5523 Mar 04 15:17	12° \approx 48'02	20.56461 AU	opposition	5529 Sep 30 00:42	9° \approx 28'04	-0°53'04
morning rise	5523 Mar 19 19:46	13° \approx 41'41		direct	5529 Dec 15 15:10	7° \approx 30'33	
retrograde	5523 Jun 20 01:08	16° \approx 50'53		evening set	5530 Mar 16 10:49	10° \approx 33'30	
opposition	5523 Sep 04 21:17	14° \approx 52'03	-0°50'09				
min. Earth dist.	5523 Sep 04 09:24	14° \approx 53'15	18.59153 AU	conjunction	5530 Apr 01 02:46	11° \approx 27'45	-0°47'49
direct	5523 Nov 20 21:53	12° \approx 52'54		minimum elong	5530 Apr 01 02:46	11° \approx 27'45	0°47'50
evening set	5524 Feb 20 20:14	16° \approx 00'52		max. Earth dist.	5530 Apr 01 21:27	11° \approx 30'28	20.89086 AU
				morning rise	5530 Apr 16 20:08	12° \approx 22'13	
conjunction	5524 Mar 07 12:01	16° \approx 56'01	-0°45'51	retrograde	5530 Jul 18 20:35	15° \approx 29'13	
minimum elong	5524 Mar 07 12:01	16° \approx 56'01	0°45'51	opposition	5530 Oct 04 11:35	13° \approx 30'43	-0°52'37
max. Earth dist.	5524 Mar 08 01:21	16° \approx 57'59	20.61770 AU	min. Earth dist.	5530 Oct 03 17:10	13° \approx 32'33	18.90881 AU
morning rise	5524 Mar 23 03:50	17° \approx 51'11		direct	5530 Dec 20 00:48	11° \approx 33'27	
retrograde	5524 Jun 23 11:50	20° \approx 59'56		evening set	5531 Mar 20 16:14	14° \approx 35'45	
opposition	5524 Sep 08 11:09	19° \approx 01'08	-0°51'19				
min. Earth dist.	5524 Sep 07 21:33	19° \approx 02'30	18.64367 AU	conjunction	5531 Apr 05 08:19	15° \approx 29'55	-0°47'19
direct	5524 Nov 24 11:32	17° \approx 02'14		minimum elong	5531 Apr 05 08:19	15° \approx 29'55	0°47'19
evening set	5525 Feb 24 03:53	20° \approx 09'14		max. Earth dist.	5531 Apr 06 02:44	15° \approx 32'35	20.92507 AU
				morning rise	5531 Apr 21 02:14	16° \approx 24'20	
conjunction	5525 Mar 11 19:22	21° \approx 04'11	-0°46'47	retrograde	5531 Jul 23 04:31	19° \approx 31'11	
minimum elong	5525 Mar 11 19:22	21° \approx 04'11	0°46'48	opposition	5531 Oct 08 22:04	17° \approx 32'42	-0°51'55
max. Earth dist.	5525 Mar 12 09:10	21° \approx 06'13	20.66891 AU	min. Earth dist.	5531 Oct 08 04:27	17° \approx 34'27	18.94089 AU
morning rise	5525 Mar 27 11:22	21° \approx 59'12		direct	5531 Dec 24 08:06	15° \approx 35'38	
retrograde	5525 Jun 27 21:21	25° \approx 07'33		evening set	5532 Mar 23 21:19	18° \approx 37'22	
min. Earth dist.	5525 Sep 12 10:34	23° \approx 10'11	18.69414 AU				
opposition	5525 Sep 13 00:37	23° \approx 08'46	-0°52'12	conjunction	5532 Apr 08 13:51	19° \approx 31'28	-0°46'34
direct	5525 Nov 28 22:54	21° \approx 10'09		minimum elong	5532 Apr 08 13:51	19° \approx 31'28	0°46'35

max. Earth dist.	5532 Apr 09 08:55	19° Υ 34'13	20.95477 AU	opposition	5538 Nov 06 13:58	15° ♄ 31'39	-0°40'18
morning rise	5532 Apr 24 08:09	20° Υ 25'50		min. Earth dist.	5538 Nov 05 19:44	15° ♄ 33'28	19.02786 AU
retrograde	5532 Jul 26 14:06	23° Υ 32'33			5538 Nov 19 21:47	15° ♄	
opposition	5532 Oct 12 08:13	21° Υ 34'04	-0°50'58	direct	5539 Jan 21 10:06	13° ♄ 35'00	
min. Earth dist.	5532 Oct 11 13:32	21° Υ 35'56	18.96804 AU		5539 Mar 21 14:06	15° ♄	
direct	5532 Dec 27 17:03	19° Υ 37'11		evening set	5539 Apr 21 05:40	16° ♄ 34'09	
evening set	5533 Mar 28 02:16	22° Υ 38'22					
conjunction	5533 Apr 12 19:03	23° Υ 32'25	-0°45'36	conjunction	5539 May 07 01:52	17° ♄ 28'18	-0°35'23
minimum elong	5533 Apr 12 19:03	23° Υ 32'25	0°45'37	minimum elong	5539 May 07 01:52	17° ♄ 28'18	0°35'24
max. Earth dist.	5533 Apr 13 13:37	23° Υ 35'06	20.97929 AU	max. Earth dist.	5539 May 07 20:23	17° ♄ 30'57	21.02595 AU
morning rise	5533 Apr 28 14:01	24° Υ 26'47		morning rise	5539 May 23 01:09	18° ♄ 22'53	
retrograde	5533 Jul 30 21:55	27° Υ 33'24		retrograde	5539 Aug 24 22:22	21° ♄ 29'32	
opposition	5533 Oct 16 18:13	25° Υ 34'52	-0°49'46	opposition	5539 Nov 10 21:55	19° ♄ 30'23	-0°37'47
min. Earth dist.	5533 Oct 16 00:33	25° Υ 36'38	18.98999 AU	min. Earth dist.	5539 Nov 10 04:54	19° ♄ 32'06	19.02386 AU
direct	5533 Dec 31 23:45	23° Υ 38'06		direct	5540 Jan 25 14:28	17° ♄ 33'44	
evening set	5534 Apr 01 07:03	26° Υ 38'47		evening set	5540 Apr 24 10:20	20° ♄ 32'48	
conjunction	5534 Apr 17 00:24	27° Υ 32'49	-0°44'25	conjunction	5540 May 10 07:22	21° ♄ 27'02	-0°33'01
minimum elong	5534 Apr 17 00:24	27° Υ 32'49	0°44'25	minimum elong	5540 May 10 07:22	21° ♄ 27'02	0°33'02
max. Earth dist.	5534 Apr 17 19:24	27° Υ 35'33	20.99863 AU	max. Earth dist.	5540 May 11 02:08	21° ♄ 29'43	21.02034 AU
morning rise	5534 May 02 19:55	28° Υ 27'10		morning rise	5540 May 26 07:23	22° ♄ 21'43	
	5534 Jun 01 16:34	0° ♄		retrograde	5540 Aug 28 07:46	25° ♄ 28'31	
retrograde	5534 Aug 04 07:00	1° ♄ 33'41		min. Earth dist.	5540 Nov 13 11:50	23° ♄ 31'06	19.01646 AU
	5534 Oct 10 16:13	30° ♄		opposition	5540 Nov 14 05:44	23° ♄ 29'18	-0°35'05
min. Earth dist.	5534 Oct 20 08:59	29° Υ 36'57	19.00660 AU	direct	5541 Jan 28 20:57	21° ♄ 32'40	
opposition	5534 Oct 21 03:31	29° Υ 35'06	-0°48'19	evening set	5541 Apr 28 15:12	24° ♄ 31'43	
direct	5535 Jan 05 08:20	27° Υ 38'24		conjunction	5541 May 14 12:54	25° ♄ 26'02	-0°30'31
	5535 Mar 24 17:31	0° ♄		minimum elong	5541 May 14 12:54	25° ♄ 26'02	0°30'32
evening set	5535 Apr 05 11:46	0° ♄ 38'39		max. Earth dist.	5541 May 15 07:05	25° ♄ 28'39	21.01119 AU
conjunction	5535 Apr 21 05:32	1° ♄ 32'40	-0°43'00	morning rise	5541 May 30 13:52	26° ♄ 20'50	
minimum elong	5535 Apr 21 05:32	1° ♄ 32'40	0°43'02	retrograde	5541 Sep 01 16:06	29° ♄ 27'52	
max. Earth dist.	5535 Apr 21 23:56	1° ♄ 35'19	21.01265 AU	opposition	5541 Nov 18 13:40	27° ♄ 28'34	-0°32'13
morning rise	5535 May 07 01:49	2° ♄ 27'02		min. Earth dist.	5541 Nov 17 21:08	27° ♄ 30'14	19.00557 AU
retrograde	5535 Aug 08 14:17	5° ♄ 33'30		direct	5542 Feb 02 01:32	25° ♄ 31'55	
opposition	5535 Oct 25 12:42	3° ♄ 34'48	-0°46'39	evening set	5542 May 02 20:25	28° ♄ 31'02	
min. Earth dist.	5535 Oct 24 19:20	3° ♄ 36'32	19.01818 AU	conjunction	5542 May 18 19:02	29° ♄ 25'29	-0°27'51
direct	5536 Jan 09 14:02	1° ♄ 38'08		minimum elong	5542 May 18 19:02	29° ♄ 25'29	0°27'52
evening set	5536 Apr 08 16:09	4° ♄ 37'59		max. Earth dist.	5542 May 19 13:12	29° ♄ 28'05	20.99859 AU
conjunction	5536 Apr 24 10:33	5° ♄ 32'01	-0°41'23		5542 May 28 20:07	0° ♄	
minimum elong	5536 Apr 24 10:33	5° ♄ 32'01	0°41'24	morning rise	5542 Jun 03 20:50	0° ♄ 20'24	
max. Earth dist.	5536 Apr 25 05:28	5° ♄ 34'44	21.02194 AU	retrograde	5542 Sep 06 02:04	3° ♄ 27'41	
morning rise	5536 May 10 07:26	6° ♄ 26'24		opposition	5542 Nov 22 21:16	1° ♄ 28'19	-0°29'12
retrograde	5536 Aug 11 23:02	9° ♄ 32'50		min. Earth dist.	5542 Nov 22 04:14	1° ♄ 30'02	18.99100 AU
opposition	5536 Oct 28 21:21	7° ♄ 34'01	-0°44'44		5543 Jan 03 06:03	30° ♄	
min. Earth dist.	5536 Oct 28 03:00	7° ♄ 35'51	19.02523 AU	direct	5543 Feb 06 07:34	29° ♄ 31'39	
direct	5537 Jan 12 22:07	5° ♄ 37'23			5543 Mar 11 16:25	0° ♄	
evening set	5537 Apr 12 20:41	8° ♄ 36'55		evening set	5543 May 07 02:10	2° ♄ 30'55	
conjunction	5537 Apr 28 15:33	9° ♄ 30'57	-0°39'34	conjunction	5543 May 23 01:30	3° ♄ 25'30	-0°25'03
minimum elong	5537 Apr 28 15:33	9° ♄ 30'57	0°39'36	minimum elong	5543 May 23 01:30	3° ♄ 25'30	0°25'04
max. Earth dist.	5537 Apr 29 10:06	9° ♄ 33'37	21.02693 AU	max. Earth dist.	5543 May 23 18:45	3° ♄ 27'58	20.98204 AU
morning rise	5537 May 14 13:15	10° ♄ 25'24		morning rise	5543 Jun 08 04:15	4° ♄ 20'34	
retrograde	5537 Aug 16 06:02	13° ♄ 31'52		retrograde	5543 Sep 10 10:49	7° ♄ 28'08	
opposition	5537 Nov 02 05:54	11° ♄ 32'55	-0°42'37	opposition	5543 Nov 27 05:12	5° ♄ 28'43	-0°26'02
min. Earth dist.	5537 Nov 01 12:37	11° ♄ 34'39	19.02838 AU	min. Earth dist.	5543 Nov 26 13:51	5° ♄ 30'16	18.97244 AU
direct	5538 Jan 17 02:51	9° ♄ 36'17		direct	5544 Feb 10 12:38	3° ♄ 32'01	
evening set	5538 Apr 17 01:02	12° ♄ 35'35		evening set	5544 May 10 08:08	6° ♄ 31'29	
conjunction	5538 May 02 20:41	13° ♄ 29'40	-0°37'34	conjunction	5544 May 26 08:23	7° ♄ 26'13	-0°22'07
minimum elong	5538 May 02 20:41	13° ♄ 29'40	0°37'35	minimum elong	5544 May 26 08:23	7° ♄ 26'13	0°22'09
max. Earth dist.	5538 May 03 15:42	13° ♄ 32'24	21.02828 AU	max. Earth dist.	5544 May 27 01:16	7° ♄ 28'38	20.96146 AU
morning rise	5538 May 18 19:05	14° ♄ 24'10		morning rise	5544 Jun 11 11:57	8° ♄ 21'26	
	5538 May 29 16:46	15° ♄		retrograde	5544 Sep 13 21:59	11° ♄ 29'20	
retrograde	5538 Aug 20 15:04	17° ♄ 30'42		opposition	5544 Nov 30 13:07	9° ♄ 29'50	-0°22'43
				min. Earth dist.	5544 Nov 29 21:33	9° ♄ 31'24	18.94957 AU

direct	5545 Feb 13 19:05	7°II33'03		behind sun end	5550 Jun 20 20:25	1°☾48'23	
evening set	5545 May 14 14:52	10°II32'49		max. Earth dist.	5550 Jun 20 23:43	1°☾48'52	20.74059 AU
				morning rise	5550 Jul 06 22:47	2°☾43'50	
conjunction	5545 May 30 15:54	11°II27'42	-0°19'04	retrograde	5550 Oct 09 13:54	5°☾54'05	
minimum elong	5545 May 30 15:54	11°II27'42	0°19'05	opposition	5550 Dec 25 15:25	3°☾53'31	-0°00'50
max. Earth dist.	5545 May 31 07:33	11°II29'57	20.93623 AU	min. Earth dist.	5550 Dec 25 06:29	3°☾54'26	18.71586 AU
morning rise	5545 Jun 15 20:25	12°II23'06		direct	5551 Mar 10 13:41	1°☾55'24	
retrograde	5545 Sep 18 06:45	15°II31'21		asc. node	5551 Mar 16 10:12	1°☾56'18	
opposition	5545 Dec 04 21:13	13°II31'45	-0°19'18	evening set	5551 Jun 08 18:05	4°☾57'58	
min. Earth dist.	5545 Dec 04 07:40	13°II33'07	18.92197 AU				
direct	5546 Feb 18 00:41	11°II34'51		conjunction	5551 Jun 25 00:41	5°☾54'07	0°00'59
evening set	5546 May 18 22:01	14°II34'57		minimum elong	5551 Jun 25 00:40	5°☾54'07	0°00'57
				behind sun begin	5551 Jun 24 17:59	5°☾53'10	
conjunction	5546 Jun 04 00:03	15°II30'01	-0°15'55	behind sun end	5551 Jun 25 07:20	5°☾55'03	
minimum elong	5546 Jun 04 00:03	15°II30'01	0°15'57	max. Earth dist.	5551 Jun 25 09:32	5°☾55'23	20.69067 AU
behind sun begin	5546 Jun 03 23:31	15°II29'56		morning rise	5551 Jul 11 10:30	6°☾50'44	
behind sun end	5546 Jun 04 00:36	15°II30'05		retrograde	5551 Oct 14 00:16	10°☾01'28	
max. Earth dist.	5546 Jun 04 14:48	15°II32'08	20.90624 AU	opposition	5551 Dec 30 00:33	8°☾00'42	0°02'59
morning rise	5546 Jun 20 05:28	16°II25'35		min. Earth dist.	5551 Dec 29 17:26	8°☾01'26	18.66481 AU
retrograde	5546 Sep 22 18:51	19°II34'13		direct	5552 Mar 13 20:28	6°☾02'18	
opposition	5546 Dec 09 05:21	17°II34'27	-0°15'45	evening set	5552 Jun 12 04:35	9°☾05'33	
min. Earth dist.	5546 Dec 08 15:56	17°II35'49	18.88938 AU				
direct	5547 Feb 22 08:08	15°II37'24		conjunction	5552 Jun 28 12:06	10°☾01'56	0°04'28
evening set	5547 May 23 05:48	18°II37'52		minimum elong	5552 Jun 28 12:06	10°☾01'56	0°04'28
				behind sun begin	5552 Jun 28 05:32	10°☾01'00	
conjunction	5547 Jun 08 08:39	19°II33'08	-0°12'41	behind sun end	5552 Jun 28 18:40	10°☾02'51	
minimum elong	5547 Jun 08 08:39	19°II33'08	0°12'41	max. Earth dist.	5552 Jun 28 19:53	10°☾03'02	20.63872 AU
behind sun begin	5547 Jun 08 04:28	19°II32'32		morning rise	5552 Jul 14 22:48	10°☾58'47	
behind sun end	5547 Jun 08 12:50	19°II33'43		retrograde	5552 Oct 17 13:50	14°☾10'04	
max. Earth dist.	5547 Jun 08 21:55	19°II35'02	20.87110 AU	opposition	5553 Jan 02 09:54	12°☾09'06	0°06'49
morning rise	5547 Jun 24 14:58	20°II28'53		min. Earth dist.	5553 Jan 02 02:56	12°☾09'50	18.61192 AU
retrograde	5547 Sep 27 03:36	23°II37'53		direct	5553 Mar 18 05:49	10°☾10'24	
opposition	5547 Dec 13 13:43	21°II37'58	-0°12'07	evening set	5553 Jun 16 16:03	13°☾14'25	
min. Earth dist.	5547 Dec 13 02:24	21°II39'07	18.85182 AU				
direct	5548 Feb 26 13:56	19°II40'41		conjunction	5553 Jul 03 00:28	14°☾11'04	0°07'54
evening set	5548 May 26 13:58	22°II41'35		minimum elong	5553 Jul 03 00:28	14°☾11'04	0°07'52
				behind sun begin	5553 Jul 02 18:27	14°☾10'13	
conjunction	5548 Jun 11 17:48	23°II37'03	-0°09'22	behind sun end	5553 Jul 03 06:28	14°☾11'55	
minimum elong	5548 Jun 11 17:49	23°II37'03	0°09'23	max. Earth dist.	5553 Jul 03 07:15	14°☾12'02	20.58492 AU
behind sun begin	5548 Jun 11 12:15	23°II36'16		morning rise	5553 Jul 19 11:56	15°☾08'10	
behind sun end	5548 Jun 11 23:22	23°II37'49		retrograde	5553 Oct 22 01:46	18°☾19'59	
max. Earth dist.	5548 Jun 12 06:05	23°II38'48	20.83145 AU	opposition	5554 Jan 06 19:36	16°☾18'52	0°10'38
morning rise	5548 Jun 28 01:01	24°II33'00		min. Earth dist.	5554 Jan 06 14:23	16°☾19'25	18.55742 AU
retrograde	5548 Sep 30 15:54	27°II42'24		direct	5554 Mar 22 13:44	14°☾19'53	
opposition	5548 Dec 16 22:07	25°II42'16	-0°08'25	evening set	5554 Jun 21 04:17	17°☾24'44	
min. Earth dist.	5548 Dec 16 10:58	25°II43'24	18.80999 AU				
direct	5549 Mar 01 22:30	23°II44'44		conjunction	5554 Jul 07 13:36	18°☾21'40	0°11'19
evening set	5549 May 30 22:40	26°II46'07		minimum elong	5554 Jul 07 13:36	18°☾21'40	0°11'18
				behind sun begin	5554 Jul 07 08:44	18°☾20'58	
conjunction	5549 Jun 16 03:26	27°II41'47	-0°06'00	behind sun end	5554 Jul 07 18:29	18°☾22'21	
minimum elong	5549 Jun 16 03:25	27°II41'47	0°06'01	max. Earth dist.	5554 Jul 07 18:57	18°☾22'25	20.52987 AU
behind sun begin	5549 Jun 15 21:04	27°II40'54		morning rise	5554 Jul 24 01:53	19°☾19'01	
behind sun end	5549 Jun 16 09:45	27°II42'41		retrograde	5554 Oct 26 16:08	22°☾31'26	
max. Earth dist.	5549 Jun 16 14:27	27°II43'22	20.78766 AU	opposition	5555 Jan 11 05:42	20°☾30'10	0°14'24
morning rise	5549 Jul 02 11:34	28°II37'58		min. Earth dist.	5555 Jan 11 00:48	20°☾30'41	18.50173 AU
	5549 Jul 28 10:21	0°☾		direct	5555 Mar 26 23:33	18°☾30'54	
retrograde	5549 Oct 05 01:12	1°☾47'47		evening set	5555 Jun 25 17:20	21°☾36'41	
	5549 Dec 16 04:07	30°☾II					
opposition	5549 Dec 21 06:49	29°II47'25	-0°04'39	conjunction	5555 Jul 12 03:30	22°☾33'52	0°14'42
min. Earth dist.	5549 Dec 20 21:40	29°II48'22	18.76441 AU	minimum elong	5555 Jul 12 03:30	22°☾33'52	0°14'40
direct	5550 Mar 06 04:33	27°II49'36		behind sun begin	5555 Jul 12 00:51	22°☾33'30	
	5550 May 19 13:01	0°☾		behind sun end	5555 Jul 12 06:08	22°☾34'15	
evening set	5550 Jun 04 08:02	0°☾51'32		max. Earth dist.	5555 Jul 12 07:58	22°☾34'31	20.47351 AU
				morning rise	5555 Jul 28 16:24	23°☾31'29	
conjunction	5550 Jun 20 13:46	1°☾47'26	-0°02'35	retrograde	5555 Oct 31 05:40	26°☾44'31	
minimum elong	5550 Jun 20 13:46	1°☾47'26	0°02'35	opposition	5556 Jan 15 16:21	24°☾43'09	0°18'08
behind sun begin	5550 Jun 20 07:06	1°☾46'30		min. Earth dist.	5556 Jan 15 13:10	24°☾43'29	18.44485 AU

direct	5556 Mar 30 08:48	22° \mathring{O} 43'38		evening set	5562 Jul 26 15:56	21° \mathring{O} 51'39	
evening set	5556 Jun 29 07:19	25° \mathring{O} 50'22					
conjunction	5556 Jul 15 18:17	26° \mathring{O} 47'50	0°18'01	conjunction	5562 Aug 12 07:03	22° \mathring{O} 50'50	0°35'42
minimum elong	5556 Jul 15 18:17	26° \mathring{O} 47'50	0°17'59	minimum elong	5562 Aug 12 07:03	22° \mathring{O} 50'50	0°35'42
max. Earth dist.	5556 Jul 15 21:02	26° \mathring{O} 48'14	20.41625 AU	max. Earth dist.	5562 Aug 11 23:21	22° \mathring{O} 49'41	20.04444 AU
morning rise	5556 Aug 01 07:58	27° \mathring{O} 45'43		morning rise	5562 Aug 28 23:39	23° \mathring{O} 50'16	
	5556 Sep 15 14:29	0° \mathring{O}		retrograde	5562 Dec 01 04:50	27° \mathring{O} 07'41	
retrograde	5556 Nov 03 21:11	0° \mathring{O} 59'24		opposition	5563 Feb 14 10:16	25° \mathring{O} 05'27	0°41'01
	5556 Dec 24 06:07	30° \mathring{R} \mathring{O}		min. Earth dist.	5563 Feb 14 16:46	25° \mathring{O} 04'45	18.01215 AU
opposition	5557 Jan 19 03:23	28° \mathring{O} 57'56	0°21'47	direct	5563 Apr 30 01:05	23° \mathring{O} 03'34	
min. Earth dist.	5557 Jan 19 00:51	28° \mathring{O} 58'12	18.38703 AU	evening set	5563 Jul 31 12:16	26° \mathring{O} 17'56	
direct	5557 Apr 03 19:41	26° \mathring{O} 58'09		conjunction	5563 Aug 17 04:01	27° \mathring{O} 17'25	0°38'05
	5557 Jul 02 04:58	0° \mathring{O}		minimum elong	5563 Aug 17 04:01	27° \mathring{O} 17'25	0°38'04
evening set	5557 Jul 03 22:19	0° \mathring{O} 05'55		max. Earth dist.	5563 Aug 16 19:59	27° \mathring{O} 16'13	19.98010 AU
				morning rise	5563 Sep 02 20:42	28° \mathring{O} 17'05	
conjunction	5557 Jul 20 10:09	1° \mathring{O} 03'41	0°21'16		5563 Oct 04 19:18	0° \mathring{O} \mathring{O}	
minimum elong	5557 Jul 20 10:09	1° \mathring{O} 03'41	0°21'15	retrograde	5563 Dec 06 00:20	1° \mathring{O} \mathring{O} 35'04	
max. Earth dist.	5557 Jul 20 11:56	1° \mathring{O} 03'57	20.35773 AU		5564 Feb 08 08:37	30° \mathring{R} \mathring{O}	
morning rise	5557 Aug 06 00:23	2° \mathring{O} 01'49		opposition	5564 Feb 19 01:25	29° \mathring{O} 32'39	0°43'33
retrograde	5557 Nov 08 12:15	5° \mathring{O} 16'09		min. Earth dist.	5564 Feb 19 09:01	29° \mathring{O} 31'50	17.94825 AU
opposition	5558 Jan 23 15:08	3° \mathring{O} 14'38	0°25'21	direct	5564 May 03 17:09	27° \mathring{O} 30'22	
min. Earth dist.	5558 Jan 23 14:30	3° \mathring{O} 14'42	18.32781 AU		5564 Jul 22 00:06	0° \mathring{O} \mathring{O}	
direct	5558 Apr 08 06:14	1° \mathring{O} 14'34		evening set	5564 Aug 04 09:40	0° \mathring{O} \mathring{O} 45'51	
evening set	5558 Jul 08 14:26	4° \mathring{O} 23'24					
				conjunction	5564 Aug 21 01:43	1° \mathring{O} \mathring{O} 45'36	0°40'15
conjunction	5558 Jul 25 02:56	5° \mathring{O} 21'27	0°24'25	minimum elong	5564 Aug 21 01:43	1° \mathring{O} \mathring{O} 45'36	0°40'15
minimum elong	5558 Jul 25 02:56	5° \mathring{O} 21'27	0°24'24	max. Earth dist.	5564 Aug 20 15:10	1° \mathring{O} \mathring{O} 44'01	19.91689 AU
max. Earth dist.	5558 Jul 25 02:24	5° \mathring{O} 21'22	20.29782 AU	morning rise	5564 Sep 06 18:46	2° \mathring{O} \mathring{O} 45'30	
morning rise	5558 Aug 10 17:49	6° \mathring{O} 19'51		retrograde	5564 Dec 09 19:10	6° \mathring{O} \mathring{O} 04'01	
retrograde	5558 Nov 13 05:17	9° \mathring{O} 34'51		opposition	5565 Feb 22 17:04	4° \mathring{O} \mathring{O} 01'26	0°45'50
opposition	5559 Jan 28 03:17	7° \mathring{O} 33'13	0°28'48	min. Earth dist.	5565 Feb 23 02:02	4° \mathring{O} \mathring{O} 00'28	17.88595 AU
min. Earth dist.	5559 Jan 28 03:46	7° \mathring{O} 33'10	18.26713 AU	direct	5565 May 08 08:53	1° \mathring{O} \mathring{O} 58'44	
direct	5559 Apr 12 18:38	5° \mathring{O} 32'51		evening set	5565 Aug 09 07:45	5° \mathring{O} \mathring{O} 15'21	
evening set	5559 Jul 13 07:27	8° \mathring{O} 42'47					
				conjunction	5565 Aug 26 00:22	6° \mathring{O} \mathring{O} 15'22	0°42'10
conjunction	5559 Jul 29 20:45	9° \mathring{O} 41'08	0°27'27	minimum elong	5565 Aug 26 00:22	6° \mathring{O} \mathring{O} 15'22	0°42'10
minimum elong	5559 Jul 29 20:45	9° \mathring{O} 41'08	0°27'27	max. Earth dist.	5565 Aug 25 13:42	6° \mathring{O} \mathring{O} 13'45	19.85544 AU
max. Earth dist.	5559 Jul 29 19:10	9° \mathring{O} 40'54	20.23622 AU	morning rise	5565 Sep 11 17:22	7° \mathring{O} \mathring{O} 15'29	
morning rise	5559 Aug 15 11:59	10° \mathring{O} 39'47		retrograde	5565 Dec 14 15:55	10° \mathring{O} \mathring{O} 34'31	
retrograde	5559 Nov 17 21:47	13° \mathring{O} 55'25		opposition	5566 Feb 27 09:21	8° \mathring{O} \mathring{O} 31'47	0°47'52
opposition	5560 Feb 01 16:15	11° \mathring{O} 53'41	0°32'07	min. Earth dist.	5566 Feb 27 19:00	8° \mathring{O} \mathring{O} 30'44	17.82561 AU
min. Earth dist.	5560 Feb 01 18:32	11° \mathring{O} 53'26	18.20477 AU	direct	5566 May 13 03:00	6° \mathring{O} \mathring{O} 28'43	
direct	5560 Apr 16 06:45	9° \mathring{O} 52'59		evening set	5566 Aug 14 06:46	9° \mathring{O} \mathring{O} 46'27	
evening set	5560 Jul 17 01:18	13° \mathring{O} 04'00					
				conjunction	5566 Aug 30 23:29	10° \mathring{O} \mathring{O} 46'42	0°43'51
conjunction	5560 Aug 02 15:12	14° \mathring{O} 02'38	0°30'22	minimum elong	5566 Aug 30 23:29	10° \mathring{O} \mathring{O} 46'42	0°43'51
minimum elong	5560 Aug 02 15:12	14° \mathring{O} 02'38	0°30'21	max. Earth dist.	5566 Aug 30 10:30	10° \mathring{O} \mathring{O} 44'44	19.79637 AU
max. Earth dist.	5560 Aug 02 11:01	14° \mathring{O} 02'01	20.17323 AU	morning rise	5566 Sep 16 16:38	11° \mathring{O} \mathring{O} 47'02	
	5560 Aug 18 20:20	15° \mathring{O}		retrograde	5566 Dec 19 10:57	15° \mathring{O} \mathring{O} 06'34	
morning rise	5560 Aug 19 07:05	15° \mathring{O} 01'33		opposition	5567 Mar 04 02:18	13° \mathring{O} \mathring{O} 03'43	0°49'36
retrograde	5560 Nov 21 15:59	18° \mathring{O} 17'49		min. Earth dist.	5567 Mar 04 13:17	13° \mathring{O} \mathring{O} 02'31	17.76812 AU
opposition	5561 Feb 05 05:45	16° \mathring{O} 15'55	0°35'16	direct	5567 May 17 20:32	11° \mathring{O} \mathring{O} 00'16	
min. Earth dist.	5561 Feb 05 09:18	16° \mathring{O} 15'32	18.14116 AU	evening set	5567 Aug 19 06:21	14° \mathring{O} \mathring{O} 19'08	
	5561 Mar 09 09:12	15° \mathring{R} \mathring{O}					
direct	5561 Apr 20 20:29	14° \mathring{O} 14'51		conjunction	5567 Sep 04 23:29	15° \mathring{O} \mathring{O} 19'38	0°45'15
	5561 Jun 01 11:45	15° \mathring{O}		minimum elong	5567 Sep 04 23:29	15° \mathring{O} \mathring{O} 19'38	0°45'15
evening set	5561 Jul 21 20:08	17° \mathring{O} 26'58		max. Earth dist.	5567 Sep 04 10:37	15° \mathring{O} \mathring{O} 17'40	19.74041 AU
				morning rise	5567 Sep 21 16:26	16° \mathring{O} \mathring{O} 20'09	
conjunction	5561 Aug 07 10:49	18° \mathring{O} 25'54	0°33'07	retrograde	5567 Dec 24 08:37	19° \mathring{O} \mathring{O} 40'10	
minimum elong	5561 Aug 07 10:48	18° \mathring{O} 25'54	0°33'06	opposition	5568 Mar 07 19:51	17° \mathring{O} \mathring{O} 37'13	0°51'01
max. Earth dist.	5561 Aug 07 05:47	18° \mathring{O} 25'09	20.10903 AU	min. Earth dist.	5568 Mar 08 07:02	17° \mathring{O} \mathring{O} 36'00	17.71386 AU
morning rise	5561 Aug 24 02:56	19° \mathring{O} 25'04		direct	5568 May 21 16:16	15° \mathring{O} \mathring{O} 33'29	
retrograde	5561 Nov 26 10:03	22° \mathring{O} 41'55		evening set	5568 Aug 23 06:48	18° \mathring{O} \mathring{O} 53'27	
opposition	5562 Feb 09 19:41	20° \mathring{O} 39'52	0°38'14				
min. Earth dist.	5562 Feb 10 00:51	20° \mathring{O} 39'19	18.07662 AU	conjunction	5568 Sep 08 23:58	19° \mathring{O} \mathring{O} 54'10	0°46'23
direct	5562 Apr 25 10:26	18° \mathring{O} 38'24		minimum elong	5568 Sep 08 23:58	19° \mathring{O} \mathring{O} 54'10	0°46'23

max. Earth dist.	5568 Sep 08 09:05	19° <u>♏</u> 51'54	19.68794 AU	min. Earth dist.	5575 Apr 10 10:34	20° <u>♏</u> 12'52	17.43174 AU
morning rise	5568 Sep 25 16:57	20° <u>♏</u> 54'52		direct	5575 Jun 24 02:18	18° <u>♏</u> 09'29	
retrograde	5568 Dec 28 04:45	24° <u>♏</u> 15'21		evening set	5575 Sep 27 03:53	21° <u>♏</u> 36'04	
opposition	5569 Mar 12 14:09	22° <u>♏</u> 12'22	0°52'08				
min. Earth dist.	5569 Mar 13 02:47	22° <u>♏</u> 10'59	17.66331 AU	conjunction	5575 Oct 13 19:53	22° <u>♏</u> 37'48	0°45'47
direct	5569 May 26 11:20	20° <u>♏</u> 08'20		minimum elong	5575 Oct 13 19:53	22° <u>♏</u> 37'48	0°45'47
evening set	5569 Aug 28 08:00	23° <u>♏</u> 29'25		max. Earth dist.	5575 Oct 12 23:12	22° <u>♏</u> 34'35	19.41772 AU
max. Earth dist.	5569 Sep 13 10:29	24° <u>♏</u> 28'03	19.63920 AU	morning rise	5575 Oct 30 09:49	23° <u>♏</u> 39'16	
				retrograde	5576 Jan 31 00:13	27° <u>♏</u> 01'51	
conjunction	5569 Sep 14 01:23	24° <u>♏</u> 30'20	0°47'14	opposition	5576 Apr 13 15:25	24° <u>♏</u> 59'01	0°50'20
minimum elong	5569 Sep 14 01:23	24° <u>♏</u> 30'20	0°47'14	min. Earth dist.	5576 Apr 14 08:18	24° <u>♏</u> 57'10	17.40540 AU
morning rise	5569 Sep 30 18:03	25° <u>♏</u> 31'12		direct	5576 Jun 28 04:19	22° <u>♏</u> 53'31	
retrograde	5570 Jan 02 03:41	28° <u>♏</u> 52'07		evening set	5576 Oct 01 08:21	26° <u>♏</u> 20'44	
opposition	5570 Mar 17 08:56	26° <u>♏</u> 49'09	0°52'55				
min. Earth dist.	5570 Mar 17 21:37	26° <u>♏</u> 47'46	17.61633 AU	conjunction	5576 Oct 17 24:00	27° <u>♏</u> 22'32	0°44'25
direct	5570 May 31 08:48	24° <u>♏</u> 44'54		minimum elong	5576 Oct 18 00:00	27° <u>♏</u> 22'32	0°44'27
evening set	5570 Sep 02 10:02	28° <u>♏</u> 07'03		max. Earth dist.	5576 Oct 17 03:28	27° <u>♏</u> 19'20	19.39345 AU
max. Earth dist.	5570 Sep 18 10:38	29° <u>♏</u> 05'36	19.59399 AU	morning rise	5576 Nov 03 13:07	28° <u>♏</u> 24'01	
					5576 Dec 01 19:42	0° <u>♏</u>	
conjunction	5570 Sep 19 03:16	29° <u>♏</u> 08'09	0°47'46	retrograde	5577 Feb 03 23:06	1° <u>♏</u> 46'38	
minimum elong	5570 Sep 19 03:16	29° <u>♏</u> 08'09	0°47'46		5577 Apr 12 09:50	30° <u>♏</u> <u>♏</u>	
	5570 Oct 03 06:43	0° <u>♏</u>		opposition	5577 Apr 18 14:18	29° <u>♏</u> 43'49	0°48'39
morning rise	5570 Oct 05 19:43	0° <u>♏</u> 09'10		min. Earth dist.	5577 Apr 19 08:24	29° <u>♏</u> 41'50	17.38338 AU
retrograde	5571 Jan 07 00:59	3° <u>♏</u> 30'31		direct	5577 Jul 03 03:53	27° <u>♏</u> 38'09	
opposition	5571 Mar 22 04:36	1° <u>♏</u> 27'34	0°53'22		5577 Sep 17 17:20	0° <u>♏</u>	
min. Earth dist.	5571 Mar 22 18:57	1° <u>♏</u> 26'00	17.57298 AU	evening set	5577 Oct 06 12:59	1° <u>♏</u> 05'53	
	5571 Apr 28 08:17	30° <u>♏</u> <u>♏</u>		max. Earth dist.	5577 Oct 22 06:29	2° <u>♏</u> 04'22	19.37386 AU
direct	5571 Jun 05 05:10	29° <u>♏</u> 23'06					
	5571 Jul 12 14:33	0° <u>♏</u>		conjunction	5577 Oct 23 03:57	2° <u>♏</u> 07'43	0°42'46
evening set	5571 Sep 07 12:26	2° <u>♏</u> 46'17		minimum elong	5577 Oct 23 03:57	2° <u>♏</u> 07'43	0°42'47
				morning rise	5577 Nov 08 16:26	3° <u>♏</u> 09'11	
conjunction	5571 Sep 24 05:41	3° <u>♏</u> 47'33	0°48'01	retrograde	5578 Feb 09 00:16	6° <u>♏</u> 31'49	
minimum elong	5571 Sep 24 05:41	3° <u>♏</u> 47'33	0°48'01	opposition	5578 Apr 23 13:19	4° <u>♏</u> 29'00	0°46'38
max. Earth dist.	5571 Sep 23 12:45	3° <u>♏</u> 44'57	19.55229 AU	min. Earth dist.	5578 Apr 24 06:42	4° <u>♏</u> 27'06	17.36627 AU
morning rise	5571 Oct 10 21:44	4° <u>♏</u> 48'42		direct	5578 Jul 08 06:46	2° <u>♏</u> 23'09	
retrograde	5572 Jan 12 01:06	8° <u>♏</u> 10'26		evening set	5578 Oct 11 17:25	5° <u>♏</u> 51'20	
opposition	5572 Mar 26 00:48	6° <u>♏</u> 07'31	0°53'29	max. Earth dist.	5578 Oct 27 11:32	6° <u>♏</u> 49'58	19.35934 AU
min. Earth dist.	5572 Mar 26 15:05	6° <u>♏</u> 05'57	17.53285 AU				
direct	5572 Jun 09 04:25	4° <u>♏</u> 02'50		conjunction	5578 Oct 28 07:53	6° <u>♏</u> 53'09	0°40'48
evening set	5572 Sep 11 15:45	7° <u>♏</u> 26'59		minimum elong	5578 Oct 28 07:53	6° <u>♏</u> 53'09	0°40'48
				morning rise	5578 Nov 13 19:24	7° <u>♏</u> 54'36	
conjunction	5572 Sep 28 08:46	8° <u>♏</u> 28'25	0°47'56	retrograde	5579 Feb 13 22:53	11° <u>♏</u> 17'09	
minimum elong	5572 Sep 28 08:46	8° <u>♏</u> 28'25	0°47'56	opposition	5579 Apr 28 12:51	9° <u>♏</u> 14'22	0°44'18
max. Earth dist.	5572 Sep 27 14:25	8° <u>♏</u> 25'35	19.51365 AU	min. Earth dist.	5579 Apr 29 06:47	9° <u>♏</u> 12'24	17.35452 AU
morning rise	5572 Oct 15 00:23	9° <u>♏</u> 29'40		direct	5579 Jul 13 07:14	7° <u>♏</u> 08'25	
retrograde	5573 Jan 15 23:14	12° <u>♏</u> 51'42		evening set	5579 Oct 16 21:42	10° <u>♏</u> 36'54	
opposition	5573 Mar 30 21:40	10° <u>♏</u> 48'49	0°53'14				
min. Earth dist.	5573 Mar 31 13:47	10° <u>♏</u> 47'04	17.49588 AU	conjunction	5579 Nov 02 11:20	11° <u>♏</u> 38'41	0°38'33
direct	5573 Jun 14 02:24	8° <u>♏</u> 43'56		minimum elong	5579 Nov 02 11:20	11° <u>♏</u> 38'41	0°38'35
evening set	5573 Sep 16 19:30	12° <u>♏</u> 08'59		max. Earth dist.	5579 Nov 01 14:19	11° <u>♏</u> 35'24	19.35054 AU
				morning rise	5579 Nov 18 22:12	12° <u>♏</u> 40'04	
conjunction	5573 Oct 03 12:18	13° <u>♏</u> 10'33	0°47'32		5580 Jan 01 20:56	15° <u>♏</u>	
minimum elong	5573 Oct 03 12:18	13° <u>♏</u> 10'33	0°47'32	retrograde	5580 Feb 18 23:17	16° <u>♏</u> 02'31	
max. Earth dist.	5573 Oct 02 17:10	13° <u>♏</u> 07'35	19.47826 AU		5580 Apr 08 11:37	15° <u>♏</u> <u>♏</u>	
morning rise	5573 Oct 20 03:26	14° <u>♏</u> 11'54		opposition	5580 May 02 12:29	13° <u>♏</u> 59'46	0°41'39
retrograde	5574 Jan 21 00:09	17° <u>♏</u> 34'10		min. Earth dist.	5580 May 03 05:31	13° <u>♏</u> 57'54	17.34871 AU
opposition	5574 Apr 04 19:05	15° <u>♏</u> 31'19	0°52'37	direct	5580 Jul 17 11:12	11° <u>♏</u> 53'43	
min. Earth dist.	5574 Apr 05 10:56	15° <u>♏</u> 29'35	17.46207 AU		5580 Oct 14 21:18	15° <u>♏</u>	
direct	5574 Jun 19 03:20	13° <u>♏</u> 26'13		evening set	5580 Oct 21 01:49	15° <u>♏</u> 22'26	
evening set	5574 Sep 21 23:32	16° <u>♏</u> 52'05					
				conjunction	5580 Nov 06 14:52	16° <u>♏</u> 24'10	0°36'03
conjunction	5574 Oct 08 16:00	17° <u>♏</u> 53'44	0°46'49	minimum elong	5580 Nov 06 14:52	16° <u>♏</u> 24'10	0°36'03
minimum elong	5574 Oct 08 16:00	17° <u>♏</u> 53'44	0°46'50	max. Earth dist.	5580 Nov 05 19:32	16° <u>♏</u> 21'09	19.34775 AU
max. Earth dist.	5574 Oct 07 20:12	17° <u>♏</u> 50'40	19.44606 AU	morning rise	5580 Nov 23 00:39	17° <u>♏</u> 25'28	
morning rise	5574 Oct 25 06:27	18° <u>♏</u> 55'09		retrograde	5581 Feb 22 21:22	20° <u>♏</u> 47'44	
retrograde	5575 Jan 25 22:44	22° <u>♏</u> 17'37		opposition	5581 May 07 12:23	18° <u>♏</u> 45'05	0°38'43
opposition	5575 Apr 09 17:10	20° <u>♏</u> 14'47	0°51'39	min. Earth dist.	5581 May 08 05:20	18° <u>♏</u> 43'14	17.34901 AU

direct	5581 Jul 22 13:10	16° \mathbb{M} 39'01		minimum elong	5587 Dec 11 03:09	19° \mathbb{X} 32'49	0°12'55
evening set	5581 Oct 26 05:51	20° \mathbb{M} 07'53		behind sun begin	5587 Dec 10 23:04	19° \mathbb{X} 32'11	
				behind sun end	5587 Dec 11 07:14	19° \mathbb{X} 33'26	
conjunction	5581 Nov 11 17:55	21° \mathbb{M} 09'31	0°33'17	max. Earth dist.	5587 Dec 10 13:16	19° \mathbb{X} 30'39	19.48922 AU
minimum elong	5581 Nov 11 17:55	21° \mathbb{M} 09'31	0°33'18	morning rise	5587 Dec 27 06:08	20° \mathbb{X} 32'58	
max. Earth dist.	5581 Nov 10 22:09	21° \mathbb{M} 06'25	19.35134 AU	retrograde	5588 Mar 27 13:26	23° \mathbb{X} 52'51	
morning rise	5581 Nov 28 02:55	22° \mathbb{M} 10'42		opposition	5588 Jun 09 14:48	21° \mathbb{X} 51'25	0°12'15
retrograde	5582 Feb 27 21:00	25° \mathbb{M} 32'47		min. Earth dist.	5588 Jun 10 03:02	21° \mathbb{X} 50'07	17.50767 AU
opposition	5582 May 12 12:31	23° \mathbb{M} 30'14	0°35'31	direct	5588 Aug 25 07:55	19° \mathbb{X} 46'18	
min. Earth dist.	5582 May 13 04:33	23° \mathbb{M} 28'29	17.35583 AU	evening set	5588 Nov 28 21:12	23° \mathbb{X} 13'19	
direct	5582 Jul 27 17:05	21° \mathbb{M} 24'13					
evening set	5582 Oct 31 09:14	24° \mathbb{M} 53'06		conjunction	5588 Dec 15 02:35	24° \mathbb{X} 13'42	0°09'05
				minimum elong	5588 Dec 15 02:35	24° \mathbb{X} 13'42	0°09'06
conjunction	5582 Nov 16 20:36	25° \mathbb{M} 54'38	0°30'19	behind sun begin	5588 Dec 14 20:55	24° \mathbb{X} 12'51	
minimum elong	5582 Nov 16 20:36	25° \mathbb{M} 54'38	0°30'20	behind sun end	5588 Dec 15 08:14	24° \mathbb{X} 14'34	
max. Earth dist.	5582 Nov 16 02:52	25° \mathbb{M} 51'52	19.36132 AU	max. Earth dist.	5588 Dec 14 13:46	24° \mathbb{X} 11'43	19.52680 AU
morning rise	5582 Dec 03 04:31	26° \mathbb{M} 55'42		morning rise	5588 Dec 31 04:35	25° \mathbb{X} 13'37	
	5583 Feb 07 20:11	0° \mathbb{X}		retrograde	5589 Apr 01 11:53	28° \mathbb{X} 32'59	
retrograde	5583 Mar 04 19:48	0° \mathbb{X} 17'32		opposition	5589 Jun 14 14:46	26° \mathbb{X} 31'42	0°07'58
	5583 Mar 30 05:17	30° \mathbb{R} \mathbb{M}		min. Earth dist.	5589 Jun 15 01:13	26° \mathbb{X} 30'35	17.54672 AU
opposition	5583 May 17 12:50	28° \mathbb{M} 15'09	0°32'04	direct	5589 Aug 30 11:03	24° \mathbb{X} 26'48	
min. Earth dist.	5583 May 18 04:12	28° \mathbb{M} 13'29	17.36875 AU	evening set	5589 Dec 03 20:53	27° \mathbb{X} 53'08	
direct	5583 Aug 01 20:01	26° \mathbb{M} 09'15					
evening set	5583 Nov 05 12:34	29° \mathbb{M} 38'05		conjunction	5589 Dec 20 01:16	28° \mathbb{X} 53'16	0°05'14
	5583 Nov 11 10:42	0° \mathbb{X}		minimum elong	5589 Dec 20 01:15	28° \mathbb{X} 53'16	0°05'16
				behind sun begin	5589 Dec 19 18:48	28° \mathbb{X} 52'17	
conjunction	5583 Nov 21 22:53	0° \mathbb{X} 39'28	0°27'08	behind sun end	5589 Dec 20 07:41	28° \mathbb{X} 54'15	
minimum elong	5583 Nov 21 22:53	0° \mathbb{X} 39'28	0°27'09	max. Earth dist.	5589 Dec 19 13:39	28° \mathbb{X} 51'28	19.56745 AU
max. Earth dist.	5583 Nov 21 05:01	0° \mathbb{X} 36'40	19.37727 AU	morning rise	5590 Jan 05 02:14	29° \mathbb{X} 52'56	
morning rise	5583 Dec 08 05:57	1° \mathbb{X} 40'24			5590 Jan 07 00:50	0° \mathbb{Z}	
retrograde	5584 Mar 08 18:46	5° \mathbb{X} 01'56		retrograde	5590 Apr 06 07:50	3° \mathbb{Z} 11'44	
opposition	5584 May 21 13:04	2° \mathbb{X} 59'45	0°28'25	opposition	5590 Jun 19 14:41	1° \mathbb{Z} 10'36	0°03'39
min. Earth dist.	5584 May 22 03:57	2° \mathbb{X} 58'09	17.38751 AU	min. Earth dist.	5590 Jun 20 01:01	1° \mathbb{Z} 09'30	17.58897 AU
direct	5584 Aug 05 22:38	0° \mathbb{X} 53'57			5590 Jul 19 00:40	30° \mathbb{R} \mathbb{X}	
evening set	5584 Nov 09 15:25	4° \mathbb{X} 22'39		direct	5590 Sep 04 11:36	29° \mathbb{X} 05'53	
max. Earth dist.	5584 Nov 25 08:48	5° \mathbb{X} 21'22	19.39867 AU		5590 Oct 20 14:58	0° \mathbb{Z}	
				evening set	5590 Dec 08 19:32	2° \mathbb{Z} 31'28	
conjunction	5584 Nov 26 00:55	5° \mathbb{X} 23'54	0°23'47				
minimum elong	5584 Nov 26 00:55	5° \mathbb{X} 23'54	0°23'49	conjunction	5590 Dec 24 22:49	3° \mathbb{Z} 31'20	0°01'20
morning rise	5584 Dec 12 06:54	6° \mathbb{X} 24'39		minimum elong	5590 Dec 24 22:50	3° \mathbb{Z} 31'20	0°01'21
retrograde	5585 Mar 13 18:31	9° \mathbb{X} 45'50		behind sun begin	5590 Dec 24 16:12	3° \mathbb{Z} 30'19	
opposition	5585 May 26 13:33	7° \mathbb{X} 43'52	0°24'35	behind sun end	5590 Dec 25 05:29	3° \mathbb{Z} 32'20	
min. Earth dist.	5585 May 27 03:28	7° \mathbb{X} 42'22	17.41123 AU	max. Earth dist.	5590 Dec 24 12:13	3° \mathbb{Z} 29'41	19.61131 AU
direct	5585 Aug 11 01:52	5° \mathbb{X} 38'14		morning rise	5591 Jan 09 23:00	4° \mathbb{Z} 30'44	
evening set	5585 Nov 14 17:50	9° \mathbb{X} 06'40		retrograde	5591 Apr 11 04:56	7° \mathbb{Z} 48'58	
max. Earth dist.	5585 Nov 30 10:16	10° \mathbb{X} 05'13	19.42471 AU	desc. node	5591 Apr 27 10:16	7° \mathbb{Z} 41'49	
				opposition	5591 Jun 24 14:01	5° \mathbb{Z} 47'57	-0°00'41
conjunction	5585 Dec 01 02:13	10° \mathbb{X} 07'43	0°20'16	min. Earth dist.	5591 Jun 24 22:12	5° \mathbb{Z} 47'05	17.63424 AU
minimum elong	5585 Dec 01 02:13	10° \mathbb{X} 07'43	0°20'17	direct	5591 Sep 09 14:07	3° \mathbb{Z} 43'27	
morning rise	5585 Dec 17 07:13	11° \mathbb{X} 08'18		evening set	5591 Dec 13 17:22	7° \mathbb{Z} 08'11	
retrograde	5586 Mar 18 16:43	14° \mathbb{X} 29'06					
opposition	5586 May 31 14:05	12° \mathbb{X} 27'19	0°20'36	conjunction	5591 Dec 29 19:43	8° \mathbb{Z} 07'46	-0°02'39
min. Earth dist.	5586 Jun 01 03:45	12° \mathbb{X} 25'51	17.43953 AU	minimum elong	5591 Dec 29 19:44	8° \mathbb{Z} 07'46	0°02'37
direct	5586 Aug 16 03:27	10° \mathbb{X} 21'51		behind sun begin	5591 Dec 29 13:07	8° \mathbb{Z} 06'46	
evening set	5586 Nov 19 19:35	13° \mathbb{X} 49'54		behind sun end	5591 Dec 30 02:22	8° \mathbb{Z} 08'46	
				max. Earth dist.	5591 Dec 29 10:59	8° \mathbb{Z} 06'26	19.65811 AU
conjunction	5586 Dec 06 03:03	14° \mathbb{X} 50'45	0°16'38	morning rise	5592 Jan 14 18:53	9° \mathbb{Z} 06'54	
minimum elong	5586 Dec 06 03:03	14° \mathbb{X} 50'45	0°16'39	retrograde	5592 Apr 14 23:24	12° \mathbb{Z} 24'31	
max. Earth dist.	5586 Dec 05 12:34	14° \mathbb{X} 48'30	19.45512 AU	opposition	5592 Jun 28 12:58	10° \mathbb{Z} 23'37	-0°04'58
morning rise	5586 Dec 22 07:01	15° \mathbb{X} 51'07		min. Earth dist.	5592 Jun 28 20:57	10° \mathbb{Z} 22'46	17.68264 AU
retrograde	5587 Mar 23 16:24	19° \mathbb{X} 11'29		direct	5592 Sep 13 13:56	8° \mathbb{Z} 19'20	
opposition	5587 Jun 05 14:28	17° \mathbb{X} 09'53	0°16'28	evening set	5592 Dec 17 14:19	11° \mathbb{Z} 43'11	
min. Earth dist.	5587 Jun 06 02:43	17° \mathbb{X} 08'34	17.47179 AU				
direct	5587 Aug 21 06:45	15° \mathbb{X} 04'36		conjunction	5593 Jan 02 15:35	12° \mathbb{Z} 42'28	-0°06'28
evening set	5587 Nov 24 20:44	18° \mathbb{X} 32'11		minimum elong	5593 Jan 02 15:35	12° \mathbb{Z} 42'28	0°06'26
				behind sun begin	5593 Jan 02 09:21	12° \mathbb{Z} 41'31	
conjunction	5587 Dec 11 03:09	19° \mathbb{X} 32'49	0°12'54	behind sun end	5593 Jan 02 21:49	12° \mathbb{Z} 43'24	

max. Earth dist.	5593 Jan 02 07:43	12°34'16	19.70820 AU	max. Earth dist.	5599 Jan 29 21:37	9°34'58	20.07142 AU
morning rise	5593 Jan 18 13:59	13°34'19		morning rise	5599 Feb 14 13:52	10°31'53	
retrograde	5593 Apr 19 19:02	16°35'19		retrograde	5599 May 17 00:04	13°45'19	
opposition	5593 Jul 03 11:27	14°35'32	-0°09'12	opposition	5599 Jul 31 16:05	11°45'40	-0°31'54
min. Earth dist.	5593 Jul 03 16:56	14°35'57	17.73434 AU	min. Earth dist.	5599 Jul 31 12:31	11°46'02	18.10431 AU
direct	5593 Sep 18 15:09	12°35'29		direct	5599 Oct 16 22:24	9°43'50	
evening set	5593 Dec 22 10:04	16°31'23		evening set	5600 Jan 18 14:18	13°00'31	
conjunction	5594 Jan 07 10:27	17°31'52	-0°10'13	conjunction	5600 Feb 03 09:39	13°57'41	-0°30'13
minimum elong	5594 Jan 07 10:27	17°31'52	0°10'12	minimum elong	5600 Feb 03 09:39	13°57'41	0°30'12
behind sun begin	5594 Jan 07 05:09	17°31'43		max. Earth dist.	5600 Feb 03 14:01	13°58'21	20.13739 AU
behind sun end	5594 Jan 07 15:45	17°31'10		morning rise	5600 Feb 19 03:07	14°54'37	
max. Earth dist.	5594 Jan 07 05:08	17°31'34	19.76156 AU		5600 Feb 20 15:33	15°	
morning rise	5594 Jan 23 07:51	18°31'57		retrograde	5600 May 20 14:47	18°07'27	
retrograde	5594 Apr 24 12:22	21°30'20		opposition	5600 Aug 04 10:58	16°08'01	-0°35'04
opposition	5594 Jul 08 09:39	19°32'41	-0°13'20	min. Earth dist.	5600 Aug 04 06:41	16°08'28	18.17014 AU
min. Earth dist.	5594 Jul 08 14:28	19°32'11	17.78947 AU		5600 Sep 02 17:38	15°R	
direct	5594 Sep 23 14:12	17°32'57		direct	5600 Oct 20 16:20	14°06'35	
evening set	5594 Dec 27 05:05	20°34'51			5600 Dec 05 21:28	15°	
				evening set	5601 Jan 22 04:11	17°22'09	
conjunction	5595 Jan 12 04:24	21°34'32	-0°13'52	conjunction	5601 Feb 06 22:41	18°19'02	-0°32'59
minimum elong	5595 Jan 12 04:23	21°34'32	0°13'50	minimum elong	5601 Feb 06 22:41	18°19'02	0°32'59
behind sun begin	5595 Jan 12 00:52	21°34'00		max. Earth dist.	5601 Feb 07 03:12	18°19'43	20.20299 AU
behind sun end	5595 Jan 12 07:54	21°34'04		morning rise	5601 Feb 22 15:51	19°15'42	
max. Earth dist.	5595 Jan 11 23:54	21°34'51	19.81847 AU	retrograde	5601 May 25 06:08	22°27'59	
morning rise	5595 Jan 28 01:09	22°34'49		opposition	5601 Aug 09 05:25	20°28'42	-0°38'01
retrograde	5595 Apr 29 06:24	26°30'36		min. Earth dist.	5601 Aug 08 23:34	20°29'18	18.23541 AU
opposition	5595 Jul 13 07:00	24°30'07	-0°17'21	direct	5601 Oct 25 10:13	18°27'39	
min. Earth dist.	5595 Jul 13 09:13	23°35'53	17.84802 AU				
direct	5595 Sep 28 13:23	21°35'42					
evening set	5595 Dec 31 23:02	25°31'37					
conjunction	5596 Jan 16 21:36	26°31'00	-0°17'26				
minimum elong	5596 Jan 16 21:36	26°31'00	0°17'25				
max. Earth dist.	5596 Jan 16 19:47	26°31'44	19.87852 AU				
morning rise	5596 Feb 01 17:29	27°31'40					
	5596 Mar 30 22:45	0°					
retrograde	5596 May 02 22:50	0°29'11					
	5596 Jun 05 21:39	30°R3					
opposition	5596 Jul 17 04:06	28°32'55	-0°21'15				
min. Earth dist.	5596 Jul 17 05:34	28°32'46	17.90940 AU				
direct	5596 Oct 02 10:34	26°32'53					
evening set	5597 Jan 04 16:12	29°34'54					
	5597 Jan 08 14:53	0°					
conjunction	5597 Jan 20 13:43	0°43'50	-0°20'51				
minimum elong	5597 Jan 20 13:43	0°43'50	0°20'50				
max. Earth dist.	5597 Jan 20 12:33	0°43'39	19.94119 AU				
morning rise	5597 Feb 05 09:04	1°41'34					
retrograde	5597 May 07 16:02	4°56'10					
opposition	5597 Jul 22 00:34	2°56'06	-0°24'59				
min. Earth dist.	5597 Jul 21 23:40	2°56'11	17.97312 AU				
direct	5597 Oct 07 07:47	0°53'27					
evening set	5598 Jan 09 08:23	4°12'18					
conjunction	5598 Jan 25 05:14	5°10'04	-0°24'09				
minimum elong	5598 Jan 25 05:14	5°10'04	0°24'07				
max. Earth dist.	5598 Jan 25 06:45	5°10'18	20.00573 AU				
morning rise	5598 Feb 09 23:47	6°07'31					
retrograde	5598 May 12 07:31	9°21'32					
opposition	5598 Jul 26 20:39	7°21'41	-0°28'32				
min. Earth dist.	5598 Jul 26 19:00	7°21'52	18.03831 AU				
direct	5598 Oct 12 02:58	5°19'28					
evening set	5599 Jan 13 23:46	8°37'13					
conjunction	5599 Jan 29 19:42	9°34'41	-0°27'16				
minimum elong	5599 Jan 29 19:41	9°34'41	0°27'16				