

evening set	7100 Mar 02 22:12	27° \mathbf{K} 44'38		conjunction	7105 Mar 29 07:36	9° \mathbf{Y} 15'49 -0°00'53	
				minimum elong	7105 Mar 29 07:36	9° \mathbf{Y} 15'49 0°00'53	
conjunction	7100 Mar 18 07:33	28° \mathbf{K} 19'10 0°13'14		behind sun begin	7105 Mar 29 01:12	9° \mathbf{Y} 15'14	
minimum elong	7100 Mar 18 07:33	28° \mathbf{K} 19'10 0°13'13		behind sun end	7105 Mar 29 13:59	9° \mathbf{Y} 16'23	
behind sun begin	7100 Mar 18 03:42	28° \mathbf{K} 18'49		max. Earth dist.	7105 Mar 29 05:14	9° \mathbf{Y} 15'39 31.15520 AU	
behind sun end	7100 Mar 18 11:23	28° \mathbf{K} 19'31		morning rise	7105 Apr 13 16:13	9° \mathbf{Y} 50'24	
max. Earth dist.	7100 Mar 18 00:28	28° \mathbf{K} 18'31 31.20863 AU		retrograde	7105 Jul 11 04:08	11° \mathbf{Y} 45'26	
morning rise	7100 Apr 02 16:05	28° \mathbf{K} 53'41		opposition	7105 Sep 28 22:32	10° \mathbf{Y} 22'19 -0°02'25	
	7100 May 06 03:43	0° \mathbf{Y}		min. Earth dist.	7105 Sep 29 00:24	10° \mathbf{Y} 22'11 29.15101 AU	
retrograde	7100 Jun 29 18:08	0° \mathbf{Y} 48'02		direct	7105 Dec 18 04:14	8° \mathbf{Y} 58'39	
	7100 Aug 26 05:56	30° \mathbf{K}		evening set	7106 Mar 16 08:34	10° \mathbf{Y} 53'01	
opposition	7100 Sep 17 07:28	29° \mathbf{K} 25'12 0°12'38					
min. Earth dist.	7100 Sep 17 14:41	29° \mathbf{K} 24'42 29.20239 AU		conjunction	7106 Mar 31 17:12	11° \mathbf{Y} 27'37 -0°03'45	
direct	7100 Dec 06 16:58	28° \mathbf{K} 01'21		minimum elong	7106 Mar 31 17:12	11° \mathbf{Y} 27'37 0°03'47	
evening set	7101 Mar 05 08:00	29° \mathbf{K} 55'50		behind sun begin	7106 Mar 31 10:51	11° \mathbf{Y} 27'02	
	7101 Mar 07 05:13	0° \mathbf{Y}		behind sun end	7106 Mar 31 23:32	11° \mathbf{Y} 28'11	
				max. Earth dist.	7106 Mar 31 14:41	11° \mathbf{Y} 27'25 31.14695 AU	
conjunction	7101 Mar 20 17:08	0° \mathbf{Y} 30'23 0°10'28		morning rise	7106 Apr 16 02:00	12° \mathbf{Y} 02'14	
minimum elong	7101 Mar 20 17:08	0° \mathbf{Y} 30'23 0°10'28		retrograde	7106 Jul 13 16:00	13° \mathbf{Y} 57'25	
behind sun begin	7101 Mar 20 12:04	0° \mathbf{Y} 29'55		opposition	7106 Oct 01 11:25	12° \mathbf{Y} 34'17 -0°05'27	
behind sun end	7101 Mar 20 22:11	0° \mathbf{Y} 30'50		min. Earth dist.	7106 Oct 01 12:43	12° \mathbf{Y} 34'11 29.14294 AU	
max. Earth dist.	7101 Mar 20 10:12	0° \mathbf{Y} 29'45 31.19622 AU		direct	7106 Dec 20 14:30	11° \mathbf{Y} 10'41	
morning rise	7101 Apr 05 01:47	1° \mathbf{Y} 04'54		evening set	7107 Mar 18 18:22	13° \mathbf{Y} 05'02	
retrograde	7101 Jul 02 06:32	2° \mathbf{Y} 59'22					
opposition	7101 Sep 19 19:49	1° \mathbf{Y} 36'26 0°09'39		conjunction	7107 Apr 03 03:08	13° \mathbf{Y} 39'39 -0°06'35	
min. Earth dist.	7101 Sep 20 01:14	1° \mathbf{Y} 36'04 29.19019 AU		minimum elong	7107 Apr 03 03:07	13° \mathbf{Y} 39'39 0°06'36	
direct	7101 Dec 09 03:56	0° \mathbf{Y} 12'35		behind sun begin	7107 Apr 02 21:06	13° \mathbf{Y} 39'06	
evening set	7102 Mar 07 17:43	2° \mathbf{Y} 07'02		behind sun end	7107 Apr 03 09:08	13° \mathbf{Y} 40'11	
				max. Earth dist.	7107 Apr 03 02:27	13° \mathbf{Y} 39'36 31.13884 AU	
conjunction	7102 Mar 23 02:46	2° \mathbf{Y} 41'35 0°07'40		morning rise	7107 Apr 18 11:48	14° \mathbf{Y} 14'17	
minimum elong	7102 Mar 23 02:45	2° \mathbf{Y} 41'35 0°07'40		retrograde	7107 Jul 16 02:50	16° \mathbf{Y} 09'38	
behind sun begin	7102 Mar 22 20:56	2° \mathbf{Y} 41'03		opposition	7107 Oct 04 00:24	14° \mathbf{Y} 46'28 -0°08'29	
behind sun end	7102 Mar 23 08:35	2° \mathbf{Y} 42'06		min. Earth dist.	7107 Oct 04 01:09	14° \mathbf{Y} 46'25 29.13467 AU	
max. Earth dist.	7102 Mar 22 21:01	2° \mathbf{Y} 41'04 31.18431 AU		direct	7107 Dec 23 02:18	13° \mathbf{Y} 22'56	
morning rise	7102 Apr 07 11:19	3° \mathbf{Y} 16'07		evening set	7108 Mar 20 04:21	15° \mathbf{Y} 17'17	
retrograde	7102 Jul 04 17:35	5° \mathbf{Y} 10'43					
opposition	7102 Sep 22 08:33	3° \mathbf{Y} 47'42 0°06'39		conjunction	7108 Apr 04 12:55	15° \mathbf{Y} 51'53 -0°09'23	
min. Earth dist.	7102 Sep 22 14:00	3° \mathbf{Y} 47'20 29.17882 AU		minimum elong	7108 Apr 04 12:55	15° \mathbf{Y} 51'53 0°09'26	
direct	7102 Dec 11 15:41	2° \mathbf{Y} 23'53		behind sun begin	7108 Apr 04 07:32	15° \mathbf{Y} 51'24	
evening set	7103 Mar 10 03:18	4° \mathbf{Y} 18'17		behind sun end	7108 Apr 04 18:18	15° \mathbf{Y} 52'22	
				max. Earth dist.	7108 Apr 04 11:57	15° \mathbf{Y} 51'48 31.13041 AU	
conjunction	7103 Mar 25 12:16	4° \mathbf{Y} 52'51 0°04'53		morning rise	7108 Apr 19 21:51	16° \mathbf{Y} 26'33	
minimum elong	7103 Mar 25 12:16	4° \mathbf{Y} 52'51 0°04'53		retrograde	7108 Jul 17 15:21	18° \mathbf{Y} 22'04	
behind sun begin	7103 Mar 25 06:01	4° \mathbf{Y} 52'17		opposition	7108 Oct 05 13:23	16° \mathbf{Y} 58'52 -0°11'30	
behind sun end	7103 Mar 25 18:30	4° \mathbf{Y} 53'24		min. Earth dist.	7108 Oct 05 13:07	16° \mathbf{Y} 58'53 29.12590 AU	
max. Earth dist.	7103 Mar 25 07:44	4° \mathbf{Y} 52'27 31.17357 AU		direct	7108 Dec 24 12:43	15° \mathbf{Y} 35'22	
morning rise	7103 Apr 09 20:50	5° \mathbf{Y} 27'23		evening set	7109 Mar 22 14:25	17° \mathbf{Y} 29'42	
retrograde	7103 Jul 07 06:07	7° \mathbf{Y} 22'07					
opposition	7103 Sep 24 21:11	5° \mathbf{Y} 59'04 0°03'38		conjunction	7109 Apr 06 23:03	18° \mathbf{Y} 04'19 -0°12'12	
min. Earth dist.	7103 Sep 25 00:37	5° \mathbf{Y} 58'50 29.16860 AU		minimum elong	7109 Apr 06 23:03	18° \mathbf{Y} 04'19 0°12'13	
direct	7103 Dec 14 04:56	4° \mathbf{Y} 35'16		behind sun begin	7109 Apr 06 18:41	18° \mathbf{Y} 03'56	
evening set	7104 Mar 11 13:03	6° \mathbf{Y} 29'40		behind sun end	7109 Apr 07 03:26	18° \mathbf{Y} 04'43	
				max. Earth dist.	7109 Apr 06 23:22	18° \mathbf{Y} 04'21 31.12105 AU	
conjunction	7104 Mar 26 21:51	7° \mathbf{Y} 04'14 0°02'02		morning rise	7109 Apr 22 07:55	18° \mathbf{Y} 39'00	
minimum elong	7104 Mar 26 21:52	7° \mathbf{Y} 04'14 0°02'02		retrograde	7109 Jul 20 02:25	20° \mathbf{Y} 34'41	
behind sun begin	7104 Mar 26 15:28	7° \mathbf{Y} 03'40		opposition	7109 Oct 08 02:25	19° \mathbf{Y} 11'25 -0°14'30	
behind sun end	7104 Mar 27 04:16	7° \mathbf{Y} 04'49		min. Earth dist.	7109 Oct 08 02:26	19° \mathbf{Y} 11'25 29.11601 AU	
max. Earth dist.	7104 Mar 26 17:50	7° \mathbf{Y} 03'54 31.16388 AU		direct	7109 Dec 26 23:42	17° \mathbf{Y} 47'58	
morning rise	7104 Apr 11 06:32	7° \mathbf{Y} 38'48		evening set	7110 Mar 25 00:38	19° \mathbf{Y} 42'15	
retrograde	7104 Jul 08 18:06	9° \mathbf{Y} 33'41					
opposition	7104 Sep 26 09:50	8° \mathbf{Y} 10'35 0°00'36		conjunction	7110 Apr 09 09:11	20° \mathbf{Y} 16'53 -0°14'59	
min. Earth dist.	7104 Sep 26 13:10	8° \mathbf{Y} 10'21 29.15949 AU		minimum elong	7110 Apr 09 09:11	20° \mathbf{Y} 16'53 0°15'01	
desc. node	7104 Dec 08 16:46	6° \mathbf{Y} 47'39		behind sun begin	7110 Apr 09 06:40	20° \mathbf{Y} 16'40	
direct	7104 Dec 15 15:41	6° \mathbf{Y} 46'51		behind sun end	7110 Apr 09 11:41	20° \mathbf{Y} 17'07	
evening set	7105 Mar 13 22:43	8° \mathbf{Y} 41'14		max. Earth dist.	7110 Apr 09 09:23	20° \mathbf{Y} 16'54 31.11064 AU	

morning rise	7110 Apr 24 18:12	20° Υ 51'35	direct	7117 Jan 11 12:29	3° δ 16'00
retrograde	7110 Jul 22 15:35	22° Υ 47'24	evening set	7117 Apr 08 23:32	5° δ 09'58
opposition	7110 Oct 10 15:32	21° Υ 24'04 -0°17'28			
min. Earth dist.	7110 Oct 10 14:03	21° Υ 24'10 29.10494 AU	conjunction	7117 Apr 24 08:17	5° δ 44'41 -0°33'43
direct	7110 Dec 29 10:25	20° Υ 00'37	minimum elong	7117 Apr 24 08:17	5° δ 44'41 0°33'45
evening set	7111 Mar 27 10:43	21° Υ 54'52	max. Earth dist.	7117 Apr 24 13:46	5° δ 45'12 31.02651 AU
			morning rise	7117 May 09 18:21	6° δ 19'32
conjunction	7111 Apr 11 19:17	22° Υ 29'31 -0°17'45	retrograde	7117 Aug 07 04:32	8° δ 16'10
minimum elong	7111 Apr 11 19:17	22° Υ 29'31 0°17'46	opposition	7117 Oct 26 11:13	6° δ 52'14 -0°37'23
max. Earth dist.	7111 Apr 11 20:08	22° Υ 29'35 31.09886 AU	min. Earth dist.	7117 Oct 26 04:23	6° δ 52'42 29.02198 AU
morning rise	7111 Apr 27 04:23	23° Υ 04'14	direct	7118 Jan 13 22:55	5° δ 28'47
retrograde	7111 Jul 25 03:44	25° Υ 00'10	evening set	7118 Apr 11 09:46	7° δ 22'46
opposition	7111 Oct 13 04:49	23° Υ 36'44 -0°20'26			
min. Earth dist.	7111 Oct 13 03:52	23° Υ 36'48 29.09262 AU	conjunction	7118 Apr 26 18:43	7° δ 57'30 -0°36'14
direct	7111 Dec 31 22:38	22° Υ 13'17	minimum elong	7118 Apr 26 18:43	7° δ 57'30 0°36'17
evening set	7112 Mar 28 20:51	24° Υ 07'28	max. Earth dist.	7118 Apr 27 01:50	7° δ 58'11 31.01731 AU
			morning rise	7118 May 12 04:51	8° δ 32'23
conjunction	7112 Apr 13 05:30	24° Υ 42'07 -0°20'30	retrograde	7118 Aug 09 15:47	10° δ 29'10
minimum elong	7112 Apr 13 05:30	24° Υ 42'07 0°20'32	opposition	7118 Oct 29 00:31	9° δ 05'13 -0°40'03
max. Earth dist.	7112 Apr 13 07:11	24° Υ 42'16 31.08615 AU	min. Earth dist.	7118 Oct 28 17:33	9° δ 05'42 29.01311 AU
morning rise	7112 Apr 28 14:43	25° Υ 16'51	direct	7119 Jan 16 09:42	7° δ 41'50
retrograde	7112 Jul 26 17:00	27° Υ 12'53	evening set	7119 Apr 13 20:02	9° δ 35'48
opposition	7112 Oct 14 17:43	25° Υ 49'21 -0°23'21			
min. Earth dist.	7112 Oct 14 15:15	25° Υ 49'31 29.07951 AU	conjunction	7119 Apr 29 05:02	10° δ 10'33 -0°38'42
direct	7113 Jan 02 11:56	24° Υ 25'51	minimum elong	7119 Apr 29 05:02	10° δ 10'33 0°38'44
evening set	7113 Mar 31 07:03	26° Υ 20'00	max. Earth dist.	7119 Apr 29 12:29	10° δ 11'16 31.00874 AU
			morning rise	7119 May 14 15:27	10° δ 45'28
conjunction	7113 Apr 15 15:37	26° Υ 54'39 -0°23'13	retrograde	7119 Aug 12 05:30	12° δ 42'25
minimum elong	7113 Apr 15 15:37	26° Υ 54'39 0°23'15	opposition	7119 Oct 31 13:42	11° δ 18'27 -0°42'40
max. Earth dist.	7113 Apr 15 17:26	26° Υ 54'49 31.07283 AU	min. Earth dist.	7119 Oct 31 05:05	11° δ 19'02 29.00462 AU
morning rise	7113 May 01 01:04	27° Υ 29'25	direct	7120 Jan 18 20:04	9° δ 55'06
retrograde	7113 Jul 29 05:17	29° Υ 25'32	evening set	7120 Apr 15 06:32	11° δ 49'05
opposition	7113 Oct 17 06:54	28° Υ 01'53 -0°26'14			
min. Earth dist.	7113 Oct 17 04:33	28° Υ 02'03 29.06632 AU	conjunction	7120 Apr 30 15:39	12° δ 23'52 -0°41'06
direct	7114 Jan 04 23:14	26° Υ 38'22	minimum elong	7120 Apr 30 15:39	12° δ 23'52 0°41'10
evening set	7114 Apr 02 17:01	28° Υ 32'27	max. Earth dist.	7120 Apr 30 23:49	12° δ 24'38 31.00013 AU
			morning rise	7120 May 16 02:16	12° δ 58'49
conjunction	7114 Apr 18 01:44	29° Υ 07'07 -0°25'54	retrograde	7120 Aug 13 18:18	14° δ 55'55
minimum elong	7114 Apr 18 01:44	29° Υ 07'07 0°25'57	opposition	7120 Nov 02 02:56	13° δ 31'55 -0°45'13
max. Earth dist.	7114 Apr 18 05:18	29° Υ 07'27 31.05981 AU	min. Earth dist.	7120 Nov 01 18:52	13° δ 32'28 28.99595 AU
morning rise	7114 May 03 11:10	29° Υ 41'54	direct	7121 Jan 20 07:26	12° δ 08'38
	7114 May 11 18:38	0° δ	evening set	7121 Apr 17 17:08	14° δ 02'38
retrograde	7114 Jul 31 16:16	1° δ 38'07			
opposition	7114 Oct 19 20:00	0° δ 14'22 -0°29'06	conjunction	7121 May 03 02:26	14° δ 37'26 -0°43'27
min. Earth dist.	7114 Oct 19 16:01	0° δ 14'39 29.05361 AU	minimum elong	7121 May 03 02:25	14° δ 37'26 0°43'30
	7114 Oct 28 15:57	30° κ Υ	max. Earth dist.	7121 May 03 11:24	14° δ 38'17 30.99123 AU
direct	7115 Jan 07 12:47	28° Υ 50'51		7121 May 13 00:21	15° δ
	7115 Mar 14 15:26	0° δ	morning rise	7121 May 18 13:12	15° δ 12'24
evening set	7115 Apr 05 03:14	0° δ 44'53	retrograde	7121 Aug 16 08:41	17° δ 09'40
			opposition	7121 Nov 04 16:12	15° δ 45'38 -0°47'41
conjunction	7115 Apr 20 11:50	1° δ 19'34 -0°28'33	min. Earth dist.	7121 Nov 04 06:42	15° δ 46'17 28.98664 AU
minimum elong	7115 Apr 20 11:50	1° δ 19'34 0°28'35		7121 Dec 04 02:19	15° κ δ
max. Earth dist.	7115 Apr 20 15:19	1° δ 19'53 31.04759 AU	direct	7122 Jan 22 19:57	14° δ 22'23
morning rise	7115 May 05 21:34	1° δ 54'22		7122 Mar 11 13:03	15° δ
retrograde	7115 Aug 03 05:06	3° δ 50'43	evening set	7122 Apr 20 03:51	16° δ 16'23
opposition	7115 Oct 22 09:07	2° δ 26'53 -0°31'54			
min. Earth dist.	7115 Oct 22 04:25	2° δ 27'12 29.04206 AU	conjunction	7122 May 05 13:07	16° δ 51'13 -0°45'44
direct	7116 Jan 10 00:00	1° δ 03'22	minimum elong	7122 May 05 13:07	16° δ 51'13 0°45'48
evening set	7116 Apr 06 13:16	2° δ 57'21	max. Earth dist.	7122 May 05 21:56	16° δ 52'03 30.98136 AU
			morning rise	7122 May 21 00:13	17° δ 26'13
conjunction	7116 Apr 21 22:06	3° δ 32'04 -0°31'09	retrograde	7122 Aug 18 22:02	19° δ 23'37
minimum elong	7116 Apr 21 22:06	3° δ 32'04 0°31'13	opposition	7122 Nov 07 05:44	17° δ 59'33 -0°50'06
max. Earth dist.	7116 Apr 22 03:37	3° δ 32'35 31.03652 AU	min. Earth dist.	7122 Nov 06 20:45	18° δ 00'10 28.97634 AU
morning rise	7116 May 07 07:52	4° δ 06'53	direct	7123 Jan 25 06:50	16° δ 36'18
retrograde	7116 Aug 04 16:00	6° δ 03'22	evening set	7123 Apr 22 14:35	18° δ 30'18
opposition	7116 Oct 23 22:12	4° δ 39'29 -0°34'40			
min. Earth dist.	7116 Oct 23 16:38	4° δ 39'52 29.03149 AU	conjunction	7123 May 08 00:11	19° δ 05'09 -0°47'57

minimum elong	7123 May 08 00:11	19° 8 05'09	0°48'01	morning rise	7129 Jun 05 07:08	3° II 03'45	
max. Earth dist.	7123 May 08 10:12	19° 8 06'06	30.97046 AU	retrograde	7129 Sep 03 12:58	5° II 01'47	
morning rise	7123 May 23 11:23	19° 8 40'11		opposition	7129 Nov 23 02:23	3° II 37'08	-1°04'41
retrograde	7123 Aug 21 10:50	21° 8 37'42		min. Earth dist.	7129 Nov 22 13:05	3° II 38'03	28.89624 AU
opposition	7123 Nov 09 19:02	20° 8 13'33	-0°52'26	direct	7130 Feb 09 19:46	2° II 13'45	
min. Earth dist.	7123 Nov 09 09:00	20° 8 14'14	28.96480 AU	evening set	7130 May 07 18:13	4° II 07'30	
direct	7124 Jan 27 20:43	18° 8 50'18					
evening set	7124 Apr 24 01:27	20° 8 44'16		conjunction	7130 May 23 05:14	4° II 42'29	-1°01'18
				minimum elong	7130 May 23 05:14	4° II 42'29	1°01'23
conjunction	7124 May 09 11:05	21° 8 19'08	-0°50'06	max. Earth dist.	7130 May 23 19:50	4° II 43'52	30.89182 AU
minimum elong	7124 May 09 11:05	21° 8 19'08	0°50'11	morning rise	7130 Jun 07 18:29	5° II 17'43	
max. Earth dist.	7124 May 09 20:23	21° 8 20'01	30.95840 AU	retrograde	7130 Sep 06 02:29	7° II 15'50	
morning rise	7124 May 24 22:44	21° 8 54'12		opposition	7130 Nov 25 15:31	5° II 51'09	-1°06'24
retrograde	7124 Aug 23 01:20	23° 8 51'48		min. Earth dist.	7130 Nov 25 00:28	5° II 52'11	28.88850 AU
opposition	7124 Nov 11 08:25	22° 8 27'34	-0°54'41	direct	7131 Feb 12 07:20	4° II 27'46	
min. Earth dist.	7124 Nov 10 22:18	22° 8 28'16	28.95236 AU	evening set	7131 May 10 05:20	6° II 21'32	
direct	7125 Jan 29 09:02	21° 8 04'18					
evening set	7125 Apr 26 12:09	22° 8 58'13		conjunction	7131 May 25 16:29	6° II 56'33	-1°02'52
				minimum elong	7131 May 25 16:29	6° II 56'33	1°02'56
conjunction	7125 May 11 22:07	23° 8 33'07	-0°52'10	max. Earth dist.	7131 May 26 07:10	6° II 57'56	30.88456 AU
minimum elong	7125 May 11 22:06	23° 8 33'07	0°52'14	morning rise	7131 Jun 10 06:11	7° II 31'48	
max. Earth dist.	7125 May 12 09:00	23° 8 34'09	30.94559 AU	retrograde	7131 Sep 08 16:04	9° II 30'02	
morning rise	7125 May 27 09:50	24° 8 08'12		opposition	7131 Nov 28 04:40	8° II 05'19	-1°08'02
retrograde	7125 Aug 25 12:23	26° 8 05'53		min. Earth dist.	7131 Nov 27 14:01	8° II 06'19	28.88179 AU
opposition	7125 Nov 13 21:39	24° 8 41'33	-0°56'52	direct	7132 Feb 14 17:26	6° II 41'57	
min. Earth dist.	7125 Nov 13 11:00	24° 8 42'17	28.93942 AU	evening set	7132 May 11 16:23	8° II 35'44	
direct	7126 Jan 31 22:20	23° 8 18'14					
evening set	7126 Apr 28 23:00	25° 8 12'07		conjunction	7132 May 27 03:58	9° II 10'46	-1°04'20
				minimum elong	7132 May 27 03:58	9° II 10'46	1°04'26
conjunction	7126 May 14 09:00	25° 8 47'01	-0°54'10	max. Earth dist.	7132 May 27 20:07	9° II 12'18	30.87815 AU
minimum elong	7126 May 14 09:00	25° 8 47'01	0°54'15	morning rise	7132 Jun 11 17:52	9° II 46'03	
max. Earth dist.	7126 May 14 19:41	25° 8 48'02	30.93283 AU	retrograde	7132 Sep 10 05:49	11° II 44'22	
morning rise	7126 May 29 21:10	26° 8 22'08		opposition	7132 Nov 29 17:45	10° II 19'38	-1°09'33
retrograde	7126 Aug 28 00:58	28° 8 19'54		min. Earth dist.	7132 Nov 29 01:56	10° II 20'43	28.87552 AU
opposition	7126 Nov 16 10:55	26° 8 55'28	-0°58'57	direct	7133 Feb 16 06:59	8° II 56'18	
min. Earth dist.	7126 Nov 15 23:13	26° 8 56'16	28.92702 AU	evening set	7133 May 14 03:44	10° II 50'06	
direct	7127 Feb 03 09:51	25° 8 32'07					
evening set	7127 May 01 09:39	27° 8 25'57		conjunction	7133 May 29 15:23	11° II 25'09	-1°05'43
				minimum elong	7133 May 29 15:23	11° II 25'09	1°05'47
conjunction	7127 May 16 19:58	28° 8 00'52	-0°56'05	max. Earth dist.	7133 May 30 06:54	11° II 26'38	30.87195 AU
minimum elong	7127 May 16 19:58	28° 8 00'52	0°56'08	morning rise	7133 Jun 14 05:46	12° II 00'28	
max. Earth dist.	7127 May 17 08:14	28° 8 02'02	30.92071 AU	retrograde	7133 Sep 12 21:04	13° II 58'54	
morning rise	7127 Jun 01 08:19	28° 8 36'01		opposition	7133 Dec 02 06:58	12° II 34'08	-1°10'58
	7127 Jul 15 15:54	0° II		min. Earth dist.	7133 Dec 01 15:12	12° II 35'13	28.86938 AU
retrograde	7127 Aug 30 11:59	0° II 33'51		direct	7134 Feb 18 18:31	11° II 10'49	
	7127 Oct 17 00:45	30° R 8		evening set	7134 May 16 15:04	13° II 04'38	
opposition	7127 Nov 19 00:11	29° 8 09'20	-1°00'57				
min. Earth dist.	7127 Nov 18 12:22	29° 8 10'09	28.91545 AU	conjunction	7134 Jun 01 03:10	13° II 39'43	-1°06'59
direct	7128 Feb 05 21:40	27° 8 45'58		minimum elong	7134 Jun 01 03:10	13° II 39'43	1°07'04
evening set	7128 May 02 20:32	29° 8 39'45		max. Earth dist.	7134 Jun 01 20:04	13° II 41'20	30.86557 AU
	7128 May 11 20:23	0° II		morning rise	7134 Jun 16 17:43	14° II 15'04	
conjunction	7128 May 18 07:02	0° II 14'42	-0°57'54	retrograde	7134 Sep 15 09:22	16° II 13'35	
minimum elong	7128 May 18 07:02	0° II 14'42	0°57'59	opposition	7134 Dec 04 20:10	14° II 48'49	-1°12'16
max. Earth dist.	7128 May 18 19:36	0° II 15'53	30.90980 AU	min. Earth dist.	7134 Dec 04 04:08	14° II 49'55	28.86270 AU
morning rise	7128 Jun 02 19:43	0° II 49'52		direct	7135 Feb 21 07:26	13° II 25'31	
retrograde	7128 Sep 01 01:23	2° II 47'48		evening set	7135 May 19 02:38	15° II 19'19	
opposition	7128 Nov 20 13:08	1° II 23'12	-1°02'52	conjunction	7135 Jun 03 14:56	15° II 54'26	-1°08'09
min. Earth dist.	7128 Nov 19 23:37	1° II 24'08	28.90520 AU	minimum elong	7135 Jun 03 14:56	15° II 54'26	1°08'13
	7129 Feb 03 23:22	30° R 8		max. Earth dist.	7135 Jun 04 07:03	15° II 55'58	30.85855 AU
direct	7129 Feb 07 08:46	29° 8 59'49		morning rise	7135 Jun 19 06:01	16° II 29'49	
	7129 Feb 10 17:33	0° II		retrograde	7135 Sep 17 23:53	18° II 28'24	
evening set	7129 May 05 07:27	1° II 53'36		opposition	7135 Dec 07 09:24	17° II 03'35	-1°13'28
				min. Earth dist.	7135 Dec 06 16:59	17° II 04'43	28.85526 AU
conjunction	7129 May 20 18:08	2° II 28'33	-0°59'39	direct	7136 Feb 23 19:24	15° II 40'17	
minimum elong	7129 May 20 18:08	2° II 28'33	0°59'43	evening set	7136 May 20 14:14	17° II 34'05	
max. Earth dist.	7129 May 21 07:33	2° II 29'50	30.90010 AU				

conjunction	7136 Jun 05 02:57	18°II09'14	-1°09'13	retrograde	7142 Oct 03 19:59	4°☾12'15	
minimum elong	7136 Jun 05 02:57	18°II09'14	1°09'18	min. Earth dist.	7142 Dec 22 09:28	2°☾48'24	28.80591 AU
max. Earth dist.	7136 Jun 05 19:55	18°II10'50	30.85051 AU	opposition	7142 Dec 23 04:05	2°☾47'06	-1°18'41
morning rise	7136 Jun 20 18:18	18°II44'38		direct	7143 Mar 11 05:00	1°☾23'37	
retrograde	7136 Sep 19 12:02	20°II43'16		evening set	7143 Jun 05 23:47	3°☾17'23	
opposition	7136 Dec 08 22:29	19°II18'25	-1°14'34				
min. Earth dist.	7136 Dec 08 06:36	19°II19'31	28.84680 AU	conjunction	7143 Jun 21 15:07	3°☾52'43	-1°13'43
direct	7137 Feb 25 07:53	17°II55'05		minimum elong	7143 Jun 21 15:07	3°☾52'43	1°13'48
evening set	7137 May 23 01:51	19°II48'51		max. Earth dist.	7143 Jun 22 11:25	3°☾54'39	30.80384 AU
				morning rise	7143 Jul 07 09:16	4°☾28'20	
conjunction	7137 Jun 07 14:53	20°II24'02	-1°10'11	retrograde	7143 Oct 06 08:37	6°☾27'15	
minimum elong	7137 Jun 07 14:53	20°II24'02	1°10'16	opposition	7143 Dec 25 16:52	5°☾02'07	-1°18'57
max. Earth dist.	7137 Jun 08 07:35	20°II25'37	30.84187 AU	min. Earth dist.	7143 Dec 24 21:44	5°☾03'27	28.80344 AU
morning rise	7137 Jun 23 06:40	20°II59'28		direct	7144 Mar 12 17:21	3°☾38'39	
retrograde	7137 Sep 22 01:47	22°II58'08		evening set	7144 Jun 07 11:49	5°☾32'27	
opposition	7137 Dec 11 11:34	21°II33'13	-1°15'32				
min. Earth dist.	7137 Dec 10 18:33	21°II34'24	28.83797 AU	conjunction	7144 Jun 23 03:25	6°☾07'48	-1°13'55
direct	7138 Feb 27 19:49	20°II09'50		minimum elong	7144 Jun 23 03:25	6°☾07'48	1°14'00
evening set	7138 May 25 13:21	22°II03'36		max. Earth dist.	7144 Jun 23 23:05	6°☾09'40	30.80199 AU
				morning rise	7144 Jul 08 22:07	6°☾43'27	
conjunction	7138 Jun 10 02:42	22°II38'47	-1°11'03	retrograde	7144 Oct 08 00:20	8°☾42'24	
minimum elong	7138 Jun 10 02:42	22°II38'47	1°11'08	min. Earth dist.	7144 Dec 26 10:01	7°☾18'39	28.80206 AU
max. Earth dist.	7138 Jun 10 19:52	22°II40'25	30.83296 AU	opposition	7144 Dec 27 05:32	7°☾17'18	-1°19'06
morning rise	7138 Jun 25 18:53	23°II14'16		direct	7145 Mar 15 05:33	5°☾53'51	
retrograde	7138 Sep 24 13:02	25°II12'58		evening set	7145 Jun 09 23:52	7°☾47'40	
min. Earth dist.	7138 Dec 13 08:19	23°II49'07	28.82930 AU				
opposition	7138 Dec 14 00:43	23°II47'59	-1°16'24	conjunction	7145 Jun 25 15:56	8°☾23'04	-1°14'00
direct	7139 Mar 02 07:07	22°II24'34		minimum elong	7145 Jun 25 15:56	8°☾23'04	1°14'04
evening set	7139 May 28 00:57	24°II18'18		max. Earth dist.	7145 Jun 26 12:41	8°☾25'02	30.80084 AU
				morning rise	7145 Jul 11 10:57	8°☾58'45	
conjunction	7139 Jun 12 14:44	24°II53'31	-1°11'48	retrograde	7145 Oct 10 13:42	10°☾57'44	
minimum elong	7139 Jun 12 14:44	24°II53'31	1°11'53	opposition	7145 Dec 29 18:24	9°☾32'39	-1°19'08
max. Earth dist.	7139 Jun 13 08:42	24°II55'13	30.82467 AU	min. Earth dist.	7145 Dec 28 23:22	9°☾33'58	28.80111 AU
morning rise	7139 Jun 28 07:17	25°II29'00		direct	7146 Mar 17 18:20	8°☾09'14	
retrograde	7139 Sep 27 02:15	27°II27'45		evening set	7146 Jun 12 11:59	10°☾03'05	
opposition	7139 Dec 16 13:28	26°II02'42	-1°17'09				
min. Earth dist.	7139 Dec 15 19:40	26°II03'56	28.82146 AU	conjunction	7146 Jun 28 04:27	10°☾38'30	-1°13'58
direct	7140 Mar 03 18:31	24°II39'15		minimum elong	7146 Jun 28 04:27	10°☾38'30	1°14'02
evening set	7140 May 29 12:42	26°II32'59		max. Earth dist.	7146 Jun 29 00:46	10°☾40'25	30.80003 AU
				morning rise	7146 Jul 13 23:58	11°☾14'13	
conjunction	7140 Jun 14 02:43	27°II08'13	-1°12'27	retrograde	7146 Oct 13 04:02	13°☾13'14	
minimum elong	7140 Jun 14 02:43	27°II08'13	1°12'32	min. Earth dist.	7146 Dec 31 11:24	11°☾49'32	28.80015 AU
max. Earth dist.	7140 Jun 14 20:35	27°II09'55	30.81731 AU	opposition	7147 Jan 01 07:10	11°☾48'10	-1°19'02
morning rise	7140 Jun 29 19:46	27°II43'45		direct	7147 Mar 20 06:26	10°☾24'45	
retrograde	7140 Sep 28 15:21	29°II42'32		evening set	7147 Jun 15 00:27	12°☾18'37	
min. Earth dist.	7140 Dec 17 09:08	28°II18'39	28.81483 AU				
opposition	7140 Dec 18 02:26	28°II17'27	-1°17'47	conjunction	7147 Jun 30 17:19	12°☾54'04	-1°13'49
direct	7141 Mar 06 04:37	26°II53'58		minimum elong	7147 Jun 30 17:19	12°☾54'04	1°13'53
evening set	7141 Jun 01 00:14	28°II47'42		max. Earth dist.	7147 Jul 01 13:34	12°☾55'59	30.79868 AU
				morning rise	7147 Jul 16 13:15	13°☾29'49	
conjunction	7141 Jun 16 14:46	29°II22'58	-1°12'59	retrograde	7147 Oct 15 16:03	15°☾28'50	
minimum elong	7141 Jun 16 14:46	29°II22'58	1°13'03	opposition	7148 Jan 03 19:56	14°☾03'46	-1°18'49
max. Earth dist.	7141 Jun 17 10:04	29°II24'48	30.81135 AU	min. Earth dist.	7148 Jan 03 01:21	14°☾05'04	28.79847 AU
morning rise	7141 Jul 02 08:03	29°II58'31		direct	7148 Mar 21 17:52	12°☾40'21	
	7141 Jul 03 00:05	0°☾		evening set	7148 Jun 16 12:56	14°☾34'13	
retrograde	7141 Oct 01 04:52	1°☾57'21					
opposition	7141 Dec 20 15:13	0°☾32'14	-1°18'17	conjunction	7148 Jul 02 06:19	15°☾09'42	-1°13'33
min. Earth dist.	7141 Dec 19 20:37	0°☾33'31	28.80957 AU	minimum elong	7148 Jul 02 06:19	15°☾09'42	1°13'38
	7142 Jan 09 11:06	30°☾II		max. Earth dist.	7148 Jul 03 02:30	15°☾11'37	30.79660 AU
direct	7142 Mar 08 18:01	29°II08'44		morning rise	7148 Jul 18 02:37	15°☾45'28	
	7142 May 03 10:43	0°☾		retrograde	7148 Oct 17 06:18	17°☾44'29	
evening set	7142 Jun 03 12:04	1°☾02'29		opposition	7149 Jan 05 08:36	16°☾19'24	-1°18'28
				min. Earth dist.	7149 Jan 04 13:14	16°☾20'45	28.79584 AU
conjunction	7142 Jun 19 02:49	1°☾37'47	-1°13'24	direct	7149 Mar 24 05:54	14°☾55'56	
minimum elong	7142 Jun 19 02:49	1°☾37'47	1°13'30	evening set	7149 Jun 19 01:23	16°☾49'48	
max. Earth dist.	7142 Jun 19 21:34	1°☾39'34	30.80687 AU				
morning rise	7142 Jul 04 20:42	2°☾13'22		conjunction	7149 Jul 04 19:04	17°☾25'18	-1°13'11

minimum elong	7149 Jul 04 19:04	17° Ω 25'18	1°13'15	opposition	7156 Jan 21 23:18	2° Ω 06'06	-1°12'48
max. Earth dist.	7149 Jul 05 14:33	17° Ω 27'08	30.79351 AU	min. Earth dist.	7156 Jan 21 04:07	2° Ω 07'27	28.78351 AU
morning rise	7149 Jul 20 15:55	18° Ω 01'05		direct	7156 Apr 08 18:11	0° Ω 42'21	
retrograde	7149 Oct 19 18:16	20° Ω 00'05		evening set	7156 Jul 04 17:24	2° Ω 36'13	
opposition	7150 Jan 07 21:23	18° Ω 34'57	-1°18'01				
min. Earth dist.	7150 Jan 07 03:12	18° Ω 36'13	28.79246 AU	conjunction	7156 Jul 20 14:21	3° Ω 11'54	-1°07'30
direct	7150 Mar 26 16:43	17° Ω 11'26		minimum elong	7156 Jul 20 14:21	3° Ω 11'54	1°07'35
evening set	7150 Jun 21 13:50	19° Ω 05'17		max. Earth dist.	7156 Jul 21 10:31	3° Ω 13'48	30.78409 AU
				morning rise	7156 Aug 05 14:12	3° Ω 47'51	
conjunction	7150 Jul 07 08:08	19° Ω 40'48	-1°12'42	retrograde	7156 Nov 04 16:23	5° Ω 46'32	
minimum elong	7150 Jul 07 08:08	19° Ω 40'48	1°12'47	opposition	7157 Jan 23 11:34	4° Ω 21'20	-1°11'32
max. Earth dist.	7150 Jul 08 04:22	19° Ω 42'42	30.79000 AU	min. Earth dist.	7157 Jan 22 17:19	4° Ω 22'37	28.78623 AU
morning rise	7150 Jul 23 05:18	20° Ω 16'36		direct	7157 Apr 11 05:41	2° Ω 57'36	
retrograde	7150 Oct 22 06:45	22° Ω 15'33		evening set	7157 Jul 07 06:02	4° Ω 51'30	
opposition	7151 Jan 10 09:50	20° Ω 50'22	-1°17'26				
min. Earth dist.	7151 Jan 09 15:00	20° Ω 51'41	28.78883 AU	conjunction	7157 Jul 23 03:30	5° Ω 27'12	-1°06'16
direct	7151 Mar 29 05:49	19° Ω 26'48		minimum elong	7157 Jul 23 03:30	5° Ω 27'12	1°06'20
evening set	7151 Jun 24 02:25	21° Ω 20'37		max. Earth dist.	7157 Jul 23 23:47	5° Ω 29'07	30.78742 AU
				morning rise	7157 Aug 08 03:44	6° Ω 03'11	
conjunction	7151 Jul 09 21:01	21° Ω 56'09	-1°12'06	retrograde	7157 Nov 07 07:14	8° Ω 01'51	
minimum elong	7151 Jul 09 21:01	21° Ω 56'09	1°12'11	opposition	7158 Jan 25 23:41	6° Ω 36'42	-1°10'09
max. Earth dist.	7151 Jul 10 16:10	21° Ω 57'58	30.78649 AU	min. Earth dist.	7158 Jan 25 04:33	6° Ω 38'03	28.78983 AU
morning rise	7151 Jul 25 18:48	22° Ω 31'59		direct	7158 Apr 13 17:39	5° Ω 13'00	
retrograde	7151 Oct 24 20:32	24° Ω 30'53		evening set	7158 Jul 09 19:04	7° Ω 06'57	
opposition	7152 Jan 12 22:21	23° Ω 05'39	-1°16'45				
min. Earth dist.	7152 Jan 12 04:03	23° Ω 06'56	28.78560 AU	conjunction	7158 Jul 25 16:52	7° Ω 42'40	-1°04'55
direct	7152 Mar 30 16:28	21° Ω 42'00		minimum elong	7158 Jul 25 16:52	7° Ω 42'40	1°05'00
evening set	7152 Jun 25 14:53	23° Ω 35'49		max. Earth dist.	7158 Jul 26 12:30	7° Ω 44'31	30.79121 AU
				morning rise	7158 Aug 10 17:36	8° Ω 18'41	
conjunction	7152 Jul 11 10:05	24° Ω 11'23	-1°11'24	retrograde	7158 Nov 09 19:06	10° Ω 17'20	
minimum elong	7152 Jul 11 10:05	24° Ω 11'23	1°11'28	opposition	7159 Jan 28 11:49	8° Ω 52'14	-1°08'39
max. Earth dist.	7152 Jul 12 06:21	24° Ω 13'18	30.78354 AU	min. Earth dist.	7159 Jan 27 18:06	8° Ω 53'29	28.79375 AU
morning rise	7152 Jul 27 08:06	24° Ω 47'14		direct	7159 Apr 16 03:58	7° Ω 28'33	
retrograde	7152 Oct 26 09:02	26° Ω 46'04		evening set	7159 Jul 12 08:07	9° Ω 22'33	
opposition	7153 Jan 14 10:37	25° Ω 20'49	-1°15'56				
min. Earth dist.	7153 Jan 13 16:03	25° Ω 22'07	28.78306 AU	conjunction	7159 Jul 28 06:31	9° Ω 58'18	-1°03'29
direct	7153 Apr 02 05:12	23° Ω 57'07		minimum elong	7159 Jul 28 06:31	9° Ω 58'18	1°03'32
evening set	7153 Jun 28 03:30	25° Ω 50'56		max. Earth dist.	7159 Jul 29 02:28	10° Ω 00'11	30.79504 AU
				morning rise	7159 Aug 13 07:32	10° Ω 34'20	
conjunction	7153 Jul 13 23:00	26° Ω 26'31	-1°10'35	retrograde	7159 Nov 12 07:48	12° Ω 32'56	
minimum elong	7153 Jul 13 23:00	26° Ω 26'31	1°10'39	opposition	7160 Jan 30 23:52	11° Ω 07'54	-1°07'04
max. Earth dist.	7153 Jul 14 18:23	26° Ω 28'21	30.78167 AU	min. Earth dist.	7160 Jan 30 05:53	11° Ω 09'10	28.79720 AU
morning rise	7153 Jul 29 21:36	27° Ω 02'23		direct	7160 Apr 17 16:23	9° Ω 44'13	
retrograde	7153 Oct 29 00:16	29° Ω 01'11		evening set	7160 Jul 13 21:23	11° Ω 38'15	
opposition	7154 Jan 16 22:57	27° Ω 35'55	-1°15'00				
min. Earth dist.	7154 Jan 16 04:07	27° Ω 37'14	28.78188 AU	conjunction	7160 Jul 29 20:03	12° Ω 14'02	-1°01'56
direct	7154 Apr 04 17:21	26° Ω 12'11		minimum elong	7160 Jul 29 20:03	12° Ω 14'02	1°01'59
evening set	7154 Jun 30 15:57	28° Ω 05'59		max. Earth dist.	7160 Jul 30 14:22	12° Ω 15'45	30.79809 AU
				morning rise	7160 Aug 14 21:35	12° Ω 50'04	
conjunction	7154 Jul 16 12:01	28° Ω 41'37	-1°09'40	retrograde	7160 Nov 13 21:18	14° Ω 48'39	
minimum elong	7154 Jul 16 12:01	28° Ω 41'37	1°09'44	opposition	7161 Feb 01 11:59	13° Ω 23'38	-1°05'21
max. Earth dist.	7154 Jul 17 08:29	28° Ω 43'32	30.78108 AU	min. Earth dist.	7161 Jan 31 19:06	13° Ω 24'49	28.79986 AU
morning rise	7154 Aug 01 10:57	29° Ω 17'30		direct	7161 Apr 20 02:11	11° Ω 59'54	
	7154 Aug 21 17:09	0° Ω		evening set	7161 Jul 16 10:31	13° Ω 53'58	
retrograde	7154 Oct 31 12:58	1° Ω 16'16					
	7155 Jan 14 02:30	30° Ω		conjunction	7161 Aug 01 09:48	14° Ω 29'46	-1°00'18
opposition	7155 Jan 19 11:16	29° Ω 50'59	-1°13'58	minimum elong	7161 Aug 01 09:48	14° Ω 29'46	1°00'22
min. Earth dist.	7155 Jan 18 16:52	29° Ω 52'17	28.78196 AU	max. Earth dist.	7161 Aug 02 04:33	14° Ω 31'32	30.80030 AU
direct	7155 Apr 07 06:09	28° Ω 27'14			7161 Aug 14 20:22	15° Ω	
	7155 Jun 23 10:26	0° Ω		morning rise	7161 Aug 17 11:33	15° Ω 05'49	
evening set	7155 Jul 03 04:39	0° Ω 21'04		retrograde	7161 Nov 16 09:32	17° Ω 04'19	
				opposition	7162 Feb 03 23:58	15° Ω 39'19	-1°03'34
conjunction	7155 Jul 19 01:09	0° Ω 56'43	-1°08'39	min. Earth dist.	7162 Feb 03 07:20	15° Ω 40'29	28.80157 AU
minimum elong	7155 Jul 19 01:09	0° Ω 56'43	1°08'43		7162 Feb 28 05:21	15° Ω	
max. Earth dist.	7155 Jul 19 21:04	0° Ω 58'36	30.78197 AU	direct	7162 Apr 22 14:54	14° Ω 15'33	
morning rise	7155 Aug 04 00:36	1° Ω 32'38			7162 Jun 13 10:50	15° Ω	
retrograde	7155 Nov 03 03:37	3° Ω 31'21		evening set	7162 Jul 18 23:44	16° Ω 09'36	

conjunction	7162 Aug 03 23:20	16°Ω45'25 -0°58'35	retrograde	7168 Dec 02 05:07	2°Π49'43
minimum elong	7162 Aug 03 23:21	16°Ω45'25 0°58'38	opposition	7169 Feb 19 09:02	1°Π24'44 -0°48'31
max. Earth dist.	7162 Aug 04 16:29	16°Ω47'02 30.80180 AU	min. Earth dist.	7169 Feb 18 18:14	1°Π25'46 28.82460 AU
morning rise	7162 Aug 20 01:41	17°Ω21'29	direct	7169 May 08 05:20	0°Π00'37
retrograde	7162 Nov 18 23:57	19°Ω19'53	evening set	7169 Aug 03 20:01	1°Π54'41
opposition	7163 Feb 06 11:54	17°Ω54'52 -1°01'40			
min. Earth dist.	7163 Feb 05 19:42	17°Ω56'01 28.80283 AU	conjunction	7169 Aug 19 22:27	2°Π30'37 -0°44'15
direct	7163 Apr 25 03:14	16°Ω31'02	minimum elong	7169 Aug 19 22:27	2°Π30'37 0°44'17
evening set	7163 Jul 21 12:56	18°Ω25'05	max. Earth dist.	7169 Aug 20 13:38	2°Π32'02 30.82834 AU
			morning rise	7169 Sep 05 03:07	3°Π06'45
conjunction	7163 Aug 06 13:06	19°Ω00'56 -0°56'46	retrograde	7169 Dec 04 17:54	5°Π04'22
minimum elong	7163 Aug 06 13:06	19°Ω00'56 0°56'49	opposition	7170 Feb 21 20:25	3°Π39'25 -0°46'03
max. Earth dist.	7163 Aug 07 06:43	19°Ω02'35 30.80290 AU	min. Earth dist.	7170 Feb 21 06:30	3°Π40'24 28.83296 AU
morning rise	7163 Aug 22 15:40	19°Ω37'00	direct	7170 May 10 14:49	2°Π15'19
retrograde	7163 Nov 21 11:41	21°Ω35'17	evening set	7170 Aug 06 09:15	4°Π09'25
opposition	7164 Feb 08 23:34	20°Ω10'15 -0°59'41			
min. Earth dist.	7164 Feb 08 08:18	20°Ω11'20 28.80392 AU	conjunction	7170 Aug 22 12:15	4°Π45'22 -0°41'54
direct	7164 Apr 26 15:56	18°Ω46'21	minimum elong	7170 Aug 22 12:15	4°Π45'22 0°41'55
evening set	7164 Jul 23 02:08	20°Ω40'24	max. Earth dist.	7170 Aug 23 04:03	4°Π46'51 30.83718 AU
			morning rise	7170 Sep 07 17:02	5°Π21'30
conjunction	7164 Aug 08 02:39	21°Ω16'15 -0°54'53	retrograde	7170 Dec 07 05:15	7°Π19'02
minimum elong	7164 Aug 08 02:40	21°Ω16'15 0°54'55	opposition	7171 Feb 24 07:42	5°Π54'11 -0°43'30
max. Earth dist.	7164 Aug 08 19:14	21°Ω17'48 30.80431 AU	min. Earth dist.	7171 Feb 23 18:02	5°Π55'09 28.84198 AU
morning rise	7164 Aug 24 05:41	21°Ω52'20	direct	7171 May 13 03:10	4°Π30'05
retrograde	7164 Nov 23 02:12	23°Ω50'30	evening set	7171 Aug 08 22:52	6°Π24'14
opposition	7165 Feb 10 11:13	22°Ω25'27 -0°57'37			
min. Earth dist.	7165 Feb 09 19:31	22°Ω26'33 28.80563 AU	conjunction	7171 Aug 25 02:02	7°Π00'12 -0°39'29
direct	7165 Apr 29 04:23	21°Ω01'28	minimum elong	7171 Aug 25 02:02	7°Π00'12 0°39'31
evening set	7165 Jul 25 15:10	22°Ω55'30	max. Earth dist.	7171 Aug 25 16:03	7°Π01'30 30.84639 AU
			morning rise	7171 Sep 10 07:13	7°Π36'20
conjunction	7165 Aug 10 16:06	23°Ω31'23 -0°52'54	retrograde	7171 Dec 09 18:36	9°Π33'47
minimum elong	7165 Aug 10 16:06	23°Ω31'23 0°52'57	opposition	7172 Feb 26 18:55	8°Π09'00 -0°40'53
max. Earth dist.	7165 Aug 11 08:50	23°Ω32'57 30.80638 AU	min. Earth dist.	7172 Feb 26 05:52	8°Π09'55 28.85118 AU
morning rise	7165 Aug 26 19:25	24°Ω07'28	direct	7172 May 14 13:58	6°Π44'54
retrograde	7165 Nov 25 14:59	26°Ω05'31	evening set	7172 Aug 10 12:24	8°Π39'07
opposition	7166 Feb 12 22:53	24°Ω40'27 -0°55'28			
min. Earth dist.	7166 Feb 12 08:17	24°Ω41'29 28.80825 AU	conjunction	7172 Aug 26 16:01	9°Π15'05 -0°37'01
direct	7166 May 01 17:10	23°Ω16'26	minimum elong	7172 Aug 26 16:01	9°Π15'05 0°37'02
evening set	7166 Jul 28 04:19	25°Ω10'27	max. Earth dist.	7172 Aug 27 06:18	9°Π16'25 30.85531 AU
			morning rise	7172 Sep 11 21:16	9°Π51'14
conjunction	7166 Aug 13 05:43	25°Ω46'20 -0°50'51	retrograde	7172 Dec 11 06:20	11°Π48'35
minimum elong	7166 Aug 13 05:43	25°Ω46'20 0°50'54	opposition	7173 Feb 28 06:17	10°Π23'52 -0°38'13
max. Earth dist.	7166 Aug 13 22:11	25°Ω47'53 30.80972 AU	min. Earth dist.	7173 Feb 27 18:27	10°Π24'42 28.85974 AU
morning rise	7166 Aug 29 09:22	26°Ω22'26	direct	7173 May 17 01:43	8°Π59'46
retrograde	7166 Nov 28 04:56	28°Ω20'22	evening set	7173 Aug 13 01:54	10°Π54'01
opposition	7167 Feb 15 10:12	26°Ω55'18 -0°53'14			
min. Earth dist.	7167 Feb 14 18:49	26°Ω56'23 28.81222 AU	conjunction	7173 Aug 29 05:47	11°Π29'59 -0°34'30
direct	7167 May 04 06:16	25°Ω31'13	minimum elong	7173 Aug 29 05:47	11°Π29'59 0°34'32
evening set	7167 Jul 30 17:37	27°Ω25'16	max. Earth dist.	7173 Aug 29 18:24	11°Π31'10 30.86358 AU
			morning rise	7173 Sep 14 11:24	12°Π06'08
conjunction	7167 Aug 15 19:19	28°Ω01'10 -0°48'43	retrograde	7173 Dec 13 20:34	14°Π03'23
minimum elong	7167 Aug 15 19:19	28°Ω01'10 0°48'46	opposition	7174 Mar 02 17:33	12°Π38'43 -0°35'30
max. Earth dist.	7167 Aug 16 11:12	28°Ω02'39 30.81438 AU	min. Earth dist.	7174 Mar 02 05:46	12°Π39'33 28.86754 AU
morning rise	7167 Aug 31 23:21	28°Ω37'17	direct	7174 May 19 14:03	11°Π14'35
	7167 Oct 14 22:17	0°Π	evening set	7174 Aug 15 15:33	13°Π08'51
retrograde	7167 Nov 30 16:27	0°Π35'05			
	7168 Jan 17 08:06	30°κΩ	conjunction	7174 Aug 31 19:47	13°Π44'50 -0°31'55
opposition	7168 Feb 17 21:44	29°Ω10'03 -0°50'55	minimum elong	7174 Aug 31 19:47	13°Π44'50 0°31'57
min. Earth dist.	7168 Feb 17 07:31	29°Ω11'03 28.81768 AU	max. Earth dist.	7174 Sep 01 07:58	13°Π45'58 30.87090 AU
direct	7168 May 05 16:57	27°Ω45'57	morning rise	7174 Sep 17 01:33	14°Π20'59
evening set	7168 Aug 01 06:41	29°Ω39'59	retrograde	7174 Dec 16 08:58	16°Π18'06
	7168 Aug 10 07:15	0°Π	opposition	7175 Mar 05 04:42	14°Π53'28 -0°32'43
			min. Earth dist.	7175 Mar 04 18:37	14°Π54'10 28.87449 AU
conjunction	7168 Aug 17 08:54	0°Π15'54 -0°46'31	direct	7175 May 22 02:47	13°Π29'18
minimum elong	7168 Aug 17 08:54	0°Π15'54 0°46'33	evening set	7175 Aug 18 05:09	15°Π23'34
max. Earth dist.	7168 Aug 18 01:18	0°Π17'26 30.82065 AU			
morning rise	7168 Sep 02 13:06	0°Π52'01	conjunction	7175 Sep 03 09:43	15°Π59'34 -0°29'18

minimum elong	7175 Sep 03 09:43	15° <u>0</u> 59'34	0°29'20	morning rise	7181 Oct 03 02:17	0° <u>0</u> 01'04
max. Earth dist.	7175 Sep 03 20:52	16° <u>0</u> 00'36	30.87771 AU	retrograde	7181 Dec 31 19:48	1° <u>0</u> 57'14
morning rise	7175 Sep 19 15:42	16° <u>0</u> 35'43		opposition	7182 Mar 20 08:32	0° <u>0</u> 32'54 -0°12'14
retrograde	7175 Dec 18 22:35	18° <u>0</u> 32'42		min. Earth dist.	7182 Mar 20 01:45	0° <u>0</u> 33'23 28.93480 AU
opposition	7176 Mar 06 15:42	17° <u>0</u> 08'04	-0°29'54		7182 Apr 09 06:26	30° <u>0</u> 08'00
min. Earth dist.	7176 Mar 06 05:19	17° <u>0</u> 08'48	28.88106 AU	direct	7182 Jun 06 11:23	29° <u>0</u> 08'32
direct	7176 May 23 16:18	15° <u>0</u> 43'52			7182 Aug 02 04:59	0° <u>0</u>
evening set	7176 Aug 19 18:39	17° <u>0</u> 38'09		evening set	7182 Sep 03 03:16	1° <u>0</u> 02'57
conjunction	7176 Sep 04 23:23	18° <u>0</u> 14'09	-0°26'39	conjunction	7182 Sep 19 09:19	1° <u>0</u> 38'57 -0°10'05
minimum elong	7176 Sep 04 23:23	18° <u>0</u> 14'09	0°26'40	minimum elong	7182 Sep 19 09:19	1° <u>0</u> 38'57 0°10'04
max. Earth dist.	7176 Sep 05 09:37	18° <u>0</u> 15'06	30.88418 AU	behind sun begin	7182 Sep 19 04:04	1° <u>0</u> 38'29
morning rise	7176 Sep 21 05:33	18° <u>0</u> 50'17		behind sun end	7182 Sep 19 14:34	1° <u>0</u> 39'25
retrograde	7176 Dec 20 10:11	20° <u>0</u> 47'08		max. Earth dist.	7182 Sep 19 16:20	1° <u>0</u> 39'35 30.94124 AU
opposition	7177 Mar 09 02:46	19° <u>0</u> 22'32	-0°27'02	morning rise	7182 Oct 05 16:07	2° <u>0</u> 15'03
min. Earth dist.	7177 Mar 08 17:57	19° <u>0</u> 23'09	28.88767 AU	retrograde	7183 Jan 03 08:39	4° <u>0</u> 11'06
direct	7177 May 26 03:24	17° <u>0</u> 58'17		opposition	7183 Mar 22 19:01	2° <u>0</u> 46'52 -0°09'12
evening set	7177 Aug 22 08:03	19° <u>0</u> 52'34		min. Earth dist.	7183 Mar 22 12:09	2° <u>0</u> 47'21 28.94781 AU
conjunction	7177 Sep 07 13:11	20° <u>0</u> 28'34	-0°23'58	direct	7183 Jun 08 23:10	1° <u>0</u> 22'31
minimum elong	7177 Sep 07 13:11	20° <u>0</u> 28'34	0°23'59	evening set	7183 Sep 05 16:51	3° <u>0</u> 16'59
max. Earth dist.	7177 Sep 07 23:28	20° <u>0</u> 29'31	30.89108 AU	conjunction	7183 Sep 21 23:05	3° <u>0</u> 52'59 -0°07'15
morning rise	7177 Sep 23 19:25	21° <u>0</u> 04'42		minimum elong	7183 Sep 21 23:05	3° <u>0</u> 52'59 0°07'15
retrograde	7177 Dec 22 23:06	23° <u>0</u> 01'24		behind sun begin	7183 Sep 21 17:03	3° <u>0</u> 52'27
opposition	7178 Mar 11 13:31	21° <u>0</u> 36'50	-0°24'08	behind sun end	7183 Sep 22 05:08	3° <u>0</u> 53'32
min. Earth dist.	7178 Mar 11 04:29	21° <u>0</u> 37'28	28.89480 AU	max. Earth dist.	7183 Sep 22 05:58	3° <u>0</u> 53'36 30.95441 AU
direct	7178 May 28 16:17	20° <u>0</u> 12'32		morning rise	7183 Oct 08 05:48	4° <u>0</u> 29'04
evening set	7178 Aug 24 21:35	22° <u>0</u> 06'49		retrograde	7184 Jan 05 20:10	6° <u>0</u> 25'01
conjunction	7178 Sep 10 02:49	22° <u>0</u> 42'50	-0°21'14	opposition	7184 Mar 24 05:46	5° <u>0</u> 00'52 -0°06'09
minimum elong	7178 Sep 10 02:49	22° <u>0</u> 42'50	0°21'14	min. Earth dist.	7184 Mar 24 00:33	5° <u>0</u> 01'14 28.96105 AU
max. Earth dist.	7178 Sep 10 11:40	22° <u>0</u> 43'39	30.89861 AU	direct	7184 Jun 10 11:21	3° <u>0</u> 36'33
morning rise	7178 Sep 26 09:20	23° <u>0</u> 18'58		evening set	7184 Sep 07 06:22	5° <u>0</u> 31'04
retrograde	7178 Dec 25 10:56	25° <u>0</u> 15'31		conjunction	7184 Sep 23 12:42	6° <u>0</u> 07'04 -0°04'24
opposition	7179 Mar 14 00:23	23° <u>0</u> 50'59	-0°21'12	minimum elong	7184 Sep 23 12:42	6° <u>0</u> 07'04 0°04'23
min. Earth dist.	7179 Mar 13 16:21	23° <u>0</u> 51'33	28.90289 AU	behind sun begin	7184 Sep 23 06:13	6° <u>0</u> 06'30
direct	7179 May 31 02:13	22° <u>0</u> 26'38		behind sun end	7184 Sep 23 19:10	6° <u>0</u> 07'39
evening set	7179 Aug 27 10:58	24° <u>0</u> 20'57		max. Earth dist.	7184 Sep 23 18:25	6° <u>0</u> 07'34 30.96757 AU
conjunction	7179 Sep 12 16:34	24° <u>0</u> 56'57	-0°18'29	morning rise	7184 Oct 09 19:27	6° <u>0</u> 43'08
minimum elong	7179 Sep 12 16:34	24° <u>0</u> 56'57	0°18'29	retrograde	7185 Jan 07 09:20	8° <u>0</u> 38'59
max. Earth dist.	7179 Sep 13 01:56	24° <u>0</u> 57'49	30.90723 AU	opposition	7185 Mar 26 16:23	7° <u>0</u> 14'55 -0°03'06
morning rise	7179 Sep 28 23:00	25° <u>0</u> 33'05		min. Earth dist.	7185 Mar 26 11:00	7° <u>0</u> 15'17 28.97386 AU
retrograde	7179 Dec 27 20:58	27° <u>0</u> 29'29		direct	7185 Jun 13 00:24	5° <u>0</u> 50'35
opposition	7180 Mar 15 11:03	26° <u>0</u> 05'00	-0°18'14	evening set	7185 Sep 09 20:06	7° <u>0</u> 45'09
min. Earth dist.	7180 Mar 15 03:09	26° <u>0</u> 05'34	28.91207 AU	conjunction	7185 Sep 26 02:30	8° <u>0</u> 21'09 -0°01'31
direct	7180 Jun 01 14:46	24° <u>0</u> 40'39		minimum elong	7185 Sep 26 02:28	8° <u>0</u> 21'09 0°01'31
evening set	7180 Aug 29 00:27	26° <u>0</u> 34'59		behind sun begin	7185 Sep 25 19:53	8° <u>0</u> 20'34
conjunction	7180 Sep 14 06:06	27° <u>0</u> 10'59	-0°15'42	behind sun end	7185 Sep 26 09:04	8° <u>0</u> 21'44
minimum elong	7180 Sep 14 06:05	27° <u>0</u> 10'59	0°15'42	max. Earth dist.	7185 Sep 26 06:59	8° <u>0</u> 21'31 30.97989 AU
behind sun begin	7180 Sep 14 05:22	27° <u>0</u> 10'55		morning rise	7185 Oct 12 09:12	8° <u>0</u> 57'11
behind sun end	7180 Sep 14 06:49	27° <u>0</u> 11'03		retrograde	7186 Jan 09 21:28	10° <u>0</u> 52'54
max. Earth dist.	7180 Sep 14 13:52	27° <u>0</u> 11'42	30.91719 AU	opposition	7186 Mar 29 03:04	9° <u>0</u> 28'54 -0°00'02
morning rise	7180 Sep 30 12:46	27° <u>0</u> 47'06		min. Earth dist.	7186 Mar 28 23:37	9° <u>0</u> 29'09 28.98575 AU
retrograde	7180 Dec 29 08:59	29° <u>0</u> 43'23		asc. node	7186 Apr 03 01:05	9° <u>0</u> 20'36
opposition	7181 Mar 17 21:47	28° <u>0</u> 18'58	-0°15'15	direct	7186 Jun 15 11:36	8° <u>0</u> 04'34
min. Earth dist.	7181 Mar 17 14:04	28° <u>0</u> 19'30	28.92282 AU	evening set	7186 Sep 12 09:45	9° <u>0</u> 59'09
direct	7181 Jun 04 00:45	26° <u>0</u> 54'35		conjunction	7186 Sep 28 16:21	10° <u>0</u> 35'08 0°01'26
evening set	7181 Aug 31 13:41	28° <u>0</u> 48'57		minimum elong	7186 Sep 28 16:21	10° <u>0</u> 35'08 0°01'28
conjunction	7181 Sep 16 19:40	29° <u>0</u> 24'58	-0°12'54	behind sun begin	7186 Sep 28 09:45	10° <u>0</u> 34'33
minimum elong	7181 Sep 16 19:40	29° <u>0</u> 24'58	0°12'54	behind sun end	7186 Sep 28 22:56	10° <u>0</u> 35'43
behind sun begin	7181 Sep 16 15:44	29° <u>0</u> 24'37		max. Earth dist.	7186 Sep 28 20:14	10° <u>0</u> 35'27 30.99124 AU
behind sun end	7181 Sep 16 23:36	29° <u>0</u> 25'19		morning rise	7186 Oct 14 22:59	11° <u>0</u> 11'09
max. Earth dist.	7181 Sep 17 04:07	29° <u>0</u> 25'44	30.92860 AU	retrograde	7187 Jan 12 10:38	13° <u>0</u> 06'43
	7181 Oct 02 14:36	0° <u>0</u>		opposition	7187 Mar 31 13:39	11° <u>0</u> 42'47 0°03'01
				min. Earth dist.	7187 Mar 31 10:24	11° <u>0</u> 43'00 28.99643 AU

direct	7187 Jun 18 01:32	10° <u>♎</u> 18'24		retrograde	7193 Jan 25 02:47	26° <u>♎</u> 25'28	
evening set	7187 Sep 14 23:29	12° <u>♎</u> 13'00		opposition	7193 Apr 13 03:58	25° <u>♎</u> 01'44	0°20'59
				min. Earth dist.	7193 Apr 13 05:32	25° <u>♎</u> 01'38	29.05411 AU
conjunction	7187 Oct 01 06:00	12° <u>♎</u> 48'59	0°04'19	direct	7193 Jun 30 22:17	23° <u>♎</u> 37'07	
minimum elong	7187 Oct 01 05:59	12° <u>♎</u> 48'59	0°04'19	evening set	7193 Sep 28 07:37	25° <u>♎</u> 31'46	
behind sun begin	7187 Sep 30 23:30	12° <u>♎</u> 48'24					
behind sun end	7187 Oct 01 12:28	12° <u>♎</u> 49'33		conjunction	7193 Oct 14 14:10	26° <u>♎</u> 07'39	0°21'01
max. Earth dist.	7187 Oct 01 08:00	12° <u>♎</u> 49'07	31.00139 AU	minimum elong	7193 Oct 14 14:10	26° <u>♎</u> 07'39	0°21'02
morning rise	7187 Oct 17 12:39	13° <u>♎</u> 24'59		max. Earth dist.	7193 Oct 14 12:18	26° <u>♎</u> 07'29	31.05996 AU
retrograde	7188 Jan 14 21:58	15° <u>♎</u> 20'23		morning rise	7193 Oct 30 20:04	26° <u>♎</u> 43'29	
opposition	7188 Apr 02 00:13	13° <u>♎</u> 56'28	0°06'03	retrograde	7194 Jan 27 14:56	28° <u>♎</u> 38'01	
min. Earth dist.	7188 Apr 01 22:23	13° <u>♎</u> 56'36	29.00622 AU	opposition	7194 Apr 15 14:02	27° <u>♎</u> 14'22	0°23'53
direct	7188 Jun 19 12:32	12° <u>♎</u> 32'03		min. Earth dist.	7194 Apr 15 15:03	27° <u>♎</u> 14'18	29.06614 AU
evening set	7188 Sep 16 12:58	14° <u>♎</u> 26'39		direct	7194 Jul 03 10:38	25° <u>♎</u> 49'44	
				evening set	7194 Sep 30 20:55	27° <u>♎</u> 44'27	
conjunction	7188 Oct 02 19:40	15° <u>♎</u> 02'37	0°07'08				
minimum elong	7188 Oct 02 19:40	15° <u>♎</u> 02'37	0°07'10	conjunction	7194 Oct 17 03:22	28° <u>♎</u> 20'19	0°23'42
behind sun begin	7188 Oct 02 13:37	15° <u>♎</u> 02'04		minimum elong	7194 Oct 17 03:22	28° <u>♎</u> 20'19	0°23'45
behind sun end	7188 Oct 03 01:43	15° <u>♎</u> 03'09		max. Earth dist.	7194 Oct 17 00:51	28° <u>♎</u> 20'05	31.07247 AU
max. Earth dist.	7188 Oct 02 21:44	15° <u>♎</u> 02'46	31.01082 AU	morning rise	7194 Nov 02 09:03	28° <u>♎</u> 56'08	
morning rise	7188 Oct 19 02:07	15° <u>♎</u> 38'35			7194 Dec 04 21:58	0° <u>♎</u>	
retrograde	7189 Jan 16 08:13	17° <u>♎</u> 33'49		retrograde	7195 Jan 30 02:31	0° <u>♎</u> 50'34	
opposition	7189 Apr 04 10:39	16° <u>♎</u> 09'57	0°09'05		7195 Mar 28 22:05	30° <u>♎</u>	
min. Earth dist.	7189 Apr 04 09:23	16° <u>♎</u> 10'02	29.01532 AU	opposition	7195 Apr 18 00:22	29° <u>♎</u> 27'00	0°26'45
direct	7189 Jun 22 01:23	14° <u>♎</u> 45'29		min. Earth dist.	7195 Apr 18 02:51	29° <u>♎</u> 26'50	29.07916 AU
evening set	7189 Sep 19 02:26	16° <u>♎</u> 40'04		direct	7195 Jul 05 21:33	28° <u>♎</u> 02'25	
				evening set	7195 Oct 03 10:03	29° <u>♎</u> 57'11	
conjunction	7189 Oct 05 09:02	17° <u>♎</u> 16'01	0°09'57		7195 Oct 04 17:13	0° <u>♎</u>	
minimum elong	7189 Oct 05 09:02	17° <u>♎</u> 16'01	0°09'58				
behind sun begin	7189 Oct 05 03:45	17° <u>♎</u> 15'33		conjunction	7195 Oct 19 16:28	0° <u>♎</u> 33'02	0°26'22
behind sun end	7189 Oct 05 14:19	17° <u>♎</u> 16'29		minimum elong	7195 Oct 19 16:28	0° <u>♎</u> 33'02	0°26'25
max. Earth dist.	7189 Oct 05 09:06	17° <u>♎</u> 16'01	31.01984 AU	max. Earth dist.	7195 Oct 19 13:47	0° <u>♎</u> 32'47	31.08582 AU
morning rise	7189 Oct 21 15:35	17° <u>♎</u> 51'58		morning rise	7195 Nov 04 21:52	1° <u>♎</u> 08'50	
retrograde	7190 Jan 18 19:51	19° <u>♎</u> 47'03		retrograde	7196 Feb 01 15:16	3° <u>♎</u> 03'10	
opposition	7190 Apr 06 21:03	18° <u>♎</u> 23'12	0°12'06	opposition	7196 Apr 19 10:29	1° <u>♎</u> 39'43	0°29'34
min. Earth dist.	7190 Apr 06 20:23	18° <u>♎</u> 23'14	29.02433 AU	min. Earth dist.	7196 Apr 19 12:56	1° <u>♎</u> 39'32	29.09257 AU
direct	7190 Jun 24 11:55	16° <u>♎</u> 58'40		direct	7196 Jul 07 11:07	0° <u>♎</u> 15'09	
evening set	7190 Sep 21 15:51	18° <u>♎</u> 53'15		evening set	7196 Oct 04 23:22	2° <u>♎</u> 10'00	
conjunction	7190 Oct 07 22:36	19° <u>♎</u> 29'12	0°12'45	conjunction	7196 Oct 21 05:31	2° <u>♎</u> 45'50	0°28'59
minimum elong	7190 Oct 07 22:36	19° <u>♎</u> 29'12	0°12'47	minimum elong	7196 Oct 21 05:31	2° <u>♎</u> 45'50	0°29'03
behind sun begin	7190 Oct 07 18:36	19° <u>♎</u> 28'50		max. Earth dist.	7196 Oct 21 01:19	2° <u>♎</u> 45'27	31.09920 AU
behind sun end	7190 Oct 08 02:36	19° <u>♎</u> 29'33		morning rise	7196 Nov 06 10:47	3° <u>♎</u> 21'36	
max. Earth dist.	7190 Oct 07 22:59	19° <u>♎</u> 29'14	31.02880 AU	retrograde	7197 Feb 03 02:39	5° <u>♎</u> 15'51	
morning rise	7190 Oct 24 04:52	20° <u>♎</u> 05'07		opposition	7197 Apr 21 20:44	3° <u>♎</u> 52'30	0°32'21
retrograde	7191 Jan 21 05:25	22° <u>♎</u> 00'02		min. Earth dist.	7197 Apr 22 00:28	3° <u>♎</u> 52'14	29.10589 AU
opposition	7191 Apr 09 07:20	20° <u>♎</u> 36'13	0°15'05	direct	7197 Jul 09 21:49	2° <u>♎</u> 27'58	
min. Earth dist.	7191 Apr 09 07:51	20° <u>♎</u> 36'11	29.03343 AU	evening set	7197 Oct 07 12:31	4° <u>♎</u> 22'52	
direct	7191 Jun 26 22:58	19° <u>♎</u> 11'38					
evening set	7191 Sep 24 05:17	21° <u>♎</u> 06'15		conjunction	7197 Oct 23 18:42	4° <u>♎</u> 58'41	0°31'34
				minimum elong	7197 Oct 23 18:42	4° <u>♎</u> 58'41	0°31'37
conjunction	7191 Oct 10 11:53	21° <u>♎</u> 42'09	0°15'32	max. Earth dist.	7197 Oct 23 14:30	4° <u>♎</u> 58'18	31.11210 AU
minimum elong	7191 Oct 10 11:53	21° <u>♎</u> 42'09	0°15'33	morning rise	7197 Nov 08 23:36	5° <u>♎</u> 34'25	
behind sun begin	7191 Oct 10 10:44	21° <u>♎</u> 42'03		retrograde	7198 Feb 05 13:13	7° <u>♎</u> 28'34	
behind sun end	7191 Oct 10 13:01	21° <u>♎</u> 42'15		opposition	7198 Apr 24 07:00	6° <u>♎</u> 05'18	0°35'04
max. Earth dist.	7191 Oct 10 10:44	21° <u>♎</u> 42'03	31.03825 AU	min. Earth dist.	7198 Apr 24 11:27	6° <u>♎</u> 05'00	29.11822 AU
morning rise	7191 Oct 26 18:09	22° <u>♎</u> 18'03		direct	7198 Jul 12 10:32	4° <u>♎</u> 40'47	
retrograde	7192 Jan 23 16:48	24° <u>♎</u> 12'50		evening set	7198 Oct 10 01:57	6° <u>♎</u> 35'43	
opposition	7192 Apr 10 17:36	22° <u>♎</u> 49'03	0°18'03				
min. Earth dist.	7192 Apr 10 17:52	22° <u>♎</u> 49'02	29.04329 AU	conjunction	7198 Oct 26 07:48	7° <u>♎</u> 11'31	0°34'06
direct	7192 Jun 28 10:45	21° <u>♎</u> 24'26		minimum elong	7198 Oct 26 07:47	7° <u>♎</u> 11'31	0°34'09
evening set	7192 Sep 25 18:23	23° <u>♎</u> 19'03		max. Earth dist.	7198 Oct 26 01:21	7° <u>♎</u> 10'56	31.12386 AU
				morning rise	7198 Nov 11 12:33	7° <u>♎</u> 47'14	
conjunction	7192 Oct 12 01:01	23° <u>♎</u> 54'57	0°18'17	retrograde	7199 Feb 08 01:09	9° <u>♎</u> 41'15	
minimum elong	7192 Oct 12 01:00	23° <u>♎</u> 54'57	0°18'19	opposition	7199 Apr 26 17:10	8° <u>♎</u> 18'05	0°37'45
max. Earth dist.	7192 Oct 12 00:03	23° <u>♎</u> 54'52	31.04848 AU	min. Earth dist.	7199 Apr 26 22:20	8° <u>♎</u> 17'43	29.12945 AU
morning rise	7192 Oct 28 06:59	24° <u>♎</u> 30'49		direct	7199 Jul 14 21:04	6° <u>♎</u> 53'32	

evening set	7199 Oct 12 15:08	8° \mathbb{M} 48'30		max. Earth dist.	7205 Nov 10 13:24	22° \mathbb{M} 35'28	31.18735 AU
				morning rise	7205 Nov 27 03:07	23° \mathbb{M} 11'57	
conjunction	7199 Oct 28 20:58	9° \mathbb{M} 24'17	0°36'34	retrograde	7206 Feb 23 00:34	25° \mathbb{M} 05'04	
minimum elong	7199 Oct 28 20:58	9° \mathbb{M} 24'17	0°36'37	opposition	7206 May 11 15:51	23° \mathbb{M} 42'05	0°54'37
max. Earth dist.	7199 Oct 28 14:35	9° \mathbb{M} 23'42	31.13441 AU	min. Earth dist.	7206 May 12 01:32	23° \mathbb{M} 41'25	29.19300 AU
morning rise	7199 Nov 14 01:15	9° \mathbb{M} 59'58		direct	7206 Jul 30 06:58	22° \mathbb{M} 17'16	
retrograde	7200 Feb 10 10:22	11° \mathbb{M} 53'52		evening set	7206 Oct 28 08:51	24° \mathbb{M} 12'16	
opposition	7200 Apr 28 03:30	10° \mathbb{M} 30'44	0°40'21				
min. Earth dist.	7200 Apr 28 10:05	10° \mathbb{M} 30'16	29.13942 AU	conjunction	7206 Nov 13 13:01	24° \mathbb{M} 47'50	0°52'08
direct	7200 Jul 16 08:11	9° \mathbb{M} 06'10		minimum elong	7206 Nov 13 13:01	24° \mathbb{M} 47'50	0°52'12
evening set	7200 Oct 14 04:11	11° \mathbb{M} 01'08		max. Earth dist.	7206 Nov 13 02:24	24° \mathbb{M} 46'51	31.19824 AU
				morning rise	7206 Nov 29 14:59	25° \mathbb{M} 23'15	
conjunction	7200 Oct 30 09:42	11° \mathbb{M} 36'53	0°38'59	retrograde	7207 Feb 25 10:46	27° \mathbb{M} 16'15	
minimum elong	7200 Oct 30 09:41	11° \mathbb{M} 36'53	0°39'03	opposition	7207 May 14 01:50	25° \mathbb{M} 53'21	0°56'44
max. Earth dist.	7200 Oct 30 01:30	11° \mathbb{M} 36'08	31.14392 AU	min. Earth dist.	7207 May 14 11:45	25° \mathbb{M} 52'40	29.20434 AU
morning rise	7200 Nov 15 13:52	12° \mathbb{M} 12'32		direct	7207 Aug 01 19:44	24° \mathbb{M} 28'33	
retrograde	7201 Feb 11 20:36	14° \mathbb{M} 06'18		evening set	7207 Oct 30 21:29	26° \mathbb{M} 23'35	
opposition	7201 Apr 30 13:38	12° \mathbb{M} 43'13	0°42'55				
min. Earth dist.	7201 Apr 30 20:14	12° \mathbb{M} 42'45	29.14849 AU	conjunction	7207 Nov 16 01:11	26° \mathbb{M} 59'08	0°54'04
direct	7201 Jul 18 19:59	11° \mathbb{M} 18'36		minimum elong	7207 Nov 16 01:11	26° \mathbb{M} 59'08	0°54'08
evening set	7201 Oct 16 17:13	13° \mathbb{M} 13'34		max. Earth dist.	7207 Nov 15 13:03	26° \mathbb{M} 58'01	31.21011 AU
				morning rise	7207 Dec 02 02:56	27° \mathbb{M} 34'31	
conjunction	7201 Nov 01 22:38	13° \mathbb{M} 49'18	0°41'21	retrograde	7208 Feb 27 22:40	29° \mathbb{M} 27'26	
minimum elong	7201 Nov 01 22:38	13° \mathbb{M} 49'18	0°41'24	opposition	7208 May 15 11:52	28° \mathbb{M} 04'38	0°58'45
max. Earth dist.	7201 Nov 01 14:17	13° \mathbb{M} 48'32	31.15252 AU	min. Earth dist.	7208 May 15 21:51	28° \mathbb{M} 03'56	29.21662 AU
morning rise	7201 Nov 18 02:23	14° \mathbb{M} 24'55		direct	7208 Aug 03 06:32	26° \mathbb{M} 39'52	
	7201 Dec 04 23:48	15° \mathbb{M}		evening set	7208 Nov 01 09:46	28° \mathbb{M} 34'56	
retrograde	7202 Feb 14 05:33	16° \mathbb{M} 18'32					
	7202 Apr 30 06:53	15° \mathbb{R} \mathbb{M}		conjunction	7208 Nov 17 13:21	29° \mathbb{M} 10'28	0°55'56
opposition	7202 May 02 23:44	14° \mathbb{M} 55'28	0°45'24	minimum elong	7208 Nov 17 13:21	29° \mathbb{M} 10'28	0°56'00
min. Earth dist.	7202 May 03 08:03	14° \mathbb{M} 54'53	29.15686 AU	max. Earth dist.	7208 Nov 17 01:50	29° \mathbb{M} 09'24	31.22246 AU
direct	7202 Jul 21 06:49	13° \mathbb{M} 30'48		morning rise	7208 Dec 03 14:33	29° \mathbb{M} 45'49	
	7202 Oct 06 23:44	15° \mathbb{M}			7208 Dec 10 06:13	0° \mathbb{X}	
evening set	7202 Oct 19 06:13	15° \mathbb{M} 25'46		retrograde	7209 Mar 01 07:39	1° \mathbb{X} 38'40	
				opposition	7209 May 17 22:00	0° \mathbb{X} 15'57	1°00'42
conjunction	7202 Nov 04 11:22	16° \mathbb{M} 01'28	0°43'38	min. Earth dist.	7209 May 18 09:15	0° \mathbb{X} 15'10	29.22891 AU
minimum elong	7202 Nov 04 11:22	16° \mathbb{M} 01'28	0°43'42		7209 May 27 12:07	30° \mathbb{R} \mathbb{M}	
max. Earth dist.	7202 Nov 04 01:51	16° \mathbb{M} 00'35	31.16077 AU	direct	7209 Aug 05 17:45	28° \mathbb{M} 51'13	
morning rise	7202 Nov 20 14:53	16° \mathbb{M} 37'02			7209 Oct 12 02:39	0° \mathbb{X}	
retrograde	7203 Feb 16 16:33	18° \mathbb{M} 30'31		evening set	7209 Nov 03 22:24	0° \mathbb{X} 46'21	
opposition	7203 May 05 09:44	17° \mathbb{M} 07'28	0°47'49				
min. Earth dist.	7203 May 05 17:40	17° \mathbb{M} 06'55	29.16501 AU	conjunction	7209 Nov 20 01:31	1° \mathbb{X} 21'50	0°57'42
direct	7203 Jul 23 18:47	15° \mathbb{M} 42'44		minimum elong	7209 Nov 20 01:31	1° \mathbb{X} 21'50	0°57'46
evening set	7203 Oct 21 18:59	17° \mathbb{M} 37'43		max. Earth dist.	7209 Nov 19 12:23	1° \mathbb{X} 20'38	31.23458 AU
				morning rise	7209 Dec 06 02:29	1° \mathbb{X} 57'10	
conjunction	7203 Nov 06 23:52	18° \mathbb{M} 13'22	0°45'52	retrograde	7210 Mar 03 18:11	3° \mathbb{X} 49'56	
minimum elong	7203 Nov 06 23:51	18° \mathbb{M} 13'22	0°45'55	opposition	7210 May 20 07:57	2° \mathbb{X} 27'20	1°02'33
max. Earth dist.	7203 Nov 06 13:44	18° \mathbb{M} 12'26	31.16889 AU	min. Earth dist.	7210 May 20 19:06	2° \mathbb{X} 26'33	29.24071 AU
morning rise	7203 Nov 23 02:59	18° \mathbb{M} 48'54		direct	7210 Aug 08 04:46	1° \mathbb{X} 02'37	
retrograde	7204 Feb 19 02:39	20° \mathbb{M} 42'16		evening set	7210 Nov 06 10:56	2° \mathbb{X} 57'47	
opposition	7204 May 06 19:52	19° \mathbb{M} 19'13	0°50'09				
min. Earth dist.	7204 May 07 05:10	19° \mathbb{M} 18'34	29.17345 AU	conjunction	7210 Nov 22 13:48	3° \mathbb{X} 33'16	0°59'24
direct	7204 Jul 25 06:23	17° \mathbb{M} 54'27		minimum elong	7210 Nov 22 13:48	3° \mathbb{X} 33'16	0°59'29
evening set	7204 Oct 23 07:38	19° \mathbb{M} 49'25		max. Earth dist.	7210 Nov 22 00:37	3° \mathbb{X} 32'03	31.24577 AU
				morning rise	7210 Dec 08 14:13	4° \mathbb{X} 08'33	
conjunction	7204 Nov 08 12:19	20° \mathbb{M} 25'02	0°48'01	retrograde	7211 Mar 06 03:20	6° \mathbb{X} 01'16	
minimum elong	7204 Nov 08 12:19	20° \mathbb{M} 25'02	0°48'06	opposition	7211 May 22 18:16	4° \mathbb{X} 38'44	1°04'19
max. Earth dist.	7204 Nov 08 02:12	20° \mathbb{M} 24'06	31.17768 AU	min. Earth dist.	7211 May 23 07:04	4° \mathbb{X} 37'50	29.25141 AU
morning rise	7204 Nov 24 15:04	21° \mathbb{M} 00'32		direct	7211 Aug 10 14:53	3° \mathbb{X} 14'02	
retrograde	7205 Feb 20 13:49	22° \mathbb{M} 53'45		evening set	7211 Nov 08 23:19	5° \mathbb{X} 09'14	
opposition	7205 May 09 05:47	21° \mathbb{M} 30'44	0°52'25	max. Earth dist.	7211 Nov 24 11:26	5° \mathbb{X} 43'21	31.25587 AU
min. Earth dist.	7205 May 09 14:46	21° \mathbb{M} 30'06	29.18264 AU				
direct	7205 Jul 27 20:07	20° \mathbb{M} 05'55		conjunction	7211 Nov 25 01:46	5° \mathbb{X} 44'41	1°01'00
evening set	7205 Oct 25 20:18	22° \mathbb{M} 00'54		minimum elong	7211 Nov 25 01:46	5° \mathbb{X} 44'41	1°01'04
				morning rise	7211 Dec 11 01:51	6° \mathbb{X} 19'56	
conjunction	7205 Nov 11 00:38	22° \mathbb{M} 36'30	0°50'07	retrograde	7212 Mar 07 14:05	8° \mathbb{X} 12'35	
minimum elong	7205 Nov 11 00:37	22° \mathbb{M} 36'30	0°50'10	opposition	7212 May 24 04:27	6° \mathbb{X} 50'06	1°05'59

min. Earth dist.	7212 May 24 16:54	6°♂49'14	29.26085 AU	morning rise	7218 Dec 26 08:44	21°♂36'36	
direct	7212 Aug 12 02:22	5°♂25'25		retrograde	7219 Mar 23 13:20	23°♂28'42	
evening set	7212 Nov 10 11:43	7°♂20'38		opposition	7219 Jun 09 03:35	22°♂06'27	1°14'52
				min. Earth dist.	7219 Jun 09 18:41	22°♂05'24	29.31019 AU
conjunction	7212 Nov 26 13:49	7°♂56'03	1°02'31	direct	7219 Aug 28 13:48	20°♂41'41	
minimum elong	7212 Nov 26 13:49	7°♂56'03	1°02'36	evening set	7219 Nov 26 23:21	22°♂36'57	
max. Earth dist.	7212 Nov 25 22:38	7°♂54'39	31.26461 AU				
morning rise	7212 Dec 12 13:26	8°♂31'16		conjunction	7219 Dec 12 22:51	23°♂12'10	1°10'30
retrograde	7213 Mar 10 00:07	10°♂23'51		minimum elong	7219 Dec 12 22:51	23°♂12'10	1°10'35
opposition	7213 May 26 14:37	9°♂01'25	1°07'33	max. Earth dist.	7219 Dec 12 05:47	23°♂10'35	31.31391 AU
min. Earth dist.	7213 May 27 04:39	9°♂00'26	29.26910 AU	morning rise	7219 Dec 28 19:24	23°♂47'07	
direct	7213 Aug 14 13:27	7°♂36'43		retrograde	7220 Mar 24 22:16	25°♂39'12	
evening set	7213 Nov 12 23:59	9°♂31'57		opposition	7220 Jun 10 13:56	24°♂17'01	1°15'43
max. Earth dist.	7213 Nov 28 10:20	10°♂05'54	31.27230 AU	min. Earth dist.	7220 Jun 11 06:07	24°♂15'54	29.31903 AU
				direct	7220 Aug 29 23:23	22°♂52'17	
conjunction	7213 Nov 29 01:48	10°♂07'20	1°03'57	evening set	7220 Nov 28 11:01	24°♂47'35	
minimum elong	7213 Nov 29 01:48	10°♂07'20	1°04'02				
morning rise	7213 Dec 15 01:00	10°♂42'31		conjunction	7220 Dec 14 10:04	25°♂22'45	1°11'15
retrograde	7214 Mar 12 11:00	12°♂35'00		minimum elong	7220 Dec 14 10:04	25°♂22'45	1°11'20
opposition	7214 May 29 00:46	11°♂12'36	1°09'02	max. Earth dist.	7220 Dec 13 16:31	25°♂21'08	31.32304 AU
min. Earth dist.	7214 May 29 14:50	11°♂11'38	29.27617 AU	morning rise	7220 Dec 30 06:18	25°♂57'42	
direct	7214 Aug 17 03:00	9°♂47'53		retrograde	7221 Mar 27 08:20	27°♂49'44	
evening set	7214 Nov 15 12:16	11°♂43'09		opposition	7221 Jun 13 00:02	26°♂27'38	1°16'27
				min. Earth dist.	7221 Jun 13 15:32	26°♂26'34	29.32813 AU
conjunction	7214 Dec 01 13:36	12°♂18'29	1°05'17	direct	7221 Sep 01 10:15	25°♂02'56	
minimum elong	7214 Dec 01 13:36	12°♂18'29	1°05'22	evening set	7221 Nov 30 22:43	26°♂58'17	
max. Earth dist.	7214 Nov 30 20:48	12°♂16'56	31.27892 AU				
morning rise	7214 Dec 17 12:26	12°♂53'38		conjunction	7221 Dec 16 21:22	27°♂33'25	1°11'53
retrograde	7215 Mar 14 21:31	14°♂46'03		minimum elong	7221 Dec 16 21:22	27°♂33'25	1°11'58
opposition	7215 May 31 10:56	13°♂23'40	1°10'24	max. Earth dist.	7221 Dec 16 03:21	27°♂31'45	31.33195 AU
min. Earth dist.	7215 Jun 01 01:51	13°♂22'38	29.28259 AU	morning rise	7222 Jan 01 17:08	28°♂08'20	
direct	7215 Aug 19 13:46	11°♂58'55			7222 Mar 25 05:12	0°♂	
evening set	7215 Nov 18 00:15	13°♂54'11		retrograde	7222 Mar 29 17:58	0°♂00'21	
max. Earth dist.	7215 Dec 03 09:08	14°♂28'00	31.28510 AU		7222 Apr 03 08:11	30°♂♂	
				opposition	7222 Jun 15 10:29	28°♂38'19	1°17'05
conjunction	7215 Dec 04 01:21	14°♂29'30	1°06'31	min. Earth dist.	7222 Jun 16 03:15	28°♂37'10	29.33684 AU
minimum elong	7215 Dec 04 01:21	14°♂29'30	1°06'36	direct	7222 Sep 03 20:42	27°♂13'40	
morning rise	7215 Dec 19 23:38	15°♂04'36		evening set	7222 Dec 03 10:20	29°♂09'02	
retrograde	7216 Mar 16 07:31	16°♂56'55					
opposition	7216 Jun 01 21:07	15°♂34'33	1°11'40	conjunction	7222 Dec 19 08:36	29°♂44'09	1°12'25
min. Earth dist.	7216 Jun 02 12:22	15°♂33'30	29.28866 AU	minimum elong	7222 Dec 19 08:36	29°♂44'09	1°12'31
direct	7216 Aug 21 03:04	14°♂09'48		max. Earth dist.	7222 Dec 18 14:39	29°♂42'29	31.34018 AU
evening set	7216 Nov 19 12:09	16°♂05'03			7222 Dec 26 11:46	0°♂	
				morning rise	7223 Jan 04 03:52	0°♂19'01	
conjunction	7216 Dec 05 12:43	16°♂40'20	1°07'40	retrograde	7223 Apr 01 04:09	2°♂11'01	
minimum elong	7216 Dec 05 12:43	16°♂40'20	1°07'45	opposition	7223 Jun 17 20:55	0°♂49'02	1°17'36
max. Earth dist.	7216 Dec 04 19:07	16°♂38'42	31.29127 AU	min. Earth dist.	7223 Jun 18 13:36	0°♂47'53	29.34444 AU
morning rise	7216 Dec 21 10:45	17°♂15'23			7223 Jul 19 12:12	30°♂♂	
retrograde	7217 Mar 18 19:14	19°♂07'38		direct	7223 Sep 06 08:57	29°♂24'25	
opposition	7217 Jun 04 07:14	17°♂45'17	1°12'50		7223 Oct 24 00:52	0°♂	
min. Earth dist.	7217 Jun 04 22:19	17°♂44'15	29.29508 AU	evening set	7223 Dec 05 22:01	1°♂19'48	
direct	7217 Aug 23 14:54	16°♂20'30					
evening set	7217 Nov 21 23:56	18°♂15'45		conjunction	7223 Dec 21 19:45	1°♂54'52	1°12'51
max. Earth dist.	7217 Dec 07 07:33	18°♂49'28	31.29789 AU	minimum elong	7223 Dec 21 19:45	1°♂54'52	1°12'56
				max. Earth dist.	7223 Dec 21 00:34	1°♂53'06	31.34713 AU
conjunction	7217 Dec 08 00:17	18°♂51'01	1°08'43	morning rise	7224 Jan 06 14:40	2°♂29'43	
minimum elong	7217 Dec 08 00:17	18°♂51'01	1°08'47	retrograde	7224 Apr 02 15:10	4°♂21'42	
morning rise	7217 Dec 23 21:42	19°♂26'02		opposition	7224 Jun 19 07:26	2°♂59'45	1°18'00
retrograde	7218 Mar 21 03:29	21°♂18'12		min. Earth dist.	7224 Jun 20 00:48	2°♂58'33	29.35083 AU
opposition	7218 Jun 06 17:24	19°♂55'54	1°13'54	direct	7224 Sep 07 19:04	1°♂35'08	
min. Earth dist.	7218 Jun 07 09:21	19°♂54'48	29.30212 AU	evening set	7224 Dec 07 09:24	3°♂30'31	
direct	7218 Aug 26 02:43	18°♂31'07					
evening set	7218 Nov 24 11:49	20°♂26'23		conjunction	7224 Dec 23 06:55	4°♂05'34	1°13'11
				minimum elong	7224 Dec 23 06:55	4°♂05'34	1°13'16
conjunction	7218 Dec 10 11:37	21°♂01'36	1°09'39	max. Earth dist.	7224 Dec 22 12:14	4°♂03'51	31.35271 AU
minimum elong	7218 Dec 10 11:37	21°♂01'36	1°09'45	morning rise	7225 Jan 08 01:18	4°♂40'23	
max. Earth dist.	7218 Dec 09 17:54	20°♂59'57	31.30547 AU	retrograde	7225 Apr 05 01:18	6°♂32'20	

opposition	7225 Jun 21 18:01	5°310'24	1°18'18	max. Earth dist.	7232 Jan 07 14:24	19°315'11	31.36567 AU
min. Earth dist.	7225 Jun 22 11:58	5°309'10	29.35553 AU	morning rise	7232 Jan 24 01:28	19°351'37	
direct	7225 Sep 10 08:35	3°345'47		retrograde	7232 Apr 19 20:52	21°343'24	
evening set	7225 Dec 09 21:01	5°341'10		opposition	7232 Jul 06 20:14	20°321'29	1°17'16
				min. Earth dist.	7232 Jul 07 14:20	20°320'14	29.36770 AU
conjunction	7225 Dec 25 17:57	6°316'12	1°13'24	direct	7232 Sep 25 16:16	18°356'49	
minimum elong	7225 Dec 25 17:57	6°316'12	1°13'29	evening set	7232 Dec 25 02:01	20°352'07	
max. Earth dist.	7225 Dec 24 21:37	6°314'19	31.35666 AU				
morning rise	7226 Jan 10 12:03	6°350'58		conjunction	7233 Jan 09 20:10	21°326'58	1°12'05
retrograde	7226 Apr 07 13:05	8°342'52		minimum elong	7233 Jan 09 20:10	21°326'58	1°12'10
opposition	7226 Jun 24 04:28	7°320'57	1°18'29	max. Earth dist.	7233 Jan 09 00:06	21°325'06	31.36857 AU
min. Earth dist.	7226 Jun 24 22:23	7°319'43	29.35880 AU	morning rise	7233 Jan 25 11:30	22°301'34	
direct	7226 Sep 12 20:42	5°356'19		retrograde	7233 Apr 22 07:57	23°353'23	
evening set	7226 Dec 12 08:22	7°351'42		opposition	7233 Jul 09 06:58	22°331'30	1°16'41
max. Earth dist.	7226 Dec 27 09:22	8°324'52	31.35919 AU	min. Earth dist.	7233 Jul 10 01:06	22°330'16	29.37083 AU
				direct	7233 Sep 28 01:35	21°306'54	
conjunction	7226 Dec 28 05:03	8°326'41	1°13'32	evening set	7233 Dec 27 12:42	23°302'14	
minimum elong	7226 Dec 28 05:03	8°326'41	1°13'37	max. Earth dist.	7234 Jan 11 11:41	23°335'17	31.37170 AU
morning rise	7227 Jan 12 22:34	9°301'26					
retrograde	7227 Apr 09 21:39	10°353'18		conjunction	7234 Jan 12 06:36	23°337'03	1°11'28
opposition	7227 Jun 26 15:11	9°331'22	1°18'33	minimum elong	7234 Jan 12 06:36	23°337'03	1°11'32
min. Earth dist.	7227 Jun 27 10:13	9°330'04	29.36070 AU	morning rise	7234 Jan 27 21:24	24°311'38	
direct	7227 Sep 15 08:55	8°306'43		retrograde	7234 Apr 24 18:18	26°303'29	
evening set	7227 Dec 14 19:31	10°302'04		opposition	7234 Jul 11 17:47	24°341'40	1°15'59
				min. Earth dist.	7234 Jul 12 12:07	24°340'25	29.37376 AU
conjunction	7227 Dec 30 15:40	10°337'01	1°13'33	direct	7234 Sep 30 14:31	23°317'07	
minimum elong	7227 Dec 30 15:40	10°337'01	1°13'37	evening set	7234 Dec 29 23:32	25°312'28	
max. Earth dist.	7227 Dec 29 18:58	10°335'06	31.36067 AU				
morning rise	7228 Jan 15 08:57	11°311'45		conjunction	7235 Jan 14 16:52	25°347'17	1°10'46
retrograde	7228 Apr 11 07:44	13°303'33		minimum elong	7235 Jan 14 16:52	25°347'17	1°10'50
opposition	7228 Jun 28 01:42	11°341'37	1°18'31	max. Earth dist.	7235 Jan 13 20:52	25°345'25	31.37447 AU
min. Earth dist.	7228 Jun 28 20:00	11°340'22	29.36177 AU	morning rise	7235 Jan 30 07:28	26°321'50	
direct	7228 Sep 16 20:51	10°316'56		retrograde	7235 Apr 27 06:49	28°313'45	
evening set	7228 Dec 16 06:34	12°312'15		opposition	7235 Jul 14 04:42	26°351'57	1°15'10
max. Earth dist.	7228 Dec 31 06:15	12°345'19	31.36142 AU	min. Earth dist.	7235 Jul 14 22:29	26°350'45	29.37622 AU
				direct	7235 Oct 03 02:08	25°327'28	
conjunction	7229 Jan 01 02:26	12°347'12	1°13'27	evening set	7236 Jan 01 10:02	27°322'50	
minimum elong	7229 Jan 01 02:26	12°347'12	1°13'33	max. Earth dist.	7236 Jan 16 08:08	27°355'51	31.37639 AU
morning rise	7229 Jan 16 19:12	13°321'53					
retrograde	7229 Apr 13 16:28	15°313'40		conjunction	7236 Jan 17 03:09	27°357'37	1°09'57
opposition	7229 Jun 30 12:15	13°351'43	1°18'22	minimum elong	7236 Jan 17 03:09	27°357'37	1°10'01
min. Earth dist.	7229 Jul 01 07:39	13°350'23	29.36248 AU	morning rise	7236 Feb 01 17:14	28°332'10	
direct	7229 Sep 19 07:21	12°327'00			7236 Mar 21 15:56	0°≈	
evening set	7229 Dec 18 17:37	14°322'18		retrograde	7236 Apr 28 15:56	0°≈24'08	
					7236 Jun 06 15:20	30°R3	
conjunction	7230 Jan 03 13:01	14°357'12	1°13'16	opposition	7236 Jul 15 15:48	29°302'21	1°14'15
minimum elong	7230 Jan 03 13:01	14°357'12	1°13'21	min. Earth dist.	7236 Jul 16 10:34	29°301'05	29.37754 AU
max. Earth dist.	7230 Jan 02 16:40	14°355'19	31.36223 AU	direct	7236 Oct 04 13:49	27°337'55	
morning rise	7230 Jan 19 05:28	15°331'52		evening set	7237 Jan 02 20:49	29°333'17	
retrograde	7230 Apr 16 01:53	17°323'37			7237 Jan 14 23:06	0°≈	
opposition	7230 Jul 02 22:50	16°301'40	1°18'07				
min. Earth dist.	7230 Jul 03 17:07	16°300'25	29.36343 AU	conjunction	7237 Jan 18 13:25	0°≈08'02	1°09'03
direct	7230 Sep 21 18:58	14°336'57		minimum elong	7237 Jan 18 13:25	0°≈08'02	1°09'07
evening set	7230 Dec 21 04:28	16°332'13		max. Earth dist.	7237 Jan 17 17:30	0°≈06'11	31.37713 AU
				morning rise	7237 Feb 03 03:18	0°≈42'34	
conjunction	7231 Jan 05 23:26	17°307'06	1°12'58	retrograde	7237 May 01 02:39	2°≈34'33	
minimum elong	7231 Jan 05 23:26	17°307'06	1°13'04	opposition	7237 Jul 18 02:40	1°≈12'48	1°13'14
max. Earth dist.	7231 Jan 05 03:07	17°305'13	31.36344 AU	min. Earth dist.	7237 Jul 18 20:39	1°≈11'34	29.37754 AU
morning rise	7231 Jan 21 15:26	17°341'45			7237 Sep 09 17:12	30°R3	
retrograde	7231 Apr 18 11:08	19°333'31		direct	7237 Oct 07 02:11	29°348'22	
opposition	7231 Jul 05 09:37	18°311'34	1°17'45		7237 Nov 02 22:22	0°≈	
min. Earth dist.	7231 Jul 06 04:24	18°310'16	29.36516 AU	evening set	7238 Jan 05 07:30	1°≈43'44	
direct	7231 Sep 24 04:59	16°346'52					
evening set	7231 Dec 23 15:15	18°342'08		conjunction	7238 Jan 20 23:49	2°≈18'29	1°08'02
				minimum elong	7238 Jan 20 23:49	2°≈18'29	1°08'07
conjunction	7232 Jan 08 09:53	19°317'00	1°12'35	max. Earth dist.	7238 Jan 20 04:14	2°≈16'40	31.37632 AU
minimum elong	7232 Jan 08 09:53	19°317'00	1°12'40	morning rise	7238 Feb 05 13:14	2°≈53'00	

retrograde	7238 May 03 12:32	4° \approx 45'00		direct	7244 Oct 22 08:32	14° \approx 58'55	
opposition	7238 Jul 20 13:55	3° \approx 23'15	1°12'06		7244 Oct 30 12:09	15° \approx	
min. Earth dist.	7238 Jul 21 09:01	3° \approx 21'56	29.37605 AU	evening set	7245 Jan 20 07:10	16° \approx 54'00	
direct	7238 Oct 09 13:23	1° \approx 58'50					
evening set	7239 Jan 07 18:02	3° \approx 54'09		conjunction	7245 Feb 04 21:08	17° \approx 28'37	0°58'27
				minimum elong	7245 Feb 04 21:09	17° \approx 28'37	0°58'31
conjunction	7239 Jan 23 09:56	4° \approx 28'53	1°06'56	max. Earth dist.	7245 Feb 04 04:04	17° \approx 27'01	31.35127 AU
minimum elong	7239 Jan 23 09:56	4° \approx 28'53	1°07'01	morning rise	7245 Feb 20 08:31	18° \approx 03'02	
max. Earth dist.	7239 Jan 22 14:13	4° \approx 27'03	31.37417 AU	retrograde	7245 May 18 09:06	19° \approx 55'15	
morning rise	7239 Feb 07 23:05	5° \approx 03'23		opposition	7245 Aug 04 20:25	18° \approx 33'13	1°01'32
retrograde	7239 May 05 21:40	6° \approx 55'24		min. Earth dist.	7245 Aug 05 13:12	18° \approx 32'05	29.35075 AU
opposition	7239 Jul 23 01:04	5° \approx 33'37	1°10'53	direct	7245 Oct 24 19:44	17° \approx 08'47	
min. Earth dist.	7239 Jul 23 19:12	5° \approx 32'23	29.37311 AU	evening set	7246 Jan 22 17:16	19° \approx 03'51	
direct	7239 Oct 12 01:43	4° \approx 09'11					
evening set	7240 Jan 10 04:32	6° \approx 04'28		conjunction	7246 Feb 07 06:48	19° \approx 38'28	0°56'44
				minimum elong	7246 Feb 07 06:48	19° \approx 38'28	0°56'47
conjunction	7240 Jan 25 20:03	6° \approx 39'11	1°05'45	max. Earth dist.	7246 Feb 06 13:38	19° \approx 36'51	31.34950 AU
minimum elong	7240 Jan 25 20:04	6° \approx 39'11	1°05'49	morning rise	7246 Feb 22 18:04	20° \approx 12'52	
max. Earth dist.	7240 Jan 25 00:01	6° \approx 37'19	31.37062 AU	retrograde	7246 May 20 20:34	22° \approx 05'11	
morning rise	7240 Feb 10 08:55	7° \approx 13'40		opposition	7246 Aug 07 07:49	20° \approx 43'10	0°59'39
retrograde	7240 May 07 06:33	9° \approx 05'42		min. Earth dist.	7246 Aug 07 23:10	20° \approx 42'07	29.34905 AU
opposition	7240 Jul 24 12:12	7° \approx 43'52	1°09'33	direct	7246 Oct 27 08:03	19° \approx 18'47	
min. Earth dist.	7240 Jul 25 07:04	7° \approx 42'35	29.36914 AU	evening set	7247 Jan 25 03:09	21° \approx 13'51	
direct	7240 Oct 13 11:45	6° \approx 19'25					
evening set	7241 Jan 11 14:48	8° \approx 14'38		conjunction	7247 Feb 09 16:26	21° \approx 48'27	0°54'56
max. Earth dist.	7241 Jan 26 10:54	8° \approx 47'32	31.36630 AU	minimum elong	7247 Feb 09 16:27	21° \approx 48'27	0°54'59
				max. Earth dist.	7247 Feb 09 00:09	21° \approx 46'56	31.34777 AU
conjunction	7241 Jan 27 06:06	8° \approx 49'20	1°04'28	morning rise	7247 Feb 25 03:22	22° \approx 22'52	
minimum elong	7241 Jan 27 06:06	8° \approx 49'20	1°04'32	retrograde	7247 May 23 07:08	24° \approx 15'16	
morning rise	7241 Feb 11 18:37	9° \approx 23'48		opposition	7247 Aug 09 19:29	22° \approx 53'16	0°57'41
retrograde	7241 May 09 15:23	11° \approx 15'51		min. Earth dist.	7247 Aug 10 11:28	22° \approx 52'11	29.34726 AU
opposition	7241 Jul 26 23:21	9° \approx 53'57	1°08'08	direct	7247 Oct 29 19:06	21° \approx 28'58	
min. Earth dist.	7241 Jul 27 17:38	9° \approx 52'42	29.36442 AU	evening set	7248 Jan 27 13:11	23° \approx 24'02	
direct	7241 Oct 15 23:14	8° \approx 29'28		max. Earth dist.	7248 Feb 11 10:15	23° \approx 57'08	31.34581 AU
evening set	7242 Jan 14 01:07	10° \approx 24'38					
				conjunction	7248 Feb 12 02:09	23° \approx 58'37	0°53'03
conjunction	7242 Jan 29 15:55	10° \approx 59'18	1°03'06	minimum elong	7248 Feb 12 02:10	23° \approx 58'37	0°53'06
minimum elong	7242 Jan 29 15:55	10° \approx 59'18	1°03'09	morning rise	7248 Feb 27 12:54	24° \approx 33'01	
max. Earth dist.	7242 Jan 28 20:13	10° \approx 57'28	31.36153 AU	retrograde	7248 May 24 16:58	26° \approx 25'32	
morning rise	7242 Feb 14 04:14	11° \approx 33'45		opposition	7248 Aug 11 06:57	25° \approx 03'32	0°55'38
retrograde	7242 May 12 02:08	13° \approx 25'49		min. Earth dist.	7248 Aug 11 21:44	25° \approx 02'32	29.34485 AU
opposition	7242 Jul 29 10:32	12° \approx 03'52	1°06'38	direct	7248 Oct 31 07:08	23° \approx 39'18	
min. Earth dist.	7242 Jul 30 04:30	12° \approx 02'38	29.35984 AU	evening set	7249 Jan 28 23:16	25° \approx 34'22	
direct	7242 Oct 18 09:08	10° \approx 39'21					
evening set	7243 Jan 16 11:10	12° \approx 34'29		conjunction	7249 Feb 13 11:55	26° \approx 08'57	0°51'05
max. Earth dist.	7243 Jan 31 07:42	13° \approx 07'26	31.35719 AU	minimum elong	7249 Feb 13 11:55	26° \approx 08'57	0°51'08
				max. Earth dist.	7249 Feb 12 19:46	26° \approx 07'26	31.34291 AU
conjunction	7243 Feb 01 01:47	13° \approx 09'07	1°01'38	morning rise	7249 Feb 28 22:28	26° \approx 43'21	
minimum elong	7243 Feb 01 01:47	13° \approx 09'07	1°01'42	retrograde	7249 May 27 02:59	28° \approx 35'58	
morning rise	7243 Feb 16 13:40	13° \approx 43'33		opposition	7249 Aug 13 18:44	27° \approx 13'59	0°53'30
	7243 Mar 29 00:45	15° \approx		min. Earth dist.	7249 Aug 14 10:02	27° \approx 12'56	29.34146 AU
retrograde	7243 May 14 11:44	15° \approx 35'40		direct	7249 Nov 02 16:57	25° \approx 49'48	
	7243 Jul 01 19:16	15° \approx		evening set	7250 Jan 31 09:16	27° \approx 44'51	
opposition	7243 Jul 31 21:52	14° \approx 13'39	1°05'01				
min. Earth dist.	7243 Aug 01 15:29	14° \approx 12'27	29.35586 AU	conjunction	7250 Feb 15 21:43	28° \approx 19'25	0°49'03
direct	7243 Oct 20 21:39	12° \approx 49'09		minimum elong	7250 Feb 15 21:43	28° \approx 19'25	0°49'06
evening set	7244 Jan 18 21:12	14° \approx 44'14		max. Earth dist.	7250 Feb 15 06:34	28° \approx 18'00	31.33889 AU
	7244 Jan 26 00:54	15° \approx		morning rise	7250 Mar 03 07:56	28° \approx 53'50	
					7250 Apr 06 01:07	0° \approx	
conjunction	7244 Feb 03 11:20	15° \approx 18'52	1°00'05	retrograde	7250 May 29 12:27	0° \approx 46'33	
minimum elong	7244 Feb 03 11:20	15° \approx 18'52	1°00'08		7250 Jul 24 18:04	30° \approx	
max. Earth dist.	7244 Feb 02 16:47	15° \approx 17'08	31.35378 AU	opposition	7250 Aug 16 06:34	29° \approx 24'33	0°51'17
morning rise	7244 Feb 18 23:08	15° \approx 53'17		min. Earth dist.	7250 Aug 16 21:17	29° \approx 23'33	29.33664 AU
retrograde	7244 May 15 23:43	17° \approx 45'27		direct	7250 Nov 05 04:15	28° \approx 00'24	
opposition	7244 Aug 02 09:07	16° \approx 23'24	1°03'20	evening set	7251 Feb 02 19:25	29° \approx 55'26	
min. Earth dist.	7244 Aug 03 01:29	16° \approx 22'18	29.35294 AU		7251 Feb 04 21:17	0° \approx	
	7244 Oct 14 05:43	15° \approx					

conjunction	7251 Feb 18 07:26	0° 1 30'00	0°46'57	direct	7257 Nov 20 13:46	13° 1 14'41	
minimum elong	7251 Feb 18 07:26	0° 1 30'00	0°47'00	evening set	7258 Feb 17 15:58	15° 1 09'27	
max. Earth dist.	7251 Feb 17 15:34	0° 1 28'31	31.33343 AU				
morning rise	7251 Mar 05 17:36	1° 1 04'25		conjunction	7258 Mar 05 02:24	15° 1 43'59	0°30'33
retrograde	7251 Jun 01 00:05	2° 1 57'14		minimum elong	7258 Mar 05 02:24	15° 1 43'59	0°30'34
opposition	7251 Aug 18 18:28	1° 1 35'12	0°49'00	max. Earth dist.	7258 Mar 04 14:55	15° 1 42'54	31.27891 AU
min. Earth dist.	7251 Aug 19 08:58	1° 1 34'13	29.33055 AU	morning rise	7258 Mar 20 11:32	16° 1 18'24	
direct	7251 Nov 07 14:00	0° 1 11'05		retrograde	7258 Jun 16 03:25	18° 1 11'52	
evening set	7252 Feb 05 05:15	2° 1 06'05		opposition	7258 Sep 03 06:28	16° 1 49'27	0°31'17
				min. Earth dist.	7258 Sep 03 16:57	16° 1 48'45	29.27603 AU
conjunction	7252 Feb 20 17:13	2° 1 40'38	0°44'47	direct	7258 Nov 23 00:08	15° 1 25'28	
minimum elong	7252 Feb 20 17:13	2° 1 40'38	0°44'49	evening set	7259 Feb 20 01:38	17° 1 20'12	
max. Earth dist.	7252 Feb 20 02:39	2° 1 39'17	31.32660 AU				
morning rise	7252 Mar 07 03:04	3° 1 15'03		conjunction	7259 Mar 07 12:00	17° 1 54'44	0°28'00
retrograde	7252 Jun 02 10:11	5° 1 07'57		minimum elong	7259 Mar 07 12:00	17° 1 54'44	0°28'01
opposition	7252 Aug 20 06:25	3° 1 45'52	0°46'39	max. Earth dist.	7259 Mar 07 02:07	17° 1 53'49	31.27289 AU
min. Earth dist.	7252 Aug 20 20:58	3° 1 44'53	29.32295 AU	morning rise	7259 Mar 22 20:56	18° 1 29'10	
direct	7252 Nov 09 02:21	2° 1 21'46		retrograde	7259 Jun 18 13:11	20° 1 22'46	
evening set	7253 Feb 06 15:18	4° 1 16'43		opposition	7259 Sep 05 18:39	19° 1 00'20	0°28'32
max. Earth dist.	7253 Feb 21 11:32	4° 1 49'50	31.31854 AU	min. Earth dist.	7259 Sep 06 04:09	18° 1 59'41	29.26996 AU
				direct	7259 Nov 25 11:50	17° 1 36'25	
conjunction	7253 Feb 22 02:51	4° 1 51'16	0°42'33	evening set	7260 Feb 22 11:22	19° 1 31'07	
minimum elong	7253 Feb 22 02:51	4° 1 51'16	0°42'35				
morning rise	7253 Mar 09 12:42	5° 1 25'41		conjunction	7260 Mar 08 21:25	20° 1 05'39	0°25'24
retrograde	7253 Jun 04 22:27	7° 1 18'40		minimum elong	7260 Mar 08 21:25	20° 1 05'39	0°25'25
opposition	7253 Aug 22 18:11	5° 1 56'30	0°44'14	max. Earth dist.	7260 Mar 08 11:13	20° 1 04'42	31.26679 AU
min. Earth dist.	7253 Aug 23 07:44	5° 1 55'35	29.31443 AU	morning rise	7260 Mar 24 06:27	20° 1 40'06	
direct	7253 Nov 11 13:08	4° 1 32'24		retrograde	7260 Jun 20 01:03	22° 1 33'50	
evening set	7254 Feb 09 01:07	6° 1 27'19		opposition	7260 Sep 07 06:57	21° 1 11'22	0°25'44
				min. Earth dist.	7260 Sep 07 15:55	21° 1 10'46	29.26370 AU
conjunction	7254 Feb 24 12:33	7° 1 01'51	0°40'16	direct	7260 Nov 26 21:43	19° 1 47'30	
minimum elong	7254 Feb 24 12:33	7° 1 01'51	0°40'17	evening set	7261 Feb 23 21:06	21° 1 42'12	
max. Earth dist.	7254 Feb 23 22:37	7° 1 00'33	31.30972 AU				
morning rise	7254 Mar 11 22:06	7° 1 36'16		conjunction	7261 Mar 11 07:08	22° 1 16'44	0°22'46
retrograde	7254 Jun 07 08:16	9° 1 29'20		minimum elong	7261 Mar 11 07:08	22° 1 16'44	0°22'47
opposition	7254 Aug 25 06:17	8° 1 07'05	0°41'46	max. Earth dist.	7261 Mar 10 22:29	22° 1 15'55	31.26015 AU
min. Earth dist.	7254 Aug 25 20:11	8° 1 06'09	29.30550 AU	morning rise	7261 Mar 26 15:53	22° 1 51'11	
direct	7254 Nov 14 00:32	6° 1 42'59		retrograde	7261 Jun 22 10:54	24° 1 45'03	
evening set	7255 Feb 11 10:50	8° 1 37'50		opposition	7261 Sep 09 19:22	23° 1 22'34	0°22'54
				min. Earth dist.	7261 Sep 10 04:13	23° 1 21'58	29.25657 AU
conjunction	7255 Feb 26 21:55	9° 1 12'22	0°37'55	direct	7261 Nov 29 09:14	21° 1 58'45	
minimum elong	7255 Feb 26 21:55	9° 1 12'22	0°37'56	evening set	7262 Feb 26 07:05	23° 1 53'25	
max. Earth dist.	7255 Feb 26 08:15	9° 1 11'05	31.30096 AU				
morning rise	7255 Mar 14 07:26	9° 1 46'46		conjunction	7262 Mar 13 16:46	24° 1 27'57	0°20'06
retrograde	7255 Jun 09 20:08	11° 1 39'55		minimum elong	7262 Mar 13 16:46	24° 1 27'57	0°20'07
opposition	7255 Aug 27 18:15	10° 1 17'37	0°39'14	max. Earth dist.	7262 Mar 13 07:35	24° 1 27'06	31.25261 AU
min. Earth dist.	7255 Aug 28 06:22	10° 1 16'47	29.29694 AU	morning rise	7262 Mar 29 01:37	25° 1 02'25	
direct	7255 Nov 16 13:48	8° 1 53'30		retrograde	7262 Jun 24 23:40	26° 1 56'26	
evening set	7256 Feb 13 20:34	10° 1 48'19		opposition	7262 Sep 12 07:54	25° 1 33'54	0°20'02
				min. Earth dist.	7262 Sep 12 15:35	25° 1 33'23	29.24845 AU
conjunction	7256 Feb 29 07:28	11° 1 22'51	0°35'31	direct	7262 Dec 01 19:18	24° 1 10'07	
minimum elong	7256 Feb 29 07:28	11° 1 22'51	0°35'33	evening set	7263 Feb 28 16:51	26° 1 04'45	
max. Earth dist.	7256 Feb 28 18:48	11° 1 21'40	31.29271 AU				
morning rise	7256 Mar 15 16:48	11° 1 57'15		conjunction	7263 Mar 16 02:30	26° 1 39'17	0°17'25
retrograde	7256 Jun 11 07:27	13° 1 50'30		minimum elong	7263 Mar 16 02:30	26° 1 39'17	0°17'25
opposition	7256 Aug 29 06:13	12° 1 28'08	0°36'38	max. Earth dist.	7263 Mar 15 18:29	26° 1 38'33	31.24375 AU
min. Earth dist.	7256 Aug 29 18:34	12° 1 27'18	29.28920 AU	morning rise	7263 Mar 31 11:10	27° 1 13'46	
direct	7256 Nov 18 01:22	11° 1 04'03		retrograde	7263 Jun 27 10:28	29° 1 07'55	
evening set	7257 Feb 15 06:17	12° 1 58'50		opposition	7263 Sep 14 20:37	27° 1 45'19	0°17'08
				min. Earth dist.	7263 Sep 15 04:51	27° 1 44'46	29.23888 AU
conjunction	7257 Mar 02 17:01	13° 1 33'22	0°33'03	direct	7263 Dec 04 06:42	26° 1 21'34	
minimum elong	7257 Mar 02 17:01	13° 1 33'22	0°33'05	evening set	7264 Mar 02 02:51	28° 1 16'10	
max. Earth dist.	7257 Mar 02 05:17	13° 1 32'16	31.28548 AU				
morning rise	7257 Mar 18 02:13	14° 1 07'47		conjunction	7264 Mar 17 12:18	28° 1 50'42	0°14'41
retrograde	7257 Jun 13 17:08	16° 1 01'07		minimum elong	7264 Mar 17 12:18	28° 1 50'42	0°14'42
opposition	7257 Aug 31 18:14	14° 1 38'44	0°33'59	behind sun begin	7264 Mar 17 09:30	28° 1 50'27	
min. Earth dist.	7257 Sep 01 04:48	14° 1 38'01	29.28226 AU	behind sun end	7264 Mar 17 15:06	28° 1 50'57	

max. Earth dist.	7264 Mar 17 04:13	28° $\mathbf{\text{K}}$ 49'57	31.23352 AU	opposition	7269 Sep 28 00:23	10° $\mathbf{\text{Y}}$ 53'45	-0°00'37
morning rise	7264 Apr 01 21:01	29° $\mathbf{\text{K}}$ 25'11		min. Earth dist.	7269 Sep 28 03:47	10° $\mathbf{\text{Y}}$ 53'31	29.16599 AU
	7264 Apr 18 07:40	0° $\mathbf{\text{Y}}$		direct	7269 Dec 17 06:31	9° $\mathbf{\text{Y}}$ 30'01	
retrograde	7264 Jun 28 23:15	1° $\mathbf{\text{Y}}$ 19'26		evening set	7270 Mar 15 13:30	11° $\mathbf{\text{Y}}$ 24'20	
	7264 Sep 14 09:22	30° $\mathbf{\text{K}}$					
opposition	7264 Sep 16 09:01	29° $\mathbf{\text{K}}$ 56'46	0°14'12	conjunction	7270 Mar 30 22:24	11° $\mathbf{\text{Y}}$ 58'54	-0°02'02
min. Earth dist.	7264 Sep 16 15:54	29° $\mathbf{\text{K}}$ 56'18	29.22785 AU	minimum elong	7270 Mar 30 22:25	11° $\mathbf{\text{Y}}$ 58'54	0°02'03
direct	7264 Dec 05 19:37	28° $\mathbf{\text{K}}$ 33'01		behind sun begin	7270 Mar 30 16:01	11° $\mathbf{\text{Y}}$ 58'20	
	7265 Feb 19 14:55	0° $\mathbf{\text{Y}}$		behind sun end	7270 Mar 31 04:49	11° $\mathbf{\text{Y}}$ 59'29	
evening set	7265 Mar 04 12:47	0° $\mathbf{\text{Y}}$ 27'35		max. Earth dist.	7270 Mar 30 19:38	11° $\mathbf{\text{Y}}$ 58'42	31.16067 AU
				morning rise	7270 Apr 15 07:03	12° $\mathbf{\text{Y}}$ 33'29	
conjunction	7265 Mar 19 22:08	1° $\mathbf{\text{Y}}$ 02'07	0°11'57	retrograde	7270 Jul 12 16:34	14° $\mathbf{\text{Y}}$ 28'28	
minimum elong	7265 Mar 19 22:08	1° $\mathbf{\text{Y}}$ 02'07	0°11'57	opposition	7270 Sep 30 13:13	13° $\mathbf{\text{Y}}$ 05'20	-0°03'36
behind sun begin	7265 Mar 19 17:39	1° $\mathbf{\text{Y}}$ 01'43		min. Earth dist.	7270 Sep 30 15:55	13° $\mathbf{\text{Y}}$ 05'09	29.15563 AU
behind sun end	7265 Mar 20 02:37	1° $\mathbf{\text{Y}}$ 02'31		direct	7270 Dec 19 17:48	11° $\mathbf{\text{Y}}$ 41'39	
max. Earth dist.	7265 Mar 19 14:31	1° $\mathbf{\text{Y}}$ 01'25	31.22176 AU	evening set	7271 Mar 17 23:14	13° $\mathbf{\text{Y}}$ 35'57	
morning rise	7265 Apr 04 06:48	1° $\mathbf{\text{Y}}$ 36'37					
retrograde	7265 Jul 01 11:10	3° $\mathbf{\text{Y}}$ 30'59		conjunction	7271 Apr 02 07:59	14° $\mathbf{\text{Y}}$ 10'32	-0°04'50
opposition	7265 Sep 18 21:47	2° $\mathbf{\text{Y}}$ 08'13	0°11'16	minimum elong	7271 Apr 02 07:58	14° $\mathbf{\text{Y}}$ 10'32	0°04'52
min. Earth dist.	7265 Sep 19 05:13	2° $\mathbf{\text{Y}}$ 07'43	29.21554 AU	behind sun begin	7271 Apr 02 01:43	14° $\mathbf{\text{Y}}$ 09'58	
direct	7265 Dec 08 07:22	0° $\mathbf{\text{Y}}$ 44'28		behind sun end	7271 Apr 02 14:13	14° $\mathbf{\text{Y}}$ 11'06	
evening set	7266 Mar 06 22:31	2° $\mathbf{\text{Y}}$ 38'57		max. Earth dist.	7271 Apr 02 05:12	14° $\mathbf{\text{Y}}$ 10'19	31.15082 AU
				morning rise	7271 Apr 17 16:49	14° $\mathbf{\text{Y}}$ 45'08	
conjunction	7266 Mar 22 07:48	3° $\mathbf{\text{Y}}$ 13'30	0°09'12	retrograde	7271 Jul 15 05:31	16° $\mathbf{\text{Y}}$ 40'17	
minimum elong	7266 Mar 22 07:47	3° $\mathbf{\text{Y}}$ 13'30	0°09'12	opposition	7271 Oct 03 01:58	15° $\mathbf{\text{Y}}$ 17'07	-0°06'35
behind sun begin	7266 Mar 22 02:20	3° $\mathbf{\text{Y}}$ 13'00		min. Earth dist.	7271 Oct 03 03:06	15° $\mathbf{\text{Y}}$ 17'02	29.14609 AU
behind sun end	7266 Mar 22 13:14	3° $\mathbf{\text{Y}}$ 13'59		direct	7271 Dec 22 03:14	13° $\mathbf{\text{Y}}$ 53'28	
max. Earth dist.	7266 Mar 22 01:06	3° $\mathbf{\text{Y}}$ 12'53	31.20908 AU	evening set	7272 Mar 19 09:03	15° $\mathbf{\text{Y}}$ 47'47	
morning rise	7266 Apr 06 16:25	3° $\mathbf{\text{Y}}$ 48'01					
retrograde	7266 Jul 03 21:38	5° $\mathbf{\text{Y}}$ 42'28		conjunction	7272 Apr 03 17:50	16° $\mathbf{\text{Y}}$ 22'22	-0°07'37
opposition	7266 Sep 21 10:26	4° $\mathbf{\text{Y}}$ 19'37	0°08'18	minimum elong	7272 Apr 03 17:51	16° $\mathbf{\text{Y}}$ 22'22	0°07'38
min. Earth dist.	7266 Sep 21 16:13	4° $\mathbf{\text{Y}}$ 19'13	29.20249 AU	behind sun begin	7272 Apr 03 12:01	16° $\mathbf{\text{Y}}$ 21'51	
direct	7266 Dec 10 20:32	2° $\mathbf{\text{Y}}$ 55'50		behind sun end	7272 Apr 03 23:40	16° $\mathbf{\text{Y}}$ 22'54	
evening set	7267 Mar 09 08:21	4° $\mathbf{\text{Y}}$ 50'17		max. Earth dist.	7272 Apr 03 16:33	16° $\mathbf{\text{Y}}$ 22'16	31.14140 AU
				morning rise	7272 Apr 19 02:38	16° $\mathbf{\text{Y}}$ 57'00	
conjunction	7267 Mar 24 17:24	5° $\mathbf{\text{Y}}$ 24'49	0°06'27	retrograde	7272 Jul 16 16:47	18° $\mathbf{\text{Y}}$ 52'19	
minimum elong	7267 Mar 24 17:24	5° $\mathbf{\text{Y}}$ 24'49	0°06'26	opposition	7272 Oct 04 14:44	17° $\mathbf{\text{Y}}$ 29'07	-0°09'34
behind sun begin	7267 Mar 24 11:21	5° $\mathbf{\text{Y}}$ 24'16		min. Earth dist.	7272 Oct 04 16:05	17° $\mathbf{\text{Y}}$ 29'01	29.13679 AU
behind sun end	7267 Mar 24 23:27	5° $\mathbf{\text{Y}}$ 25'22		direct	7272 Dec 23 14:01	16° $\mathbf{\text{Y}}$ 05'32	
max. Earth dist.	7267 Mar 24 10:50	5° $\mathbf{\text{Y}}$ 24'13	31.19596 AU	evening set	7273 Mar 21 19:01	17° $\mathbf{\text{Y}}$ 59'51	
morning rise	7267 Apr 09 02:08	5° $\mathbf{\text{Y}}$ 59'21					
retrograde	7267 Jul 06 08:44	7° $\mathbf{\text{Y}}$ 53'55		conjunction	7273 Apr 06 03:43	18° $\mathbf{\text{Y}}$ 34'27	-0°10'23
opposition	7267 Sep 23 23:05	6° $\mathbf{\text{Y}}$ 30'58	0°05'20	minimum elong	7273 Apr 06 03:42	18° $\mathbf{\text{Y}}$ 34'27	0°10'24
min. Earth dist.	7267 Sep 24 04:45	6° $\mathbf{\text{Y}}$ 30'35	29.18961 AU	behind sun begin	7273 Apr 05 22:38	18° $\mathbf{\text{Y}}$ 33'59	
direct	7267 Dec 13 07:41	5° $\mathbf{\text{Y}}$ 07'11		behind sun end	7273 Apr 06 08:47	18° $\mathbf{\text{Y}}$ 34'54	
evening set	7268 Mar 10 17:58	7° $\mathbf{\text{Y}}$ 01'34		max. Earth dist.	7273 Apr 06 02:51	18° $\mathbf{\text{Y}}$ 34'22	31.13221 AU
				morning rise	7273 Apr 21 12:37	19° $\mathbf{\text{Y}}$ 09'06	
conjunction	7268 Mar 26 03:07	7° $\mathbf{\text{Y}}$ 36'07	0°03'41	retrograde	7273 Jul 19 06:35	21° $\mathbf{\text{Y}}$ 04'34	
minimum elong	7268 Mar 26 03:06	7° $\mathbf{\text{Y}}$ 36'07	0°03'40	opposition	7273 Oct 07 03:37	19° $\mathbf{\text{Y}}$ 41'20	-0°12'32
behind sun begin	7268 Mar 25 20:45	7° $\mathbf{\text{Y}}$ 35'33		min. Earth dist.	7273 Oct 07 03:17	19° $\mathbf{\text{Y}}$ 41'22	29.12747 AU
behind sun end	7268 Mar 26 09:26	7° $\mathbf{\text{Y}}$ 36'42		direct	7273 Dec 26 02:21	18° $\mathbf{\text{Y}}$ 17'49	
max. Earth dist.	7268 Mar 25 22:21	7° $\mathbf{\text{Y}}$ 35'42	31.18332 AU	evening set	7274 Mar 24 04:57	20° $\mathbf{\text{Y}}$ 12'07	
morning rise	7268 Apr 10 11:42	8° $\mathbf{\text{Y}}$ 10'40					
retrograde	7268 Jul 07 18:46	10° $\mathbf{\text{Y}}$ 05'21		conjunction	7274 Apr 08 13:35	20° $\mathbf{\text{Y}}$ 46'44	-0°13'08
opposition	7268 Sep 25 11:44	8° $\mathbf{\text{Y}}$ 42'19	0°02'22	minimum elong	7274 Apr 08 13:34	20° $\mathbf{\text{Y}}$ 46'44	0°13'10
min. Earth dist.	7268 Sep 25 16:06	8° $\mathbf{\text{Y}}$ 42'01	29.17726 AU	behind sun begin	7274 Apr 08 09:42	20° $\mathbf{\text{Y}}$ 46'23	
direct	7268 Dec 14 20:18	7° $\mathbf{\text{Y}}$ 18'33		behind sun end	7274 Apr 08 17:27	20° $\mathbf{\text{Y}}$ 47'05	
evening set	7269 Mar 13 03:48	9° $\mathbf{\text{Y}}$ 12'54		max. Earth dist.	7274 Apr 08 13:23	20° $\mathbf{\text{Y}}$ 46'43	31.12260 AU
				morning rise	7274 Apr 23 22:33	21° $\mathbf{\text{Y}}$ 21'25	
conjunction	7269 Mar 28 12:39	9° $\mathbf{\text{Y}}$ 47'27	0°00'51	retrograde	7274 Jul 21 19:34	23° $\mathbf{\text{Y}}$ 17'04	
minimum elong	7269 Mar 28 12:39	9° $\mathbf{\text{Y}}$ 47'27	0°00'50	opposition	7274 Oct 09 16:45	21° $\mathbf{\text{Y}}$ 53'47	-0°15'29
behind sun begin	7269 Mar 28 06:15	9° $\mathbf{\text{Y}}$ 46'53		min. Earth dist.	7274 Oct 09 16:51	21° $\mathbf{\text{Y}}$ 53'46	29.11765 AU
behind sun end	7269 Mar 28 19:02	9° $\mathbf{\text{Y}}$ 48'02		direct	7274 Dec 28 13:09	20° $\mathbf{\text{Y}}$ 30'18	
max. Earth dist.	7269 Mar 28 07:51	9° $\mathbf{\text{Y}}$ 47'02	31.17146 AU	evening set	7275 Mar 26 15:00	22° $\mathbf{\text{Y}}$ 24'36	
morning rise	7269 Apr 12 21:24	10° $\mathbf{\text{Y}}$ 22'01					
retrograde	7269 Jul 10 06:37	12° $\mathbf{\text{Y}}$ 16'51		conjunction	7275 Apr 10 23:41	22° $\mathbf{\text{Y}}$ 59'13	-0°15'53
desc. node	7269 Jul 14 06:37	12° $\mathbf{\text{Y}}$ 16'35		minimum elong	7275 Apr 10 23:41	22° $\mathbf{\text{Y}}$ 59'13	0°15'55

behind sun begin	7275 Apr 10 22:23	22° Υ 59'06		retrograde	7281 Aug 06 04:50	8° \mathcal{B} 46'03	
behind sun end	7275 Apr 11 00:59	22° Υ 59'20		opposition	7281 Oct 25 12:16	7° \mathcal{B} 22'08	-0°35'16
max. Earth dist.	7275 Apr 11 00:26	22° Υ 59'17	31.11241 AU	min. Earth dist.	7281 Oct 25 07:31	7° \mathcal{B} 22'27	29.02888 AU
morning rise	7275 Apr 26 08:41	23° Υ 33'55		direct	7282 Jan 13 01:15	5° \mathcal{B} 58'36	
retrograde	7275 Jul 24 07:22	25° Υ 29'42		evening set	7282 Apr 10 13:57	7° \mathcal{B} 52'33	
opposition	7275 Oct 12 05:38	24° Υ 06'23	-0°18'24				
min. Earth dist.	7275 Oct 12 04:18	24° Υ 06'28	29.10692 AU	conjunction	7282 Apr 25 22:49	8° \mathcal{B} 27'15	-0°34'15
direct	7275 Dec 31 02:06	22° Υ 42'56		minimum elong	7282 Apr 25 22:49	8° \mathcal{B} 27'15	0°34'18
evening set	7276 Mar 28 01:14	24° Υ 37'12		max. Earth dist.	7282 Apr 26 04:20	8° \mathcal{B} 27'46	31.02323 AU
				morning rise	7282 May 11 08:51	9° \mathcal{B} 02'06	
conjunction	7276 Apr 12 09:49	25° Υ 11'51	-0°18'36	retrograde	7282 Aug 08 18:07	10° \mathcal{B} 58'42	
minimum elong	7276 Apr 12 09:48	25° Υ 11'51	0°18'38	opposition	7282 Oct 28 01:19	9° \mathcal{B} 34'43	-0°37'56
max. Earth dist.	7276 Apr 12 10:11	25° Υ 11'53	31.10107 AU	min. Earth dist.	7282 Oct 27 18:34	9° \mathcal{B} 35'10	29.01808 AU
morning rise	7276 Apr 27 19:02	25° Υ 46'34		direct	7283 Jan 15 12:45	8° \mathcal{B} 11'11	
retrograde	7276 Jul 25 20:26	27° Υ 42'29		evening set	7283 Apr 13 00:11	10° \mathcal{B} 05'08	
opposition	7276 Oct 13 18:49	26° Υ 19'05	-0°21'18				
min. Earth dist.	7276 Oct 13 17:42	26° Υ 19'09	29.09505 AU	conjunction	7283 Apr 28 09:07	10° \mathcal{B} 39'52	-0°36'42
direct	7277 Jan 01 14:05	24° Υ 55'38		minimum elong	7283 Apr 28 09:07	10° \mathcal{B} 39'52	0°36'46
evening set	7277 Mar 30 11:19	26° Υ 49'52		max. Earth dist.	7283 Apr 28 15:29	10° \mathcal{B} 40'28	31.01296 AU
				morning rise	7283 May 13 19:22	11° \mathcal{B} 14'44	
conjunction	7277 Apr 14 20:02	27° Υ 24'32	-0°21'18	retrograde	7283 Aug 11 06:50	13° \mathcal{B} 11'28	
minimum elong	7277 Apr 14 20:02	27° Υ 24'32	0°21'21	opposition	7283 Oct 30 14:24	11° \mathcal{B} 47'26	-0°40'32
max. Earth dist.	7277 Apr 14 21:52	27° Υ 24'42	31.08856 AU	min. Earth dist.	7283 Oct 30 07:48	11° \mathcal{B} 47'53	29.00848 AU
morning rise	7277 Apr 30 05:13	27° Υ 59'16		direct	7284 Jan 17 22:46	10° \mathcal{B} 23'57	
retrograde	7277 Jul 28 07:41	29° Υ 55'18		evening set	7284 Apr 14 10:25	12° \mathcal{B} 17'53	
opposition	7277 Oct 16 07:54	28° Υ 31'49	-0°24'11				
min. Earth dist.	7277 Oct 16 05:53	28° Υ 31'57	29.08189 AU	conjunction	7284 Apr 29 19:33	12° \mathcal{B} 52'38	-0°39'07
direct	7278 Jan 04 03:52	27° Υ 08'21		minimum elong	7284 Apr 29 19:33	12° \mathcal{B} 52'38	0°39'11
evening set	7278 Apr 01 21:35	29° Υ 02'32		max. Earth dist.	7284 Apr 30 03:14	12° \mathcal{B} 53'22	31.00387 AU
				morning rise	7284 May 15 05:56	13° \mathcal{B} 27'32	
conjunction	7278 Apr 17 06:10	29° Υ 37'12	-0°23'58		7284 Jul 05 03:01	15° \mathcal{B}	
minimum elong	7278 Apr 17 06:10	29° Υ 37'12	0°24'01	retrograde	7284 Aug 12 19:48	15° \mathcal{B} 24'25	
max. Earth dist.	7278 Apr 17 07:34	29° Υ 37'19	31.07505 AU		7284 Sep 21 16:40	15° \mathcal{R} \mathcal{B}	
	7278 Apr 27 07:22	0° \mathcal{B}		opposition	7284 Nov 01 03:27	14° \mathcal{B} 00'21	-0°43'05
morning rise	7278 May 02 15:39	0° \mathcal{B} 11'58		min. Earth dist.	7284 Oct 31 19:03	14° \mathcal{B} 00'56	28.99971 AU
retrograde	7278 Jul 30 19:38	2° \mathcal{B} 08'06		direct	7285 Jan 19 11:33	12° \mathcal{B} 36'55	
opposition	7278 Oct 18 21:05	0° \mathcal{B} 44'29	-0°27'01	evening set	7285 Apr 16 20:47	14° \mathcal{B} 30'52	
min. Earth dist.	7278 Oct 18 18:30	0° \mathcal{B} 44'40	29.06816 AU		7285 Apr 29 18:37	15° \mathcal{B}	
	7278 Nov 16 13:31	30° \mathcal{R} Υ					
direct	7279 Jan 06 14:48	29° Υ 21'00		conjunction	7285 May 02 05:52	15° \mathcal{B} 05'38	-0°41'28
	7279 Feb 24 10:20	0° \mathcal{B}		minimum elong	7285 May 02 05:52	15° \mathcal{B} 05'38	0°41'32
evening set	7279 Apr 04 07:33	1° \mathcal{B} 15'06		max. Earth dist.	7285 May 02 13:34	15° \mathcal{B} 06'21	30.99538 AU
				morning rise	7285 May 17 16:34	15° \mathcal{B} 40'34	
conjunction	7279 Apr 19 16:21	1° \mathcal{B} 49'47	-0°26'36	retrograde	7285 Aug 15 10:01	17° \mathcal{B} 37'36	
minimum elong	7279 Apr 19 16:21	1° \mathcal{B} 49'47	0°26'39	opposition	7285 Nov 03 16:46	16° \mathcal{B} 13'31	-0°45'34
max. Earth dist.	7279 Apr 19 19:32	1° \mathcal{B} 50'05	31.06111 AU	min. Earth dist.	7285 Nov 03 08:20	16° \mathcal{B} 14'05	28.99153 AU
morning rise	7279 May 05 01:51	2° \mathcal{B} 24'34			7285 Dec 28 09:03	15° \mathcal{R} \mathcal{B}	
retrograde	7279 Aug 02 05:12	4° \mathcal{B} 20'48		direct	7286 Jan 21 22:56	14° \mathcal{B} 50'08	
opposition	7279 Oct 21 10:12	2° \mathcal{B} 57'05	-0°29'49		7286 Feb 15 02:42	15° \mathcal{B}	
min. Earth dist.	7279 Oct 21 07:08	2° \mathcal{B} 57'18	29.05424 AU	evening set	7286 Apr 19 07:12	16° \mathcal{B} 44'05	
direct	7280 Jan 09 03:24	1° \mathcal{B} 33'34					
evening set	7280 Apr 05 17:45	3° \mathcal{B} 27'36		conjunction	7286 May 04 16:34	17° \mathcal{B} 18'53	-0°43'46
				minimum elong	7286 May 04 16:34	17° \mathcal{B} 18'53	0°43'50
conjunction	7280 Apr 21 02:28	4° \mathcal{B} 02'18	-0°29'11	max. Earth dist.	7286 May 05 02:00	17° \mathcal{B} 19'47	30.98728 AU
minimum elong	7280 Apr 21 02:28	4° \mathcal{B} 02'18	0°29'14	morning rise	7286 May 20 03:19	17° \mathcal{B} 53'51	
max. Earth dist.	7280 Apr 21 05:36	4° \mathcal{B} 02'35	31.04746 AU	retrograde	7286 Aug 17 22:36	19° \mathcal{B} 51'02	
morning rise	7280 May 06 12:14	4° \mathcal{B} 37'06		opposition	7286 Nov 06 05:59	18° \mathcal{B} 26'56	-0°47'59
retrograde	7280 Aug 03 18:04	6° \mathcal{B} 33'26		min. Earth dist.	7286 Nov 05 20:33	18° \mathcal{B} 27'34	28.98338 AU
opposition	7280 Oct 22 23:05	5° \mathcal{B} 09'36	-0°32'34	direct	7287 Jan 24 12:11	17° \mathcal{B} 03'36	
min. Earth dist.	7280 Oct 22 18:28	5° \mathcal{B} 09'55	29.04103 AU	evening set	7287 Apr 21 17:52	18° \mathcal{B} 57'34	
direct	7281 Jan 10 13:55	3° \mathcal{B} 46'04					
evening set	7281 Apr 08 03:53	5° \mathcal{B} 40'04		conjunction	7287 May 07 03:12	19° \mathcal{B} 32'23	-0°46'00
				minimum elong	7287 May 07 03:12	19° \mathcal{B} 32'23	0°46'04
conjunction	7281 Apr 23 12:43	6° \mathcal{B} 14'46	-0°31'44	max. Earth dist.	7287 May 07 12:10	19° \mathcal{B} 33'14	30.97899 AU
minimum elong	7281 Apr 23 12:42	6° \mathcal{B} 14'46	0°31'47	morning rise	7287 May 22 14:21	20° \mathcal{B} 07'24	
max. Earth dist.	7281 Apr 23 17:24	6° \mathcal{B} 15'12	31.03466 AU	retrograde	7287 Aug 20 12:00	22° \mathcal{B} 04'43	
morning rise	7281 May 08 22:31	6° \mathcal{B} 49'35		opposition	7287 Nov 08 19:19	20° \mathcal{B} 40'36	-0°50'20

min. Earth dist.	7287 Nov 08 09:33	20° 8 41'16	28.97488 AU	conjunction	7294 May 22 08:24	5° II 10'08	-0°59'32
direct	7288 Jan 26 22:56	19° 8 17'19		minimum elong	7294 May 22 08:24	5° II 10'08	0°59'37
evening set	7288 Apr 23 04:35	21° 8 11'18		max. Earth dist.	7294 May 22 21:10	5° II 11'21	30.90359 AU
				morning rise	7294 Jun 06 21:27	5° II 45'20	
conjunction	7288 May 08 14:11	21° 8 46'08	-0°48'09	retrograde	7294 Sep 05 05:29	7° II 43'22	
minimum elong	7288 May 08 14:11	21° 8 46'08	0°48'13	opposition	7294 Nov 24 16:07	6° II 18'45	-1°04'31
max. Earth dist.	7288 May 09 00:32	21° 8 47'07	30.96995 AU	min. Earth dist.	7294 Nov 24 02:54	6° II 19'39	28.89945 AU
morning rise	7288 May 24 01:24	22° 8 21'10		direct	7295 Feb 11 08:37	4° II 55'22	
retrograde	7288 Aug 21 23:03	24° 8 18'38		evening set	7295 May 09 08:36	6° II 49'11	
opposition	7288 Nov 10 08:34	22° 8 54'29	-0°52'37				
min. Earth dist.	7288 Nov 09 22:43	22° 8 55'10	28.96535 AU	conjunction	7295 May 24 19:41	7° II 24'10	-1°01'08
direct	7289 Jan 28 11:44	21° 8 31'14		minimum elong	7295 May 24 19:41	7° II 24'10	1°01'13
evening set	7289 Apr 25 15:30	23° 8 25'12		max. Earth dist.	7295 May 25 10:14	7° II 25'33	30.89468 AU
				morning rise	7295 Jun 09 08:55	7° II 59'24	
conjunction	7289 May 11 01:09	24° 8 00'04	-0°50'15	retrograde	7295 Sep 07 18:07	9° II 57'31	
minimum elong	7289 May 11 01:09	24° 8 00'04	0°50'19	opposition	7295 Nov 27 05:13	8° II 32'51	-1°06'11
max. Earth dist.	7289 May 11 10:57	24° 8 01'00	30.95996 AU	min. Earth dist.	7295 Nov 26 14:47	8° II 33'51	28.89110 AU
morning rise	7289 May 26 12:44	24° 8 35'08		direct	7296 Feb 13 21:46	7° II 09'29	
retrograde	7289 Aug 24 13:20	26° 8 32'43		evening set	7296 May 10 19:43	9° II 03'18	
opposition	7289 Nov 12 21:57	25° 8 08'31	-0°54'49				
min. Earth dist.	7289 Nov 12 11:04	25° 8 09'16	28.95484 AU	conjunction	7296 May 26 06:52	9° II 38'18	-1°02'38
direct	7290 Jan 30 22:47	23° 8 45'16		minimum elong	7296 May 26 06:52	9° II 38'18	1°02'43
evening set	7290 Apr 28 02:14	25° 8 39'12		max. Earth dist.	7296 May 26 21:06	9° II 39'39	30.88693 AU
				morning rise	7296 Jun 10 20:34	10° II 13'33	
conjunction	7290 May 13 12:09	26° 8 14'05	-0°52'16	retrograde	7296 Sep 09 08:14	12° II 11'46	
minimum elong	7290 May 13 12:09	26° 8 14'05	0°52'20	opposition	7296 Nov 28 18:20	10° II 47'04	-1°07'45
max. Earth dist.	7290 May 13 22:54	26° 8 15'07	30.94884 AU	min. Earth dist.	7296 Nov 28 03:26	10° II 48'06	28.88398 AU
morning rise	7290 May 28 23:56	26° 8 49'11		direct	7297 Feb 15 08:46	9° II 23'43	
retrograde	7290 Aug 27 00:05	28° 8 46'53		evening set	7297 May 13 06:45	11° II 17'31	
opposition	7290 Nov 15 11:23	27° 8 22'36	-0°56'56				
min. Earth dist.	7290 Nov 15 00:57	27° 8 23'19	28.94329 AU	conjunction	7297 May 28 18:20	11° II 52'34	-1°04'03
direct	7291 Feb 02 10:38	25° 8 59'20		minimum elong	7297 May 28 18:19	11° II 52'34	1°04'09
evening set	7291 Apr 30 13:08	27° 8 53'14		max. Earth dist.	7297 May 29 10:16	11° II 54'05	30.88023 AU
				morning rise	7297 Jun 13 08:13	12° II 27'51	
conjunction	7291 May 15 23:15	28° 8 28'08	-0°54'12	retrograde	7297 Sep 11 20:53	14° II 26'09	
minimum elong	7291 May 15 23:15	28° 8 28'08	0°54'17	opposition	7297 Dec 01 07:34	13° II 01'26	-1°09'13
max. Earth dist.	7291 May 16 10:18	28° 8 29'11	30.93709 AU	min. Earth dist.	7297 Nov 30 16:15	13° II 02'29	28.87768 AU
morning rise	7291 May 31 11:22	29° 8 03'15		direct	7298 Feb 17 22:19	11° II 38'06	
	7291 Jun 28 02:40	0° II		evening set	7298 May 15 17:56	13° II 31'55	
retrograde	7291 Aug 29 13:09	1° II 01'02					
	7291 Nov 03 15:45	30° 8 8		conjunction	7298 May 31 05:42	14° II 06'59	-1°05'22
opposition	7291 Nov 18 00:25	29° 8 36'40	-0°58'58	minimum elong	7298 May 31 05:42	14° II 06'59	1°05'27
min. Earth dist.	7291 Nov 17 12:36	29° 8 37'29	28.93140 AU	max. Earth dist.	7298 May 31 21:22	14° II 08'28	30.87433 AU
direct	7292 Feb 04 22:08	28° 8 13'21		morning rise	7298 Jun 15 20:04	14° II 42'18	
	7292 Apr 28 17:20	0° II		retrograde	7298 Sep 14 11:38	16° II 40'41	
evening set	7292 May 02 00:01	0° II 07'14		opposition	7298 Dec 03 20:45	15° II 15'58	-1°10'34
				min. Earth dist.	7298 Dec 03 04:28	15° II 17'05	28.87199 AU
conjunction	7292 May 17 10:18	0° II 42'09	-0°56'04	direct	7299 Feb 20 09:50	13° II 52'40	
minimum elong	7292 May 17 10:18	0° II 42'09	0°56'08	evening set	7299 May 18 05:20	15° II 46'29	
max. Earth dist.	7292 May 17 21:49	0° II 43'15	30.92513 AU				
morning rise	7292 Jun 01 22:43	1° II 17'18		conjunction	7299 Jun 02 17:26	16° II 21'34	-1°06'35
retrograde	7292 Aug 31 01:30	3° II 15'10		minimum elong	7299 Jun 02 17:26	16° II 21'34	1°06'41
opposition	7292 Nov 19 13:44	1° II 50'42	-1°00'55	max. Earth dist.	7299 Jun 03 10:03	16° II 23'09	30.86857 AU
min. Earth dist.	7292 Nov 19 02:20	1° II 51'29	28.91975 AU	morning rise	7299 Jun 18 08:05	16° II 56'56	
direct	7293 Feb 06 07:55	0° II 27'21		retrograde	7299 Sep 16 22:48	18° II 55'24	
evening set	7293 May 04 10:45	2° II 21'12		opposition	7299 Dec 06 09:52	17° II 30'40	-1°11'49
				min. Earth dist.	7299 Dec 05 18:09	17° II 31'45	28.86619 AU
conjunction	7293 May 19 21:19	2° II 56'08	-0°57'50	direct	7300 Feb 22 21:33	16° II 07'23	
minimum elong	7293 May 19 21:19	2° II 56'08	0°57'55	evening set	7300 May 20 16:54	18° II 01'13	
max. Earth dist.	7293 May 20 10:08	2° II 57'21	30.91386 AU				
morning rise	7293 Jun 04 09:56	3° II 31'18		conjunction	7300 Jun 05 05:17	18° II 36'20	-1°07'42
retrograde	7293 Sep 02 14:49	5° II 29'15		minimum elong	7300 Jun 05 05:17	18° II 36'20	1°07'47
opposition	7293 Nov 22 02:54	4° II 04'43	-1°02'46	max. Earth dist.	7300 Jun 05 21:56	18° II 37'55	30.86262 AU
min. Earth dist.	7293 Nov 21 13:43	4° II 05'37	28.90895 AU	morning rise	7300 Jun 20 20:18	19° II 11'43	
direct	7294 Feb 08 21:22	2° II 41'21		retrograde	7300 Sep 19 12:36	21° II 10'17	
evening set	7294 May 06 21:45	4° II 35'10		opposition	7300 Dec 08 23:03	19° II 45'32	-1°12'58
				min. Earth dist.	7300 Dec 08 06:15	19° II 46'41	28.85989 AU

direct	7301 Feb 25 09:08	18° Π 22'15	conjunction	7307 Jun 21 17:40	4° \mathfrak{D} 20'31 -1°12'35
evening set	7301 May 23 04:29	20° Π 16'05	minimum elong	7307 Jun 21 17:40	4° \mathfrak{D} 20'31 1°12'40
			max. Earth dist.	7307 Jun 22 11:55	4° \mathfrak{D} 22'15 30.80677 AU
conjunction	7301 Jun 07 17:07	20° Π 51'14 -1°08'43	morning rise	7307 Jul 07 11:30	4° \mathfrak{D} 56'06
minimum elong	7301 Jun 07 17:07	20° Π 51'14 1°08'49	retrograde	7307 Oct 06 11:46	6° \mathfrak{D} 54'56
max. Earth dist.	7301 Jun 08 09:47	20° Π 52'49 30.85576 AU	opposition	7307 Dec 25 18:08	5° \mathfrak{D} 29'47 -1°17'46
morning rise	7301 Jun 23 08:31	21° Π 26'39	min. Earth dist.	7307 Dec 24 23:44	5° \mathfrak{D} 31'04 28.80465 AU
retrograde	7301 Sep 22 01:17	23° Π 25'18	direct	7308 Mar 12 21:46	4° \mathfrak{D} 06'16
opposition	7301 Dec 11 12:27	22° Π 00'30 -1°13'59	evening set	7308 Jun 07 14:42	6° \mathfrak{D} 00'03
min. Earth dist.	7301 Dec 10 20:36	22° Π 01'36 28.85260 AU			
direct	7302 Feb 27 19:25	20° Π 37'13	conjunction	7308 Jun 23 05:57	6° \mathfrak{D} 35'23 -1°12'50
evening set	7302 May 25 16:10	22° Π 31'02	minimum elong	7308 Jun 23 05:57	6° \mathfrak{D} 35'23 1°12'55
			max. Earth dist.	7308 Jun 24 01:15	6° \mathfrak{D} 37'12 30.80150 AU
conjunction	7302 Jun 10 05:16	23° Π 06'12 -1°09'38	morning rise	7308 Jul 09 00:07	7° \mathfrak{D} 11'00
minimum elong	7302 Jun 10 05:16	23° Π 06'12 1°09'43	retrograde	7308 Oct 07 23:26	9° \mathfrak{D} 09'51
max. Earth dist.	7302 Jun 10 22:29	23° Π 07'50 30.84799 AU	opposition	7308 Dec 27 06:59	7° \mathfrak{D} 44'42 -1°18'00
morning rise	7302 Jun 25 20:58	23° Π 41'39	min. Earth dist.	7308 Dec 26 12:50	7° \mathfrak{D} 45'58 28.80011 AU
retrograde	7302 Sep 24 14:39	25° Π 40'20	direct	7309 Mar 15 09:49	6° \mathfrak{D} 21'12
min. Earth dist.	7302 Dec 13 08:36	24° Π 16'40 28.84428 AU	evening set	7309 Jun 10 02:27	8° \mathfrak{D} 14'58
opposition	7302 Dec 14 01:31	24° Π 15'29 -1°14'54			
direct	7303 Mar 02 08:41	22° Π 52'10	conjunction	7309 Jun 25 18:07	8° \mathfrak{D} 50'20 -1°12'59
evening set	7303 May 28 03:58	24° Π 45'58	minimum elong	7309 Jun 25 18:07	8° \mathfrak{D} 50'20 1°13'05
			max. Earth dist.	7309 Jun 26 13:41	8° \mathfrak{D} 52'11 30.79778 AU
conjunction	7303 Jun 12 17:18	25° Π 21'10 -1°10'26	morning rise	7309 Jul 11 12:44	9° \mathfrak{D} 25'59
minimum elong	7303 Jun 12 17:17	25° Π 21'10 1°10'32	retrograde	7309 Oct 10 13:53	11° \mathfrak{D} 24'53
max. Earth dist.	7303 Jun 13 09:46	25° Π 22'44 30.83925 AU	opposition	7309 Dec 29 19:44	9° \mathfrak{D} 59'44 -1°18'06
morning rise	7303 Jun 28 09:33	25° Π 56'38	min. Earth dist.	7309 Dec 29 00:17	10° \mathfrak{D} 01'05 28.79702 AU
retrograde	7303 Sep 27 04:40	27° Π 55'22	direct	7310 Mar 17 21:32	8° \mathfrak{D} 36'14
opposition	7303 Dec 16 14:43	26° Π 30'26 -1°15'43	evening set	7310 Jun 12 14:31	10° \mathfrak{D} 30'02
min. Earth dist.	7303 Dec 15 22:28	26° Π 31'34 28.83531 AU			
direct	7304 Mar 03 19:41	25° Π 07'04	conjunction	7310 Jun 28 06:33	11° \mathfrak{D} 05'26 -1°13'02
evening set	7304 May 29 15:34	27° Π 00'51	minimum elong	7310 Jun 28 06:33	11° \mathfrak{D} 05'26 1°13'07
			max. Earth dist.	7310 Jun 29 02:24	11° \mathfrak{D} 07'19 30.79521 AU
conjunction	7304 Jun 14 05:23	27° Π 36'04 -1°11'08	morning rise	7310 Jul 14 01:39	11° \mathfrak{D} 41'07
minimum elong	7304 Jun 14 05:23	27° Π 36'04 1°11'13	retrograde	7310 Oct 13 02:20	13° \mathfrak{D} 40'03
max. Earth dist.	7304 Jun 14 23:10	27° Π 37'45 30.83013 AU	opposition	7311 Jan 01 08:28	12° \mathfrak{D} 14'55 -1°18'04
morning rise	7304 Jun 29 21:51	28° Π 11'34	min. Earth dist.	7310 Dec 31 13:54	12° \mathfrak{D} 16'13 28.79501 AU
	7304 Sep 03 15:53	0° \mathfrak{D}	direct	7311 Mar 20 07:30	10° \mathfrak{D} 51'26
retrograde	7304 Sep 28 17:22	0° \mathfrak{D} 10'19	evening set	7311 Jun 15 02:37	12° \mathfrak{D} 45'16
	7304 Oct 24 04:58	30° \mathfrak{R} Π			
min. Earth dist.	7304 Dec 17 10:32	28° Π 46'31 28.82620 AU	conjunction	7311 Jun 30 19:11	13° \mathfrak{D} 20'41 -1°12'57
opposition	7304 Dec 18 03:38	28° Π 45'20 -1°16'24	minimum elong	7311 Jun 30 19:11	13° \mathfrak{D} 20'41 1°13'03
direct	7305 Mar 06 08:49	27° Π 21'54	max. Earth dist.	7311 Jul 01 15:41	13° \mathfrak{D} 22'38 30.79363 AU
evening set	7305 Jun 01 03:22	29° Π 15'40	morning rise	7311 Jul 16 14:38	13° \mathfrak{D} 56'24
			retrograde	7311 Oct 15 15:09	15° \mathfrak{D} 55'22
conjunction	7305 Jun 16 17:23	29° Π 50'55 -1°11'43	opposition	7312 Jan 03 21:06	14° \mathfrak{D} 30'16 -1°17'56
minimum elong	7305 Jun 16 17:23	29° Π 50'55 1°11'49	min. Earth dist.	7312 Jan 03 01:29	14° \mathfrak{D} 31'38 28.79360 AU
max. Earth dist.	7305 Jun 17 10:33	29° Π 52'32 30.82132 AU	direct	7312 Mar 21 20:08	13° \mathfrak{D} 06'48
	7305 Jun 20 17:06	0° \mathfrak{D}	evening set	7312 Jun 16 14:55	15° \mathfrak{D} 00'40
morning rise	7305 Jul 02 10:25	0° \mathfrak{D} 26'26			
retrograde	7305 Oct 01 08:03	2° \mathfrak{D} 25'13	conjunction	7312 Jul 02 07:43	15° \mathfrak{D} 36'07 -1°12'46
opposition	7305 Dec 20 16:39	1° \mathfrak{D} 00'09 -1°16'58	minimum elong	7312 Jul 02 07:43	15° \mathfrak{D} 36'07 1°12'51
min. Earth dist.	7305 Dec 19 23:26	1° \mathfrak{D} 01'21 28.81789 AU	max. Earth dist.	7312 Jul 03 03:29	15° \mathfrak{D} 37'59 30.79227 AU
	7306 Jan 29 22:23	30° \mathfrak{R} Π	morning rise	7312 Jul 18 03:41	16° \mathfrak{D} 11'52
direct	7306 Mar 08 20:14	29° Π 36'41	retrograde	7312 Oct 17 04:32	18° \mathfrak{D} 10'53
	7306 Apr 14 19:58	0° \mathfrak{D}	opposition	7313 Jan 05 09:54	16° \mathfrak{D} 45'47 -1°17'40
evening set	7306 Jun 03 14:59	1° \mathfrak{D} 30'26	min. Earth dist.	7313 Jan 04 15:11	16° \mathfrak{D} 47'05 28.79228 AU
			direct	7313 Mar 24 05:51	15° \mathfrak{D} 22'19
conjunction	7306 Jun 19 05:31	2° \mathfrak{D} 05'43 -1°12'12	evening set	7313 Jun 19 03:16	17° \mathfrak{D} 16'13
minimum elong	7306 Jun 19 05:31	2° \mathfrak{D} 05'43 1°12'17			
max. Earth dist.	7306 Jun 20 00:15	2° \mathfrak{D} 07'29 30.81340 AU	conjunction	7313 Jul 04 20:39	17° \mathfrak{D} 51'42 -1°12'28
morning rise	7306 Jul 04 22:50	2° \mathfrak{D} 41'16	minimum elong	7313 Jul 04 20:39	17° \mathfrak{D} 51'42 1°12'34
retrograde	7306 Oct 03 21:18	4° \mathfrak{D} 40'04	max. Earth dist.	7313 Jul 05 17:17	17° \mathfrak{D} 53'39 30.79077 AU
min. Earth dist.	7306 Dec 22 11:58	3° \mathfrak{D} 16'10 28.81054 AU	morning rise	7313 Jul 20 16:54	18° \mathfrak{D} 27'28
opposition	7306 Dec 23 05:30	3° \mathfrak{D} 14'57 -1°17'26	retrograde	7313 Oct 19 17:51	20° \mathfrak{D} 26'29
direct	7307 Mar 11 10:06	1° \mathfrak{D} 51'28	opposition	7314 Jan 07 22:35	19° \mathfrak{D} 01'24 -1°17'17
evening set	7307 Jun 06 02:51	3° \mathfrak{D} 45'13	min. Earth dist.	7314 Jan 07 03:24	19° \mathfrak{D} 02'44 28.79042 AU

direct	7314 Mar 26 18:10	17° Ω 37'55		minimum elong	7320 Jul 20 15:34	3° Ω 39'09	1°07'24
evening set	7314 Jun 21 15:49	19° Ω 31'50		max. Earth dist.	7320 Jul 21 11:41	3° Ω 41'03	30.77383 AU
				morning rise	7320 Aug 05 14:53	4° Ω 15'04	
conjunction	7314 Jul 07 09:31	20° Ω 07'20 -1°12'03		retrograde	7320 Nov 04 16:14	6° Ω 13'46	
minimum elong	7314 Jul 07 09:31	20° Ω 07'20 1°12'08		opposition	7321 Jan 23 13:24	4° Ω 48'28	-1°11'24
max. Earth dist.	7314 Jul 08 04:51	20° Ω 09'10 30.78855 AU		min. Earth dist.	7321 Jan 22 18:25	4° Ω 49'48	28.77485 AU
morning rise	7314 Jul 23 06:23	20° Ω 43'08		direct	7321 Apr 11 09:04	3° Ω 24'39	
retrograde	7314 Oct 22 08:38	22° Ω 42'09		evening set	7321 Jul 07 07:45	5° Ω 18'29	
opposition	7315 Jan 10 11:20	21° Ω 17'02 -1°16'47					
min. Earth dist.	7315 Jan 09 16:45	21° Ω 18'20 28.78781 AU		conjunction	7321 Jul 23 04:36	5° Ω 54'10	-1°06'11
direct	7315 Mar 29 05:49	19° Ω 53'31		minimum elong	7321 Jul 23 04:36	5° Ω 54'10	1°06'16
evening set	7315 Jun 24 04:21	21° Ω 47'25		max. Earth dist.	7321 Jul 24 00:06	5° Ω 56'00	30.77509 AU
				morning rise	7321 Aug 08 04:29	6° Ω 30'06	
conjunction	7315 Jul 09 22:38	22° Ω 22'57 -1°11'32		retrograde	7321 Nov 07 05:05	8° Ω 28'46	
minimum elong	7315 Jul 09 22:38	22° Ω 22'57 1°11'37		min. Earth dist.	7322 Jan 25 07:22	7° Ω 04'46	28.77696 AU
max. Earth dist.	7315 Jul 10 18:46	22° Ω 24'51 30.78548 AU		opposition	7322 Jan 26 01:34	7° Ω 03'29	-1°10'07
morning rise	7315 Jul 25 19:46	22° Ω 58'46		direct	7322 Apr 13 18:38	5° Ω 39'40	
retrograde	7315 Oct 24 21:49	24° Ω 57'45		evening set	7322 Jul 09 20:22	7° Ω 33'32	
opposition	7316 Jan 12 23:49	23° Ω 32'36 -1°16'11					
min. Earth dist.	7316 Jan 12 05:33	23° Ω 33'52 28.78435 AU		conjunction	7322 Jul 25 17:52	8° Ω 09'14	-1°04'56
direct	7316 Mar 30 19:38	22° Ω 09'01		minimum elong	7322 Jul 25 17:52	8° Ω 09'14	1°05'00
evening set	7316 Jun 25 16:56	24° Ω 02'55		max. Earth dist.	7322 Jul 26 14:21	8° Ω 11'10	30.77796 AU
				morning rise	7322 Aug 10 18:02	8° Ω 45'12	
conjunction	7316 Jul 11 11:34	24° Ω 38'28 -1°10'54		retrograde	7322 Nov 09 17:48	10° Ω 43'50	
minimum elong	7316 Jul 11 11:34	24° Ω 38'28 1°10'59		opposition	7323 Jan 28 13:36	9° Ω 18'36	-1°08'43
max. Earth dist.	7316 Jul 12 06:37	24° Ω 40'16 30.78198 AU		min. Earth dist.	7323 Jan 27 18:45	9° Ω 19'55	28.78037 AU
morning rise	7316 Jul 27 09:17	25° Ω 14'18		direct	7323 Apr 16 06:39	7° Ω 54'47	
retrograde	7316 Oct 26 12:11	27° Ω 13'13		evening set	7323 Jul 12 09:19	9° Ω 48'42	
opposition	7317 Jan 14 12:20	25° Ω 48'01 -1°15'27					
min. Earth dist.	7317 Jan 13 17:46	25° Ω 49'19 28.78083 AU		conjunction	7323 Jul 28 07:05	10° Ω 24'25	-1°03'34
direct	7317 Apr 02 07:27	24° Ω 24'22		minimum elong	7323 Jul 28 07:05	10° Ω 24'25	1°03'39
evening set	7317 Jun 28 05:19	26° Ω 18'15		max. Earth dist.	7323 Jul 29 02:26	10° Ω 26'15	30.78199 AU
				morning rise	7323 Aug 13 07:48	11° Ω 00'25	
conjunction	7317 Jul 14 00:28	26° Ω 53'49 -1°10'10		retrograde	7323 Nov 12 07:37	12° Ω 59'01	
minimum elong	7317 Jul 14 00:28	26° Ω 53'49 1°10'16		min. Earth dist.	7324 Jan 30 07:20	11° Ω 35'08	28.78490 AU
max. Earth dist.	7317 Jul 14 20:13	26° Ω 55'41 30.77850 AU		opposition	7324 Jan 31 01:37	11° Ω 33'51	-1°07'12
morning rise	7317 Jul 29 22:33	27° Ω 29'41		direct	7324 Apr 17 17:13	10° Ω 10'03	
retrograde	7317 Oct 29 00:54	29° Ω 28'33		evening set	7324 Jul 13 22:12	12° Ω 04'02	
min. Earth dist.	7318 Jan 16 06:55	28° Ω 04'33 28.77761 AU					
opposition	7318 Jan 17 00:50	28° Ω 03'18 -1°14'36		conjunction	7324 Jul 29 20:33	12° Ω 39'47	-1°02'07
direct	7318 Apr 04 20:35	26° Ω 39'35		minimum elong	7324 Jul 29 20:33	12° Ω 39'47	1°02'10
evening set	7318 Jun 30 17:55	28° Ω 33'26		max. Earth dist.	7324 Jul 30 16:51	12° Ω 41'41	30.78681 AU
				morning rise	7324 Aug 14 21:30	13° Ω 15'47	
conjunction	7318 Jul 16 13:31	29° Ω 09'02 -1°09'20			7324 Oct 15 07:09	15° Ω	
minimum elong	7318 Jul 16 13:31	29° Ω 09'02 1°09'24		retrograde	7324 Nov 13 20:36	15° Ω 14'23	
max. Earth dist.	7318 Jul 17 08:59	29° Ω 10'52 30.77579 AU			7324 Dec 13 21:16	15° Ω	
morning rise	7318 Aug 01 12:05	29° Ω 44'55		opposition	7325 Feb 01 13:39	13° Ω 49'16	-1°05'35
	7318 Aug 08 10:20	0° Ω		min. Earth dist.	7325 Jan 31 19:43	13° Ω 50'32	28.78981 AU
retrograde	7318 Oct 31 15:44	1° Ω 43'42		direct	7325 Apr 20 05:48	12° Ω 25'30	
opposition	7319 Jan 19 12:58	0° Ω 18'25 -1°13'39		evening set	7325 Jul 16 11:16	14° Ω 19'32	
min. Earth dist.	7319 Jan 18 18:11	0° Ω 19'44 28.77538 AU					
	7319 Jan 30 13:55	30° Ω		conjunction	7325 Aug 01 09:57	14° Ω 55'18	-1°00'33
direct	7319 Apr 07 09:25	28° Ω 54'40		minimum elong	7325 Aug 01 09:57	14° Ω 55'18	1°00'37
	7319 Jun 09 19:56	0° Ω		max. Earth dist.	7325 Aug 02 04:52	14° Ω 57'05	30.79181 AU
evening set	7319 Jul 03 06:34	0° Ω 48'30			7325 Aug 03 11:47	15° Ω	
				morning rise	7325 Aug 17 11:28	15° Ω 31'20	
conjunction	7319 Jul 19 02:34	1° Ω 24'07 -1°08'23		retrograde	7325 Nov 16 11:30	17° Ω 29'54	
minimum elong	7319 Jul 19 02:34	1° Ω 24'08 1°08'29		min. Earth dist.	7326 Feb 03 07:58	16° Ω 06'06	28.79462 AU
max. Earth dist.	7319 Jul 19 22:08	1° Ω 25'58 30.77405 AU		opposition	7326 Feb 04 01:44	16° Ω 04'51	-1°03'52
morning rise	7319 Aug 04 01:34	2° Ω 00'02			7326 Mar 19 22:52	15° Ω	
retrograde	7319 Nov 03 03:31	3° Ω 58'46		direct	7326 Apr 22 16:53	14° Ω 41'05	
min. Earth dist.	7320 Jan 21 07:26	2° Ω 34'43 28.77437 AU			7326 May 25 23:17	15° Ω	
opposition	7320 Jan 22 01:16	2° Ω 33'28 -1°12'35		evening set	7326 Jul 19 00:32	16° Ω 35'10	
direct	7320 Apr 08 20:33	1° Ω 09'40					
evening set	7320 Jul 04 19:01	3° Ω 03'30		conjunction	7326 Aug 03 23:45	17° Ω 10'58	-0°58'54
				minimum elong	7326 Aug 03 23:45	17° Ω 10'58	0°58'57
conjunction	7320 Jul 20 15:34	3° Ω 39'09 -1°07'20		max. Earth dist.	7326 Aug 04 18:46	17° Ω 12'45	30.79619 AU

morning rise	7326 Aug 20 01:32	17°047'01	direct	7333 May 08 05:40	0°028'30	
retrograde	7326 Nov 19 00:59	19°045'31	evening set	7333 Aug 03 21:11	2°022'36	
opposition	7327 Feb 06 13:42	18°020'30 -1°02'03				
min. Earth dist.	7327 Feb 05 21:09	18°021'40 28.79856 AU	conjunction	7333 Aug 19 23:23	2°058'31 -0°45'03	
direct	7327 Apr 25 06:02	16°056'44	minimum elong	7333 Aug 19 23:23	2°058'31 0°45'06	
evening set	7327 Jul 21 13:53	18°050'50	max. Earth dist.	7333 Aug 20 15:39	3°000'02 30.81973 AU	
			morning rise	7333 Sep 05 03:33	3°034'38	
conjunction	7327 Aug 06 13:31	19°026'40 -0°57'10	retrograde	7333 Dec 04 17:22	5°032'24	
minimum elong	7327 Aug 06 13:31	19°026'40 0°57'14	opposition	7334 Feb 21 23:26	4°007'26 -0°46'57	
max. Earth dist.	7327 Aug 07 07:20	19°028'21 30.79979 AU	min. Earth dist.	7334 Feb 21 09:19	4°008'26 28.82317 AU	
morning rise	7327 Aug 22 15:43	20°002'44	direct	7334 May 10 17:30	2°043'21	
retrograde	7327 Nov 21 16:20	22°001'10	evening set	7334 Aug 06 10:36	4°037'27	
min. Earth dist.	7328 Feb 08 08:49	20°037'21 28.80166 AU				
opposition	7328 Feb 09 01:38	20°036'10 -1°00'09	conjunction	7334 Aug 22 13:02	5°013'23 -0°42'46	
direct	7328 Apr 26 19:23	19°012'22	minimum elong	7334 Aug 22 13:03	5°013'23 0°42'48	
evening set	7328 Jul 23 03:04	21°006'28	max. Earth dist.	7334 Aug 23 03:56	5°014'47 30.82644 AU	
			morning rise	7334 Sep 07 17:39	5°049'31	
conjunction	7328 Aug 08 03:05	21°042'19 -0°55'20	retrograde	7334 Dec 07 07:04	7°047'11	
minimum elong	7328 Aug 08 03:06	21°042'19 0°55'23	opposition	7335 Feb 24 10:43	6°022'15 -0°44'28	
max. Earth dist.	7328 Aug 08 20:31	21°043'57 30.80247 AU	min. Earth dist.	7335 Feb 23 20:34	6°023'15 28.83056 AU	
morning rise	7328 Aug 24 05:40	22°018'25	direct	7335 May 13 04:05	4°058'09	
retrograde	7328 Nov 23 04:16	24°016'44	evening set	7335 Aug 08 23:55	6°052'17	
opposition	7329 Feb 10 13:38	22°051'45 -0°58'09				
min. Earth dist.	7329 Feb 09 22:19	22°052'49 28.80410 AU	conjunction	7335 Aug 25 02:49	7°028'14 -0°40'26	
direct	7329 Apr 29 07:12	21°027'54	minimum elong	7335 Aug 25 02:50	7°028'14 0°40'29	
evening set	7329 Jul 25 16:17	23°022'00	max. Earth dist.	7335 Aug 25 18:14	7°029'40 30.83440 AU	
			morning rise	7335 Sep 10 07:34	8°004'22	
conjunction	7329 Aug 10 16:50	23°057'52 -0°53'26	retrograde	7335 Dec 09 19:13	10°001'56	
minimum elong	7329 Aug 10 16:51	23°057'52 0°53'30	opposition	7336 Feb 26 22:09	8°037'04 -0°41'56	
max. Earth dist.	7329 Aug 11 10:03	23°059'29 30.80490 AU	min. Earth dist.	7336 Feb 26 08:56	8°038'00 28.83903 AU	
morning rise	7329 Aug 26 19:45	24°033'58	direct	7336 May 14 16:54	7°012'58	
retrograde	7329 Nov 25 17:39	26°032'10	evening set	7336 Aug 10 13:11	9°007'08	
min. Earth dist.	7330 Feb 12 09:27	25°008'18 28.80644 AU				
opposition	7330 Feb 13 01:15	25°007'11 -0°56'04	conjunction	7336 Aug 26 16:23	9°043'06 -0°38'02	
direct	7330 May 01 20:13	23°043'17	minimum elong	7336 Aug 26 16:23	9°043'06 0°38'03	
evening set	7330 Jul 28 05:38	25°037'22	max. Earth dist.	7336 Aug 27 06:48	9°044'26 30.84345 AU	
			morning rise	7336 Sep 11 21:29	10°019'14	
conjunction	7330 Aug 13 06:29	26°013'15 -0°51'27	retrograde	7336 Dec 11 09:36	12°016'43	
minimum elong	7330 Aug 13 06:30	26°013'15 0°51'29	opposition	7337 Feb 28 09:26	10°051'55 -0°39'20	
max. Earth dist.	7330 Aug 13 22:37	26°014'46 30.80734 AU	min. Earth dist.	7337 Feb 27 19:52	10°052'53 28.84830 AU	
morning rise	7330 Aug 29 09:51	26°049'22	direct	7337 May 17 05:37	9°027'49	
retrograde	7330 Nov 28 06:39	28°047'28	evening set	7337 Aug 13 02:46	11°022'03	
opposition	7331 Feb 15 12:59	27°022'28 -0°53'54				
min. Earth dist.	7331 Feb 14 22:26	27°023'29 28.80915 AU	conjunction	7337 Aug 29 06:17	11°058'01 -0°35'34	
direct	7331 May 04 06:32	25°058'30	minimum elong	7337 Aug 29 06:17	11°058'01 0°35'36	
evening set	7331 Jul 30 18:47	27°052'35	max. Earth dist.	7337 Aug 29 20:19	11°059'20 30.85275 AU	
			morning rise	7337 Sep 14 11:35	12°034'10	
conjunction	7331 Aug 15 20:11	28°028'29 -0°49'23	retrograde	7337 Dec 13 22:00	14°031'33	
minimum elong	7331 Aug 15 20:11	28°028'29 0°49'26	opposition	7338 Mar 02 20:45	13°006'50 -0°36'40	
max. Earth dist.	7331 Aug 16 12:50	28°030'03 30.81039 AU	min. Earth dist.	7338 Mar 02 08:56	13°007'40 28.85756 AU	
morning rise	7331 Aug 31 23:43	29°004'36	direct	7338 May 19 17:02	11°042'44	
	7331 Sep 28 05:15	0°00	evening set	7338 Aug 15 16:24	13°037'00	
retrograde	7331 Nov 30 17:49	1°002'35				
	7332 Feb 04 14:41	30°00	conjunction	7338 Aug 31 20:18	14°012'59 -0°33'03	
min. Earth dist.	7332 Feb 17 09:28	29°038'38 28.81255 AU	minimum elong	7338 Aug 31 20:18	14°012'59 0°33'04	
opposition	7332 Feb 18 00:25	29°037'35 -0°51'40	max. Earth dist.	7338 Sep 01 09:37	14°014'14 30.86183 AU	
direct	7332 May 05 19:14	28°013'34	morning rise	7338 Sep 17 01:48	14°049'08	
	7332 Jul 28 19:38	0°00	retrograde	7338 Dec 16 12:16	16°046'25	
evening set	7332 Aug 01 08:06	0°007'39	opposition	7339 Mar 05 07:57	15°021'45 -0°33'57	
			min. Earth dist.	7339 Mar 04 20:00	15°022'36 28.86617 AU	
conjunction	7332 Aug 17 09:43	0°043'33 -0°47'15	direct	7339 May 22 06:20	13°057'40	
minimum elong	7332 Aug 17 09:43	0°043'33 0°47'17	evening set	7339 Aug 18 06:06	15°051'57	
max. Earth dist.	7332 Aug 18 01:04	0°045'00 30.81440 AU				
morning rise	7332 Sep 02 13:44	1°019'41	conjunction	7339 Sep 03 10:10	16°027'57 -0°30'29	
retrograde	7332 Dec 02 05:53	3°017'33	minimum elong	7339 Sep 03 10:10	16°027'57 0°30'30	
opposition	7333 Feb 19 11:58	1°052'34 -0°49'20	max. Earth dist.	7339 Sep 03 22:01	16°029'03 30.86990 AU	
min. Earth dist.	7333 Feb 18 21:38	1°053'35 28.81726 AU	morning rise	7339 Sep 19 15:55	17°004'06	

retrograde	7339 Dec 19 01:10	19° 00 01'16		min. Earth dist.	7346 Mar 20 05:11	1° 00 03'21	28.91497 AU
opposition	7340 Mar 06 19:17	17° 00 36'39	-0°31'11		7346 May 01 06:52	30° 00 00	
min. Earth dist.	7340 Mar 06 09:00	17° 00 37'22	28.87381 AU	direct	7346 Jun 06 16:27	29° 00 38'24	
direct	7340 May 23 17:21	16° 00 12'31			7346 Jul 12 15:36	0° 00 00	
evening set	7340 Aug 19 19:42	18° 00 06'50		evening set	7346 Sep 03 04:53	1° 00 32'48	
conjunction	7340 Sep 05 00:13	18° 00 42'50	-0°27'53	conjunction	7346 Sep 19 10:44	2° 00 08'48	-0°11'36
minimum elong	7340 Sep 05 00:13	18° 00 42'50	0°27'53	minimum elong	7346 Sep 19 10:44	2° 00 08'48	0°11'36
max. Earth dist.	7340 Sep 05 11:53	18° 00 43'55	30.87714 AU	behind sun begin	7346 Sep 19 06:06	2° 00 08'24	
morning rise	7340 Sep 21 06:02	19° 00 18'59		behind sun end	7346 Sep 19 15:22	2° 00 09'13	
retrograde	7340 Dec 20 12:40	21° 00 16'00		max. Earth dist.	7346 Sep 19 18:13	2° 00 09'29	30.91962 AU
opposition	7341 Mar 09 06:23	19° 00 51'26	-0°28'22	morning rise	7346 Oct 05 17:20	2° 00 44'54	
min. Earth dist.	7341 Mar 08 20:11	19° 00 52'09	28.88053 AU	retrograde	7347 Jan 03 11:05	4° 00 41'06	
direct	7341 May 26 06:24	18° 00 27'16		opposition	7347 Mar 22 23:28	3° 00 16'42	-0°10'52
evening set	7341 Aug 22 09:22	20° 00 21'34		min. Earth dist.	7347 Mar 22 17:20	3° 00 17'08	28.92481 AU
				direct	7347 Jun 09 03:39	1° 00 52'16	
conjunction	7341 Sep 07 14:02	20° 00 57'35	-0°25'14	evening set	7347 Sep 05 18:13	3° 00 46'42	
minimum elong	7341 Sep 07 14:02	20° 00 57'35	0°25'15				
max. Earth dist.	7341 Sep 07 23:48	20° 00 58'29	30.88358 AU	conjunction	7347 Sep 22 00:15	4° 00 22'42	-0°08'49
morning rise	7341 Sep 23 20:12	21° 00 33'44		minimum elong	7347 Sep 22 00:15	4° 00 22'42	0°08'49
retrograde	7341 Dec 23 00:39	23° 00 30'37		behind sun begin	7347 Sep 21 18:36	4° 00 22'12	
opposition	7342 Mar 11 17:30	22° 00 06'03	-0°25'32	behind sun end	7347 Sep 22 05:53	4° 00 23'12	
min. Earth dist.	7342 Mar 11 08:28	22° 00 06'41	28.88675 AU	max. Earth dist.	7347 Sep 22 07:21	4° 00 23'21	30.93025 AU
direct	7342 May 28 16:59	20° 00 41'50		morning rise	7347 Oct 08 06:53	4° 00 58'47	
evening set	7342 Aug 24 22:57	22° 00 36'09		retrograde	7348 Jan 06 00:52	6° 00 54'52	
				opposition	7348 Mar 24 10:04	5° 00 30'32	-0°07'52
conjunction	7342 Sep 10 04:03	23° 00 12'10	-0°22'34	min. Earth dist.	7348 Mar 24 03:21	5° 00 31'01	28.93604 AU
minimum elong	7342 Sep 10 04:03	23° 00 12'10	0°22'34	direct	7348 Jun 10 17:11	4° 00 06'07	
max. Earth dist.	7342 Sep 10 14:10	23° 00 13'06	30.88965 AU	evening set	7348 Sep 07 07:43	6° 00 00'36	
morning rise	7342 Sep 26 10:11	23° 00 48'18					
retrograde	7342 Dec 25 11:26	25° 00 45'02		conjunction	7348 Sep 23 13:48	6° 00 36'36	-0°06'02
opposition	7343 Mar 14 04:22	24° 00 20'30	-0°22'39	minimum elong	7348 Sep 23 13:48	6° 00 36'36	0°06'01
min. Earth dist.	7343 Mar 13 20:02	24° 00 21'05	28.89274 AU	behind sun begin	7348 Sep 23 07:32	6° 00 36'03	
direct	7343 May 31 04:44	22° 00 56'13		behind sun end	7348 Sep 23 20:04	6° 00 37'10	
evening set	7343 Aug 27 12:35	24° 00 50'33		max. Earth dist.	7348 Sep 23 20:00	6° 00 37'09	30.94210 AU
				morning rise	7348 Oct 09 20:31	7° 00 12'40	
conjunction	7343 Sep 12 17:45	25° 00 26'33	-0°19'51	retrograde	7349 Jan 07 13:25	9° 00 08'39	
minimum elong	7343 Sep 12 17:45	25° 00 26'33	0°19'52	opposition	7349 Mar 26 20:42	7° 00 44'24	-0°04'52
max. Earth dist.	7343 Sep 13 02:10	25° 00 27'20	30.89586 AU	min. Earth dist.	7349 Mar 26 15:24	7° 00 44'47	28.94845 AU
morning rise	7343 Sep 29 00:11	26° 00 02'41		direct	7349 Jun 13 04:20	6° 00 20'00	
retrograde	7343 Dec 27 23:52	27° 00 59'17		evening set	7349 Sep 09 21:08	8° 00 14'32	
opposition	7344 Mar 15 15:15	26° 00 34'46	-0°19'44				
min. Earth dist.	7344 Mar 15 07:08	26° 00 35'20	28.89925 AU	conjunction	7349 Sep 26 03:32	8° 00 50'32	-0°03'13
direct	7344 Jun 01 15:23	25° 00 10'26		minimum elong	7349 Sep 26 03:30	8° 00 50'32	0°03'12
evening set	7344 Aug 29 01:53	27° 00 04'46		behind sun begin	7349 Sep 25 20:57	8° 00 49'57	
				behind sun end	7349 Sep 26 10:04	8° 00 51'07	
conjunction	7344 Sep 14 07:23	27° 00 40'46	-0°17'07	max. Earth dist.	7349 Sep 26 09:42	8° 00 51'05	30.95486 AU
minimum elong	7344 Sep 14 07:23	27° 00 40'46	0°17'07	morning rise	7349 Oct 12 10:10	9° 00 26'36	
max. Earth dist.	7344 Sep 14 16:13	27° 00 41'35	30.90266 AU	retrograde	7350 Jan 10 01:00	11° 00 22'27	
morning rise	7344 Sep 30 13:47	28° 00 16'54		opposition	7350 Mar 29 07:16	9° 00 58'19	-0°01'51
	7344 Dec 01 04:04	0° 00 00		min. Earth dist.	7350 Mar 29 02:01	9° 00 58'41	28.96122 AU
retrograde	7344 Dec 29 10:30	0° 00 13'21		direct	7350 Jun 15 17:08	8° 00 33'57	
	7345 Jan 27 02:23	30° 00 00		evening set	7350 Sep 12 10:53	10° 00 28'31	
opposition	7345 Mar 18 02:07	28° 00 48'52	-0°16'48				
min. Earth dist.	7345 Mar 17 19:02	28° 00 49'22	28.90648 AU	conjunction	7350 Sep 28 17:09	11° 00 04'31	-0°00'20
direct	7345 Jun 04 04:07	27° 00 24'29		minimum elong	7350 Sep 28 17:10	11° 00 04'31	0°00'19
evening set	7345 Aug 31 15:23	29° 00 18'51		behind sun begin	7350 Sep 28 10:36	11° 00 03'56	
				behind sun end	7350 Sep 28 23:43	11° 00 05'06	
conjunction	7345 Sep 16 21:02	29° 00 54'51	-0°14'22	max. Earth dist.	7350 Sep 28 21:28	11° 00 04'53	30.96756 AU
minimum elong	7345 Sep 16 21:02	29° 00 54'51	0°14'23	morning rise	7350 Oct 14 23:54	11° 00 40'34	
behind sun begin	7345 Sep 16 18:13	29° 00 54'36		asc. node	7350 Nov 10 14:52	12° 00 34'21	
behind sun end	7345 Sep 16 23:51	29° 00 55'06		retrograde	7351 Jan 12 13:33	13° 00 36'19	
max. Earth dist.	7345 Sep 17 04:38	29° 00 55'32	30.91054 AU	opposition	7351 Mar 31 17:51	12° 00 12'16	0°01'10
	7345 Sep 19 04:18	0° 00 00		min. Earth dist.	7351 Mar 31 13:50	12° 00 12'33	28.97380 AU
morning rise	7345 Oct 03 03:39	0° 00 30'57		direct	7351 Jun 18 03:32	10° 00 47'54	
retrograde	7345 Dec 31 23:34	2° 00 27'17		evening set	7351 Sep 15 00:27	12° 00 42'30	
opposition	7346 Mar 20 12:41	1° 00 02'49	-0°13'51				

conjunction	7351 Oct 01 06:58	13° <u>♁</u> 18'31	0°02'34	direct	7357 Jul 01 03:01	24° <u>♁</u> 08'25	
minimum elong	7351 Oct 01 06:58	13° <u>♁</u> 18'31	0°02'35	evening set	7357 Sep 28 09:12	26° <u>♁</u> 03'04	
behind sun begin	7351 Oct 01 00:23	13° <u>♁</u> 17'55					
behind sun end	7351 Oct 01 13:33	13° <u>♁</u> 19'06		conjunction	7357 Oct 14 15:42	26° <u>♁</u> 38'58	0°19'08
max. Earth dist.	7351 Oct 01 11:23	13° <u>♁</u> 18'53	30.97974 AU	minimum elong	7357 Oct 14 15:42	26° <u>♁</u> 38'58	0°19'11
morning rise	7351 Oct 17 13:29	13° <u>♁</u> 54'32		max. Earth dist.	7357 Oct 14 14:08	26° <u>♁</u> 38'50	31.03910 AU
retrograde	7352 Jan 15 00:25	15° <u>♁</u> 50'09		morning rise	7357 Oct 30 21:43	27° <u>♁</u> 14'51	
opposition	7352 Apr 02 04:31	14° <u>♁</u> 26'11	0°04'10	retrograde	7358 Jan 27 19:13	29° <u>♁</u> 09'32	
min. Earth dist.	7352 Apr 02 01:24	14° <u>♁</u> 26'24	28.98548 AU	opposition	7358 Apr 15 18:53	27° <u>♁</u> 45'45	0°21'52
direct	7352 Jun 19 15:08	13° <u>♁</u> 01'48		min. Earth dist.	7358 Apr 15 20:29	27° <u>♁</u> 45'38	29.04443 AU
evening set	7352 Sep 16 14:01	14° <u>♁</u> 56'25		direct	7358 Jul 03 14:35	26° <u>♁</u> 21'05	
				evening set	7358 Sep 30 22:24	28° <u>♁</u> 15'45	
conjunction	7352 Oct 02 20:26	15° <u>♁</u> 32'24	0°05'22				
minimum elong	7352 Oct 02 20:27	15° <u>♁</u> 32'25	0°05'24	conjunction	7358 Oct 17 04:56	28° <u>♁</u> 51'38	0°21'49
behind sun begin	7352 Oct 02 14:06	15° <u>♁</u> 31'51		minimum elong	7358 Oct 17 04:55	28° <u>♁</u> 51'38	0°21'52
behind sun end	7352 Oct 03 02:48	15° <u>♁</u> 32'58		max. Earth dist.	7358 Oct 17 03:27	28° <u>♁</u> 51'30	31.04986 AU
max. Earth dist.	7352 Oct 02 22:46	15° <u>♁</u> 32'35	30.99100 AU	morning rise	7358 Nov 02 10:39	29° <u>♁</u> 27'29	
morning rise	7352 Oct 19 03:06	16° <u>♁</u> 08'26			7358 Nov 18 00:18	0° <u>♁</u>	
retrograde	7353 Jan 16 11:53	18° <u>♁</u> 03'54		retrograde	7359 Jan 30 06:17	1° <u>♁</u> 22'01	
opposition	7353 Apr 04 15:08	16° <u>♁</u> 39'59	0°07'10		7359 Apr 17 04:54	30° <u>♁</u>	
min. Earth dist.	7353 Apr 04 12:33	16° <u>♁</u> 40'09	28.99628 AU	opposition	7359 Apr 18 05:02	29° <u>♁</u> 58'18	0°24'43
direct	7353 Jun 22 02:08	15° <u>♁</u> 15'33		min. Earth dist.	7359 Apr 18 06:23	29° <u>♁</u> 58'12	29.05570 AU
evening set	7353 Sep 19 03:34	17° <u>♁</u> 10'12		direct	7359 Jul 06 03:33	28° <u>♁</u> 33'37	
					7359 Sep 19 23:26	0° <u>♁</u>	
conjunction	7353 Oct 05 10:12	17° <u>♁</u> 46'10	0°08'09	evening set	7359 Oct 03 11:40	0° <u>♁</u> 28'19	
minimum elong	7353 Oct 05 10:12	17° <u>♁</u> 46'10	0°08'11				
behind sun begin	7353 Oct 05 04:23	17° <u>♁</u> 45'39		conjunction	7359 Oct 19 17:58	1° <u>♁</u> 04'11	0°24'28
behind sun end	7353 Oct 05 16:02	17° <u>♁</u> 46'41		minimum elong	7359 Oct 19 17:58	1° <u>♁</u> 04'11	0°24'31
max. Earth dist.	7353 Oct 05 12:27	17° <u>♁</u> 46'21	31.00125 AU	max. Earth dist.	7359 Oct 19 15:03	1° <u>♁</u> 03'55	31.06180 AU
morning rise	7353 Oct 21 16:37	18° <u>♁</u> 22'10		morning rise	7359 Nov 04 23:37	1° <u>♁</u> 40'00	
retrograde	7354 Jan 18 21:12	20° <u>♁</u> 17'29		retrograde	7360 Feb 01 18:29	3° <u>♁</u> 34'25	
opposition	7354 Apr 07 01:35	18° <u>♁</u> 53'36	0°10'09	opposition	7360 Apr 19 15:17	2° <u>♁</u> 10'46	0°27'31
min. Earth dist.	7354 Apr 07 00:33	18° <u>♁</u> 53'40	29.00610 AU	min. Earth dist.	7360 Apr 19 17:17	2° <u>♁</u> 10'38	29.06841 AU
direct	7354 Jun 24 14:03	17° <u>♁</u> 29'08		direct	7360 Jul 07 14:11	0° <u>♁</u> 46'06	
evening set	7354 Sep 21 17:10	19° <u>♁</u> 23'46		evening set	7360 Oct 05 00:38	2° <u>♁</u> 40'50	
conjunction	7354 Oct 07 23:44	19° <u>♁</u> 59'43	0°10'56	conjunction	7360 Oct 21 07:02	3° <u>♁</u> 16'42	0°27'04
minimum elong	7354 Oct 07 23:44	19° <u>♁</u> 59'43	0°10'58	minimum elong	7360 Oct 21 07:01	3° <u>♁</u> 16'42	0°27'07
behind sun begin	7354 Oct 07 18:50	19° <u>♁</u> 59'17		max. Earth dist.	7360 Oct 21 04:45	3° <u>♁</u> 16'29	31.07510 AU
behind sun end	7354 Oct 08 04:38	20° <u>♁</u> 00'10		morning rise	7360 Nov 06 12:21	3° <u>♁</u> 52'29	
max. Earth dist.	7354 Oct 08 00:11	19° <u>♁</u> 59'46	31.01084 AU	retrograde	7361 Feb 03 04:49	5° <u>♁</u> 46'48	
morning rise	7354 Oct 24 06:11	20° <u>♁</u> 35'41		opposition	7361 Apr 22 01:31	4° <u>♁</u> 23'16	0°30'18
retrograde	7355 Jan 21 09:31	22° <u>♁</u> 30'51		min. Earth dist.	7361 Apr 22 04:06	4° <u>♁</u> 23'05	29.08212 AU
opposition	7355 Apr 09 11:58	21° <u>♁</u> 06'59	0°13'07	direct	7361 Jul 10 01:49	2° <u>♁</u> 58'38	
min. Earth dist.	7355 Apr 09 10:51	21° <u>♁</u> 07'04	29.01544 AU	evening set	7361 Oct 07 13:57	4° <u>♁</u> 53'25	
direct	7355 Jun 27 01:48	19° <u>♁</u> 42'28					
evening set	7355 Sep 24 06:30	21° <u>♁</u> 37'06		conjunction	7361 Oct 23 20:04	5° <u>♁</u> 29'15	0°29'39
				minimum elong	7361 Oct 23 20:04	5° <u>♁</u> 29'15	0°29'42
conjunction	7355 Oct 10 13:05	22° <u>♁</u> 13'02	0°13'41	max. Earth dist.	7361 Oct 23 16:05	5° <u>♁</u> 28'53	31.08926 AU
minimum elong	7355 Oct 10 13:05	22° <u>♁</u> 13'02	0°13'43	morning rise	7361 Nov 09 01:20	6° <u>♁</u> 05'02	
behind sun begin	7355 Oct 10 09:43	22° <u>♁</u> 12'44		retrograde	7362 Feb 05 16:06	7° <u>♁</u> 59'15	
behind sun end	7355 Oct 10 16:28	22° <u>♁</u> 13'20		opposition	7362 Apr 24 11:35	6° <u>♁</u> 35'49	0°33'01
max. Earth dist.	7355 Oct 10 13:13	22° <u>♁</u> 13'03	31.01997 AU	min. Earth dist.	7362 Apr 24 14:27	6° <u>♁</u> 35'37	29.09654 AU
morning rise	7355 Oct 26 19:19	22° <u>♁</u> 48'59		direct	7362 Jul 12 12:16	5° <u>♁</u> 11'13	
retrograde	7356 Jan 23 19:36	24° <u>♁</u> 43'59		evening set	7362 Oct 10 03:10	7° <u>♁</u> 06'05	
opposition	7356 Apr 10 22:26	23° <u>♁</u> 20'08	0°16'04				
min. Earth dist.	7356 Apr 10 22:59	23° <u>♁</u> 20'06	29.02461 AU	conjunction	7362 Oct 26 09:16	7° <u>♁</u> 41'54	0°32'10
direct	7356 Jun 28 13:13	21° <u>♁</u> 55'34		minimum elong	7362 Oct 26 09:16	7° <u>♁</u> 41'54	0°32'14
evening set	7356 Sep 25 19:50	23° <u>♁</u> 50'12		max. Earth dist.	7362 Oct 26 05:32	7° <u>♁</u> 41'34	31.10362 AU
				morning rise	7362 Nov 11 14:06	8° <u>♁</u> 17'39	
conjunction	7356 Oct 12 02:25	24° <u>♁</u> 26'07	0°16'25	retrograde	7363 Feb 08 01:23	10° <u>♁</u> 11'47	
minimum elong	7356 Oct 12 02:25	24° <u>♁</u> 26'07	0°16'28	opposition	7363 Apr 26 21:54	8° <u>♁</u> 48'29	0°35'42
max. Earth dist.	7356 Oct 12 01:48	24° <u>♁</u> 26'04	31.02933 AU	min. Earth dist.	7363 Apr 27 02:14	8° <u>♁</u> 48'11	29.11076 AU
morning rise	7356 Oct 28 08:34	25° <u>♁</u> 02'01		direct	7363 Jul 14 23:11	7° <u>♁</u> 23'56	
retrograde	7357 Jan 25 07:55	26° <u>♁</u> 56'52		evening set	7363 Oct 12 16:20	9° <u>♁</u> 18'50	
opposition	7357 Apr 13 08:33	25° <u>♁</u> 33'03	0°18'59				
min. Earth dist.	7357 Apr 13 08:48	25° <u>♁</u> 33'02	29.03414 AU	conjunction	7363 Oct 28 22:08	9° <u>♁</u> 54'38	0°34'39

minimum elong	7363 Oct 28 22:08	9° ℓ 54'38	0°34'43	opposition	7370 May 11 21:12	24° ℓ 15'19	0°52'40
max. Earth dist.	7363 Oct 28 16:41	9° ℓ 54'08	31.11755 AU	min. Earth dist.	7370 May 12 06:45	24° ℓ 14'39	29.18383 AU
morning rise	7363 Nov 14 02:50	10° ℓ 30'22		direct	7370 Jul 30 12:09	22° ℓ 50'36	
retrograde	7364 Feb 10 13:36	12° ℓ 24'25		evening set	7370 Oct 28 11:25	24° ℓ 45'38	
opposition	7364 Apr 28 08:08	11° ℓ 01'12	0°38'19				
min. Earth dist.	7364 Apr 28 12:22	11° ℓ 00'54	29.12427 AU	conjunction	7370 Nov 13 15:40	25° ℓ 21'15	0°50'19
direct	7364 Jul 16 09:51	9° ℓ 36'39		minimum elong	7370 Nov 13 15:40	25° ℓ 21'15	0°50'23
evening set	7364 Oct 14 05:34	11° ℓ 31'38		max. Earth dist.	7370 Nov 13 04:11	25° ℓ 20'11	31.18809 AU
				morning rise	7370 Nov 29 18:09	25° ℓ 56'43	
conjunction	7364 Oct 30 11:16	12° ℓ 07'24	0°37'05	retrograde	7371 Feb 25 17:11	27° ℓ 49'52	
minimum elong	7364 Oct 30 11:16	12° ℓ 07'24	0°37'08	opposition	7371 May 14 07:17	26° ℓ 26'58	0°54'48
max. Earth dist.	7364 Oct 30 05:16	12° ℓ 06'51	31.13039 AU	min. Earth dist.	7371 May 14 16:42	26° ℓ 26'18	29.19310 AU
morning rise	7364 Nov 15 15:35	12° ℓ 43'06		direct	7371 Aug 01 23:16	25° ℓ 02'12	
retrograde	7365 Feb 11 23:19	14° ℓ 37'03		evening set	7371 Oct 30 23:47	26° ℓ 57'14	
opposition	7365 Apr 30 18:25	13° ℓ 13'55	0°40'53				
min. Earth dist.	7365 May 01 00:36	13° ℓ 13'29	29.13657 AU	conjunction	7371 Nov 16 03:54	27° ℓ 32'49	0°52'16
direct	7365 Jul 18 20:45	11° ℓ 49'23		minimum elong	7371 Nov 16 03:54	27° ℓ 32'49	0°52'21
evening set	7365 Oct 16 18:49	13° ℓ 44'23		max. Earth dist.	7371 Nov 15 17:09	27° ℓ 31'49	31.19766 AU
				morning rise	7371 Dec 02 05:51	28° ℓ 08'14	
conjunction	7365 Nov 02 00:21	14° ℓ 20'08	0°39'27		7372 Feb 19 08:40	0° ♊	
minimum elong	7365 Nov 02 00:21	14° ℓ 20'08	0°39'31	retrograde	7372 Feb 28 01:37	0° ♊ 01'18	
max. Earth dist.	7365 Nov 01 17:09	14° ℓ 19'28	31.14209 AU		7372 Mar 07 19:21	30° ♋ ℓ	
morning rise	7365 Nov 18 04:25	14° ℓ 55'48		opposition	7372 May 15 17:28	28° ℓ 38'25	0°56'51
	7365 Nov 20 03:12	15° ℓ		min. Earth dist.	7372 May 16 03:53	28° ℓ 37'42	29.20317 AU
retrograde	7366 Feb 14 11:15	16° ℓ 49'37		direct	7372 Aug 03 10:20	27° ℓ 13'39	
opposition	7366 May 03 04:37	15° ℓ 26'34	0°43'22	evening set	7372 Nov 01 12:24	29° ℓ 08'41	
min. Earth dist.	7366 May 03 10:47	15° ℓ 26'08	29.14756 AU				
	7366 May 19 06:29	15° ♋ ℓ		conjunction	7372 Nov 17 16:07	29° ℓ 44'15	0°54'09
direct	7366 Jul 21 10:32	14° ℓ 02'00		minimum elong	7372 Nov 17 16:07	29° ℓ 44'15	0°54'14
	7366 Sep 20 15:34	15° ℓ		max. Earth dist.	7372 Nov 17 04:08	29° ℓ 43'08	31.20832 AU
evening set	7366 Oct 19 07:59	15° ℓ 57'02			7372 Nov 24 18:39	0° ♊	
				morning rise	7372 Dec 03 17:51	0° ♊ 19'38	
conjunction	7366 Nov 04 13:14	16° ℓ 32'45	0°41'45	retrograde	7373 Mar 01 12:56	2° ♊ 12'35	
minimum elong	7366 Nov 04 13:14	16° ℓ 32'45	0°41'49	opposition	7373 May 18 03:22	0° ♊ 49'47	0°58'49
max. Earth dist.	7366 Nov 04 04:50	16° ℓ 31'59	31.15241 AU	min. Earth dist.	7373 May 18 13:10	0° ♊ 49'06	29.21431 AU
morning rise	7366 Nov 20 16:59	17° ℓ 08'23			7373 Jun 18 22:04	30° ♋ ℓ	
retrograde	7367 Feb 16 22:06	19° ℓ 02'06		direct	7373 Aug 05 20:49	29° ℓ 25'01	
opposition	7367 May 05 14:54	17° ℓ 39'04	0°45'48		7373 Sep 21 21:01	0° ♊	
min. Earth dist.	7367 May 05 22:41	17° ℓ 38'31	29.15747 AU	evening set	7373 Nov 04 00:57	1° ♊ 20'05	
direct	7367 Jul 23 22:05	16° ℓ 14'28					
evening set	7367 Oct 21 20:57	18° ℓ 09'31		conjunction	7373 Nov 20 04:26	1° ♊ 55'37	0°55'57
				minimum elong	7373 Nov 20 04:26	1° ♊ 55'37	0°56'03
conjunction	7367 Nov 07 02:05	18° ℓ 45'13	0°44'00	max. Earth dist.	7373 Nov 19 16:31	1° ♊ 54'31	31.21980 AU
minimum elong	7367 Nov 07 02:05	18° ℓ 45'13	0°44'04	morning rise	7373 Dec 06 05:40	2° ♊ 30'59	
max. Earth dist.	7367 Nov 06 17:24	18° ℓ 44'25	31.16188 AU	retrograde	7374 Mar 03 21:33	4° ♊ 23'51	
morning rise	7367 Nov 23 05:28	19° ℓ 20'48		opposition	7374 May 20 13:34	3° ♊ 01'07	1°00'42
retrograde	7368 Feb 19 09:01	21° ℓ 14'22		min. Earth dist.	7374 May 21 00:49	3° ♊ 00'20	29.22611 AU
opposition	7368 May 07 01:01	19° ℓ 51'23	0°48'10	direct	7374 Aug 08 07:17	1° ♊ 36'23	
min. Earth dist.	7368 May 07 08:57	19° ℓ 50'49	29.16652 AU	evening set	7374 Nov 06 13:25	3° ♊ 31'30	
direct	7368 Jul 25 11:12	18° ℓ 26'45					
evening set	7368 Oct 23 09:51	20° ℓ 21'47		conjunction	7374 Nov 22 16:32	4° ♊ 06'59	0°57'41
				minimum elong	7374 Nov 22 16:32	4° ♊ 06'59	0°57'46
conjunction	7368 Nov 08 14:38	20° ℓ 57'27	0°46'10	max. Earth dist.	7374 Nov 22 04:02	4° ♊ 05'50	31.23174 AU
minimum elong	7368 Nov 08 14:38	20° ℓ 57'27	0°46'15	morning rise	7374 Dec 08 17:25	4° ♊ 42'19	
max. Earth dist.	7368 Nov 08 04:16	20° ℓ 56'30	31.17066 AU	retrograde	7375 Mar 06 08:22	6° ♊ 35'07	
morning rise	7368 Nov 24 17:50	21° ℓ 33'00		opposition	7375 May 22 23:38	5° ♊ 12'29	1°02'29
retrograde	7369 Feb 20 21:19	23° ℓ 26'26		min. Earth dist.	7375 May 23 10:32	5° ♊ 11'43	29.23795 AU
opposition	7369 May 09 11:09	22° ℓ 03'28	0°50'27	direct	7375 Aug 10 19:40	3° ♊ 47'46	
min. Earth dist.	7369 May 09 19:59	22° ℓ 02'51	29.17523 AU	evening set	7375 Nov 09 01:56	5° ♊ 42'56	
direct	7369 Jul 27 23:14	20° ℓ 38'47					
evening set	7369 Oct 25 22:37	22° ℓ 33'49		conjunction	7375 Nov 25 04:41	6° ♊ 18'24	0°59'19
				minimum elong	7375 Nov 25 04:41	6° ♊ 18'24	0°59'25
conjunction	7369 Nov 11 03:19	23° ℓ 09'28	0°48'17	max. Earth dist.	7375 Nov 24 15:20	6° ♊ 17'10	31.24331 AU
minimum elong	7369 Nov 11 03:19	23° ℓ 09'28	0°48'21	morning rise	7375 Dec 11 05:09	6° ♊ 53'42	
max. Earth dist.	7369 Nov 10 17:23	23° ℓ 08'33	31.17924 AU	retrograde	7376 Mar 07 19:03	8° ♊ 46'26	
morning rise	7369 Nov 27 06:00	23° ℓ 44'58		opposition	7376 May 24 09:49	7° ♊ 23'53	1°04'11
retrograde	7370 Feb 23 06:38	25° ℓ 38'16		min. Earth dist.	7376 May 24 22:09	7° ♊ 23'01	29.24931 AU

direct	7376 Aug 12 05:56	5°♏59'11		retrograde	7383 Mar 23 17:11	24°♏03'49	
evening set	7376 Nov 10 14:20	7°♏54'23		opposition	7383 Jun 09 09:21	22°♏41'31	1°13'21
				min. Earth dist.	7383 Jun 10 01:41	22°♏40'23	29.29791 AU
conjunction	7376 Nov 26 16:51	8°♏29'50	1°00'51	direct	7383 Aug 28 16:08	21°♏16'42	
minimum elong	7376 Nov 26 16:51	8°♏29'50	1°00'57	evening set	7383 Nov 27 03:07	23°♏11'57	
max. Earth dist.	7376 Nov 26 03:19	8°♏28'35	31.25413 AU	max. Earth dist.	7383 Dec 12 09:26	23°♏45'33	31.30022 AU
morning rise	7376 Dec 12 16:52	9°♏05'05					
retrograde	7377 Mar 10 05:49	10°♏57'45		conjunction	7383 Dec 13 02:59	23°♏47'11	1°09'06
opposition	7377 May 26 20:02	9°♏35'16	1°05'48	minimum elong	7383 Dec 13 02:59	23°♏47'11	1°09'13
min. Earth dist.	7377 May 27 08:35	9°♏34'24	29.25944 AU	morning rise	7383 Dec 29 00:05	24°♏22'11	
direct	7377 Aug 14 18:58	8°♏10'35		retrograde	7384 Mar 25 02:53	26°♏14'18	
evening set	7377 Nov 13 02:54	10°♏05'50		opposition	7384 Jun 10 19:24	24°♏52'01	1°14'15
				min. Earth dist.	7384 Jun 11 10:57	24°♏50'57	29.30390 AU
conjunction	7377 Nov 29 04:55	10°♏41'14	1°02'19	direct	7384 Aug 30 03:52	23°♏27'12	
minimum elong	7377 Nov 29 04:55	10°♏41'14	1°02'24	evening set	7384 Nov 28 14:48	25°♏22'28	
max. Earth dist.	7377 Nov 28 13:37	10°♏39'49	31.26356 AU				
morning rise	7377 Dec 15 04:37	11°♏16'27		conjunction	7384 Dec 14 14:16	25°♏57'40	1°09'54
retrograde	7378 Mar 12 17:59	13°♏09'03		minimum elong	7384 Dec 14 14:16	25°♏57'40	1°09'59
opposition	7378 May 29 06:14	11°♏46'37	1°07'18	max. Earth dist.	7384 Dec 13 20:22	25°♏56'00	31.30665 AU
min. Earth dist.	7378 May 29 19:39	11°♏45'41	29.26831 AU	morning rise	7384 Dec 30 10:57	26°♏32'38	
direct	7378 Aug 17 06:44	10°♏21'56		retrograde	7385 Mar 27 13:00	28°♏24'43	
evening set	7378 Nov 15 15:13	12°♏17'12		opposition	7385 Jun 13 05:42	27°♏02'28	1°15'03
				min. Earth dist.	7385 Jun 13 21:57	27°♏01'20	29.31094 AU
conjunction	7378 Dec 01 17:02	12°♏52'35	1°03'41	direct	7385 Sep 01 13:12	25°♏37'39	
minimum elong	7378 Dec 01 17:02	12°♏52'35	1°03'46	evening set	7385 Dec 01 02:21	27°♏32'56	
max. Earth dist.	7378 Dec 01 02:01	12°♏51'12	31.27169 AU	max. Earth dist.	7385 Dec 16 08:11	28°♏06'30	31.31417 AU
morning rise	7378 Dec 17 16:09	13°♏27'46					
retrograde	7379 Mar 15 03:25	15°♏20'17		conjunction	7385 Dec 17 01:30	28°♏08'06	1°10'35
opposition	7379 May 31 16:34	13°♏57'53	1°08'43	minimum elong	7385 Dec 17 01:29	28°♏08'06	1°10'41
min. Earth dist.	7379 Jun 01 06:53	13°♏56'54	29.27574 AU	morning rise	7386 Jan 01 21:40	28°♏43'03	
direct	7379 Aug 19 19:41	12°♏33'12			7386 Feb 11 22:49	0°♏	
evening set	7379 Nov 18 03:25	14°♏28'28		retrograde	7386 Mar 29 23:06	0°♏35'05	
max. Earth dist.	7379 Dec 03 11:59	15°♏02'16	31.27856 AU		7386 May 16 10:00	30°♏♏	
				opposition	7386 Jun 15 15:53	29°♏12'54	1°15'44
conjunction	7379 Dec 04 04:43	15°♏03'49	1°04'57	min. Earth dist.	7386 Jun 16 07:47	29°♏11'48	29.31876 AU
minimum elong	7379 Dec 04 04:42	15°♏03'49	1°05'03	direct	7386 Sep 04 01:52	27°♏48'08	
morning rise	7379 Dec 20 03:35	15°♏38'58		evening set	7386 Dec 03 13:57	29°♏43'27	
retrograde	7380 Mar 16 14:14	17°♏31'24			7386 Dec 11 03:29	0°♏	
opposition	7380 Jun 02 02:45	16°♏09'02	1°10'02				
min. Earth dist.	7380 Jun 02 17:08	16°♏08'02	29.28211 AU	conjunction	7386 Dec 19 12:34	0°♏18'35	1°11'11
direct	7380 Aug 21 07:05	14°♏44'19		minimum elong	7386 Dec 19 12:33	0°♏18'35	1°11'16
evening set	7380 Nov 19 15:30	16°♏39'35		max. Earth dist.	7386 Dec 18 18:13	0°♏16'54	31.32235 AU
				morning rise	7387 Jan 04 08:25	0°♏53'30	
conjunction	7380 Dec 05 16:37	17°♏14'55	1°06'08	retrograde	7387 Apr 01 11:31	2°♏45'32	
minimum elong	7380 Dec 05 16:37	17°♏14'55	1°06'13	opposition	7387 Jun 18 02:12	1°♏23'24	1°16'18
max. Earth dist.	7380 Dec 05 00:18	17°♏13'25	31.28438 AU	min. Earth dist.	7387 Jun 18 18:17	1°♏22'18	29.32720 AU
morning rise	7380 Dec 21 14:54	17°♏50'02			7387 Aug 28 13:24	30°♏♏	
retrograde	7381 Mar 18 22:39	19°♏42'22		direct	7387 Sep 06 13:12	29°♏58'41	
opposition	7381 Jun 04 12:55	18°♏20'02	1°11'14		7387 Sep 15 13:23	0°♏	
min. Earth dist.	7381 Jun 05 04:39	18°♏18'56	29.28755 AU	evening set	7387 Dec 06 01:15	1°♏54'02	
direct	7381 Aug 23 18:33	16°♏55'17					
evening set	7381 Nov 22 03:38	18°♏50'33		conjunction	7387 Dec 21 23:38	2°♏29'09	1°11'40
max. Earth dist.	7381 Dec 07 10:38	19°♏24'13	31.28961 AU	minimum elong	7387 Dec 21 23:38	2°♏29'09	1°11'46
				max. Earth dist.	7387 Dec 21 06:11	2°♏27'32	31.33073 AU
conjunction	7381 Dec 08 04:14	19°♏25'51	1°07'13	morning rise	7388 Jan 06 18:57	3°♏04'01	
minimum elong	7381 Dec 08 04:14	19°♏25'51	1°07'20	retrograde	7388 Apr 02 20:46	4°♏56'02	
morning rise	7381 Dec 24 02:15	20°♏00'55		opposition	7388 Jun 19 12:36	3°♏33'58	1°16'46
retrograde	7382 Mar 21 09:29	21°♏53'10		min. Earth dist.	7388 Jun 20 05:24	3°♏32'49	29.33532 AU
opposition	7382 Jun 06 23:03	20°♏30'51	1°12'21	direct	7388 Sep 08 01:36	2°♏09'18	
min. Earth dist.	7382 Jun 07 14:11	20°♏29'48	29.29264 AU	evening set	7388 Dec 07 12:53	4°♏04'40	
direct	7382 Aug 26 05:29	19°♏06'05					
evening set	7382 Nov 24 15:23	21°♏01'20		conjunction	7388 Dec 23 10:41	4°♏39'45	1°12'03
				minimum elong	7388 Dec 23 10:41	4°♏39'45	1°12'08
conjunction	7382 Dec 10 15:40	21°♏36'35	1°08'13	max. Earth dist.	7388 Dec 22 15:49	4°♏38'00	31.33854 AU
minimum elong	7382 Dec 10 15:40	21°♏36'35	1°08'18	morning rise	7389 Jan 08 05:43	5°♏14'36	
max. Earth dist.	7382 Dec 09 22:18	21°♏34'59	31.29462 AU	retrograde	7389 Apr 05 08:10	7°♏06'35	
morning rise	7382 Dec 26 13:08	22°♏11'38		opposition	7389 Jun 21 22:53	5°♏44'36	1°17'08

min. Earth dist.	7389 Jun 22 15:29	5°343'27	29.34273 AU	morning rise	7396 Jan 24 06:38	20°326'51	
direct	7389 Sep 10 12:55	4°319'56		retrograde	7396 Apr 20 04:14	22°318'37	
evening set	7389 Dec 10 00:22	6°315'20		opposition	7396 Jul 07 01:02	20°356'38	1°16'34
				min. Earth dist.	7396 Jul 07 19:23	20°355'22	29.36347 AU
conjunction	7389 Dec 25 21:54	6°350'24	1°12'20	direct	7396 Sep 25 20:25	19°331'54	
minimum elong	7389 Dec 25 21:54	6°350'24	1°12'26	evening set	7396 Dec 25 06:12	21°327'09	
max. Earth dist.	7389 Dec 25 03:36	6°348'42	31.34530 AU	max. Earth dist.	7397 Jan 09 05:41	22°300'14	31.36374 AU
morning rise	7390 Jan 10 16:20	7°325'13					
retrograde	7390 Apr 07 17:30	9°317'10		conjunction	7397 Jan 10 00:57	22°302'01	1°11'27
opposition	7390 Jun 24 09:33	7°355'13	1°17'22	minimum elong	7397 Jan 10 00:58	22°302'01	1°11'31
min. Earth dist.	7390 Jun 25 03:24	7°353'59	29.34889 AU	morning rise	7397 Jan 25 16:35	22°336'38	
direct	7390 Sep 13 01:03	6°330'35		retrograde	7397 Apr 22 13:08	24°328'24	
evening set	7390 Dec 12 11:46	8°325'58		opposition	7397 Jul 09 11:41	23°306'25	1°16'03
				min. Earth dist.	7397 Jul 10 06:15	23°305'09	29.36558 AU
conjunction	7390 Dec 28 08:45	9°301'00	1°12'31	direct	7397 Sep 28 08:30	21°341'43	
minimum elong	7390 Dec 28 08:45	9°301'00	1°12'36	evening set	7397 Dec 27 17:05	23°336'59	
max. Earth dist.	7390 Dec 27 13:18	8°359'12	31.35084 AU				
morning rise	7391 Jan 13 02:54	9°335'47		conjunction	7398 Jan 12 11:16	24°311'49	1°10'55
retrograde	7391 Apr 10 04:23	11°327'43		minimum elong	7398 Jan 12 11:16	24°311'49	1°11'00
opposition	7391 Jun 26 20:04	10°305'47	1°17'30	max. Earth dist.	7398 Jan 11 15:15	24°309'57	31.36639 AU
min. Earth dist.	7391 Jun 27 13:15	10°304'36	29.35373 AU	morning rise	7398 Jan 28 02:41	24°346'24	
direct	7391 Sep 15 12:50	8°341'09		retrograde	7398 Apr 25 00:41	26°338'11	
evening set	7391 Dec 14 23:07	10°336'32		opposition	7398 Jul 11 22:24	25°316'15	1°15'25
				min. Earth dist.	7398 Jul 12 15:58	25°315'03	29.36868 AU
conjunction	7391 Dec 30 19:47	11°311'32	1°12'35	direct	7398 Sep 30 19:44	23°351'35	
minimum elong	7391 Dec 30 19:47	11°311'32	1°12'42	evening set	7398 Dec 30 03:34	25°346'51	
max. Earth dist.	7391 Dec 30 00:18	11°309'44	31.35492 AU				
morning rise	7392 Jan 15 13:25	11°346'18		conjunction	7399 Jan 14 21:31	26°321'41	1°10'17
retrograde	7392 Apr 11 12:12	13°338'11		minimum elong	7399 Jan 14 21:32	26°321'41	1°10'21
opposition	7392 Jun 28 06:38	12°316'16	1°17'32	max. Earth dist.	7399 Jan 14 02:46	26°319'56	31.36980 AU
min. Earth dist.	7392 Jun 29 01:15	12°314'59	29.35722 AU	morning rise	7399 Jan 30 12:25	26°356'15	
direct	7392 Sep 16 23:20	10°351'37		retrograde	7399 Apr 27 10:18	28°348'04	
evening set	7392 Dec 16 10:26	12°346'58		opposition	7399 Jul 14 09:18	27°326'11	1°14'41
max. Earth dist.	7392 Dec 31 10:50	13°320'06	31.35784 AU	min. Earth dist.	7399 Jul 15 03:34	27°324'56	29.37230 AU
				direct	7399 Oct 03 07:38	26°301'36	
conjunction	7393 Jan 01 06:42	13°321'57	1°12'34	evening set	7400 Jan 01 14:18	27°356'53	
minimum elong	7393 Jan 01 06:42	13°321'57	1°12'39				
morning rise	7393 Jan 16 24:00	13°356'41		conjunction	7400 Jan 17 07:45	28°331'41	1°09'32
retrograde	7393 Apr 13 21:32	15°348'31		minimum elong	7400 Jan 17 07:46	28°331'41	1°09'38
opposition	7393 Jun 30 17:10	14°326'36	1°17'27	max. Earth dist.	7400 Jan 16 12:30	28°329'53	31.37361 AU
min. Earth dist.	7393 Jul 01 11:16	14°325'21	29.35944 AU	morning rise	7400 Feb 01 22:27	29°306'14	
direct	7393 Sep 19 11:09	13°301'56			7400 Feb 28 15:51	0°≈	
evening set	7393 Dec 18 21:38	14°357'15		retrograde	7400 Apr 29 21:27	0°≈58'06	
					7400 Jul 02 03:51	30°R3	
conjunction	7394 Jan 03 17:26	15°332'12	1°12'26	opposition	7400 Jul 16 19:56	29°336'16	1°13'51
minimum elong	7394 Jan 03 17:26	15°332'12	1°12'32	min. Earth dist.	7400 Jul 17 13:09	29°335'05	29.37597 AU
max. Earth dist.	7394 Jan 02 21:01	15°330'19	31.35954 AU	direct	7400 Oct 05 19:08	28°311'45	
morning rise	7394 Jan 19 10:19	16°306'54			7400 Dec 31 18:33	0°≈	
retrograde	7394 Apr 16 07:19	17°358'43		evening set	7401 Jan 04 00:58	0°≈07'04	
opposition	7394 Jul 03 03:48	16°336'46	1°17'16				
min. Earth dist.	7394 Jul 03 22:43	16°335'29	29.36089 AU	conjunction	7401 Jan 19 18:06	0°≈41'51	1°08'42
direct	7394 Sep 21 20:38	15°312'05		minimum elong	7401 Jan 19 18:06	0°≈41'51	1°08'47
evening set	7394 Dec 21 08:35	17°307'22		max. Earth dist.	7401 Jan 18 23:07	0°≈40'05	31.37699 AU
max. Earth dist.	7395 Jan 05 08:22	17°340'27	31.36079 AU	morning rise	7401 Feb 04 08:21	1°≈16'24	
				retrograde	7401 May 02 05:53	3°≈08'19	
conjunction	7395 Jan 06 04:06	17°342'17	1°12'13	opposition	7401 Jul 19 06:59	1°≈46'32	1°12'54
minimum elong	7395 Jan 06 04:06	17°342'17	1°12'18	min. Earth dist.	7401 Jul 20 01:17	1°≈45'17	29.37905 AU
morning rise	7395 Jan 21 20:32	18°316'57		direct	7401 Oct 08 05:18	0°≈22'04	
retrograde	7395 Apr 18 16:39	20°308'44		evening set	7402 Jan 06 11:35	2°≈17'23	
opposition	7395 Jul 05 14:24	18°346'46	1°16'58	max. Earth dist.	7402 Jan 21 09:27	2°≈50'24	31.37961 AU
min. Earth dist.	7395 Jul 06 08:57	18°345'30	29.36198 AU				
direct	7395 Sep 24 09:31	17°322'04		conjunction	7402 Jan 22 04:19	2°≈52'10	1°07'46
evening set	7395 Dec 23 19:27	19°317'19		minimum elong	7402 Jan 22 04:19	2°≈52'10	1°07'51
				morning rise	7402 Feb 06 18:14	3°≈26'42	
conjunction	7396 Jan 08 14:26	19°352'12	1°11'53	retrograde	7402 May 04 15:24	5°≈18'39	
minimum elong	7396 Jan 08 14:26	19°352'12	1°11'58	opposition	7402 Jul 21 18:02	3°≈56'55	1°11'50
max. Earth dist.	7396 Jan 07 17:52	19°350'18	31.36198 AU	min. Earth dist.	7402 Jul 22 11:37	3°≈55'43	29.38099 AU

direct	7402 Oct 10 16:35	2° \approx 32'30		conjunction	7409 Feb 06 02:46	18° \approx 04'22	0°58'37
evening set	7403 Jan 08 22:15	4° \approx 27'50		minimum elong	7409 Feb 06 02:46	18° \approx 04'22	0°58'40
				morning rise	7409 Feb 21 14:37	18° \approx 38'48	
conjunction	7403 Jan 24 14:33	5° \approx 02'35	1°06'44	retrograde	7409 May 19 16:43	20° \approx 30'59	
minimum elong	7403 Jan 24 14:33	5° \approx 02'35	1°06'48	opposition	7409 Aug 06 00:41	19° \approx 09'00	1°01'45
max. Earth dist.	7403 Jan 23 19:09	5° \approx 00'47	31.38087 AU	min. Earth dist.	7409 Aug 06 17:17	19° \approx 07'52	29.35986 AU
morning rise	7403 Feb 09 04:09	5° \approx 37'06		direct	7409 Oct 26 01:44	17° \approx 44'34	
retrograde	7403 May 07 01:53	7° \approx 29'08		evening set	7410 Jan 23 22:30	19° \approx 39'39	
opposition	7403 Jul 24 05:11	6° \approx 07'24	1°10'41				
min. Earth dist.	7403 Jul 24 23:26	6° \approx 06'09	29.38166 AU	conjunction	7410 Feb 08 12:28	20° \approx 14'15	0°56'58
direct	7403 Oct 13 01:19	4° \approx 43'01		minimum elong	7410 Feb 08 12:28	20° \approx 14'16	0°57'02
evening set	7404 Jan 11 08:43	6° \approx 38'20		max. Earth dist.	7410 Feb 07 18:43	20° \approx 12'36	31.35739 AU
max. Earth dist.	7404 Jan 26 06:04	7° \approx 11'19	31.38075 AU	morning rise	7410 Feb 23 23:58	20° \approx 48'40	
				retrograde	7410 May 22 01:20	22° \approx 40'55	
conjunction	7404 Jan 27 00:48	7° \approx 13'04	1°05'36	opposition	7410 Aug 08 12:11	21° \approx 18'54	0°59'57
minimum elong	7404 Jan 27 00:48	7° \approx 13'04	1°05'41	min. Earth dist.	7410 Aug 09 05:09	21° \approx 17'45	29.35615 AU
morning rise	7404 Feb 11 14:00	7° \approx 47'34		direct	7410 Oct 28 12:28	19° \approx 54'30	
retrograde	7404 May 08 11:22	9° \approx 39'38		evening set	7411 Jan 26 08:30	21° \approx 49'32	
opposition	7404 Jul 25 16:23	8° \approx 17'54	1°09'26				
min. Earth dist.	7404 Jul 26 10:28	8° \approx 16'40	29.38059 AU	conjunction	7411 Feb 10 22:11	22° \approx 24'08	0°55'14
direct	7404 Oct 14 14:11	6° \approx 53'32		minimum elong	7411 Feb 10 22:11	22° \approx 24'08	0°55'18
evening set	7405 Jan 12 19:23	8° \approx 48'50		max. Earth dist.	7411 Feb 10 05:19	22° \approx 22'34	31.35418 AU
				morning rise	7411 Feb 26 09:27	22° \approx 58'33	
conjunction	7405 Jan 28 10:57	9° \approx 23'33	1°04'22	retrograde	7411 May 24 10:50	24° \approx 50'50	
minimum elong	7405 Jan 28 10:57	9° \approx 23'33	1°04'26	opposition	7411 Aug 10 23:29	23° \approx 28'49	0°58'03
max. Earth dist.	7405 Jan 27 15:03	9° \approx 21'41	31.37892 AU	min. Earth dist.	7411 Aug 11 15:08	23° \approx 27'45	29.35318 AU
morning rise	7405 Feb 12 23:58	9° \approx 58'02		direct	7411 Oct 31 00:20	22° \approx 04'28	
retrograde	7405 May 10 23:14	11° \approx 50'08		evening set	7412 Jan 28 18:29	23° \approx 59'29	
opposition	7405 Jul 28 03:32	10° \approx 28'22	1°08'05				
min. Earth dist.	7405 Jul 28 21:36	10° \approx 27'08	29.37804 AU	conjunction	7412 Feb 13 07:49	24° \approx 34'05	0°53'26
direct	7405 Oct 17 00:35	9° \approx 04'00		minimum elong	7412 Feb 13 07:49	24° \approx 34'05	0°53'30
evening set	7406 Jan 15 05:48	10° \approx 59'16		max. Earth dist.	7412 Feb 12 14:55	24° \approx 32'30	31.35149 AU
				morning rise	7412 Feb 28 18:57	25° \approx 08'29	
conjunction	7406 Jan 30 21:11	11° \approx 33'58	1°03'04	retrograde	7412 May 25 21:27	27° \approx 00'52	
minimum elong	7406 Jan 30 21:11	11° \approx 33'58	1°03'09	opposition	7412 Aug 12 11:00	25° \approx 38'51	0°56'05
max. Earth dist.	7406 Jan 30 02:22	11° \approx 32'12	31.37566 AU	min. Earth dist.	7412 Aug 13 02:45	25° \approx 37'47	29.35065 AU
morning rise	7406 Feb 15 09:44	12° \approx 08'26		direct	7412 Nov 01 09:32	24° \approx 14'32	
retrograde	7406 May 13 08:17	14° \approx 00'33		evening set	7413 Jan 30 04:26	26° \approx 09'33	
opposition	7406 Jul 30 14:56	12° \approx 38'45	1°06'38				
min. Earth dist.	7406 Jul 31 09:26	12° \approx 37'29	29.37408 AU	conjunction	7413 Feb 14 17:34	26° \approx 44'08	0°51'32
direct	7406 Oct 19 12:21	11° \approx 14'22		minimum elong	7413 Feb 14 17:34	26° \approx 44'08	0°51'35
evening set	7407 Jan 17 16:06	13° \approx 09'35		max. Earth dist.	7413 Feb 14 01:58	26° \approx 42'41	31.34894 AU
max. Earth dist.	7407 Feb 01 11:25	13° \approx 42'25	31.37131 AU	morning rise	7413 Mar 02 04:20	27° \approx 18'33	
				retrograde	7413 May 28 06:39	29° \approx 11'01	
conjunction	7407 Feb 02 06:59	13° \approx 44'15	1°01'40	opposition	7413 Aug 14 22:33	27° \approx 49'01	0°54'01
minimum elong	7407 Feb 02 06:59	13° \approx 44'15	1°01'44	min. Earth dist.	7413 Aug 15 13:44	27° \approx 47'59	29.34783 AU
morning rise	7407 Feb 17 19:26	14° \approx 18'43		direct	7413 Nov 03 21:36	26° \approx 24'45	
	7407 Mar 09 18:12	15° \approx		evening set	7414 Feb 01 14:32	28° \approx 19'46	
retrograde	7407 May 15 20:04	16° \approx 10'51		max. Earth dist.	7414 Feb 16 10:56	28° \approx 52'49	31.34596 AU
	7407 Jul 26 07:52	15° \approx					
opposition	7407 Aug 02 02:09	14° \approx 48'59	1°05'06	conjunction	7414 Feb 17 03:13	28° \approx 54'20	0°49'34
min. Earth dist.	7407 Aug 02 19:43	14° \approx 47'47	29.36937 AU	minimum elong	7414 Feb 17 03:13	28° \approx 54'20	0°49'38
direct	7407 Oct 22 00:32	13° \approx 24'34		morning rise	7414 Mar 04 13:54	29° \approx 28'45	
	7408 Jan 10 20:31	15° \approx			7414 Mar 19 09:10	0° \approx	
evening set	7408 Jan 20 02:16	15° \approx 19'44		retrograde	7414 May 30 18:42	1° \approx 21'20	
				opposition	7414 Aug 17 10:16	29° \approx 59'19	0°51'53
conjunction	7408 Feb 04 16:58	15° \approx 54'23	1°00'11		7414 Aug 17 00:06	30° \approx	
minimum elong	7408 Feb 04 16:58	15° \approx 54'23	1°00'16	min. Earth dist.	7414 Aug 18 00:56	29° \approx 58'19	29.34456 AU
max. Earth dist.	7408 Feb 03 22:34	15° \approx 52'40	31.36635 AU	direct	7414 Nov 06 07:00	28° \approx 35'07	
morning rise	7408 Feb 20 05:00	16° \approx 28'49			7415 Jan 20 18:19	0° \approx	
retrograde	7408 May 17 05:59	18° \approx 20'59		evening set	7415 Feb 04 00:22	0° \approx 30'07	
opposition	7408 Aug 03 13:23	16° \approx 59'03	1°03'28				
min. Earth dist.	7408 Aug 04 07:35	16° \approx 57'48	29.36439 AU	conjunction	7415 Feb 19 12:56	1° \approx 04'41	0°47'32
direct	7408 Oct 23 13:20	15° \approx 34'38		minimum elong	7415 Feb 19 12:57	1° \approx 04'41	0°47'34
evening set	7409 Jan 21 12:29	17° \approx 29'44		max. Earth dist.	7415 Feb 18 22:03	1° \approx 03'18	31.34217 AU
max. Earth dist.	7409 Feb 05 08:16	18° \approx 02'39	31.36159 AU	morning rise	7415 Mar 06 23:16	1° \approx 39'05	
				retrograde	7415 Jun 02 04:25	3° \approx 31'47	

opposition	7415 Aug 19 22:06	2° ✕ 09'45	0°49'40	max. Earth dist.	7422 Mar 05 20:37	16° ✕ 17'14	31.28489 AU
min. Earth dist.	7415 Aug 20 13:07	2° ✕ 08'44	29.34015 AU	morning rise	7422 Mar 21 17:34	16° ✕ 52'45	
direct	7415 Nov 08 18:08	0° ✕ 45'36		retrograde	7422 Jun 17 05:38	18° ✕ 46'04	
evening set	7416 Feb 06 10:30	2° ✕ 40'35		opposition	7422 Sep 04 09:42	17° ✕ 23'39	0°32'25
				min. Earth dist.	7422 Sep 04 21:02	17° ✕ 22'52	29.28080 AU
conjunction	7416 Feb 21 22:39	3° ✕ 15'09	0°45'26	direct	7422 Nov 24 04:59	15° ✕ 59'34	
minimum elong	7416 Feb 21 22:39	3° ✕ 15'09	0°45'29	evening set	7423 Feb 21 07:08	17° ✕ 54'15	
max. Earth dist.	7416 Feb 21 07:02	3° ✕ 13'41	31.33720 AU				
morning rise	7416 Mar 08 08:56	3° ✕ 49'33		conjunction	7423 Mar 08 17:38	18° ✕ 28'47	0°29'06
retrograde	7416 Jun 03 16:54	5° ✕ 42'21		minimum elong	7423 Mar 08 17:38	18° ✕ 28'47	0°29'07
opposition	7416 Aug 21 09:45	4° ✕ 20'18	0°47'23	max. Earth dist.	7423 Mar 08 05:42	18° ✕ 27'40	31.27669 AU
min. Earth dist.	7416 Aug 21 23:49	4° ✕ 19'20	29.33448 AU	morning rise	7423 Mar 24 02:56	19° ✕ 03'13	
direct	7416 Nov 10 05:46	2° ✕ 56'10		retrograde	7423 Jun 19 17:21	20° ✕ 56'39	
evening set	7417 Feb 07 20:33	4° ✕ 51'09		opposition	7423 Sep 06 21:45	19° ✕ 34'11	0°29'45
				min. Earth dist.	7423 Sep 07 07:59	19° ✕ 33'29	29.27313 AU
conjunction	7417 Feb 23 08:32	5° ✕ 25'43	0°43'16	direct	7423 Nov 26 13:53	18° ✕ 10'08	
minimum elong	7417 Feb 23 08:32	5° ✕ 25'43	0°43'18	evening set	7424 Feb 23 16:43	20° ✕ 04'49	
max. Earth dist.	7417 Feb 22 17:50	5° ✕ 24'20	31.33075 AU				
morning rise	7417 Mar 10 18:30	6° ✕ 00'07		conjunction	7424 Mar 10 03:12	20° ✕ 39'21	0°26'35
retrograde	7417 Jun 06 03:51	7° ✕ 53'00		minimum elong	7424 Mar 10 03:12	20° ✕ 39'21	0°26'36
opposition	7417 Aug 23 21:48	6° ✕ 30'55	0°45'02	max. Earth dist.	7424 Mar 09 17:06	20° ✕ 38'24	31.26942 AU
min. Earth dist.	7417 Aug 24 12:36	6° ✕ 29'54	29.32730 AU	morning rise	7424 Mar 25 12:13	21° ✕ 13'47	
direct	7417 Nov 12 18:10	5° ✕ 06'49		retrograde	7424 Jun 21 03:07	23° ✕ 07'21	
evening set	7418 Feb 10 06:28	7° ✕ 01'46		opposition	7424 Sep 08 09:49	21° ✕ 44'51	0°27'01
				min. Earth dist.	7424 Sep 08 19:54	21° ✕ 44'10	29.26615 AU
conjunction	7418 Feb 25 18:08	7° ✕ 36'19	0°41'02	direct	7424 Nov 28 00:30	20° ✕ 20'52	
minimum elong	7418 Feb 25 18:08	7° ✕ 36'19	0°41'05	evening set	7425 Feb 25 02:29	22° ✕ 15'31	
max. Earth dist.	7418 Feb 25 03:17	7° ✕ 34'56	31.32295 AU				
morning rise	7418 Mar 13 04:00	8° ✕ 10'43		conjunction	7425 Mar 12 12:38	22° ✕ 50'03	0°24'01
retrograde	7418 Jun 08 15:13	10° ✕ 03'42		minimum elong	7425 Mar 12 12:38	22° ✕ 50'03	0°24'01
opposition	7418 Aug 26 09:42	8° ✕ 41'33	0°42'37	max. Earth dist.	7425 Mar 12 02:30	22° ✕ 49'06	31.26285 AU
min. Earth dist.	7418 Aug 26 23:06	8° ✕ 40'38	29.31875 AU	morning rise	7425 Mar 27 21:43	23° ✕ 24'30	
direct	7418 Nov 15 06:44	7° ✕ 17'28		retrograde	7425 Jun 23 16:05	25° ✕ 18'12	
evening set	7419 Feb 12 16:21	9° ✕ 12'22		opposition	7425 Sep 10 22:02	23° ✕ 55'40	0°24'15
				min. Earth dist.	7425 Sep 11 06:34	23° ✕ 55'06	29.25972 AU
conjunction	7419 Feb 28 03:49	9° ✕ 46'55	0°38'45	direct	7425 Nov 30 11:43	22° ✕ 31'45	
minimum elong	7419 Feb 28 03:49	9° ✕ 46'55	0°38'47	evening set	7426 Feb 27 12:02	24° ✕ 26'24	
max. Earth dist.	7419 Feb 27 13:19	9° ✕ 45'33	31.31382 AU				
morning rise	7419 Mar 15 13:31	10° ✕ 21'19		conjunction	7426 Mar 14 22:06	25° ✕ 00'55	0°21'24
retrograde	7419 Jun 11 00:35	12° ✕ 14'22		minimum elong	7426 Mar 14 22:06	25° ✕ 00'55	0°21'25
opposition	7419 Aug 28 21:39	10° ✕ 52'09	0°40'09	max. Earth dist.	7426 Mar 14 13:21	25° ✕ 00'07	31.25641 AU
min. Earth dist.	7419 Aug 29 11:42	10° ✕ 51'12	29.30924 AU	morning rise	7426 Mar 30 07:00	25° ✕ 35'23	
direct	7419 Nov 17 17:58	9° ✕ 28'04		retrograde	7426 Jun 26 03:46	27° ✕ 29'14	
evening set	7420 Feb 15 02:06	11° ✕ 22'54		opposition	7426 Sep 13 10:29	26° ✕ 06'40	0°21'27
				min. Earth dist.	7426 Sep 13 19:21	26° ✕ 06'04	29.25323 AU
conjunction	7420 Mar 01 13:24	11° ✕ 57'27	0°36'25	direct	7426 Dec 02 23:06	24° ✕ 42'49	
minimum elong	7420 Mar 01 13:24	11° ✕ 57'27	0°36'27	evening set	7427 Mar 01 21:50	26° ✕ 37'27	
max. Earth dist.	7420 Feb 29 23:50	11° ✕ 56'11	31.30407 AU				
morning rise	7420 Mar 16 22:58	12° ✕ 31'51		conjunction	7427 Mar 17 07:41	27° ✕ 11'59	0°18'46
retrograde	7420 Jun 12 10:16	14° ✕ 24'59		minimum elong	7427 Mar 17 07:41	27° ✕ 11'59	0°18'46
opposition	7420 Aug 30 09:34	13° ✕ 02'41	0°37'38	max. Earth dist.	7427 Mar 16 23:14	27° ✕ 11'11	31.24982 AU
min. Earth dist.	7420 Aug 30 22:18	13° ✕ 01'49	29.29922 AU	morning rise	7427 Apr 01 16:34	27° ✕ 46'27	
direct	7420 Nov 19 06:51	11° ✕ 38'35		retrograde	7427 Jun 28 15:48	29° ✕ 40'25	
evening set	7421 Feb 16 11:52	13° ✕ 33'22		opposition	7427 Sep 15 22:41	28° ✕ 17'51	0°18'36
				min. Earth dist.	7427 Sep 16 05:59	28° ✕ 17'21	29.24628 AU
conjunction	7421 Mar 03 22:48	14° ✕ 07'55	0°34'01	direct	7427 Dec 05 10:53	26° ✕ 54'01	
minimum elong	7421 Mar 03 22:48	14° ✕ 07'55	0°34'02	evening set	7428 Mar 03 07:41	28° ✕ 48'39	
max. Earth dist.	7421 Mar 03 09:17	14° ✕ 06'39	31.29412 AU				
morning rise	7421 Mar 19 08:18	14° ✕ 42'19		conjunction	7428 Mar 18 17:22	29° ✕ 23'11	0°16'06
retrograde	7421 Jun 14 20:53	16° ✕ 35'32		minimum elong	7428 Mar 18 17:22	29° ✕ 23'11	0°16'06
opposition	7421 Sep 01 21:37	15° ✕ 13'10	0°35'03	behind sun begin	7428 Mar 18 16:36	29° ✕ 23'07	
min. Earth dist.	7421 Sep 02 10:05	15° ✕ 12'19	29.28961 AU	behind sun end	7428 Mar 18 18:08	29° ✕ 23'15	
direct	7421 Nov 21 16:51	13° ✕ 49'04		max. Earth dist.	7428 Mar 18 09:13	29° ✕ 22'26	31.24240 AU
evening set	7422 Feb 18 21:29	15° ✕ 43'48		morning rise	7428 Apr 03 02:12	29° ✕ 57'40	
					7428 Apr 04 03:41	0° °	
conjunction	7422 Mar 06 08:21	16° ✕ 18'20	0°31'35	retrograde	7428 Jun 30 02:59	1° ° 51'47	
minimum elong	7422 Mar 06 08:21	16° ✕ 18'20	0°31'37	opposition	7428 Sep 17 11:16	0° ° 29'09	0°15'44

min. Earth dist.	7428 Sep 17 19:07	0° Υ 28'38	29.23842 AU	conjunction	7434 Apr 01 03:35	12° Υ 31'24	-0°00'20
	7428 Oct 05 18:29	30° \mathbb{H}		minimum elong	7434 Apr 01 03:34	12° Υ 31'24	0°00'21
direct	7428 Dec 06 22:31	29° \mathbb{H} 05'23		behind sun begin	7434 Mar 31 21:11	12° Υ 30'50	
	7429 Feb 03 20:23	0° Υ		behind sun end	7434 Apr 01 09:56	12° Υ 31'59	
evening set	7429 Mar 05 17:29	0° Υ 59'59		max. Earth dist.	7434 Mar 31 22:52	12° Υ 31'00	31.17649 AU
				morning rise	7434 Apr 16 12:23	13° Υ 05'58	
conjunction	7429 Mar 21 03:05	1° Υ 34'31	0°13'24	retrograde	7434 Jul 13 21:17	15° Υ 00'46	
minimum elong	7429 Mar 21 03:04	1° Υ 34'31	0°13'24	opposition	7434 Oct 01 15:06	13° Υ 37'40	-0°01'49
behind sun begin	7429 Mar 20 23:20	1° Υ 34'11		min. Earth dist.	7434 Oct 01 18:17	13° Υ 37'27	29.17074 AU
behind sun end	7429 Mar 21 06:49	1° Υ 34'51		direct	7434 Dec 20 20:05	12° Υ 13'55	
max. Earth dist.	7429 Mar 20 19:54	1° Υ 33'52	31.23398 AU	evening set	7435 Mar 19 04:21	14° Υ 08'12	
morning rise	7429 Apr 05 11:47	2° Υ 09'00					
retrograde	7429 Jul 02 14:17	4° Υ 03'14		conjunction	7435 Apr 03 13:18	14° Υ 42'45	-0°03'09
opposition	7429 Sep 19 23:50	2° Υ 40'35	0°12'51	minimum elong	7435 Apr 03 13:18	14° Υ 42'45	0°03'10
min. Earth dist.	7429 Sep 20 06:28	2° Υ 40'08	29.22927 AU	behind sun begin	7435 Apr 03 06:56	14° Υ 42'11	
direct	7429 Dec 09 12:04	1° Υ 16'50		behind sun end	7435 Apr 03 19:41	14° Υ 43'20	
evening set	7430 Mar 08 03:30	3° Υ 11'23		max. Earth dist.	7435 Apr 03 10:04	14° Υ 42'30	31.16518 AU
				morning rise	7435 Apr 18 22:04	15° Υ 17'20	
conjunction	7430 Mar 23 12:49	3° Υ 45'56	0°10'42	retrograde	7435 Jul 16 08:54	17° Υ 12'16	
minimum elong	7430 Mar 23 12:49	3° Υ 45'56	0°10'42	opposition	7435 Oct 04 03:44	15° Υ 49'06	-0°04'45
behind sun begin	7430 Mar 23 07:50	3° Υ 45'29		min. Earth dist.	7435 Oct 04 06:57	15° Υ 48'53	29.15999 AU
behind sun end	7430 Mar 23 17:48	3° Υ 46'23		direct	7435 Dec 23 06:54	14° Υ 25'23	
max. Earth dist.	7430 Mar 23 05:16	3° Υ 45'14	31.22418 AU	evening set	7436 Mar 20 14:08	16° Υ 19'39	
morning rise	7430 Apr 07 21:36	4° Υ 20'26					
retrograde	7430 Jul 05 01:43	6° Υ 14'47		conjunction	7436 Apr 04 23:01	16° Υ 54'13	-0°05'53
opposition	7430 Sep 22 12:31	4° Υ 52'03	0°09'56	minimum elong	7436 Apr 04 23:01	16° Υ 54'13	0°05'54
min. Earth dist.	7430 Sep 22 19:13	4° Υ 51'36	29.21891 AU	behind sun begin	7436 Apr 04 16:54	16° Υ 53'40	
direct	7430 Dec 11 22:39	3° Υ 28'19		behind sun end	7436 Apr 05 05:08	16° Υ 54'47	
evening set	7431 Mar 10 13:14	5° Υ 22'49		max. Earth dist.	7436 Apr 04 20:32	16° Υ 54'01	31.15500 AU
				morning rise	7436 Apr 20 07:51	17° Υ 28'49	
conjunction	7431 Mar 25 22:37	5° Υ 57'21	0°07'59	retrograde	7436 Jul 17 21:27	19° Υ 23'54	
minimum elong	7431 Mar 25 22:38	5° Υ 57'21	0°07'57	opposition	7436 Oct 05 16:25	18° Υ 00'42	-0°07'42
behind sun begin	7431 Mar 25 16:52	5° Υ 56'50		min. Earth dist.	7436 Oct 05 17:36	18° Υ 00'37	29.15020 AU
behind sun end	7431 Mar 26 04:23	5° Υ 57'53		direct	7436 Dec 24 18:28	16° Υ 37'02	
max. Earth dist.	7431 Mar 25 16:30	5° Υ 56'48	31.21316 AU	evening set	7437 Mar 22 23:54	18° Υ 31'18	
morning rise	7431 Apr 10 07:17	6° Υ 31'53					
retrograde	7431 Jul 07 10:55	8° Υ 26'20		conjunction	7437 Apr 07 08:40	19° Υ 05'53	-0°08'37
opposition	7431 Sep 25 01:09	7° Υ 03'31	0°07'01	minimum elong	7437 Apr 07 08:40	19° Υ 05'53	0°08'40
min. Earth dist.	7431 Sep 25 07:10	7° Υ 03'06	29.20719 AU	behind sun begin	7437 Apr 07 03:04	19° Υ 05'22	
direct	7431 Dec 14 11:28	5° Υ 39'47		behind sun end	7437 Apr 07 14:15	19° Υ 06'23	
evening set	7432 Mar 11 23:11	7° Υ 34'12		max. Earth dist.	7437 Apr 07 06:51	19° Υ 05'43	31.14558 AU
				morning rise	7437 Apr 22 17:34	19° Υ 40'30	
conjunction	7432 Mar 27 08:19	8° Υ 08'45	0°05'15	retrograde	7437 Jul 20 09:40	21° Υ 35'45	
minimum elong	7432 Mar 27 08:18	8° Υ 08'45	0°05'15	opposition	7437 Oct 08 05:23	20° Υ 12'30	-0°10'38
behind sun begin	7432 Mar 27 02:06	8° Υ 08'12		min. Earth dist.	7437 Oct 08 06:37	20° Υ 12'25	29.14117 AU
behind sun end	7432 Mar 27 14:31	8° Υ 09'19		direct	7437 Dec 27 06:00	18° Υ 48'54	
max. Earth dist.	7432 Mar 27 01:37	8° Υ 08'09	31.20107 AU	evening set	7438 Mar 25 09:43	20° Υ 43'10	
morning rise	7432 Apr 11 17:07	8° Υ 43'17					
retrograde	7432 Jul 08 22:37	10° Υ 37'51		conjunction	7438 Apr 09 18:32	21° Υ 17'46	-0°11'21
opposition	7432 Sep 26 13:40	9° Υ 14'56	0°04'04	minimum elong	7438 Apr 09 18:32	21° Υ 17'46	0°11'23
min. Earth dist.	7432 Sep 26 18:53	9° Υ 14'35	29.19485 AU	behind sun begin	7438 Apr 09 13:49	21° Υ 17'20	
direct	7432 Dec 15 21:29	7° Υ 51'10		behind sun end	7438 Apr 09 23:16	21° Υ 18'11	
evening set	7433 Mar 14 08:54	9° Υ 45'33		max. Earth dist.	7438 Apr 09 18:14	21° Υ 17'44	31.13683 AU
				morning rise	7438 Apr 25 03:26	21° Υ 52'24	
conjunction	7433 Mar 29 18:03	10° Υ 20'06	0°02'30	retrograde	7438 Jul 22 22:18	23° Υ 47'49	
minimum elong	7433 Mar 29 18:04	10° Υ 20'06	0°02'28	opposition	7438 Oct 10 18:11	22° Υ 24'33	-0°13'33
behind sun begin	7433 Mar 29 11:40	10° Υ 19'31		min. Earth dist.	7438 Oct 10 17:53	22° Υ 24'35	29.13248 AU
behind sun end	7433 Mar 30 00:28	10° Υ 20'41		direct	7438 Dec 29 19:18	21° Υ 01'01	
max. Earth dist.	7433 Mar 29 13:10	10° Υ 19'40	31.18857 AU	evening set	7439 Mar 27 19:41	22° Υ 55'17	
morning rise	7433 Apr 14 02:43	10° Υ 54'39					
retrograde	7433 Jul 11 08:35	12° Υ 49'19		conjunction	7439 Apr 12 04:22	23° Υ 29'54	-0°14'04
opposition	7433 Sep 29 02:26	11° Υ 26'18	0°01'08	minimum elong	7439 Apr 12 04:21	23° Υ 29'54	0°14'07
min. Earth dist.	7433 Sep 29 07:23	11° Υ 25'58	29.18242 AU	behind sun begin	7439 Apr 12 01:05	23° Υ 29'36	
direct	7433 Dec 18 09:01	10° Υ 02'33		behind sun end	7439 Apr 12 07:37	23° Υ 30'12	
desc. node	7434 Feb 17 13:53	11° Υ 01'33		max. Earth dist.	7439 Apr 12 03:57	23° Υ 29'52	31.12815 AU
evening set	7434 Mar 16 18:37	11° Υ 56'51		morning rise	7439 Apr 27 13:29	24° Υ 04'34	
				retrograde	7439 Jul 25 10:35	26° Υ 00'09	

opposition	7439 Oct 13 07:10	24° Υ 36'52 -0°16'27	direct	7446 Jan 14 02:46	6° \mathcal{S} 30'17
min. Earth dist.	7439 Oct 13 06:46	24° Υ 36'54 29.12377 AU	evening set	7446 Apr 11 19:00	8° \mathcal{S} 24'19
direct	7440 Jan 01 05:45	23° Υ 13'24			
evening set	7440 Mar 29 05:40	25° Υ 07'39	conjunction	7446 Apr 27 03:48	8° \mathcal{S} 59'01 -0°32'21
			minimum elong	7446 Apr 27 03:48	8° \mathcal{S} 59'01 0°32'25
conjunction	7440 Apr 13 14:27	25° Υ 42'17 -0°16'46	max. Earth dist.	7446 Apr 27 07:34	8° \mathcal{S} 59'23 31.04456 AU
minimum elong	7440 Apr 13 14:27	25° Υ 42'17 0°16'48	morning rise	7446 May 12 13:44	9° \mathcal{S} 33'51
max. Earth dist.	7440 Apr 13 15:39	25° Υ 42'23 31.11914 AU	retrograde	7446 Aug 09 21:59	11° \mathcal{S} 30'20
morning rise	7440 Apr 28 23:28	26° Υ 16'59	opposition	7446 Oct 29 03:02	10° \mathcal{S} 06'30 -0°35'54
retrograde	7440 Jul 26 20:41	28° Υ 12'43	min. Earth dist.	7446 Oct 28 22:48	10° \mathcal{S} 06'47 29.03792 AU
opposition	7440 Oct 14 20:09	26° Υ 49'25 -0°19'20	direct	7447 Jan 16 14:43	8° \mathcal{S} 43'01
min. Earth dist.	7440 Oct 14 18:59	26° Υ 49'29 29.11437 AU	evening set	7447 Apr 14 05:08	10° \mathcal{S} 37'00
direct	7441 Jan 02 18:36	25° Υ 26'00			
evening set	7441 Mar 31 15:55	27° Υ 20'15	conjunction	7447 Apr 29 14:08	11° \mathcal{S} 11'43 -0°34'49
			minimum elong	7447 Apr 29 14:08	11° \mathcal{S} 11'43 0°34'53
conjunction	7441 Apr 16 00:31	27° Υ 54'54 -0°19'27	max. Earth dist.	7447 Apr 29 19:31	11° \mathcal{S} 12'14 31.03124 AU
minimum elong	7441 Apr 16 00:30	27° Υ 54'54 0°19'30	morning rise	7447 May 15 00:09	11° \mathcal{S} 46'34
max. Earth dist.	7441 Apr 16 01:10	27° Υ 54'57 31.10937 AU	retrograde	7447 Aug 12 10:57	13° \mathcal{S} 43'09
morning rise	7441 May 01 09:47	28° Υ 29'37	opposition	7447 Oct 31 16:02	12° \mathcal{S} 19'13 -0°38'30
	7441 Jun 19 21:54	0° \mathcal{S}	min. Earth dist.	7447 Oct 31 10:04	12° \mathcal{S} 19'38 29.02505 AU
retrograde	7441 Jul 29 09:37	0° \mathcal{S} 25'30	direct	7448 Jan 19 04:05	10° \mathcal{S} 55'44
	7441 Sep 08 04:32	30° $\mathcal{R}\Upsilon$	evening set	7448 Apr 15 15:26	12° \mathcal{S} 49'42
opposition	7441 Oct 17 09:19	29° Υ 02'10 -0°22'12			
min. Earth dist.	7441 Oct 17 07:24	29° Υ 02'17 29.10416 AU	conjunction	7448 May 01 00:20	13° \mathcal{S} 24'25 -0°37'13
direct	7442 Jan 05 04:56	27° Υ 38'47	minimum elong	7448 May 01 00:20	13° \mathcal{S} 24'25 0°37'16
evening set	7442 Apr 03 02:00	29° Υ 33'00	max. Earth dist.	7448 May 01 05:45	13° \mathcal{S} 24'56 31.01889 AU
	7442 Apr 15 01:52	0° \mathcal{S}	morning rise	7448 May 16 10:38	13° \mathcal{S} 59'18
				7448 Jun 15 08:55	15° \mathcal{S}
conjunction	7442 Apr 18 10:45	0° \mathcal{S} 07'40 -0°22'06	retrograde	7448 Aug 13 23:23	15° \mathcal{S} 56'00
minimum elong	7442 Apr 18 10:45	0° \mathcal{S} 07'40 0°22'08		7448 Oct 15 18:55	15° $\mathcal{R}\mathcal{S}$
max. Earth dist.	7442 Apr 18 12:49	0° \mathcal{S} 07'52 31.09846 AU	opposition	7448 Nov 02 05:10	14° \mathcal{S} 32'00 -0°41'03
morning rise	7442 May 03 19:59	0° \mathcal{S} 42'25	min. Earth dist.	7448 Nov 01 22:49	14° \mathcal{S} 32'26 29.01339 AU
retrograde	7442 Jul 31 20:22	2° \mathcal{S} 38'28	direct	7449 Jan 20 14:48	13° \mathcal{S} 08'31
opposition	7442 Oct 19 22:33	1° \mathcal{S} 15'03 -0°25'01		7449 Apr 16 23:08	15° \mathcal{S}
min. Earth dist.	7442 Oct 19 20:45	1° \mathcal{S} 15'10 29.09257 AU	evening set	7449 Apr 18 01:39	15° \mathcal{S} 02'27
	7442 Dec 15 23:47	30° $\mathcal{R}\Upsilon$			
direct	7443 Jan 07 17:00	29° Υ 51'41	conjunction	7449 May 03 10:49	15° \mathcal{S} 37'12 -0°39'34
	7443 Jan 29 23:01	0° \mathcal{S}	minimum elong	7449 May 03 10:49	15° \mathcal{S} 37'12 0°39'39
evening set	7443 Apr 05 12:22	1° \mathcal{S} 45'53	max. Earth dist.	7449 May 03 18:12	15° \mathcal{S} 37'54 31.00779 AU
			morning rise	7449 May 18 21:09	16° \mathcal{S} 12'06
conjunction	7443 Apr 20 21:02	2° \mathcal{S} 20'33 -0°24'43	retrograde	7449 Aug 16 10:49	18° \mathcal{S} 08'55
minimum elong	7443 Apr 20 21:02	2° \mathcal{S} 20'33 0°24'47	opposition	7449 Nov 04 18:17	16° \mathcal{S} 44'52 -0°43'32
max. Earth dist.	7443 Apr 20 22:48	2° \mathcal{S} 20'43 31.08627 AU	min. Earth dist.	7449 Nov 04 10:46	16° \mathcal{S} 45'22 29.00280 AU
morning rise	7443 May 06 06:31	2° \mathcal{S} 55'19	direct	7450 Jan 23 04:11	15° \mathcal{S} 21'25
retrograde	7443 Aug 03 08:54	4° \mathcal{S} 51'29	evening set	7450 Apr 20 11:58	17° \mathcal{S} 15'19
opposition	7443 Oct 22 11:31	3° \mathcal{S} 27'59 -0°27'48			
min. Earth dist.	7443 Oct 22 08:33	3° \mathcal{S} 28'12 29.07972 AU	conjunction	7450 May 05 21:06	17° \mathcal{S} 50'06 -0°41'52
direct	7444 Jan 10 04:02	2° \mathcal{S} 04'36	minimum elong	7450 May 05 21:06	17° \mathcal{S} 50'06 0°41'56
evening set	7444 Apr 06 22:38	3° \mathcal{S} 58'45	max. Earth dist.	7450 May 06 04:19	17° \mathcal{S} 50'47 30.99774 AU
			morning rise	7450 May 21 07:51	18° \mathcal{S} 25'01
conjunction	7444 Apr 22 07:24	4° \mathcal{S} 33'26 -0°27'19	retrograde	7450 Aug 19 00:32	20° \mathcal{S} 21'59
minimum elong	7444 Apr 22 07:24	4° \mathcal{S} 33'26 0°27'21	opposition	7450 Nov 07 07:26	18° \mathcal{S} 57'53 -0°45'57
max. Earth dist.	7444 Apr 22 10:03	4° \mathcal{S} 33'41 31.07277 AU	min. Earth dist.	7450 Nov 06 22:55	18° \mathcal{S} 58'28 28.99321 AU
morning rise	7444 May 07 16:58	5° \mathcal{S} 08'14	direct	7451 Jan 25 15:09	17° \mathcal{S} 34'28
retrograde	7444 Aug 04 20:23	7° \mathcal{S} 04'30	evening set	7451 Apr 22 22:22	19° \mathcal{S} 28'23
opposition	7444 Oct 24 00:48	5° \mathcal{S} 40'54 -0°30'33			
min. Earth dist.	7444 Oct 23 22:15	5° \mathcal{S} 41'05 29.06582 AU	conjunction	7451 May 08 07:46	20° \mathcal{S} 03'10 -0°44'06
direct	7445 Jan 11 14:44	4° \mathcal{S} 17'30	minimum elong	7451 May 08 07:45	20° \mathcal{S} 03'10 0°44'11
evening set	7445 Apr 09 08:44	6° \mathcal{S} 11'35	max. Earth dist.	7451 May 08 16:39	20° \mathcal{S} 04'01 30.98835 AU
			morning rise	7451 May 23 18:34	20° \mathcal{S} 38'08
conjunction	7445 Apr 24 17:33	6° \mathcal{S} 46'16 -0°29'51	retrograde	7451 Aug 21 11:27	22° \mathcal{S} 35'14
minimum elong	7445 Apr 24 17:33	6° \mathcal{S} 46'16 0°29'56	opposition	7451 Nov 09 20:31	21° \mathcal{S} 11'07 -0°48'19
max. Earth dist.	7445 Apr 24 20:51	6° \mathcal{S} 46'35 31.05869 AU	min. Earth dist.	7451 Nov 09 11:51	21° \mathcal{S} 11'42 28.98403 AU
morning rise	7445 May 10 03:17	7° \mathcal{S} 21'05	direct	7452 Jan 28 03:09	19° \mathcal{S} 47'44
retrograde	7445 Aug 07 09:09	9° \mathcal{S} 17'28	evening set	7452 Apr 24 08:58	21° \mathcal{S} 41'39
opposition	7445 Oct 26 13:54	7° \mathcal{S} 53'44 -0°33'15			
min. Earth dist.	7445 Oct 26 09:32	7° \mathcal{S} 54'02 29.05163 AU	conjunction	7452 May 09 18:23	22° \mathcal{S} 16'28 -0°46'16

minimum elong	7452 May 09 18:23	22° 8 16'28 0°46'20	opposition	7458 Nov 25 17:30	6° II 48'16 -1°02'38
max. Earth dist.	7452 May 10 03:20	22° 8 17'19 30.97938 AU	min. Earth dist.	7458 Nov 25 05:11	6° II 49'07 28.90787 AU
morning rise	7452 May 25 05:31	22° 8 51'28	direct	7459 Feb 12 13:54	5° II 24'53
retrograde	7452 Aug 23 00:33	24° 8 48'43	evening set	7459 May 10 12:48	7° II 18'43
opposition	7452 Nov 11 09:44	23° 8 24'34 -0°50'36			
min. Earth dist.	7452 Nov 10 23:45	23° 8 25'15 28.97509 AU	conjunction	7459 May 25 23:31	7° II 53'42 -0°59'23
direct	7453 Jan 29 13:54	22° 8 01'14	minimum elong	7459 May 25 23:31	7° II 53'42 0°59'29
evening set	7453 Apr 26 19:31	23° 8 55'09	max. Earth dist.	7459 May 26 11:42	7° II 54'51 30.90176 AU
			morning rise	7459 Jun 10 12:35	8° II 28'54
conjunction	7453 May 12 05:06	24° 8 30'00 -0°48'22	retrograde	7459 Sep 08 21:49	10° II 26'53
minimum elong	7453 May 12 05:06	24° 8 30'00 0°48'28	opposition	7459 Nov 28 06:32	9° II 02'16 -1°04'20
max. Earth dist.	7453 May 12 15:01	24° 8 30'56 30.97020 AU	min. Earth dist.	7459 Nov 27 17:25	9° II 03'10 28.89673 AU
morning rise	7453 May 27 16:25	25° 8 05'01	direct	7460 Feb 15 01:45	7° II 38'52
retrograde	7453 Aug 25 12:33	27° 8 02'26	evening set	7460 May 11 23:42	9° II 32'41
opposition	7453 Nov 13 23:11	25° 8 38'15 -0°52'49			
min. Earth dist.	7453 Nov 13 13:40	25° 8 38'54 28.96575 AU	conjunction	7460 May 27 10:45	10° II 07'41 -1°00'55
direct	7454 Feb 01 00:15	24° 8 14'57	minimum elong	7460 May 27 10:45	10° II 07'41 1°01'00
evening set	7454 Apr 29 06:19	26° 8 08'53	max. Earth dist.	7460 May 28 00:40	10° II 09'00 30.89112 AU
			morning rise	7460 Jun 11 24:00	10° II 42'54
conjunction	7454 May 14 16:06	26° 8 43'45 -0°50'24	retrograde	7460 Sep 10 08:42	12° II 40'59
minimum elong	7454 May 14 16:05	26° 8 43'45 0°50'28	opposition	7460 Nov 29 19:42	11° II 16'18 -1°05'56
max. Earth dist.	7454 May 15 02:25	26° 8 44'43 30.96057 AU	min. Earth dist.	7460 Nov 29 06:11	11° II 17'14 28.88680 AU
morning rise	7454 May 30 03:39	27° 8 18'48	direct	7461 Feb 16 14:15	9° II 52'54
retrograde	7454 Aug 28 02:16	29° 8 16'20	evening set	7461 May 14 10:37	11° II 46'41
opposition	7454 Nov 16 12:19	27° 8 52'07 -0°54'57			
min. Earth dist.	7454 Nov 16 01:24	27° 8 52'52 28.95568 AU	conjunction	7461 May 29 21:51	12° II 21'42 -1°02'23
direct	7455 Feb 03 11:55	26° 8 28'50	minimum elong	7461 May 29 21:51	12° II 21'42 1°02'29
evening set	7455 May 01 17:16	28° 8 22'47	max. Earth dist.	7461 May 30 11:58	12° II 23'03 30.88200 AU
			morning rise	7461 Jun 14 11:31	12° II 56'58
conjunction	7455 May 17 03:09	28° 8 57'40 -0°52'21	retrograde	7461 Sep 12 21:42	14° II 55'08
minimum elong	7455 May 17 03:09	28° 8 57'40 0°52'27	opposition	7461 Dec 02 08:48	13° II 30'24 -1°07'27
max. Earth dist.	7455 May 17 13:20	28° 8 58'38 30.94989 AU	min. Earth dist.	7461 Dec 01 17:50	13° II 31'26 28.87842 AU
morning rise	7455 Jun 01 15:02	29° 8 32'45	direct	7462 Feb 19 01:40	12° II 07'00
	7455 Jun 14 05:41	0° II	evening set	7462 May 16 21:41	14° II 00'47
retrograde	7455 Aug 30 15:50	1° II 30'25			
opposition	7455 Nov 19 01:45	0° II 06'08 -0°57'00	conjunction	7462 Jun 01 09:14	14° II 35'50 -1°03'44
min. Earth dist.	7455 Nov 18 15:29	0° II 06'50 28.94454 AU	minimum elong	7462 Jun 01 09:14	14° II 35'50 1°03'49
	7455 Nov 22 19:18	30° 8	max. Earth dist.	7462 Jun 02 00:28	14° II 37'17 30.87420 AU
direct	7456 Feb 05 23:29	28° 8 42'51	morning rise	7462 Jun 16 23:12	15° II 11'08
	7456 Apr 15 20:47	0° II	retrograde	7462 Sep 15 09:49	17° II 09'23
evening set	7456 May 03 04:03	0° II 36'46	opposition	7462 Dec 04 21:50	15° II 44'38 -1°08'51
			min. Earth dist.	7462 Dec 04 07:10	15° II 45'38 28.87133 AU
conjunction	7456 May 18 14:15	1° II 11'41 -0°54'14	direct	7463 Feb 21 12:12	14° II 21'14
minimum elong	7456 May 18 14:15	1° II 11'41 0°54'19	evening set	7463 May 19 08:49	16° II 15'02
max. Earth dist.	7456 May 19 01:32	1° II 12'45 30.93825 AU			
morning rise	7456 Jun 03 02:16	1° II 46'47	conjunction	7463 Jun 03 20:41	16° II 50'06 -1°05'00
retrograde	7456 Sep 01 05:29	3° II 44'33	minimum elong	7463 Jun 03 20:41	16° II 50'06 1°05'07
opposition	7456 Nov 20 15:01	2° II 20'12 -0°58'58	max. Earth dist.	7463 Jun 04 12:34	16° II 51'36 30.86776 AU
min. Earth dist.	7456 Nov 20 03:29	2° II 20'59 28.93240 AU	morning rise	7463 Jun 19 10:59	17° II 25'25
direct	7457 Feb 07 12:44	0° II 56'53	retrograde	7463 Sep 17 22:59	19° II 23'46
evening set	7457 May 05 15:03	2° II 50'47	opposition	7463 Dec 07 10:52	17° II 59'00 -1°10'09
			min. Earth dist.	7463 Dec 06 18:33	18° II 00'08 28.86535 AU
conjunction	7457 May 21 01:17	3° II 25'43 -0°56'02	direct	7464 Feb 23 23:54	16° II 35'38
minimum elong	7457 May 21 01:17	3° II 25'43 0°56'09	evening set	7464 May 20 20:03	18° II 29'26
max. Earth dist.	7457 May 21 12:10	3° II 26'44 30.92588 AU			
morning rise	7457 Jun 05 13:46	4° II 00'51	conjunction	7464 Jun 05 08:05	19° II 04'32 -1°06'10
retrograde	7457 Sep 03 18:44	5° II 58'42	minimum elong	7464 Jun 05 08:05	19° II 04'32 1°06'16
opposition	7457 Nov 23 04:21	4° II 34'15 -1°00'51	max. Earth dist.	7464 Jun 06 00:10	19° II 06'03 30.86210 AU
min. Earth dist.	7457 Nov 22 16:58	4° II 35'02 28.92004 AU	morning rise	7464 Jun 20 22:48	19° II 39'53
direct	7458 Feb 09 23:38	3° II 10'54	retrograde	7464 Sep 19 11:48	21° II 38'20
evening set	7458 May 08 01:47	5° II 04'46	min. Earth dist.	7464 Dec 08 08:18	20° II 14'38 28.86009 AU
			opposition	7464 Dec 09 00:06	20° II 13'33 -1°11'20
conjunction	7458 May 23 12:26	5° II 39'43 -0°57'45	direct	7465 Feb 25 10:22	18° II 50'12
minimum elong	7458 May 23 12:26	5° II 39'43 0°57'50	evening set	7465 May 23 07:22	20° II 44'02
max. Earth dist.	7458 May 24 01:01	5° II 40'55 30.91352 AU			
morning rise	7458 Jun 08 01:04	6° II 14'53	conjunction	7465 Jun 07 19:50	21° II 19'09 -1°07'14
retrograde	7458 Sep 06 07:24	8° II 12'48	minimum elong	7465 Jun 07 19:50	21° II 19'09 1°07'21

max. Earth dist.	7465 Jun 08 13:07	21°II20'47	30.85706 AU	min. Earth dist.	7471 Dec 25 02:40	5°☾59'10	28.81332 AU
morning rise	7465 Jun 23 10:47	21°II54'31		direct	7472 Mar 13 00:02	4°☾34'31	
retrograde	7465 Sep 22 01:24	23°II53'04		evening set	7472 Jun 07 17:30	6°☾28'16	
opposition	7465 Dec 11 13:08	22°II28'17	-1°12'25				
min. Earth dist.	7465 Dec 10 20:10	22°II29'27	28.85507 AU	conjunction	7472 Jun 23 08:24	7°☾03'34	-1°11'45
direct	7466 Feb 27 22:14	21°II04'57		minimum elong	7472 Jun 23 08:24	7°☾03'34	1°11'51
evening set	7466 May 25 18:59	22°II58'48		max. Earth dist.	7472 Jun 24 02:56	7°☾05'20	30.80943 AU
				morning rise	7472 Jul 09 02:09	7°☾39'10	
conjunction	7466 Jun 10 07:38	23°II33'56	-1°08'11	retrograde	7472 Oct 08 00:14	9°☾37'58	
minimum elong	7466 Jun 10 07:38	23°II33'56	1°08'17	opposition	7472 Dec 27 08:26	8°☾12'51	-1°16'52
max. Earth dist.	7466 Jun 11 00:16	23°II35'31	30.85191 AU	min. Earth dist.	7472 Dec 26 14:02	8°☾14'08	28.80704 AU
morning rise	7466 Jun 25 23:07	24°II09'21		direct	7473 Mar 15 12:17	6°☾49'20	
retrograde	7466 Sep 24 15:51	26°II07'59		evening set	7473 Jun 10 05:26	8°☾43'06	
min. Earth dist.	7466 Dec 13 09:58	24°II44'18	28.84975 AU				
opposition	7466 Dec 14 02:22	24°II43'10	-1°13'24	conjunction	7473 Jun 25 20:38	9°☾18'25	-1°11'58
direct	7467 Mar 02 09:02	23°II19'51		minimum elong	7473 Jun 25 20:38	9°☾18'25	1°12'05
evening set	7467 May 28 06:38	25°II13'42		max. Earth dist.	7473 Jun 26 15:15	9°☾20'11	30.80370 AU
				morning rise	7473 Jul 11 14:53	9°☾54'02	
conjunction	7467 Jun 12 19:45	25°II48'53	-1°09'03	retrograde	7473 Oct 10 12:25	11°☾52'52	
minimum elong	7467 Jun 12 19:45	25°II48'53	1°09'09	opposition	7473 Dec 29 21:16	10°☾27'44	-1°17'02
max. Earth dist.	7467 Jun 13 13:31	25°II50'34	30.84612 AU	min. Earth dist.	7473 Dec 29 03:28	10°☾28'58	28.80209 AU
morning rise	7467 Jun 28 11:24	26°II24'19		direct	7474 Mar 17 22:36	9°☾04'12	
retrograde	7467 Sep 27 05:38	28°II23'00		evening set	7474 Jun 12 17:17	10°☾57'59	
opposition	7467 Dec 16 15:25	26°II58'10	-1°14'16				
min. Earth dist.	7467 Dec 15 22:36	26°II59'20	28.84347 AU	conjunction	7474 Jun 28 09:03	11°☾33'20	-1°12'05
direct	7468 Mar 03 22:57	25°II34'50		minimum elong	7474 Jun 28 09:03	11°☾33'20	1°12'10
evening set	7468 May 29 18:29	27°II28'41		max. Earth dist.	7474 Jun 29 04:46	11°☾35'12	30.79947 AU
				morning rise	7474 Jul 14 03:36	12°☾08'58	
conjunction	7468 Jun 14 07:48	28°II03'53	-1°09'48	retrograde	7474 Oct 13 01:42	14°☾07'50	
minimum elong	7468 Jun 14 07:47	28°II03'53	1°09'54	opposition	7475 Jan 01 09:57	12°☾42'42	-1°17'06
max. Earth dist.	7468 Jun 15 00:31	28°II05'29	30.83945 AU	min. Earth dist.	7474 Dec 31 14:50	12°☾44'02	28.79847 AU
morning rise	7468 Jun 30 00:00	28°II39'22		direct	7475 Mar 20 10:03	11°☾19'10	
	7468 Aug 10 22:44	0°☾		evening set	7475 Jun 15 05:21	13°☾12'58	
retrograde	7468 Sep 28 20:39	0°☾38'05					
	7468 Nov 18 07:28	30°☾II		conjunction	7475 Jun 30 21:20	13°☾48'21	-1°12'04
min. Earth dist.	7468 Dec 17 11:42	29°II14'22	28.83639 AU	minimum elong	7475 Jun 30 21:20	13°☾48'21	1°12'11
opposition	7468 Dec 18 04:39	29°II13'12	-1°15'01	max. Earth dist.	7475 Jul 01 16:34	13°☾50'10	30.79648 AU
direct	7469 Mar 06 10:55	27°II49'50		morning rise	7475 Jul 16 16:27	14°☾24'01	
evening set	7469 Jun 01 06:07	29°II43'40		retrograde	7475 Oct 15 15:34	16°☾22'56	
	7469 Jun 08 12:44	0°☾		opposition	7476 Jan 03 22:44	14°☾57'48	-1°17'02
conjunction	7469 Jun 16 19:56	0°☾18'54	-1°10'27	min. Earth dist.	7476 Jan 03 04:03	14°☾59'06	28.79617 AU
minimum elong	7469 Jun 16 19:56	0°☾18'54	1°10'34	direct	7476 Mar 21 20:32	13°☾34'17	
max. Earth dist.	7469 Jun 17 13:44	0°☾20'35	30.83190 AU	evening set	7476 Jun 16 17:21	15°☾28'07	
morning rise	7469 Jul 02 12:26	0°☾54'24					
retrograde	7469 Oct 01 08:45	2°☾53'09		conjunction	7476 Jul 02 09:55	16°☾03'31	-1°11'57
opposition	7469 Dec 20 17:47	1°☾28'12	-1°15'39	minimum elong	7476 Jul 02 09:55	16°☾03'31	1°12'03
min. Earth dist.	7469 Dec 20 01:03	1°☾29'21	28.82852 AU	max. Earth dist.	7476 Jul 03 06:34	16°☾05'29	30.79476 AU
direct	7470 Mar 08 23:59	0°☾04'48		morning rise	7476 Jul 18 05:18	16°☾39'13	
evening set	7470 Jun 03 17:59	1°☾58'36		retrograde	7476 Oct 17 05:29	18°☾38'10	
				opposition	7477 Jan 05 11:27	17°☾13'03	-1°16'51
conjunction	7470 Jun 19 08:06	2°☾33'51	-1°11'00	min. Earth dist.	7477 Jan 04 16:07	17°☾14'24	28.79487 AU
minimum elong	7470 Jun 19 08:06	2°☾33'51	1°11'05	direct	7477 Mar 24 09:39	15°☾49'33	
max. Earth dist.	7470 Jun 20 01:26	2°☾35'30	30.82402 AU	evening set	7477 Jun 19 05:33	17°☾43'26	
morning rise	7470 Jul 05 01:07	3°☾09'23					
retrograde	7470 Oct 03 22:59	5°☾08'08		conjunction	7477 Jul 04 22:24	18°☾18'52	-1°11'44
opposition	7470 Dec 23 06:36	3°☾43'07	-1°16'10	minimum elong	7477 Jul 04 22:24	18°☾18'52	1°11'50
min. Earth dist.	7470 Dec 22 13:06	3°☾44'20	28.82069 AU	max. Earth dist.	7477 Jul 05 18:09	18°☾20'45	30.79390 AU
direct	7471 Mar 11 12:22	2°☾19'40		morning rise	7477 Jul 20 18:24	18°☾54'36	
evening set	7471 Jun 06 05:49	4°☾13'27		retrograde	7477 Oct 19 20:32	20°☾53'36	
				min. Earth dist.	7478 Jan 07 04:54	19°☾29'51	28.79427 AU
conjunction	7471 Jun 21 20:19	4°☾48'44	-1°11'26	opposition	7478 Jan 08 00:12	19°☾28'30	-1°16'32
minimum elong	7471 Jun 21 20:19	4°☾48'44	1°11'32	direct	7478 Mar 26 20:45	18°☾05'01	
max. Earth dist.	7471 Jun 22 14:24	4°☾50'27	30.81626 AU	evening set	7478 Jun 21 17:55	19°☾58'56	
morning rise	7471 Jul 07 13:41	5°☾24'18					
retrograde	7471 Oct 06 11:21	7°☾23'04		conjunction	7478 Jul 07 11:19	20°☾34'25	-1°11'23
opposition	7471 Dec 25 19:36	5°☾58'00	-1°16'35	minimum elong	7478 Jul 07 11:19	20°☾34'25	1°11'28
				max. Earth dist.	7478 Jul 08 08:00	20°☾36'23	30.79327 AU

morning rise	7478 Jul 23 07:35	21°☾10'11	direct	7485 Apr 11 09:57	3°♊54'00
retrograde	7478 Oct 22 09:46	23°☾09'11	evening set	7485 Jul 07 10:10	5°♊47'53
opposition	7479 Jan 10 12:47	21°☾44'08 -1°16'07			
min. Earth dist.	7479 Jan 09 17:56	21°☾45'26 28.79353 AU	conjunction	7485 Jul 23 06:45	6°♊23'31 -1°06'00
direct	7479 Mar 29 09:18	20°☾20'40	minimum elong	7485 Jul 23 06:45	6°♊23'32 1°06'05
evening set	7479 Jun 24 06:30	22°☾14'37	max. Earth dist.	7485 Jul 24 02:34	6°♊25'24 30.77573 AU
			morning rise	7485 Aug 08 06:03	6°♊59'27
conjunction	7479 Jul 10 00:14	22°☾50'07 -1°10'56	retrograde	7485 Nov 07 05:37	8°♊58'10
minimum elong	7479 Jul 10 00:14	22°☾50'07 1°11'02	min. Earth dist.	7486 Jan 25 10:04	7°♊34'10 28.77565 AU
max. Earth dist.	7479 Jul 10 19:59	22°☾52'00 30.79239 AU	opposition	7486 Jan 26 04:07	7°♊32'54 -1°09'58
morning rise	7479 Jul 25 21:02	23°☾25'55	direct	7486 Apr 13 22:31	6°♊09'06
retrograde	7479 Oct 25 01:48	25°☾24'56	evening set	7486 Jul 09 23:00	8°♊02'58
min. Earth dist.	7480 Jan 12 06:18	24°☾01'13 28.79231 AU			
opposition	7480 Jan 13 01:28	23°☾59'53 -1°15'34	conjunction	7486 Jul 25 19:51	8°♊38'38 -1°04'49
direct	7480 Mar 30 22:21	22°☾36'25	minimum elong	7486 Jul 25 19:51	8°♊38'38 1°04'54
evening set	7480 Jun 25 18:59	24°☾30'22	max. Earth dist.	7486 Jul 26 14:34	8°♊40'24 30.77483 AU
			morning rise	7486 Aug 10 19:44	9°♊14'35
conjunction	7480 Jul 11 13:11	25°☾05'55 -1°10'23	retrograde	7486 Nov 09 19:39	11°♊13'15
minimum elong	7480 Jul 11 13:11	25°☾05'55 1°10'28	opposition	7487 Jan 28 16:10	9°♊47'58 -1°08'39
max. Earth dist.	7480 Jul 12 09:10	25°☾07'48 30.79061 AU	min. Earth dist.	7487 Jan 27 22:13	9°♊49'14 28.77553 AU
morning rise	7480 Jul 27 10:21	25°☾41'44	direct	7487 Apr 16 09:03	8°♊24'07
retrograde	7480 Oct 26 14:39	27°☾40'45	evening set	7487 Jul 12 11:40	10°♊18'00
opposition	7481 Jan 14 14:17	26°☾15'41 -1°14'55			
min. Earth dist.	7481 Jan 13 20:15	26°☾16'56 28.79003 AU	conjunction	7487 Jul 28 09:07	10°♊53'42 -1°03'33
direct	7481 Apr 02 10:51	24°☾52'11	minimum elong	7487 Jul 28 09:07	10°♊53'42 1°03'37
evening set	7481 Jun 28 07:40	26°☾46'08	max. Earth dist.	7487 Jul 29 04:54	10°♊55'34 30.77541 AU
			morning rise	7487 Aug 13 09:14	11°♊29'40
conjunction	7481 Jul 14 02:22	27°☾21'42 -1°09'42	retrograde	7487 Nov 12 08:18	13°♊28'16
minimum elong	7481 Jul 14 02:22	27°☾21'42 1°09'49	min. Earth dist.	7488 Jan 30 10:26	12°♊04'16 28.77682 AU
max. Earth dist.	7481 Jul 14 21:54	27°☾23'33 30.78798 AU	opposition	7488 Jan 31 04:18	12°♊03'00 -1°07'13
morning rise	7481 Jul 29 23:59	27°☾57'33	direct	7488 Apr 17 21:38	10°♊39'08
retrograde	7481 Oct 29 04:07	29°☾56'31	evening set	7488 Jul 14 00:21	12°♊33'03
min. Earth dist.	7482 Jan 16 08:02	28°☾32'44 28.78694 AU			
opposition	7482 Jan 17 02:44	28°☾31'25 -1°14'09	conjunction	7488 Jul 29 22:10	13°♊08'46 -1°02'10
direct	7482 Apr 04 23:38	27°☾07'52	minimum elong	7488 Jul 29 22:10	13°♊08'46 1°02'14
evening set	7482 Jun 30 20:23	29°☾01'48	max. Earth dist.	7488 Jul 30 17:12	13°♊10'34 30.77757 AU
			morning rise	7488 Aug 14 22:51	13°♊44'45
conjunction	7482 Jul 16 15:28	29°☾37'24 -1°08'56		7488 Sep 22 16:32	15°♊
minimum elong	7482 Jul 16 15:28	29°☾37'24 1°09'02	retrograde	7488 Nov 13 23:46	15°♊43'19
max. Earth dist.	7482 Jul 17 10:25	29°☾39'11 30.78453 AU		7489 Jan 06 16:07	15°♊
	7482 Jul 26 15:01	0°♊	opposition	7489 Feb 01 16:22	14°♊18'05 -1°05'42
morning rise	7482 Aug 01 13:36	0°♊13'16	min. Earth dist.	7489 Jan 31 21:59	14°♊19'22 28.77966 AU
retrograde	7482 Oct 31 16:29	2°♊12'10	direct	7489 Apr 20 10:10	12°♊54'13
opposition	7483 Jan 19 15:18	0°♊47'02 -1°13'16	evening set	7489 Jul 16 13:15	14°♊48'09
min. Earth dist.	7483 Jan 18 21:49	0°♊48'15 28.78335 AU		7489 Jul 21 21:14	15°♊
	7483 Feb 18 08:02	30°♊☾			
direct	7483 Apr 07 10:46	29°☾23'25	conjunction	7489 Aug 01 11:34	15°♊23'54 -1°00'41
	7483 May 24 01:15	0°♊	minimum elong	7489 Aug 01 11:34	15°♊23'54 1°00'46
evening set	7483 Jul 03 08:55	1°♊17'19	max. Earth dist.	7489 Aug 02 07:10	15°♊25'45 30.78096 AU
			morning rise	7489 Aug 17 12:35	15°♊59'55
conjunction	7483 Jul 19 04:33	1°♊52'56 -1°08'04	retrograde	7489 Nov 16 12:18	17°♊58'26
minimum elong	7483 Jul 19 04:34	1°♊52'56 1°08'09	min. Earth dist.	7490 Feb 03 11:00	16°♊34'28 28.78353 AU
max. Earth dist.	7483 Jul 20 00:03	1°♊54'47 30.78100 AU	opposition	7490 Feb 04 04:21	16°♊33'15 -1°04'04
morning rise	7483 Aug 04 03:00	2°♊28'49	direct	7490 Apr 22 22:04	15°♊09'24
retrograde	7483 Nov 03 05:24	4°♊27'40	evening set	7490 Jul 19 02:16	17°♊03'23
min. Earth dist.	7484 Jan 21 09:14	3°♊03'46 28.77988 AU			
opposition	7484 Jan 22 03:36	3°♊02'28 -1°12'16	conjunction	7490 Aug 04 01:03	17°♊39'10 -0°59'07
direct	7484 Apr 08 23:02	1°♊38'47	minimum elong	7490 Aug 04 01:03	17°♊39'10 0°59'12
evening set	7484 Jul 04 21:39	3°♊32'41	max. Earth dist.	7490 Aug 04 20:11	17°♊40'58 30.78532 AU
			morning rise	7490 Aug 20 02:29	18°♊15'12
conjunction	7484 Jul 20 17:34	4°♊08'18 -1°07'05	retrograde	7490 Nov 19 03:03	20°♊13'41
minimum elong	7484 Jul 20 17:34	4°♊08'18 1°07'10	opposition	7491 Feb 06 16:16	18°♊48'34 -1°02'20
max. Earth dist.	7484 Jul 21 12:14	4°♊10'04 30.77785 AU	min. Earth dist.	7491 Feb 05 22:19	18°♊49'49 28.78803 AU
morning rise	7484 Aug 05 16:35	4°♊44'13	direct	7491 Apr 25 10:33	17°♊24'44
retrograde	7484 Nov 04 17:31	6°♊43'00	evening set	7491 Jul 21 15:22	19°♊18'46
opposition	7485 Jan 23 15:57	5°♊17'45 -1°11'10			
min. Earth dist.	7485 Jan 22 22:23	5°♊18'59 28.77725 AU	conjunction	7491 Aug 06 14:28	19°♊54'34 -0°57'28

minimum elong	7491 Aug 06 14:29	19°Ω54'34	0°57'31	opposition	7498 Feb 22 02:32	4°♊36'04	-0°47'46
max. Earth dist.	7491 Aug 07 09:04	19°Ω56'19	30.78977 AU	min. Earth dist.	7498 Feb 21 12:05	4°♊37'05	28.81000 AU
morning rise	7491 Aug 22 16:17	20°Ω30'38		direct	7498 May 10 20:35	3°♊11'58	
retrograde	7491 Nov 21 16:24	22°Ω29'05		evening set	7498 Aug 06 12:12	5°♊06'07	
min. Earth dist.	7492 Feb 08 11:50	21°Ω05'10	28.79242 AU				
opposition	7492 Feb 09 04:20	21°Ω04'00	-1°00'30	conjunction	7498 Aug 22 14:18	5°♊42'02	-0°43'35
direct	7492 Apr 26 21:37	19°Ω40'12		minimum elong	7498 Aug 22 14:18	5°♊42'02	0°43'38
evening set	7492 Jul 23 04:33	21°Ω34'16		max. Earth dist.	7498 Aug 23 05:52	5°♊43'30	30.81187 AU
				morning rise	7498 Sep 07 18:27	6°♊18'10	
conjunction	7492 Aug 08 04:12	22°Ω10'06	-0°55'43	retrograde	7498 Dec 07 08:17	8°♊15'57	
minimum elong	7492 Aug 08 04:12	22°Ω10'06	0°55'46	opposition	7499 Feb 24 14:01	6°♊50'57	-0°45'23
max. Earth dist.	7492 Aug 08 22:42	22°Ω11'50	30.79398 AU	min. Earth dist.	7499 Feb 24 00:37	6°♊51'54	28.81471 AU
morning rise	7492 Aug 24 06:18	22°Ω46'10		direct	7499 May 13 08:19	5°♊26'50	
retrograde	7492 Nov 23 05:56	24°Ω44'34		evening set	7499 Aug 09 01:19	7°♊20'58	
opposition	7493 Feb 10 16:12	23°Ω19'32	-0°58'35				
min. Earth dist.	7493 Feb 09 23:18	23°Ω20'44	28.79621 AU	conjunction	7499 Aug 25 03:46	7°♊56'54	-0°41'19
direct	7493 Apr 29 09:53	21°Ω55'43		minimum elong	7499 Aug 25 03:46	7°♊56'54	0°41'21
evening set	7493 Jul 25 17:55	23°Ω49'49		max. Earth dist.	7499 Aug 25 18:49	7°♊58'19	30.81739 AU
				morning rise	7499 Sep 10 08:15	8°♊33'02	
conjunction	7493 Aug 10 17:53	24°Ω25'40	-0°53'53	retrograde	7499 Dec 09 22:49	10°♊30'43	
minimum elong	7493 Aug 10 17:53	24°Ω25'40	0°53'56	min. Earth dist.	7500 Feb 26 11:10	9°♊06'45	28.82095 AU
max. Earth dist.	7493 Aug 11 10:55	24°Ω27'16	30.79736 AU	opposition	7500 Feb 27 01:20	9°♊05'45	-0°42'55
morning rise	7493 Aug 26 20:30	25°Ω01'46		direct	7500 May 15 21:26	7°♊41'35	
retrograde	7493 Nov 25 17:54	27°Ω00'05		evening set	7500 Aug 11 14:38	9°♊35'45	
opposition	7494 Feb 13 04:13	25°Ω35'05	-0°56'35				
min. Earth dist.	7494 Feb 12 12:42	25°Ω36'10	28.79920 AU	conjunction	7500 Aug 27 17:24	10°♊11'42	-0°38'59
direct	7494 May 01 20:47	24°Ω11'13		minimum elong	7500 Aug 27 17:24	10°♊11'42	0°39'02
evening set	7494 Jul 28 07:10	26°Ω05'20		max. Earth dist.	7500 Aug 28 08:09	10°♊13'05	30.82436 AU
				morning rise	7500 Sep 12 22:10	10°♊47'50	
conjunction	7494 Aug 13 07:43	26°Ω41'12	-0°51'58	retrograde	7500 Dec 12 11:58	12°♊45'25	
minimum elong	7494 Aug 13 07:43	26°Ω41'12	0°52'01	opposition	7501 Mar 01 12:41	11°♊20'29	-0°40'24
max. Earth dist.	7494 Aug 14 01:08	26°Ω42'50	30.80000 AU	min. Earth dist.	7501 Feb 28 23:44	11°♊21'23	28.82873 AU
morning rise	7494 Aug 29 10:31	27°Ω17'18		direct	7501 May 18 09:13	9°♊56'19	
retrograde	7494 Nov 28 05:35	29°Ω15'32		evening set	7501 Aug 14 03:55	11°♊50'30	
opposition	7495 Feb 15 15:52	27°Ω50'32	-0°54'30				
min. Earth dist.	7495 Feb 15 00:27	27°Ω51'37	28.80148 AU	conjunction	7501 Aug 30 07:09	12°♊26'28	-0°36'36
direct	7495 May 04 08:58	26°Ω26'37		minimum elong	7501 Aug 30 07:09	12°♊26'28	0°36'37
evening set	7495 Jul 30 20:31	28°Ω20'45		max. Earth dist.	7501 Aug 30 21:56	12°♊27'51	30.83295 AU
				morning rise	7501 Sep 15 12:08	13°♊02'37	
conjunction	7495 Aug 15 21:19	28°Ω56'37	-0°49'58	retrograde	7501 Dec 15 01:03	15°♊00'05	
minimum elong	7495 Aug 15 21:19	28°Ω56'38	0°50'01	opposition	7502 Mar 03 23:54	13°♊35'13	-0°37'48
max. Earth dist.	7495 Aug 16 13:06	28°Ω58'06	30.80227 AU	min. Earth dist.	7502 Mar 03 10:19	13°♊36'10	28.83783 AU
morning rise	7495 Sep 01 00:38	29°Ω32'44		direct	7502 May 20 22:08	12°♊11'04	
	7495 Sep 13 18:58	0°♊		evening set	7502 Aug 16 17:25	14°♊05'17	
retrograde	7495 Nov 30 19:02	1°♊30'52					
opposition	7496 Feb 18 03:37	0°♊05'52	-0°52'20	conjunction	7502 Sep 01 20:49	14°♊41'15	-0°34'09
min. Earth dist.	7496 Feb 17 12:48	0°♊06'55	28.80380 AU	minimum elong	7502 Sep 01 20:49	14°♊41'15	0°34'10
	7496 Feb 21 14:49	30°♊		max. Earth dist.	7502 Sep 02 10:28	14°♊42'32	30.84256 AU
direct	7496 May 05 19:08	28°Ω41'53		morning rise	7502 Sep 18 02:08	15°♊17'25	
	7496 Jul 15 06:38	0°♊		retrograde	7502 Dec 17 13:15	17°♊14'47	
evening set	7496 Aug 01 09:35	0°♊36'01		opposition	7503 Mar 06 11:09	15°♊50'00	-0°35'09
				min. Earth dist.	7503 Mar 05 22:53	15°♊50'52	28.84787 AU
conjunction	7496 Aug 17 10:56	1°♊11'54	-0°47'55	direct	7503 May 23 08:28	14°♊25'52	
minimum elong	7496 Aug 17 10:57	1°♊11'54	0°47'58	evening set	7503 Aug 19 06:51	16°♊20'07	
max. Earth dist.	7496 Aug 18 03:25	1°♊13'27	30.80470 AU				
morning rise	7496 Sep 02 14:27	1°♊48'02		conjunction	7503 Sep 04 10:44	16°♊56'06	-0°31'39
retrograde	7496 Dec 02 06:31	3°♊46'03		minimum elong	7503 Sep 04 10:44	16°♊56'06	0°31'40
opposition	7497 Feb 19 15:12	2°♊21'03	-0°50'05	max. Earth dist.	7503 Sep 05 00:48	16°♊57'25	30.85285 AU
min. Earth dist.	7497 Feb 19 00:55	2°♊22'03	28.80641 AU	morning rise	7503 Sep 20 16:06	17°♊32'16	
direct	7497 May 08 08:00	0°♊57'01		retrograde	7503 Dec 20 01:41	19°♊29'32	
evening set	7497 Aug 03 22:55	2°♊51'08		opposition	7504 Mar 07 22:21	18°♊04'50	-0°32'27
				min. Earth dist.	7504 Mar 07 10:16	18°♊05'42	28.85810 AU
conjunction	7497 Aug 20 00:34	3°♊27'03	-0°45'47	direct	7504 May 24 20:25	16°♊40'43	
minimum elong	7497 Aug 20 00:34	3°♊27'03	0°45'49	evening set	7504 Aug 20 20:28	18°♊35'01	
max. Earth dist.	7497 Aug 20 15:44	3°♊28'28	30.80781 AU				
morning rise	7497 Sep 05 04:32	4°♊03'10		conjunction	7504 Sep 06 00:29	19°♊11'01	-0°29'06
retrograde	7497 Dec 04 20:43	6°♊01'04		minimum elong	7504 Sep 06 00:29	19°♊11'01	0°29'07

max. Earth dist.	7504 Sep 06 12:41	19° <u>11</u> '12'09	30.86297 AU	retrograde	7511 Jan 04 15:59	5° <u>11</u> '11'04	
morning rise	7504 Sep 22 06:15	19° <u>11</u> '47'10		opposition	7511 Mar 24 03:35	3° <u>11</u> '46'38	-0°12'28
retrograde	7504 Dec 21 14:29	21° <u>11</u> '44'21		min. Earth dist.	7511 Mar 23 20:13	3° <u>11</u> '47'09	28.91451 AU
opposition	7505 Mar 10 09:40	20° <u>11</u> '19'43	-0°29'42	direct	7511 Jun 10 09:27	2° <u>11</u> '22'15	
min. Earth dist.	7505 Mar 09 22:32	20° <u>11</u> '20'30	28.86796 AU	evening set	7511 Sep 06 19:43	4° <u>11</u> '16'39	
direct	7505 May 27 06:35	18° <u>11</u> '55'35					
evening set	7505 Aug 23 10:10	20° <u>11</u> '49'55		conjunction	7511 Sep 23 01:25	4° <u>11</u> '52'40	-0°10'20
				minimum elong	7511 Sep 23 01:24	4° <u>11</u> '52'40	0°10'19
conjunction	7505 Sep 08 14:38	21° <u>11</u> '25'55	-0°26'30	behind sun begin	7511 Sep 22 20:15	4° <u>11</u> '52'12	
minimum elong	7505 Sep 08 14:38	21° <u>11</u> '25'55	0°26'31	behind sun end	7511 Sep 23 06:34	4° <u>11</u> '53'07	
max. Earth dist.	7505 Sep 09 02:54	21° <u>11</u> '27'03	30.87234 AU	max. Earth dist.	7511 Sep 23 08:15	4° <u>11</u> '53'17	30.91881 AU
morning rise	7505 Sep 24 20:24	22° <u>11</u> '02'04		morning rise	7511 Oct 09 08:00	5° <u>11</u> '28'46	
retrograde	7505 Dec 24 01:11	23° <u>11</u> '59'08		retrograde	7512 Jan 07 03:59	7° <u>11</u> '24'59	
opposition	7506 Mar 12 20:48	22° <u>11</u> '34'33	-0°26'54	opposition	7512 Mar 25 14:22	6° <u>11</u> '00'35	-0°09'31
min. Earth dist.	7506 Mar 12 10:41	22° <u>11</u> '35'16	28.87678 AU	min. Earth dist.	7512 Mar 25 08:11	6° <u>11</u> '01'01	28.92357 AU
direct	7506 May 29 19:03	21° <u>11</u> '10'24		direct	7512 Jun 11 20:07	4° <u>11</u> '36'11	
evening set	7506 Aug 25 23:58	23° <u>11</u> '04'45		evening set	7512 Sep 08 09:01	6° <u>11</u> '30'36	
conjunction	7506 Sep 11 04:35	23° <u>11</u> '40'45	-0°23'52	conjunction	7512 Sep 24 15:03	7° <u>11</u> '06'37	-0°07'35
minimum elong	7506 Sep 11 04:35	23° <u>11</u> '40'45	0°23'54	minimum elong	7512 Sep 24 15:03	7° <u>11</u> '06'37	0°07'35
max. Earth dist.	7506 Sep 11 14:49	23° <u>11</u> '41'42	30.88079 AU	behind sun begin	7512 Sep 24 09:05	7° <u>11</u> '06'05	
morning rise	7506 Sep 27 10:39	24° <u>11</u> '16'54		behind sun end	7512 Sep 24 21:01	7° <u>11</u> '07'09	
retrograde	7506 Dec 26 14:32	26° <u>11</u> '13'50		max. Earth dist.	7512 Sep 24 22:21	7° <u>11</u> '07'17	30.92847 AU
opposition	7507 Mar 15 07:57	24° <u>11</u> '49'18	-0°24'05	morning rise	7512 Oct 10 21:35	7° <u>11</u> '42'43	
min. Earth dist.	7507 Mar 14 22:08	24° <u>11</u> '49'59	28.88479 AU	retrograde	7513 Jan 08 16:08	9° <u>11</u> '38'48	
direct	7507 Jun 01 06:50	23° <u>11</u> '25'06		opposition	7513 Mar 28 01:03	8° <u>11</u> '14'28	-0°06'34
evening set	7507 Aug 28 13:27	25° <u>11</u> '19'27		min. Earth dist.	7513 Mar 27 18:50	8° <u>11</u> '14'54	28.93375 AU
				direct	7513 Jun 14 08:26	6° <u>11</u> '50'03	
conjunction	7507 Sep 13 18:24	25° <u>11</u> '55'28	-0°21'13	evening set	7513 Sep 10 22:40	8° <u>11</u> '44'31	
minimum elong	7507 Sep 13 18:25	25° <u>11</u> '55'28	0°21'13				
max. Earth dist.	7507 Sep 14 04:38	25° <u>11</u> '56'25	30.88837 AU	conjunction	7513 Sep 27 04:41	9° <u>11</u> '20'32	-0°04'49
morning rise	7507 Sep 30 00:31	26° <u>11</u> '31'36		minimum elong	7513 Sep 27 04:40	9° <u>11</u> '20'32	0°04'48
retrograde	7507 Dec 29 01:35	28° <u>11</u> '28'24		behind sun begin	7513 Sep 26 22:14	9° <u>11</u> '19'57	
opposition	7508 Mar 16 19:06	27° <u>11</u> '03'53	-0°21'13	behind sun end	7513 Sep 27 11:05	9° <u>11</u> '21'06	
min. Earth dist.	7508 Mar 16 10:50	27° <u>11</u> '04'28	28.89207 AU	max. Earth dist.	7513 Sep 27 10:22	9° <u>11</u> '21'02	30.93934 AU
direct	7508 Jun 02 18:26	25° <u>11</u> '39'39		morning rise	7513 Oct 13 11:22	9° <u>11</u> '56'36	
evening set	7508 Aug 30 03:05	27° <u>11</u> '34'01		retrograde	7514 Jan 11 03:46	11° <u>11</u> '52'35	
				opposition	7514 Mar 30 11:39	10° <u>11</u> '28'19	-0°03'35
conjunction	7508 Sep 15 08:16	28° <u>11</u> '10'01	-0°18'31	min. Earth dist.	7514 Mar 30 06:02	10° <u>11</u> '28'43	28.94529 AU
minimum elong	7508 Sep 15 08:16	28° <u>11</u> '10'01	0°18'32	direct	7514 Jun 16 18:28	9° <u>11</u> '03'55	
max. Earth dist.	7508 Sep 15 17:16	28° <u>11</u> '10'51	30.89563 AU	evening set	7514 Sep 13 12:06	10° <u>11</u> '58'26	
morning rise	7508 Oct 01 14:36	28° <u>11</u> '46'09					
	7508 Nov 08 22:43	0° <u>11</u> '		conjunction	7514 Sep 29 18:22	11° <u>11</u> '34'26	-0°02'02
retrograde	7508 Dec 30 15:21	0° <u>11</u> '42'48		minimum elong	7514 Sep 29 18:23	11° <u>11</u> '34'26	0°02'01
	7509 Feb 21 12:07	30° <u>11</u> ' <u>11</u>		behind sun begin	7514 Sep 29 11:47	11° <u>11</u> '33'51	
opposition	7509 Mar 19 05:55	29° <u>11</u> '18'18	-0°18'19	behind sun end	7514 Sep 30 00:58	11° <u>11</u> '35'01	
min. Earth dist.	7509 Mar 18 21:27	29° <u>11</u> '18'54	28.89923 AU	max. Earth dist.	7514 Sep 30 00:38	11° <u>11</u> '34'59	30.95139 AU
direct	7509 Jun 05 07:50	27° <u>11</u> '54'00		morning rise	7514 Oct 16 00:55	12° <u>11</u> '10'30	
evening set	7509 Sep 01 16:43	29° <u>11</u> '48'23		retrograde	7515 Jan 13 13:40	14° <u>11</u> '06'22	
	7509 Sep 06 23:44	0° <u>11</u> '		opposition	7515 Apr 01 22:19	12° <u>11</u> '42'13	-0°00'37
conjunction	7509 Sep 17 22:07	0° <u>11</u> '24'24	-0°15'49	min. Earth dist.	7515 Apr 01 17:25	12° <u>11</u> '42'34	28.95771 AU
minimum elong	7509 Sep 17 22:07	0° <u>11</u> '24'24	0°15'48	asc. node	7515 Jun 15 23:47	11° <u>11</u> '18'01	
max. Earth dist.	7509 Sep 18 06:28	0° <u>11</u> '25'10	30.90277 AU	direct	7515 Jun 19 06:14	11° <u>11</u> '17'51	
morning rise	7509 Oct 04 04:32	1° <u>11</u> '00'31		evening set	7515 Sep 16 01:34	13° <u>11</u> '12'24	
retrograde	7510 Jan 02 03:29	2° <u>11</u> '57'01					
opposition	7510 Mar 21 16:52	1° <u>11</u> '32'32	-0°15'24	conjunction	7515 Oct 02 07:49	13° <u>11</u> '48'24	0°00'51
min. Earth dist.	7510 Mar 21 09:59	1° <u>11</u> '33'02	28.90657 AU	minimum elong	7515 Oct 02 07:48	13° <u>11</u> '48'24	0°00'53
direct	7510 Jun 07 20:03	0° <u>11</u> '08'12		behind sun begin	7515 Oct 02 01:14	13° <u>11</u> '47'49	
evening set	7510 Sep 04 06:11	2° <u>11</u> '02'35		behind sun end	7515 Oct 02 14:23	13° <u>11</u> '48'59	
				max. Earth dist.	7515 Oct 02 12:21	13° <u>11</u> '48'47	30.96421 AU
conjunction	7510 Sep 20 11:49	2° <u>11</u> '38'36	-0°13'05	morning rise	7515 Oct 18 14:30	14° <u>11</u> '24'28	
minimum elong	7510 Sep 20 11:49	2° <u>11</u> '38'36	0°13'05	retrograde	7516 Jan 16 02:26	16° <u>11</u> '20'14	
behind sun begin	7510 Sep 20 08:00	2° <u>11</u> '38'16		opposition	7516 Apr 03 08:56	14° <u>11</u> '56'11	0°02'22
behind sun end	7510 Sep 20 15:39	2° <u>11</u> '38'57		min. Earth dist.	7516 Apr 03 04:12	14° <u>11</u> '56'31	28.97065 AU
max. Earth dist.	7510 Sep 20 19:49	2° <u>11</u> '39'20	30.91041 AU	direct	7516 Jun 20 16:43	13° <u>11</u> '31'49	
morning rise	7510 Oct 06 18:16	3° <u>11</u> '14'43		evening set	7516 Sep 17 15:11	15° <u>11</u> '26'26	

conjunction	7516 Oct 03 21:35	16° <u>♂</u> 02'26	0°03'41	direct	7522 Jul 04 19:28	26° <u>♂</u> 53'54	
minimum elong	7516 Oct 03 21:37	16° <u>♂</u> 02'26	0°03'42	evening set	7522 Oct 02 00:40	28° <u>♂</u> 48'37	
behind sun begin	7516 Oct 03 15:05	16° <u>♂</u> 01'51					
behind sun end	7516 Oct 04 04:08	16° <u>♂</u> 03'01		conjunction	7522 Oct 18 07:03	29° <u>♂</u> 24'31	0°20'00
max. Earth dist.	7516 Oct 04 02:09	16° <u>♂</u> 02'49	30.97697 AU	minimum elong	7522 Oct 18 07:02	29° <u>♂</u> 24'31	0°20'03
morning rise	7516 Oct 20 04:07	16° <u>♂</u> 38'29		max. Earth dist.	7522 Oct 18 04:50	29° <u>♂</u> 24'19	31.03631 AU
retrograde	7517 Jan 17 12:56	18° <u>♂</u> 34'08		morning rise	7522 Nov 03 13:02	0° <u>♂</u> 00'25	
opposition	7517 Apr 05 19:32	17° <u>♂</u> 10'11	0°05'20		7522 Nov 03 08:27	0° <u>♂</u>	
min. Earth dist.	7517 Apr 05 16:33	17° <u>♂</u> 10'24	28.98317 AU	retrograde	7523 Jan 31 11:57	1° <u>♂</u> 55'10	
direct	7517 Jun 23 03:03	15° <u>♂</u> 45'50		opposition	7523 Apr 19 10:26	0° <u>♂</u> 31'25	0°22'46
evening set	7517 Sep 20 04:57	17° <u>♂</u> 40'30		min. Earth dist.	7523 Apr 19 11:55	0° <u>♂</u> 31'19	29.04076 AU
					7523 May 08 11:19	30° <u>♂</u>	
conjunction	7517 Oct 06 11:23	18° <u>♂</u> 16'29	0°06'26	direct	7523 Jul 07 06:26	29° <u>♂</u> 06'48	
minimum elong	7517 Oct 06 11:23	18° <u>♂</u> 16'29	0°06'29		7523 Sep 03 08:36	0° <u>♂</u>	
behind sun begin	7517 Oct 06 05:12	18° <u>♂</u> 15'56		evening set	7523 Oct 04 13:43	1° <u>♂</u> 01'30	
behind sun end	7517 Oct 06 17:34	18° <u>♂</u> 17'02					
max. Earth dist.	7517 Oct 06 14:17	18° <u>♂</u> 16'43	30.98915 AU	conjunction	7523 Oct 20 20:13	1° <u>♂</u> 37'24	0°22'38
morning rise	7517 Oct 22 17:55	18° <u>♂</u> 52'31		minimum elong	7523 Oct 20 20:13	1° <u>♂</u> 37'24	0°22'42
retrograde	7518 Jan 20 01:50	20° <u>♂</u> 48'03		max. Earth dist.	7523 Oct 20 18:33	1° <u>♂</u> 37'15	31.04523 AU
opposition	7518 Apr 08 06:08	19° <u>♂</u> 24'10	0°08'18	morning rise	7523 Nov 06 01:53	2° <u>♂</u> 13'15	
min. Earth dist.	7518 Apr 08 03:10	19° <u>♂</u> 24'22	28.99482 AU	retrograde	7524 Feb 02 21:19	4° <u>♂</u> 07'51	
direct	7518 Jun 25 16:36	17° <u>♂</u> 59'48		opposition	7524 Apr 20 20:44	2° <u>♂</u> 44'08	0°25'34
evening set	7518 Sep 22 18:35	19° <u>♂</u> 54'30		min. Earth dist.	7524 Apr 20 22:56	2° <u>♂</u> 43'59	29.05001 AU
				direct	7524 Jul 08 18:37	1° <u>♂</u> 19'28	
conjunction	7518 Oct 09 01:02	20° <u>♂</u> 30'29	0°09'11	evening set	7524 Oct 06 03:02	3° <u>♂</u> 14'11	
minimum elong	7518 Oct 09 01:02	20° <u>♂</u> 30'29	0°09'13				
behind sun begin	7518 Oct 08 19:30	20° <u>♂</u> 29'59		conjunction	7524 Oct 22 09:18	3° <u>♂</u> 50'03	0°25'14
behind sun end	7518 Oct 09 06:34	20° <u>♂</u> 30'58		minimum elong	7524 Oct 22 09:18	3° <u>♂</u> 50'03	0°25'16
max. Earth dist.	7518 Oct 09 03:04	20° <u>♂</u> 30'39	31.00013 AU	max. Earth dist.	7524 Oct 22 05:58	3° <u>♂</u> 49'45	31.05499 AU
morning rise	7518 Oct 25 07:24	21° <u>♂</u> 06'29		morning rise	7524 Nov 07 14:57	4° <u>♂</u> 25'53	
retrograde	7519 Jan 22 13:01	23° <u>♂</u> 01'54		retrograde	7525 Feb 04 09:01	6° <u>♂</u> 20'20	
opposition	7519 Apr 10 16:50	21° <u>♂</u> 38'03	0°11'15	opposition	7525 Apr 23 06:49	4° <u>♂</u> 56'39	0°28'19
min. Earth dist.	7519 Apr 10 15:44	21° <u>♂</u> 38'08	29.00531 AU	min. Earth dist.	7525 Apr 23 08:53	4° <u>♂</u> 56'31	29.06038 AU
direct	7519 Jun 28 04:40	20° <u>♂</u> 13'39		direct	7525 Jul 11 05:07	3° <u>♂</u> 31'57	
evening set	7519 Sep 25 08:09	22° <u>♂</u> 08'23		evening set	7525 Oct 08 16:13	5° <u>♂</u> 26'41	
conjunction	7519 Oct 11 14:41	22° <u>♂</u> 44'20	0°11'56	conjunction	7525 Oct 24 22:30	6° <u>♂</u> 02'32	0°27'47
minimum elong	7519 Oct 11 14:41	22° <u>♂</u> 44'20	0°11'59	minimum elong	7525 Oct 24 22:30	6° <u>♂</u> 02'32	0°27'51
behind sun begin	7519 Oct 11 10:14	22° <u>♂</u> 43'56		max. Earth dist.	7525 Oct 24 19:34	6° <u>♂</u> 02'16	31.06587 AU
behind sun end	7519 Oct 11 19:08	22° <u>♂</u> 44'44		morning rise	7525 Nov 10 03:46	6° <u>♂</u> 38'20	
max. Earth dist.	7519 Oct 11 15:48	22° <u>♂</u> 44'26	31.01017 AU	retrograde	7526 Feb 06 18:11	8° <u>♂</u> 32'40	
morning rise	7519 Oct 27 20:58	23° <u>♂</u> 20'18		opposition	7526 Apr 25 17:09	7° <u>♂</u> 09'03	0°31'02
retrograde	7520 Jan 25 01:22	25° <u>♂</u> 15'34		min. Earth dist.	7526 Apr 25 20:26	7° <u>♂</u> 08'49	29.07192 AU
opposition	7520 Apr 12 03:16	23° <u>♂</u> 51'46	0°14'10	direct	7526 Jul 13 15:29	5° <u>♂</u> 44'21	
min. Earth dist.	7520 Apr 12 02:07	23° <u>♂</u> 51'51	29.01480 AU	evening set	7526 Oct 11 05:15	7° <u>♂</u> 39'07	
direct	7520 Jun 29 18:08	22° <u>♂</u> 27'19					
evening set	7520 Sep 26 21:44	24° <u>♂</u> 22'02		conjunction	7526 Oct 27 11:20	8° <u>♂</u> 14'56	0°30'18
				minimum elong	7526 Oct 27 11:20	8° <u>♂</u> 14'56	0°30'22
conjunction	7520 Oct 13 04:12	24° <u>♂</u> 57'59	0°14'39	max. Earth dist.	7526 Oct 27 07:22	8° <u>♂</u> 14'34	31.07812 AU
minimum elong	7520 Oct 13 04:12	24° <u>♂</u> 57'59	0°14'41	morning rise	7526 Nov 12 16:29	8° <u>♂</u> 50'43	
behind sun begin	7520 Oct 13 01:42	24° <u>♂</u> 57'46		retrograde	7527 Feb 09 05:44	10° <u>♂</u> 44'56	
behind sun end	7520 Oct 13 06:42	24° <u>♂</u> 58'12		opposition	7527 Apr 28 03:17	9° <u>♂</u> 21'25	0°33'42
max. Earth dist.	7520 Oct 13 03:45	24° <u>♂</u> 57'57	31.01924 AU	min. Earth dist.	7527 Apr 28 06:01	9° <u>♂</u> 21'13	29.08470 AU
morning rise	7520 Oct 29 10:28	25° <u>♂</u> 33'56		direct	7527 Jul 16 03:54	7° <u>♂</u> 56'43	
retrograde	7521 Jan 26 13:30	27° <u>♂</u> 29'02		evening set	7527 Oct 13 18:21	9° <u>♂</u> 51'32	
opposition	7521 Apr 14 13:48	26° <u>♂</u> 05'14	0°17'04				
min. Earth dist.	7521 Apr 14 14:15	26° <u>♂</u> 05'13	29.02362 AU	conjunction	7527 Oct 30 00:19	10° <u>♂</u> 27'21	0°32'46
direct	7521 Jul 02 05:47	24° <u>♂</u> 40'44		minimum elong	7527 Oct 30 00:19	10° <u>♂</u> 27'21	0°32'51
evening set	7521 Sep 29 11:12	26° <u>♂</u> 35'27		max. Earth dist.	7527 Oct 29 20:08	10° <u>♂</u> 26'58	31.09131 AU
				morning rise	7527 Nov 15 05:10	11° <u>♂</u> 03'06	
conjunction	7521 Oct 15 17:46	27° <u>♂</u> 11'23	0°17'20	retrograde	7528 Feb 11 16:15	12° <u>♂</u> 57'14	
minimum elong	7521 Oct 15 17:46	27° <u>♂</u> 11'23	0°17'24	opposition	7528 Apr 29 13:29	11° <u>♂</u> 33'49	0°36'19
max. Earth dist.	7521 Oct 15 17:18	27° <u>♂</u> 11'21	31.02784 AU	min. Earth dist.	7528 Apr 29 17:48	11° <u>♂</u> 33'31	29.09827 AU
morning rise	7521 Oct 31 23:46	27° <u>♂</u> 47'18		direct	7528 Jul 17 14:35	10° <u>♂</u> 09'09	
retrograde	7522 Jan 29 01:06	29° <u>♂</u> 42'13		evening set	7528 Oct 15 07:28	12° <u>♂</u> 04'03	
opposition	7522 Apr 17 00:05	28° <u>♂</u> 18'28	0°19'56				
min. Earth dist.	7522 Apr 17 00:52	28° <u>♂</u> 18'24	29.03203 AU	conjunction	7528 Oct 31 13:20	12° <u>♂</u> 39'50	0°35'12

minimum elong	7528 Oct 31 13:20	12°M.39'50	0°35'16	morning rise	7534 Nov 30 20:58	26°M.29'57	
max. Earth dist.	7528 Oct 31 08:29	12°M.39'24	31.10504 AU	retrograde	7535 Feb 26 20:24	28°M.23'19	
morning rise	7528 Nov 16 17:57	13°M.15'33		opposition	7535 May 15 12:54	27°M.00'22	0°52'52
	7529 Jan 20 09:18	15°M.		min. Earth dist.	7535 May 15 22:37	26°M.59'42	29.17494 AU
retrograde	7529 Feb 13 04:19	15°M.09'36		direct	7535 Aug 03 01:04	25°M.35'39	
	7529 Mar 09 05:03	15°R.M.		evening set	7535 Nov 01 02:29	27°M.30'43	
opposition	7529 May 01 23:37	13°M.46'18	0°38'52				
min. Earth dist.	7529 May 02 03:46	13°M.46'00	29.11184 AU	conjunction	7535 Nov 17 06:44	28°M.06'20	0°50'28
direct	7529 Jul 20 03:16	12°M.21'40		minimum elong	7535 Nov 17 06:44	28°M.06'20	0°50'34
evening set	7529 Oct 17 20:44	14°M.16'37		max. Earth dist.	7535 Nov 16 19:37	28°M.05'19	31.17906 AU
				morning rise	7535 Dec 03 09:10	28°M.41'50	
conjunction	7529 Nov 03 02:18	14°M.52'24	0°37'34		7536 Jan 14 03:34	0°M.	
minimum elong	7529 Nov 03 02:18	14°M.52'24	0°37'39	retrograde	7536 Feb 29 06:25	0°M.35'03	
max. Earth dist.	7529 Nov 02 20:02	14°M.51'49	31.11827 AU		7536 Apr 16 12:37	30°R.M.	
	7529 Nov 06 12:26	15°M.		opposition	7536 May 16 22:48	29°M.12'08	0°54'56
morning rise	7529 Nov 19 06:39	15°M.28'05		min. Earth dist.	7536 May 17 08:05	29°M.11'29	29.18376 AU
retrograde	7530 Feb 15 16:25	17°M.22'03		direct	7536 Aug 04 13:18	27°M.47'22	
opposition	7530 May 04 09:53	15°M.58'50	0°41'22	evening set	7536 Nov 02 15:08	29°M.42'26	
min. Earth dist.	7530 May 04 15:34	15°M.58'26	29.12483 AU		7536 Nov 10 15:52	0°M.	
	7530 Jun 12 02:16	15°R.M.					
direct	7530 Jul 22 14:31	14°M.34'13		conjunction	7536 Nov 18 19:10	0°M.18'02	0°52'22
	7530 Aug 31 12:50	15°M.		minimum elong	7536 Nov 18 19:10	0°M.18'02	0°52'28
evening set	7530 Oct 20 09:51	16°M.29'13		max. Earth dist.	7536 Nov 18 07:52	0°M.17'00	31.18802 AU
				morning rise	7536 Dec 04 21:10	0°M.53'29	
conjunction	7530 Nov 05 15:21	17°M.04'59	0°39'53	retrograde	7537 Mar 02 15:46	2°M.46'35	
minimum elong	7530 Nov 05 15:21	17°M.04'59	0°39'57	opposition	7537 May 19 08:58	1°M.23'42	0°56'56
max. Earth dist.	7530 Nov 05 08:57	17°M.04'24	31.13075 AU	min. Earth dist.	7537 May 19 19:35	1°M.22'57	29.19316 AU
morning rise	7530 Nov 21 19:17	17°M.40'38			7537 Jul 29 20:06	30°R.M.	
retrograde	7531 Feb 18 04:08	19°M.34'30		direct	7537 Aug 06 23:17	29°M.58'54	
opposition	7531 May 06 20:09	18°M.11'22	0°43'49		7537 Aug 15 05:49	0°M.	
min. Earth dist.	7531 May 07 02:18	18°M.10'56	29.13672 AU	evening set	7537 Nov 05 03:39	1°M.53'58	
direct	7531 Jul 25 04:07	16°M.46'46					
evening set	7531 Oct 22 22:56	18°M.41'48		conjunction	7537 Nov 21 07:23	2°M.29'32	0°54'12
				minimum elong	7537 Nov 21 07:23	2°M.29'32	0°54'18
conjunction	7531 Nov 08 04:05	19°M.17'32	0°42'08	max. Earth dist.	7537 Nov 20 19:49	2°M.28'28	31.19787 AU
minimum elong	7531 Nov 08 04:05	19°M.17'32	0°42'13	morning rise	7537 Dec 07 09:00	3°M.04'56	
max. Earth dist.	7531 Nov 07 19:45	19°M.16'46	31.14208 AU	retrograde	7538 Mar 05 02:24	4°M.57'56	
morning rise	7531 Nov 24 07:53	19°M.53'10		opposition	7538 May 21 18:59	3°M.35'06	0°58'50
retrograde	7532 Feb 20 15:07	21°M.46'55		min. Earth dist.	7538 May 22 04:56	3°M.34'24	29.20349 AU
opposition	7532 May 08 06:25	20°M.23'50	0°46'11	direct	7538 Aug 09 11:46	2°M.10'17	
min. Earth dist.	7532 May 08 13:27	20°M.23'21	29.14757 AU	evening set	7538 Nov 07 16:10	4°M.05'23	
direct	7532 Jul 26 15:10	18°M.59'14					
evening set	7532 Oct 24 11:57	20°M.54'17		conjunction	7538 Nov 23 19:32	4°M.40'54	0°55'57
				minimum elong	7538 Nov 23 19:31	4°M.40'54	0°56'02
conjunction	7532 Nov 09 17:05	21°M.30'00	0°44'19	max. Earth dist.	7538 Nov 23 07:09	4°M.39'46	31.20875 AU
minimum elong	7532 Nov 09 17:05	21°M.30'00	0°44'23	morning rise	7538 Dec 09 20:47	5°M.16'16	
max. Earth dist.	7532 Nov 09 08:52	21°M.29'15	31.15231 AU	retrograde	7539 Mar 07 13:41	7°M.09'11	
morning rise	7532 Nov 25 20:23	22°M.05'35		opposition	7539 May 24 05:07	5°M.46'24	1°00'40
retrograde	7533 Feb 22 00:37	23°M.59'12		min. Earth dist.	7539 May 24 15:55	5°M.45'38	29.21508 AU
opposition	7533 May 10 16:33	22°M.36'12	0°48'29	direct	7539 Aug 11 22:56	4°M.21'36	
min. Earth dist.	7533 May 11 00:43	22°M.35'37	29.15725 AU	evening set	7539 Nov 10 04:25	6°M.16'43	
direct	7533 Jul 29 03:36	21°M.11'34					
evening set	7533 Oct 27 01:03	23°M.06'38		conjunction	7539 Nov 26 07:37	6°M.52'13	0°57'37
				minimum elong	7539 Nov 26 07:37	6°M.52'13	0°57'43
conjunction	7533 Nov 12 05:47	23°M.42'19	0°46'26	max. Earth dist.	7539 Nov 25 19:45	6°M.51'07	31.22083 AU
minimum elong	7533 Nov 12 05:46	23°M.42'19	0°46'32	morning rise	7539 Dec 12 08:26	7°M.27'33	
max. Earth dist.	7533 Nov 11 19:35	23°M.41'23	31.16163 AU	retrograde	7540 Mar 09 00:27	9°M.20'23	
morning rise	7533 Nov 28 08:55	24°M.17'52		opposition	7540 May 25 15:12	7°M.57'41	1°02'24
retrograde	7534 Feb 24 12:21	26°M.11'21		min. Earth dist.	7540 May 26 02:08	7°M.56'55	29.22739 AU
opposition	7534 May 13 02:41	24°M.48'23	0°50'43	direct	7540 Aug 13 12:18	6°M.32'55	
min. Earth dist.	7534 May 13 10:56	24°M.47'48	29.16630 AU	evening set	7540 Nov 11 16:58	8°M.28'05	
direct	7534 Jul 31 14:19	23°M.23'42					
evening set	7534 Oct 29 13:43	25°M.18'47		conjunction	7540 Nov 27 19:41	9°M.03'33	0°59'12
				minimum elong	7540 Nov 27 19:41	9°M.03'33	0°59'17
conjunction	7534 Nov 14 18:19	25°M.54'26	0°48'29	max. Earth dist.	7540 Nov 27 06:23	9°M.02'19	31.23335 AU
minimum elong	7534 Nov 14 18:19	25°M.54'26	0°48'34	morning rise	7540 Dec 13 20:14	9°M.38'51	
max. Earth dist.	7534 Nov 14 08:23	25°M.53'31	31.17036 AU	retrograde	7541 Mar 11 11:42	11°M.31'36	

opposition	7541 May 28 01:14	10°♏09'00	1°04'02	max. Earth dist.	7547 Dec 13 13:09	24°♏20'39	31.29643 AU
min. Earth dist.	7541 May 28 12:40	10°♏08'12	29.24003 AU	morning rise	7547 Dec 30 04:29	24°♏57'21	
direct	7541 Aug 15 22:48	8°♏44'16		retrograde	7548 Mar 26 10:15	26°♏49'35	
evening set	7541 Nov 14 05:20	10°♏39'28		opposition	7548 Jun 12 01:09	25°♏27'19	1°12'48
				min. Earth dist.	7548 Jun 12 17:07	25°♏26'13	29.29967 AU
conjunction	7541 Nov 30 07:52	11°♏14'55	1°00'41	direct	7548 Aug 31 06:51	24°♏02'33	
minimum elong	7541 Nov 30 07:52	11°♏14'55	1°00'48	evening set	7548 Nov 29 18:28	25°♏57'50	
max. Earth dist.	7541 Nov 29 19:06	11°♏13'44	31.24576 AU				
morning rise	7541 Dec 16 07:51	11°♏50'11		conjunction	7548 Dec 15 18:26	26°♏33'04	1°08'34
retrograde	7542 Mar 13 21:45	13°♏42'52		minimum elong	7548 Dec 15 18:26	26°♏33'04	1°08'39
opposition	7542 May 30 11:32	12°♏20'21	1°05'35	max. Earth dist.	7548 Dec 15 01:13	26°♏31'29	31.30172 AU
min. Earth dist.	7542 May 30 23:57	12°♏19'29	29.25209 AU	morning rise	7548 Dec 31 15:30	27°♏08'05	
direct	7542 Aug 18 11:28	10°♏55'40		retrograde	7549 Mar 28 20:11	29°♏00'15	
evening set	7542 Nov 16 17:42	12°♏50'54		opposition	7549 Jun 14 11:21	27°♏38'00	1°13'38
				min. Earth dist.	7549 Jun 15 03:24	27°♏36'53	29.30493 AU
conjunction	7542 Dec 02 19:42	13°♏26'19	1°02'06	direct	7549 Sep 02 20:13	26°♏13'13	
minimum elong	7542 Dec 02 19:42	13°♏26'19	1°02'11	evening set	7549 Dec 02 06:19	28°♏08'30	
max. Earth dist.	7542 Dec 02 05:10	13°♏24'58	31.25739 AU	max. Earth dist.	7549 Dec 17 11:23	28°♏42'00	31.30717 AU
morning rise	7542 Dec 18 19:26	14°♏01'32					
retrograde	7543 Mar 16 09:36	15°♏54'10		conjunction	7549 Dec 18 05:43	28°♏43'42	1°09'18
opposition	7543 Jun 01 21:46	14°♏31'43	1°07'02	minimum elong	7549 Dec 18 05:43	28°♏43'42	1°09'25
min. Earth dist.	7543 Jun 02 10:07	14°♏30'52	29.26323 AU	morning rise	7550 Jan 03 02:29	29°♏18'41	
direct	7543 Aug 20 22:40	13°♏07'02			7550 Jan 23 04:55	0°♏	
evening set	7543 Nov 19 06:00	15°♏02'18		retrograde	7550 Mar 31 07:05	1°♏10'47	
					7550 Jun 09 23:35	30°♏♏	
conjunction	7543 Dec 05 07:48	15°♏37'42	1°03'24	opposition	7550 Jun 16 21:40	29°♏48'33	1°14'23
minimum elong	7543 Dec 05 07:48	15°♏37'42	1°03'31	min. Earth dist.	7550 Jun 17 13:37	29°♏47'27	29.31081 AU
max. Earth dist.	7543 Dec 04 17:22	15°♏36'22	31.26776 AU	direct	7550 Sep 05 06:44	28°♏23'46	
morning rise	7543 Dec 21 06:57	16°♏12'53			7550 Nov 25 18:14	0°♏	
retrograde	7544 Mar 17 17:57	18°♏05'26		evening set	7550 Dec 04 17:44	0°♏19'03	
opposition	7544 Jun 03 08:01	16°♏43'03	1°08'23				
min. Earth dist.	7544 Jun 03 22:03	16°♏42'05	29.27295 AU	conjunction	7550 Dec 20 16:54	0°♏54'13	1°09'56
direct	7544 Aug 22 09:36	15°♏18'23		minimum elong	7550 Dec 20 16:54	0°♏54'13	1°10'02
evening set	7544 Nov 20 18:24	17°♏13'40		max. Earth dist.	7550 Dec 19 23:41	0°♏52'38	31.31339 AU
				morning rise	7551 Jan 05 13:05	1°♏29'10	
conjunction	7544 Dec 06 19:45	17°♏49'01	1°04'38	retrograde	7551 Apr 02 16:49	3°♏21'14	
minimum elong	7544 Dec 06 19:45	17°♏49'01	1°04'44	opposition	7551 Jun 19 08:03	1°♏59'02	1°15'00
max. Earth dist.	7544 Dec 06 03:54	17°♏47'33	31.27681 AU	min. Earth dist.	7551 Jun 20 00:27	1°♏57'54	29.31743 AU
morning rise	7544 Dec 22 18:37	18°♏24'11		direct	7551 Sep 07 19:52	0°♏34'16	
retrograde	7545 Mar 20 04:09	20°♏16'39		evening set	7551 Dec 07 05:24	2°♏29'35	
opposition	7545 Jun 05 18:17	18°♏54'19	1°09'39	max. Earth dist.	7551 Dec 22 09:39	3°♏03'01	31.32052 AU
min. Earth dist.	7545 Jun 06 08:02	18°♏53'22	29.28124 AU				
direct	7545 Aug 24 21:28	17°♏29'38		conjunction	7551 Dec 23 04:02	3°♏04'43	1°10'29
evening set	7545 Nov 23 06:36	19°♏24'55		minimum elong	7551 Dec 23 04:02	3°♏04'43	1°10'35
				morning rise	7552 Jan 07 23:58	3°♏39'38	
conjunction	7545 Dec 09 07:37	20°♏00'15	1°05'45	retrograde	7552 Apr 04 04:36	5°♏31'40	
minimum elong	7545 Dec 09 07:37	20°♏00'15	1°05'52	opposition	7552 Jun 20 18:11	4°♏09'31	1°15'32
max. Earth dist.	7545 Dec 08 15:22	19°♏58'45	31.28433 AU	min. Earth dist.	7552 Jun 21 09:55	4°♏08'26	29.32494 AU
morning rise	7545 Dec 25 05:57	20°♏35'22		direct	7552 Sep 09 07:16	2°♏44'48	
retrograde	7546 Mar 22 13:21	22°♏27'46		evening set	7552 Dec 08 16:55	4°♏40'08	
opposition	7546 Jun 08 04:40	21°♏05'28	1°10'48				
min. Earth dist.	7546 Jun 08 19:58	21°♏04'24	29.28824 AU	conjunction	7552 Dec 24 15:18	5°♏15'15	1°10'55
direct	7546 Aug 27 07:12	19°♏40'46		minimum elong	7552 Dec 24 15:18	5°♏15'15	1°11'01
evening set	7546 Nov 25 18:41	21°♏36'03		max. Earth dist.	7552 Dec 23 21:39	5°♏13'37	31.32823 AU
				morning rise	7553 Jan 09 10:39	5°♏50'09	
conjunction	7546 Dec 11 19:20	22°♏11'21	1°06'47	retrograde	7553 Apr 06 12:48	7°♏42'09	
minimum elong	7546 Dec 11 19:20	22°♏11'21	1°06'53	opposition	7553 Jun 23 04:40	6°♏20'06	1°15'56
max. Earth dist.	7546 Dec 11 02:37	22°♏09'48	31.29083 AU	min. Earth dist.	7553 Jun 23 21:35	6°♏18'55	29.33277 AU
morning rise	7546 Dec 27 17:17	22°♏46'26		direct	7553 Sep 11 18:10	4°♏55'25	
retrograde	7547 Mar 24 23:27	24°♏38'45		evening set	7553 Dec 11 04:24	6°♏50'47	
opposition	7547 Jun 10 14:51	23°♏16'28	1°11'51	max. Earth dist.	7553 Dec 26 07:54	7°♏24'10	31.33607 AU
min. Earth dist.	7547 Jun 11 05:49	23°♏15'26	29.29423 AU				
direct	7547 Aug 29 19:41	21°♏51'45		conjunction	7553 Dec 27 02:15	7°♏25'52	1°11'15
evening set	7547 Nov 28 06:39	23°♏47'02		minimum elong	7553 Dec 27 02:15	7°♏25'52	1°11'22
				morning rise	7554 Jan 11 21:18	8°♏00'44	
conjunction	7547 Dec 14 06:53	24°♏22'17	1°07'43	retrograde	7554 Apr 08 22:39	9°♏52'43	
minimum elong	7547 Dec 14 06:53	24°♏22'17	1°07'50	opposition	7554 Jun 25 15:03	8°♏30'44	1°16'15

min. Earth dist.	7554 Jun 26 07:15	8°329'37	29.34037 AU	morning rise	7561 Jan 26 22:41	23°314'15	
direct	7554 Sep 14 05:28	7°306'06		retrograde	7561 Apr 23 21:52	25°306'03	
evening set	7554 Dec 13 15:52	9°301'29		opposition	7561 Jul 10 17:18	23°344'05	1°15'20
				min. Earth dist.	7561 Jul 11 11:36	23°342'50	29.36110 AU
conjunction	7554 Dec 29 13:22	9°336'34	1°11'29	direct	7561 Sep 29 14:02	22°319'23	
minimum elong	7554 Dec 29 13:22	9°336'34	1°11'35	evening set	7561 Dec 28 22:01	24°314'39	
max. Earth dist.	7554 Dec 28 18:56	9°334'51	31.34327 AU				
morning rise	7555 Jan 14 07:54	10°311'24		conjunction	7562 Jan 13 16:48	24°349'31	1°10'16
retrograde	7555 Apr 11 08:09	12°303'23		minimum elong	7562 Jan 13 16:48	24°349'31	1°10'23
opposition	7555 Jun 28 01:34	10°341'27	1°16'26	max. Earth dist.	7562 Jan 12 20:59	24°347'41	31.36043 AU
min. Earth dist.	7555 Jun 28 19:06	10°340'14	29.34723 AU	morning rise	7562 Jan 29 08:32	25°324'09	
direct	7555 Sep 16 14:15	9°316'50		retrograde	7562 Apr 26 06:00	27°315'56	
evening set	7555 Dec 16 03:17	11°312'14		opposition	7562 Jul 13 04:08	25°353'57	1°14'46
max. Earth dist.	7555 Dec 31 05:44	11°345'33	31.34954 AU	min. Earth dist.	7562 Jul 13 23:14	25°352'38	29.36125 AU
				direct	7562 Oct 02 01:35	24°329'14	
conjunction	7556 Jan 01 00:25	11°347'17	1°11'37	evening set	7562 Dec 31 08:48	26°324'28	
minimum elong	7556 Jan 01 00:25	11°347'17	1°11'43	max. Earth dist.	7563 Jan 15 07:07	26°357'27	31.36098 AU
morning rise	7556 Jan 16 18:35	12°322'05					
retrograde	7556 Apr 12 17:45	14°314'03		conjunction	7563 Jan 16 03:06	26°359'18	1°09'42
opposition	7556 Jun 29 12:06	12°352'10	1°16'31	minimum elong	7563 Jan 16 03:06	26°359'18	1°09'48
min. Earth dist.	7556 Jun 30 05:16	12°350'59	29.35273 AU	morning rise	7563 Jan 31 18:34	27°333'54	
direct	7556 Sep 18 02:40	11°327'34		retrograde	7563 Apr 28 15:41	29°325'40	
evening set	7556 Dec 17 14:46	13°322'58		opposition	7563 Jul 15 14:41	28°303'41	1°14'07
				min. Earth dist.	7563 Jul 16 08:31	28°302'28	29.36219 AU
conjunction	7557 Jan 02 11:24	13°357'59	1°11'38	direct	7563 Oct 04 13:20	26°338'58	
minimum elong	7557 Jan 02 11:24	13°357'59	1°11'44	evening set	7564 Jan 02 19:27	28°334'12	
max. Earth dist.	7557 Jan 01 15:39	13°356'09	31.35429 AU				
morning rise	7557 Jan 18 05:10	14°332'46		conjunction	7564 Jan 18 13:25	29°309'01	1°09'02
retrograde	7557 Apr 15 04:11	16°324'43		minimum elong	7564 Jan 18 13:25	29°309'01	1°09'08
opposition	7557 Jul 01 22:44	15°302'50	1°16'30	max. Earth dist.	7564 Jan 17 17:52	29°307'12	31.36236 AU
min. Earth dist.	7557 Jul 02 16:48	15°301'35	29.35686 AU	morning rise	7564 Feb 03 04:29	29°343'36	
direct	7557 Sep 20 13:01	13°338'14			7564 Feb 10 20:33	0°≈	
evening set	7557 Dec 20 02:03	15°333'38		retrograde	7564 Apr 30 01:03	1°≈35'23	
				opposition	7564 Jul 17 01:31	0°≈13'25	1°13'21
conjunction	7558 Jan 04 22:25	16°308'37	1°11'34	min. Earth dist.	7564 Jul 17 19:57	0°≈12'09	29.36409 AU
minimum elong	7558 Jan 04 22:25	16°308'37	1°11'40		7564 Jul 25 06:09	30°R3	
max. Earth dist.	7558 Jan 04 03:08	16°306'50	31.35767 AU	direct	7564 Oct 05 22:37	28°348'44	
morning rise	7558 Jan 20 15:40	16°343'22			7564 Dec 13 19:28	0°≈	
retrograde	7558 Apr 17 13:47	18°335'17		evening set	7565 Jan 04 06:03	0°≈43'58	
opposition	7558 Jul 04 09:27	17°313'24	1°16'22				
min. Earth dist.	7558 Jul 05 03:44	17°312'09	29.35944 AU	conjunction	7565 Jan 19 23:39	1°≈18'46	1°08'16
direct	7558 Sep 23 01:31	15°348'48		minimum elong	7565 Jan 19 23:39	1°≈18'46	1°08'21
evening set	7558 Dec 22 13:13	17°344'10		max. Earth dist.	7565 Jan 19 04:41	1°≈17'00	31.36471 AU
				morning rise	7565 Feb 04 14:20	1°≈53'20	
conjunction	7559 Jan 07 09:02	18°319'07	1°11'23	retrograde	7565 May 02 10:19	3°≈45'09	
minimum elong	7559 Jan 07 09:02	18°319'07	1°11'29	opposition	7565 Jul 19 12:16	2°≈23'13	1°12'28
max. Earth dist.	7559 Jan 06 12:29	18°317'13	31.35962 AU	min. Earth dist.	7565 Jul 20 05:43	2°≈22'02	29.36661 AU
morning rise	7559 Jan 23 02:04	18°353'50		direct	7565 Oct 08 10:33	0°≈58'36	
retrograde	7559 Apr 20 00:55	20°345'44		evening set	7566 Jan 06 16:40	2°≈53'50	
opposition	7559 Jul 06 20:04	19°323'49	1°16'07				
min. Earth dist.	7559 Jul 07 14:25	19°322'34	29.36083 AU	conjunction	7566 Jan 22 09:48	3°≈28'37	1°07'24
direct	7559 Sep 25 12:15	17°359'11		minimum elong	7566 Jan 22 09:48	3°≈28'37	1°07'30
evening set	7559 Dec 25 00:15	19°354'32		max. Earth dist.	7566 Jan 21 14:25	3°≈26'49	31.36747 AU
				morning rise	7566 Feb 07 00:12	4°≈03'11	
conjunction	7560 Jan 09 19:52	20°329'27	1°11'07	retrograde	7566 May 04 21:03	5°≈55'03	
minimum elong	7560 Jan 09 19:52	20°329'27	1°11'13	opposition	7566 Jul 21 23:11	4°≈33'10	1°11'30
max. Earth dist.	7560 Jan 09 00:10	20°327'38	31.36042 AU	min. Earth dist.	7566 Jul 22 16:54	4°≈31'57	29.36952 AU
morning rise	7560 Jan 25 12:21	21°304'08		direct	7566 Oct 10 19:42	3°≈08'36	
retrograde	7560 Apr 21 10:33	22°355'59		evening set	7567 Jan 09 03:02	5°≈03'51	
opposition	7560 Jul 08 06:40	21°334'03	1°15'47				
min. Earth dist.	7560 Jul 09 01:48	21°332'45	29.36113 AU	conjunction	7567 Jan 24 19:57	5°≈38'38	1°06'26
direct	7560 Sep 27 01:53	20°309'23		minimum elong	7567 Jan 24 19:57	5°≈38'38	1°06'31
evening set	7560 Dec 26 11:21	22°304'42		max. Earth dist.	7567 Jan 24 01:39	5°≈36'56	31.37026 AU
max. Earth dist.	7561 Jan 10 09:37	22°337'40	31.36052 AU	morning rise	7567 Feb 09 09:55	6°≈13'10	
				retrograde	7567 May 07 06:45	8°≈05'06	
conjunction	7561 Jan 11 06:24	22°339'35	1°10'45	opposition	7567 Jul 24 10:10	6°≈43'15	1°10'25
minimum elong	7561 Jan 11 06:24	22°339'35	1°10'50	min. Earth dist.	7567 Jul 25 03:51	6°≈42'03	29.37193 AU

direct	7567 Oct 13 07:05	5° \approx 18'45		minimum elong	7574 Feb 08 18:26	20° \approx 50'33	0°57'14
evening set	7568 Jan 11 13:43	7° \approx 14'02		max. Earth dist.	7574 Feb 08 00:29	20° \approx 48'53	31.35969 AU
max. Earth dist.	7568 Jan 26 10:47	7° \approx 46'59	31.37233 AU	morning rise	7574 Feb 24 06:19	21° \approx 25'00	
				retrograde	7574 May 22 06:13	23° \approx 17'13	
conjunction	7568 Jan 27 06:05	7° \approx 48'47	1°05'23	opposition	7574 Aug 08 16:36	21° \approx 55'15	1°00'11
minimum elong	7568 Jan 27 06:05	7° \approx 48'47	1°05'28	min. Earth dist.	7574 Aug 09 09:27	21° \approx 54'06	29.35783 AU
morning rise	7568 Feb 11 19:51	8° \approx 23'19		direct	7574 Oct 28 17:36	20° \approx 30'51	
retrograde	7568 May 08 18:29	10° \approx 15'19		evening set	7575 Jan 26 14:02	22° \approx 25'55	
opposition	7568 Jul 25 21:06	8° \approx 53'29	1°09'14	max. Earth dist.	7575 Feb 10 09:52	22° \approx 58'51	31.35523 AU
min. Earth dist.	7568 Jul 26 14:33	8° \approx 52'18	29.37358 AU				
direct	7568 Oct 14 17:06	7° \approx 29'02		conjunction	7575 Feb 11 04:03	23° \approx 00'33	0°55'30
evening set	7569 Jan 13 00:14	9° \approx 24'20		minimum elong	7575 Feb 11 04:03	23° \approx 00'33	0°55'33
				morning rise	7575 Feb 26 15:47	23° \approx 34'59	
conjunction	7569 Jan 28 16:24	9° \approx 59'04	1°04'14	retrograde	7575 May 24 16:05	25° \approx 27'15	
minimum elong	7569 Jan 28 16:24	9° \approx 59'04	1°04'18	opposition	7575 Aug 11 03:59	24° \approx 05'14	0°58'22
max. Earth dist.	7569 Jan 27 22:09	9° \approx 57'22	31.37335 AU	min. Earth dist.	7575 Aug 11 20:38	24° \approx 04'06	29.35375 AU
morning rise	7569 Feb 13 05:40	10° \approx 33'34		direct	7575 Oct 31 02:54	22° \approx 40'50	
retrograde	7569 May 11 05:01	12° \approx 25'38		evening set	7576 Jan 28 23:59	24° \approx 35'51	
opposition	7569 Jul 28 08:23	11° \approx 03'50	1°07'57				
min. Earth dist.	7569 Jul 29 02:28	11° \approx 02'36	29.37392 AU	conjunction	7576 Feb 13 13:49	25° \approx 10'29	0°53'46
direct	7569 Oct 17 06:18	9° \approx 39'26		minimum elong	7576 Feb 13 13:50	25° \approx 10'29	0°53'49
evening set	7570 Jan 15 10:44	11° \approx 34'43		max. Earth dist.	7576 Feb 12 21:12	25° \approx 08'55	31.35151 AU
max. Earth dist.	7570 Jan 30 07:09	12° \approx 07'38	31.37310 AU	morning rise	7576 Feb 29 01:09	25° \approx 44'54	
				retrograde	7576 May 26 01:06	27° \approx 37'12	
conjunction	7570 Jan 31 02:22	12° \approx 09'25	1°02'59	opposition	7576 Aug 12 15:19	26° \approx 15'10	0°56'28
minimum elong	7570 Jan 31 02:23	12° \approx 09'25	1°03'04	min. Earth dist.	7576 Aug 13 07:25	26° \approx 14'04	29.35035 AU
morning rise	7570 Feb 15 15:29	12° \approx 43'55		direct	7576 Nov 01 13:57	24° \approx 50'47	
retrograde	7570 May 13 17:08	14° \approx 36'01		evening set	7577 Jan 30 10:03	26° \approx 45'47	
opposition	7570 Jul 30 19:33	13° \approx 14'13	1°06'35				
min. Earth dist.	7570 Jul 31 12:46	13° \approx 13'03	29.37297 AU	conjunction	7577 Feb 14 23:26	27° \approx 20'23	0°51'57
direct	7570 Oct 19 18:17	11° \approx 49'50		minimum elong	7577 Feb 14 23:26	27° \approx 20'23	0°52'00
evening set	7571 Jan 17 21:10	13° \approx 45'07		max. Earth dist.	7577 Feb 14 06:25	27° \approx 18'48	31.34867 AU
				morning rise	7577 Mar 02 10:40	27° \approx 54'49	
conjunction	7571 Feb 02 12:35	14° \approx 19'49	1°01'39	retrograde	7577 May 28 12:52	29° \approx 47'12	
minimum elong	7571 Feb 02 12:36	14° \approx 19'49	1°01'44	opposition	7577 Aug 15 02:50	28° \approx 25'08	0°54'29
max. Earth dist.	7571 Feb 01 17:59	14° \approx 18'05	31.37137 AU	min. Earth dist.	7577 Aug 15 17:55	28° \approx 24'07	29.34793 AU
morning rise	7571 Feb 18 01:16	14° \approx 54'18		direct	7577 Nov 04 00:00	27° \approx 00'48	
	7571 Feb 20 16:24	15° \approx		evening set	7578 Feb 01 19:48	28° \approx 55'47	
retrograde	7571 May 16 01:56	16° \approx 46'26					
opposition	7571 Aug 02 06:46	15° \approx 24'37	1°05'07	conjunction	7578 Feb 17 09:03	29° \approx 30'23	0°50'03
min. Earth dist.	7571 Aug 03 01:05	15° \approx 23'22	29.37056 AU	minimum elong	7578 Feb 17 09:03	29° \approx 30'23	0°50'07
	7571 Aug 17 13:04	15° \approx		max. Earth dist.	7578 Feb 16 17:43	29° \approx 28'57	31.34651 AU
direct	7571 Oct 22 05:50	14° \approx 00'15			7578 Mar 02 15:34	0° \approx	
	7571 Dec 23 16:48	15° \approx		morning rise	7578 Mar 04 19:54	0° \approx 04'47	
evening set	7572 Jan 20 07:37	15° \approx 55'29		retrograde	7578 May 30 23:18	1° \approx 57'16	
				opposition	7578 Aug 17 14:27	0° \approx 35'13	0°52'26
conjunction	7572 Feb 04 22:39	16° \approx 30'10	1°00'14	min. Earth dist.	7578 Aug 18 05:42	0° \approx 34'10	29.34587 AU
minimum elong	7572 Feb 04 22:40	16° \approx 30'10	1°00'19		7578 Sep 08 20:31	30° \approx	
max. Earth dist.	7572 Feb 04 03:43	16° \approx 28'24	31.36840 AU	direct	7578 Nov 06 12:03	29° \approx 10'56	
morning rise	7572 Feb 20 11:09	17° \approx 04'38			7579 Jan 01 15:21	0° \approx	
retrograde	7572 May 17 12:08	18° \approx 56'47		evening set	7579 Feb 04 05:49	1° \approx 05'55	
opposition	7572 Aug 03 17:58	17° \approx 34'57	1°03'34				
min. Earth dist.	7572 Aug 04 11:15	17° \approx 33'46	29.36689 AU	conjunction	7579 Feb 19 18:38	1° \approx 40'29	0°48'05
direct	7572 Oct 23 18:40	16° \approx 10'34		minimum elong	7579 Feb 19 18:39	1° \approx 40'29	0°48'08
evening set	7573 Jan 21 17:53	18° \approx 05'46		max. Earth dist.	7579 Feb 19 02:55	1° \approx 39'01	31.34461 AU
				morning rise	7579 Mar 07 05:27	2° \approx 14'54	
conjunction	7573 Feb 06 08:36	18° \approx 40'26	0°58'44	retrograde	7579 Jun 02 11:27	4° \approx 07'28	
minimum elong	7573 Feb 06 08:36	18° \approx 40'26	0°58'49	opposition	7579 Aug 20 01:52	2° \approx 45'25	0°50'17
max. Earth dist.	7573 Feb 05 13:50	18° \approx 38'41	31.36423 AU	min. Earth dist.	7579 Aug 20 15:50	2° \approx 44'28	29.34383 AU
morning rise	7573 Feb 21 20:45	19° \approx 14'53		direct	7579 Nov 08 23:04	1° \approx 21'12	
retrograde	7573 May 19 21:50	21° \approx 07'04		evening set	7580 Feb 06 15:48	3° \approx 16'10	
opposition	7573 Aug 06 05:20	19° \approx 45'10	1°01'55				
min. Earth dist.	7573 Aug 06 23:19	19° \approx 43'57	29.36245 AU	conjunction	7580 Feb 22 04:26	3° \approx 50'45	0°46'02
direct	7573 Oct 26 05:06	18° \approx 20'47		minimum elong	7580 Feb 22 04:26	3° \approx 50'45	0°46'06
evening set	7574 Jan 24 04:00	20° \approx 15'55		max. Earth dist.	7580 Feb 21 13:37	3° \approx 49'22	31.34227 AU
				morning rise	7580 Mar 08 14:55	4° \approx 25'09	
conjunction	7574 Feb 08 18:26	20° \approx 50'33	0°57'10	retrograde	7580 Jun 03 21:32	6° \approx 17'49	

opposition	7580 Aug 21 13:43	4° ✕ 55'46	0°48'04	max. Earth dist.	7587 Mar 08 12:11	19° ✕ 03'45	31.29321 AU
min. Earth dist.	7580 Aug 22 04:28	4° ✕ 54'46	29.34115 AU	morning rise	7587 Mar 24 09:34	19° ✕ 39'17	
direct	7580 Nov 10 10:29	3° ✕ 31'37		retrograde	7587 Jun 19 23:00	21° ✕ 32'37	
evening set	7581 Feb 08 01:47	5° ✕ 26'35		opposition	7587 Sep 07 01:36	20° ✕ 10'14	0°30'50
				min. Earth dist.	7587 Sep 07 13:44	20° ✕ 09'24	29.28846 AU
conjunction	7581 Feb 23 14:04	6° ✕ 01'09	0°43'56	direct	7587 Nov 26 18:19	18° ✕ 46'12	
minimum elong	7581 Feb 23 14:04	6° ✕ 01'09	0°43'58	evening set	7588 Feb 23 23:05	20° ✕ 40'54	
max. Earth dist.	7581 Feb 22 23:24	5° ✕ 59'46	31.33920 AU				
morning rise	7581 Mar 11 00:23	6° ✕ 35'33		conjunction	7588 Mar 10 09:42	21° ✕ 15'25	0°27'38
retrograde	7581 Jun 06 08:49	8° ✕ 28'19		minimum elong	7588 Mar 10 09:42	21° ✕ 15'25	0°27'39
opposition	7581 Aug 24 01:32	7° ✕ 06'16	0°45'47	max. Earth dist.	7588 Mar 09 21:39	21° ✕ 14'18	31.28361 AU
min. Earth dist.	7581 Aug 24 15:01	7° ✕ 05'21	29.33745 AU	morning rise	7588 Mar 25 19:03	21° ✕ 49'51	
direct	7581 Nov 12 23:23	5° ✕ 42'10		retrograde	7588 Jun 21 11:13	23° ✕ 43'17	
evening set	7582 Feb 10 11:50	7° ✕ 37'07		opposition	7588 Sep 08 13:39	22° ✕ 20'49	0°28'10
				min. Earth dist.	7588 Sep 08 23:59	22° ✕ 20'08	29.27922 AU
conjunction	7582 Feb 25 23:50	8° ✕ 11'40	0°41'46	direct	7588 Nov 28 05:04	20° ✕ 56'48	
minimum elong	7582 Feb 25 23:50	8° ✕ 11'40	0°41'49	evening set	7589 Feb 25 08:40	22° ✕ 51'29	
max. Earth dist.	7582 Feb 25 09:16	8° ✕ 10'19	31.33483 AU				
morning rise	7582 Mar 13 09:58	8° ✕ 46'05		conjunction	7589 Mar 12 19:09	23° ✕ 26'00	0°25'07
retrograde	7582 Jun 08 19:37	10° ✕ 38'57		minimum elong	7589 Mar 12 19:09	23° ✕ 26'00	0°25'08
opposition	7582 Aug 26 13:29	9° ✕ 16'52	0°43'26	max. Earth dist.	7589 Mar 12 08:24	23° ✕ 25'00	31.27475 AU
min. Earth dist.	7582 Aug 27 03:38	9° ✕ 15'55	29.33248 AU	morning rise	7589 Mar 28 04:17	24° ✕ 00'26	
direct	7582 Nov 15 09:59	7° ✕ 52'49		retrograde	7589 Jun 23 21:43	25° ✕ 54'00	
evening set	7583 Feb 12 21:46	9° ✕ 47'44		opposition	7589 Sep 11 01:57	24° ✕ 31'30	0°25'28
				min. Earth dist.	7589 Sep 11 12:26	24° ✕ 30'47	29.27084 AU
conjunction	7583 Feb 28 09:37	10° ✕ 22'18	0°39'32	direct	7589 Nov 30 16:37	23° ✕ 07'31	
minimum elong	7583 Feb 28 09:37	10° ✕ 22'18	0°39'34	evening set	7590 Feb 27 18:22	25° ✕ 02'10	
max. Earth dist.	7583 Feb 27 19:45	10° ✕ 21'00	31.32913 AU				
morning rise	7583 Mar 15 19:32	10° ✕ 56'42		conjunction	7590 Mar 15 04:39	25° ✕ 36'41	0°22'34
retrograde	7583 Jun 11 04:53	12° ✕ 49'40		minimum elong	7590 Mar 15 04:39	25° ✕ 36'41	0°22'35
opposition	7583 Aug 29 01:25	11° ✕ 27'34	0°41'01	max. Earth dist.	7590 Mar 14 18:43	25° ✕ 35'46	31.26690 AU
min. Earth dist.	7583 Aug 29 14:41	11° ✕ 26'40	29.32584 AU	morning rise	7590 Mar 30 13:45	26° ✕ 11'08	
direct	7583 Nov 17 22:39	10° ✕ 03'32		retrograde	7590 Jun 26 09:50	28° ✕ 04'48	
evening set	7584 Feb 15 07:51	11° ✕ 58'25		opposition	7590 Sep 13 13:58	26° ✕ 42'17	0°22'43
				min. Earth dist.	7590 Sep 13 22:42	26° ✕ 41'41	29.26325 AU
conjunction	7584 Mar 01 19:19	12° ✕ 32'58	0°37'15	direct	7590 Dec 03 05:40	25° ✕ 18'21	
minimum elong	7584 Mar 01 19:20	12° ✕ 32'58	0°37'17	evening set	7591 Mar 02 04:01	27° ✕ 13'00	
max. Earth dist.	7584 Mar 01 04:46	12° ✕ 31'36	31.32172 AU				
morning rise	7584 Mar 17 05:11	13° ✕ 07'23		conjunction	7591 Mar 17 14:07	27° ✕ 47'32	0°19'59
retrograde	7584 Jun 12 15:26	15° ✕ 00'27		minimum elong	7591 Mar 17 14:07	27° ✕ 47'32	0°19'59
opposition	7584 Aug 30 13:26	13° ✕ 38'17	0°38'33	max. Earth dist.	7591 Mar 17 04:38	27° ✕ 46'39	31.25953 AU
min. Earth dist.	7584 Aug 31 02:46	13° ✕ 37'23	29.31774 AU	morning rise	7591 Apr 01 23:11	28° ✕ 21'59	
direct	7584 Nov 19 08:25	12° ✕ 14'16			7591 May 29 00:28	0° ∇	
evening set	7585 Feb 16 17:45	14° ✕ 09'06		retrograde	7591 Jun 28 21:27	0° ∇ 15'48	
					7591 Jul 30 09:01	30° ℞ ✕	
conjunction	7585 Mar 04 05:08	14° ✕ 43'39	0°34'55	opposition	7591 Sep 16 02:17	28° ✕ 53'15	0°19'57
minimum elong	7585 Mar 04 05:08	14° ✕ 43'39	0°34'56	min. Earth dist.	7591 Sep 16 11:12	28° ✕ 52'38	29.25606 AU
max. Earth dist.	7585 Mar 03 15:57	14° ✕ 42'25	31.31298 AU	direct	7591 Dec 05 16:34	27° ✕ 29'23	
morning rise	7585 Mar 19 14:42	15° ✕ 18'04		evening set	7592 Mar 03 13:40	29° ✕ 24'00	
retrograde	7585 Jun 15 00:50	17° ✕ 11'13					
opposition	7585 Sep 02 01:33	15° ✕ 48'59	0°36'02	conjunction	7592 Mar 18 23:41	29° ✕ 58'32	0°17'22
min. Earth dist.	7585 Sep 02 14:35	15° ✕ 48'06	29.30834 AU	minimum elong	7592 Mar 18 23:41	29° ✕ 58'32	0°17'22
direct	7585 Nov 21 19:55	14° ✕ 24'58		max. Earth dist.	7592 Mar 18 15:32	29° ✕ 57'47	31.25237 AU
evening set	7586 Feb 19 03:33	16° ✕ 19'45			7592 Mar 19 15:17	0° ∇	
				morning rise	7592 Apr 03 08:35	0° ∇ 33'00	
conjunction	7586 Mar 06 14:34	16° ✕ 54'17	0°32'32	retrograde	7592 Jun 30 06:53	2° ∇ 26'58	
minimum elong	7586 Mar 06 14:34	16° ✕ 54'17	0°32'33	opposition	7592 Sep 17 14:37	1° ∇ 04'23	0°17'08
max. Earth dist.	7586 Mar 06 00:54	16° ✕ 53'00	31.30327 AU	min. Earth dist.	7592 Sep 17 22:14	1° ∇ 03'52	29.24869 AU
morning rise	7586 Mar 22 00:12	17° ✕ 28'43			7592 Nov 01 16:28	30° ℞ ✕	
retrograde	7586 Jun 17 12:36	19° ✕ 21'57		direct	7592 Dec 07 05:04	29° ✕ 40'35	
opposition	7586 Sep 04 13:35	17° ✕ 59'38	0°33'27		7593 Jan 10 15:40	0° ∇	
min. Earth dist.	7586 Sep 05 01:43	17° ✕ 58'49	29.29841 AU	evening set	7593 Mar 05 23:32	1° ∇ 35'11	
direct	7586 Nov 24 06:24	16° ✕ 35'36					
evening set	7587 Feb 21 13:15	18° ✕ 30'20		conjunction	7593 Mar 21 09:14	2° ∇ 09'44	0°14'44
				minimum elong	7593 Mar 21 09:14	2° ∇ 09'44	0°14'43
conjunction	7587 Mar 09 00:13	19° ✕ 04'52	0°30'06	behind sun begin	7593 Mar 21 06:27	2° ∇ 09'29	
minimum elong	7587 Mar 09 00:13	19° ✕ 04'52	0°30'07	behind sun end	7593 Mar 21 12:01	2° ∇ 09'59	

max. Earth dist.	7593 Mar 21 00:46	2°♈08'57	31.24487 AU	evening set	7599 Mar 19 10:35	14°♈43'57	
morning rise	7593 Apr 05 18:12	2°♈44'13					
retrograde	7593 Jul 02 18:06	4°♈38'18		conjunction	7599 Apr 03 19:42	15°♈18'30	-0°01'33
opposition	7593 Sep 20 03:08	3°♈15'42	0°14'17	minimum elong	7599 Apr 03 19:43	15°♈18'30	0°01'35
min. Earth dist.	7593 Sep 20 10:29	3°♈15'12	29.24099 AU	behind sun begin	7599 Apr 03 13:18	15°♈17'55	
direct	7593 Dec 09 15:16	1°♈51'57		behind sun end	7599 Apr 04 02:07	15°♈19'05	
evening set	7594 Mar 08 09:11	3°♈46'31		max. Earth dist.	7599 Apr 03 15:01	15°♈18'06	31.17859 AU
				morning rise	7599 Apr 19 04:33	15°♈53'04	
conjunction	7594 Mar 23 18:54	4°♈21'04	0°12'04	retrograde	7599 Jul 16 14:34	17°♈47'51	
minimum elong	7594 Mar 23 18:54	4°♈21'04	0°12'03	opposition	7599 Oct 04 06:52	16°♈24'45	-0°03'03
behind sun begin	7594 Mar 23 14:28	4°♈20'40		min. Earth dist.	7599 Oct 04 10:33	16°♈24'30	29.17190 AU
behind sun end	7594 Mar 23 23:20	4°♈21'28		direct	7599 Dec 23 12:56	15°♈01'00	
max. Earth dist.	7594 Mar 23 12:03	4°♈20'27	31.23672 AU	evening set	7600 Mar 20 20:21	16°♈55'16	
morning rise	7594 Apr 08 03:41	4°♈55'34					
retrograde	7594 Jul 05 04:12	6°♈49'48		conjunction	7600 Apr 05 05:18	17°♈29'50	-0°04'17
opposition	7594 Sep 22 15:43	5°♈27'09	0°11'26	minimum elong	7600 Apr 05 05:17	17°♈29'50	0°04'19
min. Earth dist.	7594 Sep 22 22:42	5°♈26'41	29.23225 AU	behind sun begin	7600 Apr 04 22:59	17°♈29'16	
direct	7594 Dec 12 03:08	4°♈03'27		behind sun end	7600 Apr 05 11:36	17°♈30'24	
evening set	7595 Mar 10 19:12	5°♈57'59		max. Earth dist.	7600 Apr 05 01:06	17°♈29'28	31.16540 AU
				morning rise	7600 Apr 20 14:11	18°♈04'24	
conjunction	7595 Mar 26 04:37	6°♈32'32	0°09'23	retrograde	7600 Jul 18 02:20	19°♈59'19	
minimum elong	7595 Mar 26 04:37	6°♈32'32	0°09'23	opposition	7600 Oct 05 19:40	18°♈36'07	-0°05'57
behind sun begin	7595 Mar 25 23:13	6°♈32'03		min. Earth dist.	7600 Oct 05 23:15	18°♈35'52	29.15922 AU
behind sun end	7595 Mar 26 10:01	6°♈33'01		direct	7600 Dec 25 00:07	17°♈12'21	
max. Earth dist.	7595 Mar 25 21:08	6°♈31'51	31.22745 AU	evening set	7601 Mar 23 06:04	19°♈06'35	
morning rise	7595 Apr 10 13:31	7°♈07'03					
retrograde	7595 Jul 07 16:05	9°♈01'25		conjunction	7601 Apr 07 15:03	19°♈41'09	-0°06'58
opposition	7595 Sep 25 04:10	7°♈38'42	0°08'33	minimum elong	7601 Apr 07 15:03	19°♈41'09	0°07'01
min. Earth dist.	7595 Sep 25 10:23	7°♈38'17	29.22238 AU	behind sun begin	7601 Apr 07 09:06	19°♈40'37	
direct	7595 Dec 14 13:34	6°♈15'01		behind sun end	7601 Apr 07 20:59	19°♈41'42	
evening set	7596 Mar 12 05:06	8°♈09'31		max. Earth dist.	7601 Apr 07 12:35	19°♈40'57	31.15325 AU
				morning rise	7601 Apr 22 23:51	20°♈15'45	
conjunction	7596 Mar 27 14:32	8°♈44'04	0°06'42	retrograde	7601 Jul 20 12:37	22°♈10'47	
minimum elong	7596 Mar 27 14:32	8°♈44'04	0°06'42	opposition	7601 Oct 08 08:20	20°♈47'31	-0°08'50
behind sun begin	7596 Mar 27 08:31	8°♈43'32		min. Earth dist.	7601 Oct 08 10:11	20°♈47'23	29.14760 AU
behind sun end	7596 Mar 27 20:32	8°♈44'37		direct	7601 Dec 27 12:59	19°♈23'47	
max. Earth dist.	7596 Mar 27 08:21	8°♈43'31	31.21682 AU				
morning rise	7596 Apr 11 23:14	9°♈18'36					
retrograde	7596 Jul 09 02:32	11°♈13'05					
opposition	7596 Sep 26 16:58	9°♈50'18	0°05'39				
min. Earth dist.	7596 Sep 26 23:25	9°♈49'52	29.21104 AU				
direct	7596 Dec 16 00:57	8°♈26'36					
evening set	7597 Mar 14 14:58	10°♈21'03					
conjunction	7597 Mar 30 00:11	10°♈55'37	0°04'00				
minimum elong	7597 Mar 30 00:11	10°♈55'37	0°03'59				
behind sun begin	7597 Mar 29 17:51	10°♈55'02					
behind sun end	7597 Mar 30 06:31	10°♈56'11					
max. Earth dist.	7597 Mar 29 17:47	10°♈55'02	31.20494 AU				
morning rise	7597 Apr 14 09:01	11°♈30'09					
retrograde	7597 Jul 11 14:58	13°♈24'45					
opposition	7597 Sep 29 05:38	12°♈01'52	0°02'45				
min. Earth dist.	7597 Sep 29 10:35	12°♈01'32	29.19854 AU				
direct	7597 Dec 18 11:48	10°♈38'09					
evening set	7598 Mar 17 00:49	12°♈32'33					
conjunction	7598 Apr 01 10:00	13°♈07'06	0°01'16				
minimum elong	7598 Apr 01 10:00	13°♈07'06	0°01'15				
behind sun begin	7598 Apr 01 03:35	13°♈06'31					
behind sun end	7598 Apr 01 16:24	13°♈07'40					
max. Earth dist.	7598 Apr 01 04:28	13°♈06'37	31.19192 AU				
morning rise	7598 Apr 16 18:47	13°♈41'39					
retrograde	7598 Jul 14 02:08	15°♈36'21					
desc. node	7598 Sep 13 14:42	14°♈42'17					
opposition	7598 Oct 01 18:17	14°♈13'21	-0°00'09				
min. Earth dist.	7598 Oct 01 23:44	14°♈12'59	29.18526 AU				
direct	7598 Dec 20 23:41	12°♈49'37					