

opposition	7100 Feb 01 18:09	13° Ω 23'56 -12°39'00	opposition	7106 Feb 07 21:47	19° Ω 06'48 -11°27'50
min. Earth dist.	7100 Feb 01 16:57	13° Ω 24'00 47.73166 AU	min. Earth dist.	7106 Feb 08 04:10	19° Ω 06'30 47.21058 AU
direct	7100 Apr 24 13:06	12° Ω 25'23	direct	7106 Apr 30 14:43	18° Ω 07'51
evening set	7100 Jul 22 13:56	13° Ω 38'26	evening set	7106 Jul 27 10:37	19° Ω 19'31
conjunction	7100 Aug 01 00:36	13° Ω 51'14 -12°03'21	conjunction	7106 Aug 07 08:46	19° Ω 34'23 -10°54'04
minimum elong	7100 Aug 01 00:47	13° Ω 51'15 12°03'24	minimum elong	7106 Aug 07 08:57	19° Ω 34'24 10°54'07
max. Earth dist.	7100 Aug 01 00:21	13° Ω 51'13 49.64953 AU	max. Earth dist.	7106 Aug 07 02:04	19° Ω 34'01 49.12327 AU
morning rise	7100 Aug 10 12:41	14° Ω 04'08	morning rise	7106 Aug 18 08:19	19° Ω 49'22
	7100 Sep 27 18:40	15° Ω	retrograde	7106 Nov 17 19:44	21° Ω 03'48
retrograde	7100 Nov 11 12:00	15° Ω 20'03	opposition	7107 Feb 09 02:29	20° Ω 04'12 -11°15'11
	7100 Dec 26 15:47	15° $\kappa\Omega$	min. Earth dist.	7107 Feb 09 09:42	20° Ω 03'52 47.10947 AU
opposition	7101 Feb 02 22:46	14° Ω 20'49 -12°27'40	direct	7107 May 01 18:20	19° Ω 05'10
min. Earth dist.	7101 Feb 02 23:20	14° Ω 20'48 47.65740 AU	evening set	7107 Jul 28 10:47	20° Ω 16'40
direct	7101 Apr 25 14:36	13° Ω 22'14			
evening set	7101 Jul 23 12:52	14° Ω 35'02	conjunction	7107 Aug 08 14:17	20° Ω 31'52 -10°41'44
			minimum elong	7107 Aug 08 14:28	20° Ω 31'52 10°41'47
conjunction	7101 Aug 02 05:52	14° Ω 48'12 -11°52'19	max. Earth dist.	7107 Aug 08 06:14	20° Ω 31'24 49.02222 AU
minimum elong	7101 Aug 02 06:04	14° Ω 48'13 11°52'22	morning rise	7107 Aug 19 19:21	20° Ω 47'09
max. Earth dist.	7101 Aug 02 05:12	14° Ω 48'10 49.57391 AU	retrograde	7107 Nov 19 01:19	22° Ω 01'22
	7101 Aug 10 22:20	15° Ω	opposition	7108 Feb 10 07:03	21° Ω 01'43 -11°02'17
morning rise	7101 Aug 12 00:07	15° Ω 01'27	min. Earth dist.	7108 Feb 10 14:27	21° Ω 01'22 47.00561 AU
retrograde	7101 Nov 12 18:26	16° Ω 17'07	direct	7108 May 01 21:29	20° Ω 02'36
opposition	7102 Feb 04 03:26	15° Ω 17'51 -12°16'08	evening set	7108 Jul 28 10:57	21° Ω 13'56
min. Earth dist.	7102 Feb 04 05:24	15° Ω 17'46 47.57763 AU			
	7102 Feb 20 06:46	15° $\kappa\Omega$	conjunction	7108 Aug 08 19:51	21° Ω 29'28 -10°29'11
direct	7102 Apr 26 17:48	14° Ω 19'13	minimum elong	7108 Aug 08 20:01	21° Ω 29'28 10°29'13
	7102 Jun 29 12:31	15° Ω	max. Earth dist.	7108 Aug 08 10:47	21° Ω 28'57 48.91832 AU
evening set	7102 Jul 24 12:14	15° Ω 31'46	morning rise	7108 Aug 20 06:22	21° Ω 45'05
			retrograde	7108 Nov 19 05:14	22° Ω 59'07
conjunction	7102 Aug 03 11:12	15° Ω 45'18 -11°41'05	opposition	7109 Feb 10 11:58	21° Ω 59'24 -10°49'07
minimum elong	7102 Aug 03 11:23	15° Ω 45'18 11°41'10	min. Earth dist.	7109 Feb 10 21:04	21° Ω 58'58 46.89900 AU
max. Earth dist.	7102 Aug 03 08:34	15° Ω 45'09 49.49299 AU	direct	7109 May 03 03:00	21° Ω 00'12
morning rise	7102 Aug 13 11:34	15° Ω 58'54	evening set	7109 Jul 29 11:10	22° Ω 11'24
retrograde	7102 Nov 13 22:40	17° Ω 14'18			
opposition	7103 Feb 05 07:56	16° Ω 14'59 -12°04'24	conjunction	7109 Aug 10 01:23	22° Ω 27'14 -10°16'22
min. Earth dist.	7103 Feb 05 10:36	16° Ω 14'52 47.49263 AU	minimum elong	7109 Aug 10 01:34	22° Ω 27'15 10°16'26
direct	7103 Apr 27 21:53	15° Ω 16'17	max. Earth dist.	7109 Aug 09 16:15	22° Ω 26'43 48.81183 AU
evening set	7103 Jul 25 11:38	16° Ω 28'37	morning rise	7109 Aug 21 17:03	22° Ω 43'10
			retrograde	7109 Nov 20 08:55	23° Ω 57'03
conjunction	7103 Aug 04 16:37	16° Ω 42'29 -11°29'40	opposition	7110 Feb 11 16:49	22° Ω 57'17 -10°35'43
minimum elong	7103 Aug 04 16:48	16° Ω 42'29 11°29'43	min. Earth dist.	7110 Feb 12 01:43	22° Ω 56'51 46.78960 AU
max. Earth dist.	7103 Aug 04 12:24	16° Ω 42'14 49.40682 AU	direct	7110 May 04 10:16	21° Ω 58'00
morning rise	7103 Aug 14 23:04	16° Ω 56'26	evening set	7110 Jul 30 11:49	23° Ω 09'04
retrograde	7103 Nov 15 01:12	18° Ω 11'34			
opposition	7104 Feb 06 12:37	17° Ω 12'12 -11°52'26	conjunction	7110 Aug 11 07:03	23° Ω 25'13 -10°03'20
min. Earth dist.	7104 Feb 06 17:22	17° Ω 11'58 47.40266 AU	minimum elong	7110 Aug 11 07:14	23° Ω 25'14 10°03'22
direct	7104 Apr 28 05:35	16° Ω 13'25	max. Earth dist.	7110 Aug 10 19:57	23° Ω 24'35 48.70237 AU
evening set	7104 Jul 25 11:12	17° Ω 25'31	morning rise	7110 Aug 23 04:04	23° Ω 41'29
			retrograde	7110 Nov 21 17:22	24° Ω 55'14
conjunction	7104 Aug 04 22:01	17° Ω 39'43 -11°18'01	opposition	7111 Feb 12 21:44	23° Ω 55'24 -10°22'04
minimum elong	7104 Aug 04 22:12	17° Ω 39'44 11°18'04	min. Earth dist.	7111 Feb 13 08:12	23° Ω 54'54 46.67711 AU
max. Earth dist.	7104 Aug 04 17:24	17° Ω 39'27 49.31609 AU	direct	7111 May 05 13:42	22° Ω 56'03
morning rise	7104 Aug 15 10:10	17° Ω 54'01	evening set	7111 Jul 31 12:36	24° Ω 07'00
retrograde	7104 Nov 15 05:41	19° Ω 08'54			
opposition	7105 Feb 06 17:05	18° Ω 09'28 -11°40'15	conjunction	7111 Aug 12 13:03	24° Ω 23'29 -9°50'03
min. Earth dist.	7105 Feb 06 22:02	18° Ω 09'14 47.30839 AU	minimum elong	7111 Aug 12 13:14	24° Ω 23'29 9°50'06
direct	7105 Apr 29 12:09	17° Ω 10'36	max. Earth dist.	7111 Aug 12 01:49	24° Ω 22'50 48.58938 AU
evening set	7105 Jul 26 10:56	18° Ω 22'29	morning rise	7111 Aug 24 15:02	24° Ω 40'04
			retrograde	7111 Nov 23 01:15	25° Ω 53'40
conjunction	7105 Aug 06 03:20	18° Ω 37'01 -11°06'09	opposition	7112 Feb 14 02:47	24° Ω 53'47 -10°08'10
minimum elong	7105 Aug 06 03:32	18° Ω 37'02 11°06'12	min. Earth dist.	7112 Feb 14 14:26	24° Ω 53'14 46.56063 AU
max. Earth dist.	7105 Aug 05 20:40	18° Ω 36'38 49.22138 AU	direct	7112 May 05 16:53	23° Ω 54'22
morning rise	7105 Aug 16 21:21	18° Ω 51'39	evening set	7112 Jul 31 13:48	25° Ω 05'13
retrograde	7105 Nov 16 13:33	20° Ω 06'19			

conjunction	7112 Aug 12 19:01	25°022'00 -9°36'33	max. Earth dist.	7118 Aug 18 12:33	1°00'16"23 47.66982 AU
minimum elong	7112 Aug 12 19:11	25°022'01 9°36'35	morning rise	7118 Sep 01 19:32	1°00'36"15
max. Earth dist.	7112 Aug 12 05:56	25°021'15 48.47218 AU	retrograde	7118 Nov 29 20:45	2°00'49"12
morning rise	7112 Aug 25 01:57	25°038'54	opposition	7119 Feb 20 16:27	1°00'48"35 -8°24'26
retrograde	7112 Nov 23 08:40	26°052'23	min. Earth dist.	7119 Feb 21 12:16	1°00'47"38 45.61654 AU
opposition	7113 Feb 14 07:51	25°052'26 -9°54'03	direct	7119 May 13 05:38	0°00'48"18
min. Earth dist.	7113 Feb 14 20:11	25°051'51 46.43967 AU	evening set	7119 Aug 07 03:16	1°00'58"46
direct	7113 May 06 19:53	24°052'55			
evening set	7113 Aug 01 15:07	26°003'42	conjunction	7119 Aug 20 16:01	2°00'17"36 -7°55'50
max. Earth dist.	7113 Aug 13 10:30	26°019'56 48.35004 AU	minimum elong	7119 Aug 20 16:10	2°00'17"37 7°55'52
			max. Earth dist.	7119 Aug 19 19:02	2°00'16"23 47.52316 AU
conjunction	7113 Aug 14 01:12	26°020'47 -9°22'50	morning rise	7119 Sep 03 06:22	2°00'36"34
minimum elong	7113 Aug 14 01:22	26°020'48 9°22'53	retrograde	7119 Dec 01 01:16	3°00'49"29
morning rise	7113 Aug 26 13:01	26°037'59	opposition	7120 Feb 21 22:06	2°00'48"45 -8°08'38
retrograde	7113 Nov 24 12:35	27°051'21	min. Earth dist.	7120 Feb 22 17:42	2°00'47"48 45.46720 AU
opposition	7114 Feb 15 13:13	26°051'18 -9°39'42	direct	7120 May 13 13:21	1°00'48"20
min. Earth dist.	7114 Feb 16 03:42	26°050'37 46.31362 AU	evening set	7120 Aug 07 06:05	2°00'58"50
direct	7114 May 08 03:03	25°051'41			
evening set	7114 Aug 02 16:37	27°002'23	conjunction	7120 Aug 20 22:43	3°00'17"57 -7°40'30
			minimum elong	7120 Aug 20 22:52	3°00'17"57 7°40'32
conjunction	7114 Aug 15 07:29	27°019'46 -9°08'54	max. Earth dist.	7120 Aug 19 23:53	3°00'16"36 47.37379 AU
minimum elong	7114 Aug 15 07:40	27°019'47 9°08'56	morning rise	7120 Sep 03 17:14	3°00'37"11
max. Earth dist.	7114 Aug 14 16:08	27°018'53 48.22291 AU	retrograde	7120 Dec 01 09:28	4°00'50"07
morning rise	7114 Aug 27 23:55	27°037'16	opposition	7121 Feb 22 04:01	3°00'49"17 -7°52'34
retrograde	7114 Nov 25 16:36	28°050'32	min. Earth dist.	7121 Feb 23 01:02	3°00'48"15 45.31536 AU
opposition	7115 Feb 16 18:31	27°050'23 -9°25'08	direct	7121 May 14 18:16	2°00'48"45
min. Earth dist.	7115 Feb 17 09:20	27°049'40 46.18249 AU	evening set	7121 Aug 08 09:02	3°00'59"16
direct	7115 May 09 10:38	26°050'38	max. Earth dist.	7121 Aug 21 07:04	4°00'17"20 47.22193 AU
evening set	7115 Aug 03 18:30	28°001'15			
			conjunction	7121 Aug 22 05:45	4°00'18"40 -7°24'54
conjunction	7115 Aug 16 13:50	28°018'56 -8°54'45	minimum elong	7121 Aug 22 05:54	4°00'18"40 7°24'56
minimum elong	7115 Aug 16 14:00	28°018'57 8°54'48	morning rise	7121 Sep 05 04:03	4°00'38"11
max. Earth dist.	7115 Aug 15 20:00	28°017'54 48.09075 AU	retrograde	7121 Dec 02 18:26	5°00'51"08
morning rise	7115 Aug 29 11:02	28°036'44	opposition	7122 Feb 23 10:01	4°00'50"12 -7°36'14
retrograde	7115 Nov 27 00:35	29°049'54	min. Earth dist.	7122 Feb 24 07:38	4°00'49"09 45.16090 AU
opposition	7116 Feb 17 23:51	28°049'38 -9°10'19	direct	7122 May 15 22:04	3°00'49"33
min. Earth dist.	7116 Feb 18 16:36	28°048'50 46.04669 AU	evening set	7122 Aug 09 12:22	5°00'00"08
direct	7116 May 09 14:43	27°049'46			
evening set	7116 Aug 03 20:22	29°000'19	conjunction	7122 Aug 23 12:48	5°00'19"49 -7°09'04
			minimum elong	7122 Aug 23 12:57	5°00'19"50 7°09'06
conjunction	7116 Aug 16 20:20	29°018'17 -8°40'22	max. Earth dist.	7122 Aug 22 12:34	5°00'18"24 47.06745 AU
minimum elong	7116 Aug 16 20:31	29°018'18 8°40'24	morning rise	7122 Sep 06 15:03	5°00'39"37
max. Earth dist.	7116 Aug 16 02:14	29°017'14 47.95412 AU	retrograde	7122 Dec 04 04:52	6°00'52"36
morning rise	7116 Aug 29 21:53	29°036'22	opposition	7123 Feb 24 16:08	5°00'51"35 -7°19'38
	7116 Sep 16 22:15	0°00'	min. Earth dist.	7123 Feb 25 14:20	5°00'50"30 45.00361 AU
retrograde	7116 Nov 27 07:22	0°00'49"27	direct	7123 May 17 00:41	4°00'50"49
	7117 Feb 08 16:16	30°00'	evening set	7123 Aug 10 16:04	6°00'01"30
opposition	7117 Feb 18 05:19	29°049'05 -8°55'17			
min. Earth dist.	7117 Feb 18 22:54	29°048'14 45.90665 AU	conjunction	7123 Aug 24 20:14	6°00'21"28 -6°52'59
direct	7117 May 10 19:55	28°049'04	minimum elong	7123 Aug 24 20:23	6°00'21"28 6°53'00
evening set	7117 Aug 04 22:23	29°059'34	max. Earth dist.	7123 Aug 23 18:48	6°00'19"57 46.90956 AU
	7117 Aug 05 06:07	0°00'	morning rise	7123 Sep 08 02:08	6°00'41"32
max. Earth dist.	7117 Aug 17 07:00	0°00'16"41 47.81369 AU	retrograde	7123 Dec 05 10:46	7°00'54"34
			opposition	7124 Feb 25 22:24	6°00'53"27 -7°02'47
conjunction	7117 Aug 18 02:36	0°00'17"50 -8°25'46	min. Earth dist.	7124 Feb 26 22:33	6°00'52"17 44.84262 AU
minimum elong	7117 Aug 18 02:46	0°00'17"50 8°25'49	direct	7124 May 17 08:11	5°00'52"34
morning rise	7117 Aug 31 08:37	0°00'36"12	evening set	7124 Aug 10 20:05	7°00'03"21
retrograde	7117 Nov 28 15:06	1°00'49"12	max. Earth dist.	7124 Aug 24 01:50	7°00'22"02 46.74776 AU
opposition	7118 Feb 19 10:50	0°00'48'42 -8°39'59			
min. Earth dist.	7118 Feb 20 04:54	0°00'47'50 45.76317 AU	conjunction	7124 Aug 25 03:53	7°00'23"35 -6°36'40
	7118 Apr 09 12:03	30°00'	minimum elong	7124 Aug 25 04:02	7°00'23"36 6°36'42
direct	7118 May 11 23:34	29°048'33	morning rise	7124 Sep 08 13:16	7°00'43"56
	7118 Jun 13 07:21	0°00'	retrograde	7124 Dec 05 15:50	8°00'57"02
evening set	7118 Aug 06 00:43	0°00'59"02	opposition	7125 Feb 26 04:50	7°00'55"49 -6°45'41
			min. Earth dist.	7125 Feb 27 05:18	7°00'54"37 44.67734 AU
conjunction	7118 Aug 19 09:14	1°00'17"35 -8°10'55	direct	7125 May 18 17:04	6°00'54"47
minimum elong	7118 Aug 19 09:25	1°00'17"36 8°10'58	evening set	7125 Aug 12 00:22	8°00'05"40
































































































































max. Earth dist.	7125 Aug 25 06:56	8° \mathring{M} 24'29	46.58122 AU	min. Earth dist.	7132 Mar 06 14:47	15° \mathring{M} 21'22	43.39725 AU
				direct	7132 May 25 17:29	14° \mathring{M} 20'34	
conjunction	7125 Aug 26 11:29	8° \mathring{M} 26'11	-6°20'07	evening set	7132 Aug 18 14:53	15° \mathring{M} 32'27	
minimum elong	7125 Aug 26 11:37	8° \mathring{M} 26'11	6°20'08	max. Earth dist.	7132 Sep 01 10:00	15° \mathring{M} 52'28	45.29537 AU
morning rise	7125 Sep 10 00:26	8° \mathring{M} 46'48					
retrograde	7125 Dec 07 00:17	9° \mathring{M} 59'59		conjunction	7132 Sep 02 22:33	15° \mathring{M} 54'42	-4°17'32
opposition	7126 Feb 27 11:36	8° \mathring{M} 58'37	-6°28'20	minimum elong	7132 Sep 02 22:38	15° \mathring{M} 54'43	4°17'33
min. Earth dist.	7126 Feb 28 14:10	8° \mathring{M} 57'19	44.50722 AU	morning rise	7132 Sep 18 07:48	16° \mathring{M} 17'04	
direct	7126 May 19 23:17	7° \mathring{M} 57'27		retrograde	7132 Dec 14 13:45	17° \mathring{M} 31'04	
evening set	7126 Aug 13 04:58	9° \mathring{M} 08'25		opposition	7133 Mar 06 14:12	16° \mathring{M} 28'25	-4°19'43
				min. Earth dist.	7133 Mar 07 23:11	16° \mathring{M} 26'45	43.20204 AU
conjunction	7126 Aug 27 19:35	9° \mathring{M} 29'11	-6°03'20	direct	7133 May 26 21:59	15° \mathring{M} 25'46	
minimum elong	7126 Aug 27 19:43	9° \mathring{M} 29'12	6°03'22	evening set	7133 Aug 19 21:28	16° \mathring{M} 37'54	
max. Earth dist.	7126 Aug 26 14:32	9° \mathring{M} 27'27	46.40969 AU	max. Earth dist.	7133 Sep 02 18:29	16° \mathring{M} 58'07	45.09983 AU
morning rise	7126 Sep 11 11:42	9° \mathring{M} 50'04					
retrograde	7126 Dec 08 08:08	11° \mathring{M} 03'21		conjunction	7133 Sep 04 07:36	17° \mathring{M} 00'23	-3°59'01
opposition	7127 Feb 28 18:20	10° \mathring{M} 01'50	-6°10'45	minimum elong	7133 Sep 04 07:42	17° \mathring{M} 00'24	3°59'03
min. Earth dist.	7127 Mar 01 21:49	10° \mathring{M} 00'28	44.33203 AU	morning rise	7133 Sep 19 19:06	17° \mathring{M} 22'59	
direct	7127 May 21 06:11	9° \mathring{M} 00'28		retrograde	7133 Dec 15 23:38	18° \mathring{M} 37'12	
evening set	7127 Aug 14 10:01	10° \mathring{M} 11'33		opposition	7134 Mar 07 22:16	17° \mathring{M} 34'22	-4°00'16
max. Earth dist.	7127 Aug 27 20:34	10° \mathring{M} 30'43	46.23334 AU	min. Earth dist.	7134 Mar 09 08:31	17° \mathring{M} 32'38	43.00459 AU
				direct	7134 May 28 05:14	16° \mathring{M} 31'31	
conjunction	7127 Aug 29 03:42	10° \mathring{M} 32'35	-5°46'19	evening set	7134 Aug 21 04:40	17° \mathring{M} 43'55	
minimum elong	7127 Aug 29 03:50	10° \mathring{M} 32'35	5°46'20	max. Earth dist.	7134 Sep 04 03:28	18° \mathring{M} 04'20	44.90215 AU
morning rise	7127 Sep 12 23:08	10° \mathring{M} 53'43					
retrograde	7127 Dec 09 19:27	12° \mathring{M} 07'04		conjunction	7134 Sep 05 17:03	18° \mathring{M} 06'39	-3°40'15
opposition	7128 Mar 01 01:15	11° \mathring{M} 05'23	-5°52'54	minimum elong	7134 Sep 05 17:08	18° \mathring{M} 06'39	3°40'16
min. Earth dist.	7128 Mar 02 05:46	11° \mathring{M} 03'58	44.15227 AU	morning rise	7134 Sep 21 06:44	18° \mathring{M} 29'29	
direct	7128 May 21 09:55	10° \mathring{M} 03'48		retrograde	7134 Dec 17 08:57	19° \mathring{M} 43'55	
evening set	7128 Aug 14 15:07	11° \mathring{M} 15'02		opposition	7135 Mar 09 06:16	18° \mathring{M} 40'55	-3°40'32
max. Earth dist.	7128 Aug 28 03:32	11° \mathring{M} 34'22	46.05237 AU	min. Earth dist.	7135 Mar 10 16:35	18° \mathring{M} 39'11	42.80483 AU
				direct	7135 May 29 14:16	17° \mathring{M} 37'53	
conjunction	7128 Aug 29 11:55	11° \mathring{M} 36'18	-5°29'03	evening set	7135 Aug 22 12:25	18° \mathring{M} 50'35	
minimum elong	7128 Aug 29 12:02	11° \mathring{M} 36'19	5°29'05	max. Earth dist.	7135 Sep 05 11:09	19° \mathring{M} 11'06	44.70168 AU
morning rise	7128 Sep 13 10:19	11° \mathring{M} 57'42					
retrograde	7128 Dec 10 04:53	13° \mathring{M} 11'08		conjunction	7135 Sep 07 02:46	19° \mathring{M} 13'33	-3°21'14
opposition	7129 Mar 02 08:23	12° \mathring{M} 09'15	-5°34'48	minimum elong	7135 Sep 07 02:51	19° \mathring{M} 13'33	3°21'15
min. Earth dist.	7129 Mar 03 14:44	12° \mathring{M} 07'45	43.96827 AU	morning rise	7135 Sep 22 18:34	19° \mathring{M} 36'37	
direct	7129 May 22 16:19	11° \mathring{M} 07'29		retrograde	7135 Dec 18 18:32	20° \mathring{M} 51'20	
evening set	7129 Aug 15 20:32	12° \mathring{M} 18'50		opposition	7136 Mar 09 14:46	19° \mathring{M} 48'10	-3°20'32
max. Earth dist.	7129 Aug 29 11:21	12° \mathring{M} 38'22	45.86766 AU	min. Earth dist.	7136 Mar 11 03:06	19° \mathring{M} 46'19	42.60211 AU
				direct	7136 May 29 22:41	18° \mathring{M} 44'56	
conjunction	7129 Aug 30 20:19	12° \mathring{M} 40'22	-5°11'33	evening set	7136 Aug 22 20:22	19° \mathring{M} 57'57	
minimum elong	7129 Aug 30 20:27	12° \mathring{M} 40'22	5°11'34	max. Earth dist.	7136 Sep 05 21:00	20° \mathring{M} 18'40	44.49785 AU
morning rise	7129 Sep 14 21:36	13° \mathring{M} 02'00					
retrograde	7129 Dec 11 11:14	14° \mathring{M} 15'32		conjunction	7136 Sep 07 12:45	20° \mathring{M} 21'09	-3°01'57
opposition	7130 Mar 03 15:30	13° \mathring{M} 13'28	-5°16'26	minimum elong	7136 Sep 07 12:49	20° \mathring{M} 21'09	3°01'57
min. Earth dist.	7130 Mar 04 21:47	13° \mathring{M} 11'57	43.78082 AU	morning rise	7136 Sep 23 06:13	20° \mathring{M} 44'26	
direct	7130 May 24 01:07	12° \mathring{M} 11'28		retrograde	7136 Dec 19 03:23	21° \mathring{M} 59'27	
evening set	7130 Aug 17 02:19	13° \mathring{M} 22'59		opposition	7137 Mar 10 23:25	20° \mathring{M} 56'06	-3°00'16
max. Earth dist.	7130 Aug 30 17:51	13° \mathring{M} 42'38	45.67958 AU	min. Earth dist.	7137 Mar 12 12:09	20° \mathring{M} 54'14	42.39567 AU
				direct	7137 May 31 07:55	19° \mathring{M} 52'40	
conjunction	7130 Sep 01 04:49	13° \mathring{M} 44'45	-4°53'48	evening set	7137 Aug 24 05:02	21° \mathring{M} 06'02	
minimum elong	7130 Sep 01 04:55	13° \mathring{M} 44'45	4°53'49	max. Earth dist.	7137 Sep 07 05:01	21° \mathring{M} 26'49	44.29007 AU
morning rise	7130 Sep 16 09:00	14° \mathring{M} 06'39					
retrograde	7130 Dec 12 18:17	15° \mathring{M} 20'18		conjunction	7137 Sep 08 23:00	21° \mathring{M} 29'26	-2°42'26
opposition	7131 Mar 04 22:58	14° \mathring{M} 18'02	-4°57'48	minimum elong	7137 Sep 08 23:04	21° \mathring{M} 29'27	2°42'27
min. Earth dist.	7131 Mar 06 07:01	14° \mathring{M} 16'26	43.59036 AU	morning rise	7137 Sep 24 18:19	21° \mathring{M} 52'57	
direct	7131 May 25 09:33	13° \mathring{M} 15'49		retrograde	7137 Dec 20 16:21	23° \mathring{M} 08'17	
evening set	7131 Aug 18 08:23	14° \mathring{M} 27'30		opposition	7138 Mar 12 08:20	22° \mathring{M} 04'45	-2°39'44
max. Earth dist.	7131 Sep 01 02:50	14° \mathring{M} 47'24	45.48865 AU	min. Earth dist.	7138 Mar 13 22:31	22° \mathring{M} 02'47	42.18520 AU
				direct	7138 Jun 01 13:42	21° \mathring{M} 01'04	
conjunction	7131 Sep 02 13:41	14° \mathring{M} 49'31	-4°35'48	evening set	7138 Aug 25 14:00	22° \mathring{M} 14'48	
minimum elong	7131 Sep 02 13:48	14° \mathring{M} 49'31	4°35'49	max. Earth dist.	7138 Sep 08 14:37	22° \mathring{M} 35'43	44.07790 AU
morning rise	7131 Sep 17 20:18	15° \mathring{M} 11'39					
retrograde	7131 Dec 14 02:08	16° \mathring{M} 25'27		conjunction	7138 Sep 10 09:40	22° \mathring{M} 38'25	-2°22'40
opposition	7132 Mar 05 06:25	15° \mathring{M} 23'00	-4°38'54	minimum elong	7138 Sep 10 09:44	22° \mathring{M} 38'26	2°22'40

morning rise	7138 Sep 26 06:24	23° <u>00</u> '02'09		7145 Apr 08 04:03	30° <u>00</u> ' <u>00</u>	
retrograde	7138 Dec 22 04:54	24° <u>00</u> '17'48	direct	7145 Jun 09 07:16	29° <u>00</u> '17'54	
opposition	7139 Mar 13 17:37	23° <u>00</u> '14'03 -2°18'57	asc. node	7145 Aug 05 20:42	29° <u>00</u> '55'53	
min. Earth dist.	7139 Mar 15 09:25	23° <u>00</u> '12'00 41.97029 AU		7145 Aug 09 03:41	0° <u>00</u> ' <u>00</u>	
direct	7139 Jun 02 21:15	22° <u>00</u> '10'07	evening set	7145 Sep 02 17:27	0° <u>00</u> '34'45	
evening set	7139 Aug 26 23:29	23° <u>00</u> '24'14	max. Earth dist.	7145 Sep 16 16:22	0° <u>00</u> '56'24 42.50222 AU	
max. Earth dist.	7139 Sep 10 00:15	23° <u>00</u> '45'16 43.86154 AU				
conjunction	7139 Sep 11 20:33	23° <u>00</u> '48'04 -2°02'39	conjunction	7145 Sep 18 18:55	0° <u>00</u> '59'42 0°02'39	
minimum elong	7139 Sep 11 20:36	23° <u>00</u> '48'04 2°02'40	minimum elong	7145 Sep 18 18:55	0° <u>00</u> '59'42 0°02'39	
morning rise	7139 Sep 27 18:40	24° <u>00</u> '12'00	behind sun begin	7145 Sep 18 12:25	0° <u>00</u> '59'18	
retrograde	7139 Dec 23 16:58	25° <u>00</u> '27'58	behind sun end	7145 Sep 19 01:25	1° <u>00</u> '00'05	
opposition	7140 Mar 14 02:53	24° <u>00</u> '23'59 -1°57'53	morning rise	7145 Oct 04 21:04	1° <u>00</u> '24'42	
min. Earth dist.	7140 Mar 15 19:01	24° <u>00</u> '21'55 41.75144 AU	retrograde	7145 Dec 30 17:50	2° <u>00</u> '43'12	
direct	7140 Jun 03 06:07	23° <u>00</u> '19'48	opposition	7146 Mar 21 16:54	1° <u>00</u> '37'40 0°14'07	
evening set	7140 Aug 27 09:24	24° <u>00</u> '34'18	min. Earth dist.	7146 Mar 23 14:38	1° <u>00</u> '35'14 40.38468 AU	
max. Earth dist.	7140 Sep 10 09:21	24° <u>00</u> '55'24 43.64126 AU	direct	7146 Jun 10 17:40	0° <u>00</u> '31'44	
			evening set	7146 Sep 04 06:13	1° <u>00</u> '49'11	
			max. Earth dist.	7146 Sep 18 05:26	2° <u>00</u> '10'58 42.26988 AU	
conjunction	7140 Sep 12 07:36	24° <u>00</u> '58'20 -1°42'24				
minimum elong	7140 Sep 12 07:39	24° <u>00</u> '58'21 1°42'23	conjunction	7146 Sep 20 07:51	2° <u>00</u> '14'17 0°24'19	
morning rise	7140 Sep 28 06:55	25° <u>00</u> '22'28	minimum elong	7146 Sep 20 07:50	2° <u>00</u> '14'17 0°24'20	
retrograde	7140 Dec 24 02:24	26° <u>00</u> '38'48	morning rise	7146 Oct 06 09:54	2° <u>00</u> '39'26	
opposition	7141 Mar 15 12:38	25° <u>00</u> '34'34 -1°36'33	retrograde	7147 Jan 01 04:59	3° <u>00</u> '58'29	
min. Earth dist.	7141 Mar 17 06:44	25° <u>00</u> '32'23 41.52910 AU	opposition	7147 Mar 23 04:17	2° <u>00</u> '52'42 0°37'03	
direct	7141 Jun 04 17:17	24° <u>00</u> '30'06	min. Earth dist.	7147 Mar 25 01:44	2° <u>00</u> '50'16 40.15161 AU	
evening set	7141 Aug 28 19:27	25° <u>00</u> '45'01	direct	7147 Jun 12 06:40	1° <u>00</u> '46'29	
max. Earth dist.	7141 Sep 11 20:39	26° <u>00</u> '06'17 43.41779 AU	evening set	7147 Sep 05 19:50	3° <u>00</u> '04'33	
			max. Earth dist.	7147 Sep 19 16:43	3° <u>00</u> '26'19 42.03586 AU	
conjunction	7141 Sep 13 18:52	26° <u>00</u> '09'15 -1°21'54				
minimum elong	7141 Sep 13 18:54	26° <u>00</u> '09'15 1°21'54	conjunction	7147 Sep 21 21:04	3° <u>00</u> '29'47 0°46'16	
morning rise	7141 Sep 29 19:03	26° <u>00</u> '33'34	minimum elong	7147 Sep 21 21:03	3° <u>00</u> '29'47 0°46'17	
retrograde	7141 Dec 25 10:58	27° <u>00</u> '50'16	morning rise	7147 Oct 07 22:56	3° <u>00</u> '55'06	
opposition	7142 Mar 16 22:30	26° <u>00</u> '45'47 -1°14'57	retrograde	7148 Jan 02 17:41	5° <u>00</u> '14'43	
min. Earth dist.	7142 Mar 18 16:42	26° <u>00</u> '43'34 41.30385 AU	opposition	7148 Mar 23 16:02	4° <u>00</u> '08'41 1°00'13	
direct	7142 Jun 06 05:16	25° <u>00</u> '41'01	min. Earth dist.	7148 Mar 25 15:04	4° <u>00</u> '06'09 39.91679 AU	
evening set	7142 Aug 30 06:19	26° <u>00</u> '56'22	direct	7148 Jun 12 17:37	3° <u>00</u> '02'11	
max. Earth dist.	7142 Sep 13 06:09	27° <u>00</u> '17'42 43.19163 AU	evening set	7148 Sep 06 09:55	4° <u>00</u> '20'53	
			max. Earth dist.	7148 Sep 20 06:23	4° <u>00</u> '42'47 41.79961 AU	
conjunction	7142 Sep 15 06:25	27° <u>00</u> '20'48 -1°01'09				
minimum elong	7142 Sep 15 06:27	27° <u>00</u> '20'48 1°01'08	conjunction	7148 Sep 22 10:51	4° <u>00</u> '46'17 1°08'27	
morning rise	7142 Oct 01 07:34	27° <u>00</u> '45'18	minimum elong	7148 Sep 22 10:49	4° <u>00</u> '46'16 1°08'27	
retrograde	7142 Dec 26 23:44	29° <u>00</u> '02'24	morning rise	7148 Oct 08 12:00	5° <u>00</u> '11'43	
opposition	7143 Mar 18 08:34	27° <u>00</u> '57'39 -0°53'05	retrograde	7149 Jan 03 06:44	6° <u>00</u> '31'57	
min. Earth dist.	7143 Mar 20 04:03	27° <u>00</u> '55'22 41.07638 AU	opposition	7149 Mar 25 04:13	5° <u>00</u> '25'39 1°23'39	
direct	7143 Jun 07 12:54	26° <u>00</u> '52'36	min. Earth dist.	7149 Mar 27 04:03	5° <u>00</u> '23'04 39.67945 AU	
evening set	7143 Aug 31 17:31	28° <u>00</u> '08'25	direct	7149 Jun 14 04:36	4° <u>00</u> '18'52	
max. Earth dist.	7143 Sep 14 17:54	28° <u>00</u> '29'53 42.96329 AU	evening set	7149 Sep 08 00:41	5° <u>00</u> '38'15	
			max. Earth dist.	7149 Sep 21 18:40	6° <u>00</u> '00'07 41.56060 AU	
conjunction	7143 Sep 16 18:25	28° <u>00</u> '33'01 -0°40'09				
minimum elong	7143 Sep 16 18:26	28° <u>00</u> '33'01 0°40'09	conjunction	7149 Sep 24 00:49	6° <u>00</u> '03'45 1°30'51	
morning rise	7143 Oct 02 19:58	28° <u>00</u> '57'42	minimum elong	7149 Sep 24 00:47	6° <u>00</u> '03'45 1°30'51	
	7143 Nov 22 13:29	0° <u>00</u> ' <u>00</u>	morning rise	7149 Oct 10 01:21	6° <u>00</u> '29'19	
retrograde	7143 Dec 28 12:02	0° <u>00</u> '15'15	retrograde	7150 Jan 04 23:13	7° <u>00</u> '50'12	
	7144 Feb 02 19:27	30° <u>00</u> ' <u>00</u>	opposition	7150 Mar 26 16:47	6° <u>00</u> '43'37 1°47'19	
opposition	7144 Mar 18 19:04	29° <u>00</u> '10'14 -0°30'57	min. Earth dist.	7150 Mar 28 17:23	6° <u>00</u> '40'59 39.43918 AU	
min. Earth dist.	7144 Mar 20 15:16	29° <u>00</u> '07'54 40.84703 AU	direct	7150 Jun 15 14:07	5° <u>00</u> '36'30	
direct	7144 Jun 07 22:12	28° <u>00</u> '04'53	evening set	7150 Sep 09 16:17	6° <u>00</u> '56'36	
evening set	7144 Sep 01 05:10	29° <u>00</u> '21'12	max. Earth dist.	7150 Sep 23 07:53	7° <u>00</u> '18'28 41.31821 AU	
max. Earth dist.	7144 Sep 15 05:10	29° <u>00</u> '42'46 42.73344 AU				
conjunction	7144 Sep 17 06:25	29° <u>00</u> '45'58 -0°18'55	conjunction	7150 Sep 25 15:32	7° <u>00</u> '22'13 1°53'28	
minimum elong	7144 Sep 17 06:26	29° <u>00</u> '45'58 0°18'55	minimum elong	7150 Sep 25 15:28	7° <u>00</u> '22'13 1°53'28	
	7144 Sep 26 06:57	0° <u>00</u> ' <u>00</u>	morning rise	7150 Oct 11 14:56	7° <u>00</u> '47'54	
morning rise	7144 Oct 03 08:25	0° <u>00</u> '10'48	retrograde	7151 Jan 06 15:09	9° <u>00</u> '09'25	
retrograde	7144 Dec 29 03:12	1° <u>00</u> '28'49	opposition	7151 Mar 28 05:44	8° <u>00</u> '02'33 2°11'14	
opposition	7145 Mar 20 05:47	0° <u>00</u> '23'32 -0°08'33	min. Earth dist.	7151 Mar 30 08:11	7° <u>00</u> '59'48 39.19559 AU	
min. Earth dist.	7145 Mar 22 01:58	0° <u>00</u> '21'12 40.61644 AU	direct	7151 Jun 17 02:35	6° <u>00</u> '55'05	
			evening set	7151 Sep 11 08:30	8° <u>00</u> '15'56	

max. Earth dist.	7151 Sep 24 22:24	8° <u>0</u> 37'50	41.07266 AU	min. Earth dist.	7158 Apr 08 19:13	17° <u>0</u> 40'16	37.43632 AU
				direct	7158 Jun 26 04:39	16° <u>0</u> 33'20	
conjunction	7151 Sep 27 06:36	8° <u>0</u> 41'39	2°16'18	evening set	7158 Sep 21 21:51	18° <u>0</u> 00'33	
minimum elong	7151 Sep 27 06:32	8° <u>0</u> 41'39	2°16'19	max. Earth dist.	7158 Oct 04 13:44	18° <u>0</u> 22'06	39.30315 AU
morning rise	7151 Oct 13 04:42	9° <u>0</u> 07'25					
retrograde	7152 Jan 08 07:29	10° <u>0</u> 29'37		conjunction	7158 Oct 07 03:23	18° <u>0</u> 26'32	5°01'19
opposition	7152 Mar 28 19:02	9° <u>0</u> 22'26	2°35'23	minimum elong	7158 Oct 07 03:14	18° <u>0</u> 26'31	5°01'20
min. Earth dist.	7152 Mar 30 21:34	9° <u>0</u> 19'39	38.94903 AU	morning rise	7158 Oct 22 08:13	18° <u>0</u> 52'30	
direct	7152 Jun 17 17:12	8° <u>0</u> 14'37		retrograde	7159 Jan 18 07:53	20° <u>0</u> 20'41	
evening set	7152 Sep 12 01:20	9° <u>0</u> 36'14		opposition	7159 Apr 08 04:05	19° <u>0</u> 11'09	5°30'12
max. Earth dist.	7152 Sep 25 11:27	9° <u>0</u> 58'02	40.82412 AU	min. Earth dist.	7159 Apr 10 11:09	19° <u>0</u> 08'00	37.18307 AU
				direct	7159 Jun 27 22:30	18° <u>0</u> 00'42	
conjunction	7152 Sep 27 21:49	10° <u>0</u> 02'02	2°39'20	evening set	7159 Sep 23 20:22	19° <u>0</u> 29'04	
minimum elong	7152 Sep 27 21:45	10° <u>0</u> 02'02	2°39'21	max. Earth dist.	7159 Oct 06 06:39	19° <u>0</u> 50'25	39.04854 AU
morning rise	7152 Oct 13 18:27	10° <u>0</u> 27'53					
retrograde	7153 Jan 08 23:10	11° <u>0</u> 50'48		conjunction	7159 Oct 08 22:03	19° <u>0</u> 55'00	5°25'29
opposition	7153 Mar 30 08:50	10° <u>0</u> 43'17	2°59'46	minimum elong	7159 Oct 08 21:52	19° <u>0</u> 54'59	5°25'31
min. Earth dist.	7153 Apr 01 13:15	10° <u>0</u> 40'23	38.69992 AU	morning rise	7159 Oct 23 23:15	20° <u>0</u> 20'55	
direct	7153 Jun 19 06:35	9° <u>0</u> 35'05		retrograde	7160 Jan 20 03:26	21° <u>0</u> 50'11	
evening set	7153 Sep 13 18:48	10° <u>0</u> 57'31		opposition	7160 Apr 08 21:06	20° <u>0</u> 40'21	5°55'49
max. Earth dist.	7153 Sep 27 03:22	11° <u>0</u> 19'22	40.57323 AU	min. Earth dist.	7160 Apr 11 05:29	20° <u>0</u> 37'06	36.92969 AU
				direct	7160 Jun 28 13:18	19° <u>0</u> 29'31	
conjunction	7153 Sep 29 13:42	11° <u>0</u> 23'23	3°02'34	evening set	7160 Sep 24 19:31	20° <u>0</u> 59'05	
minimum elong	7153 Sep 29 13:37	11° <u>0</u> 23'23	3°02'36	max. Earth dist.	7160 Oct 07 02:01	21° <u>0</u> 20'19	38.79328 AU
morning rise	7153 Oct 15 08:21	11° <u>0</u> 49'18					
retrograde	7154 Jan 10 12:42	13° <u>0</u> 12'58		conjunction	7160 Oct 09 17:18	21° <u>0</u> 24'56	5°49'44
opposition	7154 Mar 31 22:51	12° <u>0</u> 05'07	3°24'22	minimum elong	7160 Oct 09 17:07	21° <u>0</u> 24'56	5°49'46
min. Earth dist.	7154 Apr 03 03:26	12° <u>0</u> 02'12	38.44879 AU	morning rise	7160 Oct 24 14:11	21° <u>0</u> 50'48	
direct	7154 Jun 20 21:27	10° <u>0</u> 56'33		retrograde	7161 Jan 20 21:05	23° <u>0</u> 21'12	
evening set	7154 Sep 15 13:10	12° <u>0</u> 19'49		opposition	7161 Apr 10 14:42	22° <u>0</u> 11'01	6°21'34
max. Earth dist.	7154 Sep 28 17:51	12° <u>0</u> 41'34	40.32061 AU	min. Earth dist.	7161 Apr 12 23:36	22° <u>0</u> 07'43	36.67544 AU
				direct	7161 Jun 30 05:40	20° <u>0</u> 59'50	
conjunction	7154 Oct 01 05:53	12° <u>0</u> 45'45	3°26'00	evening set	7161 Sep 26 19:59	22° <u>0</u> 30'37	
minimum elong	7154 Oct 01 05:46	12° <u>0</u> 45'44	3°26'01	max. Earth dist.	7161 Oct 08 20:32	22° <u>0</u> 51'38	38.53694 AU
morning rise	7154 Oct 16 22:34	13° <u>0</u> 11'42					
retrograde	7155 Jan 12 05:58	14° <u>0</u> 36'11		conjunction	7161 Oct 11 13:10	22° <u>0</u> 56'24	6°14'06
opposition	7155 Apr 02 13:21	13° <u>0</u> 27'59	3°49'10	minimum elong	7161 Oct 11 12:58	22° <u>0</u> 56'23	6°14'08
min. Earth dist.	7155 Apr 04 18:49	13° <u>0</u> 25'00	38.19638 AU	morning rise	7161 Oct 26 05:41	23° <u>0</u> 22'09	
direct	7155 Jun 22 09:20	12° <u>0</u> 19'01		retrograde	7162 Jan 22 19:08	24° <u>0</u> 53'43	
evening set	7155 Sep 17 08:07	13° <u>0</u> 43'12		opposition	7162 Apr 12 08:42	23° <u>0</u> 43'12	6°47'26
max. Earth dist.	7155 Sep 30 10:10	14° <u>0</u> 04'56	40.06665 AU	min. Earth dist.	7162 Apr 14 18:09	23° <u>0</u> 39'51	36.42003 AU
				direct	7162 Jul 01 20:24	22° <u>0</u> 31'36	
conjunction	7155 Oct 02 22:35	14° <u>0</u> 09'10	3°49'36	evening set	7162 Sep 28 21:23	24° <u>0</u> 03'41	
minimum elong	7155 Oct 02 22:29	14° <u>0</u> 09'09	3°49'38	max. Earth dist.	7162 Oct 10 16:05	24° <u>0</u> 24'28	38.27895 AU
morning rise	7155 Oct 18 12:40	14° <u>0</u> 35'09					
retrograde	7156 Jan 13 23:00	16° <u>0</u> 00'29		conjunction	7162 Oct 13 09:51	24° <u>0</u> 29'20	6°38'31
opposition	7156 Apr 03 04:21	14° <u>0</u> 51'56	4°14'11	minimum elong	7162 Oct 13 09:39	24° <u>0</u> 29'19	6°38'33
min. Earth dist.	7156 Apr 05 10:47	14° <u>0</u> 48'53	37.94307 AU	morning rise	7162 Oct 27 21:22	24° <u>0</u> 54'58	
direct	7156 Jun 22 21:59	13° <u>0</u> 42'35		retrograde	7163 Jan 24 16:37	26° <u>0</u> 27'45	
evening set	7156 Sep 18 03:54	15° <u>0</u> 07'43		opposition	7163 Apr 14 03:33	25° <u>0</u> 16'52	7°13'22
max. Earth dist.	7156 Oct 01 02:48	15° <u>0</u> 29'25	39.81225 AU	min. Earth dist.	7163 Apr 16 14:36	25° <u>0</u> 13'24	36.16300 AU
				direct	7163 Jul 03 12:23	24° <u>0</u> 04'50	
conjunction	7156 Oct 03 15:39	15° <u>0</u> 33'42	4°13'22	evening set	7163 Sep 30 23:48	25° <u>0</u> 38'16	
minimum elong	7156 Oct 03 15:31	15° <u>0</u> 33'42	4°13'23	max. Earth dist.	7163 Oct 12 12:50	25° <u>0</u> 58'48	38.01948 AU
morning rise	7156 Oct 19 03:02	15° <u>0</u> 59'42					
retrograde	7157 Jan 14 18:20	17° <u>0</u> 25'56		conjunction	7163 Oct 15 06:59	26° <u>0</u> 03'45	7°03'01
opposition	7157 Apr 04 19:44	16° <u>0</u> 17'03	4°39'21	minimum elong	7163 Oct 15 06:45	26° <u>0</u> 03'44	7°03'03
min. Earth dist.	7157 Apr 07 01:48	16° <u>0</u> 14'00	37.68967 AU	morning rise	7163 Oct 29 13:10	26° <u>0</u> 29'13	
direct	7157 Jun 24 12:34	15° <u>0</u> 07'19		retrograde	7164 Jan 26 15:52	28° <u>0</u> 03'15	
evening set	7157 Sep 20 00:24	16° <u>0</u> 33'28		opposition	7164 Apr 14 22:45	26° <u>0</u> 51'58	7°39'24
max. Earth dist.	7157 Oct 02 18:59	16° <u>0</u> 55'03	39.55764 AU	min. Earth dist.	7164 Apr 17 09:40	26° <u>0</u> 48'30	35.90469 AU
				direct	7164 Jul 04 09:13	25° <u>0</u> 39'29	
conjunction	7157 Oct 05 09:08	16° <u>0</u> 59'28	4°37'17	evening set	7164 Oct 02 03:14	27° <u>0</u> 14'19	
minimum elong	7157 Oct 05 09:00	16° <u>0</u> 59'27	4°37'19	max. Earth dist.	7164 Oct 13 08:39	27° <u>0</u> 34'29	37.75873 AU
morning rise	7157 Oct 20 17:29	17° <u>0</u> 25'27					
retrograde	7158 Jan 16 13:31	18° <u>0</u> 52'39		conjunction	7164 Oct 16 04:41	27° <u>0</u> 39'37	7°27'32
opposition	7158 Apr 06 11:47	17° <u>0</u> 43'26	5°04'42	minimum elong	7164 Oct 16 04:27	27° <u>0</u> 39'36	7°27'34

morning rise	7164 Oct 30 05:11	28° <u>♂</u> 04'53	direct	7171 Jul 16 12:24	7° <u>♂</u> 23'43	
retrograde	7165 Jan 27 16:04	29° <u>♂</u> 40'13	evening set	7171 Oct 17 10:27	9° <u>♂</u> 10'12	
opposition	7165 Apr 16 18:42	28° <u>♂</u> 28'31 8°05'27	max. Earth dist.	7171 Oct 26 08:29	9° <u>♂</u> 27'21	35.95260 AU
min. Earth dist.	7165 Apr 19 07:12	28° <u>♂</u> 24'56	35.64557 AU			
direct	7165 Jul 06 05:09	27° <u>♂</u> 15'35	conjunction	7171 Oct 29 06:26	9° <u>♂</u> 32'59	10°17'20
evening set	7165 Oct 04 07:33	28° <u>♂</u> 51'51	minimum elong	7171 Oct 29 06:06	9° <u>♂</u> 32'57	10°17'24
max. Earth dist.	7165 Oct 15 07:25	29° <u>♂</u> 11'46	37.49736 AU	morning rise	7171 Nov 10 01:09	9° <u>♂</u> 55'41
				retrograde	7172 Feb 09 21:50	11° <u>♂</u> 42'01
conjunction	7165 Oct 18 03:01	29° <u>♂</u> 16'55 7°52'04	opposition	7172 Apr 28 07:38	10° <u>♂</u> 27'24	11°05'59
minimum elong	7165 Oct 18 02:46	29° <u>♂</u> 16'54 7°52'06	min. Earth dist.	7172 Apr 30 21:34	10° <u>♂</u> 23'32	33.86203 AU
morning rise	7165 Oct 31 21:13	29° <u>♂</u> 41'57	direct	7172 Jul 17 11:36	9° <u>♂</u> 11'07	
	7165 Nov 11 03:30	0° <u>♂</u>	evening set	7172 Oct 18 23:25	10° <u>♂</u> 59'38	
retrograde	7166 Jan 29 13:39	1° <u>♂</u> 18'38	max. Earth dist.	7172 Oct 27 12:43	11° <u>♂</u> 16'14	35.70338 AU
opposition	7166 Apr 18 15:09	0° <u>♂</u> 06'31 8°31'32				
min. Earth dist.	7166 Apr 21 03:27	0° <u>♂</u> 02'54 35.38612 AU	conjunction	7172 Oct 30 09:37	11° <u>♂</u> 21'51	10°40'51
	7166 Apr 23 04:11	30° <u>♂</u> 02'54	minimum elong	7172 Oct 30 09:18	11° <u>♂</u> 21'49	10°40'55
direct	7166 Jul 08 02:54	28° <u>♂</u> 53'05	morning rise	7172 Nov 10 18:20	11° <u>♂</u> 43'59	
	7166 Sep 18 18:36	0° <u>♂</u>	retrograde	7173 Feb 11 01:00	13° <u>♂</u> 32'14	
evening set	7166 Oct 06 13:14	0° <u>♂</u> 30'52	opposition	7173 Apr 30 08:53	12° <u>♂</u> 17'13	11°30'59
max. Earth dist.	7166 Oct 17 04:47	0° <u>♂</u> 50'20 37.23595 AU	min. Earth dist.	7173 May 02 22:14	12° <u>♂</u> 13'22	33.61663 AU
			direct	7173 Jul 19 12:56	11° <u>♂</u> 00'31	
conjunction	7166 Oct 20 01:55	0° <u>♂</u> 55'40 8°16'34	evening set	7173 Oct 21 13:53	12° <u>♂</u> 51'08	
minimum elong	7166 Oct 20 01:40	0° <u>♂</u> 55'38 8°16'36	max. Earth dist.	7173 Oct 29 15:21	13° <u>♂</u> 06'57	35.45629 AU
morning rise	7166 Nov 02 13:38	1° <u>♂</u> 20'25				
retrograde	7167 Jan 31 12:23	2° <u>♂</u> 58'31	conjunction	7173 Nov 01 13:28	13° <u>♂</u> 12'43	11°04'05
opposition	7167 Apr 20 12:06	1° <u>♂</u> 45'58 8°57'35	minimum elong	7173 Nov 01 13:07	13° <u>♂</u> 12'42	11°04'08
min. Earth dist.	7167 Apr 23 01:17	1° <u>♂</u> 42'17 35.12720 AU	morning rise	7173 Nov 12 11:50	13° <u>♂</u> 34'13	
direct	7167 Jul 09 22:20	0° <u>♂</u> 32'02		7174 Jan 03 15:04	15° <u>♂</u>	
evening set	7167 Oct 08 19:50	2° <u>♂</u> 11'23	retrograde	7174 Feb 13 06:26	15° <u>♂</u> 24'28	
max. Earth dist.	7167 Oct 19 04:43	2° <u>♂</u> 30'32 36.97516 AU		7174 Mar 26 12:58	15° <u>♂</u>	
			opposition	7174 May 02 10:59	14° <u>♂</u> 09'05	11°55'41
conjunction	7167 Oct 22 01:36	2° <u>♂</u> 35'53 8°41'00	min. Earth dist.	7174 May 05 00:56	14° <u>♂</u> 05'10	33.37324 AU
minimum elong	7167 Oct 22 01:19	2° <u>♂</u> 35'52 8°41'03	direct	7174 Jul 21 12:58	12° <u>♂</u> 51'55	
morning rise	7167 Nov 04 05:59	3° <u>♂</u> 00'19	evening set	7174 Oct 24 05:52	14° <u>♂</u> 44'45	
retrograde	7168 Feb 02 10:08	4° <u>♂</u> 39'54		7174 Oct 31 22:40	15° <u>♂</u>	
opposition	7168 Apr 21 09:55	3° <u>♂</u> 26'55 9°23'34	max. Earth dist.	7174 Oct 31 20:47	14° <u>♂</u> 59'51	35.21083 AU
min. Earth dist.	7168 Apr 23 23:25	3° <u>♂</u> 23'11 34.86939 AU				
direct	7168 Jul 10 18:41	2° <u>♂</u> 12'30	conjunction	7174 Nov 03 18:24	15° <u>♂</u> 05'38	11°26'58
evening set	7168 Oct 10 03:33	3° <u>♂</u> 53'29	minimum elong	7174 Nov 03 18:04	15° <u>♂</u> 05'36	11°27'01
max. Earth dist.	7168 Oct 20 04:20	4° <u>♂</u> 12'12 36.71595 AU	morning rise	7174 Nov 14 05:26	15° <u>♂</u> 26'25	
			retrograde	7175 Feb 15 10:46	17° <u>♂</u> 18'44	
conjunction	7168 Oct 23 01:34	4° <u>♂</u> 17'38 9°05'21	opposition	7175 May 04 13:56	16° <u>♂</u> 02'57	12°20'00
minimum elong	7168 Oct 23 01:17	4° <u>♂</u> 17'36 9°05'23	min. Earth dist.	7175 May 07 04:16	15° <u>♂</u> 58'59	33.13149 AU
morning rise	7168 Nov 04 22:25	4° <u>♂</u> 41'42		7175 Jun 21 17:02	15° <u>♂</u>	
retrograde	7169 Feb 03 11:45	6° <u>♂</u> 22'51	direct	7175 Jul 23 13:52	14° <u>♂</u> 45'20	
opposition	7169 Apr 23 08:14	5° <u>♂</u> 09'26 9°49'27		7175 Aug 24 02:14	15° <u>♂</u>	
min. Earth dist.	7169 Apr 25 21:14	5° <u>♂</u> 05'42 34.61362 AU	evening set	7175 Oct 26 23:30	16° <u>♂</u> 40'27	
direct	7169 Jul 12 14:30	3° <u>♂</u> 54'31	max. Earth dist.	7175 Nov 03 01:42	16° <u>♂</u> 54'39	34.96724 AU
evening set	7169 Oct 12 12:30	5° <u>♂</u> 37'15				
max. Earth dist.	7169 Oct 22 04:53	5° <u>♂</u> 55'29 36.45879 AU	conjunction	7175 Nov 05 23:57	17° <u>♂</u> 00'33	11°49'27
			minimum elong	7175 Nov 05 23:35	17° <u>♂</u> 00'31	11°49'31
conjunction	7169 Oct 25 02:30	6° <u>♂</u> 00'59 9°29'33	morning rise	7175 Nov 15 23:07	17° <u>♂</u> 20'33	
minimum elong	7169 Oct 25 02:11	6° <u>♂</u> 00'57 9°29'35	retrograde	7176 Feb 17 17:29	19° <u>♂</u> 15'01	
morning rise	7169 Nov 06 15:09	6° <u>♂</u> 24'39	opposition	7176 May 05 17:38	17° <u>♂</u> 58'50	12°43'55
retrograde	7170 Feb 05 13:11	8° <u>♂</u> 07'27	min. Earth dist.	7176 May 08 07:36	17° <u>♂</u> 54'52	32.89177 AU
opposition	7170 Apr 25 07:19	6° <u>♂</u> 53'36 10°15'10	direct	7176 Jul 24 15:31	16° <u>♂</u> 40'45	
min. Earth dist.	7170 Apr 27 21:12	6° <u>♂</u> 49'48 34.36029 AU	evening set	7176 Oct 28 18:23	18° <u>♂</u> 38'14	
direct	7170 Jul 14 11:55	5° <u>♂</u> 38'13	max. Earth dist.	7176 Nov 04 07:48	18° <u>♂</u> 51'29	34.72562 AU
evening set	7170 Oct 14 22:53	7° <u>♂</u> 22'47				
max. Earth dist.	7170 Oct 24 07:17	7° <u>♂</u> 40'34 36.20437 AU	conjunction	7176 Nov 07 06:13	18° <u>♂</u> 57'27	12°11'31
			minimum elong	7176 Nov 07 05:52	18° <u>♂</u> 57'26	12°11'34
conjunction	7170 Oct 27 04:10	7° <u>♂</u> 46'04 9°53'33	morning rise	7176 Nov 16 16:42	19° <u>♂</u> 16'36	
minimum elong	7170 Oct 27 03:52	7° <u>♂</u> 46'02 9°53'36	retrograde	7177 Feb 18 23:34	21° <u>♂</u> 13'19	
morning rise	7170 Nov 08 08:04	8° <u>♂</u> 09'16	opposition	7177 May 07 22:17	19° <u>♂</u> 56'42	13°07'21
retrograde	7171 Feb 07 17:13	9° <u>♂</u> 53'47	min. Earth dist.	7177 May 10 13:04	19° <u>♂</u> 52'40	32.65429 AU
opposition	7171 Apr 27 07:04	8° <u>♂</u> 39'33 10°40'42	direct	7177 Jul 26 18:41	18° <u>♂</u> 38'07	
min. Earth dist.	7171 Apr 29 19:58	8° <u>♂</u> 35'47 34.10978 AU	evening set	7177 Oct 31 15:15	20° <u>♂</u> 38'05	

max. Earth dist.	7177 Nov 06 15:31	20° ℳ 50'22	34.48668 AU	morning rise	7183 Nov 27 07:04	3° ♂ 40'13	
				retrograde	7184 Mar 06 00:32	5° ♂ 56'19	
conjunction	7177 Nov 09 13:22	20° ℳ 56'21	12°33'04	opposition	7184 May 22 04:41	4° ♂ 36'52	15°31'38
minimum elong	7177 Nov 09 13:00	20° ℳ 56'19	12°33'08	min. Earth dist.	7184 May 24 15:19	4° ♂ 32'55	31.11519 AU
morning rise	7177 Nov 18 10:14	21° ℳ 14'31		direct	7184 Aug 09 19:27	3° ♂ 15'03	
retrograde	7178 Feb 21 08:12	23° ℳ 13'34		evening set	7184 Nov 21 11:18	5° ♂ 37'06	
opposition	7178 May 10 03:24	21° ℳ 56'32	13°30'15	max. Earth dist.	7184 Nov 21 20:15	5° ♂ 37'56	32.94707 AU
min. Earth dist.	7178 May 12 17:10	21° ℳ 52'32	32.41975 AU				
direct	7178 Jul 28 23:56	20° ℳ 37'27		conjunction	7184 Nov 24 12:50	5° ♂ 43'50	14°43'55
evening set	7178 Nov 03 13:44	22° ℳ 40'00		minimum elong	7184 Nov 24 12:32	5° ♂ 43'48	14°44'00
max. Earth dist.	7178 Nov 08 22:51	22° ℳ 51'07	34.25086 AU	morning rise	7184 Nov 27 13:43	5° ♂ 50'30	
				retrograde	7185 Mar 08 14:02	8° ♂ 10'35	
conjunction	7178 Nov 11 21:19	22° ℳ 57'11	12°54'04	opposition	7185 May 24 15:48	6° ♂ 50'49	15°48'25
minimum elong	7178 Nov 11 20:59	22° ℳ 57'10	12°54'08	min. Earth dist.	7185 May 27 00:46	6° ♂ 46'57	30.91989 AU
morning rise	7178 Nov 20 03:44	23° ℳ 14'18		direct	7185 Aug 12 05:15	5° ♂ 28'36	
retrograde	7179 Feb 23 17:09	25° ℳ 15'47		max. Earth dist.	7185 Nov 24 10:37	7° ♂ 52'59	32.75237 AU
opposition	7179 May 12 09:35	23° ℳ 58'19	13°52'31	evening set	7185 Nov 26 06:57	7° ♂ 57'04	
min. Earth dist.	7179 May 15 00:10	23° ℳ 54'14	32.18881 AU				
direct	7179 Jul 31 04:19	22° ℳ 38'44		conjunction	7185 Nov 27 02:26	7° ♂ 58'52	14°58'50
evening set	7179 Nov 06 14:05	24° ℳ 43'59		minimum elong	7185 Nov 27 02:06	7° ♂ 58'51	14°58'55
max. Earth dist.	7179 Nov 11 09:01	24° ℳ 53'58	34.01908 AU	evening rise	7185 Nov 27 21:17	8° ♂ 00'37	
				retrograde	7186 Mar 11 02:51	10° ♂ 26'57	
conjunction	7179 Nov 14 05:56	24° ℳ 59'59	13°14'26	opposition	7186 May 27 03:52	9° ♂ 06'51	16°04'02
minimum elong	7179 Nov 14 05:34	24° ℳ 59'57	13°14'30	min. Earth dist.	7186 May 29 13:01	9° ♂ 02'58	30.73078 AU
morning rise	7179 Nov 21 20:33	25° ℳ 15'54		direct	7186 Aug 14 15:33	7° ♂ 44'17	
retrograde	7180 Feb 26 03:28	27° ℳ 19'56		max. Earth dist.	7186 Nov 27 02:36	10° ♂ 10'12	32.56403 AU
opposition	7180 May 13 16:31	26° ℳ 02'02	14°14'05				
min. Earth dist.	7180 May 16 05:47	25° ℳ 58'00	31.96224 AU	conjunction	7186 Nov 29 16:49	10° ♂ 16'00	15°12'37
direct	7180 Aug 01 12:51	24° ℳ 41'58		minimum elong	7186 Nov 29 16:33	10° ♂ 15'58	15°12'42
evening set	7180 Nov 08 16:26	26° ℳ 50'03		retrograde	7187 Mar 13 18:23	12° ♂ 45'21	
max. Earth dist.	7180 Nov 12 17:53	26° ℳ 58'37	33.79216 AU	opposition	7187 May 29 16:49	11° ♂ 24'57	16°18'25
				min. Earth dist.	7187 Jun 01 00:08	11° ♂ 21'10	30.54770 AU
conjunction	7180 Nov 15 15:15	27° ℳ 04'43	13°34'04	direct	7187 Aug 17 04:24	10° ♂ 02'00	
minimum elong	7180 Nov 15 14:54	27° ℳ 04'41	13°34'09	max. Earth dist.	7187 Nov 29 17:55	12° ♂ 29'19	32.38176 AU
morning rise	7180 Nov 22 13:04	27° ℳ 19'18					
retrograde	7181 Feb 27 15:03	29° ℳ 26'02		conjunction	7187 Dec 02 07:50	12° ♂ 35'07	15°25'12
opposition	7181 May 16 00:11	28° ℳ 07'42	14°34'52	minimum elong	7187 Dec 02 07:33	12° ♂ 35'05	15°25'16
min. Earth dist.	7181 May 18 13:22	28° ℳ 03'39	31.74106 AU	retrograde	7188 Mar 15 10:02	15° ♂ 05'43	
direct	7181 Aug 03 19:40	26° ℳ 47'09		opposition	7188 May 31 06:44	13° ♂ 44'59	16°31'28
evening set	7181 Nov 11 21:14	28° ℳ 58'16		min. Earth dist.	7188 Jun 02 14:05	13° ♂ 41'12	30.37072 AU
max. Earth dist.	7181 Nov 15 06:02	29° ℳ 05'26	33.57096 AU	direct	7188 Aug 18 16:16	12° ♂ 21'41	
				max. Earth dist.	7188 Dec 01 12:02	14° ♂ 50'29	32.20596 AU
conjunction	7181 Nov 18 01:30	29° ℳ 11'25	13°52'55				
minimum elong	7181 Nov 18 01:08	29° ℳ 11'23	13°53'00	conjunction	7188 Dec 03 23:45	14° ♂ 56'08	15°36'30
morning rise	7181 Nov 24 04:41	29° ℳ 24'29		minimum elong	7188 Dec 03 23:32	14° ♂ 56'07	15°36'35
	7181 Dec 11 05:58	0° ♂		retrograde	7189 Mar 18 02:45	17° ♂ 27'54	
retrograde	7182 Mar 02 00:24	1° ♂ 34'05		opposition	7189 Jun 02 21:14	16° ♂ 06'53	16°43'09
opposition	7182 May 18 08:52	0° ♂ 15'22	14°54'47	min. Earth dist.	7189 Jun 05 02:53	16° ♂ 03'11	30.20002 AU
min. Earth dist.	7182 May 20 20:58	0° ♂ 11'21	31.52576 AU	direct	7189 Aug 21 08:16	14° ♂ 43'13	
	7182 May 28 00:51	30° ♂		max. Earth dist.	7189 Dec 04 04:38	17° ♂ 13'16	32.03685 AU
direct	7182 Aug 06 04:07	28° ℳ 54'22					
	7182 Oct 12 01:59	0° ♂		conjunction	7189 Dec 06 16:18	17° ♂ 18'57	15°46'28
evening set	7182 Nov 15 05:02	1° ♂ 08'42		minimum elong	7189 Dec 06 16:03	17° ♂ 18'55	15°46'33
max. Earth dist.	7182 Nov 17 17:13	1° ♂ 14'06	33.35618 AU	retrograde	7190 Mar 20 20:34	19° ♂ 51'51	
				opposition	7190 Jun 05 12:37	18° ♂ 30'30	16°53'21
conjunction	7182 Nov 20 12:27	1° ♂ 20'08	14°10'54	min. Earth dist.	7190 Jun 07 17:37	18° ♂ 26'50	30.03614 AU
minimum elong	7182 Nov 20 12:08	1° ♂ 20'06	14°10'58	direct	7190 Aug 23 23:07	17° ♂ 06'29	
morning rise	7182 Nov 25 19:02	1° ♂ 31'29		max. Earth dist.	7190 Dec 07 00:30	19° ♂ 37'58	31.87495 AU
retrograde	7183 Mar 04 12:45	3° ♂ 44'10					
opposition	7183 May 20 18:14	2° ♂ 25'04	15°13'44	conjunction	7190 Dec 09 09:34	19° ♂ 43'26	15°55'00
min. Earth dist.	7183 May 23 05:15	2° ♂ 21'07	31.31713 AU	minimum elong	7190 Dec 09 09:23	19° ♂ 43'25	15°55'05
direct	7183 Aug 08 11:47	1° ♂ 03'38		retrograde	7191 Mar 23 13:21	22° ♂ 17'24	
evening set	7183 Nov 18 16:49	3° ♂ 21'33		opposition	7191 Jun 08 04:43	20° ♂ 55'45	17°02'00
max. Earth dist.	7183 Nov 20 06:48	3° ♂ 24'59	33.14816 AU	min. Earth dist.	7191 Jun 10 08:13	20° ♂ 52'10	29.87943 AU
				direct	7191 Aug 26 15:40	19° ♂ 31'24	
conjunction	7183 Nov 23 00:22	3° ♂ 30'56	14°27'55	max. Earth dist.	7191 Dec 09 18:50	22° ♂ 04'03	31.72100 AU
minimum elong	7183 Nov 23 00:01	3° ♂ 30'54	14°28'00				

conjunction	7191 Dec 12 03:14	22°  09'30	16°02'04	conjunction	7200 Jan 01 16:52	12°  23'56	15°57'04
minimum elong	7191 Dec 12 03:03	22°  09'29	16°02'09	minimum elong	7200 Jan 01 16:59	12°  23'57	15°57'09
retrograde	7192 Mar 25 08:59	24°  44'27		retrograde	7200 Apr 14 19:59	15°  04'14	
opposition	7192 Jun 09 21:27	23°  22'31	17°09'01	opposition	7200 Jun 30 07:53	13°  41'11	16°58'05
min. Earth dist.	7192 Jun 11 23:16	23°  19'03	29.73092 AU	min. Earth dist.	7200 Jul 01 16:56	13°  38'51	28.90008 AU
direct	7192 Aug 28 08:01	21°  57'51		direct	7200 Sep 17 14:50	12°  15'20	
max. Earth dist.	7192 Dec 11 16:01	24°  31'50	31.57571 AU	max. Earth dist.	7201 Jan 02 03:03	14°  35'28	30.78855 AU
conjunction	7192 Dec 13 21:28	24°  37'01	16°07'33	conjunction	7201 Jan 03 13:49	14°  35'57	15°48'17
minimum elong	7192 Dec 13 21:21	24°  37'00	16°07'37	minimum elong	7201 Jan 03 13:58	14°  35'58	15°48'21
retrograde	7193 Mar 28 02:19	27°  12'53		retrograde	7201 Apr 17 17:25	17°  34'03	
opposition	7193 Jun 12 14:56	25°  50'42	17°14'19	opposition	7201 Jul 03 05:03	16°  31'24	16°47'54
min. Earth dist.	7193 Jun 14 15:32	25°  47'18	29.59114 AU	min. Earth dist.	7201 Jul 04 12:06	16°  31'12	28.84178 AU
direct	7193 Aug 31 00:51	24°  25'45		direct	7201 Sep 20 12:33	14°  35'13	
max. Earth dist.	7193 Dec 14 12:12	27°  00'49	31.44000 AU	max. Earth dist.	7202 Jan 05 03:50	17°  33'11	30.73687 AU
conjunction	7193 Dec 16 16:09	27°  05'54	16°11'23	conjunction	7202 Jan 06 11:04	17°  36'19	15°37'41
minimum elong	7193 Dec 16 16:02	27°  05'53	16°11'28	minimum elong	7202 Jan 06 11:15	17°  36'20	15°37'46
retrograde	7194 Mar 30 21:39	29°  42'37		retrograde	7202 Apr 20 13:08	20°  31'59	
opposition	7194 Jun 15 08:48	28°  20'13	17°17'48	opposition	7202 Jul 06 02:22	18°  53'51	16°35'45
min. Earth dist.	7194 Jun 17 06:43	28°  16'59	29.46109 AU	min. Earth dist.	7202 Jul 07 07:17	18°  51'48	28.79316 AU
direct	7194 Sep 02 18:49	26°  55'00		direct	7202 Sep 23 11:01	17°  32'56	
max. Earth dist.	7194 Dec 17 10:19	29°  31'15	31.31454 AU	max. Earth dist.	7203 Jan 08 02:26	20°  30'48	30.69540 AU
conjunction	7194 Dec 19 11:28	29°  36'04	16°13'31	conjunction	7203 Jan 09 08:09	20°  31'24	15°25'17
minimum elong	7194 Dec 19 11:24	29°  36'04	16°13'35	minimum elong	7203 Jan 09 08:22	20°  31'24	15°25'21
	7194 Dec 29 15:54	0°  3		retrograde	7203 Apr 23 11:08	22°  35'29	
retrograde	7195 Apr 02 15:45	2°  13'36		opposition	7203 Jul 08 23:49	21°  30'19	16°21'40
opposition	7195 Jun 18 03:35	0°  50'59	17°19'24	min. Earth dist.	7203 Jul 10 01:59	21°  32'28	28.75471 AU
min. Earth dist.	7195 Jun 20 00:11	0°  47'51	29.34136 AU	direct	7203 Sep 26 09:21	20°  30'42	
	7195 Jul 20 11:00	30°  R 		max. Earth dist.	7204 Jan 11 03:15	22°  34'34	30.66438 AU
direct	7195 Sep 05 12:00	29°  25'35					
	7195 Oct 21 04:56	0°  3		conjunction	7204 Jan 12 05:07	22°  34'10	15°11'06
max. Earth dist.	7195 Dec 20 08:07	2°  30'25	31.20013 AU	minimum elong	7204 Jan 12 05:22	22°  34'12	15°11'11
				retrograde	7204 Apr 25 06:37	25°  29'45	
conjunction	7195 Dec 22 06:53	2°  30'29	16°13'52	opposition	7204 Jul 10 21:22	24°  30'34	16°05'39
minimum elong	7195 Dec 22 06:50	2°  30'29	16°13'57	min. Earth dist.	7204 Jul 11 21:39	24°  30'45	28.72656 AU
retrograde	7196 Apr 04 12:31	4°  34'54		direct	7204 Sep 28 08:48	22°  34'39	
opposition	7196 Jun 19 22:41	3°  32'00	17°19'05	evening set	7205 Jan 12 10:44	25°  32'18	
min. Earth dist.	7196 Jun 21 16:00	3°  32'05	29.23239 AU	max. Earth dist.	7205 Jan 13 01:53	25°  32'49	30.64430 AU
direct	7196 Sep 07 06:22	1°  35'26					
max. Earth dist.	7196 Dec 22 06:36	4°  35'42	31.09669 AU	conjunction	7205 Jan 14 01:51	25°  32'14	14°55'08
conjunction	7196 Dec 24 02:55	4°  34'06	16°12'25	minimum elong	7205 Jan 14 02:07	25°  32'15	14°55'12
minimum elong	7196 Dec 24 02:56	4°  34'06	16°12'30	morning rise	7205 Jan 15 17:31	25°  32'13	
retrograde	7197 Apr 07 06:46	7°  31'01		retrograde	7205 Apr 28 03:18	28°  30'53	
opposition	7197 Jun 22 18:19	5°  35'09	17°16'48	opposition	7205 Jul 13 18:32	26°  34'24	15°47'45
min. Earth dist.	7197 Jun 24 10:29	5°  35'19	29.13410 AU	min. Earth dist.	7205 Jul 14 15:20	26°  34'05	28.70939 AU
direct	7197 Sep 10 00:37	4°  33'02		direct	7205 Oct 01 07:35	25°  31'30	
max. Earth dist.	7197 Dec 25 05:56	7°  30'41	31.00421 AU	evening set	7206 Jan 13 09:58	27°  32'19	
conjunction	7197 Dec 26 23:19	7°  31'49	16°09'08	conjunction	7206 Jan 16 22:30	28°  30'48	14°37'27
minimum elong	7197 Dec 26 23:21	7°  31'49	16°09'13	minimum elong	7206 Jan 16 22:48	28°  30'49	14°37'32
retrograde	7198 Apr 10 03:15	9°  35'17		max. Earth dist.	7206 Jan 16 02:20	27°  38'46	30.63559 AU
opposition	7198 Jun 25 14:23	8°  30'21	17°12'33	morning rise	7206 Jan 20 11:31	28°  30'19	
min. Earth dist.	7198 Jun 27 03:34	8°  32'43	29.04610 AU		7206 Mar 13 13:22	0°  R	
direct	7198 Sep 12 21:42	7°  30'43		retrograde	7206 Apr 30 22:12	0°  R 	
max. Earth dist.	7198 Dec 28 04:24	9°  34'32	30.92208 AU		7206 Jun 20 10:39	30°  R 	
conjunction	7198 Dec 29 19:55	9°  34'29	16°04'01	opposition	7206 Jul 16 15:57	29°  31'41	15°27'58
minimum elong	7198 Dec 29 20:00	9°  34'30	16°04'05	min. Earth dist.	7206 Jul 17 10:51	29°  31'21	28.70370 AU
retrograde	7199 Apr 12 23:39	12°  32'26		direct	7206 Oct 04 05:40	27°  35'51	
opposition	7199 Jun 28 11:00	11°  30'52	17°06'18		7207 Jan 04 19:25	0°  R	
min. Earth dist.	7199 Jun 29 22:46	11°  30'25	28.96819 AU	evening set	7207 Jan 14 23:56	0°  R 	
direct	7199 Sep 15 16:35	9°  33'37					
max. Earth dist.	7199 Dec 31 04:40	12°  32'01	30.85029 AU	conjunction	7207 Jan 19 18:34	0°  R 	
				minimum elong	7207 Jan 19 18:53	0°  R 	
				max. Earth dist.	7207 Jan 19 01:02	0°  R 	
				morning rise	7207 Jan 24 13:36	0°  R 	

retrograde	7207 May 03 18:50	3° \approx 15'24		evening set	7214 Jan 26 22:24	17° \approx 52'47	
opposition	7207 Jul 19 13:02	1° \approx 52'17	15°06'22				
min. Earth dist.	7207 Jul 20 03:49	1° \approx 51'15	28.71018 AU	conjunction	7214 Feb 06 04:37	18° \approx 16'48	11°20'31
direct	7207 Oct 07 04:32	0° \approx 26'34		minimum elong	7214 Feb 06 05:01	18° \approx 16'51	11°20'35
evening set	7208 Jan 16 18:55	2° \approx 55'59		max. Earth dist.	7214 Feb 06 07:59	18° \approx 17'08	30.99890 AU
				morning rise	7214 Feb 16 10:42	18° \approx 40'49	
conjunction	7208 Jan 22 14:29	3° \approx 09'56	13°57'00	retrograde	7214 May 20 20:01	20° \approx 51'56	
minimum elong	7208 Jan 22 14:50	3° \approx 09'58	13°57'05	opposition	7214 Aug 06 08:28	19° \approx 30'10	11°51'15
max. Earth dist.	7208 Jan 22 00:36	3° \approx 08'33	30.65491 AU	min. Earth dist.	7214 Aug 06 03:40	19° \approx 30'30	29.08404 AU
morning rise	7208 Jan 28 10:22	3° \approx 23'54		direct	7214 Oct 25 03:30	18° \approx 06'14	
retrograde	7208 May 05 12:13	5° \approx 49'10		evening set	7215 Jan 29 01:21	20° \approx 18'45	
opposition	7208 Jul 21 09:59	4° \approx 26'09	14°43'01				
min. Earth dist.	7208 Jul 21 22:43	4° \approx 25'15	28.72917 AU	conjunction	7215 Feb 08 21:10	20° \approx 43'57	10°50'19
direct	7208 Oct 09 01:04	3° \approx 00'36		minimum elong	7215 Feb 08 21:33	20° \approx 43'59	10°50'22
evening set	7209 Jan 17 16:33	5° \approx 27'18		max. Earth dist.	7215 Feb 09 04:15	20° \approx 44'39	31.09240 AU
				morning rise	7215 Feb 19 16:28	21° \approx 09'07	
conjunction	7209 Jan 24 09:57	5° \approx 43'23	13°34'21	retrograde	7215 May 23 11:11	23° \approx 18'09	
minimum elong	7209 Jan 24 10:18	5° \approx 43'25	13°34'25	opposition	7215 Aug 09 02:47	21° \approx 56'38	11°18'23
max. Earth dist.	7209 Jan 23 23:14	5° \approx 42'19	30.68361 AU	min. Earth dist.	7215 Aug 08 20:07	21° \approx 57'05	29.17846 AU
morning rise	7209 Jan 31 03:33	5° \approx 59'30		direct	7215 Oct 28 00:41	20° \approx 33'01	
retrograde	7209 May 08 06:51	8° \approx 22'05		evening set	7216 Jan 31 04:50	22° \approx 43'22	
opposition	7209 Jul 24 06:32	6° \approx 59'14	14°17'59				
min. Earth dist.	7209 Jul 24 15:19	6° \approx 58'37	28.76046 AU	conjunction	7216 Feb 11 12:59	23° \approx 09'37	10°19'13
direct	7209 Oct 11 23:30	5° \approx 33'54		minimum elong	7216 Feb 11 13:23	23° \approx 09'39	10°19'16
evening set	7210 Jan 19 15:46	7° \approx 58'02		max. Earth dist.	7216 Feb 11 21:35	23° \approx 10'27	31.19513 AU
				morning rise	7216 Feb 22 20:50	23° \approx 35'50	
conjunction	7210 Jan 27 05:02	8° \approx 16'02	13°10'13	retrograde	7216 May 25 03:01	25° \approx 42'50	
minimum elong	7210 Jan 27 05:25	8° \approx 16'04	13°10'17	opposition	7216 Aug 10 20:14	24° \approx 21'33	10°44'34
max. Earth dist.	7210 Jan 26 21:20	8° \approx 15'16	30.72444 AU	min. Earth dist.	7216 Aug 10 10:06	24° \approx 22'14	29.28217 AU
morning rise	7210 Feb 03 18:28	8° \approx 34'03		direct	7216 Oct 29 19:56	22° \approx 58'13	
retrograde	7210 May 11 00:47	10° \approx 54'09		evening set	7217 Feb 01 08:19	25° \approx 06'28	
opposition	7210 Jul 27 02:53	9° \approx 31'30	13°51'21				
min. Earth dist.	7210 Jul 27 09:27	9° \approx 31'02	28.80371 AU	conjunction	7217 Feb 13 04:16	25° \approx 33'40	9°47'17
direct	7210 Oct 14 18:33	8° \approx 06'24		minimum elong	7217 Feb 13 04:37	25° \approx 33'42	9°47'20
evening set	7211 Jan 21 16:20	10° \approx 28'05		max. Earth dist.	7217 Feb 13 16:17	25° \approx 34'50	31.30695 AU
				morning rise	7217 Feb 24 23:32	26° \approx 00'49	
conjunction	7211 Jan 29 23:44	10° \approx 47'48	12°44'39	retrograde	7217 May 27 16:21	28° \approx 05'51	
minimum elong	7211 Jan 30 00:06	10° \approx 47'51	12°44'42	opposition	7217 Aug 13 13:17	26° \approx 44'48	10°09'57
max. Earth dist.	7211 Jan 29 19:31	10° \approx 47'23	30.77710 AU	min. Earth dist.	7217 Aug 13 01:39	26° \approx 45'35	29.39506 AU
morning rise	7211 Feb 07 07:05	11° \approx 07'32		direct	7217 Nov 01 14:35	25° \approx 21'46	
retrograde	7211 May 13 17:45	13° \approx 25'17		evening set	7218 Feb 03 12:05	27° \approx 27'58	
opposition	7211 Jul 29 22:55	12° \approx 02'50	13°23'16				
min. Earth dist.	7211 Jul 30 02:07	12° \approx 02'36	28.85822 AU	conjunction	7218 Feb 15 18:36	27° \approx 56'00	9°14'38
direct	7211 Oct 17 16:25	10° \approx 38'01		minimum elong	7218 Feb 15 18:58	27° \approx 56'02	9°14'40
evening set	7212 Jan 23 17:33	12° \approx 57'18		max. Earth dist.	7218 Feb 16 08:34	27° \approx 57'20	31.42804 AU
				morning rise	7218 Feb 28 00:34	28° \approx 23'59	
conjunction	7212 Feb 01 17:45	13° \approx 18'36	12°17'47		7218 Apr 20 00:04	0° \approx	
minimum elong	7212 Feb 01 18:09	13° \approx 18'38	12°17'51	retrograde	7218 May 30 07:03	0° \approx 27'05	
max. Earth dist.	7212 Feb 01 15:48	13° \approx 18'25	30.84075 AU		7218 Jul 10 21:59	30° \approx	
morning rise	7212 Feb 10 17:58	13° \approx 39'54		opposition	7218 Aug 16 05:31	29° \approx 06'16	9°34'35
	7212 Mar 19 03:42	15° \approx		min. Earth dist.	7218 Aug 15 14:14	29° \approx 07'18	29.51745 AU
retrograde	7212 May 15 11:03	15° \approx 55'22		direct	7218 Nov 04 10:08	27° \approx 43'34	
	7212 Jul 15 07:06	15° \approx		evening set	7219 Feb 05 15:48	29° \approx 47'45	
opposition	7212 Jul 31 18:35	14° \approx 33'08	12°53'48		7219 Feb 11 02:02	0° \approx	
min. Earth dist.	7212 Jul 31 19:15	14° \approx 33'05	28.92355 AU				
direct	7212 Oct 19 11:51	13° \approx 08'36		conjunction	7219 Feb 18 08:16	0° \approx 16'32	8°41'20
	7213 Jan 13 16:22	15° \approx		minimum elong	7219 Feb 18 08:36	0° \approx 16'34	8°41'22
evening set	7213 Jan 24 19:41	15° \approx 25'36		max. Earth dist.	7219 Feb 19 01:33	0° \approx 18'11	31.55863 AU
				morning rise	7219 Mar 03 00:03	0° \approx 45'16	
conjunction	7213 Feb 03 11:31	15° \approx 48'19	11°49'42	retrograde	7219 Jun 01 19:07	2° \approx 46'32	
minimum elong	7213 Feb 03 11:54	15° \approx 48'21	11°49'45	opposition	7219 Aug 18 21:17	1° \approx 25'57	8°58'36
max. Earth dist.	7213 Feb 03 13:11	15° \approx 48'29	30.91491 AU	min. Earth dist.	7219 Aug 18 04:02	1° \approx 27'07	29.64986 AU
morning rise	7213 Feb 13 03:04	16° \approx 11'02		direct	7219 Nov 07 02:50	0° \approx 03'35	
retrograde	7213 May 18 02:47	18° \approx 24'17		evening set	7220 Feb 07 19:34	2° \approx 05'51	
opposition	7213 Aug 03 13:41	17° \approx 02'17	12°23'06				
min. Earth dist.	7213 Aug 03 11:58	17° \approx 02'24	28.99889 AU	conjunction	7220 Feb 20 21:05	2° \approx 35'16	8°07'29
direct	7213 Oct 22 08:31	15° \approx 38'03		minimum elong	7220 Feb 20 21:25	2° \approx 35'18	8°07'31

max. Earth dist.	7220 Feb 21 17:05	2° ✕ 37'10	31.69927 AU	conjunction	7227 Mar 07 19:38	17° ✕ 58'23	4°02'34
morning rise	7220 Mar 04 21:51	3° ✕ 04'38		minimum elong	7227 Mar 07 19:48	17° ✕ 58'24	4°02'35
retrograde	7220 Jun 03 05:36	5° ✕ 04'08		max. Earth dist.	7227 Mar 09 07:12	18° ✕ 01'35	32.92725 AU
opposition	7220 Aug 20 12:11	3° ✕ 43'51	8°22'04	morning rise	7227 Mar 22 14:56	18° ✕ 30'01	
min. Earth dist.	7220 Aug 19 15:25	3° ✕ 45'14	29.79231 AU	retrograde	7227 Jun 18 22:06	20° ✕ 19'16	
direct	7220 Nov 08 20:16	2° ✕ 21'50		min. Earth dist.	7227 Sep 04 13:06	19° ✕ 03'41	31.03053 AU
evening set	7221 Feb 08 23:30	4° ✕ 22'15		opposition	7227 Sep 06 01:56	19° ✕ 01'20	3°59'37
				direct	7227 Nov 25 16:27	17° ✕ 42'13	
				evening set	7228 Feb 23 03:25	19° ✕ 31'41	
conjunction	7221 Feb 22 09:16	4° ✕ 52'14	7°33'10				
minimum elong	7221 Feb 22 09:34	4° ✕ 52'16	7°33'11				
max. Earth dist.	7221 Feb 23 07:46	4° ✕ 54'21	31.84973 AU	conjunction	7228 Mar 09 02:57	20° ✕ 03'27	3°27'27
morning rise	7221 Mar 07 18:20	5° ✕ 22'09		minimum elong	7228 Mar 09 03:06	20° ✕ 03'28	3°27'28
retrograde	7221 Jun 05 16:12	7° ✕ 19'58		max. Earth dist.	7228 Mar 10 16:47	20° ✕ 06'49	33.12857 AU
min. Earth dist.	7221 Aug 22 03:12	6° ✕ 01'31	29.94482 AU	morning rise	7228 Mar 24 01:38	20° ✕ 35'09	
opposition	7221 Aug 23 02:24	5° ✕ 59'59	7°45'05	retrograde	7228 Jun 20 04:27	22° ✕ 23'11	
direct	7221 Nov 11 10:17	4° ✕ 38'22		min. Earth dist.	7228 Sep 05 21:48	21° ✕ 07'58	31.23292 AU
evening set	7222 Feb 11 03:27	6° ✕ 37'00		opposition	7228 Sep 07 11:33	21° ✕ 05'34	3°22'15
				direct	7228 Nov 27 03:09	19° ✕ 46'51	
				evening set	7229 Feb 24 07:17	21° ✕ 35'00	
conjunction	7222 Feb 24 20:49	7° ✕ 07'28	6°58'28				
minimum elong	7222 Feb 24 21:06	7° ✕ 07'30	6°58'30				
max. Earth dist.	7222 Feb 25 22:27	7° ✕ 09'51	32.00990 AU	conjunction	7229 Mar 11 09:37	22° ✕ 06'45	2°52'31
morning rise	7222 Mar 10 13:14	7° ✕ 37'51		minimum elong	7229 Mar 11 09:44	22° ✕ 06'46	2°52'32
retrograde	7222 Jun 08 01:34	9° ✕ 34'04		max. Earth dist.	7229 Mar 13 00:50	22° ✕ 10'13	33.33461 AU
opposition	7222 Aug 25 16:02	8° ✕ 14'25	7°07'47	morning rise	7229 Mar 26 11:05	22° ✕ 38'27	
min. Earth dist.	7222 Aug 24 14:17	8° ✕ 16'07	30.10670 AU	retrograde	7229 Jun 22 08:45	24° ✕ 25'18	
direct	7222 Nov 14 01:27	6° ✕ 53'13		min. Earth dist.	7229 Sep 08 04:17	23° ✕ 10'32	31.43997 AU
evening set	7223 Feb 13 07:24	8° ✕ 50'09		opposition	7229 Sep 09 20:13	23° ✕ 08'00	2°45'07
				direct	7229 Nov 29 14:49	21° ✕ 49'40	
				evening set	7230 Feb 26 11:02	23° ✕ 36'34	
conjunction	7223 Feb 27 07:23	9° ✕ 21'00	6°23'30				
minimum elong	7223 Feb 27 07:38	9° ✕ 21'02	6°23'31				
max. Earth dist.	7223 Feb 28 10:47	9° ✕ 23'32	32.17888 AU	conjunction	7230 Mar 13 15:29	24° ✕ 08'16	2°17'49
morning rise	7223 Mar 13 06:42	9° ✕ 51'48		minimum elong	7230 Mar 13 15:34	24° ✕ 08'16	2°17'49
retrograde	7223 Jun 10 11:34	11° ✕ 46'29		max. Earth dist.	7230 Mar 15 08:08	24° ✕ 11'50	33.54509 AU
min. Earth dist.	7223 Aug 27 00:23	10° ✕ 29'03	30.27742 AU	morning rise	7230 Mar 28 19:15	24° ✕ 39'54	
opposition	7223 Aug 28 05:00	10° ✕ 27'11	6°30'15	retrograde	7230 Jun 24 13:11	26° ✕ 25'39	
direct	7223 Nov 16 14:17	9° ✕ 06'23		min. Earth dist.	7230 Sep 10 10:49	25° ✕ 11'16	31.65203 AU
evening set	7224 Feb 15 11:20	11° ✕ 01'42		opposition	7230 Sep 12 04:25	25° ✕ 08'39	2°08'17
				direct	7230 Dec 01 23:27	23° ✕ 50'42	
				evening set	7231 Feb 28 14:19	25° ✕ 36'22	
conjunction	7224 Feb 29 17:33	11° ✕ 32'53	5°48'20				
minimum elong	7224 Feb 29 17:47	11° ✕ 32'54	5°48'22				
max. Earth dist.	7224 Mar 02 00:17	11° ✕ 35'42	32.35600 AU	conjunction	7231 Mar 15 20:32	26° ✕ 07'58	1°43'23
morning rise	7224 Mar 14 22:44	12° ✕ 03'59		minimum elong	7231 Mar 15 20:36	26° ✕ 07'58	1°43'23
retrograde	7224 Jun 11 19:40	13° ✕ 57'13		max. Earth dist.	7231 Mar 17 15:34	26° ✕ 11'43	33.76050 AU
min. Earth dist.	7224 Aug 28 11:04	12° ✕ 40'13	30.45591 AU	morning rise	7231 Mar 31 01:52	26° ✕ 39'30	
opposition	7224 Aug 29 17:11	12° ✕ 38'15	5°52'34	retrograde	7231 Jun 26 15:45	28° ✕ 24'12	
direct	7224 Nov 18 03:33	11° ✕ 17'53		min. Earth dist.	7231 Sep 12 16:45	27° ✕ 10'12	31.86921 AU
evening set	7225 Feb 16 15:29	13° ✕ 11'39		opposition	7231 Sep 14 11:51	27° ✕ 07'30	1°31'48
				direct	7231 Dec 04 08:50	25° ✕ 49'56	
				evening set	7232 Mar 01 17:44	27° ✕ 34'28	
conjunction	7225 Mar 03 02:53	13° ✕ 43'04	5°13'05				
minimum elong	7225 Mar 03 03:05	13° ✕ 43'05	5°13'06				
max. Earth dist.	7225 Mar 04 10:38	13° ✕ 45'58	32.54029 AU	conjunction	7232 Mar 17 00:52	28° ✕ 05'54	1°09'17
morning rise	7225 Mar 17 13:34	14° ✕ 14'25		minimum elong	7232 Mar 17 00:55	28° ✕ 05'54	1°09'18
retrograde	7225 Jun 14 05:33	16° ✕ 06'16		max. Earth dist.	7232 Mar 18 20:51	28° ✕ 09'42	33.98099 AU
min. Earth dist.	7225 Aug 30 19:33	14° ✕ 49'47	30.64146 AU	morning rise	7232 Apr 01 07:30	28° ✕ 37'17	
opposition	7225 Sep 01 04:43	14° ✕ 47'39	5°14'51		7232 May 21 15:03	0° ° °	
direct	7225 Nov 20 14:57	13° ✕ 27'42		retrograde	7232 Jun 27 19:50	0° ° °21'01	
evening set	7226 Feb 18 19:26	15° ✕ 19'59			7232 Aug 05 07:26	30° ° ° ° °	
				min. Earth dist.	7232 Sep 13 20:41	29° ✕ 07'28	32.09203 AU
conjunction	7226 Mar 05 11:37	15° ✕ 51'35	4°37'48	opposition	7232 Sep 15 18:21	29° ✕ 04'38	0°55'43
minimum elong	7226 Mar 05 11:48	15° ✕ 51'36	4°37'49	direct	7232 Dec 05 15:05	27° ✕ 47'26	
max. Earth dist.	7226 Mar 06 22:18	15° ✕ 54'43	32.73091 AU	evening set	7233 Mar 03 20:50	29° ✕ 30'54	
morning rise	7226 Mar 20 02:48	16° ✕ 23'06			7233 Mar 18 03:38	0° ° °	
retrograde	7226 Jun 16 13:12	18° ✕ 13'37					
min. Earth dist.	7226 Sep 02 05:44	16° ✕ 57'32	30.83320 AU	conjunction	7233 Mar 19 04:43	0° ° °02'09	0°35'34
opposition	7226 Sep 03 15:46	16° ✕ 55'21	4°37'11	minimum elong	7233 Mar 19 04:44	0° ° °02'09	0°35'34
direct	7226 Nov 23 03:47	15° ✕ 35'50		max. Earth dist.	7233 Mar 21 03:31	0° ° °06'09	34.20691 AU
evening set	7227 Feb 20 23:33	17° ✕ 26'41		morning rise	7233 Apr 03 11:47	0° ° °33'20	

retrograde	7233 Jun 29 22:31	2°♈16'10		opposition	7239 Sep 29 23:16	12°♈02'11	-3°02'27
min. Earth dist.	7233 Sep 16 01:46	1°♈02'59	32.32032 AU	direct	7239 Dec 20 02:26	10°♈47'52	
opposition	7233 Sep 18 00:25	1°♈00'06	0°20'04	evening set	7240 Mar 16 14:42	12°♈25'29	
	7233 Nov 03 11:46	30°♈					
direct	7233 Dec 07 21:31	29°♈43'19		conjunction	7240 Mar 31 13:48	12°♈54'25	-3°07'19
	7234 Jan 10 11:20	0°♈		minimum elong	7240 Mar 31 13:41	12°♈54'25	3°07'19
evening set	7234 Mar 05 23:49	1°♈25'48		max. Earth dist.	7240 Apr 02 21:30	12°♈58'57	35.89963 AU
				morning rise	7240 Apr 15 12:29	13°♈23'21	
conjunction	7234 Mar 21 07:38	1°♈56'48	0°02'17	retrograde	7240 Jul 12 03:01	15°♈01'16	
minimum elong	7234 Mar 21 07:38	1°♈56'48	0°02'17	min. Earth dist.	7240 Sep 28 17:23	13°♈50'53	34.02637 AU
behind sun begin	7234 Mar 21 01:15	1°♈56'17		opposition	7240 Oct 01 00:55	13°♈47'36	-3°34'05
behind sun end	7234 Mar 21 14:00	1°♈57'19		direct	7240 Dec 21 04:58	12°♈33'38	
max. Earth dist.	7234 Mar 23 07:10	2°♈00'50	34.43807 AU	evening set	7241 Mar 18 16:46	14°♈10'34	
morning rise	7234 Apr 05 14:57	2°♈27'45					
desc. node	7234 Apr 15 00:03	2°♈46'00		conjunction	7241 Apr 02 12:55	14°♈39'04	-3°36'57
retrograde	7234 Jul 02 02:38	4°♈09'44		minimum elong	7241 Apr 02 12:47	14°♈39'03	3°36'59
min. Earth dist.	7234 Sep 18 04:11	2°♈57'04	32.55389 AU	max. Earth dist.	7241 Apr 04 20:18	14°♈43'32	36.14910 AU
opposition	7234 Sep 20 05:44	2°♈54'02	-0°15'05	morning rise	7241 Apr 17 08:56	15°♈07'34	
direct	7234 Dec 10 02:00	1°♈37'40		retrograde	7241 Jul 14 02:54	16°♈44'55	
evening set	7235 Mar 08 02:37	3°♈19'13		min. Earth dist.	7241 Sep 30 16:38	15°♈34'55	34.27725 AU
				opposition	7241 Oct 03 02:02	15°♈31'32	-4°05'03
conjunction	7235 Mar 23 10:07	3°♈49'57	-0°30'40	direct	7241 Dec 23 05:53	14°♈17'54	
minimum elong	7235 Mar 23 10:05	3°♈49'57	0°30'41	evening set	7242 Mar 20 18:24	15°♈54'12	
max. Earth dist.	7235 Mar 25 12:06	3°♈54'09	34.67398 AU				
morning rise	7235 Apr 07 17:01	4°♈20'39		conjunction	7242 Apr 04 11:24	16°♈22'14	-4°06'00
retrograde	7235 Jul 04 04:41	6°♈01'50		minimum elong	7242 Apr 04 11:16	16°♈22'14	4°06'01
min. Earth dist.	7235 Sep 20 08:20	4°♈49'32	32.79216 AU	max. Earth dist.	7242 Apr 06 20:28	16°♈26'49	36.39909 AU
opposition	7235 Sep 22 10:28	4°♈46'29	-0°49'44	morning rise	7242 Apr 19 04:13	16°♈50'16	
direct	7235 Dec 12 07:56	3°♈30'32		retrograde	7242 Jul 16 01:36	18°♈27'07	
evening set	7236 Mar 09 05:14	5°♈11'13		min. Earth dist.	7242 Oct 02 17:26	17°♈17'21	34.52893 AU
				opposition	7242 Oct 05 02:43	17°♈13'59	-4°35'22
conjunction	7236 Mar 24 11:55	5°♈41'39	-1°03'03	direct	7242 Dec 25 07:00	16°♈00'41	
minimum elong	7236 Mar 24 11:52	5°♈41'38	1°03'04	evening set	7243 Mar 22 19:50	17°♈36'22	
max. Earth dist.	7236 Mar 26 14:49	5°♈45'54	34.91408 AU				
morning rise	7236 Apr 08 18:03	6°♈12'03		conjunction	7243 Apr 06 09:20	18°♈03'55	-4°34'26
retrograde	7236 Jul 05 06:53	7°♈52'30		minimum elong	7243 Apr 06 09:11	18°♈03'54	4°34'28
min. Earth dist.	7236 Sep 21 10:12	6°♈40'40	33.03424 AU	max. Earth dist.	7243 Apr 08 18:42	18°♈08'29	36.65001 AU
opposition	7236 Sep 23 14:27	6°♈37'30	-1°23'48	morning rise	7243 Apr 20 22:41	18°♈31'28	
direct	7236 Dec 13 14:40	5°♈21'58		retrograde	7243 Jul 17 23:56	20°♈07'49	
evening set	7237 Mar 11 07:52	7°♈01'50		min. Earth dist.	7243 Oct 04 15:40	18°♈58'23	34.78178 AU
				opposition	7243 Oct 07 02:32	18°♈54'57	-5°05'00
conjunction	7237 Mar 26 13:08	7°♈31'56	-1°34'56	direct	7243 Dec 27 07:57	17°♈41'56	
minimum elong	7237 Mar 26 13:05	7°♈31'56	1°34'58	evening set	7244 Mar 23 21:03	19°♈17'04	
max. Earth dist.	7237 Mar 28 17:27	7°♈36'17	35.15732 AU				
morning rise	7237 Apr 10 18:05	8°♈02'00		conjunction	7244 Apr 07 06:39	19°♈44'07	-5°02'14
retrograde	7237 Jul 07 08:06	9°♈41'46		minimum elong	7244 Apr 07 06:30	19°♈44'07	5°02'16
min. Earth dist.	7237 Sep 23 12:44	8°♈30'20	33.27949 AU	max. Earth dist.	7244 Apr 09 17:03	19°♈48'44	36.90217 AU
opposition	7237 Sep 25 17:57	8°♈27'07	-1°57'18	morning rise	7244 Apr 21 16:18	20°♈11'11	
direct	7237 Dec 15 18:54	7°♈12'01		retrograde	7244 Jul 18 20:12	21°♈47'04	
evening set	7238 Mar 13 10:16	8°♈51'05		min. Earth dist.	7244 Oct 05 14:21	20°♈37'55	35.03640 AU
				opposition	7244 Oct 08 01:58	20°♈34'27	-5°33'57
conjunction	7238 Mar 28 13:57	9°♈20'50	-2°06'18	direct	7244 Dec 28 08:12	19°♈21'47	
minimum elong	7238 Mar 28 13:53	9°♈20'49	2°06'18	evening set	7245 Mar 25 21:57	20°♈56'23	
max. Earth dist.	7238 Mar 30 19:44	9°♈25'16	35.40322 AU				
morning rise	7238 Apr 12 17:07	9°♈50'33		conjunction	7245 Apr 09 03:31	21°♈22'55	-5°29'25
retrograde	7238 Jul 09 05:53	11°♈29'39		minimum elong	7245 Apr 09 03:21	21°♈22'55	5°29'28
min. Earth dist.	7238 Sep 25 14:43	10°♈18'36	33.52699 AU	max. Earth dist.	7245 Apr 11 15:23	21°♈27'37	37.15617 AU
opposition	7238 Sep 27 20:54	10°♈15'21	-2°30'12	morning rise	7245 Apr 23 08:53	21°♈49'29	
direct	7238 Dec 18 00:08	9°♈00'39		retrograde	7245 Jul 20 13:54	23°♈24'57	
evening set	7239 Mar 15 12:34	10°♈38'59		min. Earth dist.	7245 Oct 07 12:11	22°♈16'07	35.29285 AU
				opposition	7245 Oct 10 00:43	22°♈12'37	-6°02'11
conjunction	7239 Mar 30 13:59	11°♈08'20	-2°37'05	direct	7245 Dec 30 10:14	21°♈00'16	
minimum elong	7239 Mar 30 13:54	11°♈08'19	2°37'07	evening set	7246 Mar 27 22:49	22°♈34'24	
max. Earth dist.	7239 Apr 01 19:58	11°♈12'45	35.65083 AU				
morning rise	7239 Apr 14 15:16	11°♈37'40		conjunction	7246 Apr 10 23:46	23°♈00'25	-5°55'56
retrograde	7239 Jul 11 05:15	13°♈16'10		minimum elong	7246 Apr 10 23:35	23°♈00'25	5°55'58
min. Earth dist.	7239 Sep 27 15:36	12°♈05'30	33.77622 AU	max. Earth dist.	7246 Apr 13 11:49	23°♈05'06	37.41205 AU
























































































































morning rise	7246 Apr 25 00:55	23° Υ 26'27	direct	7253 Jan 10 15:37	1° \mathcal{B} 58'59
retrograde	7246 Jul 22 10:13	25° Υ 01'34	evening set	7253 Apr 08 23:16	3° \mathcal{B} 30'52
min. Earth dist.	7246 Oct 09 08:49	23° Υ 53'07 35.55140 AU			
opposition	7246 Oct 11 23:06	23° Υ 49'32 -6°29'43	conjunction	7253 Apr 21 10:05	3° \mathcal{B} 52'56 -8°43'35
direct	7247 Jan 01 08:23	22° Υ 37'32	minimum elong	7253 Apr 21 09:52	3° \mathcal{B} 52'55 8°43'39
evening set	7247 Mar 29 23:11	24° Υ 11'13	max. Earth dist.	7253 Apr 24 01:35	3° \mathcal{B} 57'40 39.22008 AU
			morning rise	7253 May 03 21:15	4° \mathcal{B} 15'02
conjunction	7247 Apr 12 19:37	24° Υ 36'43 -6°21'49	retrograde	7253 Aug 01 19:08	5° \mathcal{B} 48'34
minimum elong	7247 Apr 12 19:26	24° Υ 36'42 6°21'52	min. Earth dist.	7253 Oct 20 04:46	4° \mathcal{B} 42'17 37.37139 AU
max. Earth dist.	7247 Apr 15 09:37	24° Υ 41'31 37.66973 AU	opposition	7253 Oct 22 22:16	4° \mathcal{B} 38'39 -9°22'56
morning rise	7247 Apr 26 15:59	25° Υ 02'13	direct	7254 Jan 12 10:38	3° \mathcal{B} 29'03
retrograde	7247 Jul 24 04:46	26° Υ 37'01	evening set	7254 Apr 10 22:40	5° \mathcal{B} 00'42
min. Earth dist.	7247 Oct 11 06:48	25° Υ 28'51 35.81147 AU			
opposition	7247 Oct 13 20:58	25° Υ 25'17 -6°56'33	conjunction	7254 Apr 23 03:16	5° \mathcal{B} 22'10 -9°05'01
direct	7248 Jan 03 07:14	24° Υ 13'39	minimum elong	7254 Apr 23 03:03	5° \mathcal{B} 22'09 9°05'04
evening set	7248 Mar 30 23:39	25° Υ 46'58	max. Earth dist.	7254 Apr 25 19:50	5° \mathcal{B} 26'57 39.47382 AU
			morning rise	7254 May 05 08:00	5° \mathcal{B} 43'40
conjunction	7248 Apr 13 15:00	26° Υ 11'54 -6°47'03	retrograde	7254 Aug 03 11:39	7° \mathcal{B} 17'04
minimum elong	7248 Apr 13 14:49	26° Υ 11'53 6°47'04	min. Earth dist.	7254 Oct 22 00:32	6° \mathcal{B} 10'56 37.62627 AU
max. Earth dist.	7248 Apr 16 04:46	26° Υ 16'39 37.92866 AU	opposition	7254 Oct 24 17:06	6° \mathcal{B} 07'22 -9°44'59
morning rise	7248 Apr 27 06:31	26° Υ 36'52	direct	7255 Jan 14 06:08	4° \mathcal{B} 58'04
retrograde	7248 Jul 25 01:43	28° Υ 11'23	evening set	7255 Apr 12 21:50	6° \mathcal{B} 29'28
min. Earth dist.	7248 Oct 12 02:09	27° Υ 03'37 36.07261 AU			
opposition	7248 Oct 14 18:05	26° Υ 59'59 -7°22'40	conjunction	7255 Apr 24 19:48	6° \mathcal{B} 50'20 -9°25'51
direct	7249 Jan 04 03:07	25° Υ 48'42	minimum elong	7255 Apr 24 19:35	6° \mathcal{B} 50'19 9°25'54
evening set	7249 Apr 01 23:51	27° Υ 21'40	max. Earth dist.	7255 Apr 27 11:44	6° \mathcal{B} 55'02 39.72585 AU
			morning rise	7255 May 06 18:01	7° \mathcal{B} 11'14
conjunction	7249 Apr 15 10:02	27° Υ 46'04 -7°11'38	retrograde	7255 Aug 05 06:00	8° \mathcal{B} 44'28
minimum elong	7249 Apr 15 09:50	27° Υ 46'03 7°11'41	min. Earth dist.	7255 Oct 23 17:35	7° \mathcal{B} 38'38 37.87962 AU
max. Earth dist.	7249 Apr 18 01:17	27° Υ 50'53 38.18820 AU	opposition	7255 Oct 26 11:17	7° \mathcal{B} 35'01 -10°06'23
morning rise	7249 Apr 28 20:20	28° Υ 10'28	direct	7256 Jan 15 23:00	6° \mathcal{B} 25'58
retrograde	7249 Jul 26 22:29	29° Υ 44'45	evening set	7256 Apr 13 20:49	7° \mathcal{B} 57'11
min. Earth dist.	7249 Oct 13 23:26	28° Υ 37'15 36.33419 AU			
opposition	7249 Oct 16 15:05	28° Υ 33'39 -7°48'05	conjunction	7256 Apr 25 12:01	8° \mathcal{B} 17'26 -9°46'03
direct	7250 Jan 05 22:48	27° Υ 22'44	minimum elong	7256 Apr 25 11:48	8° \mathcal{B} 17'25 9°46'06
evening set	7250 Apr 03 23:50	28° Υ 55'24	max. Earth dist.	7256 Apr 28 04:43	8° \mathcal{B} 22'09 39.97651 AU
			morning rise	7256 May 07 03:32	8° \mathcal{B} 37'43
conjunction	7250 Apr 17 04:32	29° Υ 19'14 -7°35'34	retrograde	7256 Aug 05 23:52	10° \mathcal{B} 10'50
minimum elong	7250 Apr 17 04:20	29° Υ 19'13 7°35'36	min. Earth dist.	7256 Oct 24 11:42	9° \mathcal{B} 05'10 38.13206 AU
max. Earth dist.	7250 Apr 19 19:58	29° Υ 24'02 38.44784 AU	opposition	7256 Oct 27 05:03	9° \mathcal{B} 01'36 -10°27'07
morning rise	7250 Apr 30 09:19	29° Υ 43'05	direct	7257 Jan 16 14:57	7° \mathcal{B} 52'49
	7250 May 10 01:49	0° \mathcal{B}	evening set	7257 Apr 15 19:37	9° \mathcal{B} 23'52
retrograde	7250 Jul 28 16:47	1° \mathcal{B} 17'08			
min. Earth dist.	7250 Oct 15 18:52	0° \mathcal{B} 09'59 36.59544 AU	conjunction	7257 Apr 27 03:54	9° \mathcal{B} 43'30 -10°05'39
opposition	7250 Oct 18 11:32	0° \mathcal{B} 06'21 -8°12'49	minimum elong	7257 Apr 27 03:40	9° \mathcal{B} 43'29 10°05'42
	7250 Oct 23 04:27	30° $\mathcal{R}\Upsilon$	max. Earth dist.	7257 Apr 29 21:07	9° \mathcal{B} 48'13 40.22657 AU
direct	7251 Jan 07 19:56	28° Υ 55'48	morning rise	7257 May 08 12:18	10° \mathcal{B} 03'09
	7251 Mar 20 10:35	0° \mathcal{B}	retrograde	7257 Aug 07 13:14	11° \mathcal{B} 36'10
evening set	7251 Apr 05 23:49	0° \mathcal{B} 28'11	min. Earth dist.	7257 Oct 26 04:25	10° \mathcal{B} 30'46 38.38391 AU
			opposition	7257 Oct 28 22:26	10° \mathcal{B} 27'10 -10°47'11
conjunction	7251 Apr 18 22:44	0° \mathcal{B} 51'26 -7°58'52	direct	7258 Jan 18 10:53	9° \mathcal{B} 18'39
minimum elong	7251 Apr 18 22:31	0° \mathcal{B} 51'25 7°58'55	evening set	7258 Apr 17 18:09	10° \mathcal{B} 49'34
max. Earth dist.	7251 Apr 21 14:17	0° \mathcal{B} 56'13 38.70672 AU			
morning rise	7251 May 01 21:59	1° \mathcal{B} 14'43	conjunction	7258 Apr 28 19:09	11° \mathcal{B} 08'34 -10°24'38
retrograde	7251 Jul 30 10:23	2° \mathcal{B} 48'35	minimum elong	7258 Apr 28 18:56	11° \mathcal{B} 08'33 10°24'41
min. Earth dist.	7251 Oct 17 14:45	1° \mathcal{B} 41'43 36.85587 AU	max. Earth dist.	7258 May 01 12:10	11° \mathcal{B} 13'15 40.47618 AU
opposition	7251 Oct 20 07:32	1° \mathcal{B} 38'06 -8°36'51	morning rise	7258 May 09 20:33	11° \mathcal{B} 27'36
direct	7252 Jan 09 16:56	0° \mathcal{B} 27'53	retrograde	7258 Aug 09 03:24	13° \mathcal{B} 00'33
evening set	7252 Apr 06 23:34	2° \mathcal{B} 00'01	min. Earth dist.	7258 Oct 27 20:46	11° \mathcal{B} 55'25 38.63554 AU
			opposition	7258 Oct 30 15:31	11° \mathcal{B} 51'47 -11°06'36
conjunction	7252 Apr 19 16:43	2° \mathcal{B} 22'41 -8°21'32	direct	7259 Jan 20 05:08	10° \mathcal{B} 43'33
minimum elong	7252 Apr 19 16:30	2° \mathcal{B} 22'40 8°21'34	evening set	7259 Apr 19 16:32	12° \mathcal{B} 14'21
max. Earth dist.	7252 Apr 22 09:05	2° \mathcal{B} 27'30 38.96437 AU			
morning rise	7252 May 02 09:53	2° \mathcal{B} 45'22	conjunction	7259 Apr 30 10:22	12° \mathcal{B} 32'44 -10°42'59
retrograde	7252 Jul 31 01:18	4° \mathcal{B} 19'04	minimum elong	7259 Apr 30 10:08	12° \mathcal{B} 32'43 10°43'03
min. Earth dist.	7252 Oct 18 10:37	3° \mathcal{B} 12'28 37.11458 AU	max. Earth dist.	7259 May 03 04:42	12° \mathcal{B} 37'29 40.72547 AU
opposition	7252 Oct 21 03:07	3° \mathcal{B} 08'52 -9°00'14	morning rise	7259 May 11 04:18	12° \mathcal{B} 51'07

retrograde	7259 Aug 10 16:14	14°8'24"02		opposition	7265 Nov 09 04:56	21°8'21"50 -13°05'10
min. Earth dist.	7259 Oct 29 13:48	13°8'19"07 38.88656 AU		direct	7266 Jan 29 21:00	20°8'15"31
opposition	7259 Nov 01 08:03	13°8'15"31 -11°25'21		evening set	7266 May 01 02:56	21°8'46"14
direct	7260 Jan 22 00:08	12°8'07"34				
evening set	7260 Apr 20 14:55	13°8'38"18		conjunction	7266 May 09 11:55	22°8'00"02 -12°35'27
				minimum elong	7266 May 09 11:44	22°8'00"01 12°35'31
conjunction	7260 May 01 01:04	13°8'56"02 -11°00'45		max. Earth dist.	7266 May 12 05:21	22°8'04"33 42.42122 AU
minimum elong	7260 May 01 00:52	13°8'56"01 11°00'49		morning rise	7266 May 17 21:00	22°8'13"51
max. Earth dist.	7260 May 03 18:41	14°8'00"43 40.97407 AU		retrograde	7266 Aug 19 18:41	23°8'47"07
morning rise	7260 May 11 11:33	14°8'13"48		min. Earth dist.	7266 Nov 08 02:38	22°8'43"41 40.58719 AU
	7260 Jun 09 23:20	15°8'		opposition	7266 Nov 10 19:26	22°8'40"16 -13°19'49
retrograde	7260 Aug 11 07:46	15°8'46"42		direct	7267 Jan 31 12:41	21°8'34"11
	7260 Oct 16 01:22	15°8'		evening set	7267 May 03 00:53	23°8'04"57
min. Earth dist.	7260 Oct 30 04:44	14°8'42"05 39.13670 AU				
opposition	7260 Nov 02 00:15	14°8'38"26 -11°43'29		conjunction	7267 May 11 00:46	23°8'18"04 -12°49'23
direct	7261 Jan 22 15:51	13°8'30"47		minimum elong	7267 May 11 00:35	23°8'18"03 12°49'27
	7261 Apr 21 16:14	15°8'		max. Earth dist.	7267 May 13 17:09	23°8'22"29 42.65091 AU
evening set	7261 Apr 22 12:56	15°8'01"27		morning rise	7267 May 19 00:44	23°8'31"12
				retrograde	7267 Aug 21 08:17	25°8'04"33
conjunction	7261 May 02 15:28	15°8'18"32 -11°17'55		min. Earth dist.	7267 Nov 09 15:48	24°8'01"20 40.81713 AU
minimum elong	7261 May 02 15:15	15°8'18"31 11°17'59		opposition	7267 Nov 12 09:15	23°8'57"55 -13°33'57
max. Earth dist.	7261 May 05 10:04	15°8'23"15 41.22146 AU		direct	7268 Feb 02 01:48	22°8'52"02
morning rise	7261 May 12 18:15	15°8'35"40		evening set	7268 May 03 22:37	24°8'22"53
retrograde	7261 Aug 12 23:28	17°8'08"35				
min. Earth dist.	7261 Oct 31 21:42	16°8'04"09 39.38541 AU		conjunction	7268 May 11 13:14	24°8'35"18 -13°02'48
opposition	7261 Nov 03 16:19	16°8'00"35 -12°00'59		minimum elong	7268 May 11 13:03	24°8'35"17 13°02'54
	7261 Dec 31 22:52	15°8'		max. Earth dist.	7268 May 14 05:36	24°8'39"41 42.87750 AU
direct	7262 Jan 24 07:07	14°8'53"13		morning rise	7268 May 19 04:00	24°8'47"44
	7262 Feb 16 05:41	15°8'		retrograde	7268 Aug 21 12:20	26°8'21"13
evening set	7262 Apr 24 11:06	16°8'23"51		min. Earth dist.	7268 Nov 10 06:26	25°8'18"08 41.04441 AU
				opposition	7268 Nov 12 23:02	25°8'14"45 -13°47'32
conjunction	7262 May 04 05:42	16°8'40"18 -11°34'31		direct	7269 Feb 02 13:56	24°8'09"05
minimum elong	7262 May 04 05:30	16°8'40"17 11°34'35		evening set	7269 May 05 20:22	25°8'40"03
max. Earth dist.	7262 May 06 23:57	16°8'44"58 41.46728 AU				
morning rise	7262 May 14 00:28	16°8'56"47		conjunction	7269 May 13 01:23	25°8'51"46 -13°15'43
retrograde	7262 Aug 14 15:14	18°8'29"43		minimum elong	7269 May 13 01:12	25°8'51"45 13°15'47
min. Earth dist.	7262 Nov 02 12:45	17°8'25"34 39.63211 AU		max. Earth dist.	7269 May 15 18:03	25°8'56"09 43.10183 AU
opposition	7262 Nov 05 07:53	17°8'21"59 -12°17'53		morning rise	7269 May 20 06:24	26°8'03"28
direct	7263 Jan 25 21:13	16°8'14"54		retrograde	7269 Aug 23 09:01	27°8'37"07
evening set	7263 Apr 26 09:04	17°8'45"31		min. Earth dist.	7269 Nov 11 19:43	26°8'34"13 41.26946 AU
				opposition	7269 Nov 14 12:23	26°8'30"52 -14°00'34
conjunction	7263 May 05 19:33	18°8'01"20 -11°50'33		direct	7270 Feb 04 03:56	25°8'25"24
minimum elong	7263 May 05 19:20	18°8'01"19 11°50'36		evening set	7270 May 07 18:11	26°8'56"31
max. Earth dist.	7263 May 08 13:30	18°8'05"57 41.71067 AU				
morning rise	7263 May 15 06:20	18°8'17"09		conjunction	7270 May 14 13:12	27°8'07"30 -13°28'07
retrograde	7263 Aug 16 06:03	19°8'50"09		minimum elong	7270 May 14 13:02	27°8'07"30 13°28'12
min. Earth dist.	7263 Nov 04 04:35	18°8'46"12 39.87621 AU		max. Earth dist.	7270 May 17 05:05	27°8'11"49 43.32423 AU
opposition	7263 Nov 06 23:18	18°8'42"40 -12°34'12		morning rise	7270 May 21 08:21	27°8'18"29
direct	7264 Jan 27 11:43	17°8'35"51		retrograde	7270 Aug 24 20:35	28°8'52"20
evening set	7264 Apr 27 07:07	19°8'06"30		min. Earth dist.	7270 Nov 13 08:24	27°8'49"39 41.49286 AU
				opposition	7270 Nov 16 01:28	27°8'46"17 -14°13'04
conjunction	7264 May 06 09:23	19°8'21"38 -12°06'02		direct	7271 Feb 05 17:16	26°8'41"03
minimum elong	7264 May 06 09:11	19°8'21"38 12°06'06		evening set	7271 May 09 16:05	28°8'12"21
max. Earth dist.	7264 May 09 03:41	19°8'26"15 41.95113 AU				
morning rise	7264 May 15 11:44	19°8'36"48		conjunction	7271 May 16 00:54	28°8'22"36 -13°40'00
retrograde	7264 Aug 16 16:50	21°8'09"52		minimum elong	7271 May 16 00:45	28°8'22"35 13°40'04
min. Earth dist.	7264 Nov 04 20:15	20°8'06"07 40.11687 AU		max. Earth dist.	7271 May 18 17:48	28°8'26"57 43.54498 AU
opposition	7264 Nov 07 14:10	20°8'02"37 -12°49'57		morning rise	7271 May 22 09:44	28°8'32"51
direct	7265 Jan 28 05:31	18°8'56"04			7271 Aug 02 06:19	0°II
evening set	7265 Apr 29 05:11	20°8'26"45		retrograde	7271 Aug 26 05:41	0°II06'55
					7271 Sep 19 18:14	30°8'
conjunction	7265 May 07 22:47	20°8'41"13 -12°21'00		min. Earth dist.	7271 Nov 14 22:06	29°8'04"23 41.71437 AU
minimum elong	7265 May 07 22:35	20°8'41"12 12°21'03		opposition	7271 Nov 17 14:16	29°8'01"04 -14°25'02
max. Earth dist.	7265 May 10 15:35	20°8'45"43 42.18803 AU		direct	7272 Feb 07 09:15	27°8'56"04
morning rise	7265 May 16 16:39	20°8'55"43		evening set	7272 May 10 14:16	29°8'27"37
retrograde	7265 Aug 18 05:57	22°8'28"52				
min. Earth dist.	7265 Nov 06 10:37	21°8'25"20 40.35392 AU		conjunction	7272 May 16 12:16	29°8'37"05 -13°51'23

minimum elong	7272 May 16 12:06	29° 8 37'04	13°51'27	min. Earth dist.	7278 Nov 23 12:09	7° II 32'31	43.18421 AU
max. Earth dist.	7272 May 19 04:03	29° 8 41'21	43.76391 AU	opposition	7278 Nov 26 00:39	7° II 29'28	-15°35'06
morning rise	7272 May 22 10:16	29° 8 46'34		direct	7279 Feb 15 20:04	6° II 25'57	
	7272 May 30 21:58	0° II		evening set	7279 May 24 15:20	8° II 02'00	
retrograde	7272 Aug 26 18:34	1° II 20'55					
min. Earth dist.	7272 Nov 15 09:37	0° II 18'38	41.93392 AU	conjunction	7279 May 25 14:30	8° II 03'30	-14°58'10
opposition	7272 Nov 18 02:36	0° II 15'17	-14°36'29	minimum elong	7279 May 25 14:24	8° II 03'29	14°58'16
	7272 Nov 30 14:21	30° 8		morning rise	7279 May 26 13:31	8° II 04'59	
direct	7273 Feb 07 21:11	29° 8 10'31		max. Earth dist.	7279 May 28 03:10	8° II 07'26	45.21085 AU
	7273 Apr 14 10:40	0° II		retrograde	7279 Sep 04 22:32	9° II 44'05	
evening set	7273 May 12 12:39	0° II 42'21		min. Earth dist.	7279 Nov 24 22:49	8° II 42'49	43.37807 AU
				opposition	7279 Nov 27 11:23	8° II 39'46	-15°43'20
conjunction	7273 May 17 23:25	0° II 51'01	-14°02'16	direct	7280 Feb 17 05:43	7° II 36'23	
minimum elong	7273 May 17 23:17	0° II 51'01	14°02'20				
max. Earth dist.	7273 May 20 15:37	0° II 55'17	43.98071 AU	conjunction	7280 May 26 00:09	9° II 13'27	-15°06'02
morning rise	7273 May 23 10:13	0° II 59'43		minimum elong	7280 May 26 00:02	9° II 13'27	15°06'06
retrograde	7273 Aug 28 07:50	2° II 34'23		max. Earth dist.	7280 May 28 11:54	9° II 17'18	45.40159 AU
min. Earth dist.	7273 Nov 16 23:10	1° II 32'15	42.15118 AU	retrograde	7280 Sep 05 08:46	10° II 53'35	
opposition	7273 Nov 19 14:59	1° II 28'58	-14°47'25	min. Earth dist.	7280 Nov 25 10:09	9° II 52'23	43.56853 AU
direct	7274 Feb 09 08:02	0° II 24'27		opposition	7280 Nov 27 21:54	9° II 49'24	-15°51'08
evening set	7274 May 14 11:33	1° II 56'35		direct	7281 Feb 17 15:13	8° II 46'10	
conjunction	7274 May 19 10:21	2° II 04'26	-14°12'41	conjunction	7281 May 27 09:43	10° II 22'46	-15°13'29
minimum elong	7274 May 19 10:12	2° II 04'26	14°12'45	minimum elong	7281 May 27 09:38	10° II 22'45	15°13'34
max. Earth dist.	7274 May 22 02:23	2° II 08'40	44.19511 AU	max. Earth dist.	7281 May 29 22:03	10° II 26'38	45.58936 AU
morning rise	7274 May 24 09:04	2° II 12'18		retrograde	7281 Sep 06 15:20	12° II 02'26	
retrograde	7274 Aug 29 18:54	3° II 47'20		min. Earth dist.	7281 Nov 26 21:03	11° II 01'21	43.75610 AU
min. Earth dist.	7274 Nov 18 11:00	2° II 45'24	42.36557 AU	opposition	7281 Nov 29 08:13	10° II 58'23	-15°58'31
opposition	7274 Nov 21 02:56	2° II 42'08	-14°57'51	direct	7282 Feb 19 03:08	9° II 55'18	
direct	7275 Feb 10 19:13	1° II 37'51					
evening set	7275 May 16 11:12	3° II 10'22		conjunction	7282 May 28 18:50	11° II 31'27	-15°20'30
				minimum elong	7282 May 28 18:45	11° II 31'27	15°20'34
conjunction	7275 May 20 21:05	3° II 17'21	-14°22'38	max. Earth dist.	7282 May 31 05:50	11° II 35'13	45.77460 AU
minimum elong	7275 May 20 20:58	3° II 17'21	14°22'43	retrograde	7282 Sep 07 23:46	13° II 10'42	
max. Earth dist.	7275 May 23 12:04	3° II 21'30	44.40633 AU	min. Earth dist.	7282 Nov 28 06:36	12° II 09'47	43.94136 AU
morning rise	7275 May 25 06:58	3° II 24'19		opposition	7282 Nov 30 18:17	12° II 06'48	-16°05'27
retrograde	7275 Aug 31 06:08	4° II 59'47		direct	7283 Feb 20 13:48	11° II 03'53	
min. Earth dist.	7275 Nov 19 23:15	3° II 58'01	42.57664 AU				
opposition	7275 Nov 22 14:36	3° II 54'48	-15°07'49	conjunction	7283 May 30 04:00	12° II 39'36	-15°27'06
direct	7276 Feb 12 05:29	2° II 50'43		minimum elong	7283 May 30 03:55	12° II 39'36	15°27'11
evening set	7276 May 17 12:06	4° II 23'44		max. Earth dist.	7283 Jun 01 15:35	12° II 43'24	45.95757 AU
				retrograde	7283 Sep 09 08:27	14° II 18'27	
conjunction	7276 May 21 07:51	4° II 29'45	-14°32'09	min. Earth dist.	7283 Nov 29 17:49	13° II 17'37	44.12429 AU
minimum elong	7276 May 21 07:43	4° II 29'45	14°32'13	opposition	7283 Dec 02 04:03	13° II 14'43	-16°11'57
max. Earth dist.	7276 May 23 23:06	4° II 33'54	44.61394 AU	direct	7284 Feb 22 01:07	12° II 11'58	
morning rise	7276 May 25 03:29	4° II 35'46					
retrograde	7276 Aug 31 14:37	6° II 11'44		conjunction	7284 May 30 12:56	13° II 47'17	-15°33'17
min. Earth dist.	7276 Nov 20 12:10	5° II 10'05	42.78359 AU	minimum elong	7284 May 30 12:52	13° II 47'16	15°33'22
opposition	7276 Nov 23 02:09	5° II 06'56	-15°17'21	max. Earth dist.	7284 Jun 01 23:49	13° II 51'01	46.13839 AU
direct	7277 Feb 12 19:03	4° II 03'04		retrograde	7284 Sep 09 18:22	15° II 25'45	
evening set	7277 May 19 14:44	5° II 36'40		min. Earth dist.	7284 Nov 30 02:46	14° II 25'06	44.30484 AU
				opposition	7284 Dec 02 13:37	14° II 22'11	-16°18'01
conjunction	7277 May 22 18:10	5° II 41'36	-14°41'14	direct	7285 Feb 22 10:08	13° II 19'38	
minimum elong	7277 May 22 18:03	5° II 41'36	14°41'19				
morning rise	7277 May 25 21:31	5° II 46'32		conjunction	7285 May 31 21:29	14° II 54'33	-15°39'04
max. Earth dist.	7277 May 25 07:46	5° II 45'38	44.81731 AU	minimum elong	7285 May 31 21:24	14° II 54'33	15°39'10
retrograde	7277 Sep 02 00:05	7° II 23'08		max. Earth dist.	7285 Jun 03 07:50	14° II 58'14	46.31669 AU
min. Earth dist.	7277 Nov 21 23:16	6° II 21'40	42.98614 AU	retrograde	7285 Sep 11 05:51	16° II 32'40	
opposition	7277 Nov 24 13:30	6° II 18'31	-15°26'26	min. Earth dist.	7285 Dec 01 13:19	15° II 32'09	44.48282 AU
direct	7278 Feb 14 07:46	5° II 14'49		opposition	7285 Dec 03 23:14	15° II 29'17	-16°23'40
evening set	7278 May 21 20:59	6° II 49'16		direct	7286 Feb 23 16:44	14° II 26'55	
conjunction	7278 May 24 04:28	6° II 52'52	-14°49'54	conjunction	7286 Jun 02 06:11	16° II 01'29	-15°44'27
minimum elong	7278 May 24 04:21	6° II 52'52	14°49'59	minimum elong	7286 Jun 02 06:08	16° II 01'29	15°44'33
morning rise	7278 May 26 11:47	6° II 56'28		max. Earth dist.	7286 Jun 04 16:48	16° II 05'10	46.49231 AU
max. Earth dist.	7278 May 26 18:02	6° II 56'53	45.01618 AU	retrograde	7286 Sep 12 13:40	17° II 39'14	
retrograde	7278 Sep 03 11:07	8° II 33'56		min. Earth dist.	7286 Dec 02 23:12	16° II 38'52	44.65765 AU

opposition	7286 Dec 05 08:26	16°II36'03 -16°28'56	conjunction	7295 Jun 12 05:21	25°II47'43 -16°17'26
direct	7287 Feb 25 01:49	15°II33'53	minimum elong	7295 Jun 12 05:21	25°II47'43 16°17'31
			max. Earth dist.	7295 Jun 14 08:38	25°II50'50 47.88691 AU
conjunction	7287 Jun 03 14:35	17°II08'05 -15°49'28	retrograde	7295 Sep 22 12:42	27°II22'29
minimum elong	7287 Jun 03 14:31	17°II08'05 15°49'34	min. Earth dist.	7295 Dec 13 10:07	26°II22'57 46.04000 AU
max. Earth dist.	7287 Jun 05 23:36	17°II11'40 46.66458 AU	opposition	7295 Dec 15 12:09	26°II20'32 -17°00'25
retrograde	7287 Sep 13 21:30	18°II45'31	direct	7296 Mar 06 09:04	25°II19'39
min. Earth dist.	7287 Dec 04 08:32	17°II45'19 44.82887 AU			
opposition	7287 Dec 06 17:33	17°II42'30 -16°33'48	conjunction	7296 Jun 12 12:31	26°II50'48 -16°19'25
direct	7288 Feb 26 11:04	16°II40'32	minimum elong	7296 Jun 12 12:32	26°II50'48 16°19'31
			max. Earth dist.	7296 Jun 14 15:49	26°II53'55 48.02396 AU
conjunction	7288 Jun 03 23:00	18°II14'24 -15°54'08	retrograde	7296 Sep 22 20:48	28°II25'16
minimum elong	7288 Jun 03 22:58	18°II14'24 15°54'13	min. Earth dist.	7296 Dec 13 17:46	27°II25'51 46.17587 AU
max. Earth dist.	7288 Jun 06 08:12	18°II17'59 46.83281 AU	opposition	7296 Dec 15 19:37	27°II23'27 -17°02'11
retrograde	7288 Sep 14 04:21	19°II51'30	direct	7297 Mar 07 14:47	26°II22'41
min. Earth dist.	7288 Dec 04 19:19	18°II51'23 44.99567 AU			
opposition	7288 Dec 07 02:31	18°II48'40 -16°38'19	conjunction	7297 Jun 13 19:27	27°II53'33 -16°21'04
direct	7289 Feb 26 22:58	17°II46'53	minimum elong	7297 Jun 13 19:28	27°II53'33 16°21'09
			max. Earth dist.	7297 Jun 15 21:18	27°II56'34 48.15814 AU
conjunction	7289 Jun 05 07:18	19°II20'24 -15°58'27	retrograde	7297 Sep 24 04:30	29°II27'44
minimum elong	7289 Jun 05 07:15	19°II20'24 15°58'32	min. Earth dist.	7297 Dec 15 01:40	28°II28'26 46.30887 AU
max. Earth dist.	7289 Jun 07 14:55	19°II23'52 46.99658 AU	opposition	7297 Dec 17 03:07	28°II26'03 -17°03'36
retrograde	7289 Sep 15 14:25	20°II57'11	direct	7298 Mar 08 20:44	27°II25'26
min. Earth dist.	7289 Dec 06 04:03	19°II57'13 45.15768 AU			
opposition	7289 Dec 08 11:17	19°II54'31 -16°42'30	conjunction	7298 Jun 15 02:23	28°II56'01 -16°22'23
direct	7290 Feb 28 07:41	18°II52'53	minimum elong	7298 Jun 15 02:23	28°II56'01 16°22'29
			max. Earth dist.	7298 Jun 17 04:38	28°II59'03 48.28921 AU
conjunction	7290 Jun 06 15:21	20°II26'03 -16°02'26		7298 Aug 02 17:44	0°☾
minimum elong	7290 Jun 06 15:20	20°II26'03 16°02'31	retrograde	7298 Sep 25 08:09	0°☾29'55
max. Earth dist.	7290 Jun 08 22:00	20°II29'26 47.15535 AU		7298 Nov 19 14:04	30°RII
retrograde	7290 Sep 17 00:31	22°II02'30	min. Earth dist.	7298 Dec 16 10:30	29°II30'41 46.43835 AU
min. Earth dist.	7290 Dec 07 14:36	21°II02'35 45.31469 AU	opposition	7298 Dec 18 10:27	29°II28'22 -17°04'42
opposition	7290 Dec 09 20:02	20°II59'58 -16°46'20	direct	7299 Mar 10 06:05	28°II27'54
direct	7291 Mar 01 14:48	19°II58'29			
			conjunction	7299 Jun 16 09:15	29°II58'13 -16°23'24
conjunction	7291 Jun 07 23:28	21°II31'18 -16°06'06	minimum elong	7299 Jun 16 09:18	29°II58'13 16°23'29
minimum elong	7291 Jun 07 23:26	21°II31'18 16°06'11		7299 Jun 17 14:57	0°☾
max. Earth dist.	7291 Jun 10 05:46	21°II34'39 47.30931 AU	max. Earth dist.	7299 Jun 18 09:55	0°☾01'09 48.41668 AU
retrograde	7291 Sep 18 07:41	23°II07'23	retrograde	7299 Sep 26 14:25	1°☾31'51
min. Earth dist.	7291 Dec 08 23:30	22°II07'33 45.46685 AU	min. Earth dist.	7299 Dec 17 17:28	0°☾32'45 46.56390 AU
opposition	7291 Dec 11 04:15	22°II04'59 -16°49'51	opposition	7299 Dec 19 17:26	0°☾30'27 -17°05'29
direct	7292 Mar 01 22:35	21°II03'37		7300 Jan 16 10:21	30°RII
			direct	7300 Mar 11 13:59	29°II30'06
conjunction	7292 Jun 08 07:09	22°II36'05 -16°09'26		7300 May 02 23:20	0°☾
minimum elong	7292 Jun 08 07:09	22°II36'05 16°09'32			
max. Earth dist.	7292 Jun 10 11:40	22°II39'19 47.45880 AU	conjunction	7300 Jun 17 16:03	1°☾00'10 -16°24'07
retrograde	7292 Sep 18 14:35	24°II11'48	minimum elong	7300 Jun 17 16:04	1°☾00'10 16°24'13
min. Earth dist.	7292 Dec 09 08:08	23°II12'04 45.61500 AU	max. Earth dist.	7300 Jun 19 15:56	1°☾03'02 48.53981 AU
opposition	7292 Dec 11 12:29	23°II09'31 -16°53'01	retrograde	7300 Sep 27 22:59	2°☾33'34
direct	7293 Mar 03 05:53	22°II08'16	min. Earth dist.	7300 Dec 19 02:44	1°☾34'29 46.68487 AU
			opposition	7300 Dec 21 00:37	1°☾32'18 -17°05'58
conjunction	7293 Jun 09 14:40	23°II40'24 -16°12'27	direct	7301 Mar 12 21:28	0°☾32'04
minimum elong	7293 Jun 09 14:39	23°II40'24 16°12'32			
max. Earth dist.	7293 Jun 11 19:35	23°II43'39 47.60454 AU	conjunction	7301 Jun 18 22:46	2°☾01'52 -16°24'34
retrograde	7293 Sep 19 19:38	25°II15'48	minimum elong	7301 Jun 18 22:49	2°☾01'53 16°24'39
min. Earth dist.	7293 Dec 10 17:43	24°II16'05 45.75958 AU	max. Earth dist.	7301 Jun 20 22:04	2°☾04'42 48.65818 AU
opposition	7293 Dec 12 20:38	24°II13'37 -16°55'50	retrograde	7301 Sep 29 06:18	3°☾35'02
direct	7294 Mar 04 16:02	23°II12'29	min. Earth dist.	7301 Dec 20 10:13	2°☾36'02 46.80060 AU
			opposition	7301 Dec 22 07:37	2°☾33'52 -17°06'11
conjunction	7294 Jun 10 22:06	24°II44'15 -16°15'07	direct	7302 Mar 14 03:54	1°☾33'46
minimum elong	7294 Jun 10 22:06	24°II44'15 16°15'13			
max. Earth dist.	7294 Jun 13 01:54	24°II47'26 47.74718 AU	conjunction	7302 Jun 20 05:24	3°☾03'19 -16°24'45
retrograde	7294 Sep 21 02:31	26°II19'20	minimum elong	7302 Jun 20 05:26	3°☾03'19 16°24'50
min. Earth dist.	7294 Dec 12 01:01	25°II19'46 45.90120 AU	max. Earth dist.	7302 Jun 22 02:30	3°☾06'00 48.77121 AU
opposition	7294 Dec 14 04:22	25°II17'16 -16°58'18	retrograde	7302 Sep 30 14:14	4°☾36'12
direct	7295 Mar 06 01:52	24°II16'15	min. Earth dist.	7302 Dec 21 18:13	3°☾37'15 46.91105 AU
			opposition	7302 Dec 23 14:27	3°☾35'09 -17°06'08

direct	7303 Mar 15 08:08	2°☾35'08		minimum elong	7311 Jun 29 11:46	12°☾02'57	16°14'02
				max. Earth dist.	7311 Jul 01 02:39	12°☾05'13	49.60730 AU
conjunction	7303 Jun 21 12:03	4°☾04'26 -16°24'40		retrograde	7311 Oct 09 18:26	13°☾33'54	
minimum elong	7303 Jun 21 12:07	4°☾04'26 16°24'45		min. Earth dist.	7311 Dec 31 08:40	12°☾35'27	47.72890 AU
max. Earth dist.	7303 Jun 23 09:04	4°☾07'07 48.87898 AU		opposition	7312 Jan 01 21:46	12°☾33'42	-16°52'52
retrograde	7303 Oct 01 18:43	5°☾37'03		direct	7312 Mar 23 19:25	11°☾34'31	
min. Earth dist.	7303 Dec 23 02:40	4°☾38'07 47.01622 AU					
opposition	7303 Dec 24 21:10	4°☾36'05 -17°05'49		conjunction	7312 Jun 29 17:13	13°☾01'58	-16°11'21
direct	7304 Mar 15 16:10	3°☾36'09		minimum elong	7312 Jun 29 17:19	13°☾01'58	16°11'26
				max. Earth dist.	7312 Jul 01 06:17	13°☾04'07	49.68310 AU
conjunction	7304 Jun 21 18:19	5°☾05'12 -16°24'19		retrograde	7312 Oct 10 03:24	14°☾32'45	
minimum elong	7304 Jun 21 18:21	5°☾05'12 16°24'24		min. Earth dist.	7312 Dec 31 15:43	13°☾34'20	47.80206 AU
max. Earth dist.	7304 Jun 23 13:36	5°☾07'46 48.98192 AU		opposition	7313 Jan 02 03:31	13°☾32'39	-16°49'59
retrograde	7304 Oct 01 23:22	6°☾37'34		direct	7313 Mar 24 21:17	12°☾33'33	
min. Earth dist.	7304 Dec 23 09:04	5°☾38'42 47.11690 AU					
opposition	7304 Dec 25 03:37	5°☾36'41 -17°05'14		conjunction	7313 Jun 30 22:59	14°☾00'51	-16°08'31
direct	7305 Mar 17 00:16	4°☾36'50		minimum elong	7313 Jun 30 23:04	14°☾00'51	16°08'37
				max. Earth dist.	7313 Jul 02 11:56	14°☾03'00	49.75425 AU
conjunction	7305 Jun 23 00:30	6°☾05'37 -16°23'41		retrograde	7313 Oct 11 08:24	15°☾31'28	
minimum elong	7305 Jun 23 00:34	6°☾05'37 16°23'47		min. Earth dist.	7314 Jan 01 22:59	14°☾33'03	47.87015 AU
max. Earth dist.	7305 Jun 24 19:12	6°☾08'09 49.08065 AU		opposition	7314 Jan 03 09:10	14°☾31'27	-16°46'52
retrograde	7305 Oct 03 06:43	7°☾37'46		direct	7314 Mar 26 02:26	13°☾32'26	
min. Earth dist.	7305 Dec 24 17:17	6°☾38'53 47.21376 AU					
opposition	7305 Dec 26 10:06	6°☾36'57 -17°04'20		conjunction	7314 Jul 02 04:34	14°☾59'33	-16°05'28
direct	7306 Mar 18 08:04	5°☾37'10		minimum elong	7314 Jul 02 04:41	14°☾59'34	16°05'33
				max. Earth dist.	7314 Jul 03 15:29	15°☾01'35	49.82029 AU
conjunction	7306 Jun 24 06:36	7°☾05'44 -16°22'47		retrograde	7314 Oct 12 11:49	16°☾30'00	
minimum elong	7306 Jun 24 06:40	7°☾05'44 16°22'51		min. Earth dist.	7315 Jan 03 04:52	15°☾31'38	47.93297 AU
max. Earth dist.	7306 Jun 26 01:01	7°☾08'14 49.17599 AU		opposition	7315 Jan 04 14:43	15°☾30'03	-16°43'31
retrograde	7306 Oct 04 14:28	8°☾37'38		direct	7315 Mar 27 08:36	14°☾31'04	
min. Earth dist.	7306 Dec 25 23:27	7°☾38'51 47.30724 AU					
opposition	7306 Dec 27 16:16	7°☾36'55 -17°03'10		conjunction	7315 Jul 03 10:09	15°☾58'01	-16°02'11
direct	7307 Mar 19 12:55	6°☾37'13		minimum elong	7315 Jul 03 10:14	15°☾58'02	16°02'16
				max. Earth dist.	7315 Jul 04 19:59	15°☾59'59	49.88096 AU
conjunction	7307 Jun 25 12:32	8°☾05'34 -16°21'35		retrograde	7315 Oct 13 15:49	17°☾28'17	
minimum elong	7307 Jun 25 12:36	8°☾05'34 16°21'40		opposition	7316 Jan 05 20:08	16°☾28'23	-16°39'56
max. Earth dist.	7307 Jun 27 05:26	8°☾07'58 49.26813 AU		min. Earth dist.	7316 Jan 04 12:27	16°☾29'52	47.99059 AU
retrograde	7307 Oct 05 22:01	9°☾37'15		direct	7316 Mar 27 17:24	15°☾29'27	
min. Earth dist.	7307 Dec 27 06:20	8°☾38'30 47.39778 AU					
opposition	7307 Dec 28 22:17	8°☾36'37 -17°01'41		conjunction	7316 Jul 03 15:37	16°☾56'13	-15°58'40
direct	7308 Mar 19 16:45	7°☾37'01		minimum elong	7316 Jul 03 15:45	16°☾56'13	15°58'46
				max. Earth dist.	7316 Jul 05 00:51	16°☾58'08	49.93689 AU
conjunction	7308 Jun 25 18:30	9°☾05'10 -16°20'06		retrograde	7316 Oct 13 22:12	18°☾26'18	
minimum elong	7308 Jun 25 18:35	9°☾05'10 16°20'10		min. Earth dist.	7317 Jan 04 17:56	17°☾27'54	48.04362 AU
max. Earth dist.	7308 Jun 27 11:46	9°☾07'35 49.35743 AU		opposition	7317 Jan 06 01:25	17°☾26'25	-16°36'06
retrograde	7308 Oct 06 00:39	10°☾36'38		direct	7317 Mar 28 23:34	16°☾27'31	
min. Earth dist.	7308 Dec 27 13:21	9°☾37'57 47.48534 AU					
opposition	7308 Dec 29 04:19	9°☾36'07 -16°59'54		conjunction	7317 Jul 04 20:44	17°☾54'07	-15°54'55
direct	7309 Mar 20 23:42	8°☾36'37		minimum elong	7317 Jul 04 20:50	17°☾54'08	15°55'00
				max. Earth dist.	7317 Jul 06 04:14	17°☾55'56	49.98853 AU
conjunction	7309 Jun 27 00:08	10°☾04'34 -16°18'19		retrograde	7317 Oct 15 05:50	19°☾24'01	
minimum elong	7309 Jun 27 00:13	10°☾04'34 16°18'25		min. Earth dist.	7318 Jan 06 00:28	18°☾25'36	48.09282 AU
max. Earth dist.	7309 Jun 28 15:59	10°☾06'54 49.44393 AU		opposition	7318 Jan 07 06:45	18°☾24'11	-16°32'02
retrograde	7309 Oct 07 04:50	11°☾35'51		direct	7318 Mar 30 02:39	17°☾25'19	
min. Earth dist.	7309 Dec 28 19:06	10°☾37'17 47.57000 AU					
opposition	7309 Dec 30 10:15	10°☾35'26 -16°57'50		conjunction	7318 Jul 06 02:05	18°☾51'45	-15°50'55
direct	7310 Mar 22 06:35	9°☾36'02		minimum elong	7318 Jul 06 02:13	18°☾51'45	15°51'01
				max. Earth dist.	7318 Jul 07 09:48	18°☾53'34	50.03658 AU
conjunction	7310 Jun 28 05:54	11°☾03'49 -16°16'16		retrograde	7318 Oct 16 09:26	20°☾21'29	
minimum elong	7310 Jun 28 06:00	11°☾03'49 16°16'21		min. Earth dist.	7319 Jan 07 06:30	19°☾23'03	48.13853 AU
max. Earth dist.	7310 Jun 29 21:21	11°☾06'08 49.52730 AU		opposition	7319 Jan 08 11:47	19°☾21'41	-16°27'42
retrograde	7310 Oct 08 11:41	12°☾34'57		direct	7319 Mar 31 07:52	18°☾22'51	
min. Earth dist.	7310 Dec 30 02:48	11°☾36'23 47.65138 AU					
opposition	7310 Dec 31 16:06	11°☾34'37 -16°55'29		conjunction	7319 Jul 07 07:14	19°☾49'09	-15°46'40
direct	7311 Mar 23 13:44	10°☾35'20		minimum elong	7319 Jul 07 07:21	19°☾49'09	15°46'44
				max. Earth dist.	7319 Jul 08 13:21	19°☾50'53	50.08151 AU
conjunction	7311 Jun 29 11:41	12°☾02'57 -16°13'56		retrograde	7319 Oct 17 12:49	21°☾18'43	

min. Earth dist.	7320 Jan 08 11:28	20°  20'20	48.18124 AU	evening set	7328 Jul 14 00:37	28°  20'48	
opposition	7320 Jan 09 16:48	20°  18'58	-16°23'06				
direct	7320 Mar 31 12:51	19°  20'11		conjunction	7328 Jul 15 04:36	28°  22'23	-14°57'27
				minimum elong	7328 Jul 15 04:45	28°  22'24	14°57'32
conjunction	7320 Jul 07 12:13	20°  46'21	-15°42'09	morning rise	7328 Jul 16 08:55	28°  24'00	
minimum elong	7320 Jul 07 12:21	20°  46'21	15°42'14	max. Earth dist.	7328 Jul 16 02:09	28°  23'37	50.32275 AU
max. Earth dist.	7320 Jul 08 17:59	20°  48'03	50.12339 AU	retrograde	7328 Oct 25 14:37	29°  51'10	
retrograde	7320 Oct 17 17:22	22°  15'48		opposition	7329 Jan 17 12:18	28°  51'57	-15°30'41
opposition	7321 Jan 09 21:54	21°  16'06	-16°18'14	min. Earth dist.	7329 Jan 16 16:59	28°  52'51	48.39510 AU
min. Earth dist.	7321 Jan 08 18:15	21°  17'24	48.22099 AU	direct	7329 Apr 09 06:31	27°  53'37	
direct	7321 Apr 01 19:18	20°  17'23		evening set	7329 Jul 14 04:02	29°  16'04	
conjunction	7321 Jul 08 17:19	21°  43'26	-15°37'22	conjunction	7329 Jul 16 09:28	29°  19'06	-14°50'54
minimum elong	7321 Jul 08 17:28	21°  43'26	15°37'27	minimum elong	7329 Jul 16 09:38	29°  19'07	14°51'00
max. Earth dist.	7321 Jul 09 22:44	21°  45'07	50.16255 AU	max. Earth dist.	7329 Jul 17 05:16	29°  20'14	50.32607 AU
retrograde	7321 Oct 18 22:40	23°  12'47		morning rise	7329 Jul 18 15:20	29°  22'10	
min. Earth dist.	7322 Jan 09 22:53	22°  14'27	48.25779 AU		7329 Aug 16 13:39	0°  0	
opposition	7322 Jan 11 02:45	22°  13'09	-16°13'06	retrograde	7329 Oct 26 17:19	0°  14'47	
direct	7322 Apr 03 00:54	21°  14'29			7330 Jan 08 09:19	30°  19'48	
				opposition	7330 Jan 18 16:49	29°  48'35	-15°23'45
conjunction	7322 Jul 09 22:14	22°  40'27	-15°32'21	min. Earth dist.	7330 Jan 17 21:54	29°  49'28	48.39536 AU
minimum elong	7322 Jul 09 22:22	22°  40'27	15°32'26	direct	7330 Apr 10 10:38	28°  50'14	
max. Earth dist.	7322 Jul 11 01:58	22°  42'02	50.19862 AU		7330 Jul 06 00:43	0°  0	
retrograde	7322 Oct 20 07:02	24°  09'42		evening set	7330 Jul 14 15:34	0°  11'39	
min. Earth dist.	7323 Jan 11 05:09	23°  11'24	48.29138 AU				
opposition	7323 Jan 12 07:42	23°  10'10	-16°07'43	conjunction	7330 Jul 17 14:20	0°  15'40	-14°44'08
direct	7323 Apr 04 02:58	22°  11'34		minimum elong	7330 Jul 17 14:29	0°  15'41	14°44'12
				max. Earth dist.	7330 Jul 18 09:24	0°  16'45	50.32537 AU
conjunction	7323 Jul 11 03:23	23°  37'28	-15°27'04	morning rise	7330 Jul 20 13:34	0°  19'43	
minimum elong	7323 Jul 11 03:33	23°  37'28	15°27'09	retrograde	7330 Oct 27 20:12	1°  44'17	
max. Earth dist.	7323 Jul 12 07:17	23°  39'03	50.23120 AU	opposition	7331 Jan 19 21:26	0°  45'05	-15°16'35
retrograde	7323 Oct 21 11:52	25°  06'37		min. Earth dist.	7331 Jan 19 04:20	0°  45'52	48.39183 AU
min. Earth dist.	7324 Jan 12 11:07	24°  08'21	48.32107 AU		7331 Mar 07 00:21	30°  19'48	
opposition	7324 Jan 13 12:26	24°  07'10	-16°02'06	direct	7331 Apr 11 17:09	29°  46'44	
direct	7324 Apr 04 06:32	23°  08'39			7331 May 16 21:14	0°  0	
				evening set	7331 Jul 15 06:22	1°  07'18	
conjunction	7324 Jul 11 08:23	24°  34'29	-15°21'34				
minimum elong	7324 Jul 11 08:31	24°  34'30	15°21'39	conjunction	7331 Jul 18 19:13	1°  12'06	-14°37'07
max. Earth dist.	7324 Jul 12 10:23	24°  35'58	50.25976 AU	minimum elong	7331 Jul 18 19:23	1°  12'07	14°37'12
retrograde	7324 Oct 21 16:20	26°  03'34		max. Earth dist.	7331 Jul 19 13:47	1°  13'10	50.32125 AU
opposition	7325 Jan 13 17:15	25°  04'12	-15°56'14	morning rise	7331 Jul 22 08:33	1°  16'57	
min. Earth dist.	7325 Jan 12 16:20	25°  05'21	48.34644 AU	retrograde	7331 Oct 29 00:22	2°  40'39	
direct	7325 Apr 05 10:17	24°  05'45		min. Earth dist.	7332 Jan 20 08:31	1°  42'16	48.38494 AU
				opposition	7332 Jan 21 01:45	1°  41'28	-15°09'11
conjunction	7325 Jul 12 13:23	25°  31'31	-15°15'51	direct	7332 Apr 11 23:32	0°  43'07	
minimum elong	7325 Jul 12 13:33	25°  31'32	15°15'56	evening set	7332 Jul 14 22:40	2°  02'56	
max. Earth dist.	7325 Jul 13 14:24	25°  32'57	50.28348 AU				
retrograde	7325 Oct 22 19:55	27°  00'34		conjunction	7332 Jul 18 23:55	2°  08'26	-14°29'53
opposition	7326 Jan 14 22:12	26°  01'15	-15°50'09	minimum elong	7332 Jul 19 00:05	2°  08'27	14°29'57
min. Earth dist.	7326 Jan 13 23:31	26°  02'18	48.36666 AU	max. Earth dist.	7332 Jul 19 16:48	2°  09'24	50.31393 AU
direct	7326 Apr 06 18:14	25°  02'51		morning rise	7332 Jul 23 01:44	2°  13'59	
				retrograde	7332 Oct 29 08:20	3°  36'57	
conjunction	7326 Jul 13 18:37	26°  28'33	-15°09'55	opposition	7333 Jan 21 06:19	2°  37'46	-15°01'32
minimum elong	7326 Jul 13 18:46	26°  28'34	15°10'00	min. Earth dist.	7333 Jan 20 14:19	2°  38'31	48.37505 AU
max. Earth dist.	7326 Jul 14 18:39	26°  29'56	50.30198 AU	direct	7333 Apr 13 02:24	1°  39'26	
retrograde	7326 Oct 24 01:58	27°  57'31		evening set	7333 Jul 15 16:09	2°  58'35	
min. Earth dist.	7327 Jan 15 04:39	26°  59'17	48.38136 AU				
opposition	7327 Jan 16 02:50	26°  58'15	-15°43'53	conjunction	7333 Jul 20 04:40	3°  04'43	-14°22'24
direct	7327 Apr 08 00:01	25°  59'53		minimum elong	7333 Jul 20 04:50	3°  04'44	14°22'29
				max. Earth dist.	7333 Jul 20 21:52	3°  05'41	50.30362 AU
conjunction	7327 Jul 14 23:39	27°  25'32	-15°03'48	morning rise	7333 Jul 24 17:46	3°  10'53	
minimum elong	7327 Jul 14 23:49	27°  25'32	15°03'53	retrograde	7333 Oct 30 14:06	4°  33'10	
max. Earth dist.	7327 Jul 15 21:25	27°  26'46	50.31494 AU	opposition	7334 Jan 22 10:49	3°  34'01	-14°53'38
retrograde	7327 Oct 25 10:31	28°  54'24		min. Earth dist.	7334 Jan 21 19:41	3°  34'43	48.36199 AU
min. Earth dist.	7328 Jan 16 11:11	27°  56'07	48.39073 AU	direct	7334 Apr 14 04:54	2°  35'42	
opposition	7328 Jan 17 07:38	27°  55'10	-15°37'23	evening set	7334 Jul 16 10:36	3°  54'14	
direct	7328 Apr 08 01:50	26°  56'49					

conjunction	7334 Jul 21 09:27	4°00'58 -14°14'40	direct	7341 Apr 20 12:36	9°00'43
minimum elong	7334 Jul 21 09:39	4°00'58 14°14'45	evening set	7341 Jul 20 09:18	10°02'45
max. Earth dist.	7334 Jul 22 00:59	4°01'51 50.29024 AU			
morning rise	7334 Jul 26 09:00	4°07'43	conjunction	7341 Jul 27 19:49	10°03'50 -13°14'40
retrograde	7334 Oct 31 19:34	5°02'23	minimum elong	7341 Jul 27 20:00	10°03'50 13°14'44
opposition	7335 Jan 23 15:07	4°03'15 -14°45'29	max. Earth dist.	7341 Jul 28 03:24	10°03'58 50.07210 AU
min. Earth dist.	7335 Jan 23 00:13	4°03'57 48.34575 AU	morning rise	7341 Aug 04 07:15	10°04'10
direct	7335 Apr 15 07:05	3°03'15	retrograde	7341 Nov 07 01:49	12°03'26
evening set	7335 Jul 17 05:37	4°04'56	opposition	7342 Jan 29 22:05	11°04'17 -13°42'29
			min. Earth dist.	7342 Jan 29 15:24	11°04'36 48.10216 AU
conjunction	7335 Jul 22 14:19	4°05'13 -14°06'43	direct	7342 Apr 21 18:48	10°05'52
minimum elong	7335 Jul 22 14:29	4°05'13 14°06'49	evening set	7342 Jul 21 06:54	11°02'45
max. Earth dist.	7335 Jul 23 05:02	4°05'03 50.27330 AU			
morning rise	7335 Jul 27 23:42	5°04'31	conjunction	7342 Jul 29 00:42	11°03'14 -13°05'16
retrograde	7335 Nov 01 21:40	6°02'37	minimum elong	7342 Jul 29 00:53	11°03'14 13°05'21
opposition	7336 Jan 24 19:38	5°02'31 -14°37'07	max. Earth dist.	7342 Jul 29 06:23	11°03'33 50.02214 AU
min. Earth dist.	7336 Jan 24 06:45	5°02'07 48.32569 AU	morning rise	7342 Aug 05 19:37	11°04'46
direct	7336 Apr 15 13:58	4°02'14	retrograde	7342 Nov 08 09:01	12°05'38
evening set	7336 Jul 17 01:12	5°04'53	opposition	7343 Jan 31 02:22	12°00'28 -13°32'37
			min. Earth dist.	7343 Jan 30 21:19	12°00'42 48.04919 AU
conjunction	7336 Jul 22 19:06	5°03'30 -13°58'33	direct	7343 Apr 22 21:57	11°02'01
minimum elong	7336 Jul 22 19:17	5°03'31 13°58'38	evening set	7343 Jul 22 04:40	12°01'32
max. Earth dist.	7336 Jul 23 09:17	5°04'18 50.25241 AU			
morning rise	7336 Jul 28 13:42	6°01'20	conjunction	7343 Jul 30 05:42	12°02'24 -12°55'39
retrograde	7336 Nov 02 01:30	7°02'15	minimum elong	7343 Jul 30 05:53	12°02'25 12°55'42
min. Earth dist.	7337 Jan 24 11:23	6°02'25 48.30125 AU	max. Earth dist.	7343 Jul 30 11:31	12°02'44 49.96879 AU
opposition	7337 Jan 25 00:01	6°02'50 -14°28'31	morning rise	7343 Aug 07 07:42	12°03'21
direct	7337 Apr 16 20:24	5°02'43	retrograde	7343 Nov 09 14:48	13°05'50
evening set	7337 Jul 17 21:19	6°04'13	opposition	7344 Feb 01 06:43	12°05'39 -13°22'31
			min. Earth dist.	7344 Feb 01 02:21	12°05'51 47.99294 AU
conjunction	7337 Jul 23 23:59	6°04'50 -13°50'11	direct	7344 Apr 23 00:37	11°05'10
minimum elong	7337 Jul 24 00:09	6°04'51 13°50'15	evening set	7344 Jul 22 02:32	13°01'20
max. Earth dist.	7337 Jul 24 11:52	6°05'30 50.22677 AU			
morning rise	7337 Jul 30 03:29	6°05'10	conjunction	7344 Jul 30 10:23	13°02'37 -12°45'47
retrograde	7337 Nov 03 09:48	8°01'15	minimum elong	7344 Jul 30 10:34	13°02'38 12°45'52
opposition	7338 Jan 26 04:31	7°01'11 -14°19'43	max. Earth dist.	7344 Jul 30 14:40	13°02'52 49.91250 AU
min. Earth dist.	7338 Jan 25 17:45	7°01'41 48.27188 AU	morning rise	7344 Aug 07 19:24	13°03'57
direct	7338 Apr 17 22:52	6°02'04	retrograde	7344 Nov 09 20:40	14°05'05
evening set	7338 Jul 18 17:56	7°03'26	opposition	7345 Feb 01 11:05	13°05'53 -13°12'10
			min. Earth dist.	7345 Feb 01 06:51	13°05'04 47.93391 AU
conjunction	7338 Jul 25 05:05	7°04'11 -13°41'36	direct	7345 Apr 24 02:27	12°05'42
minimum elong	7338 Jul 25 05:17	7°04'12 13°41'40	evening set	7345 Jul 23 00:35	14°08'14
max. Earth dist.	7338 Jul 25 16:33	7°04'50 50.19588 AU			
morning rise	7338 Jul 31 17:02	9°05'00	conjunction	7345 Jul 31 15:19	14°09'54 -12°35'42
retrograde	7338 Nov 04 14:55	9°04'35	minimum elong	7345 Jul 31 15:31	14°09'55 12°35'45
opposition	7339 Jan 27 08:58	8°01'51 -14°10'43	max. Earth dist.	7345 Jul 31 18:59	14°02'07 49.85334 AU
min. Earth dist.	7339 Jan 26 23:28	8°01'58 48.23692 AU	morning rise	7345 Aug 09 07:15	14°03'17
direct	7339 Apr 19 03:17	7°01'14		7345 Aug 31 06:32	15°00'
evening set	7339 Jul 19 14:53	8°03'19	retrograde	7345 Nov 10 23:05	15°04'26
				7346 Jan 23 22:45	15°00'
conjunction	7339 Jul 26 10:00	8°04'22 -13°32'50	opposition	7346 Feb 02 15:30	14°04'13 -13°01'35
minimum elong	7339 Jul 26 10:11	8°04'22 13°32'53	min. Earth dist.	7346 Feb 02 12:55	14°04'20 47.87204 AU
max. Earth dist.	7339 Jul 26 19:19	8°04'03 50.15957 AU	direct	7346 Apr 25 08:32	13°05'41
morning rise	7339 Aug 02 06:02	8°05'14		7346 Jul 20 18:31	15°00'
retrograde	7339 Nov 05 19:07	10°01'04	evening set	7346 Jul 23 22:57	15°04'16
opposition	7340 Jan 28 13:17	9°01'15 -14°01'31			
min. Earth dist.	7340 Jan 28 04:34	9°01'14 48.19667 AU	conjunction	7346 Aug 01 20:21	15°06'18 -12°25'22
direct	7340 Apr 19 06:26	8°01'30	minimum elong	7346 Aug 01 20:32	15°06'19 12°25'26
evening set	7340 Jul 19 11:59	9°02'10	max. Earth dist.	7346 Aug 01 23:40	15°06'29 49.79150 AU
			morning rise	7346 Aug 10 18:51	15°02'25
conjunction	7340 Jul 26 14:58	9°03'49 -13°23'51	retrograde	7346 Nov 12 02:26	16°04'55
minimum elong	7340 Jul 26 15:09	9°03'50 13°23'56	opposition	7347 Feb 03 19:50	15°04'41 -12°50'45
max. Earth dist.	7340 Jul 26 23:10	9°03'17 50.11804 AU	min. Earth dist.	7347 Feb 03 17:11	15°04'49 47.80722 AU
morning rise	7340 Aug 02 18:55	9°04'31		7347 Mar 22 12:28	15°00'
retrograde	7340 Nov 05 22:02	11°07'12	direct	7347 Apr 26 15:32	14°07'09
opposition	7341 Jan 28 17:47	10°08'05 -13°52'06		7347 May 31 04:57	15°00'
min. Earth dist.	7341 Jan 28 11:05	10°08'23 48.15153 AU	evening set	7347 Jul 24 21:29	16°00'28

conjunction	7347 Aug 03 01:16	16°Ω12'52	-12°14'48	direct	7354 May 02 21:10	21°Ω26'18	
minimum elong	7347 Aug 03 01:28	16°Ω12'53	12°14'51	evening set	7354 Jul 29 17:04	22°Ω37'58	
max. Earth dist.	7347 Aug 03 02:41	16°Ω12'57	49.72643 AU				
morning rise	7347 Aug 12 06:27	16°Ω25'22		conjunction	7354 Aug 09 14:32	22°Ω52'48	-10°54'55
retrograde	7347 Nov 13 11:10	17°Ω41'35		minimum elong	7354 Aug 09 14:43	22°Ω52'49	10°54'58
opposition	7348 Feb 05 00:16	16°Ω42'21	-12°39'40	max. Earth dist.	7354 Aug 09 07:29	22°Ω52'24	49.14477 AU
min. Earth dist.	7348 Feb 04 23:11	16°Ω42'24	47.73906 AU	morning rise	7354 Aug 20 13:35	23°Ω07'44	
direct	7348 Apr 26 17:59	15°Ω43'48		retrograde	7354 Nov 20 02:29	24°Ω22'09	
evening set	7348 Jul 24 20:11	16°Ω56'51		opposition	7355 Feb 11 08:30	23°Ω22'34	-11°16'05
				min. Earth dist.	7355 Feb 11 14:59	23°Ω22'16	47.13142 AU
conjunction	7348 Aug 03 06:28	17°Ω09'38	-12°04'01	direct	7355 May 03 23:03	22°Ω23'32	
minimum elong	7348 Aug 03 06:38	17°Ω09'39	12°04'04	evening set	7355 Jul 30 17:01	23°Ω35'00	
max. Earth dist.	7348 Aug 03 07:50	17°Ω09'43	49.65773 AU				
morning rise	7348 Aug 12 17:56	17°Ω22'30		conjunction	7355 Aug 10 20:00	23°Ω50'10	-10°42'38
retrograde	7348 Nov 13 17:41	18°Ω38'27		minimum elong	7355 Aug 10 20:12	23°Ω50'11	10°42'42
opposition	7349 Feb 05 04:46	17°Ω39'13	-12°28'23	max. Earth dist.	7355 Aug 10 12:09	23°Ω49'43	49.04418 AU
min. Earth dist.	7349 Feb 05 04:42	17°Ω39'13	47.66684 AU	morning rise	7355 Aug 22 00:34	24°Ω05'25	
direct	7349 Apr 27 21:19	16°Ω40'38		retrograde	7355 Nov 21 06:23	25°Ω19'37	
evening set	7349 Jul 25 19:13	17°Ω53'27		opposition	7356 Feb 12 13:15	24°Ω19'58	-11°03'14
				min. Earth dist.	7356 Feb 12 21:28	24°Ω19'35	47.02789 AU
conjunction	7349 Aug 04 11:34	18°Ω06'35	-11°53'01	direct	7356 May 04 04:12	23°Ω20'50	
minimum elong	7349 Aug 04 11:46	18°Ω06'36	11°53'04	evening set	7356 Jul 30 17:13	24°Ω32'08	
max. Earth dist.	7349 Aug 04 11:02	18°Ω06'33	49.58473 AU				
morning rise	7349 Aug 14 05:20	18°Ω19'49		conjunction	7356 Aug 11 01:34	24°Ω47'37	-10°30'08
retrograde	7349 Nov 14 23:40	19°Ω35'29		minimum elong	7356 Aug 11 01:45	24°Ω47'37	10°30'10
opposition	7350 Feb 06 09:19	18°Ω36'15	-12°16'52	max. Earth dist.	7356 Aug 10 17:22	24°Ω47'09	48.94068 AU
min. Earth dist.	7350 Feb 06 10:05	18°Ω36'13	47.58998 AU	morning rise	7356 Aug 22 11:23	25°Ω03'12	
direct	7350 Apr 28 23:30	17°Ω37'38		retrograde	7356 Nov 21 09:02	26°Ω17'12	
evening set	7350 Jul 26 18:28	18°Ω50'12		opposition	7357 Feb 12 17:58	25°Ω17'28	-10°50'08
				min. Earth dist.	7357 Feb 13 01:57	25°Ω17'06	46.92153 AU
conjunction	7350 Aug 05 17:00	19°Ω03'42	-11°41'48	direct	7357 May 05 11:32	24°Ω18'15	
minimum elong	7350 Aug 05 17:11	19°Ω03'43	11°41'52	evening set	7357 Jul 31 17:32	25°Ω29'24	
max. Earth dist.	7350 Aug 05 15:01	19°Ω03'35	49.50658 AU				
morning rise	7350 Aug 15 16:56	19°Ω17'17		conjunction	7357 Aug 12 07:03	25°Ω45'12	-10°17'23
retrograde	7350 Nov 16 02:40	20°Ω32'42		minimum elong	7357 Aug 12 07:14	25°Ω45'13	10°17'26
opposition	7351 Feb 07 13:56	19°Ω33'24	-12°05'08	max. Earth dist.	7357 Aug 11 21:00	25°Ω44'38	48.83433 AU
min. Earth dist.	7351 Feb 07 16:53	19°Ω33'16	47.50780 AU	morning rise	7357 Aug 23 22:20	26°Ω01'06	
direct	7351 Apr 30 05:40	18°Ω34'44		retrograde	7357 Nov 22 16:17	27°Ω14'57	
evening set	7351 Jul 27 17:59	19°Ω47'05		opposition	7358 Feb 13 22:57	26°Ω15'09	-10°36'47
				min. Earth dist.	7358 Feb 14 08:24	26°Ω14'42	46.81241 AU
conjunction	7351 Aug 06 22:27	20°Ω00'55	-11°30'24	direct	7358 May 06 15:51	25°Ω15'52	
minimum elong	7351 Aug 06 22:39	20°Ω00'56	11°30'28	evening set	7358 Aug 01 18:05	26°Ω26'53	
max. Earth dist.	7351 Aug 06 19:34	20°Ω00'45	49.42325 AU				
morning rise	7351 Aug 17 04:14	20°Ω14'50		conjunction	7358 Aug 13 12:55	26°Ω43'00	-10°04'24
retrograde	7351 Nov 17 05:42	21°Ω30'00		minimum elong	7358 Aug 13 13:06	26°Ω43'01	10°04'26
opposition	7352 Feb 08 18:31	20°Ω30'39	-11°53'12	max. Earth dist.	7358 Aug 13 03:01	26°Ω42'26	48.72517 AU
min. Earth dist.	7352 Feb 08 21:45	20°Ω30'30	47.42037 AU	morning rise	7358 Aug 25 09:13	26°Ω59'13	
direct	7352 Apr 30 12:32	19°Ω31'54		retrograde	7358 Nov 23 23:03	28°Ω12'55	
evening set	7352 Jul 27 17:26	20°Ω44'01		opposition	7359 Feb 15 03:47	27°Ω13'04	-10°23'12
				min. Earth dist.	7359 Feb 15 13:52	27°Ω12'36	46.70029 AU
conjunction	7352 Aug 07 03:38	20°Ω58'11	-11°18'47	direct	7359 May 07 19:47	26°Ω13'43	
minimum elong	7352 Aug 07 03:49	20°Ω58'11	11°18'50	evening set	7359 Aug 02 18:59	27°Ω24'38	
max. Earth dist.	7352 Aug 06 22:33	20°Ω57'53	49.33477 AU				
morning rise	7352 Aug 17 15:25	21°Ω12'27		conjunction	7359 Aug 14 18:41	27°Ω41'04	-9°51'10
retrograde	7352 Nov 17 12:27	22°Ω27'21		minimum elong	7359 Aug 14 18:52	27°Ω41'04	9°51'14
opposition	7353 Feb 08 23:18	21°Ω27'56	-11°41'04	max. Earth dist.	7359 Aug 14 07:08	27°Ω40'24	48.61301 AU
min. Earth dist.	7353 Feb 09 04:24	21°Ω27'42	47.32815 AU	morning rise	7359 Aug 26 20:08	27°Ω57'36	
direct	7353 May 01 17:07	20°Ω29'06		retrograde	7359 Nov 25 06:57	29°Ω11'11	
evening set	7353 Jul 28 17:06	21°Ω40'58		opposition	7360 Feb 16 08:49	28°Ω11'17	-10°09'21
				min. Earth dist.	7360 Feb 16 19:34	28°Ω10'47	46.58502 AU
conjunction	7353 Aug 08 09:08	21°Ω55'29	-11°06'57	direct	7360 May 07 22:02	27°Ω11'53	
minimum elong	7353 Aug 08 09:19	21°Ω55'29	11°07'02	evening set	7360 Aug 02 19:49	28°Ω22'43	
max. Earth dist.	7353 Aug 08 03:53	21°Ω55'11	49.24173 AU	max. Earth dist.	7360 Aug 14 11:59	28°Ω38'44	48.49718 AU
morning rise	7353 Aug 19 02:31	22°Ω10'05					
retrograde	7353 Nov 18 18:56	23°Ω24'44		conjunction	7360 Aug 15 00:32	28°Ω39'27	-9°37'43
opposition	7354 Feb 10 03:52	22°Ω25'14	-11°28'41	minimum elong	7360 Aug 15 00:43	28°Ω39'28	9°37'46
min. Earth dist.	7354 Feb 10 09:51	22°Ω24'57	47.23160 AU	morning rise	7360 Aug 27 06:56	28°Ω56'18	

	7360 Oct 25 21:29	0°00'	min. Earth dist.	7367 Feb 23 17:38	5°00'06"17	45.64779 AU
retrograde	7360 Nov 25 11:40	0°00'09"47	direct	7367 May 15 12:30	4°00'07"01	
	7360 Dec 26 06:14	30°00'00"	evening set	7367 Aug 09 09:43	5°00'17"31	
opposition	7361 Feb 16 14:04	29°00'09"50 -9°55'16"				
min. Earth dist.	7361 Feb 17 02:41	29°00'09"14 46.46576 AU	conjunction	7367 Aug 22 21:44	5°00'36"19 -7°57'22"	
direct	7361 May 09 04:02	28°00'10"22	minimum elong	7367 Aug 22 21:54	5°00'36"20 7°57'24"	
evening set	7361 Aug 03 21:11	29°00'21"08	max. Earth dist.	7367 Aug 21 23:34	5°00'35"01 47.55365 AU	
			morning rise	7367 Sep 05 11:39	5°00'55"15	
conjunction	7361 Aug 16 06:44	29°00'38"11 -9°24'02"	retrograde	7367 Dec 03 07:59	7°00'08"13	
minimum elong	7361 Aug 16 06:54	29°00'38"12 9°24'05"	opposition	7368 Feb 24 04:31	6°00'07"33 -8°10'16"	
max. Earth dist.	7361 Aug 15 17:24	29°00'37"25 48.37715 AU	min. Earth dist.	7368 Feb 25 01:07	6°00'06"33 45.49709 AU	
morning rise	7361 Aug 28 17:52	29°00'55"21	direct	7368 May 15 19:16	5°00'07"13	
	7361 Sep 01 04:29	0°00'	evening set	7368 Aug 09 12:15	6°00'17"42	
retrograde	7361 Nov 26 15:53	1°00'08"44	max. Earth dist.	7368 Aug 22 06:33	6°00'35"30 47.40273 AU	
opposition	7362 Feb 17 19:10	0°00'08"44 -9°40'58"				
min. Earth dist.	7362 Feb 18 08:09	0°00'08"07 46.34187 AU	conjunction	7368 Aug 23 04:28	6°00'36"47 -7°42'07"	
	7362 Feb 25 11:28	30°00'00"	minimum elong	7368 Aug 23 04:37	6°00'36"48 7°42'10"	
direct	7362 May 10 10:55	29°00'09"11	morning rise	7368 Sep 05 22:15	6°00'55"59	
	7362 Jul 20 19:52	0°00'	retrograde	7368 Dec 03 15:16	8°00'08"57	
evening set	7362 Aug 04 22:52	0°00'19"54	opposition	7369 Feb 24 10:24	7°00'08"09 -7°54'17"	
			min. Earth dist.	7369 Feb 25 07:20	7°00'07"08 45.34349 AU	
conjunction	7362 Aug 17 13:01	0°00'37"15 -9°10'09"	direct	7369 May 17 00:45	6°00'07"40	
minimum elong	7362 Aug 17 13:12	0°00'37"16 9°10'12"	evening set	7369 Aug 10 15:21	7°00'18"10	
max. Earth dist.	7362 Aug 16 21:14	0°00'36"20 48.25205 AU	max. Earth dist.	7369 Aug 23 11:46	7°00'36"08 47.24918 AU	
morning rise	7362 Aug 30 05:02	0°00'54"43				
retrograde	7362 Nov 27 23:31	2°00'08"02	conjunction	7369 Aug 24 11:21	7°00'37"32 -7°26'36"	
opposition	7363 Feb 19 00:37	1°00'07"58 -9°26'26"	minimum elong	7369 Aug 24 11:30	7°00'37"32 7°26'38"	
min. Earth dist.	7363 Feb 19 15:47	1°00'07"14 46.21278 AU	morning rise	7369 Sep 07 09:12	7°00'57"00	
direct	7363 May 11 15:46	0°00'08"19	retrograde	7369 Dec 05 01:00	9°00'09"57	
evening set	7363 Aug 06 00:34	1°00'18"58	opposition	7370 Feb 25 16:17	8°00'09"02 -7°38'02"	
			min. Earth dist.	7370 Feb 26 13:53	8°00'07"59 45.18744 AU	
conjunction	7363 Aug 18 19:27	1°00'36"37 -8°56'02"	direct	7370 May 18 03:42	7°00'08"24	
minimum elong	7363 Aug 18 19:37	1°00'36"37 8°56'04"	evening set	7370 Aug 11 18:36	8°00'18"56	
max. Earth dist.	7363 Aug 18 03:09	1°00'35"40 48.12161 AU				
morning rise	7363 Aug 31 15:54	1°00'54"23	conjunction	7370 Aug 25 18:31	8°00'38"35 -7°10'51"	
retrograde	7363 Nov 29 06:49	3°00'07"37	minimum elong	7370 Aug 25 18:40	8°00'38"35 7°10'54"	
opposition	7364 Feb 20 06:02	2°00'07"27 -9°11'40"	max. Earth dist.	7370 Aug 24 18:10	8°00'37"09 47.09299 AU	
min. Earth dist.	7364 Feb 20 22:07	2°00'06"41 46.07828 AU	morning rise	7370 Sep 08 20:08	8°00'58"20	
direct	7364 May 11 20:46	1°00'07"41	retrograde	7370 Dec 06 08:18	10°00'11"17	
evening set	7364 Aug 06 02:37	2°00'18"17	opposition	7371 Feb 26 22:28	9°00'10"15 -7°21'31"	
max. Earth dist.	7364 Aug 18 07:26	2°00'35"10 47.98611 AU	min. Earth dist.	7371 Feb 27 21:29	9°00'09"08 45.02871 AU	
			direct	7371 May 19 09:19	8°00'09"29	
conjunction	7364 Aug 19 01:51	2°00'36"14 -8°41'43"	evening set	7371 Aug 12 22:05	9°00'20"05	
minimum elong	7364 Aug 19 02:02	2°00'36"14 8°41'46"	max. Earth dist.	7371 Aug 26 00:57	9°00'38"32 46.93421 AU	
morning rise	7364 Sep 01 02:55	2°00'54"17				
retrograde	7364 Nov 29 16:23	4°00'07"26	conjunction	7371 Aug 27 01:41	9°00'40"00 -6°54'51"	
opposition	7365 Feb 20 11:31	3°00'07"10 -8°56'41"	minimum elong	7371 Aug 27 01:51	9°00'40"00 6°54'52"	
min. Earth dist.	7365 Feb 21 04:32	3°00'06"21 45.93902 AU	morning rise	7371 Sep 10 06:56	10°00'00"01	
direct	7365 May 12 22:45	2°00'07"16	retrograde	7371 Dec 07 14:12	11°00'13"00	
evening set	7365 Aug 07 04:40	3°00'17"49	opposition	7372 Feb 28 04:37	10°00'11"51 -7°04'45"	
			min. Earth dist.	7372 Feb 29 03:34	10°00'10"44 44.86719 AU	
conjunction	7365 Aug 20 08:23	3°00'36"03 -8°27'10"	direct	7372 May 19 16:32	9°00'10"57	
minimum elong	7365 Aug 20 08:33	3°00'36"04 8°27'11"	evening set	7372 Aug 13 02:01	10°00'21"38	
max. Earth dist.	7365 Aug 19 12:53	3°00'34"55 47.84585 AU	max. Earth dist.	7372 Aug 26 06:22	10°00'40"14 46.77226 AU	
morning rise	7365 Sep 02 13:50	3°00'54"24				
retrograde	7365 Nov 30 22:58	5°00'07"29	conjunction	7372 Aug 27 09:05	10°00'41"49 -6°38'36"	
opposition	7366 Feb 21 17:12	4°00'07"05 -8°41'27"	minimum elong	7372 Aug 27 09:13	10°00'41"50 6°38'38"	
min. Earth dist.	7366 Feb 22 12:06	4°00'06"10 45.79528 AU	morning rise	7372 Sep 10 18:02	11°00'02"07	
direct	7366 May 14 03:46	3°00'07"03	retrograde	7372 Dec 07 21:33	12°00'15"10	
evening set	7366 Aug 08 07:05	4°00'17"34	opposition	7373 Feb 28 11:05	11°00'13"54 -6°47'43"	
			min. Earth dist.	7373 Mar 01 12:04	11°00'12"40 44.70233 AU	
conjunction	7366 Aug 21 15:05	4°00'36"05 -8°12'23"	direct	7373 May 20 23:08	10°00'12"51	
minimum elong	7366 Aug 21 15:15	4°00'36"06 8°12'26"	evening set	7373 Aug 14 06:08	11°00'23"38	
max. Earth dist.	7366 Aug 20 18:53	4°00'34"54 47.70155 AU				
morning rise	7366 Sep 04 00:43	4°00'54"43	conjunction	7373 Aug 28 16:50	11°00'44"05 -6°22'06"	
retrograde	7366 Dec 02 01:50	6°00'07"44	minimum elong	7373 Aug 28 16:59	11°00'44"05 6°22'08"	
opposition	7367 Feb 22 22:39	5°00'07"12 -8°25'59"	max. Earth dist.	7373 Aug 27 13:52	11°00'42"29 46.60656 AU	

morning rise	7373 Sep 12 05:04	12° 00 04'39	conjunction	7380 Sep 05 03:29	19° 00 11'15	-4°19'59	
retrograde	7373 Dec 09 04:22	13° 00 17'47	minimum elong	7380 Sep 05 03:36	19° 00 11'15	4°19'59	
opposition	7374 Mar 01 17:39	12° 00 16'23	-6°30'26	morning rise	7380 Sep 20 12:09	19° 00 33'34	
min. Earth dist.	7374 Mar 02 19:17	12° 00 15'07	44.53325 AU	retrograde	7380 Dec 16 19:00	20° 00 47'34	
direct	7374 May 22 06:37	11° 00 15'11		opposition	7381 Mar 08 20:07	19° 00 44'56	-4°22'18
evening set	7374 Aug 15 10:52	12° 00 26'04		min. Earth dist.	7381 Mar 10 05:27	19° 00 43'15	43.23194 AU
max. Earth dist.	7374 Aug 28 19:29	12° 00 45'02	46.43636 AU	direct	7381 May 29 03:55	18° 00 42'20	
				evening set	7381 Aug 22 02:55	19° 00 54'25	
conjunction	7374 Aug 30 00:45	12° 00 46'47	-6°05'23	max. Earth dist.	7381 Sep 05 00:01	20° 00 14'37	45.12963 AU
minimum elong	7374 Aug 30 00:52	12° 00 46'48	6°05'24				
morning rise	7374 Sep 13 16:26	13° 00 07'37		conjunction	7381 Sep 06 12:33	20° 00 16'52	-4°01'32
retrograde	7374 Dec 10 15:26	14° 00 20'50		minimum elong	7381 Sep 06 12:39	20° 00 16'52	4°01'34
opposition	7375 Mar 03 00:19	13° 00 19'17	-6°12'54	morning rise	7381 Sep 21 23:38	20° 00 39'26	
min. Earth dist.	7375 Mar 04 03:14	13° 00 17'57	44.35956 AU	retrograde	7381 Dec 18 05:08	21° 00 53'37	
direct	7375 May 23 10:12	12° 00 17'55		opposition	7382 Mar 10 03:59	20° 00 50'48	-4°02'56
evening set	7375 Aug 16 15:44	13° 00 28'56		min. Earth dist.	7382 Mar 11 13:12	20° 00 49'08	43.03442 AU
max. Earth dist.	7375 Aug 30 02:30	13° 00 48'05	46.26126 AU	direct	7382 May 30 11:45	19° 00 48'00	
				evening set	7382 Aug 23 10:05	21° 00 00'21	
conjunction	7375 Aug 31 08:55	13° 00 49'54	-5°48'25	max. Earth dist.	7382 Sep 06 07:43	21° 00 20'42	44.93183 AU
minimum elong	7375 Aug 31 09:03	13° 00 49'55	5°48'27				
morning rise	7375 Sep 15 03:41	14° 00 10'59		conjunction	7382 Sep 07 21:53	21° 00 23'03	-3°42'50
retrograde	7375 Dec 12 00:59	15° 00 24'17		minimum elong	7382 Sep 07 21:59	21° 00 23'03	3°42'51
opposition	7376 Mar 03 07:22	14° 00 22'35	-5°55'07	morning rise	7382 Sep 23 11:12	21° 00 45'51	
min. Earth dist.	7376 Mar 04 12:04	14° 00 21'10	44.18098 AU	retrograde	7382 Dec 19 14:00	23° 00 00'16	
direct	7376 May 23 15:41	13° 00 21'01		opposition	7383 Mar 11 12:08	21° 00 57'17	-3°43'16
evening set	7376 Aug 16 20:44	14° 00 32'10		min. Earth dist.	7383 Mar 12 23:04	21° 00 55'31	42.83490 AU
max. Earth dist.	7376 Aug 30 09:35	14° 00 51'30	46.08159 AU	direct	7383 May 31 20:11	20° 00 54'18	
				evening set	7383 Aug 24 17:29	22° 00 06'56	
conjunction	7376 Aug 31 17:01	14° 00 53'24	-5°31'13	max. Earth dist.	7383 Sep 07 17:31	22° 00 27'30	44.73205 AU
minimum elong	7376 Aug 31 17:08	14° 00 53'24	5°31'14				
morning rise	7376 Sep 15 14:51	15° 00 14'44		conjunction	7383 Sep 09 07:31	22° 00 29'52	-3°23'53
retrograde	7376 Dec 12 07:51	16° 00 28'08		minimum elong	7383 Sep 09 07:36	22° 00 29'52	3°23'54
opposition	7377 Mar 04 14:23	15° 00 26'15	-5°37'05	morning rise	7383 Sep 24 22:45	22° 00 52'54	
min. Earth dist.	7377 Mar 05 19:21	15° 00 24'49	43.99799 AU	retrograde	7383 Dec 20 21:26	24° 00 07'36	
direct	7377 May 24 23:57	14° 00 24'29		opposition	7384 Mar 11 20:28	23° 00 04'27	-3°23'21
evening set	7377 Aug 18 02:15	15° 00 35'46		min. Earth dist.	7384 Mar 13 07:22	23° 00 02'40	42.63321 AU
max. Earth dist.	7377 Aug 31 15:50	15° 00 55'13	45.89753 AU	direct	7384 Jun 01 05:51	22° 00 01'16	
				evening set	7384 Aug 25 01:21	23° 00 14'13	
conjunction	7377 Sep 02 01:23	15° 00 57'15	-5°13'47	max. Earth dist.	7384 Sep 08 01:16	23° 00 34'53	44.52986 AU
minimum elong	7377 Sep 02 01:31	15° 00 57'16	5°13'49				
morning rise	7377 Sep 17 02:16	16° 00 18'51		conjunction	7384 Sep 09 17:09	23° 00 37'22	-3°04'40
retrograde	7377 Dec 13 14:50	17° 00 32'21		minimum elong	7384 Sep 09 17:14	23° 00 37'23	3°04'41
opposition	7378 Mar 05 21:34	16° 00 30'17	-5°18'47	morning rise	7384 Sep 25 10:26	24° 00 00'38	
min. Earth dist.	7378 Mar 07 04:33	16° 00 28'44	43.81104 AU	retrograde	7384 Dec 21 09:34	25° 00 15'38	
direct	7378 May 26 08:22	15° 00 28'19		opposition	7385 Mar 13 05:07	24° 00 12'19	-3°03'09
evening set	7378 Aug 19 07:56	16° 00 39'46		min. Earth dist.	7385 Mar 14 17:20	24° 00 10'28	42.42890 AU
max. Earth dist.	7378 Sep 02 00:28	16° 00 59'27	45.70977 AU	direct	7385 Jun 02 11:36	23° 00 08'56	
				evening set	7385 Aug 26 09:45	24° 00 22'15	
conjunction	7378 Sep 03 10:03	17° 00 01'30	-4°56'06	max. Earth dist.	7385 Sep 09 10:59	24° 00 43'06	44.32441 AU
minimum elong	7378 Sep 03 10:10	17° 00 01'30	4°56'07				
morning rise	7378 Sep 18 13:33	17° 00 23'20		conjunction	7385 Sep 11 03:27	24° 00 45'37	-2°45'13
retrograde	7378 Dec 14 22:11	18° 00 36'59		minimum elong	7385 Sep 11 03:31	24° 00 45'37	2°45'14
opposition	7379 Mar 07 04:53	17° 00 34'43	-5°00'14	morning rise	7385 Sep 26 22:18	25° 00 09'06	
min. Earth dist.	7379 Mar 08 12:09	17° 00 33'09	43.62063 AU	retrograde	7385 Dec 22 21:38	26° 00 24'25	
direct	7379 May 27 16:30	16° 00 32'33		opposition	7386 Mar 14 13:56	25° 00 20'55	-2°42'41
evening set	7379 Aug 20 13:58	17° 00 44'10		min. Earth dist.	7386 Mar 16 03:35	25° 00 18'59	42.22101 AU
max. Earth dist.	7379 Sep 03 07:06	18° 00 03'59	45.51886 AU	direct	7386 Jun 03 17:45	24° 00 17'20	
				evening set	7386 Aug 27 18:44	25° 00 31'00	
conjunction	7379 Sep 04 18:34	18° 00 06'08	-4°38'10	max. Earth dist.	7386 Sep 10 20:04	25° 00 51'58	44.11521 AU
minimum elong	7379 Sep 04 18:41	18° 00 06'09	4°38'11				
morning rise	7379 Sep 20 00:51	18° 00 28'14		conjunction	7386 Sep 12 13:59	25° 00 54'35	-2°25'30
retrograde	7379 Dec 16 09:01	19° 00 42'02		minimum elong	7386 Sep 12 14:03	25° 00 54'36	2°25'31
opposition	7380 Mar 07 12:23	18° 00 39'35	-4°41'24	morning rise	7386 Sep 28 10:26	26° 00 18'17	
min. Earth dist.	7380 Mar 08 20:40	18° 00 37'58	43.42749 AU	retrograde	7386 Dec 24 10:14	27° 00 33'55	
direct	7380 May 27 21:23	17° 00 37'12		opposition	7387 Mar 15 23:03	26° 00 30'14	-2°21'57
evening set	7380 Aug 20 20:15	18° 00 49'02		min. Earth dist.	7387 Mar 17 13:14	26° 00 28'16	42.00913 AU
max. Earth dist.	7380 Sep 03 15:32	19° 00 09'03	45.32528 AU	direct	7387 Jun 05 01:23	25° 00 26'24	

evening set	7387 Aug 29 04:05	26° 10 40'27		minimum elong	7393 Sep 20 23:15	4° 15 15'27	0°00'44
max. Earth dist.	7387 Sep 12 04:45	27° 10 01'29	43.90160 AU	behind sun begin	7393 Sep 20 16:45	4° 15 15'04	
				behind sun end	7393 Sep 21 05:45	4° 15 15'51	
conjunction	7387 Sep 14 00:41	27° 10 04'15	-2°05'33	asc. node	7393 Oct 03 06:39	4° 15 34'39	
minimum elong	7387 Sep 14 00:44	27° 10 04'15	2°05'34	morning rise	7393 Oct 07 01:14	4° 15 40'26	
morning rise	7387 Sep 29 22:29	27° 10 28'09		retrograde	7394 Jan 01 19:36	5° 15 58'50	
retrograde	7387 Dec 25 20:44	28° 10 44'07		opposition	7394 Mar 23 22:19	4° 15 53'19	0°10'37
opposition	7388 Mar 16 08:34	27° 10 40'12	-2°00'57	min. Earth dist.	7394 Mar 25 19:00	4° 15 50'56	40.42912 AU
min. Earth dist.	7388 Mar 18 00:50	27° 10 38'07	41.79293 AU	direct	7394 Jun 13 01:07	3° 15 47'26	
direct	7388 Jun 05 12:16	26° 10 36'07		evening set	7394 Sep 06 10:45	5° 15 04'43	
evening set	7388 Aug 29 13:49	27° 10 50'33		max. Earth dist.	7394 Sep 20 08:41	5° 15 26'24	42.31388 AU
max. Earth dist.	7388 Sep 12 15:33	28° 10 11'45	43.68385 AU				
				conjunction	7394 Sep 22 12:03	5° 15 29'46	0°20'57
conjunction	7388 Sep 14 11:49	28° 10 14'33	-1°45'22	minimum elong	7394 Sep 22 12:03	5° 15 29'46	0°20'57
minimum elong	7388 Sep 14 11:52	28° 10 14'33	1°45'22	morning rise	7394 Oct 08 14:07	5° 15 54'54	
morning rise	7388 Sep 30 10:43	28° 10 38'39		retrograde	7395 Jan 03 08:09	7° 15 13'49	
retrograde	7388 Dec 26 05:24	29° 10 54'58		opposition	7395 Mar 25 09:48	6° 15 08'02	0°33'28
opposition	7389 Mar 17 18:08	28° 10 50'48	-1°39'41	min. Earth dist.	7395 Mar 27 07:53	6° 15 05'35	40.19524 AU
min. Earth dist.	7389 Mar 19 10:39	28° 10 48'42	41.57272 AU	direct	7395 Jun 14 12:07	5° 15 01'52	
direct	7389 Jun 07 00:25	27° 10 46'26		evening set	7395 Sep 07 23:55	6° 15 19'45	
evening set	7389 Aug 31 00:10	29° 10 01'16		max. Earth dist.	7395 Sep 21 22:09	6° 15 41'35	42.07917 AU
max. Earth dist.	7389 Sep 14 00:27	29° 10 22'29	43.46220 AU				
				conjunction	7395 Sep 24 01:12	6° 15 44'57	0°42'49
conjunction	7389 Sep 15 23:06	29° 10 25'28	-1°24'56	minimum elong	7395 Sep 24 01:11	6° 15 44'57	0°42'50
minimum elong	7389 Sep 15 23:08	29° 10 25'28	1°24'55	morning rise	7395 Oct 10 02:50	7° 15 10'14	
morning rise	7389 Oct 01 23:11	29° 10 49'46		retrograde	7396 Jan 04 20:24	8° 15 29'44	
	7389 Oct 08 22:43	0° 15		opposition	7396 Mar 25 21:35	7° 15 23'42	0°56'34
retrograde	7389 Dec 27 17:12	1° 15 06'26		min. Earth dist.	7396 Mar 27 19:57	7° 15 21'12	39.95991 AU
opposition	7390 Mar 19 04:04	0° 15 02'00	-1°18'10	direct	7396 Jun 14 23:14	6° 15 17'15	
	7390 Mar 20 18:34	30° 15		evening set	7396 Sep 08 13:58	7° 15 35'47	
min. Earth dist.	7390 Mar 20 22:19	29° 15 59'48	41.34898 AU	max. Earth dist.	7396 Sep 22 10:10	7° 15 57'38	41.84294 AU
direct	7390 Jun 08 09:13	28° 15 57'21					
	7390 Aug 23 20:16	0° 15		conjunction	7396 Sep 24 14:44	8° 15 01'07	1°04'55
evening set	7390 Sep 01 10:52	0° 15 12'36		minimum elong	7396 Sep 24 14:42	8° 15 01'07	1°04'56
max. Earth dist.	7390 Sep 15 11:46	0° 15 33'58	43.23706 AU	morning rise	7396 Oct 10 16:03	8° 15 26'32	
				retrograde	7397 Jan 05 12:26	9° 15 46'40	
conjunction	7390 Sep 17 10:49	0° 15 36'59	-1°04'15	opposition	7397 Mar 27 09:34	8° 15 40'23	1°19'55
minimum elong	7390 Sep 17 10:51	0° 15 36'59	1°04'14	min. Earth dist.	7397 Mar 29 08:44	8° 15 37'50	39.72292 AU
morning rise	7390 Oct 03 11:32	1° 15 01'28		direct	7397 Jun 16 08:12	7° 15 33'38	
retrograde	7390 Dec 29 04:00	2° 15 18'32		evening set	7397 Sep 10 04:40	8° 15 52'52	
opposition	7391 Mar 20 14:11	1° 15 13'50	-0°56'22	max. Earth dist.	7397 Sep 23 23:12	9° 15 14'45	41.60440 AU
min. Earth dist.	7391 Mar 22 09:15	1° 15 11'34	41.12209 AU				
direct	7391 Jun 09 18:57	0° 15 08'52		conjunction	7397 Sep 26 04:52	9° 15 18'21	1°27'15
evening set	7391 Sep 02 22:06	1° 15 24'35		minimum elong	7397 Sep 26 04:49	9° 15 18'20	1°27'17
max. Earth dist.	7391 Sep 16 22:22	1° 15 46'01	43.00923 AU	morning rise	7397 Oct 12 05:21	9° 15 43'53	
				retrograde	7398 Jan 07 04:23	11° 15 04'40	
conjunction	7391 Sep 18 22:38	1° 15 49'08	-0°43'19	opposition	7398 Mar 28 22:10	9° 15 58'07	1°43'31
minimum elong	7391 Sep 18 22:39	1° 15 49'08	0°43'18	min. Earth dist.	7398 Mar 30 22:58	9° 15 55'28	39.48335 AU
morning rise	7391 Oct 05 00:05	2° 15 13'47		direct	7398 Jun 17 19:33	8° 15 51'05	
retrograde	7391 Dec 30 18:46	3° 15 31'16		evening set	7398 Sep 11 20:07	10° 15 11'03	
opposition	7392 Mar 21 00:34	2° 15 26'17	-0°34'18	max. Earth dist.	7398 Sep 25 13:04	10° 15 32'59	41.36302 AU
min. Earth dist.	7392 Mar 22 19:58	2° 15 24'00	40.89291 AU				
direct	7392 Jun 10 02:46	1° 15 21'01		conjunction	7398 Sep 27 19:24	10° 15 36'39	1°49'48
evening set	7392 Sep 03 09:39	2° 15 37'13		minimum elong	7398 Sep 27 19:21	10° 15 36'38	1°49'49
max. Earth dist.	7392 Sep 17 09:14	2° 15 58'44	42.77906 AU	morning rise	7398 Oct 13 18:53	11° 15 02'17	
				retrograde	7399 Jan 08 21:16	12° 15 23'44	
conjunction	7392 Sep 19 10:41	3° 15 01'56	-0°22'09	opposition	7399 Mar 30 10:58	11° 15 16'56	2°07'21
minimum elong	7392 Sep 19 10:42	3° 15 01'56	0°22'09	min. Earth dist.	7399 Apr 01 11:56	11° 15 14'16	39.24077 AU
morning rise	7392 Oct 05 12:30	3° 15 26'45		direct	7399 Jun 19 08:51	10° 15 09'35	
retrograde	7392 Dec 31 08:26	4° 15 44'41		evening set	7399 Sep 13 12:18	11° 15 30'18	
opposition	7393 Mar 22 11:25	3° 15 39'25	-0°11'58	max. Earth dist.	7399 Sep 27 01:43	11° 15 52'10	41.11830 AU
min. Earth dist.	7393 Mar 24 08:25	3° 15 37'03	40.66175 AU				
direct	7393 Jun 11 12:12	2° 15 33'51		conjunction	7399 Sep 29 10:19	11° 15 56'01	2°12'34
evening set	7393 Sep 04 21:51	3° 15 50'34		minimum elong	7399 Sep 29 10:15	11° 15 56'00	2°12'36
max. Earth dist.	7393 Sep 18 21:46	4° 15 12'14	42.54721 AU	morning rise	7399 Oct 15 08:37	12° 15 21'46	
				retrograde	7400 Jan 10 12:23	13° 15 43'55	
conjunction	7393 Sep 20 23:14	4° 15 15'27	-0°00'45	opposition	7400 Apr 01 00:24	12° 15 36'49	2°31'26

min. Earth dist.	7400 Apr 03 03:26	12° <u>0</u> 34'01	38.99498 AU	morning rise	7406 Oct 25 12:07	22° <u>0</u> 06'52	
direct	7400 Jun 20 21:40	11° <u>0</u> 29'08		retrograde	7407 Jan 21 11:29	23° <u>0</u> 34'54	
evening set	7400 Sep 15 04:51	12° <u>0</u> 50'38		opposition	7407 Apr 11 09:00	22° <u>0</u> 25'23	5°25'48
max. Earth dist.	7400 Sep 28 16:52	13° <u>0</u> 12'32	40.87038 AU	min. Earth dist.	7407 Apr 13 16:44	22° <u>0</u> 22'12	37.22054 AU
				direct	7407 Jul 01 02:24	21° <u>0</u> 14'57	
conjunction	7400 Oct 01 01:39	13° <u>0</u> 16'25	2°35'32	evening set	7407 Sep 26 22:50	22° <u>0</u> 43'04	
minimum elong	7400 Oct 01 01:34	13° <u>0</u> 16'25	2°35'33	max. Earth dist.	7407 Oct 09 10:54	23° <u>0</u> 04'30	39.08545 AU
morning rise	7400 Oct 16 22:20	13° <u>0</u> 42'16					
retrograde	7401 Jan 12 01:16	15° <u>0</u> 05'08		conjunction	7407 Oct 12 01:14	23° <u>0</u> 09'00	5°21'18
opposition	7401 Apr 02 14:06	13° <u>0</u> 57'43	2°55'44	minimum elong	7407 Oct 12 01:03	23° <u>0</u> 08'59	5°21'20
min. Earth dist.	7401 Apr 04 17:26	13° <u>0</u> 54'53	38.74609 AU	morning rise	7407 Oct 27 02:51	23° <u>0</u> 34'56	
direct	7401 Jun 22 12:45	12° <u>0</u> 49'41		retrograde	7408 Jan 23 03:56	25° <u>0</u> 04'00	
evening set	7401 Sep 16 22:27	14° <u>0</u> 11'59		opposition	7408 Apr 12 01:53	23° <u>0</u> 54'08	5°51'23
max. Earth dist.	7401 Sep 30 06:29	14° <u>0</u> 33'48	40.61953 AU	min. Earth dist.	7408 Apr 14 09:42	23° <u>0</u> 50'55	36.96583 AU
				direct	7408 Jul 01 18:55	22° <u>0</u> 43'20	
conjunction	7401 Oct 02 17:23	14° <u>0</u> 37'52	2°58'43	evening set	7408 Sep 27 21:53	24° <u>0</u> 12'35	
minimum elong	7401 Oct 02 17:18	14° <u>0</u> 37'51	2°58'44	max. Earth dist.	7408 Oct 10 04:47	24° <u>0</u> 33'51	38.82956 AU
morning rise	7401 Oct 18 12:27	15° <u>0</u> 03'46					
retrograde	7402 Jan 13 17:39	16° <u>0</u> 27'24		conjunction	7408 Oct 12 20:11	24° <u>0</u> 38'28	5°45'31
opposition	7402 Apr 04 04:05	15° <u>0</u> 19'40	3°20'16	minimum elong	7408 Oct 12 20:00	24° <u>0</u> 38'27	5°45'33
min. Earth dist.	7402 Apr 06 08:41	15° <u>0</u> 16'45	38.49469 AU	morning rise	7408 Oct 27 17:56	25° <u>0</u> 04'20	
direct	7402 Jun 24 00:13	14° <u>0</u> 11'14		retrograde	7409 Jan 24 00:47	26° <u>0</u> 34'30	
evening set	7402 Sep 18 16:36	15° <u>0</u> 34'24		opposition	7409 Apr 13 19:13	25° <u>0</u> 24'18	6°17'04
max. Earth dist.	7402 Oct 01 22:16	15° <u>0</u> 56'12	40.36616 AU	min. Earth dist.	7409 Apr 16 03:21	25° <u>0</u> 21'03	36.71141 AU
				direct	7409 Jul 03 08:55	24° <u>0</u> 13'06	
conjunction	7402 Oct 04 09:41	16° <u>0</u> 00'19	3°22'04	evening set	7409 Sep 29 22:00	25° <u>0</u> 43'35	
minimum elong	7402 Oct 04 09:35	16° <u>0</u> 00'19	3°22'06	max. Earth dist.	7409 Oct 11 23:56	26° <u>0</u> 04'40	38.57333 AU
morning rise	7402 Oct 20 02:30	16° <u>0</u> 26'17					
retrograde	7403 Jan 15 09:32	17° <u>0</u> 50'43		conjunction	7409 Oct 14 16:01	26° <u>0</u> 09'22	6°09'49
opposition	7403 Apr 05 18:39	16° <u>0</u> 42'37	3°45'00	minimum elong	7409 Oct 14 15:50	26° <u>0</u> 09'21	6°09'51
min. Earth dist.	7403 Apr 08 00:19	16° <u>0</u> 39'38	38.24120 AU	morning rise	7409 Oct 29 09:14	26° <u>0</u> 35'08	
direct	7403 Jun 25 12:24	15° <u>0</u> 33'49		retrograde	7410 Jan 25 21:14	28° <u>0</u> 06'29	
evening set	7403 Sep 20 11:22	16° <u>0</u> 57'51		opposition	7410 Apr 15 13:10	26° <u>0</u> 55'55	6°42'52
max. Earth dist.	7403 Oct 03 13:56	17° <u>0</u> 19'37	40.11115 AU	min. Earth dist.	7410 Apr 17 22:42	26° <u>0</u> 52'34	36.45652 AU
				direct	7410 Jul 05 00:25	25° <u>0</u> 44'20	
conjunction	7403 Oct 06 02:04	17° <u>0</u> 23'49	3°45'37	evening set	7410 Oct 01 23:11	27° <u>0</u> 16'06	
minimum elong	7403 Oct 06 01:57	17° <u>0</u> 23'48	3°45'39	max. Earth dist.	7410 Oct 13 20:03	27° <u>0</u> 37'00	38.31645 AU
morning rise	7403 Oct 21 16:36	17° <u>0</u> 49'48					
retrograde	7404 Jan 17 04:32	19° <u>0</u> 15'05		conjunction	7410 Oct 16 12:26	27° <u>0</u> 41'46	6°34'11
opposition	7404 Apr 06 09:30	18° <u>0</u> 06'38	4°09'56	minimum elong	7410 Oct 16 12:14	27° <u>0</u> 41'45	6°34'14
min. Earth dist.	7404 Apr 08 15:10	18° <u>0</u> 03'37	37.98651 AU	morning rise	7410 Oct 31 00:49	28° <u>0</u> 07'24	
direct	7404 Jun 26 02:34	16° <u>0</u> 57'25		retrograde	7411 Jan 27 20:14	29° <u>0</u> 39'57	
evening set	7404 Sep 21 07:01	18° <u>0</u> 22'24		opposition	7411 Apr 17 07:42	28° <u>0</u> 29'02	7°08'45
max. Earth dist.	7404 Oct 04 05:34	18° <u>0</u> 44'03	39.85494 AU	min. Earth dist.	7411 Apr 19 17:07	28° <u>0</u> 25'40	36.20082 AU
				direct	7411 Jul 06 19:26	27° <u>0</u> 17'02	
conjunction	7404 Oct 06 19:07	18° <u>0</u> 48'23	4°09'19	evening set	7411 Oct 04 01:15	28° <u>0</u> 50'08	
minimum elong	7404 Oct 06 18:59	18° <u>0</u> 48'22	4°09'21	max. Earth dist.	7411 Oct 15 15:01	29° <u>0</u> 10'42	38.05834 AU
morning rise	7404 Oct 22 06:56	19° <u>0</u> 14'23					
retrograde	7405 Jan 17 23:50	20° <u>0</u> 40'32		conjunction	7411 Oct 18 09:16	29° <u>0</u> 15'39	6°58'37
opposition	7405 Apr 08 00:51	19° <u>0</u> 31'42	4°35'04	minimum elong	7411 Oct 18 09:02	29° <u>0</u> 15'38	6°58'39
min. Earth dist.	7405 Apr 10 08:00	19° <u>0</u> 28'36	37.73114 AU	morning rise	7411 Nov 01 16:28	29° <u>0</u> 41'08	
direct	7405 Jun 27 17:51	18° <u>0</u> 22'05			7411 Nov 12 15:43	0° <u>0</u> 00'00	
evening set	7405 Sep 23 03:26	19° <u>0</u> 48'04		retrograde	7412 Jan 29 19:48	1° <u>0</u> 14'56	
max. Earth dist.	7405 Oct 05 23:33	20° <u>0</u> 09'42	39.59835 AU	opposition	7412 Apr 18 03:00	0° <u>0</u> 03'38	7°34'43
					7412 Apr 20 16:48	30° <u>0</u> 00'00	
conjunction	7405 Oct 08 12:42	20° <u>0</u> 14'03	4°33'11	min. Earth dist.	7412 Apr 20 14:07	0° <u>0</u> 00'09	35.94401 AU
minimum elong	7405 Oct 08 12:33	20° <u>0</u> 14'02	4°33'13	direct	7412 Jul 07 13:58	28° <u>0</u> 51'12	
morning rise	7405 Oct 23 21:26	20° <u>0</u> 40'03			7412 Sep 20 03:50	0° <u>0</u> 00'00	
retrograde	7406 Jan 19 17:50	22° <u>0</u> 07'06		evening set	7412 Oct 05 04:25	0° <u>0</u> 12'54	
opposition	7406 Apr 09 16:39	20° <u>0</u> 57'56	5°00'21	max. Earth dist.	7412 Oct 16 12:57	0° <u>0</u> 14'03	37.79911 AU
min. Earth dist.	7406 Apr 11 23:15	20° <u>0</u> 54'50	37.47566 AU				
direct	7406 Jun 29 11:28	19° <u>0</u> 47'54		conjunction	7412 Oct 19 06:59	0° <u>0</u> 15'02	7°23'05
evening set	7406 Sep 25 00:47	21° <u>0</u> 14'55		minimum elong	7412 Oct 19 06:45	0° <u>0</u> 15'01	7°23'08
max. Earth dist.	7406 Oct 07 15:53	21° <u>0</u> 36'24	39.34173 AU	morning rise	7412 Nov 02 08:24	1° <u>0</u> 16'20	
				retrograde	7413 Jan 30 16:41	2° <u>0</u> 15'25	
conjunction	7406 Oct 10 06:37	21° <u>0</u> 40'53	4°57'11	opposition	7413 Apr 19 22:40	1° <u>0</u> 13'44	8°00'43
minimum elong	7406 Oct 10 06:28	21° <u>0</u> 40'53	4°57'13	min. Earth dist.	7413 Apr 22 09:41	1° <u>0</u> 13'14	35.68618 AU

direct	7413 Jul 09 10:39	0°M.26'50		retrograde	7420 Feb 12 23:03	14°M.51'06	
evening set	7413 Oct 07 08:49	2°M.02'47		opposition	7420 May 01 10:52	13°M.36'32	11°01'06
max. Earth dist.	7413 Oct 18 09:20	2°M.22'44	37.53898 AU	min. Earth dist.	7420 May 03 23:35	13°M.32'45	33.90196 AU
				direct	7420 Jul 20 15:59	12°M.20'22	
conjunction	7413 Oct 21 05:12	2°M.27'54	7°47'34	evening set	7420 Oct 21 22:41	14°M.08'29	
minimum elong	7413 Oct 21 04:57	2°M.27'53	7°47'36	max. Earth dist.	7420 Oct 30 13:20	14°M.25'11	35.74391 AU
morning rise	7413 Nov 04 00:42	2°M.52'58					
retrograde	7414 Feb 01 15:18	4°M.29'25		conjunction	7420 Nov 02 10:44	14°M.30'49	10°36'17
opposition	7414 Apr 21 19:03	3°M.17'19	8°26'44	minimum elong	7420 Nov 02 10:24	14°M.30'48	10°36'21
min. Earth dist.	7414 Apr 24 07:12	3°M.13'43	35.42786 AU	morning rise	7420 Nov 13 21:36	14°M.53'05	
direct	7414 Jul 11 05:29	2°M.03'58			7420 Nov 17 12:15	15°M.	
evening set	7414 Oct 09 14:04	3°M.41'24		retrograde	7421 Feb 14 03:38	16°M.41'01	
max. Earth dist.	7414 Oct 20 08:19	4°M.01'03	37.27835 AU	opposition	7421 May 03 11:53	15°M.26'05	11°26'06
				min. Earth dist.	7421 May 06 01:00	15°M.22'15	33.65677 AU
conjunction	7414 Oct 23 04:06	4°M.06'16	8°12'02		7421 May 21 04:08	15°R.M.	
minimum elong	7414 Oct 23 03:51	4°M.06'15	8°12'06	direct	7421 Jul 22 15:05	14°M.09'28	
morning rise	7414 Nov 05 16:52	4°M.31'04			7421 Sep 21 01:47	15°M.	
retrograde	7415 Feb 03 12:43	6°M.08'56		evening set	7421 Oct 24 12:49	15°M.59'42	
opposition	7415 Apr 23 16:04	4°M.56'25	8°52'45	max. Earth dist.	7421 Nov 01 18:01	16°M.15'47	35.49725 AU
min. Earth dist.	7415 Apr 26 04:46	4°M.52'46	35.16943 AU				
direct	7415 Jul 13 01:08	3°M.42'36		conjunction	7421 Nov 04 14:40	16°M.21'25	10°59'30
evening set	7415 Oct 11 20:34	5°M.21'36		minimum elong	7421 Nov 04 14:20	16°M.21'24	10°59'34
max. Earth dist.	7415 Oct 22 06:54	5°M.40'50	37.01809 AU	morning rise	7421 Nov 15 15:02	16°M.43'03	
				retrograde	7422 Feb 16 07:15	18°M.32'59	
conjunction	7415 Oct 25 03:28	5°M.46'09	8°36'26	opposition	7422 May 05 13:55	17°M.17'40	11°50'47
minimum elong	7415 Oct 25 03:12	5°M.46'08	8°36'29	min. Earth dist.	7422 May 08 03:15	17°M.13'48	33.41410 AU
morning rise	7415 Nov 07 09:20	6°M.10'39		direct	7422 Jul 24 14:55	16°M.00'38	
retrograde	7416 Feb 05 13:37	7°M.50'01		evening set	7422 Oct 27 04:28	17°M.53'02	
opposition	7416 Apr 24 13:33	6°M.37'05	9°18'42	max. Earth dist.	7422 Nov 03 22:01	18°M.08'20	35.25300 AU
min. Earth dist.	7416 Apr 27 02:07	6°M.33'24	34.91188 AU				
direct	7416 Jul 13 20:06	5°M.22'46		conjunction	7422 Nov 06 19:08	18°M.14'04	11°22'23
evening set	7416 Oct 13 03:59	7°M.03'25		minimum elong	7422 Nov 06 18:47	18°M.14'02	11°22'28
max. Earth dist.	7416 Oct 23 06:24	7°M.22'14	36.75871 AU	morning rise	7422 Nov 17 08:34	18°M.35'01	
				retrograde	7423 Feb 18 12:34	20°M.27'01	
conjunction	7416 Oct 26 03:33	7°M.27'38	9°00'45	opposition	7423 May 07 16:37	19°M.11'20	12°15'06
minimum elong	7416 Oct 26 03:16	7°M.27'37	9°00'50	min. Earth dist.	7423 May 10 05:41	19°M.07'27	33.17373 AU
morning rise	7416 Nov 08 01:51	7°M.51'47		direct	7423 Jul 26 15:36	17°M.53'51	
retrograde	7417 Feb 06 14:23	9°M.32'42		evening set	7423 Oct 29 21:34	19°M.48'31	
opposition	7417 Apr 26 11:55	8°M.19'20	9°44'34	max. Earth dist.	7423 Nov 06 03:11	20°M.02'58	35.01066 AU
min. Earth dist.	7417 Apr 29 01:29	8°M.15'35	34.65565 AU				
direct	7417 Jul 15 17:18	7°M.04'32		conjunction	7423 Nov 09 00:38	20°M.08'47	11°44'53
evening set	7417 Oct 15 12:50	8°M.46'56		minimum elong	7423 Nov 09 00:17	20°M.08'46	11°44'57
max. Earth dist.	7417 Oct 25 07:46	9°M.05'20	36.50106 AU	morning rise	7423 Nov 19 02:18	20°M.28'59	
				retrograde	7424 Feb 20 17:57	22°M.23'07	
conjunction	7417 Oct 28 04:20	9°M.10'45	9°24'57	opposition	7424 May 08 20:17	21°M.07'02	12°39'01
minimum elong	7417 Oct 28 04:02	9°M.10'44	9°25'00	min. Earth dist.	7424 May 11 10:18	21°M.03'04	32.93529 AU
morning rise	7417 Nov 09 18:32	9°M.34'30		direct	7424 Jul 27 16:54	19°M.49'05	
retrograde	7418 Feb 08 17:40	11°M.17'02		evening set	7424 Oct 31 16:25	21°M.46'07	
opposition	7418 Apr 28 10:42	10°M.03'16	10°10'17	max. Earth dist.	7424 Nov 07 09:45	21°M.59'41	34.77041 AU
min. Earth dist.	7418 Apr 30 23:23	9°M.59'32	34.40158 AU				
direct	7418 Jul 17 16:54	8°M.47'59		conjunction	7424 Nov 10 06:52	22°M.05'32	12°06'56
evening set	7418 Oct 17 22:50	10°M.32'12		minimum elong	7424 Nov 10 06:31	22°M.05'30	12°07'02
max. Earth dist.	7418 Oct 27 08:08	10°M.50'03	36.24570 AU	morning rise	7424 Nov 19 20:02	22°M.24'53	
				retrograde	7425 Feb 22 01:49	24°M.21'13	
conjunction	7418 Oct 30 05:45	10°M.55'35	9°48'58	opposition	7425 May 11 00:39	23°M.04'44	13°02'28
minimum elong	7418 Oct 30 05:26	10°M.55'34	9°49'02	min. Earth dist.	7425 May 13 13:50	23°M.00'48	32.69891 AU
morning rise	7418 Nov 11 11:28	11°M.18'54		direct	7425 Jul 29 20:43	21°M.46'18	
retrograde	7419 Feb 10 20:49	13°M.03'09		evening set	7425 Nov 03 12:51	23°M.45'47	
opposition	7419 Apr 30 10:28	11°M.48'58	10°35'49	max. Earth dist.	7425 Nov 09 15:54	23°M.58'17	34.53220 AU
min. Earth dist.	7419 May 03 00:03	11°M.45'10	34.15026 AU				
direct	7419 Jul 19 15:14	10°M.33'14		conjunction	7425 Nov 12 13:59	24°M.04'16	12°28'32
evening set	7419 Oct 20 09:58	12°M.19'21		minimum elong	7425 Nov 12 13:38	24°M.04'14	12°28'36
max. Earth dist.	7419 Oct 29 11:26	12°M.36'44	35.99328 AU	morning rise	7425 Nov 21 13:55	24°M.22'41	
				retrograde	7426 Feb 24 10:13	26°M.21'20	
conjunction	7419 Nov 01 07:51	12°M.42'14	10°12'45	opposition	7426 May 13 05:54	25°M.04'24	13°25'23
minimum elong	7419 Nov 01 07:32	12°M.42'13	10°12'48	min. Earth dist.	7426 May 15 20:09	25°M.00'23	32.46490 AU
morning rise	7419 Nov 13 04:16	13°M.05'03		direct	7426 Aug 01 00:26	23°M.45'29	

evening set	7426 Nov 06 11:06	25° \mathbb{M} 47'31		conjunction	7432 Nov 27 13:04	8° \mathbb{A} 49'30	14°40'12
max. Earth dist.	7426 Nov 12 00:59	25° \mathbb{M} 59'01	34.29670 AU	minimum elong	7432 Nov 27 12:45	8° \mathbb{A} 49'28	14°40'18
				morning rise	7432 Nov 30 21:54	8° \mathbb{A} 56'53	
conjunction	7426 Nov 14 21:55	26° \mathbb{M} 04'58	12°49'34	retrograde	7433 Mar 11 13:06	11° \mathbb{A} 16'00	
minimum elong	7426 Nov 14 21:33	26° \mathbb{M} 04'56	12°49'39	opposition	7433 May 27 17:31	9° \mathbb{A} 56'13	15°44'31
morning rise	7426 Nov 23 07:26	26° \mathbb{M} 22'19		min. Earth dist.	7433 May 30 03:32	9° \mathbb{A} 52'18	30.95151 AU
retrograde	7427 Feb 26 19:54	28° \mathbb{M} 23'22		direct	7433 Aug 15 06:09	8° \mathbb{A} 34'03	
opposition	7427 May 15 11:57	27° \mathbb{M} 06'01	13°47'42	max. Earth dist.	7433 Nov 27 11:06	10° \mathbb{A} 58'09	32.78356 AU
min. Earth dist.	7427 May 18 01:17	27° \mathbb{M} 02'01	32.23384 AU	evening set	7433 Nov 28 10:40	11° \mathbb{A} 00'19	
direct	7427 Aug 03 08:15	25° \mathbb{M} 46'36					
evening set	7427 Nov 09 10:56	27° \mathbb{M} 51'17		conjunction	7433 Nov 30 02:24	11° \mathbb{A} 03'59	14°55'18
max. Earth dist.	7427 Nov 14 08:34	28° \mathbb{M} 01'30	34.06451 AU	minimum elong	7433 Nov 30 02:06	11° \mathbb{A} 03'57	14°55'23
				morning rise	7433 Dec 01 17:32	11° \mathbb{A} 07'35	
conjunction	7427 Nov 17 06:20	28° \mathbb{M} 07'34	13°09'59	retrograde	7434 Mar 14 03:41	13° \mathbb{A} 31'48	
minimum elong	7427 Nov 17 05:58	28° \mathbb{M} 07'32	13°10'04	opposition	7434 May 30 05:20	12° \mathbb{A} 11'44	16°00'19
morning rise	7427 Nov 25 00:39	28° \mathbb{M} 23'46		min. Earth dist.	7434 Jun 01 13:23	12° \mathbb{A} 07'55	30.76037 AU
	7428 Jan 18 08:31	0° \mathbb{A}		direct	7434 Aug 17 17:55	10° \mathbb{A} 49'11	
retrograde	7428 Feb 29 06:02	0° \mathbb{A} 27'20		max. Earth dist.	7434 Nov 30 01:32	13° \mathbb{A} 14'45	32.59338 AU
	7428 Apr 11 21:29	30° \mathbb{R} \mathbb{M}					
opposition	7428 May 16 18:48	29° \mathbb{M} 09'32	14°09'22	conjunction	7434 Dec 02 16:32	13° \mathbb{A} 20'35	15°09'15
min. Earth dist.	7428 May 19 08:25	29° \mathbb{M} 05'30	32.00652 AU	minimum elong	7434 Dec 02 16:15	13° \mathbb{A} 20'34	15°09'22
direct	7428 Aug 04 14:13	27° \mathbb{M} 49'37		retrograde	7435 Mar 16 19:04	15° \mathbb{A} 49'44	
evening set	7428 Nov 11 13:00	29° \mathbb{M} 57'05		opposition	7435 Jun 01 18:11	14° \mathbb{A} 29'21	16°14'53
	7428 Nov 12 22:16	0° \mathbb{A}		min. Earth dist.	7435 Jun 04 02:16	14° \mathbb{A} 25'31	30.57586 AU
max. Earth dist.	7428 Nov 15 19:30	0° \mathbb{A} 06'04	33.83632 AU	direct	7435 Aug 20 04:26	13° \mathbb{A} 06'28	
				max. Earth dist.	7435 Dec 02 18:42	15° \mathbb{A} 33'37	32.40988 AU
conjunction	7428 Nov 18 15:50	0° \mathbb{A} 12'05	13°29'44				
minimum elong	7428 Nov 18 15:29	0° \mathbb{A} 12'03	13°29'49	conjunction	7435 Dec 05 07:26	15° \mathbb{A} 39'18	15°22'01
morning rise	7428 Nov 25 17:30	0° \mathbb{A} 26'58		minimum elong	7435 Dec 05 07:10	15° \mathbb{A} 39'16	15°22'06
retrograde	7429 Mar 02 14:39	2° \mathbb{A} 33'11		retrograde	7436 Mar 18 11:32	18° \mathbb{A} 09'43	
opposition	7429 May 19 02:23	1° \mathbb{A} 14'57	14°30'16	opposition	7436 Jun 03 07:50	16° \mathbb{A} 49'02	16°28'09
min. Earth dist.	7429 May 21 15:24	1° \mathbb{A} 10'55	31.78351 AU	min. Earth dist.	7436 Jun 05 14:19	16° \mathbb{A} 45'18	30.39761 AU
	7429 Jul 19 00:16	30° \mathbb{R} \mathbb{M}		direct	7436 Aug 21 19:20	15° \mathbb{A} 25'48	
direct	7429 Aug 06 21:51	29° \mathbb{M} 54'32		max. Earth dist.	7436 Dec 04 10:22	17° \mathbb{A} 54'17	32.23283 AU
	7429 Aug 25 13:27	0° \mathbb{A}					
evening set	7429 Nov 14 17:23	2° \mathbb{A} 04'58		conjunction	7436 Dec 06 23:10	18° \mathbb{A} 00'01	15°33'31
max. Earth dist.	7429 Nov 18 05:34	2° \mathbb{A} 12'25	33.61307 AU	minimum elong	7436 Dec 06 22:55	18° \mathbb{A} 00'00	15°33'37
				retrograde	7437 Mar 21 04:36	20° \mathbb{A} 31'40	
conjunction	7429 Nov 21 01:58	2° \mathbb{A} 18'30	13°48'42	opposition	7437 Jun 05 22:11	19° \mathbb{A} 10'41	16°40'01
minimum elong	7429 Nov 21 01:37	2° \mathbb{A} 18'28	13°48'47	min. Earth dist.	7437 Jun 08 04:11	19° \mathbb{A} 06'58	30.22579 AU
morning rise	7429 Nov 27 09:37	2° \mathbb{A} 31'56		direct	7437 Aug 24 08:50	17° \mathbb{A} 47'06	
retrograde	7430 Mar 05 02:09	4° \mathbb{A} 40'56		max. Earth dist.	7437 Dec 07 05:16	20° \mathbb{A} 17'05	32.06241 AU
opposition	7430 May 21 10:51	3° \mathbb{A} 22'17	14°50'19				
min. Earth dist.	7430 May 23 22:59	3° \mathbb{A} 18'17	31.56590 AU	conjunction	7437 Dec 09 15:46	20° \mathbb{A} 22'39	15°43'40
direct	7430 Aug 09 04:54	2° \mathbb{A} 01'23		minimum elong	7437 Dec 09 15:33	20° \mathbb{A} 22'37	15°43'46
evening set	7430 Nov 18 00:19	4° \mathbb{A} 14'58		retrograde	7438 Mar 23 21:07	22° \mathbb{A} 55'26	
max. Earth dist.	7430 Nov 20 17:54	4° \mathbb{A} 20'50	33.39545 AU	opposition	7438 Jun 08 13:32	21° \mathbb{A} 34'10	16°50'27
				min. Earth dist.	7438 Jun 10 18:18	21° \mathbb{A} 30'31	30.06046 AU
conjunction	7430 Nov 23 12:51	4° \mathbb{A} 26'50	14°06'49	direct	7438 Aug 27 00:12	20° \mathbb{A} 10'16	
minimum elong	7430 Nov 23 12:31	4° \mathbb{A} 26'48	14°06'55	max. Earth dist.	7438 Dec 09 22:38	22° \mathbb{A} 41'29	31.89906 AU
morning rise	7430 Nov 29 00:24	4° \mathbb{A} 38'36					
retrograde	7431 Mar 07 12:28	6° \mathbb{A} 50'37		conjunction	7438 Dec 12 08:41	22° \mathbb{A} 47'03	15°52'26
opposition	7431 May 23 20:19	5° \mathbb{A} 31'34	15°09'26	minimum elong	7438 Dec 12 08:30	22° \mathbb{A} 47'01	15°52'33
min. Earth dist.	7431 May 26 08:11	5° \mathbb{A} 27'33	31.35426 AU	retrograde	7439 Mar 26 16:22	25° \mathbb{A} 20'55	
direct	7431 Aug 11 11:56	4° \mathbb{A} 10'12		opposition	7439 Jun 11 05:29	23° \mathbb{A} 59'22	16°59'21
evening set	7431 Nov 21 11:03	6° \mathbb{A} 27'15		min. Earth dist.	7439 Jun 13 08:46	23° \mathbb{A} 55'48	29.90227 AU
max. Earth dist.	7431 Nov 23 06:34	6° \mathbb{A} 31'11	33.18451 AU	direct	7439 Aug 29 15:39	22° \mathbb{A} 35'08	
				max. Earth dist.	7439 Dec 12 18:49	25° \mathbb{A} 07'43	31.74321 AU
conjunction	7431 Nov 26 00:30	6° \mathbb{A} 37'08	14°24'01				
minimum elong	7431 Nov 26 00:11	6° \mathbb{A} 37'07	14°24'06	conjunction	7439 Dec 15 02:30	25° \mathbb{A} 13'05	15°59'44
morning rise	7431 Nov 30 13:10	6° \mathbb{A} 46'58		minimum elong	7439 Dec 15 02:19	25° \mathbb{A} 13'04	15°59'50
retrograde	7432 Mar 09 00:46	9° \mathbb{A} 02'17		retrograde	7440 Mar 28 08:54	27° \mathbb{A} 47'58	
opposition	7432 May 25 06:23	7° \mathbb{A} 42'51	15°27'31	opposition	7440 Jun 12 22:06	26° \mathbb{A} 26'08	17°06'38
min. Earth dist.	7432 May 27 16:24	7° \mathbb{A} 38'57	31.14945 AU	min. Earth dist.	7440 Jun 15 00:37	26° \mathbb{A} 22'36	29.75161 AU
direct	7432 Aug 12 21:12	6° \mathbb{A} 21'04		direct	7440 Aug 31 07:13	25° \mathbb{A} 01'35	
evening set	7432 Nov 24 03:29	8° \mathbb{A} 42'04		max. Earth dist.	7440 Dec 14 14:18	27° \mathbb{A} 35'19	31.59563 AU
max. Earth dist.	7432 Nov 24 19:54	8° \mathbb{A} 43'34	32.98048 AU				

conjunction	7440 Dec 16 20:42	27° 7 40'36	16°05'29	max. Earth dist.	7449 Jan 05 02:52	17° 3 57'49	30.78742 AU
minimum elong	7440 Dec 16 20:34	27° 7 40'35	16°05'36				
	7441 Feb 28 10:55	0° 3		conjunction	7449 Jan 06 12:35	18° 3 01'12	15°48'44
retrograde	7441 Mar 31 03:28	0° 3 16'25		minimum elong	7449 Jan 06 12:44	18° 3 01'13	15°48'50
	7441 May 01 08:27	30° 8 7		retrograde	7449 Apr 20 15:55	20° 3 41'40	
opposition	7441 Jun 15 15:20	28° 7 54'19	17°12'14	opposition	7449 Jul 06 04:20	19° 3 18'29	16°48'32
min. Earth dist.	7441 Jun 17 15:30	28° 7 50'57	29.60928 AU	min. Earth dist.	7449 Jul 07 11:31	19° 3 16'16	28.84035 AU
direct	7441 Sep 03 00:49	27° 7 29'27		direct	7449 Sep 23 12:32	17° 3 52'30	
	7441 Dec 15 14:17	0° 3		max. Earth dist.	7450 Jan 08 01:18	20° 3 33'59	30.73515 AU
max. Earth dist.	7441 Dec 17 11:18	0° 3 04'24	31.45686 AU				
conjunction	7441 Dec 19 15:27	0° 3 09'29	16°09'37	conjunction	7450 Jan 09 09:32	20° 3 37'13	15°38'24
minimum elong	7441 Dec 19 15:20	0° 3 09'28	16°09'43	minimum elong	7450 Jan 09 09:42	20° 3 37'14	15°38'30
retrograde	7442 Apr 02 21:07	2° 3 46'10		retrograde	7450 Apr 23 14:21	23° 3 17'52	
opposition	7442 Jun 18 09:19	1° 3 23'48	17°16'03	opposition	7450 Jul 09 01:33	21° 3 54'39	16°36'40
min. Earth dist.	7442 Jun 20 08:34	1° 3 20'29	29.47600 AU	min. Earth dist.	7450 Jul 10 05:58	21° 3 52'38	28.79141 AU
	7442 Aug 27 17:23	30° 8 7		direct	7450 Sep 26 10:39	20° 3 28'39	
direct	7442 Sep 05 17:07	29° 7 58'39		max. Earth dist.	7451 Jan 11 02:09	23° 3 10'37	30.69320 AU
	7442 Sep 14 16:42	0° 3		conjunction	7451 Jan 12 06:44	23° 3 13'29	15°26'16
max. Earth dist.	7442 Dec 20 08:46	2° 3 34'42	31.32805 AU	minimum elong	7451 Jan 12 06:58	23° 3 13'30	15°26'22
				retrograde	7451 Apr 26 10:05	25° 3 54'10	
conjunction	7442 Dec 22 10:32	2° 3 39'35	16°12'04	opposition	7451 Jul 11 23:01	24° 3 30'56	16°22'51
minimum elong	7442 Dec 22 10:29	2° 3 39'35	16°12'11	min. Earth dist.	7451 Jul 13 01:50	24° 3 29'02	28.75248 AU
retrograde	7443 Apr 05 16:34	5° 3 17'03		direct	7451 Sep 29 08:57	23° 3 04'58	
opposition	7443 Jun 21 03:43	3° 3 54'27	17°18'01	max. Earth dist.	7452 Jan 14 00:52	25° 3 47'04	30.66174 AU
min. Earth dist.	7443 Jun 22 23:51	3° 3 51'21	29.35274 AU				
direct	7443 Sep 08 11:12	2° 3 29'03		conjunction	7452 Jan 15 03:42	25° 3 49'46	15°12'20
max. Earth dist.	7443 Dec 23 06:21	5° 3 06'07	31.20983 AU	minimum elong	7452 Jan 15 03:55	25° 3 49'47	15°12'25
				retrograde	7452 Apr 28 07:31	28° 3 30'24	
conjunction	7443 Dec 25 06:00	5° 3 10'49	16°12'46	opposition	7452 Jul 13 20:23	27° 3 07'10	16°07'07
minimum elong	7443 Dec 25 05:57	5° 3 10'49	16°12'51	min. Earth dist.	7452 Jul 14 19:50	27° 3 05'31	28.72379 AU
retrograde	7444 Apr 07 10:18	7° 3 49'00		direct	7452 Oct 01 07:46	25° 3 41'14	
opposition	7444 Jun 22 22:49	6° 3 26'12	17°18'04	evening set	7453 Jan 15 16:23	28° 3 22'38	
min. Earth dist.	7444 Jun 24 17:39	6° 3 23'11	29.24017 AU	max. Earth dist.	7453 Jan 16 01:13	28° 3 23'31	30.64072 AU
direct	7444 Sep 10 05:24	5° 3 00'37					
max. Earth dist.	7444 Dec 25 05:35	7° 3 38'43	31.10294 AU	conjunction	7453 Jan 17 00:42	28° 3 25'53	14°56'39
				minimum elong	7453 Jan 17 00:59	28° 3 25'55	14°56'44
conjunction	7444 Dec 27 01:58	7° 3 43'07	16°11'39	morning rise	7453 Jan 18 09:36	28° 3 29'11	
minimum elong	7444 Dec 27 01:59	7° 3 43'07	16°11'45		7453 Feb 27 14:43	0° 3	
retrograde	7445 Apr 10 06:00	10° 3 21'55		retrograde	7453 May 01 02:44	1° 3 06'20	
opposition	7445 Jun 25 18:12	8° 3 58'59	17°16'09		7453 Jul 06 17:23	30° 8 7	
min. Earth dist.	7445 Jun 27 09:55	8° 3 56'10	29.13860 AU	opposition	7453 Jul 16 17:49	29° 3 43'08	15°49'30
direct	7445 Sep 13 01:46	7° 3 33'14		min. Earth dist.	7453 Jul 17 15:46	29° 3 41'35	28.70549 AU
max. Earth dist.	7445 Dec 28 03:42	10° 3 12'10	31.00744 AU	direct	7453 Oct 04 05:26	28° 3 17'15	
					7453 Dec 24 16:01	0° 3	
conjunction	7445 Dec 29 22:14	10° 3 16'24	16°08'42	evening set	7454 Jan 16 12:11	0° 3 53'28	
minimum elong	7445 Dec 29 22:15	10° 3 16'24	16°08'48				
retrograde	7446 Apr 13 02:16	12° 3 55'46		conjunction	7454 Jan 19 21:21	1° 3 01'38	14°39'13
opposition	7446 Jun 28 14:14	11° 3 32'44	17°12'15	minimum elong	7454 Jan 19 21:38	1° 3 01'39	14°39'19
min. Earth dist.	7446 Jun 30 04:16	11° 3 30'03	29.04822 AU	max. Earth dist.	7454 Jan 19 00:17	0° 3 59'31	30.63073 AU
direct	7446 Sep 15 20:04	10° 3 06'53		morning rise	7454 Jan 23 06:58	1° 3 09'49	
max. Earth dist.	7446 Dec 31 03:54	12° 3 46'44	30.92330 AU	retrograde	7454 May 03 23:48	3° 3 41'49	
				opposition	7454 Jul 19 15:07	2° 3 18'39	15°30'02
conjunction	7447 Jan 01 18:43	12° 3 50'36	16°03'54	min. Earth dist.	7454 Jul 20 09:18	2° 3 17'22	28.69817 AU
minimum elong	7447 Jan 01 18:48	12° 3 50'37	16°04'00	direct	7454 Oct 07 04:05	0° 3 52'50	
retrograde	7447 Apr 15 22:22	15° 3 30'27		evening set	7455 Jan 18 01:37	3° 3 25'36	
opposition	7447 Jul 01 10:37	14° 3 07'20	17°06'20				
min. Earth dist.	7447 Jul 02 21:57	14° 3 04'50	28.96854 AU	conjunction	7455 Jan 22 17:35	3° 3 36'50	14°20'07
direct	7447 Sep 18 17:53	12° 3 41'25		minimum elong	7455 Jan 22 17:55	3° 3 36'52	14°20'11
max. Earth dist.	7448 Jan 03 02:06	15° 3 21'51	30.85006 AU	max. Earth dist.	7455 Jan 21 23:49	3° 3 35'03	30.63207 AU
				morning rise	7455 Jan 27 09:59	3° 3 48'05	
conjunction	7448 Jan 04 15:27	15° 3 25'35	15°57'14	retrograde	7455 May 06 17:21	6° 3 16'40	
minimum elong	7448 Jan 04 15:32	15° 3 25'36	15°57'20	opposition	7455 Jul 22 12:21	4° 3 53'33	15°08'44
retrograde	7448 Apr 17 19:56	18° 3 05'49		min. Earth dist.	7455 Jul 23 04:41	4° 3 52'24	28.70240 AU
opposition	7448 Jul 03 07:12	16° 3 42'38	16°58'25	direct	7455 Oct 10 01:06	3° 3 27'51	
min. Earth dist.	7448 Jul 04 16:24	16° 3 40'17	28.89943 AU	evening set	7456 Jan 19 20:31	5° 3 57'39	
direct	7448 Sep 20 14:48	15° 3 16'40					

conjunction	7456 Jan 25 13:35	6° \approx 11'22	13°59'21	retrograde	7462 May 23 20:33	23° \approx 55'34	
minimum elong	7456 Jan 25 13:55	6° \approx 11'24	13°59'26	opposition	7462 Aug 09 08:09	22° \approx 33'48	11°55'19
max. Earth dist.	7456 Jan 24 23:08	6° \approx 09'55	30.64551 AU	min. Earth dist.	7462 Aug 09 04:17	22° \approx 34'04	29.06457 AU
morning rise	7456 Jan 31 06:58	6° \approx 25'06		direct	7462 Oct 28 03:45	21° \approx 09'51	
retrograde	7456 May 08 12:02	8° \approx 50'44		evening set	7463 Feb 01 02:57	23° \approx 22'44	
opposition	7456 Jul 24 09:07	7° \approx 27'44	14°45'42				
min. Earth dist.	7456 Jul 24 21:39	7° \approx 26'51	28.71864 AU	conjunction	7463 Feb 11 21:08	23° \approx 47'48	10°54'11
direct	7456 Oct 11 23:52	6° \approx 02'10		minimum elong	7463 Feb 11 21:31	23° \approx 47'50	10°54'13
evening set	7457 Jan 20 18:04	8° \approx 29'15		max. Earth dist.	7463 Feb 12 03:01	23° \approx 48'23	31.07233 AU
				morning rise	7463 Feb 22 15:04	24° \approx 12'51	
conjunction	7457 Jan 27 09:15	8° \approx 45'08	13°37'00	retrograde	7463 May 26 13:15	26° \approx 22'14	
minimum elong	7457 Jan 27 09:37	8° \approx 45'10	13°37'04	opposition	7463 Aug 12 02:24	25° \approx 00'41	11°22'36
max. Earth dist.	7457 Jan 26 21:40	8° \approx 43'58	30.67129 AU	min. Earth dist.	7463 Aug 11 19:00	25° \approx 01'11	29.15864 AU
morning rise	7457 Feb 03 00:42	9° \approx 01'01		direct	7463 Oct 30 23:39	23° \approx 37'02	
retrograde	7457 May 11 06:30	11° \approx 24'01		evening set	7464 Feb 03 06:24	25° \approx 47'46	
opposition	7457 Jul 27 05:54	10° \approx 01'08	14°20'57				
min. Earth dist.	7457 Jul 27 15:54	10° \approx 00'26	28.74736 AU	conjunction	7464 Feb 14 13:21	26° \approx 13'55	10°23'12
direct	7457 Oct 14 19:09	8° \approx 35'46		minimum elong	7464 Feb 14 13:44	26° \approx 13'57	10°23'16
evening set	7458 Jan 22 17:20	11° \approx 00'17		max. Earth dist.	7464 Feb 14 22:31	26° \approx 14'48	31.17452 AU
				morning rise	7464 Feb 25 19:45	26° \approx 40'01	
conjunction	7458 Jan 30 04:25	11° \approx 18'05	13°13'07	retrograde	7464 May 28 03:44	28° \approx 47'21	
minimum elong	7458 Jan 30 04:47	11° \approx 18'07	13°13'12	opposition	7464 Aug 13 20:08	27° \approx 26'04	10°48'56
max. Earth dist.	7458 Jan 29 20:43	11° \approx 17'19	30.70973 AU	min. Earth dist.	7464 Aug 13 11:23	27° \approx 26'39	29.26170 AU
morning rise	7458 Feb 06 15:36	11° \approx 35'54		direct	7464 Nov 01 18:59	26° \approx 02'43	
retrograde	7458 May 13 23:41	13° \approx 56'23		evening set	7465 Feb 04 10:16	28° \approx 11'20	
opposition	7458 Jul 30 02:18	12° \approx 33'42	13°54'37				
min. Earth dist.	7458 Jul 30 08:52	12° \approx 33'14	28.78830 AU	conjunction	7465 Feb 16 04:47	28° \approx 38'26	9°51'24
direct	7458 Oct 17 17:40	11° \approx 08'34		minimum elong	7465 Feb 16 05:09	28° \approx 38'28	9°51'27
evening set	7459 Jan 24 17:45	13° \approx 30'37		max. Earth dist.	7465 Feb 16 15:44	28° \approx 39'30	31.28562 AU
				morning rise	7465 Feb 27 22:49	29° \approx 05'30	
conjunction	7459 Feb 01 23:07	13° \approx 50'10	12°47'48		7465 Mar 25 08:28	0° \approx	
minimum elong	7459 Feb 01 23:31	13° \approx 50'12	12°47'52	retrograde	7465 May 30 19:29	1° \approx 10'50	
max. Earth dist.	7459 Feb 01 17:45	13° \approx 49'38	30.76035 AU		7465 Aug 10 06:08	30° \approx	
morning rise	7459 Feb 10 04:38	14° \approx 09'43		opposition	7465 Aug 16 13:15	29° \approx 49'47	10°14'26
	7459 Mar 04 07:08	15° \approx		min. Earth dist.	7465 Aug 16 01:05	29° \approx 50'36	29.37354 AU
retrograde	7459 May 16 17:50	16° \approx 27'50		direct	7465 Nov 04 15:18	28° \approx 26'45	
opposition	7459 Aug 01 22:16	15° \approx 05'21	13°26'45		7466 Jan 22 09:47	0° \approx	
min. Earth dist.	7459 Aug 02 01:55	15° \approx 05'05	28.84126 AU	evening set	7466 Feb 06 13:59	0° \approx 33'18	
	7459 Aug 05 03:08	15° \approx					
direct	7459 Oct 20 13:32	13° \approx 40'29		conjunction	7466 Feb 18 19:25	1° \approx 01'15	9°18'53
	7459 Dec 30 18:36	15° \approx		minimum elong	7466 Feb 18 19:46	1° \approx 01'17	9°18'56
evening set	7460 Jan 26 19:06	16° \approx 00'10		max. Earth dist.	7466 Feb 19 09:17	1° \approx 02'35	31.40527 AU
				morning rise	7466 Mar 03 00:13	1° \approx 29'09	
conjunction	7460 Feb 04 17:29	16° \approx 21'18	12°21'08	retrograde	7466 Jun 02 07:55	3° \approx 32'35	
minimum elong	7460 Feb 04 17:53	16° \approx 21'20	12°21'13	opposition	7466 Aug 19 05:53	2° \approx 11'45	9°39'13
max. Earth dist.	7460 Feb 04 16:05	16° \approx 21'09	30.82268 AU	min. Earth dist.	7466 Aug 18 16:05	2° \approx 12'41	29.49425 AU
morning rise	7460 Feb 13 15:43	16° \approx 42'25		direct	7466 Nov 07 08:45	0° \approx 49'02	
retrograde	7460 May 18 10:22	18° \approx 58'15		evening set	7467 Feb 08 17:59	2° \approx 53'33	
opposition	7460 Aug 03 17:58	17° \approx 35'59	12°57'31				
min. Earth dist.	7460 Aug 03 19:12	17° \approx 35'54	28.90530 AU	conjunction	7467 Feb 21 09:22	3° \approx 22'16	8°45'42
direct	7460 Oct 22 10:20	16° \approx 11'25		minimum elong	7467 Feb 21 09:43	3° \approx 22'18	8°45'45
evening set	7461 Jan 27 21:13	18° \approx 28'47		max. Earth dist.	7467 Feb 22 01:47	3° \approx 23'50	31.53381 AU
				morning rise	7467 Mar 06 00:02	3° \approx 50'55	
conjunction	7461 Feb 06 11:12	18° \approx 51'21	11°53'15	retrograde	7467 Jun 04 19:28	5° \approx 52'28	
minimum elong	7461 Feb 06 11:36	18° \approx 51'24	11°53'18	opposition	7467 Aug 21 21:31	4° \approx 31'53	9°03'21
max. Earth dist.	7461 Feb 06 11:38	18° \approx 51'24	30.89582 AU	min. Earth dist.	7467 Aug 21 04:34	4° \approx 33'01	29.62392 AU
morning rise	7461 Feb 16 01:09	19° \approx 13'56		direct	7467 Nov 10 03:17	3° \approx 09'28	
retrograde	7461 May 21 04:32	21° \approx 27'32		evening set	7468 Feb 10 21:58	5° \approx 12'03	
opposition	7461 Aug 06 13:12	20° \approx 05'31	12°27'00				
min. Earth dist.	7461 Aug 06 11:08	20° \approx 05'40	28.97998 AU	conjunction	7468 Feb 23 22:30	5° \approx 41'25	8°11'58
direct	7461 Oct 25 06:21	18° \approx 41'15		minimum elong	7468 Feb 23 22:49	5° \approx 41'27	8°12'01
evening set	7462 Jan 29 23:51	20° \approx 56'21		max. Earth dist.	7468 Feb 24 17:14	5° \approx 43'11	31.67129 AU
				morning rise	7468 Mar 07 22:23	6° \approx 10'43	
conjunction	7462 Feb 09 04:36	21° \approx 20'15	11°24'13	retrograde	7468 Jun 06 07:02	8° \approx 10'29	
minimum elong	7462 Feb 09 04:59	21° \approx 20'17	11°24'17	opposition	7468 Aug 23 12:43	6° \approx 50'09	8°26'57
max. Earth dist.	7462 Feb 09 08:52	21° \approx 20'40	30.97922 AU	min. Earth dist.	7468 Aug 22 17:20	6° \approx 51'26	29.76307 AU
morning rise	7462 Feb 19 08:57	21° \approx 44'07		direct	7468 Nov 11 18:22	5° \approx 28'03	

evening set	7469 Feb 12 01:56	7° $\mathbf{\text{H}}$ 28'46		min. Earth dist.	7475 Sep 07 15:49	22° $\mathbf{\text{H}}$ 11'51	30.98389 AU
				opposition	7475 Sep 09 03:18	22° $\mathbf{\text{H}}$ 09'35	4°04'53
conjunction	7469 Feb 25 10:54	7° $\mathbf{\text{H}}$ 58'42	7°37'46	direct	7475 Nov 28 17:17	20° $\mathbf{\text{H}}$ 50'23	
minimum elong	7469 Feb 25 11:13	7° $\mathbf{\text{H}}$ 58'44	7°37'47	evening set	7476 Feb 26 06:18	22° $\mathbf{\text{H}}$ 40'11	
max. Earth dist.	7469 Feb 26 08:55	8° $\mathbf{\text{H}}$ 00'46	31.81823 AU				
morning rise	7469 Mar 10 18:57	8° $\mathbf{\text{H}}$ 28'34		conjunction	7476 Mar 12 05:36	23° $\mathbf{\text{H}}$ 11'58	3°32'22
retrograde	7469 Jun 08 16:47	10° $\mathbf{\text{H}}$ 26'38		minimum elong	7476 Mar 12 05:45	23° $\mathbf{\text{H}}$ 11'59	3°32'23
min. Earth dist.	7469 Aug 25 05:09	9° $\mathbf{\text{H}}$ 08'02	29.91176 AU	max. Earth dist.	7476 Mar 13 18:51	23° $\mathbf{\text{H}}$ 15'17	33.08139 AU
opposition	7469 Aug 26 03:10	9° $\mathbf{\text{H}}$ 06'34	7°50'06	morning rise	7476 Mar 27 03:58	23° $\mathbf{\text{H}}$ 43'41	
direct	7469 Nov 14 10:54	7° $\mathbf{\text{H}}$ 44'51		retrograde	7476 Jun 23 06:22	25° $\mathbf{\text{H}}$ 31'58	
evening set	7470 Feb 14 06:04	9° $\mathbf{\text{H}}$ 43'46		min. Earth dist.	7476 Sep 08 23:11	24° $\mathbf{\text{H}}$ 16'43	31.18548 AU
				opposition	7476 Sep 10 12:55	24° $\mathbf{\text{H}}$ 14'19	3°27'30
conjunction	7470 Feb 27 22:29	10° $\mathbf{\text{H}}$ 14'11	7°03'11	direct	7476 Nov 30 05:47	22° $\mathbf{\text{H}}$ 55'32	
minimum elong	7470 Feb 27 22:47	10° $\mathbf{\text{H}}$ 14'12	7°03'13	evening set	7477 Feb 27 10:16	24° $\mathbf{\text{H}}$ 44'00	
max. Earth dist.	7470 Feb 28 22:19	10° $\mathbf{\text{H}}$ 16'24	31.97463 AU				
morning rise	7470 Mar 13 14:15	10° $\mathbf{\text{H}}$ 44'32		conjunction	7477 Mar 14 12:18	25° $\mathbf{\text{H}}$ 15'48	2°57'25
retrograde	7470 Jun 11 03:39	12° $\mathbf{\text{H}}$ 40'59		minimum elong	7477 Mar 14 12:25	25° $\mathbf{\text{H}}$ 15'49	2°57'25
opposition	7470 Aug 28 16:55	11° $\mathbf{\text{H}}$ 21'14	7°12'53	max. Earth dist.	7477 Mar 16 02:55	25° $\mathbf{\text{H}}$ 19'13	33.28667 AU
min. Earth dist.	7470 Aug 27 15:44	11° $\mathbf{\text{H}}$ 22'53	30.07022 AU	morning rise	7477 Mar 29 13:37	25° $\mathbf{\text{H}}$ 47'32	
direct	7470 Nov 17 00:32	9° $\mathbf{\text{H}}$ 59'53		retrograde	7477 Jun 25 11:57	27° $\mathbf{\text{H}}$ 34'39	
evening set	7471 Feb 16 09:57	11° $\mathbf{\text{H}}$ 57'06		min. Earth dist.	7477 Sep 11 06:34	26° $\mathbf{\text{H}}$ 19'49	31.39196 AU
				opposition	7477 Sep 12 21:57	26° $\mathbf{\text{H}}$ 17'19	2°50'20
conjunction	7471 Mar 02 09:26	12° $\mathbf{\text{H}}$ 27'56	6°28'17	direct	7477 Dec 02 15:10	24° $\mathbf{\text{H}}$ 58'56	
minimum elong	7471 Mar 02 09:41	12° $\mathbf{\text{H}}$ 27'57	6°28'18	evening set	7478 Mar 01 14:01	26° $\mathbf{\text{H}}$ 46'09	
max. Earth dist.	7471 Mar 03 12:53	12° $\mathbf{\text{H}}$ 30'28	32.14036 AU				
morning rise	7471 Mar 16 07:53	12° $\mathbf{\text{H}}$ 58'41		conjunction	7478 Mar 16 18:29	27° $\mathbf{\text{H}}$ 17'54	2°22'42
retrograde	7471 Jun 13 12:39	14° $\mathbf{\text{H}}$ 53'36		minimum elong	7478 Mar 16 18:35	27° $\mathbf{\text{H}}$ 17'54	2°22'43
min. Earth dist.	7471 Aug 30 03:01	13° $\mathbf{\text{H}}$ 35'57	30.23771 AU	max. Earth dist.	7478 Mar 18 11:13	27° $\mathbf{\text{H}}$ 21'28	33.49650 AU
opposition	7471 Aug 31 06:00	13° $\mathbf{\text{H}}$ 34'11	6°35'25	morning rise	7478 Mar 31 21:58	27° $\mathbf{\text{H}}$ 49'34	
direct	7471 Nov 19 14:46	12° $\mathbf{\text{H}}$ 13'15		retrograde	7478 Jun 27 15:22	29° $\mathbf{\text{H}}$ 35'35	
evening set	7472 Feb 18 14:07	14° $\mathbf{\text{H}}$ 08'50		min. Earth dist.	7478 Sep 13 13:32	28° $\mathbf{\text{H}}$ 21'08	31.60293 AU
				opposition	7478 Sep 15 06:11	28° $\mathbf{\text{H}}$ 18'34	2°13'28
conjunction	7472 Mar 03 19:34	14° $\mathbf{\text{H}}$ 40'00	5°53'11	direct	7478 Dec 05 01:42	27° $\mathbf{\text{H}}$ 00'34	
minimum elong	7472 Mar 03 19:49	14° $\mathbf{\text{H}}$ 40'01	5°53'13	evening set	7479 Mar 03 17:40	28° $\mathbf{\text{H}}$ 46'33	
max. Earth dist.	7472 Mar 05 00:22	14° $\mathbf{\text{H}}$ 42'39	32.31462 AU				
morning rise	7472 Mar 18 00:17	15° $\mathbf{\text{H}}$ 11'05		conjunction	7479 Mar 18 23:42	29° $\mathbf{\text{H}}$ 18'11	1°48'14
retrograde	7472 Jun 14 23:15	17° $\mathbf{\text{H}}$ 04'32		minimum elong	7479 Mar 18 23:47	29° $\mathbf{\text{H}}$ 18'12	1°48'14
min. Earth dist.	7472 Aug 31 11:52	15° $\mathbf{\text{H}}$ 47'27	30.41365 AU	max. Earth dist.	7479 Mar 20 17:07	29° $\mathbf{\text{H}}$ 21'48	33.71059 AU
opposition	7472 Sep 01 18:11	15° $\mathbf{\text{H}}$ 45'28	5°57'48	morning rise	7479 Apr 03 05:08	29° $\mathbf{\text{H}}$ 49'47	
direct	7472 Nov 21 03:01	14° $\mathbf{\text{H}}$ 24'59			7479 Apr 08 06:49	0° $\mathbf{\text{Y}}$	
evening set	7473 Feb 19 18:10	16° $\mathbf{\text{H}}$ 19'01		retrograde	7479 Jun 29 19:47	1° $\mathbf{\text{Y}}$ 34'44	
				min. Earth dist.	7479 Sep 15 18:39	0° $\mathbf{\text{Y}}$ 20'42	31.81858 AU
conjunction	7473 Mar 06 05:10	16° $\mathbf{\text{H}}$ 50'26	5°17'58	opposition	7479 Sep 17 13:38	0° $\mathbf{\text{Y}}$ 18'00	1°36'57
minimum elong	7473 Mar 06 05:23	16° $\mathbf{\text{H}}$ 50'27	5°17'59		7479 Sep 29 15:49	30° $\mathbf{\text{R}}$ $\mathbf{\text{H}}$	
max. Earth dist.	7473 Mar 07 13:13	16° $\mathbf{\text{H}}$ 53'22	32.49664 AU	direct	7479 Dec 07 09:00	29° $\mathbf{\text{H}}$ 00'21	
morning rise	7473 Mar 20 15:11	17° $\mathbf{\text{H}}$ 21'47			7480 Feb 09 22:28	0° $\mathbf{\text{Y}}$	
retrograde	7473 Jun 17 08:02	19° $\mathbf{\text{H}}$ 13'51		evening set	7480 Mar 04 21:00	0° $\mathbf{\text{Y}}$ 45'10	
min. Earth dist.	7473 Sep 02 22:33	17° $\mathbf{\text{H}}$ 57'11	30.59719 AU				
opposition	7473 Sep 04 06:02	17° $\mathbf{\text{H}}$ 55'08	5°20'07	conjunction	7480 Mar 20 04:21	1° $\mathbf{\text{Y}}$ 16'40	1°14'06
direct	7473 Nov 23 16:46	16° $\mathbf{\text{H}}$ 35'05		minimum elong	7480 Mar 20 04:24	1° $\mathbf{\text{Y}}$ 16'41	1°14'06
evening set	7474 Feb 21 22:11	18° $\mathbf{\text{H}}$ 27'39		max. Earth dist.	7480 Mar 22 00:30	1° $\mathbf{\text{Y}}$ 20'30	33.92919 AU
				morning rise	7480 Apr 04 10:48	1° $\mathbf{\text{Y}}$ 48'06	
conjunction	7474 Mar 08 13:51	18° $\mathbf{\text{H}}$ 59'15	4°42'42	retrograde	7480 Jun 30 22:28	3° $\mathbf{\text{Y}}$ 32'03	
minimum elong	7474 Mar 08 14:03	18° $\mathbf{\text{H}}$ 59'16	4°42'44	min. Earth dist.	7480 Sep 17 00:35	2° $\mathbf{\text{Y}}$ 18'20	32.03906 AU
max. Earth dist.	7474 Mar 09 23:09	19° $\mathbf{\text{H}}$ 02'16	32.68568 AU	opposition	7480 Sep 18 20:24	2° $\mathbf{\text{Y}}$ 15'37	1°00'49
morning rise	7474 Mar 23 04:42	19° $\mathbf{\text{H}}$ 30'47		direct	7480 Dec 08 16:23	0° $\mathbf{\text{Y}}$ 58'20	
retrograde	7474 Jun 19 18:04	21° $\mathbf{\text{H}}$ 21'32		evening set	7481 Mar 07 00:18	2° $\mathbf{\text{Y}}$ 42'03	
min. Earth dist.	7474 Sep 05 06:33	20° $\mathbf{\text{H}}$ 05'24	30.78750 AU				
opposition	7474 Sep 06 17:01	20° $\mathbf{\text{H}}$ 03'11	4°42'27	conjunction	7481 Mar 22 08:10	3° $\mathbf{\text{Y}}$ 13'21	0°40'20
direct	7474 Nov 26 06:13	18° $\mathbf{\text{H}}$ 43'34		minimum elong	7481 Mar 22 08:11	3° $\mathbf{\text{Y}}$ 13'21	0°40'19
evening set	7475 Feb 24 02:15	20° $\mathbf{\text{H}}$ 34'42		max. Earth dist.	7481 Mar 24 05:05	3° $\mathbf{\text{Y}}$ 17'12	34.15273 AU
				morning rise	7481 Apr 06 15:26	3° $\mathbf{\text{Y}}$ 44'36	
conjunction	7475 Mar 10 22:03	21° $\mathbf{\text{H}}$ 06'26	4°07'29	retrograde	7481 Jul 03 02:43	5° $\mathbf{\text{Y}}$ 27'36	
minimum elong	7475 Mar 10 22:13	21° $\mathbf{\text{H}}$ 06'27	4°07'30	min. Earth dist.	7481 Sep 19 03:41	4° $\mathbf{\text{Y}}$ 14'21	32.26494 AU
max. Earth dist.	7475 Mar 12 09:45	21° $\mathbf{\text{H}}$ 09'39	32.88077 AU	opposition	7481 Sep 21 02:30	4° $\mathbf{\text{Y}}$ 11'27	0°25'08
morning rise	7475 Mar 25 16:58	21° $\mathbf{\text{H}}$ 38'06		direct	7481 Dec 10 22:13	2° $\mathbf{\text{Y}}$ 54'32	
retrograde	7475 Jun 22 00:53	23° $\mathbf{\text{H}}$ 27'35		evening set	7482 Mar 09 03:13	4° $\mathbf{\text{Y}}$ 37'14	

conjunction	7482 Mar 24 11:17	5°♈08'18 0°07'01	retrograde	7488 Jul 15 08:00	18°♈13'03	
minimum elong	7482 Mar 24 11:17	5°♈08'18 0°07'01	min. Earth dist.	7488 Oct 01 18:48	17°♈02'37	33.96892 AU
behind sun begin	7482 Mar 24 05:21	5°♈07'49	opposition	7488 Oct 04 03:24	16°♈59'16	-3°29'31
behind sun end	7482 Mar 24 17:12	5°♈08'47	direct	7488 Dec 24 06:37	15°♈45'09	
max. Earth dist.	7482 Mar 26 10:52	5°♈12'21 34.38145 AU	evening set	7489 Mar 21 20:16	17°♈22'15	
morning rise	7482 Apr 08 18:40	5°♈39'19				
desc. node	7482 Jun 09 14:34	7°♈11'33	conjunction	7489 Apr 05 17:02	17°♈50'50	-3°32'40
retrograde	7482 Jul 05 05:28	7°♈21'27	minimum elong	7489 Apr 05 16:54	17°♈50'49	3°32'42
min. Earth dist.	7482 Sep 21 08:20	6°♈08'32 32.49627 AU	max. Earth dist.	7489 Apr 08 01:27	17°♈55'23	36.09276 AU
opposition	7482 Sep 23 08:01	6°♈05'36 -0°10'06	morning rise	7489 Apr 20 13:28	18°♈19'24	
direct	7482 Dec 13 05:30	4°♈49'05	retrograde	7489 Jul 17 07:44	19°♈56'52	
evening set	7483 Mar 11 06:05	6°♈30'48	min. Earth dist.	7489 Oct 03 20:22	18°♈46'43	34.22173 AU
			opposition	7489 Oct 06 04:50	18°♈43'23	-4°00'34
conjunction	7483 Mar 26 13:50	7°♈01'36 -0°26'00	direct	7489 Dec 26 07:59	17°♈29'40	
minimum elong	7483 Mar 26 13:49	7°♈01'36 0°26'01	evening set	7490 Mar 23 22:02	19°♈06'08	
max. Earth dist.	7483 Mar 28 14:31	7°♈05'43 34.61543 AU				
morning rise	7483 Apr 10 20:58	7°♈32'21	conjunction	7490 Apr 07 15:39	19°♈34'15	-4°01'46
retrograde	7483 Jul 07 08:32	9°♈13'39	minimum elong	7490 Apr 07 15:32	19°♈34'15	4°01'48
min. Earth dist.	7483 Sep 23 10:28	8°♈01'13 32.73269 AU	max. Earth dist.	7490 Apr 10 00:08	19°♈38'47	36.34470 AU
opposition	7483 Sep 25 12:33	7°♈58'09 -0°44'48	morning rise	7490 Apr 22 09:02	20°♈02'22	
direct	7483 Dec 15 12:30	6°♈42'01	retrograde	7490 Jul 19 06:51	21°♈39'19	
evening set	7484 Mar 12 08:53	8°♈22'51	min. Earth dist.	7490 Oct 05 19:32	20°♈29'34	34.47502 AU
			opposition	7490 Oct 08 05:29	20°♈26'09	-4°30'57
conjunction	7484 Mar 27 15:46	8°♈53'21 -0°58'27	direct	7490 Dec 28 09:34	19°♈12'46	
minimum elong	7484 Mar 27 15:44	8°♈53'21 0°58'27	evening set	7491 Mar 25 23:43	20°♈48'40	
max. Earth dist.	7484 Mar 29 18:11	8°♈57'35 34.85401 AU				
morning rise	7484 Apr 11 22:12	9°♈23'49	conjunction	7491 Apr 09 13:49	21°♈16'19	-4°30'16
retrograde	7484 Jul 08 09:55	11°♈04'21	minimum elong	7491 Apr 09 13:40	21°♈16'18	4°30'19
min. Earth dist.	7484 Sep 24 13:23	9°♈52'19 32.97380 AU	max. Earth dist.	7491 Apr 11 23:04	21°♈20'52	36.59689 AU
opposition	7484 Sep 26 16:46	9°♈49'11 -1°18'57	morning rise	7491 Apr 24 03:51	21°♈43'58	
direct	7484 Dec 16 17:06	8°♈33'28	retrograde	7491 Jul 21 03:48	23°♈20'25	
evening set	7485 Mar 14 11:18	10°♈13'27	min. Earth dist.	7491 Oct 07 19:17	22°♈10'57	34.72890 AU
			opposition	7491 Oct 10 05:31	22°♈07'32	-5°00'40
conjunction	7485 Mar 29 17:04	10°♈43'37 -1°30'23	direct	7491 Dec 30 10:53	20°♈54'30	
minimum elong	7485 Mar 29 17:00	10°♈43'37 1°30'25	evening set	7492 Mar 27 01:02	22°♈29'49	
max. Earth dist.	7485 Mar 31 21:19	10°♈47'58 35.09674 AU				
morning rise	7485 Apr 13 22:12	11°♈13'46	conjunction	7492 Apr 10 11:28	22°♈56'59	-4°58'09
retrograde	7485 Jul 10 08:26	12°♈53'35	minimum elong	7492 Apr 10 11:19	22°♈56'58	4°58'12
min. Earth dist.	7485 Sep 26 15:35	11°♈41'58 33.21866 AU	max. Earth dist.	7492 Apr 12 21:50	23°♈01'36	36.84973 AU
opposition	7485 Sep 28 20:20	11°♈38'46 -1°52'31	morning rise	7492 Apr 24 21:36	23°♈24'09	
direct	7485 Dec 18 23:17	10°♈23'28	retrograde	7492 Jul 21 22:19	25°♈00'09	
evening set	7486 Mar 16 13:49	12°♈02'40	min. Earth dist.	7492 Oct 08 18:04	23°♈50'59	34.98354 AU
			opposition	7492 Oct 11 05:03	23°♈47'33	-5°29'41
conjunction	7486 Mar 31 17:46	12°♈32'28 -2°01'48	direct	7492 Dec 31 13:51	22°♈34'50	
minimum elong	7486 Mar 31 17:42	12°♈32'28 2°01'49	evening set	7493 Mar 29 02:08	24°♈09'38	
max. Earth dist.	7486 Apr 02 22:34	12°♈36'50 35.34270 AU				
morning rise	7486 Apr 15 21:28	13°♈02'15	conjunction	7493 Apr 12 08:16	24°♈36'17	-5°25'25
retrograde	7486 Jul 12 08:47	14°♈41'25	minimum elong	7493 Apr 12 08:06	24°♈36'16	5°25'28
min. Earth dist.	7486 Sep 28 16:44	13°♈30'14 33.46678 AU	max. Earth dist.	7493 Apr 14 18:53	24°♈40'53	37.10347 AU
opposition	7486 Sep 30 23:14	13°♈26'58 -2°25'29	morning rise	7493 Apr 26 14:31	25°♈02'56	
direct	7486 Dec 21 01:59	12°♈12'04	retrograde	7493 Jul 23 19:08	26°♈38'32	
evening set	7487 Mar 18 15:59	13°♈50'31	min. Earth dist.	7493 Oct 10 15:29	25°♈29'43	35.23968 AU
			opposition	7493 Oct 13 04:06	25°♈26'13	-5°58'01
conjunction	7487 Apr 02 18:05	14°♈19'56 -2°32'40	direct	7494 Jan 02 13:01	24°♈13'50	
minimum elong	7487 Apr 02 17:59	14°♈19'56 2°32'42	evening set	7494 Mar 31 02:57	25°♈48'09	
max. Earth dist.	7487 Apr 05 00:54	14°♈24'26 35.59126 AU				
morning rise	7487 Apr 17 19:38	14°♈49'21	conjunction	7494 Apr 14 04:51	26°♈14'17	-5°52'01
retrograde	7487 Jul 14 07:19	16°♈27'54	minimum elong	7494 Apr 14 04:41	26°♈14'16	5°52'04
min. Earth dist.	7487 Sep 30 19:03	15°♈17'03 33.71707 AU	max. Earth dist.	7494 Apr 16 17:23	26°♈19'00	37.35876 AU
opposition	7487 Oct 03 01:39	15°♈13'47 -2°57'49	morning rise	7494 Apr 28 06:35	26°♈40'25	
direct	7487 Dec 23 05:24	13°♈59'18	retrograde	7494 Jul 25 13:39	28°♈15'39	
evening set	7488 Mar 19 18:15	15°♈37'03	min. Earth dist.	7494 Oct 12 13:52	27°♈07'06	35.49744 AU
			opposition	7494 Oct 15 02:29	27°♈03'37	-6°25'39
conjunction	7488 Apr 03 17:44	16°♈06'03 -3°02'58	direct	7495 Jan 04 12:49	25°♈51'35	
minimum elong	7488 Apr 03 17:38	16°♈06'03 3°02'59	evening set	7495 Apr 02 03:40	27°♈25'27	
max. Earth dist.	7488 Apr 06 00:26	16°♈10'31 35.84148 AU				
morning rise	7488 Apr 18 17:01	16°♈35'03	conjunction	7495 Apr 16 00:47	27°♈51'03	-6°17'59

minimum elong	7495 Apr 16 00:35	27° Υ 51'02	6°18'02	min. Earth dist.	7501 Oct 24 10:13	7° \mathcal{B} 58'46	37.31977 AU
max. Earth dist.	7495 Apr 18 13:08	27° Υ 55'43	37.61570 AU	opposition	7501 Oct 27 02:29	7° \mathcal{B} 55'12	-9°19'25
morning rise	7495 Apr 29 22:00	28° Υ 16'39		direct	7502 Jan 16 15:24	6° \mathcal{B} 45'33	
retrograde	7495 Jul 27 11:10	29° Υ 51'34		evening set	7502 Apr 15 03:29	8° \mathcal{B} 17'18	
min. Earth dist.	7495 Oct 14 09:43	28° Υ 43'25	35.75685 AU				
opposition	7495 Oct 17 00:20	28° Υ 39'49	-6°52'34	conjunction	7502 Apr 27 09:03	8° \mathcal{B} 38'53	-9°01'41
direct	7496 Jan 06 09:10	27° Υ 28'08		minimum elong	7502 Apr 27 08:51	8° \mathcal{B} 38'52	9°01'45
evening set	7496 Apr 03 04:05	29° Υ 01'37		max. Earth dist.	7502 Apr 30 00:32	8° \mathcal{B} 43'35	39.42311 AU
				morning rise	7502 May 09 14:51	9° \mathcal{B} 00'30	
conjunction	7496 Apr 16 20:18	29° Υ 26'40	-6°43'18	retrograde	7502 Aug 07 18:37	10° \mathcal{B} 33'55	
minimum elong	7496 Apr 16 20:07	29° Υ 26'39	6°43'21	min. Earth dist.	7502 Oct 26 04:00	9° \mathcal{B} 27'49	37.57554 AU
max. Earth dist.	7496 Apr 19 10:24	29° Υ 31'27	37.87400 AU	opposition	7502 Oct 28 21:11	9° \mathcal{B} 24'13	-9°41'32
morning rise	7496 Apr 30 12:35	29° Υ 51'44		direct	7503 Jan 18 08:55	8° \mathcal{B} 14'51	
	7496 May 05 03:16	0° \mathcal{B}		evening set	7503 Apr 17 02:49	9° \mathcal{B} 46'22	
retrograde	7496 Jul 28 08:23	1° \mathcal{B} 26'22					
min. Earth dist.	7496 Oct 15 07:18	0° \mathcal{B} 18'29	36.01757 AU	conjunction	7503 Apr 29 01:54	10° \mathcal{B} 07'21	-9°22'34
opposition	7496 Oct 17 21:50	0° \mathcal{B} 14'56	-7°18'47	minimum elong	7503 Apr 29 01:41	10° \mathcal{B} 07'20	9°22'38
	7496 Oct 28 21:29	30° $\mathcal{R}\Upsilon$		max. Earth dist.	7503 May 01 17:53	10° \mathcal{B} 12'03	39.67558 AU
direct	7497 Jan 07 04:48	29° Υ 03'36		morning rise	7503 May 11 01:15	10° \mathcal{B} 28'21	
	7497 Mar 14 12:05	0° \mathcal{B}		retrograde	7503 Aug 09 12:20	12° \mathcal{B} 01'38	
evening set	7497 Apr 05 04:21	0° \mathcal{B} 36'44		min. Earth dist.	7503 Oct 27 23:15	10° \mathcal{B} 55'42	37.82903 AU
				opposition	7503 Oct 30 15:41	10° \mathcal{B} 52'09	-10°03'00
conjunction	7497 Apr 18 15:24	1° \mathcal{B} 01'14	-7°07'57	direct	7504 Jan 20 02:15	9° \mathcal{B} 43'03	
minimum elong	7497 Apr 18 15:12	1° \mathcal{B} 01'13	7°08'01	evening set	7504 Apr 18 01:53	11° \mathcal{B} 14'22	
max. Earth dist.	7497 Apr 21 05:48	1° \mathcal{B} 05'59	38.13342 AU				
morning rise	7497 May 02 02:28	1° \mathcal{B} 25'44		conjunction	7504 Apr 29 18:16	11° \mathcal{B} 34'43	-9°42'51
retrograde	7497 Jul 30 03:04	3° \mathcal{B} 00'06		minimum elong	7504 Apr 29 18:04	11° \mathcal{B} 34'42	9°42'56
min. Earth dist.	7497 Oct 17 02:51	1° \mathcal{B} 52'36	36.27906 AU	max. Earth dist.	7504 May 02 10:23	11° \mathcal{B} 39'24	39.92596 AU
opposition	7497 Oct 19 18:46	1° \mathcal{B} 48'59	-7°44'17	morning rise	7504 May 11 10:45	11° \mathcal{B} 55'07	
direct	7498 Jan 09 02:39	0° \mathcal{B} 38'00		retrograde	7504 Aug 10 03:04	13° \mathcal{B} 28'14	
evening set	7498 Apr 07 04:23	2° \mathcal{B} 10'49		min. Earth dist.	7504 Oct 28 16:41	12° \mathcal{B} 22'32	38.08051 AU
				opposition	7504 Oct 31 09:37	12° \mathcal{B} 18'59	-10°23'50
conjunction	7498 Apr 20 09:57	2° \mathcal{B} 34'45	-7°31'58	direct	7505 Jan 20 22:29	11° \mathcal{B} 10'07	
minimum elong	7498 Apr 20 09:45	2° \mathcal{B} 34'44	7°32'02	evening set	7505 Apr 20 00:49	12° \mathcal{B} 41'15	
max. Earth dist.	7498 Apr 23 00:53	2° \mathcal{B} 39'31	38.39316 AU				
morning rise	7498 May 03 15:46	2° \mathcal{B} 58'42		conjunction	7505 May 01 10:09	13° \mathcal{B} 01'00	-10°02'32
retrograde	7498 Jul 31 21:44	4° \mathcal{B} 32'50		minimum elong	7505 May 01 09:55	13° \mathcal{B} 00'59	10°02'36
min. Earth dist.	7498 Oct 18 23:10	3° \mathcal{B} 25'38	36.54080 AU	max. Earth dist.	7505 May 04 01:59	13° \mathcal{B} 05'37	40.17466 AU
opposition	7498 Oct 21 15:23	3° \mathcal{B} 22'01	-8°09'06	morning rise	7505 May 12 19:51	13° \mathcal{B} 20'45	
direct	7499 Jan 11 00:12	2° \mathcal{B} 11'24		retrograde	7505 Aug 11 18:23	14° \mathcal{B} 53'46	
evening set	7499 Apr 09 04:20	3° \mathcal{B} 43'55		min. Earth dist.	7505 Oct 30 09:48	13° \mathcal{B} 48'18	38.33088 AU
				opposition	7505 Nov 02 03:13	13° \mathcal{B} 44'43	-10°44'00
conjunction	7499 Apr 22 04:22	4° \mathcal{B} 07'17	-7°55'20	direct	7506 Jan 22 16:49	12° \mathcal{B} 36'07	
minimum elong	7499 Apr 22 04:09	4° \mathcal{B} 07'16	7°55'23	evening set	7506 Apr 21 23:21	14° \mathcal{B} 07'06	
max. Earth dist.	7499 Apr 24 20:14	4° \mathcal{B} 12'06	38.65273 AU				
morning rise	7499 May 05 04:22	4° \mathcal{B} 30'40		conjunction	7506 May 03 01:44	14° \mathcal{B} 26'12	-10°21'36
retrograde	7499 Aug 02 13:24	6° \mathcal{B} 04'35		minimum elong	7506 May 03 01:31	14° \mathcal{B} 26'11	10°21'42
min. Earth dist.	7499 Oct 20 19:11	4° \mathcal{B} 57'40	36.80185 AU	max. Earth dist.	7506 May 05 18:49	14° \mathcal{B} 30'54	40.42245 AU
opposition	7499 Oct 23 11:20	4° \mathcal{B} 54'04	-8°33'13	morning rise	7506 May 14 04:11	14° \mathcal{B} 45'20	
direct	7500 Jan 12 23:14	3° \mathcal{B} 43'47			7506 May 22 21:32	15° \mathcal{B}	
evening set	7500 Apr 11 04:17	5° \mathcal{B} 16'03		retrograde	7506 Aug 13 07:33	16° \mathcal{B} 18'17	
				min. Earth dist.	7506 Nov 01 03:20	15° \mathcal{B} 12'59	38.58035 AU
conjunction	7500 Apr 23 22:14	5° \mathcal{B} 38'49	-8°18'04	opposition	7506 Nov 03 20:22	15° \mathcal{B} 09'27	-11°03'31
minimum elong	7500 Apr 23 22:02	5° \mathcal{B} 38'48	8°18'08		7506 Nov 11 02:31	15° $\mathcal{R}\mathcal{B}$	
max. Earth dist.	7500 Apr 26 13:31	5° \mathcal{B} 43'34	38.91126 AU	direct	7507 Jan 24 12:24	14° \mathcal{B} 01'06	
morning rise	7500 May 06 16:31	6° \mathcal{B} 01'37			7507 Apr 04 05:41	15° \mathcal{B}	
retrograde	7500 Aug 04 07:39	7° \mathcal{B} 35'22		evening set	7507 Apr 23 21:59	15° \mathcal{B} 31'58	
min. Earth dist.	7500 Oct 22 13:54	6° \mathcal{B} 28'47	37.06176 AU				
opposition	7500 Oct 25 07:04	6° \mathcal{B} 25'08	-8°56'39	conjunction	7507 May 04 16:53	15° \mathcal{B} 50'26	-10°40'04
direct	7501 Jan 14 18:43	5° \mathcal{B} 15'11		minimum elong	7507 May 04 16:40	15° \mathcal{B} 50'25	10°40'08
evening set	7501 Apr 13 03:49	6° \mathcal{B} 47'11		max. Earth dist.	7507 May 07 09:16	15° \mathcal{B} 55'03	40.66957 AU
				morning rise	7507 May 15 12:05	16° \mathcal{B} 08'56	
conjunction	7501 Apr 25 15:49	7° \mathcal{B} 09'22	-8°40'11	retrograde	7507 Aug 14 22:48	17° \mathcal{B} 41'50	
minimum elong	7501 Apr 25 15:35	7° \mathcal{B} 09'21	8°40'14	min. Earth dist.	7507 Nov 02 18:31	16° \mathcal{B} 36'51	38.82928 AU
max. Earth dist.	7501 Apr 28 08:16	7° \mathcal{B} 14'10	39.16822 AU	opposition	7507 Nov 05 12:55	16° \mathcal{B} 33'14	-11°22'23
morning rise	7501 May 08 03:53	7° \mathcal{B} 31'34		direct	7508 Jan 26 04:58	15° \mathcal{B} 25'10	
retrograde	7501 Aug 05 23:51	9° \mathcal{B} 05'09		evening set	7508 Apr 24 20:16	16° \mathcal{B} 55'56	

conjunction	7508 May 05 07:46	17° 8 13'47	-10°57'55	direct	7515 Feb 04 17:24	24° 8 52'47
minimum elong	7508 May 05 07:33	17° 8 13'46	10°58'00	evening set	7515 May 07 06:05	26° 8 23'39
max. Earth dist.	7508 May 08 01:26	17° 8 18'28	40.91610 AU			
morning rise	7508 May 15 19:28	17° 8 31'39		conjunction	7515 May 15 07:34	26° 8 36'54 -12°46'59
retrograde	7508 Aug 15 14:31	19° 8 04'32		minimum elong	7515 May 15 07:23	26° 8 36'53 12°47'04
min. Earth dist.	7508 Nov 03 11:40	17° 8 59'44	39.07758 AU	max. Earth dist.	7515 May 18 00:01	26° 8 41'19 42.59347 AU
opposition	7508 Nov 06 05:24	17° 8 56'11	-11°40'37	morning rise	7515 May 23 09:14	26° 8 50'10
direct	7509 Jan 26 20:53	16° 8 48'24		retrograde	7515 Aug 25 17:02	28° 8 23'33
evening set	7509 Apr 26 18:25	18° 8 19'06		min. Earth dist.	7515 Nov 13 22:04	27° 8 20'17 40.75984 AU
				opposition	7515 Nov 16 14:34	27° 8 16'55 -13°31'30
conjunction	7509 May 06 22:11	18° 8 36'19	-11°15'11	direct	7516 Feb 06 05:15	26° 8 10'59
minimum elong	7509 May 06 21:59	18° 8 36'18	11°15'15	evening set	7516 May 08 03:56	27° 8 41'56
max. Earth dist.	7509 May 09 15:34	18° 8 40'57	41.16198 AU			
morning rise	7509 May 17 02:07	18° 8 53'33		conjunction	7516 May 15 20:13	27° 8 54'29 -13°00'27
retrograde	7509 Aug 17 06:43	20° 8 26'26		minimum elong	7516 May 15 20:02	27° 8 54'29 13°00'33
min. Earth dist.	7509 Nov 05 02:39	19° 8 21'56	39.32489 AU	max. Earth dist.	7516 May 18 12:27	27° 8 58'52 42.82083 AU
opposition	7509 Nov 07 21:21	19° 8 18'21	-11°58'13	morning rise	7516 May 23 12:31	28° 8 07'03
direct	7510 Jan 28 11:04	18° 8 10'51		retrograde	7516 Aug 26 04:51	29° 8 40'33
evening set	7510 Apr 28 16:28	19° 8 41'32		min. Earth dist.	7516 Nov 14 11:51	28° 8 37'28 40.98737 AU
				opposition	7516 Nov 17 04:19	28° 8 34'06 -13°45'09
conjunction	7510 May 08 12:22	19° 8 58'07	-11°31'51	direct	7517 Feb 06 19:02	27° 8 28'23
minimum elong	7510 May 08 12:09	19° 8 58'06	11°31'57	evening set	7517 May 10 01:35	28° 8 59'25
max. Earth dist.	7510 May 11 05:55	20° 8 02'43	41.40660 AU			
morning rise	7510 May 18 08:34	20° 8 14'42		conjunction	7517 May 17 08:17	29° 8 11'16 -13°13'25
retrograde	7510 Aug 18 21:27	21° 8 47'38		minimum elong	7517 May 17 08:07	29° 8 11'16 13°13'31
min. Earth dist.	7510 Nov 06 18:38	20° 8 43'21	39.57089 AU	max. Earth dist.	7517 May 19 23:44	29° 8 15'35 43.04515 AU
opposition	7510 Nov 09 12:58	20° 8 39'49	-12°15'12	morning rise	7517 May 24 15:09	29° 8 23'07
direct	7511 Jan 30 02:07	19° 8 32'36			7517 Jun 17 10:10	0° II
evening set	7511 Apr 30 14:30	21° 8 03'18		retrograde	7517 Aug 27 16:00	0° II 56'46
					7517 Nov 11 02:38	30° R 8
conjunction	7511 May 10 02:25	21° 8 19'13	-11°47'58	min. Earth dist.	7517 Nov 16 01:19	29° 8 53'51 41.21237 AU
minimum elong	7511 May 10 02:13	21° 8 19'12	11°48'02	opposition	7517 Nov 18 17:50	29° 8 50'29 -13°58'15
max. Earth dist.	7511 May 12 20:33	21° 8 23'51	41.64966 AU	direct	7518 Feb 08 09:26	28° 8 44'58
morning rise	7511 May 19 14:25	21° 8 35'09			7518 May 01 20:06	0° II
retrograde	7511 Aug 20 08:52	23° 8 08'08		evening set	7518 May 11 23:22	0° II 16'07
min. Earth dist.	7511 Nov 08 10:11	22° 8 04'06	39.81478 AU			
opposition	7511 Nov 11 04:15	22° 8 00'35	-12°31'35	conjunction	7518 May 18 20:21	0° II 27'15 -13°25'53
direct	7512 Jan 31 19:51	20° 8 53'40		minimum elong	7518 May 18 20:10	0° II 27'15 13°25'58
evening set	7512 May 01 12:24	22° 8 24'23		max. Earth dist.	7518 May 21 12:45	0° II 31'36 43.26722 AU
				morning rise	7518 May 25 17:18	0° II 38'23
conjunction	7512 May 10 15:55	22° 8 39'39	-12°03'30	retrograde	7518 Aug 29 00:16	2° II 12'12
minimum elong	7512 May 10 15:42	22° 8 39'38	12°03'36	min. Earth dist.	7518 Nov 17 15:08	1° II 09'24 41.43520 AU
max. Earth dist.	7512 May 13 08:58	22° 8 44'11	41.89034 AU	opposition	7518 Nov 20 06:49	1° II 06'05 -14°10'49
morning rise	7512 May 19 19:43	22° 8 54'55		direct	7519 Feb 10 02:04	0° II 00'46
retrograde	7512 Aug 20 22:19	24° 8 28'00		evening set	7519 May 13 21:21	1° II 32'05
min. Earth dist.	7512 Nov 09 00:46	23° 8 24'14	40.05618 AU			
opposition	7512 Nov 11 19:18	23° 8 20'42	-12°47'23	conjunction	7519 May 20 08:00	1° II 42'29 -13°37'50
direct	7513 Feb 01 11:32	22° 8 14'04		minimum elong	7519 May 20 07:51	1° II 42'28 13°37'56
evening set	7513 May 03 10:18	23° 8 44'50		max. Earth dist.	7519 May 22 23:21	1° II 46'44 43.48748 AU
				morning rise	7519 May 26 18:43	1° II 52'52
conjunction	7513 May 12 05:28	23° 8 59'26	-12°18'31	retrograde	7519 Aug 30 12:02	3° II 26'53
minimum elong	7513 May 12 05:17	23° 8 59'25	12°18'36	min. Earth dist.	7519 Nov 19 02:55	2° II 24'19 41.65634 AU
max. Earth dist.	7513 May 14 23:15	24° 8 04'00	42.12821 AU	opposition	7519 Nov 21 19:35	2° II 20'58 -14°22'51
morning rise	7513 May 21 00:45	24° 8 14'03		direct	7520 Feb 11 15:12	1° II 15'51
retrograde	7513 Aug 22 10:52	25° 8 47'14		evening set	7520 May 14 19:13	2° II 47'22
min. Earth dist.	7513 Nov 10 16:59	24° 8 43'36	40.29438 AU			
opposition	7513 Nov 13 10:06	24° 8 40'10	-13°02'38	conjunction	7520 May 20 19:19	2° II 57'00 -13°49'16
direct	7514 Feb 03 03:47	23° 8 33'47		minimum elong	7520 May 20 19:10	2° II 56'59 13°49'22
evening set	7514 May 05 08:15	25° 8 04'36		max. Earth dist.	7520 May 23 11:20	3° II 01'17 43.70605 AU
				morning rise	7520 May 26 19:27	3° II 06'38
conjunction	7514 May 13 18:38	25° 8 18'31	-12°33'00	retrograde	7520 Aug 31 00:27	4° II 40'54
minimum elong	7514 May 13 18:26	25° 8 18'31	12°33'05	min. Earth dist.	7520 Nov 19 16:36	3° II 38'27 41.87582 AU
max. Earth dist.	7514 May 16 11:09	25° 8 22'59	42.36273 AU	opposition	7520 Nov 22 08:16	3° II 35'10 -14°34'21
morning rise	7514 May 22 05:09	25° 8 32'28		direct	7521 Feb 12 03:56	2° II 30'17
retrograde	7514 Aug 24 01:27	27° 8 05'45		evening set	7521 May 16 17:39	4° II 02'02
min. Earth dist.	7514 Nov 12 06:46	26° 8 02'23	40.52895 AU			
opposition	7514 Nov 15 00:28	25° 8 58'55	-13°17'20	conjunction	7521 May 22 06:34	4° II 10'52 -14°00'13

minimum elong	7521 May 22 06:25	4°II10'52	14°00'19	conjunction	7528 May 30 07:33	12°II33'10	-15°04'05
max. Earth dist.	7521 May 24 22:26	4°II15'08	43.92308 AU	minimum elong	7528 May 30 07:28	12°II33'09	15°04'11
morning rise	7521 May 27 19:26	4°II19'43		max. Earth dist.	7528 Jun 01 20:07	12°II37'04	45.35795 AU
retrograde	7521 Sep 01 12:49	5°II54'16		retrograde	7528 Sep 09 13:23	14°II13'24	
min. Earth dist.	7521 Nov 21 04:17	4°II52'03	42.09342 AU	min. Earth dist.	7528 Nov 29 16:25	13°II12'13	43.52506 AU
opposition	7521 Nov 23 20:27	4°II48'45	-14°45'20	opposition	7528 Dec 02 03:55	13°II09'14	-15°49'09
direct	7522 Feb 13 14:47	3°II44'05		direct	7529 Feb 21 22:20	12°II06'00	
evening set	7522 May 18 16:15	5°II16'09					
conjunction	7522 May 23 17:26	5°II24'10	-14°10'40	conjunction	7529 May 31 17:05	13°II42'47	-15°11'33
minimum elong	7522 May 23 17:17	5°II24'10	14°10'46	minimum elong	7529 May 31 16:59	13°II42'47	15°11'40
max. Earth dist.	7522 May 26 08:43	5°II28'22	44.13807 AU	max. Earth dist.	7529 Jun 03 04:04	13°II46'34	45.54664 AU
morning rise	7522 May 28 18:37	5°II32'11		retrograde	7529 Sep 10 22:31	15°II22'35	
retrograde	7522 Sep 03 01:36	7°II07'05		min. Earth dist.	7529 Dec 01 02:41	14°II21'33	43.71326 AU
min. Earth dist.	7522 Nov 22 16:41	6°II05'02	42.30888 AU	opposition	7529 Dec 03 14:15	14°II18'34	-15°56'33
opposition	7522 Nov 25 08:32	6°II01'47	-14°55'49	direct	7530 Feb 23 08:46	13°II15'29	
direct	7523 Feb 15 00:22	4°II57'20		conjunction	7530 Jun 02 02:31	14°II51'50	-15°18'37
evening set	7523 May 20 15:41	6°II29'46		minimum elong	7530 Jun 02 02:26	14°II51'49	15°18'43
conjunction	7523 May 25 04:17	6°II36'56	-14°20'39	max. Earth dist.	7530 Jun 04 14:01	14°II55'38	45.73200 AU
minimum elong	7523 May 25 04:09	6°II36'55	14°20'45	retrograde	7530 Sep 12 06:13	16°II31'13	
max. Earth dist.	7523 May 27 20:07	6°II41'08	44.35066 AU	min. Earth dist.	7530 Dec 02 14:21	15°II30'15	43.89827 AU
morning rise	7523 May 29 16:48	6°II44'04		opposition	7530 Dec 05 00:27	15°II27'21	-16°03'32
retrograde	7523 Sep 04 10:21	8°II19'22		direct	7531 Feb 24 21:31	14°II24'26	
min. Earth dist.	7523 Nov 24 05:20	7°II17'29	42.52146 AU	conjunction	7531 Jun 03 11:40	16°II00'20	-15°25'16
opposition	7523 Nov 26 20:14	7°II14'17	-15°05'49	minimum elong	7531 Jun 03 11:34	16°II00'20	15°25'21
direct	7524 Feb 16 13:56	6°II10'04		max. Earth dist.	7531 Jun 05 22:11	16°II04'04	45.91458 AU
evening set	7524 May 21 16:03	7°II42'57		retrograde	7531 Sep 13 16:22	17°II39'19	
conjunction	7524 May 25 14:49	7°II49'10	-14°30'11	min. Earth dist.	7531 Dec 03 23:31	16°II38'33	44.08059 AU
minimum elong	7524 May 25 14:42	7°II49'10	14°30'16	opposition	7531 Dec 06 10:14	16°II35'37	-16°10'06
max. Earth dist.	7524 May 28 05:13	7°II53'16	44.56026 AU	direct	7532 Feb 26 07:37	15°II32'52	
morning rise	7524 May 29 13:32	7°II55'23		conjunction	7532 Jun 03 20:35	17°II08'22	-15°31'30
retrograde	7524 Sep 04 20:02	9°II31'10		minimum elong	7532 Jun 03 20:32	17°II08'22	15°31'37
min. Earth dist.	7524 Nov 24 16:35	8°II29'30	42.73083 AU	max. Earth dist.	7532 Jun 06 06:53	17°II12'04	46.09459 AU
opposition	7524 Nov 27 07:50	8°II26'17	-15°15'21	retrograde	7532 Sep 14 05:00	18°II46'58	
direct	7525 Feb 17 02:25	7°II22'18		min. Earth dist.	7532 Dec 04 10:21	17°II46'17	44.26051 AU
evening set	7525 May 23 17:56	8°II55'45		opposition	7532 Dec 06 20:06	17°II43'26	-16°16'13
conjunction	7525 May 27 01:13	9°II00'56	-14°39'16	direct	7533 Feb 26 14:23	16°II40'52	
minimum elong	7525 May 27 01:06	9°II00'55	14°39'22	conjunction	7533 Jun 05 05:23	18°II15'57	-15°37'20
morning rise	7525 May 30 08:23	9°II06'07		minimum elong	7533 Jun 05 05:18	18°II15'57	15°37'26
max. Earth dist.	7525 May 29 16:00	9°II05'02	44.76622 AU	max. Earth dist.	7533 Jun 07 15:51	18°II19'39	46.27231 AU
retrograde	7525 Sep 06 06:53	10°II42'30		retrograde	7533 Sep 15 13:08	19°II54'11	
min. Earth dist.	7525 Nov 26 05:48	9°II40'56	42.93619 AU	min. Earth dist.	7533 Dec 05 20:03	18°II53'40	44.43777 AU
opposition	7525 Nov 28 19:19	9°II37'49	-15°24'26	opposition	7533 Dec 08 05:35	18°II50'49	-16°21'56
direct	7526 Feb 18 15:02	8°II34'02		direct	7534 Feb 27 23:38	17°II48'26	
evening set	7526 May 25 23:02	10°II08'16		conjunction	7534 Jun 06 13:58	19°II23'09	-15°42'47
conjunction	7526 May 28 11:36	10°II12'12	-14°47'56	minimum elong	7534 Jun 06 13:55	19°II23'09	15°42'53
minimum elong	7526 May 28 11:30	10°II12'12	14°48'02	max. Earth dist.	7534 Jun 08 23:06	19°II26'45	46.44734 AU
morning rise	7526 May 31 00:01	10°II16'08		retrograde	7534 Sep 16 20:49	21°II01'00	
max. Earth dist.	7526 May 31 01:07	10°II16'13	44.96805 AU	min. Earth dist.	7534 Dec 07 05:30	20°II00'39	44.61230 AU
retrograde	7526 Sep 07 18:22	11°II53'20		opposition	7534 Dec 09 14:49	19°II57'49	-16°27'15
min. Earth dist.	7526 Nov 27 16:40	10°II51'57	43.13703 AU	direct	7535 Mar 01 08:24	18°II55'37	
opposition	7526 Nov 30 06:15	10°II48'51	-15°33'05	conjunction	7535 Jun 07 22:32	20°II29'59	-15°47'50
direct	7527 Feb 20 01:13	9°II45'15		minimum elong	7535 Jun 07 22:29	20°II29'58	15°47'56
evening set	7527 May 28 11:56	11°II20'46		max. Earth dist.	7535 Jun 10 08:11	20°II33'36	46.61941 AU
conjunction	7527 May 29 21:42	11°II22'58	-14°56'12	retrograde	7535 Sep 18 02:41	22°II07'29	
minimum elong	7527 May 29 21:35	11°II22'57	14°56'19	min. Earth dist.	7535 Dec 08 16:09	21°II07'13	44.78351 AU
morning rise	7527 May 31 07:17	11°II25'08		opposition	7535 Dec 11 00:02	21°II04'28	-16°32'10
max. Earth dist.	7527 Jun 01 10:10	11°II26'53	45.16520 AU	direct	7536 Mar 01 20:21	20°II02'27	
retrograde	7527 Sep 09 05:42	13°II03'39		conjunction	7536 Jun 08 06:46	21°II36'27	-15°52'31
min. Earth dist.	7527 Nov 29 05:00	12°II02'21	43.33327 AU	minimum elong	7536 Jun 08 06:43	21°II36'27	15°52'38
opposition	7527 Dec 01 17:15	11°II59'20	-15°41'19	max. Earth dist.	7536 Jun 10 15:04	21°II39'59	46.78808 AU
direct	7528 Feb 21 10:47	10°II55'55					

retrograde	7536 Sep 18 11:25	23° Π 13'38		retrograde	7544 Sep 27 03:32	1° \mathfrak{D} 47'41	
min. Earth dist.	7536 Dec 09 00:53	22° Π 13'33	44.95096 AU	min. Earth dist.	7544 Dec 18 01:25	0° \mathfrak{D} 48'11	46.12893 AU
opposition	7536 Dec 11 09:02	22° Π 10'47	-16°36'42	opposition	7544 Dec 20 02:44	0° \mathfrak{D} 45'48	-17°00'53
direct	7537 Mar 03 05:51	21° Π 08'56			7545 Feb 02 16:56	30° \mathfrak{R} Π	
				direct	7545 Mar 11 22:29	29° Π 44'56	
conjunction	7537 Jun 09 15:03	22° Π 42'35	-15°56'52		7545 Apr 17 13:02	0° \mathfrak{D}	
minimum elong	7537 Jun 09 15:00	22° Π 42'35	15°56'58				
max. Earth dist.	7537 Jun 11 22:43	22° Π 46'03	46.95261 AU	conjunction	7545 Jun 18 03:44	1° \mathfrak{D} 15'51	-16°19'49
retrograde	7537 Sep 19 21:43	24° Π 19'26		minimum elong	7545 Jun 18 03:46	1° \mathfrak{D} 15'51	16°19'56
min. Earth dist.	7537 Dec 10 11:38	23° Π 19'25	45.11407 AU	max. Earth dist.	7545 Jun 20 06:07	1° \mathfrak{D} 18'54	48.11072 AU
opposition	7537 Dec 12 17:56	23° Π 16'45	-16°40'54	retrograde	7545 Sep 28 08:00	2° \mathfrak{D} 50'01	
direct	7538 Mar 04 14:32	22° Π 15'04		min. Earth dist.	7545 Dec 19 09:50	1° \mathfrak{D} 50'35	46.26068 AU
				opposition	7545 Dec 21 10:06	1° \mathfrak{D} 48'16	-17°02'22
conjunction	7538 Jun 10 23:20	23° Π 48'21	-16°00'52	direct	7546 Mar 13 07:00	0° \mathfrak{D} 47'31	
minimum elong	7538 Jun 10 23:18	23° Π 48'21	16°00'59				
max. Earth dist.	7538 Jun 13 06:28	23° Π 51'47	47.11260 AU	conjunction	7546 Jun 19 10:36	2° \mathfrak{D} 18'10	-16°21'11
retrograde	7538 Sep 21 07:05	25° Π 24'51		minimum elong	7546 Jun 19 10:37	2° \mathfrak{D} 18'10	16°21'18
min. Earth dist.	7538 Dec 11 20:54	24° Π 24'56	45.27212 AU	max. Earth dist.	7546 Jun 21 11:28	2° \mathfrak{D} 21'07	48.24092 AU
opposition	7538 Dec 14 02:34	24° Π 22'19	-16°44'45	retrograde	7546 Sep 29 14:20	3° \mathfrak{D} 52'05	
direct	7539 Mar 05 21:46	23° Π 20'47		min. Earth dist.	7546 Dec 20 16:42	2° \mathfrak{D} 52'48	46.38963 AU
				opposition	7546 Dec 22 17:20	2° \mathfrak{D} 50'28	-17°03'31
conjunction	7539 Jun 12 07:17	24° Π 53'43	-16°04'33	direct	7547 Mar 14 14:15	1° \mathfrak{D} 49'52	
minimum elong	7539 Jun 12 07:16	24° Π 53'43	16°04'38				
max. Earth dist.	7539 Jun 14 12:27	24° Π 57'00	47.26743 AU	conjunction	7547 Jun 20 17:20	3° \mathfrak{D} 20'15	-16°22'14
retrograde	7539 Sep 22 16:19	26° Π 29'51		minimum elong	7547 Jun 20 17:23	3° \mathfrak{D} 20'15	16°22'21
min. Earth dist.	7539 Dec 13 06:12	25° Π 30'01	45.42508 AU	max. Earth dist.	7547 Jun 22 18:03	3° \mathfrak{D} 23'11	48.36805 AU
opposition	7539 Dec 15 11:06	25° Π 27'27	-16°48'17	retrograde	7547 Sep 30 22:02	4° \mathfrak{D} 53'56	
direct	7540 Mar 06 04:00	24° Π 26'02		min. Earth dist.	7547 Dec 22 01:42	3° \mathfrak{D} 54'42	46.51535 AU
				opposition	7547 Dec 24 00:34	3° \mathfrak{D} 52'27	-17°04'20
conjunction	7540 Jun 12 15:14	25° Π 58'36	-16°07'55	direct	7548 Mar 14 22:54	2° \mathfrak{D} 52'01	
minimum elong	7540 Jun 12 15:12	25° Π 58'36	16°08'02				
max. Earth dist.	7540 Jun 14 20:26	26° Π 01'53	47.41731 AU	conjunction	7548 Jun 21 00:07	4° \mathfrak{D} 22'09	-16°22'59
retrograde	7540 Sep 22 21:09	27° Π 34'24		minimum elong	7548 Jun 21 00:09	4° \mathfrak{D} 22'09	16°23'05
min. Earth dist.	7540 Dec 13 16:14	26° Π 34'34	45.57312 AU	max. Earth dist.	7548 Jun 23 00:21	4° \mathfrak{D} 25'02	48.49195 AU
opposition	7540 Dec 15 19:29	26° Π 32'05	-16°51'29	retrograde	7548 Oct 01 06:31	5° \mathfrak{D} 55'35	
direct	7541 Mar 07 14:43	25° Π 30'46		min. Earth dist.	7548 Dec 22 08:48	4° \mathfrak{D} 56'30	46.63738 AU
				opposition	7548 Dec 24 07:34	4° \mathfrak{D} 54'16	-17°04'50
conjunction	7541 Jun 13 22:47	27° Π 02'59	-16°10'57	direct	7549 Mar 16 04:55	3° \mathfrak{D} 53'58	
minimum elong	7541 Jun 13 22:47	27° Π 02'59	16°11'03				
max. Earth dist.	7541 Jun 16 02:26	27° Π 06'09	47.56271 AU	conjunction	7549 Jun 22 06:40	5° \mathfrak{D} 23'52	-16°23'26
retrograde	7541 Sep 24 02:57	28° Π 38'25		minimum elong	7549 Jun 22 06:42	5° \mathfrak{D} 23'52	16°23'32
min. Earth dist.	7541 Dec 15 00:08	27° Π 38'42	45.71697 AU	max. Earth dist.	7549 Jun 24 05:16	5° \mathfrak{D} 26'39	48.61182 AU
opposition	7541 Dec 17 03:33	27° Π 36'12	-16°54'21	retrograde	7549 Oct 02 16:17	6° \mathfrak{D} 57'04	
direct	7542 Mar 09 00:54	26° Π 34'59		min. Earth dist.	7549 Dec 23 17:04	5° \mathfrak{D} 58'04	46.75517 AU
				opposition	7549 Dec 25 14:36	5° \mathfrak{D} 55'54	-17°05'02
conjunction	7542 Jun 15 06:17	28° Π 06'51	-16°13'41	direct	7550 Mar 17 07:49	4° \mathfrak{D} 55'44	
minimum elong	7542 Jun 15 06:16	28° Π 06'51	16°13'47				
max. Earth dist.	7542 Jun 17 09:35	28° Π 09'59	47.70414 AU	conjunction	7550 Jun 23 13:27	6° \mathfrak{D} 25'25	-16°23'36
retrograde	7542 Sep 25 11:44	29° Π 41'57		minimum elong	7550 Jun 23 13:30	6° \mathfrak{D} 25'25	16°23'41
min. Earth dist.	7542 Dec 16 09:38	28° Π 42'15	45.85724 AU	max. Earth dist.	7550 Jun 25 11:54	6° \mathfrak{D} 28'11	48.72709 AU
opposition	7542 Dec 18 11:24	28° Π 39'50	-16°56'53	retrograde	7550 Oct 03 21:26	7° \mathfrak{D} 58'23	
direct	7543 Mar 10 09:41	27° Π 38'43		min. Earth dist.	7550 Dec 25 01:18	6° \mathfrak{D} 59'25	46.86789 AU
				opposition	7550 Dec 26 21:19	6° \mathfrak{D} 57'20	-17°04'59
conjunction	7543 Jun 16 13:40	29° Π 10'15	-16°16'04	direct	7551 Mar 18 15:31	5° \mathfrak{D} 57'17	
minimum elong	7543 Jun 16 13:41	29° Π 10'15	16°16'10				
max. Earth dist.	7543 Jun 18 16:41	29° Π 13'21	47.84244 AU	conjunction	7551 Jun 24 19:59	7° \mathfrak{D} 26'44	-16°23'30
	7543 Jul 22 08:52	0° \mathfrak{D}		minimum elong	7551 Jun 24 20:02	7° \mathfrak{D} 26'44	16°23'36
retrograde	7543 Sep 26 19:16	0° \mathfrak{D} 45'01		max. Earth dist.	7551 Jun 26 16:24	7° \mathfrak{D} 29'23	48.83731 AU
	7543 Dec 04 23:19	30° \mathfrak{R} Π		retrograde	7551 Oct 05 01:19	8° \mathfrak{D} 59'27	
min. Earth dist.	7543 Dec 17 17:10	29° Π 45'26	45.99440 AU	min. Earth dist.	7551 Dec 26 08:22	8° \mathfrak{D} 00'35	46.97549 AU
opposition	7543 Dec 19 19:04	29° Π 43'01	-16°59'04	opposition	7551 Dec 28 04:04	7° \mathfrak{D} 58'31	-17°04'38
direct	7544 Mar 10 16:51	28° Π 42'01		direct	7552 Mar 18 23:42	6° \mathfrak{D} 58'34	
	7544 Jun 07 18:24	0° \mathfrak{D}					
conjunction	7544 Jun 16 20:36	0° \mathfrak{D} 13'13	-16°18'06	conjunction	7552 Jun 25 02:18	8° \mathfrak{D} 27'46	-16°23'08
minimum elong	7544 Jun 16 20:35	0° \mathfrak{D} 13'13	16°18'13	minimum elong	7552 Jun 25 02:21	8° \mathfrak{D} 27'46	16°23'14
max. Earth dist.	7544 Jun 18 22:21	0° \mathfrak{D} 16'15	47.97787 AU	max. Earth dist.	7552 Jun 26 22:08	8° \mathfrak{D} 30'22	48.94234 AU
				retrograde	7552 Oct 05 07:29	10° \mathfrak{D} 00'15	

min. Earth dist.	7552 Dec 26 17:05	9°01'23 47.07803 AU	conjunction	7561 Jul 04 07:00	17°23'48 -16°07'27
opposition	7552 Dec 28 10:48	8°59'24 -17°04'02	minimum elong	7561 Jul 04 07:06	17°23'49 16°07'33
direct	7553 Mar 20 08:56	7°59'32	max. Earth dist.	7561 Jul 05 19:27	17°25'56 49.72370 AU
			retrograde	7561 Oct 14 14:10	18°54'25
conjunction	7553 Jun 26 08:39	9°28'29 -16°22'31	min. Earth dist.	7562 Jan 05 05:05	17°56'00 47.84063 AU
minimum elong	7553 Jun 26 08:42	9°28'29 16°22'38	opposition	7562 Jan 06 16:25	17°54'21 -16°45'46
max. Earth dist.	7553 Jun 28 03:38	9°31'02 49.04274 AU	direct	7562 Mar 29 11:14	16°55'15
retrograde	7553 Oct 06 14:50	11°00'43			
min. Earth dist.	7553 Dec 27 23:30	10°01'55 47.17608 AU	conjunction	7562 Jul 05 12:42	18°22'25 -16°04'22
opposition	7553 Dec 29 17:05	9°59'56 -17°03'10	minimum elong	7562 Jul 05 12:49	18°22'26 16°04'29
direct	7554 Mar 21 15:47	9°00'09	max. Earth dist.	7562 Jul 07 00:25	18°24'30 49.79215 AU
			retrograde	7562 Oct 15 18:15	19°52'53
conjunction	7554 Jun 27 14:43	10°28'50 -16°21'37	opposition	7563 Jan 07 22:06	18°52'54 -16°42'23
minimum elong	7554 Jun 27 14:48	10°28'51 16°21'43	min. Earth dist.	7563 Jan 06 12:57	18°54'27 47.90596 AU
max. Earth dist.	7554 Jun 29 08:11	10°31'17 49.13894 AU	direct	7563 Mar 30 19:09	17°53'53
retrograde	7554 Oct 07 23:00	12°00'50			
min. Earth dist.	7554 Dec 29 07:03	11°02'02 47.27037 AU	conjunction	7563 Jul 06 18:17	19°20'54 -16°01'04
opposition	7554 Dec 30 23:26	11°00'08 -17°02'00	minimum elong	7563 Jul 06 18:24	19°20'54 16°01'10
direct	7555 Mar 22 19:58	10°00'25	max. Earth dist.	7563 Jul 08 04:46	19°22'54 49.85536 AU
			retrograde	7563 Oct 17 00:10	20°51'11
conjunction	7555 Jun 28 20:44	11°28'52 -16°20'26	min. Earth dist.	7564 Jan 07 18:41	19°52'50 47.96577 AU
minimum elong	7555 Jun 28 20:47	11°28'52 16°20'33	opposition	7564 Jan 09 03:35	19°51'17 -16°38'47
max. Earth dist.	7555 Jun 30 14:34	11°31'20 49.23164 AU	direct	7564 Mar 31 01:43	18°52'20
retrograde	7555 Oct 09 03:23	13°00'37			
min. Earth dist.	7555 Dec 30 14:04	12°01'51 47.36122 AU	conjunction	7564 Jul 06 23:45	20°19'11 -15°57'33
opposition	7556 Jan 01 05:35	11°59'59 -17°00'33	minimum elong	7564 Jul 06 23:52	20°19'12 15°57'40
direct	7556 Mar 23 01:22	11°00'21	max. Earth dist.	7564 Jul 08 08:19	20°21'04 49.91306 AU
			retrograde	7564 Oct 17 07:53	21°49'19
conjunction	7556 Jun 29 02:34	12°28'35 -16°18'58	min. Earth dist.	7565 Jan 08 02:02	20°50'56 48.02032 AU
minimum elong	7556 Jun 29 02:40	12°28'35 16°19'05	opposition	7565 Jan 09 09:06	20°49'29 -16°34'58
max. Earth dist.	7556 Jun 30 18:49	12°30'57 49.32133 AU	direct	7565 Apr 01 05:42	19°50'35
retrograde	7556 Oct 09 08:09	14°00'06			
min. Earth dist.	7556 Dec 30 19:55	13°01'25 47.44924 AU	conjunction	7565 Jul 08 05:14	21°17'16 -15°53'48
opposition	7557 Jan 01 11:37	12°59'32 -16°58'47	minimum elong	7565 Jul 08 05:22	21°17'17 15°53'54
direct	7557 Mar 24 06:38	11°59'59	max. Earth dist.	7565 Jul 09 13:41	21°19'09 49.96572 AU
			retrograde	7565 Oct 18 12:46	22°47'14
conjunction	7557 Jun 30 08:21	13°28'00 -16°17'13	min. Earth dist.	7566 Jan 09 08:22	21°48'51 48.06990 AU
minimum elong	7557 Jun 30 08:26	13°28'01 16°17'19	opposition	7566 Jan 10 14:24	21°47'26 -16°30'54
max. Earth dist.	7557 Jul 02 00:29	13°30'22 49.40813 AU	direct	7566 Apr 02 10:17	20°48'35
retrograde	7557 Oct 10 12:32	14°59'20			
min. Earth dist.	7558 Jan 01 03:39	14°00'39 47.53432 AU	conjunction	7566 Jul 09 10:31	22°15'08 -15°49'50
opposition	7558 Jan 02 17:39	13°58'51 -16°56'45	minimum elong	7566 Jul 09 10:38	22°15'08 15°49'56
direct	7558 Mar 25 14:59	12°59'23	max. Earth dist.	7566 Jul 10 16:56	22°16'53 50.01383 AU
			retrograde	7566 Oct 19 17:09	23°44'56
conjunction	7558 Jul 01 14:10	14°27'12 -16°15'11	opposition	7567 Jan 11 19:28	22°45'11 -16°26'36
minimum elong	7558 Jul 01 14:17	14°27'12 16°15'17	min. Earth dist.	7567 Jan 10 13:50	22°46'34 48.11534 AU
max. Earth dist.	7558 Jul 03 05:48	14°29'31 49.49213 AU	direct	7567 Apr 03 14:19	21°46'22
retrograde	7558 Oct 11 18:28	15°58'20			
min. Earth dist.	7559 Jan 02 09:08	14°59'45 47.61635 AU	conjunction	7567 Jul 10 15:45	23°12'47 -15°45'36
opposition	7559 Jan 03 23:18	14°57'57 -16°54'24	minimum elong	7567 Jul 10 15:54	23°12'47 15°45'42
direct	7559 Mar 26 22:13	13°58'34	max. Earth dist.	7567 Jul 11 21:55	23°14'31 50.05801 AU
			retrograde	7567 Oct 20 20:27	24°42'27
conjunction	7559 Jul 02 19:46	15°26'13 -16°12'52	min. Earth dist.	7568 Jan 11 20:48	23°44'02 48.15708 AU
minimum elong	7559 Jul 02 19:51	15°26'13 16°12'58	opposition	7568 Jan 13 00:42	23°42'44 -16°22'03
max. Earth dist.	7559 Jul 04 09:53	15°28'26 49.57297 AU	direct	7568 Apr 03 21:10	22°43'58
retrograde	7559 Oct 13 03:57	16°57'09			
min. Earth dist.	7560 Jan 03 16:12	15°58'37 47.69517 AU	conjunction	7568 Jul 10 20:49	24°10'14 -15°41'08
opposition	7560 Jan 05 05:10	15°56'53 -16°51'47	minimum elong	7568 Jul 10 20:56	24°10'15 15°41'14
direct	7560 Mar 27 01:11	14°57'36	max. Earth dist.	7568 Jul 12 02:22	24°11'56 50.09891 AU
			retrograde	7568 Oct 21 01:08	25°39'47
conjunction	7560 Jul 03 01:23	16°25'04 -16°10'17	min. Earth dist.	7569 Jan 12 01:34	24°41'27 48.19559 AU
minimum elong	7560 Jul 03 01:29	16°25'05 16°10'24	opposition	7569 Jan 13 05:43	24°40'08 -16°17'14
max. Earth dist.	7560 Jul 04 15:46	16°27'18 49.65038 AU	direct	7569 Apr 05 04:26	23°41'25
retrograde	7560 Oct 13 09:41	17°55'51			
min. Earth dist.	7561 Jan 03 23:03	16°57'22 47.77008 AU	conjunction	7569 Jul 12 01:52	25°07'34 -15°36'25
opposition	7561 Jan 05 10:54	16°55'41 -16°48'54	minimum elong	7569 Jul 12 02:02	25°07'35 15°36'31
direct	7561 Mar 28 06:27	15°56'30	max. Earth dist.	7569 Jul 13 05:57	25°09'11 50.13662 AU

retrograde	7569 Oct 22 10:07	26°☾37'00		evening set	7577 Jul 17 10:21	2°♂40'39	
min. Earth dist.	7570 Jan 13 07:53	25°☾38'39	48.23109 AU				
opposition	7570 Jan 14 10:40	25°☾37'24	-16°12'09	conjunction	7577 Jul 19 18:01	2°♂43'49	-14°50'08
direct	7570 Apr 06 07:21	24°☾38'44		minimum elong	7577 Jul 19 18:10	2°♂43'49	14°50'14
				max. Earth dist.	7577 Jul 20 14:03	2°♂44'57	50.30144 AU
conjunction	7570 Jul 13 07:02	26°☾04'48	-15°31'26	morning rise	7577 Jul 22 02:05	2°♂47'00	
minimum elong	7570 Jul 13 07:10	26°☾04'48	15°31'32	retrograde	7577 Oct 30 01:01	4°♂12'30	
max. Earth dist.	7570 Jul 14 11:20	26°☾06'25	50.17136 AU	min. Earth dist.	7578 Jan 21 07:06	3°♂14'05	48.37064 AU
retrograde	7570 Oct 23 16:21	27°☾34'07		opposition	7578 Jan 22 00:55	3°♂13'16	-15°22'59
opposition	7571 Jan 15 15:35	26°☾34'35	-16°06'49	direct	7578 Apr 13 19:23	2°♂14'52	
min. Earth dist.	7571 Jan 14 13:30	26°☾35'48	48.26337 AU	evening set	7578 Jul 17 22:41	3°♂36'12	
direct	7571 Apr 07 10:27	25°☾35'59					
				conjunction	7578 Jul 20 22:57	3°♂40'18	-14°43'23
conjunction	7571 Jul 14 11:52	27°☾01'58	-15°26'12	minimum elong	7578 Jul 20 23:08	3°♂40'19	14°43'28
minimum elong	7571 Jul 14 12:01	27°☾01'58	15°26'19	max. Earth dist.	7578 Jul 21 18:05	3°♂41'24	50.30074 AU
max. Earth dist.	7571 Jul 15 14:32	27°☾03'29	50.20297 AU	morning rise	7578 Jul 23 23:42	3°♂44'26	
retrograde	7571 Oct 24 20:57	28°☾31'11		retrograde	7578 Oct 31 03:37	5°♂08'55	
opposition	7572 Jan 16 20:29	27°☾31'43	-16°01'14	min. Earth dist.	7579 Jan 22 11:30	4°♂10'30	48.36680 AU
min. Earth dist.	7572 Jan 15 18:41	27°☾32'55	48.29245 AU	opposition	7579 Jan 23 05:23	4°♂09'40	-15°15'51
direct	7572 Apr 07 13:41	26°☾33'11		direct	7579 Apr 15 02:41	3°♂11'15	
				evening set	7579 Jul 18 13:30	4°♂31'44	
conjunction	7572 Jul 14 16:53	27°☾59'05	-15°20'44				
minimum elong	7572 Jul 14 17:01	27°☾59'05	15°20'50	conjunction	7579 Jul 22 03:35	4°♂36'37	-14°36'25
max. Earth dist.	7572 Jul 15 19:07	28°☾00'35	50.23108 AU	minimum elong	7579 Jul 22 03:44	4°♂36'38	14°36'30
retrograde	7572 Oct 24 22:50	29°☾28'13		max. Earth dist.	7579 Jul 22 21:04	4°♂37'37	50.29607 AU
min. Earth dist.	7573 Jan 16 01:26	28°☾29'56	48.31775 AU	morning rise	7579 Jul 25 18:11	4°♂41'32	
opposition	7573 Jan 17 01:23	28°☾28'49	-15°55'24	retrograde	7579 Nov 01 10:21	6°♂05'09	
direct	7573 Apr 08 21:03	27°☾30'21		opposition	7580 Jan 24 10:00	5°♂05'54	-15°08'29
				min. Earth dist.	7580 Jan 23 17:38	5°♂06'40	48.35941 AU
conjunction	7573 Jul 15 21:55	28°☾56'10	-15°15'02	direct	7580 Apr 15 07:20	4°♂07'29	
minimum elong	7573 Jul 15 22:05	28°☾56'11	15°15'08	evening set	7580 Jul 18 06:13	5°♂27'14	
max. Earth dist.	7573 Jul 16 23:15	28°☾57'37	50.25528 AU				
	7573 Sep 05 21:00	0°♂		conjunction	7580 Jul 22 08:28	5°♂32'47	-14°29'12
retrograde	7573 Oct 26 03:22	0°♂25'14		minimum elong	7580 Jul 22 08:39	5°♂32'48	14°29'18
	7573 Dec 16 14:45	30°♂☾		max. Earth dist.	7580 Jul 23 02:15	5°♂33'48	50.28816 AU
min. Earth dist.	7574 Jan 17 06:23	29°☾27'01	48.33868 AU	morning rise	7580 Jul 26 11:16	5°♂38'23	
opposition	7574 Jan 18 06:06	29°☾25'54	-15°49'21	retrograde	7580 Nov 01 16:08	7°♂01'15	
direct	7574 Apr 10 03:35	28°☾27'28		opposition	7581 Jan 24 14:24	6°♂02'01	-15°00'52
				min. Earth dist.	7581 Jan 23 22:36	6°♂02'45	48.34883 AU
conjunction	7574 Jul 17 02:56	29°☾53'14	-15°09'07	direct	7581 Apr 16 10:41	5°♂03'35	
minimum elong	7574 Jul 17 03:06	29°☾53'15	15°09'12	evening set	7581 Jul 18 23:51	6°♂22'40	
max. Earth dist.	7574 Jul 18 02:18	29°☾54'34	50.27465 AU				
	7574 Jul 22 01:32	0°♂		conjunction	7581 Jul 23 13:09	6°♂28'52	-14°21'46
retrograde	7574 Oct 27 10:53	1°♂22'14		minimum elong	7581 Jul 23 13:19	6°♂28'52	14°21'51
opposition	7575 Jan 19 10:52	0°♂22'57	-15°43'04	max. Earth dist.	7581 Jul 24 05:13	6°♂29'46	50.27731 AU
min. Earth dist.	7575 Jan 18 13:08	0°♂23'58	48.35461 AU	morning rise	7581 Jul 28 03:03	6°♂35'05	
	7575 Feb 09 13:56	30°♂☾		retrograde	7581 Nov 02 22:01	7°♂57'16	
direct	7575 Apr 11 07:38	29°☾24'33		opposition	7582 Jan 25 18:49	6°♂58'03	-14°53'00
	7575 Jun 09 02:59	0°♂		min. Earth dist.	7582 Jan 25 03:21	6°♂58'46	48.33541 AU
				direct	7582 Apr 17 12:56	5°♂59'38	
conjunction	7575 Jul 18 08:07	0°♂50'14	-15°03'00	evening set	7582 Jul 19 18:19	7°♂18'07	
minimum elong	7575 Jul 18 08:16	0°♂50'15	15°03'06				
max. Earth dist.	7575 Jul 19 07:06	0°♂51'33	50.28885 AU	conjunction	7582 Jul 24 17:56	7°♂24'53	-14°14'04
retrograde	7575 Oct 28 16:44	2°♂19'08		minimum elong	7582 Jul 24 18:07	7°♂24'54	14°14'10
opposition	7576 Jan 20 15:38	1°♂19'53	-15°36'35	max. Earth dist.	7582 Jul 25 09:39	7°♂25'47	50.26350 AU
min. Earth dist.	7576 Jan 19 18:57	1°♂20'51	48.36506 AU	morning rise	7582 Jul 29 18:14	7°♂31'41	
direct	7576 Apr 11 11:37	0°♂21'30		retrograde	7582 Nov 03 23:58	8°♂53'17	
evening set	7576 Jul 17 04:54	1°♂45'17		opposition	7583 Jan 26 23:14	7°♂54'04	-14°44'54
				min. Earth dist.	7583 Jan 26 09:18	7°♂54'43	48.31902 AU
conjunction	7576 Jul 18 12:58	1°♂47'07	-14°56'40	direct	7583 Apr 18 18:58	6°♂55'41	
minimum elong	7576 Jul 18 13:08	1°♂47'07	14°56'45	evening set	7583 Jul 20 13:28	8°♂13'38	
morning rise	7576 Jul 19 21:25	1°♂48'57					
max. Earth dist.	7576 Jul 19 09:42	1°♂48'17	50.29773 AU	conjunction	7583 Jul 25 22:42	8°♂20'56	-14°06'09
retrograde	7576 Oct 28 22:12	3°♂15'54		minimum elong	7583 Jul 25 22:52	8°♂20'57	14°06'14
opposition	7577 Jan 20 20:21	2°♂16'40	-15°29'53	max. Earth dist.	7583 Jul 26 13:50	8°♂21'48	50.24694 AU
min. Earth dist.	7577 Jan 20 00:25	2°♂17'35	48.37030 AU	morning rise	7583 Jul 31 08:36	8°♂28'17	
direct	7577 Apr 12 13:53	1°♂18'17		retrograde	7583 Nov 05 03:37	9°♂49'19	

opposition	7584 Jan 28 03:36	8°Ω50'09 -14°36'33	conjunction	7590 Aug 01 09:02	14°Ω55'41 -13°04'38
min. Earth dist.	7584 Jan 27 13:29	8°Ω50'48 48.29965 AU	minimum elong	7590 Aug 01 09:13	14°Ω55'42 13°04'43
direct	7584 Apr 19 00:49	7°Ω51'47	max. Earth dist.	7590 Aug 01 16:03	14°Ω56'05 50.01157 AU
evening set	7584 Jul 20 08:54	9°Ω09'14		7590 Aug 04 13:15	15°Ω
			morning rise	7590 Aug 09 04:13	15°Ω06'16
conjunction	7584 Jul 26 03:19	9°Ω17'03 -13°57'59	retrograde	7590 Nov 11 18:33	16°Ω24'11
minimum elong	7584 Jul 26 03:30	9°Ω17'04 13°58'05	opposition	7591 Feb 03 10:36	15°Ω25'04 -13°31'58
max. Earth dist.	7584 Jul 26 16:53	9°Ω17'49 50.22711 AU	min. Earth dist.	7591 Feb 03 05:08	15°Ω25'19 48.03900 AU
morning rise	7584 Jul 31 22:32	9°Ω24'56		7591 Feb 26 14:43	15°Ω
retrograde	7584 Nov 05 11:12	10°Ω45'28	direct	7591 Apr 26 05:11	14°Ω26'40
opposition	7585 Jan 28 08:08	9°Ω46'20 -14°27'57		7591 Jun 22 08:22	15°Ω
min. Earth dist.	7585 Jan 27 19:46	9°Ω46'54 48.27685 AU	evening set	7591 Jul 25 12:40	15°Ω41'14
direct	7585 Apr 20 04:17	8°Ω48'00			
evening set	7585 Jul 21 05:05	10°Ω04'59	conjunction	7591 Aug 02 13:52	15°Ω52'09 -12°55'02
			minimum elong	7591 Aug 02 14:04	15°Ω52'09 12°55'06
conjunction	7585 Jul 27 08:18	10°Ω13'18 -13°49'36	max. Earth dist.	7591 Aug 02 18:58	15°Ω52'26 49.95915 AU
minimum elong	7585 Jul 27 08:29	10°Ω13'19 13°49'41	morning rise	7591 Aug 10 16:14	16°Ω03'07
max. Earth dist.	7585 Jul 27 21:46	10°Ω14'04 50.20354 AU	retrograde	7591 Nov 13 01:59	17°Ω20'38
morning rise	7585 Aug 02 12:17	10°Ω21'40	opposition	7592 Feb 04 14:58	16°Ω21'30 -13°21'53
retrograde	7585 Nov 06 17:00	11°Ω41'43	min. Earth dist.	7592 Feb 04 10:04	16°Ω21'43 47.98347 AU
opposition	7586 Jan 29 12:24	10°Ω42'38 -14°19'09	direct	7592 Apr 26 06:29	15°Ω23'03
min. Earth dist.	7586 Jan 29 00:54	10°Ω43'10 48.24981 AU	evening set	7592 Jul 25 10:30	16°Ω37'16
direct	7586 Apr 21 07:52	9°Ω44'20			
evening set	7586 Jul 22 01:42	11°Ω00'53	conjunction	7592 Aug 02 18:45	16°Ω48'34 -12°45'11
			minimum elong	7592 Aug 02 18:55	16°Ω48'34 12°45'15
conjunction	7586 Jul 28 13:12	11°Ω09'40 -13°41'01	max. Earth dist.	7592 Aug 02 23:21	16°Ω48'49 49.90314 AU
minimum elong	7586 Jul 28 13:23	11°Ω09'41 13°41'06	morning rise	7592 Aug 11 04:07	16°Ω59'55
max. Earth dist.	7586 Jul 29 00:29	11°Ω10'19 50.17549 AU	retrograde	7592 Nov 13 03:46	18°Ω17'05
morning rise	7586 Aug 04 01:35	11°Ω18'30	opposition	7593 Feb 04 19:27	17°Ω17'54 -13°11'34
retrograde	7586 Nov 07 23:16	12°Ω38'07	min. Earth dist.	7593 Feb 04 16:07	17°Ω18'03 47.92451 AU
opposition	7587 Jan 30 16:51	11°Ω39'03 -14°10'07	direct	7593 Apr 27 12:11	16°Ω19'25
min. Earth dist.	7587 Jan 30 06:19	11°Ω39'33 48.21803 AU	evening set	7593 Jul 26 08:49	17°Ω33'18
direct	7587 Apr 22 09:06	10°Ω40'46			
evening set	7587 Jul 22 22:27	11°Ω56'54	conjunction	7593 Aug 03 23:46	17°Ω44'59 -12°35'07
			minimum elong	7593 Aug 03 23:58	17°Ω44'59 12°35'12
conjunction	7587 Jul 29 18:06	12°Ω06'09 -13°32'13	max. Earth dist.	7593 Aug 04 03:48	17°Ω45'12 49.84407 AU
minimum elong	7587 Jul 29 18:17	12°Ω06'10 13°32'18	morning rise	7593 Aug 12 15:51	17°Ω56'43
max. Earth dist.	7587 Jul 30 04:30	12°Ω06'44 50.14223 AU	retrograde	7593 Nov 14 05:35	19°Ω13'32
morning rise	7587 Aug 05 14:39	12°Ω15'26	opposition	7594 Feb 05 23:39	18°Ω14'19 -13°01'00
retrograde	7587 Nov 09 02:37	13°Ω34'36	min. Earth dist.	7594 Feb 05 20:12	18°Ω14'29 47.86254 AU
opposition	7588 Jan 31 21:28	12°Ω35'33 -14°00'53	direct	7594 Apr 28 18:53	17°Ω15'47
min. Earth dist.	7588 Jan 31 12:59	12°Ω35'57 48.18083 AU	evening set	7594 Jul 27 07:11	18°Ω29'22
direct	7588 Apr 22 14:00	11°Ω37'16			
evening set	7588 Jul 22 19:46	12°Ω53'00	conjunction	7594 Aug 05 04:43	18°Ω41'25 -12°24'49
			minimum elong	7594 Aug 05 04:54	18°Ω41'26 12°24'53
conjunction	7588 Jul 29 23:07	13°Ω02'40 -13°23'14	max. Earth dist.	7594 Aug 05 07:02	18°Ω41'33 49.78194 AU
minimum elong	7588 Jul 29 23:18	13°Ω02'41 13°23'19	morning rise	7594 Aug 14 03:33	18°Ω53'33
max. Earth dist.	7588 Jul 30 08:17	13°Ω03'11 50.10373 AU	retrograde	7594 Nov 15 12:01	20°Ω10'02
morning rise	7588 Aug 06 03:22	13°Ω12'24	opposition	7595 Feb 07 04:11	19°Ω10'47 -12°50'12
retrograde	7588 Nov 09 05:22	14°Ω31'09	min. Earth dist.	7595 Feb 07 02:20	19°Ω10'52 47.79763 AU
opposition	7589 Feb 01 01:49	13°Ω32'05 -13°51'28	direct	7595 Apr 29 23:39	18°Ω12'13
min. Earth dist.	7589 Jan 31 17:36	13°Ω32'28 48.13834 AU	evening set	7595 Jul 28 05:35	19°Ω25'30
direct	7589 Apr 23 20:49	12°Ω33'46			
evening set	7589 Jul 23 17:10	13°Ω49'06	conjunction	7595 Aug 06 09:40	19°Ω37'56 -12°14'17
			minimum elong	7595 Aug 06 09:52	19°Ω37'56 12°14'22
conjunction	7589 Jul 31 04:02	13°Ω59'11 -13°14'02	max. Earth dist.	7595 Aug 06 12:12	19°Ω38'04 49.71689 AU
minimum elong	7589 Jul 31 04:14	13°Ω59'12 13°14'07	morning rise	7595 Aug 15 14:55	19°Ω50'26
max. Earth dist.	7589 Jul 31 11:07	13°Ω59'35 50.05999 AU	retrograde	7595 Nov 16 17:28	21°Ω06'37
morning rise	7589 Aug 07 16:00	14°Ω09'21	opposition	7596 Feb 08 08:40	20°Ω07'21 -12°39'09
	7589 Sep 18 12:32	15°Ω	min. Earth dist.	7596 Feb 08 07:12	20°Ω07'25 47.72956 AU
retrograde	7589 Nov 10 11:53	15°Ω27'41	direct	7596 Apr 30 04:14	19°Ω08'46
	7590 Jan 03 12:20	15°Ω	evening set	7596 Jul 28 04:25	20°Ω21'46
opposition	7590 Feb 02 06:19	14°Ω28'36 -13°41'49			
min. Earth dist.	7590 Feb 02 00:04	14°Ω28'53 48.09091 AU	conjunction	7596 Aug 06 14:42	20°Ω34'33 -12°03'31
direct	7590 Apr 25 02:08	13°Ω30'15	minimum elong	7596 Aug 06 14:54	20°Ω34'34 12°03'35
evening set	7590 Jul 24 14:47	14°Ω45'11	max. Earth dist.	7596 Aug 06 15:26	20°Ω34'36 49.64866 AU
			morning rise	7596 Aug 16 02:23	20°Ω47'26

retrograde	7596 Nov 17 01:19	22°♏03'19	
opposition	7597 Feb 08 13:07	21°♏04'03	-12°27'52
min. Earth dist.	7597 Feb 08 12:27	21°♏04'05	47.65815 AU
direct	7597 May 01 05:11	20°♏05'26	
evening set	7597 Jul 29 03:20	21°♏18'11	
conjunction	7597 Aug 07 19:58	21°♏31'21	-11°52'32
minimum elong	7597 Aug 07 20:09	21°♏31'21	11°52'36
max. Earth dist.	7597 Aug 07 19:58	21°♏31'21	49.57658 AU
morning rise	7597 Aug 17 13:55	21°♏44'34	
retrograde	7597 Nov 18 06:17	23°♏00'12	
opposition	7598 Feb 09 17:44	22°♏00'55	-12°16'22
min. Earth dist.	7598 Feb 09 19:01	22°♏00'51	47.58251 AU
direct	7598 May 02 09:18	21°♏02'16	
evening set	7598 Jul 30 02:39	22°♏14'48	
conjunction	7598 Aug 09 01:16	22°♏28'18	-11°41'20
minimum elong	7598 Aug 09 01:27	22°♏28'19	11°41'23
max. Earth dist.	7598 Aug 09 00:09	22°♏28'14	49.50006 AU
morning rise	7598 Aug 19 01:11	22°♏41'52	
retrograde	7598 Nov 19 09:29	23°♏57'16	
opposition	7599 Feb 10 22:14	22°♏57'57	-12°04'39
min. Earth dist.	7599 Feb 10 23:47	22°♏57'52	47.50203 AU
direct	7599 May 03 15:02	21°♏59'15	
evening set	7599 Jul 31 02:07	23°♏11'34	
conjunction	7599 Aug 10 06:37	23°♏25'24	-11°29'55
minimum elong	7599 Aug 10 06:48	23°♏25'25	11°30'00
max. Earth dist.	7599 Aug 10 03:16	23°♏25'13	49.41833 AU
morning rise	7599 Aug 20 12:39	23°♏39'20	
retrograde	7599 Nov 20 15:18	24°♏54'29	
opposition	7600 Feb 12 03:03	23°♏55'07	-11°52'43
min. Earth dist.	7600 Feb 12 06:46	23°♏54'57	47.41625 AU
direct	7600 May 03 20:37	22°♏56'22	
evening set	7600 Jul 31 01:41	24°♏08'28	
conjunction	7600 Aug 10 12:06	24°♏22'39	-11°18'19
minimum elong	7600 Aug 10 12:18	24°♏22'39	11°18'22
max. Earth dist.	7600 Aug 10 08:23	24°♏22'26	49.33123 AU
morning rise	7600 Aug 20 23:50	24°♏36'55	
retrograde	7600 Nov 20 21:40	25°♏51'49	
opposition	7601 Feb 12 07:47	24°♏52'25	-11°40'35
min. Earth dist.	7601 Feb 12 12:24	24°♏52'12	47.32494 AU
direct	7601 May 05 01:13	23°♏53'35	
evening set	7601 Aug 01 01:38	25°♏05'27	
conjunction	7601 Aug 11 17:35	25°♏19'59	-11°06'31
minimum elong	7601 Aug 11 17:46	25°♏19'59	11°06'35
max. Earth dist.	7601 Aug 11 11:30	25°♏19'38	49.23884 AU
morning rise	7601 Aug 22 11:07	25°♏34'35	
retrograde	7601 Nov 22 05:57	26°♏49'15	