

retrograde	100 Feb 12 j 22:11	3° $\mathbb{M}$ 53'13		conjunction	105 Dec 24 j 23:04	2° $\mathfrak{Z}$ 42'50	0°10'38
opposition	100 Apr 22 j 13:19	0° $\mathbb{M}$ 36'11	2°36'07	minimum elong	105 Dec 24 j 23:05	2° $\mathfrak{Z}$ 42'50	0°10'39
min. Earth dist.	100 Apr 22 j 17:59	0° $\mathbb{M}$ 35'19	9.03345 AU	behind sun begin	105 Dec 24 j 17:38	2° $\mathfrak{Z}$ 41'14	
	100 Apr 30 j 17:16	30° $\mathfrak{R}\mathfrak{A}$		behind sun end	105 Dec 25 j 04:32	2° $\mathfrak{Z}$ 44'26	
direct	100 Jul 02 j 21:53	27° $\mathfrak{A}$ 15'15		max. Earth dist.	105 Dec 24 j 15:14	2° $\mathfrak{Z}$ 40'31	10.95992 AU
	100 Sep 01 j 03:22	0° $\mathbb{M}$		morning rise	106 Jan 10 j 16:13	4° $\mathfrak{Z}$ 41'29	
evening set	100 Oct 13 j 19:42	4° $\mathbb{M}$ 23'37		retrograde	106 Apr 23 j 06:43	11° $\mathfrak{Z}$ 53'54	
				desc. node	106 May 16 j 09:28	11° $\mathfrak{Z}$ 28'27	
conjunction	100 Oct 30 j 10:23	6° $\mathbb{M}$ 20'13	2°01'39	opposition	106 Jul 03 j 05:34	8° $\mathfrak{Z}$ 33'20	-0°04'23
minimum elong	100 Oct 30 j 10:25	6° $\mathbb{M}$ 20'14	2°01'39	min. Earth dist.	106 Jul 03 j 11:51	8° $\mathfrak{Z}$ 32'10	8.92063 AU
max. Earth dist.	100 Oct 30 j 04:12	6° $\mathbb{M}$ 18'24	11.05376 AU	direct	106 Sep 11 j 02:57	5° $\mathfrak{Z}$ 14'37	
morning rise	100 Nov 15 j 22:47	8° $\mathbb{M}$ 16'10		evening set	106 Dec 19 j 21:39	12° $\mathfrak{Z}$ 18'53	
	101 Feb 07 j 15:51	15° $\mathbb{M}$					
retrograde	101 Feb 23 j 13:35	15° $\mathbb{M}$ 12'39		conjunction	107 Jan 05 j 14:31	14° $\mathfrak{Z}$ 18'23	-0°17'33
	101 Mar 11 j 15:54	15° $\mathfrak{R}\mathbb{M}$		minimum elong	107 Jan 05 j 14:30	14° $\mathfrak{Z}$ 18'23	0°17'33
opposition	101 May 04 j 14:58	11° $\mathbb{M}$ 55'34	2°19'43	max. Earth dist.	107 Jan 05 j 07:44	14° $\mathfrak{Z}$ 16'22	10.87750 AU
min. Earth dist.	101 May 04 j 20:37	11° $\mathbb{M}$ 54'32	9.07141 AU	morning rise	107 Jan 22 j 09:46	16° $\mathfrak{Z}$ 18'42	
direct	101 Jul 14 j 23:22	8° $\mathbb{M}$ 35'27		retrograde	107 May 05 j 20:34	23° $\mathfrak{Z}$ 38'46	
	101 Oct 19 j 09:22	15° $\mathbb{M}$		opposition	107 Jul 15 j 17:09	20° $\mathfrak{Z}$ 16'57	-0°38'58
evening set	101 Oct 25 j 04:22	15° $\mathbb{M}$ 39'34		min. Earth dist.	107 Jul 15 j 22:22	20° $\mathfrak{Z}$ 15'59	8.82971 AU
				direct	107 Sep 23 j 02:38	16° $\mathfrak{Z}$ 57'55	
conjunction	101 Nov 10 j 18:02	17° $\mathbb{M}$ 35'36	1°46'04	evening set	107 Dec 31 j 17:59	24° $\mathfrak{Z}$ 06'47	
minimum elong	101 Nov 10 j 18:05	17° $\mathbb{M}$ 35'37	1°46'03				
max. Earth dist.	101 Nov 10 j 11:15	17° $\mathbb{M}$ 33'36	11.08071 AU	conjunction	108 Jan 17 j 12:33	26° $\mathfrak{Z}$ 08'02	-0°45'25
morning rise	101 Nov 27 j 06:09	19° $\mathbb{M}$ 31'13		minimum elong	108 Jan 17 j 12:31	26° $\mathfrak{Z}$ 08'02	0°45'26
retrograde	102 Mar 07 j 05:55	26° $\mathbb{M}$ 27'48		max. Earth dist.	108 Jan 17 j 06:08	26° $\mathfrak{Z}$ 06'06	10.77910 AU
opposition	102 May 16 j 15:23	23° $\mathbb{M}$ 10'25	1°58'04	morning rise	108 Feb 03 j 10:23	28° $\mathfrak{Z}$ 10'19	
min. Earth dist.	102 May 16 j 21:03	23° $\mathbb{M}$ 09'22	9.08654 AU		108 Feb 19 j 06:27	0° $\mathfrak{A}$	
direct	102 Jul 26 j 21:50	19° $\mathbb{M}$ 50'57		retrograde	108 May 17 j 18:46	5° $\mathfrak{A}$ 39'11	
evening set	102 Nov 05 j 10:29	26° $\mathbb{M}$ 52'08		opposition	108 Jul 27 j 09:55	2° $\mathfrak{A}$ 16'03	-1°12'41
				min. Earth dist.	108 Jul 27 j 14:29	2° $\mathfrak{A}$ 15'11	8.72490 AU
conjunction	102 Nov 21 j 23:54	28° $\mathbb{M}$ 48'05	1°26'27		108 Aug 29 j 06:11	30° $\mathfrak{R}\mathfrak{Z}$	
minimum elong	102 Nov 21 j 23:57	28° $\mathbb{M}$ 48'05	1°26'26	direct	108 Oct 04 j 05:41	28° $\mathfrak{Z}$ 56'27	
max. Earth dist.	102 Nov 21 j 17:11	28° $\mathbb{M}$ 46'06	11.08453 AU		108 Nov 08 j 09:11	0° $\mathfrak{A}$	
	102 Dec 02 j 05:05	0° $\mathfrak{A}$		evening set	109 Jan 11 j 22:04	6° $\mathfrak{A}$ 11'21	
morning rise	102 Dec 08 j 12:21	0° $\mathfrak{A}$ 43'49					
retrograde	103 Mar 19 j 01:48	7° $\mathfrak{A}$ 42'01		conjunction	109 Jan 28 j 18:42	8° $\mathfrak{A}$ 14'37	-1°11'52
opposition	103 May 28 j 16:06	4° $\mathfrak{A}$ 24'09	1°31'57	minimum elong	109 Jan 28 j 18:39	8° $\mathfrak{A}$ 14'36	1°11'53
min. Earth dist.	103 May 28 j 22:09	4° $\mathfrak{A}$ 23'02	9.07831 AU	max. Earth dist.	109 Jan 28 j 12:40	8° $\mathfrak{A}$ 12'46	10.66876 AU
direct	103 Aug 07 j 17:14	1° $\mathfrak{A}$ 05'12		morning rise	109 Feb 14 j 19:25	10° $\mathfrak{A}$ 19'09	
evening set	103 Nov 16 j 15:54	8° $\mathfrak{A}$ 04'50			109 Mar 30 j 07:51	15° $\mathfrak{A}$	
				retrograde	109 May 30 j 23:38	17° $\mathfrak{A}$ 57'40	
conjunction	103 Dec 03 j 05:26	10° $\mathfrak{A}$ 01'06	1°03'29		109 Aug 03 j 12:17	15° $\mathfrak{R}\mathfrak{A}$	
minimum elong	103 Dec 03 j 05:28	10° $\mathfrak{A}$ 01'06	1°03'29	opposition	109 Aug 09 j 08:22	14° $\mathfrak{A}$ 33'09	-1°44'00
max. Earth dist.	103 Dec 02 j 21:52	9° $\mathfrak{A}$ 58'52	11.06511 AU	min. Earth dist.	109 Aug 09 j 12:27	14° $\mathfrak{A}$ 32'22	8.61054 AU
morning rise	103 Dec 19 j 18:57	11° $\mathfrak{A}$ 57'25		direct	109 Oct 16 j 14:03	11° $\mathfrak{A}$ 12'47	
retrograde	104 Mar 29 j 21:47	18° $\mathfrak{A}$ 58'49			109 Dec 23 j 18:04	15° $\mathfrak{A}$	
opposition	104 Jun 08 j 18:06	15° $\mathfrak{A}$ 40'15	1°02'12	evening set	110 Jan 24 j 11:21	18° $\mathfrak{A}$ 35'01	
min. Earth dist.	104 Jun 09 j 00:57	15° $\mathfrak{A}$ 38'59	9.04709 AU				
direct	104 Aug 18 j 10:32	12° $\mathfrak{A}$ 21'35		conjunction	110 Feb 10 j 10:32	20° $\mathfrak{A}$ 40'32	-1°35'36
evening set	104 Nov 26 j 22:27	19° $\mathfrak{A}$ 21'13		minimum elong	110 Feb 10 j 10:29	20° $\mathfrak{A}$ 40'31	1°35'37
				max. Earth dist.	110 Feb 10 j 06:03	20° $\mathfrak{A}$ 39'08	10.55112 AU
conjunction	104 Dec 13 j 12:35	21° $\mathfrak{A}$ 18'11	0°37'55	morning rise	110 Feb 27 j 14:15	22° $\mathfrak{A}$ 47'27	
minimum elong	104 Dec 13 j 12:36	21° $\mathfrak{A}$ 18'12	0°37'56		110 May 17 j 16:31	0° $\mathfrak{H}$	
max. Earth dist.	104 Dec 13 j 04:05	21° $\mathfrak{A}$ 15'41	11.02314 AU	retrograde	110 Jun 13 j 11:32	0° $\mathfrak{H}$ 36'06	
morning rise	104 Dec 30 j 03:48	23° $\mathfrak{A}$ 15'30			110 Jul 10 j 13:09	30° $\mathfrak{R}\mathfrak{A}$	
	105 Mar 20 j 21:33	0° $\mathfrak{Z}$		opposition	110 Aug 22 j 12:46	27° $\mathfrak{A}$ 10'13	-2°11'14
retrograde	105 Apr 10 j 23:14	0° $\mathfrak{Z}$ 21'39		min. Earth dist.	110 Aug 22 j 15:35	27° $\mathfrak{A}$ 09'40	8.49167 AU
	105 May 02 j 07:10	30° $\mathfrak{R}\mathfrak{A}$		direct	110 Oct 29 j 07:16	23° $\mathfrak{A}$ 48'55	
opposition	105 Jun 20 j 22:14	27° $\mathfrak{A}$ 02'11	0°29'44		111 Jan 26 j 11:46	0° $\mathfrak{H}$	
min. Earth dist.	105 Jun 21 j 05:23	27° $\mathfrak{A}$ 00'52	8.99398 AU	evening set	111 Feb 06 j 10:41	1° $\mathfrak{H}$ 19'24	
direct	105 Aug 30 j 06:36	23° $\mathfrak{A}$ 43'35					
	105 Dec 01 j 20:21	0° $\mathfrak{Z}$		conjunction	111 Feb 23 j 12:55	3° $\mathfrak{H}$ 27'23	-1°55'15
evening set	105 Dec 08 j 07:43	0° $\mathfrak{Z}$ 44'45		minimum elong	111 Feb 23 j 12:52	3° $\mathfrak{H}$ 27'23	1°55'15
				max. Earth dist.	111 Feb 23 j 10:50	3° $\mathfrak{H}$ 26'44	10.43161 AU

morning rise	111 Mar 12 j 19:49	5°♂36'52	min. Earth dist.	117 Nov 26 j 08:37	3°♂53'51	7.99282 AU
retrograde	111 Jun 27 j 09:29	13°♂35'32	direct	118 Feb 01 j 04:46	0°♂23'40	
opposition	111 Sep 04 j 23:31	10°♂08'20 -2°32'40	evening set	118 May 17 j 01:32	8°♂39'59	
min. Earth dist.	111 Sep 05 j 00:22	10°♂08'10 8.37391 AU				
direct	111 Nov 11 j 05:56	6°♂45'58	conjunction	118 Jun 04 j 06:09	11°♂01'35 -1°00'36	
evening set	112 Feb 19 j 20:40	14°♂25'14	minimum elong	118 Jun 04 j 06:12	11°♂01'36 1°00'35	
			max. Earth dist.	118 Jun 04 j 14:36	11°♂04'21 10.00406 AU	
conjunction	112 Mar 08 j 02:25	16°♂35'49 -2°09'26	morning rise	118 Jun 22 j 10:44	13°♂23'12	
minimum elong	112 Mar 08 j 02:23	16°♂35'48 2°09'25	retrograde	118 Oct 05 j 05:42	21°♂38'46	
max. Earth dist.	112 Mar 08 j 02:27	16°♂35'50 10.31605 AU	opposition	118 Dec 10 j 20:27	18°♂10'04 -0°56'00	
morning rise	112 Mar 25 j 12:53	18°♂47'57	min. Earth dist.	118 Dec 10 j 13:33	18°♂11'30 8.02356 AU	
retrograde	112 Jul 10 j 14:56	26°♂55'49	direct	119 Feb 15 j 19:42	14°♂40'38	
opposition	112 Sep 17 j 16:16	23°♂27'26 -2°46'37	evening set	119 Jun 01 j 06:16	22°♂56'15	
min. Earth dist.	112 Sep 17 j 15:18	23°♂27'38 8.26289 AU				
direct	112 Nov 23 j 11:38	20°♂03'53	conjunction	119 Jun 19 j 11:24	25°♂17'12 -0°28'22	
evening set	113 Mar 04 j 17:32	27°♂52'03	minimum elong	119 Jun 19 j 11:25	25°♂17'13 0°28'22	
	113 Mar 21 j 10:46	0°♀	max. Earth dist.	119 Jun 19 j 20:35	25°♂20'11 10.05000 AU	
conjunction	113 Mar 22 j 03:13	0°♀05'17 -2°16'56	morning rise	119 Jul 07 j 15:04	27°♂37'43	
minimum elong	113 Mar 22 j 03:13	0°♀05'17 2°16'55	retrograde	119 Jul 26 j 22:07	0°♂	
max. Earth dist.	113 Mar 22 j 04:28	0°♀05'41 10.21008 AU	opposition	119 Oct 19 j 10:16	5°♂45'25	
morning rise	113 Apr 08 j 17:33	2°♀20'02	min. Earth dist.	119 Dec 24 j 22:46	2°♂17'50 -0°14'39	
retrograde	113 Jul 25 j 01:58	10°♀35'35		119 Dec 24 j 15:42	2°♂19'17 8.08300 AU	
opposition	113 Oct 01 j 14:19	7°♀06'16 -2°51'37	direct	120 Jan 24 j 11:10	30°♂♂	
min. Earth dist.	113 Oct 01 j 12:22	7°♀06'40 8.16395 AU		120 Mar 01 j 08:58	28°♂48'10	
direct	113 Dec 07 j 01:50	3°♀41'27	asc. node	120 Apr 07 j 03:00	0°♂	
evening set	114 Mar 19 j 00:29	11°♀38'11	evening set	120 May 05 j 16:43	2°♂20'56	
				120 Jun 15 j 06:50	7°♂00'55	
conjunction	114 Apr 05 j 14:30	13°♀54'00 -2°16'49	conjunction	120 Jul 03 j 10:39	9°♂20'18 0°05'15	
minimum elong	114 Apr 05 j 14:31	13°♀54'00 2°16'48	minimum elong	120 Jul 03 j 10:38	9°♂20'18 0°05'15	
max. Earth dist.	114 Apr 05 j 16:42	13°♀54'43 10.11895 AU	behind sun begin	120 Jul 03 j 03:32	9°♂18'02	
morning rise	114 Apr 23 j 08:52	16°♀11'13	behind sun end	120 Jul 03 j 17:44	9°♂22'33	
retrograde	114 Aug 08 j 16:49	24°♀32'26	max. Earth dist.	120 Jul 03 j 19:40	9°♂23'11 10.12261 AU	
opposition	114 Oct 15 j 17:04	21°♀02'32 -2°46'43	morning rise	120 Jul 21 j 11:44	11°♂38'49	
min. Earth dist.	114 Oct 15 j 14:25	21°♀03'05 8.08227 AU	retrograde	120 Nov 01 j 07:43	19°♂37'17	
direct	114 Dec 20 j 23:49	17°♀36'29	opposition	121 Jan 06 j 20:33	16°♂11'02 0°26'49	
evening set	115 Apr 02 j 16:18	25°♀40'53	min. Earth dist.	121 Jan 06 j 14:12	16°♂12'20 8.16703 AU	
			direct	121 Mar 15 j 19:40	12°♂41'29	
conjunction	115 Apr 20 j 10:50	27°♀59'04 -2°08'37	evening set	121 Jun 30 j 00:23	20°♂49'25	
minimum elong	115 Apr 20 j 10:53	27°♀59'05 2°08'36				
max. Earth dist.	115 Apr 20 j 14:18	28°♀00'12 10.04815 AU	conjunction	121 Jul 18 j 01:09	23°♂06'26 0°37'51	
	115 May 05 j 23:33	0°♂	minimum elong	121 Jul 18 j 01:07	23°♂06'26 0°37'51	
morning rise	115 May 08 j 09:09	0°♂18'27	max. Earth dist.	121 Jul 18 j 09:02	23°♂08'57 10.21696 AU	
retrograde	115 Aug 23 j 10:19	8°♂42'45	morning rise	121 Aug 04 j 22:19	25°♂22'18	
opposition	115 Oct 29 j 23:11	5°♂12'37 -2°31'39		121 Sep 14 j 21:06	0°♂	
min. Earth dist.	115 Oct 29 j 19:43	5°♂13'20 8.02362 AU	retrograde	121 Nov 14 j 20:11	3°♂10'56	
direct	116 Jan 04 j 04:31	1°♂45'26		122 Jan 17 j 15:56	30°♂♂	
evening set	116 Apr 16 j 15:36	9°♂55'58	opposition	122 Jan 20 j 12:43	29°♂46'06 1°05'47	
			min. Earth dist.	122 Jan 20 j 07:20	29°♂47'11 8.27022 AU	
conjunction	116 May 04 j 14:28	12°♂16'04 -1°52'29	direct	122 Mar 30 j 02:14	26°♂16'58	
minimum elong	116 May 04 j 14:32	12°♂16'05 1°52'29		122 Jun 06 j 08:02	0°♂	
max. Earth dist.	116 May 04 j 19:34	12°♂17'44 10.00326 AU	evening set	122 Jul 14 j 09:04	4°♂18'37	
morning rise	116 May 22 j 16:06	14°♂37'02				
	116 May 25 j 16:04	15°♂	conjunction	122 Aug 01 j 05:34	6°♂32'45 1°07'44	
retrograde	116 Sep 06 j 03:53	23°♂01'21	minimum elong	122 Aug 01 j 05:31	6°♂32'44 1°07'43	
opposition	116 Nov 12 j 06:51	19°♂31'21 -2°07'01	max. Earth dist.	122 Aug 01 j 11:44	6°♂34'41 10.32721 AU	
min. Earth dist.	116 Nov 12 j 02:16	19°♂32'18 7.99291 AU	morning rise	122 Aug 18 j 21:52	8°♂45'32	
direct	117 Jan 17 j 14:47	16°♂03'10		122 Oct 19 j 06:36	15°♂	
evening set	117 May 01 j 19:44	24°♂17'47	retrograde	122 Nov 27 j 22:32	16°♂24'17	
				123 Jan 07 j 09:09	15°♂♂	
conjunction	117 May 19 j 22:09	26°♂39'05 -1°29'19	opposition	123 Feb 02 j 22:37	13°♂00'55 1°40'11	
minimum elong	117 May 19 j 22:12	26°♂39'07 1°29'18	min. Earth dist.	123 Feb 02 j 18:02	13°♂01'50 8.38633 AU	
max. Earth dist.	117 May 20 j 05:04	26°♂41'22 9.98811 AU	direct	123 Apr 13 j 03:47	9°♂32'29	
morning rise	117 Jun 07 j 01:59	29°♂00'51		123 Jul 07 j 11:15	15°♂	
	117 Jun 14 j 20:34	0°♂	evening set	123 Jul 28 j 07:31	17°♂26'50	
retrograde	117 Sep 20 j 19:10	7°♂22'07				
opposition	117 Nov 26 j 14:35	3°♂52'36 -1°34'22	conjunction	123 Aug 14 j 23:04	19°♂37'48 1°33'22	

minimum elong	123 Aug 14 j 23:00	19°Ω37'47	1°33'22	morning rise	129 Nov 11 j 08:27	3°♊33'49	
max. Earth dist.	123 Aug 15 j 03:40	19°Ω39'14	10.44697 AU	retrograde	130 Feb 18 j 21:17	10°♊30'12	
morning rise	123 Sep 01 j 09:59	21°Ω47'20		opposition	130 Apr 29 j 17:11	7°♊13'28	2°27'27
retrograde	123 Dec 10 j 18:26	29°Ω16'43		min. Earth dist.	130 Apr 29 j 20:44	7°♊12'48	9.07174 AU
opposition	124 Feb 16 j 02:23	25°Ω54'45	2°08'29	direct	130 Jul 10 j 01:50	3°♊53'24	
min. Earth dist.	124 Feb 15 j 22:22	25°Ω55'32	8.50880 AU	evening set	130 Oct 20 j 14:22	10°♊58'40	
direct	124 Apr 25 j 20:58	22°Ω27'18					
	124 Aug 07 j 21:32	0°♊		conjunction	130 Nov 06 j 04:28	12°♊54'45	1°53'21
evening set	124 Aug 09 j 19:06	0°♊13'41		minimum elong	130 Nov 06 j 04:30	12°♊54'46	1°53'20
				max. Earth dist.	130 Nov 05 j 23:26	12°♊53'17	11.08796 AU
conjunction	124 Aug 27 j 05:27	2°♊21'30	1°53'45	morning rise	130 Nov 22 j 16:27	14°♊50'17	
minimum elong	124 Aug 27 j 05:24	2°♊21'29	1°53'44		130 Nov 24 j 02:18	15°♊	
max. Earth dist.	124 Aug 27 j 09:00	2°♊22'36	10.56984 AU	retrograde	131 Mar 02 j 12:12	21°♊45'59	
morning rise	124 Sep 13 j 10:51	4°♊27'49		opposition	131 May 11 j 17:42	18°♊29'16	2°08'01
retrograde	124 Dec 22 j 07:31	11°♊48'39		min. Earth dist.	131 May 11 j 23:00	18°♊28'17	9.10089 AU
opposition	125 Feb 28 j 00:12	8°♊28'01	2°29'45	direct	131 Jul 22 j 00:07	15°♊10'03	
min. Earth dist.	125 Feb 27 j 21:05	8°♊28'38	8.63141 AU	evening set	131 Oct 31 j 21:19	22°♊11'47	
direct	125 May 09 j 06:01	5°♊01'45					
evening set	125 Aug 22 j 19:55	12°♊39'59		conjunction	131 Nov 17 j 10:35	24°♊07'30	1°35'26
				minimum elong	131 Nov 17 j 10:37	24°♊07'31	1°35'25
conjunction	125 Sep 09 j 01:14	14°♊44'50	2°08'16	max. Earth dist.	131 Nov 17 j 03:39	24°♊05'28	11.10557 AU
minimum elong	125 Sep 09 j 01:12	14°♊44'49	2°08'16	morning rise	131 Dec 03 j 22:48	26°♊02'57	
max. Earth dist.	125 Sep 09 j 03:47	14°♊45'36	10.68997 AU		132 Jan 10 j 20:08	0°♊	
morning rise	125 Sep 26 j 01:32	16°♊48'13		retrograde	132 Mar 13 j 05:24	2°♊59'32	
retrograde	126 Jan 03 j 13:21	24°♊01'32			132 May 18 j 18:28	30°♊	
opposition	126 Mar 12 j 16:29	20°♊42'07	2°43'35	opposition	132 May 22 j 18:01	29°♊42'31	1°43'48
min. Earth dist.	126 Mar 12 j 15:08	20°♊42'23	8.74854 AU	min. Earth dist.	132 May 23 j 00:18	29°♊41'22	9.10607 AU
direct	126 May 22 j 08:02	17°♊17'07		direct	132 Aug 01 j 21:12	26°♊23'57	
evening set	126 Sep 04 j 10:31	24°♊47'25			132 Oct 10 j 06:47	0°♊	
				evening set	132 Nov 11 j 02:31	3°♊23'25	
conjunction	126 Sep 21 j 11:11	26°♊49'35	2°16'43				
minimum elong	126 Sep 21 j 11:10	26°♊49'35	2°16'42	conjunction	132 Nov 27 j 15:47	5°♊19'15	1°13'53
max. Earth dist.	126 Sep 21 j 11:40	26°♊49'44	10.80203 AU	minimum elong	132 Nov 27 j 15:50	5°♊19'16	1°13'52
morning rise	126 Oct 08 j 07:16	28°♊50'26		max. Earth dist.	132 Nov 27 j 08:24	5°♊17'05	11.09887 AU
	126 Oct 18 j 07:19	0°♊		morning rise	132 Dec 14 j 04:47	7°♊15'03	
retrograde	127 Jan 15 j 14:26	5°♊57'28		retrograde	133 Mar 25 j 00:23	14°♊14'04	
opposition	127 Mar 25 j 03:55	2°♊39'06	2°49'55	opposition	133 Jun 03 j 18:57	10°♊56'27	1°15'36
min. Earth dist.	127 Mar 25 j 04:31	2°♊38'59	8.85503 AU	min. Earth dist.	133 Jun 04 j 01:21	10°♊55'17	9.08662 AU
	127 May 04 j 10:48	30°♊		direct	133 Aug 13 j 15:51	7°♊38'17	
direct	127 Jun 04 j 03:14	29°♊15'25		evening set	133 Nov 22 j 08:06	14°♊37'00	
	127 Jul 04 j 13:36	0°♊					
evening set	127 Sep 16 j 16:00	6°♊38'13		conjunction	133 Dec 08 j 21:57	16°♊33'22	0°49'25
				minimum elong	133 Dec 08 j 21:59	16°♊33'23	0°49'25
conjunction	127 Oct 03 j 12:40	8°♊38'09	2°19'07	max. Earth dist.	133 Dec 08 j 14:28	16°♊31'10	11.06738 AU
minimum elong	127 Oct 03 j 12:40	8°♊38'09	2°19'07	morning rise	133 Dec 25 j 12:10	18°♊29'56	
max. Earth dist.	127 Oct 03 j 10:48	8°♊37'35	10.90130 AU	retrograde	134 Apr 06 j 00:40	25°♊32'58	
morning rise	127 Oct 20 j 05:25	10°♊36'55		opposition	134 Jun 15 j 21:26	22°♊14'32	0°44'18
retrograde	128 Jan 27 j 09:44	17°♊38'58		min. Earth dist.	134 Jun 16 j 04:06	22°♊13'18	9.04245 AU
opposition	128 Apr 05 j 11:12	14°♊21'24	2°49'01	direct	134 Aug 25 j 10:32	18°♊56'30	
min. Earth dist.	128 Apr 05 j 13:03	14°♊21'04	8.94657 AU	evening set	134 Dec 03 j 15:51	25°♊56'05	
direct	128 Jun 15 j 16:17	10°♊59'02					
evening set	128 Sep 27 j 13:26	18°♊15'04		conjunction	134 Dec 20 j 06:33	27°♊53'24	0°22'50
				minimum elong	134 Dec 20 j 06:33	27°♊53'24	0°22'51
conjunction	128 Oct 14 j 07:05	20°♊13'12	2°15'44	max. Earth dist.	134 Dec 19 j 21:58	27°♊50'52	11.01155 AU
minimum elong	128 Oct 14 j 07:06	20°♊13'13	2°15'45	morning rise	135 Jan 05 j 22:33	29°♊51'11	
max. Earth dist.	128 Oct 14 j 03:54	20°♊12'16	10.98399 AU		135 Jan 07 j 05:02	0°♊	
morning rise	128 Oct 30 j 21:21	22°♊10'23		retrograde	135 Apr 18 j 05:15	6°♊59'50	
retrograde	129 Feb 07 j 03:48	29°♊08'55		opposition	135 Jun 28 j 03:05	3°♊40'21	0°10'52
opposition	129 Apr 17 j 15:20	25°♊51'53	2°41'20	min. Earth dist.	135 Jun 28 j 10:33	3°♊38'58	8.97488 AU
min. Earth dist.	129 Apr 17 j 17:44	25°♊51'26	9.01970 AU	direct	135 Sep 06 j 04:47	0°♊22'13	
direct	129 Jun 28 j 00:30	22°♊30'44		desc. node	135 Oct 25 j 15:36	2°♊20'13	
evening set	129 Oct 09 j 04:14	29°♊40'50		evening set	135 Dec 15 j 03:18	7°♊24'18	
	129 Oct 11 j 22:30	0°♊					
conjunction	129 Oct 25 j 19:48	1°♊37'43	2°06'59	conjunction	135 Dec 31 j 19:12	9°♊22'55	-0°05'05
minimum elong	129 Oct 25 j 19:49	1°♊37'44	2°06'59	minimum elong	135 Dec 31 j 19:12	9°♊22'55	0°05'04
max. Earth dist.	129 Oct 25 j 16:10	1°♊36'39	11.04698 AU	behind sun begin	135 Dec 31 j 12:24	9°♊20'55	
				behind sun end	136 Jan 01 j 02:00	9°♊24'55	

max. Earth dist.	135 Dec 31 j 09:51	9° $\text{S}$ 20'08	10.93361 AU		142 May 02 j 12:59	0° $\text{Y}$
morning rise	136 Jan 17 j 13:28	11° $\text{S}$ 22'16		retrograde	142 Jul 18 j 21:56	4° $\text{Y}$ 41'36
retrograde	136 Apr 29 j 14:24	18° $\text{S}$ 38'06		opposition	142 Sep 25 j 17:44	1° $\text{Y}$ 12'05 -2°50'41
opposition	136 Jul 09 j 12:37	15° $\text{S}$ 17'20 -0°23'36		min. Earth dist.	142 Sep 25 j 17:34	1° $\text{Y}$ 12'07 8.18766 AU
min. Earth dist.	136 Jul 09 j 20:18	15° $\text{S}$ 15'54 8.88695 AU			142 Oct 10 j 22:19	30° $\text{R}$ $\text{X}$
direct	136 Sep 17 j 03:11	11° $\text{S}$ 58'46		direct	142 Dec 01 j 10:00	27° $\text{X}$ 47'12
evening set	136 Dec 25 j 20:22	19° $\text{S}$ 04'56			143 Jan 20 j 03:39	0° $\text{Y}$
				evening set	143 Mar 12 j 23:07	5° $\text{Y}$ 40'57
conjunction	137 Jan 11 j 14:00	21° $\text{S}$ 05'13 -0°33'06				
minimum elong	137 Jan 11 j 13:59	21° $\text{S}$ 05'13 0°33'06		conjunction	143 Mar 30 j 11:18	7° $\text{Y}$ 55'53 -2°17'54
max. Earth dist.	137 Jan 11 j 05:22	21° $\text{S}$ 02'37 10.83695 AU		minimum elong	143 Mar 30 j 11:18	7° $\text{Y}$ 55'53 2°17'53
morning rise	137 Jan 28 j 10:41	23° $\text{S}$ 06'27		max. Earth dist.	143 Mar 30 j 13:06	7° $\text{Y}$ 56'28 10.13754 AU
	137 Apr 17 j 06:57	0° $\approx$		morning rise	143 Apr 17 j 03:55	10° $\text{Y}$ 12'17
retrograde	137 May 12 j 08:14	0° $\approx$ 30'44		retrograde	143 Aug 02 j 11:21	18° $\text{Y}$ 32'13
	137 Jun 06 j 16:03	30° $\text{R}$ $\text{S}$		opposition	143 Oct 09 j 18:52	15° $\text{Y}$ 01'53 -2°50'19
opposition	137 Jul 22 j 02:39	27° $\text{S}$ 08'29 -0°57'50		min. Earth dist.	143 Oct 09 j 16:31	15° $\text{Y}$ 02'22 8.09568 AU
min. Earth dist.	137 Jul 22 j 09:30	27° $\text{S}$ 07'11 8.78247 AU		direct	143 Dec 15 j 04:29	11° $\text{Y}$ 35'46
direct	137 Sep 29 j 05:33	23° $\text{S}$ 49'16		evening set	144 Mar 26 j 11:28	19° $\text{Y}$ 37'44
	137 Dec 29 j 05:13	0° $\approx$				
evening set	138 Jan 06 j 20:32	1° $\approx$ 00'59		conjunction	144 Apr 13 j 04:14	21° $\text{Y}$ 55'12 -2°13'20
				minimum elong	144 Apr 13 j 04:16	21° $\text{Y}$ 55'13 2°13'19
conjunction	138 Jan 23 j 16:17	3° $\approx$ 03'13 -1°00'19		max. Earth dist.	144 Apr 13 j 08:28	21° $\text{Y}$ 56'35 10.05627 AU
minimum elong	138 Jan 23 j 16:15	3° $\approx$ 03'12 1°00'19		morning rise	144 May 01 j 00:49	24° $\text{Y}$ 13'56
max. Earth dist.	138 Jan 23 j 09:14	3° $\approx$ 01'04 10.72565 AU			144 Jun 21 j 13:39	0° $\text{S}$
morning rise	138 Feb 09 j 15:31	5° $\approx$ 06'36		retrograde	144 Aug 16 j 05:40	2° $\text{S}$ 38'14
retrograde	138 May 25 j 09:41	12° $\approx$ 40'23			144 Oct 12 j 06:31	30° $\text{R}$ $\text{Y}$
opposition	138 Aug 03 j 22:10	9° $\approx$ 16'31 -1°30'23		opposition	144 Oct 22 j 23:59	29° $\text{Y}$ 07'28 -2°39'46
min. Earth dist.	138 Aug 04 j 03:21	9° $\approx$ 15'31 8.66582 AU		min. Earth dist.	144 Oct 22 j 19:47	29° $\text{Y}$ 08'20 8.02656 AU
direct	138 Oct 11 j 11:38	5° $\approx$ 56'28		direct	144 Dec 28 j 05:19	25° $\text{Y}$ 40'11
evening set	139 Jan 19 j 05:13	13° $\approx$ 15'03			145 Mar 09 j 13:11	0° $\text{S}$
	139 Feb 02 j 12:03	15° $\approx$		evening set	145 Apr 10 j 08:09	3° $\text{S}$ 49'01
conjunction	139 Feb 05 j 03:15	15° $\approx$ 19'30 -1°25'24		conjunction	145 Apr 28 j 05:19	6° $\text{S}$ 08'37 -2°00'40
minimum elong	139 Feb 05 j 03:12	15° $\approx$ 19'29 1°25'25		minimum elong	145 Apr 28 j 05:22	6° $\text{S}$ 08'38 2°00'39
max. Earth dist.	139 Feb 04 j 21:13	15° $\approx$ 17'38 10.60449 AU		max. Earth dist.	145 Apr 28 j 11:28	6° $\text{S}$ 10'38 10.00055 AU
morning rise	139 Feb 22 j 05:22	17° $\approx$ 25'16		morning rise	145 May 16 j 05:28	8° $\text{S}$ 29'13
retrograde	139 Jun 07 j 19:21	25° $\approx$ 09'14			145 Jul 15 j 08:14	15° $\text{S}$
opposition	139 Aug 16 j 23:47	21° $\approx$ 43'46 -1°59'39		retrograde	145 Aug 31 j 00:51	16° $\text{S}$ 54'50
min. Earth dist.	139 Aug 17 j 03:42	21° $\approx$ 43'00 8.54213 AU			145 Oct 17 j 06:53	15° $\text{R}$ $\text{S}$
direct	139 Oct 24 j 00:02	18° $\approx$ 22'39		opposition	145 Nov 06 j 07:33	13° $\text{S}$ 24'06 -2°19'13
evening set	140 Jan 31 j 23:45	25° $\approx$ 49'17		min. Earth dist.	145 Nov 06 j 02:03	13° $\text{S}$ 25'14 7.98489 AU
				direct	146 Jan 11 j 13:11	9° $\text{S}$ 55'49
conjunction	140 Feb 18 j 00:27	27° $\approx$ 56'10 -1°47'02			146 Mar 30 j 14:46	15° $\text{S}$
minimum elong	140 Feb 18 j 00:24	27° $\approx$ 56'10 1°47'03		evening set	146 Apr 25 j 10:45	18° $\text{S}$ 09'39
max. Earth dist.	140 Feb 17 j 19:21	27° $\approx$ 54'35 10.47903 AU				
	140 Mar 05 j 15:04	0° $\text{X}$		conjunction	146 May 13 j 11:45	20° $\text{S}$ 30'45 -1°40'27
morning rise	140 Mar 06 j 05:52	0° $\text{X}$ 04'32		minimum elong	146 May 13 j 11:48	20° $\text{S}$ 30'46 1°40'27
retrograde	140 Jun 20 j 13:36	7° $\text{X}$ 58'50		max. Earth dist.	146 May 13 j 19:12	20° $\text{S}$ 33'12 9.97432 AU
opposition	140 Aug 29 j 07:37	4° $\text{X}$ 31'50 -2°23'56		morning rise	146 May 31 j 14:44	22° $\text{S}$ 52'30
min. Earth dist.	140 Aug 29 j 10:32	4° $\text{X}$ 31'16 8.41716 AU			146 Aug 08 j 04:58	0° $\text{II}$
direct	140 Nov 04 j 18:35	1° $\text{X}$ 09'31		retrograde	146 Sep 14 j 18:13	1° $\text{II}$ 16'20
evening set	141 Feb 13 j 04:44	8° $\text{X}$ 45'01			146 Oct 22 j 11:51	30° $\text{R}$ $\text{S}$
				opposition	146 Nov 20 j 15:58	27° $\text{S}$ 46'04 -1°49'49
conjunction	141 Mar 02 j 08:44	10° $\text{X}$ 54'31 -2°03'50		min. Earth dist.	146 Nov 20 j 09:48	27° $\text{S}$ 47'21 7.97381 AU
minimum elong	141 Mar 02 j 08:41	10° $\text{X}$ 54'30 2°03'50		direct	147 Jan 26 j 01:55	24° $\text{S}$ 17'02
max. Earth dist.	141 Mar 02 j 05:11	10° $\text{X}$ 53'24 10.35521 AU			147 Apr 19 j 23:58	0° $\text{II}$
morning rise	141 Mar 19 j 17:43	13° $\text{X}$ 05'35		evening set	147 May 10 j 16:31	2° $\text{II}$ 33'35
retrograde	141 Jul 04 j 14:26	21° $\text{X}$ 09'48				
opposition	141 Sep 11 j 21:45	17° $\text{X}$ 41'26 -2°41'29		conjunction	147 May 28 j 20:19	4° $\text{II}$ 55'23 -1°13'56
min. Earth dist.	141 Sep 11 j 23:30	17° $\text{X}$ 41'05 8.29691 AU		minimum elong	147 May 28 j 20:22	4° $\text{II}$ 55'24 1°13'55
direct	141 Nov 17 j 22:07	14° $\text{X}$ 17'50		max. Earth dist.	147 May 29 j 04:40	4° $\text{II}$ 58'07 9.97953 AU
evening set	142 Feb 26 j 20:36	22° $\text{X}$ 02'35		morning rise	147 Jun 16 j 00:54	7° $\text{II}$ 17'25
				retrograde	147 Sep 29 j 07:29	15° $\text{II}$ 36'34
conjunction	142 Mar 16 j 04:26	24° $\text{X}$ 14'47 -2°14'30		opposition	147 Dec 04 j 23:22	12° $\text{II}$ 07'10 -1°13'34
minimum elong	142 Mar 16 j 04:25	24° $\text{X}$ 14'47 2°14'29		min. Earth dist.	147 Dec 04 j 16:44	12° $\text{II}$ 08'33 7.99424 AU
max. Earth dist.	142 Mar 16 j 03:28	24° $\text{X}$ 14'29 10.23921 AU		direct	148 Feb 09 j 17:28	8° $\text{II}$ 37'40
morning rise	142 Apr 02 j 17:08	26° $\text{X}$ 28'34		evening set	148 May 24 j 22:44	16° $\text{II}$ 54'35

conjunction	148 Jun 12 j 03:47	19° $\Pi$ 16'08	-0°42'56	evening set	154 Aug 17 j 16:03	7° $\Pi$ 36'48	
minimum elong	148 Jun 12 j 03:49	19° $\Pi$ 16'08	0°42'55				
max. Earth dist.	148 Jun 12 j 12:42	19° $\Pi$ 19'02	10.01588 AU	conjunction	154 Sep 03 j 23:23	9° $\Pi$ 42'51	2°02'39
morning rise	148 Jun 30 j 08:17	21° $\Pi$ 37'26		minimum elong	154 Sep 03 j 23:20	9° $\Pi$ 42'51	2°02'38
retrograde	148 Oct 12 j 14:41	29° $\Pi$ 49'31		max. Earth dist.	154 Sep 04 j 01:12	9° $\Pi$ 43'25	10.64638 AU
opposition	148 Dec 18 j 03:57	26° $\Pi$ 21'20	-0°33'05	morning rise	154 Sep 21 j 01:59	11° $\Pi$ 47'27	
min. Earth dist.	148 Dec 17 j 20:52	26° $\Pi$ 22'48	8.04496 AU	retrograde	154 Dec 29 j 17:02	19° $\Pi$ 03'55	
direct	149 Feb 23 j 08:30	22° $\Pi$ 51'41		opposition	155 Mar 07 j 15:48	15° $\Pi$ 44'26	2°38'24
	149 May 31 j 05:00	0° $\mathcal{E}$		min. Earth dist.	155 Mar 07 j 14:32	15° $\Pi$ 44'41	8.70587 AU
evening set	149 Jun 09 j 02:05	1° $\mathcal{E}$ 06'37		direct	155 May 17 j 03:30	12° $\Pi$ 19'16	
				evening set	155 Aug 30 j 11:31	19° $\Pi$ 53'06	
conjunction	149 Jun 27 j 06:39	3° $\mathcal{E}$ 26'57	-0°09'39				
minimum elong	149 Jun 27 j 06:39	3° $\mathcal{E}$ 26'57	0°09'39	conjunction	155 Sep 16 j 14:05	21° $\Pi$ 56'22	2°13'43
behind sun begin	149 Jun 27 j 00:38	3° $\mathcal{E}$ 25'01		minimum elong	155 Sep 16 j 14:03	21° $\Pi$ 56'21	2°13'42
behind sun end	149 Jun 27 j 12:39	3° $\mathcal{E}$ 28'52		max. Earth dist.	155 Sep 16 j 13:56	21° $\Pi$ 56'19	10.76049 AU
max. Earth dist.	149 Jun 27 j 15:51	3° $\mathcal{E}$ 29'55	10.08100 AU	morning rise	155 Oct 03 j 12:02	23° $\Pi$ 58'15	
morning rise	149 Jul 15 j 09:17	5° $\mathcal{E}$ 46'36			155 Dec 05 j 12:13	0° $\mathcal{A}$	
asc. node	149 Oct 13 j 17:23	13° $\mathcal{E}$ 40'28		retrograde	156 Jan 10 j 21:21	1° $\mathcal{A}$ 08'01	
retrograde	149 Oct 26 j 15:55	13° $\mathcal{E}$ 49'56			156 Feb 17 j 01:30	30° $\mathcal{R}$ $\Pi$	
opposition	150 Jan 01 j 04:31	10° $\mathcal{E}$ 23'09	0°08'45	opposition	156 Mar 19 j 05:38	27° $\Pi$ 49'34	2°47'56
min. Earth dist.	149 Dec 31 j 20:57	10° $\mathcal{E}$ 24'42	8.12269 AU	min. Earth dist.	156 Mar 19 j 05:34	27° $\Pi$ 49'35	8.81450 AU
direct	150 Mar 09 j 21:37	6° $\mathcal{E}$ 53'41		direct	156 May 29 j 02:27	24° $\Pi$ 25'39	
evening set	150 Jun 23 j 23:34	15° $\mathcal{E}$ 04'30			156 Aug 25 j 12:25	0° $\mathcal{A}$	
				evening set	156 Sep 10 j 21:13	1° $\mathcal{A}$ 51'50	
conjunction	150 Jul 12 j 01:56	17° $\mathcal{E}$ 22'45	0°23'46				
minimum elong	150 Jul 12 j 01:55	17° $\mathcal{E}$ 22'45	0°23'46	conjunction	156 Sep 27 j 19:41	3° $\mathcal{A}$ 52'44	2°18'41
max. Earth dist.	150 Jul 12 j 11:15	17° $\mathcal{E}$ 25'44	10.17059 AU	minimum elong	156 Sep 27 j 19:40	3° $\mathcal{A}$ 52'44	2°18'41
morning rise	150 Jul 30 j 01:09	19° $\mathcal{E}$ 39'59		max. Earth dist.	156 Sep 27 j 18:22	3° $\mathcal{A}$ 52'20	10.86211 AU
retrograde	150 Nov 09 j 09:01	27° $\mathcal{E}$ 33'33		morning rise	156 Oct 14 j 13:42	5° $\mathcal{A}$ 52'21	
opposition	151 Jan 14 j 23:49	24° $\mathcal{E}$ 08'18	0°49'10	retrograde	157 Jan 21 j 20:10	12° $\mathcal{A}$ 56'42	
min. Earth dist.	151 Jan 14 j 16:13	24° $\mathcal{E}$ 09'51	8.22236 AU	opposition	157 Mar 31 j 15:12	9° $\mathcal{A}$ 39'02	2°50'07
direct	151 Mar 24 j 06:46	20° $\mathcal{E}$ 39'18		min. Earth dist.	157 Mar 31 j 16:44	9° $\mathcal{A}$ 38'45	8.90878 AU
evening set	151 Jul 08 j 13:13	28° $\mathcal{E}$ 44'18		direct	157 Jun 10 j 17:23	6° $\mathcal{A}$ 16'18	
	151 Jul 18 j 14:56	0° $\mathcal{Q}$		evening set	157 Sep 22 j 22:31	13° $\mathcal{A}$ 35'28	
conjunction	151 Jul 26 j 11:55	0° $\mathcal{Q}$ 59'49	0°55'06				
minimum elong	151 Jul 26 j 11:53	0° $\mathcal{Q}$ 59'48	0°55'06	conjunction	157 Oct 09 j 17:32	15° $\mathcal{A}$ 34'25	2°17'44
max. Earth dist.	151 Jul 26 j 20:48	1° $\mathcal{Q}$ 02'38	10.27884 AU	minimum elong	157 Oct 09 j 17:33	15° $\mathcal{A}$ 34'25	2°17'45
morning rise	151 Aug 13 j 06:26	3° $\mathcal{Q}$ 14'03		max. Earth dist.	157 Oct 09 j 14:34	15° $\mathcal{A}$ 33'32	10.94788 AU
retrograde	151 Nov 22 j 17:25	10° $\mathcal{Q}$ 57'31		morning rise	157 Oct 26 j 08:42	17° $\mathcal{A}$ 32'17	
opposition	152 Jan 28 j 13:05	7° $\mathcal{Q}$ 33'51	1°25'50	retrograde	158 Feb 02 j 15:06	24° $\mathcal{A}$ 32'31	
min. Earth dist.	152 Jan 28 j 06:33	7° $\mathcal{Q}$ 35'10	8.33765 AU	opposition	158 Apr 12 j 21:00	21° $\mathcal{A}$ 15'22	2°45'17
direct	152 Apr 06 j 10:19	4° $\mathcal{Q}$ 05'33		min. Earth dist.	158 Apr 13 j 00:44	21° $\mathcal{A}$ 14'40	8.98558 AU
evening set	152 Jul 21 j 17:08	12° $\mathcal{Q}$ 03'26		direct	158 Jun 23 j 03:47	17° $\mathcal{A}$ 53'41	
				evening set	158 Oct 04 j 16:36	25° $\mathcal{A}$ 06'40	
conjunction	152 Aug 08 j 11:03	14° $\mathcal{Q}$ 15'50	1°22'46				
minimum elong	152 Aug 08 j 11:00	14° $\mathcal{Q}$ 15'49	1°22'46	conjunction	158 Oct 21 j 08:59	27° $\mathcal{A}$ 04'08	2°11'13
max. Earth dist.	152 Aug 08 j 18:24	14° $\mathcal{Q}$ 18'08	10.39903 AU	minimum elong	158 Oct 21 j 09:00	27° $\mathcal{A}$ 04'09	2°11'14
	152 Aug 14 j 08:12	15° $\mathcal{Q}$		max. Earth dist.	158 Oct 21 j 03:34	27° $\mathcal{A}$ 02'32	11.01492 AU
morning rise	152 Aug 26 j 00:13	16° $\mathcal{Q}$ 26'47		morning rise	158 Nov 06 j 22:22	29° $\mathcal{A}$ 00'46	
retrograde	152 Dec 04 j 17:46	24° $\mathcal{Q}$ 00'23			158 Nov 15 j 14:00	0° $\mathcal{M}$	
opposition	153 Feb 09 j 20:13	20° $\mathcal{Q}$ 38'15	1°56'56	retrograde	159 Feb 14 j 07:42	5° $\mathcal{M}$ 58'17	
min. Earth dist.	153 Feb 09 j 15:26	20° $\mathcal{Q}$ 39'12	8.46152 AU	opposition	159 Apr 25 j 00:08	2° $\mathcal{M}$ 41'21	2°33'59
direct	153 Apr 20 j 06:41	17° $\mathcal{Q}$ 10'50		min. Earth dist.	159 Apr 25 j 05:10	2° $\mathcal{M}$ 40'25	9.04222 AU
evening set	153 Aug 04 j 10:02	25° $\mathcal{Q}$ 00'47			159 Jun 06 j 06:49	30° $\mathcal{R}$ $\mathcal{A}$	
				direct	159 Jul 05 j 08:46	29° $\mathcal{A}$ 20'36	
conjunction	153 Aug 21 j 22:39	27° $\mathcal{Q}$ 09'57	1°45'33		159 Aug 03 j 02:31	0° $\mathcal{M}$	
minimum elong	153 Aug 21 j 22:35	27° $\mathcal{Q}$ 09'56	1°45'32	evening set	159 Oct 16 j 04:54	6° $\mathcal{M}$ 28'21	
max. Earth dist.	153 Aug 22 j 03:29	27° $\mathcal{Q}$ 11'27	10.52394 AU				
morning rise	153 Sep 08 j 06:22	29° $\mathcal{Q}$ 17'37		conjunction	159 Nov 01 j 19:32	8° $\mathcal{M}$ 24'51	1°59'36
	153 Sep 14 j 03:42	0° $\mathcal{M}$		minimum elong	159 Nov 01 j 19:34	8° $\mathcal{M}$ 24'52	1°59'36
retrograde	153 Dec 17 j 09:12	6° $\mathcal{M}$ 42'06		max. Earth dist.	159 Nov 01 j 13:05	8° $\mathcal{M}$ 22'57	11.06092 AU
opposition	154 Feb 22 j 21:03	3° $\mathcal{M}$ 21'22	2°21'20	morning rise	159 Nov 18 j 07:55	10° $\mathcal{M}$ 20'44	
min. Earth dist.	154 Feb 22 j 18:17	3° $\mathcal{M}$ 21'54	8.58655 AU		160 Jan 03 j 07:45	15° $\mathcal{M}$	
	154 Apr 23 j 22:44	30° $\mathcal{R}$ $\mathcal{Q}$		retrograde	160 Feb 25 j 23:13	17° $\mathcal{M}$ 17'03	
direct	154 May 03 j 20:34	29° $\mathcal{Q}$ 55'00			160 Apr 22 j 07:00	15° $\mathcal{R}$ $\mathcal{M}$	
	154 May 13 j 19:09	0° $\mathcal{M}$		opposition	160 May 06 j 01:27	14° $\mathcal{M}$ 00'02	2°16'49
				min. Earth dist.	160 May 06 j 06:51	13° $\mathcal{M}$ 59'02	9.07680 AU



























































































































direct	160 Jul 16 j 10:27	10° <del>M</del> 40'04		min. Earth dist.	166 Jul 17 j 11:01	22° <del>3</del> 24'51	8.81469 AU
	160 Oct 01 j 12:00	15° <del>M</del>		direct	166 Sep 24 j 12:46	19° <del>3</del> 06'42	
evening set	160 Oct 26 j 13:08	17° <del>M</del> 43'45		evening set	167 Jan 02 j 05:06	26° <del>3</del> 16'25	
conjunction	160 Nov 12 j 02:54	19° <del>M</del> 39'45	1°43'26	conjunction	167 Jan 18 j 23:49	28° <del>3</del> 17'55	-0°49'09
minimum elong	160 Nov 12 j 02:56	19° <del>M</del> 39'46	1°43'25	minimum elong	167 Jan 18 j 23:47	28° <del>3</del> 17'55	0°49'10
max. Earth dist.	160 Nov 11 j 20:24	19° <del>M</del> 37'51	11.08436 AU	max. Earth dist.	167 Jan 18 j 16:25	28° <del>3</del> 15'41	10.76287 AU
morning rise	160 Nov 28 j 14:58	21° <del>M</del> 35'21			167 Feb 02 j 01:21	0° <del>≈</del>	
retrograde	161 Mar 08 j 17:16	28° <del>M</del> 31'58		morning rise	167 Feb 04 j 22:01	0° <del>≈</del> 20'30	
opposition	161 May 18 j 01:57	25° <del>M</del> 14'37	1°54'32	retrograde	167 May 20 j 07:38	7° <del>≈</del> 50'34	
min. Earth dist.	161 May 18 j 07:45	25° <del>M</del> 13'33	9.08832 AU	opposition	167 Jul 29 j 22:54	4° <del>≈</del> 27'12	-1°17'08
direct	161 Jul 28 j 07:54	21° <del>M</del> 55'17		min. Earth dist.	167 Jul 30 j 04:15	4° <del>≈</del> 26'11	8.70757 AU
evening set	161 Nov 06 j 19:04	28° <del>M</del> 56'11		direct	167 Oct 06 j 16:47	1° <del>≈</del> 07'23	
	161 Nov 15 j 22:52	0° <del>≈</del>		evening set	168 Jan 14 j 10:11	8° <del>≈</del> 23'21	
conjunction	161 Nov 23 j 08:31	0° <del>≈</del> 52'09	1°23'19	conjunction	168 Jan 31 j 07:06	10° <del>≈</del> 26'55	-1°15'17
minimum elong	161 Nov 23 j 08:33	0° <del>≈</del> 52'09	1°23'19	minimum elong	168 Jan 31 j 07:03	10° <del>≈</del> 26'54	1°15'17
max. Earth dist.	161 Nov 23 j 01:09	0° <del>≈</del> 49'59	11.08455 AU	max. Earth dist.	168 Jan 31 j 01:05	10° <del>≈</del> 25'04	10.65050 AU
morning rise	161 Dec 09 j 21:08	2° <del>≈</del> 47'57		morning rise	168 Feb 17 j 08:07	12° <del>≈</del> 31'45	
retrograde	162 Mar 20 j 10:59	9° <del>≈</del> 46'22			168 Mar 09 j 17:19	15° <del>≈</del>	
opposition	162 May 30 j 02:44	6° <del>≈</del> 28'29	1°27'54	retrograde	168 Jun 01 j 13:08	20° <del>≈</del> 11'41	
min. Earth dist.	162 May 30 j 09:39	6° <del>≈</del> 27'12	9.07646 AU	opposition	168 Aug 10 j 22:15	16° <del>≈</del> 46'53	-1°47'57
direct	162 Aug 09 j 01:41	3° <del>≈</del> 09'34		min. Earth dist.	168 Aug 11 j 02:26	16° <del>≈</del> 46'05	8.59157 AU
evening set	162 Nov 18 j 00:37	10° <del>≈</del> 09'11			168 Sep 04 j 07:33	15° <del>≈</del>	
conjunction	162 Dec 04 j 14:09	12° <del>≈</del> 05'30	0°59'59	direct	168 Oct 18 j 04:01	13° <del>≈</del> 26'17	
minimum elong	162 Dec 04 j 14:11	12° <del>≈</del> 05'30	0°59'58	evening set	168 Nov 29 j 15:12	15° <del>≈</del>	
max. Earth dist.	162 Dec 04 j 05:33	12° <del>≈</del> 02'58	11.06149 AU		169 Jan 26 j 00:44	20° <del>≈</del> 49'43	
morning rise	162 Dec 21 j 03:58	14° <del>≈</del> 01'56		conjunction	169 Feb 12 j 00:20	22° <del>≈</del> 55'36	-1°38'30
retrograde	163 Apr 01 j 08:16	21° <del>≈</del> 03'46		minimum elong	169 Feb 12 j 00:17	22° <del>≈</del> 55'35	1°38'31
opposition	163 Jun 11 j 04:48	17° <del>≈</del> 45'07	0°57'45	max. Earth dist.	169 Feb 11 j 20:30	22° <del>≈</del> 54'25	10.53156 AU
min. Earth dist.	163 Jun 11 j 12:20	17° <del>≈</del> 43'44	9.04162 AU	morning rise	169 Mar 01 j 04:19	25° <del>≈</del> 02'53	
direct	163 Aug 20 j 21:33	14° <del>≈</del> 26'25			169 Apr 15 j 20:02	0° <del>≈</del>	
evening set	163 Nov 29 j 07:21	21° <del>≈</del> 26'15		retrograde	169 Jun 15 j 04:31	2° <del>≈</del> 53'02	
conjunction	163 Dec 15 j 21:40	23° <del>≈</del> 23'21	0°34'10		169 Aug 17 j 00:55	30° <del>≈</del>	
minimum elong	163 Dec 15 j 21:41	23° <del>≈</del> 23'21	0°34'10	opposition	169 Aug 24 j 03:36	29° <del>≈</del> 26'52	-2°14'29
max. Earth dist.	163 Dec 15 j 13:08	23° <del>≈</del> 20'49	11.01595 AU	min. Earth dist.	169 Aug 24 j 05:54	29° <del>≈</del> 26'25	8.47185 AU
morning rise	164 Jan 01 j 13:04	25° <del>≈</del> 20'48		direct	169 Oct 30 j 20:28	26° <del>≈</del> 05'20	
	164 Feb 16 j 01:27	0° <del>≈</del>		evening set	170 Jan 07 j 13:15	0° <del>≈</del>	
retrograde	164 Apr 12 j 10:25	2° <del>≈</del> 27'37			170 Feb 08 j 01:35	3° <del>≈</del> 37'10	
	164 Jun 10 j 13:07	30° <del>≈</del>		conjunction	170 Feb 25 j 04:14	5° <del>≈</del> 45'32	-1°57'27
opposition	164 Jun 22 j 09:17	29° <del>≈</del> 08'00	0°25'02	minimum elong	170 Feb 25 j 04:11	5° <del>≈</del> 45'31	1°57'27
min. Earth dist.	164 Jun 22 j 16:15	29° <del>≈</del> 06'42	8.98501 AU	max. Earth dist.	170 Feb 25 j 02:28	5° <del>≈</del> 44'59	10.41163 AU
direct	164 Aug 31 j 16:41	25° <del>≈</del> 49'21		morning rise	170 Mar 14 j 11:28	7° <del>≈</del> 55'25	
	164 Nov 13 j 20:39	0° <del>≈</del>		retrograde	170 Jun 29 j 03:50	15° <del>≈</del> 55'34	
evening set	164 Dec 09 j 17:04	2° <del>≈</del> 50'54		opposition	170 Sep 06 j 15:25	12° <del>≈</del> 28'07	-2°34'57
conjunction	164 Dec 26 j 08:40	4° <del>≈</del> 49'08	0°06'45	min. Earth dist.	170 Sep 06 j 15:45	12° <del>≈</del> 28'03	8.35419 AU
minimum elong	164 Dec 26 j 08:40	4° <del>≈</del> 49'08	0°06'46	direct	170 Nov 12 j 19:39	9° <del>≈</del> 05'32	
behind sun begin	164 Dec 26 j 02:08	4° <del>≈</del> 47'13		evening set	171 Feb 21 j 13:06	16° <del>≈</del> 46'15	
behind sun end	164 Dec 26 j 15:11	4° <del>≈</del> 51'04		conjunction	171 Mar 10 j 19:12	18° <del>≈</del> 57'13	-2°10'46
max. Earth dist.	164 Dec 26 j 01:09	4° <del>≈</del> 46'55	10.94931 AU	minimum elong	171 Mar 10 j 19:11	18° <del>≈</del> 57'13	2°10'46
morning rise	165 Jan 12 j 01:57	6° <del>≈</del> 47'59		max. Earth dist.	171 Mar 10 j 19:03	18° <del>≈</del> 57'11	10.29681 AU
desc. node	165 Mar 26 j 09:36	13° <del>≈</del> 19'28		morning rise	171 Mar 28 j 06:08	21° <del>≈</del> 09'45	
retrograde	165 Apr 24 j 18:32	14° <del>≈</del> 01'16		retrograde	171 Jul 13 j 09:39	29° <del>≈</del> 19'03	
opposition	165 Jul 04 j 17:09	10° <del>≈</del> 34'03	-0°09'11	opposition	171 Sep 20 j 09:21	25° <del>≈</del> 50'28	-2°47'43
min. Earth dist.	165 Jul 04 j 23:12	10° <del>≈</del> 39'23	8.90843 AU	min. Earth dist.	171 Sep 20 j 08:14	25° <del>≈</del> 50'42	8.24459 AU
direct	165 Sep 12 j 13:27	7° <del>≈</del> 21'42		direct	171 Nov 26 j 03:31	22° <del>≈</del> 26'43	
evening set	165 Dec 21 j 07:51	14° <del>≈</del> 26'33			172 Mar 04 j 07:30	0° <del>≈</del>	
conjunction	166 Jan 07 j 00:51	16° <del>≈</del> 26'17	-0°21'27	evening set	172 Mar 06 j 11:30	0° <del>≈</del> 16'20	
minimum elong	166 Jan 07 j 00:51	16° <del>≈</del> 26'17	0°21'27	conjunction	172 Mar 23 j 21:35	2° <del>≈</del> 29'57	-2°17'15
max. Earth dist.	166 Jan 06 j 17:26	16° <del>≈</del> 24'04	10.86384 AU	minimum elong	172 Mar 23 j 21:35	2° <del>≈</del> 29'57	2°17'14
morning rise	166 Jan 23 j 20:25	18° <del>≈</del> 26'50		max. Earth dist.	172 Mar 23 j 22:43	2° <del>≈</del> 30'19	10.19309 AU
retrograde	166 May 07 j 10:24	25° <del>≈</del> 47'55		morning rise	172 Apr 10 j 12:30	4° <del>≈</del> 45'06	
opposition	166 Jul 17 j 05:19	22° <del>≈</del> 25'55	-0°43'41	retrograde	172 Jul 26 j 21:11	13° <del>≈</del> 01'50	

opposition	172 Oct 03 j 08:26	9° $\Upsilon$ 32'23	-2°51'23	asc. node	179 Mar 14 j 23:57	1° $\Omega$ 24'32	
min. Earth dist.	172 Oct 03 j 06:33	9° $\Upsilon$ 32'46	8.14870 AU	evening set	179 Jun 18 j 04:00	9° $\Omega$ 30'29	
direct	172 Dec 08 j 19:05	6° $\Upsilon$ 07'23					
evening set	173 Mar 20 j 19:52	14° $\Upsilon$ 05'22		conjunction	179 Jul 06 j 07:27	11° $\Omega$ 49'37	0°10'01
				minimum elong	179 Jul 06 j 07:26	11° $\Omega$ 49'37	0°10'01
conjunction	173 Apr 07 j 10:24	16° $\Upsilon$ 21'32	-2°16'01	behind sun begin	179 Jul 06 j 01:35	11° $\Omega$ 47'45	
minimum elong	173 Apr 07 j 10:25	16° $\Upsilon$ 21'33	2°16'00	behind sun end	179 Jul 06 j 13:18	11° $\Omega$ 51'29	
max. Earth dist.	173 Apr 07 j 12:59	16° $\Upsilon$ 22'23	10.10575 AU	max. Earth dist.	179 Jul 06 j 16:01	11° $\Omega$ 52'22	10.13335 AU
morning rise	173 Apr 25 j 05:20	18° $\Upsilon$ 39'06		morning rise	179 Jul 24 j 08:13	14° $\Omega$ 07'53	
retrograde	173 Aug 10 j 13:00	27° $\Upsilon$ 01'04		retrograde	179 Nov 04 j 01:49	22° $\Omega$ 05'17	
opposition	173 Oct 17 j 11:54	23° $\Upsilon$ 31'05	-2°45'03	opposition	180 Jan 09 j 15:00	18° $\Omega$ 39'17	0°32'37
min. Earth dist.	173 Oct 17 j 09:10	23° $\Upsilon$ 31'39	8.07127 AU	min. Earth dist.	180 Jan 09 j 08:57	18° $\Omega$ 40'31	8.17927 AU
direct	173 Dec 22 j 18:05	20° $\Upsilon$ 04'52		direct	180 Mar 17 j 16:18	15° $\Omega$ 09'50	
evening set	174 Apr 04 j 12:49	28° $\Upsilon$ 10'13		evening set	180 Jul 01 j 20:47	23° $\Omega$ 17'09	
	174 Apr 18 j 16:02	0° $\Upsilon$					
conjunction	174 Apr 22 j 07:55	0° $\Upsilon$ 28'42	-2°06'41	conjunction	180 Jul 19 j 21:02	25° $\Omega$ 33'50	0°42'20
minimum elong	174 Apr 22 j 07:58	0° $\Upsilon$ 28'43	2°06'40	minimum elong	180 Jul 19 j 21:00	25° $\Omega$ 33'49	0°42'21
max. Earth dist.	174 Apr 22 j 12:12	0° $\Upsilon$ 30'06	10.03935 AU	max. Earth dist.	180 Jul 20 j 04:17	25° $\Omega$ 36'08	10.23048 AU
morning rise	174 May 10 j 06:38	2° $\Upsilon$ 48'20		morning rise	180 Aug 06 j 17:44	27° $\Omega$ 49'21	
retrograde	174 Aug 25 j 06:40	11° $\Upsilon$ 12'57			180 Aug 24 j 18:45	0° $\Omega$	
opposition	174 Oct 31 j 18:26	7° $\Upsilon$ 42'48	-2°28'35	retrograde	180 Nov 16 j 11:57	5° $\Omega$ 36'50	
min. Earth dist.	174 Oct 31 j 14:28	7° $\Upsilon$ 43'37	8.01697 AU	opposition	181 Jan 22 j 06:24	2° $\Omega$ 12'15	1°11'02
direct	175 Jan 06 j 00:23	4° $\Upsilon$ 15'31		min. Earth dist.	181 Jan 22 j 00:51	2° $\Omega$ 13'22	8.28487 AU
evening set	175 Apr 19 j 12:50	12° $\Upsilon$ 26'43			181 Feb 20 j 22:15	30° $\Upsilon$ $\Omega$	
				direct	181 Mar 31 j 22:54	28° $\Omega$ 43'16	
conjunction	175 May 07 j 12:14	14° $\Upsilon$ 47'02	-1°49'30		181 May 09 j 16:10	0° $\Omega$	
minimum elong	175 May 07 j 12:18	14° $\Upsilon$ 47'03	1°49'30	evening set	181 Jul 16 j 04:19	6° $\Omega$ 44'05	
max. Earth dist.	175 May 07 j 18:29	14° $\Upsilon$ 49'04	9.99875 AU				
	175 May 09 j 03:50	15° $\Upsilon$		conjunction	181 Aug 03 j 00:16	8° $\Omega$ 57'49	1°11'40
morning rise	175 May 25 j 14:08	17° $\Upsilon$ 08'09		minimum elong	181 Aug 03 j 00:13	8° $\Omega$ 57'48	1°11'41
retrograde	175 Sep 08 j 23:57	25° $\Upsilon$ 32'26		max. Earth dist.	181 Aug 03 j 06:21	8° $\Omega$ 59'43	10.34276 AU
opposition	175 Nov 15 j 02:20	22° $\Upsilon$ 02'28	-2°02'43	morning rise	181 Aug 20 j 15:58	11° $\Omega$ 10'11	
min. Earth dist.	175 Nov 14 j 20:53	22° $\Upsilon$ 03'36	7.99045 AU		181 Sep 23 j 04:15	15° $\Omega$	
direct	176 Jan 20 j 11:08	18° $\Upsilon$ 34'16		retrograde	181 Nov 29 j 14:42	18° $\Omega$ 47'48	
evening set	176 May 03 j 17:28	26° $\Upsilon$ 49'16		opposition	182 Feb 04 j 15:36	15° $\Omega$ 24'38	1°44'37
				min. Earth dist.	182 Feb 04 j 10:26	15° $\Omega$ 25'40	8.40260 AU
conjunction	176 May 21 j 20:17	29° $\Upsilon$ 10'41	-1°25'27		182 Feb 09 j 19:28	15° $\Upsilon$ $\Omega$	
minimum elong	176 May 21 j 20:21	29° $\Upsilon$ 10'43	1°25'27	direct	182 Apr 14 j 22:08	11° $\Omega$ 56'24	
max. Earth dist.	176 May 22 j 04:17	29° $\Upsilon$ 13'19	9.98776 AU		182 Jun 15 j 20:53	15° $\Omega$	
	176 May 28 j 02:51	0° $\Upsilon$		evening set	182 Jul 30 j 01:19	19° $\Omega$ 49'40	
morning rise	176 Jun 09 j 00:14	1° $\Upsilon$ 32'30					
retrograde	176 Sep 22 j 15:05	9° $\Upsilon$ 53'24		conjunction	182 Aug 16 j 16:21	22° $\Omega$ 00'15	1°36'35
opposition	176 Nov 28 j 10:04	6° $\Upsilon$ 24'00	-1°29'07	minimum elong	182 Aug 16 j 16:17	22° $\Omega$ 00'14	1°36'35
min. Earth dist.	176 Nov 28 j 03:27	6° $\Upsilon$ 25'23	7.99441 AU	max. Earth dist.	182 Aug 16 j 21:33	22° $\Omega$ 01'52	10.46371 AU
direct	177 Feb 03 j 00:40	2° $\Upsilon$ 55'05		morning rise	182 Sep 03 j 02:34	24° $\Omega$ 09'21	
evening set	177 May 18 j 23:34	11° $\Upsilon$ 11'31			182 Oct 30 j 07:20	0° $\Upsilon$	
				retrograde	182 Dec 12 j 10:20	1° $\Upsilon$ 37'36	
conjunction	177 Jun 06 j 04:20	13° $\Upsilon$ 33'08	-0°56'07		183 Jan 25 j 13:59	30° $\Upsilon$ $\Omega$	
minimum elong	177 Jun 06 j 04:22	13° $\Upsilon$ 33'08	0°56'06	opposition	183 Feb 17 j 18:32	28° $\Omega$ 15'49	2°11'55
max. Earth dist.	177 Jun 06 j 13:23	13° $\Upsilon$ 36'05	10.00768 AU	min. Earth dist.	183 Feb 17 j 14:13	28° $\Omega$ 16'39	8.52583 AU
morning rise	177 Jun 24 j 08:50	15° $\Upsilon$ 54'40		direct	183 Apr 28 j 13:43	24° $\Omega$ 48'32	
retrograde	177 Oct 07 j 01:51	24° $\Upsilon$ 09'33			183 Jul 21 j 06:19	0° $\Upsilon$	
opposition	177 Dec 12 j 15:45	20° $\Upsilon$ 41'03	-0°50'09	evening set	183 Aug 12 j 11:36	2° $\Upsilon$ 33'46	
min. Earth dist.	177 Dec 12 j 08:44	20° $\Upsilon$ 42'30	8.02903 AU				
direct	178 Feb 17 j 14:35	17° $\Upsilon$ 11'39		conjunction	183 Aug 29 j 21:24	4° $\Upsilon$ 41'12	1°56'08
evening set	178 Jun 03 j 04:05	25° $\Upsilon$ 27'07		minimum elong	183 Aug 29 j 21:21	4° $\Upsilon$ 41'11	1°56'07
				max. Earth dist.	183 Aug 30 j 01:27	4° $\Upsilon$ 42'26	10.58690 AU
conjunction	178 Jun 21 j 09:04	27° $\Upsilon$ 47'58	-0°23'34	morning rise	183 Sep 16 j 02:06	6° $\Upsilon$ 47'06	
minimum elong	178 Jun 21 j 09:05	27° $\Upsilon$ 47'58	0°23'34	retrograde	183 Dec 24 j 21:18	14° $\Upsilon$ 06'49	
max. Earth dist.	178 Jun 21 j 18:19	27° $\Upsilon$ 50'57	10.05736 AU	opposition	184 Mar 01 j 15:28	10° $\Upsilon$ 46'21	2°32'07
	178 Jul 08 j 10:25	0° $\Omega$		min. Earth dist.	184 Mar 01 j 12:49	10° $\Upsilon$ 46'52	8.64836 AU
morning rise	178 Jul 09 j 12:30	0° $\Omega$ 08'17		direct	184 May 10 j 22:41	7° $\Upsilon$ 20'13	
retrograde	178 Oct 21 j 06:32	8° $\Omega$ 15'05		evening set	184 Aug 24 j 11:07	14° $\Upsilon$ 57'17	
opposition	178 Dec 26 j 17:47	4° $\Omega$ 47'44	-0°08'38				
min. Earth dist.	178 Dec 26 j 11:02	4° $\Omega$ 49'07	8.09210 AU	conjunction	184 Sep 10 j 15:48	17° $\Upsilon$ 01'44	2°09'46
direct	179 Mar 04 j 04:35	1° $\Omega$ 18'09		minimum elong	184 Sep 10 j 15:46	17° $\Upsilon$ 01'43	2°09'45
				max. Earth dist.	184 Sep 10 j 17:58	17° $\Upsilon$ 02'23	10.70651 AU

morning rise	184 Sep 27 j 15:35	19° $\mathbb{M}$ 04'44	retrograde	191 Mar 15 j 15:20	5° $\mathbb{X}$ 05'11	
retrograde	185 Jan 05 j 02:41	26° $\mathbb{M}$ 17'02	opposition	191 May 25 j 05:08	1° $\mathbb{X}$ 48'06	1°39'54
opposition	185 Mar 14 j 07:00	22° $\mathbb{M}$ 57'44 2°44'50	min. Earth dist.	191 May 25 j 11:09	1° $\mathbb{X}$ 47'00	9.10644 AU
min. Earth dist.	185 Mar 14 j 06:18	22° $\mathbb{M}$ 57'52 8.76463 AU		191 Jun 20 j 04:52	30° $\mathbb{R}$ $\mathbb{M}$	
direct	185 May 23 j 23:49	19° $\mathbb{M}$ 32'52	direct	191 Aug 04 j 08:01	28° $\mathbb{M}$ 29'34	
evening set	185 Sep 06 j 00:17	27° $\mathbb{M}$ 01'58		191 Sep 17 j 02:09	0° $\mathbb{X}$	
			evening set	191 Nov 13 j 11:46	5° $\mathbb{X}$ 28'48	
conjunction	185 Sep 23 j 00:22	29° $\mathbb{M}$ 03'47 2°17'19				
minimum elong	185 Sep 23 j 00:21	29° $\mathbb{M}$ 03'47 2°17'18	conjunction	191 Nov 30 j 01:11	7° $\mathbb{X}$ 24'40	1°10'29
max. Earth dist.	185 Sep 22 j 24:00	29° $\mathbb{M}$ 03'40 10.81737 AU	minimum elong	191 Nov 30 j 01:14	7° $\mathbb{X}$ 24'41	1°10'29
	185 Sep 30 j 19:39	0° $\mathbb{L}$	max. Earth dist.	191 Nov 29 j 18:15	7° $\mathbb{X}$ 22'38	11.09775 AU
morning rise	185 Oct 09 j 20:06	1° $\mathbb{L}$ 04'19	morning rise	191 Dec 16 j 14:14	9° $\mathbb{X}$ 20'31	
retrograde	186 Jan 17 j 01:23	8° $\mathbb{L}$ 10'25	retrograde	192 Mar 26 j 12:28	16° $\mathbb{X}$ 19'47	
opposition	186 Mar 26 j 17:34	4° $\mathbb{L}$ 52'07 2°50'05	opposition	192 Jun 05 j 06:09	13° $\mathbb{X}$ 02'06	1°11'15
min. Earth dist.	186 Mar 26 j 18:12	4° $\mathbb{L}$ 51'59 8.86959 AU	min. Earth dist.	192 Jun 05 j 12:21	13° $\mathbb{X}$ 00'57	9.08401 AU
direct	186 Jun 05 j 17:45	1° $\mathbb{L}$ 28'32	direct	192 Aug 15 j 02:57	9° $\mathbb{X}$ 43'58	
evening set	186 Sep 18 j 04:26	8° $\mathbb{L}$ 50'13	evening set	192 Nov 23 j 17:29	16° $\mathbb{X}$ 42'37	
conjunction	186 Oct 05 j 00:47	10° $\mathbb{L}$ 49'51 2°18'51	conjunction	192 Dec 10 j 07:24	18° $\mathbb{X}$ 39'05	0°45'43
minimum elong	186 Oct 05 j 00:47	10° $\mathbb{L}$ 49'51 2°18'51	minimum elong	192 Dec 10 j 07:26	18° $\mathbb{X}$ 39'05	0°45'43
max. Earth dist.	186 Oct 04 j 22:42	10° $\mathbb{L}$ 49'14 10.91485 AU	max. Earth dist.	192 Dec 09 j 23:38	18° $\mathbb{X}$ 36'48	11.06355 AU
morning rise	186 Oct 21 j 17:14	12° $\mathbb{L}$ 48'21	morning rise	192 Dec 26 j 21:48	20° $\mathbb{X}$ 35'45	
retrograde	187 Jan 28 j 21:09	19° $\mathbb{L}$ 49'39	retrograde	193 Apr 07 j 11:55	27° $\mathbb{X}$ 39'12	
opposition	187 Apr 07 j 23:57	16° $\mathbb{L}$ 32'06 2°48'10	opposition	193 Jun 17 j 08:59	24° $\mathbb{X}$ 20'42	0°39'37
min. Earth dist.	187 Apr 08 j 01:23	16° $\mathbb{L}$ 31'50 8.95895 AU	min. Earth dist.	193 Jun 17 j 16:07	24° $\mathbb{X}$ 19'23	9.03746 AU
direct	187 Jun 18 j 07:04	13° $\mathbb{L}$ 09'49	direct	193 Aug 26 j 19:42	21° $\mathbb{X}$ 02'40	
evening set	187 Sep 30 j 00:46	20° $\mathbb{L}$ 24'49	evening set	193 Dec 05 j 01:29	28° $\mathbb{X}$ 02'24	
conjunction	187 Oct 16 j 18:16	22° $\mathbb{L}$ 22'45 2°14'41	conjunction	193 Dec 21 j 16:15	29° $\mathbb{X}$ 59'49	0°18'57
minimum elong	187 Oct 16 j 18:17	22° $\mathbb{L}$ 22'45 2°14'41	minimum elong	193 Dec 21 j 16:16	29° $\mathbb{X}$ 59'49	0°18'57
max. Earth dist.	187 Oct 16 j 15:32	22° $\mathbb{L}$ 21'56 10.99510 AU	max. Earth dist.	193 Dec 21 j 06:57	29° $\mathbb{X}$ 57'04	11.00554 AU
morning rise	187 Nov 02 j 08:16	24° $\mathbb{L}$ 19'43		193 Dec 21 j 16:52	0° $\mathbb{Z}$	
	188 Jan 01 j 00:16	0° $\mathbb{M}$	morning rise	194 Jan 07 j 08:36	1° $\mathbb{Z}$ 57'44	
retrograde	188 Feb 09 j 15:45	1° $\mathbb{M}$ 17'37	retrograde	194 Apr 19 j 15:48	9° $\mathbb{Z}$ 07'01	
	188 Mar 21 j 08:26	30° $\mathbb{R}$ $\mathbb{L}$	opposition	194 Jun 29 j 14:51	5° $\mathbb{Z}$ 47'26	0°06'02
opposition	188 Apr 19 j 03:29	28° $\mathbb{L}$ 00'35 2°39'34	min. Earth dist.	194 Jun 29 j 22:55	5° $\mathbb{Z}$ 45'56	8.96776 AU
min. Earth dist.	188 Apr 19 j 06:06	28° $\mathbb{L}$ 00'06 9.02937 AU	desc. node	194 Sep 03 j 23:58	2° $\mathbb{Z}$ 29'56	
direct	188 Jun 29 j 12:33	24° $\mathbb{L}$ 39'32	direct	194 Sep 07 j 15:50	2° $\mathbb{Z}$ 29'15	
	188 Sep 24 j 09:41	0° $\mathbb{M}$	evening set	194 Dec 16 j 13:26	9° $\mathbb{Z}$ 31'43	
evening set	188 Oct 10 j 14:45	1° $\mathbb{M}$ 48'44				
conjunction	188 Oct 27 j 06:08	3° $\mathbb{M}$ 45'28 2°05'12	conjunction	195 Jan 02 j 05:32	11° $\mathbb{Z}$ 30'30	-0°09'01
minimum elong	188 Oct 27 j 06:10	3° $\mathbb{M}$ 45'28 2°05'12	minimum elong	195 Jan 02 j 05:32	11° $\mathbb{Z}$ 30'29	0°09'00
max. Earth dist.	188 Oct 27 j 02:07	3° $\mathbb{M}$ 44'17 11.05521 AU	behind sun begin	195 Jan 01 j 23:32	11° $\mathbb{Z}$ 28'43	
morning rise	188 Nov 12 j 18:41	5° $\mathbb{M}$ 41'26	behind sun end	195 Jan 02 j 11:32	11° $\mathbb{Z}$ 32'16	
retrograde	189 Feb 20 j 06:57	12° $\mathbb{M}$ 37'23	max. Earth dist.	195 Jan 01 j 20:19	11° $\mathbb{Z}$ 27'45	10.92535 AU
opposition	189 May 01 j 04:59	9° $\mathbb{M}$ 20'38 2°24'51	morning rise	195 Jan 18 j 24:00	13° $\mathbb{Z}$ 30'00	
min. Earth dist.	189 May 01 j 09:22	9° $\mathbb{M}$ 19'49 9.07844 AU	retrograde	195 May 02 j 03:31	20° $\mathbb{Z}$ 46'40	
direct	189 Jul 11 j 13:07	6° $\mathbb{M}$ 00'36	opposition	195 Jul 12 j 00:45	17° $\mathbb{Z}$ 25'47	-0°28'25
evening set	189 Oct 22 j 00:14	13° $\mathbb{M}$ 05'12	min. Earth dist.	195 Jul 12 j 08:17	17° $\mathbb{Z}$ 24'23	8.87755 AU
			direct	195 Sep 19 j 14:52	14° $\mathbb{Z}$ 07'14	
conjunction	189 Nov 07 j 14:11	15° $\mathbb{M}$ 01'11 1°50'56	evening set	195 Dec 28 j 07:12	21° $\mathbb{Z}$ 13'58	
minimum elong	189 Nov 07 j 14:13	15° $\mathbb{M}$ 01'12 1°50'55				
max. Earth dist.	189 Nov 07 j 08:11	14° $\mathbb{M}$ 59'25 11.09316 AU	conjunction	196 Jan 14 j 01:06	23° $\mathbb{Z}$ 14'27	-0°36'58
	189 Nov 07 j 10:09	15° $\mathbb{M}$	minimum elong	196 Jan 14 j 01:04	23° $\mathbb{Z}$ 14'27	0°36'58
morning rise	189 Nov 24 j 02:18	16° $\mathbb{M}$ 56'40	max. Earth dist.	196 Jan 13 j 16:58	23° $\mathbb{Z}$ 12'00	10.82640 AU
retrograde	190 Mar 03 j 22:35	23° $\mathbb{M}$ 52'09	morning rise	196 Jan 30 j 21:54	25° $\mathbb{Z}$ 15'53	
opposition	190 May 13 j 05:04	20° $\mathbb{M}$ 35'23 2°04'43		196 Mar 16 j 01:07	0° $\mathbb{Z}$	
min. Earth dist.	190 May 13 j 10:53	20° $\mathbb{M}$ 34'19 9.10447 AU	retrograde	196 May 13 j 21:53	2° $\mathbb{Z}$ 41'13	
direct	190 Jul 23 j 12:05	17° $\mathbb{M}$ 16'12		196 Jul 14 j 12:10	30° $\mathbb{R}$ $\mathbb{Z}$	
evening set	190 Nov 02 j 06:42	24° $\mathbb{M}$ 17'27	opposition	196 Jul 23 j 15:29	29° $\mathbb{Z}$ 18'51	-1°02'27
			min. Earth dist.	196 Jul 23 j 21:48	29° $\mathbb{Z}$ 17'40	8.77092 AU
conjunction	190 Nov 18 j 20:02	26° $\mathbb{M}$ 13'10 1°32'28	direct	196 Sep 30 j 16:29	25° $\mathbb{Z}$ 59'39	
minimum elong	190 Nov 18 j 20:04	26° $\mathbb{M}$ 13'10 1°32'28		196 Dec 10 j 18:39	0° $\mathbb{Z}$	
max. Earth dist.	190 Nov 18 j 12:56	26° $\mathbb{M}$ 11'05 11.10760 AU	evening set	197 Jan 08 j 08:21	3° $\mathbb{Z}$ 12'10	
morning rise	190 Dec 05 j 08:23	28° $\mathbb{M}$ 08'36	conjunction	197 Jan 25 j 04:17	5° $\mathbb{Z}$ 14'38	-1°03'54
	190 Dec 22 j 00:48	0° $\mathbb{X}$	minimum elong	197 Jan 25 j 04:15	5° $\mathbb{Z}$ 14'38	1°03'55



max. Earth dist.	197 Jan 24 j 20:58	5° $\approx$ 12'24	10.71312 AU	opposition	203 Oct 25 j 18:25	1° $\mathcal{B}$ 35'49	-2°37'21
morning rise	197 Feb 11 j 03:47	7° $\approx$ 18'16		min. Earth dist.	203 Oct 25 j 14:12	1° $\mathcal{B}$ 36'42	8.01896 AU
retrograde	197 May 27 j 00:43	14° $\approx$ 53'15			203 Nov 14 j 21:26	30° $\mathcal{R}\mathcal{Y}$	
opposition	197 Aug 05 j 11:50	11° $\approx$ 29'18	-1°34'35	direct	203 Dec 30 j 23:35	28° $\mathcal{Y}$ 08'24	
min. Earth dist.	197 Aug 05 j 17:02	11° $\approx$ 28'18	8.65252 AU		204 Feb 14 j 04:49	0° $\mathcal{B}$	
direct	197 Oct 12 j 23:42	8° $\approx$ 09'13		evening set	204 Apr 12 j 04:26	6° $\mathcal{B}$ 17'58	
	198 Jan 16 j 18:27	15° $\approx$					
evening set	198 Jan 20 j 18:19	15° $\approx$ 28'49		conjunction	204 Apr 30 j 02:01	8° $\mathcal{B}$ 37'47	-1°58'12
				minimum elong	204 Apr 30 j 02:04	8° $\mathcal{B}$ 37'48	1°58'11
conjunction	198 Feb 06 j 16:30	17° $\approx$ 33'32	-1°28'34	max. Earth dist.	204 Apr 30 j 07:45	8° $\mathcal{B}$ 39'40	9.99474 AU
minimum elong	198 Feb 06 j 16:27	17° $\approx$ 33'31	1°28'34	morning rise	204 May 18 j 02:39	10° $\mathcal{B}$ 58'34	
max. Earth dist.	198 Feb 06 j 09:37	17° $\approx$ 31'24	10.59052 AU		204 Jun 20 j 16:57	15° $\mathcal{B}$	
morning rise	198 Feb 23 j 19:01	19° $\approx$ 39'36		retrograde	204 Sep 01 j 20:16	19° $\mathcal{B}$ 24'11	
retrograde	198 Jun 09 j 11:52	27° $\approx$ 24'50		opposition	204 Nov 08 j 02:12	15° $\mathcal{B}$ 53'27	-2°15'31
opposition	198 Aug 18 j 14:16	23° $\approx$ 59'18	-2°03'14	min. Earth dist.	204 Nov 07 j 21:04	15° $\mathcal{B}$ 54'31	7.98082 AU
min. Earth dist.	198 Aug 18 j 18:46	23° $\approx$ 58'25	8.52770 AU		204 Nov 18 j 22:31	15° $\mathcal{R}\mathcal{B}$	
direct	198 Oct 25 j 12:13	20° $\approx$ 38'07		direct	205 Jan 13 j 08:48	12° $\mathcal{B}$ 25'01	
evening set	199 Feb 02 j 14:04	28° $\approx$ 05'55			205 Mar 08 j 05:42	15° $\mathcal{B}$	
	199 Feb 17 j 21:14	0° $\mathcal{H}$		evening set	205 Apr 27 j 07:34	20° $\mathcal{B}$ 39'17	
conjunction	199 Feb 19 j 15:03	0° $\mathcal{H}$ 13'06	-1°49'35	conjunction	205 May 15 j 08:55	23° $\mathcal{B}$ 00'31	-1°37'02
minimum elong	199 Feb 19 j 15:00	0° $\mathcal{H}$ 13'05	1°49'35	minimum elong	205 May 15 j 08:58	23° $\mathcal{B}$ 00'32	1°37'02
max. Earth dist.	199 Feb 19 j 09:41	0° $\mathcal{H}$ 11'25	10.46431 AU	max. Earth dist.	205 May 15 j 15:58	23° $\mathcal{B}$ 02'50	9.97216 AU
morning rise	199 Mar 08 j 20:51	2° $\mathcal{H}$ 21'47		morning rise	205 Jun 02 j 12:16	25° $\mathcal{B}$ 22'22	
retrograde	199 Jun 23 j 05:39	10° $\mathcal{H}$ 17'23			205 Jul 11 j 19:18	0° $\mathcal{I}$	
opposition	199 Aug 31 j 23:06	6° $\mathcal{H}$ 50'19	-2°26'39	retrograde	205 Sep 16 j 12:34	3° $\mathcal{I}$ 45'48	
min. Earth dist.	199 Sep 01 j 02:21	6° $\mathcal{H}$ 49'40	8.40240 AU	opposition	205 Nov 22 j 10:38	0° $\mathcal{I}$ 15'33	-1°45'04
direct	199 Nov 07 j 09:00	3° $\mathcal{H}$ 27'55		min. Earth dist.	205 Nov 22 j 04:41	0° $\mathcal{I}$ 16'48	7.97343 AU
evening set	200 Feb 15 j 20:19	11° $\mathcal{H}$ 04'39			205 Nov 25 j 13:25	30° $\mathcal{R}\mathcal{B}$	
				direct	206 Jan 27 j 21:56	26° $\mathcal{B}$ 46'23	
conjunction	200 Mar 04 j 00:46	13° $\mathcal{H}$ 14'29	-2°05'35		206 Mar 29 j 21:13	0° $\mathcal{I}$	
minimum elong	200 Mar 04 j 00:44	13° $\mathcal{H}$ 14'28	2°05'35	evening set	206 May 12 j 13:23	5° $\mathcal{I}$ 03'02	
max. Earth dist.	200 Mar 03 j 21:51	13° $\mathcal{H}$ 13'33	10.34055 AU				
morning rise	200 Mar 21 j 10:05	15° $\mathcal{H}$ 25'52		conjunction	206 May 30 j 17:24	7° $\mathcal{I}$ 24'52	-1°09'48
retrograde	200 Jul 06 j 07:10	23° $\mathcal{H}$ 31'21		minimum elong	206 May 30 j 17:27	7° $\mathcal{I}$ 24'53	1°09'48
opposition	200 Sep 13 j 14:08	20° $\mathcal{H}$ 02'53	-2°43'07	max. Earth dist.	206 May 31 j 01:46	7° $\mathcal{I}$ 27'36	9.98105 AU
min. Earth dist.	200 Sep 13 j 15:33	20° $\mathcal{H}$ 02'36	8.28268 AU	morning rise	206 Jun 17 j 22:07	9° $\mathcal{I}$ 46'51	
direct	200 Nov 19 j 14:22	16° $\mathcal{H}$ 39'12		retrograde	206 Oct 01 j 01:19	18° $\mathcal{I}$ 05'20	
evening set	201 Feb 28 j 13:39	24° $\mathcal{H}$ 25'08		opposition	206 Dec 06 j 17:46	14° $\mathcal{I}$ 35'57	-1°08'06
				min. Earth dist.	206 Dec 06 j 10:49	14° $\mathcal{I}$ 37'23	7.99750 AU
conjunction	201 Mar 17 j 22:01	26° $\mathcal{H}$ 37'43	-2°15'17	direct	207 Feb 11 j 12:57	11° $\mathcal{I}$ 06'20	
minimum elong	201 Mar 17 j 22:00	26° $\mathcal{H}$ 37'42	2°15'16	evening set	207 May 27 j 19:16	19° $\mathcal{I}$ 23'01	
max. Earth dist.	201 Mar 17 j 21:54	26° $\mathcal{H}$ 37'40	10.22552 AU				
morning rise	201 Apr 04 j 11:03	28° $\mathcal{H}$ 51'49		conjunction	207 Jun 15 j 00:25	21° $\mathcal{I}$ 44'29	-0°38'22
	201 Apr 13 j 15:14	0° $\mathcal{Y}$		minimum elong	207 Jun 15 j 00:27	21° $\mathcal{I}$ 44'30	0°38'22
retrograde	201 Jul 20 j 16:39	7° $\mathcal{Y}$ 05'55		max. Earth dist.	207 Jun 15 j 09:50	21° $\mathcal{I}$ 47'33	10.02092 AU
opposition	201 Sep 27 j 10:51	3° $\mathcal{Y}$ 36'18	-2°51'03	morning rise	207 Jul 03 j 04:49	24° $\mathcal{I}$ 05'40	
min. Earth dist.	201 Sep 27 j 09:57	3° $\mathcal{Y}$ 36'29	8.17483 AU		207 Aug 25 j 16:16	0° $\mathcal{E}$	
direct	201 Dec 03 j 01:50	0° $\mathcal{Y}$ 11'19		retrograde	207 Oct 15 j 08:44	2° $\mathcal{E}$ 16'49	
evening set	202 Mar 14 j 17:32	8° $\mathcal{Y}$ 06'12			207 Dec 06 j 05:18	30° $\mathcal{R}\mathcal{I}$	
				opposition	207 Dec 20 j 21:49	28° $\mathcal{I}$ 48'39	-0°27'18
conjunction	202 Apr 01 j 06:12	10° $\mathcal{Y}$ 21'28	-2°17'37	min. Earth dist.	207 Dec 20 j 14:06	28° $\mathcal{I}$ 50'14	8.05153 AU
minimum elong	202 Apr 01 j 06:12	10° $\mathcal{Y}$ 21'28	2°17'36	direct	208 Feb 26 j 03:51	25° $\mathcal{I}$ 18'56	
max. Earth dist.	202 Apr 01 j 08:25	10° $\mathcal{Y}$ 22'11	10.12570 AU		208 May 12 j 02:46	0° $\mathcal{E}$	
morning rise	202 Apr 18 j 23:12	12° $\mathcal{Y}$ 38'10		evening set	208 Jun 10 j 22:04	3° $\mathcal{E}$ 33'23	
retrograde	202 Aug 04 j 08:01	20° $\mathcal{Y}$ 58'53					
opposition	202 Oct 11 j 12:43	17° $\mathcal{Y}$ 28'29	-2°49'18	conjunction	208 Jun 29 j 02:34	5° $\mathcal{E}$ 53'32	-0°05'01
min. Earth dist.	202 Oct 11 j 09:51	17° $\mathcal{Y}$ 29'04	8.08508 AU	minimum elong	208 Jun 29 j 02:33	5° $\mathcal{E}$ 53'32	0°05'00
direct	202 Dec 16 j 20:22	14° $\mathcal{Y}$ 02'14		behind sun begin	208 Jun 28 j 19:25	5° $\mathcal{E}$ 51'15	
evening set	203 Mar 29 j 06:54	22° $\mathcal{Y}$ 05'10		behind sun end	208 Jun 29 j 09:42	5° $\mathcal{E}$ 55'49	
				max. Earth dist.	208 Jun 29 j 12:30	5° $\mathcal{E}$ 56'44	10.08909 AU
conjunction	203 Apr 16 j 00:06	24° $\mathcal{Y}$ 22'55	-2°11'56	morning rise	208 Jul 17 j 04:51	8° $\mathcal{E}$ 12'57	
minimum elong	203 Apr 16 j 00:08	24° $\mathcal{Y}$ 22'55	2°11'55	asc. node	208 Aug 23 j 23:03	12° $\mathcal{E}$ 36'10	
max. Earth dist.	203 Apr 16 j 04:17	24° $\mathcal{Y}$ 24'16	10.04711 AU	retrograde	208 Oct 28 j 09:00	16° $\mathcal{E}$ 15'11	
morning rise	203 May 03 j 21:08	26° $\mathcal{Y}$ 41'56		opposition	209 Jan 02 j 21:46	12° $\mathcal{E}$ 48'28	0°14'29
	203 May 31 j 02:03	0° $\mathcal{B}$		min. Earth dist.	209 Jan 02 j 13:45	12° $\mathcal{E}$ 50'07	8.13204 AU
retrograde	203 Aug 19 j 02:23	5° $\mathcal{B}$ 06'38		direct	209 Mar 11 j 16:36	9° $\mathcal{E}$ 18'59	

evening set	209 Jun 25 j 18:45	17°  29'08		conjunction	215 Sep 30 j 07:08	6°  02'21	2°18'46
				minimum elong	215 Sep 30 j 07:07	6°  02'21	2°18'46
conjunction	209 Jul 13 j 20:47	19°  47'06	0°28'15	max. Earth dist.	215 Sep 30 j 05:44	6°  01'56	10.87754 AU
minimum elong	209 Jul 13 j 20:46	19°  47'06	0°28'15	morning rise	215 Oct 17 j 00:46	8°  01'42	
max. Earth dist.	209 Jul 14 j 06:46	19°  50'17	10.18112 AU	retrograde	216 Jan 24 j 06:52	15°  05'14	
morning rise	209 Jul 31 j 19:26	22°  04'00		opposition	216 Apr 02 j 03:13	11°  47'44	2°49'41
retrograde	209 Nov 11 j 01:04	29°  56'28		min. Earth dist.	216 Apr 02 j 05:31	11°  47'18	8.92346 AU
opposition	210 Jan 16 j 16:25	26°  31'19	0°54'30	direct	216 Jun 12 j 06:23	8°  25'11	
min. Earth dist.	210 Jan 16 j 08:55	26°  32'51	8.23392 AU	evening set	216 Sep 24 j 09:22	15°  43'23	
direct	210 Mar 26 j 00:40	23°  02'21					
	210 Jul 01 j 05:36	0°  0		conjunction	216 Oct 11 j 03:59	17°  42'05	2°17'01
evening set	210 Jul 10 j 07:18	1°  06'32		minimum elong	216 Oct 11 j 03:59	17°  42'05	2°17'02
				max. Earth dist.	216 Oct 11 j 00:03	17°  40'55	10.96156 AU
conjunction	210 Jul 28 j 05:28	3°  02'143	0°59'09	morning rise	216 Oct 27 j 18:59	19°  43'44	
minimum elong	210 Jul 28 j 05:25	3°  02'142	0°59'09	retrograde	217 Feb 04 j 01:08	26°  43'20	
max. Earth dist.	210 Jul 28 j 14:29	3°  02'434	10.29127 AU	opposition	217 Apr 14 j 08:30	23°  42'19	2°43'54
morning rise	210 Aug 14 j 23:23	5°  03'35		min. Earth dist.	217 Apr 14 j 12:32	23°  42'134	8.99816 AU
retrograde	210 Nov 24 j 08:57	13°  01'757		direct	217 Jun 24 j 15:31	20°  00'51	
opposition	211 Jan 30 j 04:57	9°  05'425	1°30'28	evening set	217 Oct 06 j 02:26	27°  41'257	
min. Earth dist.	211 Jan 29 j 22:56	9°  05'538	8.35092 AU				
direct	211 Apr 09 j 02:54	6°  02'611		conjunction	217 Oct 22 j 18:36	29°  41'015	2°09'45
evening set	211 Jul 24 j 10:02	14°  02'312		minimum elong	217 Oct 22 j 18:38	29°  41'016	2°09'46
	211 Jul 29 j 09:38	15°  0		max. Earth dist.	217 Oct 22 j 12:54	29°  40'834	11.02624 AU
					217 Oct 29 j 19:15	0°  0	
conjunction	211 Aug 11 j 03:18	16°  03'514	1°26'12	morning rise	217 Nov 08 j 07:54	1°  06'44	
minimum elong	211 Aug 11 j 03:15	16°  03'513	1°26'11	retrograde	218 Feb 15 j 16:52	8°  03'50	
max. Earth dist.	211 Aug 11 j 10:08	16°  03'722	10.41290 AU	opposition	218 Apr 26 j 11:05	4°  04'700	2°31'44
morning rise	211 Aug 28 j 15:57	18°  04'549		min. Earth dist.	218 Apr 26 j 15:46	4°  04'608	9.05211 AU
retrograde	211 Dec 07 j 07:45	26°  01'821		direct	218 Jul 06 j 20:24	1°  06'2627	
opposition	212 Feb 12 j 11:18	22°  05'623	2°00'41	evening set	218 Oct 17 j 14:05	8°  03'330	
min. Earth dist.	212 Feb 12 j 06:45	22°  05'717	8.47607 AU				
direct	212 Apr 21 j 23:13	19°  02'906		conjunction	218 Nov 03 j 04:43	10°  06'2953	1°57'28
evening set	212 Aug 06 j 01:47	27°  01'807		minimum elong	218 Nov 03 j 04:46	10°  06'2954	1°57'28
				max. Earth dist.	218 Nov 02 j 22:37	10°  06'2805	11.06935 AU
conjunction	212 Aug 23 j 13:44	29°  02'654	1°48'12	morning rise	218 Nov 19 j 16:59	12°  06'2540	
minimum elong	212 Aug 23 j 13:41	29°  02'653	1°48'11		218 Dec 13 j 03:54	15°  0	
max. Earth dist.	212 Aug 23 j 18:08	29°  02'816	10.53897 AU	retrograde	219 Feb 27 j 10:40	19°  06'2143	
	212 Aug 28 j 00:57	0°  0		opposition	219 May 08 j 11:59	16°  06'0447	2°13'51
morning rise	212 Sep 09 j 20:56	1°  06'3412		min. Earth dist.	219 May 08 j 17:23	16°  06'0348	9.08358 AU
retrograde	212 Dec 18 j 21:17	8°  06'5741			219 May 23 j 10:17	15°  06'03	
opposition	213 Feb 24 j 11:21	5°  06'3706	2°24'03	direct	219 Jul 18 j 21:07	12°  06'14501	
min. Earth dist.	213 Feb 24 j 08:04	5°  06'3745	8.60216 AU		219 Sep 10 j 23:32	15°  06'0	
direct	213 May 05 j 13:30	2°  06'1055		evening set	219 Oct 28 j 21:56	19°  06'14808	
evening set	213 Aug 19 j 06:26	9°  06'5140					
				conjunction	219 Nov 14 j 11:41	21°  06'14406	1°40'44
conjunction	213 Sep 05 j 13:15	11°  06'5721	2°04'28	minimum elong	219 Nov 14 j 11:43	21°  06'14407	1°40'43
minimum elong	213 Sep 05 j 13:12	11°  06'5720	2°04'27	max. Earth dist.	219 Nov 14 j 04:49	21°  06'14205	11.08956 AU
max. Earth dist.	213 Sep 05 j 15:31	11°  06'5802	10.66243 AU	morning rise	219 Nov 30 j 23:47	23°  06'13940	
morning rise	213 Sep 22 j 15:16	14°  06'0134			220 Feb 11 j 22:00	0°  06'0	
retrograde	213 Dec 31 j 06:03	21°  06'1705		retrograde	220 Mar 10 j 02:23	0°  06'03610	
opposition	214 Mar 09 j 05:22	17°  06'5743	2°40'03		220 Apr 06 j 17:07	30°  06'03	
min. Earth dist.	214 Mar 09 j 03:22	17°  06'5806	8.72221 AU	opposition	220 May 19 j 12:26	27°  06'1854	1°50'56
direct	214 May 18 j 18:14	14°  06'3245		min. Earth dist.	220 May 19 j 19:02	27°  06'1741	9.09178 AU
evening set	214 Sep 01 j 00:31	22°  06'0524		direct	220 Jul 29 j 16:30	23°  06'15941	
					220 Oct 30 j 06:50	0°  06'0	
conjunction	214 Sep 18 j 02:41	24°  06'0820	2°14'39	evening set	220 Nov 08 j 03:39	1°  06'00014	
minimum elong	214 Sep 18 j 02:39	24°  06'0820	2°14'39				
max. Earth dist.	214 Sep 18 j 03:23	24°  06'0833	10.77682 AU	conjunction	220 Nov 24 j 17:01	2°  06'05611	1°20'09
morning rise	214 Oct 05 j 00:05	26°  06'0953		minimum elong	220 Nov 24 j 17:03	2°  06'05612	1°20'08
	214 Nov 09 j 07:52	0°  06'0		max. Earth dist.	220 Nov 24 j 08:36	2°  06'05343	11.08641 AU
retrograde	215 Jan 12 j 09:04	3°  06'1843		morning rise	220 Dec 11 j 05:51	4°  06'05201	
opposition	215 Mar 21 j 18:24	0°  06'0024	2°48'32	retrograde	221 Mar 21 j 20:30	11°  06'05034	
	215 Mar 21 j 20:31	30°  06'0		opposition	221 May 31 j 13:13	8°  06'03240	1°23'47
min. Earth dist.	215 Mar 21 j 18:26	0°  06'0024	8.83054 AU	min. Earth dist.	221 May 31 j 20:51	8°  06'03116	9.07657 AU
direct	215 May 31 j 14:50	26°  06'3641		direct	221 Aug 10 j 12:33	5°  06'01348	
	215 Aug 06 j 17:35	0°  06'0		evening set	221 Nov 19 j 09:07	12°  06'01315	
evening set	215 Sep 13 j 09:06	4°  06'0146					

conjunction	221 Dec 05 j 22:48	14° $\mathbb{X}$ 09'38	0°56'27	conjunction	228 Feb 14 j 13:07	25° $\approx$ 08'04	-1°41'17
minimum elong	221 Dec 05 j 22:50	14° $\mathbb{X}$ 09'38	0°56'27	minimum elong	228 Feb 14 j 13:04	25° $\approx$ 08'03	1°41'17
max. Earth dist.	221 Dec 05 j 13:58	14° $\mathbb{X}$ 07'01	11.05998 AU	max. Earth dist.	228 Feb 14 j 09:28	25° $\approx$ 06'56	10.51484 AU
morning rise	221 Dec 22 j 12:49	16° $\mathbb{X}$ 06'08		morning rise	228 Mar 02 j 17:20	27° $\approx$ 15'39	
retrograde	222 Apr 02 j 18:21	23° $\mathbb{X}$ 08'15			228 Mar 26 j 04:55	0° $\mathbb{H}$	
opposition	222 Jun 12 j 15:12	19° $\mathbb{X}$ 49'33	0°53'16	retrograde	228 Jun 16 j 19:59	5° $\mathbb{H}$ 07'05	
min. Earth dist.	222 Jun 12 j 22:41	19° $\mathbb{X}$ 48'10	9.03837 AU	opposition	228 Aug 25 j 17:22	1° $\mathbb{H}$ 40'40	-2°17'33
direct	222 Aug 22 j 07:14	16° $\mathbb{X}$ 30'52		min. Earth dist.	228 Aug 25 j 19:16	1° $\mathbb{H}$ 40'17	8.45483 AU
evening set	222 Nov 30 j 16:03	23° $\mathbb{X}$ 30'43			228 Sep 17 j 04:25	30° $\mathbb{R}$ $\approx$	
				direct	228 Nov 01 j 08:11	28° $\approx$ 18'56	
conjunction	222 Dec 17 j 06:36	25° $\mathbb{X}$ 27'55	0°30'24		228 Dec 15 j 03:24	0° $\mathbb{H}$	
minimum elong	222 Dec 17 j 06:37	25° $\mathbb{X}$ 27'55	0°30'24	evening set	229 Feb 09 j 15:24	5° $\mathbb{H}$ 51'57	
max. Earth dist.	222 Dec 16 j 22:25	25° $\mathbb{X}$ 25'30	11.01104 AU				
morning rise	223 Jan 02 j 22:06	27° $\mathbb{X}$ 25'28		conjunction	229 Feb 26 j 18:18	8° $\mathbb{H}$ 00'39	-1°59'31
	223 Jan 26 j 05:18	0° $\mathbb{B}$		minimum elong	229 Feb 26 j 18:16	8° $\mathbb{H}$ 00'38	1°59'31
retrograde	223 Apr 14 j 21:09	4° $\mathbb{B}$ 32'47		max. Earth dist.	229 Feb 26 j 16:01	7° $\mathbb{H}$ 59'55	10.39440 AU
opposition	223 Jun 24 j 19:56	1° $\mathbb{B}$ 13'02	0°20'20	morning rise	229 Mar 16 j 01:58	10° $\mathbb{H}$ 10'52	
min. Earth dist.	223 Jun 25 j 02:39	1° $\mathbb{B}$ 11'48	8.97844 AU	retrograde	229 Jun 30 j 19:47	18° $\mathbb{H}$ 12'19	
	223 Jul 11 j 15:31	30° $\mathbb{R}$ $\mathbb{X}$		opposition	229 Sep 08 j 06:06	14° $\mathbb{H}$ 44'39	-2°37'03
direct	223 Sep 03 j 02:42	27° $\mathbb{X}$ 54'21		min. Earth dist.	229 Sep 08 j 06:38	14° $\mathbb{H}$ 44'33	8.33705 AU
	223 Oct 24 j 05:39	0° $\mathbb{B}$		direct	229 Nov 14 j 09:03	11° $\mathbb{H}$ 21'51	
evening set	223 Dec 12 j 02:12	4° $\mathbb{B}$ 56'08		evening set	230 Feb 23 j 04:20	19° $\mathbb{H}$ 03'52	
conjunction	223 Dec 28 j 17:53	6° $\mathbb{B}$ 54'31	0°02'53	conjunction	230 Mar 12 j 10:45	21° $\mathbb{H}$ 15'12	-2°11'58
minimum elong	223 Dec 28 j 17:54	6° $\mathbb{B}$ 54'31	0°02'54	minimum elong	230 Mar 12 j 10:43	21° $\mathbb{H}$ 15'12	2°11'58
behind sun begin	223 Dec 28 j 10:56	6° $\mathbb{B}$ 52'28		max. Earth dist.	230 Mar 12 j 09:59	21° $\mathbb{H}$ 14'57	10.27998 AU
behind sun end	223 Dec 29 j 00:52	6° $\mathbb{B}$ 56'34		morning rise	230 Mar 29 j 22:09	23° $\mathbb{H}$ 28'06	
max. Earth dist.	223 Dec 28 j 09:56	6° $\mathbb{B}$ 52'10	10.94120 AU		230 May 31 j 21:53	0° $\mathbb{Y}$	
morning rise	224 Jan 14 j 11:22	8° $\mathbb{B}$ 53'30		retrograde	230 Jul 15 j 02:48	1° $\mathbb{Y}$ 38'37	
desc. node	224 Feb 04 j 16:40	11° $\mathbb{B}$ 16'06			230 Aug 28 j 21:37	30° $\mathbb{R}$ $\mathbb{H}$	
retrograde	224 Apr 26 j 06:53	16° $\mathbb{B}$ 07'29		opposition	230 Sep 22 j 00:56	28° $\mathbb{H}$ 09'54	-2°48'39
opposition	224 Jul 06 j 04:16	12° $\mathbb{B}$ 46'34	-0°13'56	min. Earth dist.	230 Sep 22 j 00:16	28° $\mathbb{H}$ 10'02	8.22839 AU
min. Earth dist.	224 Jul 06 j 10:47	12° $\mathbb{B}$ 45'21	8.89885 AU	direct	230 Nov 27 j 17:46	24° $\mathbb{H}$ 45'56	
direct	224 Sep 13 j 23:19	9° $\mathbb{B}$ 27'39			231 Feb 15 j 14:27	0° $\mathbb{Y}$	
evening set	224 Dec 22 j 17:34	16° $\mathbb{B}$ 32'57		evening set	231 Mar 09 j 04:02	2° $\mathbb{Y}$ 36'52	
conjunction	225 Jan 08 j 10:39	18° $\mathbb{B}$ 32'50	-0°25'17	conjunction	231 Mar 26 j 14:34	4° $\mathbb{Y}$ 50'51	-2°17'26
minimum elong	225 Jan 08 j 10:38	18° $\mathbb{B}$ 32'50	0°25'17	minimum elong	231 Mar 26 j 14:34	4° $\mathbb{Y}$ 50'51	2°17'26
max. Earth dist.	225 Jan 08 j 02:20	18° $\mathbb{B}$ 30'20	10.85295 AU	max. Earth dist.	231 Mar 26 j 15:53	4° $\mathbb{Y}$ 51'16	10.17786 AU
morning rise	225 Jan 25 j 06:34	20° $\mathbb{B}$ 33'37		morning rise	231 Apr 13 j 05:57	7° $\mathbb{Y}$ 06'22	
retrograde	225 May 08 j 21:17	27° $\mathbb{B}$ 55'33		retrograde	231 Jul 29 j 15:09	15° $\mathbb{Y}$ 24'10	
opposition	225 Jul 18 j 16:57	24° $\mathbb{B}$ 33'21	-0°48'20	opposition	231 Oct 06 j 00:58	11° $\mathbb{Y}$ 54'38	-2°50'59
min. Earth dist.	225 Jul 18 j 23:27	24° $\mathbb{B}$ 32'07	8.80253 AU	min. Earth dist.	231 Oct 05 j 23:02	11° $\mathbb{Y}$ 55'01	8.13480 AU
direct	225 Sep 25 j 22:33	21° $\mathbb{B}$ 13'59		direct	231 Dec 11 j 10:56	8° $\mathbb{Y}$ 29'28	
evening set	226 Jan 03 j 15:33	28° $\mathbb{B}$ 24'22		evening set	232 Mar 22 j 13:38	16° $\mathbb{Y}$ 28'39	
	226 Jan 16 j 20:47	0° $\approx$					
conjunction	226 Jan 20 j 10:29	0° $\approx$ 26'05	-0°52'49	conjunction	232 Apr 09 j 04:46	18° $\mathbb{Y}$ 45'10	-2°15'07
minimum elong	226 Jan 20 j 10:27	0° $\approx$ 26'04	0°52'49	minimum elong	232 Apr 09 j 04:47	18° $\mathbb{Y}$ 45'11	2°15'06
max. Earth dist.	226 Jan 20 j 02:54	0° $\approx$ 23'46	10.74955 AU	max. Earth dist.	232 Apr 09 j 08:23	18° $\mathbb{Y}$ 46'21	10.09354 AU
morning rise	226 Feb 06 j 08:59	2° $\approx$ 28'53		morning rise	232 Apr 27 j 00:07	21° $\mathbb{Y}$ 03'04	
retrograde	226 May 21 j 19:40	10° $\approx$ 00'00		retrograde	232 Aug 12 j 07:05	29° $\mathbb{Y}$ 25'46	
opposition	226 Jul 31 j 11:03	6° $\approx$ 36'24	-1°21'28	opposition	232 Oct 19 j 05:06	25° $\mathbb{Y}$ 55'43	-2°43'16
min. Earth dist.	226 Jul 31 j 16:41	6° $\approx$ 35'19	8.69321 AU	min. Earth dist.	232 Oct 19 j 01:39	25° $\mathbb{Y}$ 56'25	8.06106 AU
direct	226 Oct 08 j 05:02	3° $\approx$ 16'24		direct	232 Dec 24 j 11:56	22° $\mathbb{Y}$ 29'23	
evening set	227 Jan 15 j 21:33	10° $\approx$ 33'13			233 Apr 01 j 15:35	0° $\mathbb{B}$	
				evening set	233 Apr 06 j 07:47	0° $\mathbb{B}$ 35'40	
conjunction	227 Feb 01 j 18:47	12° $\approx$ 37'03	-1°18'35	conjunction	233 Apr 24 j 03:28	2° $\mathbb{B}$ 54'26	-2°04'42
minimum elong	227 Feb 01 j 18:45	12° $\approx$ 37'02	1°18'36	minimum elong	233 Apr 24 j 03:31	2° $\mathbb{B}$ 54'27	2°04'41
max. Earth dist.	227 Feb 01 j 13:19	12° $\approx$ 35'22	10.63515 AU	max. Earth dist.	233 Apr 24 j 09:00	2° $\mathbb{B}$ 56'14	10.03125 AU
morning rise	227 Feb 18 j 19:59	14° $\approx$ 42'08		morning rise	233 May 12 j 02:30	5° $\mathbb{B}$ 14'17	
	227 Feb 21 j 07:30	15° $\approx$		retrograde	233 Aug 27 j 00:38	13° $\mathbb{B}$ 39'12	
retrograde	227 Jun 04 j 03:41	22° $\approx$ 23'16		opposition	233 Nov 02 j 11:56	10° $\mathbb{B}$ 09'01	-2°25'28
opposition	227 Aug 13 j 11:07	18° $\approx$ 58'14	-1°51'46	min. Earth dist.	233 Nov 02 j 07:07	10° $\mathbb{B}$ 10'01	8.01095 AU
min. Earth dist.	227 Aug 13 j 14:50	18° $\approx$ 57'30	8.57552 AU	direct	234 Jan 07 j 18:02	6° $\mathbb{B}$ 41'38	
direct	227 Oct 20 j 15:40	15° $\approx$ 37'26		evening set	234 Apr 21 j 08:30	14° $\mathbb{B}$ 53'27	
evening set	228 Jan 28 j 13:14	23° $\approx$ 01'54			234 Apr 22 j 04:53	15° $\mathbb{B}$	

conjunction	234 May 09 j 08:22	17° <b>8</b> 13'59	-1°46'31	minimum elong	240 Aug 04 j 17:40	11° <b>Ω</b> 19'58	1°15'27
minimum elong	234 May 09 j 08:26	17° <b>8</b> 14'00	1°46'31	max. Earth dist.	240 Aug 05 j 00:25	11° <b>Ω</b> 22'05	10.35565 AU
max. Earth dist.	234 May 09 j 15:30	17° <b>8</b> 16'19	9.99475 AU	morning rise	240 Aug 22 j 08:45	13° <b>Ω</b> 32'00	
morning rise	234 May 27 j 10:28	19° <b>8</b> 35'14			240 Sep 03 j 12:39	15° <b>Ω</b>	
retrograde	234 Sep 10 j 18:48	27° <b>8</b> 59'27		retrograde	240 Dec 01 j 06:44	21° <b>Ω</b> 08'39	
opposition	234 Nov 16 j 20:05	24° <b>8</b> 29'32	-1°58'27	opposition	241 Feb 06 j 07:32	17° <b>Ω</b> 45'40	1°48'50
min. Earth dist.	234 Nov 16 j 14:04	24° <b>8</b> 30'47	7.98830 AU	min. Earth dist.	241 Feb 06 j 02:01	17° <b>Ω</b> 46'46	8.41609 AU
direct	235 Jan 22 j 04:10	21° <b>8</b> 01'16			241 Mar 18 j 15:59	15° <b>℞</b> <b>Ω</b>	
evening set	235 May 06 j 13:25	29° <b>8</b> 16'38		direct	241 Apr 16 j 14:42	14° <b>Ω</b> 17'36	
	235 May 12 j 03:51	0° <b>Π</b>			241 May 15 j 11:43	15° <b>Ω</b>	
				evening set	241 Jul 31 j 18:08	22° <b>Ω</b> 10'01	
conjunction	235 May 24 j 16:32	1° <b>Π</b> 38'10	-1°21'39				
minimum elong	235 May 24 j 16:35	1° <b>Π</b> 38'11	1°21'38	conjunction	241 Aug 18 j 08:36	24° <b>Ω</b> 20'15	1°39'39
max. Earth dist.	235 May 25 j 00:53	1° <b>Π</b> 40'54	9.98747 AU	minimum elong	241 Aug 18 j 08:33	24° <b>Ω</b> 20'14	1°39'39
morning rise	235 Jun 11 j 20:37	4° <b>Π</b> 00'02		max. Earth dist.	241 Aug 18 j 14:27	24° <b>Ω</b> 22'04	10.47764 AU
retrograde	235 Sep 25 j 10:36	12° <b>Π</b> 20'35		morning rise	241 Sep 04 j 18:06	26° <b>Ω</b> 28'59	
opposition	235 Dec 01 j 03:52	8° <b>Π</b> 51'18	-1°23'58		241 Oct 05 j 17:34	0° <b>℥</b>	
min. Earth dist.	235 Nov 30 j 21:15	8° <b>Π</b> 52'40	7.99579 AU	retrograde	241 Dec 14 j 00:26	3° <b>℥</b> 56'17	
direct	236 Feb 05 j 17:58	5° <b>Π</b> 22'21		opposition	242 Feb 19 j 09:54	0° <b>℥</b> 34'41	2°15'11
evening set	236 May 20 j 19:45	13° <b>Π</b> 38'55		min. Earth dist.	242 Feb 19 j 05:54	0° <b>℥</b> 35'28	8.54011 AU
					242 Feb 26 j 19:12	30° <b>℞</b> <b>Ω</b>	
conjunction	236 Jun 08 j 00:35	16° <b>Π</b> 00'32	-0°51'45	direct	242 Apr 30 j 06:28	27° <b>Ω</b> 07'34	
minimum elong	236 Jun 08 j 00:38	16° <b>Π</b> 00'33	0°51'44		242 Jun 29 j 17:25	0° <b>℥</b>	
max. Earth dist.	236 Jun 08 j 09:21	16° <b>Π</b> 03'24	10.01077 AU	evening set	242 Aug 14 j 03:16	4° <b>℥</b> 51'50	
morning rise	236 Jun 26 j 05:07	18° <b>Π</b> 22'03					
retrograde	236 Oct 08 j 20:59	26° <b>Π</b> 36'19		conjunction	242 Aug 31 j 12:26	6° <b>℥</b> 58'54	1°58'23
opposition	236 Dec 14 j 09:24	23° <b>Π</b> 07'58	-0°44'29	minimum elong	242 Aug 31 j 12:23	6° <b>℥</b> 58'53	1°58'22
min. Earth dist.	236 Dec 14 j 02:49	23° <b>Π</b> 09'20	8.03366 AU	max. Earth dist.	242 Aug 31 j 16:22	7° <b>℥</b> 00'06	10.60129 AU
direct	237 Feb 19 j 09:15	19° <b>Π</b> 38'36		morning rise	242 Sep 17 j 16:35	9° <b>℥</b> 04'27	
evening set	237 Jun 05 j 00:07	27° <b>Π</b> 54'01		retrograde	242 Dec 26 j 11:11	16° <b>℥</b> 23'15	
	237 Jun 21 j 07:30	0° <b>♄</b>		opposition	243 Mar 04 j 06:07	13° <b>℥</b> 02'55	2°34'18
				min. Earth dist.	243 Mar 04 j 04:04	13° <b>℥</b> 03'19	8.66283 AU
conjunction	237 Jun 23 j 04:57	0° <b>♄</b> 14'44	-0°18'56	direct	243 May 13 j 14:03	9° <b>℥</b> 36'54	
minimum elong	237 Jun 23 j 04:58	0° <b>♄</b> 14'44	0°18'56	evening set	243 Aug 27 j 01:36	17° <b>℥</b> 12'58	
max. Earth dist.	237 Jun 23 j 13:32	0° <b>♄</b> 17'31	10.06353 AU				
morning rise	237 Jul 11 j 08:15	2° <b>♄</b> 34'56		conjunction	243 Sep 13 j 05:40	19° <b>℥</b> 17'05	2°11'09
retrograde	237 Oct 22 j 23:41	10° <b>♄</b> 40'57		minimum elong	243 Sep 13 j 05:38	19° <b>℥</b> 17'04	2°11'08
opposition	237 Dec 28 j 11:14	7° <b>♄</b> 13'48	-0°02'49	max. Earth dist.	243 Sep 13 j 07:04	19° <b>℥</b> 17'30	10.72076 AU
min. Earth dist.	237 Dec 28 j 04:46	7° <b>♄</b> 15'08	8.09967 AU	morning rise	243 Sep 30 j 05:04	21° <b>℥</b> 19'46	
asc. node	238 Jan 23 j 00:34	5° <b>♄</b> 15'26		retrograde	244 Jan 07 j 14:29	28° <b>℥</b> 31'11	
direct	238 Mar 06 j 00:14	3° <b>♄</b> 44'18		opposition	244 Mar 15 j 20:55	25° <b>℥</b> 11'58	2°45'56
evening set	238 Jun 19 j 23:27	11° <b>♄</b> 56'19		min. Earth dist.	244 Mar 15 j 20:14	25° <b>℥</b> 12'06	8.77862 AU
				direct	244 May 25 j 14:52	21° <b>℥</b> 47'13	
conjunction	238 Jul 08 j 02:35	14° <b>♄</b> 15'15	0°14'37	evening set	244 Sep 07 j 13:34	29° <b>℥</b> 15'17	
minimum elong	238 Jul 08 j 02:34	14° <b>♄</b> 15'14	0°14'38		244 Sep 13 j 20:45	0° <b>♄</b>	
behind sun begin	238 Jul 07 j 23:43	14° <b>♄</b> 14'20					
behind sun end	238 Jul 08 j 05:24	14° <b>♄</b> 16'08		conjunction	244 Sep 24 j 13:12	1° <b>♄</b> 16'48	2°17'49
max. Earth dist.	238 Jul 08 j 10:40	14° <b>♄</b> 17'50	10.14226 AU	minimum elong	244 Sep 24 j 13:11	1° <b>♄</b> 16'48	2°17'48
morning rise	238 Jul 26 j 03:03	16° <b>♄</b> 33'16		max. Earth dist.	244 Sep 24 j 12:42	1° <b>♄</b> 16'39	10.83088 AU
retrograde	238 Nov 05 j 17:25	24° <b>♄</b> 29'50		morning rise	244 Oct 11 j 08:33	3° <b>♄</b> 17'03	
opposition	239 Jan 11 j 08:01	21° <b>♄</b> 04'02	0°38'12	retrograde	245 Jan 18 j 12:59	10° <b>♄</b> 22'23	
min. Earth dist.	239 Jan 11 j 01:44	21° <b>♄</b> 05'18	8.18939 AU	opposition	245 Mar 28 j 06:49	7° <b>♄</b> 04'06	2°50'08
direct	239 Mar 20 j 11:10	17° <b>♄</b> 34'42		min. Earth dist.	245 Mar 28 j 06:55	7° <b>♄</b> 04'05	8.88253 AU
evening set	239 Jul 04 j 15:31	25° <b>♄</b> 41'29		direct	245 Jun 07 j 09:26	3° <b>♄</b> 40'39	
				evening set	245 Sep 19 j 16:32	11° <b>♄</b> 01'17	
conjunction	239 Jul 22 j 15:24	27° <b>♄</b> 57'54	0°46'39				
minimum elong	239 Jul 22 j 15:22	27° <b>♄</b> 57'53	0°46'39	conjunction	245 Oct 06 j 12:37	13° <b>♄</b> 00'40	2°18'30
max. Earth dist.	239 Jul 22 j 22:41	28° <b>♄</b> 00'12	10.24169 AU	minimum elong	245 Oct 06 j 12:38	13° <b>♄</b> 00'40	2°18'30
	239 Aug 07 j 17:36	0° <b>♄</b>		max. Earth dist.	245 Oct 06 j 11:13	13° <b>♄</b> 00'15	10.92711 AU
morning rise	239 Aug 09 j 11:38	0° <b>♄</b> 13'06		morning rise	245 Oct 23 j 04:43	14° <b>♄</b> 58'55	
retrograde	239 Nov 19 j 04:07	7° <b>♄</b> 59'40		retrograde	246 Jan 30 j 09:35	21° <b>♄</b> 59'31	
opposition	240 Jan 24 j 22:49	4° <b>♄</b> 35'17	1°16'04	opposition	246 Apr 09 j 12:35	18° <b>♄</b> 42'00	2°47'13
min. Earth dist.	240 Jan 24 j 16:39	4° <b>♄</b> 36'31	8.29700 AU	min. Earth dist.	246 Apr 09 j 13:54	18° <b>♄</b> 41'45	8.97040 AU
direct	240 Apr 02 j 16:17	1° <b>♄</b> 06'27		direct	246 Jun 19 j 19:31	15° <b>♄</b> 19'49	
evening set	240 Jul 17 j 22:12	9° <b>♄</b> 06'33		evening set	246 Oct 01 j 11:56	22° <b>♄</b> 33'49	
conjunction	240 Aug 04 j 17:43	11° <b>Ω</b> 19'59	1°15'27	conjunction	246 Oct 18 j 05:13	24° <b>♄</b> 31'34	2°13'32

minimum elong	246 Oct 18 j 05:14	24° $\mathfrak{A}$ 31'34	2°13'33	behind sun begin	252 Dec 22 j 22:34	2° $\mathfrak{Z}$ 03'46	
max. Earth dist.	246 Oct 18 j 02:35	24° $\mathfrak{A}$ 30'47	11.00568 AU	behind sun end	252 Dec 23 j 03:54	2° $\mathfrak{Z}$ 05'20	
morning rise	246 Nov 03 j 19:00	26° $\mathfrak{A}$ 28'22		max. Earth dist.	252 Dec 22 j 16:06	2° $\mathfrak{Z}$ 01'51	11.00309 AU
	246 Dec 06 j 18:17	0° $\mathfrak{M}$		morning rise	253 Jan 08 j 17:46	4° $\mathfrak{Z}$ 02'32	
retrograde	247 Feb 11 j 01:50	3° $\mathfrak{M}$ 25'39		retrograde	253 Apr 21 j 02:55	11° $\mathfrak{Z}$ 12'13	
opposition	247 Apr 21 j 15:35	0° $\mathfrak{M}$ 08'38	2°37'42	opposition	253 Jul 01 j 01:44	7° $\mathfrak{Z}$ 52'34	0°01'18
min. Earth dist.	247 Apr 21 j 18:51	0° $\mathfrak{M}$ 08'02	9.03897 AU	min. Earth dist.	253 Jul 01 j 09:32	7° $\mathfrak{Z}$ 51'07	8.96450 AU
	247 Apr 23 j 14:06	30° $\mathfrak{R}$ $\mathfrak{A}$		desc. node	253 Jul 15 j 08:31	6° $\mathfrak{Z}$ 50'04	
direct	247 Jul 02 j 00:16	26° $\mathfrak{A}$ 47'39		direct	253 Sep 09 j 02:35	4° $\mathfrak{Z}$ 34'25	
	247 Sep 05 j 12:59	0° $\mathfrak{M}$		evening set	253 Dec 17 j 22:37	11° $\mathfrak{Z}$ 36'58	
evening set	247 Oct 13 j 01:09	3° $\mathfrak{M}$ 56'01					
				conjunction	254 Jan 03 j 14:56	13° $\mathfrak{Z}$ 35'50	-0°12'51
conjunction	247 Oct 29 j 16:17	5° $\mathfrak{M}$ 52'35	2°03'20	minimum elong	254 Jan 03 j 14:56	13° $\mathfrak{Z}$ 35'50	0°12'51
minimum elong	247 Oct 29 j 16:19	5° $\mathfrak{M}$ 52'35	2°03'21	behind sun begin	254 Jan 03 j 10:30	13° $\mathfrak{Z}$ 34'31	
max. Earth dist.	247 Oct 29 j 11:27	5° $\mathfrak{M}$ 51'10	11.06378 AU	behind sun end	254 Jan 03 j 19:21	13° $\mathfrak{Z}$ 37'08	
morning rise	247 Nov 15 j 04:51	7° $\mathfrak{M}$ 48'26		max. Earth dist.	254 Jan 03 j 06:24	13° $\mathfrak{Z}$ 33'17	10.92123 AU
retrograde	248 Feb 22 j 17:19	14° $\mathfrak{M}$ 43'57		morning rise	254 Jan 20 j 09:30	15° $\mathfrak{Z}$ 35'27	
opposition	248 May 02 j 16:34	11° $\mathfrak{M}$ 27'11	2°22'10	retrograde	254 May 03 j 14:30	22° $\mathfrak{Z}$ 52'37	
min. Earth dist.	248 May 02 j 21:23	11° $\mathfrak{M}$ 26'18	9.08589 AU	opposition	254 Jul 13 j 11:38	19° $\mathfrak{Z}$ 31'40	-0°33'05
direct	248 Jul 13 j 01:45	8° $\mathfrak{M}$ 07'13		min. Earth dist.	254 Jul 13 j 18:38	19° $\mathfrak{Z}$ 30'22	8.87254 AU
	248 Oct 21 j 19:05	15° $\mathfrak{M}$		direct	254 Sep 21 j 00:19	16° $\mathfrak{Z}$ 13'09	
evening set	248 Oct 23 j 09:54	15° $\mathfrak{M}$ 11'06		evening set	254 Dec 29 j 16:54	23° $\mathfrak{Z}$ 20'11	
conjunction	248 Nov 08 j 23:46	17° $\mathfrak{M}$ 06'59	1°48'27	conjunction	255 Jan 15 j 10:55	25° $\mathfrak{Z}$ 20'46	-0°40'41
minimum elong	248 Nov 08 j 23:48	17° $\mathfrak{M}$ 07'00	1°48'27	minimum elong	255 Jan 15 j 10:54	25° $\mathfrak{Z}$ 20'46	0°40'41
max. Earth dist.	248 Nov 08 j 17:32	17° $\mathfrak{M}$ 05'09	11.09950 AU	max. Earth dist.	255 Jan 15 j 02:39	25° $\mathfrak{Z}$ 18'17	10.82042 AU
morning rise	248 Nov 25 j 11:57	19° $\mathfrak{M}$ 02'23		morning rise	255 Feb 01 j 07:53	27° $\mathfrak{Z}$ 22'20	
retrograde	249 Mar 05 j 08:09	25° $\mathfrak{M}$ 57'37			255 Feb 24 j 14:17	0° $\mathfrak{A}$	
opposition	249 May 14 j 16:18	22° $\mathfrak{M}$ 40'48	2°01'21	retrograde	255 May 16 j 10:32	4° $\mathfrak{A}$ 48'20	
min. Earth dist.	249 May 14 j 21:42	22° $\mathfrak{M}$ 39'49	9.10956 AU	opposition	255 Jul 26 j 02:47	1° $\mathfrak{A}$ 25'56	-1°06'52
direct	249 Jul 24 j 23:11	19° $\mathfrak{M}$ 21'42		min. Earth dist.	255 Jul 26 j 09:07	1° $\mathfrak{A}$ 24'44	8.76401 AU
evening set	249 Nov 03 j 15:45	26° $\mathfrak{M}$ 22'23			255 Aug 14 j 16:43	30° $\mathfrak{R}$ $\mathfrak{Z}$	
				direct	255 Oct 03 j 02:43	28° $\mathfrak{Z}$ 06'44	
conjunction	249 Nov 20 j 05:13	28° $\mathfrak{M}$ 18'02	1°29'29		255 Nov 19 j 14:32	0° $\mathfrak{A}$	
minimum elong	249 Nov 20 j 05:15	28° $\mathfrak{M}$ 18'03	1°29'28	evening set	256 Jan 10 j 18:42	5° $\mathfrak{A}$ 19'43	
max. Earth dist.	249 Nov 19 j 22:47	28° $\mathfrak{M}$ 16'09	11.11150 AU				
	249 Dec 04 j 18:47	0° $\mathfrak{A}$		conjunction	256 Jan 27 j 14:41	7° $\mathfrak{A}$ 22'21	-1°07'20
morning rise	249 Dec 06 j 17:34	0° $\mathfrak{A}$ 13'27		minimum elong	256 Jan 27 j 14:38	7° $\mathfrak{A}$ 22'20	1°07'20
retrograde	250 Mar 17 j 02:22	7° $\mathfrak{A}$ 09'58		max. Earth dist.	256 Jan 27 j 06:28	7° $\mathfrak{A}$ 19'50	10.70532 AU
opposition	250 May 26 j 16:02	3° $\mathfrak{A}$ 52'50	1°35'59	morning rise	256 Feb 13 j 14:28	9° $\mathfrak{A}$ 26'10	
min. Earth dist.	250 May 26 j 21:39	3° $\mathfrak{A}$ 51'48	9.10904 AU		256 Apr 07 j 23:28	15° $\mathfrak{A}$	
direct	250 Aug 05 j 19:08	0° $\mathfrak{A}$ 34'22		retrograde	256 May 28 j 13:47	17° $\mathfrak{A}$ 01'57	
evening set	250 Nov 14 j 20:40	7° $\mathfrak{A}$ 33'13			256 Jul 19 j 14:04	15° $\mathfrak{R}$ $\mathfrak{A}$	
				opposition	256 Aug 06 j 23:42	13° $\mathfrak{A}$ 37'59	-1°38'34
conjunction	250 Dec 01 j 10:09	9° $\mathfrak{A}$ 29'05	1°07'06	min. Earth dist.	256 Aug 07 j 05:35	13° $\mathfrak{A}$ 36'51	8.64389 AU
minimum elong	250 Dec 01 j 10:11	9° $\mathfrak{A}$ 29'06	1°07'05	direct	256 Oct 14 j 09:19	10° $\mathfrak{A}$ 17'51	
max. Earth dist.	250 Dec 01 j 03:07	9° $\mathfrak{A}$ 27'01	11.09918 AU		256 Dec 30 j 10:32	15° $\mathfrak{A}$	
morning rise	250 Dec 17 j 23:18	11° $\mathfrak{A}$ 24'57		evening set	257 Jan 22 j 05:30	17° $\mathfrak{A}$ 38'09	
retrograde	251 Mar 28 j 22:53	18° $\mathfrak{A}$ 24'16					
opposition	251 Jun 07 j 16:54	15° $\mathfrak{A}$ 06'34	1°06'54	conjunction	257 Feb 08 j 03:53	19° $\mathfrak{A}$ 43'03	-1°31'32
min. Earth dist.	251 Jun 07 j 23:30	15° $\mathfrak{A}$ 05'22	9.08425 AU	minimum elong	257 Feb 08 j 03:50	19° $\mathfrak{A}$ 43'02	1°31'32
direct	251 Aug 17 j 11:51	11° $\mathfrak{A}$ 48'30		max. Earth dist.	257 Feb 07 j 20:35	19° $\mathfrak{A}$ 40'47	10.58116 AU
evening set	251 Nov 26 j 02:21	18° $\mathfrak{A}$ 46'59		morning rise	257 Feb 25 j 06:43	21° $\mathfrak{A}$ 49'20	
				retrograde	257 Jun 10 j 23:59	29° $\mathfrak{A}$ 35'28	
conjunction	251 Dec 12 j 16:14	20° $\mathfrak{A}$ 43'27	0°42'02	opposition	257 Aug 20 j 02:36	26° $\mathfrak{A}$ 09'53	-2°06'33
minimum elong	251 Dec 12 j 16:15	20° $\mathfrak{A}$ 43'28	0°42'02	min. Earth dist.	257 Aug 20 j 07:40	26° $\mathfrak{A}$ 08'54	8.51771 AU
max. Earth dist.	251 Dec 12 j 07:46	20° $\mathfrak{A}$ 40'58	11.06283 AU	direct	257 Oct 26 j 23:47	22° $\mathfrak{A}$ 48'39	
morning rise	251 Dec 29 j 06:54	22° $\mathfrak{A}$ 40'12			258 Feb 01 j 17:34	0° $\mathfrak{H}$	
retrograde	252 Apr 08 j 21:29	29° $\mathfrak{A}$ 43'54		evening set	258 Feb 04 j 02:13	0° $\mathfrak{H}$ 17'19	
opposition	252 Jun 18 j 19:50	26° $\mathfrak{A}$ 25'21	0°35'00				
min. Earth dist.	252 Jun 19 j 03:26	26° $\mathfrak{A}$ 23'57	9.03578 AU	conjunction	258 Feb 21 j 03:34	2° $\mathfrak{H}$ 24'44	-1°51'55
direct	252 Aug 28 j 06:07	23° $\mathfrak{A}$ 07'22		minimum elong	258 Feb 21 j 03:31	2° $\mathfrak{H}$ 24'43	1°51'55
	252 Dec 05 j 09:57	0° $\mathfrak{Z}$		max. Earth dist.	258 Feb 20 j 22:33	2° $\mathfrak{H}$ 23'10	10.45373 AU
evening set	252 Dec 06 j 10:20	0° $\mathfrak{Z}$ 07'04		morning rise	258 Mar 10 j 09:35	4° $\mathfrak{H}$ 33'38	
				retrograde	258 Jun 24 j 18:48	12° $\mathfrak{H}$ 30'14	
conjunction	252 Dec 23 j 01:13	2° $\mathfrak{Z}$ 04'33	0°15'07	opposition	258 Sep 02 j 12:02	9° $\mathfrak{H}$ 03'06	-2°29'07
minimum elong	252 Dec 23 j 01:14	2° $\mathfrak{Z}$ 04'33	0°15'07	min. Earth dist.	258 Sep 02 j 15:10	9° $\mathfrak{H}$ 02'29	8.39146 AU

direct	258 Nov 08 j 22:08	5° $\text{H}$ 40'38	direct	265 Jan 29 j 14:47	29° $\text{S}$ 08'52
evening set	259 Feb 17 j 09:31	13° $\text{H}$ 18'17		265 Feb 28 j 22:16	0° $\text{II}$
			evening set	265 May 14 j 07:42	7° $\text{II}$ 25'48
conjunction	259 Mar 06 j 14:21	15° $\text{H}$ 28'24 -2°07'09			
minimum elong	259 Mar 06 j 14:19	15° $\text{H}$ 28'23 2°07'08	conjunction	265 Jun 01 j 12:01	9° $\text{II}$ 47'42 -1°05'49
max. Earth dist.	259 Mar 06 j 11:57	15° $\text{H}$ 27'39 10.32932 AU	minimum elong	265 Jun 01 j 12:04	9° $\text{II}$ 47'43 1°05'49
morning rise	259 Mar 23 j 23:53	17° $\text{H}$ 40'03	max. Earth dist.	265 Jun 01 j 20:59	9° $\text{II}$ 50'38 9.98045 AU
retrograde	259 Jul 08 j 23:08	25° $\text{H}$ 46'31	morning rise	265 Jun 19 j 16:44	12° $\text{II}$ 09'42
opposition	259 Sep 16 j 03:47	22° $\text{H}$ 17'58 -2°44'31	retrograde	265 Oct 02 j 17:48	20° $\text{II}$ 27'43
min. Earth dist.	259 Sep 16 j 04:41	22° $\text{H}$ 17'47 8.27147 AU	opposition	265 Dec 08 j 09:43	16° $\text{II}$ 58'21 -1°02'51
direct	259 Nov 22 j 02:08	18° $\text{H}$ 54'13	min. Earth dist.	265 Dec 08 j 02:08	16° $\text{II}$ 59'55 7.99831 AU
evening set	260 Mar 02 j 04:01	26° $\text{H}$ 41'07	direct	266 Feb 13 j 06:13	13° $\text{II}$ 28'39
			evening set	266 May 29 j 13:28	21° $\text{II}$ 45'22
conjunction	260 Mar 19 j 12:47	28° $\text{H}$ 53'58 -2°15'55			
minimum elong	260 Mar 19 j 12:46	28° $\text{H}$ 53'58 2°15'54	conjunction	266 Jun 16 j 18:44	24° $\text{II}$ 06'47 -0°34'00
max. Earth dist.	260 Mar 19 j 12:40	28° $\text{H}$ 53'56 10.21443 AU	minimum elong	266 Jun 16 j 18:45	24° $\text{II}$ 06'48 0°34'00
	260 Mar 28 j 02:41	0° $\text{Y}$	max. Earth dist.	266 Jun 17 j 04:59	24° $\text{II}$ 10'07 10.02321 AU
morning rise	260 Apr 06 j 02:10	1° $\text{Y}$ 08'22	morning rise	266 Jul 04 j 22:55	26° $\text{II}$ 27'52
retrograde	260 Jul 22 j 09:41	9° $\text{Y}$ 23'19		266 Aug 03 j 08:47	0° $\text{S}$
opposition	260 Sep 29 j 01:13	5° $\text{Y}$ 53'39 -2°51'15	retrograde	266 Oct 17 j 00:32	4° $\text{S}$ 38'23
min. Earth dist.	260 Sep 29 j 00:08	5° $\text{Y}$ 53'52 8.16412 AU	opposition	266 Dec 22 j 13:33	1° $\text{S}$ 10'15 -0°21'44
direct	260 Dec 04 j 14:31	2° $\text{Y}$ 28'33	min. Earth dist.	266 Dec 22 j 05:24	1° $\text{S}$ 11'56 8.05519 AU
evening set	261 Mar 16 j 09:07	10° $\text{Y}$ 24'25		267 Jan 06 j 00:35	30° $\text{R}$ $\text{II}$
			direct	267 Feb 27 j 20:48	27° $\text{II}$ 40'27
conjunction	261 Apr 02 j 22:10	12° $\text{Y}$ 39'57 -2°17'14		267 Apr 20 j 17:29	0° $\text{S}$
minimum elong	261 Apr 02 j 22:11	12° $\text{Y}$ 39'58 2°17'13	evening set	267 Jun 13 j 15:52	5° $\text{S}$ 54'43
max. Earth dist.	261 Apr 02 j 23:48	12° $\text{Y}$ 40'29 10.11553 AU			
morning rise	261 Apr 20 j 15:39	14° $\text{Y}$ 56'57	conjunction	267 Jul 01 j 20:13	8° $\text{S}$ 14'43 -0°00'29
retrograde	261 Aug 06 j 00:47	23° $\text{Y}$ 18'18	minimum elong	267 Jul 01 j 20:14	8° $\text{S}$ 14'43 0°00'29
opposition	261 Oct 13 j 03:45	19° $\text{Y}$ 47'51 -2°48'11	behind sun begin	267 Jul 01 j 12:54	8° $\text{S}$ 12'22
min. Earth dist.	261 Oct 13 j 01:15	19° $\text{Y}$ 48'22 8.07561 AU	behind sun end	267 Jul 02 j 03:34	8° $\text{S}$ 17'04
direct	261 Dec 18 j 11:21	16° $\text{Y}$ 21'28	max. Earth dist.	267 Jul 02 j 06:45	8° $\text{S}$ 18'06 10.09410 AU
evening set	262 Mar 30 j 23:30	24° $\text{Y}$ 25'19	asc. node	267 Jul 07 j 03:42	8° $\text{S}$ 55'53
			morning rise	267 Jul 19 j 22:11	10° $\text{S}$ 33'57
conjunction	262 Apr 17 j 17:04	26° $\text{Y}$ 43'19 -2°10'30	retrograde	267 Oct 31 j 00:26	18° $\text{S}$ 35'25
minimum elong	262 Apr 17 j 17:07	26° $\text{Y}$ 43'20 2°10'29	opposition	268 Jan 05 j 13:08	15° $\text{S}$ 08'46 0°19'58
max. Earth dist.	262 Apr 17 j 20:35	26° $\text{Y}$ 44'28 10.03859 AU	min. Earth dist.	268 Jan 05 j 05:15	15° $\text{S}$ 10'23 8.13827 AU
morning rise	262 May 05 j 14:35	29° $\text{Y}$ 02'35	direct	268 Mar 13 j 08:12	11° $\text{S}$ 39'14
	262 May 13 j 04:06	0° $\text{S}$	evening set	268 Jun 27 j 12:04	19° $\text{S}$ 49'01
retrograde	262 Aug 20 j 18:25	7° $\text{S}$ 27'41			
opposition	262 Oct 27 j 10:00	3° $\text{S}$ 56'52 -2°34'55	conjunction	268 Jul 15 j 13:43	22° $\text{S}$ 06'46 0°32'32
min. Earth dist.	262 Oct 27 j 06:18	3° $\text{S}$ 57'38 8.01145 AU	minimum elong	268 Jul 15 j 13:41	22° $\text{S}$ 06'46 0°32'33
direct	263 Jan 01 j 15:26	0° $\text{S}$ 29'18	max. Earth dist.	268 Jul 15 j 23:37	22° $\text{S}$ 09'56 10.18848 AU
evening set	263 Apr 14 j 21:47	8° $\text{S}$ 39'35	morning rise	268 Aug 02 j 11:55	24° $\text{S}$ 23'25
				268 Sep 23 j 02:33	0° $\text{J}$
conjunction	263 May 02 j 19:47	10° $\text{S}$ 59'38 -1°55'45	retrograde	268 Nov 12 j 16:21	2° $\text{J}$ 15'01
minimum elong	263 May 02 j 19:51	10° $\text{S}$ 59'39 1°55'44		269 Jan 03 j 14:27	30° $\text{R}$ $\text{S}$
max. Earth dist.	263 May 03 j 01:14	11° $\text{S}$ 01'25 9.98852 AU	opposition	269 Jan 18 j 07:18	28° $\text{S}$ 49'59 0°59'35
morning rise	263 May 20 j 20:52	13° $\text{S}$ 20'38	min. Earth dist.	269 Jan 18 j 00:20	28° $\text{S}$ 51'24 8.24233 AU
	263 Jun 03 j 00:47	15° $\text{S}$	direct	269 Mar 27 j 16:09	25° $\text{S}$ 20'59
retrograde	263 Sep 04 j 12:36	21° $\text{S}$ 46'21		269 Jun 12 j 18:42	0° $\text{J}$
opposition	263 Nov 10 j 18:09	18° $\text{S}$ 15'36 -2°11'54	evening set	269 Jul 11 j 23:46	3° $\text{J}$ 24'41
min. Earth dist.	263 Nov 10 j 13:15	18° $\text{S}$ 16'37 7.97587 AU			
	263 Dec 31 j 22:51	15° $\text{R}$ $\text{S}$	conjunction	269 Jul 29 j 21:21	5° $\text{J}$ 39'35 1°03'01
direct	264 Jan 16 j 00:56	14° $\text{S}$ 47'01	minimum elong	269 Jul 29 j 21:18	5° $\text{J}$ 39'34 1°03'02
	264 Jan 31 j 02:31	15° $\text{S}$	max. Earth dist.	269 Jul 30 j 05:45	5° $\text{J}$ 42'14 10.30057 AU
evening set	264 Apr 29 j 01:31	23° $\text{S}$ 01'48	morning rise	269 Aug 16 j 14:49	7° $\text{J}$ 53'10
				269 Oct 31 j 18:40	15° $\text{J}$
conjunction	264 May 17 j 03:18	25° $\text{S}$ 23'12 -1°33'43	retrograde	269 Nov 25 j 22:17	15° $\text{J}$ 34'40
minimum elong	264 May 17 j 03:21	25° $\text{S}$ 23'14 1°33'42		269 Dec 21 j 06:09	15° $\text{R}$ $\text{J}$
max. Earth dist.	264 May 17 j 10:31	25° $\text{S}$ 25'35 9.96868 AU	opposition	270 Jan 31 j 19:21	12° $\text{J}$ 11'16 1°34'53
morning rise	264 Jun 04 j 06:56	27° $\text{S}$ 45'10	min. Earth dist.	270 Jan 31 j 13:30	12° $\text{J}$ 12'26 8.36113 AU
	264 Jun 22 j 07:24	0° $\text{II}$	direct	270 Apr 10 j 19:06	8° $\text{J}$ 43'05
retrograde	264 Sep 18 j 05:18	6° $\text{II}$ 08'25		270 Jul 12 j 04:28	15° $\text{J}$
opposition	264 Nov 24 j 02:40	2° $\text{II}$ 38'10 -1°40'28	evening set	270 Jul 26 j 01:23	16° $\text{J}$ 39'28
min. Earth dist.	264 Nov 23 j 20:28	2° $\text{II}$ 39'27 7.97133 AU			
	264 Dec 30 j 03:31	30° $\text{R}$ $\text{S}$	conjunction	270 Aug 12 j 18:05	18° $\text{J}$ 51'11 1°29'27

minimum elong	270 Aug 12 j 18:02	18° $\Omega$ 51'10	1°29'27	morning rise	276 Nov 09 j 16:29	3° $\mathbb{M}$ 10'40	
max. Earth dist.	270 Aug 13 j 00:26	18° $\Omega$ 53'10	10.42380 AU	retrograde	277 Feb 17 j 03:12	10° $\mathbb{M}$ 07'15	
morning rise	270 Aug 30 j 06:16	21° $\Omega$ 01'28		opposition	277 Apr 27 j 21:09	6° $\mathbb{M}$ 50'30	2°29'29
retrograde	270 Dec 08 j 19:21	28° $\Omega$ 33'12		min. Earth dist.	277 Apr 28 j 01:29	6° $\mathbb{M}$ 49'42	9.06316 AU
opposition	271 Feb 14 j 01:03	25° $\Omega$ 11'22	2°04'14	direct	277 Jul 08 j 07:16	3° $\mathbb{M}$ 30'10	
min. Earth dist.	271 Feb 13 j 20:01	25° $\Omega$ 12'22	8.48767 AU	evening set	277 Oct 18 j 22:18	10° $\mathbb{M}$ 36'21	
direct	271 Apr 24 j 15:39	21° $\Omega$ 44'12					
evening set	271 Aug 08 j 16:08	29° $\Omega$ 32'30		conjunction	277 Nov 04 j 12:53	12° $\mathbb{M}$ 32'37	1°55'20
	271 Aug 12 j 10:56	0° $\mathbb{M}$		minimum elong	277 Nov 04 j 12:55	12° $\mathbb{M}$ 32'37	1°55'20
				max. Earth dist.	277 Nov 04 j 06:53	12° $\mathbb{M}$ 30'51	11.07931 AU
conjunction	271 Aug 26 j 03:35	1° $\mathbb{M}$ 40'57	1°50'42	morning rise	277 Nov 21 j 01:05	14° $\mathbb{M}$ 28'16	
minimum elong	271 Aug 26 j 03:32	1° $\mathbb{M}$ 40'56	1°50'42		277 Nov 25 j 16:15	15° $\mathbb{M}$	
max. Earth dist.	271 Aug 26 j 08:22	1° $\mathbb{M}$ 42'26	10.55115 AU	retrograde	278 Feb 28 j 18:48	21° $\mathbb{M}$ 23'55	
morning rise	271 Sep 12 j 10:15	3° $\mathbb{M}$ 47'56		opposition	278 May 09 j 21:37	18° $\mathbb{M}$ 07'04	2°10'52
retrograde	271 Dec 21 j 10:26	11° $\mathbb{M}$ 10'39		min. Earth dist.	278 May 10 j 03:35	18° $\mathbb{M}$ 05'58	9.09224 AU
opposition	272 Feb 27 j 00:28	7° $\mathbb{M}$ 50'12	2°26'37		278 Jul 03 j 23:39	15° $\mathbb{R}$ $\mathbb{M}$	
min. Earth dist.	272 Feb 26 j 20:25	7° $\mathbb{M}$ 50'59	8.61493 AU	direct	278 Jul 20 j 04:51	14° $\mathbb{M}$ 47'27	
direct	272 May 07 j 03:09	4° $\mathbb{M}$ 24'12			278 Aug 05 j 09:21	15° $\mathbb{M}$	
evening set	272 Aug 20 j 19:43	12° $\mathbb{M}$ 04'05		evening set	278 Oct 30 j 05:45	21° $\mathbb{M}$ 49'55	
conjunction	272 Sep 07 j 02:06	14° $\mathbb{M}$ 09'28	2°06'09	conjunction	278 Nov 15 j 19:23	23° $\mathbb{M}$ 45'46	1°38'03
minimum elong	272 Sep 07 j 02:04	14° $\mathbb{M}$ 09'27	2°06'08	minimum elong	278 Nov 15 j 19:25	23° $\mathbb{M}$ 45'47	1°38'03
max. Earth dist.	272 Sep 07 j 05:25	14° $\mathbb{M}$ 10'28	10.67578 AU	max. Earth dist.	278 Nov 15 j 11:35	23° $\mathbb{M}$ 43'29	11.09694 AU
morning rise	272 Sep 24 j 03:32	16° $\mathbb{M}$ 13'22		morning rise	278 Dec 02 j 07:38	25° $\mathbb{M}$ 41'17	
retrograde	273 Jan 01 j 17:56	23° $\mathbb{M}$ 28'04			279 Jan 13 j 08:15	0° $\mathbb{X}$	
opposition	273 Mar 10 j 18:03	20° $\mathbb{M}$ 08'51	2°41'34	retrograde	279 Mar 12 j 10:31	2° $\mathbb{X}$ 37'33	
min. Earth dist.	273 Mar 10 j 15:45	20° $\mathbb{M}$ 09'18	8.73613 AU		279 May 12 j 20:12	30° $\mathbb{R}$ $\mathbb{M}$	
direct	273 May 20 j 06:55	16° $\mathbb{M}$ 44'04		opposition	279 May 21 j 21:46	29° $\mathbb{M}$ 20'19	1°47'22
evening set	273 Sep 02 j 12:35	24° $\mathbb{M}$ 15'43		min. Earth dist.	279 May 22 j 05:08	29° $\mathbb{M}$ 18'58	9.09768 AU
				direct	279 Aug 01 j 02:25	26° $\mathbb{M}$ 01'12	
conjunction	273 Sep 19 j 14:17	26° $\mathbb{M}$ 18'21	2°15'30		279 Oct 13 j 11:02	0° $\mathbb{X}$	
minimum elong	273 Sep 19 j 14:16	26° $\mathbb{M}$ 18'20	2°15'29	evening set	279 Nov 10 j 11:05	3° $\mathbb{X}$ 01'16	
max. Earth dist.	273 Sep 19 j 15:33	26° $\mathbb{M}$ 18'43	10.79118 AU				
morning rise	273 Oct 06 j 11:13	28° $\mathbb{M}$ 19'36		conjunction	279 Nov 27 j 00:28	4° $\mathbb{X}$ 57'10	1°17'03
	273 Oct 21 j 00:25	0° $\mathbb{A}$		minimum elong	279 Nov 27 j 00:30	4° $\mathbb{X}$ 57'11	1°17'02
retrograde	274 Jan 13 j 19:25	5° $\mathbb{A}$ 27'37		max. Earth dist.	279 Nov 26 j 15:37	4° $\mathbb{X}$ 54'34	11.09088 AU
opposition	274 Mar 23 j 06:25	2° $\mathbb{A}$ 09'26	2°49'00	morning rise	279 Dec 13 j 13:27	6° $\mathbb{X}$ 52'58	
min. Earth dist.	274 Mar 23 j 06:48	2° $\mathbb{A}$ 09'22	8.84517 AU	retrograde	280 Mar 23 j 05:03	13° $\mathbb{X}$ 51'28	
	274 Apr 23 j 03:26	30° $\mathbb{R}$ $\mathbb{M}$		opposition	280 Jun 01 j 22:22	10° $\mathbb{X}$ 33'34	1°19'46
direct	274 Jun 02 j 03:59	28° $\mathbb{M}$ 45'52		min. Earth dist.	280 Jun 02 j 05:58	10° $\mathbb{X}$ 32'10	9.07942 AU
	274 Jul 11 j 14:50	0° $\mathbb{A}$		direct	280 Aug 11 j 21:47	7° $\mathbb{X}$ 14'47	
evening set	274 Sep 14 j 20:04	6° $\mathbb{A}$ 09'55		evening set	280 Nov 20 j 16:22	14° $\mathbb{X}$ 13'53	
conjunction	274 Oct 01 j 17:38	8° $\mathbb{A}$ 10'12	2°18'47	conjunction	280 Dec 07 j 06:13	16° $\mathbb{X}$ 10'15	0°53'02
minimum elong	274 Oct 01 j 17:38	8° $\mathbb{A}$ 10'12	2°18'47	minimum elong	280 Dec 07 j 06:14	16° $\mathbb{X}$ 10'16	0°53'02
max. Earth dist.	274 Oct 01 j 15:45	8° $\mathbb{A}$ 09'38	10.89211 AU	max. Earth dist.	280 Dec 06 j 21:49	16° $\mathbb{X}$ 07'47	11.06131 AU
morning rise	274 Oct 18 j 11:03	10° $\mathbb{A}$ 09'17		morning rise	280 Dec 23 j 20:17	18° $\mathbb{X}$ 06'47	
retrograde	275 Jan 25 j 16:41	17° $\mathbb{A}$ 12'02		retrograde	281 Apr 04 j 03:08	25° $\mathbb{X}$ 09'02	
opposition	275 Apr 04 j 14:23	13° $\mathbb{A}$ 54'39	2°49'09	opposition	281 Jun 14 j 00:17	21° $\mathbb{X}$ 50'16	0°48'56
min. Earth dist.	275 Apr 04 j 16:51	13° $\mathbb{A}$ 54'11	8.93776 AU	min. Earth dist.	281 Jun 14 j 07:29	21° $\mathbb{X}$ 48'56	9.03806 AU
direct	275 Jun 14 j 17:52	10° $\mathbb{A}$ 32'17		direct	281 Aug 23 j 15:57	18° $\mathbb{X}$ 31'37	
evening set	275 Sep 26 j 19:14	17° $\mathbb{A}$ 49'27		evening set	281 Dec 01 j 23:22	25° $\mathbb{X}$ 31'18	
conjunction	275 Oct 13 j 13:32	19° $\mathbb{A}$ 47'55	2°16'14	conjunction	281 Dec 18 j 14:02	27° $\mathbb{X}$ 28'33	0°26'46
minimum elong	275 Oct 13 j 13:33	19° $\mathbb{A}$ 47'55	2°16'15	minimum elong	281 Dec 18 j 14:03	27° $\mathbb{X}$ 28'33	0°26'47
max. Earth dist.	275 Oct 13 j 09:21	19° $\mathbb{A}$ 46'40	10.97533 AU	max. Earth dist.	281 Dec 18 j 05:38	27° $\mathbb{X}$ 26'04	11.00917 AU
morning rise	275 Oct 30 j 04:23	21° $\mathbb{A}$ 45'21		morning rise	282 Jan 04 j 05:41	29° $\mathbb{X}$ 26'10	
retrograde	276 Feb 06 j 09:34	28° $\mathbb{A}$ 44'17			282 Jan 09 j 03:16	0° $\mathbb{B}$	
opposition	276 Apr 15 j 19:02	25° $\mathbb{A}$ 27'22	2°42'27	retrograde	282 Apr 16 j 07:13	6° $\mathbb{B}$ 33'45	
min. Earth dist.	276 Apr 15 j 22:33	25° $\mathbb{A}$ 26'43	9.01116 AU	opposition	282 Jun 26 j 05:03	3° $\mathbb{B}$ 13'57	0°15'50
direct	276 Jun 26 j 03:11	22° $\mathbb{A}$ 06'06		min. Earth dist.	282 Jun 26 j 12:13	3° $\mathbb{B}$ 12'37	8.97497 AU
evening set	276 Oct 07 j 11:19	29° $\mathbb{A}$ 17'16			282 Aug 25 j 14:51	30° $\mathbb{R}$ $\mathbb{X}$	
	276 Oct 13 j 14:32	0° $\mathbb{M}$		direct	282 Sep 04 j 10:36	29° $\mathbb{X}$ 55'14	
					282 Sep 14 j 04:57	0° $\mathbb{B}$	
conjunction	276 Oct 24 j 03:24	1° $\mathbb{M}$ 14'22	2°08'15	evening set	282 Dec 13 j 09:50	6° $\mathbb{B}$ 57'05	
minimum elong	276 Oct 24 j 03:25	1° $\mathbb{M}$ 14'23	2°08'16	desc. node	282 Dec 18 j 07:01	7° $\mathbb{B}$ 31'29	
max. Earth dist.	276 Oct 23 j 22:20	1° $\mathbb{M}$ 12'53	11.03839 AU				

conjunction	282 Dec 30 j 01:34	8° $\mathfrak{S}$ 55'32 -0°00'54	max. Earth dist.	289 Mar 13 j 22:59	23° $\mathfrak{H}$ 26'47 10.26450 AU
minimum elong	282 Dec 30 j 01:32	8° $\mathfrak{S}$ 55'32 0°00'54	morning rise	289 Mar 31 j 11:40	25° $\mathfrak{H}$ 40'18
behind sun begin	282 Dec 29 j 18:33	8° $\mathfrak{S}$ 53'28		289 May 08 j 01:31	0° $\mathfrak{Y}$
behind sun end	282 Dec 30 j 08:31	8° $\mathfrak{S}$ 57'35	retrograde	289 Jul 16 j 16:45	3° $\mathfrak{Y}$ 51'57
max. Earth dist.	282 Dec 29 j 16:28	8° $\mathfrak{S}$ 52'51 10.93623 AU	opposition	289 Sep 23 j 13:55	0° $\mathfrak{Y}$ 23'06 -2°49'23
morning rise	283 Jan 15 j 19:17	10° $\mathfrak{S}$ 54'38	min. Earth dist.	289 Sep 23 j 13:30	0° $\mathfrak{Y}$ 23'11 8.21322 AU
retrograde	283 Apr 28 j 15:12	18° $\mathfrak{S}$ 09'04		289 Sep 28 j 09:05	30° $\mathfrak{R}$ $\mathfrak{H}$
opposition	283 Jul 08 j 13:37	14° $\mathfrak{S}$ 48'03 -0°18'28	direct	289 Nov 29 j 06:29	26° $\mathfrak{H}$ 58'58
min. Earth dist.	283 Jul 08 j 21:04	14° $\mathfrak{S}$ 46'39 8.89239 AU		290 Jan 27 j 01:31	0° $\mathfrak{Y}$
direct	283 Sep 16 j 07:02	11° $\mathfrak{S}$ 29'03	evening set	290 Mar 10 j 17:58	4° $\mathfrak{Y}$ 51'11
evening set	283 Dec 25 j 01:32	18° $\mathfrak{S}$ 34'39			
conjunction	284 Jan 10 j 18:44	20° $\mathfrak{S}$ 34'40 -0°28'55	conjunction	290 Mar 28 j 05:02	7° $\mathfrak{Y}$ 05'31 -2°17'30
minimum elong	284 Jan 10 j 18:43	20° $\mathfrak{S}$ 34'39 0°28'55	minimum elong	290 Mar 28 j 05:03	7° $\mathfrak{Y}$ 05'31 2°17'29
max. Earth dist.	284 Jan 10 j 10:02	20° $\mathfrak{S}$ 32'03 10.84511 AU	max. Earth dist.	290 Mar 28 j 07:02	7° $\mathfrak{Y}$ 06'10 10.16322 AU
morning rise	284 Jan 27 j 14:52	22° $\mathfrak{S}$ 35'34	morning rise	290 Apr 14 j 20:45	9° $\mathfrak{Y}$ 21'22
retrograde	284 May 10 j 06:32	29° $\mathfrak{S}$ 58'12	retrograde	290 Jul 31 j 05:26	17° $\mathfrak{Y}$ 40'13
opposition	284 Jul 20 j 02:39	26° $\mathfrak{S}$ 35'50 -0°52'42	opposition	290 Oct 07 j 14:46	14° $\mathfrak{Y}$ 10'35 -2°50'28
min. Earth dist.	284 Jul 20 j 09:29	26° $\mathfrak{S}$ 34'33 8.79337 AU	min. Earth dist.	290 Oct 07 j 12:20	14° $\mathfrak{Y}$ 11'05 8.12107 AU
direct	284 Sep 27 j 08:41	23° $\mathfrak{S}$ 16'21	direct	290 Dec 13 j 00:57	10° $\mathfrak{Y}$ 45'18
	285 Jan 01 j 04:05	0° $\approx$	evening set	291 Mar 25 j 04:45	18° $\mathfrak{Y}$ 45'41
evening set	285 Jan 05 j 00:02	0° $\approx$ 27'13	conjunction	291 Apr 11 j 20:26	21° $\mathfrak{Y}$ 02'34 -2°14'09
conjunction	285 Jan 21 j 19:15	2° $\approx$ 29'08 -0°56'15	minimum elong	291 Apr 11 j 20:28	21° $\mathfrak{Y}$ 02'34 2°14'08
minimum elong	285 Jan 21 j 19:13	2° $\approx$ 29'07 0°56'15	max. Earth dist.	291 Apr 12 j 01:09	21° $\mathfrak{Y}$ 04'06 10.08103 AU
max. Earth dist.	285 Jan 21 j 12:05	2° $\approx$ 26'56 10.73910 AU	morning rise	291 Apr 29 j 16:07	23° $\mathfrak{Y}$ 20'46
morning rise	285 Feb 07 j 17:53	4° $\approx$ 32'07		291 Jul 01 j 05:18	0° $\mathfrak{S}$
retrograde	285 May 23 j 07:08	12° $\approx$ 04'06	retrograde	291 Aug 14 j 22:28	1° $\mathfrak{S}$ 44'18
opposition	285 Aug 01 j 21:08	8° $\approx$ 40'19 -1°25'30		291 Sep 29 j 06:29	30° $\mathfrak{R}$ $\mathfrak{Y}$
min. Earth dist.	285 Aug 02 j 02:27	8° $\approx$ 39'18 8.68164 AU	opposition	291 Oct 21 j 19:38	28° $\mathfrak{O}$ $\mathfrak{Y}$ 14'11 -2°41'27
direct	285 Oct 09 j 13:49	5° $\approx$ 20'11	min. Earth dist.	291 Oct 21 j 15:15	28° $\mathfrak{O}$ $\mathfrak{Y}$ 15'05 8.05017 AU
evening set	286 Jan 17 j 06:58	12° $\approx$ 37'42	direct	291 Dec 27 j 01:41	24° $\mathfrak{Y}$ 47'45
conjunction	286 Feb 03 j 04:25	14° $\approx$ 41'45 -1°21'39		292 Mar 15 j 04:41	0° $\mathfrak{S}$
minimum elong	286 Feb 03 j 04:23	14° $\approx$ 41'44 1°21'40	evening set	292 Apr 08 j 00:06	2° $\mathfrak{S}$ 55'01
max. Earth dist.	286 Feb 02 j 22:55	14° $\approx$ 40'03 10.62243 AU	conjunction	292 Apr 25 j 20:18	5° $\mathfrak{S}$ 14'05 -2°02'42
	286 Feb 05 j 15:38	15° $\approx$	minimum elong	292 Apr 25 j 20:21	5° $\mathfrak{S}$ 14'06 2°02'41
morning rise	286 Feb 20 j 05:46	16° $\approx$ 47'04	max. Earth dist.	292 Apr 26 j 02:42	5° $\mathfrak{S}$ 16'10 10.02233 AU
retrograde	286 Jun 05 j 15:23	24° $\approx$ 29'12	morning rise	292 May 13 j 19:40	7° $\mathfrak{S}$ 34'12
opposition	286 Aug 14 j 21:43	21° $\approx$ 03'58 -1°55'17		292 Jul 26 j 12:24	15° $\mathfrak{S}$
min. Earth dist.	286 Aug 15 j 01:16	21° $\approx$ 03'17 8.56192 AU	retrograde	292 Aug 28 j 17:39	15° $\mathfrak{S}$ 59'29
direct	286 Oct 22 j 00:43	17° $\approx$ 43'02		292 Oct 01 j 02:29	15° $\mathfrak{R}$ $\mathfrak{S}$
evening set	287 Jan 29 j 23:39	25° $\approx$ 08'24	opposition	292 Nov 04 j 02:58	12° $\mathfrak{S}$ 29'17 -2°22'24
conjunction	287 Feb 15 j 23:40	27° $\approx$ 14'50 -1°43'49	min. Earth dist.	292 Nov 03 j 21:31	12° $\mathfrak{S}$ 30'24 8.00410 AU
minimum elong	287 Feb 15 j 23:37	27° $\approx$ 14'49 1°43'50	direct	293 Jan 09 j 07:30	9° $\mathfrak{S}$ 01'47
max. Earth dist.	287 Feb 15 j 19:12	27° $\approx$ 13'26 10.50044 AU		293 Apr 05 j 02:14	15° $\mathfrak{S}$
morning rise	287 Mar 05 j 04:12	29° $\approx$ 22'41	evening set	293 Apr 23 j 01:42	17° $\mathfrak{S}$ 14'17
	287 Mar 10 j 07:16	0° $\mathfrak{H}$	conjunction	293 May 11 j 01:54	19° $\mathfrak{S}$ 35'00 -1°43'36
retrograde	287 Jun 19 j 08:27	7° $\mathfrak{H}$ 15'15	minimum elong	293 May 11 j 01:58	19° $\mathfrak{S}$ 35'01 1°43'35
opposition	287 Aug 28 j 04:50	3° $\mathfrak{H}$ 48'39 -2°20'20	max. Earth dist.	293 May 11 j 09:15	19° $\mathfrak{S}$ 37'25 9.99004 AU
min. Earth dist.	287 Aug 28 j 07:07	3° $\mathfrak{H}$ 48'12 8.43987 AU	morning rise	293 May 29 j 04:17	21° $\mathfrak{S}$ 56'26
direct	287 Nov 03 j 18:30	0° $\mathfrak{H}$ 26'45		293 Aug 24 j 05:41	0° $\mathfrak{II}$
evening set	288 Feb 12 j 02:50	8° $\mathfrak{H}$ 00'49	retrograde	293 Sep 12 j 12:34	0° $\mathfrak{II}$ 20'34
conjunction	288 Feb 29 j 05:58	10° $\mathfrak{H}$ 09'49 -2°01'23		293 Oct 01 j 17:31	30° $\mathfrak{R}$ $\mathfrak{S}$
minimum elong	288 Feb 29 j 05:56	10° $\mathfrak{H}$ 09'48 2°01'23	opposition	293 Nov 18 j 11:27	26° $\mathfrak{S}$ 50'42 -1°54'19
max. Earth dist.	288 Feb 29 j 02:55	10° $\mathfrak{H}$ 08'51 10.37905 AU	min. Earth dist.	293 Nov 18 j 05:27	26° $\mathfrak{S}$ 51'57 7.98549 AU
morning rise	288 Mar 17 j 14:03	12° $\mathfrak{H}$ 20'21	direct	294 Jan 23 j 19:27	23° $\mathfrak{S}$ 22'20
retrograde	288 Jul 02 j 09:48	20° $\mathfrak{H}$ 23'00		294 Apr 25 j 06:40	0° $\mathfrak{II}$
opposition	288 Sep 09 j 18:24	16° $\mathfrak{H}$ 55'10 -2°38'54	evening set	294 May 08 j 06:57	1° $\mathfrak{II}$ 38'06
min. Earth dist.	288 Sep 09 j 19:32	16° $\mathfrak{H}$ 54'57 8.32154 AU	conjunction	294 May 26 j 10:13	3° $\mathfrak{II}$ 59'43 -1°17'59
direct	288 Nov 15 j 19:39	13° $\mathfrak{H}$ 32'11	minimum elong	294 May 26 j 10:17	3° $\mathfrak{II}$ 59'44 1°17'58
evening set	289 Feb 24 j 17:02	21° $\mathfrak{H}$ 15'24	max. Earth dist.	294 May 26 j 18:11	4° $\mathfrak{II}$ 02'20 9.98656 AU
conjunction	289 Mar 13 j 23:52	23° $\mathfrak{H}$ 27'04 -2°12'59	morning rise	294 Jun 13 j 14:31	6° $\mathfrak{II}$ 21'40
minimum elong	289 Mar 13 j 23:50	23° $\mathfrak{H}$ 27'03 2°12'58	retrograde	294 Sep 27 j 03:04	14° $\mathfrak{II}$ 41'50
			opposition	294 Dec 02 j 19:19	11° $\mathfrak{II}$ 12'40 -1°19'02
			min. Earth dist.	294 Dec 02 j 13:08	11° $\mathfrak{II}$ 13'57 7.99655 AU



direct	295 Feb 07 j 10:45	7° $\Pi$ 43'40			301 Apr 03 j 22:37	30° $\mathbb{R}$ $\mathcal{O}$	
evening set	295 May 23 j 13:23	16° $\Pi$ 00'25		direct	301 May 01 j 20:25	29° $\mathcal{O}$ 21'17	
					301 May 29 j 16:52	0° $\mathbb{M}$	
conjunction	295 Jun 10 j 18:16	18° $\Pi$ 22'01	-0°47'34	evening set	301 Aug 15 j 16:58	7° $\mathbb{M}$ 04'44	
minimum elong	295 Jun 10 j 18:19	18° $\Pi$ 22'02	0°47'34				
max. Earth dist.	295 Jun 11 j 02:24	18° $\Pi$ 24'40	10.01322 AU	conjunction	301 Sep 02 j 01:29	9° $\mathbb{M}$ 11'27	2°00'25
morning rise	295 Jun 28 j 22:54	20° $\Pi$ 43'30		minimum elong	301 Sep 02 j 01:26	9° $\mathbb{M}$ 11'26	2°00'24
retrograde	295 Oct 11 j 11:45	28° $\Pi$ 57'11		max. Earth dist.	301 Sep 02 j 04:46	9° $\mathbb{M}$ 12'28	10.61444 AU
opposition	295 Dec 17 j 00:43	25° $\Pi$ 29'00	-0°39'05	morning rise	301 Sep 19 j 05:12	11° $\mathbb{M}$ 16'42	
min. Earth dist.	295 Dec 16 j 18:23	25° $\Pi$ 30'19	8.03759 AU	retrograde	301 Dec 27 j 21:56	18° $\mathbb{M}$ 34'39	
direct	296 Feb 22 j 02:40	21° $\Pi$ 59'38		opposition	302 Mar 05 j 18:52	15° $\mathbb{M}$ 14'28	2°36'17
	296 Jun 04 j 18:15	0° $\mathcal{E}$		min. Earth dist.	302 Mar 05 j 16:49	15° $\mathbb{M}$ 14'52	8.67611 AU
evening set	296 Jun 06 j 17:39	0° $\mathcal{E}$ 15'00		direct	302 May 15 j 04:06	11° $\mathbb{M}$ 48'35	
				evening set	302 Aug 28 j 14:07	19° $\mathbb{M}$ 23'45	
conjunction	296 Jun 24 j 22:24	2° $\mathcal{E}$ 35'37	-0°14'32				
minimum elong	296 Jun 24 j 22:25	2° $\mathcal{E}$ 35'37	0°14'31	conjunction	302 Sep 14 j 17:43	21° $\mathbb{M}$ 27'33	2°12'21
behind sun begin	296 Jun 24 j 19:29	2° $\mathcal{E}$ 34'40		minimum elong	302 Sep 14 j 17:41	21° $\mathbb{M}$ 27'32	2°12'20
behind sun end	296 Jun 25 j 01:22	2° $\mathcal{E}$ 36'33		max. Earth dist.	302 Sep 14 j 18:53	21° $\mathbb{M}$ 27'54	10.73390 AU
max. Earth dist.	296 Jun 25 j 06:39	2° $\mathcal{E}$ 38'16	10.06892 AU	morning rise	302 Oct 01 j 16:43	23° $\mathbb{M}$ 29'57	
morning rise	296 Jul 13 j 01:36	4° $\mathcal{E}$ 55'40			302 Dec 12 j 04:07	0° $\mathcal{E}$	
retrograde	296 Oct 24 j 13:37	13° $\mathcal{E}$ 00'58		retrograde	303 Jan 09 j 00:58	0° $\mathcal{E}$ 40'36	
asc. node	296 Dec 05 j 18:01	11° $\mathcal{E}$ 27'17			303 Feb 06 j 08:53	30° $\mathbb{R}$ $\mathbb{M}$	
opposition	296 Dec 30 j 02:18	9° $\mathcal{E}$ 34'00	0°02'41	opposition	303 Mar 18 j 08:58	27° $\mathbb{M}$ 21'28	2°46'52
min. Earth dist.	296 Dec 29 j 19:36	9° $\mathcal{E}$ 35'23	8.10633 AU	min. Earth dist.	303 Mar 18 j 07:43	27° $\mathbb{M}$ 21'43	8.79152 AU
direct	297 Mar 07 j 16:35	6° $\mathcal{E}$ 04'33		direct	303 May 28 j 05:07	23° $\mathbb{M}$ 56'51	
evening set	297 Jun 21 j 16:33	14° $\mathcal{E}$ 16'17			303 Aug 28 j 20:58	0° $\mathcal{E}$	
				evening set	303 Sep 10 j 01:04	1° $\mathcal{E}$ 23'59	
conjunction	297 Jul 09 j 19:27	16° $\mathcal{E}$ 35'02	0°18'58				
minimum elong	297 Jul 09 j 19:26	16° $\mathcal{E}$ 35'01	0°18'58	conjunction	303 Sep 27 j 00:23	3° $\mathcal{E}$ 25'14	2°18'11
max. Earth dist.	297 Jul 10 j 03:47	16° $\mathcal{E}$ 37'42	10.15015 AU	minimum elong	303 Sep 27 j 00:22	3° $\mathcal{E}$ 25'13	2°18'11
morning rise	297 Jul 27 j 19:32	18° $\mathcal{E}$ 52'50		max. Earth dist.	303 Sep 27 j 00:30	3° $\mathcal{E}$ 25'16	10.84337 AU
retrograde	297 Nov 07 j 08:27	26° $\mathcal{E}$ 48'37		morning rise	303 Oct 13 j 19:17	5° $\mathcal{E}$ 25'12	
opposition	298 Jan 12 j 22:45	23° $\mathcal{E}$ 22'58	0°43'26	retrograde	304 Jan 21 j 00:34	12° $\mathcal{E}$ 29'50	
min. Earth dist.	298 Jan 12 j 15:50	23° $\mathcal{E}$ 24'23	8.19838 AU	opposition	304 Mar 29 j 18:19	9° $\mathcal{E}$ 11'37	2°50'03
direct	298 Mar 22 j 02:35	19° $\mathcal{E}$ 53'45		min. Earth dist.	304 Mar 29 j 18:12	9° $\mathcal{E}$ 11'38	8.89450 AU
evening set	298 Jul 06 j 07:54	28° $\mathcal{E}$ 00'02		direct	304 Jun 08 j 21:11	5° $\mathcal{E}$ 48'18	
	298 Jul 22 j 04:29	0° $\mathcal{O}$		evening set	304 Sep 21 j 03:03	13° $\mathcal{E}$ 07'59	
conjunction	298 Jul 24 j 07:28	0° $\mathcal{O}$ 16'12	0°50'41				
minimum elong	298 Jul 24 j 07:26	0° $\mathcal{O}$ 16'12	0°50'41	conjunction	304 Oct 07 j 22:52	15° $\mathcal{E}$ 07'09	2°18'04
max. Earth dist.	298 Jul 24 j 15:32	0° $\mathcal{O}$ 18'46	10.25169 AU	minimum elong	304 Oct 07 j 22:52	15° $\mathcal{E}$ 07'09	2°18'05
morning rise	298 Aug 11 j 03:09	2° $\mathcal{O}$ 31'08		max. Earth dist.	304 Oct 07 j 21:48	15° $\mathcal{E}$ 06'50	10.93849 AU
retrograde	298 Nov 20 j 18:28	10° $\mathcal{O}$ 16'51		morning rise	304 Oct 24 j 14:37	17° $\mathcal{E}$ 05'12	
opposition	299 Jan 26 j 13:06	6° $\mathcal{O}$ 52'38	1°20'46	retrograde	305 Jan 31 j 18:54	24° $\mathcal{E}$ 05'10	
min. Earth dist.	299 Jan 26 j 06:36	6° $\mathcal{O}$ 53'57	8.30788 AU	opposition	305 Apr 10 j 23:41	20° $\mathcal{E}$ 47'41	2°46'11
direct	299 Apr 05 j 07:34	3° $\mathcal{O}$ 23'56		min. Earth dist.	305 Apr 11 j 01:28	20° $\mathcal{E}$ 47'21	8.98115 AU
evening set	299 Jul 20 j 13:49	11° $\mathcal{O}$ 23'24		direct	305 Jun 21 j 06:16	17° $\mathcal{E}$ 25'37	
				evening set	305 Oct 02 j 21:28	24° $\mathcal{E}$ 38'44	
conjunction	299 Aug 07 j 08:53	13° $\mathcal{O}$ 36'32	1°18'58				
minimum elong	299 Aug 07 j 08:50	13° $\mathcal{O}$ 36'31	1°18'58	conjunction	305 Oct 19 j 14:28	26° $\mathcal{E}$ 36'17	2°12'21
max. Earth dist.	299 Aug 07 j 16:12	13° $\mathcal{O}$ 38'50	10.36725 AU	minimum elong	305 Oct 19 j 14:29	26° $\mathcal{E}$ 36'18	2°12'22
	299 Aug 18 j 11:23	15° $\mathcal{O}$		max. Earth dist.	305 Oct 19 j 11:14	26° $\mathcal{E}$ 35'20	11.01568 AU
morning rise	299 Aug 24 j 23:17	15° $\mathcal{O}$ 48'14		morning rise	305 Nov 05 j 04:12	28° $\mathcal{E}$ 32'56	
retrograde	299 Dec 03 j 19:47	23° $\mathcal{O}$ 24'02			305 Nov 18 j 00:24	0° $\mathbb{M}$	
opposition	300 Feb 08 j 21:22	20° $\mathcal{O}$ 01'14	1°52'45	retrograde	306 Feb 12 j 10:59	5° $\mathbb{M}$ 29'43	
min. Earth dist.	300 Feb 08 j 16:11	20° $\mathcal{O}$ 02'16	8.42831 AU	opposition	306 Apr 23 j 02:04	2° $\mathbb{M}$ 12'44	2°35'48
direct	300 Apr 18 j 05:51	16° $\mathcal{O}$ 33'17		min. Earth dist.	306 Apr 23 j 05:47	2° $\mathbb{M}$ 12'02	9.04818 AU
evening set	300 Aug 02 j 08:55	24° $\mathcal{O}$ 24'59			306 May 25 j 17:28	30° $\mathbb{R}$ $\mathcal{E}$	
				direct	306 Jul 03 j 11:30	28° $\mathcal{E}$ 51'49	
conjunction	300 Aug 19 j 22:46	26° $\mathcal{O}$ 34'52	1°42'29		306 Aug 10 j 12:24	0° $\mathbb{M}$	
minimum elong	300 Aug 19 j 22:43	26° $\mathcal{O}$ 34'51	1°42'29	evening set	306 Oct 14 j 09:55	5° $\mathbb{M}$ 59'24	
max. Earth dist.	300 Aug 20 j 04:28	26° $\mathcal{O}$ 36'38	10.49026 AU				
morning rise	300 Sep 06 j 07:41	28° $\mathcal{O}$ 43'16		conjunction	306 Oct 31 j 00:53	7° $\mathbb{M}$ 55'50	2°01'29
	300 Sep 17 j 01:04	0° $\mathbb{M}$		minimum elong	306 Oct 31 j 00:55	7° $\mathbb{M}$ 55'50	2°01'29
retrograde	300 Dec 15 j 13:21	6° $\mathbb{M}$ 09'43		max. Earth dist.	306 Oct 30 j 19:38	7° $\mathbb{M}$ 54'17	11.07211 AU
opposition	301 Feb 20 j 23:16	2° $\mathbb{M}$ 48'17	2°18'10	morning rise	306 Nov 16 j 13:29	9° $\mathbb{M}$ 51'34	
min. Earth dist.	301 Feb 20 j 19:46	2° $\mathbb{M}$ 48'58	8.55314 AU		307 Jan 08 j 00:40	15° $\mathbb{M}$	
				retrograde	307 Feb 24 j 01:21	16° $\mathbb{M}$ 46'41	

	307 Apr 13 j 22:33	15° $\mathbb{M}$		morning rise	313 Jan 21 j 17:19	17° $\mathbb{Z}$ 36'44
opposition	307 May 05 j 02:25	13° $\mathbb{M}$ 29'54 2°19'31		retrograde	313 May 05 j 00:25	24° $\mathbb{Z}$ 54'17
min. Earth dist.	307 May 05 j 06:55	13° $\mathbb{M}$ 29'05 9.09320 AU		opposition	313 Jul 14 j 20:49	21° $\mathbb{Z}$ 33'17 -0°37'31
direct	307 Jul 15 j 11:49	10° $\mathbb{M}$ 10'02		min. Earth dist.	313 Jul 15 j 03:39	21° $\mathbb{Z}$ 32'00 8.86945 AU
	307 Oct 05 j 14:09	15° $\mathbb{M}$		direct	313 Sep 22 j 08:51	18° $\mathbb{Z}$ 14'46
evening set	307 Oct 25 j 17:57	17° $\mathbb{M}$ 13'15		evening set	313 Dec 31 j 00:51	25° $\mathbb{Z}$ 21'56
conjunction	307 Nov 11 j 07:52	19° $\mathbb{M}$ 09'02 1°46'01		conjunction	314 Jan 16 j 18:53	27° $\mathbb{Z}$ 22'36 -0°44'11
minimum elong	307 Nov 11 j 07:54	19° $\mathbb{M}$ 09'03 1°46'01		minimum elong	314 Jan 16 j 18:52	27° $\mathbb{Z}$ 22'36 0°44'11
max. Earth dist.	307 Nov 11 j 02:10	19° $\mathbb{M}$ 07'22 11.10584 AU		max. Earth dist.	314 Jan 16 j 09:56	27° $\mathbb{Z}$ 19'54 10.81670 AU
morning rise	307 Nov 27 j 19:59	21° $\mathbb{M}$ 04'22		morning rise	314 Feb 02 j 16:06	29° $\mathbb{Z}$ 24'16
retrograde	308 Mar 06 j 17:59	27° $\mathbb{M}$ 59'22			314 Feb 07 j 17:50	0° $\mathbb{Z}$
opposition	308 May 16 j 01:52	24° $\mathbb{M}$ 42'32 1°58'03		retrograde	314 May 17 j 20:41	6° $\mathbb{Z}$ 50'42
min. Earth dist.	308 May 16 j 06:45	24° $\mathbb{M}$ 41'38 9.11476 AU		opposition	314 Jul 27 j 12:08	3° $\mathbb{Z}$ 28'16 -1°11'01
direct	308 Jul 26 j 09:34	21° $\mathbb{M}$ 23'31		min. Earth dist.	314 Jul 27 j 19:04	3° $\mathbb{Z}$ 26'57 8.75965 AU
evening set	308 Nov 04 j 23:18	28° $\mathbb{M}$ 23'38		direct	314 Oct 04 j 09:58	0° $\mathbb{Z}$ 09'04
	308 Nov 18 j 19:06	0° $\mathbb{Z}$		evening set	315 Jan 12 j 03:05	7° $\mathbb{Z}$ 22'22
conjunction	308 Nov 21 j 12:49	0° $\mathbb{Z}$ 19'15 1°26'34		conjunction	315 Jan 28 j 23:08	9° $\mathbb{Z}$ 25'05 -1°10'32
minimum elong	308 Nov 21 j 12:51	0° $\mathbb{Z}$ 19'16 1°26'33		minimum elong	315 Jan 28 j 23:06	9° $\mathbb{Z}$ 25'04 1°10'32
max. Earth dist.	308 Nov 21 j 06:39	0° $\mathbb{Z}$ 17'27 11.11569 AU		max. Earth dist.	315 Jan 28 j 14:33	9° $\mathbb{Z}$ 22'27 10.70029 AU
morning rise	308 Dec 08 j 01:12	2° $\mathbb{Z}$ 14'38		morning rise	315 Feb 14 j 23:09	11° $\mathbb{Z}$ 29'00
retrograde	309 Mar 18 j 11:21	9° $\mathbb{Z}$ 11'02			315 Mar 18 j 10:05	15° $\mathbb{Z}$
opposition	309 May 28 j 01:25	5° $\mathbb{Z}$ 53'54 1°32'10		retrograde	315 May 30 j 22:26	19° $\mathbb{Z}$ 05'23
min. Earth dist.	309 May 28 j 07:16	5° $\mathbb{Z}$ 52'50 9.11211 AU		opposition	315 Aug 09 j 09:20	15° $\mathbb{Z}$ 41'22 -1°42'15
direct	309 Aug 07 j 02:48	2° $\mathbb{Z}$ 35'31		min. Earth dist.	315 Aug 09 j 15:41	15° $\mathbb{Z}$ 40'09 8.63825 AU
evening set	309 Nov 16 j 04:01	9° $\mathbb{Z}$ 33'57			315 Aug 18 j 10:40	15° $\mathbb{Z}$
conjunction	309 Dec 02 j 17:29	11° $\mathbb{Z}$ 29'48 1°03'48		direct	315 Oct 16 j 18:39	12° $\mathbb{Z}$ 21'14
minimum elong	309 Dec 02 j 17:31	11° $\mathbb{Z}$ 29'49 1°03'48			315 Dec 12 j 00:13	15° $\mathbb{Z}$
max. Earth dist.	309 Dec 02 j 09:43	11° $\mathbb{Z}$ 27'31 11.10129 AU		evening set	316 Jan 24 j 14:25	19° $\mathbb{Z}$ 41'59
morning rise	309 Dec 19 j 06:53	13° $\mathbb{Z}$ 25'41		conjunction	316 Feb 10 j 13:04	21° $\mathbb{Z}$ 47'01 -1°34'16
retrograde	310 Mar 30 j 06:06	20° $\mathbb{Z}$ 25'03		minimum elong	316 Feb 10 j 13:01	21° $\mathbb{Z}$ 47'01 1°34'16
opposition	310 Jun 09 j 02:02	17° $\mathbb{Z}$ 07'20 1°02'42		max. Earth dist.	316 Feb 10 j 06:16	21° $\mathbb{Z}$ 44'55 10.57489 AU
min. Earth dist.	310 Jun 09 j 09:15	17° $\mathbb{Z}$ 06'00 9.08532 AU		morning rise	316 Feb 27 j 16:02	23° $\mathbb{Z}$ 53'26
direct	310 Aug 18 j 20:18	13° $\mathbb{Z}$ 49'18			316 Apr 28 j 02:26	0° $\mathbb{Z}$
evening set	310 Nov 27 j 09:36	20° $\mathbb{Z}$ 47'35		retrograde	316 Jun 12 j 10:15	1° $\mathbb{Z}$ 40'17
conjunction	310 Dec 13 j 23:33	22° $\mathbb{Z}$ 44'04 0°38'29			316 Jul 28 j 17:56	30° $\mathbb{Z}$
minimum elong	310 Dec 13 j 23:35	22° $\mathbb{Z}$ 44'04 0°38'29		opposition	316 Aug 21 j 12:34	28° $\mathbb{Z}$ 14'38 -2°09'36
max. Earth dist.	310 Dec 13 j 14:57	22° $\mathbb{Z}$ 41'32 11.06303 AU		min. Earth dist.	316 Aug 21 j 17:26	28° $\mathbb{Z}$ 13'41 8.51098 AU
morning rise	310 Dec 30 j 14:27	24° $\mathbb{Z}$ 40'51		direct	316 Oct 28 j 09:53	24° $\mathbb{Z}$ 53'23
	311 Feb 23 j 02:38	0° $\mathbb{Z}$			317 Jan 16 j 09:10	0° $\mathbb{Z}$
retrograde	311 Apr 11 j 06:40	1° $\mathbb{Z}$ 44'45		evening set	317 Feb 05 j 11:57	2° $\mathbb{Z}$ 22'36
	311 May 30 j 01:50	30° $\mathbb{Z}$		conjunction	317 Feb 22 j 13:36	4° $\mathbb{Z}$ 30'12 -1°54'03
opposition	311 Jun 21 j 04:55	28° $\mathbb{Z}$ 26'10 0°30'34		minimum elong	317 Feb 22 j 13:34	4° $\mathbb{Z}$ 30'11 1°54'03
min. Earth dist.	311 Jun 21 j 12:21	28° $\mathbb{Z}$ 24'48 9.03509 AU		max. Earth dist.	317 Feb 22 j 09:03	4° $\mathbb{Z}$ 28'46 10.44648 AU
direct	311 Aug 30 j 15:27	25° $\mathbb{Z}$ 08'14		morning rise	317 Mar 11 j 19:47	6° $\mathbb{Z}$ 39'17
	311 Nov 19 j 15:57	0° $\mathbb{Z}$		retrograde	317 Jun 26 j 07:26	14° $\mathbb{Z}$ 36'36
evening set	311 Dec 08 j 17:35	2° $\mathbb{Z}$ 07'49		opposition	317 Sep 03 j 22:24	11° $\mathbb{Z}$ 09'23 -2°31'19
conjunction	311 Dec 25 j 08:40	4° $\mathbb{Z}$ 05'21 0°11'27		min. Earth dist.	317 Sep 04 j 01:05	11° $\mathbb{Z}$ 08'52 8.38393 AU
minimum elong	311 Dec 25 j 08:40	4° $\mathbb{Z}$ 05'21 0°11'27		direct	317 Nov 10 j 06:44	7° $\mathbb{Z}$ 46'54
behind sun begin	311 Dec 25 j 03:33	4° $\mathbb{Z}$ 03'51		evening set	318 Feb 18 j 20:12	15° $\mathbb{Z}$ 25'14
behind sun end	311 Dec 25 j 13:47	4° $\mathbb{Z}$ 06'51		conjunction	318 Mar 08 j 01:15	17° $\mathbb{Z}$ 35'31 -2°08'31
max. Earth dist.	311 Dec 25 j 00:25	4° $\mathbb{Z}$ 02'55 11.00171 AU		minimum elong	318 Mar 08 j 01:14	17° $\mathbb{Z}$ 35'31 2°08'31
morning rise	312 Jan 11 j 01:17	6° $\mathbb{Z}$ 03'24		max. Earth dist.	318 Mar 07 j 22:37	17° $\mathbb{Z}$ 34'41 10.32151 AU
retrograde	312 Apr 22 j 11:42	13° $\mathbb{Z}$ 13'24		morning rise	318 Mar 25 j 11:02	19° $\mathbb{Z}$ 47'22
desc. node	312 May 27 j 23:22	12° $\mathbb{Z}$ 15'19		retrograde	318 Jul 10 j 11:51	27° $\mathbb{Z}$ 54'31
opposition	312 Jul 02 j 10:52	9° $\mathbb{Z}$ 53'41 -0°03'13		opposition	318 Sep 17 j 14:41	24° $\mathbb{Z}$ 25'55 -2°45'43
min. Earth dist.	312 Jul 02 j 17:52	9° $\mathbb{Z}$ 52'23 8.96250 AU		min. Earth dist.	318 Sep 17 j 15:30	24° $\mathbb{Z}$ 25'46 8.26364 AU
direct	312 Sep 10 j 10:37	6° $\mathbb{Z}$ 35'35		direct	318 Nov 23 j 11:46	21° $\mathbb{Z}$ 02'06
evening set	312 Dec 19 j 06:10	13° $\mathbb{Z}$ 38'08		evening set	319 Mar 04 j 15:35	28° $\mathbb{Z}$ 49'45
conjunction	313 Jan 04 j 22:37	15° $\mathbb{Z}$ 37'04 -0°16'30			319 Mar 13 j 20:49	0° $\mathbb{Z}$
minimum elong	313 Jan 04 j 22:36	15° $\mathbb{Z}$ 37'03 0°16'30		conjunction	319 Mar 22 j 00:34	1° $\mathbb{Z}$ 02'48 -2°16'25
max. Earth dist.	313 Jan 04 j 14:23	15° $\mathbb{Z}$ 34'37 10.91868 AU		minimum elong	319 Mar 22 j 00:33	1° $\mathbb{Z}$ 02'48 2°16'24

max. Earth dist.	319 Mar 21 j 23:39	1°♈02'31	10.20671 AU	opposition	325 Dec 24 j 01:50	3°♊22'55	-0°16'37
morning rise	319 Apr 08 j 14:20	3°♈17'24		min. Earth dist.	325 Dec 23 j 18:01	3°♊24'32	8.05821 AU
retrograde	319 Jul 24 j 22:02	11°♈32'57			326 Feb 18 j 04:38	30°♊II	
opposition	319 Oct 01 j 12:43	8°♈03'15	-2°51'18	direct	326 Mar 01 j 08:53	29°♊II53'04	
min. Earth dist.	319 Oct 01 j 12:06	8°♈03'23	8.15666 AU		326 Mar 12 j 14:45	0°♊	
direct	319 Dec 07 j 01:36	4°♈38'04		asc. node	326 May 23 j 08:37	5°♊20'34	
evening set	320 Mar 17 j 21:31	12°♈34'40		evening set	326 Jun 15 j 06:01	8°♊07'12	
conjunction	320 Apr 04 j 10:54	14°♈50'25	-2°16'46	conjunction	326 Jul 03 j 10:09	10°♊27'06	0°03'42
minimum elong	320 Apr 04 j 10:55	14°♈50'26	2°16'46	minimum elong	326 Jul 03 j 10:08	10°♊27'06	0°03'42
max. Earth dist.	320 Apr 04 j 11:49	14°♈50'43	10.10854 AU	behind sun begin	326 Jul 03 j 02:51	10°♊24'46	
morning rise	320 Apr 22 j 04:50	17°♈07'38		behind sun end	326 Jul 03 j 17:25	10°♊29'25	
retrograde	320 Aug 07 j 13:19	25°♈29'24		max. Earth dist.	326 Jul 03 j 20:14	10°♊30'20	10.09805 AU
opposition	320 Oct 14 j 15:42	21°♈58'58	-2°47'02	morning rise	326 Jul 21 j 11:51	12°♊46'12	
min. Earth dist.	320 Oct 14 j 13:51	21°♈59'21	8.06914 AU	retrograde	326 Nov 01 j 13:14	20°♊47'03	
direct	320 Dec 19 j 23:06	18°♈32'28		opposition	327 Jan 07 j 01:08	17°♊20'28	0°24'59
evening set	321 Apr 01 j 12:46	26°♈36'59		min. Earth dist.	327 Jan 06 j 17:50	17°♊21'58	8.14309 AU
conjunction	321 Apr 19 j 06:45	28°♈55'12	-2°09'04	direct	327 Mar 15 j 21:02	13°♊50'52	
minimum elong	321 Apr 19 j 06:48	28°♈55'13	2°09'03	evening set	327 Jun 30 j 01:46	22°♊00'26	
max. Earth dist.	321 Apr 19 j 10:04	28°♈56'17	10.03282 AU	conjunction	327 Jul 18 j 03:02	24°♊18'00	0°36'27
	321 Apr 27 j 13:23	0°♊		minimum elong	327 Jul 18 j 03:00	24°♊18'00	0°36'27
morning rise	321 May 07 j 04:39	1°♊14'40		max. Earth dist.	327 Jul 18 j 12:06	24°♊20'54	10.19405 AU
retrograde	321 Aug 22 j 07:19	9°♊39'58		morning rise	327 Aug 05 j 00:57	26°♊34'29	
opposition	321 Oct 28 j 22:11	6°♊09'09	-2°32'34		327 Sep 03 j 02:30	0°♊	
min. Earth dist.	321 Oct 28 j 18:43	6°♊09'52	8.00645 AU	retrograde	327 Nov 15 j 02:52	4°♊25'23	
direct	322 Jan 03 j 03:43	2°♊41'29		opposition	328 Jan 20 j 18:52	1°♊00'27	1°04'13
evening set	322 Apr 16 j 11:37	10°♊52'20		min. Earth dist.	328 Jan 20 j 12:13	1°♊01'48	8.24863 AU
conjunction	322 May 04 j 10:04	13°♊12'33	-1°53'24		328 Feb 02 j 09:50	30°♊R♊	
minimum elong	322 May 04 j 10:07	13°♊12'34	1°53'23	direct	328 Mar 29 j 06:04	27°♊31'27	
max. Earth dist.	322 May 04 j 15:53	13°♊14'28	9.98445 AU	evening set	328 May 22 j 21:30	0°♊	
	322 May 18 j 02:55	15°♊			328 Jul 13 j 12:49	5°♊34'49	
morning rise	322 May 22 j 11:23	15°♊33'42		conjunction	328 Jul 31 j 09:57	7°♊49'29	1°06'32
retrograde	322 Sep 06 j 01:47	23°♊59'25		minimum elong	328 Jul 31 j 09:54	7°♊49'28	1°06'32
opposition	322 Nov 12 j 06:32	20°♊28'41	-2°08'27	max. Earth dist.	328 Jul 31 j 17:43	7°♊51'56	10.30743 AU
min. Earth dist.	322 Nov 12 j 01:19	20°♊29'46	7.97274 AU	morning rise	328 Aug 18 j 03:02	10°♊02'50	
direct	323 Jan 17 j 14:20	17°♊00'02			328 Oct 02 j 02:10	15°♊	
evening set	323 May 01 j 15:42	25°♊15'11		retrograde	328 Nov 27 j 07:59	17°♊43'43	
conjunction	323 May 19 j 17:53	27°♊36'43	-1°30'35		329 Jan 24 j 23:08	15°♊R♊	
minimum elong	323 May 19 j 17:57	27°♊36'44	1°30'35	opposition	329 Feb 02 j 06:34	14°♊20'25	1°38'53
max. Earth dist.	323 May 20 j 01:50	27°♊39'20	9.96662 AU	min. Earth dist.	329 Feb 02 j 00:20	14°♊21'40	8.36852 AU
morning rise	323 Jun 06 j 21:38	29°♊58'46		direct	329 Apr 12 j 08:23	10°♊52'17	
	323 Jun 07 j 01:28	0°♊II		evening set	329 Jun 24 j 03:12	15°♊	
retrograde	323 Sep 20 j 18:02	8°♊II21'49			329 Jul 27 j 13:31	18°♊48'12	
opposition	323 Nov 26 j 15:06	4°♊II51'35	-1°36'10	conjunction	329 Aug 14 j 05:47	20°♊59'41	1°32'23
min. Earth dist.	323 Nov 26 j 08:21	4°♊II52'59	7.97026 AU	minimum elong	329 Aug 14 j 05:43	20°♊59'40	1°32'23
direct	324 Feb 01 j 04:04	1°♊II22'13		max. Earth dist.	329 Aug 14 j 12:23	21°♊01'44	10.43161 AU
evening set	324 May 15 j 22:14	9°♊II39'22		morning rise	329 Aug 31 j 17:27	23°♊09'42	
conjunction	324 Jun 03 j 02:47	12°♊II01'19	-1°02'07		329 Nov 12 j 17:59	0°♊♐	
minimum elong	324 Jun 03 j 02:50	12°♊II01'20	1°02'06	retrograde	329 Dec 10 j 06:14	0°♊40'53	
max. Earth dist.	324 Jun 03 j 12:20	12°♊II04'27	9.98049 AU		330 Jan 07 j 02:01	30°♊R♊	
morning rise	324 Jun 21 j 07:28	14°♊II23'20		opposition	330 Feb 15 j 11:52	27°♊19'07	2°07'25
retrograde	324 Oct 04 j 06:32	22°♊II40'56		min. Earth dist.	330 Feb 15 j 06:11	27°♊20'14	8.49589 AU
opposition	324 Dec 09 j 22:02	19°♊II11'37	-0°57'58	direct	330 Apr 26 j 02:51	23°♊52'04	
min. Earth dist.	324 Dec 09 j 14:18	19°♊II13'14	7.99932 AU		330 Jul 27 j 00:45	0°♊♐	
direct	325 Feb 14 j 18:49	15°♊II41'51		evening set	330 Aug 10 j 03:25	1°♊39'48	
evening set	325 May 31 j 04:00	23°♊II58'37		conjunction	330 Aug 27 j 14:30	3°♊48'03	1°52'57
conjunction	325 Jun 18 j 09:15	26°♊II20'01	-0°29'58	minimum elong	330 Aug 27 j 14:27	3°♊48'02	1°52'56
minimum elong	325 Jun 18 j 09:17	26°♊II20'01	0°29'58	max. Earth dist.	330 Aug 27 j 20:08	3°♊49'47	10.55972 AU
max. Earth dist.	325 Jun 18 j 19:37	26°♊II23'23	10.02527 AU	morning rise	330 Sep 13 j 20:36	5°♊54'46	
morning rise	325 Jul 06 j 13:15	28°♊II41'00		retrograde	330 Dec 22 j 20:24	13°♊16'56	
	325 Jul 17 j 01:13	0°♊		opposition	331 Feb 28 j 10:50	9°♊56'35	2°28'54
retrograde	325 Oct 18 j 13:32	6°♊51'00		min. Earth dist.	331 Feb 28 j 06:39	9°♊57'24	8.62387 AU
				direct	331 May 09 j 13:30	6°♊30'42	

evening set	331 Aug 23 j 06:15	14° $\mathbb{M}$ 10'01		conjunction	337 Nov 17 j 01:26	25° $\mathbb{M}$ 43'02	1°35'28
				minimum elong	337 Nov 17 j 01:28	25° $\mathbb{M}$ 43'03	1°35'27
conjunction	331 Sep 09 j 12:12	16° $\mathbb{M}$ 15'09	2°07'38	max. Earth dist.	337 Nov 16 j 17:15	25° $\mathbb{M}$ 40'38	11.10437 AU
minimum elong	331 Sep 09 j 12:10	16° $\mathbb{M}$ 15'09	2°07'37	morning rise	337 Dec 03 j 13:50	27° $\mathbb{M}$ 38'28	
max. Earth dist.	331 Sep 09 j 16:02	16° $\mathbb{M}$ 16'19	10.68510 AU		337 Dec 25 j 00:53	0° $\mathbb{Z}$	
morning rise	331 Sep 26 j 13:09	18° $\mathbb{M}$ 18'50		retrograde	338 Mar 13 j 17:07	4° $\mathbb{Z}$ 34'29	
retrograde	332 Jan 04 j 03:05	25° $\mathbb{M}$ 32'59		opposition	338 May 23 j 05:17	1° $\mathbb{Z}$ 17'18	1°43'56
opposition	332 Mar 12 j 04:08	22° $\mathbb{M}$ 13'54	2°42'53	min. Earth dist.	338 May 23 j 12:30	1° $\mathbb{Z}$ 15'58	9.10416 AU
min. Earth dist.	332 Mar 12 j 02:10	22° $\mathbb{M}$ 14'16	8.74593 AU		338 Jun 10 j 05:33	30° $\mathbb{R}$ $\mathbb{M}$	
direct	332 May 21 j 17:50	18° $\mathbb{M}$ 49'14		direct	338 Aug 02 j 09:57	27° $\mathbb{M}$ 58'19	
evening set	332 Sep 03 j 22:19	26° $\mathbb{M}$ 20'12			338 Sep 22 j 12:50	0° $\mathbb{Z}$	
				evening set	338 Nov 11 j 16:49	4° $\mathbb{Z}$ 57'50	
conjunction	332 Sep 20 j 23:30	28° $\mathbb{M}$ 22'35	2°16'11	conjunction	338 Nov 28 j 06:20	6° $\mathbb{Z}$ 53'41	1°14'03
minimum elong	332 Sep 20 j 23:29	28° $\mathbb{M}$ 22'35	2°16'11	minimum elong	338 Nov 28 j 06:22	6° $\mathbb{Z}$ 53'42	1°14'03
max. Earth dist.	332 Sep 21 j 00:32	28° $\mathbb{M}$ 22'54	10.80143 AU	max. Earth dist.	338 Nov 27 j 22:04	6° $\mathbb{Z}$ 51'15	11.09641 AU
	332 Oct 04 j 12:21	0° $\mathbb{Z}$		morning rise	338 Dec 14 j 19:20	8° $\mathbb{Z}$ 49'27	
morning rise	332 Oct 07 j 20:08	0° $\mathbb{Z}$ 23'37		retrograde	339 Mar 25 j 11:40	15° $\mathbb{Z}$ 47'48	
retrograde	333 Jan 15 j 03:58	7° $\mathbb{Z}$ 31'02		opposition	339 Jun 04 j 05:36	12° $\mathbb{Z}$ 29'55	1°15'55
opposition	333 Mar 24 j 16:05	4° $\mathbb{Z}$ 12'57	2°49'20	min. Earth dist.	339 Jun 04 j 12:37	12° $\mathbb{Z}$ 28'37	9.08385 AU
min. Earth dist.	333 Mar 24 j 16:25	4° $\mathbb{Z}$ 12'53	8.85591 AU	direct	339 Aug 14 j 04:58	9° $\mathbb{Z}$ 11'15	
direct	333 Jun 03 j 14:02	0° $\mathbb{Z}$ 49'31		evening set	339 Nov 22 j 21:55	16° $\mathbb{Z}$ 09'56	
evening set	333 Sep 16 j 04:50	8° $\mathbb{Z}$ 12'45					
conjunction	333 Oct 03 j 02:02	10° $\mathbb{Z}$ 12'49	2°18'42	conjunction	339 Dec 09 j 11:52	18° $\mathbb{Z}$ 06'17	0°49'45
minimum elong	333 Oct 03 j 02:02	10° $\mathbb{Z}$ 12'49	2°18'42	minimum elong	339 Dec 09 j 11:53	18° $\mathbb{Z}$ 06'17	0°49'45
max. Earth dist.	333 Oct 03 j 00:04	10° $\mathbb{Z}$ 12'14	10.90315 AU	max. Earth dist.	339 Dec 09 j 03:40	18° $\mathbb{Z}$ 03'52	11.06472 AU
morning rise	333 Oct 19 j 19:16	12° $\mathbb{Z}$ 11'43		morning rise	339 Dec 26 j 02:00	20° $\mathbb{Z}$ 02'47	
retrograde	334 Jan 26 j 23:21	19° $\mathbb{Z}$ 13'51		retrograde	340 Apr 05 j 11:10	27° $\mathbb{Z}$ 05'01	
opposition	334 Apr 05 j 23:25	15° $\mathbb{Z}$ 56'31	2°48'34	opposition	340 Jun 15 j 07:34	23° $\mathbb{Z}$ 46'15	0°44'48
min. Earth dist.	334 Apr 06 j 01:13	15° $\mathbb{Z}$ 56'11	8.94886 AU	min. Earth dist.	340 Jun 15 j 14:52	23° $\mathbb{Z}$ 44'54	9.04036 AU
direct	334 Jun 16 j 04:04	12° $\mathbb{Z}$ 34'18		direct	340 Aug 24 j 22:36	20° $\mathbb{Z}$ 27'41	
evening set	334 Sep 28 j 03:06	19° $\mathbb{Z}$ 50'38		evening set	340 Dec 03 j 04:53	27° $\mathbb{Z}$ 27'04	
conjunction	334 Oct 14 j 21:16	21° $\mathbb{Z}$ 48'53	2°15'25	conjunction	340 Dec 19 j 19:32	29° $\mathbb{Z}$ 24'18	0°23'20
minimum elong	334 Oct 14 j 21:17	21° $\mathbb{Z}$ 48'54	2°15'25	minimum elong	340 Dec 19 j 19:33	29° $\mathbb{Z}$ 24'18	0°23'20
max. Earth dist.	334 Oct 14 j 17:49	21° $\mathbb{Z}$ 47'52	10.98631 AU	max. Earth dist.	340 Dec 19 j 10:24	29° $\mathbb{Z}$ 21'36	11.01046 AU
morning rise	334 Oct 31 j 11:54	23° $\mathbb{Z}$ 46'09			340 Dec 24 j 20:05	0° $\mathbb{Z}$	
	335 Jan 08 j 23:11	0° $\mathbb{M}$		morning rise	341 Jan 05 j 11:26	1° $\mathbb{Z}$ 21'58	
retrograde	335 Feb 07 j 18:29	0° $\mathbb{M}$ 44'33		retrograde	341 Apr 17 j 13:01	8° $\mathbb{Z}$ 29'38	
	335 Mar 10 j 02:01	30° $\mathbb{R}$ $\mathbb{Z}$		opposition	341 Jun 27 j 12:16	5° $\mathbb{Z}$ 09'48	0°11'34
opposition	335 Apr 18 j 03:33	27° $\mathbb{Z}$ 27'42	2°41'00	min. Earth dist.	341 Jun 27 j 20:09	5° $\mathbb{Z}$ 08'20	8.97516 AU
min. Earth dist.	335 Apr 18 j 06:31	27° $\mathbb{Z}$ 27'09	9.02175 AU	direct	341 Sep 05 j 16:13	1° $\mathbb{Z}$ 51'06	
direct	335 Jun 28 j 12:43	24° $\mathbb{Z}$ 06'35		desc. node	341 Nov 02 j 13:22	4° $\mathbb{Z}$ 29'56	
	335 Sep 28 j 10:22	0° $\mathbb{M}$		evening set	341 Dec 14 j 15:26	8° $\mathbb{Z}$ 52'50	
evening set	335 Oct 09 j 18:31	1° $\mathbb{M}$ 16'55					
conjunction	335 Oct 26 j 10:29	3° $\mathbb{M}$ 13'53	2°06'45	conjunction	341 Dec 31 j 07:12	10° $\mathbb{Z}$ 51'19	-0°04'26
minimum elong	335 Oct 26 j 10:31	3° $\mathbb{M}$ 13'53	2°06'46	minimum elong	341 Dec 31 j 07:11	10° $\mathbb{Z}$ 51'19	0°04'26
max. Earth dist.	335 Oct 26 j 05:59	3° $\mathbb{M}$ 12'34	11.04854 AU	behind sun begin	341 Dec 31 j 00:20	10° $\mathbb{Z}$ 49'17	
morning rise	335 Nov 11 j 23:23	5° $\mathbb{M}$ 10'01		behind sun end	341 Dec 31 j 14:03	10° $\mathbb{Z}$ 53'20	
retrograde	336 Feb 19 j 10:25	12° $\mathbb{M}$ 06'08		max. Earth dist.	341 Dec 30 j 21:43	10° $\mathbb{Z}$ 48'30	10.93540 AU
opposition	336 Apr 29 j 05:22	8° $\mathbb{M}$ 49'28	2°27'15	morning rise	342 Jan 17 j 01:10	12° $\mathbb{Z}$ 50'28	
min. Earth dist.	336 Apr 29 j 09:59	8° $\mathbb{M}$ 48'37	9.07271 AU	retrograde	342 Apr 29 j 21:42	20° $\mathbb{Z}$ 05'08	
direct	336 Jul 09 j 14:09	5° $\mathbb{M}$ 29'17		opposition	342 Jul 09 j 20:42	16° $\mathbb{Z}$ 44'03	-0°22'42
evening set	336 Oct 20 j 04:57	12° $\mathbb{M}$ 34'44		min. Earth dist.	342 Jul 10 j 04:28	16° $\mathbb{Z}$ 42'36	8.89048 AU
				direct	342 Sep 17 j 14:39	13° $\mathbb{Z}$ 25'02	
conjunction	336 Nov 05 j 19:21	14° $\mathbb{M}$ 30'52	1°53'15	evening set	342 Dec 26 j 07:17	20° $\mathbb{Z}$ 30'40	
minimum elong	336 Nov 05 j 19:23	14° $\mathbb{M}$ 30'52	1°53'15				
max. Earth dist.	336 Nov 05 j 12:52	14° $\mathbb{M}$ 28'57	11.08825 AU	conjunction	343 Jan 12 j 00:41	22° $\mathbb{Z}$ 30'44	-0°32'19
	336 Nov 09 j 22:36	15° $\mathbb{M}$		minimum elong	343 Jan 12 j 00:40	22° $\mathbb{Z}$ 30'44	0°32'19
morning rise	336 Nov 22 j 07:36	16° $\mathbb{M}$ 26'25		max. Earth dist.	343 Jan 11 j 16:28	22° $\mathbb{Z}$ 28'16	10.84214 AU
retrograde	337 Mar 02 j 01:07	23° $\mathbb{M}$ 21'42		morning rise	343 Jan 28 j 20:52	24° $\mathbb{Z}$ 31'42	
opposition	337 May 11 j 05:33	20° $\mathbb{M}$ 04'56	2°07'59		343 Mar 24 j 09:14	0° $\mathbb{Z}$	
min. Earth dist.	337 May 11 j 12:02	20° $\mathbb{M}$ 03'44	9.10045 AU	retrograde	343 May 12 j 14:33	1° $\mathbb{Z}$ 54'44	
direct	337 Jul 21 j 13:12	16° $\mathbb{M}$ 45'26			343 Jul 02 j 08:32	30° $\mathbb{R}$ $\mathbb{Z}$	
evening set	337 Oct 31 j 11:51	23° $\mathbb{M}$ 47'16		opposition	343 Jul 22 j 09:50	28° $\mathbb{Z}$ 32'16	-0°56'45
				min. Earth dist.	343 Jul 22 j 16:15	28° $\mathbb{Z}$ 31'03	8.78940 AU
				direct	343 Sep 29 j 15:10	25° $\mathbb{Z}$ 12'46	

	343 Dec 17 j 06:42	0°♊	conjunction	350 Apr 13 j 07:06	23°♊08'10 -2°13'12
evening set	344 Jan 07 j 06:06	2°♊23'48	minimum elong	350 Apr 13 j 07:08	23°♊08'10 2°13'11
			max. Earth dist.	350 Apr 13 j 11:52	23°♊09'43 10.07145 AU
conjunction	344 Jan 24 j 01:28	4°♊25'47 -0°59'24	morning rise	350 May 01 j 03:05	25°♊26'38
minimum elong	344 Jan 24 j 01:26	4°♊25'46 0°59'25		350 Jun 09 j 01:02	0°♋
max. Earth dist.	344 Jan 23 j 18:29	4°♊23'39 10.73410 AU	retrograde	350 Aug 16 j 10:40	3°♋50'45
morning rise	344 Feb 10 j 00:11	6°♊28'52	opposition	350 Oct 23 j 05:23	0°♋20'36 -2°39'43
retrograde	344 May 24 j 14:50	14°♊01'22	min. Earth dist.	350 Oct 23 j 00:48	0°♋21'32 8.04136 AU
opposition	344 Aug 03 j 04:30	10°♊37'28 -1°29'11		350 Oct 27 j 09:46	30°♌♊
min. Earth dist.	344 Aug 03 j 09:33	10°♊36'30 8.67575 AU	direct	350 Dec 28 j 09:54	26°♊54'04
direct	344 Oct 10 j 20:08	7°♊17'16		351 Feb 25 j 18:58	0°♋
evening set	345 Jan 18 j 13:39	14°♊35'09	evening set	351 Apr 10 j 11:17	5°♋02'09
	345 Jan 21 j 23:39	15°♊			
			conjunction	351 Apr 28 j 07:48	7°♋21'26 -2°00'51
conjunction	345 Feb 04 j 11:09	16°♊39'19 -1°24'26	minimum elong	351 Apr 28 j 07:51	7°♋21'27 2°00'50
minimum elong	345 Feb 04 j 11:07	16°♊39'18 1°24'27	max. Earth dist.	351 Apr 28 j 13:58	7°♋23'28 10.01471 AU
max. Earth dist.	345 Feb 04 j 04:49	16°♊37'22 10.61564 AU	morning rise	351 May 16 j 07:33	9°♋41'48
morning rise	345 Feb 21 j 12:44	18°♊44'46		351 Jul 01 j 12:56	15°♋
retrograde	345 Jun 07 j 00:07	26°♊27'29	retrograde	351 Aug 31 j 05:55	18°♋07'25
opposition	345 Aug 16 j 05:14	23°♊02'09 -1°58'26		351 Nov 01 j 22:54	15°♌♋
min. Earth dist.	345 Aug 16 j 09:18	23°♊01'22 8.55435 AU	opposition	351 Nov 06 j 13:14	14°♋37'12 -2°19'35
direct	345 Oct 23 j 07:00	19°♊41'06	min. Earth dist.	351 Nov 06 j 07:57	14°♋38'18 7.99786 AU
evening set	346 Jan 31 j 06:51	27°♊07'00	direct	352 Jan 11 j 18:05	11°♋09'36
				352 Mar 18 j 13:55	15°♋
conjunction	346 Feb 17 j 06:58	29°♊13'34 -1°46'06	evening set	352 Apr 24 j 13:38	19°♋22'44
minimum elong	346 Feb 17 j 06:55	29°♊13'33 1°46'06			
max. Earth dist.	346 Feb 17 j 01:34	29°♊11'53 10.49213 AU	conjunction	352 May 12 j 14:06	21°♋43'36 -1°40'56
	346 Mar 23 j 11:45	0°♌	minimum elong	352 May 12 j 14:10	21°♋43'38 1°40'56
morning rise	346 Mar 06 j 11:47	1°♌21'36	max. Earth dist.	352 May 12 j 21:02	21°♋45'53 9.98545 AU
retrograde	346 Jun 20 j 17:14	9°♌14'50	morning rise	352 May 30 j 16:50	24°♋05'12
opposition	346 Aug 29 j 12:42	5°♌48'07 -2°22'46		352 Jul 22 j 12:38	0°♍
min. Earth dist.	346 Aug 29 j 15:49	5°♌47'31 8.43092 AU	retrograde	352 Sep 13 j 23:24	2°♍29'18
direct	346 Nov 05 j 01:03	2°♌26'04		352 Nov 07 j 13:50	30°♌♋
evening set	347 Feb 13 j 10:34	10°♌00'50	opposition	352 Nov 19 j 22:00	28°♋59'27 -1°50'34
			min. Earth dist.	352 Nov 19 j 16:25	29°♋00'37 7.98240 AU
conjunction	347 Mar 02 j 13:58	12°♌10'00 -2°03'00	direct	353 Jan 25 j 07:10	25°♋31'00
minimum elong	347 Mar 02 j 13:56	12°♌10'00 2°02'59		353 Apr 08 j 08:26	0°♍
max. Earth dist.	347 Mar 02 j 10:49	12°♌09'00 10.36955 AU	evening set	353 May 09 j 19:17	3°♍47'08
morning rise	347 Mar 19 j 22:17	14°♌20'44			
retrograde	347 Jul 04 j 17:42	22°♌24'08	conjunction	353 May 27 j 22:43	6°♍08'50 -1°14'40
opposition	347 Sep 12 j 02:38	18°♌56'11 -2°40'28	minimum elong	353 May 27 j 22:46	6°♍08'51 1°14'39
min. Earth dist.	347 Sep 12 j 04:06	18°♌55'53 8.31164 AU	max. Earth dist.	353 May 28 j 06:13	6°♍11'17 9.98493 AU
direct	347 Nov 18 j 04:16	15°♌33'03	morning rise	353 Jun 15 j 03:12	8°♍30'49
evening set	348 Feb 27 j 01:31	23°♌17'02	retrograde	353 Sep 28 j 13:03	16°♍50'45
			opposition	353 Dec 04 j 05:56	13°♍21'38 -1°14'36
conjunction	348 Mar 15 j 08:46	25°♌28'57 -2°13'49	min. Earth dist.	353 Dec 03 j 23:56	13°♍22'53 7.99614 AU
minimum elong	348 Mar 15 j 08:44	25°♌28'56 2°13'48	direct	354 Feb 08 j 22:17	9°♍52'35
max. Earth dist.	348 Mar 15 j 08:22	25°♌28'49 10.25430 AU	evening set	354 May 25 j 01:47	18°♍09'30
morning rise	348 Apr 01 j 20:47	27°♌42'24			
	348 Apr 20 j 18:33	0°♎	conjunction	354 Jun 12 j 06:45	20°♍31'08 -0°43'49
retrograde	348 Jul 18 j 01:24	5°♎54'49	minimum elong	354 Jun 12 j 06:47	20°♍31'09 0°43'49
opposition	348 Sep 24 j 22:31	2°♎25'51 -2°49'55	max. Earth dist.	354 Jun 12 j 14:49	20°♍33'46 10.01398 AU
min. Earth dist.	348 Sep 24 j 21:51	2°♎25'59 8.20290 AU	morning rise	354 Jun 30 j 11:23	22°♍52'35
	348 Oct 28 j 14:21	30°♌♌		354 Sep 08 j 07:29	0°♏
direct	348 Nov 30 j 15:05	29°♌01'35	retrograde	354 Oct 12 j 22:11	1°♏05'55
	349 Jan 02 j 02:34	0°♎		354 Nov 16 j 19:46	30°♌♍
evening set	349 Mar 12 j 03:23	6°♎54'37	opposition	354 Dec 18 j 11:16	27°♍37'49 -0°34'15
			min. Earth dist.	354 Dec 18 j 04:38	27°♍39'11 8.03935 AU
conjunction	349 Mar 29 j 14:53	9°♎09'15 -2°17'28	direct	355 Feb 23 j 13:49	24°♍08'25
minimum elong	349 Mar 29 j 14:54	9°♎09'15 2°17'27		355 May 20 j 17:10	0°♏
max. Earth dist.	349 Mar 29 j 17:19	9°♎10'02 10.15291 AU	evening set	355 Jun 09 j 06:02	2°♏23'50
morning rise	349 Apr 16 j 06:50	11°♎25'20			
retrograde	349 Aug 01 j 16:15	19°♎44'54	conjunction	355 Jun 27 j 10:48	4°♏44'24 -0°10'36
opposition	349 Oct 08 j 23:54	16°♎15'10 -2°49'53	minimum elong	355 Jun 27 j 10:48	4°♏44'24 0°10'36
min. Earth dist.	349 Oct 08 j 20:58	16°♎15'46 8.11099 AU	behind sun begin	355 Jun 27 j 05:11	4°♏42'36
direct	349 Dec 14 j 08:34	12°♎49'46	behind sun end	355 Jun 27 j 16:26	4°♏46'13
evening set	350 Mar 26 j 15:03	20°♎51'01	max. Earth dist.	355 Jun 27 j 19:26	4°♏47'11 10.07164 AU

morning rise	355 Jul 15 j 13:46	7° $\mathring{\text{D}}$ 04'22			362 Mar 11 j 20:13	30° $\mathring{\text{R}}$ 00	
asc. node	355 Oct 24 j 16:15	15° $\mathring{\text{D}}$ 08'56		opposition	362 Mar 19 j 18:15	29° $\mathring{\text{M}}$ 23'53	2°47'38
retrograde	355 Oct 27 j 00:41	15° $\mathring{\text{D}}$ 09'15		min. Earth dist.	362 Mar 19 j 16:34	29° $\mathring{\text{M}}$ 24'12	8.80042 AU
opposition	356 Jan 01 j 12:46	11° $\mathring{\text{D}}$ 42'22	0°07'35	direct	362 May 29 j 14:07	25° $\mathring{\text{M}}$ 59'24	
min. Earth dist.	356 Jan 01 j 05:31	11° $\mathring{\text{D}}$ 43'51	8.10989 AU		362 Aug 11 j 01:31	0° $\mathring{\text{A}}$	
direct	356 Mar 09 j 03:42	8° $\mathring{\text{D}}$ 12'57		evening set	362 Sep 11 j 09:47	3° $\mathring{\text{A}}$ 25'53	
evening set	356 Jun 23 j 04:52	16° $\mathring{\text{D}}$ 24'38					
conjunction	356 Jul 11 j 07:37	18° $\mathring{\text{D}}$ 43'15	0°22'51	conjunction	362 Sep 28 j 08:50	5° $\mathring{\text{A}}$ 26'57	2°18'26
minimum elong	356 Jul 11 j 07:36	18° $\mathring{\text{D}}$ 43'15	0°22'51	minimum elong	362 Sep 28 j 08:49	5° $\mathring{\text{A}}$ 26'57	2°18'26
max. Earth dist.	356 Jul 11 j 16:38	18° $\mathring{\text{D}}$ 46'08	10.15450 AU	max. Earth dist.	362 Sep 28 j 09:35	5° $\mathring{\text{A}}$ 27'11	10.85216 AU
morning rise	356 Jul 29 j 07:16	21° $\mathring{\text{D}}$ 00'54		morning rise	362 Oct 15 j 03:22	7° $\mathring{\text{A}}$ 26'44	
retrograde	356 Nov 08 j 19:03	28° $\mathring{\text{D}}$ 56'12		retrograde	363 Jan 22 j 08:10	14° $\mathring{\text{A}}$ 30'54	
opposition	357 Jan 14 j 09:08	25° $\mathring{\text{D}}$ 30'41	0°48'07	opposition	363 Apr 01 j 03:11	11° $\mathring{\text{A}}$ 12'46	2°49'53
min. Earth dist.	357 Jan 14 j 02:00	25° $\mathring{\text{D}}$ 32'08	8.20347 AU	min. Earth dist.	363 Apr 01 j 03:26	11° $\mathring{\text{A}}$ 12'43	8.90313 AU
direct	357 Mar 23 j 13:59	22° $\mathring{\text{D}}$ 01'32		direct	363 Jun 11 j 05:46	7° $\mathring{\text{A}}$ 49'33	
	357 Jul 06 j 19:17	0° $\mathring{\text{O}}$		evening set	363 Sep 23 j 11:04	15° $\mathring{\text{A}}$ 08'36	
evening set	357 Jul 07 j 19:57	0° $\mathring{\text{O}}$ 07'39		conjunction	363 Oct 10 j 06:32	17° $\mathring{\text{A}}$ 07'35	2°17'35
conjunction	357 Jul 25 j 19:09	2° $\mathring{\text{O}}$ 23'38	0°54'17	minimum elong	363 Oct 10 j 06:32	17° $\mathring{\text{A}}$ 07'35	2°17'35
minimum elong	357 Jul 25 j 19:07	2° $\mathring{\text{O}}$ 23'38	0°54'17	max. Earth dist.	363 Oct 10 j 05:08	17° $\mathring{\text{A}}$ 07'10	10.94687 AU
max. Earth dist.	357 Jul 26 j 03:42	2° $\mathring{\text{O}}$ 26'21	10.25747 AU	morning rise	363 Oct 26 j 22:08	19° $\mathring{\text{A}}$ 05'28	
morning rise	357 Aug 12 j 14:18	4° $\mathring{\text{O}}$ 38'22		retrograde	364 Feb 03 j 02:39	26° $\mathring{\text{A}}$ 05'01	
retrograde	357 Nov 22 j 04:47	12° $\mathring{\text{O}}$ 23'36		opposition	364 Apr 12 j 08:15	22° $\mathring{\text{A}}$ 47'36	2°45'08
opposition	358 Jan 27 j 23:28	8° $\mathring{\text{O}}$ 59'32	1°24'57	min. Earth dist.	364 Apr 12 j 10:24	22° $\mathring{\text{A}}$ 47'12	8.98924 AU
min. Earth dist.	358 Jan 27 j 17:17	9° $\mathring{\text{O}}$ 00'47	8.31436 AU	direct	364 Jun 22 j 15:43	19° $\mathring{\text{A}}$ 25'37	
direct	358 Apr 06 j 18:12	5° $\mathring{\text{O}}$ 30'54		evening set	364 Oct 04 j 04:39	26° $\mathring{\text{A}}$ 38'04	
evening set	358 Jul 22 j 01:23	13° $\mathring{\text{O}}$ 30'06		conjunction	364 Oct 20 j 21:24	28° $\mathring{\text{A}}$ 35'28	2°11'10
	358 Aug 03 j 02:47	15° $\mathring{\text{O}}$		minimum elong	364 Oct 20 j 21:25	28° $\mathring{\text{A}}$ 35'28	2°11'11
conjunction	358 Aug 08 j 19:57	15° $\mathring{\text{O}}$ 43'01	1°22'05	max. Earth dist.	364 Oct 20 j 17:47	28° $\mathring{\text{A}}$ 34'24	11.02343 AU
minimum elong	358 Aug 08 j 19:54	15° $\mathring{\text{O}}$ 43'00	1°22'05		364 Nov 01 j 20:57	0° $\mathring{\text{M}}$	
max. Earth dist.	358 Aug 09 j 03:06	15° $\mathring{\text{O}}$ 45'15	10.37428 AU	morning rise	364 Nov 06 j 11:06	0° $\mathring{\text{M}}$ 31'59	
morning rise	358 Aug 26 j 09:53	17° $\mathring{\text{O}}$ 54'29		retrograde	365 Feb 13 j 17:08	7° $\mathring{\text{M}}$ 28'24	
retrograde	358 Dec 05 j 05:59	25° $\mathring{\text{O}}$ 29'47		opposition	365 Apr 24 j 10:10	4° $\mathring{\text{M}}$ 11'25	2°33'57
opposition	359 Feb 10 j 07:32	22° $\mathring{\text{O}}$ 07'09	1°56'15	min. Earth dist.	365 Apr 24 j 13:27	4° $\mathring{\text{M}}$ 10'48	9.05548 AU
min. Earth dist.	359 Feb 10 j 02:53	22° $\mathring{\text{O}}$ 08'04	8.43595 AU	direct	365 Jul 04 j 19:40	0° $\mathring{\text{M}}$ 50'36	
direct	359 Apr 20 j 16:13	18° $\mathring{\text{O}}$ 39'17		evening set	365 Oct 15 j 16:22	7° $\mathring{\text{M}}$ 57'32	
evening set	359 Aug 04 j 20:01	26° $\mathring{\text{O}}$ 30'37		conjunction	365 Nov 01 j 07:21	9° $\mathring{\text{M}}$ 53'51	1°59'41
conjunction	359 Aug 22 j 09:18	28° $\mathring{\text{O}}$ 40'17	1°44'59	minimum elong	365 Nov 01 j 07:23	9° $\mathring{\text{M}}$ 53'51	1°59'41
minimum elong	359 Aug 22 j 09:14	28° $\mathring{\text{O}}$ 40'16	1°44'59	max. Earth dist.	365 Nov 01 j 02:41	9° $\mathring{\text{M}}$ 52'28	11.07897 AU
max. Earth dist.	359 Aug 22 j 14:13	28° $\mathring{\text{O}}$ 41'49	10.49827 AU	morning rise	365 Nov 17 j 19:52	11° $\mathring{\text{M}}$ 49'29	
	359 Sep 02 j 03:13	0° $\mathring{\text{M}}$			365 Dec 17 j 08:55	15° $\mathring{\text{M}}$	
morning rise	359 Sep 08 j 17:49	0° $\mathring{\text{M}}$ 48'27		retrograde	366 Feb 25 j 08:30	18° $\mathring{\text{M}}$ 44'18	
retrograde	359 Dec 17 j 21:46	8° $\mathring{\text{M}}$ 14'23		opposition	366 May 06 j 09:58	15° $\mathring{\text{M}}$ 27'30	2°16'58
opposition	360 Feb 23 j 09:07	4° $\mathring{\text{M}}$ 53'05	2°20'48	min. Earth dist.	366 May 06 j 13:46	15° $\mathring{\text{M}}$ 26'48	9.09943 AU
min. Earth dist.	360 Feb 23 j 05:37	4° $\mathring{\text{M}}$ 53'47	8.56157 AU	direct	366 May 12 j 15:49	15° $\mathring{\text{R}}$ 00	
direct	360 May 03 j 07:38	1° $\mathring{\text{M}}$ 26'13			366 Jul 16 j 20:27	12° $\mathring{\text{M}}$ 07'43	
evening set	360 Aug 17 j 03:20	9° $\mathring{\text{M}}$ 09'12		evening set	366 Sep 16 j 13:02	15° $\mathring{\text{M}}$	
conjunction	360 Sep 03 j 11:22	11° $\mathring{\text{M}}$ 15'41	2°02'13		366 Oct 26 j 23:54	19° $\mathring{\text{M}}$ 10'20	
minimum elong	360 Sep 03 j 11:20	11° $\mathring{\text{M}}$ 15'40	2°02'12	conjunction	366 Nov 12 j 13:51	21° $\mathring{\text{M}}$ 06'02	1°43'41
max. Earth dist.	360 Sep 03 j 14:26	11° $\mathring{\text{M}}$ 16'37	10.62309 AU	minimum elong	366 Nov 12 j 13:53	21° $\mathring{\text{M}}$ 06'03	1°43'41
morning rise	360 Sep 20 j 14:41	13° $\mathring{\text{M}}$ 20'43		max. Earth dist.	366 Nov 12 j 08:44	21° $\mathring{\text{M}}$ 04'32	11.11150 AU
retrograde	360 Dec 29 j 06:25	20° $\mathring{\text{M}}$ 38'13		morning rise	366 Nov 29 j 01:56	23° $\mathring{\text{M}}$ 01'17	
opposition	361 Mar 07 j 04:29	17° $\mathring{\text{M}}$ 18'07	2°38'00	retrograde	367 Mar 09 j 01:02	29° $\mathring{\text{M}}$ 56'01	
min. Earth dist.	361 Mar 07 j 01:46	17° $\mathring{\text{M}}$ 18'38	8.68497 AU	opposition	367 May 18 j 09:09	26° $\mathring{\text{M}}$ 39'11	1°54'55
direct	361 May 16 j 15:43	13° $\mathring{\text{M}}$ 52'23		min. Earth dist.	367 May 18 j 14:07	26° $\mathring{\text{M}}$ 38'16	9.11970 AU
evening set	361 Aug 29 j 23:34	21° $\mathring{\text{M}}$ 26'57		direct	367 Jul 28 j 15:43	23° $\mathring{\text{M}}$ 20'15	
conjunction	361 Sep 16 j 02:50	23° $\mathring{\text{M}}$ 30'33	2°13'23	evening set	367 Nov 04 j 07:22	0° $\mathring{\text{X}}$	
minimum elong	361 Sep 16 j 02:49	23° $\mathring{\text{M}}$ 30'32	2°13'22		367 Nov 07 j 04:53	0° $\mathring{\text{X}}$ 19'49	
max. Earth dist.	361 Sep 16 j 04:44	23° $\mathring{\text{M}}$ 31'07	10.74282 AU	conjunction	367 Nov 23 j 18:18	2° $\mathring{\text{X}}$ 15'22	1°23'48
morning rise	361 Oct 03 j 01:25	25° $\mathring{\text{M}}$ 32'44		minimum elong	367 Nov 23 j 18:20	2° $\mathring{\text{X}}$ 15'23	1°23'47
	361 Nov 14 j 00:21	0° $\mathring{\text{A}}$		max. Earth dist.	367 Nov 23 j 11:40	2° $\mathring{\text{X}}$ 13'26	11.12001 AU
retrograde	362 Jan 10 j 10:30	2° $\mathring{\text{A}}$ 42'55		morning rise	367 Dec 10 j 06:49	4° $\mathring{\text{X}}$ 10'44	
				retrograde	368 Mar 19 j 16:33	11° $\mathring{\text{X}}$ 06'58	

opposition	368 May 29 j 08:29	7°♏49'48	1°28'34	retrograde	374 Jun 01 j 05:34	21°♏01'11
min. Earth dist.	368 May 29 j 14:53	7°♏48'37	9.11570 AU	opposition	374 Aug 10 j 15:49	17°♏37'07 -1°45'34
direct	368 Aug 08 j 09:24	4°♏31'26		min. Earth dist.	374 Aug 10 j 21:57	17°♏35'57 8.63554 AU
evening set	368 Nov 17 j 09:14	11°♏29'28			374 Sep 18 j 22:36	15°♏
				direct	374 Oct 18 j 01:21	14°♏16'59
conjunction	368 Dec 03 j 22:43	13°♏25'17	1°00'42		374 Nov 15 j 14:40	15°♏
minimum elong	368 Dec 03 j 22:45	13°♏25'17	1°00'42	evening set	375 Jan 25 j 20:22	21°♏37'57
max. Earth dist.	368 Dec 03 j 14:39	13°♏22'55	11.10427 AU			
morning rise	368 Dec 20 j 12:20	15°♏21'09		conjunction	375 Feb 11 j 19:12	23°♏43'05 -1°36'43
retrograde	369 Mar 31 j 12:32	22°♏20'27		minimum elong	375 Feb 11 j 19:09	23°♏43'04 1°36'43
opposition	369 Jun 10 j 08:45	19°♏02'41	0°58'46	max. Earth dist.	375 Feb 11 j 12:53	23°♏41'07 10.57151 AU
min. Earth dist.	369 Jun 10 j 15:53	19°♏01'22	9.08755 AU	morning rise	375 Feb 28 j 22:13	25°♏49'34
direct	369 Aug 20 j 03:45	15°♏44'40			375 Apr 07 j 10:51	0°♏
evening set	369 Nov 28 j 14:34	22°♏42'37		retrograde	375 Jun 14 j 18:37	3°♏36'52
				opposition	375 Aug 23 j 19:21	0°♏11'11 -2°12'17
conjunction	369 Dec 15 j 04:43	24°♏39'07	0°35'10	min. Earth dist.	375 Aug 23 j 23:40	0°♏10'20 8.50713 AU
minimum elong	369 Dec 15 j 04:45	24°♏39'07	0°35'11		375 Aug 26 j 04:54	30°♏
max. Earth dist.	369 Dec 14 j 20:47	24°♏36'47	11.06459 AU	direct	375 Oct 30 j 15:03	26°♏49'56
morning rise	369 Dec 31 j 19:41	26°♏35'55			375 Dec 31 j 00:12	0°♏
	370 Feb 01 j 13:33	0°♏		evening set	376 Feb 07 j 18:28	4°♏19'30
retrograde	370 Apr 12 j 12:22	3°♏39'51				
opposition	370 Jun 22 j 11:21	0°♏21'12	0°26'26	conjunction	376 Feb 24 j 20:15	6°♏27'12 -1°55'55
min. Earth dist.	370 Jun 22 j 18:08	0°♏19'57	9.03595 AU	minimum elong	376 Feb 24 j 20:13	6°♏27'11 1°55'55
	370 Jun 27 j 06:42	30°♏		max. Earth dist.	376 Feb 24 j 15:18	6°♏25'39 10.44208 AU
direct	370 Aug 31 j 21:04	27°♏03'19		morning rise	376 Mar 13 j 02:38	8°♏36'23
	370 Nov 01 j 09:32	0°♏		retrograde	376 Jun 27 j 15:30	16°♏34'12
evening set	370 Dec 09 j 22:34	4°♏02'42		opposition	376 Sep 05 j 05:31	13°♏06'58 -2°33'13
				min. Earth dist.	376 Sep 05 j 08:15	13°♏06'26 8.37914 AU
conjunction	370 Dec 26 j 13:46	6°♏00'14	0°08'03	direct	376 Nov 11 j 12:45	9°♏44'28
minimum elong	370 Dec 26 j 13:46	6°♏00'14	0°08'03	evening set	377 Feb 20 j 03:30	17°♏23'18
behind sun begin	370 Dec 26 j 07:31	5°♏58'25				
behind sun end	370 Dec 26 j 20:00	6°♏02'04		conjunction	377 Mar 09 j 08:40	19°♏33'43 -2°09'40
max. Earth dist.	370 Dec 26 j 05:59	5°♏57'57	11.00199 AU	minimum elong	377 Mar 09 j 08:38	19°♏33'42 2°09'40
morning rise	371 Jan 12 j 06:27	7°♏58'18		max. Earth dist.	377 Mar 09 j 05:04	19°♏32'34 10.31637 AU
desc. node	371 Apr 14 j 00:42	15°♏02'48		morning rise	377 Mar 26 j 18:45	21°♏45'42
retrograde	371 Apr 24 j 19:03	15°♏08'26		retrograde	377 Jul 11 j 19:50	29°♏53'19
opposition	371 Jul 04 j 17:18	11°♏48'40	-0°07'24	opposition	377 Sep 18 j 22:04	26°♏24'45 -2°46'41
min. Earth dist.	371 Jul 04 j 23:58	11°♏47'26	8.96231 AU	min. Earth dist.	377 Sep 18 j 23:32	26°♏24'27 8.25827 AU
direct	371 Sep 12 j 16:42	8°♏30'36		direct	377 Nov 24 j 18:34	23°♏00'53
evening set	371 Dec 21 j 11:16	15°♏33'02			378 Feb 27 j 09:50	0°♏
				evening set	378 Mar 05 j 23:29	0°♏49'06
conjunction	372 Jan 07 j 03:42	17°♏31'58	-0°19'53			
minimum elong	372 Jan 07 j 03:41	17°♏31'58	0°19'53	conjunction	378 Mar 23 j 08:41	3°♏02'19 -2°16'46
max. Earth dist.	372 Jan 06 j 19:02	17°♏29'23	10.91817 AU	minimum elong	378 Mar 23 j 08:40	3°♏02'19 2°16'46
morning rise	372 Jan 23 j 22:37	19°♏31'42		max. Earth dist.	378 Mar 23 j 07:04	3°♏01'48 10.20126 AU
retrograde	372 May 06 j 07:06	26°♏49'24		morning rise	378 Apr 09 j 22:47	5°♏17'05
opposition	372 Jul 16 j 03:20	23°♏28'21	-0°41'34	retrograde	378 Jul 26 j 06:55	13°♏33'04
min. Earth dist.	372 Jul 16 j 10:37	23°♏26'59	8.86863 AU	opposition	378 Oct 02 j 20:31	10°♏03'24 -2°51'13
direct	372 Sep 23 j 13:37	20°♏09'49		min. Earth dist.	378 Oct 02 j 20:32	10°♏03'24 8.15122 AU
evening set	373 Jan 01 j 06:06	27°♏16'58		direct	378 Dec 08 j 08:42	6°♏38'10
				evening set	379 Mar 20 j 05:59	14°♏35'21
conjunction	373 Jan 18 j 00:11	29°♏17'39	-0°47'23			
minimum elong	373 Jan 18 j 00:10	29°♏17'38	0°47'24	conjunction	379 Apr 06 j 19:45	16°♏51'17 -2°16'16
max. Earth dist.	373 Jan 17 j 14:58	29°♏14'52	10.81554 AU	minimum elong	379 Apr 06 j 19:46	16°♏51'18 2°16'15
	373 Jan 23 j 20:22	0°♏		max. Earth dist.	379 Apr 06 j 20:41	16°♏51'36 10.10328 AU
morning rise	373 Feb 03 j 21:39	1°♏19'22		morning rise	379 Apr 24 j 13:59	19°♏08'40
retrograde	373 May 19 j 01:23	8°♏46'02		retrograde	379 Aug 09 j 22:09	27°♏30'49
opposition	373 Jul 28 j 18:37	5°♏23'32	-1°14'47	opposition	379 Oct 16 j 23:47	24°♏00'24 -2°45'51
min. Earth dist.	373 Jul 29 j 01:57	5°♏22'09	8.75805 AU	min. Earth dist.	379 Oct 16 j 22:05	24°♏00'45 8.06414 AU
direct	373 Oct 05 j 16:17	2°♏04'19		direct	379 Dec 22 j 07:29	20°♏33'51
evening set	374 Jan 13 j 08:35	9°♏17'44		evening set	380 Apr 02 j 21:58	28°♏38'57
					380 Apr 13 j 08:48	0°♏
conjunction	374 Jan 30 j 04:50	11°♏20'30	-1°13'25			
minimum elong	374 Jan 30 j 04:47	11°♏20'29	1°13'26	conjunction	380 Apr 20 j 16:25	0°♏57'21 -2°07'41
max. Earth dist.	374 Jan 29 j 20:43	11°♏18'01	10.69810 AU	minimum elong	380 Apr 20 j 16:28	0°♏57'22 2°07'40
morning rise	374 Feb 16 j 04:56	13°♏24'28		max. Earth dist.	380 Apr 20 j 20:14	0°♏58'36 10.02824 AU
	374 Mar 01 j 19:23	15°♏		morning rise	380 May 08 j 14:33	3°♏16'58

retrograde	380 Aug 23 j 16:01	11°♄42'29	retrograde	386 Nov 16 j 09:46	6°♄27'23
opposition	380 Oct 30 j 06:25	8°♄11'43 -2°30'20	opposition	387 Jan 22 j 02:57	3°♄02'28 1°08'23
min. Earth dist.	380 Oct 30 j 02:37	8°♄12'30 8.00233 AU	min. Earth dist.	387 Jan 21 j 19:53	3°♄03'54 8.25332 AU
direct	381 Jan 04 j 12:47	4°♄44'01		387 Mar 09 j 03:14	30°♄♄
evening set	381 Apr 17 j 21:26	12°♄55'22	direct	387 Mar 31 j 15:16	29°♄33'28
	381 May 03 j 20:16	15°♄		387 Apr 23 j 01:47	0°♄
			evening set	387 Jul 15 j 22:02	7°♄36'32
conjunction	381 May 05 j 20:17	15°♄15'46 -1°51'12			
minimum elong	381 May 05 j 20:21	15°♄15'47 1°51'11	conjunction	387 Aug 02 j 18:53	9°♄51'02 1°09'41
max. Earth dist.	381 May 06 j 02:41	15°♄17'52 9.98095 AU	minimum elong	387 Aug 02 j 18:50	9°♄51'01 1°09'40
morning rise	381 May 23 j 21:45	17°♄37'01	max. Earth dist.	387 Aug 03 j 02:55	9°♄53'34 10.31259 AU
retrograde	381 Sep 07 j 10:35	26°♄02'49	morning rise	387 Aug 20 j 11:32	12°♄04'11
opposition	381 Nov 13 j 15:03	22°♄32'07 -2°05'16		387 Sep 14 j 09:10	15°♄
min. Earth dist.	381 Nov 13 j 09:22	22°♄33'18 7.96987 AU	retrograde	387 Nov 29 j 16:09	19°♄44'34
direct	382 Jan 18 j 22:42	19°♄03'27	opposition	388 Feb 04 j 14:20	16°♄21'17 1°42'27
evening set	382 May 03 j 01:51	27°♄18'58	min. Earth dist.	388 Feb 04 j 07:33	16°♄22'39 8.37409 AU
				388 Feb 22 j 00:57	15°♄♄
conjunction	382 May 21 j 04:19	29°♄40'38 -1°27'42	direct	388 Apr 13 j 16:22	12°♄53'11
minimum elong	382 May 21 j 04:22	29°♄40'39 1°27'41		388 Jun 03 j 10:21	15°♄
max. Earth dist.	382 May 21 j 12:37	29°♄43'21 9.96455 AU	evening set	388 Jul 28 j 22:07	20°♄48'43
	382 May 23 j 15:19	0°♄			
morning rise	382 Jun 08 j 08:09	2°♄02'45	conjunction	388 Aug 15 j 14:02	23°♄00'01 1°35'00
retrograde	382 Sep 22 j 03:52	10°♄25'42	minimum elong	388 Aug 15 j 13:59	22°♄59'59 1°34'59
opposition	382 Nov 27 j 23:46	6°♄55'31 -1°32'13	max. Earth dist.	388 Aug 15 j 21:27	23°♄02'19 10.43753 AU
min. Earth dist.	382 Nov 27 j 16:57	6°♄56'56 7.96894 AU	morning rise	388 Sep 02 j 01:08	25°♄09'49
direct	383 Feb 02 j 11:39	3°♄26'06		388 Oct 16 j 12:51	0°♄
evening set	383 May 18 j 08:41	11°♄43'31	retrograde	388 Dec 11 j 13:24	2°♄40'32
				389 Feb 08 j 01:01	30°♄♄
conjunction	383 Jun 05 j 13:21	14°♄05'32 -0°58'43	opposition	389 Feb 16 j 19:25	29°♄18'49 2°10'16
minimum elong	383 Jun 05 j 13:24	14°♄05'33 0°58'42	min. Earth dist.	389 Feb 16 j 13:41	29°♄19'56 8.50213 AU
max. Earth dist.	383 Jun 05 j 22:43	14°♄08'36 9.98006 AU	direct	389 Apr 27 j 10:50	25°♄51'48
morning rise	383 Jun 23 j 18:05	16°♄27'34		389 Jul 10 j 00:20	0°♄
retrograde	383 Oct 06 j 16:59	24°♄44'53	evening set	389 Aug 11 j 11:22	3°♄39'06
opposition	383 Dec 12 j 06:43	21°♄15'38 -0°53'32			
min. Earth dist.	383 Dec 11 j 23:29	21°♄17'08 7.99968 AU	conjunction	389 Aug 28 j 22:02	5°♄47'08 1°54'55
direct	384 Feb 17 j 03:23	17°♄45'47	minimum elong	389 Aug 28 j 21:59	5°♄47'07 1°54'55
evening set	384 Jun 01 j 14:33	26°♄02'42	max. Earth dist.	389 Aug 29 j 04:05	5°♄49'00 10.56623 AU
			morning rise	389 Sep 15 j 03:38	7°♄53'40
conjunction	384 Jun 19 j 19:42	28°♄24'04 -0°26'18	retrograde	389 Dec 24 j 02:45	15°♄15'22
minimum elong	384 Jun 19 j 19:44	28°♄24'05 0°26'17	opposition	390 Mar 01 j 18:07	11°♄55'06 2°30'53
max. Earth dist.	384 Jun 20 j 05:20	28°♄27'12 10.02648 AU	min. Earth dist.	390 Mar 01 j 14:22	11°♄55'50 8.63072 AU
	384 Jul 02 j 03:14	0°♄	direct	390 May 10 j 21:48	8°♄29'16
morning rise	384 Jul 07 j 23:40	0°♄45'02	evening set	390 Aug 24 j 13:35	16°♄08'06
retrograde	384 Oct 19 j 22:50	8°♄54'36			
opposition	384 Dec 25 j 10:30	5°♄26'36 -0°11'59	conjunction	390 Sep 10 j 19:03	18°♄13'02 2°08'54
min. Earth dist.	384 Dec 25 j 03:19	5°♄28'05 8.06019 AU	minimum elong	390 Sep 10 j 19:01	18°♄13'02 2°08'53
direct	385 Mar 02 j 18:53	1°♄56'41	max. Earth dist.	390 Sep 10 j 22:31	18°♄14'06 10.69220 AU
asc. node	385 Apr 12 j 17:14	3°♄25'26	morning rise	390 Sep 27 j 19:42	20°♄16'32
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			opposition	391 Mar 14 j 11:04	24°♄11'13 2°43'59
conjunction	385 Jul 04 j 20:07	12°♄30'35 0°07'24	min. Earth dist.	391 Mar 14 j 09:16	24°♄11'34 8.75342 AU
minimum elong	385 Jul 04 j 20:07	12°♄30'35 0°07'24	direct	391 May 24 j 00:49	20°♄46'39
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behind sun end	385 Jul 05 j 02:48	12°♄32'44		391 Sep 20 j 13:47	0°♄
max. Earth dist.	385 Jul 05 j 05:22	12°♄33'34 10.10078 AU			
morning rise	385 Jul 22 j 21:40	14°♄49'36	conjunction	391 Sep 23 j 05:48	0°♄19'16 2°16'44
retrograde	385 Nov 02 j 20:22	22°♄49'58	minimum elong	391 Sep 23 j 05:47	0°♄19'16 2°16'44
opposition	386 Jan 08 j 09:35	19°♄23'27 0°29'32	max. Earth dist.	391 Sep 23 j 06:36	0°♄19'31 10.80928 AU
min. Earth dist.	386 Jan 08 j 02:27	19°♄24'55 8.14656 AU	morning rise	391 Oct 10 j 02:13	2°♄20'08
direct	386 Mar 17 j 07:53	15°♄53'50	retrograde	392 Jan 17 j 08:31	9°♄27'06
evening set	386 Jul 01 j 11:31	24°♄03'13	opposition	392 Mar 25 j 22:41	6°♄09'04 2°49'33
			min. Earth dist.	392 Mar 25 j 22:16	6°♄09'08 8.86420 AU
conjunction	386 Jul 19 j 12:30	26°♄20'38 0°39'58	direct	392 Jun 04 j 22:02	2°♄45'44
minimum elong	386 Jul 19 j 12:28	26°♄20'37 0°39'58	evening set	392 Sep 17 j 10:45	10°♄08'19
max. Earth dist.	386 Jul 19 j 21:09	26°♄23'23 10.19815 AU			
morning rise	386 Aug 06 j 10:09	28°♄36'57	conjunction	392 Oct 04 j 07:44	12°♄08'12 2°18'32
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

























































































































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morning rise	392 Oct 21 j 00:42	14°♄06'54		morning rise	398 Dec 27 j 05:19	21°♄52'26	
retrograde	393 Jan 28 j 05:37	21°♄08'35		retrograde	399 Apr 07 j 14:18	28°♄54'38	
opposition	393 Apr 07 j 05:39	17°♄51'17	2°47'55	opposition	399 Jun 17 j 12:09	25°♄35'54	0°40'59
min. Earth dist.	393 Apr 07 j 06:38	17°♄51'06	8.95782 AU	min. Earth dist.	399 Jun 17 j 20:07	25°♄34'26	9.04330 AU
direct	393 Jun 17 j 11:40	14°♄29'11		direct	399 Aug 27 j 01:34	22°♄17'25	
evening set	393 Sep 29 j 08:14	21°♄44'46		evening set	399 Dec 05 j 07:55	29°♄16'35	
					399 Dec 11 j 12:48	0°♄	
conjunction	393 Oct 16 j 02:18	23°♄42'52	2°14'35	conjunction	399 Dec 21 j 22:34	1°♄13'48	0°20'09
minimum elong	393 Oct 16 j 02:19	23°♄42'52	2°14'36	minimum elong	399 Dec 21 j 22:35	1°♄13'48	0°20'09
max. Earth dist.	393 Oct 15 j 23:45	23°♄42'06	10.99540 AU	max. Earth dist.	399 Dec 21 j 12:59	1°♄10'58	11.01262 AU
morning rise	393 Nov 01 j 16:42	25°♄39'58		morning rise	400 Jan 07 j 14:41	3°♄11'28	
	393 Dec 13 j 12:41	0°♄		retrograde	400 Apr 18 j 17:08	10°♄19'14	
retrograde	394 Feb 08 j 23:25	2°♄37'51		opposition	400 Jun 28 j 16:45	6°♄59'24	0°07'38
	394 Apr 10 j 14:33	30°♄		min. Earth dist.	400 Jun 29 j 00:54	6°♄57'53	8.97645 AU
opposition	394 Apr 19 j 09:24	29°♄21'04	2°39'35	direct	400 Sep 06 j 21:26	3°♄40'45	
min. Earth dist.	394 Apr 19 j 12:25	29°♄20'30	9.03075 AU	desc. node	400 Sep 21 j 07:49	3°♄51'14	
direct	394 Jun 29 j 17:08	26°♄00'04		evening set	400 Dec 15 j 18:30	10°♄42'21	
	394 Sep 11 j 15:55	0°♄					
evening set	394 Oct 10 j 23:08	3°♄09'42		conjunction	401 Jan 01 j 10:26	12°♄40'51	-0°07'37
conjunction	394 Oct 27 j 14:54	5°♄06'31	2°05'19	minimum elong	401 Jan 01 j 10:26	12°♄40'51	0°07'37
minimum elong	394 Oct 27 j 14:56	5°♄06'31	2°05'19	behind sun begin	401 Jan 01 j 04:05	12°♄38'59	
max. Earth dist.	394 Oct 27 j 10:10	5°♄05'07	11.05733 AU	behind sun end	401 Jan 01 j 16:47	12°♄42'43	
morning rise	394 Nov 13 j 03:46	7°♄02'33		max. Earth dist.	401 Jan 01 j 01:28	12°♄38'11	10.93586 AU
retrograde	395 Feb 20 j 14:19	13°♄58'13		morning rise	401 Jan 18 j 04:29	14°♄40'02	
opposition	395 May 01 j 10:48	10°♄41'37	2°25'07	retrograde	401 May 01 j 02:17	21°♄54'52	
min. Earth dist.	395 May 01 j 15:57	10°♄40'40	9.08116 AU	opposition	401 Jul 11 j 00:56	18°♄33'45	-0°26'35
direct	395 Jul 11 j 19:58	7°♄21'33		min. Earth dist.	401 Jul 11 j 08:15	18°♄32'23	8.89009 AU
evening set	395 Oct 22 j 09:00	14°♄26'23		direct	401 Sep 18 j 18:09	15°♄14'46	
	395 Oct 27 j 05:31	15°♄		evening set	401 Dec 27 j 10:31	22°♄20'24	
conjunction	395 Nov 07 j 23:15	16°♄22'23	1°51'16	conjunction	402 Jan 13 j 04:04	24°♄20'30	-0°35'25
minimum elong	395 Nov 07 j 23:18	16°♄22'24	1°51'16	minimum elong	402 Jan 13 j 04:03	24°♄20'30	0°35'25
max. Earth dist.	395 Nov 07 j 16:16	16°♄20'20	11.09629 AU	max. Earth dist.	402 Jan 12 j 20:09	24°♄18'07	10.84088 AU
morning rise	395 Nov 24 j 11:36	18°♄17'51		morning rise	402 Jan 30 j 00:18	26°♄21'31	
retrograde	396 Mar 03 j 05:20	25°♄12'49			402 Mar 04 j 08:05	0°♄	
opposition	396 May 12 j 10:43	21°♄56'06	2°05'15	retrograde	402 May 13 j 18:55	3°♄44'48	
min. Earth dist.	396 May 12 j 16:58	21°♄54'57	9.10794 AU	opposition	402 Jul 23 j 14:05	0°♄22'17	-1°00'26
direct	396 Jul 22 j 18:50	18°♄36'45		min. Earth dist.	402 Jul 23 j 20:11	0°♄21'08	8.78736 AU
evening set	396 Nov 01 j 15:19	25°♄38'00			402 Jul 28 j 12:21	30°♄	
conjunction	396 Nov 18 j 04:59	27°♄33'41	1°33'01	direct	402 Sep 30 j 18:40	27°♄02'47	
minimum elong	396 Nov 18 j 05:01	27°♄33'42	1°33'01		402 Nov 30 j 02:13	0°♄	
max. Earth dist.	396 Nov 17 j 21:22	27°♄31'27	11.11129 AU	evening set	403 Jan 08 j 09:36	4°♄13'56	
morning rise	396 Dec 04 j 17:24	29°♄29'04		conjunction	403 Jan 25 j 04:57	6°♄15'58	-1°02'16
	396 Dec 09 j 06:02	0°♄		minimum elong	403 Jan 25 j 04:55	6°♄15'57	1°02'17
retrograde	397 Mar 14 j 21:22	6°♄24'52		max. Earth dist.	403 Jan 24 j 21:18	6°♄13'38	10.73129 AU
opposition	397 May 24 j 10:07	3°♄07'43	1°40'43	morning rise	403 Feb 11 j 03:49	8°♄19'07	
min. Earth dist.	397 May 24 j 16:39	3°♄06'31	9.11032 AU		403 Apr 24 j 05:46	15°♄	
	397 Jul 19 j 08:11	30°♄		retrograde	403 May 26 j 20:28	15°♄51'57	
direct	397 Aug 03 j 14:58	29°♄48'53			403 Jun 28 j 19:18	15°♄	
	397 Aug 18 j 18:03	0°♄		opposition	403 Aug 05 j 08:54	12°♄27'59	-1°32'31
evening set	397 Nov 12 j 20:05	6°♄47'56		min. Earth dist.	403 Aug 05 j 14:24	12°♄26'56	8.67225 AU
				direct	403 Oct 12 j 23:31	9°♄07'45	
conjunction	397 Nov 29 j 09:42	8°♄43'44	1°11'16		404 Jan 08 j 14:47	15°♄	
minimum elong	397 Nov 29 j 09:45	8°♄43'45	1°11'15	evening set	404 Jan 20 j 17:25	16°♄25'51	
max. Earth dist.	397 Nov 29 j 01:55	8°♄41'27	11.10184 AU	conjunction	404 Feb 06 j 14:58	18°♄30'05	-1°26'57
morning rise	397 Dec 15 j 22:43	10°♄39'27		minimum elong	404 Feb 06 j 14:56	18°♄30'04	1°26'57
retrograde	398 Mar 26 j 17:01	17°♄37'39		max. Earth dist.	404 Feb 06 j 07:52	18°♄27'53	10.61153 AU
opposition	398 Jun 05 j 10:11	14°♄19'50	1°12'20	morning rise	404 Feb 23 j 16:49	20°♄35'38	
min. Earth dist.	398 Jun 05 j 17:11	14°♄18'33	9.08843 AU	retrograde	404 Jun 08 j 04:42	28°♄18'44	
direct	398 Aug 15 j 08:53	11°♄01'18		opposition	404 Aug 17 j 09:45	24°♄53'20	-2°01'15
evening set	398 Nov 24 j 01:06	17°♄59'37		min. Earth dist.	404 Aug 17 j 14:35	24°♄52'24	8.54965 AU
conjunction	398 Dec 10 j 15:00	19°♄55'56	0°46'42	direct	404 Oct 24 j 10:24	21°♄32'11	
minimum elong	398 Dec 10 j 15:02	19°♄55'57	0°46'42	evening set	405 Feb 01 j 10:59	28°♄58'27	

	405 Feb 09 j 18:38	0°♄	evening set	411 Apr 26 j 20:58	21°♄20'18	
conjunction	405 Feb 18 j 11:19	1°♄05'07 -1°48'07	conjunction	411 May 14 j 21:44	23°♄41'18 -1°38'31	
minimum elong	405 Feb 18 j 11:16	1°♄05'06 1°48'06	minimum elong	411 May 14 j 21:48	23°♄41'20 1°38'31	
max. Earth dist.	405 Feb 18 j 05:54	1°♄03'25 10.48685 AU	max. Earth dist.	411 May 15 j 04:42	23°♄43'35 9.98231 AU	
morning rise	405 Mar 07 j 16:19	3°♄13'15	morning rise	411 Jun 02 j 00:45	26°♄03'00	
retrograde	405 Jun 21 j 20:57	11°♄06'55		411 Jul 04 j 22:02	0°♄	
opposition	405 Aug 30 j 17:17	7°♄40'06 -2°24'55	retrograde	411 Sep 16 j 05:15	4°♄27'03	
min. Earth dist.	405 Aug 30 j 20:42	7°♄39'26 8.42515 AU	opposition	411 Nov 22 j 04:14	0°♄57'12 -1°47'10	
direct	405 Nov 06 j 06:24	4°♄17'57	min. Earth dist.	411 Nov 21 j 22:32	0°♄58'23 7.98060 AU	
evening set	406 Feb 14 j 15:07	11°♄53'09		411 Dec 03 j 19:23	30°♄	
			direct	412 Jan 27 j 13:41	27°♄28'40	
conjunction	406 Mar 03 j 18:48	14°♄02'28 -2°04'24		412 Mar 20 j 22:36	0°♄	
minimum elong	406 Mar 03 j 18:46	14°♄02'27 2°04'23	evening set	412 May 11 j 03:00	5°♄44'59	
max. Earth dist.	406 Mar 03 j 16:11	14°♄01'38 10.36327 AU				
morning rise	406 Mar 21 j 03:12	16°♄13'19	conjunction	412 May 29 j 06:40	8°♄06'45 -1°11'42	
retrograde	406 Jul 05 j 22:40	24°♄17'12	minimum elong	412 May 29 j 06:44	8°♄06'46 1°11'41	
opposition	406 Sep 13 j 07:27	20°♄49'07 -2°41'48	max. Earth dist.	412 May 29 j 14:36	8°♄09'21 9.98449 AU	
min. Earth dist.	406 Sep 13 j 08:33	20°♄48'54 8.30505 AU	morning rise	412 Jun 16 j 11:13	10°♄28'46	
direct	406 Nov 19 j 09:07	17°♄25'53	retrograde	412 Sep 29 j 19:37	18°♄48'23	
evening set	407 Feb 28 j 06:36	25°♄10'21	opposition	412 Dec 05 j 12:03	15°♄19'17 -1°10'38	
			min. Earth dist.	412 Dec 05 j 05:35	15°♄20'37 7.99679 AU	
conjunction	407 Mar 17 j 14:07	27°♄22'25 -2°14'31	direct	413 Feb 10 j 05:15	11°♄50'10	
minimum elong	407 Mar 17 j 14:06	27°♄22'25 2°14'30	evening set	413 May 26 j 09:30	20°♄07'08	
max. Earth dist.	407 Mar 17 j 14:00	27°♄22'23 10.24739 AU				
morning rise	407 Apr 04 j 02:18	29°♄36'02	conjunction	413 Jun 13 j 14:36	22°♄28'44 -0°40'30	
	407 Apr 07 j 07:08	0°♄	minimum elong	413 Jun 13 j 14:38	22°♄28'45 0°40'30	
retrograde	407 Jul 20 j 08:45	7°♄48'56	max. Earth dist.	413 Jun 13 j 23:20	22°♄31'35 10.01559 AU	
opposition	407 Sep 27 j 03:38	4°♄19'50 -2°50'19	morning rise	413 Jul 01 j 19:06	24°♄50'09	
min. Earth dist.	407 Sep 27 j 02:35	4°♄20'03 8.19588 AU		413 Aug 15 j 21:59	0°♄	
direct	407 Dec 02 j 18:21	0°♄55'27	retrograde	413 Oct 14 j 04:35	3°♄03'05	
evening set	408 Mar 13 j 09:05	8°♄49'02		413 Dec 14 j 16:13	30°♄	
			opposition	413 Dec 19 j 17:21	29°♄35'01 -0°30'00	
conjunction	408 Mar 30 j 20:52	11°♄03'50 -2°17'22	min. Earth dist.	413 Dec 19 j 10:10	29°♄36'30 8.04166 AU	
minimum elong	408 Mar 30 j 20:52	11°♄03'50 2°17'21	direct	414 Feb 24 j 20:47	26°♄05'38	
max. Earth dist.	408 Mar 30 j 22:52	11°♄04'29 10.14585 AU		414 May 04 j 09:21	0°♄	
morning rise	408 Apr 17 j 13:07	13°♄20'07	evening set	414 Jun 10 j 13:33	4°♄20'59	
retrograde	408 Aug 02 j 23:43	21°♄40'05				
opposition	408 Oct 10 j 05:20	18°♄10'16 -2°49'17	conjunction	414 Jun 28 j 18:19	6°♄41'29 -0°07'10	
min. Earth dist.	408 Oct 10 j 02:33	18°♄10'50 8.10403 AU	minimum elong	414 Jun 28 j 18:20	6°♄41'30 0°07'09	
direct	408 Dec 15 j 13:19	14°♄44'44	behind sun begin	414 Jun 28 j 11:34	6°♄39'20	
evening set	409 Mar 27 j 21:27	22°♄46'36	behind sun end	414 Jun 29 j 01:05	6°♄43'40	
			max. Earth dist.	414 Jun 29 j 03:37	6°♄44'29 10.07457 AU	
conjunction	409 Apr 14 j 13:42	25°♄03'55 -2°12'17	morning rise	414 Jul 16 j 21:02	9°♄01'22	
minimum elong	409 Apr 14 j 13:44	25°♄03'56 2°12'16	asc. node	414 Sep 16 j 22:22	15°♄33'00	
max. Earth dist.	409 Apr 14 j 17:35	25°♄05'11 10.06479 AU	retrograde	414 Oct 28 j 06:49	17°♄05'51	
morning rise	409 May 02 j 10:03	27°♄22'34	opposition	415 Jan 02 j 18:46	13°♄39'04 0°11'52	
	409 May 23 j 18:12	0°♄	min. Earth dist.	415 Jan 02 j 11:30	13°♄40'33 8.11328 AU	
retrograde	409 Aug 17 j 17:13	5°♄47'00	direct	415 Mar 11 j 10:16	10°♄09'40	
opposition	409 Oct 24 j 11:09	2°♄16'49 -2°38'05	evening set	415 Jun 25 j 12:22	18°♄21'17	
min. Earth dist.	409 Oct 24 j 07:08	2°♄17'38 8.03515 AU				
	409 Nov 23 j 19:27	30°♄	conjunction	415 Jul 13 j 14:55	20°♄39'48 0°26'13	
direct	409 Dec 29 j 16:03	28°♄50'10	minimum elong	415 Jul 13 j 14:53	20°♄39'47 0°26'14	
	410 Feb 03 j 02:21	0°♄	max. Earth dist.	415 Jul 14 j 00:00	20°♄42'42 10.15829 AU	
evening set	410 Apr 11 j 18:11	6°♄58'50	morning rise	415 Jul 31 j 14:14	22°♄57'18	
				415 Oct 11 j 05:47	0°♄	
conjunction	410 Apr 29 j 14:56	9°♄18'18 -1°59'08	retrograde	415 Nov 11 j 01:18	0°♄52'14	
minimum elong	410 Apr 29 j 14:59	9°♄18'19 1°59'08		415 Dec 12 j 02:41	30°♄	
max. Earth dist.	410 Apr 29 j 20:29	9°♄20'07 10.00929 AU	opposition	416 Jan 16 j 15:05	27°♄26'51 0°52'11	
morning rise	410 May 17 j 15:03	11°♄38'49	min. Earth dist.	416 Jan 16 j 08:30	27°♄28'11 8.20760 AU	
	410 Jun 14 j 04:11	15°♄	direct	416 Mar 24 j 19:39	23°♄57'45	
retrograde	410 Sep 01 j 11:49	20°♄04'38		416 Jun 22 j 01:14	0°♄	
opposition	410 Nov 07 j 19:21	16°♄34'25 -2°16'59	evening set	416 Jul 09 j 03:15	2°♄03'47	
min. Earth dist.	410 Nov 07 j 14:28	16°♄35'26 7.99341 AU				
	410 Nov 27 j 13:22	15°♄	conjunction	416 Jul 27 j 02:04	4°♄19'38 0°57'24	
direct	411 Jan 13 j 00:47	13°♄06'44	minimum elong	416 Jul 27 j 02:01	4°♄19'37 0°57'24	
	411 Feb 27 j 15:27	15°♄	max. Earth dist.	416 Jul 27 j 10:02	4°♄22'10 10.26183 AU	

morning rise	416 Aug 13 j 20:52	6°♊34'12		opposition	423 Apr 14 j 13:33	24°♊40'11	2°44'06
retrograde	416 Nov 23 j 11:17	14°♊19'07		min. Earth dist.	423 Apr 14 j 15:23	24°♊39'50	8.99345 AU
opposition	417 Jan 29 j 05:28	10°♊55'12	1°28'34	direct	423 Jun 24 j 21:00	21°♊18'18	
min. Earth dist.	417 Jan 28 j 23:53	10°♊56'19	8.31902 AU	evening set	423 Oct 06 j 08:56	28°♊30'20	
direct	417 Apr 08 j 00:22	7°♊26'39			423 Oct 19 j 03:49	0°♊	
	417 Jul 19 j 20:03	15°♊					
evening set	417 Jul 23 j 08:14	15°♊25'42		conjunction	423 Oct 23 j 01:35	0°♊27'39	2°10'01
				minimum elong	423 Oct 23 j 01:36	0°♊27'40	2°10'01
conjunction	417 Aug 10 j 02:20	17°♊38'28	1°24'46	max. Earth dist.	423 Oct 22 j 22:27	0°♊26'44	11.02743 AU
minimum elong	417 Aug 10 j 02:16	17°♊38'27	1°24'46	morning rise	423 Nov 08 j 15:10	2°♊24'07	
max. Earth dist.	417 Aug 10 j 08:38	17°♊40'27	10.37907 AU	retrograde	424 Feb 15 j 22:06	9°♊20'23	
morning rise	417 Aug 27 j 15:58	19°♊49'48		opposition	424 Apr 25 j 15:18	6°♊03'23	2°32'11
retrograde	417 Dec 06 j 10:31	27°♊24'49		min. Earth dist.	424 Apr 25 j 17:47	6°♊02'55	9.05916 AU
opposition	418 Feb 11 j 13:25	24°♊02'19	1°59'14	direct	424 Jul 06 j 02:13	2°♊42'38	
min. Earth dist.	418 Feb 11 j 08:47	24°♊03'14	8.44097 AU	evening set	424 Oct 16 j 20:12	9°♊49'08	
direct	418 Apr 21 j 23:42	20°♊34'35					
evening set	418 Aug 06 j 02:29	28°♊25'44		conjunction	424 Nov 02 j 11:11	11°♊45'24	1°57'58
	418 Aug 18 j 21:36	0°♊		minimum elong	424 Nov 02 j 11:13	11°♊45'24	1°57'58
				max. Earth dist.	424 Nov 02 j 07:26	11°♊44'18	11.08243 AU
conjunction	418 Aug 23 j 15:22	0°♊35'14	1°47'08	morning rise	424 Nov 18 j 23:36	13°♊40'59	
minimum elong	418 Aug 23 j 15:19	0°♊35'13	1°47'07		424 Nov 30 j 16:19	15°♊	
max. Earth dist.	418 Aug 23 j 19:56	0°♊36'39	10.50335 AU	retrograde	425 Feb 26 j 13:42	20°♊35'38	
morning rise	418 Sep 09 j 23:34	2°♊43'16		opposition	425 May 07 j 14:54	17°♊18'49	2°14'33
retrograde	418 Dec 19 j 02:37	10°♊08'59		min. Earth dist.	425 May 07 j 18:35	17°♊18'09	9.10258 AU
opposition	419 Feb 24 j 14:49	6°♊47'48	2°23'03		425 Jun 11 j 10:05	15°♊	
min. Earth dist.	419 Feb 24 j 10:45	6°♊48'36	8.56671 AU	direct	425 Jul 18 j 00:26	13°♊59'05	
direct	419 May 05 j 14:51	3°♊21'05			425 Aug 22 j 22:07	15°♊	
evening set	419 Aug 19 j 09:24	11°♊03'50		evening set	425 Oct 28 j 03:25	21°♊01'16	
conjunction	419 Sep 05 j 17:10	13°♊10'11	2°03'43	conjunction	425 Nov 13 j 17:19	22°♊56'56	1°41'29
minimum elong	419 Sep 05 j 17:07	13°♊10'10	2°03'43	minimum elong	425 Nov 13 j 17:21	22°♊56'57	1°41'28
max. Earth dist.	419 Sep 05 j 20:45	13°♊11'17	10.62823 AU	max. Earth dist.	425 Nov 13 j 12:01	22°♊55'23	11.11440 AU
morning rise	419 Sep 22 j 20:03	15°♊15'03		morning rise	425 Nov 30 j 05:29	24°♊52'11	
retrograde	419 Dec 31 j 13:01	22°♊32'21			426 Jan 21 j 19:36	0°♊	
opposition	420 Mar 08 j 10:13	19°♊12'22	2°39'26	retrograde	426 Mar 10 j 03:40	1°♊46'46	
min. Earth dist.	420 Mar 08 j 07:06	19°♊12'58	8.69002 AU		426 Apr 28 j 07:22	30°♊	
direct	420 May 17 j 20:43	15°♊46'48		opposition	426 May 19 j 13:51	28°♊29'53	1°51'58
evening set	420 Aug 31 j 05:09	23°♊21'03		min. Earth dist.	426 May 19 j 19:18	28°♊28'53	9.12228 AU
				direct	426 Jul 29 j 19:34	25°♊10'57	
conjunction	420 Sep 17 j 08:09	25°♊24'31	2°14'12		426 Oct 19 j 15:12	0°♊	
minimum elong	420 Sep 17 j 08:07	25°♊24'31	2°14'12	evening set	426 Nov 08 j 08:07	2°♊10'10	
max. Earth dist.	420 Sep 17 j 10:44	25°♊25'18	10.74781 AU				
morning rise	420 Oct 04 j 06:19	27°♊26'35		conjunction	426 Nov 24 j 21:29	4°♊05'41	1°21'12
	420 Oct 26 j 20:21	0°♊		minimum elong	426 Nov 24 j 21:31	4°♊05'42	1°21'11
retrograde	421 Jan 11 j 15:22	4°♊36'35		max. Earth dist.	426 Nov 24 j 14:28	4°♊03'38	11.12234 AU
opposition	421 Mar 20 j 23:58	1°♊17'39	2°48'13	morning rise	426 Dec 11 j 10:12	6°♊01'02	
min. Earth dist.	421 Mar 20 j 22:36	1°♊17'55	8.80531 AU	retrograde	427 Mar 21 j 20:37	12°♊57'10	
	421 Apr 07 j 09:47	30°♊		opposition	427 May 31 j 12:57	9°♊39'57	1°25'11
direct	421 May 30 j 19:39	27°♊53'17		min. Earth dist.	427 May 31 j 19:17	9°♊38'47	9.11769 AU
	421 Jul 21 j 21:16	0°♊		direct	427 Aug 10 j 14:45	6°♊21'36	
evening set	421 Sep 12 j 14:58	5°♊19'26		evening set	427 Nov 19 j 12:09	13°♊19'17	
conjunction	421 Sep 29 j 13:42	7°♊20'23	2°18'35	conjunction	427 Dec 06 j 01:45	15°♊15'05	0°57'48
minimum elong	421 Sep 29 j 13:41	7°♊20'23	2°18'34	minimum elong	427 Dec 06 j 01:47	15°♊15'06	0°57'48
max. Earth dist.	421 Sep 29 j 14:15	7°♊20'33	10.85693 AU	max. Earth dist.	427 Dec 05 j 18:24	15°♊12'56	11.10599 AU
morning rise	421 Oct 16 j 08:03	9°♊20'04		morning rise	427 Dec 22 j 15:25	17°♊10'57	
retrograde	422 Jan 23 j 13:02	16°♊24'02		retrograde	428 Apr 01 j 15:58	24°♊10'14	
opposition	422 Apr 02 j 08:42	13°♊05'59	2°49'38	opposition	428 Jun 11 j 13:04	20°♊52'22	0°55'05
min. Earth dist.	422 Apr 02 j 09:26	13°♊05'51	8.90777 AU	min. Earth dist.	428 Jun 11 j 19:19	20°♊51'13	9.08895 AU
direct	422 Jun 12 j 11:45	9°♊42'51		direct	428 Aug 21 j 07:34	17°♊34'23	
evening set	422 Sep 24 j 15:50	17°♊01'32		evening set	428 Nov 29 j 17:19	24°♊32'02	
conjunction	422 Oct 11 j 11:01	19°♊00'25	2°17'03	conjunction	428 Dec 16 j 07:38	26°♊28'31	0°32'05
minimum elong	422 Oct 11 j 11:01	19°♊00'25	2°17'03	minimum elong	428 Dec 16 j 07:39	26°♊28'32	0°32'05
max. Earth dist.	422 Oct 11 j 09:02	18°♊59'50	10.95132 AU	max. Earth dist.	428 Dec 16 j 00:28	26°♊26'25	11.06573 AU
morning rise	422 Oct 28 j 02:34	20°♊58'14		morning rise	429 Jan 01 j 22:39	28°♊25'19	
retrograde	423 Feb 04 j 06:13	27°♊57'36			429 Jan 15 j 23:28	0°♊	

retrograde	429 Apr 13 j 17:05	5°♂29'16	minimum elong	435 Feb 25 j 23:38	8°♂16'08	1°57'32
opposition	429 Jun 23 j 15:31	2°♂10'33 0°22'35	max. Earth dist.	435 Feb 25 j 17:49	8°♂14'18	10.44247 AU
min. Earth dist.	429 Jun 23 j 21:50	2°♂09'23 9.03684 AU	morning rise	435 Mar 15 j 06:17	10°♂25'22	
	429 Jul 25 j 21:27	30°♂♂	retrograde	435 Jun 29 j 19:46	18°♂23'17	
direct	429 Sep 02 j 01:11	28°♂52'40	opposition	435 Sep 07 j 09:10	14°♂56'07	-2°34'50
	429 Oct 09 j 04:41	0°♂	min. Earth dist.	435 Sep 07 j 12:34	14°♂55'26	8.37930 AU
evening set	429 Dec 11 j 01:24	5°♂51'50	direct	435 Nov 13 j 15:39	11°♂33'38	
			evening set	436 Feb 22 j 07:12	19°♂12'36	
conjunction	429 Dec 27 j 16:35	7°♂49'22 0°04'54				
minimum elong	429 Dec 27 j 16:35	7°♂49'22 0°04'54	conjunction	436 Mar 10 j 12:33	21°♂23'03	-2°10'39
behind sun begin	429 Dec 27 j 09:47	7°♂47'23	minimum elong	436 Mar 10 j 12:31	21°♂23'03	2°10'38
behind sun end	429 Dec 27 j 23:24	7°♂51'22	max. Earth dist.	436 Mar 10 j 08:25	21°♂21'45	10.31632 AU
max. Earth dist.	429 Dec 27 j 08:33	7°♂47'01 11.00273 AU	morning rise	436 Mar 27 j 22:53	23°♂35'06	
morning rise	430 Jan 13 j 09:27	9°♂47'28		436 May 28 j 17:39	0°♂	
desc. node	430 Mar 03 j 05:35	14°♂43'31	retrograde	436 Jul 13 j 00:06	1°♂42'48	
retrograde	430 Apr 25 j 22:49	16°♂57'36		436 Aug 27 j 22:29	30°♂♂	
opposition	430 Jul 05 j 21:22	13°♂37'48 -0°11'16	opposition	436 Sep 20 j 01:39	28°♂14'18	-2°47'26
min. Earth dist.	430 Jul 06 j 04:18	13°♂36'31 8.96299 AU	min. Earth dist.	436 Sep 20 j 03:48	28°♂13'52	8.25800 AU
direct	430 Sep 13 j 18:55	10°♂19'44	direct	436 Nov 25 j 21:44	24°♂50'27	
evening set	430 Dec 22 j 14:07	17°♂22'01		437 Feb 13 j 05:14	0°♂	
			evening set	437 Mar 07 j 03:28	2°♂38'54	
conjunction	431 Jan 08 j 06:33	19°♂20'56 -0°23'00				
minimum elong	431 Jan 08 j 06:32	19°♂20'56 0°23'00	conjunction	437 Mar 24 j 12:59	4°♂52'11	-2°17'01
max. Earth dist.	431 Jan 07 j 21:42	19°♂18'18 10.91893 AU	minimum elong	437 Mar 24 j 12:58	4°♂52'11	2°17'00
morning rise	431 Jan 25 j 01:40	21°♂20'40	max. Earth dist.	437 Mar 24 j 11:29	4°♂51'42	10.20079 AU
retrograde	431 May 08 j 09:30	28°♂38'27	morning rise	437 Apr 11 j 03:16	7°♂07'01	
opposition	431 Jul 18 j 07:23	25°♂17'21 -0°45'18	retrograde	437 Jul 27 j 10:16	15°♂23'04	
min. Earth dist.	431 Jul 18 j 14:46	25°♂15'58 8.86956 AU	opposition	437 Oct 04 j 00:06	11°♂53'28	-2°51'03
direct	431 Sep 25 j 17:47	21°♂58'48	min. Earth dist.	437 Oct 04 j 00:14	11°♂53'27	8.15059 AU
evening set	432 Jan 03 j 08:55	29°♂05'49	direct	437 Dec 09 j 13:16	8°♂28'16	
	432 Jan 10 j 22:47	0°♂	evening set	438 Mar 21 j 10:11	16°♂25'41	
conjunction	432 Jan 20 j 03:09	1°♂06'29 -0°50'20				
minimum elong	432 Jan 20 j 03:07	1°♂06'29 0°50'20	conjunction	438 Apr 08 j 00:18	18°♂41'43	-2°15'45
max. Earth dist.	432 Jan 19 j 18:48	1°♂03'58 10.81662 AU	minimum elong	438 Apr 08 j 00:19	18°♂41'44	2°15'44
morning rise	432 Feb 06 j 00:41	3°♂08'11	max. Earth dist.	438 Apr 08 j 01:46	18°♂42'12	10.10253 AU
retrograde	432 May 20 j 05:30	10°♂34'56	morning rise	438 Apr 25 j 18:39	20°♂59'10	
opposition	432 Jul 29 j 22:27	7°♂12'22 -1°18'13	retrograde	438 Aug 11 j 01:42	29°♂21'23	
min. Earth dist.	432 Jul 30 j 05:14	7°♂11'05 8.75928 AU	opposition	438 Oct 18 j 03:26	25°♂51'01	-2°44'44
direct	432 Oct 06 j 20:48	3°♂53'09	min. Earth dist.	438 Oct 18 j 01:21	25°♂51'26	8.06333 AU
evening set	433 Jan 14 j 11:37	11°♂06'27	direct	438 Dec 23 j 11:13	22°♂24'31	
				439 Apr 01 j 04:49	0°♂	
conjunction	433 Jan 31 j 08:01	13°♂09'12 -1°16'03	evening set	439 Apr 05 j 02:29	0°♂29'49	
minimum elong	433 Jan 31 j 07:59	13°♂09'12 1°16'03				
max. Earth dist.	433 Jan 31 j 00:38	13°♂06'57 10.69922 AU	conjunction	439 Apr 22 j 21:18	2°♂48'21	-2°06'25
	433 Feb 15 j 12:11	15°♂	minimum elong	439 Apr 22 j 21:21	2°♂48'22	2°06'24
morning rise	433 Feb 17 j 08:07	15°♂13'11	max. Earth dist.	439 Apr 23 j 01:25	2°♂49'42	10.02747 AU
retrograde	433 Jun 02 j 10:02	22°♂49'56	morning rise	439 May 10 j 19:35	5°♂08'02	
opposition	433 Aug 11 j 19:23	19°♂25'51 -1°48'32	retrograde	439 Aug 25 j 20:40	13°♂33'33	
min. Earth dist.	433 Aug 12 j 00:54	19°♂24'47 8.63662 AU	opposition	439 Nov 01 j 10:06	10°♂02'50	-2°28'18
direct	433 Oct 19 j 03:41	16°♂05'45	min. Earth dist.	439 Nov 01 j 06:04	10°♂03'40	8.00157 AU
evening set	434 Jan 26 j 23:38	23°♂26'42	direct	440 Jan 06 j 15:26	6°♂35'09	
			evening set	440 Apr 19 j 02:19	14°♂46'43	
conjunction	434 Feb 12 j 22:30	25°♂31'49 -1°38'54		440 Apr 20 j 19:33	15°♂	
minimum elong	434 Feb 12 j 22:27	25°♂31'48 1°38'54	conjunction	440 May 07 j 01:26	17°♂07'13	-1°49'14
max. Earth dist.	434 Feb 12 j 15:53	25°♂29'46 10.57234 AU	minimum elong	440 May 07 j 01:29	17°♂07'14	1°49'14
morning rise	434 Mar 02 j 01:36	27°♂38'19	max. Earth dist.	440 May 07 j 07:30	17°♂09'13	9.98033 AU
	434 Mar 22 j 06:32	0°♂	morning rise	440 May 25 j 03:04	19°♂28'34	
retrograde	434 Jun 15 j 22:39	5°♂25'41	retrograde	440 Sep 08 j 16:10	27°♂54'14	
opposition	434 Aug 24 j 22:57	2°♂00'01 -2°14'39	opposition	440 Nov 14 j 18:50	24°♂23'37	-2°02'26
min. Earth dist.	434 Aug 25 j 03:15	1°♂59'11 8.50777 AU	min. Earth dist.	440 Nov 14 j 13:29	24°♂24'44	7.96931 AU
	434 Sep 21 j 12:12	30°♂♂	direct	441 Jan 20 j 01:24	20°♂54'56	
direct	434 Oct 31 j 18:02	28°♂38'48	evening set	441 May 04 j 06:56	29°♂10'40	
	434 Dec 09 j 23:16	0°♂		441 May 10 j 15:20	0°♂	
evening set	435 Feb 08 j 21:53	6°♂08'26				
conjunction	435 Feb 25 j 23:41	8°♂16'09 -1°57'33	conjunction	441 May 22 j 09:29	1°♂32'23	-1°25'10
			minimum elong	441 May 22 j 09:33	1°♂32'24	1°25'09

max. Earth dist.	441 May 22 j 16:59	1° $\Pi$ 34'51	9.96422 AU	minimum elong	447 Aug 17 j 17:56	24° $\Omega$ 49'45	1°37'14
morning rise	441 Jun 09 j 13:29	3° $\Pi$ 54'35		max. Earth dist.	447 Aug 18 j 01:34	24° $\Omega$ 52'08	10.43952 AU
retrograde	441 Sep 23 j 09:22	12° $\Pi$ 17'21		morning rise	447 Sep 04 j 04:40	26° $\Omega$ 59'26	
opposition	441 Nov 29 j 03:37	8° $\Pi$ 47'14	-1°28'46		447 Sep 30 j 04:32	0° $\mathbb{N}$	
min. Earth dist.	441 Nov 28 j 21:31	8° $\Pi$ 48'30	7.96879 AU	retrograde	447 Dec 13 j 16:38	4° $\mathbb{N}$ 29'56	
direct	442 Feb 03 j 16:11	5° $\Pi$ 17'47		opposition	448 Feb 18 j 22:53	1° $\mathbb{N}$ 08'14	2°12'42
evening set	442 May 19 j 13:48	13° $\Pi$ 35'22		min. Earth dist.	448 Feb 18 j 17:47	1° $\mathbb{N}$ 09'14	8.50432 AU
					448 Mar 04 j 16:09	30° $\mathbb{R}$ $\Omega$	
conjunction	442 Jun 06 j 18:28	15° $\Pi$ 57'24	-0°55'46	direct	448 Apr 28 j 14:37	27° $\Omega$ 41'11	
minimum elong	442 Jun 06 j 18:31	15° $\Pi$ 57'25	0°55'46		448 Jun 21 j 08:17	0° $\mathbb{N}$	
max. Earth dist.	442 Jun 07 j 02:49	16° $\Pi$ 00'08	9.98020 AU	evening set	448 Aug 12 j 15:18	5° $\mathbb{N}$ 28'21	
morning rise	442 Jun 24 j 23:21	18° $\Pi$ 19'28					
retrograde	442 Oct 07 j 20:43	26° $\Pi$ 36'33		conjunction	448 Aug 30 j 01:30	7° $\mathbb{N}$ 36'15	1°56'36
opposition	442 Dec 13 j 10:32	23° $\Pi$ 07'22	-0°49'40	minimum elong	448 Aug 30 j 01:28	7° $\mathbb{N}$ 36'14	1°56'36
min. Earth dist.	442 Dec 13 j 04:02	23° $\Pi$ 08'43	8.00004 AU	max. Earth dist.	448 Aug 30 j 07:00	7° $\mathbb{N}$ 37'56	10.56852 AU
direct	443 Feb 18 j 08:46	19° $\Pi$ 37'28		morning rise	448 Sep 16 j 06:51	9° $\mathbb{N}$ 42'39	
evening set	443 Jun 03 j 19:41	27° $\Pi$ 54'31		retrograde	448 Dec 25 j 05:47	17° $\mathbb{N}$ 04'10	
	443 Jun 20 j 00:04	0° $\mathbb{E}$		opposition	449 Mar 02 j 21:35	13° $\mathbb{N}$ 43'55	2°32'35
conjunction	443 Jun 22 j 00:48	0° $\mathbb{E}$ 15'52	-0°23'07	min. Earth dist.	449 Mar 02 j 18:03	13° $\mathbb{N}$ 44'36	8.63329 AU
minimum elong	443 Jun 22 j 00:49	0° $\mathbb{E}$ 15'52	0°23'07	direct	449 May 12 j 01:16	10° $\mathbb{N}$ 18'06	
max. Earth dist.	443 Jun 22 j 09:29	0° $\mathbb{E}$ 18'41	10.02709 AU	evening set	449 Aug 25 j 17:00	17° $\mathbb{N}$ 56'43	
morning rise	443 Jul 10 j 04:48	2° $\mathbb{E}$ 36'48		conjunction	449 Sep 11 j 22:06	20° $\mathbb{N}$ 01'32	2°09'58
retrograde	443 Oct 22 j 01:28	10° $\mathbb{E}$ 46'06		minimum elong	449 Sep 11 j 22:04	20° $\mathbb{N}$ 01'31	2°09'57
opposition	443 Dec 27 j 14:13	7° $\mathbb{E}$ 18'09	-0°07'59	max. Earth dist.	449 Sep 12 j 01:10	20° $\mathbb{N}$ 02'28	10.69494 AU
min. Earth dist.	443 Dec 27 j 07:19	7° $\mathbb{E}$ 19'34	8.06101 AU	morning rise	449 Sep 28 j 22:35	22° $\mathbb{N}$ 04'56	
direct	444 Mar 04 j 00:04	3° $\mathbb{E}$ 48'11		retrograde	450 Jan 06 j 10:44	29° $\mathbb{N}$ 18'30	
asc. node	444 Mar 08 j 15:19	3° $\mathbb{E}$ 49'22		opposition	450 Mar 15 j 14:24	25° $\mathbb{N}$ 59'28	2°44'53
evening set	444 Jun 17 j 21:19	12° $\mathbb{E}$ 02'21		min. Earth dist.	450 Mar 15 j 11:58	25° $\mathbb{N}$ 59'56	8.75644 AU
				direct	450 May 25 j 05:41	22° $\mathbb{N}$ 34'56	
conjunction	444 Jul 06 j 01:05	14° $\mathbb{E}$ 22'06	0°10'35		450 Sep 06 j 14:37	0° $\mathbb{A}$	
minimum elong	444 Jul 06 j 01:04	14° $\mathbb{E}$ 22'05	0°10'35	evening set	450 Sep 07 j 08:04	0° $\mathbb{A}$ 05'08	
behind sun begin	444 Jul 05 j 19:26	14° $\mathbb{E}$ 20'17					
behind sun end	444 Jul 06 j 06:41	14° $\mathbb{E}$ 23'53		conjunction	450 Sep 24 j 08:39	2° $\mathbb{A}$ 07'12	2°17'10
max. Earth dist.	444 Jul 06 j 09:57	14° $\mathbb{E}$ 24'56	10.10178 AU	minimum elong	450 Sep 24 j 08:38	2° $\mathbb{A}$ 07'12	2°17'09
morning rise	444 Jul 24 j 02:27	16° $\mathbb{E}$ 41'00		max. Earth dist.	450 Sep 24 j 10:06	2° $\mathbb{A}$ 07'38	10.81263 AU
retrograde	444 Nov 03 j 23:32	24° $\mathbb{E}$ 41'08		morning rise	450 Oct 11 j 04:49	4° $\mathbb{A}$ 07'58	
opposition	445 Jan 09 j 13:13	21° $\mathbb{E}$ 14'37	0°33'26	retrograde	451 Jan 18 j 12:06	11° $\mathbb{A}$ 14'48	
min. Earth dist.	445 Jan 09 j 05:43	21° $\mathbb{E}$ 16'09	8.14777 AU	opposition	451 Mar 28 j 01:53	7° $\mathbb{A}$ 56'46	2°49'40
direct	445 Mar 18 j 12:02	17° $\mathbb{E}$ 44'57		min. Earth dist.	451 Mar 28 j 00:36	7° $\mathbb{A}$ 57'01	8.86792 AU
evening set	445 Jul 02 j 16:17	25° $\mathbb{E}$ 54'18		direct	451 Jun 07 j 01:55	4° $\mathbb{A}$ 33'32	
				evening set	451 Sep 19 j 13:27	11° $\mathbb{A}$ 55'45	
conjunction	445 Jul 20 j 17:08	28° $\mathbb{E}$ 11'39	0°43'00	conjunction	451 Oct 06 j 10:19	13° $\mathbb{A}$ 55'32	2°18'19
minimum elong	445 Jul 20 j 17:06	28° $\mathbb{E}$ 11'38	0°43'00	minimum elong	451 Oct 06 j 10:19	13° $\mathbb{A}$ 55'32	2°18'20
max. Earth dist.	445 Jul 21 j 02:09	28° $\mathbb{E}$ 14'32	10.19954 AU	max. Earth dist.	451 Oct 06 j 10:24	13° $\mathbb{A}$ 55'34	10.91611 AU
	445 Aug 03 j 21:43	0° $\Omega$		morning rise	451 Oct 23 j 02:59	15° $\mathbb{A}$ 54'08	
morning rise	445 Aug 07 j 14:26	0° $\Omega$ 27'50		retrograde	452 Jan 30 j 08:35	22° $\mathbb{A}$ 55'37	
retrograde	445 Nov 17 j 14:04	8° $\Omega$ 18'02		opposition	452 Apr 08 j 08:57	19° $\mathbb{A}$ 38'20	2°47'16
opposition	446 Jan 23 j 06:30	4° $\Omega$ 53'07	1°11'58	min. Earth dist.	452 Apr 08 j 09:42	19° $\mathbb{A}$ 38'11	8.96258 AU
min. Earth dist.	446 Jan 22 j 23:01	4° $\Omega$ 54'37	8.25490 AU	direct	452 Jun 18 j 13:44	16° $\mathbb{A}$ 16'19	
direct	446 Apr 01 j 18:57	1° $\Omega$ 24'04		evening set	452 Sep 30 j 10:28	23° $\mathbb{A}$ 31'26	
evening set	446 Jul 17 j 02:30	9° $\Omega$ 27'02					
conjunction	446 Aug 03 j 23:09	11° $\Omega$ 41'26	1°12'23	conjunction	452 Oct 17 j 04:19	25° $\mathbb{A}$ 29'25	2°13'46
minimum elong	446 Aug 03 j 23:06	11° $\Omega$ 41'25	1°12'22	minimum elong	452 Oct 17 j 04:20	25° $\mathbb{A}$ 29'26	2°13'46
max. Earth dist.	446 Aug 04 j 07:49	11° $\Omega$ 44'10	10.31433 AU	max. Earth dist.	452 Oct 17 j 02:03	25° $\mathbb{A}$ 28'45	11.00067 AU
morning rise	446 Aug 21 j 15:23	13° $\Omega$ 54'28		morning rise	452 Nov 02 j 18:38	27° $\mathbb{A}$ 26'27	
	446 Aug 30 j 14:32	15° $\Omega$			452 Nov 25 j 23:07	0° $\mathbb{M}$	
retrograde	446 Nov 30 j 19:21	21° $\Omega$ 34'37		retrograde	453 Feb 10 j 01:11	4° $\mathbb{M}$ 24'06	
opposition	447 Feb 05 j 17:49	18° $\Omega$ 11'20	1°45'32	opposition	453 Apr 20 j 12:30	1° $\mathbb{M}$ 07'20	2°38'13
min. Earth dist.	447 Feb 05 j 11:09	18° $\Omega$ 12'40	8.37599 AU	min. Earth dist.	453 Apr 20 j 15:44	1° $\mathbb{M}$ 06'44	9.03638 AU
	447 Mar 28 j 19:45	15° $\mathbb{R}$ $\Omega$			453 May 05 j 22:25	30° $\mathbb{R}$ $\mathbb{A}$	
direct	447 Apr 15 j 20:32	14° $\Omega$ 43'11		direct	453 Jun 30 j 20:38	27° $\mathbb{A}$ 46'26	
	447 May 03 j 21:12	15° $\Omega$			453 Aug 23 j 19:48	0° $\mathbb{M}$	
evening set	447 Jul 31 j 02:25	22° $\Omega$ 38'36		evening set	453 Oct 12 j 00:59	4° $\mathbb{M}$ 55'34	
conjunction	447 Aug 17 j 17:59	24° $\Omega$ 49'46	1°37'14	conjunction	453 Oct 28 j 16:34	6° $\mathbb{M}$ 52'17	2°03'56

minimum elong	453 Oct 28 j 16:36	6°  52'18	2°03'56	conjunction	460 Jan 03 j 11:06	14°  24'14	-0°10'31
max. Earth dist.	453 Oct 28 j 11:31	6°  50'48	11.06320 AU	minimum elong	460 Jan 03 j 11:05	14°  24'14	0°10'31
morning rise	453 Nov 14 j 05:30	8°  48'15		behind sun begin	460 Jan 03 j 05:35	14°  22'37	
	454 Jan 22 j 23:34	15°  11		behind sun end	460 Jan 03 j 16:35	14°  25'51	
retrograde	454 Feb 21 j 15:55	15°  43'39		max. Earth dist.	460 Jan 03 j 02:44	14°  21'45	10.93819 AU
	454 Mar 23 j 22:21	15°  11		morning rise	460 Jan 20 j 05:09	16°  23'24	
opposition	454 May 02 j 13:30	12°  27'07	2°23'07	retrograde	460 May 02 j 04:06	23°  38'16	
min. Earth dist.	454 May 02 j 18:22	12°  26'13	9.08710 AU	opposition	460 Jul 12 j 02:27	20°  17'08	-0°30'06
direct	454 Jul 12 j 22:46	9°  07'10		min. Earth dist.	460 Jul 12 j 09:19	20°  15'51	8.89190 AU
	454 Oct 12 j 20:25	15°  11		direct	460 Sep 19 j 19:22	16°  58'13	
evening set	454 Oct 23 j 10:25	16°  11'31		evening set	460 Dec 28 j 11:08	24°  03'41	
conjunction	454 Nov 09 j 00:40	18°  07'27	1°49'24	conjunction	461 Jan 14 j 04:40	26°  03'48	-0°38'12
minimum elong	454 Nov 09 j 00:42	18°  07'28	1°49'23	minimum elong	461 Jan 14 j 04:39	26°  03'47	0°38'13
max. Earth dist.	454 Nov 08 j 18:14	18°  05'34	11.10223 AU	max. Earth dist.	461 Jan 13 j 20:15	26°  01'16	10.84212 AU
morning rise	454 Nov 25 j 12:59	20°  02'51		morning rise	461 Jan 31 j 01:03	28°  04'48	
retrograde	455 Mar 05 j 06:52	26°  57'37			461 Feb 16 j 19:56	0° 	
opposition	455 May 14 j 13:11	23°  40'57	2°02'42	retrograde	461 May 14 j 21:17	5° 	28'07
min. Earth dist.	455 May 14 j 18:31	23°  39'58	9.11368 AU	opposition	461 Jul 24 j 15:27	2° 	05'36 -1°03'45
direct	455 Jul 24 j 21:39	20°  21'46		min. Earth dist.	461 Jul 24 j 22:01	2° 	04'22 8.78805 AU
evening set	455 Nov 03 j 16:24	27°  22'34			461 Aug 23 j 14:40	30° 	
				direct	461 Oct 01 j 19:05	28°  46'06	
conjunction	455 Nov 20 j 06:08	29°  18'12	1°30'45		461 Nov 08 j 22:56	0° 	
minimum elong	455 Nov 20 j 06:11	29°  18'12	1°30'45	evening set	462 Jan 09 j 10:16	5° 	57'11
max. Earth dist.	455 Nov 19 j 23:26	29°  16'14	11.11688 AU				
	455 Nov 26 j 04:54	0° 		conjunction	462 Jan 26 j 05:35	7° 	59'12 -1°04'50
morning rise	455 Dec 06 j 18:29	1°  13'31		minimum elong	462 Jan 26 j 05:33	7° 	59'12 1°04'50
retrograde	456 Mar 16 j 00:40	8°  09'10		max. Earth dist.	462 Jan 25 j 21:10	7° 	56'39 10.73143 AU
opposition	456 May 25 j 12:28	4°  52'06	1°37'43	morning rise	462 Feb 12 j 04:38	10° 	02'23
min. Earth dist.	456 May 25 j 18:39	4°  50'58	9.11561 AU		462 Mar 31 j 08:37	15° 	
direct	456 Aug 04 j 17:05	1°  33'26		retrograde	462 May 27 j 20:58	17° 	35'18
evening set	456 Nov 13 j 21:02	8°  32'03			462 Jul 26 j 16:44	15° 	
				opposition	462 Aug 06 j 10:11	14° 	11'18 -1°35'28
conjunction	456 Nov 30 j 10:38	10°  27'49	1°08'41	min. Earth dist.	462 Aug 06 j 16:25	14° 	10'06 8.67185 AU
minimum elong	456 Nov 30 j 10:40	10°  27'50	1°08'40	direct	462 Oct 13 j 23:49	10° 	51'01
max. Earth dist.	456 Nov 30 j 02:36	10°  25'28	11.10690 AU		462 Dec 24 j 23:57	15° 	
morning rise	456 Dec 16 j 23:46	12°  23'31		evening set	463 Jan 21 j 18:05	18° 	09'09
retrograde	457 Mar 27 j 17:42	19°  21'34					
opposition	457 Jun 06 j 12:16	16°  03'51	1°09'01	conjunction	463 Feb 07 j 15:46	20° 	13'24 -1°29'09
min. Earth dist.	457 Jun 06 j 19:46	16°  02'28	9.09312 AU	minimum elong	463 Feb 07 j 15:43	20° 	13'23 1°29'09
direct	457 Aug 16 j 09:15	12°  45'25		max. Earth dist.	463 Feb 07 j 08:46	20° 	11'14 10.61056 AU
evening set	457 Nov 25 j 01:53	19°  43'26		morning rise	463 Feb 24 j 17:41	22° 	18'57
					463 Jun 03 j 14:03	0° 	
conjunction	457 Dec 11 j 15:46	21°  39'43	0°43'54	retrograde	463 Jun 10 j 04:43	0° 	02'13
minimum elong	457 Dec 11 j 15:48	21°  39'43	0°43'54		463 Jun 16 j 21:01	30° 	
max. Earth dist.	457 Dec 11 j 06:23	21°  36'57	11.07288 AU	opposition	463 Aug 19 j 10:59	26° 	36'44 -2°03'42
morning rise	457 Dec 28 j 06:17	23°  36'12		min. Earth dist.	463 Aug 19 j 15:58	26° 	35'46 8.54817 AU
	458 Mar 11 j 12:05	0° 		direct	463 Oct 26 j 12:53	23° 	15'31
retrograde	458 Apr 08 j 15:30	0°  38'19			464 Jan 28 j 17:39	0° 	
	458 May 07 j 06:06	30°  11		evening set	464 Feb 03 j 11:48	0° 	41'51
opposition	458 Jun 18 j 13:59	27°  19'39	0°37'28				
min. Earth dist.	458 Jun 18 j 22:12	27°  18'08	9.04715 AU	conjunction	464 Feb 20 j 12:22	2° 	48'35 -1°49'51
direct	458 Aug 28 j 04:12	24°  01'15		minimum elong	464 Feb 20 j 12:19	2° 	48'34 1°49'51
	458 Nov 27 j 13:33	0° 		max. Earth dist.	464 Feb 20 j 07:32	2° 	47'05 10.48476 AU
evening set	458 Dec 06 j 08:30	1°  00'09		morning rise	464 Mar 08 j 17:23	4° 	56'45
				retrograde	464 Jun 22 j 23:06	12° 	50'37
conjunction	458 Dec 22 j 23:16	2°  57'21	0°17'14	opposition	464 Aug 31 j 18:24	9° 	23'42 -2°26'44
minimum elong	458 Dec 22 j 23:17	2°  57'21	0°17'15	min. Earth dist.	464 Aug 31 j 21:25	9° 	23'07 8.42259 AU
max. Earth dist.	458 Dec 22 j 14:13	2°  54'40	11.01602 AU	direct	464 Nov 07 j 07:06	6° 	01'28
morning rise	459 Jan 08 j 15:26	4°  55'00		evening set	465 Feb 15 j 16:18	13° 	36'49
retrograde	459 Apr 20 j 18:48	12°  02'45					
opposition	459 Jun 30 j 18:24	8°  42'56	0°04'03	conjunction	465 Mar 04 j 20:08	15° 	46'12 -2°05'35
min. Earth dist.	459 Jul 01 j 02:00	8°  41'31	8.97931 AU	minimum elong	465 Mar 04 j 20:06	15° 	46'11 2°05'35
desc. node	459 Aug 14 j 18:23	5°  55'02		max. Earth dist.	465 Mar 04 j 17:26	15° 	45'20 10.36009 AU
direct	459 Sep 08 j 22:42	5°  24'23		morning rise	465 Mar 22 j 04:36	17° 	57'07
evening set	459 Dec 17 j 19:01	12°  25'45		retrograde	465 Jul 07 j 01:29	26° 	01'11
				opposition	465 Sep 14 j 08:31	22° 	33'00 -2°42'53

min. Earth dist.	465 Sep 14 j 09:26	22° $\text{K}$ 32'50	8.30142 AU	opposition	471 Dec 07 j 14:11	17° $\text{II}$ 06'35	-1°07'08
direct	465 Nov 20 j 08:51	19° $\text{K}$ 09'40		min. Earth dist.	471 Dec 07 j 07:10	17° $\text{II}$ 08'02	7.99618 AU
evening set	466 Mar 01 j 08:05	26° $\text{K}$ 54'24		direct	472 Feb 12 j 07:45	13° $\text{II}$ 37'26	
				evening set	472 May 27 j 13:06	21° $\text{II}$ 54'31	
conjunction	466 Mar 18 j 15:41	29° $\text{K}$ 06'33	-2°15'03				
minimum elong	466 Mar 18 j 15:40	29° $\text{K}$ 06'32	2°15'03	conjunction	472 Jun 14 j 18:17	24° $\text{II}$ 16'09	-0°37'34
max. Earth dist.	466 Mar 18 j 14:43	29° $\text{K}$ 06'14	10.24331 AU	minimum elong	472 Jun 14 j 18:19	24° $\text{II}$ 16'10	0°37'34
	466 Mar 25 j 14:47	0° $\text{Y}$		max. Earth dist.	472 Jun 15 j 03:34	24° $\text{II}$ 19'10	10.01589 AU
morning rise	466 Apr 05 j 04:04	1° $\text{Y}$ 20'15		morning rise	472 Jul 02 j 22:40	26° $\text{II}$ 37'32	
retrograde	466 Jul 21 j 10:43	9° $\text{Y}$ 33'22			472 Jul 30 j 20:21	0° $\text{S}$	
opposition	466 Sep 28 j 04:56	6° $\text{Y}$ 04'10	-2°50'35	retrograde	472 Oct 15 j 07:23	4° $\text{S}$ 50'13	
min. Earth dist.	466 Sep 28 j 04:18	6° $\text{Y}$ 04'17	8.19144 AU	opposition	472 Dec 20 j 19:36	1° $\text{S}$ 22'13	-0°26'14
direct	466 Dec 03 j 19:39	2° $\text{Y}$ 39'39		min. Earth dist.	472 Dec 20 j 12:27	1° $\text{S}$ 23'41	8.04262 AU
evening set	467 Mar 15 j 10:50	10° $\text{Y}$ 33'34			473 Jan 06 j 21:01	30° $\text{R}$ $\text{II}$	
				direct	473 Feb 25 j 22:24	27° $\text{II}$ 52'48	
conjunction	467 Apr 01 j 22:45	12° $\text{Y}$ 48'29	-2°17'13		473 Apr 16 j 06:13	0° $\text{S}$	
minimum elong	467 Apr 01 j 22:46	12° $\text{Y}$ 48'29	2°17'12	evening set	473 Jun 11 j 17:02	6° $\text{S}$ 08'11	
max. Earth dist.	467 Apr 01 j 23:41	12° $\text{Y}$ 48'47	10.14117 AU				
morning rise	467 Apr 19 j 15:20	15° $\text{Y}$ 04'53		conjunction	473 Jun 29 j 21:39	8° $\text{S}$ 28'40	-0°04'08
retrograde	467 Aug 05 j 01:04	23° $\text{Y}$ 25'04		minimum elong	473 Jun 29 j 21:40	8° $\text{S}$ 28'40	0°04'08
opposition	467 Oct 12 j 06:49	19° $\text{Y}$ 55'10	-2°48'39	behind sun begin	473 Jun 29 j 14:25	8° $\text{S}$ 26'21	
min. Earth dist.	467 Oct 12 j 04:50	19° $\text{Y}$ 55'35	8.09911 AU	behind sun end	473 Jun 30 j 04:55	8° $\text{S}$ 31'00	
direct	467 Dec 17 j 14:54	16° $\text{Y}$ 29'30		max. Earth dist.	473 Jun 30 j 06:52	8° $\text{S}$ 31'38	10.07605 AU
evening set	468 Mar 28 j 23:41	24° $\text{Y}$ 31'46		morning rise	473 Jul 18 j 00:14	10° $\text{S}$ 48'28	
				asc. node	473 Aug 14 j 17:38	14° $\text{S}$ 08'10	
conjunction	468 Apr 15 j 16:11	26° $\text{Y}$ 49'14	-2°11'25	retrograde	473 Oct 29 j 10:08	18° $\text{S}$ 52'43	
minimum elong	468 Apr 15 j 16:13	26° $\text{Y}$ 49'15	2°11'24	opposition	474 Jan 03 j 21:02	15° $\text{S}$ 26'02	0°15'38
max. Earth dist.	468 Apr 15 j 19:16	26° $\text{Y}$ 50'15	10.05984 AU	min. Earth dist.	474 Jan 03 j 14:24	15° $\text{S}$ 27'23	8.11517 AU
morning rise	468 May 03 j 12:51	29° $\text{Y}$ 08'02		direct	474 Mar 12 j 12:02	11° $\text{S}$ 56'38	
	468 May 10 j 09:12	0° $\text{S}$		evening set	474 Jun 26 j 15:45	20° $\text{S}$ 08'17	
retrograde	468 Aug 18 j 19:05	7° $\text{S}$ 32'38					
opposition	468 Oct 25 j 12:45	4° $\text{S}$ 02'25	-2°36'35	conjunction	474 Jul 14 j 18:02	22° $\text{S}$ 26'45	0°29'11
min. Earth dist.	468 Oct 25 j 09:23	4° $\text{S}$ 03'06	8.03020 AU	minimum elong	474 Jul 14 j 18:01	22° $\text{S}$ 26'44	0°29'11
direct	468 Dec 30 j 17:41	0° $\text{S}$ 35'38		max. Earth dist.	474 Jul 15 j 02:19	22° $\text{S}$ 29'24	10.16044 AU
evening set	469 Apr 12 j 20:50	8° $\text{S}$ 44'46		morning rise	474 Aug 01 j 17:13	24° $\text{S}$ 44'11	
					474 Sep 18 j 01:51	0° $\text{J}$	
conjunction	469 Apr 30 j 17:54	11° $\text{S}$ 04'24	-1°57'35	retrograde	474 Nov 12 j 03:56	2° $\text{J}$ 38'53	
minimum elong	469 Apr 30 j 17:58	11° $\text{S}$ 04'25	1°57'34		475 Jan 08 j 02:57	30° $\text{R}$ $\text{S}$	
max. Earth dist.	469 Apr 30 j 23:24	11° $\text{S}$ 06'12	10.00459 AU	opposition	475 Jan 17 j 17:17	29° $\text{S}$ 13'37	0°55'44
morning rise	469 May 18 j 18:14	13° $\text{S}$ 25'03		min. Earth dist.	475 Jan 17 j 11:21	29° $\text{S}$ 14'50	8.21002 AU
	469 May 31 j 07:55	15° $\text{S}$		direct	475 Mar 26 j 22:36	25° $\text{S}$ 44'33	
retrograde	469 Sep 02 j 14:10	21° $\text{S}$ 51'01			475 Jun 08 j 02:53	0° $\text{J}$	
opposition	469 Nov 08 j 21:13	18° $\text{S}$ 20'48	-2°14'40	evening set	475 Jul 11 j 06:32	3° $\text{J}$ 50'40	
min. Earth dist.	469 Nov 08 j 16:15	18° $\text{S}$ 21'50	7.98909 AU				
	470 Jan 03 j 01:51	15° $\text{R}$ $\text{S}$		conjunction	475 Jul 29 j 05:01	6° $\text{J}$ 06'24	1°00'07
direct	470 Jan 14 j 02:56	14° $\text{S}$ 53'02		minimum elong	475 Jul 29 j 04:58	6° $\text{J}$ 06'23	1°00'07
	470 Jan 25 j 03:22	15° $\text{S}$		max. Earth dist.	475 Jul 29 j 12:01	6° $\text{J}$ 08'38	10.26435 AU
evening set	470 Apr 27 j 23:57	23° $\text{S}$ 07'01		morning rise	475 Aug 15 j 23:38	8° $\text{J}$ 20'54	
					475 Oct 21 j 17:42	15° $\text{J}$	
conjunction	470 May 16 j 01:03	25° $\text{S}$ 28'10	-1°36'21	retrograde	475 Nov 25 j 12:00	16° $\text{J}$ 05'39	
minimum elong	470 May 16 j 01:07	25° $\text{S}$ 28'12	1°36'20		475 Dec 30 j 18:35	15° $\text{R}$ $\text{J}$	
max. Earth dist.	470 May 16 j 08:44	25° $\text{S}$ 30'42	9.97870 AU	opposition	476 Jan 31 j 07:43	12° $\text{J}$ 41'51	1°31'43
morning rise	470 Jun 03 j 04:12	27° $\text{S}$ 49'59		min. Earth dist.	476 Jan 31 j 02:09	12° $\text{J}$ 42'58	8.32170 AU
	470 Jun 20 j 12:38	0° $\text{II}$		direct	476 Apr 09 j 04:33	9° $\text{J}$ 13'24	
retrograde	470 Sep 17 j 07:52	6° $\text{II}$ 14'06			476 Jul 05 j 21:38	15° $\text{J}$	
opposition	470 Nov 23 j 06:19	2° $\text{II}$ 44'15	-1°44'09	evening set	476 Jul 24 j 11:15	17° $\text{J}$ 12'28	
min. Earth dist.	470 Nov 22 j 23:56	2° $\text{II}$ 45'35	7.97787 AU				
	470 Dec 31 j 09:06	30° $\text{R}$ $\text{S}$		conjunction	476 Aug 11 j 05:02	19° $\text{J}$ 25'07	1°27'07
direct	471 Jan 28 j 16:36	29° $\text{S}$ 15'41		minimum elong	476 Aug 11 j 04:58	19° $\text{J}$ 25'06	1°27'06
	471 Feb 25 j 20:10	0° $\text{II}$		max. Earth dist.	476 Aug 11 j 11:03	19° $\text{J}$ 27'00	10.38179 AU
evening set	471 May 13 j 06:25	7° $\text{II}$ 32'18		morning rise	476 Aug 28 j 18:23	21° $\text{J}$ 36'20	
				retrograde	476 Dec 07 j 12:41	29° $\text{J}$ 11'18	
conjunction	471 May 31 j 10:22	9° $\text{II}$ 54'09	-1°09'04	opposition	477 Feb 12 j 15:42	25° $\text{J}$ 48'54	2°01'50
minimum elong	471 May 31 j 10:25	9° $\text{II}$ 54'10	1°09'03	min. Earth dist.	477 Feb 12 j 10:28	25° $\text{J}$ 49'56	8.44377 AU
max. Earth dist.	471 May 31 j 19:14	9° $\text{II}$ 57'03	9.98288 AU	direct	477 Apr 23 j 02:23	22° $\text{J}$ 21'17	
morning rise	471 Jun 18 j 14:55	12° $\text{II}$ 16'12			477 Aug 05 j 12:14	0° $\text{J}$	
retrograde	471 Oct 01 j 21:55	20° $\text{II}$ 35'41		evening set	477 Aug 07 j 05:12	0° $\text{J}$ 12'23	

conjunction	477 Aug 24 j 17:53	2°♎21'48	1°48'58		483 Nov 17 j 07:23	15°♍	
minimum elong	477 Aug 24 j 17:50	2°♎21'47	1°48'58	morning rise	483 Nov 21 j 00:46	15°♍25'48	
max. Earth dist.	477 Aug 24 j 23:03	2°♎23'24	10.50618 AU	retrograde	484 Feb 28 j 14:18	22°♍20'22	
morning rise	477 Sep 11 j 01:42	4°♎29'43		opposition	484 May 08 j 17:17	19°♍03'30	2°12'18
retrograde	477 Dec 20 j 05:44	11°♎55'23		min. Earth dist.	484 May 08 j 21:23	19°♍02'45	9.10413 AU
opposition	478 Feb 25 j 17:07	8°♎34'18	2°24'59	direct	484 Jul 19 j 01:55	15°♍43'45	
min. Earth dist.	478 Feb 25 j 12:42	8°♎35'10	8.56955 AU	evening set	484 Oct 29 j 04:20	22°♍45'37	
direct	478 May 06 j 16:22	5°♎07'42					
evening set	478 Aug 20 j 11:57	12°♎50'22		conjunction	484 Nov 14 j 18:09	24°♍41'15	1°39'25
				minimum elong	484 Nov 14 j 18:11	24°♍41'16	1°39'25
conjunction	478 Sep 06 j 19:29	14°♎56'38	2°05'00	max. Earth dist.	484 Nov 14 j 12:22	24°♍39'34	11.11584 AU
minimum elong	478 Sep 06 j 19:27	14°♎56'37	2°04'59	morning rise	484 Dec 01 j 06:30	26°♍36'29	
max. Earth dist.	478 Sep 06 j 23:45	14°♎57'56	10.63105 AU		485 Jan 02 j 04:23	0°♊	
morning rise	478 Sep 23 j 22:00	17°♎01'25		retrograde	485 Mar 11 j 05:12	3°♊31'01	
retrograde	479 Jan 01 j 14:45	24°♎18'39		opposition	485 May 20 j 16:00	0°♊14'04	1°49'13
opposition	479 Mar 10 j 12:37	20°♎58'46	2°40'38	min. Earth dist.	485 May 20 j 21:22	0°♊13'05	9.12353 AU
min. Earth dist.	479 Mar 10 j 09:55	20°♎59'17	8.69282 AU		485 May 23 j 20:43	30°♋♍	
direct	479 May 19 j 23:06	17°♎33'18		direct	485 Jul 30 j 22:43	26°♍55'07	
evening set	479 Sep 02 j 07:33	25°♎07'27			485 Oct 02 j 21:29	0°♊	
				evening set	485 Nov 09 j 08:49	3°♊54'02	
conjunction	479 Sep 19 j 10:13	27°♎10'49	2°14'53				
minimum elong	479 Sep 19 j 10:11	27°♎10'48	2°14'52	conjunction	485 Nov 25 j 22:16	5°♊49'32	1°18'46
max. Earth dist.	479 Sep 19 j 12:35	27°♎11'32	10.75051 AU	minimum elong	485 Nov 25 j 22:19	5°♊49'33	1°18'46
morning rise	479 Oct 06 j 08:08	29°♎12'48		max. Earth dist.	485 Nov 25 j 15:46	5°♊47'37	11.12342 AU
	479 Oct 13 j 01:15	0°♊		morning rise	485 Dec 12 j 11:03	7°♊44'52	
retrograde	480 Jan 13 j 17:52	6°♊22'45		retrograde	486 Mar 22 j 21:23	14°♊40'58	
opposition	480 Mar 22 j 02:28	3°♊03'53	2°48'40	opposition	486 Jun 01 j 14:49	11°♊23'39	1°22'03
min. Earth dist.	480 Mar 22 j 01:36	3°♊04'03	8.80800 AU	min. Earth dist.	486 Jun 01 j 20:21	11°♊22'38	9.11852 AU
	480 May 11 j 10:36	30°♋♎		direct	486 Aug 11 j 16:17	8°♊05'18	
direct	480 May 31 j 22:18	29°♎39'37		evening set	486 Nov 20 j 12:42	15°♊02'42	
	480 Jun 21 j 08:47	0°♊					
evening set	480 Sep 13 j 17:03	7°♊05'34		conjunction	486 Dec 07 j 02:25	16°♊58'30	0°55'07
				minimum elong	486 Dec 07 j 02:27	16°♊58'31	0°55'08
conjunction	480 Sep 30 j 15:28	9°♊06'26	2°18'38	max. Earth dist.	486 Dec 06 j 19:57	16°♊56'36	11.10663 AU
minimum elong	480 Sep 30 j 15:27	9°♊06'26	2°18'38	morning rise	486 Dec 23 j 16:05	18°♊54'22	
max. Earth dist.	480 Sep 30 j 15:28	9°♊06'26	10.85953 AU	retrograde	487 Apr 03 j 18:23	25°♊53'39	
morning rise	480 Oct 17 j 09:45	11°♊06'04		opposition	487 Jun 13 j 14:56	22°♊35'42	0°51'41
retrograde	481 Jan 24 j 14:05	18°♊09'59		min. Earth dist.	487 Jun 13 j 20:35	22°♊34'40	9.08937 AU
opposition	481 Apr 03 j 11:09	14°♊51'56	2°49'19	direct	487 Aug 23 j 09:30	19°♊17'43	
min. Earth dist.	481 Apr 03 j 11:37	14°♊51'51	8.91031 AU	evening set	487 Dec 01 j 17:48	26°♊15'07	
direct	481 Jun 13 j 14:12	11°♊28'53					
evening set	481 Sep 25 j 17:31	18°♊47'19		conjunction	487 Dec 18 j 08:06	28°♊11'36	0°29'14
				minimum elong	487 Dec 18 j 08:07	28°♊11'37	0°29'14
conjunction	481 Oct 12 j 12:36	20°♊46'08	2°16'30	max. Earth dist.	487 Dec 18 j 00:50	28°♊09'28	11.06602 AU
minimum elong	481 Oct 12 j 12:37	20°♊46'09	2°16'30		488 Jan 02 j 18:08	0°♋	
max. Earth dist.	481 Oct 12 j 10:56	20°♊45'39	10.95373 AU	morning rise	488 Jan 03 j 23:16	0°♋08'25	
morning rise	481 Oct 29 j 04:04	22°♊43'55		retrograde	488 Apr 14 j 18:37	7°♋12'23	
retrograde	482 Feb 05 j 07:52	29°♊43'13		opposition	488 Jun 24 j 17:20	3°♋53'36	0°19'03
opposition	482 Apr 15 j 15:51	26°♊25'47	2°43'04	min. Earth dist.	488 Jun 24 j 23:54	3°♋52'24	9.03701 AU
min. Earth dist.	482 Apr 15 j 16:56	26°♊25'35	8.99566 AU	direct	488 Sep 03 j 01:31	0°♋35'43	
direct	482 Jun 26 j 00:41	23°♊03'56		evening set	488 Dec 12 j 01:56	7°♋34'43	
	482 Oct 05 j 03:45	0°♌					
evening set	482 Oct 07 j 10:22	0°♌15'42		conjunction	488 Dec 28 j 17:05	9°♋32'14	0°01'59
				minimum elong	488 Dec 28 j 17:06	9°♋32'14	0°01'59
conjunction	482 Oct 24 j 03:01	2°♌12'59	2°08'54	behind sun begin	488 Dec 28 j 10:07	9°♋30'12	
minimum elong	482 Oct 24 j 03:02	2°♌12'59	2°08'54	behind sun end	488 Dec 29 j 00:05	9°♋34'17	
max. Earth dist.	482 Oct 24 j 00:47	2°♌12'19	11.02948 AU	max. Earth dist.	488 Dec 28 j 08:42	9°♋29'46	11.00288 AU
morning rise	482 Nov 09 j 16:27	4°♌09'23		morning rise	489 Jan 14 j 10:11	11°♋30'21	
retrograde	483 Feb 17 j 00:57	11°♌05'34		desc. node	489 Jan 23 j 21:06	12°♋35'12	
opposition	483 Apr 27 j 17:36	7°♌48'32	2°30'30	retrograde	489 Apr 26 j 22:46	18°♋40'33	
min. Earth dist.	483 Apr 27 j 19:53	7°♌48'07	9.06100 AU	opposition	489 Jul 06 j 22:55	15°♋20'42	-0°14'48
direct	483 Jul 08 j 03:42	4°♌27'50		min. Earth dist.	489 Jul 07 j 06:05	15°♋19'22	8.96313 AU
evening set	483 Oct 18 j 21:26	11°♌33'59		direct	489 Sep 14 j 20:37	12°♋02'38	
				evening set	489 Dec 23 j 14:37	19°♋04'49	
conjunction	483 Nov 04 j 12:21	13°♌30'13	1°56'21				
minimum elong	483 Nov 04 j 12:23	13°♌30'14	1°56'21	conjunction	490 Jan 09 j 07:11	21°♋03'45	-0°25'50
max. Earth dist.	483 Nov 04 j 08:41	13°♌29'09	11.08413 AU	minimum elong	490 Jan 09 j 07:10	21°♋03'45	0°25'51



max. Earth dist.	490 Jan 08 j 23:02	21° $\text{♁}$ 01'19	10.91916 AU	minimum elong	496 Mar 25 j 14:28	6° $\text{♁}$ 35'35	2°17'10
morning rise	490 Jan 26 j 02:22	23° $\text{♁}$ 03'29		max. Earth dist.	496 Mar 25 j 13:30	6° $\text{♁}$ 35'16	10.20202 AU
	490 Apr 18 j 13:24	0° $\text{♁}$		morning rise	496 Apr 12 j 04:49	8° $\text{♁}$ 50'26	
retrograde	490 May 09 j 11:23	0° $\text{♁}$ 21'22		retrograde	496 Jul 28 j 11:25	17° $\text{♁}$ 06'27	
	490 May 30 j 14:16	30° $\text{♁}$		opposition	496 Oct 05 j 00:51	13° $\text{♁}$ 36'55	-2°50'48
opposition	490 Jul 19 j 08:51	27° $\text{♁}$ 00'13	-0°48'42	min. Earth dist.	496 Oct 05 j 00:36	13° $\text{♁}$ 36'59	8.15176 AU
min. Earth dist.	490 Jul 19 j 15:35	26° $\text{♁}$ 58'57	8.87000 AU	direct	496 Dec 10 j 13:22	10° $\text{♁}$ 11'48	
direct	490 Sep 26 j 19:28	23° $\text{♁}$ 41'43		evening set	497 Mar 22 j 11:37	18° $\text{♁}$ 09'16	
	490 Dec 28 j 11:07	0° $\text{♁}$					
evening set	491 Jan 04 j 09:28	0° $\text{♁}$ 48'36		conjunction	497 Apr 09 j 01:56	20° $\text{♁}$ 25'22	-2°15'12
				minimum elong	497 Apr 09 j 01:57	20° $\text{♁}$ 25'22	2°15'12
conjunction	491 Jan 21 j 03:50	2° $\text{♁}$ 49'17	-0°53'00	max. Earth dist.	497 Apr 09 j 03:25	20° $\text{♁}$ 25'51	10.10363 AU
minimum elong	491 Jan 21 j 03:48	2° $\text{♁}$ 49'17	0°53'00	morning rise	497 Apr 26 j 20:23	22° $\text{♁}$ 42'51	
max. Earth dist.	491 Jan 20 j 20:34	2° $\text{♁}$ 47'05	10.81729 AU		497 Jul 08 j 02:18	0° $\text{♁}$	
morning rise	491 Feb 07 j 01:19	4° $\text{♁}$ 50'59		retrograde	497 Aug 12 j 04:31	1° $\text{♁}$ 04'57	
retrograde	491 May 22 j 07:14	12° $\text{♁}$ 17'48			497 Sep 16 j 10:12	30° $\text{♁}$	
opposition	491 Jul 31 j 23:50	8° $\text{♁}$ 55'13	-1°21'20	opposition	497 Oct 19 j 04:09	27° $\text{♁}$ 34'40	-2°43'38
min. Earth dist.	491 Aug 01 j 05:39	8° $\text{♁}$ 54'06	8.76034 AU	min. Earth dist.	497 Oct 19 j 01:55	27° $\text{♁}$ 35'07	8.06441 AU
direct	491 Oct 08 j 21:11	5° $\text{♁}$ 36'03		direct	497 Dec 24 j 10:35	24° $\text{♁}$ 08'12	
evening set	492 Jan 16 j 12:22	12° $\text{♁}$ 49'14			498 Mar 19 j 05:22	0° $\text{♁}$	
				evening set	498 Apr 06 j 04:04	2° $\text{♁}$ 13'35	
conjunction	492 Feb 02 j 08:47	14° $\text{♁}$ 51'59	-1°18'25				
minimum elong	492 Feb 02 j 08:44	14° $\text{♁}$ 51'58	1°18'25	conjunction	498 Apr 23 j 23:00	4° $\text{♁}$ 32'09	-2°05'12
max. Earth dist.	492 Feb 02 j 01:23	14° $\text{♁}$ 49'43	10.70052 AU	minimum elong	498 Apr 23 j 23:03	4° $\text{♁}$ 32'10	2°05'12
	492 Feb 03 j 11:01	15° $\text{♁}$		max. Earth dist.	498 Apr 24 j 02:30	4° $\text{♁}$ 33'18	10.02861 AU
morning rise	492 Feb 19 j 08:58	16° $\text{♁}$ 55'57		morning rise	498 May 11 j 21:29	6° $\text{♁}$ 51'54	
retrograde	492 Jun 03 j 11:32	24° $\text{♁}$ 32'44			498 Aug 09 j 05:19	15° $\text{♁}$	
opposition	492 Aug 12 j 20:36	21° $\text{♁}$ 08'38	-1°51'13	retrograde	498 Aug 26 j 23:11	15° $\text{♁}$ 17'12	
min. Earth dist.	492 Aug 13 j 02:01	21° $\text{♁}$ 07'36	8.63814 AU		498 Sep 13 j 15:20	15° $\text{♁}$	
direct	492 Oct 20 j 04:29	17° $\text{♁}$ 48'34		opposition	498 Nov 02 j 10:51	11° $\text{♁}$ 46'35	-2°26'23
evening set	493 Jan 28 j 00:31	25° $\text{♁}$ 09'29		min. Earth dist.	498 Nov 02 j 07:15	11° $\text{♁}$ 47'20	8.00274 AU
				direct	499 Jan 07 j 16:02	8° $\text{♁}$ 18'54	
conjunction	493 Feb 13 j 23:21	27° $\text{♁}$ 14'36	-1°40'51		499 Apr 09 j 04:40	15° $\text{♁}$	
minimum elong	493 Feb 13 j 23:18	27° $\text{♁}$ 14'35	1°40'51	evening set	499 Apr 21 j 04:00	16° $\text{♁}$ 30'34	
max. Earth dist.	493 Feb 13 j 16:02	27° $\text{♁}$ 12'20	10.57393 AU				
morning rise	493 Mar 03 j 02:39	29° $\text{♁}$ 21'06		conjunction	499 May 09 j 03:14	18° $\text{♁}$ 51'05	-1°47'25
	493 Mar 08 j 11:59	0° $\text{♁}$		minimum elong	499 May 09 j 03:17	18° $\text{♁}$ 51'06	1°47'25
retrograde	493 Jun 17 j 00:38	7° $\text{♁}$ 08'27		max. Earth dist.	499 May 09 j 08:12	18° $\text{♁}$ 52'43	9.98165 AU
opposition	493 Aug 26 j 00:03	3° $\text{♁}$ 42'51	-2°16'45	morning rise	499 May 27 j 05:08	21° $\text{♁}$ 12'28	
min. Earth dist.	493 Aug 26 j 04:57	3° $\text{♁}$ 41'54	8.50937 AU	retrograde	499 Sep 10 j 17:27	29° $\text{♁}$ 37'52	
direct	493 Nov 01 j 17:57	0° $\text{♁}$ 21'40		opposition	499 Nov 16 j 19:30	26° $\text{♁}$ 07'21	-1°59'50
evening set	494 Feb 09 j 22:47	7° $\text{♁}$ 51'20		min. Earth dist.	499 Nov 16 j 15:03	26° $\text{♁}$ 08'17	7.97067 AU
				direct	500 Jan 22 j 03:16	22° $\text{♁}$ 38'39	
conjunction	494 Feb 27 j 00:39	9° $\text{♁}$ 59'02	-1°58'59		500 Apr 28 j 05:32	0° $\text{♁}$	
minimum elong	494 Feb 27 j 00:37	9° $\text{♁}$ 59'01	1°58'58	evening set	500 May 05 j 08:45	0° $\text{♁}$ 54'28	
max. Earth dist.	494 Feb 26 j 18:36	9° $\text{♁}$ 57'08	10.44403 AU				
morning rise	494 Mar 16 j 07:24	12° $\text{♁}$ 08'16		conjunction	500 May 23 j 11:23	3° $\text{♁}$ 16'11	-1°22'51
retrograde	494 Jun 30 j 20:27	20° $\text{♁}$ 06'12		minimum elong	500 May 23 j 11:26	3° $\text{♁}$ 16'12	1°22'51
opposition	494 Sep 08 j 10:10	16° $\text{♁}$ 39'06	-2°36'14	max. Earth dist.	500 May 23 j 17:47	3° $\text{♁}$ 18'17	9.96571 AU
min. Earth dist.	494 Sep 08 j 14:01	16° $\text{♁}$ 38'20	8.38081 AU	morning rise	500 Jun 10 j 15:33	5° $\text{♁}$ 38'22	
direct	494 Nov 14 j 16:48	13° $\text{♁}$ 16'40		retrograde	500 Sep 24 j 09:02	14° $\text{♁}$ 00'49	
evening set	495 Feb 23 j 08:10	20° $\text{♁}$ 55'42		opposition	500 Nov 30 j 04:10	10° $\text{♁}$ 30'48	-1°25'38
				min. Earth dist.	500 Nov 29 j 22:45	10° $\text{♁}$ 31'56	7.97032 AU
conjunction	495 Mar 12 j 13:45	23° $\text{♁}$ 06'11	-2°11'28	direct	501 Feb 04 j 17:59	7° $\text{♁}$ 01'20	
minimum elong	495 Mar 12 j 13:44	23° $\text{♁}$ 06'10	2°11'28	evening set	501 May 20 j 15:30	15° $\text{♁}$ 18'55	
max. Earth dist.	495 Mar 12 j 10:10	23° $\text{♁}$ 05'02	10.31774 AU				
morning rise	495 Mar 30 j 00:10	25° $\text{♁}$ 18'13		conjunction	501 Jun 07 j 20:15	17° $\text{♁}$ 40'57	-0°53'07
	495 May 10 j 14:06	0° $\text{♁}$		minimum elong	501 Jun 07 j 20:17	17° $\text{♁}$ 40'58	0°53'07
retrograde	495 Jul 15 j 00:13	3° $\text{♁}$ 25'57		max. Earth dist.	501 Jun 08 j 03:57	17° $\text{♁}$ 43'28	9.98184 AU
	495 Sep 21 j 14:05	30° $\text{♁}$		morning rise	501 Jun 26 j 01:11	20° $\text{♁}$ 02'59	
opposition	495 Sep 22 j 02:31	29° $\text{♁}$ 57'31	-2°48'02	retrograde	501 Oct 08 j 20:22	28° $\text{♁}$ 19'44	
min. Earth dist.	495 Sep 22 j 04:31	29° $\text{♁}$ 57'07	8.25936 AU	opposition	501 Dec 14 j 10:57	24° $\text{♁}$ 50'37	-0°46'13
direct	495 Nov 27 j 23:41	26° $\text{♁}$ 33'44		min. Earth dist.	501 Dec 14 j 04:34	24° $\text{♁}$ 51'56	8.00174 AU
	496 Jan 30 j 05:08	0° $\text{♁}$		direct	502 Feb 19 j 09:32	21° $\text{♁}$ 20'41	
evening set	496 Mar 08 j 04:41	4° $\text{♁}$ 22'14		evening set	502 Jun 04 j 21:12	29° $\text{♁}$ 37'40	
					502 Jun 07 j 19:05	0° $\text{♁}$	
conjunction	496 Mar 25 j 14:28	6° $\text{♁}$ 35'35	-2°17'10				

conjunction	502 Jun 23 j 02:22	1°♄59'00	-0°20'18	conjunction	508 Sep 12 j 21:59	21°♄41'49	2°10'50
minimum elong	502 Jun 23 j 02:23	1°♄59'01	0°20'18	minimum elong	508 Sep 12 j 21:57	21°♄41'48	2°10'50
max. Earth dist.	502 Jun 23 j 11:00	2°♄01'48	10.02883 AU	max. Earth dist.	508 Sep 13 j 01:24	21°♄42'51	10.69502 AU
morning rise	502 Jul 11 j 06:17	4°♄19'53		morning rise	508 Sep 29 j 22:13	23°♄45'09	
retrograde	502 Oct 23 j 02:09	12°♄28'52			508 Dec 04 j 20:37	0°♄	
opposition	502 Dec 28 j 14:29	9°♄00'55	-0°04'26	retrograde	509 Jan 07 j 11:33	0°♄58'47	
min. Earth dist.	502 Dec 28 j 07:13	9°♄02'25	8.06271 AU		509 Feb 10 j 17:35	30°♄	
asc. node	503 Feb 06 j 14:24	6°♄11'32		opposition	509 Mar 16 j 14:35	27°♄39'44	2°45'38
direct	503 Mar 06 j 00:45	5°♄30'55		min. Earth dist.	509 Mar 16 j 11:31	27°♄40'19	8.75643 AU
evening set	503 Jun 19 j 22:46	13°♄45'01		direct	509 May 26 j 06:14	24°♄15'15	
					509 Aug 24 j 00:33	0°♄	
conjunction	503 Jul 08 j 02:31	16°♄04'43	0°13'24	evening set	509 Sep 08 j 07:57	1°♄45'22	
minimum elong	503 Jul 08 j 02:30	16°♄04'42	0°13'24				
behind sun begin	503 Jul 07 j 22:30	16°♄03'26		conjunction	509 Sep 25 j 08:28	3°♄47'25	2°17'28
behind sun end	503 Jul 08 j 06:30	16°♄05'59		minimum elong	509 Sep 25 j 08:27	3°♄47'25	2°17'28
max. Earth dist.	503 Jul 08 j 11:47	16°♄07'41	10.10341 AU	max. Earth dist.	509 Sep 25 j 10:47	3°♄48'07	10.81266 AU
morning rise	503 Jul 26 j 03:37	18°♄23'32		morning rise	509 Oct 12 j 04:23	5°♄48'08	
retrograde	503 Nov 06 j 00:07	26°♄23'21		retrograde	510 Jan 19 j 12:20	12°♄55'02	
opposition	504 Jan 11 j 13:20	22°♄56'50	0°36'52	opposition	510 Mar 29 j 02:09	9°♄37'01	2°49'42
min. Earth dist.	504 Jan 11 j 05:40	22°♄58'24	8.14928 AU	min. Earth dist.	510 Mar 29 j 00:49	9°♄37'16	8.86804 AU
direct	504 Mar 19 j 12:47	19°♄27'07		direct	510 Jun 08 j 00:48	6°♄13'50	
evening set	504 Jul 03 j 17:32	27°♄36'24		evening set	510 Sep 20 j 13:17	13°♄36'00	
conjunction	504 Jul 21 j 18:13	29°♄53'39	0°45'40	conjunction	510 Oct 07 j 09:59	15°♄35'45	2°18'03
minimum elong	504 Jul 21 j 18:11	29°♄53'39	0°45'40	minimum elong	510 Oct 07 j 09:59	15°♄35'45	2°18'03
max. Earth dist.	504 Jul 22 j 03:38	29°♄56'40	10.20090 AU	max. Earth dist.	510 Oct 07 j 10:21	15°♄35'52	10.91650 AU
	504 Jul 22 j 14:05	0°♄		morning rise	510 Oct 24 j 02:33	17°♄34'21	
morning rise	504 Aug 08 j 15:10	2°♄09'45		retrograde	511 Jan 31 j 08:10	24°♄35'52	
retrograde	504 Nov 18 j 13:56	9°♄59'42		opposition	511 Apr 10 j 09:24	21°♄18'38	2°46'37
opposition	505 Jan 24 j 06:41	6°♄34'46	1°15'06	min. Earth dist.	511 Apr 10 j 10:29	21°♄18'26	8.96334 AU
min. Earth dist.	505 Jan 23 j 23:35	6°♄36'12	8.25615 AU	direct	511 Jun 20 j 14:15	17°♄56'41	
direct	505 Apr 02 j 19:46	3°♄05'40		evening set	511 Oct 02 j 10:08	25°♄11'40	
evening set	505 Jul 18 j 03:24	11°♄08'33					
				conjunction	511 Oct 19 j 03:47	27°♄09'37	2°12'57
conjunction	505 Aug 04 j 23:46	13°♄22'51	1°14'44	minimum elong	511 Oct 19 j 03:48	27°♄09'38	2°12'57
minimum elong	505 Aug 04 j 23:43	13°♄22'50	1°14'44	max. Earth dist.	511 Oct 19 j 01:12	27°♄08'52	11.00190 AU
max. Earth dist.	505 Aug 05 j 08:14	13°♄25'31	10.31537 AU	morning rise	511 Nov 04 j 18:09	29°♄06'38	
	505 Aug 17 j 20:31	15°♄			511 Nov 12 j 12:48	0°♄	
morning rise	505 Aug 22 j 15:41	15°♄35'46		retrograde	512 Feb 12 j 00:51	6°♄04'18	
retrograde	505 Dec 01 j 19:44	23°♄15'45		opposition	512 Apr 21 j 12:58	2°♄47'33	2°36'54
opposition	506 Feb 06 j 17:58	19°♄52'27	1°48'12	min. Earth dist.	512 Apr 21 j 15:51	2°♄47'01	9.03805 AU
min. Earth dist.	506 Feb 06 j 12:03	19°♄53'38	8.37693 AU		512 Jun 05 j 05:17	30°♄	
direct	506 Apr 16 j 20:20	16°♄24'14		direct	512 Jul 01 j 21:07	29°♄26'44	
evening set	506 Aug 01 j 03:07	24°♄19'36			512 Jul 28 j 06:46	0°♄	
				evening set	512 Oct 13 j 00:22	6°♄35'39	
conjunction	506 Aug 18 j 18:20	26°♄30'40	1°39'10	conjunction	512 Oct 29 j 15:57	8°♄32'21	2°02'37
minimum elong	506 Aug 18 j 18:16	26°♄30'39	1°39'09	minimum elong	512 Oct 29 j 15:59	8°♄32'21	2°02'37
max. Earth dist.	506 Aug 19 j 01:01	26°♄32'45	10.44021 AU	max. Earth dist.	512 Oct 29 j 11:27	8°♄31'01	11.06526 AU
morning rise	506 Sep 05 j 04:49	28°♄40'15		morning rise	512 Nov 15 j 04:55	10°♄28'18	
	506 Sep 16 j 06:55	0°♄			512 Dec 29 j 16:47	15°♄	
retrograde	506 Dec 14 j 16:09	6°♄10'37		retrograde	513 Feb 22 j 15:34	17°♄23'43	
opposition	507 Feb 19 j 22:56	2°♄48'54	2°14'47		513 Apr 21 j 11:42	15°♄	
min. Earth dist.	507 Feb 19 j 18:16	2°♄49'49	8.50490 AU	opposition	513 May 03 j 13:48	14°♄07'11	2°21'13
	507 Apr 02 j 23:48	30°♄		min. Earth dist.	513 May 03 j 17:43	14°♄06'27	9.08934 AU
direct	507 Apr 30 j 15:09	29°♄21'48		direct	513 Jul 13 j 23:37	10°♄47'20	
	507 May 28 j 04:46	0°♄			513 Sep 28 j 00:29	15°♄	
evening set	507 Aug 14 j 15:45	7°♄08'56		evening set	513 Oct 24 j 09:38	17°♄51'28	
conjunction	507 Sep 01 j 01:38	9°♄16'45	1°58'02	conjunction	513 Nov 10 j 00:00	19°♄47'23	1°47'38
minimum elong	507 Sep 01 j 01:35	9°♄16'44	1°58'02	minimum elong	513 Nov 10 j 00:03	19°♄47'24	1°47'37
max. Earth dist.	507 Sep 01 j 06:21	9°♄18'13	10.56888 AU	max. Earth dist.	513 Nov 09 j 18:40	19°♄45'49	11.10466 AU
morning rise	507 Sep 18 j 06:48	11°♄23'06		morning rise	513 Nov 26 j 12:16	21°♄42'46	
retrograde	507 Dec 27 j 04:20	18°♄44'35		retrograde	514 Mar 06 j 08:13	28°♄37'32	
opposition	508 Mar 03 j 21:43	15°♄24'18	2°34'01	opposition	514 May 15 j 13:28	25°♄20'56	2°00'18
min. Earth dist.	508 Mar 03 j 17:45	15°♄25'05	8.63351 AU	min. Earth dist.	514 May 15 j 18:21	25°♄20'02	9.11612 AU
direct	508 May 13 j 03:00	11°♄58'29		direct	514 Jul 25 j 21:37	22°♄01'52	
evening set	508 Aug 26 j 17:04	19°♄37'03					

evening set	514 Nov 04 j 15:37	29° $\mathbb{M}$ 02'26	opposition	520 Jul 25 j 15:25	3° $\approx$ 45'09	-1°06'49
	514 Nov 12 j 22:44	0° $\mathbb{A}$	min. Earth dist.	520 Jul 25 j 22:28	3° $\approx$ 43'49	8.78998 AU
			direct	520 Oct 02 j 18:20	0° $\approx$ 25'38	
conjunction	514 Nov 21 j 05:18	0° $\mathbb{A}$ 58'03 1°28'36	evening set	521 Jan 10 j 09:24	7° $\approx$ 36'36	
minimum elong	514 Nov 21 j 05:21	0° $\mathbb{A}$ 58'04 1°28'36				
max. Earth dist.	514 Nov 20 j 22:43	0° $\mathbb{A}$ 56'07 11.11940 AU	conjunction	521 Jan 27 j 04:48	9° $\approx$ 38'35	-1°07'12
morning rise	514 Dec 07 j 17:43	2° $\mathbb{A}$ 53'23	minimum elong	521 Jan 27 j 04:46	9° $\approx$ 38'34	1°07'13
retrograde	515 Mar 17 j 23:41	9° $\mathbb{A}$ 49'02	max. Earth dist.	521 Jan 26 j 20:45	9° $\approx$ 36'08	10.73325 AU
opposition	515 May 27 j 12:52	6° $\mathbb{A}$ 32'02 1°34'54	morning rise	521 Feb 13 j 03:54	11° $\approx$ 41'43	
min. Earth dist.	515 May 27 j 19:21	6° $\mathbb{A}$ 30'51 9.11813 AU		521 Mar 14 j 16:32	15° $\approx$	
direct	515 Aug 06 j 15:32	3° $\mathbb{A}$ 13'29	retrograde	521 May 28 j 19:26	19° $\approx$ 14'35	
evening set	515 Nov 15 j 20:12	10° $\mathbb{A}$ 11'56	opposition	521 Aug 07 j 09:46	15° $\approx$ 50'33	-1°38'12
			min. Earth dist.	521 Aug 07 j 15:54	15° $\approx$ 49'22	8.67361 AU
conjunction	515 Dec 02 j 09:44	12° $\mathbb{A}$ 07'40 1°06'14		521 Aug 18 j 12:55	15° $\mathbb{R}$ $\approx$	
minimum elong	515 Dec 02 j 09:46	12° $\mathbb{A}$ 07'40 1°06'14	direct	521 Oct 15 j 00:51	12° $\approx$ 30'15	
max. Earth dist.	515 Dec 02 j 01:22	12° $\mathbb{A}$ 05'13 11.10949 AU		521 Dec 08 j 15:40	15° $\approx$	
morning rise	515 Dec 18 j 23:04	14° $\mathbb{A}$ 03'22	evening set	522 Jan 22 j 17:12	19° $\approx$ 48'13	
retrograde	516 Mar 28 j 17:50	21° $\mathbb{A}$ 01'28				
opposition	516 Jun 07 j 12:40	17° $\mathbb{A}$ 43'48 1°05'53	conjunction	522 Feb 08 j 15:01	21° $\approx$ 52'27	-1°31'11
min. Earth dist.	516 Jun 07 j 20:15	17° $\mathbb{A}$ 42'24 9.09568 AU	minimum elong	522 Feb 08 j 14:58	21° $\approx$ 52'26	1°31'11
direct	516 Aug 17 j 10:22	14° $\mathbb{A}$ 23'29	max. Earth dist.	522 Feb 08 j 08:46	21° $\approx$ 50'31	10.61213 AU
evening set	516 Nov 26 j 00:55	21° $\mathbb{A}$ 23'17	morning rise	522 Feb 25 j 16:53	23° $\approx$ 57'59	
				522 Apr 26 j 13:25	0° $\mathbb{H}$	
conjunction	516 Dec 12 j 14:55	23° $\mathbb{A}$ 19'34 0°41'15	retrograde	522 Jun 11 j 05:23	1° $\mathbb{H}$ 41'11	
minimum elong	516 Dec 12 j 14:57	23° $\mathbb{A}$ 19'35 0°41'16		522 Jul 27 j 20:00	30° $\mathbb{R}$ $\approx$	
max. Earth dist.	516 Dec 12 j 06:06	23° $\mathbb{A}$ 16'59 11.07542 AU	opposition	522 Aug 20 j 10:23	28° $\approx$ 15'37	-2°05'56
morning rise	516 Dec 29 j 05:32	25° $\mathbb{A}$ 16'04	min. Earth dist.	522 Aug 20 j 14:44	28° $\approx$ 14'46	8.54968 AU
	517 Feb 14 j 03:14	0° $\mathbb{B}$	direct	522 Oct 27 j 11:46	24° $\approx$ 54'23	
retrograde	517 Apr 09 j 15:33	2° $\mathbb{B}$ 18'12		523 Jan 15 j 13:00	0° $\mathbb{H}$	
	517 Jun 05 j 16:45	30° $\mathbb{R}$ $\mathbb{A}$	evening set	523 Feb 04 j 10:54	2° $\mathbb{H}$ 20'33	
opposition	517 Jun 19 j 14:11	28° $\mathbb{A}$ 59'34 0°34'09				
min. Earth dist.	517 Jun 19 j 21:39	28° $\mathbb{A}$ 58'12 9.04958 AU	conjunction	523 Feb 21 j 11:31	4° $\mathbb{H}$ 27'15	-1°51'26
direct	517 Aug 29 j 03:55	25° $\mathbb{A}$ 41'18	minimum elong	523 Feb 21 j 11:29	4° $\mathbb{H}$ 27'14	1°51'26
	517 Nov 13 j 01:06	0° $\mathbb{B}$	max. Earth dist.	523 Feb 21 j 06:50	4° $\mathbb{H}$ 25'47	10.48606 AU
evening set	517 Dec 07 j 07:34	2° $\mathbb{B}$ 40'00	morning rise	523 Mar 10 j 16:33	6° $\mathbb{H}$ 35'24	
			retrograde	523 Jun 24 j 22:56	14° $\mathbb{H}$ 29'09	
conjunction	517 Dec 23 j 22:29	4° $\mathbb{B}$ 37'11 0°14'30	opposition	523 Sep 02 j 17:36	11° $\mathbb{H}$ 02'10	-2°28'22
minimum elong	517 Dec 23 j 22:29	4° $\mathbb{B}$ 37'11 0°14'30	min. Earth dist.	523 Sep 02 j 20:18	11° $\mathbb{H}$ 01'38	8.42377 AU
behind sun begin	517 Dec 23 j 19:13	4° $\mathbb{B}$ 36'14	direct	523 Nov 09 j 05:33	7° $\mathbb{H}$ 39'53	
behind sun end	517 Dec 24 j 01:46	4° $\mathbb{B}$ 38'08	evening set	524 Feb 17 j 15:31	15° $\mathbb{H}$ 15'06	
max. Earth dist.	517 Dec 23 j 14:19	4° $\mathbb{B}$ 34'47 11.01832 AU				
morning rise	518 Jan 09 j 14:37	6° $\mathbb{B}$ 34'49	conjunction	524 Mar 05 j 19:21	17° $\mathbb{H}$ 24'28	-2°06'38
retrograde	518 Apr 21 j 18:48	13° $\mathbb{B}$ 42'37	minimum elong	524 Mar 05 j 19:19	17° $\mathbb{H}$ 24'27	2°06'37
opposition	518 Jul 01 j 18:30	10° $\mathbb{B}$ 22'48 0°00'41	max. Earth dist.	524 Mar 05 j 15:47	17° $\mathbb{H}$ 23'20	10.36108 AU
min. Earth dist.	518 Jul 02 j 01:25	10° $\mathbb{B}$ 21'31 8.98150 AU	morning rise	524 Mar 23 j 03:59	19° $\mathbb{H}$ 35'22	
desc. node	518 Jul 09 j 09:23	9° $\mathbb{B}$ 49'05	retrograde	524 Jul 08 j 00:20	27° $\mathbb{H}$ 39'16	
direct	518 Sep 09 j 22:27	7° $\mathbb{B}$ 04'21	opposition	524 Sep 15 j 07:25	24° $\mathbb{H}$ 11'02	-2°43'49
evening set	518 Dec 18 j 18:09	14° $\mathbb{B}$ 05'32	min. Earth dist.	524 Sep 15 j 08:50	24° $\mathbb{H}$ 10'45	8.30220 AU
			direct	524 Nov 21 j 07:56	20° $\mathbb{H}$ 47'36	
conjunction	519 Jan 04 j 10:12	16° $\mathbb{B}$ 04'00 -0°13'15	evening set	525 Mar 02 j 07:14	28° $\mathbb{H}$ 32'16	
minimum elong	519 Jan 04 j 10:11	16° $\mathbb{B}$ 04'00 0°13'15		525 Mar 13 j 20:07	0° $\mathbb{Y}$	
behind sun begin	519 Jan 04 j 06:00	16° $\mathbb{B}$ 02'46				
behind sun end	519 Jan 04 j 14:22	16° $\mathbb{B}$ 05'14	conjunction	525 Mar 19 j 14:53	0° $\mathbb{Y}$ 44'24	-2°15'30
max. Earth dist.	519 Jan 04 j 01:43	16° $\mathbb{B}$ 01'29 10.94029 AU	minimum elong	525 Mar 19 j 14:52	0° $\mathbb{Y}$ 44'24	2°15'30
morning rise	519 Jan 21 j 04:21	18° $\mathbb{B}$ 03'09	max. Earth dist.	525 Mar 19 j 12:55	0° $\mathbb{Y}$ 43'46	10.24389 AU
retrograde	519 May 04 j 05:09	25° $\mathbb{B}$ 18'01	morning rise	525 Apr 06 j 03:29	2° $\mathbb{Y}$ 58'07	
opposition	519 Jul 14 j 02:34	21° $\mathbb{B}$ 56'55 -0°33'23	retrograde	525 Jul 22 j 09:13	11° $\mathbb{Y}$ 11'02	
min. Earth dist.	519 Jul 14 j 09:35	21° $\mathbb{B}$ 55'36 8.89393 AU	opposition	525 Sep 29 j 03:40	7° $\mathbb{Y}$ 41'48	-2°50'44
direct	519 Sep 21 j 18:18	18° $\mathbb{B}$ 38'02	min. Earth dist.	525 Sep 29 j 03:52	7° $\mathbb{Y}$ 41'45	8.19176 AU
evening set	519 Dec 30 j 10:15	25° $\mathbb{B}$ 43'19	direct	525 Dec 04 j 18:28	4° $\mathbb{Y}$ 17'10	
			evening set	526 Mar 16 j 09:47	12° $\mathbb{Y}$ 11'03	
conjunction	520 Jan 16 j 03:45	27° $\mathbb{B}$ 43'23 -0°40'49				
minimum elong	520 Jan 16 j 03:43	27° $\mathbb{B}$ 43'22 0°40'50	conjunction	526 Apr 02 j 21:53	14° $\mathbb{Y}$ 25'59	-2°17'02
max. Earth dist.	520 Jan 15 j 18:49	27° $\mathbb{B}$ 40'42 10.84412 AU	minimum elong	526 Apr 02 j 21:53	14° $\mathbb{Y}$ 25'59	2°17'01
morning rise	520 Feb 02 j 00:20	29° $\mathbb{B}$ 44'24	max. Earth dist.	526 Apr 02 j 22:24	14° $\mathbb{Y}$ 26'09	10.14127 AU
	520 Feb 04 j 05:25	0° $\approx$	morning rise	526 Apr 20 j 14:38	16° $\mathbb{Y}$ 42'24	
retrograde	520 May 15 j 19:51	7° $\approx$ 07'41	retrograde	526 Aug 05 j 23:45	25° $\mathbb{Y}$ 02'24	

opposition	526 Oct 13 j 05:19	21° $\Upsilon$ 32'29	-2°48'01	morning rise	532 Jul 18 j 23:20	12° $\Theta$ 25'38	
min. Earth dist.	526 Oct 13 j 03:51	21° $\Upsilon$ 32'47	8.09895 AU	retrograde	532 Oct 30 j 07:54	20° $\Theta$ 29'39	
direct	526 Dec 18 j 13:46	18° $\Upsilon$ 06'42		opposition	533 Jan 04 j 19:18	17° $\Theta$ 03'03	0°18'52
evening set	527 Mar 30 j 22:37	26° $\Upsilon$ 08'59		min. Earth dist.	533 Jan 04 j 13:18	17° $\Theta$ 04'17	8.11685 AU
				direct	533 Mar 13 j 11:54	13° $\Theta$ 33'40	
conjunction	527 Apr 17 j 15:26	28° $\Upsilon$ 26'30	-2°10'36	evening set	533 Jun 27 j 14:53	21° $\Theta$ 45'23	
minimum elong	527 Apr 17 j 15:29	28° $\Upsilon$ 26'31	2°10'35				
max. Earth dist.	527 Apr 17 j 18:42	28° $\Upsilon$ 27'34	10.05948 AU	conjunction	533 Jul 15 j 16:57	24° $\Theta$ 03'45	0°31'43
	527 Apr 29 j 15:04	0° $\mathcal{B}$		minimum elong	533 Jul 15 j 16:56	24° $\Theta$ 03'45	0°31'42
morning rise	527 May 05 j 12:14	0° $\mathcal{B}$ 45'20		max. Earth dist.	533 Jul 16 j 00:17	24° $\Theta$ 06'06	10.16197 AU
retrograde	527 Aug 20 j 17:12	9° $\mathcal{B}$ 09'47		morning rise	533 Aug 02 j 16:03	26° $\Theta$ 21'08	
opposition	527 Oct 27 j 11:01	5° $\mathcal{B}$ 39'32	-2°35'11		533 Sep 02 j 15:41	0° $\mathcal{Q}$	
min. Earth dist.	527 Oct 27 j 07:38	5° $\mathcal{B}$ 40'14	8.02959 AU	retrograde	533 Nov 13 j 00:51	4° $\mathcal{Q}$ 15'44	
direct	528 Jan 01 j 17:03	2° $\mathcal{B}$ 12'42		opposition	534 Jan 18 j 15:28	0° $\mathcal{Q}$ 50'34	0°58'45
evening set	528 Apr 13 j 19:53	10° $\mathcal{B}$ 21'54		min. Earth dist.	534 Jan 18 j 09:34	0° $\mathcal{Q}$ 51'46	8.21136 AU
					534 Jan 29 j 03:02	30° $\mathcal{R}$ $\Theta$	
conjunction	528 May 01 j 17:17	12° $\mathcal{B}$ 41'37	-1°56'10	direct	534 Mar 27 j 22:16	27° $\Theta$ 21'32	
minimum elong	528 May 01 j 17:20	12° $\mathcal{B}$ 41'38	1°56'10		534 May 23 j 07:10	0° $\mathcal{Q}$	
max. Earth dist.	528 May 01 j 23:16	12° $\mathcal{B}$ 43'34	10.00384 AU	evening set	534 Jul 12 j 05:32	5° $\mathcal{Q}$ 27'45	
morning rise	528 May 19 j 17:40	15° $\mathcal{B}$ 02'18					
	528 May 19 j 10:29	15° $\mathcal{B}$		conjunction	534 Jul 30 j 03:52	7° $\mathcal{Q}$ 43'26	1°02'26
retrograde	528 Sep 03 j 12:14	23° $\mathcal{B}$ 28'09		minimum elong	534 Jul 30 j 03:49	7° $\mathcal{Q}$ 43'25	1°02'25
opposition	528 Nov 09 j 19:27	19° $\mathcal{B}$ 57'57	-2°12'34	max. Earth dist.	534 Jul 30 j 10:36	7° $\mathcal{Q}$ 45'34	10.26537 AU
min. Earth dist.	528 Nov 09 j 14:03	19° $\mathcal{B}$ 59'04	7.98822 AU	morning rise	534 Aug 16 j 22:17	9° $\mathcal{Q}$ 57'51	
direct	529 Jan 15 j 01:37	16° $\mathcal{B}$ 30'10			534 Oct 01 j 11:53	15° $\mathcal{Q}$	
evening set	529 Apr 28 j 23:05	24° $\mathcal{B}$ 44'17		retrograde	534 Nov 26 j 10:30	17° $\mathcal{Q}$ 42'38	
					535 Jan 23 j 15:46	15° $\mathcal{R}$ $\mathcal{Q}$	
conjunction	529 May 17 j 00:24	27° $\mathcal{B}$ 05'31	-1°34'26	opposition	535 Feb 01 j 05:56	14° $\mathcal{Q}$ 18'54	1°34'23
minimum elong	529 May 17 j 00:28	27° $\mathcal{B}$ 05'32	1°34'25	min. Earth dist.	535 Feb 01 j 00:02	14° $\mathcal{Q}$ 20'05	8.32240 AU
max. Earth dist.	529 May 17 j 08:33	27° $\mathcal{B}$ 08'11	9.97792 AU	direct	535 Apr 11 j 02:33	10° $\mathcal{Q}$ 50'31	
morning rise	529 Jun 04 j 03:33	29° $\mathcal{B}$ 27'21			535 Jun 22 j 23:06	15° $\mathcal{Q}$	
	529 Jun 08 j 09:49	0° $\mathcal{I}$		evening set	535 Jul 26 j 10:17	18° $\mathcal{Q}$ 49'44	
retrograde	529 Sep 18 j 06:29	7° $\mathcal{I}$ 51'25					
opposition	529 Nov 24 j 04:37	4° $\mathcal{I}$ 21'36	-1°41'29	conjunction	535 Aug 13 j 03:55	21° $\mathcal{Q}$ 02'20	1°29'05
min. Earth dist.	529 Nov 23 j 21:58	4° $\mathcal{I}$ 22'59	7.97730 AU	minimum elong	535 Aug 13 j 03:52	21° $\mathcal{Q}$ 02'19	1°29'04
direct	530 Jan 29 j 14:12	0° $\mathcal{I}$ 53'01		max. Earth dist.	535 Aug 13 j 10:20	21° $\mathcal{Q}$ 04'21	10.38212 AU
evening set	530 May 14 j 05:44	9° $\mathcal{I}$ 09'46		morning rise	535 Aug 30 j 16:55	23° $\mathcal{Q}$ 13'30	
					535 Nov 09 j 12:48	0° $\mathcal{P}$	
conjunction	530 Jun 01 j 09:46	11° $\mathcal{I}$ 31'40	-1°06'45	retrograde	535 Dec 09 j 12:06	0° $\mathcal{P}$ 48'33	
minimum elong	530 Jun 01 j 09:50	11° $\mathcal{I}$ 31'41	1°06'45		536 Jan 08 j 19:20	30° $\mathcal{R}$ $\mathcal{Q}$	
max. Earth dist.	530 Jun 01 j 18:47	11° $\mathcal{I}$ 34'37	9.98283 AU	opposition	536 Feb 14 j 14:09	27° $\mathcal{Q}$ 26'13	2°04'01
morning rise	530 Jun 19 j 14:22	13° $\mathcal{I}$ 53'45		min. Earth dist.	536 Feb 14 j 08:48	27° $\mathcal{Q}$ 27'17	8.44379 AU
retrograde	530 Oct 02 j 21:25	22° $\mathcal{I}$ 13'04		direct	536 Apr 24 j 00:13	23° $\mathcal{Q}$ 58'41	
opposition	530 Dec 08 j 12:33	18° $\mathcal{I}$ 44'02	-1°04'05		536 Jul 23 j 16:08	0° $\mathcal{P}$	
min. Earth dist.	530 Dec 08 j 05:45	18° $\mathcal{I}$ 45'26	7.99669 AU	evening set	536 Aug 08 j 04:14	1° $\mathcal{P}$ 49'57	
direct	531 Feb 13 j 05:02	15° $\mathcal{I}$ 14'51					
evening set	531 May 29 j 12:33	23° $\mathcal{I}$ 32'00		conjunction	536 Aug 25 j 16:42	3° $\mathcal{P}$ 59'20	1°50'31
				minimum elong	536 Aug 25 j 16:39	3° $\mathcal{P}$ 59'19	1°50'30
conjunction	531 Jun 16 j 17:41	25° $\mathcal{I}$ 53'38	-0°35'02	max. Earth dist.	536 Aug 25 j 22:20	4° $\mathcal{P}$ 01'04	10.50588 AU
minimum elong	531 Jun 16 j 17:43	25° $\mathcal{I}$ 53'38	0°35'02	morning rise	536 Sep 12 j 00:10	6° $\mathcal{P}$ 07'12	
max. Earth dist.	531 Jun 17 j 02:27	25° $\mathcal{I}$ 56'29	10.01700 AU	retrograde	536 Dec 21 j 04:24	13° $\mathcal{P}$ 33'01	
morning rise	531 Jul 04 j 22:04	28° $\mathcal{I}$ 15'00		opposition	537 Feb 26 j 15:55	10° $\mathcal{P}$ 12'01	2°26'36
	531 Jul 18 j 22:33	0° $\Theta$		min. Earth dist.	537 Feb 26 j 12:01	10° $\mathcal{P}$ 12'46	8.56906 AU
retrograde	531 Oct 17 j 06:58	6° $\Theta$ 27'24		direct	537 May 07 j 15:09	6° $\mathcal{P}$ 45'28	
opposition	531 Dec 22 j 17:55	2° $\Theta$ 59'28	-0°23'00	evening set	537 Aug 21 j 10:59	14° $\mathcal{P}$ 28'18	
min. Earth dist.	531 Dec 22 j 11:31	3° $\Theta$ 00'47	8.04410 AU				
	532 Feb 04 j 12:15	30° $\mathcal{R}$ $\mathcal{I}$		conjunction	537 Sep 07 j 18:15	16° $\mathcal{P}$ 34'32	2°06'03
direct	532 Feb 27 j 21:19	29° $\mathcal{I}$ 30'02		minimum elong	537 Sep 07 j 18:13	16° $\mathcal{P}$ 34'31	2°06'03
	532 Mar 22 j 07:00	0° $\Theta$		max. Earth dist.	537 Sep 07 j 22:10	16° $\mathcal{P}$ 35'44	10.63029 AU
evening set	532 Jun 12 j 16:23	7° $\Theta$ 45'27		morning rise	537 Sep 24 j 20:35	18° $\mathcal{P}$ 39'17	
				retrograde	538 Jan 02 j 13:57	25° $\mathcal{P}$ 56'42	
conjunction	532 Jun 30 j 20:48	10° $\Theta$ 05'52	-0°01'30	opposition	538 Mar 11 j 11:39	22° $\mathcal{P}$ 36'53	2°41'36
minimum elong	532 Jun 30 j 20:50	10° $\Theta$ 05'52	0°01'30	min. Earth dist.	538 Mar 11 j 09:34	22° $\mathcal{P}$ 37'17	8.69193 AU
behind sun begin	532 Jun 30 j 13:28	10° $\Theta$ 03'31		direct	538 May 20 j 22:01	19° $\mathcal{P}$ 11'28	
behind sun end	532 Jul 01 j 04:12	10° $\Theta$ 08'14		evening set	538 Sep 03 j 06:42	26° $\mathcal{P}$ 45'46	
max. Earth dist.	532 Jul 01 j 04:58	10° $\Theta$ 08'29	10.07771 AU				
asc. node	532 Jul 17 j 06:24	12° $\Theta$ 12'38		conjunction	538 Sep 20 j 09:04	28° $\mathcal{P}$ 49'06	2°15'23

minimum elong	538 Sep 20 j 09:03	28° <del>7</del> 49'06	2°15'24	conjunction	544 Nov 26 j 21:14	7° <del>7</del> 28'22	1°16'29
max. Earth dist.	538 Sep 20 j 10:37	28° <del>7</del> 49'34	10.74940 AU	minimum elong	544 Nov 26 j 21:16	7° <del>7</del> 28'23	1°16'29
	538 Sep 30 j 03:51	0° <del>5</del>		max. Earth dist.	544 Nov 26 j 15:47	7° <del>7</del> 26'46	11.12192 AU
morning rise	538 Oct 07 j 06:56	0° <del>5</del> 51'05		morning rise	544 Dec 13 j 10:01	9° <del>7</del> 23'44	
retrograde	539 Jan 14 j 15:51	8° <del>5</del> 01'12		retrograde	545 Mar 23 j 22:11	16° <del>7</del> 19'57	
opposition	539 Mar 24 j 01:42	4° <del>5</del> 42'22	2°48'58	opposition	545 Jun 02 j 14:46	13° <del>7</del> 02'32	1°19'06
min. Earth dist.	539 Mar 24 j 00:42	4° <del>5</del> 42'34	8.80676 AU	min. Earth dist.	545 Jun 02 j 19:38	13° <del>7</del> 01'38	9.11705 AU
direct	539 Jun 02 j 21:22	1° <del>5</del> 18'08		direct	545 Aug 12 j 16:33	9° <del>7</del> 44'10	
evening set	539 Sep 15 j 16:08	8° <del>5</del> 44'12		evening set	545 Nov 21 j 11:34	16° <del>7</del> 41'26	
conjunction	539 Oct 02 j 14:25	10° <del>5</del> 45'03	2°18'36	conjunction	545 Dec 08 j 01:20	18° <del>7</del> 37'16	0°52'36
minimum elong	539 Oct 02 j 14:25	10° <del>5</del> 45'03	2°18'36	minimum elong	545 Dec 08 j 01:22	18° <del>7</del> 37'16	0°52'36
max. Earth dist.	539 Oct 02 j 14:29	10° <del>5</del> 45'04	10.85814 AU	max. Earth dist.	545 Dec 07 j 19:01	18° <del>7</del> 35'25	11.10529 AU
morning rise	539 Oct 19 j 08:36	12° <del>5</del> 44'41		morning rise	545 Dec 24 j 15:07	20° <del>7</del> 33'10	
retrograde	540 Jan 26 j 13:27	19° <del>5</del> 48'48		retrograde	546 Apr 04 j 17:53	27° <del>7</del> 32'30	
opposition	540 Apr 04 j 10:42	16° <del>5</del> 30'44	2°48'57	opposition	546 Jun 14 j 14:58	24° <del>7</del> 14'30	0°48'30
min. Earth dist.	540 Apr 04 j 10:22	16° <del>5</del> 30'48	8.90877 AU	min. Earth dist.	546 Jun 14 j 20:48	24° <del>7</del> 13'26	9.08812 AU
direct	540 Jun 14 j 14:59	13° <del>5</del> 07'43		direct	546 Aug 24 j 07:41	20° <del>7</del> 56'30	
evening set	540 Sep 26 j 16:25	20° <del>5</del> 26'08		evening set	546 Dec 02 j 16:40	27° <del>7</del> 53'48	
conjunction	540 Oct 13 j 11:32	22° <del>5</del> 24'59	2°15'55	conjunction	546 Dec 19 j 06:56	29° <del>7</del> 50'17	0°26'33
minimum elong	540 Oct 13 j 11:33	22° <del>5</del> 24'59	2°15'56	minimum elong	546 Dec 19 j 06:56	29° <del>7</del> 50'18	0°26'34
max. Earth dist.	540 Oct 13 j 10:52	22° <del>5</del> 24'47	10.95212 AU	max. Earth dist.	546 Dec 18 j 23:17	29° <del>7</del> 48'03	11.06500 AU
morning rise	540 Oct 30 j 02:52	24° <del>5</del> 22'45			546 Dec 20 j 15:53	0° <del>8</del>	
	540 Dec 27 j 15:41	0° <del>8</del>		morning rise	547 Jan 04 j 22:19	1° <del>8</del> 47'08	
retrograde	541 Feb 06 j 08:36	1° <del>8</del> 22'14		retrograde	547 Apr 16 j 17:06	8° <del>8</del> 51'14	
	541 Mar 20 j 04:13	30° <del>8</del>		opposition	547 Jun 26 j 17:25	5° <del>8</del> 32'23	0°15'44
opposition	541 Apr 16 j 15:37	28° <del>8</del> 04'45	2°42'03	min. Earth dist.	547 Jun 27 j 00:09	5° <del>8</del> 31'08	9.03616 AU
min. Earth dist.	541 Apr 16 j 16:27	28° <del>8</del> 04'36	8.99393 AU	direct	547 Sep 05 j 01:35	2° <del>8</del> 14'28	
direct	541 Jun 26 j 23:37	24° <del>8</del> 42'56		evening set	547 Dec 14 j 00:46	9° <del>8</del> 13'23	
	541 Sep 21 j 07:13	0° <del>8</del>		desc. node	547 Dec 19 j 21:24	9° <del>8</del> 54'26	
evening set	541 Oct 08 j 09:21	1° <del>8</del> 54'38					
conjunction	541 Oct 25 j 01:57	3° <del>8</del> 51'56	2°07'49	conjunction	547 Dec 30 j 16:04	11° <del>8</del> 10'56	-0°00'49
minimum elong	541 Oct 25 j 01:59	3° <del>8</del> 51'56	2°07'48	minimum elong	547 Dec 30 j 16:04	11° <del>8</del> 10'56	0°00'49
max. Earth dist.	541 Oct 24 j 23:57	3° <del>8</del> 51'20	11.02771 AU	behind sun begin	547 Dec 30 j 09:06	11° <del>8</del> 08'54	
morning rise	541 Nov 10 j 15:22	5° <del>8</del> 48'22		behind sun end	547 Dec 30 j 23:03	11° <del>8</del> 12'59	
retrograde	542 Feb 17 j 23:23	12° <del>8</del> 44'40		max. Earth dist.	547 Dec 30 j 08:22	11° <del>8</del> 08'40	11.00229 AU
opposition	542 Apr 28 j 17:29	9° <del>8</del> 27'35	2°28'53	morning rise	548 Jan 16 j 09:17	13° <del>8</del> 09'04	
min. Earth dist.	542 Apr 28 j 20:11	9° <del>8</del> 27'05	9.05920 AU	retrograde	548 Apr 27 j 23:09	20° <del>8</del> 19'24	
direct	542 Jul 09 j 02:26	6° <del>8</del> 06'51		opposition	548 Jul 07 j 22:49	16° <del>8</del> 59'29	-0°18'06
evening set	542 Oct 19 j 20:25	13° <del>8</del> 12'57		min. Earth dist.	548 Jul 08 j 05:18	16° <del>8</del> 58'17	8.96280 AU
	542 Nov 04 j 03:55	15° <del>8</del>		direct	548 Sep 15 j 21:02	13° <del>8</del> 41'25	
conjunction	542 Nov 05 j 11:13	15° <del>8</del> 09'11	1°54'47	conjunction	549 Jan 10 j 06:15	22° <del>8</del> 42'29	-0°28'29
minimum elong	542 Nov 05 j 11:15	15° <del>8</del> 09'12	1°54'47	minimum elong	549 Jan 10 j 06:14	22° <del>8</del> 42'28	0°28'30
max. Earth dist.	542 Nov 05 j 07:05	15° <del>8</del> 07'58	11.08238 AU	max. Earth dist.	549 Jan 09 j 23:11	22° <del>8</del> 40'22	10.91910 AU
morning rise	542 Nov 21 j 23:47	17° <del>8</del> 04'48		morning rise	549 Jan 27 j 01:26	24° <del>8</del> 42'14	
retrograde	543 Mar 01 j 13:50	23° <del>8</del> 59'29			549 Mar 20 j 20:48	0° <del>8</del>	
opposition	543 May 10 j 17:19	20° <del>8</del> 42'32	2°10'09	retrograde	549 May 10 j 11:10	2° <del>8</del> 00'13	
min. Earth dist.	543 May 10 j 21:24	20° <del>8</del> 41'47	9.10239 AU		549 Jul 01 j 19:09	30° <del>8</del>	
direct	543 Jul 21 j 02:35	17° <del>8</del> 22'46		opposition	549 Jul 20 j 08:36	28° <del>8</del> 39'02	-0°51'52
evening set	543 Oct 31 j 03:09	24° <del>8</del> 24'30		min. Earth dist.	549 Jul 20 j 14:22	28° <del>8</del> 37'57	8.87035 AU
				direct	549 Sep 27 j 18:23	25° <del>8</del> 20'34	
conjunction	543 Nov 16 j 17:00	26° <del>8</del> 20'10	1°37'28		549 Dec 14 j 14:55	0° <del>8</del>	
minimum elong	543 Nov 16 j 17:03	26° <del>8</del> 20'11	1°37'27	evening set	550 Jan 05 j 08:29	2° <del>8</del> 27'24	
max. Earth dist.	543 Nov 16 j 11:37	26° <del>8</del> 18'36	11.11420 AU				
morning rise	543 Dec 03 j 05:27	28° <del>8</del> 15'27		conjunction	550 Jan 22 j 02:51	4° <del>8</del> 28'04	-0°55'28
	543 Dec 18 j 21:03	0° <del>8</del>		minimum elong	550 Jan 22 j 02:49	4° <del>8</del> 28'04	0°55'28
retrograde	544 Mar 12 j 04:16	5° <del>8</del> 10'06		max. Earth dist.	550 Jan 21 j 19:51	4° <del>8</del> 25'58	10.81808 AU
opposition	544 May 21 j 16:02	1° <del>8</del> 53'01	1°46'37	morning rise	550 Feb 08 j 00:24	6° <del>8</del> 29'46	
min. Earth dist.	544 May 21 j 20:28	1° <del>8</del> 52'13	9.12191 AU	retrograde	550 May 23 j 07:32	13° <del>8</del> 56'38	
	544 Jun 17 j 23:37	30° <del>8</del>		opposition	550 Aug 01 j 23:31	10° <del>8</del> 34'03	-1°24'12
direct	544 Jul 31 j 22:35	28° <del>8</del> 34'04		min. Earth dist.	550 Aug 02 j 05:01	10° <del>8</del> 33'00	8.76176 AU
	544 Sep 12 j 15:58	0° <del>8</del>		direct	550 Oct 09 j 20:22	7° <del>8</del> 14'55	
evening set	544 Nov 10 j 07:36	5° <del>8</del> 32'50		evening set	551 Jan 17 j 11:24	14° <del>8</del> 27'59	
					551 Jan 21 j 21:54	15° <del>8</del>	

conjunction	551 Feb 03 j 07:44	16° $\approx$ 30'42	-1°20'36	conjunction	557 Apr 24 j 22:05	6° $\approx$ 09'38	-2°04'03
minimum elong	551 Feb 03 j 07:41	16° $\approx$ 30'41	1°20'35	minimum elong	557 Apr 24 j 22:08	6° $\approx$ 09'39	2°04'03
max. Earth dist.	551 Feb 03 j 00:04	16° $\approx$ 28'21	10.70255 AU	max. Earth dist.	557 Apr 25 j 00:25	6° $\approx$ 10'24	10.03123 AU
morning rise	551 Feb 20 j 08:06	18° $\approx$ 34'40		morning rise	557 May 12 j 20:47	8° $\approx$ 29'22	
retrograde	551 Jun 05 j 11:33	26° $\approx$ 11'23			557 Jul 12 j 03:21	15° $\approx$ 8	
opposition	551 Aug 14 j 20:09	22° $\approx$ 47'19	-1°53'39	retrograde	557 Aug 27 j 20:51	16° $\approx$ 54'23	
min. Earth dist.	551 Aug 15 j 01:55	22° $\approx$ 46'13	8.64074 AU		557 Oct 14 j 05:16	15° $\approx$ 8	
direct	551 Oct 22 j 02:52	19° $\approx$ 27'16		opposition	557 Nov 03 j 09:05	13° $\approx$ 23'52	-2°24'35
evening set	552 Jan 29 j 23:30	26° $\approx$ 48'03		min. Earth dist.	557 Nov 03 j 06:21	13° $\approx$ 24'26	8.00519 AU
				direct	558 Jan 08 j 14:56	9° $\approx$ 56'11	
conjunction	552 Feb 15 j 22:23	28° $\approx$ 53'07	-1°42'38		558 Mar 27 j 13:00	15° $\approx$ 8	
minimum elong	552 Feb 15 j 22:20	28° $\approx$ 53'06	1°42'37	evening set	558 Apr 22 j 02:52	18° $\approx$ 07'46	
max. Earth dist.	552 Feb 15 j 15:14	28° $\approx$ 50'54	10.57690 AU				
	552 Feb 24 j 22:48	0° $\approx$ 8		conjunction	558 May 10 j 02:14	20° $\approx$ 28'18	-1°45'44
morning rise	552 Mar 04 j 01:48	0° $\approx$ 59'35		minimum elong	558 May 10 j 02:18	20° $\approx$ 28'20	1°45'44
retrograde	552 Jun 17 j 22:22	8° $\approx$ 46'50		max. Earth dist.	558 May 10 j 06:28	20° $\approx$ 29'41	9.98402 AU
opposition	552 Aug 26 j 23:16	5° $\approx$ 21'16	-2°18'37	morning rise	558 May 28 j 04:20	22° $\approx$ 49'41	
min. Earth dist.	552 Aug 27 j 04:24	5° $\approx$ 20'16	8.51262 AU		558 Aug 05 j 10:18	0° $\approx$ 11	
direct	552 Nov 02 j 17:50	2° $\approx$ 00'08		retrograde	558 Sep 11 j 14:56	1° $\approx$ 11'44	
evening set	553 Feb 10 j 21:43	9° $\approx$ 29'40			558 Oct 19 j 01:41	30° $\approx$ 8	
				opposition	558 Nov 17 j 17:32	27° $\approx$ 44'20	-1°57'25
conjunction	553 Feb 27 j 23:45	11° $\approx$ 37'21	-2°00'15	min. Earth dist.	558 Nov 17 j 13:35	27° $\approx$ 45'09	7.97286 AU
minimum elong	553 Feb 27 j 23:43	11° $\approx$ 37'20	2°00'15	direct	559 Jan 23 j 01:49	24° $\approx$ 15'37	
max. Earth dist.	553 Feb 27 j 18:28	11° $\approx$ 35'41	10.44732 AU		559 Apr 16 j 23:33	0° $\approx$ 11	
morning rise	553 Mar 17 j 06:27	13° $\approx$ 46'31		evening set	559 May 07 j 07:40	2° $\approx$ 11'31	
retrograde	553 Jul 01 j 18:54	21° $\approx$ 44'20					
opposition	553 Sep 09 j 09:03	18° $\approx$ 17'17	-2°37'26	conjunction	559 May 25 j 10:29	4° $\approx$ 11'53	-1°20'44
min. Earth dist.	553 Sep 09 j 12:33	18° $\approx$ 16'36	8.38420 AU	minimum elong	559 May 25 j 10:33	4° $\approx$ 11'53	1°20'43
direct	553 Nov 15 j 16:23	14° $\approx$ 54'55		max. Earth dist.	559 May 25 j 16:40	4° $\approx$ 11'55	9.96780 AU
evening set	554 Feb 24 j 07:06	22° $\approx$ 33'48		morning rise	559 Jun 12 j 14:44	7° $\approx$ 11'51	
				retrograde	559 Sep 26 j 06:52	15° $\approx$ 11'37	
conjunction	554 Mar 13 j 12:50	24° $\approx$ 44'17	-2°12'10	opposition	559 Dec 02 j 01:57	12° $\approx$ 11'07	-1°22'46
minimum elong	554 Mar 13 j 12:48	24° $\approx$ 44'16	2°12'10	min. Earth dist.	559 Dec 01 j 20:31	12° $\approx$ 11'08	7.97219 AU
max. Earth dist.	554 Mar 13 j 09:47	24° $\approx$ 43'19	10.32102 AU	direct	560 Feb 06 j 16:15	8° $\approx$ 11'37	
morning rise	554 Mar 30 j 23:12	26° $\approx$ 56'18		evening set	560 May 21 j 14:24	16° $\approx$ 11'55	
	554 Apr 25 j 19:46	0° $\approx$ 11					
retrograde	554 Jul 16 j 00:07	5° $\approx$ 03'53		conjunction	560 Jun 08 j 19:17	19° $\approx$ 11'73	-0°50'42
opposition	554 Sep 23 j 01:15	1° $\approx$ 03'52	-2°48'31	minimum elong	560 Jun 08 j 19:20	19° $\approx$ 11'73	0°50'42
min. Earth dist.	554 Sep 23 j 02:40	1° $\approx$ 03'51	8.26262 AU	max. Earth dist.	560 Jun 09 j 03:13	19° $\approx$ 11'20	9.98356 AU
	554 Oct 13 j 17:55	30° $\approx$ 8		morning rise	560 Jun 27 j 00:08	21° $\approx$ 11'39	
direct	554 Nov 28 j 21:21	28° $\approx$ 11'47		retrograde	560 Oct 09 j 18:39	29° $\approx$ 11'55	
	555 Jan 12 j 18:11	0° $\approx$ 11		opposition	560 Dec 15 j 08:43	26° $\approx$ 11'26	-0°43'06
evening set	555 Mar 10 j 03:37	6° $\approx$ 00'09		min. Earth dist.	560 Dec 15 j 02:02	26° $\approx$ 11'28	8.00323 AU
				direct	561 Feb 20 j 08:12	22° $\approx$ 11'56	
conjunction	555 Mar 27 j 13:31	8° $\approx$ 01'32	-2°17'15		561 May 27 j 00:38	0° $\approx$ 11	
minimum elong	555 Mar 27 j 13:31	8° $\approx$ 01'32	2°17'15	evening set	561 Jun 05 j 19:55	1° $\approx$ 11'35	
max. Earth dist.	555 Mar 27 j 12:16	8° $\approx$ 01'30	10.20516 AU				
morning rise	555 Apr 14 j 03:58	10° $\approx$ 01'28		conjunction	561 Jun 24 j 01:10	3° $\approx$ 11'35	-0°17'44
retrograde	555 Jul 30 j 11:48	18° $\approx$ 01'44		minimum elong	561 Jun 24 j 01:10	3° $\approx$ 11'35	0°17'44
opposition	555 Oct 06 j 23:24	15° $\approx$ 01'44	-2°50'29	max. Earth dist.	561 Jun 24 j 10:12	3° $\approx$ 11'38	10.03014 AU
min. Earth dist.	555 Oct 06 j 23:10	15° $\approx$ 01'44	8.15477 AU	morning rise	561 Jul 12 j 04:53	5° $\approx$ 11'56	
direct	555 Dec 12 j 10:54	11° $\approx$ 01'49		retrograde	561 Oct 23 j 23:56	14° $\approx$ 11'04	
evening set	556 Mar 23 j 10:42	19° $\approx$ 01'47		opposition	561 Dec 29 j 12:12	10° $\approx$ 11'36	-0°01'14
				min. Earth dist.	561 Dec 29 j 04:55	10° $\approx$ 11'38	8.06377 AU
conjunction	556 Apr 10 j 01:04	22° $\approx$ 01'03	-2°14'40	asc. node	562 Jan 09 j 14:05	9° $\approx$ 11'42	
minimum elong	556 Apr 10 j 01:06	22° $\approx$ 01'03	2°14'39	direct	562 Mar 06 j 22:54	7° $\approx$ 11'06	
max. Earth dist.	556 Apr 10 j 01:33	22° $\approx$ 01'03	10.10652 AU	evening set	562 Jun 20 j 21:31	15° $\approx$ 11'20	
morning rise	556 Apr 27 j 19:43	24° $\approx$ 01'20					
	556 Jun 17 j 10:27	0° $\approx$ 11		conjunction	562 Jul 09 j 01:12	17° $\approx$ 11'40	0°15'56
retrograde	556 Aug 13 j 03:21	2° $\approx$ 11'42		minimum elong	562 Jul 09 j 01:11	17° $\approx$ 11'40	0°15'56
	556 Oct 10 j 07:11	30° $\approx$ 8		max. Earth dist.	562 Jul 09 j 10:33	17° $\approx$ 11'43	10.10425 AU
opposition	556 Oct 20 j 02:28	29° $\approx$ 01'12	-2°42'33	morning rise	562 Jul 27 j 02:05	19° $\approx$ 11'59	
min. Earth dist.	556 Oct 20 j 00:55	29° $\approx$ 01'12	8.06711 AU	retrograde	562 Nov 06 j 22:11	27° $\approx$ 11'58	
direct	556 Dec 25 j 09:36	25° $\approx$ 01'45		opposition	563 Jan 12 j 11:03	24° $\approx$ 11'32	0°39'57
	557 Mar 05 j 21:50	0° $\approx$ 11		min. Earth dist.	563 Jan 12 j 04:01	24° $\approx$ 11'33	8.14986 AU
evening set	557 Apr 07 j 03:05	3° $\approx$ 11'51		direct	563 Mar 21 j 10:18	21° $\approx$ 11'02	
				evening set	563 Jul 05 j 16:16	29° $\approx$ 11'56	

	563 Jul 12 j 00:55	0°♈		conjunction	569 Oct 08 j 07:39	17°♏11'18	2°17'45
				minimum elong	569 Oct 08 j 07:40	17°♏11'18	2°17'45
conjunction	563 Jul 23 j 16:43	1°♏29'08 0°48'03		max. Earth dist.	569 Oct 08 j 07:31	17°♏11'16	10.91494 AU
minimum elong	563 Jul 23 j 16:41	1°♏29'08 0°48'03		morning rise	569 Oct 25 j 00:17	19°♏09'55	
max. Earth dist.	563 Jul 24 j 01:32	1°♏31'57 10.20119 AU		retrograde	570 Feb 01 j 05:55	26°♏11'36	
morning rise	563 Aug 10 j 13:27	3°♏45'09		opposition	570 Apr 11 j 07:45	22°♏54'22	2°45'55
retrograde	563 Nov 20 j 12:17	11°♏34'58		min. Earth dist.	570 Apr 11 j 08:41	22°♏54'12	8.96208 AU
opposition	564 Jan 26 j 04:32	8°♏10'02 1°17'54		direct	570 Jun 21 j 12:16	19°♏32'28	
min. Earth dist.	564 Jan 25 j 22:17	8°♏11'18 8.25622 AU		evening set	570 Oct 03 j 07:58	26°♏47'30	
direct	564 Apr 03 j 17:20	4°♏40'51					
evening set	564 Jul 19 j 01:54	12°♏43'47		conjunction	570 Oct 20 j 01:33	28°♏45'28	2°12'08
				minimum elong	570 Oct 20 j 01:34	28°♏45'28	2°12'08
conjunction	564 Aug 05 j 21:56	14°♏58'01 1°16'50		max. Earth dist.	570 Oct 19 j 23:17	28°♏44'48	11.00106 AU
minimum elong	564 Aug 05 j 21:53	14°♏58'00 1°16'49			570 Oct 30 j 14:11	0°♏	
max. Earth dist.	564 Aug 06 j 05:20	15°♏00'21 10.31511 AU		morning rise	570 Nov 05 j 15:54	0°♏42'29	
	564 Aug 06 j 04:13	15°♏		retrograde	571 Feb 12 j 22:16	7°♏40'18	
morning rise	564 Aug 23 j 13:41	17°♏10'53		opposition	571 Apr 23 j 11:27	4°♏23'32	2°35'37
retrograde	564 Dec 02 j 16:51	24°♏50'48		min. Earth dist.	571 Apr 23 j 13:19	4°♏23'11	9.03761 AU
opposition	565 Feb 07 j 15:49	21°♏27'29 1°50'35		direct	571 Jul 03 j 20:11	1°♏02'47	
min. Earth dist.	565 Feb 07 j 10:15	21°♏28'35 8.37650 AU		evening set	571 Oct 14 j 22:04	8°♏11'38	
direct	565 Apr 17 j 19:16	17°♏59'12					
evening set	565 Aug 02 j 01:23	25°♏54'38		conjunction	571 Oct 31 j 13:43	10°♏08'20	2°01'20
				minimum elong	571 Oct 31 j 13:45	10°♏08'20	2°01'20
conjunction	565 Aug 19 j 16:20	28°♏05'38 1°40'53		max. Earth dist.	571 Oct 31 j 10:26	10°♏07'22	11.06533 AU
minimum elong	565 Aug 19 j 16:16	28°♏05'37 1°40'52		morning rise	571 Nov 17 j 02:35	12°♏04'17	
max. Earth dist.	565 Aug 19 j 22:16	28°♏07'29 10.43948 AU			571 Dec 14 j 02:13	15°♏	
	565 Sep 04 j 01:02	0°♏		retrograde	572 Feb 24 j 15:38	18°♏59'47	
morning rise	565 Sep 06 j 02:41	0°♏15'11		opposition	572 May 04 j 12:26	15°♏43'15	2°19'24
retrograde	565 Dec 15 j 12:42	7°♏45'34		min. Earth dist.	572 May 04 j 15:42	15°♏42'39	9.08976 AU
opposition	566 Feb 20 j 20:41	4°♏23'49 2°16'38			572 May 14 j 08:59	15°♏	
min. Earth dist.	566 Feb 20 j 15:40	4°♏24'49 8.50396 AU		direct	572 Jul 14 j 22:10	12°♏23'29	
direct	566 May 01 j 14:28	0°♏56'42			572 Sep 11 j 13:27	15°♏	
evening set	566 Aug 15 j 13:50	8°♏43'54		evening set	572 Oct 25 j 07:14	19°♏27'27	
conjunction	566 Sep 01 j 23:35	10°♏51'41 1°59'17		conjunction	572 Nov 10 j 21:38	21°♏23'23	1°45'56
minimum elong	566 Sep 01 j 23:32	10°♏51'40 1°59'16		minimum elong	572 Nov 10 j 21:40	21°♏23'24	1°45'56
max. Earth dist.	566 Sep 02 j 04:28	10°♏53'11 10.56768 AU		max. Earth dist.	572 Nov 10 j 16:45	21°♏21'57	11.10541 AU
morning rise	566 Sep 19 j 04:31	12°♏57'58		morning rise	572 Nov 27 j 09:56	23°♏18'48	
retrograde	566 Dec 28 j 02:53	20°♏19'34			573 Feb 18 j 15:31	0°♏	
opposition	567 Mar 05 j 19:34	16°♏59'15 2°35'16		retrograde	573 Mar 07 j 05:44	0°♏13'35	
min. Earth dist.	567 Mar 05 j 15:07	17°♏00'07 8.63205 AU			573 Mar 23 j 23:21	30°♏	
direct	567 May 15 j 00:40	13°♏33'26		opposition	573 May 16 j 12:07	26°♏57'00	1°58'00
evening set	567 Aug 28 j 15:01	21°♏12'05		min. Earth dist.	573 May 16 j 17:16	26°♏56'03	9.11709 AU
				direct	573 Jul 26 j 18:21	23°♏38'00	
conjunction	567 Sep 14 j 19:50	23°♏16'50 2°11'35			573 Oct 30 j 21:46	0°♏	
minimum elong	567 Sep 14 j 19:48	23°♏16'49 2°11'35		evening set	573 Nov 05 j 13:15	0°♏38'27	
max. Earth dist.	567 Sep 15 j 00:03	23°♏18'07 10.69338 AU					
morning rise	567 Oct 01 j 19:45	25°♏20'08		conjunction	573 Nov 22 j 02:52	2°♏34'03	1°26'34
	567 Nov 14 j 20:32	0°♏		minimum elong	573 Nov 22 j 02:55	2°♏34'04	1°26'34
retrograde	568 Jan 09 j 09:42	2°♏33'55		max. Earth dist.	573 Nov 21 j 19:47	2°♏31'59	11.12056 AU
	568 Mar 07 j 15:06	30°♏		morning rise	573 Dec 08 j 15:28	4°♏29'24	
opposition	568 Mar 17 j 12:40	29°♏14'51 2°46'14		retrograde	574 Mar 18 j 21:35	11°♏25'06	
min. Earth dist.	568 Mar 17 j 09:45	29°♏15'25 8.75467 AU		opposition	574 May 28 j 11:28	8°♏08'08	1°32'14
direct	568 May 27 j 03:08	25°♏50'23		min. Earth dist.	574 May 28 j 18:05	8°♏06'56	9.11941 AU
	568 Aug 09 j 23:10	0°♏		direct	574 Aug 07 j 14:47	4°♏49'39	
evening set	568 Sep 09 j 05:50	3°♏20'36		evening set	574 Nov 16 j 17:45	11°♏47'58	
conjunction	568 Sep 26 j 06:10	5°♏22'38 2°17'41		conjunction	574 Dec 03 j 07:20	13°♏43'43	1°03'55
minimum elong	568 Sep 26 j 06:10	5°♏22'38 2°17'41		minimum elong	574 Dec 03 j 07:23	13°♏43'43	1°03'56
max. Earth dist.	568 Sep 26 j 08:38	5°♏23'23 10.81085 AU		max. Earth dist.	574 Dec 02 j 23:23	13°♏41'23	11.11089 AU
morning rise	568 Oct 13 j 01:56	7°♏23'22		morning rise	574 Dec 19 j 20:46	15°♏39'26	
retrograde	569 Jan 20 j 10:22	14°♏30'26		retrograde	575 Mar 30 j 16:03	22°♏37'36	
opposition	569 Mar 30 j 00:25	11°♏12'26 2°49'39		opposition	575 Jun 09 j 11:19	19°♏19'56	1°02'56
min. Earth dist.	569 Mar 29 j 23:34	11°♏12'36 8.86632 AU		min. Earth dist.	575 Jun 09 j 18:08	19°♏18'41	9.09710 AU
direct	569 Jun 08 j 23:17	7°♏49'17		direct	575 Aug 19 j 08:34	16°♏01'43	
evening set	569 Sep 21 j 11:09	15°♏11'32		evening set	575 Nov 27 j 22:23	22°♏59'22	

conjunction	575 Dec 14 j 12:34	24° $\mathbb{X}$ 55'39	0°38'46	retrograde	581 Jun 12 j 03:34	3° $\mathbb{H}$ 16'37
minimum elong	575 Dec 14 j 12:36	24° $\mathbb{X}$ 55'39	0°38'46		581 Aug 19 j 10:07	30° $\mathbb{R}$ $\approx$
max. Earth dist.	575 Dec 14 j 04:47	24° $\mathbb{X}$ 53'22	11.07687 AU	opposition	581 Aug 21 j 08:30	29° $\approx$ 51'01 -2°07'59
morning rise	575 Dec 31 j 03:11	26° $\mathbb{X}$ 52'09		min. Earth dist.	581 Aug 21 j 12:34	29° $\approx$ 50'13 8.55091 AU
	576 Jan 29 j 03:35	0° $\mathbb{Z}$		direct	581 Oct 28 j 09:12	26° $\approx$ 29'46
retrograde	576 Apr 10 j 14:30	3° $\mathbb{Z}$ 54'22			582 Jan 01 j 10:05	0° $\mathbb{H}$
opposition	576 Jun 20 j 12:49	0° $\mathbb{Z}$ 35'44	0°31'02	evening set	582 Feb 05 j 08:49	3° $\mathbb{H}$ 55'49
min. Earth dist.	576 Jun 20 j 19:30	0° $\mathbb{Z}$ 34'31	9.05101 AU			
	576 Jun 28 j 16:00	30° $\mathbb{R}$ $\mathbb{X}$		conjunction	582 Feb 22 j 09:22	6° $\mathbb{H}$ 02'29 -1°52'53
direct	576 Aug 30 j 02:26	27° $\mathbb{X}$ 17'33		minimum elong	582 Feb 22 j 09:19	6° $\mathbb{H}$ 02'28 1°52'52
	576 Oct 28 j 00:13	0° $\mathbb{Z}$		max. Earth dist.	582 Feb 22 j 03:59	6° $\mathbb{H}$ 00'48 10.48723 AU
evening set	576 Dec 08 j 05:14	4° $\mathbb{Z}$ 16'06		morning rise	582 Mar 11 j 14:32	8° $\mathbb{H}$ 10'37
				retrograde	582 Jun 25 j 21:04	16° $\mathbb{H}$ 04'16
conjunction	576 Dec 24 j 20:11	6° $\mathbb{Z}$ 13'17	0°11'56	opposition	582 Sep 03 j 15:35	12° $\mathbb{H}$ 37'15 -2°29'50
minimum elong	576 Dec 24 j 20:11	6° $\mathbb{Z}$ 13'18	0°11'55	min. Earth dist.	582 Sep 03 j 18:43	12° $\mathbb{H}$ 36'38 8.42493 AU
behind sun begin	576 Dec 24 j 15:17	6° $\mathbb{Z}$ 11'51		direct	582 Nov 10 j 03:15	9° $\mathbb{H}$ 14'54
behind sun end	576 Dec 25 j 01:06	6° $\mathbb{Z}$ 14'44		evening set	583 Feb 18 j 13:21	16° $\mathbb{H}$ 50'02
max. Earth dist.	576 Dec 24 j 12:02	6° $\mathbb{Z}$ 10'54	11.01974 AU			
morning rise	577 Jan 10 j 12:25	8° $\mathbb{Z}$ 10'56		conjunction	583 Mar 07 j 17:13	18° $\mathbb{H}$ 59'22 -2°07'34
retrograde	577 Apr 22 j 18:22	15° $\mathbb{Z}$ 18'44		minimum elong	583 Mar 07 j 17:11	18° $\mathbb{H}$ 59'22 2°07'33
desc. node	577 Jun 05 j 04:07	13° $\mathbb{Z}$ 53'46		max. Earth dist.	583 Mar 07 j 13:02	18° $\mathbb{H}$ 58'03 10.36222 AU
opposition	577 Jul 02 j 17:06	11° $\mathbb{Z}$ 58'58	-0°02'29	morning rise	583 Mar 25 j 02:02	21° $\mathbb{H}$ 10'16
min. Earth dist.	577 Jul 03 j 00:11	11° $\mathbb{Z}$ 57'39	8.98288 AU	retrograde	583 Jul 09 j 22:16	29° $\mathbb{H}$ 14'01
direct	577 Sep 10 j 20:11	8° $\mathbb{Z}$ 40'33		opposition	583 Sep 17 j 05:07	25° $\mathbb{H}$ 45'45 -2°44'36
evening set	577 Dec 19 j 15:55	15° $\mathbb{Z}$ 41'36		min. Earth dist.	583 Sep 17 j 07:16	25° $\mathbb{H}$ 45'20 8.30327 AU
				direct	583 Nov 23 j 05:28	22° $\mathbb{H}$ 22'14
conjunction	578 Jan 05 j 07:55	17° $\mathbb{Z}$ 40'03	-0°15'48		584 Mar 02 j 07:09	0° $\mathbb{Y}$
minimum elong	578 Jan 05 j 07:54	17° $\mathbb{Z}$ 40'02	0°15'49	evening set	584 Mar 03 j 05:00	0° $\mathbb{Y}$ 06'50
behind sun begin	578 Jan 05 j 06:14	17° $\mathbb{Z}$ 39'33				
behind sun end	578 Jan 05 j 09:34	17° $\mathbb{Z}$ 40'32		conjunction	584 Mar 20 j 12:50	2° $\mathbb{Y}$ 18'58 -2°15'52
max. Earth dist.	578 Jan 04 j 22:55	17° $\mathbb{Z}$ 37'22	10.94169 AU	minimum elong	584 Mar 20 j 12:50	2° $\mathbb{Y}$ 18'58 2°15'51
morning rise	578 Jan 22 j 02:15	19° $\mathbb{Z}$ 39'13		max. Earth dist.	584 Mar 20 j 10:55	2° $\mathbb{Y}$ 18'22 10.24486 AU
retrograde	578 May 05 j 01:58	26° $\mathbb{Z}$ 54'06		morning rise	584 Apr 07 j 01:33	4° $\mathbb{Y}$ 32'41
opposition	578 Jul 15 j 01:15	23° $\mathbb{Z}$ 32'59	-0°36'28	retrograde	584 Jul 23 j 06:14	12° $\mathbb{Y}$ 45'24
min. Earth dist.	578 Jul 15 j 08:40	23° $\mathbb{Z}$ 31'36	8.89531 AU	opposition	584 Sep 30 j 01:03	9° $\mathbb{Y}$ 16'08 -2°50'48
direct	578 Sep 22 j 16:02	20° $\mathbb{Z}$ 14'07		min. Earth dist.	584 Sep 30 j 01:31	9° $\mathbb{Y}$ 16'03 8.19259 AU
evening set	578 Dec 31 j 07:57	27° $\mathbb{Z}$ 19'17		direct	584 Dec 05 j 16:46	5° $\mathbb{Y}$ 51'28
				evening set	585 Mar 17 j 07:25	13° $\mathbb{Y}$ 45'16
conjunction	579 Jan 17 j 01:31	29° $\mathbb{Z}$ 19'20	-0°43'15			
minimum elong	579 Jan 17 j 01:29	29° $\mathbb{Z}$ 19'19	0°43'16	conjunction	585 Apr 03 j 19:45	16° $\mathbb{Y}$ 00'13 -2°16'47
max. Earth dist.	579 Jan 16 j 16:58	29° $\mathbb{Z}$ 16'45	10.84550 AU	minimum elong	585 Apr 03 j 19:46	16° $\mathbb{Y}$ 00'14 2°16'47
	579 Jan 22 j 16:38	0° $\approx$		max. Earth dist.	585 Apr 03 j 20:47	16° $\mathbb{Y}$ 00'33 10.14193 AU
morning rise	579 Feb 02 j 22:11	1° $\approx$ 20'20		morning rise	585 Apr 21 j 12:32	18° $\mathbb{Y}$ 16'38
retrograde	579 May 17 j 18:06	8° $\approx$ 43'39		retrograde	585 Aug 06 j 20:02	26° $\mathbb{Y}$ 36'28
opposition	579 Jul 27 j 13:59	5° $\approx$ 21'05	-1°09'41	opposition	585 Oct 14 j 02:28	23° $\mathbb{Y}$ 06'30 -2°47'21
min. Earth dist.	579 Jul 27 j 20:49	5° $\approx$ 19'47	8.79137 AU	min. Earth dist.	585 Oct 14 j 00:41	23° $\mathbb{Y}$ 06'52 8.09946 AU
direct	579 Oct 04 j 17:59	2° $\approx$ 01'35		direct	585 Dec 19 j 12:02	19° $\mathbb{Y}$ 40'42
evening set	580 Jan 12 j 07:14	9° $\approx$ 12'22		evening set	586 Mar 31 j 20:10	27° $\mathbb{Y}$ 42'54
conjunction	580 Jan 29 j 02:47	11° $\approx$ 14'21	-1°09'25	conjunction	586 Apr 18 j 13:14	0° $\mathbb{Z}$ 00'29 -2°09'46
minimum elong	580 Jan 29 j 02:45	11° $\approx$ 14'21	1°09'25	minimum elong	586 Apr 18 j 13:16	0° $\mathbb{Z}$ 00'29 2°09'46
max. Earth dist.	580 Jan 28 j 19:40	11° $\approx$ 12'11	10.73457 AU		586 Apr 18 j 11:46	0° $\mathbb{Z}$
morning rise	580 Feb 15 j 01:52	13° $\approx$ 17'29		max. Earth dist.	586 Apr 18 j 16:57	0° $\mathbb{Z}$ 01'41 10.05984 AU
	580 Feb 29 j 18:45	15° $\approx$		morning rise	586 May 06 j 10:04	2° $\mathbb{Z}$ 19'18
retrograde	580 May 29 j 18:44	20° $\approx$ 50'19		retrograde	586 Aug 21 j 14:13	10° $\mathbb{Z}$ 43'36
opposition	580 Aug 08 j 08:02	17° $\approx$ 26'14	-1°40'43	opposition	586 Oct 28 j 07:59	7° $\mathbb{Z}$ 13'19 -2°33'47
min. Earth dist.	580 Aug 08 j 13:25	17° $\approx$ 25'12	8.67495 AU	min. Earth dist.	586 Oct 28 j 04:13	7° $\mathbb{Z}$ 14'06 8.02978 AU
	580 Sep 13 j 01:25	15° $\mathbb{R}$ $\approx$		direct	587 Jan 02 j 13:16	3° $\mathbb{Z}$ 46'27
direct	580 Oct 15 j 22:34	14° $\approx$ 05'56		evening set	587 Apr 15 j 17:29	11° $\mathbb{Z}$ 55'39
	580 Nov 17 j 03:23	15° $\approx$				
evening set	581 Jan 23 j 15:08	21° $\approx$ 23'47		conjunction	587 May 03 j 15:03	14° $\mathbb{Z}$ 15'24 -1°54'48
				minimum elong	587 May 03 j 15:07	14° $\mathbb{Z}$ 15'25 1°54'48
conjunction	581 Feb 09 j 12:59	23° $\approx$ 27'59	-1°33'03	max. Earth dist.	587 May 03 j 21:00	14° $\mathbb{Z}$ 17'21 10.00394 AU
minimum elong	581 Feb 09 j 12:56	23° $\approx$ 27'58	1°33'03		587 May 09 j 07:15	15° $\mathbb{Z}$
max. Earth dist.	581 Feb 09 j 06:51	23° $\approx$ 26'05	10.61336 AU	morning rise	587 May 21 j 15:33	16° $\mathbb{Z}$ 36'08
morning rise	581 Feb 26 j 14:52	25° $\approx$ 33'29		retrograde	587 Sep 05 j 10:35	25° $\mathbb{Z}$ 01'49
	581 Apr 08 j 05:23	0° $\mathbb{H}$		opposition	587 Nov 11 j 16:17	21° $\mathbb{Z}$ 31'37 -2°10'33



min. Earth dist.	587 Nov 11 j 10:59	21° <b>8</b> 32'43	7.98818 AU	retrograde	593 Nov 27 j 07:25	19° <b>Q</b> 14'52	
direct	588 Jan 16 j 21:24	18° <b>8</b> 03'48		opposition	594 Feb 02 j 02:19	15° <b>Q</b> 51'12	1°36'48
evening set	588 Apr 29 j 20:46	26° <b>8</b> 18'00		min. Earth dist.	594 Feb 01 j 20:31	15° <b>Q</b> 52'22	8.32397 AU
					594 Feb 12 j 20:20	15° <b>R</b> <b>Q</b>	
conjunction	588 May 17 j 22:08	28° <b>8</b> 39'15	-1°32'36	direct	594 Apr 11 j 22:57	12° <b>Q</b> 22'51	
minimum elong	588 May 17 j 22:12	28° <b>8</b> 39'17	1°32'35		594 Jun 07 j 15:11	15° <b>Q</b>	
max. Earth dist.	588 May 18 j 05:40	28° <b>8</b> 41'44	9.97792 AU	evening set	594 Jul 27 j 07:18	20° <b>Q</b> 22'05	
	588 May 28 j 04:40	0° <b>II</b>					
morning rise	588 Jun 05 j 01:24	1° <b>II</b> 01'08		conjunction	594 Aug 14 j 00:45	22° <b>Q</b> 34'38	1°30'51
retrograde	588 Sep 19 j 04:53	9° <b>II</b> 25'02		minimum elong	594 Aug 14 j 00:42	22° <b>Q</b> 34'37	1°30'51
opposition	588 Nov 25 j 01:27	5° <b>II</b> 55'17	-1°38'57	max. Earth dist.	594 Aug 14 j 07:16	22° <b>Q</b> 36'40	10.38315 AU
min. Earth dist.	588 Nov 24 j 19:22	5° <b>II</b> 56'33	7.97738 AU	morning rise	594 Aug 31 j 13:25	24° <b>Q</b> 45'43	
direct	589 Jan 30 j 10:52	2° <b>II</b> 26'41			594 Oct 19 j 06:22	0° <b>np</b>	
evening set	589 May 15 j 03:24	10° <b>II</b> 43'34		retrograde	594 Dec 10 j 08:20	2° <b>np</b> 20'45	
					595 Feb 02 j 07:15	30° <b>R</b> <b>Q</b>	
conjunction	589 Jun 02 j 07:24	13° <b>II</b> 05'28	-1°04'34	opposition	595 Feb 15 j 10:40	28° <b>Q</b> 58'31	2°05'58
minimum elong	589 Jun 02 j 07:27	13° <b>II</b> 05'29	1°04'34	min. Earth dist.	595 Feb 15 j 06:05	28° <b>Q</b> 59'25	8.44433 AU
max. Earth dist.	589 Jun 02 j 15:35	13° <b>II</b> 08'09	9.98325 AU	direct	595 Apr 25 j 20:58	25° <b>Q</b> 31'00	
morning rise	589 Jun 20 j 12:06	15° <b>II</b> 27'34			595 Jul 11 j 12:41	0° <b>np</b>	
retrograde	589 Oct 03 j 18:50	23° <b>II</b> 46'43		evening set	595 Aug 10 j 01:18	3° <b>np</b> 22'22	
opposition	589 Dec 09 j 09:23	20° <b>II</b> 17'46	-1°01'11				
min. Earth dist.	589 Dec 09 j 03:10	20° <b>II</b> 19'03	7.99760 AU	conjunction	595 Aug 27 j 13:28	5° <b>np</b> 31'42	1°51'53
direct	590 Feb 14 j 03:11	16° <b>II</b> 48'35		minimum elong	595 Aug 27 j 13:25	5° <b>np</b> 31'41	1°51'52
evening set	590 May 30 j 10:09	25° <b>II</b> 05'47		max. Earth dist.	595 Aug 27 j 18:23	5° <b>np</b> 33'13	10.50583 AU
				morning rise	595 Sep 13 j 20:42	7° <b>np</b> 39'31	
conjunction	590 Jun 17 j 15:14	27° <b>II</b> 27'22	-0°32'38	retrograde	595 Dec 23 j 01:37	15° <b>np</b> 05'25	
minimum elong	590 Jun 17 j 15:16	27° <b>II</b> 27'22	0°32'39	opposition	596 Feb 28 j 12:44	11° <b>np</b> 44'29	2°28'01
max. Earth dist.	590 Jun 17 j 23:20	27° <b>II</b> 30'00	10.01855 AU	min. Earth dist.	596 Feb 28 j 09:36	11° <b>np</b> 45'06	8.56857 AU
morning rise	590 Jul 05 j 19:42	29° <b>II</b> 48'43		direct	596 May 08 j 11:22	8° <b>np</b> 17'59	
	590 Jul 07 j 07:07	0° <b>Q</b>		evening set	596 Aug 22 j 07:57	16° <b>np</b> 00'56	
retrograde	590 Oct 18 j 02:19	8° <b>Q</b> 00'50					
opposition	590 Dec 23 j 14:36	4° <b>Q</b> 32'58	-0°19'58	conjunction	596 Sep 08 j 14:55	18° <b>np</b> 07'09	2°06'57
min. Earth dist.	590 Dec 23 j 08:27	4° <b>Q</b> 34'15	8.04624 AU	minimum elong	596 Sep 08 j 14:53	18° <b>np</b> 07'08	2°06'57
direct	591 Feb 28 j 19:26	1° <b>Q</b> 03'31		max. Earth dist.	596 Sep 08 j 17:47	18° <b>np</b> 08'02	10.62922 AU
evening set	591 Jun 14 j 13:55	9° <b>Q</b> 18'52		morning rise	596 Sep 25 j 17:10	20° <b>np</b> 11'54	
asc. node	591 Jun 21 j 17:48	10° <b>Q</b> 13'44		retrograde	597 Jan 03 j 09:54	27° <b>np</b> 29'29	
				opposition	597 Mar 12 j 08:38	24° <b>np</b> 09'42	2°42'25
conjunction	591 Jul 02 j 18:15	11° <b>Q</b> 39'13	0°01'01	min. Earth dist.	597 Mar 12 j 06:31	24° <b>np</b> 10'06	8.69042 AU
minimum elong	591 Jul 02 j 18:15	11° <b>Q</b> 39'13	0°01'01	direct	597 May 21 j 19:21	20° <b>np</b> 44'18	
behind sun begin	591 Jul 02 j 10:54	11° <b>Q</b> 36'52		evening set	597 Sep 04 j 03:41	28° <b>np</b> 18'46	
behind sun end	591 Jul 03 j 01:37	11° <b>Q</b> 41'34			597 Sep 18 j 04:55	0° <b>Q</b>	
max. Earth dist.	591 Jul 03 j 01:58	11° <b>Q</b> 41'41	10.08023 AU				
morning rise	591 Jul 20 j 20:41	13° <b>Q</b> 58'54		conjunction	597 Sep 21 j 05:56	0° <b>Q</b> 22'07	2°15'48
retrograde	591 Nov 01 j 03:35	22° <b>Q</b> 02'36		minimum elong	597 Sep 21 j 05:55	0° <b>Q</b> 22'07	2°15'48
opposition	592 Jan 06 j 15:46	18° <b>Q</b> 36'03	0°21'51	max. Earth dist.	597 Sep 21 j 07:15	0° <b>Q</b> 22'31	10.74737 AU
min. Earth dist.	592 Jan 06 j 09:33	18° <b>Q</b> 37'19	8.11953 AU	morning rise	597 Oct 08 j 03:42	2° <b>Q</b> 24'07	
direct	592 Mar 14 j 08:48	15° <b>Q</b> 06'41		retrograde	598 Jan 15 j 12:44	9° <b>Q</b> 34'29	
evening set	592 Jun 28 j 12:07	23° <b>Q</b> 18'16		opposition	598 Mar 24 j 22:51	6° <b>Q</b> 15'38	2°49'10
				min. Earth dist.	598 Mar 24 j 21:21	6° <b>Q</b> 15'55	8.80422 AU
conjunction	592 Jul 16 j 14:06	25° <b>Q</b> 36'35	0°34'02	direct	598 Jun 03 j 19:58	2° <b>Q</b> 51'26	
minimum elong	592 Jul 16 j 14:04	25° <b>Q</b> 36'34	0°34'02	evening set	598 Sep 16 j 13:12	10° <b>Q</b> 17'40	
max. Earth dist.	592 Jul 16 j 21:31	25° <b>Q</b> 38'57	10.16457 AU				
morning rise	592 Aug 03 j 12:57	27° <b>Q</b> 53'51		conjunction	598 Oct 03 j 11:29	12° <b>Q</b> 18'33	2°18'30
	592 Aug 20 j 18:46	0° <b>Q</b>		minimum elong	598 Oct 03 j 11:29	12° <b>Q</b> 18'33	2°18'30
retrograde	592 Nov 13 j 21:44	5° <b>Q</b> 48'15		max. Earth dist.	598 Oct 03 j 12:10	12° <b>Q</b> 18'45	10.85516 AU
opposition	593 Jan 19 j 11:50	2° <b>Q</b> 23'07	1°01'31	morning rise	598 Oct 20 j 05:30	14° <b>Q</b> 18'13	
min. Earth dist.	593 Jan 19 j 05:29	2° <b>Q</b> 24'24	8.21374 AU	retrograde	599 Jan 27 j 12:11	21° <b>Q</b> 22'36	
	593 Feb 20 j 23:40	30° <b>R</b> <b>Q</b>		opposition	599 Apr 06 j 08:18	18° <b>Q</b> 04'31	2°48'32
direct	593 Mar 28 j 18:26	28° <b>Q</b> 54'08		min. Earth dist.	599 Apr 06 j 07:52	18° <b>Q</b> 04'36	8.90530 AU
	593 May 03 j 09:02	0° <b>Q</b>		direct	599 Jun 16 j 11:12	14° <b>Q</b> 41'32	
evening set	593 Jul 13 j 02:30	7° <b>Q</b> 00'14		evening set	599 Sep 28 j 13:36	22° <b>Q</b> 00'06	
conjunction	593 Jul 31 j 00:44	9° <b>Q</b> 15'52	1°04'32	conjunction	599 Oct 15 j 08:39	23° <b>Q</b> 58'59	2°15'19
minimum elong	593 Jul 31 j 00:42	9° <b>Q</b> 15'52	1°04'31	minimum elong	599 Oct 15 j 08:40	23° <b>Q</b> 59'00	2°15'20
max. Earth dist.	593 Jul 31 j 08:00	9° <b>Q</b> 18'11	10.26738 AU	max. Earth dist.	599 Oct 15 j 08:14	23° <b>Q</b> 58'52	10.94828 AU
morning rise	593 Aug 17 j 18:50	11° <b>Q</b> 30'12		morning rise	599 Oct 31 j 23:54	25° <b>Q</b> 56'49	
	593 Sep 16 j 18:08	15° <b>Q</b>			599 Dec 09 j 10:17	0° <b>np</b>	

retrograde	600 Feb 08 j 05:44	2°♄56'35	
	600 Apr 12 j 21:27	30°♄39'05	2°41'02
opposition	600 Apr 17 j 13:38	29°♄38'49	8.98977 AU
min. Earth dist.	600 Apr 17 j 15:03	26°♄17'15	
direct	600 Jun 27 j 20:36	0°♄	
	600 Sep 06 j 17:59	3°♄29'06	
evening set	600 Oct 09 j 06:41		
conjunction	600 Oct 25 j 23:11	5°♄26'27	2°06'44
minimum elong	600 Oct 25 j 23:13	5°♄26'28	2°06'44
max. Earth dist.	600 Oct 25 j 20:30	5°♄25'40	11.02330 AU
morning rise	600 Nov 11 j 12:44	7°♄22'58	
retrograde	601 Feb 18 j 21:20	14°♄19'34	
opposition	601 Apr 29 j 15:40	11°♄02'26	2°27'18
min. Earth dist.	601 Apr 29 j 18:35	11°♄01'53	9.05456 AU
direct	601 Jul 10 j 01:10	7°♄41'40	
evening set	601 Oct 20 j 17:53	14°♄47'56	
	601 Oct 22 j 11:49	15°♄	
conjunction	601 Nov 06 j 08:42	16°♄44'14	1°53'16
minimum elong	601 Nov 06 j 08:44	16°♄44'15	1°53'16
max. Earth dist.	601 Nov 06 j 04:34	16°♄43'01	11.07758 AU
morning rise	601 Nov 22 j 21:23	18°♄39'56	