




























































































































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opposition	2100 Apr 13 03:46	23°♄19'16	2°46'04	morning rise	2106 Jan 05 09:45	29°♄39'47	
min. Earth dist.	2100 Apr 13 02:54	23°♄19'26	8.69458 AU		2106 Jan 08 07:58	0°♄	
direct	2100 Jun 22 13:01	19°♄54'25		retrograde	2106 Apr 15 19:17	6°♄39'57	
evening set	2100 Oct 05 19:12	27°♄28'42		opposition	2106 Jun 25 04:57	3°♄22'06	0°59'57
				min. Earth dist.	2106 Jun 25 10:11	3°♄21'08	9.03417 AU
conjunction	2100 Oct 22 20:47	29°♄32'01	2°14'38	direct	2106 Sep 04 03:49	0°♄02'40	
minimum elong	2100 Oct 22 20:47	29°♄32'01	2°14'37	evening set	2106 Dec 14 12:43	7°♄05'37	
max. Earth dist.	2100 Oct 22 20:46	29°♄32'00	10.74423 AU				
	2100 Oct 26 17:04	0°♄		conjunction	2106 Dec 31 04:00	9°♄02'49	0°36'19
morning rise	2100 Nov 08 17:53	1°♄34'03		minimum elong	2106 Dec 31 04:01	9°♄02'49	0°36'18
retrograde	2101 Feb 16 08:45	8°♄45'51		max. Earth dist.	2106 Dec 30 21:50	9°♄00'59	11.03017 AU
opposition	2101 Apr 25 19:28	5°♄27'15	2°42'57	morning rise	2107 Jan 16 19:05	10°♄59'57	
min. Earth dist.	2101 Apr 25 20:32	5°♄27'02	8.79357 AU	retrograde	2107 Apr 27 17:34	18°♄02'09	
direct	2101 Jul 05 12:53	2°♄03'33		opposition	2107 Jul 07 08:39	14°♄43'41	0°28'21
evening set	2101 Oct 18 04:53	9°♄30'27		min. Earth dist.	2107 Jul 07 13:41	14°♄42'45	9.02118 AU
				direct	2107 Sep 16 03:16	11°♄24'35	
conjunction	2101 Nov 04 03:05	11°♄31'44	2°09'23	evening set	2107 Dec 25 21:52	18°♄26'28	
minimum elong	2101 Nov 04 03:06	11°♄31'44	2°09'23				
max. Earth dist.	2101 Nov 04 00:48	11°♄31'03	10.83659 AU	conjunction	2108 Jan 11 13:17	20°♄23'58	0°09'54
morning rise	2101 Nov 20 21:27	13°♄31'54		minimum elong	2108 Jan 11 13:17	20°♄23'58	0°09'53
	2101 Dec 03 15:28	15°♄		behind sun begin	2108 Jan 11 07:34	20°♄22'17	
retrograde	2102 Feb 28 09:44	20°♄38'39		behind sun end	2108 Jan 11 19:00	20°♄25'38	
opposition	2102 May 08 06:57	17°♄20'45	2°32'53	max. Earth dist.	2108 Jan 11 07:50	20°♄22'22	11.00686 AU
min. Earth dist.	2102 May 08 09:32	17°♄20'16	8.87858 AU	morning rise	2108 Jan 28 05:05	22°♄21'37	
	2102 Jun 11 19:28	15°♄		retrograde	2108 May 08 18:43	29°♄27'24	
direct	2102 Jul 18 06:36	13°♄58'12		desc. node	2108 May 28 01:50	29°♄09'31	
	2102 Aug 23 04:42	15°♄		opposition	2108 Jul 18 13:34	26°♄08'05	-0°04'31
evening set	2102 Oct 30 06:44	21°♄18'21		min. Earth dist.	2108 Jul 18 17:49	26°♄07'17	8.98743 AU
				direct	2108 Sep 27 00:10	22°♄49'09	
conjunction	2102 Nov 16 02:22	23°♄18'02	1°58'43	evening set	2109 Jan 05 08:36	29°♄51'26	
minimum elong	2102 Nov 16 02:24	23°♄18'02	1°58'43		2109 Jan 06 13:58	0°♄	
max. Earth dist.	2102 Nov 15 22:27	23°♄16'51	10.91372 AU				
morning rise	2102 Dec 02 18:48	25°♄16'46		conjunction	2109 Jan 22 00:24	1°♄49'34	-0°17'11
	2103 Jan 17 16:45	0°♄		minimum elong	2109 Jan 22 00:23	1°♄49'33	0°17'11
retrograde	2103 Mar 12 07:24	2°♄19'46		max. Earth dist.	2109 Jan 21 19:25	1°♄48'06	10.96314 AU
	2103 May 07 13:46	30°♄		morning rise	2109 Feb 07 17:19	3°♄48'05	
opposition	2103 May 20 15:15	29°♄02'17	2°16'38	retrograde	2109 May 21 00:49	10°♄58'53	
min. Earth dist.	2103 May 20 18:12	29°♄01'44	8.94690 AU	opposition	2109 Jul 30 20:40	7°♄38'34	-0°37'32
direct	2103 Jul 30 18:25	25°♄40'47		min. Earth dist.	2109 Jul 31 00:43	7°♄37'49	8.93400 AU
	2103 Oct 15 12:42	0°♄		direct	2109 Oct 08 21:46	4°♄19'36	
evening set	2103 Nov 11 02:01	2°♄54'57		evening set	2110 Jan 16 22:43	11°♄23'49	
conjunction	2103 Nov 27 19:52	4°♄53'26	1°43'19	conjunction	2110 Feb 02 15:04	13°♄22'54	-0°43'44
minimum elong	2103 Nov 27 19:54	4°♄53'27	1°43'19	minimum elong	2110 Feb 02 15:02	13°♄22'53	0°43'44
max. Earth dist.	2103 Nov 27 15:50	4°♄52'14	10.97315 AU	max. Earth dist.	2110 Feb 02 09:31	13°♄21'14	10.90049 AU
morning rise	2103 Dec 14 10:57	6°♄51'10			2110 Feb 16 04:42	15°♄	
retrograde	2104 Mar 23 04:26	13°♄51'49		morning rise	2110 Feb 19 09:33	15°♄22'37	
opposition	2104 May 31 21:10	10°♄34'29	1°55'06	retrograde	2110 Jun 02 11:29	22°♄39'44	
min. Earth dist.	2104 Jun 01 00:27	10°♄33'52	8.99647 AU	opposition	2110 Aug 12 06:49	19°♄18'20	-1°09'29
direct	2104 Aug 11 02:05	7°♄13'52		min. Earth dist.	2110 Aug 12 11:05	19°♄17'32	8.86279 AU
evening set	2104 Nov 21 16:25	14°♄23'03		direct	2110 Oct 20 20:12	15°♄59'08	
				evening set	2111 Jan 28 17:29	23°♄06'45	
conjunction	2104 Dec 08 09:01	16°♄20'44	1°23'54				
minimum elong	2104 Dec 08 09:03	16°♄20'45	1°23'55	conjunction	2111 Feb 14 10:53	25°♄07'06	-1°08'51
max. Earth dist.	2104 Dec 08 04:39	16°♄19'27	11.01308 AU	minimum elong	2111 Feb 14 10:51	25°♄07'05	1°08'50
morning rise	2104 Dec 24 23:28	18°♄17'52		max. Earth dist.	2111 Feb 14 05:37	25°♄05'30	10.82122 AU
retrograde	2105 Apr 04 00:26	25°♄17'32		morning rise	2111 Mar 03 07:15	27°♄08'19	
opposition	2105 Jun 13 01:25	22°♄00'05	1°29'12		2111 Mar 28 19:41	0°♄	
min. Earth dist.	2105 Jun 13 05:40	21°♄59'18	9.02586 AU	retrograde	2111 Jun 15 03:01	4°♄33'01	
direct	2105 Aug 23 03:49	18°♄40'10		opposition	2111 Aug 24 21:02	1°♄10'21	-1°39'05
evening set	2105 Dec 03 03:27	25°♄45'33		min. Earth dist.	2111 Aug 25 00:50	1°♄09'38	8.77649 AU
					2111 Sep 09 16:49	30°♄	
conjunction	2105 Dec 19 19:10	27°♄42'49	1°01'17	direct	2111 Nov 01 23:39	27°♄50'44	
minimum elong	2105 Dec 19 19:11	27°♄42'50	1°01'17		2111 Dec 22 23:14	0°♄	

evening set	2112 Feb 09 18:18	5°♄03'06	conjunction	2118 May 16 06:42	25°♄11'32 -1°55'29
			minimum elong	2118 May 16 06:45	25°♄11'33 1°55'29
conjunction	2112 Feb 26 13:21	7°♄05'03 -1°31'25	max. Earth dist.	2118 May 16 10:58	25°♄12'55 10.14164 AU
minimum elong	2112 Feb 26 13:19	7°♄05'02 1°31'25	morning rise	2118 Jun 03 03:08	27°♄28'54
max. Earth dist.	2112 Feb 26 09:39	7°♄03'55 10.72832 AU		2118 Jun 23 18:50	0°♄
morning rise	2112 Mar 14 11:51	9°♄08'04	retrograde	2118 Sep 17 22:12	5°♄45'57
retrograde	2112 Jun 27 03:30	16°♄41'16	opposition	2118 Nov 24 21:08	2°♄16'32 -2°12'20
opposition	2112 Sep 05 15:50	13°♄17'18 -2°04'57	min. Earth dist.	2118 Nov 24 17:28	2°♄17'17 8.11252 AU
min. Earth dist.	2112 Sep 05 18:16	13°♄16'50 8.67846 AU		2118 Dec 25 08:48	30°♄
direct	2112 Nov 13 06:49	9°♄57'07	direct	2119 Jan 30 08:44	28°♄50'28
evening set	2113 Feb 21 02:47	17°♄15'25		2119 Mar 06 21:00	0°♄
			evening set	2119 May 13 04:14	6°♄52'37
conjunction	2113 Mar 09 23:59	19°♄19'17 -1°50'18			
minimum elong	2113 Mar 09 23:57	19°♄19'16 1°50'18	conjunction	2119 May 31 01:29	9°♄10'52 -1°35'32
max. Earth dist.	2113 Mar 09 21:39	19°♄18'33 10.62558 AU	minimum elong	2119 May 31 01:32	9°♄10'54 1°35'32
morning rise	2113 Mar 27 01:01	21°♄24'23	max. Earth dist.	2119 May 31 06:40	9°♄12'33 10.08659 AU
retrograde	2113 Jul 10 11:33	29°♄06'34	morning rise	2119 Jun 18 01:37	11°♄30'05
opposition	2113 Sep 18 15:38	25°♄41'18 -2°25'43	retrograde	2119 Oct 02 11:42	19°♄48'29
min. Earth dist.	2113 Sep 18 16:44	25°♄41'06 8.57284 AU	opposition	2119 Dec 08 23:35	16°♄19'03 -1°43'43
direct	2113 Nov 25 17:12	22°♄20'24	min. Earth dist.	2119 Dec 08 19:25	16°♄19'54 8.06807 AU
evening set	2114 Mar 05 19:50	29°♄45'41	direct	2120 Feb 13 10:34	12°♄51'55
	2114 Mar 07 18:45	0°♄	evening set	2120 May 27 00:35	20°♄59'07
conjunction	2114 Mar 22 19:39	1°♄51'43 -2°04'24	conjunction	2120 Jun 14 01:36	23°♄18'56 -1°09'41
minimum elong	2114 Mar 22 19:38	1°♄51'42 2°04'25	minimum elong	2120 Jun 14 01:39	23°♄18'57 1°09'41
max. Earth dist.	2114 Mar 22 18:04	1°♄51'13 10.51767 AU	max. Earth dist.	2120 Jun 14 06:46	23°♄20'37 10.05402 AU
morning rise	2114 Apr 08 23:51	3°♄59'08	morning rise	2120 Jul 02 04:29	25°♄39'23
retrograde	2114 Jul 24 01:45	11°♄50'25		2120 Aug 08 03:51	0°♄
opposition	2114 Oct 01 21:09	8°♄23'57 -2°39'58	retrograde	2120 Oct 16 01:15	3°♄56'51
min. Earth dist.	2114 Oct 01 21:24	8°♄23'54 8.46456 AU	opposition	2120 Dec 22 03:20	0°♄27'45 -1°08'34
direct	2114 Dec 08 11:10	5°♄02'10	min. Earth dist.	2120 Dec 21 23:18	0°♄28'35 8.04725 AU
evening set	2115 Mar 18 22:03	12°♄35'05		2120 Dec 27 18:10	30°♄
			direct	2121 Feb 26 17:01	26°♄59'45
conjunction	2115 Apr 05 01:11	14°♄43'33 -2°12'40		2121 Apr 26 14:49	0°♄
minimum elong	2115 Apr 05 01:11	14°♄43'33 2°12'40	evening set	2121 Jun 11 00:54	5°♄10'28
max. Earth dist.	2115 Apr 05 00:23	14°♄43'18 10.40988 AU			
morning rise	2115 Apr 22 09:07	16°♄53'29	conjunction	2121 Jun 29 04:21	7°♄31'06 -0°39'30
retrograde	2115 Aug 06 23:15	24°♄53'24	minimum elong	2121 Jun 29 04:23	7°♄31'07 0°39'30
opposition	2115 Oct 15 08:14	21°♄25'52 -2°46'28	max. Earth dist.	2121 Jun 29 09:15	7°♄32'42 10.04631 AU
min. Earth dist.	2115 Oct 15 07:54	21°♄25'56 8.35906 AU	morning rise	2121 Jul 17 08:34	9°♄51'59
direct	2115 Dec 21 11:53	18°♄03'05	retrograde	2121 Oct 30 12:10	18°♄06'17
evening set	2116 Mar 31 10:03	25°♄43'58	opposition	2122 Jan 05 06:57	14°♄37'50 -0°29'11
			min. Earth dist.	2122 Jan 05 03:07	14°♄38'37 8.05248 AU
conjunction	2116 Apr 17 17:17	27°♄55'00 -2°14'13	direct	2122 Mar 13 03:10	11°♄09'10
minimum elong	2116 Apr 17 17:18	27°♄55'01 2°14'14	evening set	2122 Jun 26 02:45	19°♄21'34
max. Earth dist.	2116 Apr 17 17:55	27°♄55'12 10.30772 AU			
	2116 May 04 05:04	0°♄	conjunction	2122 Jul 14 07:05	21°♄42'07 -0°07'00
morning rise	2116 May 05 05:19	0°♄07'33	minimum elong	2122 Jul 14 07:05	21°♄42'07 0°07'00
retrograde	2116 Aug 20 02:47	8°♄14'59	behind sun begin	2122 Jul 14 00:18	21°♄39'56
opposition	2116 Oct 28 00:17	4°♄46'35 -2°44'14	behind sun end	2122 Jul 14 13:53	21°♄44'18
min. Earth dist.	2116 Oct 27 23:08	4°♄46'49 8.26185 AU	max. Earth dist.	2122 Jul 14 11:50	21°♄43'38 10.06521 AU
direct	2117 Jan 02 19:39	1°♄22'43	morning rise	2122 Aug 01 10:58	24°♄02'30
evening set	2117 Apr 14 07:38	9°♄11'27		2122 Sep 24 21:23	0°♄
			asc. node	2122 Oct 02 07:02	0°♄34'39
conjunction	2117 May 01 19:32	11°♄25'06 -2°08'32	retrograde	2122 Nov 13 17:41	2°♄11'35
minimum elong	2117 May 01 19:34	11°♄25'07 2°08'32		2123 Jan 03 14:36	30°♄
max. Earth dist.	2117 May 01 22:05	11°♄25'55 10.21665 AU	opposition	2123 Jan 19 08:55	28°♄44'01 0°11'47
morning rise	2117 May 19 11:50	13°♄40'11	min. Earth dist.	2123 Jan 19 05:07	28°♄44'48 8.08447 AU
	2117 May 30 06:20	15°♄	direct	2123 Mar 27 15:25	25°♄14'55
retrograde	2117 Sep 03 11:05	21°♄53'28		2123 Jun 12 05:34	0°♄
opposition	2117 Nov 10 20:56	18°♄24'26 -2°32'49	evening set	2123 Jul 11 03:15	3°♄26'57
min. Earth dist.	2117 Nov 10 18:27	18°♄24'57 8.17817 AU			
	2118 Jan 13 10:08	15°♄	conjunction	2123 Jul 29 06:48	5°♄46'32 0°25'48
direct	2118 Jan 16 11:12	14°♄59'28	minimum elong	2123 Jul 29 06:46	5°♄46'31 0°25'49
	2118 Jan 19 12:07	15°♄	max. Earth dist.	2123 Jul 29 11:25	5°♄48'01 10.11011 AU
evening set	2118 Apr 28 14:00	22°♄55'25	morning rise	2123 Aug 16 08:39	8°♄05'31
				2123 Oct 23 12:32	15°♄



























































































































retrograde	2123 Nov 27 16:59	16°♏07'46		min. Earth dist.	2130 Apr 20 20:38	0°♎37'01	8.74647 AU
	2124 Jan 02 06:58	15°♎♏			2130 Apr 28 23:00	30°♎♏	
opposition	2124 Feb 02 08:01	12°♏41'16	0°51'36	direct	2130 Jun 30 13:32	27°♏12'15	
min. Earth dist.	2124 Feb 02 04:02	12°♏42'05	8.14147 AU		2130 Aug 29 17:13	0°♎	
direct	2124 Apr 10 01:59	9°♏12'03		evening set	2130 Oct 13 09:12	4°♎41'59	
	2124 Jul 05 12:12	15°♏					
evening set	2124 Jul 24 23:35	17°♏21'41		conjunction	2130 Oct 30 08:54	6°♎44'04	2°12'23
				minimum elong	2130 Oct 30 08:55	6°♎44'05	2°12'21
conjunction	2124 Aug 12 00:42	19°♏39'28	0°56'39	max. Earth dist.	2130 Oct 30 08:23	6°♎43'55	10.79379 AU
minimum elong	2124 Aug 12 00:40	19°♏39'27	0°56'39	morning rise	2130 Nov 16 04:25	8°♎44'58	
max. Earth dist.	2124 Aug 12 05:19	19°♏40'56	10.17823 AU		2131 Jan 22 09:44	15°♎	
morning rise	2124 Aug 29 22:56	21°♏56'18		retrograde	2131 Feb 23 16:36	15°♎53'23	
retrograde	2124 Dec 10 10:45	29°♏50'37			2131 Mar 28 13:03	15°♎♎	
opposition	2125 Feb 15 03:06	26°♏25'17	1°27'45	opposition	2131 May 03 09:31	12°♎34'44	2°38'03
min. Earth dist.	2125 Feb 14 22:49	26°♏26'10	8.21985 AU	min. Earth dist.	2131 May 03 09:46	12°♎34'41	8.84080 AU
direct	2125 Apr 24 09:17	22°♏56'16		direct	2131 Jul 13 08:13	9°♎11'17	
	2125 Jul 31 04:15	0°♎			2131 Oct 11 21:36	15°♎	
evening set	2125 Aug 08 13:12	1°♎01'40		evening set	2131 Oct 25 13:36	16°♎33'47	
conjunction	2125 Aug 26 10:40	3°♎17'03	1°23'47	conjunction	2131 Nov 11 10:26	18°♎34'03	2°03'57
minimum elong	2125 Aug 26 10:36	3°♎17'02	1°23'48	minimum elong	2131 Nov 11 10:28	18°♎34'04	2°03'56
max. Earth dist.	2125 Aug 26 15:24	3°♎18'33	10.26534 AU	max. Earth dist.	2131 Nov 11 09:21	18°♎33'44	10.88166 AU
morning rise	2125 Sep 13 04:15	5°♎31'13		morning rise	2131 Nov 28 03:29	20°♎33'16	
retrograde	2125 Dec 23 21:38	13°♎17'00		retrograde	2132 Mar 06 14:47	27°♎37'11	
opposition	2126 Feb 28 17:23	9°♎52'55	1°58'16	opposition	2132 May 14 18:32	24°♎19'12	2°24'20
min. Earth dist.	2126 Feb 28 13:29	9°♎53'42	8.31481 AU	min. Earth dist.	2132 May 14 20:10	24°♎18'54	8.92111 AU
direct	2126 May 08 12:00	6°♎24'21		direct	2132 Jul 24 20:25	20°♎56'59	
evening set	2126 Aug 22 18:07	14°♎24'00		evening set	2132 Nov 05 10:46	28°♎12'59	
					2132 Nov 20 13:33	0°♎♎	
conjunction	2126 Sep 09 11:07	16°♎36'37	1°45'53				
minimum elong	2126 Sep 09 11:04	16°♎36'36	1°45'53	conjunction	2132 Nov 22 05:18	0°♎♎11'49	1°50'29
max. Earth dist.	2126 Sep 09 15:18	16°♎37'56	10.36615 AU	minimum elong	2132 Nov 22 05:20	0°♎♎11'49	1°50'30
morning rise	2126 Sep 26 23:38	18°♎47'52		max. Earth dist.	2132 Nov 22 02:37	0°♎♎11'01	10.95397 AU
retrograde	2127 Jan 06 00:08	26°♎24'59		morning rise	2132 Dec 08 20:52	2°♎♎09'49	
opposition	2127 Mar 14 02:24	23°♎02'09	2°21'46	retrograde	2133 Mar 18 10:25	9°♎♎10'37	
min. Earth dist.	2127 Mar 13 23:36	23°♎02'43	8.42063 AU	opposition	2133 May 27 00:36	5°♎♎53'05	2°04'57
direct	2127 May 22 10:05	19°♎34'17		min. Earth dist.	2133 May 27 03:26	5°♎♎52'34	8.98436 AU
evening set	2127 Sep 05 13:21	27°♎27'06		direct	2133 Aug 06 05:03	2°♎♎31'58	
				evening set	2133 Nov 17 02:23	9°♎♎42'28	
conjunction	2127 Sep 23 01:28	29°♎36'48	2°02'01				
minimum elong	2127 Sep 23 01:25	29°♎36'47	2°02'01	conjunction	2133 Dec 03 19:19	11°♎♎40'17	1°32'43
max. Earth dist.	2127 Sep 23 04:17	29°♎37'41	10.47485 AU	minimum elong	2133 Dec 03 19:21	11°♎♎40'18	1°32'44
	2127 Sep 26 04:05	0°♎♏		max. Earth dist.	2133 Dec 03 15:25	11°♎♎39'08	11.00801 AU
morning rise	2127 Oct 10 08:53	1°♎♏45'06		morning rise	2133 Dec 20 10:07	13°♎♎37'29	
retrograde	2128 Jan 18 19:14	9°♎13'49		retrograde	2134 Mar 30 05:16	20°♎♎36'34	
opposition	2128 Mar 26 05:54	5°♎52'13	2°37'30	opposition	2134 Jun 08 04:25	17°♎♎19'15	1°40'51
min. Earth dist.	2128 Mar 26 04:28	5°♎52'30	8.53149 AU	min. Earth dist.	2134 Jun 08 07:35	17°♎♎18'39	9.02815 AU
direct	2128 Jun 04 01:37	2°♎♏25'15		direct	2134 Aug 18 08:41	13°♎♎59'08	
evening set	2128 Sep 17 22:06	10°♎♏10'32		evening set	2134 Nov 28 13:58	21°♎♎05'16	
conjunction	2128 Oct 05 05:27	12°♎♏17'25	2°11'47	conjunction	2134 Dec 15 05:58	23°♎♎02'28	1°11'25
minimum elong	2128 Oct 05 05:26	12°♎♏17'25	2°11'47	minimum elong	2134 Dec 15 06:01	23°♎♎02'28	1°11'26
max. Earth dist.	2128 Oct 05 06:30	12°♎♏17'44	10.58583 AU	max. Earth dist.	2134 Dec 15 02:04	23°♎♎01'18	11.04174 AU
morning rise	2128 Oct 22 08:17	14°♎♏22'55		morning rise	2134 Dec 31 20:24	24°♎♎59'15	
retrograde	2129 Jan 30 07:12	21°♎♏43'54			2135 Feb 20 06:33	0°♎♏	
opposition	2129 Apr 08 04:02	18°♎♏23'25	2°45'16	retrograde	2135 Apr 11 00:34	1°♎♏58'09	
min. Earth dist.	2129 Apr 08 03:20	18°♎♏23'33	8.64184 AU		2135 Jun 01 20:57	30°♎♏♎	
direct	2129 Jun 17 10:40	14°♎♏57'31		opposition	2135 Jun 20 07:20	28°♎♎40'45	1°12'59
evening set	2129 Sep 30 20:23	22°♎♏34'57		min. Earth dist.	2135 Jun 20 10:22	28°♎♎40'11	9.05092 AU
				direct	2135 Aug 30 09:23	25°♎♎21'28	
conjunction	2129 Oct 17 23:33	24°♎♏39'16	2°15'09		2135 Nov 18 03:13	0°♎♏	
minimum elong	2129 Oct 17 23:32	24°♎♏39'16	2°15'08	evening set	2135 Dec 09 23:05	2°♎♏24'29	
max. Earth dist.	2129 Oct 17 23:26	24°♎♏39'14	10.69379 AU				
morning rise	2129 Nov 03 22:24	26°♎♏42'17		conjunction	2135 Dec 26 14:33	4°♎♏21'26	0°47'25
	2129 Dec 03 10:15	0°♎♎		minimum elong	2135 Dec 26 14:35	4°♎♏21'26	0°47'25
retrograde	2130 Feb 11 13:07	3°♎♎56'27		max. Earth dist.	2135 Dec 26 10:42	4°♎♏20'18	11.05395 AU
opposition	2130 Apr 20 21:03	0°♎♎36'56	2°45'16	morning rise	2136 Jan 12 05:07	6°♎♏18'11	

retrograde	2136 Apr 21 22:44	13°  18'24	minimum elong	2142 Mar 04 18:10	14°  02'58	1°42'17
opposition	2136 Jul 01 10:15	10°  00'42 0°42'21	max. Earth dist.	2142 Mar 04 12:47	14°  01'19	10.69477 AU
min. Earth dist.	2136 Jul 01 13:53	10°  00'02 9.05197 AU	morning rise	2142 Mar 21 17:59	16°  06'50	
direct	2136 Sep 10 07:04	6°  42'02	retrograde	2142 Jul 04 19:33	23°  43'54	
evening set	2136 Dec 20 07:38	13°  43'17	opposition	2142 Sep 13 03:47	20°  19'45	-2°16'57
			min. Earth dist.	2142 Sep 13 07:35	20°  19'01	8.64028 AU
conjunction	2137 Jan 05 22:49	15°  40'20 0°21'34	direct	2142 Nov 20 11:12	16°  59'33	
minimum elong	2137 Jan 05 22:50	15°  40'20 0°21'34	evening set	2143 Feb 28 10:44	24°  20'46	
max. Earth dist.	2137 Jan 05 17:52	15°  38'53 11.04428 AU				
morning rise	2137 Jan 22 14:07	17°  33'27	conjunction	2143 Mar 17 09:06	26°  25'32	-1°58'38
retrograde	2137 May 03 20:13	24°  34'02	minimum elong	2143 Mar 17 09:04	26°  25'31	1°58'39
opposition	2137 Jul 13 13:48	21°  32'10 0°09'59	max. Earth dist.	2143 Mar 17 05:10	26°  24'19	10.58311 AU
min. Earth dist.	2137 Jul 13 18:19	21°  32'10 9.03126 AU	morning rise	2143 Apr 03 11:44	28°  31'38	
direct	2137 Sep 22 02:25	18°  03'50		2143 Apr 15 21:32	0° 	
desc. node	2137 Nov 05 00:13	19°  36'11	retrograde	2143 Jul 18 05:03	6°  18'00	
evening set	2137 Dec 31 17:01	25°  04'49	opposition	2143 Sep 26 06:13	2°  52'21	-2°34'18
			min. Earth dist.	2143 Sep 26 08:46	2°  51'51	8.52677 AU
conjunction	2138 Jan 17 08:20	27°  02'18 -0°05'19		2143 Nov 09 15:27	30°  R 	
minimum elong	2138 Jan 17 08:20	27°  02'18 0°05'19	direct	2143 Dec 03 02:59	29°  31'08	
behind sun begin	2138 Jan 17 01:35	27°  00'19		2143 Dec 26 06:22	0° 	
behind sun end	2138 Jan 17 15:05	27°  04'16	evening set	2144 Mar 12 08:02	6°  59'49	
max. Earth dist.	2138 Jan 17 02:41	27°  00'39 11.01292 AU				
morning rise	2138 Feb 03 00:43	29°  00'06	conjunction	2144 Mar 29 09:37	9°  06'59	-2°09'40
	2138 Feb 11 18:16	0° 	minimum elong	2144 Mar 29 09:35	9°  06'58	2°09'41
retrograde	2138 May 15 22:47	6°  07'21	max. Earth dist.	2144 Mar 29 07:31	9°  06'19	10.46847 AU
opposition	2138 Jul 25 19:08	2°  48'16 -0°22'59	morning rise	2144 Apr 15 15:36	11°  15'34	
min. Earth dist.	2138 Jul 25 23:50	2°  47'24 8.98917 AU	retrograde	2144 Jul 30 23:29	19°  11'02	
	2138 Sep 09 02:20	30°  R 	opposition	2144 Oct 08 14:09	15°  43'59	-2°44'30
direct	2138 Oct 04 01:02	29°  30'03	min. Earth dist.	2144 Oct 08 15:09	15°  43'47	8.41301 AU
	2138 Oct 28 13:43	0° 	direct	2144 Dec 14 23:50	12°  52'36	
evening set	2139 Jan 12 04:43	6°  32'11	evening set	2145 Mar 25 15:04	19°  58'18	
conjunction	2139 Jan 28 20:38	8°  30'27 -0°32'04	conjunction	2145 Apr 11 20:23	22°  08'03	-2°14'23
minimum elong	2139 Jan 28 20:37	8°  30'27 0°32'04	minimum elong	2145 Apr 11 20:23	22°  08'03	2°14'24
max. Earth dist.	2139 Jan 28 15:39	8°  28'58 10.96041 AU	max. Earth dist.	2145 Apr 11 19:41	22°  07'49	10.35650 AU
morning rise	2139 Feb 14 14:13	10°  29'16	morning rise	2145 Apr 29 06:14	24°  19'16	
	2139 Mar 30 00:38	15° 		2145 Jun 21 01:55	0° 	
retrograde	2139 May 28 07:13	17°  42'13	retrograde	2145 Aug 14 00:32	2°  23'02	
	2139 Jul 29 14:06	15°  R 		2145 Oct 08 06:56	30°  R 	
opposition	2139 Aug 07 03:09	14°  22'04 -0°55'26	opposition	2145 Oct 22 03:24	28°  54'47	-2°46'24
min. Earth dist.	2139 Aug 07 07:09	14°  21'19 8.92657 AU	min. Earth dist.	2145 Oct 22 03:04	28°  54'51	8.30473 AU
direct	2139 Oct 15 22:58	11°  03'44	direct	2145 Dec 28 03:00	25°  31'09	
	2139 Dec 26 07:22	15° 		2146 Mar 11 15:48	0° 	
evening set	2140 Jan 23 20:34	18°  08'32	evening set	2146 Apr 08 07:44	3°  16'02	
conjunction	2140 Feb 09 13:25	20°  07'55 -0°57'53	conjunction	2146 Apr 25 17:22	5°  28'27	-2°12'05
minimum elong	2140 Feb 09 13:23	20°  07'54 0°57'52	minimum elong	2146 Apr 25 17:23	5°  28'28	2°12'05
max. Earth dist.	2140 Feb 09 08:34	20°  06'28 10.88798 AU	max. Earth dist.	2146 Apr 25 17:31	5°  28'30	10.25312 AU
morning rise	2140 Feb 26 08:34	22°  08'04	morning rise	2146 May 13 07:33	7°  42'21	
retrograde	2140 Jun 08 20:27	29°  08'04		2146 Jul 27 06:51	15°  28'05	
opposition	2140 Aug 18 14:42	26°  06'41 -1°26'08	retrograde	2146 Aug 28 06:41	15°  28'05	
min. Earth dist.	2140 Aug 18 18:31	26°  05'58 8.84515 AU		2146 Sep 29 09:08	15°  R 	
direct	2140 Oct 26 22:27	22°  04'57	opposition	2146 Nov 04 21:48	12°  23'54	-2°39'17
evening set	2141 Feb 03 18:01	29°  05'58	min. Earth dist.	2146 Nov 04 20:44	12°  24'07	8.20778 AU
	2141 Feb 04 04:15	0° 	direct	2147 Jan 10 14:14	8°  58'59	
				2147 Apr 07 06:07	15° 	
conjunction	2141 Feb 20 12:06	1°  57'50 -1°21'39	evening set	2147 Apr 22 09:44	16°  51'42	
minimum elong	2141 Feb 20 12:04	1°  57'49 1°21'38				
max. Earth dist.	2141 Feb 20 06:39	1°  56'11 10.79808 AU	conjunction	2147 May 10 00:05	19°  06'47	-2°02'25
morning rise	2141 Mar 09 09:22	3°  59'41	minimum elong	2147 May 10 00:08	19°  06'48	2°02'25
retrograde	2141 Jun 21 16:58	11°  57'50	max. Earth dist.	2147 May 10 01:20	19°  07'11	10.16403 AU
opposition	2141 Aug 31 06:44	8°  05'07 -1°53'45	morning rise	2147 May 27 18:45	21°  02'13	
min. Earth dist.	2141 Aug 31 10:43	8°  04'22 8.74816 AU	retrograde	2147 Sep 11 16:29	29°  03'02	
direct	2141 Nov 08 02:24	4°  45'46	opposition	2147 Nov 18 20:26	26°  09'14	-2°22'56
evening set	2142 Feb 15 22:22	12° 00'19	min. Earth dist.	2147 Nov 18 18:44	26° 09'35	8.12758 AU
			direct	2148 Jan 24 08:54	22° 43'04	
conjunction	2142 Mar 04 18:12	14° 02'58 -1°42'16		2148 Apr 30 04:07	0°	



































































































































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				minimum elong	2154 Aug 20 07:47	27° Ω 23'13	1°11'56
conjunction	2148 May 23 15:33	3° Π 00'21 -1°45'33		max. Earth dist.	2154 Aug 20 13:10	27° Ω 24'56	10.21590 AU
minimum elong	2148 May 23 15:37	3° Π 00'22 1°45'33		morning rise	2154 Sep 07 03:47	29° Ω 38'50	
max. Earth dist.	2148 May 23 18:06	3° Π 01'10 10.09429 AU			2154 Sep 09 23:51	0° \mathbb{N}	
morning rise	2148 Jun 10 14:19	5° Π 18'57		retrograde	2154 Dec 18 06:31	7° \mathbb{N} 29'05	
retrograde	2148 Sep 25 04:59	13° Π 37'33		opposition	2155 Feb 22 23:56	4° \mathbb{N} 04'24	1°45'08
opposition	2148 Dec 01 22:02	10° Π 07'30 -1°57'53		min. Earth dist.	2155 Feb 22 19:55	4° \mathbb{N} 05'12	8.26388 AU
min. Earth dist.	2148 Dec 01 19:31	10° Π 08'01 8.06889 AU		direct	2155 May 02 12:05	0° \mathbb{N} 35'37	
direct	2149 Feb 06 09:17	6° Π 40'11		evening set	2155 Aug 16 18:19	8° \mathbb{N} 38'37	
evening set	2149 May 20 14:13	14° Π 45'52					
				conjunction	2155 Sep 03 13:21	10° \mathbb{N} 52'37	1°36'28
conjunction	2149 Jun 07 13:39	17° Π 05'16 -1°22'14		minimum elong	2155 Sep 03 13:17	10° \mathbb{N} 52'36	1°36'29
minimum elong	2149 Jun 07 13:42	17° Π 05'17 1°22'14		max. Earth dist.	2155 Sep 03 17:41	10° \mathbb{N} 53'59	10.31471 AU
max. Earth dist.	2149 Jun 07 17:43	17° Π 06'35 10.04814 AU		morning rise	2155 Sep 21 04:26	13° \mathbb{N} 05'22	
morning rise	2149 Jun 25 15:38	19° Π 25'28		retrograde	2155 Dec 31 12:09	20° \mathbb{N} 46'56	
retrograde	2149 Oct 09 18:22	27° Π 44'22		opposition	2156 Mar 07 11:53	17° \mathbb{N} 23'42	2°11'57
opposition	2149 Dec 16 01:40	24° Π 14'26 -1°25'27		min. Earth dist.	2156 Mar 07 08:01	17° \mathbb{N} 24'29	8.36910 AU
min. Earth dist.	2149 Dec 15 21:57	24° Π 15'12 8.03542 AU		direct	2156 May 15 13:59	13° \mathbb{N} 55'43	
direct	2150 Feb 20 14:59	20° Π 46'10		evening set	2156 Aug 29 18:37	21° \mathbb{N} 52'18	
evening set	2150 Jun 04 13:00	28° Π 56'08					
	2150 Jun 12 19:42	0° \mathfrak{E}		conjunction	2156 Sep 16 08:57	24° \mathbb{N} 03'23	1°55'23
				minimum elong	2156 Sep 16 08:54	24° \mathbb{N} 03'23	1°55'24
conjunction	2150 Jun 22 15:41	1° \mathfrak{E} 16'43 -0°53'47		max. Earth dist.	2156 Sep 16 12:49	24° \mathbb{N} 04'36	10.42422 AU
minimum elong	2150 Jun 22 15:43	1° \mathfrak{E} 16'44 0°53'47		morning rise	2156 Oct 03 18:49	26° \mathbb{N} 13'07	
max. Earth dist.	2150 Jun 22 21:21	1° \mathfrak{E} 18'34 10.02857 AU			2156 Nov 06 01:41	0° $\underline{\mathfrak{A}}$	
morning rise	2150 Jul 10 19:37	3° \mathfrak{E} 37'45		retrograde	2157 Jan 12 12:04	3° $\underline{\mathfrak{A}}$ 46'06	
retrograde	2150 Oct 24 06:20	11° \mathfrak{E} 54'30		opposition	2157 Mar 20 18:27	0° $\underline{\mathfrak{A}}$ 24'16	2°31'14
opposition	2150 Dec 30 05:44	8° \mathfrak{E} 25'03 -0°47'39		min. Earth dist.	2157 Mar 20 14:55	0° $\underline{\mathfrak{A}}$ 24'58	8.48203 AU
min. Earth dist.	2150 Dec 30 00:52	8° \mathfrak{E} 26'03 8.02941 AU			2157 Mar 25 21:50	30° \mathbb{R} \mathbb{N}	
direct	2151 Mar 07 00:05	4° \mathfrak{E} 56'03		direct	2157 May 29 08:20	26° \mathbb{N} 57'17	
evening set	2151 Jun 19 14:43	13° \mathfrak{E} 08'30			2157 Jul 30 10:21	0° $\underline{\mathfrak{A}}$	
				evening set	2157 Sep 12 08:46	4° $\underline{\mathfrak{A}}$ 46'27	
conjunction	2151 Jul 07 19:09	15° \mathfrak{E} 29'26 -0°22'03					
minimum elong	2151 Jul 07 19:10	15° \mathfrak{E} 29'26 0°22'03		conjunction	2157 Sep 29 18:23	6° $\underline{\mathfrak{A}}$ 54'39	2°08'03
max. Earth dist.	2151 Jul 08 01:41	15° \mathfrak{E} 31'33 10.03688 AU		minimum elong	2157 Sep 29 18:21	6° $\underline{\mathfrak{A}}$ 54'39	2°08'03
morning rise	2151 Jul 25 23:27	17° \mathfrak{E} 50'21		max. Earth dist.	2157 Sep 29 21:43	6° $\underline{\mathfrak{A}}$ 55'41	10.53845 AU
retrograde	2151 Nov 07 14:57	26° \mathfrak{E} 02'42		morning rise	2157 Oct 16 23:14	9° $\underline{\mathfrak{A}}$ 01'26	
opposition	2152 Jan 13 08:45	22° \mathfrak{E} 34'05 -0°07'01		retrograde	2158 Jan 25 04:53	16° $\underline{\mathfrak{A}}$ 26'14	
min. Earth dist.	2152 Jan 13 03:30	22° \mathfrak{E} 35'11 8.05136 AU		opposition	2158 Apr 02 19:27	13° $\underline{\mathfrak{A}}$ 05'40	2°42'34
asc. node	2152 Mar 18 00:16	19° \mathfrak{E} 04'59		min. Earth dist.	2158 Apr 02 16:59	13° $\underline{\mathfrak{A}}$ 06'09	8.59659 AU
direct	2152 Mar 20 10:36	19° \mathfrak{E} 04'40		direct	2158 Jun 11 19:55	9° $\underline{\mathfrak{A}}$ 39'48	
evening set	2152 Jul 03 16:29	27° \mathfrak{E} 17'37		evening set	2158 Sep 25 12:31	17° $\underline{\mathfrak{A}}$ 21'04	
conjunction	2152 Jul 21 20:50	29° \mathfrak{E} 37'57 0°10'57		conjunction	2158 Oct 12 17:41	19° $\underline{\mathfrak{A}}$ 26'33	2°14'16
minimum elong	2152 Jul 21 20:50	29° \mathfrak{E} 37'57 0°10'57		minimum elong	2158 Oct 12 17:40	19° $\underline{\mathfrak{A}}$ 26'33	2°14'16
behind sun begin	2152 Jul 21 15:21	29° \mathfrak{E} 36'12		max. Earth dist.	2158 Oct 12 19:45	19° $\underline{\mathfrak{A}}$ 27'12	10.65128 AU
behind sun end	2152 Jul 22 02:18	29° \mathfrak{E} 39'42		morning rise	2158 Oct 29 18:07	21° $\underline{\mathfrak{A}}$ 30'40	
max. Earth dist.	2152 Jul 22 03:32	29° \mathfrak{E} 40'06 10.07259 AU		retrograde	2159 Feb 06 14:07	28° $\underline{\mathfrak{A}}$ 48'01	
	2152 Jul 24 16:56	0° Ω		opposition	2159 Apr 15 15:18	25° $\underline{\mathfrak{A}}$ 28'34	2°45'59
morning rise	2152 Aug 08 23:46	1° Ω 57'51		min. Earth dist.	2159 Apr 15 14:45	25° $\underline{\mathfrak{A}}$ 28'41	8.70664 AU
retrograde	2152 Nov 20 19:03	10° Ω 03'59		direct	2159 Jun 25 01:44	22° $\underline{\mathfrak{A}}$ 03'50	
opposition	2153 Jan 26 09:39	6° Ω 36'31 0°33'42		evening set	2159 Oct 08 06:15	29° $\underline{\mathfrak{A}}$ 37'13	
min. Earth dist.	2153 Jan 26 04:33	6° Ω 37'34 8.10000 AU			2159 Oct 11 10:51	0° \mathbb{M}	
direct	2153 Apr 03 20:31	3° Ω 06'59					
evening set	2153 Jul 18 15:13	11° Ω 18'25		conjunction	2159 Oct 25 07:23	1° \mathbb{M} 40'16	2°14'11
				minimum elong	2159 Oct 25 07:23	1° \mathbb{M} 40'16	2°14'10
conjunction	2153 Aug 05 17:43	13° Ω 37'16 0°42'53		max. Earth dist.	2159 Oct 25 07:02	1° \mathbb{M} 40'09	10.75673 AU
minimum elong	2153 Aug 05 17:41	13° Ω 37'16 0°42'54		morning rise	2159 Nov 11 04:17	3° \mathbb{M} 42'03	
max. Earth dist.	2153 Aug 06 00:03	13° Ω 39'19 10.13352 AU		retrograde	2160 Feb 18 18:33	10° \mathbb{M} 53'04	
	2153 Aug 16 11:24	15° Ω		opposition	2160 Apr 27 06:20	7° \mathbb{M} 34'32	2°41'54
morning rise	2153 Aug 23 17:45	15° Ω 55'20		min. Earth dist.	2160 Apr 27 07:23	7° \mathbb{M} 34'20	8.80643 AU
retrograde	2153 Dec 04 16:54	23° Ω 53'57		direct	2160 Jul 07 01:01	4° \mathbb{M} 10'59	
opposition	2154 Feb 09 07:05	20° Ω 27'50 1°11'50		evening set	2160 Oct 19 14:50	11° \mathbb{M} 36'51	
min. Earth dist.	2154 Feb 09 02:33	20° Ω 28'45 8.17233 AU					
direct	2154 Apr 18 05:45	16° Ω 58'30		conjunction	2160 Nov 05 12:43	13° \mathbb{M} 37'54	2°08'11
evening set	2154 Aug 02 08:35	25° Ω 06'33		minimum elong	2160 Nov 05 12:45	13° \mathbb{M} 37'54	2°08'11

max. Earth dist.	2160 Nov 05 10:21	13° \mathbb{M} 37'11	10.84962 AU	max. Earth dist.	2167 Jan 12 14:31	22° \mathfrak{Z} 21'26	11.00890 AU
	2160 Nov 16 23:01	15° \mathbb{M}		morning rise	2167 Jan 29 11:44	24° \mathfrak{Z} 20'40	
morning rise	2160 Nov 22 06:56	15° \mathbb{M} 37'50			2167 Mar 29 12:41	0° \approx	
retrograde	2161 Mar 01 18:04	22° \mathbb{M} 43'49		desc. node	2167 Apr 11 12:34	0° \approx 44'04	
opposition	2161 May 09 17:12	19° \mathbb{M} 25'58	2°30'57	retrograde	2167 May 11 03:30	1° \approx 26'33	
min. Earth dist.	2161 May 09 19:05	19° \mathbb{M} 25'36	8.89147 AU		2167 Jun 23 21:40	30° \mathbb{R} \mathfrak{Z}	
direct	2161 Jul 19 17:35	16° \mathbb{M} 03'34		opposition	2167 Jul 20 21:40	28° \mathfrak{Z} 07'15	-0°08'48
evening set	2161 Oct 31 15:31	23° \mathbb{M} 22'40		min. Earth dist.	2167 Jul 21 02:10	28° \mathfrak{Z} 06'25	8.98806 AU
				direct	2167 Sep 29 07:40	24° \mathfrak{Z} 48'23	
conjunction	2161 Nov 17 11:03	25° \mathbb{M} 22'08	1°56'52		2167 Dec 22 07:22	0° \approx	
minimum elong	2161 Nov 17 11:05	25° \mathbb{M} 22'09	1°56'51	evening set	2168 Jan 07 15:15	1° \approx 50'34	
max. Earth dist.	2161 Nov 17 07:55	25° \mathbb{M} 21'12	10.92631 AU				
morning rise	2161 Dec 04 03:18	27° \mathbb{M} 20'40		conjunction	2168 Jan 24 06:59	3° \approx 48'43	-0°20'38
	2161 Dec 28 00:59	0° \mathfrak{J}		minimum elong	2168 Jan 24 06:58	3° \approx 48'42	0°20'38
retrograde	2162 Mar 13 16:12	4° \mathfrak{J} 23'01		max. Earth dist.	2168 Jan 24 01:04	3° \approx 46'58	10.96244 AU
opposition	2162 May 22 00:52	1° \mathfrak{J} 05'36	2°13'58	morning rise	2168 Feb 10 00:04	5° \approx 47'17	
min. Earth dist.	2162 May 22 03:19	1° \mathfrak{J} 05'09	8.95889 AU	retrograde	2168 May 22 08:46	12° \approx 58'20	
	2162 Jun 05 23:13	30° \mathbb{R} \mathbb{M}		opposition	2168 Aug 01 04:54	9° \approx 38'01	-0°41'41
direct	2162 Aug 01 05:05	27° \mathbb{M} 44'15		min. Earth dist.	2168 Aug 01 09:49	9° \approx 37'06	8.93198 AU
	2162 Sep 24 08:23	0° \mathfrak{J}		direct	2168 Oct 10 04:19	6° \approx 19'04	
evening set	2162 Nov 12 10:03	4° \mathfrak{J} 57'29		evening set	2169 Jan 18 05:32	13° \approx 23'23	
					2169 Jan 31 18:50	15° \approx	
conjunction	2162 Nov 29 03:49	6° \mathfrak{J} 55'48	1°40'53	conjunction	2169 Feb 03 21:55	15° \approx 22'30	-0°47'02
minimum elong	2162 Nov 29 03:51	6° \mathfrak{J} 55'48	1°40'53	minimum elong	2169 Feb 03 21:53	15° \approx 22'29	0°47'01
max. Earth dist.	2162 Nov 29 00:09	6° \mathfrak{J} 54'42	10.98446 AU	max. Earth dist.	2169 Feb 03 15:50	15° \approx 20'41	10.89722 AU
morning rise	2162 Dec 15 18:46	8° \mathfrak{J} 53'22		morning rise	2169 Feb 20 16:36	17° \approx 22'18	
retrograde	2163 Mar 25 13:08	15° \mathfrak{J} 53'26		retrograde	2169 Jun 03 18:25	24° \approx 39'53	
opposition	2163 Jun 03 06:12	12° \mathfrak{J} 36'12	1°51'49	opposition	2169 Aug 13 15:06	21° \approx 18'24	-1°13'21
min. Earth dist.	2163 Jun 03 09:55	12° \mathfrak{J} 35'31	9.00688 AU	min. Earth dist.	2169 Aug 13 19:48	21° \approx 17'31	8.85829 AU
direct	2163 Aug 13 10:08	9° \mathfrak{J} 15'44		direct	2169 Oct 22 04:20	17° \approx 59'10	
evening set	2163 Nov 23 23:53	16° \mathfrak{J} 24'08		evening set	2170 Jan 30 00:37	25° \approx 07'04	
conjunction	2163 Dec 10 16:18	18° \mathfrak{J} 21'41	1°21'01	conjunction	2170 Feb 15 18:13	27° \approx 07'31	-1°11'50
minimum elong	2163 Dec 10 16:21	18° \mathfrak{J} 21'41	1°21'02	minimum elong	2170 Feb 15 18:11	27° \approx 07'30	1°11'49
max. Earth dist.	2163 Dec 10 11:14	18° \mathfrak{J} 20'10	11.02257 AU	max. Earth dist.	2170 Feb 15 13:16	27° \approx 06'01	10.81547 AU
morning rise	2163 Dec 27 06:49	20° \mathfrak{J} 18'43		morning rise	2170 Mar 04 14:39	29° \approx 08'50	
retrograde	2164 Apr 05 07:06	27° \mathfrak{J} 17'58			2170 Mar 11 21:41	0° \mathfrak{H}	
opposition	2164 Jun 14 10:10	24° \mathfrak{J} 00'36	1°25'27	retrograde	2170 Jun 16 12:48	6° \mathfrak{H} 34'08	
min. Earth dist.	2164 Jun 14 15:03	23° \mathfrak{J} 59'42	9.03426 AU	opposition	2170 Aug 26 05:27	3° \mathfrak{H} 11'22	-1°42'31
direct	2164 Aug 24 12:27	20° \mathfrak{J} 40'49		min. Earth dist.	2170 Aug 26 09:00	3° \mathfrak{H} 10'42	8.76962 AU
evening set	2164 Dec 04 10:22	27° \mathfrak{J} 45'35			2170 Oct 21 14:13	30° \mathbb{R} \approx	
				direct	2170 Nov 03 07:45	29° \approx 51'43	
conjunction	2164 Dec 21 02:00	29° \mathfrak{J} 42'44	0°58'04		2170 Nov 15 21:46	0° \mathfrak{H}	
minimum elong	2164 Dec 21 02:02	29° \mathfrak{J} 42'45	0°58'04	evening set	2171 Feb 11 01:56	7° \mathfrak{H} 04'30	
max. Earth dist.	2164 Dec 20 19:50	29° \mathfrak{J} 40'55	11.03960 AU				
	2164 Dec 23 12:27	0° \mathfrak{Z}		conjunction	2171 Feb 27 21:10	9° \mathfrak{H} 06'35	-1°33'58
morning rise	2165 Jan 06 16:41	1° \mathfrak{Z} 39'38		minimum elong	2171 Feb 27 21:07	9° \mathfrak{H} 06'34	1°33'58
retrograde	2165 Apr 17 03:13	8° \mathfrak{Z} 39'35		max. Earth dist.	2171 Feb 27 17:38	9° \mathfrak{H} 05'30	10.72030 AU
opposition	2165 Jun 26 13:22	5° \mathfrak{Z} 21'48	0°55'52	morning rise	2171 Mar 16 19:44	11° \mathfrak{H} 09'45	
min. Earth dist.	2165 Jun 26 18:31	5° \mathfrak{Z} 20'51	9.04022 AU	retrograde	2171 Jun 29 13:32	18° \mathfrak{H} 43'40	
direct	2165 Sep 05 13:05	2° \mathfrak{Z} 02'30		opposition	2171 Sep 08 00:37	15° \mathfrak{H} 19'34	-2°07'47
evening set	2165 Dec 15 19:20	9° \mathfrak{Z} 04'58		min. Earth dist.	2171 Sep 08 02:49	15° \mathfrak{H} 19'09	8.66950 AU
				direct	2171 Nov 15 13:39	11° \mathfrak{H} 59'18	
conjunction	2166 Jan 01 10:44	11° \mathfrak{Z} 02'07	0°32'54	evening set	2172 Feb 23 11:04	19° \mathfrak{H} 18'12	
minimum elong	2166 Jan 01 10:45	11° \mathfrak{Z} 02'07	0°32'53				
max. Earth dist.	2166 Jan 01 04:57	11° \mathfrak{Z} 00'24	11.03496 AU	conjunction	2172 Mar 11 08:23	21° \mathfrak{H} 22'13	-1°52'18
morning rise	2166 Jan 18 01:49	12° \mathfrak{Z} 59'13		minimum elong	2172 Mar 11 08:20	21° \mathfrak{H} 22'13	1°52'18
retrograde	2166 Apr 29 01:10	20° \mathfrak{Z} 01'22		max. Earth dist.	2172 Mar 11 05:21	21° \mathfrak{H} 21'17	10.61571 AU
opposition	2166 Jul 08 16:44	16° \mathfrak{Z} 42'55	0°24'06	morning rise	2172 Mar 28 09:41	23° \mathfrak{H} 27'31	
min. Earth dist.	2166 Jul 08 21:23	16° \mathfrak{Z} 42'03	9.02458 AU		2172 Jun 04 00:22	0° \mathfrak{Y}	
direct	2166 Sep 17 10:32	13° \mathfrak{Z} 23'56		retrograde	2172 Jul 11 21:13	1° \mathfrak{Y} 10'31	
evening set	2166 Dec 27 04:27	20° \mathfrak{Z} 25'32			2172 Aug 19 06:37	30° \mathbb{R} \mathfrak{H}	
				opposition	2172 Sep 20 00:59	27° \mathfrak{H} 45'07	-2°27'47
conjunction	2167 Jan 12 19:54	22° \mathfrak{Z} 23'00	0°06'25	min. Earth dist.	2172 Sep 20 02:32	27° \mathfrak{H} 44'49	8.56224 AU
minimum elong	2167 Jan 12 19:55	22° \mathfrak{Z} 23'01	0°06'24	direct	2172 Nov 27 01:42	24° \mathfrak{H} 24'05	
behind sun begin	2167 Jan 12 13:20	22° \mathfrak{Z} 21'05			2173 Feb 19 17:40	0° \mathfrak{Y}	
behind sun end	2167 Jan 13 02:30	22° \mathfrak{Z} 24'56					

evening set	2173 Mar 07 04:53	1°♊50'05		max. Earth dist.	2179 Jun 16 21:04	25°♊35'52	10.04971 AU
				morning rise	2179 Jul 04 19:26	27°♊54'53	
conjunction	2173 Mar 24 04:54	3°♊56'20 -2°05'42			2179 Jul 21 15:36	0°♊	
minimum elong	2173 Mar 24 04:52	3°♊56'20 2°05'43		retrograde	2179 Oct 18 14:55	6°♊12'15	
max. Earth dist.	2173 Mar 24 02:25	3°♊55'34 10.50643 AU		opposition	2179 Dec 24 16:15	2°♊43'11 -1°03'52	
morning rise	2173 Apr 10 09:29	6°♊04'00		min. Earth dist.	2179 Dec 24 12:32	2°♊43'57 8.04472 AU	
retrograde	2173 Jul 25 12:47	13°♊56'08			2180 Jan 31 16:22	30°♊♈	
opposition	2173 Oct 03 07:01	10°♊29'32 -2°41'08		direct	2180 Feb 29 07:14	29°♊15'03	
min. Earth dist.	2173 Oct 03 08:03	10°♊29'20 8.45279 AU			2180 Mar 28 19:09	0°♊	
direct	2173 Dec 09 19:55	7°♊07'34		evening set	2180 Jun 12 15:46	7°♊26'07	
evening set	2174 Mar 20 07:55	14°♊41'19					
				conjunction	2180 Jun 30 19:21	9°♊46'48 -0°35'33	
conjunction	2174 Apr 06 11:25	16°♊50'02 -2°13'10		minimum elong	2180 Jun 30 19:22	9°♊46'48 0°35'33	
minimum elong	2174 Apr 06 11:24	16°♊50'02 2°13'11		max. Earth dist.	2180 Jun 30 23:54	9°♊48'16 10.04546 AU	
max. Earth dist.	2174 Apr 06 10:24	16°♊49'43 10.39770 AU		morning rise	2180 Jul 18 23:42	12°♊07'41	
morning rise	2174 Apr 23 19:42	19°♊00'15		retrograde	2180 Nov 01 00:21	20°♊21'39	
retrograde	2174 Aug 08 10:32	27°♊01'02		opposition	2181 Jan 06 19:48	16°♊53'16 -0°24'08	
opposition	2174 Oct 16 18:38	23°♊33'21 -2°46'36		min. Earth dist.	2181 Jan 06 16:04	16°♊54'02 8.05306 AU	
min. Earth dist.	2174 Oct 16 18:37	23°♊33'21 8.34665 AU		direct	2181 Mar 14 18:02	13°♊24'32	
direct	2174 Dec 22 21:36	20°♊10'23		evening set	2181 Jun 27 17:42	21°♊37'05	
evening set	2175 Apr 02 20:47	27°♊52'11					
	2175 Apr 19 17:29	0°♈		conjunction	2181 Jul 15 22:03	23°♊57'36 -0°02'56	
				minimum elong	2181 Jul 15 22:04	23°♊57'36 0°02'55	
conjunction	2175 Apr 20 04:31	0°♈03'31 -2°13'52		behind sun begin	2181 Jul 15 14:44	23°♊55'15	
minimum elong	2175 Apr 20 04:32	0°♈03'31 2°13'53		behind sun end	2181 Jul 16 05:24	23°♊59'57	
max. Earth dist.	2175 Apr 20 05:43	0°♈03'54 10.29524 AU		max. Earth dist.	2181 Jul 16 02:53	23°♊59'08 10.06709 AU	
morning rise	2175 May 07 16:52	2°♈16'20		morning rise	2181 Aug 03 01:50	26°♊17'54	
retrograde	2175 Aug 22 14:10	10°♈24'37		asc. node	2181 Aug 17 21:16	28°♊08'01	
opposition	2175 Oct 30 11:18	6°♈56'04 -2°43'16			2181 Sep 03 03:38	0°♈	
min. Earth dist.	2175 Oct 30 09:46	6°♈56'23 8.24953 AU		retrograde	2181 Nov 15 05:44	4°♈26'33	
direct	2176 Jan 05 06:54	3°♈32'03		opposition	2182 Jan 20 21:45	0°♈59'04 0°16'50	
evening set	2176 Apr 15 19:21	11°♈21'42		min. Earth dist.	2182 Jan 20 17:31	0°♈59'57 8.08752 AU	
					2182 Feb 02 00:56	30°♈♈	
conjunction	2176 May 03 07:47	13°♈35'40 -2°07'17		direct	2182 Mar 29 04:59	27°♊29'59	
minimum elong	2176 May 03 07:49	13°♈35'41 2°07'17			2182 May 22 03:02	0°♈	
max. Earth dist.	2176 May 03 10:58	13°♈36'42 10.20466 AU		evening set	2182 Jul 12 17:58	5°♈41'58	
	2176 May 14 07:05	15°♈					
morning rise	2176 May 21 00:25	15°♈51'02		conjunction	2182 Jul 30 21:25	8°♈01'27 0°29'46	
retrograde	2176 Sep 04 23:20	24°♈05'05		minimum elong	2182 Jul 30 21:24	8°♈01'27 0°29'47	
opposition	2176 Nov 12 08:33	20°♈35'56 -2°30'44		max. Earth dist.	2182 Jul 31 02:38	8°♈03'08 10.11422 AU	
min. Earth dist.	2176 Nov 12 05:27	20°♈36'33 8.16675 AU		morning rise	2182 Aug 17 22:56	10°♈20'18	
direct	2177 Jan 17 22:22	17°♈10'49			2182 Sep 27 13:21	15°♈	
evening set	2177 Apr 30 02:53	25°♈07'40		retrograde	2182 Nov 29 06:23	18°♈22'04	
					2183 Feb 02 23:29	15°♈♈	
conjunction	2177 May 17 20:02	27°♈24'06 -1°53'21		opposition	2183 Feb 03 20:44	14°♈55'39 0°56'20	
minimum elong	2177 May 17 20:05	27°♈24'07 1°53'21		min. Earth dist.	2183 Feb 03 16:09	14°♈56'35 8.14654 AU	
max. Earth dist.	2177 May 18 00:29	27°♈25'33 10.13107 AU		direct	2183 Apr 12 14:56	11°♈26'30	
morning rise	2177 Jun 04 16:51	29°♈41'45			2183 Jun 17 09:05	15°♈	
	2177 Jun 07 02:46	0°♈		evening set	2183 Jul 27 14:04	19°♈35'58	
retrograde	2177 Sep 19 12:25	7°♈59'21					
opposition	2177 Nov 26 09:16	4°♈29'53 -2°09'12		conjunction	2183 Aug 14 14:58	21°♈53'35 1°00'15	
min. Earth dist.	2177 Nov 26 05:20	4°♈30'42 8.10305 AU		minimum elong	2183 Aug 14 14:56	21°♈53'35 1°00'16	
direct	2178 Jan 31 19:01	1°♈03'40		max. Earth dist.	2183 Aug 14 20:18	21°♈55'18 10.18416 AU	
evening set	2178 May 14 18:02	9°♈06'40		morning rise	2183 Sep 01 12:43	24°♈10'14	
					2183 Oct 25 15:51	0°♈♈	
conjunction	2178 Jun 01 15:36	11°♈25'09 -1°32'36		retrograde	2183 Dec 12 23:50	2°♈04'00	
minimum elong	2178 Jun 01 15:39	11°♈25'10 1°32'36			2184 Jan 31 11:58	30°♈♈	
max. Earth dist.	2178 Jun 01 20:38	11°♈26'47 10.07864 AU		opposition	2184 Feb 17 15:36	28°♈38'49 1°31'54	
morning rise	2178 Jun 19 16:06	13°♈44'36		min. Earth dist.	2184 Feb 17 11:12	28°♈39'42 8.22658 AU	
retrograde	2178 Oct 04 02:38	22°♈03'16		direct	2184 Apr 25 22:21	25°♈09'52	
opposition	2178 Dec 10 12:17	18°♈33'49 -1°39'40			2184 Jul 13 12:31	0°♈♈	
min. Earth dist.	2178 Dec 10 08:12	18°♈34'40 8.06183 AU		evening set	2184 Aug 10 03:19	3°♈15'01	
direct	2179 Feb 14 22:50	15°♈06'33					
evening set	2179 May 29 15:00	23°♈14'20		conjunction	2184 Aug 28 00:22	5°♈30'11 1°26'51	
				minimum elong	2184 Aug 28 00:19	5°♈30'10 1°26'51	
conjunction	2179 Jun 16 16:14	25°♈34'18 -1°06'08		max. Earth dist.	2184 Aug 28 05:23	5°♈31'46 10.27272 AU	
minimum elong	2179 Jun 16 16:17	25°♈34'19 1°06'07		morning rise	2184 Sep 14 17:25	7°♈44'07	

retrograde	2184 Dec 25 09:36	15°  29'20		retrograde	2191 Mar 08 23:16	29°  42'01	
opposition	2185 Mar 02 05:48	12°  05'25	2°01'37	opposition	2191 May 17 04:39	26°  24'05	2°21'58
min. Earth dist.	2185 Mar 02 02:18	12°  06'07	8.32284 AU	min. Earth dist.	2191 May 17 06:43	26°  23'42	8.92922 AU
direct	2185 May 10 01:23	8°  36'59		direct	2191 Jul 27 07:43	23°  01'56	
evening set	2185 Aug 24 07:35	16°  36'15			2191 Nov 05 07:56	0° 	
				evening set	2191 Nov 07 19:34	0°  17'16	
conjunction	2185 Sep 11 00:01	18°  48'37	1°48'14	conjunction	2191 Nov 24 13:54	2°  15'57	1°48'17
minimum elong	2185 Sep 10 23:58	18°  48'36	1°48'14	minimum elong	2191 Nov 24 13:56	2°  15'58	1°48'17
max. Earth dist.	2185 Sep 11 03:50	18°  49'49	10.37466 AU	max. Earth dist.	2191 Nov 24 10:47	2°  15'02	10.96157 AU
morning rise	2185 Sep 28 12:03	20°  59'37		morning rise	2191 Dec 11 05:27	4°  13'50	
retrograde	2186 Jan 07 11:56	28°  36'10		retrograde	2192 Mar 19 19:05	11°  14'14	
opposition	2186 Mar 15 14:33	25°  13'32	2°24'11	opposition	2192 May 28 10:15	7°  56'43	2°01'55
min. Earth dist.	2186 Mar 15 12:11	25°  14'00	8.42966 AU	min. Earth dist.	2192 May 28 12:41	7°  56'16	8.99135 AU
direct	2186 May 23 22:36	21°  45'48		direct	2192 Aug 07 15:22	4°  35'42	
evening set	2186 Sep 07 02:01	29°  38'07		evening set	2192 Nov 18 10:28	11°  14'53	
	2186 Sep 10 01:44	0° 					
conjunction	2186 Sep 24 13:36	1°  47'35	2°03'35	conjunction	2192 Dec 05 03:23	13°  14'31	1°30'01
minimum elong	2186 Sep 24 13:33	1°  47'34	2°03'35	minimum elong	2192 Dec 05 03:25	13°  14'31	1°30'02
max. Earth dist.	2186 Sep 24 15:46	1°  48'15	10.48419 AU	max. Earth dist.	2192 Dec 05 00:05	13°  14'21	11.01441 AU
morning rise	2186 Oct 11 20:40	3°  55'38		morning rise	2192 Dec 21 18:05	15°  14'02	
retrograde	2187 Jan 20 05:40	11°  23'48		retrograde	2193 Mar 31 13:30	22°  13'08	
opposition	2187 Mar 28 17:35	8°  02'21	2°38'53	opposition	2193 Jun 09 13:41	19°  12'46	1°37'16
min. Earth dist.	2187 Mar 28 16:03	8°  02'40	8.54112 AU	min. Earth dist.	2193 Jun 09 16:13	19°  12'18	9.03383 AU
direct	2187 Jun 06 14:24	4°  35'33		direct	2193 Aug 19 18:18	16°  11'44	
evening set	2187 Sep 20 09:58	12°  20'15		evening set	2193 Nov 29 21:28	23°  10'15	
conjunction	2187 Oct 07 16:55	14°  26'54	2°12'31	conjunction	2193 Dec 16 13:31	25°  10'23	1°08'19
minimum elong	2187 Oct 07 16:54	14°  26'54	2°12'30	minimum elong	2193 Dec 16 13:33	25°  10'24	1°08'20
max. Earth dist.	2187 Oct 07 17:52	14°  27'12	10.59558 AU	max. Earth dist.	2193 Dec 16 10:08	25°  10'23	11.04674 AU
morning rise	2187 Oct 24 19:23	16°  32'11		morning rise	2194 Jan 02 03:54	27°  10'06	
retrograde	2188 Feb 01 17:00	23°  52'38			2194 Jan 29 14:37	0° 	
opposition	2188 Apr 09 15:20	20°  32'16	2°45'37	retrograde	2194 Apr 12 09:55	3°  59'46	
min. Earth dist.	2188 Apr 09 13:59	20°  32'32	8.65157 AU	opposition	2194 Jun 21 16:16	0°  42'22	1°09'00
direct	2188 Jun 18 23:52	17°  06'33		min. Earth dist.	2194 Jun 21 19:24	0°  41'47	9.05513 AU
evening set	2188 Oct 02 07:24	24°  43'19			2194 Jul 01 07:49	30°  14'17	
				direct	2194 Aug 31 17:56	27°  13'07	
conjunction	2188 Oct 19 10:17	26°  47'26	2°15'03		2194 Oct 29 02:13	0° 	
minimum elong	2188 Oct 19 10:17	26°  47'26	2°15'02	evening set	2194 Dec 11 06:18	4°  25'38	
max. Earth dist.	2188 Oct 19 10:57	26°  47'38	10.70346 AU				
morning rise	2188 Nov 05 08:43	28°  50'13		conjunction	2194 Dec 27 21:41	6°  22'31	0°44'03
	2188 Nov 15 06:51	0° 		minimum elong	2194 Dec 27 21:42	6°  22'32	0°44'03
retrograde	2189 Feb 13 00:32	6°  03'53		max. Earth dist.	2194 Dec 27 17:17	6°  21'13	11.05740 AU
opposition	2189 Apr 22 08:02	2°  44'29	2°44'38	morning rise	2195 Jan 13 12:23	8°  19'15	
min. Earth dist.	2189 Apr 22 07:19	2°  44'37	8.75592 AU	retrograde	2195 Apr 24 05:23	15°  19'19	
	2189 Jun 03 03:45	30°  14'19		opposition	2195 Jul 03 18:53	12°  30'13	0°38'07
direct	2189 Jul 02 00:47	29°  19'58		min. Earth dist.	2195 Jul 03 23:08	12°  30'48	9.05463 AU
	2189 Jul 30 15:39	0° 		direct	2195 Sep 12 14:19	8°  42'56	
evening set	2189 Oct 14 19:25	6°  14'57		evening set	2195 Dec 22 14:34	15°  34'50	
conjunction	2189 Oct 31 18:52	8°  15'52	2°11'29	conjunction	2196 Jan 08 05:42	17°  34'50	0°18'04
minimum elong	2189 Oct 31 18:53	8°  15'52	2°11'29	minimum elong	2196 Jan 08 05:43	17°  34'50	0°18'04
max. Earth dist.	2189 Oct 31 18:54	8°  15'53	10.80304 AU	max. Earth dist.	2196 Jan 08 00:23	17°  33'16	11.04620 AU
morning rise	2189 Nov 17 14:05	10°  15'35		morning rise	2196 Jan 24 21:10	19°  37'56	
	2189 Dec 26 06:34	15° 		retrograde	2196 May 05 04:02	26°  40'56	
retrograde	2190 Feb 25 01:53	17°  59'29		opposition	2196 Jul 14 22:20	23°  22'36	0°05'41
	2190 Apr 30 15:15	15°  17'11		min. Earth dist.	2196 Jul 15 02:46	23°  21'47	9.03241 AU
opposition	2190 May 04 20:06	14°  40'55	2°36'30	desc. node	2196 Sep 18 00:48	20°  30'45	
min. Earth dist.	2190 May 04 20:47	14°  40'48	8.84973 AU	direct	2196 Sep 23 12:00	20°  30'41	
direct	2190 Jul 14 17:52	11°  17'36		evening set	2197 Jan 01 23:43	27°  30'00	
	2190 Sep 23 04:35	15° 					
evening set	2190 Oct 26 23:06	18°  39'22		conjunction	2197 Jan 18 15:10	29°  30'29	-0°08'49
conjunction	2190 Nov 12 19:39	20°  39'29	2°02'21	minimum elong	2197 Jan 18 15:10	29°  30'29	0°08'49
minimum elong	2190 Nov 12 19:40	20°  39'29	2°02'21	behind sun begin	2197 Jan 18 09:07	29°  30'43	
max. Earth dist.	2190 Nov 12 18:05	20°  39'01	10.89022 AU	behind sun end	2197 Jan 18 21:12	29°  30'41	
morning rise	2190 Nov 29 12:37	22°  38'34		max. Earth dist.	2197 Jan 18 10:14	29°  30'03	11.01335 AU
					2197 Jan 26 17:32	0° 	


































































































































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retrograde	2197 May 17 07:27	8° \approx 07'41	retrograde	2203 Aug 03 10:24	21° Υ 14'35
opposition	2197 Jul 27 03:31	4° \approx 48'30 -0°27'14	opposition	2203 Oct 11 23:13	17° Υ 47'33 -2°45'03
min. Earth dist.	2197 Jul 27 07:27	4° \approx 47'47 8.98894 AU	min. Earth dist.	2203 Oct 12 00:12	17° Υ 47'21 8.40795 AU
direct	2197 Oct 05 08:37	1° \approx 30'19	direct	2203 Dec 18 07:04	14° Υ 25'10
evening set	2198 Jan 13 11:36	8° \approx 32'19	evening set	2204 Mar 28 00:24	22° Υ 02'22
conjunction	2198 Jan 30 03:36	10° \approx 30'35 -0°35'28	conjunction	2204 Apr 14 05:58	24° Υ 12'17 -2°14'25
minimum elong	2198 Jan 30 03:35	10° \approx 30'35 0°35'28	minimum elong	2204 Apr 14 05:58	24° Υ 12'17 2°14'25
max. Earth dist.	2198 Jan 29 23:08	10° \approx 29'16 10.95959 AU	max. Earth dist.	2204 Apr 14 04:19	24° Υ 11'45 10.35126 AU
morning rise	2198 Feb 15 21:13	12° \approx 29'25	morning rise	2204 May 01 16:14	26° Υ 23'41
	2198 Mar 10 09:51	15° \approx		2204 Jun 01 16:36	0° \mathcal{B}
retrograde	2198 May 29 15:11	19° \approx 42'35	retrograde	2204 Aug 16 10:41	4° \mathcal{B} 27'53
opposition	2198 Aug 08 11:27	16° \approx 22'22 -0°59'27	opposition	2204 Oct 24 12:51	0° \mathcal{B} 59'40 -2°45'55
min. Earth dist.	2198 Aug 08 15:07	16° \approx 21'41 8.92532 AU	min. Earth dist.	2204 Oct 24 13:10	0° \mathcal{B} 59'36 8.29934 AU
	2198 Aug 27 11:35	15° $\mathcal{R}\approx$		2204 Nov 06 04:00	30° $\mathcal{R}\Upsilon$
direct	2198 Oct 17 06:07	13° \approx 04'02	direct	2204 Dec 30 12:03	27° Υ 36'00
	2198 Dec 05 00:15	15° \approx		2205 Feb 20 19:54	0° \mathcal{B}
evening set	2199 Jan 25 03:42	20° \approx 08'49	evening set	2205 Apr 10 17:47	5° \mathcal{B} 21'27
conjunction	2199 Feb 10 20:30	22° \approx 08'13 -1°01'01	conjunction	2205 Apr 28 03:46	7° \mathcal{B} 34'05 -2°11'16
minimum elong	2199 Feb 10 20:28	22° \approx 08'12 1°01'00	minimum elong	2205 Apr 28 03:47	7° \mathcal{B} 34'06 2°11'16
max. Earth dist.	2199 Feb 10 15:15	22° \approx 06'39 10.88641 AU	max. Earth dist.	2205 Apr 28 03:08	7° \mathcal{B} 33'53 10.24777 AU
morning rise	2199 Feb 27 15:49	24° \approx 08'25	morning rise	2205 May 15 18:25	9° \mathcal{B} 48'11
	2199 Apr 29 02:04	0° \mathcal{H}		2205 Jul 01 08:03	15° \mathcal{B}
retrograde	2199 Jun 11 05:34	1° \mathcal{H} 28'39	retrograde	2205 Aug 30 16:50	17° \mathcal{B} 59'17
	2199 Jul 25 08:25	30° $\mathcal{R}\approx$		2205 Nov 01 03:22	15° $\mathcal{R}\mathcal{B}$
opposition	2199 Aug 20 23:09	28° \approx 07'13 -1°29'45	opposition	2205 Nov 07 07:36	14° \mathcal{B} 30'09 -2°37'44
min. Earth dist.	2199 Aug 21 03:20	28° \approx 06'26 8.84333 AU	min. Earth dist.	2205 Nov 07 07:16	14° \mathcal{B} 30'13 8.20246 AU
direct	2199 Oct 29 06:08	24° \approx 48'29	direct	2206 Jan 12 23:58	11° \mathcal{B} 05'12
	2200 Jan 19 23:26	0° \mathcal{H}		2206 Mar 21 21:16	15° \mathcal{B}
evening set	2200 Feb 06 01:18	1° \mathcal{H} 57'31	evening set	2206 Apr 24 20:22	18° \mathcal{B} 58'30
conjunction	2200 Feb 22 19:24	3° \mathcal{H} 58'24 -1°24'23	conjunction	2206 May 12 11:11	21° \mathcal{B} 13'47 -2°00'45
minimum elong	2200 Feb 22 19:22	3° \mathcal{H} 58'24 1°24'23	minimum elong	2206 May 12 11:13	21° \mathcal{B} 13'48 2°00'45
max. Earth dist.	2200 Feb 22 13:38	3° \mathcal{H} 56'39 10.79596 AU	max. Earth dist.	2206 May 12 12:22	21° \mathcal{B} 14'10 10.15897 AU
morning rise	2200 Mar 11 16:52	6° \mathcal{H} 00'19	morning rise	2206 May 30 06:13	23° \mathcal{B} 30'25
retrograde	2200 Jun 24 00:43	13° \mathcal{H} 28'46		2206 Jul 30 16:18	0° \mathcal{I}
opposition	2200 Sep 02 15:16	10° \mathcal{H} 06'00 -1°56'50	retrograde	2206 Sep 14 03:26	1° \mathcal{I} 46'32
min. Earth dist.	2200 Sep 02 19:40	10° \mathcal{H} 05'10 8.74571 AU		2206 Oct 30 04:53	30° $\mathcal{R}\mathcal{B}$
direct	2200 Nov 10 10:00	6° \mathcal{H} 46'38	opposition	2206 Nov 21 06:33	28° \mathcal{B} 16'47 -2°20'21
evening set	2201 Feb 18 06:00	14° \mathcal{H} 01'20	min. Earth dist.	2206 Nov 21 05:00	28° \mathcal{B} 17'06 8.12281 AU
			direct	2207 Jan 26 18:42	24° \mathcal{B} 50'35
conjunction	2201 Mar 07 02:04	16° \mathcal{H} 04'04 -1°44'30		2207 Apr 15 20:50	0° \mathcal{I}
minimum elong	2201 Mar 07 02:01	16° \mathcal{H} 04'03 1°44'30	evening set	2207 May 09 07:39	2° \mathcal{I} 50'55
max. Earth dist.	2201 Mar 06 21:03	16° \mathcal{H} 02'32 10.69186 AU			
morning rise	2201 Mar 24 01:57	18° \mathcal{H} 07'59	conjunction	2207 May 27 03:17	5° \mathcal{I} 08'36 -1°43'06
retrograde	2201 Jul 07 03:36	25° \mathcal{H} 45'27	minimum elong	2207 May 27 03:20	5° \mathcal{I} 08'37 1°43'06
opposition	2201 Sep 15 12:16	22° \mathcal{H} 21'14 -2°19'19	max. Earth dist.	2207 May 27 06:22	5° \mathcal{I} 09'36 10.09000 AU
min. Earth dist.	2201 Sep 15 15:54	22° \mathcal{H} 20'32 8.63694 AU	morning rise	2207 Jun 14 02:19	7° \mathcal{I} 27'23
direct	2201 Nov 22 20:08	19° \mathcal{H} 01'02	retrograde	2207 Sep 28 16:26	15° \mathcal{I} 46'09
evening set	2202 Mar 02 18:52	26° \mathcal{H} 22'32	opposition	2207 Dec 05 08:23	12° \mathcal{I} 16'09 -1°54'24
			min. Earth dist.	2207 Dec 05 05:31	12° \mathcal{I} 16'44 8.06509 AU
conjunction	2202 Mar 19 17:29	28° \mathcal{H} 27'25 -2°00'14	direct	2208 Feb 09 20:07	8° \mathcal{I} 48'48
minimum elong	2202 Mar 19 17:27	28° \mathcal{H} 27'24 2°00'14	evening set	2208 May 23 02:03	16° \mathcal{I} 54'58
max. Earth dist.	2202 Mar 19 14:02	28° \mathcal{H} 26'21 10.57920 AU			
	2202 Apr 01 05:45	0° Υ	conjunction	2208 Jun 10 01:55	19° \mathcal{I} 14'31 -1°19'07
morning rise	2202 Apr 05 20:13	0° Υ 33'37	minimum elong	2208 Jun 10 01:58	19° \mathcal{I} 14'32 1°19'07
retrograde	2202 Jul 20 15:29	8° Υ 20'26	max. Earth dist.	2208 Jun 10 06:35	19° \mathcal{I} 16'02 10.04499 AU
opposition	2202 Sep 28 14:55	4° Υ 54'46 -2°35'49	morning rise	2208 Jun 28 04:04	21° \mathcal{I} 34'51
min. Earth dist.	2202 Sep 28 17:00	4° Υ 54'21 8.52245 AU	retrograde	2208 Oct 12 05:34	29° \mathcal{I} 53'47
direct	2202 Dec 05 10:40	1° Υ 33'33	opposition	2208 Dec 18 12:11	26° \mathcal{I} 23'53 -1°21'16
evening set	2203 Mar 15 16:43	9° Υ 02'38	min. Earth dist.	2208 Dec 18 08:05	26° \mathcal{I} 24'44 8.03287 AU
			direct	2209 Feb 23 01:53	22° \mathcal{I} 55'35
conjunction	2203 Apr 01 18:30	11° Υ 09'55 -2°10'31		2209 May 29 07:54	0° \mathcal{E}
minimum elong	2203 Apr 01 18:29	11° Υ 09'55 2°10'31	evening set	2209 Jun 07 01:20	1° \mathcal{E} 05'57
max. Earth dist.	2203 Apr 01 16:08	11° Υ 09'11 10.46371 AU			

conjunction	2209 Jun 25 04:14	3°  26'38 -0°50'13	minimum elong	2215 Sep 19 19:11	26°  09'18 1°57'13
minimum elong	2209 Jun 25 04:16	3°  26'39 0°50'12	max. Earth dist.	2215 Sep 19 23:51	26°  10'46 10.43026 AU
max. Earth dist.	2209 Jun 25 10:07	3°  28'33 10.02677 AU	morning rise	2215 Oct 07 04:34	28°  18'49
morning rise	2209 Jul 13 08:12	5°  47'42		2215 Oct 21 07:26	0°  ♄
retrograde	2209 Oct 26 17:38	14°  04'21	retrograde	2216 Jan 15 21:45	5°  ♄51'18
opposition	2210 Jan 01 16:22	10°  34'57 -0°43'00	opposition	2216 Mar 23 03:58	2°  ♄29'30 2°33'00
min. Earth dist.	2210 Jan 01 11:34	10°  35'57 8.02834 AU	min. Earth dist.	2216 Mar 23 00:28	2°  ♄30'11 8.48841 AU
direct	2210 Mar 09 10:33	7°  05'54		2216 Apr 27 15:41	30°  ♄ 
evening set	2210 Jun 22 03:14	15°  08'36	direct	2216 May 31 17:41	29°  ♄02'33
				2216 Jul 04 15:42	0°  ♄
conjunction	2210 Jul 10 07:39	17°  39'34 -0°18'14	evening set	2216 Sep 14 18:43	6°  ♄51'14
minimum elong	2210 Jul 10 07:39	17°  39'34 0°18'14			
max. Earth dist.	2210 Jul 10 13:53	17°  41'35 10.03662 AU	conjunction	2216 Oct 02 03:55	8°  ♄59'15 2°09'05
morning rise	2210 Jul 28 11:53	20°  00'28	minimum elong	2216 Oct 02 03:53	8°  ♄59'14 2°09'06
retrograde	2210 Nov 10 02:35	28°  012'34	max. Earth dist.	2216 Oct 02 07:30	9°  ♄00'21 10.54515 AU
opposition	2211 Jan 15 19:26	24°  044'01 -0°02'13	morning rise	2216 Oct 19 08:20	11°  ♄05'50
min. Earth dist.	2211 Jan 15 14:43	24°  044'59 8.05192 AU	retrograde	2217 Jan 27 12:55	18°  ♄30'08
asc. node	2211 Feb 05 04:26	23°  06'57	opposition	2217 Apr 05 04:49	15°  ♄09'38 2°43'20
direct	2211 Mar 23 20:49	21°  014'31	min. Earth dist.	2217 Apr 05 02:47	15°  ♄10'02 8.60366 AU
evening set	2211 Jul 07 04:59	29°  027'35	direct	2217 Jun 14 06:14	11°  ♄43'49
	2211 Jul 11 10:44	0°  ♄	evening set	2217 Sep 27 21:39	19°  ♄24'33
conjunction	2211 Jul 25 09:08	1°  ♄47'53 0°14'45	conjunction	2217 Oct 15 02:22	21°  ♄29'49 2°14'31
minimum elong	2211 Jul 25 09:07	1°  ♄47'52 0°14'46	minimum elong	2217 Oct 15 02:21	21°  ♄29'49 2°14'30
behind sun begin	2211 Jul 25 06:28	1°  ♄47'01	max. Earth dist.	2217 Oct 15 04:04	21°  ♄30'21 10.65870 AU
behind sun end	2211 Jul 25 11:47	1°  ♄48'43	morning rise	2217 Nov 01 02:35	23°  ♄33'45
max. Earth dist.	2211 Jul 25 15:04	1°  ♄49'47 10.07393 AU		2218 Jan 08 19:20	0°  ♄
morning rise	2211 Aug 12 11:58	4°  ♄07'42	retrograde	2218 Feb 08 22:05	0°  ♄50'38
retrograde	2211 Nov 24 06:34	12°  ♄13'27		2218 Mar 12 13:19	30°  ♄ 
opposition	2212 Jan 29 20:13	8°  ♄46'02 0°38'20	opposition	2218 Apr 18 00:20	27°  ♄31'15 2°45'47
min. Earth dist.	2212 Jan 29 15:43	8°  ♄46'58 8.10213 AU	min. Earth dist.	2218 Apr 17 23:42	27°  ♄31'23 8.71451 AU
direct	2212 Apr 06 08:07	5°  ♄16'25	direct	2218 Jun 27 11:38	24°  ♄06'37
evening set	2212 Jul 21 03:34	13°  ♄27'51		2218 Sep 26 06:43	0°  ♄
	2212 Aug 02 04:52	15°  ♄	evening set	2218 Oct 10 14:39	1°  ♄39'22
conjunction	2212 Aug 08 05:45	15°  ♄46'35 0°46'28	conjunction	2218 Oct 27 15:28	3°  ♄42'13 2°13'40
minimum elong	2212 Aug 08 05:43	15°  ♄46'35 0°46'29	minimum elong	2218 Oct 27 15:29	3°  ♄42'14 2°13'39
max. Earth dist.	2212 Aug 08 11:15	15°  ♄48'22 10.13631 AU	max. Earth dist.	2218 Oct 27 15:07	3°  ♄42'07 10.76510 AU
morning rise	2212 Aug 26 05:33	18°  ♄04'32	morning rise	2218 Nov 13 12:13	5°  ♄43'51
retrograde	2212 Dec 07 02:13	26°  ♄02'40	retrograde	2219 Feb 21 01:21	12°  ♄54'21
opposition	2213 Feb 11 17:25	22°  ♄36'35 1°16'02	opposition	2219 Apr 30 14:52	9°  ♄35'52 2°40'48
min. Earth dist.	2213 Feb 11 13:01	22°  ♄37'29 8.17585 AU	min. Earth dist.	2219 Apr 30 15:04	9°  ♄35'50 8.81527 AU
direct	2213 Apr 20 18:27	19°  ♄07'13	direct	2219 Jul 10 10:18	6°  ♄12'26
evening set	2213 Aug 04 20:27	27°  ♄15'07	evening set	2219 Oct 22 22:27	13°  ♄37'34
				2219 Nov 03 12:06	15°  ♄
conjunction	2213 Aug 22 19:20	29°  ♄31'36 1°15'05	conjunction	2219 Nov 08 20:13	15°  ♄38'26 2°06'58
minimum elong	2213 Aug 22 19:17	29°  ♄31'35 1°15'05	minimum elong	2219 Nov 08 20:15	15°  ♄38'26 2°06'57
max. Earth dist.	2213 Aug 23 00:24	29°  ♄33'13 10.21999 AU	max. Earth dist.	2219 Nov 08 18:49	15°  ♄38'00 10.85895 AU
	2213 Aug 26 12:21	0°  ♄ 	morning rise	2219 Nov 25 14:13	17°  ♄38'12
morning rise	2213 Sep 09 14:55	1°  ♄47'01	retrograde	2220 Mar 04 01:50	24°  ♄43'39
retrograde	2213 Dec 20 15:06	9°  ♄36'48	opposition	2220 May 12 01:23	21°  ♄25'51 2°29'02
opposition	2214 Feb 25 10:02	6°  ♄12'08 1°48'40	min. Earth dist.	2220 May 12 02:26	21°  ♄25'39 8.90103 AU
min. Earth dist.	2214 Feb 25 05:30	6°  ♄13'03 8.26859 AU	direct	2220 Jul 22 02:59	18°  ♄03'35
direct	2214 May 05 00:06	2°  ♄43'20	evening set	2220 Nov 02 22:22	25°  ♄21'51
evening set	2214 Aug 19 05:29	10°  ♄46'01			
conjunction	2214 Sep 06 00:12	12°  ♄59'50 1°39'00	conjunction	2220 Nov 19 17:48	27°  ♄21'10 1°55'01
minimum elong	2214 Sep 06 00:09	12°  ♄59'49 1°39'01	minimum elong	2220 Nov 19 17:51	27°  ♄21'11 1°55'01
max. Earth dist.	2214 Sep 06 05:03	13°  ♄01'22 10.31992 AU	max. Earth dist.	2220 Nov 19 15:36	27°  ♄20'31 10.93605 AU
morning rise	2214 Sep 23 14:48	15°  ♄12'21	morning rise	2220 Dec 06 09:50	29°  ♄19'33
retrograde	2215 Jan 02 22:02	22°  ♄53'26		2220 Dec 12 05:54	0°  ♄ 
opposition	2215 Mar 10 21:40	19°  ♄30'13 2°14'39	retrograde	2221 Mar 15 23:45	6°  ♄ 
min. Earth dist.	2215 Mar 10 17:17	19°  ♄31'06 8.37475 AU	opposition	2221 May 24 08:41	3°  ♄04'02 2°11'21
direct	2215 May 18 23:58	16°  ♄02'16	min. Earth dist.	2221 May 24 11:10	3°  ♄03'34 8.96854 AU
evening set	2215 Sep 02 05:13	23°  ♄58'24		2221 Jul 15 13:13	30°  ♄ 
			direct	2221 Aug 03 12:01	29°  ♄42'50
conjunction	2215 Sep 19 19:13	26°  ♄09'19 1°57'12		2221 Aug 22 08:36	0°  ♄ 



























































































































evening set	2221 Nov 14 16:19	6° \mathcal{Z} 55'16		evening set	2228 Jan 18 20:49	15° \approx
					2228 Jan 21 10:11	15° \approx 17'54
conjunction	2221 Dec 01 09:55	8° \mathcal{Z} 53'26	1°38'31	conjunction	2228 Feb 07 02:41	17° \approx 17'02 -0°50'04
minimum elong	2221 Dec 01 09:57	8° \mathcal{Z} 53'27	1°38'32	minimum elong	2228 Feb 07 02:39	17° \approx 17'01 0°50'03
max. Earth dist.	2221 Dec 01 06:00	8° \mathcal{Z} 52'16	10.99396 AU	max. Earth dist.	2228 Feb 06 21:00	17° \approx 15'20 10.89742 AU
morning rise	2221 Dec 18 00:53	10° \mathcal{Z} 50'53		morning rise	2228 Feb 23 21:23	19° \approx 16'50
retrograde	2222 Mar 27 18:11	17° \mathcal{Z} 50'30		retrograde	2228 Jun 06 01:16	26° \approx 34'39
opposition	2222 Jun 05 13:31	14° \mathcal{Z} 33'21	1°48'38	opposition	2228 Aug 15 21:00	23° \approx 13'06 -1°16'55
min. Earth dist.	2222 Jun 05 17:40	14° \mathcal{Z} 32'35	9.01603 AU	min. Earth dist.	2228 Aug 16 01:21	23° \approx 12'17 8.85751 AU
direct	2222 Aug 15 17:12	11° \mathcal{Z} 13'01		direct	2228 Oct 24 10:40	19° \approx 53'54
evening set	2222 Nov 26 05:37	18° \mathcal{Z} 20'45		evening set	2229 Feb 01 05:25	27° \approx 01'48
conjunction	2222 Dec 12 21:55	20° \mathcal{Z} 18'10	1°18'15	conjunction	2229 Feb 17 23:09	29° \approx 02'17 -1°14'34
minimum elong	2222 Dec 12 21:57	20° \mathcal{Z} 18'11	1°18'15	minimum elong	2229 Feb 17 23:07	29° \approx 02'16 1°14'33
max. Earth dist.	2222 Dec 12 16:24	20° \mathcal{Z} 16'33	11.03130 AU	max. Earth dist.	2229 Feb 17 18:31	29° \approx 00'53 10.81363 AU
morning rise	2222 Dec 29 12:31	22° \mathcal{Z} 15'06			2229 Feb 25 22:23	0° \mathcal{H}
retrograde	2223 Apr 08 13:23	29° \mathcal{Z} 14'02		morning rise	2229 Mar 06 19:37	1° \mathcal{H} 03'39
opposition	2223 Jun 17 17:02	25° \mathcal{Z} 56'45	1°21'51	retrograde	2229 Jun 18 19:11	8° \mathcal{H} 29'15
min. Earth dist.	2223 Jun 17 21:45	25° \mathcal{Z} 55'53	9.04238 AU	opposition	2229 Aug 28 11:19	5° \mathcal{H} 06'25 -1°45'37
direct	2223 Aug 27 20:13	22° \mathcal{Z} 37'07		min. Earth dist.	2229 Aug 28 14:38	5° \mathcal{H} 05'47 8.76683 AU
evening set	2223 Dec 07 15:37	29° \mathcal{Z} 41'18		direct	2229 Nov 05 11:51	1° \mathcal{H} 46'44
	2223 Dec 10 08:14	0° \mathcal{Z}		evening set	2230 Feb 13 07:07	8° \mathcal{H} 59'41
conjunction	2223 Dec 24 07:17	1° \mathcal{Z} 38'22	0°55'00	conjunction	2230 Mar 02 02:21	11° \mathcal{H} 01'49 -1°36'16
minimum elong	2223 Dec 24 07:19	1° \mathcal{Z} 38'23	0°55'00	minimum elong	2230 Mar 02 02:19	11° \mathcal{H} 01'48 1°36'16
max. Earth dist.	2223 Dec 24 01:40	1° \mathcal{Z} 36'43	11.04708 AU	max. Earth dist.	2230 Mar 01 22:06	11° \mathcal{H} 00'31 10.71648 AU
morning rise	2224 Jan 09 21:56	3° \mathcal{Z} 35'11		morning rise	2230 Mar 19 01:05	13° \mathcal{H} 05'03
retrograde	2224 Apr 19 09:04	10° \mathcal{Z} 34'55		retrograde	2230 Jul 01 19:46	20° \mathcal{H} 39'21
opposition	2224 Jun 28 19:56	7° \mathcal{Z} 17'12	0°51'59	opposition	2230 Sep 10 06:35	17° \mathcal{H} 15'10 -2°10'18
min. Earth dist.	2224 Jun 29 00:22	7° \mathcal{Z} 16'23	9.04690 AU	min. Earth dist.	2230 Sep 10 09:19	17° \mathcal{H} 14'39 8.66477 AU
direct	2224 Sep 07 19:12	3° \mathcal{Z} 58'04		direct	2230 Nov 17 19:05	13° \mathcal{H} 54'50
evening set	2224 Dec 18 00:17	11° \mathcal{Z} 00'03		evening set	2231 Feb 25 16:36	21° \mathcal{H} 14'02
conjunction	2225 Jan 03 15:44	12° \mathcal{Z} 57'08	0°29'39	conjunction	2231 Mar 14 13:56	23° \mathcal{H} 18'09 -1°54'03
minimum elong	2225 Jan 03 15:45	12° \mathcal{Z} 57'08	0°29'39	minimum elong	2231 Mar 14 13:54	23° \mathcal{H} 18'08 1°54'03
max. Earth dist.	2225 Jan 03 10:29	12° \mathcal{Z} 55'35	11.04086 AU	max. Earth dist.	2231 Mar 14 09:52	23° \mathcal{H} 16'53 10.61010 AU
morning rise	2225 Jan 20 06:47	14° \mathcal{Z} 54'10		morning rise	2231 Mar 31 15:30	25° \mathcal{H} 23'33
retrograde	2225 May 01 07:57	21° \mathcal{Z} 56'13			2231 May 13 00:12	0° \mathcal{Y}
opposition	2225 Jul 10 23:03	18° \mathcal{Z} 37'50	0°20'04	retrograde	2231 Jul 15 04:06	3° \mathcal{Y} 07'01
min. Earth dist.	2225 Jul 11 03:42	18° \mathcal{Z} 36'58	9.02960 AU		2231 Sep 19 07:46	30° \mathcal{R} \mathcal{H}
direct	2225 Sep 19 16:35	15° \mathcal{Z} 18'59		opposition	2231 Sep 23 07:15	29° \mathcal{H} 41'31 -2°29'35
evening set	2225 Dec 29 09:16	22° \mathcal{Z} 20'13		min. Earth dist.	2231 Sep 23 09:41	29° \mathcal{H} 41'03 8.55580 AU
conjunction	2226 Jan 15 00:41	24° \mathcal{Z} 17'39	0°03'07	direct	2231 Nov 30 07:08	26° \mathcal{H} 20'21
minimum elong	2226 Jan 15 00:40	24° \mathcal{Z} 17'39	0°03'06		2232 Feb 04 23:26	0° \mathcal{Y}
behind sun begin	2226 Jan 14 17:43	24° \mathcal{Z} 15'37		evening set	2232 Mar 09 10:45	3° \mathcal{Y} 46'46
behind sun end	2226 Jan 15 07:37	24° \mathcal{Z} 19'41		conjunction	2232 Mar 26 11:00	5° \mathcal{Y} 53'10 -2°06'49
max. Earth dist.	2226 Jan 14 18:39	24° \mathcal{Z} 15'54	11.01303 AU	minimum elong	2232 Mar 26 10:59	5° \mathcal{Y} 53'09 2°06'49
morning rise	2226 Jan 31 16:38	26° \mathcal{Z} 15'17		max. Earth dist.	2232 Mar 26 08:19	5° \mathcal{Y} 52'19 10.49923 AU
desc. node	2226 Feb 26 14:56	29° \mathcal{Z} 05'50		morning rise	2232 Apr 12 15:51	8° \mathcal{Y} 00'59
	2226 Mar 07 21:33	0° \approx		retrograde	2232 Jul 27 19:15	15° \mathcal{Y} 53'39
retrograde	2226 May 13 09:04	3° \approx 21'08		opposition	2232 Oct 05 13:30	12° \mathcal{Y} 26'55 -2°42'05
opposition	2226 Jul 23 03:46	0° \approx 01'53	-0°12'49	min. Earth dist.	2232 Oct 05 14:55	12° \mathcal{Y} 26'38 8.44489 AU
min. Earth dist.	2226 Jul 23 09:01	0° \approx 00'55	8.99122 AU	direct	2232 Dec 12 02:04	9° \mathcal{Y} 04'48
	2226 Jul 23 13:57	30° \mathcal{R} \mathcal{Z}		evening set	2233 Mar 22 14:26	16° \mathcal{Y} 39'07
direct	2226 Oct 01 11:56	26° \mathcal{Z} 43'07		conjunction	2233 Apr 08 18:20	18° \mathcal{Y} 48'01 -2°13'33
	2226 Dec 05 16:01	0° \approx		minimum elong	2233 Apr 08 18:19	18° \mathcal{Y} 48'01 2°13'34
evening set	2227 Jan 09 19:59	3° \approx 45'05		max. Earth dist.	2233 Apr 08 17:38	18° \mathcal{Y} 47'48 10.38913 AU
conjunction	2227 Jan 26 11:39	5° \approx 43'11	-0°23'52	morning rise	2233 Apr 26 02:48	20° \mathcal{Y} 58'24
minimum elong	2227 Jan 26 11:38	5° \approx 43'11	0°23'52	retrograde	2233 Aug 10 17:00	28° \mathcal{Y} 59'45
max. Earth dist.	2227 Jan 26 05:07	5° \approx 41'15	10.96465 AU	opposition	2233 Oct 19 01:17	25° \mathcal{Y} 31'55 -2°46'37
morning rise	2227 Feb 12 04:54	7° \approx 41'45		min. Earth dist.	2233 Oct 19 01:06	25° \mathcal{Y} 31'57 8.33755 AU
retrograde	2227 May 25 13:16	14° \approx 52'55		direct	2233 Dec 25 04:52	22° \mathcal{Y} 08'48
opposition	2227 Aug 04 10:51	11° \approx 32'35	-0°45'33	evening set	2234 Apr 05 04:00	29° \mathcal{Y} 51'14
min. Earth dist.	2227 Aug 04 16:11	11° \approx 31'36	8.93319 AU		2234 Apr 06 08:05	0° \mathcal{B}
direct	2227 Oct 13 10:30	8° \approx 13'41				

conjunction	2234 Apr 22 12:08	2°8'02.49" -2°13'27"	behind sun end	2240 Jul 18 16:37	26°56'06"	
minimum elong	2234 Apr 22 12:09	2°8'02.49" 2°13'28"	max. Earth dist.	2240 Jul 18 14:52	26°55'32"	10.06700 AU
max. Earth dist.	2234 Apr 22 13:28	2°8'03.14" 10.28568 AU	morning rise	2240 Aug 05 12:51	28°52'40"	
morning rise	2234 May 10 00:42	4°8'15.50"		2240 Aug 18 09:30	0°0'	
retrograde	2234 Aug 24 22:38	12°8'24.44"	retrograde	2240 Nov 17 16:05	6°0'32.27"	
opposition	2234 Nov 01 18:27	8°8'56.02" -2°42'18"	opposition	2241 Jan 23 07:04	3°0'05.01"	0°21'25"
min. Earth dist.	2234 Nov 01 16:35	8°8'56.24" 8.23968 AU	min. Earth dist.	2241 Jan 23 02:18	3°0'06.00"	8.08842 AU
direct	2235 Jan 07 13:00	5°8'31.51"		2241 Mar 10 14:46	30°48'	
evening set	2235 Apr 19 03:16	13°8'22.12"	direct	2241 Mar 31 14:37	29°53'56"	
	2235 May 01 22:36	15°8'		2241 Apr 21 13:51	0°0'	
			evening set	2241 Jul 15 05:04	7°0'48.04"	
conjunction	2235 May 06 16:03	15°8'36.26" -2°06'04"				
minimum elong	2235 May 06 16:05	15°8'36.26" 2°06'04"	conjunction	2241 Aug 02 08:24	10°0'07.29"	0°33'21"
max. Earth dist.	2235 May 06 18:48	15°8'37.19" 10.19473 AU	minimum elong	2241 Aug 02 08:22	10°0'07.28"	0°33'21"
morning rise	2235 May 24 09:03	17°8'52.03"	max. Earth dist.	2241 Aug 02 14:17	10°0'09.22"	10.11603 AU
retrograde	2235 Sep 08 09:16	26°8'06.40"	morning rise	2241 Aug 20 09:33	12°0'26.13"	
opposition	2235 Nov 15 16:14	22°8'37.24" -2°28'45"		2241 Sep 10 11:37	15°0'	
min. Earth dist.	2235 Nov 15 13:18	22°8'38.00" 8.15686 AU	retrograde	2241 Dec 01 16:12	20°0'27.43"	
direct	2236 Jan 21 04:21	19°8'12.07"	opposition	2242 Feb 06 06:06	17°0'01.25"	1°00'37"
evening set	2236 May 02 11:44	27°8'09.46"	min. Earth dist.	2242 Feb 06 01:27	17°0'02.22"	8.14921 AU
				2242 Mar 04 17:24	15°48'	
conjunction	2236 May 20 05:13	29°8'26.27" -1°51'21"	direct	2242 Apr 15 00:49	13°0'32.19"	
minimum elong	2236 May 20 05:16	29°8'26.28" 1°51'21"		2242 May 26 00:11	15°0'	
max. Earth dist.	2236 May 20 08:48	29°8'27.37" 10.12155 AU	evening set	2242 Jul 30 01:00	21°0'41.49"	
	2236 May 24 12:58	0°0'				
morning rise	2236 Jun 07 02:29	1°0'44.22"	conjunction	2242 Aug 17 01:36	23°0'59.19"	1°03'30"
retrograde	2236 Sep 21 22:29	10°0'02.26"	minimum elong	2242 Aug 17 01:33	23°0'59.18"	1°03'30"
opposition	2236 Nov 28 17:28	6°0'32.55" -2°06'16"	max. Earth dist.	2242 Aug 17 07:07	24°0'01.05"	10.18759 AU
min. Earth dist.	2236 Nov 28 14:06	6°0'33.36" 8.09399 AU	morning rise	2242 Sep 03 22:57	26°0'15.49"	
direct	2237 Feb 03 03:19	3°0'06.32"		2242 Oct 05 20:43	0°0'	
evening set	2237 May 17 03:45	11°0'10.22"	retrograde	2242 Dec 15 09:21	4°0'09.17"	
			opposition	2243 Feb 20 00:57	0°0'44.14"	1°35'38"
conjunction	2237 Jun 04 01:39	13°0'12.90" -1°29'54"	min. Earth dist.	2243 Feb 19 21:02	0°0'45.02"	8.23078 AU
minimum elong	2237 Jun 04 01:42	13°0'12.90" 1°29'54"		2243 Mar 01 04:49	30°48'	
max. Earth dist.	2237 Jun 04 06:01	13°0'13.03" 10.07045 AU	direct	2243 Apr 29 07:45	27°0'15.22"	
morning rise	2237 Jun 22 02:34	15°0'48.46"		2243 Jun 25 22:40	0°0'	
retrograde	2237 Oct 06 11:37	24°0'07.47"	evening set	2243 Aug 13 14:00	5°0'20.27"	
opposition	2237 Dec 12 21:04	20°0'13.82" -1°35'57"				
min. Earth dist.	2237 Dec 12 17:20	20°0'13.90" 8.05469 AU	conjunction	2243 Aug 31 10:37	7°0'35.27"	1°29'34"
direct	2238 Feb 17 08:30	17°0'10.57"	minimum elong	2243 Aug 31 10:34	7°0'35.26"	1°29'35"
evening set	2238 Jun 01 01:21	25°0'19.25"	max. Earth dist.	2243 Aug 31 15:07	7°0'36.53"	10.27753 AU
			morning rise	2243 Sep 18 03:19	9°0'49.14"	
conjunction	2238 Jun 19 02:52	27°0'13.39" -1°02'53"	retrograde	2243 Dec 28 18:59	17°0'34.06"	
minimum elong	2238 Jun 19 02:54	27°0'13.39" 1°02'52"	opposition	2244 Mar 04 15:03	14°0'10.21"	2°04'36"
max. Earth dist.	2238 Jun 19 07:46	27°0'14.09" 10.04402 AU	min. Earth dist.	2244 Mar 04 12:04	14°0'10.57"	8.32831 AU
morning rise	2238 Jul 07 06:19	0°0'00.17"	direct	2244 May 12 10:51	10°0'42.00"	
	2238 Jul 07 05:26	0°0'	evening set	2244 Aug 26 17:53	18°0'41.07"	
retrograde	2238 Oct 20 23:43	8°0'17.48"				
opposition	2238 Dec 27 01:24	4°0'48.43" -0°59'35"	conjunction	2244 Sep 13 09:49	20°0'53.17"	1°50'18"
min. Earth dist.	2238 Dec 26 21:29	4°0'49.32" 8.04056 AU	minimum elong	2244 Sep 13 09:46	20°0'53.16"	1°50'19"
direct	2239 Mar 03 17:02	1°0'20.30"	max. Earth dist.	2244 Sep 13 12:56	20°0'54.16"	10.38060 AU
evening set	2239 Jun 16 02:35	9°0'31.59"	morning rise	2244 Sep 30 21:30	23°0'04.07"	
				2244 Dec 13 14:01	0°0'	
conjunction	2239 Jul 04 06:25	11°0'52.46" -0°31'58"	retrograde	2245 Jan 09 20:00	0°0'40.18"	
minimum elong	2239 Jul 04 06:26	11°0'52.47" 0°31'58"		2245 Feb 06 08:56	30°48'	
max. Earth dist.	2239 Jul 04 11:33	11°0'54.26" 10.04286 AU	opposition	2245 Mar 17 23:40	27°0'17.49"	2°26'17"
morning rise	2239 Jul 22 10:49	14°0'13.42"	min. Earth dist.	2245 Mar 17 21:06	27°0'18.20"	8.43613 AU
retrograde	2239 Nov 04 09:49	22°0'27.34"	direct	2245 May 26 09:03	23°0'50.14"	
opposition	2240 Jan 10 05:02	18°0'59.12" -0°19'33"		2245 Aug 26 03:07	0°0'	
min. Earth dist.	2240 Jan 10 00:42	19°0'00.05" 8.05178 AU	evening set	2245 Sep 09 11:42	1°0'42.15"	
direct	2240 Mar 17 03:30	15°0'30.24"				
evening set	2240 Jun 30 04:48	23°0'43.12"	conjunction	2245 Sep 26 22:52	3°0'51.31"	2°04'55"
asc. node	2240 Jul 08 16:58	24°0'48.33"	minimum elong	2245 Sep 26 22:50	3°0'51.30"	2°04'55"
			max. Earth dist.	2245 Sep 27 01:05	3°0'52.12"	10.49104 AU
conjunction	2240 Jul 18 09:16	26°0'03.45" 0°00'52"	morning rise	2245 Oct 14 05:35	5°0'59.24"	
minimum elong	2240 Jul 18 09:16	26°0'03.45" 0°00'53"	retrograde	2246 Jan 22 13:22	13°0'27.12"	
behind sun begin	2240 Jul 18 01:54	26°0'01.23"	opposition	2246 Mar 31 02:29	10°0'05.54"	2°40'03"

min. Earth dist.	2246 Mar 31 00:14	10° <u>06</u> '20	8.54831 AU	min. Earth dist.	2252 Jun 11 23:18	21° <u>18</u> '24	9.03915 AU
direct	2246 Jun 09 01:06	6° <u>39</u> '15		direct	2252 Aug 22 01:43	17° <u>58</u> '52	
evening set	2246 Sep 22 18:58	14° <u>23</u> '31		evening set	2252 Dec 02 02:53	25° <u>03</u> '46	
conjunction	2246 Oct 10 01:41	16° <u>30</u> '00	2°13'04	conjunction	2252 Dec 18 18:49	27° <u>00</u> '49	1°05'23
minimum elong	2246 Oct 10 01:40	16° <u>29</u> '59	2°13'04	minimum elong	2252 Dec 18 18:51	27° <u>00</u> '49	1°05'23
max. Earth dist.	2246 Oct 10 03:25	16° <u>30</u> '32	10.60302 AU	max. Earth dist.	2252 Dec 18 15:14	26° <u>59</u> '45	11.05158 AU
morning rise	2246 Oct 27 03:45	18° <u>35</u> '06		morning rise	2253 Jan 04 09:17	28° <u>57</u> '29	
retrograde	2247 Feb 04 02:23	25° <u>55</u> '10			2253 Jan 13 13:27	0° <u>3</u>	
opposition	2247 Apr 12 24:00	22° <u>34</u> '55	2°45'49	retrograde	2253 Apr 14 14:49	5° <u>55</u> '54	
min. Earth dist.	2247 Apr 12 22:18	22° <u>35</u> '15	8.65914 AU	opposition	2253 Jun 23 23:08	2° <u>38</u> '26	1°05'15
direct	2247 Jun 22 08:12	19° <u>09</u> '22		min. Earth dist.	2253 Jun 24 02:46	2° <u>37</u> '46	9.05942 AU
evening set	2247 Oct 05 15:52	26° <u>45</u> '36			2253 Aug 04 11:07	30° <u>R</u> <u>1</u>	
conjunction	2247 Oct 22 18:31	28° <u>49</u> '33	2°14'51	direct	2253 Sep 02 23:22	29° <u>19</u> '12	
minimum elong	2247 Oct 22 18:31	28° <u>49</u> '33	2°14'50		2253 Oct 02 02:46	0° <u>3</u>	
max. Earth dist.	2247 Oct 22 19:48	28° <u>49</u> '57	10.71110 AU	evening set	2253 Dec 13 11:24	6° <u>32</u> '12	
	2247 Nov 01 10:38	0° <u>M</u>		conjunction	2253 Dec 30 02:42	8° <u>3</u> 18'01	0°40'54
morning rise	2247 Nov 08 16:35	0° <u>M</u> 52'11		minimum elong	2253 Dec 30 02:44	8° <u>3</u> 18'02	0°40'53
retrograde	2248 Feb 16 08:15	8° <u>M</u> 05'25		max. Earth dist.	2253 Dec 29 21:47	8° <u>3</u> 16'34	11.06115 AU
opposition	2248 Apr 24 16:31	4° <u>M</u> 46'07	2°43'55	morning rise	2254 Jan 15 17:33	10° <u>3</u> 14'42	
min. Earth dist.	2248 Apr 24 16:09	4° <u>M</u> 46'11	8.76355 AU	retrograde	2254 Apr 26 10:25	17° <u>3</u> 14'37	
direct	2248 Jul 04 08:32	1° <u>M</u> 21'43		opposition	2254 Jul 06 01:17	13° <u>3</u> 56'49	0°34'10
evening set	2248 Oct 17 03:15	8° <u>M</u> 50'08		min. Earth dist.	2254 Jul 06 05:33	13° <u>3</u> 56'02	9.05774 AU
conjunction	2248 Nov 03 02:22	10° <u>M</u> 51'53	2°10'34	direct	2254 Sep 14 21:47	10° <u>3</u> 38'09	
minimum elong	2248 Nov 03 02:24	10° <u>M</u> 51'53	2°10'34	evening set	2254 Dec 24 19:21	17° <u>3</u> 38'39	
max. Earth dist.	2248 Nov 03 02:09	10° <u>M</u> 51'49	10.81062 AU	conjunction	2255 Jan 10 10:34	19° <u>3</u> 35'37	0°14'48
morning rise	2248 Nov 19 21:26	12° <u>M</u> 52'29		minimum elong	2255 Jan 10 10:34	19° <u>3</u> 35'37	0°14'48
	2248 Dec 08 13:39	15° <u>M</u>		behind sun begin	2255 Jan 10 07:34	19° <u>3</u> 34'45	
retrograde	2249 Feb 27 08:39	19° <u>M</u> 59'59		behind sun end	2255 Jan 10 13:34	19° <u>3</u> 36'29	
opposition	2249 May 07 04:23	16° <u>M</u> 41'28	2°34'56	max. Earth dist.	2255 Jan 10 05:46	19° <u>3</u> 34'13	11.04869 AU
min. Earth dist.	2249 May 07 05:23	16° <u>M</u> 41'17	8.85721 AU	morning rise	2255 Jan 27 02:02	21° <u>3</u> 32'41	
	2249 May 30 14:57	15° <u>R</u> <u>M</u>		retrograde	2255 May 08 10:15	28° <u>3</u> 35'37	
direct	2249 Jul 17 03:26	13° <u>M</u> 18'14		opposition	2255 Jul 18 04:30	25° <u>3</u> 17'12	0°01'40
	2249 Sep 01 14:20	15° <u>M</u>		min. Earth dist.	2255 Jul 18 08:15	25° <u>3</u> 16'31	9.03422 AU
evening set	2249 Oct 29 06:09	20° <u>M</u> 39'22		desc. node	2255 Aug 06 07:10	23° <u>3</u> 55'10	
conjunction	2249 Nov 15 02:28	22° <u>M</u> 39'20	2°00'47	direct	2255 Sep 26 18:11	21° <u>3</u> 58'55	
minimum elong	2249 Nov 15 02:30	22° <u>M</u> 39'21	2°00'47	evening set	2256 Jan 05 04:21	28° <u>3</u> 59'19	
max. Earth dist.	2249 Nov 15 00:31	22° <u>M</u> 38'45	10.89753 AU		2256 Jan 13 19:53	0° <u>≈</u>	
morning rise	2249 Dec 01 19:27	24° <u>M</u> 38'18		conjunction	2256 Jan 21 19:52	0° <u>≈</u> 56'46	-0°12'04
	2250 Jan 25 00:20	0° <u>1</u>		minimum elong	2256 Jan 21 19:52	0° <u>≈</u> 56'46	0°12'04
retrograde	2250 Mar 11 06:01	1° <u>1</u> 41'22		behind sun begin	2256 Jan 21 15:02	0° <u>≈</u> 55'21	
	2250 Apr 27 02:03	30° <u>R</u> <u>M</u>		behind sun end	2256 Jan 22 00:42	0° <u>≈</u> 58'11	
opposition	2250 May 19 12:27	28° <u>M</u> 23'27	2°19'40	max. Earth dist.	2256 Jan 21 15:35	0° <u>≈</u> 55'31	11.01453 AU
min. Earth dist.	2250 May 19 14:07	28° <u>M</u> 23'08	8.93625 AU	morning rise	2256 Feb 07 12:16	2° <u>≈</u> 54'33	
direct	2250 Jul 29 15:49	25° <u>M</u> 01'23		retrograde	2256 May 19 13:19	10° <u>≈</u> 02'00	
	2250 Oct 20 18:39	0° <u>1</u>		opposition	2256 Jul 29 09:35	6° <u>≈</u> 42'45	-0°31'09
evening set	2250 Nov 10 01:59	2° <u>1</u> 16'02		min. Earth dist.	2256 Jul 29 13:07	6° <u>≈</u> 42'06	8.98955 AU
conjunction	2250 Nov 26 20:16	4° <u>1</u> 14'38	1°46'09	direct	2256 Oct 07 13:56	3° <u>≈</u> 24'35	
minimum elong	2250 Nov 26 20:18	4° <u>1</u> 14'38	1°46'09	evening set	2257 Jan 15 16:19	10° <u>≈</u> 26'24	
max. Earth dist.	2250 Nov 26 17:40	4° <u>1</u> 13'51	10.96830 AU	conjunction	2257 Feb 01 08:17	12° <u>≈</u> 24'40	-0°38'35
morning rise	2250 Dec 13 11:45	6° <u>1</u> 12'24		minimum elong	2257 Feb 01 08:15	12° <u>≈</u> 24'39	0°38'35
retrograde	2251 Mar 23 01:01	13° <u>1</u> 12'27		max. Earth dist.	2257 Feb 01 03:27	12° <u>≈</u> 23'14	10.95971 AU
opposition	2251 May 31 17:36	9° <u>1</u> 54'54	1°59'00	morning rise	2257 Feb 18 02:02	14° <u>≈</u> 23'30	
min. Earth dist.	2251 May 31 19:17	9° <u>1</u> 54'35	8.99761 AU		2257 Feb 23 08:18	15° <u>≈</u>	
direct	2251 Aug 10 23:13	6° <u>1</u> 33'56		retrograde	2257 May 31 21:31	21° <u>≈</u> 36'47	
evening set	2251 Nov 21 16:21	13° <u>1</u> 43'08		opposition	2257 Aug 10 17:22	18° <u>≈</u> 16'31	-1°03'08
conjunction	2251 Dec 08 09:16	15° <u>1</u> 40'45	1°27'25	min. Earth dist.	2257 Aug 10 21:27	18° <u>≈</u> 15'46	8.92507 AU
minimum elong	2251 Dec 08 09:19	15° <u>1</u> 40'45	1°27'26		2257 Oct 13 10:55	15° <u>R</u> <u>≈</u>	
max. Earth dist.	2251 Dec 08 06:44	15° <u>1</u> 40'00	11.02026 AU	direct	2257 Oct 19 11:07	14° <u>≈</u> 58'11	
morning rise	2251 Dec 24 23:52	17° <u>1</u> 37'45			2257 Oct 25 10:52	15° <u>≈</u>	
retrograde	2252 Apr 02 21:08	24° <u>1</u> 36'15		evening set	2258 Jan 27 08:30	22° <u>≈</u> 02'55	
opposition	2252 Jun 11 20:52	21° <u>1</u> 18'51	1°33'52	conjunction	2258 Feb 13 01:16	24° <u>≈</u> 02'19	-1°03'53

minimum elong	2258 Feb 13 01:14	24°  02'18	1°03'52	minimum elong	2264 Apr 29 10:59	9°  32'13	2°10'25
max. Earth dist.	2258 Feb 12 19:38	24°  00'37	10.88589 AU	max. Earth dist.	2264 Apr 29 10:26	9°  32'03	10.24436 AU
morning rise	2258 Mar 01 20:47	26°  02'33		morning rise	2264 May 17 01:54	11°  46'27	
	2258 Apr 07 16:27	0°  ✠			2264 Jun 13 05:38	15°  8	
retrograde	2258 Jun 13 10:12	3°  ✠22'57		retrograde	2264 Sep 01 00:16	19°  85'50	
opposition	2258 Aug 23 05:01	0°  ✠01'28	-1°33'03	opposition	2264 Nov 08 14:11	16°  828'46	-2°36'12
min. Earth dist.	2258 Aug 23 09:32	0°  ✠00'37	8.84265 AU	min. Earth dist.	2264 Nov 08 13:57	16°  828'48	8.19901 AU
	2258 Aug 23 12:51	30°  R 			2264 Nov 27 12:15	15°  R 	
direct	2258 Oct 31 11:04	26°  ✠42'44		direct	2265 Jan 14 06:31	13°  803'48	
	2259 Jan 03 15:48	0°  ✠			2265 Mar 01 18:21	15°  8	
evening set	2259 Feb 08 06:10	3°  ✠51'48		evening set	2265 Apr 26 03:47	20°  857'33	
conjunction	2259 Feb 25 00:23	5°  ✠52'42	-1°26'52	conjunction	2265 May 13 19:03	23°  813'00	-1°59'08
minimum elong	2259 Feb 25 00:20	5°  ✠52'41	1°26'52	minimum elong	2265 May 13 19:05	23°  813'01	1°59'08
max. Earth dist.	2259 Feb 24 19:11	5°  ✠51'08	10.79511 AU	max. Earth dist.	2265 May 13 20:45	23°  813'33	10.15560 AU
morning rise	2259 Mar 13 21:54	7°  ✠54'37		morning rise	2265 May 31 14:17	25°  829'46	
retrograde	2259 Jun 26 06:15	15°  ✠23'19			2265 Jul 09 12:02	0°  II	
opposition	2259 Sep 04 21:05	12°  ✠00'29	-1°59'35	retrograde	2265 Sep 15 10:42	3°  II46'05	
min. Earth dist.	2259 Sep 05 01:07	11°  ✠59'43	8.74472 AU	opposition	2265 Nov 22 13:15	0°  II16'23	-2°17'54
direct	2259 Nov 12 16:36	8°  ✠41'08		min. Earth dist.	2265 Nov 22 11:20	0°  II16'46	8.11959 AU
evening set	2260 Feb 20 11:04	15°  ✠55'55			2265 Nov 25 21:35	30°  R 	
				direct	2266 Jan 28 02:03	26°  850'11	
conjunction	2260 Mar 08 07:18	17°  ✠58'41	-1°46'29		2266 Mar 29 08:30	0°  II	
minimum elong	2260 Mar 08 07:16	17°  ✠58'41	1°46'29	evening set	2266 May 10 15:35	4°  II50'57	
max. Earth dist.	2260 Mar 08 03:04	17°  ✠57'24	10.69055 AU				
morning rise	2260 Mar 25 07:13	20°  ✠02'39		conjunction	2266 May 28 11:36	7°  II08'47	-1°40'47
retrograde	2260 Jul 08 10:59	27°  ✠40'24		minimum elong	2266 May 28 11:39	7°  II08'48	1°40'47
opposition	2260 Sep 16 18:05	24°  ✠16'09	-2°21'24	max. Earth dist.	2266 May 28 15:02	7°  II09'54	10.08707 AU
min. Earth dist.	2260 Sep 16 21:06	24°  ✠15'34	8.63538 AU	morning rise	2266 Jun 15 10:47	9°  II27'41	
direct	2260 Nov 24 00:44	20°  ✠56'00		retrograde	2266 Sep 29 23:48	17°  II46'34	
evening set	2261 Mar 04 00:20	28°  ✠17'40		opposition	2266 Dec 06 15:21	14°  II16'36	-1°51'09
	2261 Mar 17 22:00	0°  Y		min. Earth dist.	2266 Dec 06 12:10	14°  II17'15	8.06251 AU
conjunction	2261 Mar 20 23:05	0°  Y22'36	-2°01'36	direct	2267 Feb 11 02:44	10°  II49'14	
minimum elong	2261 Mar 20 23:03	0°  Y22'36	2°01'37	evening set	2267 May 25 10:25	18°  II55'46	
max. Earth dist.	2261 Mar 20 19:22	0°  Y21'27	10.57721 AU	conjunction	2267 Jun 12 10:32	21°  II15'27	-1°16'14
morning rise	2261 Apr 07 01:59	2°  Y28'54		minimum elong	2267 Jun 12 10:35	21°  II15'28	1°16'14
retrograde	2261 Jul 21 22:30	10°  Y16'00		max. Earth dist.	2267 Jun 12 15:04	21°  II16'56	10.04289 AU
opposition	2261 Sep 29 20:50	6°  Y50'21	-2°37'06	morning rise	2267 Jun 30 12:52	23°  II35'52	
min. Earth dist.	2261 Sep 29 23:00	6°  Y49'56	8.52011 AU		2267 Aug 28 22:00	0°  ☾	
direct	2261 Dec 06 15:02	3°  Y29'10		retrograde	2267 Oct 14 14:13	1°  ☾54'46	
evening set	2262 Mar 16 22:37	10°  Y58'33			2267 Nov 30 21:23	30°  R  II	
conjunction	2262 Apr 03 00:30	13°  Y05'56	-2°11'12	opposition	2267 Dec 20 19:18	28°  II24'56	-1°17'23
minimum elong	2262 Apr 03 00:29	13°  Y05'56	2°11'13	min. Earth dist.	2267 Dec 20 15:25	28°  II25'45	8.03125 AU
max. Earth dist.	2262 Apr 02 21:13	13°  Y04'55	10.46102 AU	direct	2268 Feb 25 07:49	24°  II56'34	
morning rise	2262 Apr 20 07:01	15°  Y14'47			2268 May 13 17:41	0°  ☾	
retrograde	2262 Aug 04 16:43	23°  Y11'02		evening set	2268 Jun 08 10:11	3°  ☾07'15	
opposition	2262 Oct 13 05:23	19°  Y44'03	-2°45'27	conjunction	2268 Jun 26 13:11	5°  ☾28'02	-0°46'55
min. Earth dist.	2262 Oct 13 07:01	19°  Y43'43	8.40494 AU	minimum elong	2268 Jun 26 13:13	5°  ☾28'03	0°46'55
direct	2262 Dec 19 13:03	16°  Y21'40		max. Earth dist.	2268 Jun 26 18:17	5°  ☾29'41	10.02573 AU
evening set	2263 Mar 30 06:42	23°  Y59'15		morning rise	2268 Jul 14 17:17	7°  ☾49'09	
conjunction	2263 Apr 16 12:29	26°  Y09'18	-2°14'21	retrograde	2268 Oct 28 02:33	16°  ☾05'35	
minimum elong	2263 Apr 16 12:30	26°  Y09'18	2°14'22	opposition	2269 Jan 02 23:34	12°  ☾36'16	-0°38'45
max. Earth dist.	2263 Apr 16 10:15	26°  Y08'35	10.34806 AU	min. Earth dist.	2269 Jan 02 19:30	12°  ☾37'06	8.02785 AU
morning rise	2263 May 03 23:06	28°  Y20'51		direct	2269 Mar 10 17:42	9°  ☾07'08	
	2263 May 17 14:11	0°  8		evening set	2269 Jun 23 12:15	17°  ☾20'05	
retrograde	2263 Aug 18 17:59	6°  825'22		conjunction	2269 Jul 11 16:36	19°  ☾41'02	-0°14'45
opposition	2263 Oct 26 19:16	2°  857'13	-2°45'21	minimum elong	2269 Jul 11 16:37	19°  ☾41'03	0°14'45
min. Earth dist.	2263 Oct 26 20:14	2°  857'01	8.29597 AU	behind sun begin	2269 Jul 11 13:57	19°  ☾40'11	
	2263 Dec 10 17:13	30°  R  Y		behind sun end	2269 Jul 11 19:17	19°  ☾41'54	
direct	2264 Jan 01 17:46	29°  Y33'33		max. Earth dist.	2269 Jul 11 21:48	19°  ☾42'43	10.03675 AU
	2264 Jan 23 14:40	0°  8		morning rise	2269 Jul 29 20:53	22°  ☾01'57	
evening set	2264 Apr 12 00:34	7°  819'25			2269 Oct 26 17:59	0°  Ω	
conjunction	2264 Apr 29 10:57	9°  832'12	-2°10'25	retrograde	2269 Nov 11 10:22	0°  Ω13'44	
					2269 Nov 27 01:54	30°  R  ☾	

asc. node	2269 Dec 28 06:31	28°♊19'56	direct	2276 Jun 15 12:51	13°♊39'59	
opposition	2270 Jan 17 02:42	26°♊45'15 0°02'09	evening set	2276 Sep 29 03:42	21°♊20'20	
min. Earth dist.	2270 Jan 16 22:35	26°♊46'06 8.05266 AU				
direct	2270 Mar 25 05:37	23°♊15'40	conjunction	2276 Oct 16 08:05	23°♊25'29 2°14'39	
	2270 Jun 26 16:12	0°♊	minimum elong	2276 Oct 16 08:04	23°♊25'29 2°14'38	
evening set	2270 Jul 08 13:50	1°♊28'51	max. Earth dist.	2276 Oct 16 09:28	23°♊25'54 10.66345 AU	
			morning rise	2276 Nov 02 08:07	25°♊29'17	
conjunction	2270 Jul 26 17:51	3°♊49'04 0°18'12		2276 Dec 14 09:30	0°♊	
minimum elong	2270 Jul 26 17:51	3°♊49'04 0°18'13	retrograde	2277 Feb 10 02:37	2°♊45'54	
max. Earth dist.	2270 Jul 26 23:06	3°♊50'45 10.07525 AU		2277 Apr 11 23:12	30°♊	
morning rise	2270 Aug 13 20:36	6°♊08'50	opposition	2277 Apr 19 06:21	29°♊26'33 2°45'30	
retrograde	2270 Nov 25 12:23	14°♊14'14	min. Earth dist.	2277 Apr 19 05:02	29°♊26'48 8.71941 AU	
opposition	2271 Jan 31 03:22	10°♊46'50 0°42'32	direct	2277 Jun 28 18:36	26°♊02'00	
min. Earth dist.	2271 Jan 30 22:55	10°♊47'45 8.10402 AU		2277 Sep 09 10:18	0°♊	
direct	2271 Apr 08 17:35	7°♊17'10	evening set	2277 Oct 11 20:05	3°♊34'19	
	2271 Jul 19 17:00	15°♊				
evening set	2271 Jul 23 12:15	15°♊28'34	conjunction	2277 Oct 28 20:47	5°♊37'04 2°13'05	
			minimum elong	2277 Oct 28 20:48	5°♊37'04 2°13'05	
conjunction	2271 Aug 10 14:17	17°♊47'12 0°49'42	max. Earth dist.	2277 Oct 28 21:13	5°♊37'12 10.77028 AU	
minimum elong	2271 Aug 10 14:15	17°♊47'11 0°49'42	morning rise	2277 Nov 14 17:19	7°♊38'36	
max. Earth dist.	2271 Aug 10 19:39	17°♊48'55 10.13868 AU	retrograde	2278 Feb 22 06:46	14°♊48'51	
morning rise	2271 Aug 28 13:49	20°♊05'00	opposition	2278 May 01 20:38	11°♊30'24 2°39'41	
retrograde	2271 Dec 09 08:16	28°♊02'45	min. Earth dist.	2278 May 01 20:02	11°♊30'31 8.82070 AU	
opposition	2272 Feb 14 00:18	24°♊36'40 1°19'48	direct	2278 Jul 11 17:10	8°♊07'05	
min. Earth dist.	2272 Feb 13 19:30	24°♊37'38 8.17867 AU		2278 Oct 19 14:32	15°♊	
direct	2272 Apr 22 02:10	21°♊07'15	evening set	2278 Oct 24 03:26	15°♊31'44	
evening set	2272 Aug 06 04:46	29°♊14'58				
	2272 Aug 12 04:10	0°♊	conjunction	2278 Nov 10 01:08	17°♊32'30 2°05'45	
			minimum elong	2278 Nov 10 01:10	17°♊32'31 2°05'45	
conjunction	2272 Aug 24 03:28	1°♊31'21 1°17'52	max. Earth dist.	2278 Nov 10 00:49	17°♊32'24 10.86483 AU	
minimum elong	2272 Aug 24 03:25	1°♊31'20 1°17'53	morning rise	2278 Nov 26 18:55	19°♊32'10	
max. Earth dist.	2272 Aug 24 08:59	1°♊33'06 10.22317 AU	retrograde	2279 Mar 06 07:32	26°♊37'18	
morning rise	2272 Sep 10 22:36	3°♊46'35	opposition	2279 May 14 07:00	23°♊19'34 2°27'11	
retrograde	2272 Dec 21 22:33	11°♊35'57	min. Earth dist.	2279 May 14 07:57	23°♊19'23 8.90723 AU	
opposition	2273 Feb 26 16:52	8°♊11'17 1°51'48	direct	2279 Jul 24 07:15	19°♊57'26	
min. Earth dist.	2273 Feb 26 11:55	8°♊12'17 8.27210 AU	evening set	2279 Nov 05 02:57	27°♊15'09	
direct	2273 May 06 06:50	4°♊42'27				
evening set	2273 Aug 20 13:13	12°♊44'51	conjunction	2279 Nov 21 22:11	29°♊14'21 1°53'14	
			minimum elong	2279 Nov 21 22:14	29°♊14'22 1°53'14	
conjunction	2273 Sep 07 07:38	14°♊58'32 1°41'14	max. Earth dist.	2279 Nov 21 20:06	29°♊13'44 10.94261 AU	
minimum elong	2273 Sep 07 07:35	14°♊58'31 1°41'15		2279 Nov 28 07:36	0°♊	
max. Earth dist.	2273 Sep 07 13:10	15°♊00'16 10.32369 AU	morning rise	2279 Dec 08 14:10	1°♊12'39	
morning rise	2273 Sep 24 21:45	17°♊10'52	retrograde	2280 Mar 17 03:18	8°♊14'09	
retrograde	2274 Jan 04 04:48	24°♊51'33	opposition	2280 May 25 14:06	4°♊56'52 2°08'51	
opposition	2274 Mar 12 04:20	21°♊28'20 2°17'00	min. Earth dist.	2280 May 25 16:55	4°♊56'21 8.97527 AU	
min. Earth dist.	2274 Mar 12 00:07	21°♊29'11 8.37879 AU	direct	2280 Aug 04 17:23	1°♊35'47	
direct	2274 May 20 06:50	18°♊00'21	evening set	2280 Nov 15 20:22	8°♊47'41	
evening set	2274 Sep 03 12:26	25°♊56'11				
			conjunction	2280 Dec 02 13:48	10°♊45'45 1°36'16	
conjunction	2274 Sep 21 02:04	28°♊06'56 1°58'46	minimum elong	2280 Dec 02 13:50	10°♊45'45 1°36'16	
minimum elong	2274 Sep 21 02:01	28°♊06'55 1°58'46	max. Earth dist.	2280 Dec 02 09:34	10°♊44'29 11.00078 AU	
max. Earth dist.	2274 Sep 21 06:41	28°♊08'22 10.43446 AU	morning rise	2280 Dec 19 04:51	12°♊43'07	
	2274 Oct 06 05:56	0°♊	retrograde	2281 Mar 28 22:36	19°♊42'29	
morning rise	2274 Oct 08 11:02	0°♊16'16	opposition	2281 Jun 06 18:35	16°♊25'23 1°45'37	
retrograde	2275 Jan 17 03:03	7°♊48'21	min. Earth dist.	2281 Jun 06 22:26	16°♊24'40 9.02277 AU	
opposition	2275 Mar 25 10:21	4°♊26'35 2°34'29	direct	2281 Aug 16 23:16	13°♊05'12	
min. Earth dist.	2275 Mar 25 07:27	4°♊27'09 8.49282 AU	evening set	2281 Nov 27 09:10	20°♊12'25	
direct	2275 Jun 03 01:12	0°♊59'38				
evening set	2275 Sep 17 01:24	8°♊47'59	conjunction	2281 Dec 14 01:30	22°♊09'46 1°15'36	
			minimum elong	2281 Dec 14 01:32	22°♊09'46 1°15'37	
conjunction	2275 Oct 04 10:11	10°♊55'50 2°09'57	max. Earth dist.	2281 Dec 13 20:33	22°♊08'18 11.03785 AU	
minimum elong	2275 Oct 04 10:10	10°♊55'49 2°09'56	morning rise	2281 Dec 30 16:06	24°♊06'38	
max. Earth dist.	2275 Oct 04 13:08	10°♊56'44 10.54964 AU		2282 Mar 04 03:37	0°♊	
morning rise	2275 Oct 21 14:23	13°♊02'16	retrograde	2282 Apr 09 17:12	1°♊05'21	
retrograde	2276 Jan 29 18:33	20°♊26'14		2282 May 17 05:40	30°♊	
opposition	2276 Apr 06 11:03	17°♊05'46 2°43'56	opposition	2282 Jun 18 21:44	27°♊48'08 1°18'26	
min. Earth dist.	2276 Apr 06 09:12	17°♊06'08 8.60829 AU	min. Earth dist.	2282 Jun 19 01:40	27°♊47'24 9.04858 AU	

direct	2282 Aug 29 00:24	24°  28'40	morning rise	2288 Mar 07 22:42	2°  53'49
	2282 Nov 25 02:30	0° 	retrograde	2288 Jun 19 23:13	10°  19'34
evening set	2282 Dec 08 18:54	1°  32'24	opposition	2288 Aug 29 15:20	6°  56'40 -1°48'27
			min. Earth dist.	2288 Aug 29 18:58	6°  55'59 8.76650 AU
conjunction	2282 Dec 25 10:37	3°  29'24 0°52'06	direct	2288 Nov 06 15:39	3°  36'59
minimum elong	2282 Dec 25 10:39	3°  29'25 0°52'06	evening set	2289 Feb 14 10:21	10°  49'54
max. Earth dist.	2282 Dec 25 05:47	3°  27'59 11.05290 AU			
morning rise	2283 Jan 11 01:12	5°  26'09	conjunction	2289 Mar 03 05:34	12°  52'03 -1°38'21
retrograde	2283 Apr 21 14:12	12°  25'46	minimum elong	2289 Mar 03 05:32	12°  52'02 1°38'21
opposition	2283 Jul 01 00:29	9°  08'08 0°48'19	max. Earth dist.	2289 Mar 03 00:30	12°  50'30 10.71559 AU
min. Earth dist.	2283 Jul 01 04:38	9°  07'22 9.05225 AU	morning rise	2289 Mar 20 04:30	14°  55'20
direct	2283 Sep 09 23:42	5°  34'10	retrograde	2289 Jul 03 00:03	22°  49'44
evening set	2283 Dec 20 03:26	12°  50'46	opposition	2289 Sep 11 10:25	19°  05'31 -2°12'33
			min. Earth dist.	2289 Sep 11 13:54	19°  04'51 8.66335 AU
conjunction	2284 Jan 05 18:48	14°  47'47 0°26'35	direct	2289 Nov 18 21:57	15°  45'06
minimum elong	2284 Jan 05 18:49	14°  47'48 0°26'35	evening set	2290 Feb 26 19:56	23°  04'23
max. Earth dist.	2284 Jan 05 13:18	14°  46'10 11.04577 AU			
morning rise	2284 Jan 22 09:55	16°  44'48	conjunction	2290 Mar 15 17:25	25°  08'31 -1°55'36
retrograde	2284 May 02 12:07	23°  46'46	minimum elong	2290 Mar 15 17:23	25°  08'31 1°55'36
opposition	2284 Jul 12 03:36	20°  28'27 0°16'17	max. Earth dist.	2290 Mar 15 13:17	25°  07'15 10.60814 AU
min. Earth dist.	2284 Jul 12 08:43	20°  27'31 9.03400 AU	morning rise	2290 Apr 01 19:06	27°  13'58
direct	2284 Sep 20 19:31	17°  09'45		2290 Apr 25 19:26	0° 
evening set	2284 Dec 30 12:13	24°  10'40	retrograde	2290 Jul 16 07:03	4°  57'37
desc. node	2285 Jan 15 10:00	26°  02'51	opposition	2290 Sep 24 11:02	1°  32'01 -2°31'08
			min. Earth dist.	2290 Sep 24 13:42	1°  31'30 8.55334 AU
conjunction	2285 Jan 16 03:35	26°  08'02 -0°00'03		2290 Oct 14 23:37	30° 
minimum elong	2285 Jan 16 03:33	26°  08'02 0°00'04	direct	2290 Dec 01 11:09	28°  10'46
behind sun begin	2285 Jan 15 21:06	26°  06'09		2291 Jan 16 08:36	0° 
behind sun end	2285 Jan 16 10:01	26°  09'55	evening set	2291 Mar 11 14:13	5°  37'19
max. Earth dist.	2285 Jan 15 21:03	26°  06'08 11.01693 AU			
morning rise	2285 Feb 01 19:42	28°  05'40	conjunction	2291 Mar 28 14:44	7°  43'47 -2°07'45
	2285 Feb 18 19:15	0° 	minimum elong	2291 Mar 28 14:42	7°  43'46 2°07'46
retrograde	2285 May 14 11:40	5°  11'31	max. Earth dist.	2291 Mar 28 12:35	7°  43'07 10.49623 AU
opposition	2285 Jul 24 08:06	1°  52'18 -0°16'35	morning rise	2291 Apr 14 19:37	9°  51'39
min. Earth dist.	2285 Jul 24 13:35	1°  51'17 8.99455 AU	retrograde	2291 Jul 29 22:33	17°  44'33
	2285 Aug 20 04:56	30° 	opposition	2291 Oct 07 17:16	14°  17'41 -2°42'51
direct	2285 Oct 02 16:16	28°  33'37	min. Earth dist.	2291 Oct 07 18:18	14°  17'28 8.44146 AU
	2285 Nov 13 21:11	0° 	direct	2291 Dec 14 06:40	10°  55'29
evening set	2286 Jan 10 22:53	5°  35'22	evening set	2292 Mar 23 18:15	18°  29'58
conjunction	2286 Jan 27 14:38	7°  33'26 -0°26'53	conjunction	2292 Apr 09 22:25	20°  38'59 -2°13'49
minimum elong	2286 Jan 27 14:37	7°  33'26 0°26'53	minimum elong	2292 Apr 09 22:25	20°  38'58 2°13'49
max. Earth dist.	2286 Jan 27 08:32	7°  31'38 10.96736 AU	max. Earth dist.	2292 Apr 09 21:50	20°  38'47 10.38525 AU
morning rise	2286 Feb 13 07:54	9°  31'59	morning rise	2292 Apr 27 07:03	22°  49'27
	2286 Apr 10 01:33	15° 		2292 Jul 11 07:19	0° 
retrograde	2286 May 26 18:04	16°  43'12	retrograde	2292 Aug 11 22:36	0°  51'00
	2286 Jul 13 21:44	15° 		2292 Sep 12 18:13	30° 
opposition	2286 Aug 05 14:54	13°  22'53 -0°49'09	opposition	2292 Oct 20 05:01	27°  23'03 -2°46'31
min. Earth dist.	2286 Aug 05 19:44	13°  21'59 8.93528 AU	min. Earth dist.	2292 Oct 20 04:37	27°  23'08 8.33329 AU
direct	2286 Oct 14 14:52	10°  04'03	direct	2292 Dec 26 07:13	23°  59'49
	2287 Jan 03 15:18	15° 		2293 Mar 23 07:28	0° 
evening set	2287 Jan 22 13:06	17°  08'05	evening set	2293 Apr 06 08:14	1°  42'31
conjunction	2287 Feb 08 05:41	19°  07'12 -0°52'53	conjunction	2293 Apr 23 16:34	3°  54'13 -2°13'01
minimum elong	2287 Feb 08 05:39	19°  07'11 0°52'53	minimum elong	2293 Apr 23 16:35	3°  54'13 2°13'01
max. Earth dist.	2287 Feb 08 00:38	19°  05'41 10.89883 AU	max. Earth dist.	2293 Apr 23 17:10	3°  54'24 10.28109 AU
morning rise	2287 Feb 25 00:20	21°  07'00	morning rise	2293 May 11 05:26	6°  07'23
retrograde	2287 Jun 08 05:24	28°  24'55	retrograde	2293 Aug 26 04:14	14°  16'25
opposition	2287 Aug 18 01:02	25°  03'20 -1°20'12	opposition	2293 Nov 02 22:21	10°  47'38 -2°41'18
min. Earth dist.	2287 Aug 18 04:52	25°  02'37 8.85834 AU	min. Earth dist.	2293 Nov 02 20:51	10°  47'57 8.23478 AU
direct	2287 Oct 26 13:16	21°  44'11	direct	2294 Jan 08 16:00	7°  23'19
evening set	2288 Feb 03 08:27	28°  05'18		2294 Apr 18 11:04	15° 
	2288 Feb 12 20:19	0° 	evening set	2294 Apr 20 07:48	15°  14'02
conjunction	2288 Feb 20 02:08	0°  52'26 -1°17'04	conjunction	2294 May 07 20:47	17°  28'24 -2°04'53
minimum elong	2288 Feb 20 02:06	0°  52'26 1°17'04	minimum elong	2294 May 07 20:49	17°  28'25 2°04'53
max. Earth dist.	2288 Feb 19 21:08	0°  50'56 10.81384 AU	max. Earth dist.	2294 May 07 22:24	17°  28'55 10.18971 AU

morning rise	2294 May 25 14:10	19° 8 44'10			2300 Aug 27 20:25	15° 8	
retrograde	2294 Sep 09 13:48	27° 8 58'57		retrograde	2300 Dec 03 21:30	22° 8 22'08	
opposition	2294 Nov 16 20:21	24° 8 29'38 -2°26'52		opposition	2301 Feb 08 10:56	18° 8 55'57	1°04'17
min. Earth dist.	2294 Nov 16 18:15	24° 8 30'03 8.15169 AU		min. Earth dist.	2301 Feb 08 06:59	18° 8 56'45	8.15135 AU
direct	2295 Jan 22 08:57	21° 8 04'12		direct	2301 Apr 17 05:12	15° 8 26'51	
evening set	2295 May 04 16:37	29° 8 02'17		evening set	2301 Aug 01 07:15	23° 8 36'26	
	2295 May 12 05:26	0° 8					
conjunction	2295 May 22 10:24	1° 8 19'08 -1°49'30		conjunction	2301 Aug 19 07:28	25° 8 53'51	1°06'17
minimum elong	2295 May 22 10:27	1° 8 19'09 1°49'30		minimum elong	2301 Aug 19 07:25	25° 8 53'50	1°06'17
max. Earth dist.	2295 May 22 13:16	1° 8 20'03 10.11651 AU		max. Earth dist.	2301 Aug 19 12:07	25° 8 55'20	10.18995 AU
morning rise	2295 Jun 09 08:04	3° 8 37'11		morning rise	2301 Sep 06 04:34	28° 8 10'15	
retrograde	2295 Sep 24 02:20	11° 8 55'25		retrograde	2301 Sep 21 03:51	0° 8	
opposition	2295 Nov 30 21:47	8° 8 25'53 -2°03'36		opposition	2301 Dec 17 14:50	6° 8 03'30	
min. Earth dist.	2295 Nov 30 19:01	8° 8 26'27 8.08905 AU		opposition	2302 Feb 22 05:48	2° 8 38'36	1°38'49
direct	2296 Feb 05 08:20	4° 8 59'24		min. Earth dist.	2302 Feb 22 02:27	2° 8 39'16	8.23344 AU
evening set	2296 May 18 09:08	13° 8 03'42		direct	2302 Mar 31 11:13	30° 8 8	
				evening set	2302 May 01 13:03	29° 8 09'46	
conjunction	2296 Jun 05 07:24	15° 8 22'36 -1°27'28			2302 Jun 01 13:27	0° 8	
minimum elong	2296 Jun 05 07:27	15° 8 22'37 1°27'27			2302 Aug 15 19:58	7° 8 14'54	
max. Earth dist.	2296 Jun 05 11:43	15° 8 24'00 10.06589 AU		conjunction	2302 Sep 02 16:12	9° 8 29'48	1°31'53
morning rise	2296 Jun 23 08:35	17° 8 42'24		minimum elong	2302 Sep 02 16:09	9° 8 29'47	1°31'54
retrograde	2296 Oct 07 16:14	26° 8 01'34		max. Earth dist.	2302 Sep 02 19:51	9° 8 30'58	10.28029 AU
opposition	2296 Dec 14 01:34	22° 8 32'07 -1°32'36		morning rise	2302 Sep 20 08:40	11° 8 43'29	
min. Earth dist.	2296 Dec 13 21:48	22° 8 32'54 8.05057 AU		retrograde	2302 Dec 30 22:45	19° 8 28'11	
direct	2297 Feb 18 12:59	19° 8 04'41		opposition	2303 Mar 07 19:52	16° 8 04'34	2°07'07
evening set	2297 Jun 02 07:12	27° 8 13'36		min. Earth dist.	2303 Mar 07 16:49	16° 8 05'10	8.33125 AU
				direct	2303 May 15 17:24	12° 8 36'18	
conjunction	2297 Jun 20 09:01	29° 8 33'53 -0°59'59		evening set	2303 Aug 29 23:40	20° 8 35'25	
minimum elong	2297 Jun 20 09:04	29° 8 33'53 0°59'59					
max. Earth dist.	2297 Jun 20 14:36	29° 8 35'42 10.04068 AU		conjunction	2303 Sep 16 15:18	22° 8 47'29	1°52'02
	2297 Jun 23 17:13	0° 8		minimum elong	2303 Sep 16 15:15	22° 8 47'28	1°52'03
morning rise	2297 Jul 08 12:32	1° 8 54'42		max. Earth dist.	2303 Sep 16 18:14	22° 8 48'25	10.38357 AU
retrograde	2297 Oct 22 05:21	10° 8 12'16		morning rise	2303 Oct 04 02:39	24° 8 58'12	
opposition	2297 Dec 28 06:07	6° 8 43'13 -0°55'46			2303 Nov 19 08:05	0° 8	
min. Earth dist.	2297 Dec 28 01:30	6° 8 44'10 8.03815 AU		retrograde	2304 Jan 12 23:54	2° 8 34'17	
direct	2298 Mar 04 22:04	3° 8 14'58			2304 Mar 09 23:18	30° 8 8	
evening set	2298 Jun 17 08:45	11° 8 26'46		opposition	2304 Mar 20 04:28	29° 8 11'54	2°28'01
				min. Earth dist.	2304 Mar 20 01:22	29° 8 12'31	8.43918 AU
conjunction	2298 Jul 05 12:45	13° 8 47'36 -0°28'48		direct	2304 May 28 15:20	25° 8 44'26	
minimum elong	2298 Jul 05 12:47	13° 8 47'37 0°28'48			2304 Aug 10 24:00	0° 8	
max. Earth dist.	2298 Jul 05 18:55	13° 8 49'36 10.04158 AU		evening set	2304 Sep 11 17:10	3° 8 36'23	
morning rise	2298 Jul 23 17:04	16° 8 08'34					
retrograde	2298 Nov 05 15:19	24° 8 22'19		conjunction	2304 Sep 29 04:08	5° 8 45'33	2°05'59
opposition	2299 Jan 11 09:51	20° 8 53'58 -0°15'32		minimum elong	2304 Sep 29 04:05	5° 8 45'32	2°06'00
min. Earth dist.	2299 Jan 11 04:58	20° 8 54'58 8.05155 AU		max. Earth dist.	2304 Sep 29 06:58	5° 8 46'26	10.49413 AU
direct	2299 Mar 19 08:47	17° 8 25'09		morning rise	2304 Oct 16 10:25	7° 8 53'19	
asc. node	2299 Jun 03 17:09	22° 8 11'09		retrograde	2305 Jan 24 19:41	15° 8 21'02	
evening set	2299 Jul 02 11:08	25° 8 38'06		opposition	2305 Apr 02 07:29	11° 8 59'49	2°40'57
				min. Earth dist.	2305 Apr 02 04:56	12° 8 00'19	8.55144 AU
conjunction	2299 Jul 20 15:35	27° 8 58'38 0°04'08		direct	2305 Jun 11 05:02	8° 8 33'18	
minimum elong	2299 Jul 20 15:35	27° 8 58'38 0°04'09		evening set	2305 Sep 25 00:04	16° 8 17'23	
behind sun begin	2299 Jul 20 08:20	27° 8 56'19					
behind sun end	2299 Jul 20 22:50	28° 8 00'58		conjunction	2305 Oct 12 06:34	18° 8 23'48	2°13'28
max. Earth dist.	2299 Jul 20 21:39	28° 8 00'34 10.06764 AU		minimum elong	2305 Oct 12 06:33	18° 8 23'47	2°13'28
	2299 Aug 05 07:43	0° 8		max. Earth dist.	2305 Oct 12 08:54	18° 8 24'31	10.60620 AU
morning rise	2299 Aug 07 19:00	0° 8 18'52		morning rise	2305 Oct 29 08:18	20° 8 28'48	
retrograde	2299 Nov 19 21:11	8° 8 27'04		retrograde	2306 Feb 06 06:57	27° 8 48'44	
opposition	2300 Jan 25 11:53	4° 8 59'43 0°25'23		opposition	2306 Apr 15 05:04	24° 8 28'36	2°45'53
min. Earth dist.	2300 Jan 25 07:20	5° 8 00'39 8.08972 AU		min. Earth dist.	2306 Apr 15 03:44	24° 8 28'51	8.66234 AU
direct	2300 Apr 02 19:42	1° 8 30'37		direct	2306 Jun 24 12:40	21° 8 03'08	
evening set	2300 Jul 17 11:29	9° 8 42'52		evening set	2306 Oct 07 20:45	28° 8 39'10	
					2306 Oct 19 01:24	0° 8	
conjunction	2300 Aug 04 14:35	12° 8 02'13 0°36'27					
minimum elong	2300 Aug 04 14:33	12° 8 02'12 0°36'27		conjunction	2306 Oct 24 23:07	0° 8 43'02	2°14'33
max. Earth dist.	2300 Aug 04 20:06	12° 8 03'59 10.11777 AU		minimum elong	2306 Oct 24 23:07	0° 8 43'02	2°14'32
morning rise	2300 Aug 22 15:28	14° 8 20'52		max. Earth dist.	2306 Oct 25 00:07	0° 8 43'20	10.71431 AU

morning rise	2306 Nov 10 21:03	2° \mathbb{M} 45'36		opposition	2313 Jul 08 05:27	15° \mathcal{Z} 46'36	0°30'27
retrograde	2307 Feb 18 12:04	9° \mathbb{M} 58'41		min. Earth dist.	2313 Jul 08 08:51	15° \mathcal{Z} 45'58	9.05971 AU
opposition	2307 Apr 27 21:31	6° \mathbb{M} 39'28	2°43'09	direct	2313 Sep 17 01:57	12° \mathcal{Z} 27'57	
min. Earth dist.	2307 Apr 27 21:37	6° \mathbb{M} 39'27	8.76677 AU	evening set	2313 Dec 26 22:04	19° \mathcal{Z} 28'07	
direct	2307 Jul 07 14:28	3° \mathbb{M} 15'08					
evening set	2307 Oct 20 07:48	10° \mathbb{M} 43'18		conjunction	2314 Jan 12 13:25	21° \mathcal{Z} 25'03	0°11'45
				minimum elong	2314 Jan 12 13:25	21° \mathcal{Z} 25'03	0°11'44
conjunction	2307 Nov 06 06:41	12° \mathbb{M} 44'58	2°09'37	behind sun begin	2314 Jan 12 08:26	21° \mathcal{Z} 23'36	
minimum elong	2307 Nov 06 06:42	12° \mathbb{M} 44'58	2°09'37	behind sun end	2314 Jan 12 18:24	21° \mathcal{Z} 26'30	
max. Earth dist.	2307 Nov 06 05:53	12° \mathbb{M} 44'43	10.81382 AU	max. Earth dist.	2314 Jan 12 09:33	21° \mathcal{Z} 23'55	11.05045 AU
morning rise	2307 Nov 23 01:44	14° \mathbb{M} 45'30		morning rise	2314 Jan 29 04:52	23° \mathcal{Z} 22'05	
	2307 Nov 25 03:05	15° \mathbb{M}			2314 Apr 17 21:45	0° \approx	
retrograde	2308 Mar 01 13:02	21° \mathbb{M} 52'51		retrograde	2314 May 10 13:44	0° \approx 25'00	
opposition	2308 May 09 09:25	18° \mathbb{M} 34'22	2°33'24		2314 Jun 02 11:50	30° \mathbb{R} \mathcal{Z}	
min. Earth dist.	2308 May 09 10:02	18° \mathbb{M} 34'15	8.86034 AU	desc. node	2314 Jun 26 08:40	28° \mathcal{Z} 47'35	
direct	2308 Jul 19 08:50	15° \mathbb{M} 11'12		opposition	2314 Jul 20 08:27	27° \mathcal{Z} 06'30	-0°02'05
evening set	2308 Oct 31 10:11	22° \mathbb{M} 31'58		min. Earth dist.	2314 Jul 20 11:40	27° \mathcal{Z} 05'55	9.03575 AU
				direct	2314 Sep 28 21:31	23° \mathcal{Z} 48'14	
conjunction	2308 Nov 17 06:27	24° \mathbb{M} 31'52	1°59'15		2314 Dec 31 06:03	0° \approx	
minimum elong	2308 Nov 17 06:29	24° \mathbb{M} 31'53	1°59'14	evening set	2315 Jan 07 07:01	0° \approx 48'22	
max. Earth dist.	2308 Nov 17 04:59	24° \mathbb{M} 31'26	10.90063 AU				
morning rise	2308 Dec 03 23:21	26° \mathbb{M} 30'48		conjunction	2315 Jan 23 22:29	2° \approx 45'48	-0°15'06
	2309 Jan 05 02:47	0° \mathcal{Z}		minimum elong	2315 Jan 23 22:28	2° \approx 45'48	0°15'05
retrograde	2309 Mar 13 09:50	3° \mathcal{Z} 33'44		behind sun begin	2315 Jan 23 19:47	2° \approx 45'01	
opposition	2309 May 21 17:22	0° \mathcal{Z} 15'46	2°17'27	behind sun end	2315 Jan 24 01:10	2° \approx 46'35	
min. Earth dist.	2309 May 21 18:10	0° \mathcal{Z} 15'37	8.93921 AU	max. Earth dist.	2315 Jan 23 18:08	2° \approx 44'31	11.01587 AU
	2309 May 25 05:42	30° \mathbb{R} \mathbb{M}		morning rise	2315 Feb 09 14:57	4° \approx 43'34	
direct	2309 Jul 31 21:23	26° \mathbb{M} 53'46		retrograde	2315 May 22 17:35	11° \approx 51'01	
	2309 Oct 03 23:04	0° \mathcal{Z}		opposition	2315 Aug 01 13:30	8° \approx 31'44	-0°34'48
evening set	2309 Nov 12 05:41	4° \mathcal{Z} 08'01		min. Earth dist.	2315 Aug 01 17:15	8° \approx 31'02	8.99074 AU
				direct	2315 Oct 10 16:54	5° \approx 13'34	
conjunction	2309 Nov 29 00:02	6° \mathcal{Z} 06'33	1°44'06	evening set	2316 Jan 18 18:54	12° \approx 15'11	
minimum elong	2309 Nov 29 00:04	6° \mathcal{Z} 06'34	1°44'06				
max. Earth dist.	2309 Nov 28 22:24	6° \mathcal{Z} 06'04	10.97121 AU	conjunction	2316 Feb 04 10:48	14° \approx 13'26	-0°41'29
morning rise	2309 Dec 15 15:24	8° \mathcal{Z} 04'17		minimum elong	2316 Feb 04 10:46	14° \approx 13'25	0°41'28
retrograde	2310 Mar 25 06:18	15° \mathcal{Z} 04'10		max. Earth dist.	2316 Feb 04 05:36	14° \approx 11'53	10.96082 AU
opposition	2310 Jun 02 22:20	11° \mathcal{Z} 46'35	1°56'13		2316 Feb 10 23:20	15° \approx	
min. Earth dist.	2310 Jun 02 23:48	11° \mathcal{Z} 46'19	9.00035 AU	morning rise	2316 Feb 21 04:43	16° \approx 12'16	
direct	2310 Aug 13 03:57	8° \mathcal{Z} 25'39		retrograde	2316 Jun 02 23:47	23° \approx 25'37	
evening set	2310 Nov 23 19:50	15° \mathcal{Z} 34'26		opposition	2316 Aug 12 21:09	20° \approx 05'19	-1°06'32
				min. Earth dist.	2316 Aug 13 01:29	20° \approx 04'30	8.92616 AU
conjunction	2310 Dec 10 12:42	17° \mathcal{Z} 32'00	1°24'57	direct	2316 Oct 21 14:07	16° \approx 47'00	
minimum elong	2310 Dec 10 12:44	17° \mathcal{Z} 32'01	1°24'57	evening set	2317 Jan 29 11:00	23° \approx 51'36	
max. Earth dist.	2310 Dec 10 10:13	17° \mathcal{Z} 31'16	11.02293 AU				
morning rise	2310 Dec 27 03:20	19° \mathcal{Z} 28'59		conjunction	2317 Feb 15 03:53	25° \approx 51'00	-1°06'30
retrograde	2311 Apr 06 00:16	26° \mathcal{Z} 27'18		minimum elong	2317 Feb 15 03:50	25° \approx 50'59	1°06'30
opposition	2311 Jun 15 01:32	23° \mathcal{Z} 09'52	1°30'38	max. Earth dist.	2317 Feb 14 22:52	25° \approx 49'29	10.88697 AU
min. Earth dist.	2311 Jun 15 04:20	23° \mathcal{Z} 09'21	9.04167 AU	morning rise	2317 Mar 03 23:27	27° \approx 51'12	
direct	2311 Aug 25 05:01	19° \mathcal{Z} 49'53			2317 Mar 22 22:03	0° \mathbb{H}	
evening set	2311 Dec 05 06:05	26° \mathcal{Z} 54'24		retrograde	2317 Jun 15 13:16	5° \mathbb{H} 11'44	
				opposition	2317 Aug 25 08:31	1° \mathbb{H} 50'12	-1°36'03
conjunction	2311 Dec 21 21:54	28° \mathcal{Z} 51'23	1°02'36	min. Earth dist.	2317 Aug 25 12:30	1° \mathbb{H} 49'27	8.84387 AU
minimum elong	2311 Dec 21 21:56	28° \mathcal{Z} 51'24	1°02'36		2317 Sep 20 06:12	30° \mathbb{R} \approx	
max. Earth dist.	2311 Dec 21 17:57	28° \mathcal{Z} 50'13	11.05402 AU	direct	2317 Nov 02 15:32	28° \approx 31'31	
	2311 Dec 31 15:16	0° \mathcal{Z}			2317 Dec 14 15:17	0° \mathbb{H}	
morning rise	2312 Jan 07 12:31	0° \mathcal{Z} 48'02		evening set	2318 Feb 10 08:45	5° \mathbb{H} 40'27	
retrograde	2312 Apr 16 18:07	7° \mathcal{Z} 46'21					
opposition	2312 Jun 26 03:38	4° \mathcal{Z} 28'48	1°01'42	conjunction	2318 Feb 27 03:04	7° \mathbb{H} 41'22	-1°29'07
min. Earth dist.	2312 Jun 26 07:11	4° \mathcal{Z} 28'09	9.06170 AU	minimum elong	2318 Feb 27 03:02	7° \mathbb{H} 41'21	1°29'07
direct	2312 Sep 05 04:55	1° \mathcal{Z} 09'34		max. Earth dist.	2318 Feb 26 22:53	7° \mathbb{H} 40'05	10.79640 AU
evening set	2312 Dec 15 14:18	8° \mathcal{Z} 11'12		morning rise	2318 Mar 16 00:33	9° \mathbb{H} 43'16	
				retrograde	2318 Jun 28 10:55	17° \mathbb{H} 12'02	
conjunction	2313 Jan 01 05:40	10° \mathcal{Z} 08'00	0°37'54	opposition	2318 Sep 07 00:21	13° \mathbb{H} 49'10	-2°02'04
minimum elong	2313 Jan 01 05:41	10° \mathcal{Z} 08'00	0°37'54	min. Earth dist.	2318 Sep 07 03:35	13° \mathbb{H} 48'34	8.74627 AU
max. Earth dist.	2313 Jan 01 01:18	10° \mathcal{Z} 06'42	11.06333 AU	direct	2318 Nov 14 18:44	10° \mathbb{H} 29'53	
morning rise	2313 Jan 17 20:35	12° \mathcal{Z} 04'39		evening set	2319 Feb 22 13:43	17° \mathbb{H} 44'33	
retrograde	2313 Apr 28 14:24	19° \mathcal{Z} 04'30					

conjunction	2319 Mar 11 09:58	19° H 47'17	-1°48'15	conjunction	2325 May 30 15:43	8° II 59'09	-1°38'41
minimum elong	2319 Mar 11 09:55	19° H 47'17	1°48'15	minimum elong	2325 May 30 15:46	8° II 59'10	1°38'40
max. Earth dist.	2319 Mar 11 05:49	19° H 46'02	10.69213 AU	max. Earth dist.	2325 May 30 18:23	9° II 00'00	10.08605 AU
morning rise	2319 Mar 28 09:56	21° H 51'14		morning rise	2325 Jun 17 15:08	11° II 18'08	
retrograde	2319 Jul 11 14:17	29° H 29'01		retrograde	2325 Oct 02 04:39	19° II 36'57	
opposition	2319 Sep 19 21:17	26° H 04'47	-2°23'13	opposition	2325 Dec 08 18:22	16° II 07'03	-1°48'12
min. Earth dist.	2319 Sep 20 00:09	26° H 04'14	8.63702 AU	min. Earth dist.	2325 Dec 08 15:42	16° II 07'36	8.06138 AU
direct	2319 Nov 27 03:00	22° H 44'40		direct	2326 Feb 13 04:33	12° II 39'40	
	2320 Mar 05 06:16	0° Y		evening set	2326 May 27 14:33	20° II 46'27	
evening set	2320 Mar 06 03:03	0° Y 06'17					
conjunction	2320 Mar 23 01:48	2° Y 11'13	-2°02'48	conjunction	2326 Jun 14 14:47	23° II 06'12	-1°13'38
minimum elong	2320 Mar 23 01:46	2° Y 11'13	2°02'48	minimum elong	2326 Jun 14 14:50	23° II 06'13	1°13'38
max. Earth dist.	2320 Mar 22 21:17	2° Y 09'50	10.57873 AU	max. Earth dist.	2326 Jun 14 18:14	23° II 07'19	10.04184 AU
morning rise	2320 Apr 09 04:56	4° Y 17'31		morning rise	2326 Jul 02 17:21	25° II 26'42	
retrograde	2320 Jul 24 01:36	12° Y 04'39			2326 Aug 10 16:33	0° E	
opposition	2320 Oct 01 23:55	8° Y 39'03	-2°38'10	retrograde	2326 Oct 16 18:46	3° E 45'30	
min. Earth dist.	2320 Oct 02 02:44	8° Y 38'30	8.52143 AU	opposition	2326 Dec 22 22:28	0° E 15'44	-1°13'55
direct	2320 Dec 08 17:57	5° Y 17'53		min. Earth dist.	2326 Dec 22 19:24	0° E 16'22	8.03021 AU
evening set	2321 Mar 19 01:29	12° Y 47'18			2326 Dec 26 02:36	30° R II	
conjunction	2321 Apr 05 03:30	14° Y 54'42	-2°11'45	direct	2327 Feb 27 11:46	26° II 47'19	
minimum elong	2321 Apr 05 03:29	14° Y 54'42	2°11'45		2327 Apr 29 10:03	0° E	
max. Earth dist.	2321 Apr 04 23:43	14° Y 53'31	10.46207 AU	evening set	2327 Jun 11 14:38	4° E 58'16	
morning rise	2321 Apr 22 10:14	17° Y 03'35		conjunction	2327 Jun 29 17:43	7° E 19'05	-0°44'00
retrograde	2321 Aug 06 20:11	24° Y 59'51		minimum elong	2327 Jun 29 17:45	7° E 19'05	0°43'59
opposition	2321 Oct 15 08:15	21° Y 32'56	-2°45'41	max. Earth dist.	2327 Jun 29 21:44	7° E 20'23	10.02486 AU
min. Earth dist.	2321 Oct 15 10:32	21° Y 32'29	8.40569 AU	morning rise	2327 Jul 17 22:00	9° E 40'15	
direct	2321 Dec 21 15:19	18° Y 10'35		retrograde	2327 Oct 31 05:24	17° E 56'32	
evening set	2322 Apr 01 09:40	25° Y 48'16		opposition	2328 Jan 06 02:45	14° E 27'17	-0°34'58
conjunction	2322 Apr 18 15:45	27° Y 58'21	-2°14'12	min. Earth dist.	2328 Jan 05 23:20	14° E 27'59	8.02709 AU
minimum elong	2322 Apr 18 15:45	27° Y 58'21	2°14'13	direct	2328 Mar 12 22:32	10° E 58'06	
max. Earth dist.	2322 Apr 18 13:43	27° Y 57'43	10.34848 AU	evening set	2328 Jun 25 16:56	19° E 11'17	
	2322 May 04 18:26	0° E		conjunction	2328 Jul 13 21:19	21° E 32'15	-0°11'41
morning rise	2322 May 06 02:30	0° E 09'57		minimum elong	2328 Jul 13 21:20	21° E 32'15	0°11'40
retrograde	2322 Aug 20 20:42	8° E 14'31		behind sun begin	2328 Jul 13 16:13	21° E 30'37	
opposition	2322 Oct 28 22:08	4° E 46'25	-2°44'44	behind sun end	2328 Jul 14 02:27	21° E 33'54	
min. Earth dist.	2322 Oct 28 23:06	4° E 46'13	8.29606 AU	max. Earth dist.	2328 Jul 14 01:56	21° E 33'44	10.03617 AU
direct	2323 Jan 03 21:15	1° E 22'48		morning rise	2328 Aug 01 01:37	23° E 53'09	
evening set	2323 Apr 15 03:42	9° E 08'47			2328 Sep 26 03:27	0° O	
conjunction	2323 May 02 14:26	11° E 21'40	-2°09'34	retrograde	2328 Nov 13 12:42	2° O 04'47	
minimum elong	2323 May 02 14:28	11° E 21'40	2°09'34	asc. node	2328 Nov 24 21:11	1° O 57'35	
max. Earth dist.	2323 May 02 14:25	11° E 21'39	10.24414 AU		2329 Jan 01 21:01	30° R E	
morning rise	2323 May 20 05:31	13° E 35'58		opposition	2329 Jan 19 05:59	28° E 36'20	0°06'00
	2323 May 31 14:48	15° E		min. Earth dist.	2329 Jan 19 01:53	28° E 37'11	8.05224 AU
retrograde	2323 Sep 04 03:04	21° E 47'24		direct	2329 Mar 27 10:10	25° E 06'43	
opposition	2323 Nov 11 17:01	18° E 18'22	-2°34'43		2329 Jun 13 00:27	0° O	
min. Earth dist.	2323 Nov 11 16:24	18° E 18'29	8.19851 AU	evening set	2329 Jul 10 18:29	3° O 20'03	
	2324 Jan 06 13:05	15° R E		conjunction	2329 Jul 28 22:30	5° O 40'15	0°21'15
direct	2324 Jan 17 09:42	14° E 53'27		minimum elong	2329 Jul 28 22:29	5° O 40'15	0°21'16
	2324 Jan 28 04:08	15° E		max. Earth dist.	2329 Jul 29 03:52	5° O 41'59	10.07502 AU
evening set	2324 Apr 28 07:22	22° E 47'22		morning rise	2329 Aug 16 01:03	7° O 59'57	
conjunction	2324 May 15 22:56	25° E 02'55	-1°57'37		2329 Oct 24 04:31	15° O	
minimum elong	2324 May 15 22:58	25° E 02'56	1°57'37	retrograde	2329 Nov 27 15:33	16° O 05'13	
max. Earth dist.	2324 May 16 00:33	25° E 03'27	10.15489 AU		2330 Jan 01 10:37	15° R O	
morning rise	2324 Jun 02 18:20	27° E 19'45		opposition	2330 Feb 02 06:41	12° O 37'49	0°46'13
	2324 Jun 24 18:24	0° II		min. Earth dist.	2330 Feb 02 01:49	12° O 38'49	8.10399 AU
retrograde	2324 Sep 17 14:31	5° II 36'04		direct	2330 Apr 10 20:59	9° O 08'06	
opposition	2324 Nov 24 16:04	2° II 06'25	-2°15'38		2330 Jul 06 14:42	15° O	
min. Earth dist.	2324 Nov 24 14:07	2° II 06'49	8.11865 AU	evening set	2330 Jul 25 16:53	17° O 19'34	
	2324 Dec 22 11:14	30° R E		conjunction	2330 Aug 12 18:51	19° O 38'10	0°52'31
direct	2325 Jan 30 04:00	28° E 40'13		minimum elong	2330 Aug 12 18:49	19° O 38'09	0°52'31
	2325 Mar 09 07:38	0° II		max. Earth dist.	2330 Aug 13 00:46	19° O 40'04	10.13884 AU
evening set	2325 May 12 19:31	6° II 41'13		morning rise	2330 Aug 30 18:04	21° O 55'53	
				retrograde	2330 Dec 11 12:43	29° O 53'28	

opposition	2331 Feb 16 03:38	26°♎27'21	1°23'06	opposition	2337 May 03 23:54	13°♎18'48	2°38'33
min. Earth dist.	2331 Feb 15 22:36	26°♎28'23	8.17903 AU	min. Earth dist.	2337 May 03 23:11	13°♎18'56	8.82329 AU
direct	2331 Apr 25 05:28	22°♎57'53		direct	2337 Jul 13 19:03	9°♎55'35	
	2331 Jul 31 12:13	0°♎			2337 Oct 05 13:25	15°♎	
evening set	2331 Aug 09 09:22	1°♎05'39		evening set	2337 Oct 26 05:57	17°♎19'57	
conjunction	2331 Aug 27 07:51	3°♎21'57	1°20'19	conjunction	2337 Nov 12 03:30	19°♎20'40	2°04'33
minimum elong	2331 Aug 27 07:48	3°♎21'56	1°20'19	minimum elong	2337 Nov 12 03:32	19°♎20'41	2°04'33
max. Earth dist.	2331 Aug 27 13:46	3°♎23'50	10.22368 AU	max. Earth dist.	2337 Nov 12 03:28	19°♎20'39	10.86791 AU
morning rise	2331 Sep 14 02:36	5°♎37'06		morning rise	2337 Nov 28 21:14	21°♎20'18	
retrograde	2331 Dec 25 01:59	13°♎26'16		retrograde	2338 Mar 08 09:04	28°♎25'18	
opposition	2332 Feb 29 20:15	10°♎01'36	1°54'32	opposition	2338 May 16 10:10	25°♎07'37	2°25'22
min. Earth dist.	2332 Feb 29 15:40	10°♎02'31	8.27280 AU	min. Earth dist.	2338 May 16 11:18	25°♎07'24	8.91085 AU
direct	2332 May 08 10:45	6°♎32'42		direct	2338 Jul 26 10:24	21°♎45'33	
evening set	2332 Aug 22 17:36	14°♎35'07		evening set	2338 Nov 07 05:11	29°♎02'58	
					2338 Nov 15 07:18	0°♎	
conjunction	2332 Sep 09 11:40	16°♎48'40	1°43'10	conjunction	2338 Nov 24 00:15	1°♎02'05	1°51'31
minimum elong	2332 Sep 09 11:36	16°♎48'39	1°43'11	minimum elong	2338 Nov 24 00:18	1°♎02'06	1°51'31
max. Earth dist.	2332 Sep 09 17:00	16°♎50'21	10.32451 AU	max. Earth dist.	2338 Nov 23 21:58	1°♎01'24	10.94682 AU
morning rise	2332 Sep 27 01:25	19°♎00'54		morning rise	2338 Dec 10 16:19	3°♎00'20	
retrograde	2333 Jan 06 07:47	26°♎41'25		retrograde	2339 Mar 20 05:42	10°♎01'39	
opposition	2333 Mar 14 07:46	23°♎18'13	2°19'02	opposition	2339 May 28 17:02	6°♎44'25	2°06'27
min. Earth dist.	2333 Mar 14 04:13	23°♎18'56	8.37986 AU	min. Earth dist.	2339 May 28 19:30	6°♎43'57	8.97995 AU
direct	2333 May 22 10:44	19°♎50'11		direct	2339 Aug 07 21:03	3°♎23'25	
evening set	2333 Sep 05 16:26	27°♎45'57		evening set	2339 Nov 18 22:10	10°♎34'54	
conjunction	2333 Sep 23 05:39	29°♎56'35	2°00'07	conjunction	2339 Dec 05 15:34	12°♎32'54	1°34'06
minimum elong	2333 Sep 23 05:37	29°♎56'34	2°00'06	minimum elong	2339 Dec 05 15:36	12°♎32'54	1°34'07
max. Earth dist.	2333 Sep 23 09:32	29°♎57'48	10.43566 AU	max. Earth dist.	2339 Dec 05 11:53	12°♎31'48	11.00587 AU
	2333 Sep 23 16:35	0°♎		morning rise	2339 Dec 22 06:36	14°♎30'13	
morning rise	2333 Oct 10 14:24	2°♎05'50		retrograde	2340 Mar 31 00:19	21°♎29'22	
retrograde	2334 Jan 19 05:57	9°♎37'46		opposition	2340 Jun 08 21:21	18°♎12'18	1°42'45
opposition	2334 Mar 27 13:39	6°♎16'00	2°35'45	min. Earth dist.	2340 Jun 09 00:10	18°♎11'47	9.02803 AU
min. Earth dist.	2334 Mar 27 10:56	6°♎16'32	8.49425 AU	direct	2340 Aug 19 01:48	14°♎52'15	
direct	2334 Jun 05 04:48	2°♎49'02		evening set	2340 Nov 29 10:30	21°♎59'00	
evening set	2334 Sep 19 04:59	10°♎37'16					
conjunction	2334 Oct 06 13:29	12°♎45'02	2°10'38	conjunction	2340 Dec 16 02:55	23°♎56'17	1°13'07
minimum elong	2334 Oct 06 13:27	12°♎45'01	2°10'38	minimum elong	2340 Dec 16 02:57	23°♎56'17	1°13'07
max. Earth dist.	2334 Oct 06 15:59	12°♎45'48	10.55119 AU	max. Earth dist.	2340 Dec 15 23:06	23°♎55'09	11.04326 AU
morning rise	2334 Oct 23 17:30	14°♎51'24		morning rise	2341 Jan 01 17:27	25°♎53'06	
retrograde	2335 Jan 31 20:13	22°♎15'14			2341 Feb 10 05:11	0°♎	
opposition	2335 Apr 09 14:14	18°♎54'46	2°44'23	retrograde	2341 Apr 11 20:16	2°♎51'39	
min. Earth dist.	2335 Apr 09 11:51	18°♎55'14	8.60998 AU		2341 Jun 15 05:27	30°♎	
direct	2335 Jun 18 17:31	15°♎29'01		opposition	2341 Jun 21 00:16	29°♎34'28	1°15'13
evening set	2335 Oct 02 06:55	23°♎09'14		min. Earth dist.	2341 Jun 21 03:42	29°♎33'50	9.05395 AU
				direct	2341 Aug 31 03:15	26°♎15'08	
conjunction	2335 Oct 19 11:09	25°♎14'17	2°14'40		2341 Nov 10 00:43	0°♎	
minimum elong	2335 Oct 19 11:08	25°♎14'17	2°14'40	evening set	2341 Dec 10 20:07	3°♎18'27	
max. Earth dist.	2335 Oct 19 13:04	25°♎14'53	10.66529 AU	conjunction	2341 Dec 27 11:47	5°♎15'24	0°49'22
morning rise	2335 Nov 05 10:56	27°♎18'02		minimum elong	2341 Dec 27 11:49	5°♎15'24	0°49'22
	2335 Nov 29 02:56	0°♎		max. Earth dist.	2341 Dec 27 07:02	5°♎14'00	11.05821 AU
retrograde	2336 Feb 13 05:58	4°♎34'34		morning rise	2342 Jan 13 02:24	7°♎12'06	
opposition	2336 Apr 21 09:32	1°♎15'13	2°45'08	retrograde	2342 Apr 23 15:57	14°♎11'31	
min. Earth dist.	2336 Apr 21 07:31	1°♎15'37	8.72139 AU	opposition	2342 Jul 03 02:46	10°♎53'58	0°44'53
	2336 May 08 03:29	30°♎		min. Earth dist.	2342 Jul 03 07:18	10°♎53'08	9.05740 AU
direct	2336 Jun 30 22:25	27°♎50'46		direct	2342 Sep 12 00:07	7°♎35'07	
	2336 Aug 22 05:43	0°♎		evening set	2342 Dec 22 04:29	14°♎36'21	
evening set	2336 Oct 13 22:55	5°♎22'52					
conjunction	2336 Oct 30 23:31	7°♎25'34	2°12'29	conjunction	2343 Jan 07 19:45	16°♎33'18	0°23'44
minimum elong	2336 Oct 30 23:32	7°♎25'34	2°12'28	minimum elong	2343 Jan 07 19:45	16°♎33'18	0°23'44
max. Earth dist.	2336 Oct 31 01:02	7°♎26'01	10.77255 AU	max. Earth dist.	2343 Jan 07 13:40	16°♎31'31	11.05077 AU
morning rise	2336 Nov 16 19:49	9°♎27'01		morning rise	2343 Jan 24 11:01	18°♎30'16	
	2337 Jan 11 13:09	15°♎		retrograde	2343 May 05 12:22	25°♎32'08	
retrograde	2337 Feb 24 10:31	16°♎37'12		opposition	2343 Jul 15 05:47	22°♎13'52	0°12'46
	2337 Apr 10 15:41	15°♎		min. Earth dist.	2343 Jul 15 11:05	22°♎12'54	9.03873 AU

direct	2343 Sep 23 21:44	18°♄55'15			2349 Apr 12 13:09	0°♄
desc. node	2343 Dec 09 04:25	23°♄15'18		retrograde	2349 Jul 18 08:30	6°♄41'26
evening set	2344 Jan 02 13:00	25°♄55'51		opposition	2349 Sep 26 12:06	3°♄15'45 -2°32'27
				min. Earth dist.	2349 Sep 26 14:19	3°♄15'19 8.55312 AU
conjunction	2344 Jan 19 04:24	27°♄53'11 -0°02'59			2349 Nov 23 07:42	30°♄
minimum elong	2344 Jan 19 04:23	27°♄53'11 0°03'00		direct	2349 Dec 03 12:38	29°♄54'28
behind sun begin	2344 Jan 18 21:26	27°♄51'09			2349 Dec 13 15:09	0°♄
behind sun end	2344 Jan 19 11:20	27°♄55'12		evening set	2350 Mar 13 15:04	7°♄20'59
max. Earth dist.	2344 Jan 18 22:19	27°♄51'24 11.02138 AU				
morning rise	2344 Feb 04 20:34	29°♄50'45		conjunction	2350 Mar 30 15:43	9°♄27'28 -2°08'32
	2344 Feb 06 04:37	0°♄		minimum elong	2350 Mar 30 15:42	9°♄27'28 2°08'33
retrograde	2344 May 16 14:17	6°♄56'33		max. Earth dist.	2350 Mar 30 13:39	9°♄26'50 10.49549 AU
opposition	2344 Jul 26 10:04	3°♄37'21 -0°20'03		morning rise	2350 Apr 16 20:40	11°♄35'22
min. Earth dist.	2344 Jul 26 14:57	3°♄36'27 8.99864 AU		retrograde	2350 Aug 01 01:07	19°♄28'18
direct	2344 Oct 04 19:16	0°♄18'45		opposition	2350 Oct 09 18:14	16°♄01'22 -2°43'26
evening set	2345 Jan 12 23:38	7°♄20'11		min. Earth dist.	2350 Oct 09 19:02	16°♄01'12 8.44032 AU
				direct	2350 Dec 16 06:19	12°♄39'06
conjunction	2345 Jan 29 15:30	9°♄18'13 -0°29'39		evening set	2351 Mar 26 19:13	20°♄13'37
minimum elong	2345 Jan 29 15:29	9°♄18'13 0°29'39				
max. Earth dist.	2345 Jan 29 10:08	9°♄16'38 10.97104 AU		conjunction	2351 Apr 12 23:28	22°♄22'40 -2°13'59
morning rise	2345 Feb 15 08:44	11°♄16'44		minimum elong	2351 Apr 12 23:28	22°♄22'40 2°13'59
	2345 Mar 22 02:39	15°♄		max. Earth dist.	2351 Apr 12 22:08	22°♄22'15 10.38370 AU
retrograde	2345 May 28 19:37	18°♄27'53		morning rise	2351 Apr 30 08:20	24°♄33'13
opposition	2345 Aug 07 16:35	15°♄07'34 -0°52'26			2351 Jun 19 15:31	0°♄
min. Earth dist.	2345 Aug 07 20:52	15°♄06'46 8.93856 AU		retrograde	2351 Aug 15 00:13	2°♄34'48
	2345 Aug 09 09:15	15°♄			2351 Oct 11 23:34	30°♄
direct	2345 Oct 16 15:21	11°♄48'49		opposition	2351 Oct 23 05:59	29°♄06'47 -2°46'19
	2345 Dec 19 08:02	15°♄		min. Earth dist.	2351 Oct 23 06:04	29°♄06'46 8.33135 AU
evening set	2346 Jan 24 13:55	18°♄52'36		direct	2351 Dec 29 07:45	25°♄43'27
					2352 Mar 10 01:20	0°♄
conjunction	2346 Feb 10 06:28	20°♄51'40 -0°55'28		evening set	2352 Apr 08 09:22	3°♄26'18
minimum elong	2346 Feb 10 06:26	20°♄51'39 0°55'27				
max. Earth dist.	2346 Feb 10 01:12	20°♄50'06 10.90165 AU		conjunction	2352 Apr 25 17:51	5°♄38'04 -2°12'31
morning rise	2346 Feb 27 01:11	22°♄51'26		minimum elong	2352 Apr 25 17:53	5°♄38'04 2°12'32
	2346 May 27 12:22	0°♄		max. Earth dist.	2352 Apr 25 17:24	5°♄37'55 10.27882 AU
retrograde	2346 Jun 10 07:10	0°♄09'18		morning rise	2352 May 13 07:04	7°♄51'19
	2346 Jun 24 02:44	30°♄			2352 Jul 24 23:28	15°♄
opposition	2346 Aug 20 02:40	26°♄47'44 -1°23'10		retrograde	2352 Aug 28 04:49	16°♄00'23
min. Earth dist.	2346 Aug 20 06:46	26°♄46'58 8.86073 AU			2352 Oct 01 15:22	15°♄
direct	2346 Oct 28 14:33	23°♄28'36		opposition	2352 Nov 04 23:16	12°♄31'34 -2°40'18
	2347 Jan 31 05:38	0°♄		min. Earth dist.	2352 Nov 04 22:40	12°♄31'41 8.23212 AU
evening set	2347 Feb 05 09:12	0°♄36'11		direct	2353 Jan 10 17:21	9°♄07'07
					2353 Apr 06 07:23	15°♄
conjunction	2347 Feb 22 02:48	2°♄36'37 -1°19'20		evening set	2353 Apr 22 09:06	16°♄58'03
minimum elong	2347 Feb 22 02:45	2°♄36'36 1°19'20				
max. Earth dist.	2347 Feb 21 21:05	2°♄34'53 10.81581 AU		conjunction	2353 May 09 22:20	19°♄12'31 -2°03'46
morning rise	2347 Mar 10 23:31	4°♄37'59		minimum elong	2353 May 09 22:22	19°♄12'32 2°03'46
retrograde	2347 Jun 23 00:45	12°♄03'42		max. Earth dist.	2353 May 09 23:21	19°♄12'51 10.18678 AU
opposition	2347 Sep 01 16:54	8°♄40'47 -1°50'59		morning rise	2353 May 27 15:59	21°♄28'23
min. Earth dist.	2347 Sep 01 21:10	8°♄39'59 8.76805 AU		retrograde	2353 Sep 11 14:41	29°♄43'14
direct	2347 Nov 09 16:23	5°♄21'05		opposition	2353 Nov 18 21:15	26°♄13'53 -2°25'06
evening set	2348 Feb 17 11:04	12°♄33'52		min. Earth dist.	2353 Nov 18 19:42	26°♄14'12 8.14848 AU
				direct	2354 Jan 24 10:02	22°♄48'21
conjunction	2348 Mar 05 06:23	14°♄36'00 -1°40'12			2354 Apr 30 13:19	0°♄
minimum elong	2348 Mar 05 06:21	14°♄35'59 1°40'12		evening set	2354 May 06 18:05	0°♄46'42
max. Earth dist.	2348 Mar 05 01:22	14°♄34'28 10.71672 AU				
morning rise	2348 Mar 22 05:25	16°♄39'16		conjunction	2354 May 24 12:12	3°♄03'40 -1°47'47
retrograde	2348 Jul 04 23:51	24°♄13'41		minimum elong	2354 May 24 12:16	3°♄03'41 1°47'47
opposition	2348 Sep 13 11:43	20°♄49'23 -2°14'32		max. Earth dist.	2354 May 24 15:14	3°♄04'39 10.11317 AU
min. Earth dist.	2348 Sep 13 15:21	20°♄48'42 8.66407 AU		morning rise	2354 Jun 11 10:03	5°♄21'51
direct	2348 Nov 20 23:49	17°♄28'57		retrograde	2354 Sep 26 03:46	13°♄40'11
evening set	2349 Feb 28 20:42	24°♄48'09		opposition	2354 Dec 02 22:45	10°♄10'37 -2°01'07
				min. Earth dist.	2354 Dec 02 19:52	10°♄11'12 8.08559 AU
conjunction	2349 Mar 17 18:23	26°♄52'19 -1°56'57		direct	2355 Feb 07 09:27	6°♄44'04
minimum elong	2349 Mar 17 18:21	26°♄52'18 1°56'58		evening set	2355 May 21 10:53	14°♄48'41
max. Earth dist.	2349 Mar 17 14:53	26°♄51'14 10.60835 AU				
morning rise	2349 Apr 03 20:05	28°♄57'45		conjunction	2355 Jun 08 09:30	17°♄07'42 -1°25'14

minimum elong	2355 Jun 08 09:34	17° Π 07'44	1°25'13	minimum elong	2361 Sep 03 18:10	11° Π 15'44	1°33'54
max. Earth dist.	2355 Jun 08 14:22	17° Π 09'17	10.06248 AU	max. Earth dist.	2361 Sep 03 21:51	11° Π 16'55	10.28226 AU
morning rise	2355 Jun 26 10:48	19° Π 27'38		morning rise	2361 Sep 21 10:24	13° Π 29'20	
retrograde	2355 Oct 10 18:03	27° Π 46'54		retrograde	2361 Dec 31 23:58	21° Π 13'58	
opposition	2355 Dec 17 02:37	24° Π 17'28	-1°29'34	opposition	2362 Mar 08 21:17	17° Π 50'24	2°09'17
min. Earth dist.	2355 Dec 16 22:25	24° Π 18'20	8.04729 AU	min. Earth dist.	2362 Mar 08 17:43	17° Π 51'07	8.33317 AU
direct	2356 Feb 21 14:34	20° Π 49'59		direct	2362 May 16 19:06	14° Π 22'13	
evening set	2356 Jun 04 09:28	28° Π 59'18		evening set	2362 Aug 31 01:47	22° Π 21'19	
	2356 Jun 12 06:22	0° \mathcal{E}					
conjunction	2356 Jun 22 11:31	1° \mathcal{E} 19'41	-0°57'22	conjunction	2362 Sep 17 17:16	24° Π 33'19	1°53'31
minimum elong	2356 Jun 22 11:33	1° \mathcal{E} 19'42	0°57'21	minimum elong	2362 Sep 17 17:13	24° Π 33'18	1°53'31
max. Earth dist.	2356 Jun 22 17:35	1° \mathcal{E} 21'40	10.03773 AU	max. Earth dist.	2362 Sep 17 20:47	24° Π 34'25	10.38536 AU
morning rise	2356 Jul 10 15:02	3° \mathcal{E} 40'35		morning rise	2362 Oct 05 04:15	26° Π 43'56	
retrograde	2356 Oct 24 06:59	11° \mathcal{E} 58'14		retrograde	2362 Nov 02 08:52	0° \mathcal{A}	
opposition	2356 Dec 30 07:19	8° \mathcal{E} 29'13	-0°52'20	retrograde	2363 Jan 14 02:35	4° \mathcal{A} 19'57	
min. Earth dist.	2356 Dec 30 02:24	8° \mathcal{E} 30'14	8.03572 AU	opposition	2363 Mar 22 05:58	0° \mathcal{A} 57'38	2°29'29
direct	2357 Mar 06 23:01	5° \mathcal{E} 00'58		min. Earth dist.	2363 Mar 22 02:48	0° \mathcal{A} 58'16	8.44082 AU
evening set	2357 Jun 19 11:21	13° \mathcal{E} 13'07		direct	2363 Apr 03 13:12	30° \mathcal{R} Π	
				evening set	2363 May 30 15:50	27° Π 30'14	
conjunction	2357 Jul 07 15:23	15° \mathcal{E} 34'01	-0°25'57		2363 Jul 25 08:11	0° \mathcal{A}	
minimum elong	2357 Jul 07 15:24	15° \mathcal{E} 34'01	0°25'57		2363 Sep 13 19:14	5° \mathcal{A} 22'11	
max. Earth dist.	2357 Jul 07 21:46	15° \mathcal{E} 36'05	10.03995 AU	conjunction	2363 Oct 01 05:59	7° \mathcal{A} 31'17	2°06'52
morning rise	2357 Jul 25 19:38	17° \mathcal{E} 55'00		minimum elong	2363 Oct 01 05:56	7° \mathcal{A} 31'17	2°06'52
retrograde	2357 Nov 07 17:37	26° \mathcal{E} 08'43		max. Earth dist.	2363 Oct 01 09:10	7° \mathcal{A} 32'17	10.49560 AU
opposition	2358 Jan 13 11:17	22° \mathcal{E} 40'25	-0°11'56	morning rise	2363 Oct 18 11:55	9° \mathcal{A} 38'58	
min. Earth dist.	2358 Jan 13 06:32	22° \mathcal{E} 41'24	8.05085 AU	retrograde	2364 Jan 26 21:06	17° \mathcal{A} 06'39	
direct	2358 Mar 21 09:24	19° \mathcal{E} 11'34		opposition	2364 Apr 03 09:16	13° \mathcal{A} 45'31	2°41'40
asc. node	2358 May 03 12:28	20° \mathcal{E} 50'41		min. Earth dist.	2364 Apr 03 07:13	13° \mathcal{A} 45'55	8.55276 AU
evening set	2358 Jul 04 13:48	27° \mathcal{E} 24'43		direct	2364 Jun 12 06:37	10° \mathcal{A} 19'04	
				evening set	2364 Sep 26 01:58	18° \mathcal{A} 03'08	
conjunction	2358 Jul 22 18:07	29° \mathcal{E} 45'14	0°07'01	conjunction	2364 Oct 13 08:09	20° \mathcal{A} 09'28	2°13'44
minimum elong	2358 Jul 22 18:08	29° \mathcal{E} 45'14	0°07'01	minimum elong	2364 Oct 13 08:08	20° \mathcal{A} 09'28	2°13'43
behind sun begin	2358 Jul 22 11:20	29° \mathcal{E} 43'03		max. Earth dist.	2364 Oct 13 10:03	20° \mathcal{A} 10'03	10.60733 AU
behind sun end	2358 Jul 23 00:55	29° \mathcal{E} 47'25		morning rise	2364 Oct 30 09:42	22° \mathcal{A} 14'26	
max. Earth dist.	2358 Jul 22 23:47	29° \mathcal{E} 47'03	10.06785 AU	retrograde	2365 Feb 07 08:16	29° \mathcal{A} 34'23	
	2358 Jul 24 15:40	0° \mathcal{Q}		opposition	2365 Apr 16 07:00	26° \mathcal{A} 14'18	2°45'49
morning rise	2358 Aug 09 21:29	2° \mathcal{Q} 05'26		min. Earth dist.	2365 Apr 16 06:11	26° \mathcal{A} 14'27	8.66336 AU
retrograde	2358 Nov 21 23:37	10° \mathcal{Q} 13'26		direct	2365 Jun 25 15:16	22° \mathcal{A} 48'53	
opposition	2359 Jan 27 13:20	6° \mathcal{Q} 46'09	0°28'55		2365 Oct 05 10:26	0° \mathcal{M}	
min. Earth dist.	2359 Jan 27 09:25	6° \mathcal{Q} 46'57	8.09067 AU	evening set	2365 Oct 08 22:28	0° \mathcal{M} 24'52	
direct	2359 Apr 04 20:56	3° \mathcal{Q} 17'01					
evening set	2359 Jul 19 14:12	11° \mathcal{Q} 29'21		conjunction	2365 Oct 26 00:35	2° \mathcal{M} 28'41	2°14'12
				minimum elong	2365 Oct 26 00:35	2° \mathcal{M} 28'41	2°14'11
conjunction	2359 Aug 06 17:03	13° \mathcal{Q} 48'38	0°39'11	max. Earth dist.	2365 Oct 26 00:51	2° \mathcal{M} 28'46	10.71515 AU
minimum elong	2359 Aug 06 17:01	13° \mathcal{Q} 48'37	0°39'12	morning rise	2365 Nov 11 22:29	4° \mathcal{M} 31'13	
max. Earth dist.	2359 Aug 06 21:35	13° \mathcal{Q} 50'06	10.11920 AU	retrograde	2366 Feb 19 13:28	11° \mathcal{M} 44'19	
	2359 Aug 15 22:45	15° \mathcal{Q}		opposition	2366 Apr 28 23:25	8° \mathcal{M} 25'07	2°42'21
morning rise	2359 Aug 24 17:50	16° \mathcal{Q} 07'14		min. Earth dist.	2366 Apr 28 23:20	8° \mathcal{M} 25'08	8.76742 AU
retrograde	2359 Dec 05 23:07	24° \mathcal{Q} 08'15		direct	2366 Jul 08 16:29	5° \mathcal{M} 00'51	
opposition	2360 Feb 10 12:18	20° \mathcal{Q} 42'09	1°07'32	evening set	2366 Oct 21 09:19	12° \mathcal{M} 28'54	
min. Earth dist.	2360 Feb 10 08:50	20° \mathcal{Q} 42'51	8.15314 AU				
direct	2360 Apr 18 07:54	17° \mathcal{Q} 13'03		conjunction	2366 Nov 07 08:07	14° \mathcal{M} 30'34	2°08'41
evening set	2360 Aug 02 09:49	25° \mathcal{Q} 22'42		minimum elong	2366 Nov 07 08:09	14° \mathcal{M} 30'34	2°08'40
				max. Earth dist.	2366 Nov 07 07:29	14° \mathcal{M} 30'22	10.81429 AU
conjunction	2360 Aug 20 09:45	27° \mathcal{Q} 40'01	1°08'43		2366 Nov 11 09:52	15° \mathcal{M}	
minimum elong	2360 Aug 20 09:42	27° \mathcal{Q} 40'00	1°08'43	morning rise	2366 Nov 24 03:06	16° \mathcal{M} 31'05	
max. Earth dist.	2360 Aug 20 13:39	27° \mathcal{Q} 41'15	10.19186 AU	retrograde	2367 Mar 03 14:02	23° \mathcal{M} 38'28	
morning rise	2360 Sep 07 06:40	29° \mathcal{Q} 56'20		opposition	2367 May 11 11:25	20° \mathcal{M} 19'58	2°31'55
	2360 Sep 07 18:22	0° \mathcal{M}		min. Earth dist.	2367 May 11 11:21	20° \mathcal{M} 19'59	8.86052 AU
retrograde	2360 Dec 18 14:37	7° \mathcal{M} 49'25		direct	2367 Jul 21 11:30	16° \mathcal{M} 56'51	
opposition	2361 Feb 23 07:13	4° \mathcal{M} 24'35	1°41'35	evening set	2367 Nov 02 11:33	24° \mathcal{M} 17'30	
min. Earth dist.	2361 Feb 23 03:44	4° \mathcal{M} 25'17	8.23546 AU				
direct	2361 May 02 16:27	0° \mathcal{M} 55'49		conjunction	2367 Nov 19 07:49	26° \mathcal{M} 17'23	1°57'46
evening set	2361 Aug 16 22:11	9° \mathcal{M} 00'57		minimum elong	2367 Nov 19 07:51	26° \mathcal{M} 17'24	1°57'46
				max. Earth dist.	2367 Nov 19 07:15	26° \mathcal{M} 17'13	10.90064 AU
conjunction	2361 Sep 03 18:13	11° \mathcal{M} 15'45	1°33'53				

morning rise	2367 Dec 06 00:34	28° \mathbb{M} 16'18	conjunction	2374 Jan 24 23:29	4° \approx 30'59 -0°17'56
	2367 Dec 21 05:11	0° \mathbb{A}	minimum elong	2374 Jan 24 23:29	4° \approx 30'59 0°17'56
retrograde	2368 Mar 14 13:03	5° \mathbb{A} 19'17	max. Earth dist.	2374 Jan 24 18:43	4° \approx 29'35 11.01479 AU
opposition	2368 May 22 19:34	2° \mathbb{A} 01'19 2°15'21	morning rise	2374 Feb 10 16:09	6° \approx 28'48
min. Earth dist.	2368 May 22 20:09	2° \mathbb{A} 01'12 8.93897 AU	retrograde	2374 May 23 17:53	13° \approx 36'25
	2368 Jun 20 19:47	30° \mathbb{R} \mathbb{M}	opposition	2374 Aug 02 15:40	10° \approx 17'04 -0°38'13
direct	2368 Aug 01 23:29	28° \mathbb{M} 39'20	min. Earth dist.	2374 Aug 02 19:40	10° \approx 16'20 8.98972 AU
	2368 Sep 12 05:46	0° \mathbb{A}	direct	2374 Oct 11 17:58	6° \approx 58'54
evening set	2368 Nov 13 06:58	5° \mathbb{A} 53'24	evening set	2375 Jan 19 19:57	14° \approx 00'31
				2375 Jan 28 06:20	15° \approx
conjunction	2368 Nov 30 01:15	7° \mathbb{A} 51'57 1°42'09	conjunction	2375 Feb 05 11:54	15° \approx 58'46 -0°44'11
minimum elong	2368 Nov 30 01:18	7° \mathbb{A} 51'58 1°42'10	minimum elong	2375 Feb 05 11:53	15° \approx 58'45 0°44'10
max. Earth dist.	2368 Nov 29 23:52	7° \mathbb{A} 51'32 10.97086 AU	max. Earth dist.	2375 Feb 05 07:11	15° \approx 57'22 10.95989 AU
morning rise	2368 Dec 16 16:38	9° \mathbb{A} 49'42	morning rise	2375 Feb 22 05:54	17° \approx 57'37
retrograde	2369 Mar 26 07:31	16° \mathbb{A} 49'37	retrograde	2375 Jun 05 02:01	25° \approx 11'12
opposition	2369 Jun 04 00:36	13° \mathbb{A} 32'00 1°53'36	opposition	2375 Aug 14 23:20	21° \approx 50'49 -1°09'42
min. Earth dist.	2369 Jun 04 02:32	13° \mathbb{A} 31'38 8.99986 AU	min. Earth dist.	2375 Aug 15 03:04	21° \approx 50'08 8.92541 AU
direct	2369 Aug 14 04:45	10° \mathbb{A} 11'04	direct	2375 Oct 23 17:09	18° \approx 32'32
evening set	2369 Nov 24 21:03	17° \mathbb{A} 19'42	evening set	2376 Jan 31 12:05	25° \approx 37'06
conjunction	2369 Dec 11 13:49	19° \mathbb{A} 17'16 1°22'37	conjunction	2376 Feb 17 05:06	27° \approx 36'31 -1°08'57
minimum elong	2369 Dec 11 13:51	19° \mathbb{A} 17'17 1°22'38	minimum elong	2376 Feb 17 05:04	27° \approx 36'31 1°08'57
max. Earth dist.	2369 Dec 11 10:46	19° \mathbb{A} 16'22 11.02235 AU	max. Earth dist.	2376 Feb 17 01:16	27° \approx 35'22 10.88640 AU
morning rise	2369 Dec 28 04:37	21° \mathbb{A} 14'17	morning rise	2376 Mar 05 00:39	29° \approx 36'45
retrograde	2370 Apr 07 01:12	28° \mathbb{A} 12'40		2376 Mar 08 08:16	0° \mathbb{H}
opposition	2370 Jun 16 03:45	24° \mathbb{A} 55'11 1°27'36	retrograde	2376 Jun 16 16:25	6° \mathbb{H} 57'28
min. Earth dist.	2370 Jun 16 06:38	24° \mathbb{A} 54'39 9.04095 AU	opposition	2376 Aug 26 10:37	3° \mathbb{H} 35'54 -1°38'51
direct	2370 Aug 26 07:59	21° \mathbb{A} 35'10	min. Earth dist.	2376 Aug 26 13:33	3° \mathbb{H} 35'21 8.84367 AU
evening set	2370 Dec 06 07:11	28° \mathbb{A} 39'35	direct	2376 Nov 03 16:30	0° \mathbb{H} 17'16
	2370 Dec 17 18:56	0° \mathbb{B}	evening set	2377 Feb 11 10:06	7° \mathbb{H} 26'11
conjunction	2370 Dec 22 23:02	0° \mathbb{B} 36'34 0°59'59	conjunction	2377 Feb 28 04:27	9° \mathbb{H} 27'05 -1°31'12
minimum elong	2370 Dec 22 23:04	0° \mathbb{B} 36'35 1°00'00	minimum elong	2377 Feb 28 04:25	9° \mathbb{H} 27'04 1°31'12
max. Earth dist.	2370 Dec 22 19:23	0° \mathbb{B} 35'30 11.05322 AU	max. Earth dist.	2377 Feb 28 00:36	9° \mathbb{H} 25'55 10.79659 AU
morning rise	2371 Jan 08 13:42	2° \mathbb{B} 33'14	morning rise	2377 Mar 17 02:00	11° \mathbb{H} 29'00
retrograde	2371 Apr 18 20:06	9° \mathbb{B} 31'39	retrograde	2377 Jun 29 12:36	18° \mathbb{H} 57'52
opposition	2371 Jun 28 05:50	6° \mathbb{B} 14'02 0°58'23	opposition	2377 Sep 08 02:20	15° \mathbb{H} 34'59 -2°04'20
min. Earth dist.	2371 Jun 28 08:35	6° \mathbb{B} 13'32 9.06077 AU	min. Earth dist.	2377 Sep 08 05:11	15° \mathbb{H} 34'27 8.74705 AU
direct	2371 Sep 07 07:10	2° \mathbb{B} 54'49	direct	2377 Nov 15 19:46	12° \mathbb{H} 15'44
evening set	2371 Dec 17 15:17	9° \mathbb{B} 56'19	evening set	2378 Feb 23 15:12	19° \mathbb{H} 30'21
conjunction	2372 Jan 03 06:47	11° \mathbb{B} 53'07 0°35'06	conjunction	2378 Mar 12 11:23	21° \mathbb{H} 33'05 -1°49'51
minimum elong	2372 Jan 03 06:48	11° \mathbb{B} 53'07 0°35'06	minimum elong	2378 Mar 12 11:21	21° \mathbb{H} 33'04 1°49'52
max. Earth dist.	2372 Jan 03 03:26	11° \mathbb{B} 52'08 11.06234 AU	max. Earth dist.	2378 Mar 12 06:54	21° \mathbb{H} 31'42 10.69348 AU
morning rise	2372 Jan 19 21:39	13° \mathbb{B} 49'48	morning rise	2378 Mar 29 11:33	23° \mathbb{H} 37'02
retrograde	2372 Apr 29 16:41	20° \mathbb{B} 49'47		2378 Jun 03 11:38	0° \mathbb{Y}
opposition	2372 Jul 09 07:42	17° \mathbb{B} 31'48 0°26'58	retrograde	2378 Jul 12 16:41	1° \mathbb{Y} 14'47
min. Earth dist.	2372 Jul 09 10:24	17° \mathbb{B} 31'18 9.05864 AU		2378 Aug 21 11:23	30° \mathbb{R} \mathbb{H}
direct	2372 Sep 18 03:48	14° \mathbb{B} 13'10	opposition	2378 Sep 20 23:14	27° \mathbb{H} 50'34 -2°24'51
evening set	2372 Dec 27 23:04	21° \mathbb{B} 13'13	min. Earth dist.	2378 Sep 21 02:24	27° \mathbb{H} 49'58 8.63892 AU
conjunction	2373 Jan 13 14:25	23° \mathbb{B} 10'11 0°08'52	direct	2378 Nov 28 04:27	24° \mathbb{H} 30'28
minimum elong	2373 Jan 13 14:25	23° \mathbb{B} 10'11 0°08'52		2379 Feb 20 07:33	0° \mathbb{Y}
behind sun begin	2373 Jan 13 08:24	23° \mathbb{B} 08'25	evening set	2379 Mar 08 04:25	1° \mathbb{Y} 51'58
behind sun end	2373 Jan 13 20:27	23° \mathbb{B} 11'56	conjunction	2379 Mar 25 03:15	3° \mathbb{Y} 56'53 -2°03'51
max. Earth dist.	2373 Jan 13 10:44	23° \mathbb{B} 09'07 11.04935 AU	minimum elong	2379 Mar 25 03:13	3° \mathbb{Y} 56'52 2°03'51
morning rise	2373 Jan 30 05:58	25° \mathbb{B} 07'15	max. Earth dist.	2379 Mar 24 22:47	3° \mathbb{Y} 55'30 10.58105 AU
	2373 Mar 19 20:55	0° \approx	morning rise	2379 Apr 11 06:33	6° \mathbb{Y} 03'11
retrograde	2373 May 11 16:32	2° \approx 10'18	retrograde	2379 Jul 26 03:17	13° \mathbb{Y} 50'13
desc. node	2373 May 17 20:56	2° \approx 08'26	opposition	2379 Oct 04 01:40	10° \mathbb{Y} 24'39 -2°39'05
	2373 Jul 05 16:47	30° \mathbb{R} \mathbb{B}	min. Earth dist.	2379 Oct 04 04:44	10° \mathbb{Y} 24'03 8.52407 AU
opposition	2373 Jul 21 10:42	28° \mathbb{B} 51'45 -0°05'37	direct	2379 Dec 10 19:17	7° \mathbb{Y} 03'31
min. Earth dist.	2373 Jul 21 14:05	28° \mathbb{B} 51'08 9.03465 AU	evening set	2380 Mar 20 02:55	14° \mathbb{Y} 32'49
direct	2373 Sep 29 22:50	25° \mathbb{B} 33'28			
	2373 Dec 16 03:13	0° \approx	conjunction	2380 Apr 06 05:11	16° \mathbb{Y} 40'12 -2°12'11
evening set	2374 Jan 08 08:06	2° \approx 33'33	minimum elong	2380 Apr 06 05:10	16° \mathbb{Y} 40'12 2°12'11

max. Earth dist.	2380 Apr 06 02:04	16°♈39'14	10.46489 AU	morning rise	2386 Jul 18 23:32	11°♊23'49	
morning rise	2380 Apr 23 12:00	18°♈49'04		retrograde	2386 Nov 01 05:13	19°♊39'44	
retrograde	2380 Aug 07 20:47	26°♈45'11		opposition	2387 Jan 07 02:59	16°♊10'32	-0°31'32
opposition	2380 Oct 16 09:37	23°♈18'18	-2°45'48	min. Earth dist.	2387 Jan 06 23:31	16°♊11'16	8.02983 AU
min. Earth dist.	2380 Oct 16 11:36	23°♈17'54	8.40864 AU	direct	2387 Mar 14 23:03	12°♊41'22	
direct	2380 Dec 22 17:40	19°♈56'01		evening set	2387 Jun 27 18:13	20°♊54'27	
evening set	2381 Apr 02 11:08	27°♈33'34					
conjunction	2381 Apr 19 17:29	29°♈43'40	-2°14'00	conjunction	2387 Jul 15 22:43	23°♊15'23	-0°08'55
minimum elong	2381 Apr 19 17:30	29°♈43'40	2°14'00	minimum elong	2387 Jul 15 22:44	23°♊15'24	0°08'55
max. Earth dist.	2381 Apr 19 16:01	29°♈43'12	10.35144 AU	behind sun begin	2387 Jul 15 16:28	23°♊13'23	
	2381 Apr 21 21:07	0°♈		behind sun end	2387 Jul 16 05:00	23°♊17'25	
morning rise	2381 May 07 04:19	1°♈55'14		max. Earth dist.	2387 Jul 16 03:38	23°♊16'58	10.03881 AU
retrograde	2381 Aug 21 21:52	9°♈59'37		morning rise	2387 Aug 03 02:53	25°♊36'13	
opposition	2381 Oct 29 23:16	6°♈31'33	-2°44'03		2387 Sep 09 15:39	0°♈	
min. Earth dist.	2381 Oct 29 23:44	6°♈31'28	8.29905 AU	asc. node	2387 Oct 26 01:48	3°♈24'02	
direct	2382 Jan 04 22:27	3°♈08'00		retrograde	2387 Nov 15 13:25	3°♈47'32	
evening set	2382 Apr 16 05:10	10°♈53'50		opposition	2388 Jan 21 06:03	0°♈19'07	0°09'26
				min. Earth dist.	2388 Jan 21 01:39	0°♈20'01	8.05469 AU
conjunction	2382 May 03 16:05	13°♈06'44	-2°08'42		2388 Jan 25 02:45	30°♈	
minimum elong	2382 May 03 16:07	13°♈06'44	2°08'42	direct	2388 Mar 28 10:25	26°♈49'29	
max. Earth dist.	2382 May 03 15:59	13°♈06'42	10.24713 AU	evening set	2388 May 28 13:54	0°♈	
	2382 May 18 12:16	15°♈			2388 Jul 11 19:43	5°♈02'45	
morning rise	2382 May 21 07:19	15°♈21'02		conjunction	2388 Jul 29 23:41	7°♈22'54	0°23'57
retrograde	2382 Sep 05 05:55	23°♈32'12		minimum elong	2388 Jul 29 23:40	7°♈22'54	0°23'57
opposition	2382 Nov 12 18:00	20°♈03'14	-2°33'15	max. Earth dist.	2388 Jul 30 05:30	7°♈24'46	10.07725 AU
min. Earth dist.	2382 Nov 12 17:18	20°♈03'23	8.20148 AU	morning rise	2388 Aug 17 01:57	9°♈42'31	
direct	2383 Jan 18 09:13	16°♈38'21			2388 Oct 03 02:05	15°♈	
evening set	2383 Apr 30 08:52	24°♈32'08		retrograde	2388 Nov 28 16:13	17°♈47'30	
					2389 Jan 26 03:36	15°♈	
conjunction	2383 May 18 00:34	26°♈47'42	-1°56'09	opposition	2389 Feb 03 06:40	14°♈20'08	0°49'27
minimum elong	2383 May 18 00:37	26°♈47'43	1°56'08	min. Earth dist.	2389 Feb 03 01:52	14°♈21'07	8.10601 AU
max. Earth dist.	2383 May 18 01:19	26°♈47'56	10.15791 AU	direct	2389 Apr 11 21:20	10°♈50'24	
morning rise	2383 Jun 04 20:16	29°♈04'33			2389 Jun 22 07:34	15°♈	
	2383 Jun 12 05:57	0°♈		evening set	2389 Jul 26 17:54	19°♈01'50	
retrograde	2383 Sep 19 16:50	7°♈20'30					
opposition	2383 Nov 26 16:52	3°♈50'57	-2°13'26	conjunction	2389 Aug 13 19:40	21°♈20'20	0°55'00
min. Earth dist.	2383 Nov 26 15:32	3°♈51'14	8.12160 AU	minimum elong	2389 Aug 13 19:38	21°♈20'19	0°55'00
direct	2384 Feb 01 04:30	0°♈24'45		max. Earth dist.	2389 Aug 14 01:36	21°♈22'15	10.14059 AU
evening set	2384 May 13 21:04	8°♈25'40		morning rise	2389 Aug 31 18:35	23°♈37'58	
					2389 Oct 31 11:44	0°♈	
conjunction	2384 May 31 17:25	10°♈43'35	-1°36'40	retrograde	2389 Dec 12 12:32	1°♈35'20	
minimum elong	2384 May 31 17:28	10°♈43'36	1°36'40		2390 Jan 24 05:27	30°♈	
max. Earth dist.	2384 May 31 18:55	10°♈44'04	10.08906 AU	opposition	2390 Feb 17 03:35	28°♈09'15	1°25'58
morning rise	2384 Jun 18 17:06	13°♈02'35		min. Earth dist.	2390 Feb 16 23:12	28°♈10'09	8.18057 AU
retrograde	2384 Oct 03 05:28	21°♈21'00		direct	2390 Apr 26 05:47	24°♈39'45	
opposition	2384 Dec 09 19:01	17°♈51'12	-1°45'25		2390 Jul 18 01:52	0°♈	
min. Earth dist.	2384 Dec 09 17:14	17°♈51'35	8.06428 AU	evening set	2390 Aug 10 10:11	2°♈47'30	
direct	2385 Feb 14 06:34	14°♈23'49					
evening set	2385 May 28 16:00	22°♈30'30		conjunction	2390 Aug 28 08:22	5°♈03'42	1°22'26
				minimum elong	2390 Aug 28 08:19	5°♈03'41	1°22'26
conjunction	2385 Jun 15 16:21	24°♈50'15	-1°11'14	max. Earth dist.	2390 Aug 28 13:35	5°♈05'22	10.22488 AU
minimum elong	2385 Jun 15 16:24	24°♈50'16	1°11'13	morning rise	2390 Sep 15 02:53	7°♈18'46	
max. Earth dist.	2385 Jun 15 19:04	24°♈51'08	10.04477 AU	retrograde	2390 Dec 26 02:07	15°♈07'47	
morning rise	2385 Jul 03 19:05	27°♈10'43		opposition	2391 Mar 02 20:09	11°♈43'08	1°56'53
	2385 Jul 26 21:09	0°♈		min. Earth dist.	2391 Mar 02 16:26	11°♈43'53	8.27377 AU
retrograde	2385 Oct 17 17:58	5°♈29'08		direct	2391 May 10 10:30	8°♈14'11	
opposition	2385 Dec 23 22:55	1°♈59'28	-1°10'42	evening set	2391 Aug 24 18:16	16°♈16'37	
min. Earth dist.	2385 Dec 23 20:20	2°♈00'00	8.03306 AU				
	2386 Jan 18 15:24	30°♈		conjunction	2391 Sep 11 11:57	18°♈30'05	1°44'49
direct	2386 Feb 28 13:27	28°♈31'03		minimum elong	2391 Sep 11 11:54	18°♈30'04	1°44'49
	2386 Apr 09 23:13	0°♈		max. Earth dist.	2391 Sep 11 16:10	18°♈31'25	10.32508 AU
evening set	2386 Jun 12 15:57	6°♈41'53		morning rise	2391 Sep 29 01:31	20°♈42'15	
				retrograde	2392 Jan 08 07:10	28°♈22'40	
conjunction	2386 Jun 30 19:11	9°♈02'41	-0°41'19	opposition	2392 Mar 15 07:37	24°♈59'29	2°20'45
minimum elong	2386 Jun 30 19:13	9°♈02'42	0°41'19	min. Earth dist.	2392 Mar 15 04:25	25°♈00'07	8.38018 AU
max. Earth dist.	2386 Jun 30 23:04	9°♈03'57	10.02771 AU	direct	2392 May 23 11:22	21°♈31'25	

evening set	2392 Sep 06 16:47	29° $\overline{\text{M}}$ 27'13		opposition	2398 May 29 17:26	8° \times 26'17	2°04'11
	2392 Sep 11 03:33	0° $\underline{\text{A}}$		min. Earth dist.	2398 May 29 18:52	8° \times 26'02	8.98015 AU
				direct	2398 Aug 08 21:09	5° \times 05'22	
conjunction	2392 Sep 24 05:43	1° $\underline{\text{A}}$ 37'47	2°01'13	evening set	2398 Nov 19 21:42	12° \times 16'42	
minimum elong	2392 Sep 24 05:41	1° $\underline{\text{A}}$ 37'46	2°01'13				
max. Earth dist.	2392 Sep 24 08:56	1° $\underline{\text{A}}$ 38'47	10.43562 AU	conjunction	2398 Dec 06 15:11	14° \times 14'42	1°32'03
morning rise	2392 Oct 11 14:17	3° $\underline{\text{A}}$ 46'59		minimum elong	2398 Dec 06 15:14	14° \times 14'42	1°32'03
retrograde	2393 Jan 20 04:27	11° $\underline{\text{A}}$ 18'55		max. Earth dist.	2398 Dec 06 12:46	14° \times 13'59	11.00663 AU
opposition	2393 Mar 28 13:32	7° $\underline{\text{A}}$ 57'08	2°36'46	morning rise	2398 Dec 23 06:10	16° \times 12'00	
min. Earth dist.	2393 Mar 28 10:24	7° $\underline{\text{A}}$ 57'45	8.49395 AU	retrograde	2399 Apr 02 01:19	23° \times 11'12	
direct	2393 Jun 06 06:18	4° $\underline{\text{A}}$ 30'10		opposition	2399 Jun 10 21:54	19° \times 54'07	1°40'02
evening set	2393 Sep 20 05:00	12° $\underline{\text{A}}$ 18'26		min. Earth dist.	2399 Jun 11 00:01	19° \times 53'44	9.02915 AU
				direct	2399 Aug 21 02:39	16° \times 34'09	
conjunction	2393 Oct 07 13:22	14° $\underline{\text{A}}$ 26'09	2°11'09	evening set	2399 Dec 01 09:57	23° \times 40'40	
minimum elong	2393 Oct 07 13:21	14° $\underline{\text{A}}$ 26'08	2°11'09				
max. Earth dist.	2393 Oct 07 16:13	14° $\underline{\text{A}}$ 27'01	10.55060 AU	conjunction	2399 Dec 18 02:20	25° \times 37'57	1°10'45
morning rise	2393 Oct 24 17:09	16° $\underline{\text{A}}$ 32'28		minimum elong	2399 Dec 18 02:22	25° \times 37'57	1°10'45
retrograde	2394 Feb 01 20:40	23° $\underline{\text{A}}$ 56'24		max. Earth dist.	2399 Dec 17 23:00	25° \times 36'58	11.04478 AU
opposition	2394 Apr 10 14:09	20° $\underline{\text{A}}$ 35'55	2°44'41	morning rise	2400 Jan 03 16:53	27° \times 34'45	
min. Earth dist.	2394 Apr 10 11:20	20° $\underline{\text{A}}$ 36'28	8.60909 AU		2400 Jan 25 15:03	0° $\overline{\text{Z}}$	
direct	2394 Jun 19 17:44	17° $\underline{\text{A}}$ 10'11		retrograde	2400 Apr 12 20:49	4° $\overline{\text{Z}}$ 33'17	
evening set	2394 Oct 03 06:52	24° $\underline{\text{A}}$ 50'25		opposition	2400 Jun 22 00:54	1° $\overline{\text{Z}}$ 16'08	1°12'10
				min. Earth dist.	2400 Jun 22 04:29	1° $\overline{\text{Z}}$ 15'28	9.05576 AU
conjunction	2394 Oct 20 11:01	26° $\underline{\text{A}}$ 55'29	2°14'37		2400 Jul 09 16:57	30° R \times	
minimum elong	2394 Oct 20 11:01	26° $\underline{\text{A}}$ 55'29	2°14'36	direct	2400 Sep 01 02:25	27° \times 56'53	
max. Earth dist.	2394 Oct 20 13:36	26° $\underline{\text{A}}$ 56'17	10.66420 AU		2400 Oct 22 12:20	0° $\overline{\text{Z}}$	
morning rise	2394 Nov 06 10:33	28° $\underline{\text{A}}$ 59'12		evening set	2400 Dec 11 19:33	4° $\overline{\text{Z}}$ 59'57	
	2394 Nov 15 00:38	0° $\overline{\text{M}}$					
retrograde	2395 Feb 14 06:38	6° $\overline{\text{M}}$ 15'49		conjunction	2400 Dec 28 11:08	6° $\overline{\text{Z}}$ 56'53	0°46'47
opposition	2395 Apr 23 09:37	2° $\overline{\text{M}}$ 56'30	2°44'43	minimum elong	2400 Dec 28 11:10	6° $\overline{\text{Z}}$ 56'53	0°46'47
min. Earth dist.	2395 Apr 23 07:48	2° $\overline{\text{M}}$ 56'51	8.72010 AU	max. Earth dist.	2400 Dec 28 06:03	6° $\overline{\text{Z}}$ 55'23	11.06032 AU
	2395 Jun 08 23:12	30° R $\underline{\text{A}}$		morning rise	2401 Jan 14 01:55	8° $\overline{\text{Z}}$ 53'35	
direct	2395 Jul 02 20:53	29° $\underline{\text{A}}$ 32'04		retrograde	2401 Apr 24 14:45	15° $\overline{\text{Z}}$ 53'00	
	2395 Jul 26 17:26	0° $\overline{\text{M}}$		opposition	2401 Jul 04 03:15	12° $\overline{\text{Z}}$ 35'28	0°41'38
evening set	2395 Oct 15 22:50	7° $\overline{\text{M}}$ 04'13		min. Earth dist.	2401 Jul 04 07:54	12° $\overline{\text{Z}}$ 34'36	9.05971 AU
				direct	2401 Sep 13 00:39	9° $\overline{\text{Z}}$ 16'40	
conjunction	2395 Nov 01 23:17	9° $\overline{\text{M}}$ 06'56	2°11'51	evening set	2401 Dec 23 03:51	16° $\overline{\text{Z}}$ 17'43	
minimum elong	2395 Nov 01 23:18	9° $\overline{\text{M}}$ 06'56	2°11'50				
max. Earth dist.	2395 Nov 02 00:49	9° $\overline{\text{M}}$ 07'23	10.77121 AU	conjunction	2402 Jan 08 19:09	18° $\overline{\text{Z}}$ 14'39	0°21'02
morning rise	2395 Nov 18 19:28	11° $\overline{\text{M}}$ 08'24		minimum elong	2402 Jan 08 19:10	18° $\overline{\text{Z}}$ 14'39	0°21'02
	2395 Dec 24 07:23	15° $\overline{\text{M}}$		max. Earth dist.	2402 Jan 08 13:26	18° $\overline{\text{Z}}$ 12'58	11.05324 AU
retrograde	2396 Feb 26 09:40	18° $\overline{\text{M}}$ 18'42		morning rise	2402 Jan 25 10:30	20° $\overline{\text{Z}}$ 11'36	
opposition	2396 May 05 00:18	15° $\overline{\text{M}}$ 00'20	2°37'27	retrograde	2402 May 06 13:07	27° $\overline{\text{Z}}$ 13'28	
min. Earth dist.	2396 May 05 00:03	15° $\overline{\text{M}}$ 00'23	8.82201 AU	opposition	2402 Jul 16 06:10	23° $\overline{\text{Z}}$ 55'13	0°09'26
	2396 May 05 02:02	15° R $\overline{\text{M}}$		min. Earth dist.	2402 Jul 16 10:45	23° $\overline{\text{Z}}$ 54'23	9.04128 AU
direct	2396 Jul 14 19:26	11° $\overline{\text{M}}$ 37'09		direct	2402 Sep 24 22:47	20° $\overline{\text{Z}}$ 36'41	
	2396 Sep 19 16:51	15° $\overline{\text{M}}$		desc. node	2402 Nov 01 22:03	21° $\overline{\text{Z}}$ 46'27	
evening set	2396 Oct 27 05:43	19° $\overline{\text{M}}$ 01'34		evening set	2403 Jan 03 12:21	27° $\overline{\text{Z}}$ 37'04	
conjunction	2396 Nov 13 03:05	21° $\overline{\text{M}}$ 02'16	2°03'22	conjunction	2403 Jan 20 03:50	29° $\overline{\text{Z}}$ 34'22	-0°05'42
minimum elong	2396 Nov 13 03:07	21° $\overline{\text{M}}$ 02'17	2°03'22	minimum elong	2403 Jan 20 03:49	29° $\overline{\text{Z}}$ 34'22	0°05'42
max. Earth dist.	2396 Nov 13 02:35	21° $\overline{\text{M}}$ 02'07	10.86684 AU	behind sun begin	2403 Jan 19 21:08	29° $\overline{\text{Z}}$ 32'24	
morning rise	2396 Nov 29 20:53	23° $\overline{\text{M}}$ 01'56		behind sun end	2403 Jan 20 10:31	29° $\overline{\text{Z}}$ 36'19	
	2397 Feb 25 15:31	0° \times		max. Earth dist.	2403 Jan 19 22:49	29° $\overline{\text{Z}}$ 32'55	11.02400 AU
retrograde	2397 Mar 09 09:20	0° \times 07'05			2403 Jan 23 18:27	0° \approx	
	2397 Mar 21 04:37	30° R $\overline{\text{M}}$		morning rise	2403 Feb 05 19:56	1° \approx 31'54	
opposition	2397 May 17 10:38	26° $\overline{\text{M}}$ 49'24	2°23'38	retrograde	2403 May 18 14:22	8° \approx 37'43	
min. Earth dist.	2397 May 17 11:28	26° $\overline{\text{M}}$ 49'15	8.91010 AU	opposition	2403 Jul 28 10:27	5° \approx 18'31	-0°23'20
direct	2397 Jul 27 11:36	23° $\overline{\text{M}}$ 27'24		min. Earth dist.	2403 Jul 28 14:30	5° \approx 17'46	9.00131 AU
	2397 Nov 01 17:30	0° \times		direct	2403 Oct 06 18:34	2° \approx 00'01	
evening set	2397 Nov 08 04:51	0° \times 44'45		evening set	2404 Jan 14 23:03	9° \approx 01'14	
conjunction	2397 Nov 24 23:54	2° \times 43'54	1°49'52	conjunction	2404 Jan 31 14:54	10° \approx 59'14	-0°32'17
minimum elong	2397 Nov 24 23:56	2° \times 43'54	1°49'52	minimum elong	2404 Jan 31 14:53	10° \approx 59'13	0°32'16
max. Earth dist.	2397 Nov 24 22:03	2° \times 43'21	10.94657 AU	max. Earth dist.	2404 Jan 31 09:45	10° \approx 57'42	10.97376 AU
morning rise	2397 Dec 11 16:00	4° \times 42'10		morning rise	2404 Feb 17 08:10	12° \approx 57'42	
retrograde	2398 Mar 21 05:10	11° \times 43'33			2404 Mar 06 11:24	15° \approx	

retrograde	2404 May 29 20:31	20° \approx 08'50	retrograde	2410 Aug 15 22:39	4° \approx 13'31
opposition	2404 Aug 08 16:54	16° \approx 48'32 -0°55'32	opposition	2410 Oct 24 04:56	0° \approx 45'30 -2°46'02
min. Earth dist.	2404 Aug 08 21:12	16° \approx 47'44 8.94133 AU	min. Earth dist.	2410 Oct 24 05:48	0° \approx 45'19 8.33296 AU
	2404 Sep 03 09:37	15° \approx		2410 Nov 02 19:18	30° \approx 19'
direct	2404 Oct 17 15:20	13° \approx 29'50	direct	2410 Dec 30 07:02	27° \approx 22'06
	2404 Nov 29 11:56	15° \approx		2411 Feb 23 08:22	0° \approx
evening set	2405 Jan 25 13:21	20° \approx 33'25	evening set	2411 Apr 10 08:13	5° \approx 04'48
conjunction	2405 Feb 11 05:49	22° \approx 32'26 -0°57'53	conjunction	2411 Apr 27 16:57	7° \approx 16'35 -2°12'01
minimum elong	2405 Feb 11 05:47	22° \approx 32'26 0°57'52	minimum elong	2411 Apr 27 16:58	7° \approx 16'36 2°12'01
max. Earth dist.	2405 Feb 10 23:59	22° \approx 30'41 10.90445 AU	max. Earth dist.	2411 Apr 27 16:16	7° \approx 16'22 10.28017 AU
morning rise	2405 Feb 28 00:43	24° \approx 32'11	morning rise	2411 May 15 06:22	9° \approx 29'52
	2405 Apr 24 01:11	0° \approx		2411 Jul 04 11:07	15° \approx
retrograde	2405 Jun 11 06:49	1° \approx 49'58	retrograde	2411 Aug 30 03:41	17° \approx 38'44
	2405 Jul 30 23:31	30° \approx		2411 Oct 27 10:23	15° \approx
opposition	2405 Aug 21 02:47	28° \approx 28'25 -1°25'57	opposition	2411 Nov 06 21:54	14° \approx 09'53 -2°39'17
min. Earth dist.	2405 Aug 21 07:26	28° \approx 27'33 8.86355 AU	min. Earth dist.	2411 Nov 06 21:43	14° \approx 09'56 8.23309 AU
direct	2405 Oct 29 13:41	25° \approx 09'18	direct	2412 Jan 12 16:04	10° \approx 45'23
	2406 Jan 17 06:42	0° \approx		2412 Mar 23 18:30	15° \approx
evening set	2406 Feb 06 08:33	2° \approx 16'43	evening set	2412 Apr 23 07:58	18° \approx 36'15
conjunction	2406 Feb 23 02:11	4° \approx 17'05 -1°21'26	conjunction	2412 May 10 21:31	20° \approx 50'45 -2°02'41
minimum elong	2406 Feb 23 02:08	4° \approx 17'04 1°21'26	minimum elong	2412 May 10 21:33	20° \approx 50'46 2°02'41
max. Earth dist.	2406 Feb 22 20:41	4° \approx 15'25 10.81862 AU	max. Earth dist.	2412 May 10 22:50	20° \approx 51'11 10.18737 AU
morning rise	2406 Mar 11 22:58	6° \approx 18'25	morning rise	2412 May 28 15:16	23° \approx 06'38
retrograde	2406 Jun 23 23:08	13° \approx 44'04		2412 Aug 03 23:13	0° \approx
opposition	2406 Sep 02 16:47	10° \approx 21'08 -1°53'20	retrograde	2412 Sep 12 12:51	1° \approx 21'18
min. Earth dist.	2406 Sep 02 20:57	10° \approx 20'20 8.77086 AU		2412 Oct 22 11:36	30° \approx
direct	2406 Nov 10 16:56	7° \approx 01'27	opposition	2412 Nov 19 19:29	27° \approx 51'55 -2°23'24
evening set	2407 Feb 18 10:19	14° \approx 14'02	min. Earth dist.	2412 Nov 19 17:49	27° \approx 52'15 8.14863 AU
			direct	2413 Jan 25 09:12	24° \approx 26'20
conjunction	2407 Mar 07 05:46	16° \approx 16'08 -1°41'54		2413 Apr 17 23:50	0° \approx
minimum elong	2407 Mar 07 05:44	16° \approx 16'07 1°41'54	evening set	2413 May 07 16:52	2° \approx 24'41
max. Earth dist.	2407 Mar 07 01:38	16° \approx 14'52 10.71944 AU			
morning rise	2407 Mar 24 04:46	18° \approx 19'21	conjunction	2413 May 25 11:17	4° \approx 41'43 -1°46'11
retrograde	2407 Jul 07 00:24	25° \approx 53'42	minimum elong	2413 May 25 11:21	4° \approx 41'44 1°46'11
opposition	2407 Sep 15 11:24	22° \approx 29'21 -2°16'20	max. Earth dist.	2413 May 25 14:38	4° \approx 42'48 10.11291 AU
min. Earth dist.	2407 Sep 15 14:21	22° \approx 28'47 8.66679 AU	morning rise	2413 Jun 12 09:11	6° \approx 59'54
direct	2407 Nov 22 23:54	19° \approx 08'57	retrograde	2413 Sep 27 01:49	15° \approx 18'07
evening set	2408 Mar 01 19:56	26° \approx 27'55	opposition	2413 Dec 03 20:52	11° \approx 48'32 -1°58'50
			min. Earth dist.	2413 Dec 03 17:40	11° \approx 49'12 8.08492 AU
conjunction	2408 Mar 18 17:43	28° \approx 32'03 -1°58'10	direct	2414 Feb 08 07:59	8° \approx 21'57
minimum elong	2408 Mar 18 17:41	28° \approx 32'02 1°58'11	evening set	2414 May 22 09:39	16° \approx 26'38
max. Earth dist.	2408 Mar 18 14:30	28° \approx 31'03 10.61091 AU			
	2408 Mar 30 16:00	0° \approx	conjunction	2414 Jun 09 08:28	18° \approx 45'44 -1°23'12
morning rise	2408 Apr 04 19:27	0° \approx 37'28	minimum elong	2414 Jun 09 08:31	18° \approx 45'45 1°23'11
retrograde	2408 Jul 19 08:57	8° \approx 20'59	max. Earth dist.	2414 Jun 09 13:12	18° \approx 47'16 10.06150 AU
opposition	2408 Sep 27 11:29	4° \approx 55'17 -2°33'37	morning rise	2414 Jun 27 09:50	21° \approx 05'41
min. Earth dist.	2408 Sep 27 13:23	4° \approx 54'55 8.55560 AU	retrograde	2414 Oct 11 16:32	29° \approx 24'55
direct	2408 Dec 04 10:44	1° \approx 34'00	opposition	2414 Dec 18 00:42	25° \approx 55'28 -1°26'48
evening set	2409 Mar 14 14:19	9° \approx 00'21	min. Earth dist.	2414 Dec 17 20:39	25° \approx 56'18 8.04599 AU
			direct	2415 Feb 22 11:46	22° \approx 27'57
conjunction	2409 Mar 31 14:58	11° \approx 06'48 -2°09'13		2415 Jun 01 10:15	0° \approx
minimum elong	2409 Mar 31 14:57	11° \approx 06'47 2°09'13	evening set	2415 Jun 06 08:29	0° \approx 37'26
max. Earth dist.	2409 Mar 31 12:08	11° \approx 05'55 10.49778 AU			
morning rise	2409 Apr 17 20:06	13° \approx 14'40	conjunction	2415 Jun 24 10:36	2° \approx 57'54 -0°55'01
retrograde	2409 Aug 02 00:07	21° \approx 07'25	minimum elong	2415 Jun 24 10:38	2° \approx 57'54 0°55'00
opposition	2409 Oct 10 17:22	17° \approx 40'28 -2°43'53	max. Earth dist.	2415 Jun 24 15:56	2° \approx 59'38 10.03630 AU
min. Earth dist.	2409 Oct 10 18:40	17° \approx 40'12 8.44241 AU	morning rise	2415 Jul 12 14:13	5° \approx 18'51
direct	2409 Dec 17 05:26	14° \approx 18'10	retrograde	2415 Oct 26 06:34	13° \approx 36'28
evening set	2410 Mar 27 18:19	21° \approx 52'33	opposition	2416 Jan 01 05:26	10° \approx 07'30 -0°49'16
			min. Earth dist.	2416 Jan 01 01:10	10° \approx 08'23 8.03423 AU
conjunction	2410 Apr 13 22:37	24° \approx 01'35 -2°14'04	direct	2416 Mar 07 20:07	6° \approx 39'11
minimum elong	2410 Apr 13 22:37	24° \approx 01'35 2°14'04	evening set	2416 Jun 20 10:37	14° \approx 51'37
max. Earth dist.	2410 Apr 13 20:25	24° \approx 00'54 10.38559 AU			
morning rise	2410 May 01 07:43	26° \approx 12'08	conjunction	2416 Jul 08 14:36	17° \approx 12'34 -0°23'25
	2410 Jun 03 07:41	0° \approx	minimum elong	2416 Jul 08 14:37	17° \approx 12'34 0°23'24

max. Earth dist.	2416 Jul 08 20:02	17°♄14'19	10.03865 AU	conjunction	2422 Oct 02 04:52	9°♄09'59	2°07'36
morning rise	2416 Jul 26 18:56	19°♄33'36		minimum elong	2422 Oct 02 04:50	9°♄09'58	2°07'35
retrograde	2416 Nov 08 17:06	27°♄47'16		max. Earth dist.	2422 Oct 02 07:25	9°♄10'47	10.49472 AU
opposition	2417 Jan 14 09:38	24°♄19'02	-0°08'44	morning rise	2422 Oct 19 10:40	11°♄17'39	
min. Earth dist.	2417 Jan 14 05:30	24°♄19'53	8.04992 AU	retrograde	2423 Jan 27 19:39	18°♄45'27	
direct	2417 Mar 22 08:29	20°♄50'08		opposition	2423 Apr 05 08:19	15°♄24'23	2°42'13
asc. node	2417 Apr 04 21:29	21°♄00'22		min. Earth dist.	2423 Apr 05 06:54	15°♄24'39	8.55167 AU
evening set	2417 Jul 05 13:05	29°♄03'29		direct	2423 Jun 14 06:07	11°♄57'58	
	2417 Jul 12 21:46	0°♄		evening set	2423 Sep 28 01:11	19°♄42'11	
conjunction	2417 Jul 23 17:17	1°♄24'00	0°09'34	conjunction	2423 Oct 15 07:05	21°♄48'30	2°13'53
minimum elong	2417 Jul 23 17:17	1°♄24'00	0°09'34	minimum elong	2423 Oct 15 07:05	21°♄48'29	2°13'53
behind sun begin	2417 Jul 23 11:15	1°♄22'03		max. Earth dist.	2423 Oct 15 08:10	21°♄48'49	10.60596 AU
behind sun end	2417 Jul 23 23:19	1°♄25'56		morning rise	2423 Nov 01 08:35	23°♄53'27	
max. Earth dist.	2417 Jul 23 22:14	1°♄25'35	10.06746 AU		2424 Jan 02 17:30	0°♄	
morning rise	2417 Aug 10 20:39	3°♄44'12		retrograde	2424 Feb 09 07:05	1°♄13'35	
retrograde	2417 Nov 22 21:18	11°♄52'06			2424 Mar 18 17:02	30°♄	
opposition	2418 Jan 28 11:44	8°♄24'50	0°32'02	opposition	2424 Apr 17 06:21	27°♄53'32	2°45'41
min. Earth dist.	2418 Jan 28 08:00	8°♄25'36	8.09083 AU	min. Earth dist.	2424 Apr 17 05:21	27°♄53'43	8.66180 AU
direct	2418 Apr 05 21:07	4°♄55'40		direct	2424 Jun 26 14:32	24°♄28'11	
evening set	2418 Jul 20 13:28	13°♄08'05			2424 Sep 21 22:18	0°♄	
	2418 Aug 04 03:31	15°♄		evening set	2424 Oct 09 21:38	2°♄04'16	
conjunction	2418 Aug 07 16:14	15°♄27'19	0°41'36	conjunction	2424 Oct 26 23:40	4°♄08'06	2°13'47
minimum elong	2418 Aug 07 16:12	15°♄27'18	0°41'37	minimum elong	2424 Oct 26 23:40	4°♄08'06	2°13'47
max. Earth dist.	2418 Aug 07 20:27	15°♄28'41	10.11973 AU	max. Earth dist.	2424 Oct 27 00:02	4°♄08'13	10.71343 AU
morning rise	2418 Aug 25 16:55	17°♄45'52		morning rise	2424 Nov 12 21:29	6°♄10'40	
retrograde	2418 Dec 06 20:02	25°♄46'44		retrograde	2425 Feb 20 12:31	13°♄23'59	
opposition	2419 Feb 11 10:36	22°♄20'40	1°10'23	opposition	2425 Apr 29 23:01	10°♄04'47	2°41'31
min. Earth dist.	2419 Feb 11 06:52	22°♄21'25	8.15384 AU	min. Earth dist.	2425 Apr 29 22:12	10°♄04'57	8.76548 AU
direct	2419 Apr 20 07:40	18°♄51'33		direct	2425 Jul 09 16:55	6°♄40'34	
evening set	2419 Aug 04 09:02	27°♄01'16		evening set	2425 Oct 22 08:31	14°♄08'43	
					2425 Oct 29 13:11	15°♄	
conjunction	2419 Aug 22 08:54	29°♄18'31	1°10'51	conjunction	2425 Nov 08 07:22	16°♄10'24	2°07'44
minimum elong	2419 Aug 22 08:51	29°♄18'30	1°10'51	minimum elong	2425 Nov 08 07:24	16°♄10'25	2°07'44
max. Earth dist.	2419 Aug 22 13:00	29°♄19'50	10.19252 AU	max. Earth dist.	2425 Nov 08 07:37	16°♄10'29	10.81223 AU
	2419 Aug 27 18:31	0°♄		morning rise	2425 Nov 25 02:13	18°♄10'57	
morning rise	2419 Sep 09 05:33	1°♄34'45		retrograde	2426 Mar 04 14:58	25°♄18'34	
retrograde	2419 Dec 20 13:15	9°♄27'47		opposition	2426 May 12 11:17	22°♄00'04	2°30'27
opposition	2420 Feb 25 05:37	6°♄02'58	1°44'01	min. Earth dist.	2426 May 12 11:05	22°♄00'06	8.85823 AU
min. Earth dist.	2420 Feb 25 01:45	6°♄03'45	8.23595 AU	direct	2426 Jul 22 10:56	18°♄37'00	
direct	2420 May 03 14:19	2°♄34'13		evening set	2426 Nov 03 10:57	25°♄57'42	
evening set	2420 Aug 17 21:19	10°♄39'24					
conjunction	2420 Sep 04 17:12	12°♄54'10	1°35'38	conjunction	2426 Nov 20 07:10	27°♄57'38	1°56'19
minimum elong	2420 Sep 04 17:08	12°♄54'09	1°35'38	minimum elong	2426 Nov 20 07:12	27°♄57'39	1°56'19
max. Earth dist.	2420 Sep 04 21:22	12°♄55'30	10.28249 AU	max. Earth dist.	2426 Nov 20 06:51	27°♄57'33	10.89826 AU
morning rise	2420 Sep 22 09:01	15°♄07'41		morning rise	2426 Dec 06 23:52	29°♄56'35	
retrograde	2421 Jan 01 23:44	22°♄52'19			2426 Dec 07 11:33	0°♄	
opposition	2421 Mar 09 19:52	19°♄28'47	2°11'10	retrograde	2427 Mar 16 12:28	6°♄59'46	
min. Earth dist.	2421 Mar 09 16:20	19°♄29'30	8.33315 AU	opposition	2427 May 24 19:46	3°♄41'47	2°13'19
direct	2421 May 17 16:57	16°♄00'38		min. Earth dist.	2427 May 24 20:49	3°♄41'36	8.93648 AU
evening set	2421 Sep 01 00:52	23°♄59'50		direct	2427 Aug 03 22:04	0°♄19'50	
				evening set	2427 Nov 15 06:26	7°♄33'58	
conjunction	2421 Sep 18 16:09	26°♄11'47	1°54'46	conjunction	2427 Dec 02 00:35	9°♄32'32	1°40'16
minimum elong	2421 Sep 18 16:06	26°♄11'47	1°54'46	minimum elong	2427 Dec 02 00:38	9°♄32'33	1°40'17
max. Earth dist.	2421 Sep 18 19:53	26°♄12'58	10.38504 AU	max. Earth dist.	2427 Dec 01 22:44	9°♄31'59	10.96836 AU
morning rise	2421 Oct 06 02:50	28°♄22'22		morning rise	2427 Dec 18 16:05	11°♄30'21	
	2421 Oct 19 15:50	0°♄		retrograde	2428 Mar 27 07:13	18°♄30'29	
retrograde	2422 Jan 15 01:10	5°♄58'27		opposition	2428 Jun 05 01:03	15°♄12'50	1°51'04
opposition	2422 Mar 23 04:46	2°♄36'12	2°30'44	min. Earth dist.	2428 Jun 05 03:05	15°♄12'27	8.99735 AU
min. Earth dist.	2422 Mar 23 02:17	2°♄36'41	8.44026 AU	direct	2428 Aug 15 05:53	11°♄51'54	
	2422 Apr 29 14:45	30°♄		evening set	2428 Nov 25 20:25	19°♄00'33	
direct	2422 May 31 14:45	29°♄08'49					
	2422 Jul 02 11:07	0°♄		conjunction	2428 Dec 12 13:12	20°♄58'10	1°20'23
evening set	2422 Sep 14 18:24	7°♄00'55		minimum elong	2428 Dec 12 13:14	20°♄58'11	1°20'24

max. Earth dist.	2428 Dec 12 10:17	20° \mathbb{A} 57'19	11.01988 AU	conjunction	2435 Feb 18 04:48	29° \approx 18'29	-1°11'13
morning rise	2428 Dec 29 04:06	22° \mathbb{A} 55'14		minimum elong	2435 Feb 18 04:46	29° \approx 18'28	1°11'13
retrograde	2429 Apr 08 01:28	29° \mathbb{A} 53'50		max. Earth dist.	2435 Feb 18 01:26	29° \approx 17'28	10.88551 AU
opposition	2429 Jun 17 04:11	26° \mathbb{A} 36'17	1°24'42		2435 Feb 23 23:15	0° \mathbb{H}	
min. Earth dist.	2429 Jun 17 06:16	26° \mathbb{A} 35'54	9.03848 AU	morning rise	2435 Mar 07 00:24	1° \mathbb{H} 18'44	
direct	2429 Aug 27 08:22	23° \mathbb{A} 16'17		retrograde	2435 Jun 18 16:47	8° \mathbb{H} 39'35	
	2429 Dec 04 06:29	0° \mathbb{B}		opposition	2435 Aug 28 11:10	5° \mathbb{H} 17'58	-1°41'26
evening set	2429 Dec 07 06:34	0° \mathbb{B} 20'41		min. Earth dist.	2435 Aug 28 13:43	5° \mathbb{H} 17'29	8.84320 AU
				direct	2435 Nov 05 16:17	1° \mathbb{H} 59'20	
conjunction	2429 Dec 23 22:33	2° \mathbb{B} 17'43	0°57'30	evening set	2436 Feb 13 09:58	9° \mathbb{H} 08'14	
minimum elong	2429 Dec 23 22:35	2° \mathbb{B} 17'44	0°57'29				
max. Earth dist.	2429 Dec 23 19:57	2° \mathbb{B} 16'57	11.05078 AU	conjunction	2436 Mar 01 04:17	11° \mathbb{H} 09'08	-1°33'07
morning rise	2430 Jan 09 13:11	4° \mathbb{B} 14'26		minimum elong	2436 Mar 01 04:14	11° \mathbb{H} 09'07	1°33'07
retrograde	2430 Apr 19 20:29	11° \mathbb{B} 13'04		max. Earth dist.	2436 Mar 01 00:05	11° \mathbb{H} 07'52	10.79661 AU
opposition	2430 Jun 29 06:16	7° \mathbb{B} 55'22	0°55'13	morning rise	2436 Mar 18 02:01	13° \mathbb{H} 11'05	
min. Earth dist.	2430 Jun 29 08:19	7° \mathbb{B} 54'59	9.05834 AU	retrograde	2436 Jun 30 13:29	20° \mathbb{H} 39'58	
direct	2430 Sep 08 07:18	4° \mathbb{B} 36'09		opposition	2436 Sep 09 02:44	17° \mathbb{H} 17'06	-2°06'25
evening set	2430 Dec 18 14:46	11° \mathbb{B} 37'39		min. Earth dist.	2436 Sep 09 05:52	17° \mathbb{H} 16'30	8.74769 AU
				direct	2436 Nov 16 19:52	13° \mathbb{H} 57'49	
conjunction	2431 Jan 04 06:16	13° \mathbb{B} 34'29	0°32'26	evening set	2437 Feb 24 15:06	21° \mathbb{H} 12'22	
minimum elong	2431 Jan 04 06:17	13° \mathbb{B} 34'30	0°32'26				
max. Earth dist.	2431 Jan 04 03:20	13° \mathbb{B} 33'38	11.06000 AU	conjunction	2437 Mar 13 11:21	23° \mathbb{H} 15'05	-1°51'19
morning rise	2431 Jan 20 21:10	15° \mathbb{B} 31'13		minimum elong	2437 Mar 13 11:19	23° \mathbb{H} 15'04	1°51'19
retrograde	2431 May 01 17:55	22° \mathbb{B} 31'23		max. Earth dist.	2437 Mar 13 07:03	23° \mathbb{H} 13'46	10.69478 AU
opposition	2431 Jul 11 08:23	19° \mathbb{B} 13'22	0°23'39	morning rise	2437 Mar 30 11:40	25° \mathbb{H} 19'03	
min. Earth dist.	2431 Jul 11 11:08	19° \mathbb{B} 12'51	9.05642 AU		2437 May 13 03:57	0° \mathbb{Y}	
direct	2431 Sep 20 03:15	15° \mathbb{B} 54'43		retrograde	2437 Jul 13 16:06	2° \mathbb{Y} 56'43	
evening set	2431 Dec 29 22:34	22° \mathbb{B} 54'44			2437 Sep 15 23:46	30° \mathbb{R} \mathbb{H}	
				opposition	2437 Sep 21 23:26	29° \mathbb{H} 32'29	-2°26'19
conjunction	2432 Jan 15 13:50	24° \mathbb{B} 51'43	0°06'09	min. Earth dist.	2437 Sep 22 02:38	29° \mathbb{H} 31'52	8.64093 AU
minimum elong	2432 Jan 15 13:50	24° \mathbb{B} 51'43	0°06'09	direct	2437 Nov 29 04:14	26° \mathbb{H} 12'23	
behind sun begin	2432 Jan 15 07:13	24° \mathbb{B} 49'47			2438 Feb 05 12:41	0° \mathbb{Y}	
behind sun end	2432 Jan 15 20:28	24° \mathbb{B} 53'39		evening set	2438 Mar 09 04:13	3° \mathbb{Y} 33'44	
max. Earth dist.	2432 Jan 15 09:44	24° \mathbb{B} 50'33	11.04730 AU				
morning rise	2432 Feb 01 05:34	26° \mathbb{B} 48'51		conjunction	2438 Mar 26 03:13	5° \mathbb{Y} 38'37	-2°04'47
	2432 Mar 01 17:26	0° \approx		minimum elong	2438 Mar 26 03:12	5° \mathbb{Y} 38'37	2°04'47
desc. node	2432 Apr 10 11:20	3° \approx 02'06		max. Earth dist.	2438 Mar 25 23:45	5° \mathbb{Y} 37'33	10.58360 AU
retrograde	2432 May 12 15:26	3° \approx 52'05		morning rise	2438 Apr 12 06:33	7° \mathbb{Y} 44'53	
opposition	2432 Jul 22 11:23	0° \approx 33'28	-0°08'56	retrograde	2438 Jul 27 02:13	15° \mathbb{Y} 31'46	
min. Earth dist.	2432 Jul 22 15:01	0° \approx 32'48	9.03276 AU	opposition	2438 Oct 05 01:35	12° \mathbb{Y} 06'10	-2°39'51
	2432 Jul 30 01:35	30° \mathbb{R} \mathbb{B}		min. Earth dist.	2438 Oct 05 04:05	12° \mathbb{Y} 05'41	8.52714 AU
direct	2432 Sep 30 22:28	27° \mathbb{B} 15'10		direct	2438 Dec 11 20:19	8° \mathbb{Y} 45'05	
	2432 Nov 29 08:17	0° \approx		evening set	2439 Mar 22 02:41	16° \mathbb{Y} 14'09	
evening set	2433 Jan 09 07:39	4° \approx 15'16					
				conjunction	2439 Apr 08 05:09	18° \mathbb{Y} 21'32	-2°12'31
conjunction	2433 Jan 25 23:05	6° \approx 12'42	-0°20'37	minimum elong	2439 Apr 08 05:09	18° \mathbb{Y} 21'32	2°12'31
minimum elong	2433 Jan 25 23:05	6° \approx 12'42	0°20'37	max. Earth dist.	2439 Apr 08 02:48	18° \mathbb{Y} 20'48	10.46823 AU
max. Earth dist.	2433 Jan 25 18:38	6° \approx 11'24	11.01307 AU	morning rise	2439 Apr 25 12:01	20° \mathbb{Y} 30'22	
morning rise	2433 Feb 11 15:51	8° \approx 10'33		retrograde	2439 Aug 09 21:12	28° \mathbb{Y} 26'15	
	2433 May 05 09:09	15° \approx		opposition	2439 Oct 18 09:15	24° \mathbb{Y} 59'22	-2°45'49
retrograde	2433 May 24 18:24	15° \approx 18'21		min. Earth dist.	2439 Oct 18 10:35	24° \mathbb{Y} 59'07	8.41224 AU
	2433 Jun 13 09:05	15° \mathbb{R} \approx		direct	2439 Dec 24 17:00	21° \mathbb{Y} 37'07	
opposition	2433 Aug 03 16:09	11° \approx 58'56	-0°41'26	evening set	2440 Apr 03 10:58	29° \mathbb{Y} 14'27	
min. Earth dist.	2433 Aug 03 19:38	11° \approx 58'17	8.98818 AU		2440 Apr 09 13:11	0° \mathbb{B}	
direct	2433 Oct 12 19:49	8° \approx 40'44					
	2434 Jan 14 16:42	15° \approx		conjunction	2440 Apr 20 17:27	1° \mathbb{B} 24'32	-2°13'43
evening set	2434 Jan 20 19:33	15° \approx 42'20		minimum elong	2440 Apr 20 17:27	1° \mathbb{B} 24'32	2°13'43
				max. Earth dist.	2440 Apr 20 15:42	1° \mathbb{B} 23'59	10.35515 AU
conjunction	2434 Feb 06 11:38	17° \approx 40'37	-0°46'43	morning rise	2440 May 08 04:26	3° \mathbb{B} 36'06	
minimum elong	2434 Feb 06 11:36	17° \approx 40'37	0°46'42	retrograde	2440 Aug 22 23:05	11° \mathbb{B} 40'08	
max. Earth dist.	2434 Feb 06 07:57	17° \approx 39'32	10.95850 AU	opposition	2440 Oct 30 22:41	8° \mathbb{B} 12'09	-2°43'18
morning rise	2434 Feb 23 05:35	19° \approx 39'30		min. Earth dist.	2440 Oct 30 23:12	8° \mathbb{B} 12'02	8.30281 AU
retrograde	2434 Jun 06 03:08	26° \approx 53'14		direct	2441 Jan 05 20:25	4° \mathbb{B} 48'37	
opposition	2434 Aug 15 23:50	23° \approx 32'48	-1°12'40	evening set	2441 Apr 17 04:56	12° \mathbb{B} 34'16	
min. Earth dist.	2434 Aug 16 02:37	23° \approx 32'17	8.92427 AU				
direct	2434 Oct 24 16:24	20° \approx 14'31		conjunction	2441 May 04 15:56	14° \mathbb{B} 47'07	-2°07'49
evening set	2435 Feb 01 11:46	27° \approx 19'03		minimum elong	2441 May 04 15:58	14° \mathbb{B} 47'08	2°07'49

max. Earth dist.	2441 May 04 14:54	14° 8 46'48	10.25094 AU	conjunction	2447 Jul 31 22:49	9° 0 00'44	0°26'27
	2441 May 06 08:16	15° 8		minimum elong	2447 Jul 31 22:48	9° 0 00'44	0°26'28
morning rise	2441 May 22 07:25	17° 8 01'26		max. Earth dist.	2447 Aug 01 04:11	9° 0 02'28	10.07960 AU
retrograde	2441 Sep 06 05:28	25° 8 12'13		morning rise	2447 Aug 19 00:53	11° 0 20'16	
opposition	2441 Nov 13 17:15	21° 8 43'20	-2°31'46		2447 Sep 18 19:52	15° 0	
min. Earth dist.	2441 Nov 13 17:12	21° 8 43'21	8.20525 AU	retrograde	2447 Nov 30 14:45	19° 0 25'00	
direct	2442 Jan 19 09:02	18° 8 18'28		opposition	2448 Feb 05 04:46	15° 0 57'43	0°52'27
evening set	2442 May 01 08:31	26° 8 12'05		min. Earth dist.	2448 Feb 05 00:48	15° 0 58'32	8.10810 AU
					2448 Feb 17 01:26	15° 8 0	
conjunction	2442 May 19 00:22	28° 8 27'38	-1°54'42	direct	2448 Apr 12 19:09	12° 0 27'59	
minimum elong	2442 May 19 00:25	28° 8 27'39	1°54'42		2448 Jun 06 08:57	15° 0	
max. Earth dist.	2442 May 19 00:15	28° 8 27'36	10.16174 AU	evening set	2448 Jul 27 17:02	20° 0 39'25	
	2442 May 31 00:07	0° 0 0					
morning rise	2442 Jun 05 20:19	0° 0 0 44'29		conjunction	2448 Aug 14 18:30	22° 0 57'51	0°57'16
retrograde	2442 Sep 20 15:09	9° 0 0 00'02		minimum elong	2448 Aug 14 18:27	22° 0 57'50	0°57'16
opposition	2442 Nov 27 15:55	5° 0 0 30'35	-2°11'18	max. Earth dist.	2448 Aug 14 23:22	22° 0 59'25	10.14234 AU
min. Earth dist.	2442 Nov 27 15:21	5° 0 0 30'42	8.12534 AU	morning rise	2448 Sep 01 17:14	25° 0 15'23	
direct	2443 Feb 02 04:31	2° 0 0 04'24			2448 Oct 13 08:34	0° 0 0	
evening set	2443 May 15 20:37	10° 0 0 05'08		retrograde	2448 Dec 13 11:07	3° 0 0 12'35	
					2449 Feb 15 07:42	30° 8 0	
conjunction	2443 Jun 02 17:12	12° 0 0 23'04	-1°34'45	opposition	2449 Feb 18 01:41	29° 0 46'33	1°28'35
minimum elong	2443 Jun 02 17:15	12° 0 0 23'05	1°34'44	min. Earth dist.	2449 Feb 17 22:08	29° 0 47'17	8.18208 AU
max. Earth dist.	2443 Jun 02 18:24	12° 0 0 23'27	10.09280 AU	direct	2449 Apr 27 03:47	26° 0 17'02	
morning rise	2443 Jun 20 17:06	14° 0 0 42'02			2449 Jul 03 19:57	0° 0 0	
retrograde	2443 Oct 05 03:41	23° 0 0 00'03		evening set	2449 Aug 11 08:57	4° 0 0 24'47	
opposition	2443 Dec 11 17:47	19° 0 0 30'22	-1°42'45				
min. Earth dist.	2443 Dec 11 16:18	19° 0 0 30'40	8.06788 AU	conjunction	2449 Aug 29 06:51	6° 0 0 40'55	1°24'21
direct	2444 Feb 16 05:56	16° 0 0 03'00		minimum elong	2449 Aug 29 06:47	6° 0 0 40'54	1°24'21
evening set	2444 May 29 15:32	24° 0 0 09'32		max. Earth dist.	2449 Aug 29 10:56	6° 0 0 42'13	10.22598 AU
				morning rise	2449 Sep 16 01:14	8° 0 0 55'55	
conjunction	2444 Jun 16 16:07	26° 0 0 29'16	-1°08'56	retrograde	2449 Dec 26 23:23	16° 0 0 44'49	
minimum elong	2444 Jun 16 16:10	26° 0 0 29'17	1°08'55	opposition	2450 Mar 03 18:09	13° 0 0 20'11	1°59'00
max. Earth dist.	2444 Jun 16 19:02	26° 0 0 30'13	10.04827 AU	min. Earth dist.	2450 Mar 03 14:43	13° 0 0 20'53	8.27457 AU
morning rise	2444 Jul 04 18:53	28° 0 0 49'42		direct	2450 May 11 10:03	9° 0 0 51'13	
	2444 Jul 14 02:42	0° 0 0 0		evening set	2450 Aug 25 16:52	17° 0 0 53'41	
retrograde	2444 Oct 18 16:44	7° 0 0 07'44					
opposition	2444 Dec 24 21:24	3° 0 0 38'09	-1°07'40	conjunction	2450 Sep 12 10:21	20° 0 0 07'05	1°46'17
min. Earth dist.	2444 Dec 24 18:36	3° 0 0 38'44	8.03640 AU	minimum elong	2450 Sep 12 10:17	20° 0 0 07'04	1°46'18
direct	2445 Mar 01 12:11	0° 0 0 09'47		max. Earth dist.	2450 Sep 12 13:57	20° 0 0 08'13	10.32543 AU
evening set	2445 Jun 13 15:20	8° 0 0 20'30		morning rise	2450 Sep 29 23:44	22° 0 0 19'12	
				retrograde	2451 Jan 09 03:53	29° 0 0 59'34	
conjunction	2445 Jul 01 18:44	10° 0 0 41'16	-0°38'48	opposition	2451 Mar 17 05:31	26° 0 0 36'22	2°22'17
minimum elong	2445 Jul 01 18:45	10° 0 0 41'16	0°38'47	min. Earth dist.	2451 Mar 17 01:58	26° 0 0 37'04	8.38015 AU
max. Earth dist.	2445 Jul 01 23:02	10° 0 0 42'40	10.03091 AU	direct	2451 May 25 10:48	23° 0 0 08'17	
morning rise	2445 Jul 19 22:57	13° 0 0 02'20			2451 Aug 30 18:40	0° 0 0 0	
retrograde	2445 Nov 02 04:16	21° 0 0 17'56		evening set	2451 Sep 08 15:10	1° 0 0 04'06	
opposition	2446 Jan 08 01:19	17° 0 0 48'49	-0°28'19				
min. Earth dist.	2446 Jan 07 21:34	17° 0 0 49'35	8.03286 AU	conjunction	2451 Sep 26 03:59	3° 0 0 14'38	2°02'11
direct	2446 Mar 15 21:53	14° 0 0 19'41		minimum elong	2451 Sep 26 03:56	3° 0 0 14'37	2°02'11
evening set	2446 Jun 28 17:29	22° 0 0 32'40		max. Earth dist.	2451 Sep 26 07:28	3° 0 0 15'44	10.43515 AU
				morning rise	2451 Oct 13 12:16	5° 0 0 23'46	
conjunction	2446 Jul 16 22:00	24° 0 0 53'34	-0°06'20	retrograde	2452 Jan 22 03:11	12° 0 0 55'45	
minimum elong	2446 Jul 16 22:01	24° 0 0 53'34	0°06'19	opposition	2452 Mar 29 11:37	9° 0 0 33'56	2°37'38
behind sun begin	2446 Jul 16 15:05	24° 0 0 51'21		min. Earth dist.	2452 Mar 29 08:08	9° 0 0 34'37	8.49306 AU
behind sun end	2446 Jul 17 04:58	24° 0 0 55'48		direct	2452 Jun 07 04:01	6° 0 0 06'58	
max. Earth dist.	2446 Jul 17 03:08	24° 0 0 55'12	10.04166 AU	evening set	2452 Sep 21 03:05	13° 0 0 55'14	
morning rise	2446 Aug 04 02:02	27° 0 0 14'20					
	2446 Aug 26 16:37	0° 0 0 0		conjunction	2452 Oct 08 11:21	16° 0 0 02'56	2°11'35
asc. node	2446 Sep 27 05:49	3° 0 0 11'25		minimum elong	2452 Oct 08 11:20	16° 0 0 02'56	2°11'35
retrograde	2446 Nov 16 11:55	5° 0 0 25'21		max. Earth dist.	2452 Oct 08 14:50	16° 0 0 04'01	10.54932 AU
opposition	2447 Jan 22 04:14	1° 0 0 57'01	0°12'38	morning rise	2452 Oct 25 14:52	18° 0 0 09'14	
min. Earth dist.	2447 Jan 22 00:04	1° 0 0 57'53	8.05731 AU	retrograde	2453 Feb 02 19:25	25° 0 0 33'15	
	2447 Feb 16 06:38	30° 8 0 0		opposition	2453 Apr 11 12:22	22° 0 0 12'44	2°44'52
direct	2447 Mar 30 08:39	28° 0 0 27'25		min. Earth dist.	2453 Apr 11 09:53	22° 0 0 13'13	8.60745 AU
	2447 May 11 01:39	0° 0 0 0		direct	2453 Jun 20 14:29	18° 0 0 47'00	
evening set	2447 Jul 13 19:00	6° 0 0 40'39		evening set	2453 Oct 04 04:53	26° 0 0 27'16	

conjunction	2453 Oct 21 08:53	28°♄32'20	2°14'29			2459 Sep 25 19:02	0°♄	
minimum elong	2453 Oct 21 08:53	28°♄32'20	2°14'28	evening set		2459 Dec 13 17:45	6°♄38'04	
max. Earth dist.	2453 Oct 21 11:17	28°♄33'04	10.66222 AU					
	2453 Nov 02 08:33	0°♄		conjunction		2459 Dec 30 09:21	8°♄35'00	0°44'18
morning rise	2453 Nov 07 08:19	0°♄36'04		minimum elong		2459 Dec 30 09:22	8°♄35'00	0°44'18
retrograde	2454 Feb 15 03:52	7°♄52'48		max. Earth dist.		2459 Dec 30 04:33	8°♄33'35	11.05970 AU
opposition	2454 Apr 24 07:54	4°♄33'28	2°44'15	morning rise		2460 Jan 16 00:14	10°♄31'44	
min. Earth dist.	2454 Apr 24 06:45	4°♄33'41	8.71785 AU	retrograde		2460 Apr 25 14:27	17°♄31'18	
direct	2454 Jul 03 19:51	1°♄09'00		opposition		2460 Jul 05 02:33	14°♄13'44	0°38'31
evening set	2454 Oct 16 20:51	8°♄41'15		min. Earth dist.		2460 Jul 05 06:29	14°♄13'00	9.05926 AU
				direct		2460 Sep 14 00:49	10°♄55'00	
				evening set		2460 Dec 24 02:06	17°♄55'58	
conjunction	2454 Nov 02 21:06	10°♄43'57	2°11'11					
minimum elong	2454 Nov 02 21:07	10°♄43'58	2°11'10					
max. Earth dist.	2454 Nov 02 21:52	10°♄44'11	10.76870 AU	conjunction		2461 Jan 09 17:33	19°♄52'56	0°18'27
morning rise	2454 Nov 19 17:20	12°♄45'28		minimum elong		2461 Jan 09 17:34	19°♄52'56	0°18'27
	2454 Dec 09 08:55	15°♄		max. Earth dist.		2461 Jan 09 12:53	19°♄51'34	11.05291 AU
retrograde	2455 Feb 27 07:56	19°♄55'57		morning rise		2461 Jan 26 08:52	21°♄49'54	
opposition	2455 May 06 22:48	16°♄37'33	2°36'20	retrograde		2461 May 07 12:24	28°♄51'55	
min. Earth dist.	2455 May 06 22:33	16°♄37'36	8.81932 AU	opposition		2461 Jul 17 05:28	25°♄33'40	0°06'14
	2455 May 29 08:07	15°♄		min. Earth dist.		2461 Jul 17 09:12	25°♄32'59	9.04105 AU
direct	2455 Jul 16 18:11	13°♄14'21		direct		2461 Sep 25 21:09	22°♄15'13	
	2455 Sep 02 01:00	15°♄		desc. node		2461 Sep 27 04:12	22°♄15'18	
evening set	2455 Oct 29 03:37	20°♄38'50		evening set		2462 Jan 04 10:49	29°♄15'34	
						2462 Jan 10 19:18	0°♄	
conjunction	2455 Nov 15 00:56	22°♄39'35	2°02'13					
minimum elong	2455 Nov 15 00:57	22°♄39'36	2°02'13	conjunction		2462 Jan 21 02:19	1°♄12'52	-0°08'17
max. Earth dist.	2455 Nov 15 00:29	22°♄39'27	10.86409 AU	minimum elong		2462 Jan 21 02:18	1°♄12'52	0°08'17
morning rise	2455 Dec 01 18:45	24°♄39'17		behind sun begin		2462 Jan 20 20:07	1°♄11'04	
	2456 Jan 24 10:02	0°♄		behind sun end		2462 Jan 21 08:29	1°♄14'41	
retrograde	2456 Mar 10 07:09	1°♄44'40		max. Earth dist.		2462 Jan 20 21:40	1°♄11'31	11.02382 AU
	2456 Apr 26 21:03	30°♄		morning rise		2462 Feb 06 18:25	3°♄10'26	
opposition	2456 May 18 09:22	28°♄26'56	2°21'56	retrograde		2462 May 19 14:24	10°♄16'24	
min. Earth dist.	2456 May 18 09:19	28°♄26'57	8.90733 AU	opposition		2462 Jul 29 09:54	6°♄57'14	-0°26'28
direct	2456 Jul 28 10:08	25°♄04'58		min. Earth dist.		2462 Jul 29 13:55	6°♄56'29	9.00125 AU
	2456 Oct 18 21:18	0°♄		direct		2462 Oct 07 17:25	3°♄38'48	
evening set	2456 Nov 09 02:46	2°♄22'22		evening set		2463 Jan 15 21:41	10°♄40'00	
conjunction	2456 Nov 25 21:56	4°♄21'32	1°48'15	conjunction		2463 Feb 01 13:26	12°♄37'59	-0°34'47
minimum elong	2456 Nov 25 21:59	4°♄21'33	1°48'15	minimum elong		2463 Feb 01 13:25	12°♄37'59	0°34'46
max. Earth dist.	2456 Nov 25 21:11	4°♄21'19	10.94403 AU	max. Earth dist.		2463 Feb 01 07:50	12°♄36'20	10.97383 AU
morning rise	2456 Dec 12 13:58	6°♄19'51		morning rise		2463 Feb 18 06:52	14°♄36'30	
retrograde	2457 Mar 22 04:57	13°♄21'27				2463 Feb 21 16:05	15°♄	
opposition	2457 May 30 16:19	10°♄04'09	2°01'59	retrograde		2463 May 31 19:31	21°♄47'47	
min. Earth dist.	2457 May 30 17:06	10°♄04'01	8.97784 AU	opposition		2463 Aug 10 16:33	18°♄27'30	-0°58'29
direct	2457 Aug 09 20:34	6°♄43'15		min. Earth dist.		2463 Aug 10 21:12	18°♄26'38	8.94157 AU
evening set	2457 Nov 20 19:47	13°♄54'34		direct		2463 Oct 19 13:33	15°♄08'51	
				evening set		2464 Jan 27 12:02	22°♄12'26	
conjunction	2457 Dec 07 13:18	15°♄52'36	1°30'04					
minimum elong	2457 Dec 07 13:21	15°♄52'37	1°30'05	conjunction		2464 Feb 13 04:33	24°♄11'27	-1°00'11
max. Earth dist.	2457 Dec 07 11:33	15°♄52'05	11.00475 AU	minimum elong		2464 Feb 13 04:31	24°♄11'26	1°00'10
morning rise	2457 Dec 24 04:17	17°♄49'57		max. Earth dist.		2464 Feb 12 22:55	24°♄09'46	10.90483 AU
retrograde	2458 Apr 03 00:20	24°♄49'15		morning rise		2464 Feb 29 23:33	26°♄11'12	
opposition	2458 Jun 11 21:01	21°♄32'10	1°37'25			2464 Apr 05 09:20	0°♄	
min. Earth dist.	2458 Jun 11 23:20	21°♄31'44	9.02762 AU	retrograde		2464 Jun 12 05:29	3°♄29'10	
direct	2458 Aug 21 24:00	18°♄12'12		opposition		2464 Aug 22 02:22	0°♄07'36	-1°28'36
evening set	2458 Dec 02 08:10	25°♄18'40		min. Earth dist.		2464 Aug 22 06:48	0°♄06'46	8.86410 AU
						2464 Aug 23 18:49	30°♄	
conjunction	2458 Dec 19 00:26	27°♄15'57	1°08'28	direct		2464 Oct 30 13:54	26°♄48'32	
minimum elong	2458 Dec 19 00:28	27°♄15'58	1°08'28			2465 Jan 01 20:01	0°♄	
max. Earth dist.	2458 Dec 18 20:45	27°♄14'52	11.04363 AU	evening set		2465 Feb 07 07:23	3°♄55'56	
morning rise	2459 Jan 04 15:08	29°♄12'48						
	2459 Jan 11 12:25	0°♄		conjunction		2465 Feb 24 01:10	5°♄56'19	-1°23'27
retrograde	2459 Apr 14 18:06	6°♄11'28		minimum elong		2465 Feb 24 01:07	5°♄56'18	1°23'27
opposition	2459 Jun 24 00:11	2°♄54'16	1°09'15	max. Earth dist.		2465 Feb 23 20:41	5°♄54'58	10.81924 AU
min. Earth dist.	2459 Jun 24 03:53	2°♄53'35	9.05488 AU	morning rise		2465 Mar 12 21:54	7°♄57'38	
	2459 Aug 11 02:49	30°♄		retrograde		2465 Jun 24 23:38	15°♄23'24	
direct	2459 Sep 03 01:27	29°♄35'02		opposition		2465 Sep 03 16:12	12°♄00'28	-1°55'33

min. Earth dist.	2465 Sep 03 19:31	11° K 59'50	8.77168 AU		2471 Nov 15 10:50	30° R 8
direct	2465 Nov 11 16:19	8° K 40'50		opposition	2471 Nov 21 17:22	29° B 29'29 -2°21'40
evening set	2466 Feb 19 09:19	15° K 53'23		min. Earth dist.	2471 Nov 21 15:25	29° B 29'53 8.15089 AU
				direct	2472 Jan 27 06:40	26° B 03'51
conjunction	2466 Mar 08 04:49	17° K 55'28 -1°43'30			2472 Apr 04 07:24	0° II
minimum elong	2466 Mar 08 04:47	17° K 55'27 1°43'31		evening set	2472 May 08 15:26	4° II 02'00
max. Earth dist.	2466 Mar 08 01:06	17° K 54'20 10.72036 AU				
morning rise	2466 Mar 25 03:48	19° K 58'41		conjunction	2472 May 26 10:00	6° II 19'03 -1°44'33
retrograde	2466 Jul 08 00:28	27° K 33'05		minimum elong	2472 May 26 10:04	6° II 19'04 1°44'33
opposition	2466 Sep 16 10:50	24° K 08'44 -2°18'01		max. Earth dist.	2472 May 26 12:53	6° II 19'59 10.11510 AU
min. Earth dist.	2466 Sep 16 13:19	24° K 08'16 8.66796 AU		morning rise	2472 Jun 13 08:02	8° II 37'14
direct	2466 Nov 23 21:45	20° K 48'22		retrograde	2472 Sep 28 00:51	16° II 55'02
evening set	2467 Mar 03 18:59	28° K 07'16		opposition	2472 Dec 04 18:30	13° II 25'27 -1°56'32
	2467 Mar 19 03:45	0° Y		min. Earth dist.	2472 Dec 04 15:34	13° II 26'03 8.08694 AU
conjunction	2467 Mar 20 16:44	0° Y 11'23 -1°59'18		direct	2473 Feb 09 04:39	9° II 58'47
minimum elong	2467 Mar 20 16:42	0° Y 11'23 1°59'19		evening set	2473 May 23 07:58	18° II 03'19
max. Earth dist.	2467 Mar 20 13:04	0° Y 10'16 10.61227 AU		conjunction	2473 Jun 10 06:49	20° II 22'24 -1°21'10
morning rise	2467 Apr 06 18:38	2° Y 16'48		minimum elong	2473 Jun 10 06:52	20° II 22'25 1°21'10
retrograde	2467 Jul 21 08:07	10° Y 00'18		max. Earth dist.	2473 Jun 10 10:30	20° II 23'35 10.06346 AU
opposition	2467 Sep 29 10:49	6° Y 34'37 -2°34'40		morning rise	2473 Jun 28 08:22	22° II 42'21
min. Earth dist.	2467 Sep 29 13:01	6° Y 34'11 8.55719 AU			2473 Sep 08 20:53	0° B
direct	2467 Dec 06 10:02	3° Y 13'19		retrograde	2473 Oct 12 15:13	1° B 01'11
evening set	2468 Mar 15 13:27	10° Y 39'35			2473 Nov 15 11:44	30° R II
conjunction	2468 Apr 01 14:08	12° Y 46'02 -2°09'48		opposition	2473 Dec 18 22:09	27° II 31'46 -1°24'05
minimum elong	2468 Apr 01 14:07	12° Y 46'01 2°09'48		min. Earth dist.	2473 Dec 18 18:54	27° II 32'26 8.04778 AU
max. Earth dist.	2468 Apr 01 10:47	12° Y 44'59 10.49958 AU		direct	2474 Feb 23 09:21	24° II 04'10
morning rise	2468 Apr 18 19:29	14° Y 53'54			2474 May 20 06:29	0° B
retrograde	2468 Aug 02 23:19	22° Y 46'29		evening set	2474 Jun 07 06:37	2° B 13'34
opposition	2468 Oct 11 16:20	19° Y 19'34 -2°44'14		conjunction	2474 Jun 25 08:46	4° B 34'00 -0°52'43
min. Earth dist.	2468 Oct 11 18:15	19° Y 19'11 8.44438 AU		minimum elong	2474 Jun 25 08:49	4° B 34'01 0°52'42
direct	2468 Dec 18 04:14	15° Y 57'14		max. Earth dist.	2474 Jun 25 13:00	4° B 35'22 10.03808 AU
evening set	2469 Mar 28 17:18	23° Y 31'30		morning rise	2474 Jul 13 12:35	6° B 54'57
conjunction	2469 Apr 14 21:48	25° Y 40'32 -2°14'04		retrograde	2474 Oct 27 03:54	15° B 12'13
minimum elong	2469 Apr 14 21:48	25° Y 40'32 2°14'04		opposition	2475 Jan 02 02:39	11° B 43'17 -0°46'17
max. Earth dist.	2469 Apr 14 19:51	25° Y 39'55 10.38771 AU		min. Earth dist.	2475 Jan 01 23:08	11° B 44'00 8.03592 AU
morning rise	2469 May 02 07:01	27° Y 51'04		direct	2475 Mar 09 19:06	8° B 14'55
	2469 May 20 06:07	0° B		evening set	2475 Jun 22 08:40	16° B 27'20
retrograde	2469 Aug 16 21:10	5° B 52'13		conjunction	2475 Jul 10 12:42	18° B 48'14 -0°20'59
opposition	2469 Oct 25 03:36	2° B 24'12 -2°45'39		minimum elong	2475 Jul 10 12:43	18° B 48'15 0°20'59
min. Earth dist.	2469 Oct 25 04:30	2° B 24'01 8.33520 AU		max. Earth dist.	2475 Jul 10 17:27	18° B 49'47 10.04038 AU
	2469 Nov 27 17:32	30° R Y		morning rise	2475 Jul 28 17:07	21° B 09'14
direct	2469 Dec 31 06:06	29° Y 00'47		retrograde	2475 Nov 10 12:40	29° B 22'37
	2470 Feb 02 06:00	0° B		opposition	2476 Jan 16 06:43	25° B 54'26 -0°05'41
evening set	2470 Apr 11 06:58	6° B 43'20		min. Earth dist.	2476 Jan 16 02:45	25° B 55'15 8.05177 AU
conjunction	2470 Apr 28 15:58	8° B 55'06 -2°11'26		asc. node	2476 Mar 08 17:39	22° B 37'18
minimum elong	2470 Apr 28 15:59	8° B 55'07 2°11'25		direct	2476 Mar 23 06:53	22° B 25'33
max. Earth dist.	2470 Apr 28 15:58	8° B 55'06 10.28247 AU			2476 Jul 01 07:43	0° Q
morning rise	2470 May 16 05:26	11° B 08'21		evening set	2476 Jul 06 11:00	0° Q 38'50
	2470 Jun 18 10:17	15° B		conjunction	2476 Jul 24 15:13	2° Q 59'18 0°11'58
retrograde	2470 Aug 31 01:13	19° B 16'57		minimum elong	2476 Jul 24 15:12	2° Q 59'18 0°11'59
opposition	2470 Nov 07 20:10	15° B 48'04 -2°38'12		behind sun begin	2476 Jul 24 10:15	2° Q 57'43
min. Earth dist.	2470 Nov 07 19:33	15° B 48'12 8.23543 AU		behind sun end	2476 Jul 24 20:09	3° Q 00'53
	2470 Nov 17 21:14	15° R 8		max. Earth dist.	2476 Jul 24 20:17	3° Q 00'56 10.06960 AU
direct	2471 Jan 13 15:37	12° B 23'33		morning rise	2476 Aug 11 18:27	5° Q 19'25
	2471 Mar 09 03:41	15° B		retrograde	2476 Nov 23 17:38	13° Q 27'03
evening set	2471 Apr 25 06:38	20° B 14'12		opposition	2477 Jan 29 08:40	9° Q 59'48 0°34'58
conjunction	2471 May 12 20:27	22° B 28'44 -2°01'33		min. Earth dist.	2477 Jan 29 04:23	10° Q 00'41 8.09338 AU
minimum elong	2471 May 12 20:29	22° B 28'45 2°01'32		direct	2477 Apr 06 18:18	6° Q 30'38
max. Earth dist.	2471 May 12 22:03	22° B 29'15 10.18970 AU		evening set	2477 Jul 21 11:08	14° Q 42'53
morning rise	2471 May 30 14:17	24° B 44'36			2477 Jul 23 17:16	15° Q
	2471 Jul 16 11:26	0° II		conjunction	2477 Aug 08 13:51	17° Q 02'02 0°43'51
retrograde	2471 Sep 14 10:58	2° II 58'53		minimum elong	2477 Aug 08 13:49	17° Q 02'02 0°43'51

max. Earth dist.	2477 Aug 08 18:50	17° Ω 03'39	10.12266 AU	retrograde	2484 Feb 22 11:36	14° \mathbb{M} 58'26	
morning rise	2477 Aug 26 14:18	19° Ω 20'28		opposition	2484 Apr 30 20:35	11° \mathbb{M} 39'17	2°40'40
retrograde	2477 Dec 07 17:23	27° Ω 21'01		min. Earth dist.	2484 Apr 30 19:45	11° \mathbb{M} 39'26	8.76206 AU
opposition	2478 Feb 12 07:20	23° Ω 54'56	1°13'01	direct	2484 Jul 10 13:04	8° \mathbb{M} 15'09	
min. Earth dist.	2478 Feb 12 03:09	23° Ω 55'47	8.15696 AU		2484 Oct 17 00:47	15° \mathbb{M}	
direct	2478 Apr 21 04:04	20° Ω 25'49		evening set	2484 Oct 23 05:41	15° \mathbb{M} 43'30	
evening set	2478 Aug 05 06:27	28° Ω 35'18					
	2478 Aug 16 10:04	0° \mathbb{M}		conjunction	2484 Nov 09 04:31	17° \mathbb{M} 45'17	2°06'46
				minimum elong	2484 Nov 09 04:33	17° \mathbb{M} 45'17	2°06'46
conjunction	2478 Aug 23 06:12	0° \mathbb{M} 52'28	1°12'48	max. Earth dist.	2484 Nov 09 04:56	17° \mathbb{M} 45'24	10.80829 AU
minimum elong	2478 Aug 23 06:09	0° \mathbb{M} 52'27	1°12'48	morning rise	2484 Nov 25 23:19	19° \mathbb{M} 45'54	
max. Earth dist.	2478 Aug 23 10:50	0° \mathbb{M} 53'58	10.19557 AU	retrograde	2485 Mar 05 12:34	26° \mathbb{M} 53'53	
morning rise	2478 Sep 10 02:32	3° \mathbb{M} 08'36		opposition	2485 May 13 09:16	23° \mathbb{M} 35'25	2°29'00
retrograde	2478 Dec 21 10:30	11° \mathbb{M} 01'20		min. Earth dist.	2485 May 13 09:44	23° \mathbb{M} 35'19	8.85381 AU
opposition	2479 Feb 26 02:12	7° \mathbb{M} 36'32	1°46'12	direct	2485 Jul 23 07:27	20° \mathbb{M} 12'23	
min. Earth dist.	2479 Feb 25 22:40	7° \mathbb{M} 37'15	8.23875 AU	evening set	2485 Nov 04 08:24	27° \mathbb{M} 33'23	
direct	2479 May 05 11:03	4° \mathbb{M} 07'47					
evening set	2479 Aug 19 18:33	12° \mathbb{M} 12'51		conjunction	2485 Nov 21 04:32	29° \mathbb{M} 33'23	1°54'54
				minimum elong	2485 Nov 21 04:34	29° \mathbb{M} 33'24	1°54'54
conjunction	2479 Sep 06 14:12	14° \mathbb{M} 27'31	1°37'11	max. Earth dist.	2485 Nov 21 03:27	29° \mathbb{M} 33'04	10.89342 AU
minimum elong	2479 Sep 06 14:08	14° \mathbb{M} 27'30	1°37'11		2485 Nov 24 21:32	0° \mathbb{M}	
max. Earth dist.	2479 Sep 06 18:07	14° \mathbb{M} 28'46	10.28479 AU	morning rise	2485 Dec 07 21:22	1° \mathbb{M} 32'27	
morning rise	2479 Sep 24 05:42	16° \mathbb{M} 40'56		retrograde	2486 Mar 17 10:10	8° \mathbb{M} 36'02	
retrograde	2480 Jan 03 19:51	24° \mathbb{M} 25'24		opposition	2486 May 25 18:04	5° \mathbb{M} 18'04	2°11'20
opposition	2480 Mar 10 16:29	21° \mathbb{M} 01'56	2°12'48	min. Earth dist.	2486 May 25 19:27	5° \mathbb{M} 17'48	8.93127 AU
min. Earth dist.	2480 Mar 10 13:50	21° \mathbb{M} 02'28	8.33496 AU	direct	2486 Aug 04 20:58	1° \mathbb{M} 56'07	
direct	2480 May 18 13:56	17° \mathbb{M} 33'47		evening set	2486 Nov 16 04:06	9° \mathbb{M} 10'33	
evening set	2480 Sep 01 21:55	25° \mathbb{M} 32'58					
				conjunction	2486 Dec 02 22:15	11° \mathbb{M} 09'13	1°38'27
conjunction	2480 Sep 19 12:52	27° \mathbb{M} 44'50	1°55'51	minimum elong	2486 Dec 02 22:17	11° \mathbb{M} 09'14	1°38'27
minimum elong	2480 Sep 19 12:49	27° \mathbb{M} 44'49	1°55'51	max. Earth dist.	2486 Dec 02 20:10	11° \mathbb{M} 08'36	10.96285 AU
max. Earth dist.	2480 Sep 19 15:39	27° \mathbb{M} 45'43	10.38617 AU	morning rise	2486 Dec 19 13:52	13° \mathbb{M} 07'08	
morning rise	2480 Oct 06 23:23	29° \mathbb{M} 55'21		retrograde	2487 Mar 29 05:45	20° \mathbb{M} 07'43	
	2480 Oct 07 14:31	0° \mathbb{M}		opposition	2487 Jun 06 23:47	16° \mathbb{M} 50'01	1°48'38
retrograde	2481 Jan 15 21:52	7° \mathbb{M} 31'26		min. Earth dist.	2487 Jun 07 01:12	16° \mathbb{M} 49'45	8.99155 AU
opposition	2481 Mar 24 01:28	4° \mathbb{M} 09'14	2°31'46	direct	2487 Aug 17 04:00	13° \mathbb{M} 29'07	
min. Earth dist.	2481 Mar 23 23:43	4° \mathbb{M} 09'35	8.44084 AU	evening set	2487 Nov 27 18:11	20° \mathbb{M} 38'00	
direct	2481 Jun 01 11:22	0° \mathbb{M} 41'53					
evening set	2481 Sep 15 15:19	8° \mathbb{M} 34'02		conjunction	2487 Dec 14 11:07	22° \mathbb{M} 35'43	1°18'13
				minimum elong	2487 Dec 14 11:09	22° \mathbb{M} 35'44	1°18'13
conjunction	2481 Oct 03 01:31	10° \mathbb{M} 43'05	2°08'11	max. Earth dist.	2487 Dec 14 09:09	22° \mathbb{M} 35'08	11.01393 AU
minimum elong	2481 Oct 03 01:29	10° \mathbb{M} 43'04	2°08'11	morning rise	2487 Dec 31 02:01	24° \mathbb{M} 32'54	
max. Earth dist.	2481 Oct 03 02:58	10° \mathbb{M} 43'32	10.49456 AU		2488 Feb 25 11:42	0° \mathbb{M}	
morning rise	2481 Oct 20 07:16	12° \mathbb{M} 50'44		retrograde	2488 Apr 09 00:43	1° \mathbb{M} 31'59	
retrograde	2482 Jan 28 15:52	20° \mathbb{M} 18'39			2488 May 24 00:11	30° \mathbb{R}	
opposition	2482 Apr 06 05:07	16° \mathbb{M} 57'37	2°42'38	opposition	2488 Jun 18 03:19	28° \mathbb{M} 14'20	1°21'53
min. Earth dist.	2482 Apr 06 03:41	16° \mathbb{M} 57'54	8.55087 AU	min. Earth dist.	2488 Jun 18 04:38	28° \mathbb{M} 14'06	9.03236 AU
direct	2482 Jun 15 03:21	13° \mathbb{M} 31'15		direct	2488 Aug 28 07:16	24° \mathbb{M} 54'20	
evening set	2482 Sep 28 22:09	21° \mathbb{M} 15'38			2488 Nov 20 10:01	0° \mathbb{M}	
				evening set	2488 Dec 08 04:44	1° \mathbb{M} 58'58	
conjunction	2482 Oct 16 03:58	23° \mathbb{M} 21'57	2°13'57				
minimum elong	2482 Oct 16 03:57	23° \mathbb{M} 21'57	2°13'56	conjunction	2488 Dec 24 20:48	3° \mathbb{M} 56'07	0°55'04
max. Earth dist.	2482 Oct 16 04:49	23° \mathbb{M} 22'13	10.60445 AU	minimum elong	2488 Dec 24 20:50	3° \mathbb{M} 56'07	0°55'03
morning rise	2482 Nov 02 05:19	25° \mathbb{M} 26'56		max. Earth dist.	2488 Dec 24 18:43	3° \mathbb{M} 55'30	11.04466 AU
	2482 Dec 14 09:01	0° \mathbb{M}		morning rise	2489 Jan 10 11:29	5° \mathbb{M} 52'55	
retrograde	2483 Feb 10 03:38	2° \mathbb{M} 47'18		retrograde	2489 Apr 20 21:01	12° \mathbb{M} 51'59	
	2483 Apr 12 01:13	30° \mathbb{R}		opposition	2489 Jun 30 05:42	9° \mathbb{M} 34'14	0°52'08
opposition	2483 Apr 19 03:24	29° \mathbb{M} 27'17	2°45'27	min. Earth dist.	2489 Jun 30 07:50	9° \mathbb{M} 33'50	9.05222 AU
min. Earth dist.	2483 Apr 19 02:00	29° \mathbb{M} 27'33	8.65960 AU	direct	2489 Sep 09 05:52	6° \mathbb{M} 14'59	
direct	2483 Jun 28 12:42	26° \mathbb{M} 02'01		evening set	2489 Dec 19 13:17	13° \mathbb{M} 16'42	
	2483 Sep 08 22:27	0° \mathbb{M}					
evening set	2483 Oct 11 18:41	3° \mathbb{M} 38'19		conjunction	2490 Jan 05 04:44	15° \mathbb{M} 13'37	0°29'51
				minimum elong	2490 Jan 05 04:45	15° \mathbb{M} 13'38	0°29'50
conjunction	2483 Oct 28 20:43	5° \mathbb{M} 42'11	2°13'20	max. Earth dist.	2490 Jan 05 01:26	15° \mathbb{M} 12'39	11.05401 AU
minimum elong	2483 Oct 28 20:44	5° \mathbb{M} 42'11	2°13'20	morning rise	2490 Jan 21 19:49	17° \mathbb{M} 10'28	
max. Earth dist.	2483 Oct 28 21:37	5° \mathbb{M} 42'28	10.71061 AU	retrograde	2490 May 02 15:54	24° \mathbb{M} 11'03	
morning rise	2483 Nov 14 18:22	7° \mathbb{M} 44'47		opposition	2490 Jul 12 08:10	20° \mathbb{M} 52'56	0°20'25

min. Earth dist.	2490 Jul 12 11:09	20° \mathfrak{Z} 52'23	9.05058 AU	morning rise	2496 Mar 31 11:36	27° \mathfrak{H} 00'38	
direct	2490 Sep 21 01:37	17° \mathfrak{Z} 34'14			2496 Apr 26 19:58	0° \mathfrak{Y}	
evening set	2490 Dec 30 21:17	24° \mathfrak{Z} 34'29		retrograde	2496 Jul 14 15:29	4° \mathfrak{Y} 38'20	
				opposition	2496 Sep 22 23:31	1° \mathfrak{Y} 14'02	-2°27'43
conjunction	2491 Jan 16 12:34	26° \mathfrak{Z} 31'32	0°03'30	min. Earth dist.	2496 Sep 23 01:48	1° \mathfrak{Y} 13'35	8.64204 AU
minimum elong	2491 Jan 16 12:34	26° \mathfrak{Z} 31'32	0°03'30		2496 Oct 09 09:53	30° \mathfrak{R} \mathfrak{H}	
behind sun begin	2491 Jan 16 05:39	26° \mathfrak{Z} 29'31		direct	2496 Nov 30 05:38	27° \mathfrak{H} 53'56	
behind sun end	2491 Jan 16 19:29	26° \mathfrak{Z} 33'33			2497 Jan 18 22:51	0° \mathfrak{Y}	
max. Earth dist.	2491 Jan 16 08:40	26° \mathfrak{Z} 30'25	11.04170 AU	evening set	2497 Mar 10 04:02	5° \mathfrak{Y} 15'08	
morning rise	2491 Feb 02 04:25	28° \mathfrak{Z} 28'44					
	2491 Feb 15 16:00	0° \mathfrak{Z}		conjunction	2497 Mar 27 03:11	7° \mathfrak{Y} 20'01	-2°05'38
desc. node	2491 Mar 05 22:21	1° \mathfrak{Z} 53'07		minimum elong	2497 Mar 27 03:09	7° \mathfrak{Y} 20'01	2°05'39
retrograde	2491 May 14 15:27	5° \mathfrak{Z} 32'25		max. Earth dist.	2497 Mar 27 00:48	7° \mathfrak{Y} 19'17	10.58566 AU
opposition	2491 Jul 24 11:23	2° \mathfrak{Z} 13'41	-0°12'11	morning rise	2497 Apr 13 06:30	9° \mathfrak{Y} 26'15	
min. Earth dist.	2491 Jul 24 14:26	2° \mathfrak{Z} 13'07	9.02744 AU	retrograde	2497 Jul 28 03:34	17° \mathfrak{Y} 12'58	
	2491 Aug 26 14:33	30° \mathfrak{R} \mathfrak{Z}		opposition	2497 Oct 06 01:26	13° \mathfrak{Y} 47'20	-2°40'33
direct	2491 Oct 02 23:24	28° \mathfrak{Z} 55'19		min. Earth dist.	2497 Oct 06 03:00	13° \mathfrak{Y} 47'01	8.53021 AU
	2491 Nov 08 09:26	0° \mathfrak{Z}		direct	2497 Dec 12 19:11	10° \mathfrak{Y} 26'15	
evening set	2492 Jan 11 06:35	5° \mathfrak{Z} 55'35		evening set	2498 Mar 23 02:29	17° \mathfrak{Y} 55'04	
conjunction	2492 Jan 27 22:11	7° \mathfrak{Z} 53'06	-0°23'14	conjunction	2498 Apr 09 04:59	20° \mathfrak{Y} 02'24	-2°12'47
minimum elong	2492 Jan 27 22:10	7° \mathfrak{Z} 53'06	0°23'14	minimum elong	2498 Apr 09 04:58	20° \mathfrak{Y} 02'24	2°12'48
max. Earth dist.	2492 Jan 27 18:56	7° \mathfrak{Z} 52'09	11.00806 AU	max. Earth dist.	2498 Apr 09 02:40	20° \mathfrak{Y} 01'41	10.47207 AU
morning rise	2492 Feb 13 14:56	9° \mathfrak{Z} 51'01		morning rise	2498 Apr 26 11:59	22° \mathfrak{Y} 11'12	
	2492 Apr 05 09:05	15° \mathfrak{Z}			2498 Jul 30 10:45	0° \mathfrak{Z}	
retrograde	2492 May 25 19:07	16° \mathfrak{Z} 59'11		retrograde	2498 Aug 10 21:41	0° \mathfrak{Z} 06'44	
	2492 Jul 17 01:40	15° \mathfrak{R} \mathfrak{Z}			2498 Aug 22 07:52	30° \mathfrak{R} \mathfrak{Y}	
opposition	2492 Aug 04 16:11	13° \mathfrak{Z} 39'38	-0°44'34	opposition	2498 Oct 19 08:54	26° \mathfrak{Y} 39'53	-2°45'46
min. Earth dist.	2492 Aug 04 18:36	13° \mathfrak{Z} 39'11	8.98356 AU	min. Earth dist.	2498 Oct 19 10:04	26° \mathfrak{Y} 39'40	8.41678 AU
direct	2492 Oct 13 18:56	10° \mathfrak{Z} 21'25		direct	2498 Dec 25 15:45	23° \mathfrak{Y} 17'39	
	2492 Dec 31 09:27	15° \mathfrak{Z}			2499 Mar 28 23:37	0° \mathfrak{Z}	
evening set	2493 Jan 21 18:48	17° \mathfrak{Z} 23'10		evening set	2499 Apr 05 10:35	0° \mathfrak{Z} 54'41	
conjunction	2493 Feb 07 10:57	19° \mathfrak{Z} 21'29	-0°49'11	conjunction	2499 Apr 22 17:08	3° \mathfrak{Z} 04'43	-2°13'23
minimum elong	2493 Feb 07 10:56	19° \mathfrak{Z} 21'29	0°49'10	minimum elong	2499 Apr 22 17:08	3° \mathfrak{Z} 04'43	2°13'23
max. Earth dist.	2493 Feb 07 07:52	19° \mathfrak{Z} 20'34	10.95425 AU	max. Earth dist.	2499 Apr 22 14:44	3° \mathfrak{Z} 03'58	10.36024 AU
morning rise	2493 Feb 24 04:56	21° \mathfrak{Z} 20'26		morning rise	2499 May 10 04:23	5° \mathfrak{Z} 16'14	
retrograde	2493 Jun 07 03:16	28° \mathfrak{Z} 34'28		retrograde	2499 Aug 24 21:52	13° \mathfrak{Z} 19'49	
opposition	2493 Aug 16 23:59	25° \mathfrak{Z} 13'55	-1°15'34	opposition	2499 Nov 01 21:58	9° \mathfrak{Z} 51'54	-2°42'29
min. Earth dist.	2493 Aug 17 02:21	25° \mathfrak{Z} 13'29	8.92052 AU	min. Earth dist.	2499 Nov 01 23:03	9° \mathfrak{Z} 51'41	8.30828 AU
direct	2493 Oct 25 15:50	21° \mathfrak{Z} 55'36		direct	2500 Jan 07 20:28	6° \mathfrak{Z} 28'24	
evening set	2494 Feb 02 11:16	29° \mathfrak{Z} 00'16		evening set	2500 Apr 19 04:25	14° \mathfrak{Z} 13'44	
	2494 Feb 10 20:54	0° \mathfrak{H}			2500 Apr 25 07:37	15° \mathfrak{Z}	
conjunction	2494 Feb 19 04:13	0° \mathfrak{H} 59'43	-1°13'26	conjunction	2500 May 06 15:33	16° \mathfrak{Z} 26'32	-2°06'53
minimum elong	2494 Feb 19 04:11	0° \mathfrak{H} 59'42	1°13'26	minimum elong	2500 May 06 15:35	16° \mathfrak{Z} 26'33	2°06'53
max. Earth dist.	2494 Feb 19 00:35	0° \mathfrak{H} 58'38	10.88230 AU	max. Earth dist.	2500 May 06 14:05	16° \mathfrak{Z} 26'04	10.25674 AU
morning rise	2494 Mar 07 23:58	3° \mathfrak{H} 00'01		morning rise	2500 May 24 07:15	18° \mathfrak{Z} 40'47	
retrograde	2494 Jun 19 17:30	10° \mathfrak{H} 21'06		retrograde	2500 Sep 08 03:32	26° \mathfrak{Z} 51'02	
opposition	2494 Aug 29 11:28	6° \mathfrak{H} 59'25	-1°43'56	opposition	2500 Nov 15 16:03	23° \mathfrak{Z} 22'17	-2°30'14
min. Earth dist.	2494 Aug 29 14:13	6° \mathfrak{H} 58'54	8.84066 AU	min. Earth dist.	2500 Nov 15 16:32	23° \mathfrak{Z} 22'11	8.21121 AU
direct	2494 Nov 06 15:39	3° \mathfrak{H} 40'43		direct	2501 Jan 21 08:18	19° \mathfrak{Z} 57'27	
evening set	2495 Feb 14 09:34	10° \mathfrak{H} 49'42		evening set	2501 May 03 07:40	27° \mathfrak{Z} 50'43	
conjunction	2495 Mar 03 03:54	12° \mathfrak{H} 50'37	-1°34'58	conjunction	2501 May 20 23:45	0° \mathfrak{H} 06'13	-1°53'14
minimum elong	2495 Mar 03 03:52	12° \mathfrak{H} 50'36	1°34'58	minimum elong	2501 May 20 23:48	0° \mathfrak{H} 06'14	1°53'13
max. Earth dist.	2495 Mar 03 00:03	12° \mathfrak{H} 49'27	10.79482 AU		2501 May 20 04:26	0° \mathfrak{H}	
morning rise	2495 Mar 20 01:48	14° \mathfrak{H} 52'36		max. Earth dist.	2501 May 20 23:47	0° \mathfrak{H} 06'14	10.16785 AU
retrograde	2495 Jul 02 12:44	22° \mathfrak{H} 21'39		morning rise	2501 Jun 07 19:48	2° \mathfrak{H} 23'00	
opposition	2495 Sep 11 03:02	18° \mathfrak{H} 58'42	-2°08'25	retrograde	2501 Sep 22 13:37	10° \mathfrak{H} 38'00	
min. Earth dist.	2495 Sep 11 05:58	18° \mathfrak{H} 58'08	8.74680 AU	opposition	2501 Nov 29 14:18	7° \mathfrak{H} 08'40	-2°09'09
direct	2495 Nov 18 19:44	15° \mathfrak{H} 39'24		min. Earth dist.	2501 Nov 29 13:44	7° \mathfrak{H} 08'47	8.13148 AU
evening set	2496 Feb 26 14:48	22° \mathfrak{H} 53'57		direct	2502 Feb 04 03:22	3° \mathfrak{H} 42'33	
				evening set	2502 May 17 19:26	11° \mathfrak{H} 42'55	
conjunction	2496 Mar 14 11:15	24° \mathfrak{H} 56'41	-1°52'43	conjunction	2502 Jun 04 16:16	14° \mathfrak{H} 00'48	-1°32'49
minimum elong	2496 Mar 14 11:13	24° \mathfrak{H} 56'40	1°52'43	minimum elong	2502 Jun 04 16:20	14° \mathfrak{H} 00'49	1°32'49
max. Earth dist.	2496 Mar 14 08:13	24° \mathfrak{H} 55'45	10.69479 AU				

max. Earth dist.	2502 Jun 04 18:02	14° Π 01'22	10.09893 AU	evening set	2508 Aug 13 06:20	5° η 59'03	
morning rise	2502 Jun 22 16:11	16° Π 19'42					
retrograde	2502 Oct 07 01:46	24° Π 37'10		conjunction	2508 Aug 31 04:03	8° η 15'05	1°26'07
opposition	2502 Dec 13 15:41	21° Π 07'35	-1°40'07	minimum elong	2508 Aug 31 04:00	8° η 15'04	1°26'07
min. Earth dist.	2502 Dec 13 13:48	21° Π 07'59	8.07387 AU	max. Earth dist.	2508 Aug 31 07:45	8° η 16'16	10.22730 AU
direct	2503 Feb 18 04:35	17° Π 40'18		morning rise	2508 Sep 17 22:15	10° η 30'00	
evening set	2503 Jun 01 14:14	25° Π 46'32		retrograde	2508 Dec 28 18:59	18° η 18'50	
				opposition	2509 Mar 05 14:48	14° η 54'12	2°00'57
conjunction	2503 Jun 19 15:00	28° Π 06'12	-1°06'41	min. Earth dist.	2509 Mar 05 11:06	14° η 54'57	8.27527 AU
minimum elong	2503 Jun 19 15:03	28° Π 06'13	1°06'40	direct	2509 May 13 07:36	11° η 25'14	
max. Earth dist.	2503 Jun 19 18:11	28° Π 07'14	10.05410 AU	evening set	2509 Aug 27 13:59	19° η 27'40	
	2503 Jul 04 06:33	0° Θ					
morning rise	2503 Jul 07 17:42	0° Θ 26'33		conjunction	2509 Sep 14 07:23	21° η 41'02	1°47'38
retrograde	2503 Oct 21 14:25	8° Θ 44'02		minimum elong	2509 Sep 14 07:20	21° η 41'01	1°47'37
opposition	2503 Dec 27 18:53	5° Θ 14'35	-1°04'43	max. Earth dist.	2509 Sep 14 11:14	21° η 42'15	10.32545 AU
min. Earth dist.	2503 Dec 27 15:59	5° Θ 15'11	8.04196 AU	morning rise	2509 Oct 01 20:30	23° η 53'05	
direct	2504 Mar 03 10:10	1° Θ 46'18			2509 Nov 30 04:26	0° Ω	
evening set	2504 Jun 15 13:51	9° Θ 56'45		retrograde	2510 Jan 11 01:54	1° Ω 33'28	
					2510 Feb 22 20:03	30° κ η	
conjunction	2504 Jul 03 17:15	12° Θ 17'27	-0°36'22	opposition	2510 Mar 19 02:09	28° η 10'13	2°23'39
minimum elong	2504 Jul 03 17:16	12° Θ 17'28	0°36'21	min. Earth dist.	2510 Mar 18 22:32	28° η 10'56	8.37951 AU
max. Earth dist.	2504 Jul 03 21:12	12° Θ 18'44	10.03621 AU	direct	2510 May 27 06:20	24° η 42'07	
morning rise	2504 Jul 21 21:23	14° Θ 38'25			2510 Aug 19 01:40	0° Ω	
retrograde	2504 Nov 04 01:48	22° Θ 53'32		evening set	2510 Sep 10 12:12	2° Ω 37'58	
opposition	2505 Jan 09 22:35	19° Θ 24'33	-0°25'14				
min. Earth dist.	2505 Jan 09 19:19	19° Θ 25'14	8.03780 AU	conjunction	2510 Sep 28 00:54	4° Ω 48'30	2°03'02
direct	2505 Mar 17 18:24	15° Θ 55'28		minimum elong	2510 Sep 28 00:52	4° Ω 48'29	2°03'01
evening set	2505 Jun 30 15:39	24° Θ 08'15		max. Earth dist.	2510 Sep 28 04:41	4° Ω 49'40	10.43384 AU
				morning rise	2510 Oct 15 08:54	6° Ω 57'36	
conjunction	2505 Jul 18 20:03	26° Θ 29'05	-0°03'53	retrograde	2511 Jan 24 00:13	14° Ω 29'38	
minimum elong	2505 Jul 18 20:04	26° Θ 29'05	0°03'52	opposition	2511 Apr 01 08:26	11° Ω 07'47	2°38'23
behind sun begin	2505 Jul 18 12:47	26° Θ 26'44		min. Earth dist.	2511 Apr 01 05:33	11° Ω 08'21	8.49112 AU
behind sun end	2505 Jul 19 03:21	26° Θ 31'25		direct	2511 Jun 10 00:21	7° Ω 40'46	
max. Earth dist.	2505 Jul 19 00:15	26° Θ 30'24	10.04624 AU	evening set	2511 Sep 24 00:02	15° Ω 29'07	
morning rise	2505 Aug 06 00:01	28° Θ 49'45					
	2505 Aug 15 08:06	0° Ω		conjunction	2511 Oct 11 08:06	17° Ω 36'49	2°11'55
asc. node	2505 Aug 31 18:05	1° Ω 56'54		minimum elong	2511 Oct 11 08:05	17° Ω 36'49	2°11'55
retrograde	2505 Nov 18 10:05	7° Ω 00'22		max. Earth dist.	2511 Oct 11 11:10	17° Ω 37'46	10.54676 AU
opposition	2506 Jan 24 01:18	3° Ω 32'10	0°15'40	morning rise	2511 Oct 28 11:28	19° Ω 43'07	
min. Earth dist.	2506 Jan 23 22:06	3° Ω 32'49	8.06147 AU	retrograde	2512 Feb 05 15:24	27° Ω 07'17	
direct	2506 Apr 01 05:23	0° Ω 02'34		opposition	2512 Apr 13 09:25	23° Ω 46'44	2°44'59
evening set	2506 Jul 15 16:59	8° Ω 15'41		min. Earth dist.	2512 Apr 13 07:43	23° Ω 47'03	8.60441 AU
				direct	2512 Jun 22 12:17	20° Ω 20'55	
conjunction	2506 Aug 02 20:37	10° Ω 35'41	0°28'49	evening set	2512 Oct 06 01:47	28° Ω 01'20	
minimum elong	2506 Aug 02 20:36	10° Ω 35'41	0°28'50		2512 Oct 22 08:38	0° \mathbb{M}	
max. Earth dist.	2506 Aug 03 00:36	10° Ω 36'58	10.08329 AU				
morning rise	2506 Aug 20 22:39	12° Ω 55'09		conjunction	2512 Oct 23 05:35	0° \mathbb{M} 06'24	2°14'17
	2506 Sep 06 20:28	15° Ω		minimum elong	2512 Oct 23 05:34	0° \mathbb{M} 06'24	2°14'17
retrograde	2506 Dec 02 11:55	20° Ω 59'31		max. Earth dist.	2512 Oct 23 07:02	0° \mathbb{M} 06'51	10.65867 AU
opposition	2507 Feb 07 01:35	17° Ω 32'22	0°55'16	morning rise	2512 Nov 09 05:02	2° \mathbb{M} 10'10	
min. Earth dist.	2507 Feb 06 22:32	17° Ω 32'59	8.11130 AU	retrograde	2513 Feb 17 01:00	9° \mathbb{M} 27'08	
	2507 Mar 13 19:19	15° κ Ω		opposition	2513 Apr 26 05:05	6° \mathbb{M} 07'43	2°43'43
direct	2507 Apr 15 17:05	14° Ω 02'37		min. Earth dist.	2513 Apr 26 04:04	6° \mathbb{M} 07'55	8.71389 AU
	2507 May 18 12:00	15° Ω		direct	2513 Jul 05 17:01	2° \mathbb{M} 43'12	
evening set	2507 Jul 30 14:48	22° Ω 14'02		evening set	2513 Oct 18 17:44	10° \mathbb{M} 15'36	
conjunction	2507 Aug 17 16:03	24° Ω 32'21	0°59'23	conjunction	2513 Nov 04 17:57	12° \mathbb{M} 18'22	2°10'29
minimum elong	2507 Aug 17 16:01	24° Ω 32'21	0°59'24	minimum elong	2513 Nov 04 17:58	12° \mathbb{M} 18'23	2°10'28
max. Earth dist.	2507 Aug 17 19:42	24° Ω 33'32	10.14492 AU	max. Earth dist.	2513 Nov 04 18:26	12° \mathbb{M} 18'31	10.76436 AU
morning rise	2507 Sep 04 14:42	26° Ω 49'49		morning rise	2513 Nov 21 14:13	14° \mathbb{M} 19'57	
	2507 Oct 01 03:29	0° η			2513 Nov 27 06:31	15° \mathbb{M}	
retrograde	2507 Dec 16 06:43	4° η 46'47		retrograde	2514 Mar 01 04:25	21° \mathbb{M} 30'42	
opposition	2508 Feb 20 22:26	1° η 20'50	1°31'01	opposition	2514 May 08 20:11	18° \mathbb{M} 12'12	2°35'11
min. Earth dist.	2508 Feb 20 19:07	1° η 21'30	8.18409 AU	min. Earth dist.	2514 May 08 19:19	18° \mathbb{M} 12'22	8.81460 AU
	2508 Mar 08 21:54	30° κ Ω			2514 Jul 03 14:53	15° κ \mathbb{M}	
direct	2508 Apr 29 02:36	27° Ω 51'18		direct	2514 Jul 18 15:56	14° \mathbb{M} 48'59	
	2508 Jun 18 09:29	0° η			2514 Aug 02 14:36	15° \mathbb{M}	

evening set	2514 Oct 31 00:37	22° \mathbb{M} 13'40		desc. node	2520 Aug 23 16:37	24° \mathfrak{Z} 50'20
				direct	2520 Sep 27 19:34	23° \mathfrak{Z} 53'00
conjunction	2514 Nov 16 22:01	24° \mathbb{M} 14'28	2°01'02		2520 Dec 29 14:00	0° \approx
minimum elong	2514 Nov 16 22:03	24° \mathbb{M} 14'29	2°01'02	evening set	2521 Jan 06 09:04	0° \approx 53'25
max. Earth dist.	2514 Nov 16 22:23	24° \mathbb{M} 14'35	10.85917 AU			
morning rise	2514 Dec 03 15:45	26° \mathbb{M} 14'15		conjunction	2521 Jan 23 00:29	2° \approx 50'46 -0°10'51
	2515 Jan 07 11:37	0° \mathfrak{Z}		minimum elong	2521 Jan 23 00:28	2° \approx 50'46 0°10'51
retrograde	2515 Mar 13 05:31	3° \mathfrak{Z} 19'58		behind sun begin	2521 Jan 22 19:06	2° \approx 49'11
opposition	2515 May 21 07:10	0° \mathfrak{Z} 02'10	2°20'14	behind sun end	2521 Jan 23 05:50	2° \approx 52'20
min. Earth dist.	2515 May 21 06:41	0° \mathfrak{Z} 02'15	8.90222 AU	max. Earth dist.	2521 Jan 22 19:27	2° \approx 49'17 11.02231 AU
	2515 May 21 18:41	30° \mathbb{R} \mathbb{M}		morning rise	2521 Feb 08 16:45	4° \approx 48'23
direct	2515 Jul 31 08:12	26° \mathbb{M} 40'11		retrograde	2521 May 21 13:01	11° \approx 54'35
	2515 Oct 05 19:18	0° \mathfrak{Z}		opposition	2521 Jul 31 09:13	8° \approx 35'27 -0°29'35
evening set	2515 Nov 11 23:59	3° \mathfrak{Z} 57'45		min. Earth dist.	2521 Jul 31 13:35	8° \approx 34'39 9.00002 AU
				direct	2521 Oct 09 15:09	5° \approx 17'05
conjunction	2515 Nov 28 19:11	5° \mathfrak{Z} 57'01	1°46'38	evening set	2522 Jan 17 20:07	12° \approx 18'24
minimum elong	2515 Nov 28 19:13	5° \mathfrak{Z} 57'02	1°46'39			
max. Earth dist.	2515 Nov 28 19:05	5° \mathfrak{Z} 56'59	10.93901 AU	conjunction	2522 Feb 03 11:52	14° \approx 16'24 -0°37'15
morning rise	2515 Dec 15 11:12	7° \mathfrak{Z} 55'24		minimum elong	2522 Feb 03 11:51	14° \approx 16'24 0°37'15
retrograde	2516 Mar 24 03:28	14° \mathfrak{Z} 57'20		max. Earth dist.	2522 Feb 03 06:25	14° \approx 14'47 10.97289 AU
opposition	2516 Jun 01 14:35	11° \mathfrak{Z} 39'59	1°59'46		2522 Feb 09 14:35	15° \approx
min. Earth dist.	2516 Jun 01 15:32	11° \mathfrak{Z} 39'48	8.97301 AU	morning rise	2522 Feb 20 05:24	16° \approx 14'57
direct	2516 Aug 11 16:55	8° \mathfrak{Z} 19'05		retrograde	2522 Jun 02 17:58	23° \approx 26'31
evening set	2516 Nov 22 17:13	15° \mathfrak{Z} 30'33		opposition	2522 Aug 12 16:02	20° \approx 06'14 -1°01'24
				min. Earth dist.	2522 Aug 12 20:20	20° \approx 05'26 8.94090 AU
conjunction	2516 Dec 09 10:41	17° \mathfrak{Z} 28'39	1°28'05	direct	2522 Oct 21 13:33	16° \approx 47'40
minimum elong	2516 Dec 09 10:43	17° \mathfrak{Z} 28'39	1°28'05	evening set	2523 Jan 29 10:34	23° \approx 51'18
max. Earth dist.	2516 Dec 09 08:43	17° \mathfrak{Z} 28'04	11.00033 AU			
morning rise	2516 Dec 26 01:50	19° \mathfrak{Z} 26'06		conjunction	2523 Feb 15 03:12	25° \approx 50'21 -1°02'27
retrograde	2517 Apr 04 21:33	26° \mathfrak{Z} 25'42		minimum elong	2523 Feb 15 03:11	25° \approx 50'20 1°02'27
opposition	2517 Jun 13 19:31	23° \mathfrak{Z} 08'33	1°34'49	max. Earth dist.	2523 Feb 14 22:39	25° \approx 48'59 10.90441 AU
min. Earth dist.	2517 Jun 13 21:56	23° \mathfrak{Z} 08'06	9.02365 AU	morning rise	2523 Mar 03 22:11	27° \approx 50'07
direct	2517 Aug 23 22:31	19° \mathfrak{Z} 48'33			2523 Mar 23 02:02	0° \mathfrak{H}
evening set	2517 Dec 04 05:46	26° \mathfrak{Z} 55'09		retrograde	2523 Jun 15 06:19	5° \mathfrak{H} 08'19
				opposition	2523 Aug 25 01:53	1° \mathfrak{H} 46'46 -1°31'12
conjunction	2517 Dec 20 22:03	28° \mathfrak{Z} 52'29	1°06'12	min. Earth dist.	2523 Aug 25 05:22	1° \mathfrak{H} 46'07 8.86400 AU
minimum elong	2517 Dec 20 22:05	28° \mathfrak{Z} 52'30	1°06'12		2523 Sep 19 02:07	30° \mathbb{R} \approx
max. Earth dist.	2517 Dec 20 18:30	28° \mathfrak{Z} 51'26	11.04017 AU	direct	2523 Nov 02 12:54	28° \approx 27'47
	2517 Dec 30 11:14	0° \mathfrak{Z}			2523 Dec 15 12:54	0° \mathfrak{H}
morning rise	2518 Jan 06 12:53	0° \mathfrak{Z} 49'24		evening set	2524 Feb 10 06:13	5° \mathfrak{H} 35'12
retrograde	2518 Apr 16 16:52	7° \mathfrak{Z} 48'20				
opposition	2518 Jun 25 22:50	4° \mathfrak{Z} 31'05	1°06'21	conjunction	2524 Feb 27 00:04	7° \mathfrak{H} 35'35 -1°25'24
min. Earth dist.	2518 Jun 26 01:48	4° \mathfrak{Z} 30'32	9.05182 AU	minimum elong	2524 Feb 27 00:02	7° \mathfrak{H} 35'35 1°25'24
direct	2518 Sep 05 00:40	1° \mathfrak{Z} 11'51		max. Earth dist.	2524 Feb 26 20:11	7° \mathfrak{H} 34'25 10.81936 AU
evening set	2518 Dec 15 15:28	8° \mathfrak{Z} 14'57		morning rise	2524 Mar 14 20:49	9° \mathfrak{H} 36'56
				retrograde	2524 Jun 26 23:21	17° \mathfrak{H} 02'50
conjunction	2519 Jan 01 07:11	10° \mathfrak{Z} 11'56	0°41'50	opposition	2524 Sep 05 15:35	13° \mathfrak{H} 39'55 -1°57'43
minimum elong	2519 Jan 01 07:12	10° \mathfrak{Z} 11'57	0°41'50	min. Earth dist.	2524 Sep 05 18:23	13° \mathfrak{H} 39'23 8.77216 AU
max. Earth dist.	2519 Jan 01 03:32	10° \mathfrak{Z} 10'52	11.05702 AU	direct	2524 Nov 13 14:26	10° \mathfrak{H} 20'21
morning rise	2519 Jan 17 22:03	12° \mathfrak{Z} 08'43		evening set	2525 Feb 21 08:21	17° \mathfrak{H} 32'54
retrograde	2519 Apr 28 13:08	19° \mathfrak{Z} 08'35				
opposition	2519 Jul 08 01:30	15° \mathfrak{Z} 50'57	0°35'25	conjunction	2525 Mar 10 03:48	19° \mathfrak{H} 34'59 -1°45'03
min. Earth dist.	2519 Jul 08 04:26	15° \mathfrak{Z} 50'25	9.05689 AU	minimum elong	2525 Mar 10 03:45	19° \mathfrak{H} 34'58 1°45'04
direct	2519 Sep 16 22:48	12° \mathfrak{Z} 32'17		max. Earth dist.	2525 Mar 09 23:39	19° \mathfrak{H} 33'43 10.72112 AU
evening set	2519 Dec 26 23:59	19° \mathfrak{Z} 33'19		morning rise	2525 Mar 27 02:55	21° \mathfrak{H} 38'12
				retrograde	2525 Jul 09 23:49	29° \mathfrak{H} 12'39
conjunction	2520 Jan 12 15:29	21° \mathfrak{Z} 30'19	0°15'53	opposition	2525 Sep 18 10:13	25° \mathfrak{H} 48'20 -2°19'38
minimum elong	2520 Jan 12 15:30	21° \mathfrak{Z} 30'19	0°15'52	min. Earth dist.	2525 Sep 18 12:58	25° \mathfrak{H} 47'48 8.66906 AU
behind sun begin	2520 Jan 12 13:55	21° \mathfrak{Z} 29'51		direct	2525 Nov 25 21:06	22° \mathfrak{H} 27'59
behind sun end	2520 Jan 12 17:05	21° \mathfrak{Z} 30'47		evening set	2526 Mar 05 17:57	29° \mathfrak{H} 46'50
max. Earth dist.	2520 Jan 12 11:33	21° \mathfrak{Z} 29'10	11.05083 AU		2526 Mar 07 13:33	0° \mathfrak{Y}
morning rise	2520 Jan 29 06:50	23° \mathfrak{Z} 27'20				
	2520 Apr 14 19:29	0° \approx		conjunction	2526 Mar 22 15:42	1° \mathfrak{Y} 50'56 -2°00'22
retrograde	2520 May 09 12:34	0° \approx 29'38		minimum elong	2526 Mar 22 15:40	1° \mathfrak{Y} 50'56 2°00'22
	2520 Jun 03 11:28	30° \mathbb{R} \mathfrak{Z}		max. Earth dist.	2526 Mar 22 11:47	1° \mathfrak{Y} 49'44 10.61372 AU
opposition	2520 Jul 19 04:40	27° \mathfrak{Z} 11'23	0°03'05	morning rise	2526 Apr 08 17:47	3° \mathfrak{Y} 56'22
min. Earth dist.	2520 Jul 19 08:10	27° \mathfrak{Z} 10'44	9.03926 AU	retrograde	2526 Jul 23 07:44	11° \mathfrak{Y} 39'48

opposition	2526 Oct 01 10:03	8° Υ 14'08	-2°35'38	retrograde	2532 Oct 14 11:04	2° \mathfrak{D} 36'28	
min. Earth dist.	2526 Oct 01 12:38	8° Υ 13'38	8.55899 AU		2532 Dec 09 23:15	30° \mathfrak{R} II	
direct	2526 Dec 08 08:33	4° Υ 52'51		opposition	2532 Dec 20 19:13	29° Π 07'03	-1°21'21
evening set	2527 Mar 18 12:21	12° Υ 18'59		min. Earth dist.	2532 Dec 20 16:36	29° Π 07'36	8.05042 AU
				direct	2533 Feb 25 08:07	25° Π 39'23	
conjunction	2527 Apr 04 13:15	14° Υ 25'25	-2°10'19		2533 May 08 05:49	0° \mathfrak{D}	
minimum elong	2527 Apr 04 13:13	14° Υ 25'25	2°10'19	evening set	2533 Jun 09 04:17	3° \mathfrak{D} 48'34	
max. Earth dist.	2527 Apr 04 10:25	14° Υ 24'32	10.50170 AU				
morning rise	2527 Apr 21 18:41	16° Υ 33'17		conjunction	2533 Jun 27 06:33	6° \mathfrak{D} 08'58	-0°50'25
retrograde	2527 Aug 05 21:14	24° Υ 25'42		minimum elong	2533 Jun 27 06:35	6° \mathfrak{D} 08'59	0°50'25
opposition	2527 Oct 14 15:12	20° Υ 58'46	-2°44'30	max. Earth dist.	2533 Jun 27 10:29	6° \mathfrak{D} 10'15	10.04057 AU
min. Earth dist.	2527 Oct 14 16:58	20° Υ 58'25	8.44681 AU	morning rise	2533 Jul 15 10:25	8° \mathfrak{D} 29'51	
direct	2527 Dec 21 03:56	17° Υ 36'26		retrograde	2533 Oct 28 23:23	16° \mathfrak{D} 46'44	
evening set	2528 Mar 30 16:10	25° Υ 10'32		opposition	2534 Jan 03 23:24	13° \mathfrak{D} 17'48	-0°43'20
				min. Earth dist.	2534 Jan 03 19:54	13° \mathfrak{D} 18'32	8.03821 AU
conjunction	2528 Apr 16 20:55	27° Υ 19'34	-2°14'00	direct	2534 Mar 11 16:34	9° \mathfrak{D} 49'24	
minimum elong	2528 Apr 16 20:55	27° Υ 19'34	2°14'00	evening set	2534 Jun 24 06:08	18° \mathfrak{D} 01'38	
max. Earth dist.	2528 Apr 16 19:48	27° Υ 19'13	10.39033 AU				
morning rise	2528 May 04 06:09	29° Υ 30'03		conjunction	2534 Jul 12 10:17	20° \mathfrak{D} 22'32	-0°18'35
	2528 May 08 07:52	0° \mathfrak{R}		minimum elong	2534 Jul 12 10:18	20° \mathfrak{D} 22'32	0°18'35
retrograde	2528 Aug 18 19:08	7° \mathfrak{R} 30'56		max. Earth dist.	2534 Jul 12 15:19	20° \mathfrak{D} 24'09	10.04255 AU
opposition	2528 Oct 27 02:04	4° \mathfrak{R} 02'54	-2°45'12	morning rise	2534 Jul 30 14:37	22° \mathfrak{D} 43'28	
min. Earth dist.	2528 Oct 27 02:22	4° \mathfrak{R} 02'50	8.33802 AU		2534 Oct 11 06:59	0° \mathfrak{Q}	
direct	2529 Jan 02 05:30	0° \mathfrak{R} 39'28		retrograde	2534 Nov 12 09:26	0° \mathfrak{Q} 56'32	
evening set	2529 Apr 13 05:40	8° \mathfrak{R} 21'45			2534 Dec 14 16:49	30° \mathfrak{R} \mathfrak{D}	
				opposition	2535 Jan 18 03:12	27° \mathfrak{D} 28'22	-0°02'41
conjunction	2529 Apr 30 14:49	10° \mathfrak{R} 33'32	-2°10'47	min. Earth dist.	2535 Jan 17 22:53	27° \mathfrak{D} 29'15	8.05382 AU
minimum elong	2529 Apr 30 14:51	10° \mathfrak{R} 33'32	2°10'47	asc. node	2535 Feb 11 21:58	25° \mathfrak{D} 32'47	
max. Earth dist.	2529 Apr 30 15:01	10° \mathfrak{R} 33'35	10.28540 AU	direct	2535 Mar 26 03:21	23° \mathfrak{D} 59'28	
morning rise	2529 May 18 04:22	12° \mathfrak{R} 46'45			2535 Jun 21 09:26	0° \mathfrak{Q}	
	2529 Jun 05 13:56	15° \mathfrak{R}		evening set	2535 Jul 09 08:30	2° \mathfrak{Q} 12'41	
retrograde	2529 Sep 02 00:13	20° \mathfrak{R} 54'58					
opposition	2529 Nov 09 18:20	17° \mathfrak{R} 26'04	-2°37'02	conjunction	2535 Jul 27 12:43	4° \mathfrak{Q} 33'06	0°14'20
min. Earth dist.	2529 Nov 09 17:25	17° \mathfrak{R} 26'15	8.23847 AU	minimum elong	2535 Jul 27 12:43	4° \mathfrak{Q} 33'06	0°14'21
	2529 Dec 13 11:09	15° \mathfrak{R} \mathfrak{R}		behind sun begin	2535 Jul 27 09:34	4° \mathfrak{Q} 32'05	
direct	2530 Jan 15 12:50	14° \mathfrak{R} 01'30		behind sun end	2535 Jul 27 15:51	4° \mathfrak{Q} 34'06	
	2530 Feb 17 04:43	15° \mathfrak{R}		max. Earth dist.	2535 Jul 27 18:23	4° \mathfrak{Q} 34'55	10.07167 AU
evening set	2530 Apr 27 05:08	21° \mathfrak{R} 51'52		morning rise	2535 Aug 14 15:44	6° \mathfrak{Q} 53'08	
					2535 Nov 23 15:26	15° \mathfrak{Q}	
conjunction	2530 May 14 19:02	24° \mathfrak{R} 06'22	-2°00'21	retrograde	2535 Nov 26 14:54	15° \mathfrak{Q} 00'30	
minimum elong	2530 May 14 19:05	24° \mathfrak{R} 06'23	2°00'21		2535 Nov 29 14:14	15° \mathfrak{R} \mathfrak{Q}	
max. Earth dist.	2530 May 14 20:03	24° \mathfrak{R} 06'41	10.19284 AU	opposition	2536 Feb 01 05:04	11° \mathfrak{Q} 33'18	0°37'50
morning rise	2530 Jun 01 13:05	26° \mathfrak{R} 22'13		min. Earth dist.	2536 Feb 01 00:28	11° \mathfrak{Q} 34'14	8.09563 AU
	2530 Jul 02 06:12	0° Π		direct	2536 Apr 08 14:59	8° \mathfrak{Q} 04'08	
retrograde	2530 Sep 16 10:24	4° Π 36'02			2536 Jul 13 02:54	15° \mathfrak{Q}	
opposition	2530 Nov 23 15:11	1° Π 06'37	-2°19'51	evening set	2536 Jul 23 08:30	16° \mathfrak{Q} 16'18	
min. Earth dist.	2530 Nov 23 13:39	1° Π 06'56	8.15400 AU				
	2530 Dec 07 12:47	30° \mathfrak{R} \mathfrak{R}		conjunction	2536 Aug 10 11:06	18° \mathfrak{Q} 35'22	0°46'03
direct	2531 Jan 29 03:57	27° \mathfrak{R} 40'54		minimum elong	2536 Aug 10 11:03	18° \mathfrak{Q} 35'21	0°46'03
	2531 Mar 21 07:22	0° Π		max. Earth dist.	2536 Aug 10 16:34	18° \mathfrak{Q} 37'08	10.12521 AU
evening set	2531 May 11 13:43	5° Π 38'48		morning rise	2536 Aug 28 11:14	20° \mathfrak{Q} 53'41	
				retrograde	2536 Dec 09 13:52	28° \mathfrak{Q} 53'57	
conjunction	2531 May 29 08:23	7° Π 55'48	-1°42'53	opposition	2537 Feb 14 03:42	25° \mathfrak{Q} 27'54	1°15'34
minimum elong	2531 May 29 08:26	7° Π 55'49	1°42'53	min. Earth dist.	2537 Feb 13 23:46	25° \mathfrak{Q} 28'42	8.15986 AU
max. Earth dist.	2531 May 29 10:08	7° Π 56'21	10.11822 AU	direct	2537 Apr 23 00:47	21° \mathfrak{Q} 58'46	
morning rise	2531 Jun 16 06:40	10° Π 13'57			2537 Aug 06 01:36	0° \mathfrak{P}	
retrograde	2531 Sep 30 22:19	18° Π 31'14		evening set	2537 Aug 07 03:31	0° \mathfrak{P} 08'06	
opposition	2531 Dec 07 15:56	15° Π 01'39	-1°54'12				
min. Earth dist.	2531 Dec 07 13:56	15° Π 02'04	8.08989 AU	conjunction	2537 Aug 25 03:02	2° \mathfrak{P} 25'09	1°14'42
direct	2532 Feb 12 03:23	11° Π 34'53		minimum elong	2537 Aug 25 02:59	2° \mathfrak{P} 25'08	1°14'42
evening set	2532 May 25 05:58	19° Π 39'11		max. Earth dist.	2537 Aug 25 07:22	2° \mathfrak{P} 26'33	10.19861 AU
				morning rise	2537 Sep 11 23:09	4° \mathfrak{P} 41'10	
conjunction	2532 Jun 12 04:54	21° Π 58'13	-1°19'08	retrograde	2537 Dec 23 06:32	12° \mathfrak{P} 33'36	
minimum elong	2532 Jun 12 04:57	21° Π 58'14	1°19'07	opposition	2538 Feb 27 22:26	9° \mathfrak{P} 08'51	1°48'19
max. Earth dist.	2532 Jun 12 07:38	21° Π 59'06	10.06631 AU	min. Earth dist.	2538 Feb 27 19:43	9° \mathfrak{P} 09'24	8.24178 AU
morning rise	2532 Jun 30 06:37	24° Π 18'08		direct	2538 May 07 07:27	5° \mathfrak{P} 40'05	
	2532 Aug 20 08:06	0° \mathfrak{D}		evening set	2538 Aug 21 15:27	13° \mathfrak{P} 45'02	

conjunction	2538 Sep 08 10:45	15° \mathring{M} 59'36	1°38'41	conjunction	2544 Nov 23 01:15	1° \mathring{X} 07'51	1°53'27
minimum elong	2538 Sep 08 10:42	15° \mathring{M} 59'34	1°38'41	minimum elong	2544 Nov 23 01:17	1° \mathring{X} 07'52	1°53'27
max. Earth dist.	2538 Sep 08 13:33	16° \mathring{M} 00'29	10.28748 AU	max. Earth dist.	2544 Nov 22 23:37	1° \mathring{X} 07'22	10.88821 AU
morning rise	2538 Sep 26 02:07	18° \mathring{M} 12'54		morning rise	2544 Dec 09 18:14	3° \mathring{X} 07'01	
retrograde	2539 Jan 05 16:02	25° \mathring{M} 57'10		retrograde	2545 Mar 19 07:42	10° \mathring{X} 11'03	
opposition	2539 Mar 13 12:33	22° \mathring{M} 33'46	2°14'22	opposition	2545 May 27 15:36	6° \mathring{X} 53'03	2°09'20
min. Earth dist.	2539 Mar 13 10:34	22° \mathring{M} 34'10	8.33725 AU	min. Earth dist.	2545 May 27 16:36	6° \mathring{X} 52'52	8.92544 AU
direct	2539 May 21 10:08	19° \mathring{M} 05'37		direct	2545 Aug 06 18:11	3° \mathring{X} 31'08	
evening set	2539 Sep 04 18:31	27° \mathring{M} 04'46		evening set	2545 Nov 18 01:04	10° \mathring{X} 45'52	
conjunction	2539 Sep 22 09:12	29° \mathring{M} 16'35	1°56'53	conjunction	2545 Dec 04 19:22	12° \mathring{X} 44'39	1°36'37
minimum elong	2539 Sep 22 09:09	29° \mathring{M} 16'34	1°56'53	minimum elong	2545 Dec 04 19:24	12° \mathring{X} 44'39	1°36'37
max. Earth dist.	2539 Sep 22 10:56	29° \mathring{M} 17'07	10.38782 AU	max. Earth dist.	2545 Dec 04 17:52	12° \mathring{X} 44'12	10.95654 AU
	2539 Sep 28 03:35	0° \mathring{L}		morning rise	2545 Dec 21 11:00	14° \mathring{X} 42'41	
morning rise	2539 Oct 09 19:36	1° \mathring{L} 27'02		retrograde	2546 Mar 31 04:00	21° \mathring{X} 43'46	
retrograde	2540 Jan 18 16:47	9° \mathring{L} 03'04		opposition	2546 Jun 08 21:48	18° \mathring{X} 26'00	1°46'11
opposition	2540 Mar 25 21:36	5° \mathring{L} 40'55	2°32'44	min. Earth dist.	2546 Jun 08 22:42	18° \mathring{X} 25'50	8.98467 AU
min. Earth dist.	2540 Mar 25 19:48	5° \mathring{L} 41'16	8.44189 AU	direct	2546 Aug 19 02:06	15° \mathring{X} 05'05	
direct	2540 Jun 03 08:50	2° \mathring{L} 13'38		evening set	2546 Nov 29 15:31	22° \mathring{X} 14'18	
evening set	2540 Sep 17 11:33	10° \mathring{L} 05'49		conjunction	2546 Dec 16 08:32	24° \mathring{X} 12'08	1°16'04
conjunction	2540 Oct 04 21:39	12° \mathring{L} 14'50	2°08'42	minimum elong	2546 Dec 16 08:34	24° \mathring{X} 12'09	1°16'04
minimum elong	2540 Oct 04 21:38	12° \mathring{L} 14'49	2°08'42	max. Earth dist.	2546 Dec 16 07:05	24° \mathring{X} 11'42	11.00667 AU
max. Earth dist.	2540 Oct 04 22:56	12° \mathring{L} 15'13	10.49486 AU	morning rise	2547 Jan 01 23:26	26° \mathring{X} 09'25	
morning rise	2540 Oct 22 03:15	14° \mathring{L} 22'27			2547 Feb 07 07:12	0° \mathring{Z}	
retrograde	2541 Jan 30 11:55	21° \mathring{L} 50'30		retrograde	2547 Apr 12 00:24	3° \mathring{Z} 09'01	
opposition	2541 Apr 08 01:19	18° \mathring{L} 29'31	2°42'58		2547 Jun 19 02:55	30° \mathring{R} \mathring{X}	
min. Earth dist.	2541 Apr 07 23:29	18° \mathring{L} 29'52	8.55043 AU	opposition	2547 Jun 21 01:55	29° \mathring{X} 51'18	1°19'06
direct	2541 Jun 17 00:13	15° \mathring{L} 03'13		min. Earth dist.	2547 Jun 21 03:26	29° \mathring{X} 51'01	9.02472 AU
evening set	2541 Sep 30 18:23	22° \mathring{L} 47'43		direct	2547 Aug 31 04:31	26° \mathring{X} 31'16	
conjunction	2541 Oct 18 00:12	24° \mathring{L} 54'04	2°13'57		2547 Nov 07 06:12	0° \mathring{Z}	
minimum elong	2541 Oct 18 00:11	24° \mathring{L} 54'04	2°13'56	evening set	2547 Dec 11 02:28	3° \mathring{Z} 36'13	
max. Earth dist.	2541 Oct 18 01:32	24° \mathring{L} 54'29	10.60325 AU	conjunction	2547 Dec 27 18:30	5° \mathring{Z} 33'29	0°52'39
morning rise	2541 Nov 04 01:21	26° \mathring{L} 59'02		minimum elong	2547 Dec 27 18:32	5° \mathring{Z} 33'29	0°52'39
	2541 Nov 30 12:36	0° \mathring{M}		max. Earth dist.	2547 Dec 27 15:57	5° \mathring{Z} 32'43	11.03679 AU
retrograde	2542 Feb 12 01:35	4° \mathring{M} 19'38		morning rise	2548 Jan 13 09:23	7° \mathring{Z} 30'26	
opposition	2542 Apr 20 23:50	0° \mathring{M} 59'40	2°45'09	retrograde	2548 Apr 22 18:26	14° \mathring{Z} 30'00	
min. Earth dist.	2542 Apr 20 22:39	0° \mathring{M} 59'54	8.65762 AU	opposition	2548 Jul 02 04:41	11° \mathring{Z} 12'08	0°49'05
	2542 May 04 01:44	30° \mathring{R} \mathring{L}		min. Earth dist.	2548 Jul 02 07:18	11° \mathring{Z} 11'38	9.04417 AU
direct	2542 Jun 30 07:40	27° \mathring{L} 34'29		direct	2548 Sep 11 03:17	7° \mathring{Z} 52'48	
	2542 Aug 24 20:57	0° \mathring{M}		evening set	2548 Dec 21 11:22	14° \mathring{Z} 54'53	
evening set	2542 Oct 13 15:05	5° \mathring{M} 10'59		conjunction	2549 Jan 07 02:51	16° \mathring{Z} 51'55	0°27'17
conjunction	2542 Oct 30 17:04	7° \mathring{M} 14'55	2°12'49	minimum elong	2549 Jan 07 02:52	16° \mathring{Z} 51'55	0°27'17
minimum elong	2542 Oct 30 17:05	7° \mathring{M} 14'55	2°12'49	max. Earth dist.	2549 Jan 06 23:22	16° \mathring{Z} 50'54	11.04584 AU
max. Earth dist.	2542 Oct 30 17:54	7° \mathring{M} 15'10	10.70791 AU	morning rise	2549 Jan 23 18:08	18° \mathring{Z} 48'53	
morning rise	2542 Nov 16 14:36	9° \mathring{M} 17'34		retrograde	2549 May 04 15:27	25° \mathring{Z} 50'02	
	2543 Jan 12 23:21	15° \mathring{M}		opposition	2549 Jul 14 07:26	22° \mathring{Z} 31'45	0°17'14
retrograde	2543 Feb 24 07:54	16° \mathring{M} 31'31		min. Earth dist.	2549 Jul 14 10:06	22° \mathring{Z} 31'16	9.04230 AU
	2543 Apr 08 21:44	15° \mathring{R} \mathring{M}		direct	2549 Sep 23 02:04	19° \mathring{Z} 12'58	
opposition	2543 May 03 17:29	13° \mathring{M} 12'25	2°39'45	evening set	2550 Jan 01 19:41	26° \mathring{Z} 13'34	
min. Earth dist.	2543 May 03 17:26	13° \mathring{M} 12'26	8.75866 AU	conjunction	2550 Jan 18 11:08	28° \mathring{Z} 10'44	0°00'50
direct	2543 Jul 13 09:01	9° \mathring{M} 48'20		minimum elong	2550 Jan 18 11:08	28° \mathring{Z} 10'44	0°00'50
	2543 Oct 06 00:10	15° \mathring{M}		behind sun begin	2550 Jan 18 04:10	28° \mathring{Z} 08'42	
evening set	2543 Oct 26 02:13	17° \mathring{M} 16'58		behind sun end	2550 Jan 18 18:05	28° \mathring{Z} 12'46	
conjunction	2543 Nov 12 00:55	19° \mathring{M} 18'48	2°05'47	max. Earth dist.	2550 Jan 18 08:08	28° \mathring{Z} 09'55	11.03337 AU
minimum elong	2543 Nov 12 00:56	19° \mathring{M} 18'48	2°05'46	desc. node	2550 Jan 29 18:20	29° \mathring{Z} 30'39	
max. Earth dist.	2543 Nov 12 00:29	19° \mathring{M} 18'40	10.80424 AU		2550 Feb 02 23:06	0° \mathring{X}	
morning rise	2543 Nov 28 19:47	21° \mathring{M} 19'30		morning rise	2550 Feb 04 03:00	0° \mathring{X} 08'04	
retrograde	2544 Mar 07 09:35	28° \mathring{M} 27'53		retrograde	2550 May 16 15:31	7° \mathring{X} 12'18	
opposition	2544 May 15 06:34	25° \mathring{M} 09'27	2°27'31	opposition	2550 Jul 26 11:02	3° \mathring{X} 53'24	-0°15'24
min. Earth dist.	2544 May 15 07:29	25° \mathring{M} 09'17	8.84916 AU	min. Earth dist.	2550 Jul 26 13:09	3° \mathring{X} 53'00	9.01913 AU
direct	2544 Jul 25 05:09	21° \mathring{M} 46'27		direct	2550 Oct 04 21:55	0° \mathring{X} 34'58	
evening set	2544 Nov 06 05:08	29° \mathring{M} 07'45		evening set	2551 Jan 13 05:25	7° \mathring{X} 35'33	
	2544 Nov 13 14:10	0° \mathring{X}					

conjunction	2551 Jan 29 21:07	9° \approx 33'11	-0°25'50	evening set	2557 Mar 25 03:34	19° Υ 39'01	
minimum elong	2551 Jan 29 21:06	9° \approx 33'11	0°25'49				
max. Earth dist.	2551 Jan 29 18:33	9° \approx 32'26	10.99983 AU	conjunction	2557 Apr 11 06:07	21° Υ 46'22	-2°13'00
morning rise	2551 Feb 15 13:54	11° \approx 31'13		minimum elong	2557 Apr 11 06:06	21° Υ 46'22	2°13'00
	2551 Mar 19 21:54	15° \approx		max. Earth dist.	2557 Apr 11 03:32	21° Υ 45'34	10.47240 AU
retrograde	2551 May 28 19:19	18° \approx 39'57		morning rise	2557 Apr 28 13:21	23° Υ 55'12	
opposition	2551 Aug 07 16:19	15° \approx 20'13	-0°47'40		2557 Jun 26 12:06	0° δ	
min. Earth dist.	2551 Aug 07 18:21	15° \approx 19'51	8.97554 AU	retrograde	2557 Aug 12 22:26	1° δ 50'39	
	2551 Aug 12 05:30	15° \approx			2557 Sep 30 05:42	30° κ Υ	
direct	2551 Oct 16 18:04	12° \approx 01'55		opposition	2557 Oct 21 09:58	28° Υ 23'49	-2°45'36
	2551 Dec 17 05:36	15° \approx		min. Earth dist.	2557 Oct 21 11:24	28° Υ 23'32	8.41819 AU
evening set	2552 Jan 24 18:05	19° \approx 03'59		direct	2557 Dec 27 16:56	25° Υ 01'35	
					2558 Mar 16 03:57	0° δ	
conjunction	2552 Feb 10 10:13	21° \approx 02'25	-0°51'38	evening set	2558 Apr 07 11:35	2° δ 38'32	
minimum elong	2552 Feb 10 10:11	21° \approx 02'25	0°51'37				
max. Earth dist.	2552 Feb 10 06:51	21° \approx 01'25	10.94647 AU	conjunction	2558 Apr 24 18:19	4° δ 48'35	-2°12'56
morning rise	2552 Feb 27 04:25	23° \approx 01'29		minimum elong	2558 Apr 24 18:19	4° δ 48'35	2°12'56
	2552 May 22 00:28	0° κ		max. Earth dist.	2558 Apr 24 16:10	4° δ 47'54	10.36261 AU
retrograde	2552 Jun 09 04:27	0° κ 16'02		morning rise	2558 May 12 05:47	7° δ 00'07	
	2552 Jun 27 09:46	30° \approx			2558 Aug 18 18:59	15° δ	
opposition	2552 Aug 19 00:28	26° \approx 55'21	-1°18'26	retrograde	2558 Aug 26 22:38	15° δ 03'28	
min. Earth dist.	2552 Aug 19 03:06	26° \approx 54'51	8.91310 AU		2558 Sep 04 02:04	15° \approx δ	
direct	2552 Oct 27 15:22	23° \approx 36'55		opposition	2558 Nov 03 22:46	11° δ 35'37	-2°41'31
	2553 Jan 29 10:47	0° κ		min. Earth dist.	2558 Nov 03 23:57	11° δ 35'23	8.31149 AU
evening set	2553 Feb 04 10:58	0° κ 41'55		direct	2559 Jan 09 21:21	8° δ 12'09	
					2559 Apr 13 11:37	15° δ	
conjunction	2553 Feb 21 03:58	2° κ 41'28	-1°15'38	evening set	2559 Apr 21 05:26	15° δ 57'19	
minimum elong	2553 Feb 21 03:55	2° κ 41'27	1°15'38				
max. Earth dist.	2553 Feb 21 00:23	2° κ 40'23	10.87527 AU	conjunction	2559 May 08 16:54	18° δ 10'08	-2°05'50
morning rise	2553 Mar 09 23:53	4° κ 41'53		minimum elong	2559 May 08 16:56	18° δ 10'08	2°05'49
retrograde	2553 Jun 21 16:55	12° κ 03'27		max. Earth dist.	2559 May 08 16:08	18° δ 09'53	10.26069 AU
opposition	2553 Aug 31 12:12	8° κ 41'38	-1°46'26	morning rise	2559 May 26 08:43	20° δ 24'21	
min. Earth dist.	2553 Aug 31 14:51	8° κ 41'08	8.83417 AU	retrograde	2559 Sep 10 04:06	28° δ 34'14	
direct	2553 Nov 08 15:55	5° κ 22'51		opposition	2559 Nov 17 16:24	25° δ 05'33	-2°28'31
evening set	2554 Feb 16 09:36	12° κ 32'09		min. Earth dist.	2559 Nov 17 16:30	25° δ 05'32	8.21580 AU
				direct	2560 Jan 23 09:22	21° δ 40'48	
conjunction	2554 Mar 05 04:07	14° κ 33'09	-1°36'47	evening set	2560 May 04 08:36	29° δ 33'51	
minimum elong	2554 Mar 05 04:05	14° κ 33'09	1°36'48		2560 May 07 19:25	0° Π	
max. Earth dist.	2554 Mar 05 01:25	14° κ 32'20	10.78888 AU				
morning rise	2554 Mar 22 02:03	16° κ 35'13		conjunction	2560 May 22 00:58	1° Π 49'20	-1°51'36
retrograde	2554 Jul 04 13:45	24° κ 04'45		minimum elong	2560 May 22 01:02	1° Π 49'21	1°51'35
opposition	2554 Sep 13 04:02	20° κ 41'39	-2°10'24	max. Earth dist.	2560 May 22 01:46	1° Π 49'35	10.17300 AU
min. Earth dist.	2554 Sep 13 05:59	20° κ 41'17	8.74166 AU	morning rise	2560 Jun 08 21:05	4° Π 06'03	
direct	2554 Nov 20 21:15	17° κ 22'19		retrograde	2560 Sep 23 13:25	12° Π 20'35	
evening set	2555 Feb 28 15:14	24° κ 37'06		opposition	2560 Nov 30 14:18	8° Π 51'21	-2°06'47
				min. Earth dist.	2560 Nov 30 13:08	8° Π 51'36	8.13712 AU
conjunction	2555 Mar 17 11:51	26° κ 39'55	-1°54'04	direct	2561 Feb 05 04:02	5° Π 25'21	
minimum elong	2555 Mar 17 11:49	26° κ 39'55	1°54'05	evening set	2561 May 18 20:06	13° Π 25'24	
max. Earth dist.	2555 Mar 17 09:59	26° κ 39'21	10.69045 AU				
morning rise	2555 Apr 03 12:15	28° κ 43'58		conjunction	2561 Jun 05 17:07	15° Π 43'14	-1°30'43
	2555 Apr 14 06:49	0° Υ		minimum elong	2561 Jun 05 17:11	15° Π 43'15	1°30'42
retrograde	2555 Jul 17 18:21	6° Υ 22'00		max. Earth dist.	2561 Jun 05 19:13	15° Π 43'55	10.10504 AU
opposition	2555 Sep 26 00:39	2° Υ 57'37	-2°29'04	morning rise	2561 Jun 23 17:04	18° Π 02'03	
min. Earth dist.	2555 Sep 26 01:51	2° Υ 57'23	8.63881 AU	retrograde	2561 Oct 08 01:50	26° Π 18'57	
	2555 Nov 12 09:52	30° \approx κ		opposition	2561 Dec 14 15:21	22° Π 49'31	-1°37'15
direct	2555 Dec 03 05:21	29° κ 37'30		min. Earth dist.	2561 Dec 14 13:14	22° Π 49'57	8.08034 AU
	2555 Dec 23 19:36	0° Υ		direct	2562 Feb 19 03:43	19° Π 22'19	
evening set	2556 Mar 12 04:57	6° Υ 58'52		evening set	2562 Jun 02 14:42	27° Π 28'10	
conjunction	2556 Mar 29 04:09	9° Υ 03'48	-2°06'27	conjunction	2562 Jun 20 15:32	29° Π 47'47	-1°04'15
minimum elong	2556 Mar 29 04:07	9° Υ 03'47	2°06'27	minimum elong	2562 Jun 20 15:35	29° Π 47'48	1°04'14
max. Earth dist.	2556 Mar 29 02:02	9° Υ 03'08	10.58354 AU	max. Earth dist.	2562 Jun 20 18:15	29° Π 48'40	10.06095 AU
morning rise	2556 Apr 15 07:38	11° Υ 10'05			2562 Jun 22 05:10	0° δ	
retrograde	2556 Jul 30 04:53	18° Υ 56'54		morning rise	2562 Jul 08 18:18	2° δ 08'02	
opposition	2556 Oct 08 02:31	15° Υ 31'15	-2°41'10	retrograde	2562 Oct 22 14:44	10° δ 24'51	
min. Earth dist.	2556 Oct 08 03:45	15° Υ 31'00	8.52937 AU	opposition	2562 Dec 28 18:06	6° δ 55'34	-1°01'32
direct	2556 Dec 14 19:31	12° Υ 10'09		min. Earth dist.	2562 Dec 28 15:42	6° δ 56'04	8.04901 AU

direct	2563 Mar 05 08:44	3°♊27'20			2569 Mar 16 19:09	30°♏♏	
evening set	2563 Jun 17 14:02	11°♊37'25		opposition	2569 Mar 19 23:12	29°♏44'50	2°24'58
				min. Earth dist.	2569 Mar 19 20:23	29°♏45'24	8.38240 AU
conjunction	2563 Jul 05 17:21	13°♊58'00 -0°33'45		direct	2569 May 28 04:01	26°♏16'42	
minimum elong	2563 Jul 05 17:23	13°♊58'01 0°33'45			2569 Aug 04 23:41	0°♊	
max. Earth dist.	2563 Jul 05 20:15	13°♊58'57 10.04345 AU		evening set	2569 Sep 11 09:33	4°♊12'20	
morning rise	2563 Jul 23 21:32	16°♊18'52					
retrograde	2563 Nov 06 01:37	24°♊33'17		conjunction	2569 Sep 28 22:00	6°♊22'45	2°03'51
opposition	2564 Jan 11 21:26	21°♊04'27 -0°21'57		minimum elong	2569 Sep 28 21:57	6°♊22'44	2°03'50
min. Earth dist.	2564 Jan 11 18:59	21°♊04'58 8.04509 AU		max. Earth dist.	2569 Sep 29 00:59	6°♊23'41	10.43583 AU
direct	2564 Mar 18 17:55	17°♊35'26		morning rise	2569 Oct 16 05:48	8°♊31'46	
evening set	2564 Jul 01 15:18	25°♊47'50		retrograde	2570 Jan 24 20:30	16°♊03'36	
				opposition	2570 Apr 02 05:20	12°♊41'45	2°39'04
conjunction	2564 Jul 19 19:32	28°♊08'30 -0°01'14		min. Earth dist.	2570 Apr 02 03:29	12°♊42'07	8.49234 AU
minimum elong	2564 Jul 19 19:33	28°♊08'30 0°01'13		direct	2570 Jun 10 21:57	9°♊14'39	
behind sun begin	2564 Jul 19 12:11	28°♊06'08		evening set	2570 Sep 24 21:09	17°♊02'54	
behind sun end	2564 Jul 20 02:55	28°♊10'52					
max. Earth dist.	2564 Jul 19 22:41	28°♊09'28 10.05354 AU		conjunction	2570 Oct 12 04:56	19°♊10'32	2°12'12
asc. node	2564 Aug 02 12:56	29°♊55'00		minimum elong	2570 Oct 12 04:54	19°♊10'32	2°12'11
	2564 Aug 03 04:30	0°♏		max. Earth dist.	2570 Oct 12 06:40	19°♊11'04	10.54702 AU
morning rise	2564 Aug 06 23:28	0°♏29'02		morning rise	2570 Oct 29 08:13	21°♊16'47	
retrograde	2564 Nov 19 07:50	8°♏38'59		retrograde	2571 Feb 06 11:48	28°♊40'52	
opposition	2565 Jan 24 23:42	5°♏10'56 0°18'52		opposition	2571 Apr 15 06:15	25°♊20'16	2°45'00
min. Earth dist.	2565 Jan 24 21:03	5°♏11'28 8.06868 AU		min. Earth dist.	2571 Apr 15 04:52	25°♊20'32	8.60384 AU
direct	2565 Apr 02 05:54	1°♏41'24		direct	2571 Jun 24 09:31	21°♊54'24	
evening set	2565 Jul 16 16:06	9°♏54'07		evening set	2571 Oct 07 22:35	29°♊34'47	
					2571 Oct 11 10:30	0°♏	
conjunction	2565 Aug 03 19:36	12°♏13'57 0°31'17		conjunction	2571 Oct 25 02:15	1°♏39'50	2°14'02
minimum elong	2565 Aug 03 19:34	12°♏13'56 0°31'17		minimum elong	2571 Oct 25 02:15	1°♏39'50	2°14'02
max. Earth dist.	2565 Aug 03 22:53	12°♏15'01 10.09029 AU		max. Earth dist.	2571 Oct 25 03:09	1°♏40'07	10.65720 AU
morning rise	2565 Aug 21 21:31	14°♏33'15		morning rise	2571 Nov 11 01:39	3°♏43'36	
	2565 Aug 25 10:28	15°♏		retrograde	2572 Feb 18 20:44	11°♏00'39	
retrograde	2565 Dec 03 08:10	22°♏37'02		opposition	2572 Apr 27 02:00	7°♏41'09	2°43'06
opposition	2566 Feb 07 23:27	19°♏09'59 0°58'10		min. Earth dist.	2572 Apr 27 00:38	7°♏41'25	8.71158 AU
min. Earth dist.	2566 Feb 07 20:27	19°♏10'36 8.11801 AU		direct	2572 Jul 06 14:50	4°♏16'35	
direct	2566 Apr 16 16:28	15°♏40'17		evening set	2572 Oct 19 14:19	11°♏49'02	
evening set	2566 Jul 31 13:25	23°♏51'18					
conjunction	2566 Aug 18 14:34	26°♏09'29 1°01'34		conjunction	2572 Nov 05 14:35	13°♏51'50	2°09'43
minimum elong	2566 Aug 18 14:32	26°♏09'28 1°01'34		minimum elong	2572 Nov 05 14:37	13°♏51'50	2°09'43
max. Earth dist.	2566 Aug 18 18:07	26°♏10'37 10.15119 AU		max. Earth dist.	2572 Nov 05 15:28	13°♏52'06	10.76124 AU
morning rise	2566 Sep 05 12:57	28°♏26'46			2572 Nov 14 23:58	15°♏	
	2566 Sep 18 03:30	0°♏		morning rise	2572 Nov 22 10:45	15°♏53'26	
retrograde	2566 Dec 17 03:55	6°♏23'14		retrograde	2573 Mar 02 02:33	23°♏04'24	
opposition	2567 Feb 21 19:54	2°♏57'20 1°33'30		opposition	2573 May 09 17:15	19°♏45'50	2°33'59
min. Earth dist.	2567 Feb 21 16:20	2°♏58'04 8.18981 AU		min. Earth dist.	2573 May 09 16:16	19°♏46'01	8.81065 AU
	2567 Apr 06 08:56	30°♏♏		direct	2573 Jul 19 13:07	16°♏22'35	
direct	2567 May 01 00:20	29°♏27'51		evening set	2573 Oct 31 21:20	23°♏47'23	
	2567 May 25 14:24	0°♏					
evening set	2567 Aug 15 04:31	7°♏35'13		conjunction	2573 Nov 17 18:47	25°♏48'17	1°59'48
				minimum elong	2573 Nov 17 18:49	25°♏48'17	1°59'48
conjunction	2567 Sep 02 02:05	9°♏51'08 1°27'55		max. Earth dist.	2573 Nov 17 19:23	25°♏48'28	10.85451 AU
minimum elong	2567 Sep 02 02:02	9°♏51'06 1°27'54		morning rise	2573 Dec 04 12:27	27°♏48'07	
max. Earth dist.	2567 Sep 02 06:08	9°♏52'25 10.23238 AU			2573 Dec 23 22:19	0°♏	
morning rise	2567 Sep 19 19:53	12°♏05'52		retrograde	2574 Mar 14 03:14	4°♏54'07	
retrograde	2567 Dec 30 17:13	19°♏54'18		opposition	2574 May 22 04:36	1°♏36'16	2°18'28
opposition	2568 Mar 06 12:03	16°♏29'41 2°02'53		min. Earth dist.	2574 May 22 04:43	1°♏36'15	8.89692 AU
min. Earth dist.	2568 Mar 06 08:30	16°♏30'24 8.27968 AU			2574 Jun 13 11:49	30°♏♏	
direct	2568 May 14 04:14	13°♏00'44		direct	2574 Aug 01 03:55	28°♏14'16	
evening set	2568 Aug 28 11:42	21°♏02'51			2574 Sep 17 14:54	0°♏	
				evening set	2574 Nov 12 20:55	5°♏32'05	
conjunction	2568 Sep 15 04:53	23°♏16'06 1°48'57					
minimum elong	2568 Sep 15 04:49	23°♏16'05 1°48'57		conjunction	2574 Nov 29 16:03	7°♏31'25	1°44'59
max. Earth dist.	2568 Sep 15 08:48	23°♏17'20 10.32908 AU		minimum elong	2574 Nov 29 16:05	7°♏31'26	1°44'59
morning rise	2568 Oct 02 17:39	25°♏28'00		max. Earth dist.	2574 Nov 29 15:18	7°♏31'12	10.93325 AU
	2568 Nov 12 05:22	0°♊		morning rise	2574 Dec 16 08:12	9°♏29'55	
retrograde	2569 Jan 11 22:29	3°♊08'04		retrograde	2575 Mar 25 24:00	16°♏32'15	

opposition	2575 Jun 03 12:31	13° \mathbb{A} 14'52	1°57'32	max. Earth dist.	2581 Feb 04 06:32	15° \approx 55'21	10.96824 AU
min. Earth dist.	2575 Jun 03 13:52	13° \mathbb{A} 14'37	8.96693 AU	morning rise	2581 Feb 21 04:31	17° \approx 55'17	
direct	2575 Aug 13 14:39	9° \mathbb{A} 53'56		retrograde	2581 Jun 03 19:28	25° \approx 07'22	
evening set	2575 Nov 24 14:17	17° \mathbb{A} 05'42		opposition	2581 Aug 13 16:05	21° \approx 47'06	-1°04'23
				min. Earth dist.	2581 Aug 13 19:24	21° \approx 46'28	8.93654 AU
conjunction	2575 Dec 11 07:45	19° \mathbb{A} 03'54	1°26'04	direct	2581 Oct 22 13:11	18° \approx 28'36	
minimum elong	2575 Dec 11 07:47	19° \mathbb{A} 03'55	1°26'04	evening set	2582 Jan 30 09:58	25° \approx 32'31	
max. Earth dist.	2575 Dec 11 05:34	19° \mathbb{A} 03'15	10.99413 AU				
morning rise	2575 Dec 27 23:05	21° \mathbb{A} 01'28		conjunction	2582 Feb 16 02:41	27° \approx 31'38	-1°04'45
retrograde	2576 Apr 05 20:01	28° \mathbb{A} 01'33		minimum elong	2582 Feb 16 02:39	27° \approx 31'38	1°04'45
opposition	2576 Jun 14 17:47	24° \mathbb{A} 44'20	1°32'10	max. Earth dist.	2582 Feb 15 22:54	27° \approx 30'30	10.90032 AU
min. Earth dist.	2576 Jun 14 19:37	24° \mathbb{A} 44'00	9.01743 AU	morning rise	2582 Mar 04 21:40	29° \approx 31'30	
direct	2576 Aug 24 20:52	21° \mathbb{A} 24'21			2582 Mar 08 23:31	0° \mathbb{H}	
evening set	2576 Dec 05 03:08	28° \mathbb{A} 31'13		retrograde	2582 Jun 16 06:51	6° \mathbb{H} 50'10	
	2576 Dec 17 18:33	0° \mathbb{B}		opposition	2582 Aug 26 02:19	3° \mathbb{H} 28'36	-1°33'52
				min. Earth dist.	2582 Aug 26 05:09	3° \mathbb{H} 28'04	8.86032 AU
conjunction	2576 Dec 21 19:34	0° \mathbb{B} 28'40	1°03'54	direct	2582 Nov 03 11:37	0° \mathbb{H} 09'41	
minimum elong	2576 Dec 21 19:36	0° \mathbb{B} 28'41	1°03'53	evening set	2583 Feb 11 06:06	7° \mathbb{H} 17'21	
max. Earth dist.	2576 Dec 21 16:57	0° \mathbb{B} 27'54	11.03410 AU				
morning rise	2577 Jan 07 10:27	2° \mathbb{B} 25'42		conjunction	2583 Feb 27 23:55	9° \mathbb{H} 17'49	-1°27'24
retrograde	2577 Apr 17 15:25	9° \mathbb{B} 25'06		minimum elong	2583 Feb 27 23:53	9° \mathbb{H} 17'48	1°27'24
opposition	2577 Jun 26 21:22	6° \mathbb{B} 07'47	1°03'24	max. Earth dist.	2583 Feb 27 19:51	9° \mathbb{H} 16'35	10.81613 AU
min. Earth dist.	2577 Jun 26 23:23	6° \mathbb{B} 07'25	9.04586 AU	morning rise	2583 Mar 16 20:51	11° \mathbb{H} 19'14	
direct	2577 Sep 05 22:32	2° \mathbb{B} 48'35		retrograde	2583 Jun 29 00:49	18° \mathbb{H} 45'30	
evening set	2577 Dec 16 13:12	9° \mathbb{B} 51'58		opposition	2583 Sep 07 16:18	15° \mathbb{H} 22'35	-1°59'55
				min. Earth dist.	2583 Sep 07 19:15	15° \mathbb{H} 22'01	8.76946 AU
conjunction	2578 Jan 02 05:02	11° \mathbb{B} 49'03	0°39'20	direct	2583 Nov 15 14:24	12° \mathbb{H} 03'01	
minimum elong	2578 Jan 02 05:03	11° \mathbb{B} 49'03	0°39'19	evening set	2584 Feb 23 08:32	19° \mathbb{H} 15'47	
max. Earth dist.	2578 Jan 02 02:09	11° \mathbb{B} 48'12	11.05124 AU				
morning rise	2578 Jan 18 19:54	13° \mathbb{B} 45'56		conjunction	2584 Mar 11 04:01	21° \mathbb{H} 17'54	-1°46'38
retrograde	2578 Apr 29 13:19	20° \mathbb{B} 46'16		minimum elong	2584 Mar 11 03:59	21° \mathbb{H} 17'54	1°46'38
opposition	2578 Jul 09 00:34	17° \mathbb{B} 28'37	0°32'17	max. Earth dist.	2584 Mar 10 23:46	21° \mathbb{H} 16'36	10.71898 AU
min. Earth dist.	2578 Jul 09 03:20	17° \mathbb{B} 28'07	9.05123 AU	morning rise	2584 Mar 28 03:22	23° \mathbb{H} 21'12	
direct	2578 Sep 17 21:09	14° \mathbb{B} 09'59			2584 Jun 07 05:56	0° \mathbb{Y}	
evening set	2578 Dec 27 22:07	21° \mathbb{B} 11'18		retrograde	2584 Jul 11 00:45	0° \mathbb{Y} 55'53	
					2584 Aug 14 05:06	30° \mathbb{R} \mathbb{H}	
conjunction	2579 Jan 13 13:34	23° \mathbb{B} 08'23	0°13'16	opposition	2584 Sep 19 11:01	27° \mathbb{H} 31'34	-2°21'16
minimum elong	2579 Jan 13 13:34	23° \mathbb{B} 08'24	0°13'16	min. Earth dist.	2584 Sep 19 14:00	27° \mathbb{H} 30'59	8.66752 AU
behind sun begin	2579 Jan 13 09:24	23° \mathbb{B} 07'11		direct	2584 Nov 26 21:00	24° \mathbb{H} 11'13	
behind sun end	2579 Jan 13 17:44	23° \mathbb{B} 09'36			2585 Feb 22 00:24	0° \mathbb{Y}	
max. Earth dist.	2579 Jan 13 09:23	23° \mathbb{B} 07'10	11.04535 AU	evening set	2585 Mar 06 18:19	1° \mathbb{Y} 30'11	
morning rise	2579 Jan 30 05:04	25° \mathbb{B} 05'32					
	2579 Mar 20 04:05	0° \approx		conjunction	2585 Mar 23 16:15	3° \mathbb{Y} 34'19	-2°01'26
retrograde	2579 May 11 11:13	2° \approx 08'20		minimum elong	2585 Mar 23 16:13	3° \mathbb{Y} 34'18	2°01'26
	2579 Jul 05 00:17	30° \mathbb{R} \mathbb{B}		max. Earth dist.	2585 Mar 23 13:10	3° \mathbb{Y} 33'22	10.61275 AU
desc. node	2579 Jul 19 14:26	28° \mathbb{B} 57'02		morning rise	2585 Apr 09 18:25	5° \mathbb{Y} 39'47	
opposition	2579 Jul 21 04:11	28° \mathbb{B} 50'05	-0°00'08	retrograde	2585 Jul 24 07:14	13° \mathbb{Y} 23'20	
min. Earth dist.	2579 Jul 21 07:59	28° \mathbb{B} 49'23	9.03397 AU	opposition	2585 Oct 02 10:48	9° \mathbb{Y} 57'38	-2°36'35
direct	2579 Sep 29 16:55	25° \mathbb{B} 31'44		min. Earth dist.	2585 Oct 02 12:53	9° \mathbb{Y} 57'13	8.55871 AU
	2579 Dec 16 06:58	0° \approx		direct	2585 Dec 09 10:10	6° \mathbb{Y} 36'20	
evening set	2580 Jan 08 07:38	2° \approx 32'29		evening set	2586 Mar 19 12:50	14° \mathbb{Y} 02'28	
conjunction	2580 Jan 24 23:03	4° \approx 29'54	-0°13'28	conjunction	2586 Apr 05 13:58	16° \mathbb{Y} 08'57	-2°10'48
minimum elong	2580 Jan 24 23:03	4° \approx 29'54	0°13'28	minimum elong	2586 Apr 05 13:57	16° \mathbb{Y} 08'57	2°10'48
behind sun begin	2580 Jan 24 19:00	4° \approx 28'43		max. Earth dist.	2586 Apr 05 12:16	16° \mathbb{Y} 08'25	10.50202 AU
behind sun end	2580 Jan 25 03:06	4° \approx 31'05		morning rise	2586 Apr 22 19:27	18° \mathbb{Y} 16'49	
max. Earth dist.	2580 Jan 24 17:59	4° \approx 28'25	11.01724 AU	retrograde	2586 Aug 06 22:25	26° \mathbb{Y} 09'13	
morning rise	2580 Feb 10 15:31	6° \approx 27'38		opposition	2586 Oct 15 15:51	22° \mathbb{Y} 42'13	-2°44'43
retrograde	2580 May 22 12:20	13° \approx 34'23		min. Earth dist.	2586 Oct 15 16:44	22° \mathbb{Y} 42'03	8.44784 AU
opposition	2580 Aug 01 08:57	10° \approx 15'14	-0°32'44	direct	2586 Dec 22 04:38	19° \mathbb{Y} 19'53	
min. Earth dist.	2580 Aug 01 13:05	10° \approx 14'28	8.99518 AU	evening set	2587 Apr 01 16:46	26° \mathbb{Y} 53'50	
direct	2580 Oct 10 15:18	6° \approx 56'54					
evening set	2581 Jan 18 19:04	13° \approx 58'33		conjunction	2587 Apr 18 21:41	29° \mathbb{Y} 02'53	-2°13'52
	2581 Jan 27 12:18	15° \approx		minimum elong	2587 Apr 18 21:41	29° \mathbb{Y} 02'53	2°13'52
				max. Earth dist.	2587 Apr 18 20:56	29° \mathbb{Y} 02'39	10.39195 AU
conjunction	2581 Feb 04 10:59	15° \approx 56'40	-0°39'46		2587 Apr 26 11:20	0° \mathbb{B}	
minimum elong	2581 Feb 04 10:57	15° \approx 56'39	0°39'46	morning rise	2587 May 06 07:05	1° \mathbb{B} 13'23	

retrograde	2587 Aug 20 21:10	9°♄14'01		retrograde	2593 Sep 20 06:50	0°♄	
opposition	2587 Oct 29 02:26	5°♄45'57 -2°44'38		retrograde	2593 Nov 13 07:16	2°♄32'54	
min. Earth dist.	2587 Oct 29 02:20	5°♄45'58 8.34026 AU			2594 Jan 07 17:44	30°♄	
direct	2588 Jan 04 04:36	2°♄22'29		asc. node	2594 Jan 14 21:28	29°♄25'13	
evening set	2588 Apr 14 06:14	10°♄04'32		opposition	2594 Jan 19 00:46	29°♄04'46	0°00'27
				min. Earth dist.	2594 Jan 18 20:29	29°♄05'39	8.05804 AU
conjunction	2588 May 01 15:29	12°♄16'17 -2°10'02		direct	2594 Mar 27 01:27	25°♄35'52	
minimum elong	2588 May 01 15:30	12°♄16'17 2°10'02			2594 Jun 08 04:14	0°♄	
max. Earth dist.	2588 May 01 15:08	12°♄16'10 10.28820 AU		evening set	2594 Jul 10 06:59	3°♄48'51	
morning rise	2588 May 19 05:15	14°♄29'29					
	2588 May 23 07:49	15°♄		conjunction	2594 Jul 28 11:07	6°♄09'10	0°16'47
retrograde	2588 Sep 03 00:58	22°♄37'17		minimum elong	2594 Jul 28 11:06	6°♄09'10	0°16'48
opposition	2588 Nov 10 18:20	19°♄08'22 -2°35'43		max. Earth dist.	2594 Jul 28 16:34	6°♄10'55	10.07575 AU
min. Earth dist.	2588 Nov 10 17:46	19°♄08'29 8.24177 AU		morning rise	2594 Aug 15 13:57	8°♄29'05	
direct	2589 Jan 16 12:53	15°♄43'43			2594 Oct 16 07:36	15°♄	
evening set	2589 Apr 28 05:26	23°♄33'48		retrograde	2594 Nov 27 12:18	16°♄36'02	
					2595 Jan 09 06:34	15°♄	
conjunction	2589 May 15 19:26	25°♄48'14 -1°59'01		opposition	2595 Feb 02 02:22	13°♄08'55	0°40'47
minimum elong	2589 May 15 19:29	25°♄48'15 1°59'01		min. Earth dist.	2595 Feb 01 22:20	13°♄09'44	8.09965 AU
max. Earth dist.	2589 May 15 19:45	25°♄48'21 10.19665 AU		direct	2595 Apr 10 11:56	9°♄39'46	
morning rise	2589 Jun 02 13:44	28°♄04'03			2595 Jul 01 13:45	15°♄	
	2589 Jun 18 08:36	0°♄		evening set	2595 Jul 25 06:46	17°♄51'46	
retrograde	2589 Sep 17 08:57	6°♄17'18					
opposition	2589 Nov 24 14:48	2°♄47'53 -2°17'51		conjunction	2595 Aug 12 09:06	20°♄10'44	0°48'18
min. Earth dist.	2589 Nov 24 13:52	2°♄48'04 8.15817 AU		minimum elong	2595 Aug 12 09:04	20°♄10'43	0°48'19
	2590 Jan 03 22:16	30°♄		max. Earth dist.	2595 Aug 12 13:54	20°♄12'16	10.12926 AU
direct	2590 Jan 30 05:03	29°♄22'05		morning rise	2595 Aug 30 09:04	22°♄28'56	
	2590 Feb 25 07:00	0°♄			2595 Nov 18 16:30	0°♄	
evening set	2590 May 12 13:35	7°♄19'35		retrograde	2595 Dec 11 11:32	0°♄28'50	
					2596 Jan 03 07:12	30°♄	
conjunction	2590 May 30 08:26	9°♄36'32 -1°41'03		opposition	2596 Feb 16 00:54	27°♄02'52	1°18'11
minimum elong	2590 May 30 08:30	9°♄36'33 1°41'03		min. Earth dist.	2596 Feb 15 21:40	27°♄03'32	8.16414 AU
max. Earth dist.	2590 May 30 09:53	9°♄37'00 10.12274 AU		direct	2596 Apr 23 21:58	23°♄33'45	
morning rise	2590 Jun 17 06:56	11°♄54'38			2596 Jul 25 01:01	0°♄	
retrograde	2590 Oct 01 20:11	20°♄11'16		evening set	2596 Aug 08 01:19	1°♄42'52	
opposition	2590 Dec 08 14:59	16°♄41'40 -1°51'39					
min. Earth dist.	2590 Dec 08 13:18	16°♄42'01 8.09457 AU		conjunction	2596 Aug 26 00:29	3°♄59'47	1°16'37
direct	2591 Feb 13 03:16	13°♄14'49		minimum elong	2596 Aug 26 00:26	3°♄59'46	1°16'37
evening set	2591 May 27 05:32	21°♄18'41		max. Earth dist.	2596 Aug 26 03:53	4°♄00'53	10.20302 AU
				morning rise	2596 Sep 12 20:28	6°♄15'40	
conjunction	2591 Jun 14 04:41	23°♄37'41 -1°16'55		retrograde	2596 Dec 24 03:00	14°♄07'44	
minimum elong	2591 Jun 14 04:44	23°♄37'42 1°16'55		opposition	2597 Feb 28 19:21	10°♄43'03	1°50'26
max. Earth dist.	2591 Jun 14 07:34	23°♄38'37 10.07111 AU		min. Earth dist.	2597 Feb 28 16:57	10°♄43'32	8.24627 AU
morning rise	2591 Jul 02 06:27	25°♄57'30		direct	2597 May 08 05:29	7°♄14'18	
	2591 Aug 05 10:12	0°♄		evening set	2597 Aug 22 12:48	15°♄19'01	
retrograde	2591 Oct 16 09:15	4°♄15'10					
opposition	2591 Dec 22 17:36	0°♄45'45 -1°18'25		conjunction	2597 Sep 09 07:52	17°♄33'26	1°40'10
min. Earth dist.	2591 Dec 22 14:49	0°♄46'19 8.05519 AU		minimum elong	2597 Sep 09 07:49	17°♄33'25	1°40'10
	2592 Jan 01 01:26	30°♄		max. Earth dist.	2597 Sep 09 09:56	17°♄34'06	10.29171 AU
direct	2592 Feb 27 07:08	27°♄18'01		morning rise	2597 Sep 26 23:05	19°♄46'38	
	2592 Apr 22 18:21	0°♄		retrograde	2598 Jan 06 11:03	27°♄30'37	
evening set	2592 Jun 10 03:24	5°♄26'48		opposition	2598 Mar 14 09:07	24°♄07'16	2°15'55
				min. Earth dist.	2598 Mar 14 07:00	24°♄07'41	8.34105 AU
conjunction	2592 Jun 28 05:50	7°♄47'07 -0°47'59		direct	2598 May 22 08:46	20°♄39'11	
minimum elong	2592 Jun 28 05:52	7°♄47'08 0°47'58		evening set	2598 Sep 05 15:30	28°♄38'09	
max. Earth dist.	2592 Jun 28 10:16	7°♄48'33 10.04528 AU			2598 Sep 16 15:06	0°♄	
morning rise	2592 Jul 16 09:35	10°♄07'54					
retrograde	2592 Oct 29 21:38	18°♄24'10		conjunction	2598 Sep 23 06:02	0°♄49'52	1°57'53
opposition	2593 Jan 04 21:20	14°♄55'14 -0°40'12		minimum elong	2598 Sep 23 05:59	0°♄49'51	1°57'53
min. Earth dist.	2593 Jan 04 17:26	14°♄56'02 8.04278 AU		max. Earth dist.	2598 Sep 23 07:42	0°♄50'23	10.39093 AU
direct	2593 Mar 12 15:04	11°♄26'49		morning rise	2598 Oct 10 16:11	3°♄00'13	
evening set	2593 Jun 25 04:48	19°♄38'42		retrograde	2599 Jan 19 13:34	10°♄36'08	
				opposition	2599 Mar 27 18:07	7°♄14'03	2°33'39
conjunction	2593 Jul 13 09:00	21°♄59'30 -0°16'04		min. Earth dist.	2599 Mar 27 16:05	7°♄14'27	8.44419 AU
minimum elong	2593 Jul 13 09:01	21°♄59'30 0°16'03		direct	2599 Jun 05 05:21	3°♄46'50	
max. Earth dist.	2593 Jul 13 14:22	22°♄01'14 10.04696 AU		evening set	2599 Sep 19 08:14	11°♄38'56	
morning rise	2593 Jul 31 13:11	24°♄20'20					

conjunction	2599 Oct 06 18:14	13° <u>♂</u> 47'54	2°09'11
minimum elong	2599 Oct 06 18:12	13° <u>♂</u> 47'54	2°09'10
max. Earth dist.	2599 Oct 06 19:52	13° <u>♂</u> 48'25	10.49627 AU
morning rise	2599 Oct 23 23:31	15° <u>♂</u> 55'28	
retrograde	2600 Feb 01 09:40	23° <u>♂</u> 23'33	
opposition	2600 Apr 09 21:58	20° <u>♂</u> 02'37	2°43'14
min. Earth dist.	2600 Apr 09 20:29	20° <u>♂</u> 02'55	8.55093 AU
direct	2600 Jun 18 19:27	16° <u>♂</u> 36'25	
evening set	2600 Oct 02 15:00	24° <u>♂</u> 20'57	
conjunction	2600 Oct 19 20:41	26° <u>♂</u> 27'18	2°13'54
minimum elong	2600 Oct 19 20:41	26° <u>♂</u> 27'18	2°13'53
max. Earth dist.	2600 Oct 19 21:50	26° <u>♂</u> 27'39	10.60280 AU
morning rise	2600 Nov 05 21:41	28° <u>♂</u> 32'16	
	2600 Nov 18 07:14	0° <u>♂</u>	
retrograde	2601 Feb 13 21:49	5° <u>♂</u> 53'01	
opposition	2601 Apr 22 20:39	2° <u>♂</u> 33'08	2°44'46
min. Earth dist.	2601 Apr 22 20:26	2° <u>♂</u> 33'10	8.65627 AU
	2601 May 30 08:19	30° <u>♂</u>	
direct	2601 Jul 02 04:11	29° <u>♂</u> 07'59	
	2601 Aug 03 17:47	0° <u>♂</u>	
evening set	2601 Oct 15 11:50	6° <u>♂</u> 44'41	
conjunction	2601 Nov 01 13:37	8° <u>♂</u> 48'37	2°12'15
minimum elong	2601 Nov 01 13:38	8° <u>♂</u> 48'37	2°12'15
max. Earth dist.	2601 Nov 01 13:22	8° <u>♂</u> 48'33	10.70560 AU
morning rise	2601 Nov 18 11:10	10° <u>♂</u> 51'19	
	2601 Dec 26 16:18	15° <u>♂</u>	